United States Army Corps of Engineers
New England District

2022 Annual Operations, Maintenance, and Monitoring Report

Shepley's Hill Landfill

Former Fort Devens Army Installation

Devens, Massachusetts

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2022 Annual Operations, Maintenance, and Monitoring Report

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Devens, Massachusetts

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CERTIFICATION

I hereby certify that the enclosed Report, shown and marked in this submittal, is that proposed to be incorporated with Contract Number W912WJ-19-D-0014. This document was prepared in accordance with the United States Army Corps of Engineers (USACE) Scope of Work and is hereby submitted for Government approval.

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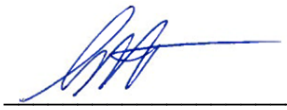

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Acronyms and Abbreviations

µg/L	microgram per liter
AOC	area of contamination
Army	United States Army
ATP	arsenic treatment plant
CIP	clean-in-place
CL	cleanup level
COC	contaminant of concern
DO	dissolved oxygen
DoD	Department of Defense
DOE	Department of Energy
Eurofins	Eurofins TestAmerica Laboratories
FBRO	filter bed roll-off
Fort Devens	former Fort Devens Army Installation
ft	foot
ft/ft	foot per foot
gpm	gallon per minute
IC	institutional control
ID	identification
KGS	KOMAN Government Solutions, LLC
LEL	lower explosive limit
LGP	landfill gas point
LTM	long-term monitoring
LTMMP	Long-Term Monitoring and Maintenance Plan
LTMMP Addendum	Addendum to the Long-Term Monitoring and Maintenance Plan Update
LTMMP Update	Long-Term Monitoring and Maintenance Plan Update
LUC	land use control
LUCIP	Land Use Control Implementation Plan
MassDEP	Massachusetts Department of Environmental Protection
MassDevelopment	Massachusetts Development and Finance Agency
MCL	maximum contaminant level

MF	microfiltration
mg/L	milligram per liter
MPE	measuring point elevation
MS	matrix spike
MSD	matrix spike duplicate
mV	millivolt
NAVD88	North American Vertical Datum of 1988
NIA	North Impact Area
O&M	operation and maintenance
ORP	oxidation-reduction potential
PLC	programmable login controller
ppm	part per million
QAPP	Quality Assurance Project Plan
QC	quality control
Quality Systems Manual	Department of Defense (DoD) and Department of Energy (DOE) Consolidated Quality Systems Manual for Environmental Laboratories, Version 5.3
redox	oxidation-reduction
RI	remedial investigation
ROD	Record of Decision
S-A JV	SERES-Arcadis 8(a) Joint Venture 2, LLC
SHL	Shepley's Hill Landfill
Sovereign	Sovereign Consulting, Inc.
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1 Introduction

SERES-Arcadis 8(a) Joint Venture 2, LLC (S-A JV) prepared this 2022 Annual Operations, Maintenance, and Monitoring Report for the United States Army Corps of Engineering (USACE) – New England District, under Contract Number W912WJ-19-D-0014. This report summarizes the long-term monitoring (LTM) program and operation and maintenance (O&M) activities conducted during 2022 at the Shepley's Hill Landfill (SHL) site, located at the former Fort Devens Army Installation (Fort Devens) in Devens, Massachusetts (Figure 1). LTM and O&M activities were conducted in accordance with the Long-Term Monitoring and Maintenance Plan Update (LTMMP Update; Sovereign Consulting, Inc. [Sovereign] 2015), the 2018 Addendum to the Long-Term Monitoring and Maintenance Plan Update (LTMMP Addendum; KOMAN Government Solutions, LLC [KGS] 2018), and the Quality Assurance Project Plan (QAPP) for the Annual Long-Term Monitoring and Maintenance Program (S-A JV 2020).

1.1 Site Location

Fort Devens is located approximately 35 miles northwest of the city of Boston, within the towns of Ayer and Shirley in Middlesex County and Harvard and Lancaster in Worcester County. Fort Devens was established in 1917 for military training and logistical support during World War I and operated as a permanent base from 1931 until closure by the Base Realignment and Closure Committee in 1996.

SHL encompasses approximately 84 acres in the northeast corner of the Main Post of Fort Devens (Figure 2). The landfill is bordered to the east by Plow Shop Pond and land formerly containing a railroad roundhouse, to the west by Shepley's Hill, to the south by recent commercial development, and to the north by wooded and residential areas. Plow Show Pond to the east drains to Nonacoicus Brook to the north, which flows north/northwest and discharges to the Nashua River. Nonacoicus Brook is located north of the landfill in the North Impact Area (NIA; Figure 3).

1.2 Site Background

The United States Army (Army) reportedly began operating SHL by the early 1940s; however, evidence from test pits within the landfill suggests earlier usage, possibly as early as the mid-19th century. SHL contains a variety of waste materials (more than 1.5 million cubic yards) that extend to a depth of approximately 40 feet (ft) below ground surface in the central portion of the landfill. Approximately 160,000 cubic yards (11% of the total waste mass) appear to have been emplaced below the water table in a former wetland, and peat deposits have been identified below the waste (Harding ESE 2003; Sovereign 2011).

The Massachusetts Department of Environmental Protection (MassDEP) approved the landfill closure plan for SHL in 1985. The landfill was closed in five phases between 1987 and 1993 in accordance with 310 Code of Massachusetts Regulations 19.000. Closure consisted of capping the landfill, covering the cap with soil and vegetation, installing gas vents and groundwater monitoring wells, and constructing drainage swales. The MassDEP issued a Landfill Capping Compliance Letter approving the closure in February 1996 (Harding ESE 2003; Sovereign 2011).

After closure of SHL, the Army completed remedial investigations (RIs) under the Comprehensive Environmental Response, Compensation, and Liability Act to characterize soil, sediment, surface water, and groundwater. RIs

confirmed the presence of various contaminants at the site, the most predominant of which is arsenic. A subsequent feasibility study and Record of Decision (ROD; USACE 1995) resulted in a remedial action, which included long-term O&M of the landfill cap, groundwater monitoring, and a contingent remedial component requiring the design and construction of a groundwater extraction and treatment system if the landfill cap did not result in a reduction of groundwater contaminant concentrations (primarily arsenic) below risk-based cleanup goals by 2008. The remedial action objectives for SHL are to:

- Protect potential residential receptors from exposure to impacted groundwater migrating from the landfill that contains chemicals in excess of United States Environmental Protection Agency (USEPA) maximum contaminant levels (MCLs).
- Prevent impacted groundwater from contributing to the contamination of Plow Shop Pond sediments in excess of human health and ecological risk-based concentrations.

Table 1, below, lists the contaminants of concern (COCs) identified in the ROD and their target cleanup levels (CLs). Of the COCs listed below, only arsenic, iron, and manganese are currently sampled as part of the LTM program, in accordance with the LTMMP Update and LTMMP Addendum (Sovereign 2015; KGS 2018, respectively).

Table 1 ROD-Specified Contaminants of Concern and Cleanup Levels

COC	Cleanup Level (µg/L)	Selection Basis
Arsenic	10	MCL[a]
Manganese	1,715	Background[b]
Iron	9,100	Background
Chromium	100	MCL
1,2-Dichlorobenzene	600	MCL
1,4-Dichlorobenzene	5	MCL
1,2-Dichloroethane	5	MCL
Lead	15	Action level
Nickel	100	MCL
Sodium	20,000	Health advisory
Aluminum	6,870	Background

Notes:
[a] In accordance with the 2005 Five-Year Review Report, data are screened against the updated standard of 10 µg/L (USACE 2005) rather than the original standard of 50 µg/L from the ROD (USACE 1995).
[b] Revised from ROD (USACE 1995) CL based on background evaluation.
µg/L = microgram per liter

In March 2006, the Army installed two extraction wells (EW-01 and EW-04) and constructed a groundwater extraction and treatment system. The system started with an initial pumping rate of 25 gallons per minute (gpm), which was gradually increased to a combined extraction rate of at least 50 gpm by 2014. In 2022, the arsenic treatment plant (ATP) average online extraction flow rate was 54.73 gpm, with an average effective flow rate (including downtime) of 48.05 gpm. During 2022, the system had an uptime of approximately 88%, with downtime due to routine O&M as well as periodic non-routine maintenance and repairs. System O&M is discussed in detail in Section 4.

In 2011, the Army investigated Red Cove/Plow Shop Pond (known as Area of Contamination [AOC] 72) located east of SHL. The AOC 72 RI (AMEC 2011) concluded that the SHL remedy in place in 2011 (landfill capping and groundwater extraction) did not eliminate groundwater flow and arsenic migration from SHL to Red Cove/Plow Shop Pond, and that groundwater discharge was contributing arsenic to sediment that could accumulate to levels that posed unacceptable risk to receptors. As a result, in August and September 2012, the Army installed a barrier wall between SHL and AOC 72 as a non-time critical removal action. Documentation of the barrier wall installation was provided in a Removal Action Completion Report (Sovereign 2013a).

In addition to LTM and O&M activities, land use controls (LUCs) were established for the NIA in 2013 (Sovereign 2013b), and the Army subsequently issued an LUC Implementation Plan (LUCIP) for SHL in 2014 (Sovereign 2014). The LUC area is shown on Figure 4 and discussed in Section 5.

2 Groundwater and Hydraulic Monitoring

Groundwater monitoring was conducted at SHL in 2022 in accordance with the LTMMP Update, LTMMP Addendum, additional work requested by USEPA, and QAPP (Sovereign 2015; KGS 2018; S-A JV 2020, respectively). Sampling events for 2022 occurred in May/June and October/November. Results of sampling are presented in the following sections.

The LTM program includes wells in the Barrier Wall Area, Landfill Area, Nearfield Area, NIA, and Upgradient Area. These sampling and hydraulic monitoring locations are summarized in Tables 2 and 3, respectively. A site plan showing the LTM well network is provided on Figure 5. Groundwater monitoring field forms, laboratory analytical reports, and data validation reports are provided in Appendix A, Appendix B, and Appendix C, respectively.

2.1 Hydraulic Monitoring

Groundwater elevations at SHL monitoring wells and piezometers, including piezometers used to monitor performance of the barrier wall, were gauged on April 28 and October 11, 2022. while the ATP was online and groundwater was being pumped from extraction wells EW-01 and EW-04. Hydraulic monitoring data are provided in Table 4. During each monitoring event, an electronic water level meter was used to measure depth to water with an accuracy of ±0.01 foot from the marked reference point at the top of the inside casing of each monitoring well/piezometer. LTM network wells were inspected, and new well locks were installed during the 2022 monitoring events where replacements were needed.

A total of 63 monitoring wells were measured during the spring 2022 monitoring event. In fall 2022, 143 monitoring wells and two staff gauges were measured; two of the four stream gauges included in Table 4 could not be accessed or viewed, as they are located in wetland areas and were partially obscured by vegetation.

Spring and fall 2022 groundwater elevation contour maps (Figures 6 and 7, respectively) were developed using survey data from the 2017 and 2018 monitoring well survey reports, which use the Massachusetts State Plane Coordinate System of North American Datum of 1983 for horizontal control and the North American Vertical Datum of 1988 (NAVD88) for vertical control. As described in Table 4, each groundwater contour map includes contour values for shallow overburden wells only; deep paired overburden well and bedrock well data were excluded, but several were used to assess vertical gradients. Similar to previous monitoring events, the water levels measured in fall 2022 illustrate that groundwater flows generally from the southwest to the north toward Nonacoicus Brook, with a deflection of groundwater flow to the north by the barrier wall in the area west of the wall. Groundwater elevations in overburden well locations were observed to be higher in spring than fall by an average of 1.78 feet (Table 4). Historical groundwater elevations from the last 5 years (2017 through 2022) are included in Appendix D; groundwater elevations in overburden well locations were observed to be lower in fall 2022 compared to fall 2021 by an average of 2.20 feet. The following groundwater hydraulic gradients were calculated in 2022:

- The gradient across the southern portion of the Landfill Area was calculated as 0.011 foot per foot (ft/ft) in fall 2022 using wells SHL-15 (Upgradient Area) and PZ-12-10 (Barrier Wall Area).
- The gradient across the northern portion of the Landfill Area was calculated as 0.010 ft/ft in fall 2022 using wells SHM-10-15 (Landfill Area) and SHL-23 (Nearfield Area).

- The gradient across the Nearfield Area ranged from 0.002 ft/ft (spring 2022) using wells EPA-PZ-2012-1A and SHP-2016-2A (Nearfield Area) to 0.004 ft/ft (fall 2022) using wells SHM-10-06A and SHM-10-16 (Nearfield Area).
- The gradient across the NIA ranged from 0.003 ft/ft (fall 2022) using wells SHM-05-40X and SHM-13-08 (NIA) to 0.004 ft/ft (spring 2022) using wells SHM-05-40X and SHM-13-03 (NIA), respectively.
- The gradient across the Barrier Wall Area was calculated as 0.097 ft/ft in spring 2022 and 0.032 ft/ft in fall 2022 using wells PZ-12-05 and PZ-12-06 (Barrier Wall Area).
- In general, the horizontal hydraulic gradient is steepest across the Landfill Area (typically two to three times greater in 2022) compared to other areas, and the gradient across the NIA is comparable to the gradient of the Nearfield Area.

The three sets of overburden and bedrock well pairs gauged during the fall 2022 monitoring event were assessed with respect to the presence of vertical gradients, as shown in Table 5. The vertical gradient observations are summarized below:

- A positive vertical gradient (downward flow component) was observed in the Upgradient Area from overburden to bedrock. This is consistent with recent historical observations.
- A positive vertical gradient (downward flow component) was observed in the Barrier Wall Area near Red Cove. Gradients have fluctuated between positive and negative over the last five fall gauging events (-0.006 to 0.002), most likely due to the relative degree of groundwater discharge from the bedrock towards Plow Shop Pond, compared to the relative degree of influence from the water levels in Plow Shop Pond at the time of gauging.
- A negative vertical gradient (upward flow component) was observed in the Nearfield Area. The gradient in this area has generally been positive/downward flow component in recent fall gauging events. However, some instances of upward flow have been observed in fall gauging events, with a similar gradient being observed in the fall 2018 event. These minor fluctuations are likely due to changes in precipitation from year to year and/or flow rates at the extraction wells at the time of gauging. At overburden triplet monitoring well SHM-05-41A/B/C, groundwater flow had both an upward and slight downward component from approximately 60 feet bgs toward the approximate 40 feet bgs and 95 feet bgs intervals.

2.2 Groundwater Sampling

A total of 63 and 109 well locations were sampled in spring and fall 2022, respectively. All locations were sampled in accordance with the LTMMP Update, LTMMP Addendum, and QAPP (Sovereign 2015; KGS 2018; S-A JV 2020, respectively). Two locations could not be sampled in fall 2022: monitoring well SHP-2016-07A did not have enough water to sample (0.19 feet) and monitoring well SHM-07-03 was observed to be destroyed during a Town of Ayer water main replacement project and subsequent roadwork/re-paving activities on Sculley Road.

Samples were collected in accordance with the procedures outlined in the Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells Revision 3 and 4 (USEPA 2017). Dissolved metals and dissolved organic carbon samples were field-filtered using a 0.45-micrometer polyethersulphone filter. Groundwater was purged using a bladder pump or peristaltic pump, depending on the measured water level. Groundwater was purged through a calibrated YSI multi-meter and a turbidity meter to

monitor groundwater chemistry parameters, and samples were collected upon achievement of field parameter stability. Calibration records are included in Appendix B.

Groundwater samples were submitted to Eurofins TestAmerica Laboratories (Eurofins) of Savannah, Georgia for the following analyses: dissolved metals (arsenic, iron, and manganese), chloride/sulfate, total alkalinity, and dissolved organic carbon. In accordance with the QAPP (S-A JV 2020), quality assurance / quality control (QC) procedures included the collection of field duplicate samples, matrix spike (MS)/matrix spike duplicate (MSD) samples, and equipment blank samples.

2.2.1 2022 Data Summary

The spring and fall 2022 sampling results are summarized in Tables 6 and 7, respectively. A summary of historical groundwater sampling results is provided in Appendix E. Figures 8 and 9 present dissolved arsenic concentration results for the spring and fall 2022 sampling events, respectively. The following is a summary of dissolved metals results from the sampling events conducted in 2022:

Spring 2022 Sampling Event

- Dissolved arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 40 of the 63 sampled locations (63%, compared to 67% in 2021), with the highest concentration of 3,000 µg/L detected in extraction well EW-04 (Nearfield Area).
- Dissolved iron concentrations in groundwater exceeded the CL of 9,100 µg/L at 28 of the 63 sampled locations (44%, compared to 49% in 2021), with the highest concentration of 87,000 µg/L detected in well SHL-11 (Barrier Wall Area, east of Landfill Area, north of the barrier wall).
- Dissolved manganese concentrations in groundwater exceeded the CL of 1,715 µg/L at 20 of the 63 sampled locations (32%, compared to 33% in 2021), with the highest concentration of 8,800 µg/L detected in well EPA-PZ-2012-5B (Nearfield Area).

Fall 2022 Sampling Event

- Dissolved arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 63 of the 109 sampled locations (58%, compared to 57% in 2021), with the highest concentration of 7,500 µg/L detected in well SHM-10-15 (Landfill Area).
- Dissolved iron concentrations in groundwater exceeded the CL of 9,100 µg/L at 43 of the 109 sampled locations (39%, equal to that in 2021), with the highest concentration of 80,000 µg/L detected in well SHM-10-14 (Landfill Area).
- Dissolved manganese concentrations in groundwater exceeded the CL of 1,715 µg/L at 37 of the 109 sampled locations (34%, compared to 31% in 2021), with the highest concentration of 9,600 µg/L detected in well EPA-PZ-2012-5B (Nearfield Area).

2.2.2 Arsenic Concentration Trends

Arsenic concentration trends over time were performed at 61 wells specified in the LTMMP Update (Sovereign 2015). Criteria for performing the statistical analyses include using wells that have a minimum of four rounds of data available and have dissolved arsenic concentrations greater than or equal to 10 µg/L. Of the 61 wells

specified in the LTMMP Update, a total of 26 wells (43%) had arsenic concentrations less than the CL in 2022, and a total of 35 wells (57%) exceeded the CL in 2022.

Arsenic data for the subset of 35 wells exceeding the CL in 2022 were evaluated using the Mann-Kendall trend test available in the ProUCL statistical software for environmental applications. The wells were evaluated to identify whether there are statistically significant trends for arsenic concentrations over time at each location at a 95% confidence level.

The evaluation identified that of the 35 wells statistically tested, 22 wells (63%) exhibited statistically significant decreasing concentrations, 11 wells (31%) exhibited no statistically significant trend, and two wells (6%; SHM-10-11 and SHM-13-05) exhibited increasing concentrations at the selected 95% confidence level. Monitoring well SHM-10-11 is in the southern portion of the Landfill Area. Monitoring well SHM-13-05 is located in the NIA; the concentration of arsenic at this well has fluctuated from approximately 6 µg/L to 18 µg/L (Appendix F). Results are shown in Table 8, below. Figure 10 shows the arsenic concentration trend results and identifies locations included in the LTMMP Update (Sovereign 2015) for trend evaluation that exhibited arsenic concentrations less than the CL in 2022. ProUCL outputs for each well are included in Appendix F.

Table 8 2022 Mann-Kendall Trend Analysis Results

Arsenic Concentration Below the CL of 10 µg/L in 2022	Statistically Significant Evidence of a Decreasing Trend	Insufficient Evidence of a Statistically Significant Trend	Statistically Significant Evidence of an Increasing Trend
EPA-PZ-2012-1A	EPA-PZ-2012-1B	EPA-PZ-2012-3A	SHM-10-11
EPA-PZ-2012-2A	EPA-PZ-2012-3B	EPA-PZ-2012-7B	SHM-13-05
EPA-PZ-2012-2B	EPA-PZ-2012-4B	SHL-5	
EPA-PZ-2012-4A	EPA-PZ-2012-6B	SHL-9	
EPA-PZ-2012-5A	N5-P1	SHM-05-41C	
EPA-PZ-2012-5B	SHM-05-40X	SHM-10-06A	
EPA-PZ-2012-6A	SHM-05-41A	SHM-10-07	
EPA-PZ-2012-7A	SHM-05-41B	SHM-10-14	
SHM-05-42A	SHM-05-42B	SHM-10-15	
SHM-07-03[a]	SHM-10-06	SHM-10-16	
SHM-10-02	SHM-10-12	SHP-99-29X	
SHM-10-03	SHM-10-13		
SHM-10-04	SHM-13-03[b]		
SHM-10-05A	SHM-13-04		
SHM-10-08	SHM-13-06		
SHM-10-10	SHM-13-07		
SHM-13-01	SHM-13-08		
SHM-13-02	SHM-93-22B		
SHM-13-14S	SHM-96-5B[c]		
SHM-13-14D	SHM-96-5C		
SHM-13-15	SHM-99-31C		
SHM-93-22C	SHM-99-32X		
SHL-8S			
SHL-8D			
SHL-22			
SHL-23			

Notes:
a. SHM-07-03 was observed to be destroyed prior to the fall 2022 event; data from spring 2022 is included in the trend analysis.
b. SHM-13-03 was incorrectly listed twice in Data Quality Objective Step 5 of the LTMMP Update as SHP-13-03.
c. SHM-96-5B was incorrectly listed in Data Quality Objective Step 5 of the LTMMP Update as SHL-96-5B.

2.2.3 Groundwater Monitoring Field Parameters

Water quality parameters (including pH, specific conductivity, dissolved oxygen [DO], temperature, and oxidation-reduction potential [ORP]) were collected during each of the 2022 sampling events. ORP and DO are particularly significant field parameters at SHL, as they can be used as indicators of oxidation-reduction (redox) conditions in the aquifer (ITRC 2022). Under the reducing conditions present at much of the site, naturally occurring arsenic associated with iron and manganese oxyhydroxide minerals is released into solution due to reductive dissolution. For example, ferric iron present in the oxides is reduced to ferrous iron, which is more soluble. Similarly, solid manganese (Mn^{4+}) minerals are reduced to more soluble manganese (Mn^{2+}). These dissolution processes also release arsenic associated with the minerals; and the iron, manganese, and arsenic can then be detected in dissolved metals analyses. Microbial reduction of iron and manganese (frequently coupled to organic matter

oxidation) is most favorable in the absence of oxygen, and dissolved oxygen can reoxidize iron and manganese; therefore, low DO is expected in zones with elevated iron and manganese. The ORP is a measure of the presence of redox-sensitive species in solution (including iron and manganese). Therefore, higher concentrations of iron and manganese would be expected in locations where low/negative ORP values and low DO concentrations are measured (Gannett Fleming, Inc. 2011).

Metals concentrations and associated field ORP measurements from the spring and fall 2022 groundwater sampling events are shown in Tables 6 and 7. The summary of correlations presented below indicates that dissolved metals in groundwater at SHL are more likely to exceed the CL when the redox state in groundwater is reducing and that the redox condition of the aquifer influences whether groundwater meets or exceeds the CLs for arsenic, iron, and manganese.

Spring 2022 Sampling Event

- Of the 63 groundwater samples collected and analyzed for arsenic during the spring 2022 event, 40 samples had concentrations exceeding the CL for arsenic and 23 samples had concentrations that either were not detected above the limit of detection or were detected below the CL:
  - Of the 23 samples that met the CL for arsenic, DO and ORP measurements indicate that 12 samples (52%) were collected from locations where the aquifer was oxidizing (ORP greater than 50 millivolts [mV] and DO greater than 1 milligram per liter [mg/L]), 5 samples (22%) were collected from locations screened in groundwater that was moderately reducing (where either ORP was greater than 50 mV or DO was greater than 1 mg/L), and 6 samples (26%) were collected at locations with groundwater that was reducing (ORP less than 50 mV and DO less than 1 mg/L).
  - In comparison, of the 40 samples that exceeded the CL for arsenic, samples were generally collected from locations with more strongly reducing geochemical conditions: three samples (7.5%) from groundwater under oxidizing conditions, three samples (7.5%) from moderately reducing conditions, and 34 samples (85%) where the aquifer was reducing.
  - Of the samples that met the CL for arsenic, the mean ORP value was 106.7 mV (median of 111.0 mV) and the mean DO concentration was 2.16 mg/L (median of 2.51 mg/L).
  - In comparison, samples that exceeded the CL for arsenic had a lower ORP and DO concentration: a mean ORP of -78.3 mV (median of -84.7 mV) and a mean DO concentration of 0.70 mg/L (median of 0.75 mg/L).
- Locations where iron and/or manganese concentrations exceeded the CL generally overlapped with locations that exceeded the CL for arsenic, indicating reducing conditions in groundwater has affected all three of these naturally occurring metals:
  - Of the 28 samples that exceeded the CL for iron in spring 2022, 27 samples (96%) also exceeded the CL for arsenic.
  - Of the 20 samples that exceeded the CL for manganese in spring 2022, 16 samples (80%) also exceeded the CL for arsenic.

Fall 2022 Sampling Event

- Of the 109 groundwater samples collected and analyzed for arsenic during the fall 2022 sampling event, 63 samples had concentrations exceeding the CL for arsenic and 46 samples had concentrations that either were not detected above the limit of detection or were detected below the CL:

  - Of the 46 samples that met the CL for arsenic, DO and ORP measurements indicate that 35 samples (76%) were collected from locations where the aquifer was oxidizing, seven samples (15%) were collected from locations screened in groundwater that was moderately reducing, and four samples (9%) were collected at locations with groundwater that was reducing.
  - In comparison, of the 63 samples that exceeded the CL for arsenic, samples were collected from locations with more strongly reducing geochemical conditions: one sample (2%) from groundwater under oxidizing conditions, 33 samples (52%) from moderately reducing conditions, and 29 samples (46%) where the aquifer was reducing.
  - Of the samples that met the CL for arsenic, the mean ORP value was 171.7 mV (median of 172.7 mV) and the mean DO concentration was 2.10 mg/L (median of 1.86 mg/L).
  - In comparison, samples that exceeded the CL for arsenic had a lower ORP and DO concentration: a mean ORP of -46.3 mV (median of -67.9 mV) and a mean DO concentration of 1.04 mg/L (median of 0.99 mg/L).
- Locations where iron and/or manganese concentrations exceeded the CL generally overlapped with locations that exceeded the CL for arsenic, indicating reducing conditions in groundwater has affected all three of these naturally occurring metals:
  - Of the 45 samples that exceeded the CL for iron in fall 2022, 43 samples (96%) also exceeded the CL for arsenic.
  - Of the 37 samples that exceeded the CL for manganese fall 2022, 32 samples (86%) also exceeded the CL for arsenic.

2.2.4 Quality Assurance/Quality Control

Eurofins was the primary contract laboratory used for the spring and fall 2022 LTM sampling events. Eurofins is compliant with the United States Department of Defense (DoD) and Department of Defense (DOE) Consolidated Quality Systems Manual for Environmental Laboratories, Version 5.3 (Quality Systems Manual; DoD and DOE 2019) under the DoD Environmental Laboratory Accreditation Program and holds current National Environmental Laboratory Accreditation Program accreditation for applicable analytical methods.

As part of the 2022 groundwater sampling events, quality assurance/QC samples were collected to confirm that the data quality objectives were met for the laboratory analysis. Field duplicate samples were collected during sampling events to evaluate field precision at the rate of 10% (1 per 10 samples). MS/MSD pairs were also submitted at a rate of 5% (1 per 20 samples) to evaluate matrix effects on analytical precision and accuracy.

Analytical results from the 2022 sampling events were reviewed and evaluated for data acceptability by Laboratory Data Consultants, Inc. of Carlsbad, California in accordance with the USEPA Region 1 Environmental Data Review Program Guidance (USEPA 2018), the QAPP (S-A JV 2020), and the DoD General Data Validation Guidelines (DoD 2019). The method requirements from the Quality Systems Manual (DoD and DOE 2019) and the USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 (USEPA 2014) were also used as supplemental information.

Laboratory Data Consultants, Inc. of Carlsbad, California reviewed and updated the database with appropriate data qualifiers as needed. Laboratory analyses were confirmed to have been performed in general compliance with the precision, accuracy, representativeness, completeness, comparability, and sensitivity requirements listed in the QAPP (S-A JV 2020). Sample results that were qualified as estimated (UJ/J) due to QC exceedances are

usable with caution; no results were rejected. Analytical results reported for the 2022 LTM samples were deemed valid and usable for intended purposes. The data validation reports and a summary of quality control exceptions noted for the SHL 2022 LTM sampling data are presented in Appendix C.

2.3 Conclusions

The results of the spring monitoring event and the more comprehensive fall 2022 site-wide monitoring event continue to illustrate a general groundwater flow direction from the west/southwest to the north toward Nonacoicus Brook, with a deflection of groundwater flow to the north in the area west of the barrier wall near Red Cove at Plow Shop Pond. Concentrations of arsenic, iron, and manganese in groundwater continue to exceed CLs in various wells at SHL and in the NIA (Tables 6 and 7). Locations where dissolved metals (arsenic, iron, and manganese) concentrations exceed the CL are generally under more reducing geochemical conditions than locations where dissolved metals concentrations meet the CL.

The groundwater monitoring program will continue in accordance with the LTMMP Update and LTMMP Addendum (Sovereign 2015; KGS 2018, respectively) until a new Long-Term Monitoring and Maintenance Plan (LTMMP) is prepared. As mentioned in Section 2.2, one monitoring well along Sculley Road (SHM-07-03) was destroyed by Town of Ayer roadwork activities prior to the fall 2022 monitoring event. The Army is not planning to re-install this well at this time, as it has been below the CL for arsenic since installation and below laboratory limits of detection (LODs) in 12 of 16 historical sampling events.

The 2022 scope included the following additional work requested by USEPA in addition to what is included in the LTMMP Update and LTMMP Addendum:

- Continued collection of geochemical and hydrologic data from the nested piezometers (SHP 2016-1A/B through SHP 2016-5A/B) in spring and fall, until fall 2022.
- Continued collection of geochemical and hydrologic data for a minimum of 5 years (through 2022) for USEPA-added wells to the monitoring network (SHM-05-39A/B, SHM-99-31A/B).
- Continued collection of water level data from piezometers SHP-2017-01 and SHP-2017-02 located near the extraction wells in spring and fall, until fall 2022.
- Continued collection of geochemical and hydrologic data from bedrock wells SHP-2016-06A/B/C and SHP-2016-07A/B in spring and fall, until fall 2022.
- Continued collection of hydrologic data from wells SHM-10-11, N6-P1, and SHP-99-35X in spring and fall to provide more hydraulic control in the southern portion of the landfill through fall 2022.

An updated LTMMP will be prepared in 2023 and submitted to the USEPA and MassDEP. The Army will be conducting an assessment to confirm the effectiveness of the barrier wall installed adjacent to Red Cove in 2023. The results of the assessment will be considered as part of the LTMMP update.

3 Landfill Maintenance and Monitoring

In accordance with the LTMMP Update (Sovereign 2015), SHL was inspected, and routine maintenance was performed during 2022. All landfill maintenance and monitoring activities were completed by Sovereign.

3.1 Landfill Inspection

The annual inspection identifies and corrects problems pertaining to the effectiveness of the cap system, erosional controls, gas vents, and sampling points. The landfill inspection report with supporting photographs is presented in Appendix G. A summary of the report findings is provided below:

- The surface cover had no new depressions. No tree or shrub growth was observed on the landfill surface during the inspection. Small tree and shrub growth on the margins of the landfill were removed during the annual mowing event.
- An annual inspection of the landfill and adjacent areas was conducted on October 25, 2022. The overall condition of the landfill, utility berm, and culverts was found to be satisfactory. Vegetation atop the utility berm was mowed during the annual mowing event. The southern drainage swale exhibited large vegetative growth that was removed during annual mowing activities. Vegetation in the northern drainage swales was also removed during annual mowing activities. No new topographic depressions or significant erosion was observed.
- Gas vent GV-3 was observed to be leaning at a 15 to 20 angle but is still functional and appears to be in otherwise good condition (see photograph in Appendix G). The remaining landfill gas points (LGPs) and gas vents (Figure 11) were in good condition.
- Monitoring wells and piezometers located on the landfill cap or perimeter that are currently part of the LTM network were observed to be in good condition overall.
- The landfill access road was observed to be in good condition. Minor rutting with ponded water from a recent rain event was observed along the northern portion of the access road. Rutting appears to have worsened compared to previous years.
- Perimeter fencing was not installed historically along much of the western boundary of the landfill and along the southeastern boundary near the railroad tracks. The fence gates across roads that access the landfill are secured with chains and padlocks.
- Some wetland encroachment was observed in the swales located in the southern portion of the landfill. However, the individual areas of encroachment are small and confined to the swales.
- The recreational field located south of the access road in the middle of the southern half of the landfill appeared to be in good condition. There was no tire rutting observed between the field and the landfill access road.

Sovereign provided the following recommendations for 2023:

- Continue monitoring for settlement that creates depressions.
- Continue monitoring for tree and shrub growth on the surface cover. Remove tree/shrub growth as necessary.
- Continue monitoring the utility berm for negative impacts on the drainage patterns.

- Continue annual inspections and mowing of the landfill cap, utility berm, drainage swales, and culverts (including removal of tree and shrub growth).
- Continue to monitor GV-3 to ensure the angle of the vent does not worsen. Continue monitoring the condition of the remaining LGPs and monitoring wells.
- Continue monitoring for erosion and depressions/settlement within the landfill and repair, as necessary.
- Conduct routine checks of the recreational field to confirm the integrity of the landfill cover, gas vents, and monitoring wells in this area.
- Rutting observed along the northern portion of the landfill access road will be repaired and regraded in winter 2022-2023. Continue to monitor road condition and repair as needed.

3.2 Landfill Gas Monitoring

Sovereign completed annual sampling of landfill gas vents and LGPs (Figure 11) on October 27, 2022. Sampling activities were conducted in accordance with procedures described in the MassDEP Landfill Technical Guidance Manual, as revised May 1997 (MassDEP 1997):

- Landfill gas monitoring is conducted by first capping off the gas vents and connecting the handheld monitoring devices to the sample port on the cap for the initial readings.
- Following collection of the initial readings, an adjustable flow rate sampling pump is connected to the sample port on the cap. Two vent volumes are purged from the gas vents using the sampling pump, and the post-purge monitoring readings are collected with the handheld monitoring device.
- Each handheld monitoring device is equipped with an internal pump and is allowed to operate for approximately one minute before recording the monitoring data.

Landfill gas sampling was conducted with a multi-gas meter and landfill gas meter and included the following parameters: volatile organic compounds (VOCs), oxygen, hydrogen sulfide, lower explosive limit (LEL), carbon monoxide, carbon dioxide, and methane. Each parameter was measured and recorded twice (initial reading and post-purge reading). Gas monitoring results (Table G-1 and Table G-2) and gas probe construction details (Table G-3) are provided in Appendix G. Results appear to be generally consistent or lower than historical observations. The landfill gas monitoring results are summarized below:

- Field readings of barometric pressure were relatively stable and ranged from 29.56 to 29.87 inches of mercury. The background barometric pressure ranged from 29.56 to 29.87 inches mercury at the ATP from the start of the day to the end of the day.
- VOC detections ranged from 0.0 to 1.0 parts per million (ppm) in initial readings, and all locations were 0.0 ppm in post-purge readings. The highest initial readings of 1.0 ppm (gas probes LGP-09-01XB and LGP-09-02X) decreased to 0.0 ppm post-purge.
- Oxygen ranged from 0.0 to 20.9% in initial readings; all locations were 20.9% post-purge.
- Hydrogen sulfide remained at 0.0 ppm for all initial and post purge readings.
- The LEL ranged from 0.0 to 99% (initial) and 0.0 to 5.0% (post-purge).
- Carbon monoxide remained at 0.0 ppm for all initial and post purge readings.
- Carbon dioxide detections ranged from 0.0 to 15.5% (initial) and 0.0 to 0.7% (post-purge).

- Methane detections ranged from 0.0 to 11.4% in initial readings; all locations were 0.0% post-purge. The highest initial readings were detected at gas probe LGP-05-05X.

4 Arsenic Treatment Plant Operations, Maintenance, and Monitoring

The SHL ATP treated and discharged 25,256,825 gallons of groundwater between January 1 and December 31, 2022 (Table G-4 and Table G-5), bringing the cumulative treated volume total to approximately 374,303,475 gallons since system startup in 2006 (Table G-6). All ATP operations, maintenance, and monitoring in 2022 was conducted by Sovereign; data are presented in the following sections.

4.1 System Description

The ATP is designed to remove dissolved arsenic from extracted groundwater through co-precipitation with iron followed by microfiltration (MF). The ATP consists of the following components:

- Extraction system (extraction wells EW-01 and EW-04)
- Chlorine dioxide generation and addition in order to oxidize iron
- Coagulation via a contact tank with a direct drive batch tank mixer
- MF of the water to concentrate precipitated solids
- Solids removal via an inclined plate clarifier
- Bag filtration and discharge of the inclined plate clarifier decant water
- Polymer-aided flocculation of sludge using a filter bed roll-off (FBRO)
- Treated water discharge to the Devens publicly owned treatment works.

Historical monthly discharge totals and an operational summary of the monthly online hours, flow totals, and operating status during 2022 are presented in Appendix G.

4.1.1 System Efficiency and Routine Maintenance

During 2022, the treatment plant was operational approximately 88% of the total available hours during the calendar year (i.e., "uptime"), which is equal to the uptime in 2021 (Table G-4). When online, the average flow through the plant during the year was 54.73 gpm. The plant achieved an effective average extraction rate (i.e., the extraction rate calculated by dividing the volume pumped by the elapsed time during the year, not the actual online time) of 48.05 gpm in 2022 (compared to 47.11 gpm in 2021).

The FBRO was emptied routinely (every 1 to 2 weeks) in 2022 due to high sludge generation from inorganics (primarily iron) in the influent. This is consistent with historical FBRO maintenance. A total of 264.68 tons of sludge were removed in 2022 by Global Remediation Services, Inc. (Table G-7). The sludge removal process was optimized, which resulted in zero downtime attributable to FBRO operations for the ATP in 2022.

Non-operational time is associated with both routine and non-routine system maintenance, repairs, and upgrades (Section 4.1.2). The ATP MF system continues to require periodic clean-in-place (CIP) procedures to prevent long-term fouling of the filter membranes (Table G-8). The Army has continued to optimize system operations, and currently CIP events are conducted once per month. Extended CIP events are conducted only in situations when the level of filter fouling is greater than normal, most likely because of a non-optimal dosage concentration of chlorine dioxide. No extended CIP events were required in 2022.

4.1.2 Non-Routine System Maintenance, Repairs, and Upgrades

This section details major system non-routine maintenance activities encountered or implemented, along with system upgrades completed during 2022. Monthly shutdown and maintenance events, along with associated system downtimes, are presented in Table G-8. The non-routine maintenance activities are summarized below:

- January 3, 2022 – Microfilter Pump P1 was replaced due to leaking seals.
- February 2, 2022 – The chlorine dioxide flow control valve was replaced during a routine CIP event.
- April 16, 2022 – The system shut down due to a low-pressure alarm. The input/output card for Pump P1 was replaced and the system was restarted.
- April 17, 2022 – The system shut down due to a low-pressure alarm. It was determined that the air compressor was failing and required maintenance by the manufacturer. The air compressor was subsequently serviced on April 19, 2022, and the system was restarted.
- May 1, 2022 – The system shut down due to a low-pressure alarm from air compressor failure. A manufacturer representative determined that compressor valve assembly was clogged and subsequently replaced the multi-purpose valve and instrument block. The system was restarted on May 6, 2022, following compressor repair.
- May 17, 2022 – The system shut down due to failure of the polymer skid static mixer. The mixer was replaced and the system restarted on May 18, 2022.
- June 2, 2022 – The fire suppression panel was replaced due to failure of the existing panel.
- June 10, 2022 – The input/output card for the Pump 1 variable frequency drive on the microfilter skid was replaced due to normal wear.
- June 12, 2022 – The system shut down due to a low-pressure alarm from air compressor failure. The compressor was restarted on June 13, 2022; however, the air compressor failed again later that same day due to overheating and low pressure. On June 14, 2022, a manufacturer representative removed and cleaned the oil scavenge line and associated check valve and rewired the pressure switch. The system was subsequently restarted.
- June 24, 2022 – The system shut down due to a low-pressure alarm from air compressor failure. Upon evaluation, it was determined that the temperature switch had failed, and the oil cooler was completely clogged and unusable. As a result of systemic failures throughout the air compressor, the air compressor was taken out of service, and a new air compressor was installed on June 30, 2022.
- June 30, 2022 – The potable water solenoid valve failed and was subsequently replaced on July 5, 2022.
- July 12, 2022 – The chlorine dioxide skid was serviced, the eductor and inline mixer were cleaned, and the backup chlorine gas cylinder flow control valve was removed from service. The flow control valve was subsequently replaced on July 20, 2022.
- August 9, 2022 – The input/output card for the Pump 1 variable frequency drive on the microfilter skid was replaced due to normal wear.
- August 15, 2022 – Potable water service to the building was disrupted due to work on Sculley Road. Water service was restored on August 16, 2022, and the system was restarted.
- August 19, 2022 – The sodium chlorite feed check valve was replaced.
- August 26, 2022 – The sodium chlorite feed line was replaced.

- August 22, 2022 – The system shut down due to high effluent sump alarms. The effluent pumps were subsequently serviced on August 26, 2022.
- September 20, 2022 – A microfilter relay failed and was subsequently replaced on September 23, 2022, and the system was restarted.
- September 26, 2022 – A faulty chlorine gas regulator was replaced.
- October 5, 2022 – The impellor for Effluent Pump No. 1 was replaced during a CIP event to minimize downtime.
- October 13, 2022 – The impellor for Effluent Pump No. 2 was replaced. Effluent Pump No. 1 was able to maintain total system flow during this period, and as a result, the work was conducted with no additional downtime.
- October 25, 2022 – The system shut down due to basket strainer high pressure alarm. The basket strainer was subsequently inspected and cleaned on October 26, 2022, and the system was restarted.
- November 2, 2022 – The system shut down due to a failure of the sludge pump switch. The switch was subsequently repaired on November 3, 2022, and the system was restarted.
- November 28, 2022 – The system shut down to replace a leaking potable water backflow preventer. The potable water backflow preventor was replaced and the system was restarted.

4.2 Arsenic Treatment Plant Monitoring

This section describes the ATP influent and effluent sampling conducted in 2022 to monitor for arsenic and other parameters. Samples were analyzed by SGS Laboratories of Dayton, New Jersey. The associated laboratory analytical reports and data validation reports for the ATP monitoring conducted by Sovereign are included in Appendix B and Appendix C, respectively.

4.2.1 Influent

ATP influent was sampled for metals (arsenic, iron, and manganese), VOCs, and dissolved gases (methane and ethane), as described in the sections below.

4.2.1.1 Metals

The ATP system influent is sampled quarterly for metals (arsenic, iron, and manganese). Although influent inorganic sampling is not required by ATP Landfill Discharge Permit Number 020 (Massachusetts Development and Finance Agency [MassDevelopment] 2019) or by the LTMMP Update (Sovereign 2015), it is monitored to gauge system loading and to verify that a sufficient iron concentration is maintained to promote iron and arsenic co-precipitation and coagulation. The original system design recommended a minimum iron concentration of 40 mg/L. Current influent iron concentrations remain above this level (average of 51.0 mg/L in 2022). The ATP was designed with a ferric chloride addition system with the ability to add ferric chloride to the influent if deemed necessary based on results of influent inorganic sampling; this component of the system has not been needed and has been decommissioned.

Average concentrations for arsenic, iron, and manganese in extraction well EW-01 since 2006 are 2.01, 71.72, and 2.20 mg/L, respectively; compared to average concentrations of 1.49, 66.15, and 2.18 mg/L in 2022. Average concentrations for arsenic, iron, and manganese in extraction well EW-04 since 2006 are 2.82, 35.85, and

2.17 mg/L, respectively; compared to average concentrations of 3.60, 44.88, and 2.17 mg/L in 2022. Influent loading concentrations of iron, arsenic, and manganese are presented and graphically illustrated in Table G-9.

4.2.1.2 Volatile Organic Compounds and Dissolved Gases

In accordance with the LTMMP Update (Sovereign 2015), and as part of the landfill closure monitoring program, annual ATP influent sampling was conducted for VOCs and dissolved gases (methane and ethane) in September 2022. Results are documented in Table G-10 and summarized below:

- Methane was detected at concentrations of 2,120 µg/L (EW-01) and 1,060 µg/L (EW-04) in the sampled influent, compared to the 2021 sampling results of 1,990 µg/L (EW-01) and 1,490 µg/L (EW-04).
- Ethane was detected at concentrations of 0.68 µg/L (EW-01) and non-detect (EW-04), compared to the 2021 concentrations of 0.53 µg/L (EW-01) and non-detect (EW-04).
- Total VOC concentrations were 10.84 µg/L (EW-01) and 3.05 µg/L (EW-04). These low concentrations of VOCs are consistent with historical observations.

4.2.2 Effluent

The USACE is authorized to discharge treated groundwater from the ATP to the Devens municipal sewerage system in accordance with Landfill Discharge Permit Number 020 (MassDevelopment). The current permit, which mandates effluent sampling for arsenic and other select parameters on a monthly, quarterly, and/or annual basis and a maximum daily flow of 93,600 gallons per day (65 gpm), was last renewed on June 28, 2022, and is in effect until June 28, 2025 (MassDevelopment 2022). There were no changes made to the permit conditions. Effluent sampling results are included in Appendix G and summarized below:

- Arsenic samples were collected monthly, with results ranging from 1.6 to 26.3 µg/L. As shown in Table G-11, each sampling result was below the effluent limitation of 75 µg/L (Mass Development, 2022).
- Select metals (barium, manganese, and magnesium) and other parameters (chloride, nitrate, and sulfate) were sampled quarterly (March, June, September, and December 2022) (Table G-12). Sampling for these parameters is required by the permit, but no effluent limitations have been established.
- Select metals (chromium [total], cadmium, copper, lead, silver, selenium, and mercury) along with total toxic organics and total petroleum hydrocarbons were sampled on an annual basis in September 2022 (Table G-13). Total toxic organics are equal to the sum of total VOCs, semi-volatile organic compounds, pesticides, and polychlorinated biphenyls. Concentrations of all parameters were within permit-defined discharge limitations.

4.3 Arsenic Treatment Plant Optimization and Recommendations

The deployment of pressure transducers in the extraction wells and the MF module upgrades in January 2015 have allowed for further optimization of the ATP. The pressure transducers deployed in the extraction wells have eliminated the potential exposure of the well screen to air that is known to cause iron fouling. Thus, system downtime has been reduced and the system can now be controlled in a manner to optimize flow rates to best

meet hydrogeologic capture goals. The MF module upgrades have increased the total number of MF modules to 10 and have allowed for an increase in the average flow rate and output of the ATP.

No significant changes are proposed for the ATP operation and maintenance based on the data presented herein. However, based on the results of pilot testing performed in 2021, the Army is in the process of preparing a design for the installation of an alternate metals removal technology to replace the existing MF system, which will improve the performance and safety of the ATP. This work will include modifying the oxidant from chlorine dioxide to a less reactive compound (i.e., permanganate) and use of an inclined plate settler (e.g., a Lamella Gravity Settler).

The plant will continue to operate at a flow rate of approximately 50 gpm each month, with continued maintenance to include the following:

- The influent piping will be inspected annually and cleaned, if necessary, during scheduled CIP events. This will prevent the build-up of precipitate within the system that could restrict flow.
- System components will be regularly inspected and replaced before the end of their operational life. This will minimize operational downtime associated with equipment failure.

5 Land Use Controls

In accordance with the LUCIP (Sovereign 2014), the Army conducts annual monitoring and maintenance activities, which include ICs and affirmative measures.

5.1 Institutional Controls

The LUC area (Figure 4) is actively monitored, and any required changes to the area are updated in the LUCIP (Sovereign 2014), in consultation with and concurrence from the USEPA and MassDEP. Reports on the implementation and enforcement of the ICs are provided to the Town of Ayer and MassDEP, including any instances where groundwater extraction is observed.

A review of the ICs was conducted during 2022. The Town of Ayer completed a water main replacement project on Sculley Road in 2022; no other new construction activities or other changes were observed.

5.2 Affirmative Measures

Affirmative measures for the SHL LUCs include the following:

- An informational pamphlet with contact information is distributed annually to properties within the NIA and is included on the Town of Ayer Board of Health website (https://www.ayer.ma.us/board-health/pages/shepleys-hill-landfill-resources) under the title "Fort Devens SHL Factsheet Final_October 2022."
- A door-to-door survey is conducted every 5 years with at residences within the LUC area to provide the information pamphlet in person and general information on the groundwater moratorium. A survey was completed in 2019, with the next survey scheduled for 2024.
- A list of property owners and resident addresses within the LUC area is updated annually for implementation of the LUCIP actions noted; the LUCIP (Sovereign 2014) is distributed to appropriate parties.
- The Army meets with the Town of Ayer Board of Health annually or as needed if a change in the groundwater contamination distribution in the aquifer occurs.

Educational pamphlets were mailed to occupants of properties identified within the LUC area via the United States Postal Service in October 2022. The educational pamphlet was also provided to the Town of Ayer Board of Health on January 30, 2023, to post on its public website.

In summary, no deficiencies or deviations from the LUCs were noted; no corrective actions are required. The completed LUCIP checklist, list of properties/addresses within the LUC area, and educational pamphlet are included in Appendix H.

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Tables

Table 2
LTMMP Sampling Program
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Location	Monitoring Frequency	TOR Elevation (feet NAVD88)	Screen Interval (feet bgs)	Screen Elevation (feet NAVD88)	Formation Type at Screen Interval
PZ-12-01	Barrier Wall	Semiannual	237.55	24.0 - 34.0	213.55 - 203.55	OB (shallow)
PZ-12-02	Barrier Wall	Semiannual	237.79	24.0 - 34.0	213.79 - 203.79	OB (shallow)
PZ-12-03	Barrier Wall	Semiannual	236.40	22.0 - 32.0	214.40 - 204.40	OB (shallow)
PZ-12-04	Barrier Wall	Semiannual	238.20	22.0 - 32.0	216.20 - 206.20	OB (shallow)
PZ-12-05	Barrier Wall	Semiannual	238.73	26.0 - 36.0	212.73 - 202.73	OB (mid)
PZ-12-06	Barrier Wall	Semiannual	242.18	26.0 - 36.0	216.18 - 206.18	OB (mid)
PZ-12-07	Barrier Wall	Semiannual	244.59	18.0 - 28.0	226.59 - 216.59	OB (mid)
PZ-12-08	Barrier Wall	Semiannual	244.83	18.0 - 28.0	226.83 - 216.83	OB (mid)
PZ-12-09	Barrier Wall	Semiannual	241.93	22.0 - 32.0	219.93 - 209.93	OB (shallow)
PZ-12-10	Barrier Wall	Semiannual	242.28	22.0 - 32.0	220.28 - 210.28	OB (shallow)
SHL-10	Barrier Wall	Semiannual	248.02	24.0 - 39.0	224.02 - 216.02	OB (shallow)
SHL-11	Barrier Wall	Semiannual	235.47	12.0 - 27.0	223.47 - 208.47	OB (shallow)
SHL-19	Barrier Wall	Semiannual	240.50	20.0 - 30.0	220.50 - 210.50	OB (shallow)
SHL-20	Barrier Wall	Semiannual	235.95	39.0 - 49.0	196.95 - 186.95	OB (Deep)
SHL-3	Barrier Wall	Annual	246.95	24.0 - 34.0	222.95 - 212.95	OB (mid)
SHL-4	Barrier Wall	Semiannual	227.48	3.0 - 13.0	224.48 - 214.48	OB (shallow)
SHM-11-02	Barrier Wall	Semiannual	240.73	39.0 - 49.0	201.73 - 191.73	BR
SHM-11-06	Barrier Wall	Semiannual	236.17	25.0 - 35.0	211.17 - 201.17	OB (shallow)
SHM-93-10D	Barrier Wall	Annual	248.01	46.0 - 56.0	202.01 - 192.01	BR
SHP-01-36X	Barrier Wall	Semiannual	223.95	3.0 - 8.0	220.95 - 215.95	OB (shallow)
SHP-01-37X	Barrier Wall	Semiannual	222.79	1.0 - 6.0	221.79 - 216.79	OB (shallow)
SHP-01-38A	Barrier Wall	Semiannual	220.86	1.5 - 6.5	219.36 - 214.36	OB (shallow)
N5-P1	Landfill Area	Annual	242.65	95.5 - 97.5*	147.15 - 145.15	BR
SHM-10-07	Landfill Area	Annual	246.82	40.0 - 50.0	206.82 - 196.82	OB (mid)
SHM-10-11	Landfill Area	Annual	263.76	50.0 - 60.0	213.76 - 203.76	OB (deep)
SHM-10-12	Landfill Area	Annual	255.17	45.0 - 55.0	210.17 - 200.17	OB (mid)
SHM-10-13	Landfill Area	Annual	244.77	60.0 - 70.0	184.77 - 174.77	OB (deep)
SHM-10-14	Landfill Area	Annual	237.62	60.0 - 80.0	177.62 - 157.62	OB (deep)
SHM-10-15	Landfill Area	Annual	243.68	45.0 - 55.0	198.68 - 188.68	OB (mid)
SHP-2016-07A	Landfill Area	Semiannual	265.30	22.0 - 32.0	243.30 - 233.30	BR
SHP-2016-07B	Landfill Area	Semiannual	265.33	70.0 - 80.0	195.33 - 185.33	BR
SHP-99-29X	Landfill Area	Annual	243.34	19.0 - 29.0	254.16 - 244.16	OB (shallow)
EPA-PZ-2012-1A	Nearfield Area	Semiannual	223.79	20.0 - 25.0	203.79 - 198.79	OB (shallow)
EPA-PZ-2012-1B	Nearfield Area	Semiannual	223.53	70.0 - 75.0	153.53 - 148.53	OB (deep)
EPA-PZ-2012-2A	Nearfield Area	Semiannual	223.38	20.0 - 25.0	203.38 - 198.38	OB (shallow)
EPA-PZ-2012-2B	Nearfield Area	Semiannual	223.37	75.0 - 80.0	148.37 - 143.47	OB (deep)
EPA-PZ-2012-3A	Nearfield Area	Semiannual	222.65	20.0 - 25.0	202.65 - 197.65	OB (shallow)
EPA-PZ-2012-3B	Nearfield Area	Semiannual	222.57	70.0 - 75.0	152.57 - 147.57	OB (deep)
EPA-PZ-2012-4A	Nearfield Area	Semiannual	226.60	20.0 - 25.0	206.60 - 201.60	OB (shallow)
EPA-PZ-2012-4B	Nearfield Area	Semiannual	226.39	70.0 - 75.0	156.39 - 151.39	OB (deep)
EPA-PZ-2012-5A	Nearfield Area	Semiannual	220.01	20.0 - 25.0	200.01 - 195.01	OB (shallow)
EPA-PZ-2012-5B	Nearfield Area	Semiannual	219.38	80.0 - 85.0	139.38 - 134.38	OB (deep)
EPA-PZ-2012-6A	Nearfield Area	Semiannual	234.25	25.0 - 30.0	209.25 - 204.25	OB (shallow)
EPA-PZ-2012-6B	Nearfield Area	Semiannual	234.08	75.0 - 80.0	159.08 - 154.08	OB (deep)
EPA-PZ-2012-7A	Nearfield Area	Semiannual	234.16	25.0 - 30.0	209.16 - 204.16	OB (shallow)
EPA-PZ-2012-7B	Nearfield Area	Semiannual	234.03	60.0 - 65.0	174.03 - 169.03	OB (deep)
EW-01	Nearfield Area	Semiannual	226.80	60.0 - 85.0	166.80 - 141.80	OB (deep)
EW-04	Nearfield Area	Semiannual	227.03	70.0 - 95.0	157.03 - 132.03	OB (deep)
SHL-22	Nearfield Area	Annual	219.58	105.0 - 115.0	114.58 - 104.58	OB (deep)/Till
SHL-23	Nearfield Area	Annual	241.29	23.0 - 33.0	218.29 - 208.29	OB (shallow)
SHL-5	Nearfield Area	Annual	217.60	3.0 - 13.0	214.60 - 204.60	OB (shallow)
SHL-8D	Nearfield Area	Annual	220.78	68.0 - 70.0	152.78 - 150.78	OB (deep)
SHL-8S	Nearfield Area	Annual	220.97	52.0 - 54.0	168.97 - 166.97	OB (shallow)
SHL-9	Nearfield Area	Annual	221.95	15.0 - 25.0	206.95 - 196.95	OB (shallow)
SHM-05-41A	Nearfield Area	Annual	222.48	42.0 - 44.0	180.48 - 178.48	OB (shallow)
SHM-05-41B	Nearfield Area	Semiannual	222.33	62.0 - 64.0	160.33 - 158.33	OB (mid)
SHM-05-41C	Nearfield Area	Semiannual	222.57	88.0 - 93.0	134.57 - 129.57	OB (deep)/Till
SHM-05-42A	Nearfield Area	Annual	216.81	40.0 - 42.0	176.81 - 174.81	OB (shallow)
SHM-05-42B	Nearfield Area	Annual	216.80	70.0 - 72.0	146.80 - 144.80	OB (mid)
SHM-10-06	Nearfield Area	Annual	232.91	69.5 - 79.5	163.41 - 153.41	OB (deep)
SHM-10-06A	Nearfield Area	Annual	248.54	77.0 - 87.0	171.54 - 161.54	OB (deep)
SHM-10-16	Nearfield Area	Annual	219.23	75.0 - 85.0	144.23 - 134.23	OB (deep)
SHM-93-22B	Nearfield Area	Semiannual	219.39	82.3 - 92.3	137.09 - 127.09	OB (mid)
SHM-93-22C	Nearfield Area	Annual	220.69	124.3 - 134.3	96.39 - 86.39	BR
SHM-96-5B	Nearfield Area	Semiannual	218.92	80.0 - 90.0	138.92 - 128.92	OB/Till
SHM-96-5C	Nearfield Area	Annual	218.39	50.0 - 60.0	168.39 - 158.39	OB (mid)
SHP-2016-06A	Nearfield Area	Semiannual	241.90	81.0 - 86.0	160.90 - 155.90	BR
SHP-2016-06B	Nearfield Area	Semiannual	241.89	102.0 -112.0	139.89 - 129.89	BR
SHP-2016-06C	Nearfield Area	Semiannual	241.92	123.0 - 133.0	118.92 - 108.92	BR
SHP-2016-1A	Nearfield Area	Semiannual	227.27	13.9 - 23.0	213.37 - 204.27	OB (shallow)
SHP-2016-1B	Nearfield Area	Semiannual	227.24	75.0 - 85.0	152.24 - 142.24	OB (deep)
SHP-2016-2A	Nearfield Area	Semiannual	225.93	20.0 - 25.0	205.93 - 200.93	OB (shallow)
SHP-2016-2B	Nearfield Area	Semiannual	225.95	80.0 - 85.0	145.95 - 140.95	OB (deep)
SHP-2016-3A	Nearfield Area	Semiannual	223.18	20.0 - 25.0	203.18 - 198.18	OB (shallow)
SHP-2016-3B	Nearfield Area	Semiannual	223.18	80.0 - 85.0	143.18 - 138.18	OB (deep)
SHP-2016-4A	Nearfield Area	Semiannual	229.97	25.0 - 30.0	204.97 - 199.97	OB (shallow)
SHP-2016-4B	Nearfield Area	Semiannual	229.75	85.0 - 90.0	144.75 - 139.75	OB (deep)

Table 2
LTMMP Sampling Program
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Location	Monitoring Frequency	TOR Elevation (feet NAVD88)	Screen Interval (feet bgs)	Screen Elevation (feet NAVD88)	Formation Type at Screen Interval
SHP-2016-5A	Nearfield Area	Semiannual	227.01	25.0 - 30.0	202.01 - 197.01	OB (shallow)
SHP-2016-5B	Nearfield Area	Semiannual	226.95	85.0 - 90.0	141.95 - 136.95	OB (deep)
SHM-05-39A[b]	Northern Impact Area	Annual	221.53	37.0 - 39.0	184.53 - 182.53	OB (mid)
SHM-05-39B[b]	Northern Impact Area	Annual	221.51	66.0 - 68.0	155.51 - 153.51	OB (deep)
SHM-05-40X	Northern Impact Area	Semiannual	223.19	32.0 - 34.0	191.34 - 189.34	OB (mid)/Till
SHM-07-03	Northern Impact Area	Semiannual	227.90	25.0 - 35.0	202.90 - 192.90	OB (shallow)
SHM-07-05X	Northern Impact Area	Semiannual	223.40	56.0 - 66.0	167.40 - 157.40	OB (mid)
SHM-10-02	Northern Impact Area	Annual	223.03	53.0 - 63.0	170.03 - 160.03	OB (mid)
SHM-10-03	Northern Impact Area	Annual	232.05	58.5 - 68.5	173.55 - 163.55	OB (mid)
SHM-10-04	Northern Impact Area	Annual	212.61	55.0 - 65.0	157.61 - 147.61	OB (mid)
SHM-10-05A	Northern Impact Area	Annual	235.09	50.0 - 60.0	185.09 - 175.09	OB (mid)
SHM-10-08	Northern Impact Area	Annual	214.36	46.0 - 56.0	168.36 - 158.36	OB (deep)/Till
SHM-10-10	Northern Impact Area	Annual	217.11	56.0 - 66.0	161.11 - 151.11	OB (deep)/Till
SHM-13-01	Northern Impact Area	Annual	208.08	39.0 - 49.0	169.08 - 159.08	OB (mid)
SHM-13-02	Northern Impact Area	Annual	218.72	60.0 - 70.0	158.72 - 148.72	OB (deep)
SHM-13-03	Northern Impact Area	Semiannual	212.05	42.0 - 52.0	170.05 - 160.05	OB (deep)/Till
SHM-13-04	Northern Impact Area	Semiannual	227.02	20.0 - 30.0	207.02 - 197.02	OB (shallow)
SHM-13-05	Northern Impact Area	Annual	225.14	75.0 - 85.0	150.14 - 140.14	OB (deep)
SHM-13-06	Northern Impact Area	Semiannual	223.89	36.0 - 46.0	187.89 - 177.89	OB (deep)
SHM-13-07	Northern Impact Area	Semiannual	225.64	27.0 - 37.0	198.64 - 188.64	Unknown
SHM-13-08	Northern Impact Area	Semiannual	227.90	55.0 - 65.0	172.90 - 162.90	OB (mid)/Till
SHM-13-14D	Northern Impact Area	Annual	210.48	45.0 - 55.0	165.68 - 155.68	OB (deep)
SHM-13-14S	Northern Impact Area	Annual	210.55	5.0 - 15.0	206.03 - 196.03	OB (shallow)
SHM-13-15	Northern Impact Area	Annual	210.58	50.0 - 60.0	160.58 - 150.58	OB (deep)
SHM-99-31A[b]	Northern Impact Area	Annual	214.34	4.0 - 14.0	210.34 - 200.34	OB (shallow)
SHM-99-31B[b]	Northern Impact Area	Annual	214.39	50.0 - 60.0	164.39 - 154.39	OB (mid)
SHM-99-31C	Northern Impact Area	Annual	214.60	68.0 - 78.0	146.60 - 136.60	OB (deep)
SHM-99-32X	Northern Impact Area	Annual	221.28	72.0 - 82.0	149.28 - 139.28	OB (deep)
SHL-12	Upgradient Area	Annual	248.62	15.0 - 30.0	233.62 - 218.62	OB
SHL-15	Upgradient Area	Annual	259.92	14.5 - 24.5	245.42 - 235.42	OB
SHL-24	Upgradient Area	Annual	238.75	110.0 - 120.0[a]	128.75 - 118.75	OB//Till/BR
SHL-7	Upgradient Area	Annual	236.33	11.0 - 21.0	225.33 - 215.33	OB
SHM-93-18B	Upgradient Area	Annual	237.31	78.5 - 88.5	158.81 - 148.81	OB
SHM-93-24A	Upgradient Area	Annual	238.42	13.2 - 23.2	225.22 - 215.22	OB

Notes:
1. TOR elevations from November 2017 Shepley's Hill Landfill (SHL) survey data (North American Vertical Datum [NAVD] 1988)
2, Locations compiled from the SHL LTMMP Update (Sovereign Consulting, Inc. 2015) and LTMMP Addendum (KOMAN Government Solutions, LLC 2018).
3. [a] Estimated value derived from Supplemental Groundwater Investigation (Harding ESE 2003).
4. [b] Location added to LTMMP list in response to United States Environmental Protection Agency (USEPA) informal dispute resolution letter dated (USEPA 2016).

Acronyms and Abbreviations:
amsl = above mean sea level (NAVD 88)
ATP = arsenic treatment plant
bgs = below ground surface
BR = bedrock
DQO = data quality objective
LTM = long-term monitoring
LTMMP = Long-Term Monitoring and Maintenance Plan
OB = overburden
TOR = top of riser

References:
Harding ESE. 2003. Shepley's Hill Landfill Supplemental Groundwater Investigation, Devens, Massachusetts. February.
KOMAN Government Solutions, LLC. 2018. Addendum to the Long-Term Monitoring and Maintenance Plan Update, Shepley's Hill Landfill, Landfill, Former Fort Devens Army Installation, Devens, MA. January 25.
Sovereign Consulting, Inc. 2015. Long-Term Monitoring and Maintenance Plan Update, Former Fort Devens Army Installation, Devens, Massachusetts. August.
USEPA. 2016. Former Fort Devens Installation – Dispute Resolution 2015 Devens Five Year Review (FYR) Report. February 24.

Table 3
LTMMP Hydraulic Monitoring Program
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Location	Monitoring Frequency	TOR Elevation (feet NAVD88)	Screen Interval (feet bgs)	Screen Elevation (feet NAVD88)	Formation Type at Screen Interval
N1-P1	Barrier Wall	Annual	229.92	65.0 - 70.0	164.92 - 159.92	OB (deep)
N1-P2	Barrier Wall	Annual	229.93	40.0 - 45.0	189.93 - 184.93	OB (mid)
N1-P3	Barrier Wall	Annual	230.08	12.0 - 17.0	218.08 - 213.08	OB (shallow)
N2-P1	Barrier Wall	Annual	222.01	35.0 - 40.0	187.01 - 182.01	BR
N2-P2	Barrier Wall	Annual	222.16	4.0 - 9.0	218.16 - 213.16	OB (shallow)
N3-P1	Barrier Wall	Annual	220.83	33.0 - 35.0*	187.83 - 185.83	BR
N3-P2	Barrier Wall	Annual	220.84	4.0 - 9.0*	216.84 - 211.84	OB (shallow)
PZ-12-01	Barrier Wall	Semiannual	237.55	24.0 - 34.0	213.55 - 203.55	OB (shallow)
PZ-12-02	Barrier Wall	Semiannual	237.79	24.0 - 34.0	213.79 - 203.79	OB (shallow)
PZ-12-03	Barrier Wall	Semiannual	236.40	22.0 - 32.0	214.40 - 204.40	OB (shallow)
PZ-12-04	Barrier Wall	Semiannual	238.20	22.0 - 32.0	216.20 - 206.20	OB (shallow)
PZ-12-05	Barrier Wall	Semiannual	238.73	26.0 - 36.0	212.73 - 202.73	OB (mid)
PZ-12-06	Barrier Wall	Semiannual	242.18	26.0 - 36.0	216.18 - 206.18	OB (mid)
PZ-12-07	Barrier Wall	Semiannual	244.59	18.0 - 28.0	226.59 - 216.59	OB (mid)
PZ-12-08	Barrier Wall	Semiannual	244.83	18.0 - 28.0	226.83 - 216.83	OB (mid)
PZ-12-09	Barrier Wall	Semiannual	241.93	22.0 - 32.0	219.93 - 209.93	OB (shallow)
PZ-12-10	Barrier Wall	Semiannual	242.28	22.0 - 32.0	220.28 - 210.28	OB (shallow)
SHL-10	Barrier Wall	Annual	248.02	24.0 - 39.0	224.02 - 216.02	OB (shallow)
SHL-11	Barrier Wall	Annual	235.47	12.0 - 27.0	223.47 - 208.47	OB (shallow)
SHL-19	Barrier Wall	Annual	238.43	20.0 - 30.0	220.50 - 210.50	OB (shallow)
SHL-20	Barrier Wall	Annual	235.95	39.0 - 49.0	196.95 - 186.95	OB (deep)
SHL-3	Barrier Wall	Annual	246.95	24.0 - 34.0	222.95 - 212.95	OB (mid)
SHL-4	Barrier Wall	Annual	225.50	3.0 - 13.0	224.48 - 214.48	OB (shallow)
SHM-11-02	Barrier Wall	Annual	240.73	39.0 - 49.0	201.73 - 191.73	BR
SHM-11-06	Barrier Wall	Annual	236.17	25.0 - 35.0	211.17 - 201.17	OB (shallow)
SHM-11-07	Barrier Wall	Annual	240.83	41.0 - 46.0	199.83 - 194.83	BR
SHM-93-10D	Barrier Wall	Annual	248.01	46.0 - 56.0	202.01 - 192.01	BR
SHP-01-36X	Barrier Wall	Annual	223.95	3.0 - 8.0	220.95 - 215.95	OB (shallow)
SHP-01-37X	Barrier Wall	Annual	222.79	1.0 - 6.0	221.79 - 216.79	OB (shallow)
SHP-01-38A	Barrier Wall	Annual	218.77	1.5 - 6.5	219.36 - 214.36	OB (shallow)
SHP-01-38B	Barrier Wall	Annual	221.03	18.0 - 23.0	203.03 - 198.03	OB (deep)
SHP-05-43	Barrier Wall	Annual	260.71	50.5 - 60.5	209.67 - 199.67	OB (shallow)
SHP-05-44	Barrier Wall	Annual	258.14	51.0 - 61.0	207.55 - 197.55	OB (mid)
N5-P1	Landfill Area	Annual	242.65	95.5 - 97.5	147.15 - 145.15	BR
N5-P2	Landfill Area	Annual	242.69	23.0 - 28.0*	219.69 - 214.69	BR
N6-P1	Landfill Area	Annual	259.02	85.5 - 87.5*	173.52 - 171.52	BR
SHL-18	Landfill Area	Annual	235.71	16.0 - 26.0	221.56 - 211.56	OB
SHM-10-07	Landfill Area	Annual	246.82	40.0 - 50.0	206.82 - 196.82	OB (mid)
SHM-10-11	Landfill Area	Annual	263.76	50.0 - 60.0	213.76 - 203.76	OB (deep)
SHM-10-12	Landfill Area	Annual	255.17	45.0 - 55.0	210.17 - 200.17	OB (mid)
SHM-10-13	Landfill Area	Annual	244.77	60.0 - 70.0	184.77 - 174.77	OB (deep)
SHM-10-14	Landfill Area	Annual	237.62	60.0 - 80.0	177.62 - 157.62	OB (deep)
SHM-10-15	Landfill Area	Annual	243.68	45.0 - 55.0	198.68 - 188.68	OB (mid)
SHM-93-18B	Landfill Area	Annual	237.31	78.5 - 88.5	158.81 - 148.81	OB
SHP-2016-07A	Landfill Area	Semiannual	265.30	22.0 - 32.0	243.30 - 233.30	BR
SHP-2016-07B	Landfill Area	Semiannual	265.33	70.0 - 80.0	195.33 - 185.33	BR
SHP-95-27X	Landfill Area	Annual	237.45	30.5 - 40.5	206.95 - 196.95	OB
SHP-99-01C	Landfill Area	Annual	274.15	19.7 - 29.7	254.45 - 244.45	BR
SHP-99-29X	Landfill Area	Annual	243.34	19.0 - 29.0	254.16 - 244.16	OB (shallow)
SHP-99-35X	Landfill Area	Annual	258.49	30.2 - 40.2	228.29 - 218.29	OB (shallow)
EPA-PZ-2012-1A	Nearfield Area	Semiannual	223.79	20.0 - 25.0	203.79 - 198.79	OB (shallow)
EPA-PZ-2012-1B	Nearfield Area	Semiannual	223.53	70.0 - 75.0	153.53 - 148.53	OB (deep)
EPA-PZ-2012-2A	Nearfield Area	Semiannual	223.38	20.0 - 25.0	203.38 - 198.38	OB (shallow)
EPA-PZ-2012-2B	Nearfield Area	Semiannual	223.37	75.0 - 80.0	148.37 - 143.47	OB (deep)
EPA-PZ-2012-3A	Nearfield Area	Semiannual	222.65	20.0 - 25.0	202.65 - 197.65	OB (shallow)
EPA-PZ-2012-3B	Nearfield Area	Semiannual	222.57	70.0 - 75.0	152.57 - 147.57	OB (deep)
EPA-PZ-2012-4A	Nearfield Area	Semiannual	226.60	20.0 - 25.0	206.60 - 201.60	OB (shallow)
EPA-PZ-2012-4B	Nearfield Area	Semiannual	226.39	70.0 - 75.0	156.39 - 151.39	OB (deep)
EPA-PZ-2012-5A	Nearfield Area	Semiannual	220.01	20.0 - 25.0	200.01 - 195.01	OB (shallow)
EPA-PZ-2012-5B	Nearfield Area	Semiannual	219.38	80.0 - 85.0	139.38 - 134.38	OB (deep)
EPA-PZ-2012-6A	Nearfield Area	Semiannual	234.25	25.0 - 30.0	209.25 - 204.25	OB (shallow)
EPA-PZ-2012-6B	Nearfield Area	Semiannual	234.08	75.0 - 80.0	159.08 - 154.08	OB (deep)
EPA-PZ-2012-7A	Nearfield Area	Semiannual	234.16	25.0 - 30.0	209.16 - 204.16	OB (shallow)
EPA-PZ-2012-7B	Nearfield Area	Semiannual	234.03	60.0 - 65.0	174.03 - 169.03	OB (deep)
SHL-13	Nearfield Area	Annual	220.71	5.0 - 20.0	215.71 - 200.71	OB (shallow)
SHL-22	Nearfield Area	Annual	219.58	105.0 - 115.0	114.58 - 104.58	OB (deep)/Till
SHL-23	Nearfield Area	Annual	241.29	23.0 - 33.0	218.29 - 208.29	OB
SHL-5	Nearfield Area	Annual	216.81	3.0 - 13.0	214.60 - 204.60	OB (shallow)
SHL-8D	Nearfield Area	Annual	220.78	68.0 - 70.0	152.78 - 150.78	OB (deep)
SHL-8S	Nearfield Area	Annual	220.97	52.0 - 54.0	168.97 - 166.97	OB (shallow)
SHL-9	Nearfield Area	Annual	220.88	15.0 - 25.0	206.95 - 196.95	OB (shallow)
SHM-05-41A	Nearfield Area	Annual	222.48	42.0 - 44.0	180.48 - 178.48	OB (shallow)
SHM-05-41B	Nearfield Area	Annual	222.33	62.0 - 64.0	160.33 - 158.33	OB (mid)
SHM-05-41C	Nearfield Area	Annual	222.57	88.0 - 93.0	134.57 - 129.57	OB (deep)/Till
SHM-05-42A	Nearfield Area	Annual	216.81	40.0 - 42.0	176.81 - 174.81	OB (shallow)
SHM-05-42B	Nearfield Area	Annual	216.80	70.0 - 72.0	146.80 - 144.80	OB (mid)
SHM-10-06	Nearfield Area	Annual	232.91	69.5 - 79.5	163.41 - 153.41	OB (deep)
SHM-10-06A	Nearfield Area	Annual	248.54	77.0 - 87.0	171.54 - 161.54	OB (deep)

Table 3
LTMMP Hydraulic Monitoring Program
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Location	Monitoring Frequency	TOR Elevation (feet NAVD88)	Screen Interval (feet bgs)	Screen Elevation (feet NAVD88)	Formation Type at Screen Interval
SHM-10-16	Nearfield Area	Annual	219.23	75.0 - 85.0	144.23 - 134.23	OB (deep)
SHM-93-22B	Nearfield Area	Annual	219.39	82.3 - 92.3	137.09 - 127.09	OB (mid)
SHM-93-22C	Nearfield Area	Annual	220.69	124.3 - 134.3	96.39 - 86.39	BR
SHM-96-5B	Nearfield Area	Annual	218.92	80.0 - 90.0	138.92 - 128.92	OB
SHM-96-5C	Nearfield Area	Annual	218.39	50.0 - 60.0	168.39 - 158.39	OB (mid)
SHP-05-45A	Nearfield Area	Annual	228.48	20.0 - 25.0	208.48 - 203.48	OB (shallow)
SHP-05-45B	Nearfield Area	Annual	229.11	65.0 - 75.0	164.11 - 154.11	OB (mid)
SHP-05-46A	Nearfield Area	Annual	228.18	20.0 - 25.0	208.18 - 203.18	OB (mid)
SHP-05-46B	Nearfield Area	Annual	227.60	65.0 - 75.0	162.60 - 152.60	OB (shallow)
SHP-05-47A	Nearfield Area	Annual	217.39	1.0 - 2.0	216.39 - 215.39	OB (shallow)
SHP-05-47B	Nearfield Area	Annual	215.40	3.0 - 4.0	212.40 - 211.40	OB (shallow)
SHP-2016-06A	Nearfield Area	Semiannual	241.90	81.0 - 86.0	160.90 - 155.90	BR
SHP-2016-06B	Nearfield Area	Semiannual	241.89	102.0 -112.0	139.89 - 129.89	BR
SHP-2016-06C	Nearfield Area	Semiannual	241.92	123.0 - 133.0	118.92 - 108.92	BR
SHP-2016-1A	Nearfield Area	Semiannual	227.27	13.9 - 23.0	213.37 - 204.27	OB (shallow)
SHP-2016-1B	Nearfield Area	Semiannual	227.24	75.0 - 85.0	152.24 - 142.24	OB (deep)
SHP-2016-2A	Nearfield Area	Semiannual	225.93	20.0 - 25.0	205.93 - 200.93	OB (shallow)
SHP-2016-2B	Nearfield Area	Semiannual	225.95	80.0 - 85.0	145.95 - 140.95	OB (deep)
SHP-2016-3A	Nearfield Area	Semiannual	223.18	20.0 - 25.0	203.18 - 198.18	OB (shallow)
SHP-2016-3B	Nearfield Area	Semiannual	223.18	80.0 - 85.0	143.18 - 138.18	OB (deep)
SHP-2016-4A	Nearfield Area	Semiannual	229.97	25.0 - 30.0	204.97 - 199.97	OB (shallow)
SHP-2016-4B	Nearfield Area	Semiannual	229.75	85.0 - 90.0	144.75 - 139.75	OB (deep)
SHP-2016-5A	Nearfield Area	Semiannual	227.01	25.0 - 30.0	202.01 - 197.01	OB (shallow)
SHP-2016-5B	Nearfield Area	Semiannual	226.95	85.0 - 90.0	141.95 - 136.95	OB (deep)
SHP-2017-01	Nearfield Area	Semiannual	229.63	74.0 - 79.0	155.63 - 150.63	OB
SHP-2017-02	Nearfield Area	Semiannual	230.05	89.5 - 94.5	140.55 - 135.55	Overburden
SHM-05-39A	Northern Impact Area	Annual	221.53	37.0 - 39.0	184.53 - 182.53	OB (mid)
SHM-05-39B	Northern Impact Area	Annual	221.51	66.0 - 68.0	155.51 - 153.51	OB (deep)
SHM-05-40X	Northern Impact Area	Semiannual	223.34	32.0 - 34.0	191.34 - 189.34	OB (mid)/Till
SHM-07-03	Northern Impact Area	Semiannual	227.90	25.0 - 35.0	202.90 - 192.90	OB (shallow)
SHM-07-05X	Northern Impact Area	Semiannual	223.40	56.0 - 66.0	167.40 - 157.40	BR
SHM-10-01	Northern Impact Area	Annual	209.65	60.5 - 70.5	149.15 - 139.15	OB (deep)/Till
SHM-10-02	Northern Impact Area	Annual	223.03	53.0 - 63.0	170.03 - 160.03	OB (mid)
SHM-10-03	Northern Impact Area	Annual	232.05	58.5 - 68.5	173.55 - 163.55	OB (mid)
SHM-10-04	Northern Impact Area	Annual	212.61	55.0 - 65.0	157.61 - 147.61	OB (mid)
SHM-10-05A	Northern Impact Area	Annual	235.09	50.0 - 60.0	185.09 - 175.09	OB (mid)
SHM-10-08	Northern Impact Area	Annual	214.36	46.0 - 56.0	168.36 - 158.36	OB (deep)/Till
SHM-10-10	Northern Impact Area	Annual	217.11	56.0 - 66.0	161.11 - 151.11	OB (deep)/Till
SHM-13-01	Northern Impact Area	Annual	208.08	39.0 - 49.0	169.08 - 159.08	OB (mid)
SHM-13-02	Northern Impact Area	Annual	218.72	60.0 - 70.0	158.72 - 148.72	OB (deep)
SHM-13-03	Northern Impact Area	Semiannual	212.05	42.0 - 52.0	170.05 - 160.05	OB (deep)/Till
SHM-13-04	Northern Impact Area	Semiannual	227.02	20.0 - 30.0	207.02 - 197.02	OB (shallow)
SHM-13-05	Northern Impact Area	Annual	225.14	75.0 - 85.0	150.14 - 140.14	OB (deep)
SHM-13-06	Northern Impact Area	Semiannual	223.89	36.0 - 46.0	187.89 - 177.89	OB (deep)/Till
SHM-13-07	Northern Impact Area	Semiannual	225.64	27.0 - 37.0	198.64 - 188.64	Unknown
SHM-13-08	Northern Impact Area	Semiannual	227.90	55.0 - 65.0	172.90 - 162.90	OB (mid)/Till
SHM-13-14D	Northern Impact Area	Annual	210.68	45.0 - 55.0	165.68 - 155.68	OB (deep)
SHM-13-14S	Northern Impact Area	Annual	211.03	5.0 - 15.0	206.03 - 196.03	OB (shallow)
SHM-13-15	Northern Impact Area	Annual	210.58	50.0 - 60.0	160.58 - 150.58	OB (deep)
SHM-99-31A	Northern Impact Area	Annual	214.34	4.0 - 14.0	210.34 - 200.34	OB (shallow)
SHM-99-31B	Northern Impact Area	Annual	214.39	50.0 - 60.0	164.39 - 154.39	OB (mid)
SHM-99-31C	Northern Impact Area	Annual	214.60	68.0 - 78.0	146.60 - 136.60	OB (deep)
SHM-99-32X	Northern Impact Area	Annual	221.28	72.0 - 82.0	149.28 - 139.28	OB (deep)
SHM-99-34B	Northern Impact Area	Annual	224.91	74.5-79.5	150.40 - 145.40	OB (deep)
SHP-05-48A	Northern Impact Area	Annual	217.31	1.0 - 2.0	216.31 - 215.31	OB (shallow)
SHP-05-48B	Northern Impact Area	Annual	215.96	2.0 - 3.0	213.96 - 212.96	OB (shallow)
SHP-05-49A	Northern Impact Area	Annual	216.67	1.0 - 2.0	215.67 - 214.67	OB (shallow)
SHP-05-49B	Northern Impact Area	Annual	215.14	2.5 - 3.5	212.64 - 211.64	OB (shallow)
SHSG-13-01G	Surface Water	Annual	205.53	NA	NA	Staff Gauge
SHSG-13-02G	Surface Water	Annual	205.01	NA	NA	Staff Gauge
SHSG-13-03G	Surface Water	Annual	209.99	NA	NA	Staff Gauge
SHSG-14-01G	Surface Water	Annual	213.01	NA	NA	Staff Gauge
N7-P1	Upgradient Area	Annual	255.59	66.0 - 68.0[a]	189.59 - 187.59	BR
N7-P2	Upgradient Area	Annual	256.04	29.0 - 34.0[a]	227.04 - 222.04	OB
SHL-12	Upgradient Area	Annual	248.62	15.0 - 30.0	233.62 - 218.62	OB
SHL-15	Upgradient Area	Annual	258.83	14.5 - 24.5	245.42 - 235.42	OB
SHL-17	Upgradient Area	Annual	233.79	6.0 - 16.0	227.79 - 217.79	OB
SHL-24	Upgradient Area	Annual	238.75	110.0 - 120.0[a]	128.75 - 118.75	OB/Till/BR
SHL-7	Upgradient Area	Annual	236.33	11.0 - 21.0	225.33 - 215.33	OB
SHM-93-24A	Upgradient Area	Annual	238.42	13.2 - 23.2	225.22 - 215.22	OB

Table 3
LTMMP Hydraulic Monitoring Program
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Location	Monitoring Frequency	TOR Elevation (feet NAVD88)	Screen Interval (feet bgs)	Screen Elevation (feet NAVD88)	Formation Type at Screen Interval

Notes:

1. TOR elevations from November 2017 Shepley's Hill Landfill (SHL) survey data (North American Vertical Datum [NAVD] 1988)
2. Locations compiled from the SHL LTMMP Update (Sovereign Consulting, Inc. 2015) and LTMMP Addendum (KOMAN Government Solutions, LLC 2018).
3. [a] Estimated value derived from Supplemental Groundwater Investigation (Harding ESE 2003).

Acronyms and Abbreviations:

bgs = below ground surface
BR = bedrock
LTMMP = Long-Term Monitoring and Maintenance Plan
NA = not applicable
OB = overburden
TOR = top of riser

References:

Harding ESE. 2003. Shepley's Hill Landfill Supplemental Groundwater Investigation, Devens, Massachusetts. February.

KOMAN Government Solutions, LLC. 2018. Addendum to the Long-Term Monitoring and Maintenance Plan Update, Shepley's Hill Landfill, Former Fort Devens Army Installation, Devens, MA. January 25.

Sovereign Consulting, Inc. 2015. Long-Term Monitoring and Maintenance Plan Update, Former Fort Devens Army Installation, Devens, Massachusetts. August.

Table 4
Hydraulic Monitoring Data for Spring and Fall 2022
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well Identification	Screen Interval (ft bmp)	Formation Type	Measurement Included on Contour Maps (Y/N)?
Nearfield Area	EPA-PZ-2012-1A	23.88 -28.88	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-1B	23.72 - 78.72	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-2A	23.66 - 28.66	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-2B	78.62 - 83.62	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-3A	23.45 - 28.45	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-3B	73.32 - 78.32	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-4A	23.30 - 28.30	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-4B	72.88 - 77.88	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-5A	23.68 - 28.68	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-5B	83.18 - 88.18	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-6A	28.54 - 33.54	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-6B	78.23 - 83.23	OB (deep)	N; deep OB paired well
Nearfield Area	EPA-PZ-2012-7A	24.74 - 29.74	OB (shallow)	Y
Nearfield Area	EPA-PZ-2012-7B	59.75 - 64.75	OB (deep)	N; deep OB paired well
Barrier Wall	N1-P1	67.14 - 72.14	OB (deep)	N; deep OB paired well
Barrier Wall	N1-P2	42.15 - 47.15	OB (mid)	N; deep OB paired well
Barrier Wall	N1-P3	14.30 - 19.30	OB (shallow)	Y
Barrier Wall	N2-P1	36.46 - 41.46	BR	N; bedrock well
Barrier Wall	N2-P2	5.61 - 10.61	OB (shallow)	Y
Barrier Wall	N3-P1	35.02 - 37.02	BR	N; bedrock well
Barrier Wall	N3-P2	6.03 - 11.03	OB (shallow)	Y
Landfill Area	N5-P1	97.69 - 99.69	BR	N; bedrock well
Landfill Area	N5-P2	25.23 - 30.23	BR	N; bedrock well
Landfill Area	N6-P1	88.39 - 90.39	BR	N; bedrock well
Upgradient Area	N7-P1	68.41 - 70.41	BR	N; bedrock well
Upgradient Area	N7-P2	31.86 - 36.86	OB	Y
Barrier Wall	PZ-12-01	27.70 - 37.70	OB (shallow)	Y
Barrier Wall	PZ-12-02	28.04 - 38.04	OB (shallow)	Y
Barrier Wall	PZ-12-03	27.55 - 37.55	OB (shallow)	Y
Barrier Wall	PZ-12-04	27.15 - 37.15	OB (shallow)	Y
Barrier Wall	PZ-12-05	28.65 - 38.65	OB (mid)	Y
Barrier Wall	PZ-12-06	28.76 - 38.76	OB (mid)	Y
Barrier Wall	PZ-12-07	23.79 - 33.79	OB (mid)	Y
Barrier Wall	PZ-12-08	21.09 - 35.09	OB (mid)	Y
Barrier Wall	PZ-12-09	23.50 - 33.50	OB (shallow)	Y
Barrier Wall	PZ-12-10	23.30 - 33.30	OB (shallow)	Y
Barrier Wall	SHL-10	25.40 - 40.40	OB (shallow)	Y
Barrier Wall	SHL-11	13.52 - 28.52	OB (shallow)	Y
Upgradient Area	SHL-12	16.40 - 31.40	OB	Y
Nearfield Area	SHL-13	6.73 - 21.73	OB (shallow)	Y
Upgradient Area	SHL-15	15.40 - 25.40	OB	Y
Upgradient Area	SHL-17	7.91 - 17.91	OB	Y
Landfill Area	SHL-18	7.89 - 27.89	OB	Y
Barrier Wall	SHL-19	21.91 - 31.91	OB (shallow)	Y
Barrier Wall	SHL-20	40.23 - 50.23	OB (deep)	Y
Nearfield Area	SHL-22	105.68 - 115.68	OB (deep)/Till	N; screened into till
Nearfield Area	SHL-23	24.85 - 34.85	OB	Y
Upgradient Area	SHL-24	111.96 - 121.96	OB (deep)	N; deep OB paired well
Barrier Wall	SHL-3	25.15 - 35.15	OB (mid)	Y
Barrier Wall	SHL-4	4.40 - 14.40	OB (shallow)	Y
Nearfield Area	SHL-5	3.70 - 13.70	OB (shallow)	Y
Upgradient Area	SHL-7	12.55 - 22.55	OB	Y
Nearfield Area	SHL-8D	70.95 - 72.95	OB (deep)	N; deep OB paired well
Nearfield Area	SHL-8S	54.14 - 56.14	OB (shallow)	Y
Nearfield Area	SHL-9	16.23 - 26.23	OB (shallow)	Y
North Impact Area	SHM-05-39A	36.74 - 38.74	OB (mid)	Y
North Impact Area	SHM-05-39B	65.74 - 67.74	OB (deep)	N; deep OB paired well
North Impact Area	SHM-05-40X	31.93 - 33.93	OB (mid)	Y
Nearfield Area	SHM-05-41A	41.76 - 43.76	OB (shallow)	Y
Nearfield Area	SHM-05-41B	61.83 - 63.83	OB (mid)	N; deep OB paired well
Nearfield Area	SHM-05-41C	97.66 - 92.66	OB (deep)	N; deep OB paired well
Nearfield Area	SHM-05-42A	43.16 - 45.16	OB (shallow)	Y
Nearfield Area	SHM-05-42B	73.15 - 75.15	OB (mid)	N; deep OB paired well
North Impact Area	SHM-07-03	24.94 - 34.94	OB (shallow)	N; well destroyed
North Impact Area	SHM-07-05X	54.83 - 64.83	BR	N; bedrock well
North Impact Area	SHM-10-01	63.46 - 73.46	OB (deep)	Y
North Impact Area	SHM-10-02	55.84 - 65.84	OB (mid)	Y
North Impact Area	SHM-10-03	60.78 - 70.78	OB (mid)	Y
North Impact Area	SHM-10-04	57.61 - 67.61	OB (mid)	Y
North Impact Area	SHM-10-05A	49.68 - 59.68	OB (mid)	Y
Nearfield Area	SHM-10-06	72.38 -82.38	OB (deep)	Y
Nearfield Area	SHM-10-06A	79.58 - 89.58	OB (deep)	Y
Landfill Area	SHM-10-07	41.84 - 51.84	OB (mid)	Y
North Impact Area	SHM-10-08	48.50 - 58.50	OB (deep)	Y
North Impact Area	SHM-10-10	57.71 - 67.71	OB (deep)	Y
Landfill Area	SHM-10-11	52.60 - 62.60	OB (deep)	Y
Landfill Area	SHM-10-12	47.60 - 57.60	OB (mid)	Y
Landfill Area	SHM-10-13	63.26 - 73.26	OB (deep)	Y
Landfill Area	SHM-10-14	62.82 - 82.82	OB (deep)	Y
Landfill Area	SHM-10-15	46.73 - 56.73	OB (mid)	Y
Nearfield Area	SHM-10-16	77.51 - 87.51	OB (deep)	Y
Barrier Wall	SHM-11-02	41.07 - 51.07 [a]	BR	N; bedrock well
Barrier Wall	SHM-11-06	27.84 - 37.84	OB (shallow)	Y
Barrier Wall	SHM-11-07	43.61 - 48.61	BR	N; bedrock well
North Impact Area	SHM-13-01	41.31 - 51.31	OB (mid)	Y
North Impact Area	SHM-13-02	61.80 - 71.80	OB (deep)	Y
North Impact Area	SHM-13-03	44.14 - 54.14	OB (deep)	Y
North Impact Area	SHM-13-04	19.68 - 29.68	OB (shallow)	Y

Table 4
Hydraulic Monitoring Data for Spring and Fall 2022
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well Identification	Screen Interval (ft bmp)	Formation Type	Measurement Included on Contour Maps (Y/N)?
North Impact Area	SHM-13-05	74.75 - 84.75	OB (deep)	Y
North Impact Area	SHM-13-06	35.66 - 45.66	OB (deep)	Y
North Impact Area	SHM-13-07	26.53 - 36.53	OB (shallow)	Y
North Impact Area	SHM-13-08	54.71 - 64.71	OB (deep)	Y
North Impact Area	SHM-13-14D	48.20 - 58.20	OB (deep)	N; deep OB paired well
North Impact Area	SHM-13-14S	8.36 - 18.36	OB (shallow)	Y
North Impact Area	SHM-13-15	54.60 - 64.60	OB (deep)	Y
Barrier Wall	SHM-93-10D	48.70 - 58.70 [a]	BR	N; bedrock well
Landfill Area	SHM-93-18B	80.60 - 90.60	OB	N; deep OB paired well
Nearfield Area	SHM-93-22B	82.55 - 92.55	OB (mid)	Y
Nearfield Area	SHM-93-22C	126.07 - 136.07	BR	N; bedrock well
Upgradient Area	SHM-93-24A	16.23 - 26.23	OB	Y
Nearfield Area	SHM-96-5B	81.54 - 91.54	OB (deep)/Till	N; deep OB paired well
Nearfield Area	SHM-96-5C	51.0 - 61.0	OB (mid)	N; deep OB paired well
North Impact Area	SHM-99-31A	5.52 - 15.52	OB (shallow)	Y
North Impact Area	SHM-99-31B	51.87 - 61.87	OB (mid)	N; deep OB paired well
North Impact Area	SHM-99-31C	69.96 - 79.96	OB (deep)	N; deep OB paired well
North Impact Area	SHM-99-32X	74.16 - 84.16	OB (deep)	Y
Barrier Wall	SHP-01-36X	6.96 - 11.98	OB (shallow)	Y
Barrier Wall	SHP-01-37X	5.12 - 10.12	OB (shallow)	Y
Barrier Wall	SHP-01-38A	3.59 - 8.59	OB (shallow)	Y
Barrier Wall	SHP-01-38B	20.15 - 25.15	OB (deep)	N; deep OB paired well
Barrier Wall	SHP-05-43	52.29 - 62.29	OB (shallow)	Y
Barrier Wall	SHP-05-44	53.99 - 63.99	OB (mid)	Y
Nearfield Area	SHP-05-45A	22.16 - 27.16	OB (shallow)	Y
Nearfield Area	SHP-05-45B	67.39 - 77.39	OB (mid)	N; deep OB paired well
Nearfield Area	SHP-05-46A	21.87 - 26.87	OB (shallow)	Y
Nearfield Area	SHP-05-46B	66.57 - 76.57	OB (mid)	N; deep OB paired well
Nearfield Area	SHP-05-47A	5.04 - 6.04	OB (shallow)	Y
Nearfield Area	SHP-05-47B	5.07 - 6.07	OB (shallow)	N; deep OB paired well
North Impact Area	SHP-05-48A	5.22 - 6.22	OB (shallow)	N; well dry
North Impact Area	SHP-05-48B	4.93 - 5.93	OB (shallow)	N; deep OB paired well
North Impact Area	SHP-05-49A	5.33 - 6.33	OB (shallow)	Y
North Impact Area	SHP-05-49B	4.25 - 6.25	OB (shallow)	N; deep OB paired well
Nearfield Area	SHP-2016-06A	82.85 - 87.85	BR	N; bedrock well
Nearfield Area	SHP-2016-06B	103.84 - 113.84	BR	N; bedrock well
Nearfield Area	SHP-2016-06C	124.87 - 134.87	BR	N; bedrock well
Landfill Area	SHP-2016-07A	24.32 - 34.32	BR	N; bedrock well
Landfill Area	SHP-2016-07B	72.35 - 82.35	BR	N; bedrock well
Nearfield Area	SHP-2016-1A	15.59 - 25.59	OB (shallow)	Y
Nearfield Area	SHP-2016-1B	77.56 - 87.56	OB (deep)	N; deep OB paired well
Nearfield Area	SHP-2016-2A	22.20 - 27.20	OB (shallow)	Y
Nearfield Area	SHP-2016-2B	82.22 - 87.22	OB (deep)	N; deep OB paired well
Nearfield Area	SHP-2016-3A	22.05 - 27.05	OB (shallow)	Y
Nearfield Area	SHP-2016-3B	82.05 - 87.05	OB (deep)	N; deep OB paired well
Nearfield Area	SHP-2016-4A	27.40 - 32.40	OB (shallow)	Y
Nearfield Area	SHP-2016-4B	87.18 - 92.18	OB (deep)	N; deep OB paired well
Nearfield Area	SHP-2016-5A	27.13 - 32.13	OB (shallow)	Y
Nearfield Area	SHP-2016-5B	87.07 - 92.07	OB (deep)	N; deep OB paired well
Nearfield Area	SHP-2017-01	74.0 - 79.0	OB	Y
Nearfield Area	SHP-2017-02	89.5 - 94.5	OB	Y
Landfill Area	SHP-95-27X	32.64 - 42.64	OB	Y
Landfill Area	SHP-99-01C	21.69 - 31.69	BR	N; bedrock well
Landfill Area	SHP-99-29X	20.88 - 30.88	OB (shallow)	Y
North Impact Area	SHP-99-34B	76.72 - 81.72	OB (deep)	Y
Landfill Area	SHP-99-35X	31.96 - 41.96	OB (shallow)	Y
Surface Water	SHSG-13-01G	(4 ft mark)	Staff Gauge	N; cannot be accessed/viewed
Surface Water	SHSG-13-02G	(4 ft mark)	Staff Gauge	Y
Surface Water	SHSG-13-03G	(6 ft mark)	Staff Gauge	N; cannot be accessed/viewed
Surface Water	SHSG-14-01G	(3 ft mark)	Staff Gauge	Y

Notes:
1. TOR elevations from November 2017 Shepley's Hill Landfill (SHL) survey data (North American Vertical Datum [NAVD] 1
approximated based
2. * Water level measurement collected on 5/4/2022
3. -- = not measured

Acronyms and Abbreviations:
bmp = below measuring point
BR = bedrock
OB = overburden
TOR = top of riser (referenced measuring point)

Table 5
Historical Vertical Hydraulic Gradients
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Depth to Water Fall 2022 (feet below MPE)	Groundwater Elevation Fall 2022 (ft NAVD88)	Bottom of Screen (ft NAVD88)	Top of Screen (ft NAVD88)	Mid-Point of Screen (ft NAVD88)	Mid-Point of Screen Separation (ft)	Vertical Gradient Fall 2018	Vertical Gradient Fall 2019	Vertical Gradient Fall 2020	Vertical Gradient Fall 2021	Vertical Gradient Fall 2022
Upgradient Area											
N7-P2 (OB)	32.25	223.79	222.04	227.04	224.54	35.96	**-0.003**	**0.011**	**0.010**	**0.010**	**0.010**
N7-P1 (BR)	32.15	223.44	187.59	189.58	188.59						
Barrier Wall Area											
N2-P2 (OB)	5.42	216.74	213.16	218.16	215.66	31.15	**0.002**	**-0.006**	**-0.001**	**-0.001**	**0.002**
N2-P1 (BR)	5.34	216.67	182.01	187.01	184.51						
Nearfield Area											
SHM-93-22B (OB)	9.09	210.30	127.09	137.09	132.09	40.70	**-0.002**	**0.002**	**0.008**	**0.007**	**-0.002**
SHM-93-22C (BR)	10.29	210.40	86.39	96.39	91.39						
North Impact Area											
SHM-05-40X (OB)	15.73	207.46	189.34	191.34	190.34	27.94	**0.013**	**0.005**	**-0.009**	**0.004**	**0.003**
SHM-07-05X (BR)	16.01	207.39	167.40	157.40	162.40						

Acronyms and Abbrevations:
BR: bedrock
MPE: measuring point elevation
NAVD88: North American Vertical Datum of 1988
OB: overburden

Table 6
Spring 2022 LTM Analytical Results and Field Parameters
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	General Chemisty				Metals			Field Parameters					
		Analyte	Alkalinity	Chloride	DOC	Sulfate	Arsenic	Iron	Manganese	DO	ORP	pH	SPC	Temp	Turbidity
		Units	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mV	SU	µS/cm	°C	NTU
		Screening Limit[a]					10	9,100	1,715						
Location	Sample ID	Date													
EPA-PZ-2012-1A	EPA-PZ-2012-1A-SPR22	05/11/2022	57	0.99	2.3	1.8	1.8 J	400	320	0.58	111	5.83	0.02	11.6	1.9
EPA-PZ-2012-1B	EPA-PZ-2012-1B-SPR22	05/11/2022	140	36	1.6	14	**150**	**9,400**	**8,100**	0.52	-24.8	6.29	0.078	13.4	6.4
EPA-PZ-2012-2A	EPA-PZ-2012-2A-SPR22	05/12/2022	11	1.9	0.75 J	5.2	3 U	130 J	1.9 J	3.25	271	5.46	0.005	12.2	1.7
EPA-PZ-2012-2B	EPA-PZ-2012-2B-SPR22	05/12/2022	110	29	1.3	5.4	1.8 J	5,900	**4,200**	0.55	85.6	5.89	0.04	12.9	1.9
EPA-PZ-2012-3A	EPA-PZ-2012-3A-SPR22	05/05/2022	86	22	8.3	1 U	**17**	**15,000**	880	0.76	-19.3	5.73	0.19	10.3	2.03
EPA-PZ-2012-3B	EPA-PZ-2012-3B-SPR22	05/05/2022	140	33	1.8	17	**2,600**	**38,000**	**5,100**	0.75	-96.6	6.49	0.376	11.5	5.81
EPA-PZ-2012-4A	EPA-PZ-2012-4A-SPR22	05/10/2022	87	14	10	1.8	2.8 J	4,200	580	0.85	-41.8	6.34	0.243	18.2	34
EPA-PZ-2012-4B	EPA-PZ-2012-4B-SPR22	05/10/2022	120	33	1.9	17	**1,800**	**50,000**	770	0.82	-101	6.59	0.426	15.4	2.63
EPA-PZ-2012-4B	SHL-DUP04-SPR22	05/10/2022	100	33	1.9	17	**1,800**	**50,000**	750	---	---	---	---	---	---
EPA-PZ-2012-5A	EPA-PZ-2012-5A-SPR22	05/05/2022	25	14	6.9	3.9	1.4 J	5,800	87	0.76	43.8	5.3	0.079	10.2	2.77
EPA-PZ-2012-5B	EPA-PZ-2012-5B-SPR22	05/05/2022	150	44	1.4	15	1.5 J	140	**8,800**	0.8	33	6.14	0.33	11.1	1.41
EPA-PZ-2012-6A	EPA-PZ-2012-6A-SPR22	05/06/2022	38	39	1.1	4.5	3 U	50 U	5 U	7.08	132	5.97	0.169	13.6	2.25
EPA-PZ-2012-6B	EPA-PZ-2012-6B-SPR22	05/10/2022	31	4.1	1.3	3.6	**250**	**15,000**	800	0.83	-103	6.63	0.105	12.7	11.3
EPA-PZ-2012-7A	EPA-PZ-2012-7A-SPR22	05/12/2022	24	160	1.1	4.4	3 U	50 U	6.4 J	4.27	189	5.81	0.546	15.4	3.37
EPA-PZ-2012-7B	EPA-PZ-2012-7B-SPR22	05/12/2022	31	1.1	1.1	2.4	**1,300**	**15,000**	**3,100**	0.65	-107	6.74	0.101	12.3	3.99
EW-01	EW-01-SPR22	05/13/2022	200	18	4.8	3.7	**1,500**	**70,000**	**2,200**	---	---	---	---	---	---
EW-04	EW-04-SPR22	05/13/2022	100	6.3	2.2	4.3	**3,000**	**41,000**	**2,600**	---	---	---	---	---	---
PZ-12-01	PZ-12-01-SPR22	05/04/2022	170	84	3.3	17	**600**	**64,000**	**2,500**	0.74	-87.8	6.36	0.611	11.1	2.38
PZ-12-02	PZ-12-02-SPR22	05/04/2022	210	61	4	1 U	**250**	**65,000**	1,200	0.67	-82.1	6.34	0.589	11	3.45
PZ-12-03	PZ-12-03-SPR22	05/05/2022	160	75	2.1	3.5	**750**	**45,000**	**3,600**	0.57	-105	6.5	0.669	17.5	9.22
PZ-12-04	PZ-12-04-SPR22	05/05/2022	150	49	2.2	0.88 J	**710**	**57,000**	1,400	0.62	-87.3	6.34	0.554	18.1	10.8
PZ-12-05	PZ-12-05-SPR22	05/09/2022	35	1.6	1.3	6.1	6.9	6,800	890	2.43	63.5	5.71	0.099	14.1	15.8
PZ-12-06	PZ-12-06-SPR22	05/09/2022	49	3.2	1.3	36	3 U	41 J	240	0.91	225	5.48	0.23	12.4	3.39
PZ-12-06	SHL-DUP01-SPR22	05/09/2022	50	3.2	1.2	36	3 U	34 J	240	---	---	---	---	---	---
PZ-12-07	PZ-12-07-SPR22	05/06/2022	80	0.89	1.4	16	**130**	2,900	980	4.53	-10.6	6.51	0.181	14.1	34.8
PZ-12-08	PZ-12-08-SPR22	05/06/2022	65	0.69	1.4	18	3.8 J	**12,000**	**2,900**	0.95	40.2	5.72	0.187	13.2	84.1
PZ-12-09	PZ-12-09-SPR22	05/06/2022	84	0.89	0.61 J	9.8	1.7 J	50 U	43	2	108	6.55	0.181	14.4	3.74
PZ-12-10	PZ-12-10-SPR22	05/09/2022	49	1.7	0.87 J	7.3	3 U	50 U	5 U	6.69	177	6.17	0.113	14	2.74
SHL-10	SHL-10-SPR22	05/12/2022	11	0.92	4.6	1.8	3 U	50 U	2 J	7.3	140	6.11	0.004	12.1	2.2
SHL-11	SHL-11-SPR22	05/05/2022	180	89	2.4	0.46 J	**930**	**87,000**	1,500	0.58	-111	6.48	0.713	14.6	54.4
SHL-19	SHL-19-SPR22	05/06/2022	75	0.77	0.91 J	11	5.6	230	2.8 J	6.78	151	6.26	0.166	13.3	12.7
SHL-20	SHL-20-SPR22	05/05/2022	95	94	1.8	51	**830**	**54,000**	**4,000**	0.65	-105	6.55	0.607	13.6	3.54
SHL-20	SHL-DUP02-SPR22	05/05/2022	97	94	2	51	**830**	**53,000**	**3,900**	---	---	---	---	---	---
SHL-4	SHL-4-SPR22	05/03/2022	73	0.98	2.3	28	**110**	6,900	1,400	0.84	-36.4	6.2	0.174	11.4	21
SHM-05-40X	SHM-05-40X-SPR22	05/12/2022	100	17	1.9	3.3	**1,900**	**24,000**	730	0.89	-91.7	6.37	0.273	12.5	3.81
SHM-05-41B	SHM-05-41B-SPR22	05/09/2022	56	50	2.8	3.9	**390**	**21,000**	770	0.78	-68.2	6.26	0.31	11.7	1.76
SHM-05-41C	SHM-05-41C-SPR22	05/06/2022	260	180	3.8	3.7	**270 J**	4,700	940	0.8	-122	6.78	0.809	10.9	4.32
SHM-07-03	SHM-07-03-SPR22	05/12/2022	23	240	0.78 J	6.4	3 U	50 U	13	4.84	149	5.44	0.751	16.2	11.1
SHM-07-05X	SHM-07-05X-SPR22	05/12/2022	26	360	3.3	5 U	**110**	4,200	110	0.9	-67.1	6.41	1.09	15.7	3.15
SHM-11-02	SHM-11-02-SPR22	05/06/2022	200	50	1.4	4.3	**14**	8,900	750	0.79	-199	7.49	0.461	11.8	5.49
SHM-11-06	SHM-11-06-SPR22	05/04/2022	210	60	2.7	5.1	**770**	**78,000**	**1,900**	0.92	-80.4	6.18	0.588	10.5	5.23
SHM-13-03	SHM-13-03-SPR22	05/06/2022	210	59	2.5	3.6	**53**	3,800	**8,400**	0.23	-16.9	6.34	0.15	10.7	22.9
SHM-13-04	SHM-13-04-SPR22	05/06/2022	33	330	1.1	7.7	**50**	410	24	5.3	117	6.13	0.311	12	69.8
SHM-13-06	SHM-13-06-SPR22	05/06/2022	56	34	1.2	6.2	**2,400**	**15,000**	1,100	0.53	-131	6.95	0.076	13	8.6
SHM-13-07	SHM-13-07-SPR22	05/06/2022	48	120	1	10	**210**	**12,000**	1,200	0.23	-53.2	6.5	0.141	11.9	4.7
SHM-13-08	SHM-13-08-SPR22	05/06/2022	110	23	1.9	3.6	**890**	**37,000**	1,100	0.33	-133	6.81	0.107	12.9	2.3
SHM-93-22B	SHM-93-22B-SPR22	05/09/2022	190	39	1.4	12	**34**	1,100	**6,600**	0.32	19.3	6.41	0.099	8	23.2
SHM-96-5B	SHL-DUP05-SPR22	05/10/2022	160	35	1.5	21	**1,000**	**15,000**	**7,900**	---	---	---	---	---	---
SHM-96-5B	SHM-96-5B-SPR22	05/10/2022	170	35	1.4	21	**980**	**14,000**	**7,800**	0.47	-49.3	6.41	0.088	10.9	42.9
SHP-01-36X	SHP-01-36X-SPR22	05/10/2022	22	80	2.5	5.5	7.5	1,200	110	0.43	31	6.13	0.058	12.7	8.5
SHP-01-37X	SHP-01-37X-SPR22	05/09/2022	51	31	1.9	13	**25**	2,500	350	1.16	30.9	6.09	0.052	11.3	2.7
SHP-01-38A	SHL-DUP03-SPR22	05/09/2022	71	1.4	1	5.8	**85**	**17,000**	1,300	---	---	---	---	---	---
SHP-01-38A	SHP-01-38A-SPR22	05/09/2022	70	1.4	1.2	5.9	**87**	**17,000**	1,400	0.54	-3.7	5.98	0.034	10.9	2.3

Table 6
Spring 2022 LTM Analytical Results and Field Parameters
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	General Chemisty				Metals			Field Parameters					
		Analyte	Alkalinity	Chloride	DOC	Sulfate	Arsenic	Iron	Manganese	DO	ORP	pH	SPC	Temp	Turbidity
		Units	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mV	SU	µS/cm	°C	NTU
		Screening Limit[a]					10	9,100	1,715						
Location	Sample ID	Date													
SHP-2016-06A	SHP-2016-06A-SPR22	05/11/2022	150	6.6	7	59	**1,500**	690	1,200	0.39	-217	7.99	0.443	17.1	4.23
SHP-2016-06B	SHP-2016-06B-SPR22	05/11/2022	120	1.6	1.3	14	**340**	100	190	0.34	-192	7.98	0.307	12.4	11.8
SHP-2016-06C	SHP-2016-06C-SPR22	05/11/2022	110	1.5	0.56 J	8.5	**360**	120	190	0.42	-177	7.94	0.244	16.9	10.5
SHP-2016-07A	SHP-2016-07A-SPR22	05/10/2022	9.1	1.5	0.89 J	4.6	2.2 J	210	**1,900**	2.51	117	5.32	0.032	13.1	2.49
SHP-2016-07B	SHP-2016-07B-SPR22	05/11/2022	130	2.7	2.8	28	**100**	110	350	1.05	-47.4	6.86	0.298	15.3	3.43
SHP-2016-1A	SHP-2016-1A-SPR22	05/10/2022	21	0.79	0.73 J	2.4	3 U	50 U	5 U	8.15	236	5.86	0.051	12	1.48
SHP-2016-1B	SHP-2016-1B-SPR22	05/10/2022	66	2.5	1.9	2.4	**110**	**18,000**	910	0.89	-66.5	6.44	0.163	14.1	8.04
SHP-2016-2A	SHP-2016-2A-SPR22	05/11/2022	48	2.6	0.82 J	2.7	3 J	50 U	320	2.65	48	7	0.086	10.2	3.38
SHP-2016-2B	SHP-2016-2B-SPR22	05/11/2022	110	16	1.9	3.4	**410**	**39,000**	**2,500**	0.9	-80.3	6.22	0.308	10.9	1.8
SHP-2016-3A	SHP-2016-3A-SPR22	05/09/2022	33	1.8	0.92 J	1.3	3.6 J	7,000	270	2.56	-40.2	6.17	0.071	7.7	1.14
SHP-2016-3B	SHP-2016-3B-SPR22	05/09/2022	94	8.3	1.7	3.9	**210**	**31,000**	**2,200**	0.78	-70.1	6.18	0.233	9.1	0.51
SHP-2016-4A	SHP-2016-4A-SPR22	05/11/2022	12	3.2	0.96 J	4.2	3 U	50 U	64	8.87	214	5.88	0.008	12.1	2.2
SHP-2016-4B	SHP-2016-4B-SPR22	05/10/2022	67	4.8	1.4	3.9	**730**	**31,000**	**2,200**	0.7	-110	6.58	0.039	11.1	4.9
SHP-2016-5A	SHL-DUP06-SPR22	05/10/2022	65	9.5	6.8	3.3	3.2 J	1,800	200	---	---	---	---	---	---
SHP-2016-5A	SHP-2016-5A-SPR22	05/10/2022	64	9.5	6.9	3.4	3.3 J	1,700	190	0.82	-28.7	6.19	0.14	11.5	4.87
SHP-2016-5B	SHP-2016-5B-SPR22	05/10/2022	130	19	2.2	5	**560**	**56,000**	**2,900**	0.85	-90.2	6.39	0.398	11.9	1.07

560 =Above Cleanup Goal

Notes:

1. [a]Screening Limits: Shepley's Hill Landfill (SHL) Cleanup Goals
2. Screening Limits Source: USACE. 1995. Record of Decision, Shepley's Hill Landfill Operable Unit, Fort Devens, Massachusetts. September.
3. -- = no data available

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = microgram per liter
µS/cm = microSiemens per centimeter
DO = dissolved oxygen
DOC = dissolved organic carbon
FD = field duplicate
J = The analyte was positively identified, the quantitation is an estimation.
LTM = long-term monitoring
mg/L = milligram per liter
mV = millivolt
NTU = Nephelometric Turbidity Unit
ORP = oxidation-reduction potential
SPC = specific conductivity
SU = standard unit
Temp = temperature
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ = Estimated non-detect because of QC outliers.
USACE = U.S. Army Corps of Engineers

Table 7
Fall 2022 LTM Analytical Results and Field Parameters
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	Metals												Field		
		Analyte	Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
		Units	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	pH Units	µS/cm	NTU	mg/L	°C	mv
		Screening Limit[a]	10	9,100	1,715										
Location	Sample ID	Date													
EPA-PZ-2012-1A	EPA-PZ-2012-1A-FAL22	10/18/2022	2.1 J	400	240	46	3.7	2.1	1.3	5.97	0.065	1.11	1.32	12.6	100.7
EPA-PZ-2012-1B	EPA-PZ-2012-1B-FAL22	10/18/2022	**200**	**12,000**	**7,000**	180	35	2.4	21	6.35	0.293	2.74	1.27	12.0	-40.8
EPA-PZ-2012-2A	EPA-PZ-2012-2A-FAL22	10/18/2022	3 U	50 U	5 U	12	3.7	0.87 J	5.6	5.67	0.033	0.87	5.49	11.7	272.2
EPA-PZ-2012-2B	EPA-PZ-2012-2B-FAL22	10/18/2022	2.7 J	**10,000**	**6,600**	150	51	2.4	8.3	6.01	0.281	3.31	1.16	12.3	13.2
EPA-PZ-2012-3A	EPA-PZ-2012-3A-FAL22	10/17/2022	**15**	**15,000**	880	83	24	9.5	1 UJ	5.75	0.252	1.90	0.59	11.8	285.3
EPA-PZ-2012-3B	EPA-PZ-2012-3B-FAL22	10/17/2022	**2,700**	**37,000**	**5,800**	150	34	1.7	18	6.51	0.483	3.21	0.69	11.2	-132.9
EPA-PZ-2012-4A	EPA-PZ-2012-4A-FAL22	10/13/2022	3.3 J	4,400	610	88	21	9.3	1 U	6.10	0.238	1.41	0.63	14.9	8.0
EPA-PZ-2012-4B	EPA-PZ-2012-4B-FAL22	10/13/2022	**2,100**	**49,000**	810	120	30	1.8	17	6.49	0.457	3.44	0.58	14.6	-103.3
EPA-PZ-2012-4B	SHL-DUP01-FAL22	10/13/2022	**2,000**	**50,000**	820	120	32	1.7	19	---	---	---	---	---	---
EPA-PZ-2012-5A	EPA-PZ-2012-5A-FAL22	10/19/2022	1.2 J	4,700	88	24	13	6.7	3.2	5.19	0.093	2.47	0.64	9.9	399.5
EPA-PZ-2012-5B	EPA-PZ-2012-5B-FAL22	10/19/2022	1.4 J	180	**9,600**	160	43	1.3	16	6.31	0.432	3.15	0.57	10.9	423.7
EPA-PZ-2012-6A	EPA-PZ-2012-6A-FAL22	10/24/2022	3 U	50 U	5 U	35	1.8	0.98 J	2.4	6.34	0.049	1.46	5.79	11.9	181.9
EPA-PZ-2012-6B	EPA-PZ-2012-6B-FAL22	10/24/2022	**300**	**21,000**	1,100	52	6	1.4 J	5.6	6.73	0.105	3.21	1.60	12.6	-108.7
EPA-PZ-2012-6B	SHL-DUP02-FAL22	10/24/2022	**290**	**21,000**	1,200	53	6	1.6	5.5	---	---	---	---	---	---
EPA-PZ-2012-7A	EPA-PZ-2012-7A-FAL22	10/24/2022	3 U	50 U	2.8 J	21	170	1.3 J	4.3	5.86	0.364	1.81	4.75	13.0	115.2
EPA-PZ-2012-7B	EPA-PZ-2012-7B-FAL22	10/24/2022	**770**	**12,000**	1,600	40	51	1.8	0.59 J	6.67	0.098	10.16	1.48	12.8	-99.9
EW-01	EW-01-FAL22	10/21/2022	**1,600**	**64,000**	**2,100**	230	18	4.6	4.5	6.27	0.393	7.82	4.17	14.0	-67.9
EW-04	EW-04-FAL22	10/21/2022	**3,000**	**37,000**	**2,400**	120	5.6	1.9	3.9	6.34	0.194	2.42	3.49	13.9	-62.4
N5-P1	N5-P1-FAL22	10/19/2022	**560**	380	1,300	130	18	1	16	6.90	0.208	3.22	1.37	13.5	-48.2
PZ-12-01	PZ-12-01-FAL22	10/13/2022	**570**	**58,000**	**2,400**	140	86	2.4	25	6.54	0.440	9.73	1.31	14.1	-73.8
PZ-12-02	PZ-12-02-FAL22	10/13/2022	**280**	**66,000**	1,200	200	81	3.5	1 U	6.46	0.475	3.91	1.20	14.9	-74.0
PZ-12-03	PZ-12-03-FAL22	10/14/2022	**720**	**53,000**	**4,100**	160	54	2.3	7.5	6.70	0.357	13.16	1.31	12.5	-97.5
PZ-12-04	PZ-12-04-FAL22	10/13/2022	**690**	**63,000**	1,700	130	79	2.2	0.8 J	6.62	0.404	3.66	1.18	15.3	-93.1
PZ-12-05	PZ-12-05-FAL22	10/14/2022	**14**	5,800	780	63	2	2.2	7.7	6.03	0.097	47.60	1.33	13.6	47.9
PZ-12-06	PZ-12-06-FAL22	10/14/2022	1.4 J	920	860	53	8.4	0.83 J	9.9	5.87	0.107	2.85	1.24	17.4	118.5
PZ-12-06	SHL-DUP03-FAL22	10/14/2022	1.1 J	930	860	52	8.5	1	10	---	---	---	---	---	---
PZ-12-07	PZ-12-07-FAL22	10/17/2022	**110**	3,300	1,600	99	2.3	2.3	59	6.57	0.198	46.84	3.82	12.2	-29.1
PZ-12-08	PZ-12-08-FAL22	10/17/2022	**14**	**18,000**	**2,300**	91	1.9	1.6	9	5.96	0.129	34.45	1.23	12.0	5.6
PZ-12-09	PZ-12-09-FAL22	10/17/2022	2 J	50 U	3 J	87	0.82	0.86 J	9.2	6.58	0.115	0.67	2.43	11.2	127.8
PZ-12-10	PZ-12-10-FAL22	10/14/2022	3 U	50 U	5 U	37	1 J	0.74 J	4.5 J	6.16	0.053	1.28	5.51	15.3	173.4
SHL-10	SHL-10-FAL22	10/24/2022	7.7	2,400	1,100	41	2	2.3	6.4	6.27	0.117	4.43	2.06	11.3	37.2
SHL-11	SHL-11-FAL22	10/13/2022	**940**	**65,000**	**2,000**	170	94	2	9.5	6.77	0.447	0.33	1.12	14.2	-114.0
SHL-12	SHL-12-FAL22	10/18/2022	3 U	50 U	100	110	93	2.1	130	6.21	0.881	60.80	1.56	13.9	188.0
SHL-15	SHL-15-FAL22	10/19/2022	**40**	4,200	220	110	24 J	3.4	10	5.84	0.197	1.51	1.53	11.4	-19.1
SHL-19	SHL-19-FAL22	10/17/2022	1.2 J	50 U	5 U	78	0.8	1.4	12	6.31	0.108	3.32	3.94	11.9	172.0
SHL-20	SHL-20-FAL22	10/13/2022	**870**	**73,000**	**2,400**	150	110	2.2	7.3	6.67	0.493	5.65	1.14	14.5	-98.7
SHL-20	SHL-DUP04-FAL22	10/13/2022	**830**	**72,000**	**2,400**	160	110	2.2	7.4	---	---	---	---	---	---
SHL-22	SHL-22-FAL22	10/25/2022	4.4 J	39 J	**7,900**	270	31	1.3 J	13	6.56	0.564	3.80	0.74	10.5	89.2
SHL-22	SHL-DUP05-FAL22	10/25/2022	5	48 J	**8,000**	270	31	1.3 J	13	---	---	---	---	---	---
SHL-23	SHL-23-FAL22	10/26/2022	3 U	50 U	12	5.2	3.8	1.6 UB	4.9	5.51	0.024	4.92	9.94	11.7	199.0
SHL-24	SHL-24-FAL22	10/14/2022	3.8 J	50 U	5 U	48	41	0.5 U	25	7.04	0.290	0.21	2.66	13.0	163.0
SHL-24	SHL-DUP06-FAL22	10/14/2022	3.6 J	50 U	5 U	51	41	0.99 J	25	---	---	---	---	---	---
SHL-3	SHL-3-FAL22	10/21/2022	3 U	27 J	2.9 J	67	1.9	1.5	3.8	5.58	0.158	6.26	5.35	12.6	210.0
SHL-4	SHL-4-FAL22	10/13/2022	**120**	**13,000**	**1,900**	65	1.2	1.3	18	6.19	0.186	7.89	0.70	17.1	-11.1
SHL-5	SHL-5-FAL22	10/17/2022	**14**	7,900	710	25	73	3.7	1 UJ	5.52	0.287	1.29	0.76	12.4	464.0
SHL-7	SHL-7-FAL22	10/19/2022	3 U	87 J	13	67	56	1.2	12	6.14	0.378	72.40	1.20	11.7	146.0
SHL-8D	SHL-8D-FAL22	10/19/2022	3 U	50 U	1.3 J	13	62	0.89 J	5.1	5.77	0.262	2.54	1.16	11.1	152.0
SHL-8S	SHL-8S-FAL22	10/20/2022	3 U	50 U	5 U	25	6.4	0.54 J	5	6.16	0.090	4.49	5.08	10.4	236.0
SHL-9	SHL-9-FAL22	10/25/2022	**40**	4,800	270	92	6.9	7.6	0.76 J	6.34	0.320	2.50	0.61	11.8	-7.7
SHM-05-39A	SHM-05-39A-FAL22	11/03/2022	2.4 J	50 U	3 J	43	31	1.3 J	5.7	6.56	0.120	19.30	7.34	10.9	197.0
SHM-05-39B	SHM-05-39B-FAL22	10/26/2022	**440**	**18,000**	810	50	150	1.5 UB	6.8	6.84	0.704	31.20	0.66	14.1	-99.0

Table 7
Fall 2022 LTM Analytical Results and Field Parameters
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	Metals												Field		
		Analyte	Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
		Units	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	pH Units	µS/cm	NTU	mg/L	°C	mv
		Screening Limit[a]	10	9,100	1,715										
Location	Sample ID	Date													
SHM-05-40X	SHL-DUP07-FAL22	10/26/2022	**2,300**	**30,000**	890	150	17	1.7 UB	4.1	---	---	---	---	---	---
SHM-05-40X	SHM-05-40X-FAL22	10/26/2022	**2,200**	**29,000**	880	150	17	1.7 UB	4.4	6.61	0.499	8.10	0.69	12.5	-92.9
SHM-05-41A	SHM-05-41A-FAL22	10/17/2022	**48**	**10,000**	180	31	16	1.6	5.2	6.75	0.165	3.54	0.91	10.8	-62.4
SHM-05-41B	SHM-05-41B-FAL22	10/17/2022	**710**	**15,000**	150	31	110	9.2	1 UJ	7.00	0.318	5.30	0.85	10.8	-115.0
SHM-05-41C	SHM-05-41C-FAL22	10/17/2022	**28**	1,600	39	25	86	3.5	1 UJ	6.54	0.361	10.90	0.99	10.6	-19.9
SHM-05-42A	SHM-05-42A-FAL22	10/20/2022	3 U	69 J	76	28	6.3	1 J	6.5	5.55	0.083	1.91	0.62	10.5	418.0
SHM-05-42B	SHM-05-42B-FAL22	10/20/2022	**150**	**26,000**	**5,800**	150	45	1.3 J	7.5	6.24	0.443	0.75	0.62	10.7	-12.5
SHM-07-05X	SHM-07-05X-FAL22	10/26/2022	**60**	740	200	26	37	13	7.8	6.50	0.345	26.20	0.63	16.7	25.8
SHM-10-02	SHM-10-02-FAL22	11/04/2022	3 U	50 U	940	110	100	1.2 J	6.4	6.35	0.572	3.17	4.28	13.7	287.0
SHM-10-03	SHM-10-03-FAL22	11/03/2022	3 U	50 U	9 J	170	130	0.95 J	6.7	7.00	0.721	3.18	1.17	12.9	60.4
SHM-10-04	SHM-10-04-FAL22	11/03/2022	3 U	50 U	290	62	47 J	1.2 J	34 J	6.28	0.388	3.67	1.07	14.3	146.0
SHM-10-05A	SHM-10-05A-FAL22	10/24/2022	1.3 J	58 J	3.8 J	23	62	0.71 J	6.5	6.35	0.294	12.90	1.60	15.0	149.0
SHM-10-06	SHM-10-06-FAL22	10/13/2022	**930**	**73,000**	**2,400**	100	36	1.8	12	6.32	0.460	1.61	0.65	13.4	-89.9
SHM-10-06A	SHM-10-06A-FAL22	10/24/2022	**66**	9,100	1,200	81	12	1.7	5.7	6.01	0.356	10.70	1.08	12.7	25.8
SHM-10-07	SHM-10-07-FAL22	10/18/2022	**1,100**	**42,000**	**2,300**	120	88	2.4	12	6.54	0.394	8.32	1.37	13.3	-104.0
SHM-10-08	SHM-10-08-FAL22	11/04/2022	3 U	50 U	570	120	120	1 J	5.8	6.32	0.648	3.59	1.03	15.2	229.0
SHM-10-10	SHM-10-10-FAL22	10/20/2022	3 U	50 U	1.5 J	95	180	1.4 J	12	6.82	0.855	3.22	5.07	12.9	196.0
SHM-10-11	SHM-10-11-FAL22	10/20/2022	**530**	**55,000**	**2,500**	160	42	2	53	6.14	0.315	1.99	1.06	11.6	-49.8
SHM-10-12	SHM-10-12-FAL22	10/20/2022	**3,200**	**66,000**	**5,200**	180	2.5	3.7	1.5	5.92	0.214	3.73	0.91	11.4	-32.8
SHM-10-13	SHM-10-13-FAL22	10/20/2022	**410**	**52,000**	790	280	29	4.9	1 U	6.38	0.448	6.51	1.21	13.6	-88.4
SHM-10-14	SHM-10-14-FAL22	10/19/2022	**4,900**	**80,000**	**2,300**	230	4.3	3.7	1 U	6.14	0.318	2.70	1.19	12.3	-56.0
SHM-10-15	SHM-10-15-FAL22	10/19/2022	**7,500**	**44,000**	**7,600**	200	6.7	3	7.5	6.24	0.286	37.20	1.69	13.2	-59.1
SHM-10-16	SHM-10-16-FAL22	10/18/2022	**1,000**	**30,000**	**2,400**	250	30	1.7	5.3	6.56	0.638	16.10	0.68	13.1	-162.0
SHM-11-02	SHM-11-02-FAL22	10/14/2022	7.1	7,000	550	160	50	1.4	1.6	7.51	0.468	11.60	0.96	12.8	-207.8
SHM-11-06	SHL-DUP08-FAL22	10/14/2022	**580**	**51,000**	1,300	180	69	2.4	17	---	---	---	---	---	---
SHM-11-06	SHM-11-06-FAL22	10/14/2022	**630**	**54,000**	1,400	180	65	2.4	15	6.03	0.703	4.44	0.85	13.0	-74.8
SHM-13-01	SHM-13-01-FAL22	10/26/2022	2.2 J	130	2.4 J	23	83	0.74 UB	12	5.42	0.387	2.81	6.95	15.0	263.0
SHM-13-02	SHM-13-02-FAL22	10/26/2022	3 U	50 U	**2,500**	100	42	1.5 UB	6.6	5.59	0.375	2.38	2.99	14.9	194.0
SHM-13-03	SHM-13-03-FAL22	10/20/2022	**69**	4,900	**7,500**	160	52	1.8	3.7	7.05	0.525	15.30	1.09	15.6	-11.5
SHM-13-04	SHM-13-04-FAL22	10/13/2022	**96**	540	17	38	560	1	9	5.94	1.820	71.70	6.68	13.8	142.0
SHM-13-05	SHM-13-05-FAL22	10/13/2022	**17**	2,500	**3,300**	360	36	2.3	7.6	6.81	0.742	1.05	0.92	14.8	-85.5
SHM-13-06	SHM-13-06-FAL22	10/13/2022	**2,300**	**15,000**	1,400	54	24	1.1	3.6	6.97	0.236	17.50	0.95	13.4	-115.0
SHM-13-07	SHM-13-07-FAL22	10/13/2022	**350**	**15,000**	**2,000**	54	97	1.2	5.5	6.58	0.445	11.10	0.92	13.8	-63.3
SHM-13-08	SHM-13-08-FAL22	10/13/2022	**890**	**38,000**	1,100	120	37	2.9	2.5	6.76	0.455	4.06	0.90	13.8	-121.0
SHM-13-14D	SHM-13-14D-FAL22	11/02/2022	3 U	50 U	300	41	29	1.2 J	5.1	6.35	0.209	5.56	1.01	13.6	203.0
SHM-13-14S	SHM-13-14S-FAL22	11/02/2022	3 U	50 U	160	33	73	1.2 J	12	5.70	0.374	8.49	1.94	14.7	197.0
SHM-13-15	SHM-13-15-FAL22	10/31/2022	7	850	**4,300**	270 J	54	2.5	12	6.64	0.727	13.10	1.03	14.2	19.2
SHM-93-10D	SHM-93-10D-FAL22	10/21/2022	1.6 J	140	2.5 J	54	31	1.4 J	20	11.20	0.288	41.76	1.77	15.1	81.6
SHM-93-18B	SHM-93-18B-FAL22	11/03/2022	3 U	50 U	750	45	220	0.5 J	34	6.14	0.571	3.88	1.21	17.5	141.0
SHM-93-22B	SHM-93-22B-FAL22	10/25/2022	**120**	6,500	**9,300**	180	40	1.4 J	13	6.38	0.509	9.30	0.62	10.9	-13.6
SHM-93-22C	SHM-93-22C-FAL22	10/25/2022	**11**	54 J	17	130	19	3	4.7	7.48	0.414	2.80	1.98	11.4	-42.1
SHM-93-24A	SHM-93-24A-FAL22	10/14/2022	3 U	50 U	11	15	210	0.71 J	45	5.26	0.806	0.38	8.53	13.4	233.3
SHM-96-5B	SHL-DUP09-FAL22	10/19/2022	**830**	**12,000**	**8,900**	180	35	1.5	20	---	---	---	---	---	---
SHM-96-5B	SHM-96-5B-FAL22	10/19/2022	**840**	**11,000**	**8,800**	180	35	1.5	20	6.46	0.492	10.30	0.69	12.3	-184.0
SHM-96-5C	SHM-96-5C-FAL22	10/19/2022	**54**	**29,000**	**5,700**	160	35	1.7	5.1	6.23	0.425	1.25	0.65	11.1	-174.0
SHM-99-31A	SHM-99-31A-FAL22	10/14/2022	**29**	**13,000**	650	30	89	3.1	0.95 J	5.52	0.325	3.18	0.51	13.7	444.0
SHM-99-31B	SHM-99-31B-FAL22	10/14/2022	1.6 J	2,400 J	7.4 J	34	8.3	2.1	5.8	6.61	0.109	2.29	4.58	13.6	556.0
SHM-99-31C	SHM-99-31C-FAL22	10/14/2022	**56**	4,700	**5,100**	260	30	1.7	7	6.58	0.574	1.27	0.60	14.6	-87.9
SHM-99-32X	SHM-99-32X-FAL22	10/18/2022	**24**	4,200	**3,100**	54	72	1.4	8.7	6.46	0.351	4.68	0.73	12.4	-105.0
SHP-01-36X	SHP-01-36X-FAL22	10/25/2022	6.6	620	98	33	86	3.4	14	5.85	0.424	9.02	1.29	15.0	74.6
SHP-01-37X	SHP-01-37X-FAL22	10/26/2022	5	670	55	30	85	5.3 UB	14	5.94	0.429	2.87	2.92	14.8	52.1

Table 7
Fall 2022 LTM Analytical Results and Field Parameters
Shepley's Hill Landfill, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	Metals											Field		
		Analyte	Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
		Units	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	pH Units	µS/cm	NTU	mg/L	°C	mv
		Screening Limit[a]	10	9,100	1,715										
Location	Sample ID	Date													
SHP-01-38A	SHL-DUP10-FAL22	10/25/2022	**140**	**25,000**	**1,800**	96	13	1.4 J	6.1	---	---	---	---	---	---
SHP-01-38A	SHP-01-38A-FAL22	10/25/2022	**140**	**24,000**	**1,800**	73	13	1.3 J	5.8	5.46	0.311	10.30	1.27	15.0	17.5
SHP-2016-06A	SHP-2016-06A-FAL22	10/26/2022	**1,900**	1,200	1,400	140	5.6	7.8 UB	70	7.40	0.278	3.01	1.41	15.1	-142.0
SHP-2016-06B	SHP-2016-06B-FAL22	10/26/2022	**290**	140	210	130	1.5	1.6 UB	19	7.79	0.181	4.73	1.45	14.3	-145.0
SHP-2016-06C	SHP-2016-06C-FAL22	10/26/2022	**380**	150	180	110	1.4	1.2 UB	13	7.75	0.160	5.55	1.10	15.2	-163.0
SHP-2016-07B	SHL-DUP11-FAL22	10/18/2022	**160**	580	530	140	2.8	3.9	32	---	---	---	---	---	---
SHP-2016-07B	SHP-2016-07B-FAL22	10/18/2022	**160**	560	510	140	2.8	3.8	33	7.26	0.333	12.90	0.71	12.2	-150.0
SHP-2016-1A	SHP-2016-1A-FAL22	10/21/2022	3 U	50 U	2.9 J	23	0.84	1 J	2.9	5.67	0.036	2.12	6.77	9.9	184.0
SHP-2016-1B	SHP-2016-1B-FAL22	10/21/2022	**140**	**27,000**	1,300	110	7.5	2.8	5.9	6.29	0.166	1.92	1.23	13.3	-62.9
SHP-2016-2A	SHP-2016-2A-FAL22	10/20/2022	2 J	50 U	590	48	2.5	0.65 J	2.5	6.82	0.091	0.57	2.86	10.2	527.0
SHP-2016-2B	SHP-2016-2B-FAL22	10/20/2022	**480**	**38,000**	**2,400**	140	14	2	4.7	6.53	0.369	0.93	0.65	10.1	-60.0
SHP-2016-3A	SHP-2016-3A-FAL22	10/24/2022	4.6 J	**11,000**	410	37	7.5	1.1 J	1	6.31	0.232	2.80	0.75	9.4	-27.2
SHP-2016-3B	SHP-2016-3B-FAL22	10/24/2022	**260**	**34,000**	**2,900**	110	18	1.7	5.6	6.34	0.433	4.50	0.72	9.6	-61.3
SHP-2016-4A	SHP-2016-4A-FAL22	10/21/2022	3 U	50 U	67	16	3.4	0.81 J	2.9	5.86	0.120	2.00	2.82	10.0	220.0
SHP-2016-4B	SHP-2016-4B-FAL22	10/21/2022	**1,400**	**45,000**	**2,800**	140	26	1.7	11	6.50	0.464	2.20	0.73	10.5	-89.4
SHP-2016-5A	SHP-2016-5A-FAL22	10/21/2022	3.5 J	1,300	140	61	3.2	7.6	1.1	6.37	0.216	7.40	0.78	10.6	-21.3
SHP-2016-5B	SHP-2016-5B-FAL22	10/21/2022	**710**	**58,000**	**3,500**	160	21	2.3	7.2	6.52	0.503	3.20	0.61	11.3	-97.9
SHP-99-29X	SHP-99-29X-FAL22	10/19/2022	**2,300**	**30,000**	**4,200**	78	2	2	2.4	5.75	0.111	3.52	1.16	13.5	0.8

560 =Above Cleanup Goal

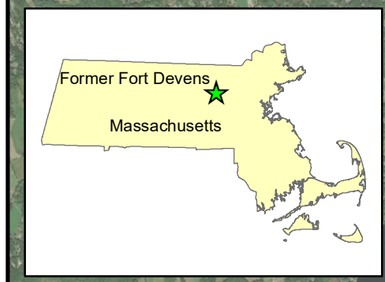
Notes:

1. [a]Screening Limits: Shepley's Hill Landfill (SHL) Cleanup Goals
2. Screening Limits Source: USACE. 1995. Record of Decision, Shepley's Hill Landfill Operable Unit, Fort Devens, Massachusetts. September.
3. -- = no data available

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = microgram per liter
µS/cm = microSiemens per centimeter
DO = dissolved oxygen
DOC = dissolved organic carbon
FD = field duplicate
J = The analyte was positively identified, the quantitation is an estimation.
LTM = long-term monitoring
mg/L = milligram per liter
mV = millivolt
NTU = Nephelometric Turbidity Unit
ORP = oxidation-reduction potential
SPC = specific conductivity
SU = standard unit
Temp = temperature
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ = Estimated non-detect because of QC outliers.
USACE = U.S. Army Corps of Engineers

Figures



N

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Lancaster

Harvard

Former Fort Devens Army Installation and Fort Devens Reserve Forces Training Area (South Post)

Aerial Source: ESRI, ArcGIS Online, World Imagery

Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- County Line
- Highway
- Major Road

0 1 2

Miles

2022 Annual Operations, Maintenance, and Monitoring Report
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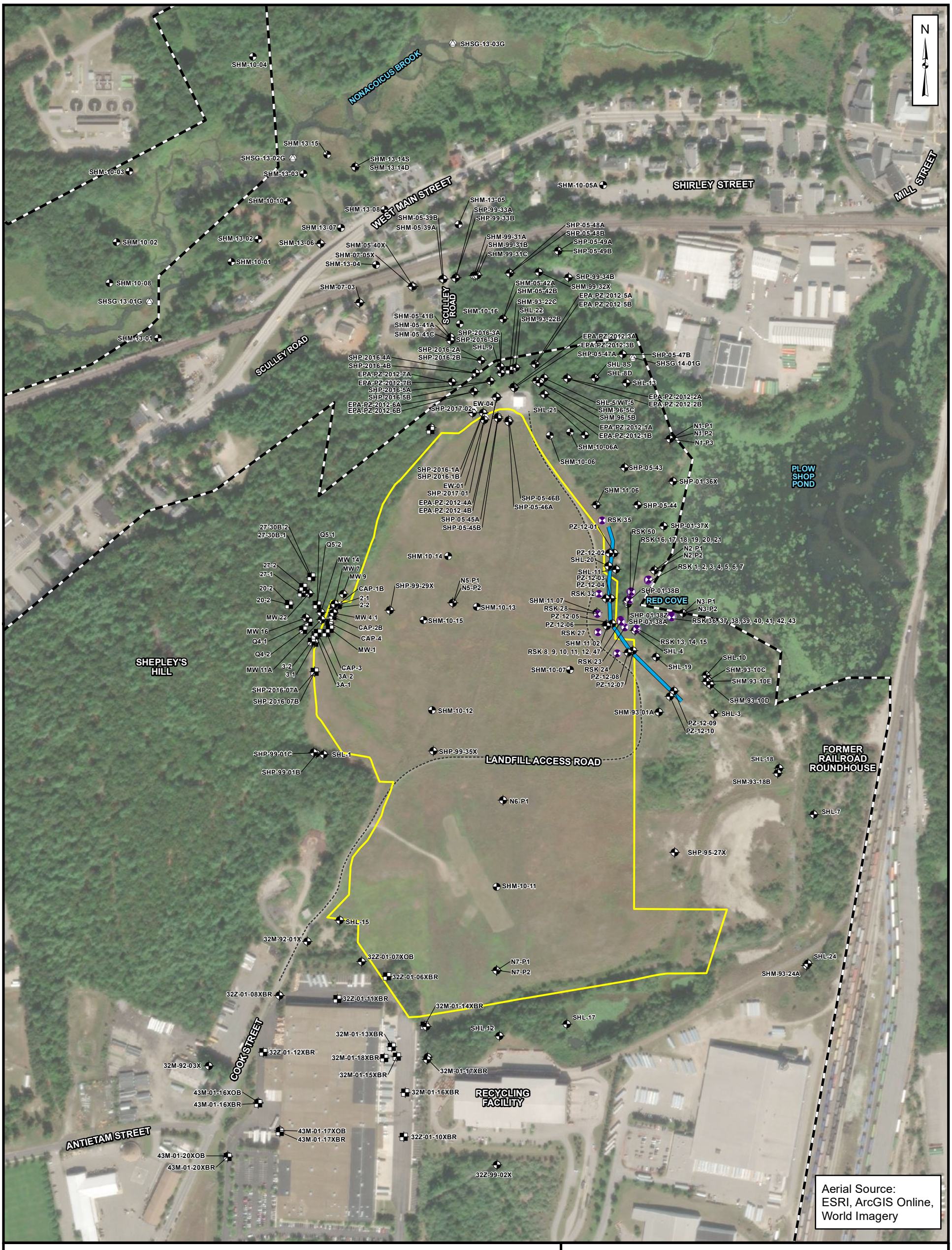
Former Fort Devens Army Installation
Devens, Massachusetts

Site Location

Figure 1



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall
- Landfill Access Road

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Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Site Plan

Figure
2

File: Figure 2 - SHL Site Layout.mxd



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Landfill Access Road

0 200 400
Feet

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Former Fort Devens Army Installation
Devens, Massachusetts

North Impact Area

Figure 3

File: Figure 3 - SHL NIA.mxd



Legend

- Shepley's Hill Landfill Boundary
- Area of Land Use Controls
- Property Boundary
- Community Groundwater Source
- Non-Community Groundwater Source

Parcel Source: Level 3 Assessors' Parcel Mapping

Public Water Supply Source: Massachusetts Department of Environmental Protection

0 200 400
Feet

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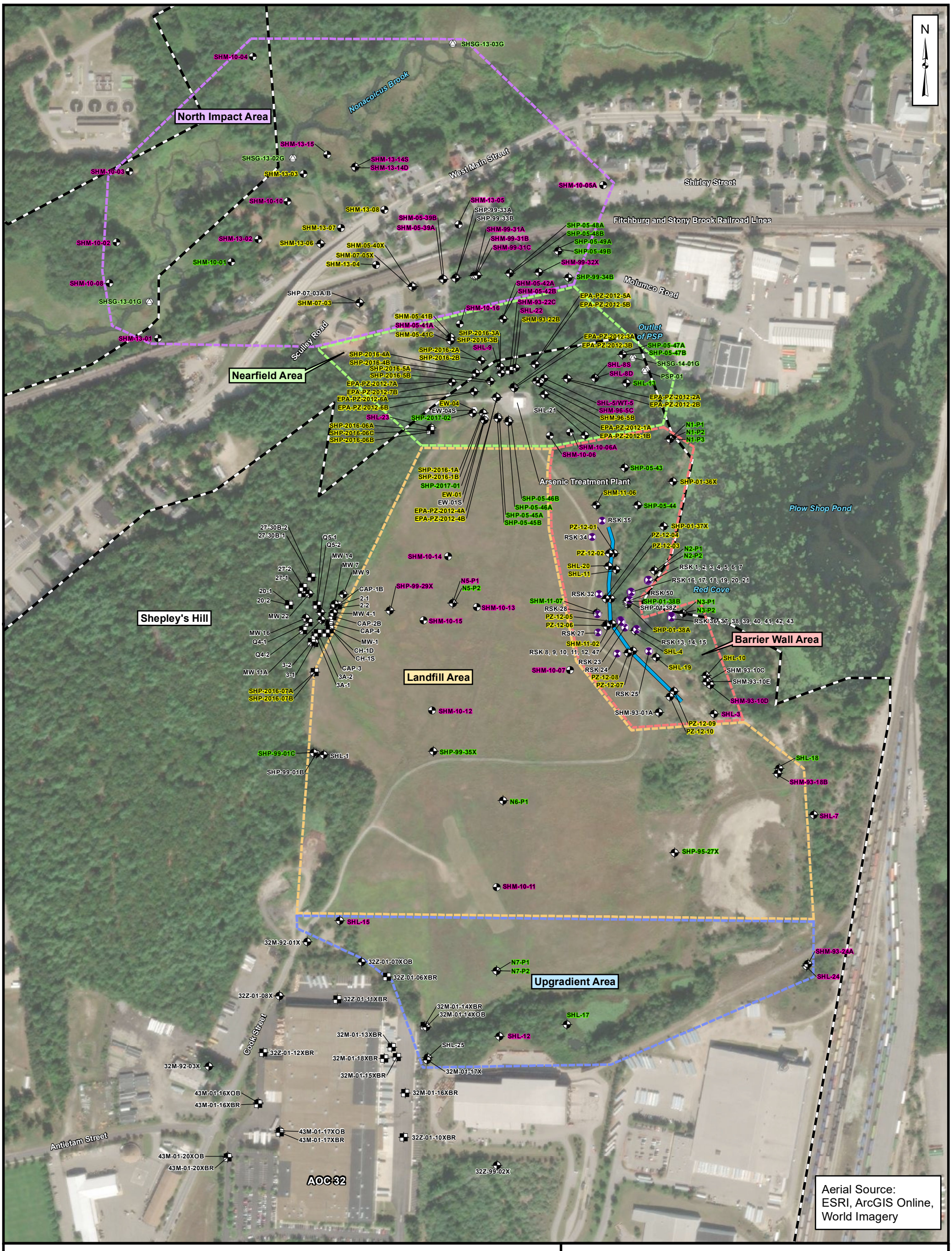
Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Area of Land Use Controls

Figure 4

File: Figure 4 - SHL LUC.mxd



Legend

- Former Fort Devens Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall

PZ-12-07	Well/Boring/Gauge Identification
SHM-13-01	LTM Well/Piezometer Annual Sampling (Fall)
SHL-10	LTM Well/Piezometer Semiannual Sampling (Spring/Fall)
SHP-99-01B	LTM Well/Piezometer Hydraulic Monitoring Only

LTM = long-term monitoring
LTMMP = Long-Term Monitoring and Maintenance Plan

Notes:
1. LTM well network established from LTMMP Update (Sovereign 2015) and LTMMP Addendum (KGS 2018).

0 200 400
Feet

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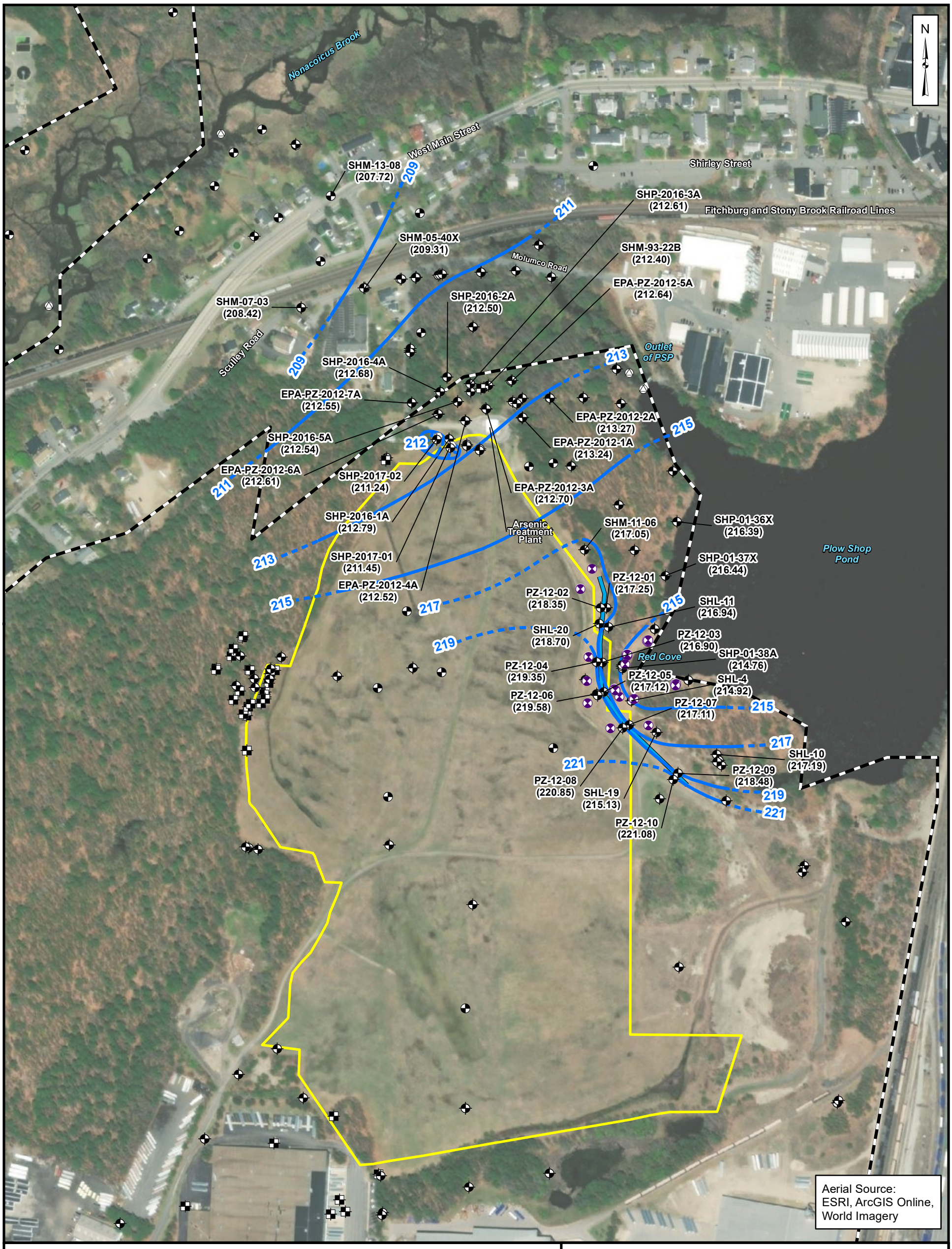
Long-Term Monitoring Well Network

Figure
5

File: Figure 5 - SHL LTM Network.mxd



Aerial Source:
ESRI, ArcGIS Online,
World Imagery

Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall
- Groundwater Contour (ft NAVD88) (Interval = 2 ft)
- Groundwater Contour (ft NAVD88) (Interval = 2 ft) (Inferred)
- Groundwater Extraction Zone

ft NAVD88 = North American Vertical Datum of 1988

0 200 400
Feet

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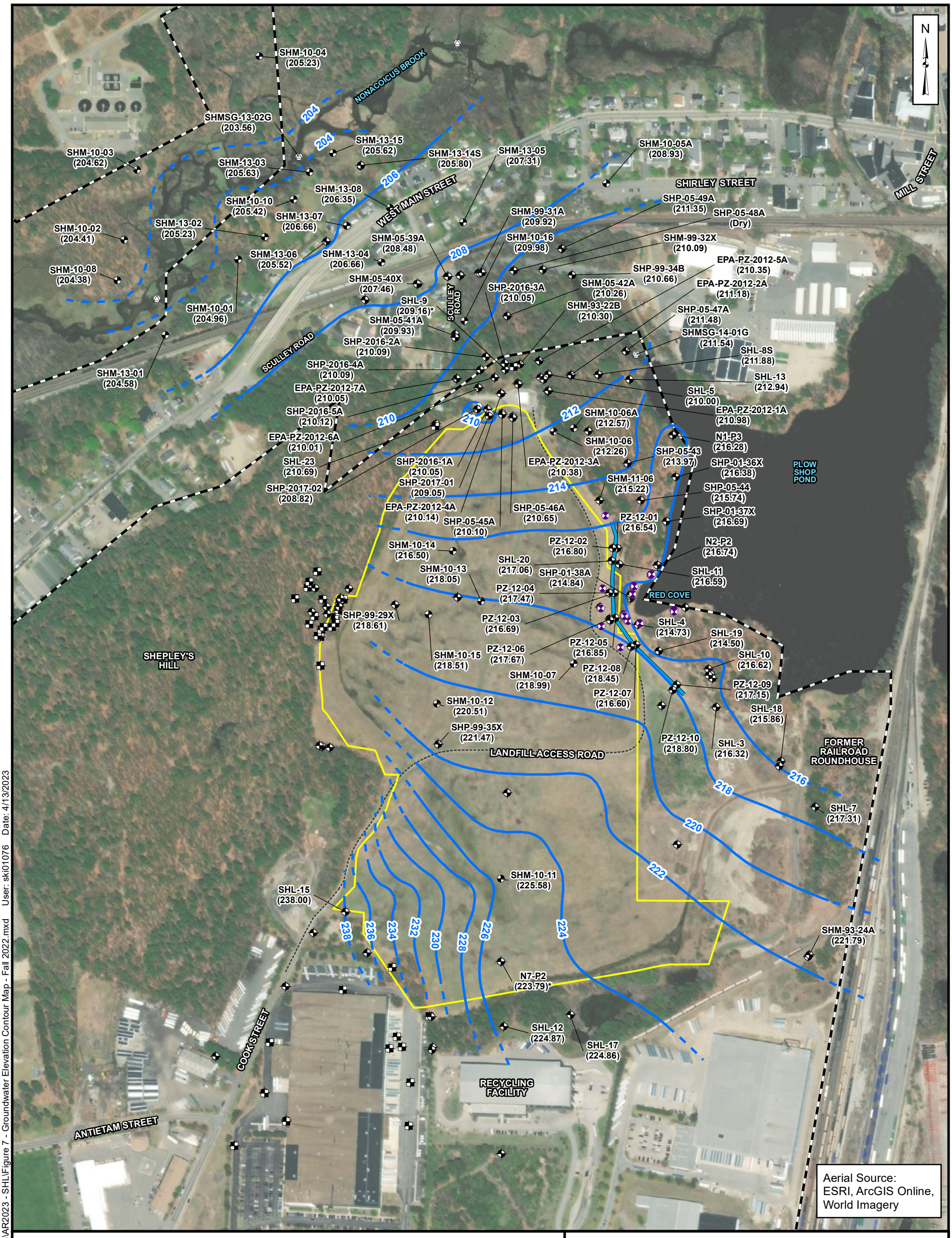
Devens, Massachusetts

Groundwater Elevation Contour Map Spring 2022

Figure
6

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - SHL\APR_2023\Figure 6 - SHL GWC - Spring 2022.mxd

File: Figure 6 - SHL GWC - Spring 2022.mxd



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall
- Landfill Access Road
- Groundwater Contour (ft NAVD88) (Interval = 2 ft) (dashed where inferred)
- Groundwater Extraction Zone

Note:
1. Wells N7-P2 and SHL-9 not used for contouring.
2. ft NAVD88 = North American Vertical Datum of 1988
3. 2-ft interval used for drafting contour lines, with the exception of near the EW-1 and EW-4 extraction well area (1-ft interval)

0 200 400
Feet

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Devens, Massachusetts

Groundwater Elevation Contour Map - Fall 2022

Figure 7

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - SHL\Figure 7 - Groundwater Elevation Contour Map - Fall 2022.mxd User: ski01076 Date: 4/13/2023

File: Figure 7 - Groundwater Elevation Contour Map - Fall 2022.mxd

N

SHM-13-03	
Date	05/06/2022
Arsenic	53

SHM-13-08	
Date	05/06/2022
Arsenic	890

SHM-13-06	
Date	05/06/2022
Arsenic	2,400

SHM-13-07	
Date	05/06/2022
Arsenic	210

SHM-13-04	
Date	05/06/2022
Arsenic	50

SHM-07-03	
Date	05/12/2022
Arsenic	3 U

SHM-05-41C	
Date	05/06/2022
Arsenic	270 J

SHM-07-05X	
Date	05/12/2022
Arsenic	110

SHM-05-40X	
Date	05/12/2022
Arsenic	1,900

SHM-05-41B	
Date	05/09/2022
Arsenic	390

SHP-2016-5A	
Date	05/10/2022
Arsenic	3.3 J

SHP-2016-5B	
Date	05/10/2022
Arsenic	560

SHP-2016-3A	
Date	05/09/2022
Arsenic	3.6 J

SHP-2016-3B	
Date	05/09/2022
Arsenic	210

SHM-93-22B	
Date	05/09/2022
Arsenic	34

EPA-PZ-2012-5A	
Date	05/05/2022
Arsenic	1.4 J

EPA-PZ-2012-5B	
Date	05/05/2022
Arsenic	1.5 J

EPA-PZ-2012-2A	
Date	05/12/2022
Arsenic	3 U

EPA-PZ-2012-2B	
Date	05/12/2022
Arsenic	1.8 J

SHP-2016-2A	
Date	05/11/2022
Arsenic	3 J

SHP-2016-2B	
Date	05/11/2022
Arsenic	410

SHP-2016-4A	
Date	05/11/2022
Arsenic	3 U

SHP-2016-4B	
Date	05/10/2022
Arsenic	730

EPA-PZ-2012-7A	
Date	05/12/2022
Arsenic	3 U

EPA-PZ-2012-7B	
Date	05/12/2022
Arsenic	1,300

EPA-PZ-2012-6A	
Date	05/06/2022
Arsenic	3 U

EPA-PZ-2012-6B	
Date	05/10/2022
Arsenic	250

EW-04	
Date	05/13/2022
Arsenic	3,000

SHP-2016-1A	
Date	05/10/2022
Arsenic	3 U

SHP-2016-1B	
Date	05/10/2022
Arsenic	110

SHP-2016-06A	
Date	05/11/2022
Arsenic	1,500

SHP-2016-06B	
Date	05/11/2022
Arsenic	340

SHP-2016-06C	
Date	05/11/2022
Arsenic	360

EW-01	
Date	05/13/2022
Arsenic	1,500

EPA-PZ-2012-4A	
Date	05/10/2022
Arsenic	2.8 J

EPA-PZ-2012-4B	
Date	05/10/2022
Arsenic	1,800

SHM-96-5B	
Date	05/10/2022
Arsenic	980

EPA-PZ-2012-1A	
Date	05/11/22
Arsenic	1.8 J

EPA-PZ-2012-1B	
Date	05/11/2022
Arsenic	150

EPA-PZ-2012-3A	
Date	05/05/2022
Arsenic	17

EPA-PZ-2012-3B	
Date	05/05/2022
Arsenic	2,600

SHM-11-06	
Date	05/04/2022
Arsenic	770

SHP-01-36X	
Date	05/10/2022
Arsenic	7.5

PZ-12-02	
Date	05/04/2022
Arsenic	250

SHP-01-37X	
Date	05/09/2022
Arsenic	25

SHL-20	
Date	05/05/2022
Arsenic	830

PZ-12-01	
Date	05/04/2022
Arsenic	600

PZ-12-03	
Date	05/05/2022
Arsenic	750

SHL-11	
Date	05/05/2022
Arsenic	930

PZ-12-04	
Date	05/05/2022
Arsenic	710

SHP-01-38A	
Date	05/09/2022
Arsenic	87

PZ-12-05	
Date	05/09/2022
Arsenic	6.9

PZ-12-06	
Date	05/09/2022
Arsenic	3 U

SHL-4	
Date	05/03/2022
Arsenic	110

SHP-2016-07A	
Date	05/10/2022
Arsenic	2.2 J

SHP-2016-07B	
Date	05/11/2022
Arsenic	100

SHM-11-02	
Date	05/06/2022
Arsenic	14

SHL-19	
Date	05/06/2022
Arsenic	5.6

SHL-10	
Date	05/12/2022
Arsenic	3 U

PZ-12-08	
Date	05/06/2022
Arsenic	3.8 J

PZ-12-07		PZ-12-10		PZ-12-09	
Date	05/06/2022	Date	05/09/2022	Date	05/06/2022
Arsenic	130	Arsenic	3 U	Arsenic	1.7 J

Nonacoicus Brook
West Main Street
Shirley Street
Fitchburg and Stony Brook Railroad Lines
Old West Main Street
Molumco Road
Outlet of PSP
Arsenic Treatment Plant
Plow Shop Pond
Red Cove
Cook Street

Aerial Source:
ESRI, ArcGIS Online,
World Imagery

Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Well with Arsenic Concentration Above 1,000 µg/L
- Well with Arsenic Concentration Between 100 and 1,000 µg/L
- Well with Arsenic Concentration Between 10 and 100 µg/L
- Well with Arsenic Concentration Below 10 µg/L
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall

Notes:

1. Results are for Dissolved Arsenic.
2. All concentrations in micrograms per liter (µg/L).
3. J = Estimated Result
4. Arsenic GW-1 Standard = 10 µg/L
5. **BOLD** values indicate GW-1 exceedances.

0 200 400
Feet

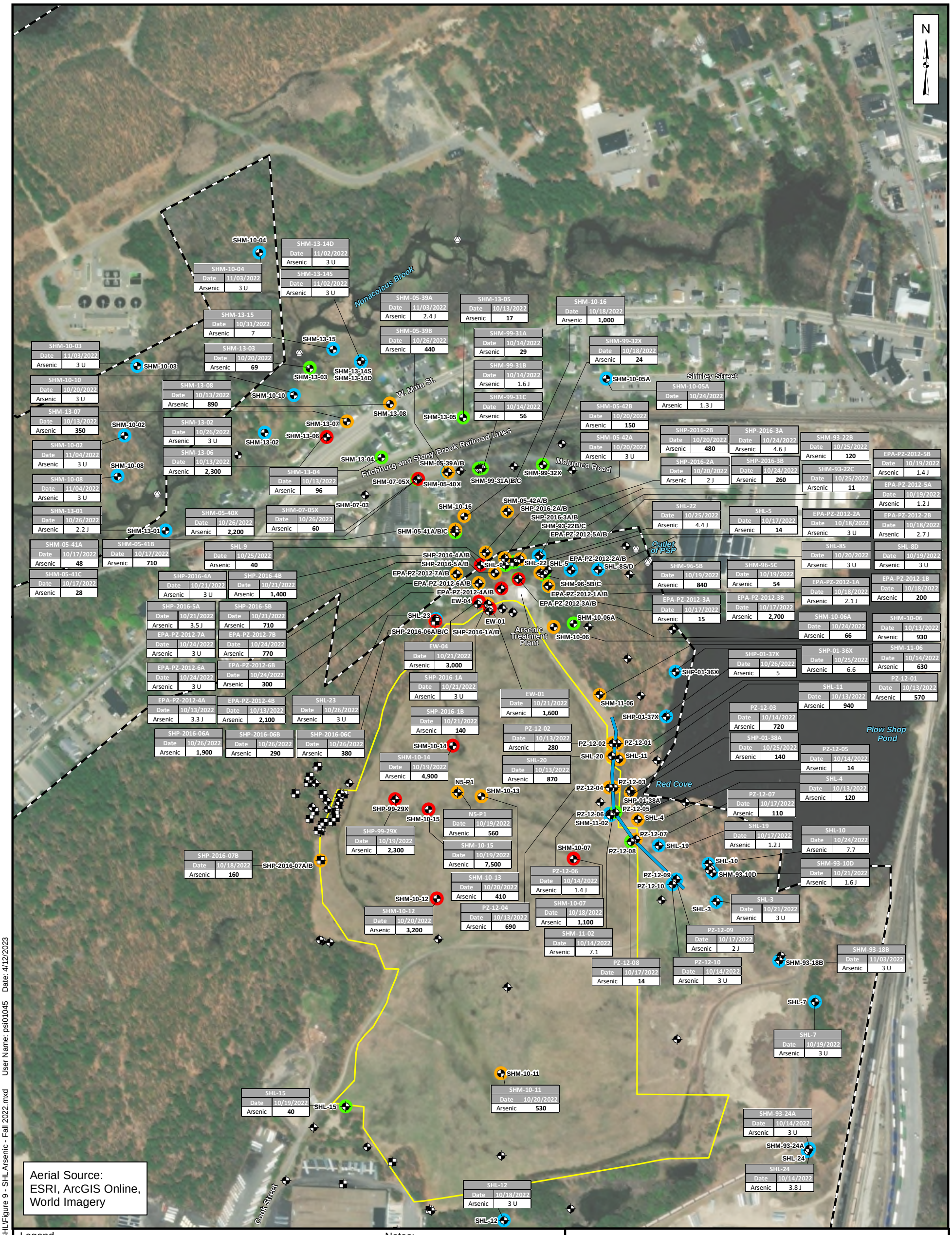
2022 Annual Operations, Maintenance, and Monitoring Report
Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Dissolved Arsenic in Groundwater
Spring 2022
North Impact Area and Shepley's Hill Landfill

Figure
8

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - SHL\Figure 8 - SHL Arsenic - Spring 2022.mxd User Name: psi01045 Date: 4/12/2023

File: Figure 8 - SHL Arsenic - Spring 2022.mxd



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Well with Arsenic Concentration Above 1,000 µg/L
- Well with Arsenic Concentration Between 100 and 1,000 µg/L
- Well with Arsenic Concentration Between 10 and 100 µg/L
- Well with Arsenic Concentration Below 10 µg/L
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall

Notes:

1. All concentrations in micrograms per liter (µg/L).
2. J = Estimated Result
3. Arsenic GW-1 Standard = 10 µg/L
4. **BOLD** values indicate GW-1 exceedances.

0 200 400
Feet

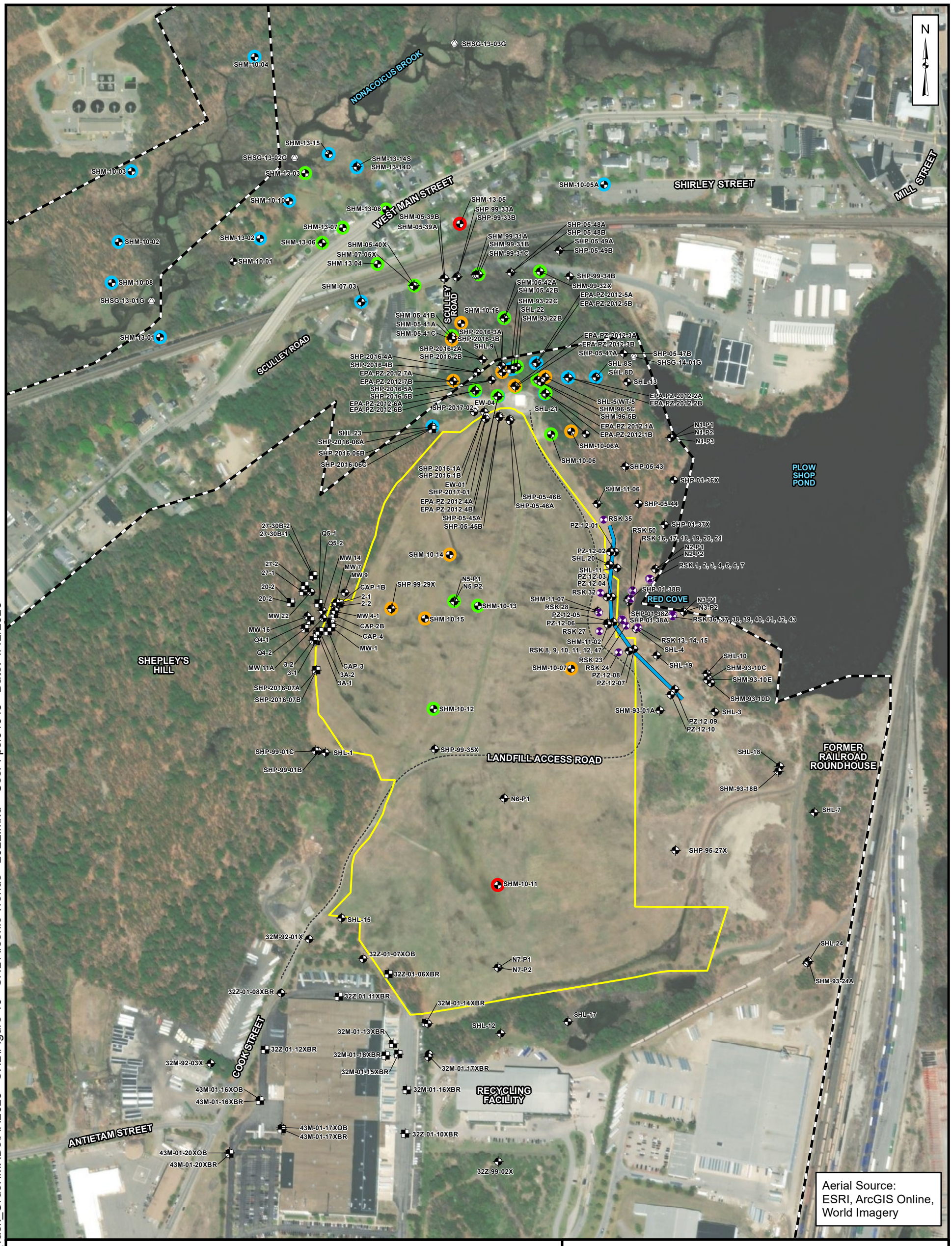
2022 Annual Operations, Maintenance, and Monitoring Report
Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Dissolved Arsenic in Groundwater Fall 2022

Figure **9**

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - SHL\Figure 9 - SHL Arsenic - Fall 2022.mxd User Name: psi01045 Date: 4/12/2023

File: Figure 9 - SHL Arsenic - Fall 2022.mxd



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Overburden Monitoring Well/Piezometer
- Groundwater Profiling Location/Monitoring Well
- Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Stream Gauge
- Barrier Wall
- Landfill Access Road

- Statistically Significant Evidence of a Decreasing Trend
- Arsenic Concentration is Below 10 µg/L
- Insufficient Evidence of a Statistically Significant Trend
- Statistically Significant Evidence of an Increasing Trend

µg/L = micrograms per liter

Notes:
1. Arsenic concentration trends evaluated using ProUCL Mann-Kendall statistical software.

0 200 400
Feet

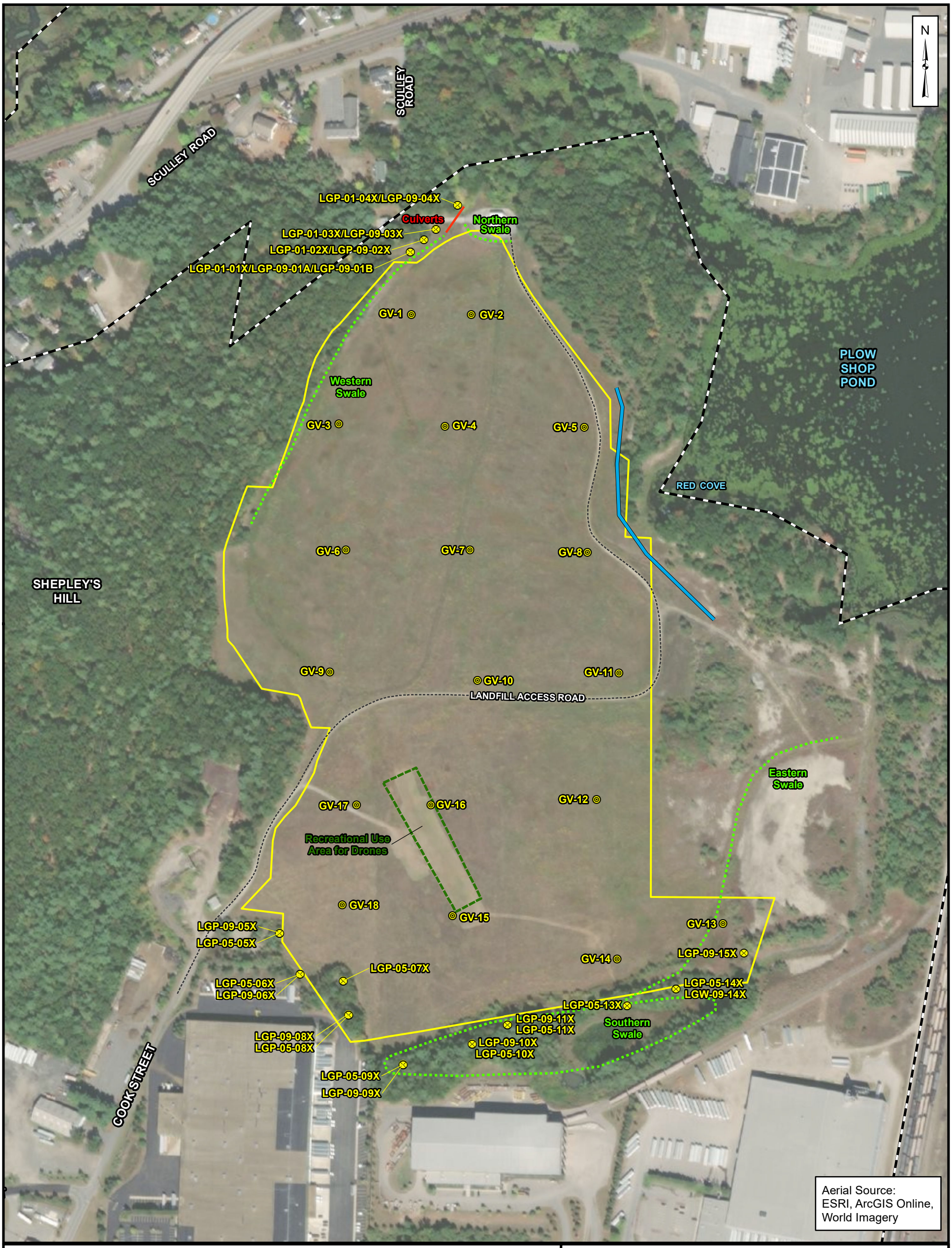
2022 Annual Report
Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Arsenic Concentration Trends

Figure
10

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - SHL\Figure 10 - SHL Arsenic Trends - 2022.mxd User : psi01045 Date: 4/12/2023

File: Figure 10 - SHL Arsenic Trends - 2022.mxd



Legend

- Former Fort Devens Boundary
- Shepley's Hill Landfill Boundary
- Gas Vent
- Gas Probe
- Culvert
- Drainage Swale
- Landfill Access Road
- Barrier Wall
- Recreational Use Area for Drones

0 200 400
Feet

2022 Annual Operations, Maintenance, and Monitoring Report
Shepley's Hill Landfill
Former Fort Devens Army Installation
Devens, Massachusetts

Landfill
Gas Probes and Vents

Figure
11

File: Figure 11 - SHL Gas Probes & Vents.mxd

Appendix A

Groundwater Monitoring Field Forms

SERES Engineering & Services, LLC
ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
EPA-PZ-2012-1A	04-28-2022	14:21	Yes	10.55	28.86	--	--	
EPA-PZ-2012-1B	04-28-2022	14:26	Yes	10.30	77.50	--	--	
EPA-PZ-2012-2A	04-28-2022	14:32	Yes	10.11	28.40	--	--	
EPA-PZ-2012-2B	04-28-2022	14:36	Yes	10.30	83.20	--	--	
EPA-PZ-2012-3A	04-28-2022	14:05	Yes	9.95	26.70	--	--	
EPA-PZ-2012-3B	04-28-2022	14:11	Yes	9.86	76.69	--	--	
EPA-PZ-2012-4A	04-28-2022	15:06	Yes	14.08	28.00	--	--	
EPA-PZ-2012-4B	04-28-2022	15:10	Yes	14.03	77.00	--	--	
EPA-PZ-2012-5A	04-28-2022	14:32	Yes	7.37	27.13	--	--	
EPA-PZ-2012-5B	04-28-2022	14:40	Yes	6.74	85.42	--	--	
EPA-PZ-2012-6A	04-28-2022	13:21	Yes	21.64	33.00	--	--	
EPA-PZ-2012-6B	04-28-2022	13:31	Yes	21.62	81.60	--	--	
EPA-PZ-2012-7A	04-28-2022	16:08	Yes	21.61	29.40	--	--	
EPA-PZ-2012-7B	04-28-2022	16:01	Yes	21.51	64.60	--	--	
PZ-12-01	04-28-2022	12:04	Yes	20.30	35.81	--	--	
PZ-12-02	04-28-2022	12:07	Yes	19.44	34.50	--	--	
PZ-12-03	04-28-2022	12:45	Yes	19.50	36.60	--	--	
PZ-12-04	04-28-2022	12:49	Yes	18.85	37.10	--	--	
PZ-12-05	04-28-2022	12:56	Yes	21.61	34.70	--	--	
PZ-12-06	04-28-2022	13:01	Yes	22.60	35.95	--	--	
PZ-12-07	04-28-2022	13:10	Yes	27.48	33.43	--	--	
PZ-12-08	04-28-2022	13:15	Yes	23.98	32.40	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

SERES Engineering & Services, LLC
ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
PZ-12-09	04-28-2022	13:44	Yes	23.45	33.30	--	--	
PZ-12-10	04-28-2022	13:46	Yes	21.20	32.40	--	--	
SHL-10	04-28-2022	14:07	Yes	30.83	38.70	--	--	
SHL-11	04-28-2022	12:22	Yes	18.53	29.50	--	--	
SHL-19	04-28-2022	13:33	Yes	23.30	32.60	--	--	
SHL-20	04-28-2022	12:18	Yes	17.25	50.60	--	--	
SHL-4	04-28-2022	12:47	Yes	10.58	14.54	--	--	
SHM-05-40X	04-28-2022	16:17	Yes	13.88	33.11	--	--	
SHM-05-41B	04-28-2022	15:44	Yes	10.03	61.49	--	--	
SHM-05-41C	04-28-2022	15:48	Yes	10.28	87.56	--	--	
SHM-07-03	04-28-2022	9:59	Yes	19.48	32.84	--	--	
SHM-07-05X	04-28-2022	16:09	Yes	14.19	64.02	--	--	
SHM-11-02	04-28-2022	12:55	Yes	21.86	68.17	--	--	
SHM-11-06	04-28-2022	13:07	Yes	19.12	35.56	--	--	
SHM-13-03	05-04-2022	14:13	Yes	5.34	50.60	--	--	
SHM-13-04	04-28-2022	14:38	Yes	18.71	29.98	--	--	
SHM-13-06	04-28-2022	13:52	Yes	17.23	45.71	--	--	
SHM-13-07	04-28-2022	14:05	Yes	18.69	35.17	--	--	
SHM-13-08	04-28-2022	14:26	Yes	20.18	65.10	--	--	
SHM-93-22B	04-29-2022	10:10	Yes	6.99	92.30	--	--	
SHM-96-5B	04-28-2022	15:45	Yes	5.92	90.62	--	--	
SHP-01-36X	04-28-2022	16:36	Yes	7.56	12.90	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHP-01-37X	04-28-2022	16:42	Yes	6.35	11.14	--	--	
SHP-01-38A	04-28-2022	16:16	Yes	4.01	9.08	--	--	
SHP-2016-06A	04-28-2022	15:25	Yes	27.65	85.80	--	--	
SHP-2016-06B	04-28-2022	15:30	Yes	19.51	111.90	--	--	
SHP-2016-06C	04-28-2022	15:35	Yes	19.95	132.83	--	--	
SHP-2016-07A	04-29-2022	10:45	Yes	15.21	31.59	--	--	
SHP-2016-07B	04-29-2022	10:46	Yes	22.31	79.60	--	--	
SHP-2016-1A	04-28-2022	14:54	Yes	14.48	26.20	--	--	
SHP-2016-1B	04-28-2022	14:58	Yes	16.03	85.70	--	--	
SHP-2016-2A	04-28-2022	15:08	Yes	13.43	27.18	--	--	
SHP-2016-2B	04-28-2022	15:11	Yes	13.51	87.63	--	--	
SHP-2016-3A	04-28-2022	15:25	Yes	10.57	27.28	--	--	
SHP-2016-3B	04-28-2022	15:29	Yes	10.67	87.31	--	--	
SHP-2016-4A	04-28-2022	14:54	Yes	17.29	92.51	--	--	
SHP-2016-4B	04-28-2022	15:01	Yes	17.73	33.73	--	--	Wells may be labeled incorrect. Only symbol to note photographed.
SHP-2016-5A	04-28-2022	14:54	Yes	14.47	32.51	--	--	
SHP-2016-5B	04-28-2022	14:57	Yes	14.43	92.30	--	--	
SHP-2017-01	04-28-2022	15:31	Yes	18.18	78.26	--	--	New lock.
SHP-2017-02	04-28-2022	15:22	Yes	18.81	93.28	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
EPA-PZ-2012-1A	10-11-2022	10:18	12.81	27.85	--	--	
EPA-PZ-2012-1B	10-11-2022	10:11	12.51	77.54	--	--	
EPA-PZ-2012-2A	10-11-2022	10:00	12.20	28.35	--	--	Very soft bottom, measured to TOC- total depth of 25' may be BGS
EPA-PZ-2012-2B	10-11-2022	10:06	12.15	83.30	--	--	Measured to top of casing. Well completion is stand pipe. Depth of 80' may be BGS
EPA-PZ-2012-3A	10-11-2022	12:29	12.27	27.65	--	--	
EPA-PZ-2012-3B	10-11-2022	12:33	12.25	76.85	--	--	
EPA-PZ-2012-4A	10-11-2022	12:14	16.46	27.91	--	--	
EPA-PZ-2012-4B	10-11-2022	12:23	16.48	76.81	--	--	
EPA-PZ-2012-5A	10-11-2022	14:13	9.66	27.26	--	--	
EPA-PZ-2012-5B	10-11-2022	14:17	8.86	85.57	--	--	
EPA-PZ-2012-6A	10-11-2022	09:34	24.24	33.35	--	--	
EPA-PZ-2012-6B	10-11-2022	09:35	24.12	80.40	--	--	
EPA-PZ-2012-7A	10-11-2022	09:09	24.11	29.50	--	--	
EPA-PZ-2012-7B	10-11-2022	09:10	24.02	64.60	--	--	
N1-P1	10-11-2022	14:21	13.14	72.90	--	--	
N1-P2	10-11-2022	14:27	14.45	47.56	--	--	
N1-P3	10-11-2022	14:32	13.80	21.07	--	--	
N2-P1	10-11-2022	12:22	5.34	41.82	--	--	
N2-P2	10-11-2022	12:31	5.42	9.00	--	--	
N3-P1	10-11-2022	12:57	4.06	35.00	--	--	
N3-P2	10-11-2022	13:02	4.09	12.00	--	--	

ft-bmp = feet below measuring point

ppmV = parts per million by volume

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
N5-P1	10-11-2022	14:39	24.61	101.01	--	--	
N5-P2	10-11-2022	14:44	24.50	32.80	--	--	
N6-P1	10-11-2022	15:02	37.46	90.68			
N7-P1	10-11-2022	13:36	32.15	71.50	--	--	
N7-P2	10-11-2022	13:40	32.25	38.31	--	--	
PZ-12-01	10-11-2022	10:55	21.01	35.80	--	--	
PZ-12-02	10-11-2022	10:59	20.99	34.50	--	--	
PZ-12-03	10-11-2022	11:36	19.71	36.64	--	--	
PZ-12-04	10-11-2022	11:42	20.73	37.11	--	--	
PZ-12-05	10-11-2022	11:51	21.88	34.65	--	--	
PZ-12-06	10-11-2022	11:54	24.51	35.91	--	--	
PZ-12-07	10-11-2022	12:13	27.99	33.31	--	--	
PZ-12-08	10-11-2022	12:17	26.38	32.40	--	--	
PZ-12-09	10-11-2022	12:35	24.78	33.31	--	--	
PZ-12-10	10-11-2022	12:40	23.48	32.41	--	--	
SHL-10	10-11-2022	14:48	31.40	38.62	--	--	
SHL-11	10-11-2022	11:31	18.88	29.75	--	--	
SHL-12	10-11-2022	16:44	23.75	28.73			
SHL-13	10-11-2022	15:49	7.77	21.57	--	--	
SHL-15	10-11-2022	13:24	20.83	26.65	--	--	
SHL-17	10-11-2022	16:59	8.93	18.51			Cannot lock - outer casing is busted. Old well sentinel (model LTM3000) in well.

ft-bmp = feet below measuring point
ppmV = parts per million by volume

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHL-18	10-11-2022	10:19	19.85	28.79	--	--	
SHL-19	10-11-2022	12:23	23.93	32.65	--	--	
SHL-20	10-11-2022	11:21	18.89	50.60	--	--	
SHL-22	10-11-2022	15:32	9.05	110.30	--	--	
SHL-23	10-11-2022	15:30	30.60	35.47			
SHL-24	10-11-2022	11:07	16.96	120.00	--	--	
SHL-3	10-11-2022	13:24	30.63	34.17	--	--	
SHL-4	10-11-2022	14:36	10.77	14.72	--	--	
SHL-5	10-11-2022	13:49	6.81	13.89	--	--	
SHL-7	10-11-2022	10:39	19.02	23.77	--	--	
SHL-8D	10-11-2022	15:30	9.00	69.70	--	--	
SHL-8S	10-11-2022	15:37	9.09	55.70	--	--	
SHL-9	10-11-2022	15:27	11.72	26.26	--	--	
SHM-05-39A	10-11-2022	08:26	13.05	38.90	--	--	
SHM-05-39B	10-11-2022	08:28	13.69	66.00	--	--	
SHM-05-40X	10-11-2022	08:12	15.73	33.61	--	--	
SHM-05-41A	10-11-2022	08:50	12.55	41.85	--	--	
SHM-05-41B	10-11-2022	08:52	12.35	61.90	--	--	
SHM-05-41C	10-11-2022	08:53	12.61	87.80	--	--	Very Soft bottom
SHM-05-42A	10-11-2022	10:59	6.55	44.19	--	--	
SHM-05-42B	10-11-2022	11:04	6.61	73.59	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHM-07-03	10-11-2022	--	--	--	--	--	Inaccessible due to roadwork
SHM-07-05X	10-11-2022	08:10	16.01	64.00	--	--	
SHM-10-01	10-11-2022	9:59	4.69	70.78	--	--	Compression cap and lock missing.
SHM-10-02	10-11-2022	8:20	18.62	64.18	--	--	
SHM-10-03	10-11-2022	8:30	27.43	69.82	--	--	
SHM-10-04	10-11-2022	8:48	7.38	64.48	--	--	
SHM-10-05A	10-11-2022	12:04	26.16	50.95	--	--	
SHM-10-06	10-11-2022	10:37	20.65	81.65	--	--	
SHM-10-06A	10-11-2022	13:10	35.97	89.14	--	--	
SHM-10-07	10-11-2022	15:06	27.83	50.20	--	--	
SHM-10-08	10-11-2022	08:11	9.98	56.71	--	--	
SHM-10-10	10-11-2022	11:48	11.69	66.60	--	--	Lock is missing.
SHM-10-11	10-11-2022	14:31	41.18	62.27	--	--	
SHM-10-12	10-11-2022	14:23	34.66	57.28	--	--	
SHM-10-13	10-11-2022	14:15	26.72	73.04	--	--	
SHM-10-14	10-11-2022	13:56	21.12	82.14	--	--	
SHM-10-15	10-11-2022	14:07	25.17	56.60	--	--	Compression cap is missing.
SHM-10-16	10-11-2022	12:53	9.25	87.24	--	--	
SHM-11-02	10-11-2022	11:58	23.25	68.65	--	--	
SHM-11-06	10-11-2022	10:46	20.95	35.90	--	--	
SHM-11-07	10-11-2022	15:46	23.23	48.21	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHM-13-01	10-11-2022	09:41	3.50	51.15	--	--	
SHM-13-02	10-11-2022	10:05	13.54	72.98	--	--	Lock missing.
SHM-13-03	10-11-2022	11:37	6.42	48.05	--	--	
SHM-13-04	10-11-2022	09:01	20.36	29.87	--	--	
SHM-13-05	10-11-2022	09:24	17.83	85.29	--	--	
SHM-13-06	10-11-2022	10:14	18.37	45.69	--	--	
SHM-13-07	10-11-2022	10:24	19.93	35.16	--	--	
SHM-13-08	10-11-2022	12:23	21.55	64.37	--	--	
SHM-13-14D	10-11-2022	11:27	4.63	57.21	--	--	
SHM-13-14S	10-11-2022	11:19	4.75	17.72	--	--	
SHM-13-15	10-11-2022	11:11	4.96	62.35	--	--	Compression fitting missing.
SHM-93-10D	10-11-2022	14:52	30.96	57.72	--	--	
SHM-93-18B	10-11-2022	09:56	19.54	90.88	--	--	
SHM-93-22B	10-11-2022	13:32	9.09	92.65	--	--	
SHM-93-22C	10-11-2022	13:16	10.29	136.72	--	--	
SHM-93-24A	10-14-2022	09:27	16.63	25.65	--	--	
SHM-96-5B	10-11-2022	14:02	8.10	88.64	--	--	
SHM-96-5C	10-11-2022	13:55	7.61	79.70	--	--	
SHM-99-31A	10-11-2022	09:44	4.42	15.82	--	--	
SHM-99-31B	10-11-2022	09:50	5.40	61.46	--	--	
SHM-99-31C	10-11-2022	09:54	5.70	79.98	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHM-99-32X	10-11-2022	10:07	11.19	84.06	--	--	
SHP-01-36X	10-11-2022	13:54	7.57	13.01	--	--	
SHP-01-37X	10-11-2022	14:09	6.10	11.34	--	--	
SHM-01-38A	10-11-2022	12:06	3.93	9.10	--	--	
SHP-01-38B	10-11-2022	12:08	4.62	25.72	--	--	
SHP-05-43	10-11-2022	15:09	46.74	61.19	--	--	
SHP-05-44	10-11-2022	15:00	42.40	60.70	--	--	
SHP-05-45A	10-11-2022	14:00	18.38	27.31	--	--	
SHP-05-45B	10-11-2022	13:57	18.83	75.90	--	--	
SHP-05-46A	10-11-2022	14:17	17.53	27.30	--	--	
SHP-05-46B	10-11-2022	14:20	16.88	75.81	--	--	
SHP-05-47A	10-11-2022	16:31	5.91	6.04	--	--	
SHP-05-47B	10-11-2022	16:35	3.00	5.95	--	--	
SHP-05-48A	10-11-2022	17:21	Dry	5.59	--	--	Dry.
SHP-05-48B	10-11-2022	17:26	Dry	5.38	--	--	Dry.
SHP-05-49A	10-11-2022	10:25	5.32	5.98	--	--	
SHP-05-49B	10-11-2022	10:30	4.27	5.32	--	--	
SHP-2016-06A	10-11-2022	15:56	30.38	85.59	--	--	
SHP-2016-06B	10-11-2022	15:47	24.52	111.84	--	--	
SHP-2016-06C	10-11-2022	15:38	24.34	132.81	--	--	
SHP-2016-07A	10-11-2022	15:04	31.60	31.79	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHP-2016-07B	10-11-2022	15:07	33.47	79.82	--	--	
SHP-2016-1A	10-11-2022	09:47	17.22	26.20	--	--	
SHP-2016-1B	10-11-2022	09:48	18.33	85.80	--	--	
SHP-2016-2A	10-11-2022	11:18	15.84	27.39	--	--	
SHP-2016-2B	10-11-2022	11:22	15.84	84.25	--	--	
SHP-2016-3A	10-11-2022	12:52	13.13	27.47	--	--	
SHP-2016-3B	10-11-2022	12:58	12.98	87.53	--	--	
SHP-2016-4A	10-11-2022	11:45	19.88	32.74	--	--	
SHP-2016-4B	10-11-2022	11:46	19.67	92.50	--	--	
SHP-2016-5A	10-11-2022	11:29	16.89	32.76	--	--	
SHP-2016-5B	10-11-2022	11:33	16.87	92.51	--	--	
SHP-2017-01	10-11-2022	14:30	20.58	78.41	--	--	
SHP-2017-02	10-11-2022	15:33	21.23	93.40	--	--	
SHP-95-27X	10-11-2022	09:37	34.74	42.08	--	--	
SHP-99-01C	10-11-2022	16:54	26.91	32.68	--	--	
SHP-99-29X	10-11-2022	16:30	24.73	30.70	--	--	
SHP-99-34B	10-11-2022	17:19	14.25	74.70	--	--	
SHP-99-35X	10-11-2022	17:25	36.76	41.78	--	--	
SHSG-13-01G	10-11-2022	--	--	--	--	--	Cannot measure due to inaccessibility and vegetation blocking a view of the gauge.
SHSG-13-02G	10-11-2022	11:00	1.45	--	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-11-2022 to 10-14-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	SHL
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler, Desmond Bedard	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
SHSG-13-03G	10-11-2022	--	--	--	--	--	Cannot measure due to inaccessibility and vegetation blocking a view of the gauge.
SHSG-14-01G	10-11-2022	13:40	1.47	--	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Sampling Form

Well ID	EPA-PZ-2012-1A	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	50's Sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.85	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	18.31	**Gallons in Well**	0.75
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:22	**Total Volume Purged (ml)**	5700	**Sample ID**	EPA-PZ-2012-1A-SPR22	**Sample Time**	12:01
Purge End Time	12:01	**Well Volumes Purged (total)**	2	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:30	0	150	10.86	1200	5.84	0.019	11.9	1.4	11.1	136.7	Clear	No Odor
11:35	5	150	10.86	1950	5.82	0.019	8	0.8	11.2	126	Clear	No Odor
11:39	9	150	10.86	2550	5.81	0.02	5.5	0.67	11.6	117.6	Clear	No Odor
11:45	15	150	10.86	3450	5.83	0.02	3.4	0.63	11.4	113.7	Clear	No Odor
11:50	20	150	10.86	4200	5.83	0.02	2.7	0.59	11.6	111.9	Clear	No Odor
11:55	25	150	10.86	4950	5.83	0.02	2.4	0.56	11.8	111.1	Clear	No Odor
12:00	30	150	10.86	5700	5.83	0.02	1.9	0.58	11.6	111.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-1B	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	50's Sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.64	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	67.00	**Gallons in Well**	2.75
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	7.25	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:26	**Total Volume Purged (ml)**	8100	**Sample ID**	EPA-PZ-2012-1B	**Sample Time**	14:23
Purge End Time	14:23	**Well Volumes Purged (total)**	0.78	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:31	0	150	10.56	750	4	0.076	5.6	3.35	13.5	27.8	Clear	No Odor
13:34	3	150	10.56	1200	6.17	0.073	1.8	1.8	12.7	2.9	Clear	No Odor
13:40	9	150	10.56	2100	6.16	0.073	1.5	0.98	12.5	-1.5	Clear	No Odor
13:45	14	150	10.56	2850	6.17	0.073	2.2	0.79	12.9	-3.5	Clear	No Odor
13:50	19	150	10.56	3600	6.18	0.074	10.3	0.73	12.6	-8.4	Clear	No Odor
13:55	24	150	10.56	4350	6.23	0.075	16.8	0.67	12.7	-20.8	Clear	No Odor
14:00	29	150	10.56	5100	6.27	0.077	12.6	0.63	13.2	-30.8	Clear	No Odor
14:06	35	150	10.56	6000	6.28	0.077	7	0.54	13.1	-33.5	Clear	No Odor
14:13	42	150	10.56	7050	6.29	0.078	6.7	0.53	13.3	-34.4	Clear	No Odor
14:20	49	150	10.56	8100	6.29	0.078	6.4	0.52	13.4	-34.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-2A	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)				**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.42	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	18.29	**Gallons in Well**	0.075
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:23	**Total Volume Purged (ml)**	4800	**Sample ID**	EPA-PZ-2012-1A-SPR22	**Sample Time**	09:59
Purge End Time	09:56	**Well Volumes Purged (total)**	1.7	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:30	0	150	10.57	1050	5.46	0.006	2.6	3.93	11.8	262.6	Clear	No Odor
09:35	5	150	10.57	1800	5.44	0.005	1.7	3.41	11.5	260	Clear	No Odor
09:40	10	150	10.57	2250	5.44	0.003	1.5	3.33	11.6	260.2	Clear	No Odor
09:45	15	150	10.57	3300	5.45	0.005	1.4	3.28	12	262.5	Clear	No Odor
09:50	20	150	10.57	4050	5.46	0.005	1.5	3.27	12	266.2	Clear	No Odor
09:55	25	150	10.57	4800	5.46	0.005	1.7	3.25	12.2	270.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-2B	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)				**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-80.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.47	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	72.90	**Gallons in Well**	3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	77.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:30	**Total Volume Purged (ml)**	5250	**Sample ID**	EPA-PZ-2012-2B-EPA22	**Sample Time**	11:07
Purge End Time	11:06	**Well Volumes Purged (total)**	0.46	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:35	0	150	10.47	750	5.89	0.038	1.6	1.73	12.9	148.2	Clear	No Odor
10:40	5	150	10.47	1500	5.87	0.038	1.5	0.84	12.4	125	Clear	No Odor
10:46	11	150	10.47	2400	5.88	0.039	4	0.67	12.9	97	Clear	No Odor
10:50	15	150	10.47	3000	5.88	0.039	1.8	0.64	13.1	91.7	Clear	No Odor
10:55	20	150	10.47	3750	5.88	0.039	1.8	0.6	12.7	88.7	Clear	No Odor
11:00	25	150	10.47	4500	5.88	0.04	2.1	0.57	12.8	84.7	Clear	No Odor
11:05	30	150	10.47	5250	5.89	0.04	1.9	0.55	12.9	85.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-3A	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.42	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	16.75	**Gallons in Well**	0.68
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:05	**Total Volume Purged (ml)**	5560	**Sample ID**	EPA-PZ-2012-3A-SPR22	**Sample Time**	09:40
Purge End Time	09:37	**Well Volumes Purged (total)**	2.16	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:10	0	196	9.49	980	5.75	0.192	13.34	1.09	9.9	-5.3	Clear	No Odor
09:15	5	196	9.5	1960	5.74	0.191	7.82	0.89	10	-11.3	Clear	No Odor
09:20	10	180	9.5	2860	5.73	0.19	14.48	0.82	10.1	-14.4	Clear	No Odor
09:25	15	180	9.5	3760	5.73	0.19	2.3	0.79	10.2	-16.5	Clear	No Odor
09:30	20	180	9.5	4660	5.73	0.191	3.25	0.77	10.2	-18.1	Clear	No Odor
09:35	25	180	9.5	5560	5.73	0.19	2.03	0.76	10.3	-19.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-3B	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.29	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	66.83	**Gallons in Well**	2.71
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:14	**Total Volume Purged (ml)**	7570	**Sample ID**	EPA-PZ-2012-3B-SPR22	**Sample Time**	12:05
Purge End Time	12:01	**Well Volumes Purged (total)**	0.74	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:19	0	166	9.38	830	6.53	0.381	28.29	1.26	12.1	-74.5	Clear	No Odor
11:24	5	166	9.4	1660	6.5	0.375	17.69	0.94	11.4	-83.5	Clear	No Odor
11:29	10	166	9.39	2490	6.5	0.375	16	0.87	11.3	-87.4	Clear	No Odor
11:34	15	160	9.38	3290	6.5	0.375	10.96	0.83	11.4	-90.2	Clear	No Odor
11:39	20	160	9.38	4090	6.5	0.374	8.51	0.81	11.3	-91.9	Clear	No Odor
11:44	25	178	9.38	4980	6.5	0.376	8.45	0.79	11.3	-93.9	Clear	No Odor
11:49	30	178	9.38	5870	6.5	0.376	6.31	0.78	11.5	-94.8	Clear	No Odor
11:54	35	170	9.38	6720	6.5	0.376	5.96	0.77	11.4	-96	Clear	No Odor
11:59	40	170	9.38	7570	6.49	0.376	5.81	0.75	11.5	-96.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? yes

Well Inspection Comments: Labeled on inside only

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-4A	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	48.9 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.35	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	13.92	**Gallons in Well**	0.57
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:20	**Total Volume Purged (ml)**	9375	**Sample ID**	EPA-PZ-2012-04A-SPR22	**Sample Time**	13:40
Purge End Time	13:36	**Well Volumes Purged (total)**	4.34	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:30	0	125	14.4	1250	6.33	0.236	10.55	1.33	18.1	-27.4	Yellow	No Odor
12:35	5	125	14.4	1875	6.33	0.236	12.41	1.1	17.8	-29.9	Orange	No Odor
12:40	10	125	14.44	2500	6.33	0.236	10.95	0.98	17.6	-31.7	Orange	No Odor
12:45	15	125	14.46	3125	6.33	0.24	9.41	0.93	18	-33.3	Orange	No Odor
12:50	20	125	14.47	3750	6.33	0.24	10.89	0.91	18.3	-34.7	Orange	No Odor
12:55	25	125	14.47	4375	6.34	0.244	14.42	0.91	18.4	-36.2	Orange	No Odor
13:00	30	125	14.45	5000	6.33	0.241	21.19	0.88	18	-37.1	Yellow	Slight
13:05	35	125	14.45	5625	6.34	0.242	22.35	0.88	18	-37.9	Yellow	Slight
13:10	40	125	14.44	6250	6.34	0.237	26.05	0.86	17.5	-37.9	Yellow	Slight
13:15	45	125	14.44	6875	6.33	0.24	29.46	0.85	17.7	-38.8	Yellow	Slight
13:20	50	125	14.44	7500	6.34	0.237	34.4	0.85	17.4	-39.3	Yellow	Slight
13:25	55	125	14.44	8125	6.34	0.242	34.61	0.85	18.2	-40.2	Clear	Slight
13:30	60	125	14.45	8750	6.34	0.243	34.88	0.86	18.1	-41	Clear	Slight
13:35	65	125	14.44	9375	6.34	0.243	34.02	0.85	18.2	-41.8	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-4B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	48.9 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.28	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	62.97	**Gallons in Well**	2.56
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	74.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:50	**Total Volume Purged (ml)**	7500	**Sample ID**	EPA-PZ-2012-4B-SPR22	**Sample Time**	14:55
Purge End Time	14:49	**Well Volumes Purged (total)**	0.77	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:05	0	125	14.3	1875	6.48	0.446	7.97	2.81	16.5	-82.5	Yellow	No Odor
14:10	5	125	14.25	2500	6.51	0.445	3.02	1.12	16	-93.9	Orange	No Odor
14:15	10	125	14.15	3126	6.53	0.442	2.77	0.98	16	-96.6	Yellow	No Odor
14:20	15	125	14.25	3750	6.55	0.438	2.55	0.9	15.8	-98.5	Yellow	Slight
14:25	20	125	14.25	4375	6.56	0.439	3.01	0.87	16	-100.1	Yellow	Slight
14:30	25	125	14.25	5000	6.58	0.435	2.35	0.86	15.7	-100.4	Yellow	Slight
14:35	30	125	14.15	5625	6.59	0.431	2.06	0.84	15.5	-100.5	Yellow	Slight
14:41	36	125	14.26	6375	6.59	0.432	1.78	0.83	15.7	-101.1	Yellow	Slight
14:45	40	125	14.26	6875	6.59	0.429	2.19	0.82	15.5	-101.3	Yellow	Slight
14:50	45	125	14.26	7500	6.59	0.426	2.63	0.82	15.4	-101.2	Yellow	Slight

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-5A	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	7.1	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	19.76	**Gallons in Well**	0.80
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:25	**Total Volume Purged (ml)**	4590	**Sample ID**	EPA-PZ-2012-5A-SPR22	**Sample Time**	13:55
Purge End Time	13:50	**Well Volumes Purged (total)**	1.52	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	190	7.16	950	5.33	0.081	12.75	1.02	10.4	46.9	Clear	Slight
13:35	5	182	7.18	1860	5.31	0.08	18.92	0.85	10.3	45.8	Clear	Slight
13:40	10	182	7.19	2770	5.3	0.079	3.13	0.81	10.2	45.1	Clear	No Odor
13:45	15	182	7.18	3680	5.3	0.079	3.14	0.78	10	44.4	Clear	No Odor
13:50	20	182	7.17	4590	5.3	0.079	2.77	0.76	10.2	43.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-5B	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	6.31	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	78.68	**Gallons in Well**	3.20
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	83	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:20	**Total Volume Purged (ml)**	4390	**Sample ID**	EPA-PZ-2012-5B-SPR22	**Sample Time**	14:50
Purge End Time	14:45	**Well Volumes Purged (total)**	0.36	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:25	0	178	6.41	890	6.12	0.334	3.57	1.34	11.3	25.8	Clear	No Odor
14:30	5	178	6.4	1780	6.12	0.333	2.53	0.98	11.3	26.5	Clear	No Odor
14:35	10	174	6.4	2650	6.13	0.333	1.71	0.88	11.3	29.7	Clear	No Odor
14:40	15	174	6.4	3520	6.14	0.331	1.4	0.83	11.1	31.5	Clear	No Odor
14:45	20	174	6.4	4390	6.14	0.33	1.41	0.8	11.1	33	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-6A	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	11.36	**Gallons in Well**	0.46
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	29	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:16	**Total Volume Purged (ml)**	5904	**Sample ID**	EPA-PZ-2012-6A-SPR22	**Sample Time**	12:05
Purge End Time	12:01	**Well Volumes Purged (total)**	3.39	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:21	0	132	21.02	660	6.23	0.149	22.33	7.47	13.3	73.7	Clear	No Odor
11:26	5	132	21.02	1320	6.09	0.15	28.4	7.4	13.5	87.5	Clear	No Odor
11:31	10	132	21.02	1980	6.03	0.158	11.91	7.36	13.1	98.6	Clear	No Odor
11:36	15	132	21.02	2640	6.01	0.159	9.43	7.31	13.2	106.8	Clear	No Odor
11:41	20	132	21.02	3300	6	0.155	6.52	7.29	13	113.4	Clear	No Odor
11:46	25	132	21.02	3960	5.99	0.161	4.33	7.18	13.2	120.1	Clear	No Odor
11:51	30	132	21.02	4620	5.98	0.167	3.28	7.16	13.3	125.1	Clear	No Odor
11:56	35	132	21.02	5280	5.98	0.169	3.54	7.11	13.4	128.5	Clear	No Odor
12:01	40	132	21.02	5940	5.97	0.169	2.25	7.08	13.6	131.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-6B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-80.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.85	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	59.98	**Gallons in Well**	2.44
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	78	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:03	**Total Volume Purged (ml)**	4810	**Sample ID**	EPA-PZ-2016-6B-SPR22	**Sample Time**	09:45
Purge End Time	09:45	**Well Volumes Purged (total)**	0.52	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	130	21.89	260	6.18	0.094	157.05	2.74	12.5	1.1	Gray	No Odor
09:10	5	130	21.88	910	6.41	0.102	98.79	1.16	12.5	-46.3	Gray	No Odor
09:15	10	130	21.92	1560	6.52	0.103	52.33	0.99	12.6	-71	Gray	No Odor
09:20	15	130	21.91	2210	6.56	0.103	33.1	0.94	12.4	-82.7	Gray	No Odor
09:25	20	130	21.88	2860	6.59	0.103	15.5	0.9	12.5	-90.6	Gray	No Odor
09:30	25	130	21.88	3510	6.61	0.104	11.2	0.87	12.6	-96.4	Clear	No Odor
09:35	30	130	21.88	4160	6.62	0.105	11.32	0.85	12.7	-100.3	Clear	No Odor
09:40	35	130	21.88	4680	6.63	0.105	11.27	0.83	12.7	-103.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-7A	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	51.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.88	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	7.79	**Gallons in Well**	0.32
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:05	**Total Volume Purged (ml)**	11400	**Sample ID**	EPA-PZ-2012-7A-SPR22	**Sample Time**	12:25
Purge End Time	12:22	**Well Volumes Purged (total)**	9.41	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:10	0	150	21.88	750	5.82	0.412	99.03	4.91	13.6	76.4	Clear	No Odor
11:15	5	150	21.88	1500	5.76	0.433	10.15	4.49	13.2	115.3	Clear	No Odor
11:20	10	150	21.89	2250	5.77	0.464	16.27	4.29	13.4	139.8	Clear	No Odor
11:25	15	150	21.88	3000	5.78	0.481	15.34	4.23	13.4	153.9	Clear	No Odor
11:30	20	150	21.88	3750	5.78	0.488	10.78	4.21	13.7	162.8	Clear	No Odor
11:40	30	150	21.88	5250	5.78	0.495	32.74	4.24	13.3	179.3	Clear	No Odor
11:45	35	150	21.88	6000	5.78	0.501	40.71	4.24	13.4	185.1	Clear	No Odor
11:50	40	150	21.88	6750	5.78	0.506	8.42	4.25	13.5	187.6	Clear	No Odor
11:55	45	150	21.89	7500	5.79	0.52	58.03	4.2	14.2	189.8	Clear	No Odor
12:00	50	150	21.89	8250	5.79	0.524	11.66	4.18	14.5	190.1	Clear	No Odor
12:05	55	150	21.89	9000	5.8	0.538	6.74	4.17	14.9	190.4	Clear	No Odor
12:10	60	150	21.89	9750	5.8	0.542	3.75	4.14	15.2	190.8	Clear	No Odor
12:15	65	150	21.89	10500	5.8	0.548	4.47	4.18	15.4	192.7	Clear	No Odor
12:21	71	150	21.89	11400	5.81	0.546	3.37	4.27	15.4	189.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	EPA-PZ-2012-7B	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	51.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-65.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.92	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	45.10	**Gallons in Well**	1.83
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	62	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:35	**Total Volume Purged (ml)**	8500	**Sample ID**	EPA-PZ-2012-7B-SPR22	**Sample Time**	10:55
Purge End Time	10:51	**Well Volumes Purged (total)**	1.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:45	0	100	21.92	1000	6.67	0.1	43.85	1.06	11.8	-88.4	Clear	No Odor
09:51	6	100	21.92	1600	6.68	0.101	14.47	0.84	11.8	-100.5	Clear	No Odor
09:55	10	100	21.92	2000	6.7	0.101	14.42	0.78	12.1	-104.6	Clear	No Odor
10:00	15	100	21.92	2500	6.71	0.1	14.25	0.75	11.7	-106.1	Clear	No Odor
10:05	20	100	21.91	3000	6.72	0.1	14.91	0.73	11.9	-106.8	Clear	No Odor
10:10	25	100	21.91	3500	6.72	0.1	10.46	0.71	11.8	-107.2	Clear	No Odor
10:15	30	125	21.92	4125	6.72	0.1	7.12	0.7	12.1	-107.3	Clear	No Odor
10:20	35	125	21.91	4750	6.73	0.101	8.11	0.69	12.2	-107.2	Clear	No Odor
10:26	41	125	21.91	5500	6.73	0.1	8.43	0.67	12.2	-107.1	Clear	No Odor
10:30	45	125	21.92	6000	6.73	0.101	7.72	0.67	12.5	-107.1	Clear	No Odor
10:35	50	125	21.91	6625	6.73	0.101	6.71	0.67	12.3	-107.1	Clear	No Odor
10:40	55	125	21.91	7250	6.73	0.101	3.24	0.67	12.3	-107.1	Clear	No Odor
10:45	60	125	21.92	7875	6.74	0.1	3.03	0.66	12.4	-106.8	Clear	No Odor
10:50	65	125	21.91	8500	6.74	0.101	3.99	0.65	12.3	-107.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-01	**Date**	2022-05-04	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	42.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.38	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	15.51	**Gallons in Well**	2.52
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:00	**Total Volume Purged (ml)**	9750	**Sample ID**	PZ-12-01-SPR22	**Sample Time**	15:10
Purge End Time	15:06	**Well Volumes Purged (total)**	1.02	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:05	0	150	20.38	750	6.37	0.626	16.74	1.41	11.2	-88.3	Clear	No Odor
14:10	5	150	20.38	1500	6.37	0.621	12.79	0.98	11.2	-90.8	Clear	No Odor
14:15	10	150	20.4	2250	6.37	0.62	15.45	0.89	11.2	-91.6	Clear	No Odor
14:20	15	150	20.4	3000	6.37	0.622	13.73	0.83	11.4	-91.9	Clear	No Odor
14:26	21	150	20.39	3750	6.37	0.617	10.99	0.81	11.2	-91.4	Clear	No Odor
14:31	26	150	20.39	4500	6.36	0.618	12.1	0.78	11.2	-91.1	Clear	No Odor
14:35	30	150	20.39	5250	6.36	0.614	9.12	0.77	11.1	-90.5	Clear	No Odor
14:40	35	150	20.29	6000	6.36	0.614	6.83	0.76	11.2	-90	Clear	No Odor
14:45	40	150	20.38	6750	6.36	0.615	5.83	0.76	11.2	-89.5	Clear	No Odor
14:50	45	150	20.38	7500	6.36	0.614	4.43	0.75	11.2	-89.2	Clear	No Odor
14:55	50	150	20.38	8250	6.36	0.614	3.34	0.74	11.2	-88.7	Clear	No Odor
15:00	55	150	20.38	9000	6.36	0.612	2.88	0.74	11.2	-88.3	Clear	No Odor
15:05	60	150	20.38	9750	6.36	0.611	2.38	0.74	11.1	-87.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-02	**Date**	2022-05-04	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	42.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	19.46	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	15.06	**Gallons in Well**	2.45
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	15:25	**Total Volume Purged (ml)**	6000	**Sample ID**	PZ-12-02-SPR22	**Sample Time**	16:10
Purge End Time	16:07	**Well Volumes Purged (total)**	0.65	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
15:31	0	150	19.53	900	6.3	0.588	15.96	1.04	10.8	-71.7	Clear	No Odor
15:35	4	150	19.55	1500	6.34	0.589	9.71	0.8	10.7	-78.3	Clear	No Odor
15:40	9	150	19.53	2250	6.34	0.588	5.93	0.69	10.7	-81	Clear	No Odor
15:45	14	150	19.53	3000	6.34	0.591	4.46	0.67	10.8	-82.1	Clear	No Odor
15:50	19	150	19.54	3750	6.34	0.589	4.88	0.67	10.8	-82.4	Clear	No Odor
15:56	25	150	19.53	4650	6.34	0.594	3.02	0.68	11	-82.4	Clear	No Odor
16:00	29	150	19.54	5250	6.34	0.59	3.88	0.68	10.9	-82.2	Orange	No Odor
16:05	34	150	19.53	6000	6.34	0.589	3.45	0.67	11	-82.1	Orange	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-03	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	19.54	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	17.10	**Gallons in Well**	2.78
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	33	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:10	**Total Volume Purged (ml)**	10500	**Sample ID**	PZ-12.03-SPR22	**Sample Time**	15:25
Purge End Time	15:22	**Well Volumes Purged (total)**	1.00	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:20	0	150	19.54	1500	6.46	0.674	25.25	0.77	19.4	-109.7	Orange	No Odor
14:26	6	150	19.54	2400	6.48	0.683	22.91	0.67	17.8	-110.1	Orange	No Odor
14:30	10	150	19.55	3000	6.49	0.68	22.67	0.64	17.7	-109.4	Orange	No Odor
14:36	16	150	19.54	3900	6.49	0.674	25.64	0.63	17.1	-108.3	Orange	No Odor
14:41	21	150	19.54	4650	6.49	0.659	21.39	0.61	17.8	-106.9	Orange	No Odor
14:46	26	150	19.54	5400	6.49	0.671	22.31	0.59	17.2	-106.9	Orange	No Odor
14:50	30	150	19.54	6000	6.49	0.669	17.46	0.62	17.3	-106.7	Orange	No Odor
14:55	35	150	19.55	6750	6.49	0.678	16.88	0.6	17.7	-106.7	Orange	No Odor
15:00	40	150	19.55	7500	6.5	0.682	30.28	0.58	17.8	-106.3	Orange	No Odor
15:05	45	150	19.54	8250	6.5	0.67	26.96	0.58	17.2	-105.8	Orange	No Odor
15:11	51	150	19.54	9150	6.5	0.67	8.86	0.58	17	-104.9	Orange	No Odor
15:15	55	150	19.55	9750	6.5	0.671	8.81	0.57	17.3	-104.7	Orange	No Odor
15:20	60	150	19.54	10500	6.5	0.669	9.22	0.57	17.5	-104.9	Orange	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None possibly the standpipe isn't included in total depth

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-04	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	18.9	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	18.25	**Gallons in Well**	2.97
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	36.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:40	**Total Volume Purged (ml)**	10500	**Sample ID**	PZ-12-04-SPR22	**Sample Time**	13:55
Purge End Time	13:51	**Well Volumes Purged (total)**	0.93	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:55	0	150	18.9	2250	6.2	0.605	10.07	0.75	17.2	-90.8	Orange	No Odor
13:00	5	150	18.9	3000	6.29	0.608	6.85	0.69	17.7	-90.5	Orange	No Odor
13:05	10	150	18.9	3750	6.31	0.59	6.41	0.65	17.5	-89.9	Orange	No Odor
13:10	15	150	18.9	4500	6.31	0.589	5.74	0.65	18	-90.2	Orange	No Odor
13:15	20	150	18.9	5250	6.32	0.572	6.65	0.64	17.4	-89.1	Orange	No Odor
13:20	25	150	18.9	6000	6.33	0.568	6.55	0.64	17.6	-88.9	Orange	No Odor
13:25	30	150	18.9	6750	6.33	0.576	6.94	0.65	18.4	-89.4	Orange	No Odor
13:31	36	150	18.9	7650	6.33	0.565	5.91	0.63	18	-88.3	Orange	No Odor
13:35	40	150	18.89	8250	6.34	0.564	6.12	0.62	18.1	-88.5	Orange	No Odor
13:40	45	150	18.9	9000	6.34	0.56	10.87	0.62	18.2	-88.1	Orange	No Odor
13:45	50	150	18.9	9750	6.34	0.551	10.79	0.62	17.7	-87.4	Orange	No Odor
13:50	55	150	18.9	10500	6.34	0.554	10.75	0.62	18.1	-87.3	Orange	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None-s standpipe included in total depth?

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-05	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	26.0-36.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.65	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	13.09	**Gallons in Well**	2.13
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32.2	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:40	**Total Volume Purged (ml)**	9600	**Sample ID**	PZ-12-05-SPR22	**Sample Time**	12:05
Purge End Time	12:00	**Well Volumes Purged (total)**	1.19	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:50	0	120	21.65	1200	5.86	0.131	310.98	2.24	12.9	26.6	Orange	No Odor
10:56	6	120	21.66	1920	5.78	0.114	136.58	2.35	13.1	43.1	Orange	No Odor
11:00	10	120	21.65	2400	5.76	0.109	107.41	2.35	13.2	46.1	Orange	No Odor
11:05	15	120	21.65	3000	5.75	0.106	101.54	2.36	13.2	49.4	Orange	No Odor
11:10	20	120	21.65	3600	5.76	0.106	89.62	2.29	13.3	48.1	Orange	No Odor
11:15	25	120	21.66	4200	5.75	0.105	49.02	2.38	13.4	51.7	Orange	No Odor
11:20	30	120	21.65	4800	5.74	0.103	97.32	2.38	13.6	54	Orange	No Odor
11:25	35	120	21.65	5400	5.73	0.102	51.75	2.4	13.8	55.1	Orange	No Odor
11:30	40	120	21.65	6000	5.73	0.102	48.45	2.39	13.9	56.1	Orange	No Odor
11:35	45	120	21.65	6600	5.73	0.101	42.21	2.4	13.8	57.1	Orange	No Odor
11:40	50	120	21.65	7200	5.72	0.101	34.14	2.38	13.9	58.9	Yellow	No Odor
11:45	55	120	21.65	7800	5.72	0.1	17.61	2.41	14	60.1	Yellow	No Odor
11:50	60	120	21.65	8400	5.72	0.099	15.58	2.4	13.9	61.3	Yellow	No Odor
11:55	65	120	21.65	9000	5.71	0.098	16.86	2.42	14	62.7	Yellow	No Odor
12:00	70	120	21.65	9600	5.71	0.099	15.84	2.43	14.1	63.5	Yellow	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-06	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	26.0-36.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	22.71	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	13.35	**Gallons in Well**	2.17
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	34	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:45	**Total Volume Purged (ml)**	12480	**Sample ID**	PZ-12-06-SPR22	**Sample Time**	10:00
Purge End Time	09:57	**Well Volumes Purged (total)**	1.52	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:55	0	150	22.73	1500	5.41	0.201	28.25	1.52	11.2	241.1	Orange	No Odor
09:02	7	180	22.73	2760	5.44	0.209	6.34	1.31	11.4	237.5	Orange	No Odor
09:06	11	180	22.73	3480	5.45	0.213	5.32	1.23	11.7	238.3	Orange	No Odor
09:35	40	180	22.73	8700	5.46	0.224	10.12	1.07	12	231.6	Yellow	No Odor
09:41	46	180	22.73	9780	5.46	0.225	5.33	1.02	12.1	230.2	Yellow	No Odor
09:45	50	180	22.73	10500	5.46	0.227	4.73	0.98	12.2	229.3	Clear	No Odor
09:50	55	180	22.73	11400	5.46	0.228	4.75	0.91	12.3	228.2	Clear	No Odor
09:56	61	180	22.73	12480	5.48	0.23	3.39	0.91	12.4	224.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-07	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	18.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	27.59	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	5.95	**Gallons in Well**	0.97
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30.8	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:35	**Total Volume Purged (ml)**	12150	**Sample ID**	PZ-2-07-SPR22	**Sample Time**	12:00
Purge End Time	11:57	**Well Volumes Purged (total)**	3.31	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:45	0	150	27.6	1500	6.29	0.082	249.84	7.37	13.5	56.9	Orange	No Odor
10:50	5	150	27.65	2250	6.23	0.084	168.4	7.1	13.4	67.6	Orange	No Odor
10:55	10	150	27.71	3000	6.29	0.097	153.04	6.77	13.6	174.04	Orange	No Odor
11:00	15	150	27.77	3750	6.37	121	169.6	6.16	13.4	45.1	Orange	Slight
11:05	20	150	27.77	4500	6.41	0.135	119.13	5.9	13.4	32.4	Orange	No Odor
11:15	30	150	27.7	6000	6.46	0.152	71.15	5.42	14	9	Orange	No Odor
11:21	36	150	27.65	6900	6.49	0.166	64.94	5.06	14	-1.6	Orange	Slight
11:25	40	150	27.63	7500	6.49	0.167	51.23	5.15	13.5	-2.3	Orange	Slight
11:30	45	150	27.65	8250	6.5	0.169	40.13	5.04	13.6	-4.5	Orange	Slight
11:35	50	150	27.65	9000	6.5	0.172	34.65	4.92	13.7	-6.4	Orange	Slight
11:40	55	150	27.65	9750	6.51	0.175	44.49	4.78	13.9	-8.4	Orange	Slight
11:45	60	150	27.65	10500	6.51	0.176	34.13	4.73	13.8	-8.9	Orange	Slight
11:50	65	150	27.66	11250	6.51	0.178	35.47	4.63	14	-9.7	Orange	No Odor
11:56	71	150	27.64	12150	6.51	0.181	34.79	4.53	14.1	-10.6	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-08	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	18.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	24.18	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	8.42	**Gallons in Well**	1.37
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:00	**Total Volume Purged (ml)**	9150	**Sample ID**	PZ-12-08-SPR22	**Sample Time**	10:05
Purge End Time	10:02	**Well Volumes Purged (total)**	1.76	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:30	0	150	24.15	4500	5.66	0.185	231.79	1.06	12.9	41.8	Orange	Slight
09:35	5	150	24.16	5250	5.67	0.183	230.3	1	13	41.9	Orange	Slight
09:40	10	150	24.15	6000	5.68	0.184	227.22	1.01	12.9	41.4	Orange	Slight
09:45	15	150	24.15	6750	5.7	0.185	204.53	0.99	13.2	40.7	Orange	Slight
09:52	22	150	24.15	7800	5.72	0.185	93.03	0.98	13	39.5	Orange	Slight
09:55	25	150	24.15	8250	5.72	0.185	92.45	0.98	13	40.1	Orange	Slight
10:01	31	150	24.15	9150	5.72	0.187	84.12	0.95	13.2	40.2	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None-standpipe ?

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-09	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	23.64	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	9.85	**Gallons in Well**	1.60
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30.2	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:00	**Total Volume Purged (ml)**	12900	**Sample ID**	PZ-12-09-SPR22	**Sample Time**	15:30
Purge End Time	15:28	**Well Volumes Purged (total)**	2.13	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:10	0	150	23.69	1500	6.63	0.2	23.76	1.68	14.7	117.7	Orange	No Odor
14:16	6	150	23.69	2400	6.55	0.188	24.37	1.83	14.1	111.5	Yellow	No Odor
14:21	11	150	23.69	3150	6.53	0.13	26.62	1.93	14.2	108.8	Yellow	No Odor
14:25	15	150	23.7	3750	6.52	0.183	17.94	1.95	14.4	106.9	Yellow	No Odor
14:31	21	150	23.69	4650	6.54	0.15	15.35	2	15.1	104.5	Yellow	No Odor
14:35	25	150	23.69	5250	6.56	0.19	8.93	2.1	15.6	100.4	Yellow	No Odor
14:41	31	150	23.69	6150	6.55	0.194	14.98	2.23	17.2	99.1	Yellow	No Odor
14:45	35	150	23.69	6750	6.59	0.188	20.39	1.95	14.1	99.4	Yellow	No Odor
14:50	40	150	23.69	7500	6.56	0.185	11.22	1.87	14.4	100.7	Yellow	No Odor
14:55	45	150	23.69	8250	6.55	0.185	11.49	1.89	14.5	101.8	Yellow	No Odor
15:00	50	150	23.69	9000	6.55	0.185	8.06	1.89	14.5	102.6	Yellow	No Odor
15:05	55	150	23.69	9750	6.55	0.185	8.92	1.88	14.7	103.7	Yellow	No Odor
15:10	60	150	23.69	10500	6.55	0.186	6.07	1.96	14.8	104.9	Yellow	No Odor
15:15	65	150	23.69	11250	6.55	0.183	3.99	1.98	14.6	106.1	Yellow	No Odor
15:21	71	150	23.69	12150	6.55	0.184	4.2	2.05	14.5	106.6	Yellow	No Odor
15:26	76	150	23.69	12900	6.55	0.181	3.74	2	14.4	107.8	Yellow	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	PZ-12-10	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.4	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	11.20	**Gallons in Well**	1.82
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	31	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:40	**Total Volume Purged (ml)**	11400	**Sample ID**	PZ-12-10-SPR22	**Sample Time**	14:20
Purge End Time	14:16	**Well Volumes Purged (total)**	1.65	**Replicate / Code No.**	Not Applicable / PZ-12-10-SPR22	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	120	21.4	6000	6.15	0.111	7.12	6.74	13.2	174	Clear	No Odor
13:35	5	120	21.4	6600	6.15	0.111	13.39	6.67	13.8	174.7	Clear	No Odor
13:41	11	120	21.4	7320	6.16	0.114	3.01	6.64	14.2	174.2	Clear	No Odor
13:45	15	120	21.4	7800	6.16	0.111	2.61	6.7	13.4	175.4	Clear	No Odor
13:50	20	120	21.4	8400	6.16	0.111	7.79	6.72	13.3	175.7	Clear	No Odor
13:55	25	120	21.4	9000	6.16	0.112	7.07	6.71	13.7	175.5	Clear	No Odor
14:00	30	120	21.4	9600	6.17	0.113	3.03	6.73	13.5	175.9	Clear	No Odor
14:05	35	120	21.4	10200	6.17	0.112	2.17	6.73	13.9	175.9	Clear	No Odor
14:10	40	120	21.4	10800	6.16	0.113	2.37	6.77	14	176.8	Clear	No Odor
14:15	45	120	21.4	11400	6.17	0.113	2.74	6.69	14	177.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Well ID	SHL-10	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)				**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-39.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	31.04	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	7.87	**Gallons in Well**	1.28
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	35.02	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:08	**Total Volume Purged (ml)**	6300	**Sample ID**	SHL-10-SPR22	**Sample Time**	13:53
Purge End Time	13:53	**Well Volumes Purged (total)**	1.3	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:15	0	150	31.06	1050	7.04	0.019	14.5	4.96	13.2	86.3	Clear	No Odor
13:20	5	150	31.06	1800	6.79	0.016	8.1	5.29	13.1	95.8	Clear	No Odor
13:25	10	150	30.06	2550	6.57	0.009	5.3	6.16	12.7	111.3	Clear	No Odor
13:30	15	150	30.06	3300	6.29	0.006	3.9	6.78	12.3	123.7	Clear	No Odor
13:35	20	150	30.06	4050	6.27	0.005	2.9	7.01	12.3	134.2	Clear	No Odor
13:40	25	150	30.06	4800	6.2	0.004	2.6	7.21	12.4	138.3	Clear	No Odor
13:45	30	150	30.06	5550	6.17	0.004	2.5	7.25	12.3	139.7	Clear	No Odor
13:50	35	150	30.06	6300	6.11	0.004	2.2	7.3	12.1	140.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHL-11	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	12.0-27.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	18.38	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	27.97	**Gallons in Well**	4.54
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:05	**Total Volume Purged (ml)**	7500	**Sample ID**	Shl-11-SPR22	**Sample Time**	12:00
Purge End Time	11:56	**Well Volumes Purged (total)**	0.44	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:10	0	150	18.55	750	6.48	0.704	110.1	1.04	13.5	-108.1	Orange	No Odor
11:15	5	150	18.54	1500	6.47	0.702	144.73	0.79	13.5	-109.2	Orange	No Odor
11:20	10	150	18.54	2250	6.47	0.705	80.56	0.7	13.7	-110.7	Orange	No Odor
11:25	15	150	18.54	3000	6.48	0.709	65.12	0.65	13.7	-111.4	Clear	No Odor
11:30	20	150	18.54	3750	6.48	0.712	60.69	0.63	13.8	-111.6	Clear	No Odor
11:35	25	150	18.54	4500	6.51	0.702	71.68	0.6	14.2	-113.2	Clear	No Odor
11:41	31	150	18.54	5400	6.5	0.7	57.6	0.57	14.5	-112.9	Clear	No Odor
11:45	35	150	18.54	6000	6.49	0.707	51.25	0.57	14.6	-112.5	Yellow	No Odor
11:50	40	150	18.54	6750	6.49	0.712	51.63	0.56	14.7	-112.1	Orange	No Odor
11:55	45	150	18.54	7500	6.48	0.713	54.4	0.58	14.6	-111.3	Orange	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None metallic type sheen smears turbidity probe and cuvette. Turbidity was most likely much lower.

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHL-19	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-30.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	23.45	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	9.30	**Gallons in Well**	6.04
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	25	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:25	**Total Volume Purged (ml)**	10500	**Sample ID**	SHL-19-SPR22	**Sample Time**	13:40
Purge End Time	13:35	**Well Volumes Purged (total)**	0.46	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:35	0	150	23.44	1500	6.26	0.205	14.29	7.19	13.5	104.1	Orange	No Odor
12:41	6	150	23.44	2400	6.25	0.179	15.7	6.94	13.2	119.3	Orange	No Odor
12:47	12	150	23.44	3300	6.26	0.175	9.54	7.06	13.3	127.1	Orange	No Odor
12:51	16	150	23.44	3900	6.27	0.173	9.88	6.92	13.3	131.1	Orange	No Odor
12:55	20	150	23.45	4500	6.27	0.173	9.68	7.11	13.2	134.3	Yellow	No Odor
13:00	25	150	23.45	5250	6.27	0.171	10.01	7.03	13.2	136.6	Yellow	No Odor
13:06	31	150	23.45	6150	6.28	0.169	13.2	7.01	13.2	139.4	Yellow	No Odor
13:11	36	150	23.44	6900	6.26	0.17	18.58	7.09	13.4	142.6	Yellow	No Odor
13:16	41	150	23.44	7650	6.26	0.17	15.39	6.85	13.5	142.3	Yellow	No Odor
13:20	45	150	23.44	8250	6.27	0.171	14.12	7.26	13.6	143.9	Yellow	No Odor
13:25	50	150	23.45	9000	6.27	0.166	13.34	7.39	13.1	146.9	Yellow	No Odor
13:31	56	150	23.45	9900	6.26	0.166	13.31	6.99	13.2	149.6	Yellow	No Odor
13:35	60	150	23.44	10500	6.26	0.166	12.71	6.78	13.3	150.6	Yellow	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHL-20	**Date**	2022-05-05	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	39.0-49.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	17.34	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	33.35	**Gallons in Well**	21.68
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	37	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:50	**Total Volume Purged (ml)**	12750	**Sample ID**	SHL-20-SPR22	**Sample Time**	10:20
Purge End Time	10:16	**Well Volumes Purged (total)**	0.16	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:00	0	150	17.34	1500	6.42	0.56	10.1	0.99	12.3	-100.2	Orange	No Odor
09:05	5	150	17.34	2250	6.47	0.567	7.81	0.83	12.3	-104.3	Orange	No Odor
09:10	10	150	17.34	3000	6.49	0.575	6.29	0.8	12.5	-105.6	Orange	No Odor
09:15	15	150	17.34	3750	6.5	0.582	7.23	0.78	12.8	-106.2	Orange	No Odor
09:20	20	150	17.34	4500	6.52	0.584	6.26	0.76	12.7	-106.6	Orange	No Odor
09:26	26	150	17.34	5400	6.52	0.588	6.33	0.73	12.9	-106.8	Orange	No Odor
09:48	48	150	17.34	8700	6.54	0.597	4.04	0.68	13.2	-106.1	Orange	No Odor
10:05	65	150	17.34	11250	6.54	0.604	3.27	0.66	13.5	-105.2	Orange	No Odor
10:10	70	150	17.34	12000	6.54	0.604	3.51	0.65	13.6	-104.9	Orange	No Odor
10:15	75	150	17.34	12750	6.55	0.607	3.54	0.65	13.6	-104.8	Orange	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHL-4	**Date**	2022-05-03	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	3.0-13.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.67	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	3.96	**Gallons in Well**	0.64
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	12	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:22	**Total Volume Purged (ml)**	7080	**Sample ID**	SHL-4-SPR22	**Sample Time**	14:30
Purge End Time	14:25	**Well Volumes Purged (total)**	2.92	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:23	0	100	10.68	100	6.2	0.203	272.61	1.85	10.9	20.8	Orange	No Odor
13:28	5	100	10.68	600	6.15	0.202	253.71	1.33	11.1	-0.5	Reddish Brown	No Odor
13:33	10	100	10.67	1100	6.14	0.205	194.26	1.12	11.7	-12.3	Reddish Brown	No Odor
13:38	15	110	10.68	1650	6.15	0.2	125.91	1.01	11.1	-18.8	Reddish Brown	No Odor
13:43	20	110	10.67	2200	6.17	0.192	97.18	0.98	10.7	-23.7	Reddish Brown	No Odor
13:48	25	122	10.68	2810	6.18	0.185	82.31	0.93	10.4	-26.1	Reddish Brown	No Odor
13:53	30	122	10.67	3420	6.19	0.18	86.57	0.95	10.4	-28.6	Yellow	No Odor
13:58	35	122	10.67	4030	6.19	0.179	57.44	0.92	10.6	-30	Yellow	No Odor
14:03	40	122	10.67	4640	6.2	0.177	43.78	0.9	10.8	-31.9	Yellow	No Odor
14:08	45	122	10.67	5250	6.2	0.176	29.97	0.87	11.1	-33.3	Clear	No Odor
14:13	50	122	10.67	5860	6.2	0.176	22.38	0.85	11.3	-34.6	Clear	No Odor
14:18	55	122	10.67	6470	6.2	0.174	22.31	0.85	11.4	-35.7	Clear	No Odor
14:23	60	122	10.67	7080	6.2	0.174	20.99	0.84	11.4	-36.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-05-40X	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	32.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.15	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	19.23	**Gallons in Well**	3.12
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	33	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:58	**Total Volume Purged (ml)**	6728	**Sample ID**	SHM-05-40X-SPR22	**Sample Time**	10:45
Purge End Time	10:45	**Well Volumes Purged (total)**	0.57	**Replicate / Code No.**	NA	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:00	0	126	14.21	252	5.97	0.274	53.72	3.76	13	25	Clear	No Odor
10:05	5	158	14.22	1042	6.21	0.273	29.12	1.86	12.5	-41.4	Clear	No Odor
10:10	10	158	14.21	1832	6.29	0.272	14.21	1.27	12.4	-64.5	Clear	No Odor
10:15	15	158	14.21	2622	6.32	0.272	10.82	1.12	12.4	-74.9	Clear	No Odor
10:20	20	158	14.21	3412	6.34	0.27	7.03	1.05	12.4	-80.6	Clear	No Odor
10:25	25	158	14.21	4202	6.35	0.271	6.24	0.98	12.7	-84.6	Clear	No Odor
10:30	30	136	14.21	4882	6.35	0.272	5.3	0.96	12.5	-87.3	Clear	No Odor
10:35	35	142	14.21	5592	6.37	0.271	4.55	0.92	12.4	-89.6	Clear	No Odor
10:39	39	142	14.21	6160	6.37	0.273	4.84	0.9	12.5	-90.6	Clear	No Odor
10:43	43	142	14.21	6728	6.37	0.273	3.81	0.89	12.5	-91.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-05-41B	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	62.0-64.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.21	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	51.46	**Gallons in Well**	8.36
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	63	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:18	**Total Volume Purged (ml)**	8270	**Sample ID**	SHM-05-41B-SPR22	**Sample Time**	14:15
Purge End Time	14:10	**Well Volumes Purged (total)**	0.26	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:23	0	164	10.29	820	6.03	0.552	56.48	1.47	11.3	24.4	Clear	No Odor
13:28	5	164	10.28	1640	6.11	0.406	31.06	1.02	11.5	-28.4	Clear	No Odor
13:33	10	170	10.27	2490	6.18	0.336	23.54	0.9	11.8	-47.3	Clear	No Odor
13:38	15	170	10.27	3340	6.21	0.314	30.28	0.86	11.7	-55.9	Clear	No Odor
13:43	20	170	10.27	4190	6.24	0.293	13.25	0.83	11.6	-62.6	Clear	No Odor
13:48	25	170	10.27	5040	6.24	0.296	8.44	0.82	11.7	-64.7	Clear	No Odor
13:53	30	170	10.27	5890	6.22	0.33	8.47	0.81	11.7	-63.2	Clear	No Odor
13:58	35	170	10.27	6740	6.24	0.306	4.68	0.8	11.8	-65.9	Clear	No Odor
14:03	40	170	10.27	7590	6.25	0.303	2.84	0.78	11.8	-67	Clear	No Odor
14:07	44	170	10.27	8270	6.26	0.31	1.76	0.78	11.7	-68.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-05-41C	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	88.0-93.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.83	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	77.28	**Gallons in Well**	12.56
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	90	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:27	**Total Volume Purged (ml)**	12920	**Sample ID**	SHM-05-41C-SPR22	**Sample Time**	14:45
Purge End Time	14:43	**Well Volumes Purged (total)**	0.27	**Replicate / Code No.**	MS/MSD / SHM-05-41C-SPR22	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	170	9.99	510	6.91	0.257	22.57	2.71	11	106.5	Clear	No Odor
13:35	5	170	9.99	1360	6.54	0.295	13.6	1.28	10.8	3.2	Clear	No Odor
13:40	10	170	9.99	2210	6.48	0.44	12.5	1.09	10.7	-55	Clear	No Odor
13:45	15	170	9.99	3060	6.58	0.55	6.2	0.99	10.7	-80.2	Clear	No Odor
13:50	20	170	9.99	3910	6.64	0.608	4.04	0.93	10.8	-95.6	Clear	No Odor
13:55	25	170	9.99	4760	6.67	0.627	3.86	0.9	10.7	-101.8	Clear	No Odor
14:00	30	170	9.99	5610	6.69	0.649	4.13	0.87	10.6	-106.1	Clear	No Odor
14:05	35	170	9.99	6460	6.71	0.679	2.98	0.86	10.8	-110.3	Clear	No Odor
14:10	40	170	9.99	7310	6.73	0.706	3.27	0.85	10.9	-113.6	Clear	No Odor
14:15	45	170	9.99	8160	6.74	0.723	3.3	0.84	10.8	-115.7	Clear	No Odor
14:20	50	170	9.99	9010	6.75	0.745	3.8	0.83	10.9	-117.5	Clear	No Odor
14:25	55	170	9.99	9860	6.76	0.763	3.95	0.82	10.7	-118.6	Clear	No Odor
14:30	60	170	9.99	10710	6.77	0.776	4.67	0.82	10.7	-119.7	Clear	No Odor
14:35	65	170	9.99	11560	6.77	0.791	4.84	0.81	11	-120.6	Clear	No Odor
14:39	69	170	9.99	12240	6.78	0.802	4.97	0.81	11	-121.1	Clear	No Odor
14:43	73	170	9.99	12920	6.78	0.809	4.32	0.8	10.9	-121.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

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in = inches
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mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-07-03	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-35.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	19.75	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	13.36	**Gallons in Well**	2.17
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:15	**Total Volume Purged (ml)**	3180	**Sample ID**	SHM-07-03-SPR22	**Sample Time**	13:50
Purge End Time	13:46	**Well Volumes Purged (total)**	0.39	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:20	0	106	20.2	530	5.45	0.787	14.8	4.96	17.1	115.4	Clear	No Odor
13:25	5	106	20.22	1060	5.44	0.753	12.6	4.88	16.4	128.5	Clear	No Odor
13:30	10	106	20.21	1590	5.44	0.758	13.12	4.87	16.9	135.9	Clear	No Odor
13:35	15	106	20.21	2120	5.44	0.746	11.36	4.9	16.1	142.4	Clear	No Odor
13:40	20	106	20.21	2650	5.44	0.75	11.1	4.89	16.1	146.4	Clear	No Odor
13:45	25	106	20.21	3180	5.44	0.751	11.08	4.84	16.2	149.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-07-05X	**Date**	2022-05-12	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	56.0-66.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.42	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	49.83	**Gallons in Well**	8.10
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	61	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:50	**Total Volume Purged (ml)**	4600	**Sample ID**	SHM-07-05X-SPR22	**Sample Time**	12:30
Purge End Time	12:26	**Well Volumes Purged (total)**	0.15	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:55	0	150	15.59	750	6.35	1.019	5.61	1.55	14.4	-49.2	Clear	No Odor
12:00	5	150	16.68	1500	6.34	1.036	31.75	1.06	14.7	-52.4	Clear	No Odor
12:05	10	124	17.62	2120	6.34	1.046	3.33	0.95	15.1	-52.8	Clear	No Odor
12:10	15	124	18.53	2740	6.37	1.09	4	0.93	15	-60.2	Clear	No Odor
12:15	20	124	19.4	3360	6.4	1.101	3.51	0.89	15.6	-63.8	Clear	No Odor
12:20	25	124	20.27	3980	6.42	1.108	3.24	0.9	15.4	-67.9	Clear	No Odor
12:25	30	124	21.05	4600	6.41	1.092	3.15	0.9	15.7	-67.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-11-02	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	39.0-49.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	21.9	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	46.31	**Gallons in Well**	30.10
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	44	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:08	**Total Volume Purged (ml)**	8700	**Sample ID**	SHM-11-02-SPR22	**Sample Time**	10:25
Purge End Time	10:20	**Well Volumes Purged (total)**	0.08	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:13	0	132	22.26	660	7.48	0.396	45.03	1.39	11.6	-186.2	Clear	No Odor
09:18	5	132	22.47	1320	7.6	0.441	7.69	1.08	11.7	-215.2	Clear	No Odor
09:23	10	132	22.66	1980	7.63	0.45	8.6	0.96	11.7	-218.2	Clear	No Odor
09:28	15	132	22.83	2640	7.57	0.461	12.63	0.92	11.5	-212.5	Clear	No Odor
09:33	20	132	23.02	3300	7.54	0.473	11.22	0.88	11.6	-208.2	Clear	No Odor
09:38	25	132	23.18	3960	7.59	0.461	8.89	0.85	11.5	-211.4	Clear	No Odor
09:43	30	132	23.28	4620	7.61	0.45	8.22	0.84	11.5	-214.5	Clear	No Odor
09:48	35	132	23.39	5280	7.61	0.447	7.95	0.82	11.6	-214.6	Clear	No Odor
09:53	40	114	23.46	5850	7.58	0.448	7.29	0.82	11.6	-211.8	Clear	No Odor
09:58	45	114	23.54	6420	7.56	0.451	6.73	0.81	11.7	-208.8	Clear	No Odor
10:03	50	114	23.62	6990	7.54	0.453	6.18	0.8	11.6	-205.8	Clear	No Odor
10:08	55	114	23.66	7560	7.51	0.455	5.71	0.8	11.7	-202.6	Clear	No Odor
10:13	60	114	23.71	8130	7.5	0.458	5.54	0.8	11.8	-200.5	Clear	No Odor
10:18	65	114	23.75	8700	7.49	0.461	5.49	0.79	11.8	-199	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-11-06	**Date**	2022-05-04	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-35.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	19.21	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	16.44	**Gallons in Well**	2.67
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:25	**Total Volume Purged (ml)**	6480	**Sample ID**	SHM-11-06-SPR22	**Sample Time**	15:15
Purge End Time	15:11	**Well Volumes Purged (total)**	0.64	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:30	0	144	19.35	720	6.19	0.581	231.94	1.21	10.6	-60.1	Yellow	No Odor
14:35	5	144	19.36	1440	6.18	0.588	23.66	1.03	10.6	-68.3	Clear	No Odor
14:40	10	144	19.35	2160	6.18	0.588	19.51	0.97	10.6	-73.1	Clear	No Odor
14:45	15	144	19.35	2880	6.18	0.588	15.57	0.93	10.6	-75.6	Clear	No Odor
14:50	20	144	19.35	3600	6.18	0.588	12.8	0.9	10.6	-77	Clear	No Odor
14:55	25	144	19.35	4320	6.18	0.588	9.71	0.94	10.6	-78.3	Clear	No Odor
15:00	30	144	19.35	5040	6.18	0.588	5.75	0.94	10.6	-79.2	Clear	No Odor
15:05	35	144	19.35	5760	6.18	0.588	5.5	0.9	10.6	-79.9	Clear	No Odor
15:10	40	144	19.35	6480	6.18	0.588	5.23	0.92	10.5	-80.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-13-03	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	49, sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	42.0-52.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	5.86	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	45.39	**Gallons in Well**	7.38
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	47	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:56	**Total Volume Purged (ml)**	4930	**Sample ID**	SHM-13-03-SPR22	**Sample Time**	09:32
Purge End Time	09:31	**Well Volumes Purged (total)**	0.18	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:00	0	145	5.94	580	6.21	0.148	16.5	0.79	10.5	66.8	Clear	No Odor
09:04	4	145	5.94	1160	6.27	0.147	17.7	0.37	10.5	24	Clear	No Odor
09:11	11	145	5.96	2175	7.9	0.147	20.3	0.28	10.5	3	Clear	No Odor
09:15	15	145	5.96	2755	6.32	0.148	21.8	0.26	10.6	-2.9	Clear	No Odor
09:20	20	145	5.96	3480	6.33	0.149	21.4	0.25	10.7	-7.3	Clear	No Odor
09:25	25	145	5.96	4205	6.34	0.149	21.3	0.24	10.7	-13.1	Clear	No Odor
09:30	30	145	5.94	4930	6.34	0.15	22.9	0.23	10.7	-16.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-13-04	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50, overcast			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-30.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	18.85	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	11.27	**Gallons in Well**	1.84
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	25	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:38	**Total Volume Purged (ml)**	3200	**Sample ID**	SHM-13-04-SPR22	**Sample Time**	15:12
Purge End Time	15:11	**Well Volumes Purged (total)**	0.46	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:49	0	100	18.85	1100	6.18	0.315	577.4	5.44	12.3	91	Reddish Brown	Slight
14:55	6	100	18.85	1700	6.15	0.311	250.6	5.25	12.1	97	Brown	No Odor
15:00	11	100	18.85	2200	6.14	0.312	112	5.35	12.1	110.6	Brown	No Odor
15:05	16	100	18.85	2700	6.13	0.314	90.3	5.35	12.2	116.3	Brown	No Odor
15:10	21	100	18.85	3200	6.13	0.311	69.8	5.3	12	117.2	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-13-06	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50 and overcast			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	36.0-46.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	17.39	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	28.48	**Gallons in Well**	4.6
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	41	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:48	**Total Volume Purged (ml)**	3200	**Sample ID**	SHM-13-06-SPR22	**Sample Time**	12:22
Purge End Time	12:21	**Well Volumes Purged (total)**	0.18	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:55	0	100	17.39	700	6.53	0.085	21.1	1.85	13	-45.8	Clear	No Odor
12:00	5	100	17.4	1200	6.81	0.077	5.7	0.71	13.1	-113.9	Clear	No Odor
12:05	10	100	17.39	1700	6.9	0.077	11.7	0.57	13	-126.5	Clear	No Odor
12:10	15	100	17.39	2200	6.94	0.077	8.9	0.56	13.1	-130.2	Clear	No Odor
12:15	20	100	17.39	2700	6.94	0.076	8.1	0.56	13	-130.7	Clear	No Odor
12:20	25	100	17.39	3200	6.95	0.076	8.6	0.53	13	-130.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: Well cover is cracked.

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-13-07	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50, sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	27.0-37.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	18.81	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	16.48	**Gallons in Well**	2.7
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:04	**Total Volume Purged (ml)**	6670	**Sample ID**	SHM-13-07-SPR22	**Sample Time**	10:53
Purge End Time	10:51	**Well Volumes Purged (total)**	0.66	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:10	0	145	18.84	870	6.97	0.113	25.4	3.35	11.6	98.5	Clear	No Odor
10:15	5	145	18.84	1595	6.48	0.128	21.3	0.94	11.7	4.9	Clear	No Odor
10:20	10	145	18.84	2320	6.41	0.133	15.2	0.49	11.7	-18.3	Clear	No Odor
10:25	15	145	18.84	3045	6.44	0.137	9.5	0.36	11.8	-33.2	Clear	No Odor
10:30	20	145	18.84	3770	6.45	0.138	7.5	0.31	11.7	-40.1	Clear	No Odor
10:35	25	145	18.84	4495	6.47	0.139	6.4	0.29	11.8	-43.9	Clear	No Odor
10:40	30	145	18.84	5220	6.48	0.14	5.2	0.27	11.9	-47.6	Clear	No Odor
10:45	35	145	18.84	5945	6.49	0.141	4.8	0.25	12	-51.8	Clear	No Odor
10:50	40	145	18.84	6670	6.5	0.141	4.7	0.23	11.9	-53.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-13-08	**Date**	2022-05-06	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50, overcast			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	55.0-65.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.27	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	44.92	**Gallons in Well**	7.3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:11	**Total Volume Purged (ml)**	4400	**Sample ID**	SHM-13-08-SPR22	**Sample Time**	13:57
Purge End Time	13:55	**Well Volumes Purged (total)**	0.16	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:20	0	100	20.29	900	6.82	0.088	3.4	0.81	13.2	-54.6	Clear	No Odor
13:25	5	100	20.28	1400	6.79	0.093	3.6	0.47	13	-67.9	Clear	No Odor
13:30	10	100	20.29	1900	6.78	0.093	3.7	0.47	12.8	-76.2	Clear	No Odor
13:35	15	100	20.29	2400	6.77	0.095	2.4	0.4	12.8	-100.7	Clear	No Odor
13:39	19	100	20.28	2800	6.77	0.103	2.7	0.36	12.7	-126.1	Clear	No Odor
13:44	24	100	20.28	3300	6.82	0.106	1.6	0.36	12.7	-135.6	Clear	No Odor
13:50	30	100	20.29	3900	6.82	0.106	2.4	0.34	12.8	-137.3	Clear	No Odor
13:55	35	100	20.28	4400	6.81	0.107	2.3	0.33	12.9	-132.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-93-22B	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50's Clear Wind			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	82.0-92.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	7.09	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	85.31	**Gallons in Well**	55.7
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	87	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:50	**Total Volume Purged (ml)**	2500	**Sample ID**	SHM-93-22B-SPR22	**Sample Time**	15:17
Purge End Time	15:16	**Well Volumes Purged (total)**	0.01	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:55	0	100	7.02	500	6.39	0.101	54.9	0.54	8.1	1.8	Clear	No Odor
15:00	5	100	7.02	1000	6.39	0.1	38.4	0.4	8.1	11.4	Clear	No Odor
15:05	10	100	7.02	1500	6.4	0.099	24.6	0.35	8	16.4	Clear	No Odor
15:10	15	100	7.02	2000	6.4	0.099	24.5	0.33	8	18.6	Clear	No Odor
15:15	20	100	7.02	2500	6.41	0.099	23.2	0.32	8	19.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHM-96-5B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	56, clear sunny.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	6.22	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	84.70	**Gallons in Well**	13.8
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:35	**Total Volume Purged (ml)**	6000	**Sample ID**	SHM-96-5B-SPR22	**Sample Time**	12:17
Purge End Time	12:16	**Well Volumes Purged (total)**	0.11	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:40	0	150	6.24	750	6.46	0.078	133.6	2.18	10.6	57	Clear	No Odor
11:45	5	150	6.24	1500	6.4	0.085	108.3	1.09	10.7	-27.3	Clear	No Odor
11:50	10	150	6.24	2250	6.39	0.086	84.9	0.77	10.7	-37	Clear	No Odor
11:55	15	150	6.24	3000	6.4	0.087	65.3	0.63	10.8	-43.3	Clear	No Odor
12:00	20	150	6.24	3750	6.4	0.087	64.2	0.56	11	-46.2	Clear	No Odor
12:05	25	150	6.24	4500	6.41	0.088	44.9	0.51	11.1	-48.1	Brown	No Odor
12:10	30	150	6.24	5250	6.41	0.088	43.2	0.48	11	-48.8	Brown	No Odor
12:15	35	150	6.24	6000	6.41	0.088	42.9	0.47	10.9	-49.3	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-01-36X	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	53 Sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	3.0-8.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	7.76	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	5.34	**Gallons in Well**	0.22
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	12	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:50	**Total Volume Purged (ml)**	4500	**Sample ID**	SHP-01-36X-SPR22	**Sample Time**	10:20
Purge End Time	10:20	**Well Volumes Purged (total)**	5.4	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	150	7.8	750	6.06	0.056	17.3	1.56	12.4	39.3	Clear	No Odor
10:00	5	150	7.8	1500	6.14	0.057	15.4	0.55	12.3	32.4	Clear	No Odor
10:05	10	150	7.8	2250	6.16	0.057	11.8	0.53	12.4	30.1	Clear	No Odor
10:10	15	150	7.8	3000	6.14	0.057	8.9	0.48	12.5	30.6	Clear	No Odor
10:15	20	150	7.8	3750	6.14	0.058	8.5	0.44	12.6	30.5	Brown	No Odor
10:20	25	150	7.8	4500	6.13	0.058	8.5	0.43	12.7	31	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-01-37X	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50's clear windy			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	1.0-6.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	6.54	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	4.79	**Gallons in Well**	0.2
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	10	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:39	**Total Volume Purged (ml)**	3100	**Sample ID**	SHL-01-37X-SPR22	**Sample Time**	13:11
Purge End Time	13:11	**Well Volumes Purged (total)**	6.05	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:45	0	100	6.54	600	6.25	0.059	42.8	1.6	11.5	14.6	Clear	No Odor
12:50	5	100	6.54	1100	6.13	0.057	14.5	1.13	11.2	23	Clear	No Odor
12:55	10	100	6.54	1600	6.1	0.053	5.7	1.09	11.2	27.6	Clear	No Odor
13:00	15	100	6.54	2100	6.09	0.051	3.8	1.09	11.2	29.6	Clear	No Odor
13:05	20	100	6.54	2600	6.09	0.051	2.9	1.14	11.3	30.7	Brown	No Odor
13:10	25	100	6.54	3100	6.09	0.052	2.7	1.16	11.3	30.9	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-01-38A	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Clear 50's			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	1.5-6.5	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	4.2	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	5.07	**Gallons in Well**	0.21
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	5.35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:56	**Total Volume Purged (ml)**	2700	**Sample ID**	SHP-01-38A-SPR22	**Sample Time**	11:26
Purge End Time	11:24	**Well Volumes Purged (total)**	3.4	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:57	0	100	4.2	100	5.99	0.037	24.3	1.09	11.4	4.3	Clear	No Odor
11:02	5	100	4.2	600	5.98	0.035	8.9	0.72	11	1.3	Clear	No Odor
11:07	10	100	4.2	1100	5.98	0.035	5.3	0.64	11	-1	Clear	No Odor
11:13	16	100	4	1700	5.98	0.035	3.3	0.59	10.9	-2.3	Clear	No Odor
11:18	21	100	4.2	2200	5.98	0.034	2.9	0.56	11	-3.2	Clear	No Odor
11:23	26	100	4.2	2700	5.98	0.034	2.3	0.54	10.9	-3.7	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-06A	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	51.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	81.0-86.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	27.45	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	58.15	**Gallons in Well**	5.31
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	83.3	**Purge Method**	Low-Flow	**Purging Equipment**	Mini-Bladder Pump
Purge Start Time	09:35	**Total Volume Purged (ml)**	10950	**Sample ID**	SHP-2016-06A-SPR22	**Sample Time**	11:25
Purge End Time	11:20	**Well Volumes Purged (total)**	0.54	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	50	28.22	1000	7.54	0.41	5.13	5.9	17.3	-114.4	Yellow	No Odor
10:00	5	50	28.68	1250	7.4	0.419	26.18	2.28	15.5	-124.9	Yellow	No Odor
10:05	10	50	28.68	1500	7.39	0.42	32.63	1.81	15.2	-126	Yellow	No Odor
10:16	21	50	27.75	2050	7.44	0.43	5.24	2.56	15.6	-120.9	Yellow	No Odor
10:23	28	50	27.74	2400	7.53	0.437	7.15	2.21	16	-132.6	Yellow	No Odor
10:26	31	150	27.7	2850	7.57	0.44	4.56	2.06	16.2	-136.4	Yellow	No Odor
10:30	35	150	27.68	3450	7.63	0.445	3.59	1.73	16.5	-146.7	Yellow	No Odor
10:36	41	150	27.66	4350	7.72	0.446	6.22	1.43	16.4	161.6	Yellow	No Odor
10:40	45	150	27.5	4950	7.79	0.443	6.31	1.21	16.3	-171.4	Yellow	No Odor
10:46	51	150	27.46	5850	7.91	0.437	4.45	0.96	16.3	-187.8	Yellow	No Odor
10:51	56	150	27.46	6600	7.99	0.435	7.62	0.81	16.4	-200.2	Yellow	No Odor
10:55	60	150	28.46	7200	8.03	0.434	7.89	0.69	16.5	-206.3	Yellow	No Odor
11:01	66	150	27.46	8100	8.03	0.434	4.54	0.57	16.7	-211.1	Yellow	No Odor
11:05	70	150	27.46	8700	8.02	0.435	4.05	0.51	17	-213.3	Yellow	No Odor
11:10	75	150	27.45	9450	8.01	0.439	4.58	0.45	17.1	-215.1	Yellow	No Odor
11:15	80	150	27.44	10200	8.01	0.441	4.29	0.43	17.1	-216.5	Yellow	No Odor
11:20	85	150	27.4	10950	7.99	0.443	4.23	0.39	17.1	-217.1	Yellow	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Information

Well Labeled Properly:	yes
Is Well in Good Condition?	yes
Well Inspection Comments:	

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-06B	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	51.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	102.0-112.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	19.19	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	91.99	**Gallons in Well**	8.41
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	109	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:55	**Total Volume Purged (ml)**	9500	**Sample ID**	SHP-2016-06B-SPR22	**Sample Time**	13:35
Purge End Time	13:31	**Well Volumes Purged (total)**	0.30	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:15	0	100	19.19	2000	7.86	0.375	7.52	6.55	13.1	-95.1	Clear	No Odor
12:21	6	100	19.18	2600	7.87	0.346	14.23	2.22	12.6	-133.3	Clear	No Odor
12:25	10	100	19.19	3000	7.89	0.341	18.99	1.5	12.5	-145.5	Clear	No Odor
12:30	15	100	19.17	3500	7.89	0.337	19.83	1.04	12.4	-153.2	Clear	No Odor
12:35	20	100	19.19	4000	7.88	0.333	23.45	0.77	12.2	-159.8	Clear	No Odor
12:40	25	100	19.18	4500	7.87	0.34	16.95	0.74	13	-162.4	Clear	No Odor
12:55	40	100	19.19	6000	7.88	0.353	8.18	1.09	14.4	-145.6	Clear	No Odor
13:00	45	100	19.19	14980	7.95	0.316	22.45	0.52	10.6	-166.2	Clear	No Odor
13:05	50	100	19.18	7000	8.01	0.308	12.63	0.48	10.8	-178.8	Clear	No Odor
13:10	55	100	19.19	7500	8.14	0.309	12.72	0.4	13.1	-191.6	Clear	No Odor
13:15	60	100	19.18	8000	8.13	0.307	13.7	0.38	12.6	-194.2	Clear	No Odor
13:20	65	100	19.19	8500	8.06	0.305	12.81	0.36	12.4	-193.1	Clear	No Odor
13:25	70	100	19.18	9000	8	0.304	12.37	0.35	12.5	-192	Clear	No Odor
13:30	75	100	19.19	9500	7.98	0.307	11.84	0.34	12.4	-191.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-06C	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	51.1 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	123.0-133.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	20.48	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	112.88	**Gallons in Well**	10.32
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:10	**Total Volume Purged (ml)**	6500	**Sample ID**	SHP-2016-06C-SPR22	**Sample Time**	15:20
Purge End Time	15:16	**Well Volumes Purged (total)**	0.17	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:15	0	100	20.45	500	7.91	0.33	13.66	8.24	16.5	-42.1	Clear	No Odor
14:20	5	100	20.48	1000	7.78	0.292	13.39	5.55	13.1	-106.3	Clear	No Odor
14:25	10	100	20.48	1500	7.8	0.283	14.57	2.64	15.3	-145.6	Clear	No Odor
14:30	15	100	20.48	2000	7.82	0.279	31.44	1.24	15.8	-171.8	Clear	No Odor
14:35	20	100	20.48	2500	7.85	0.275	33.18	0.8	16.1	-184.4	Clear	No Odor
14:40	25	100	20.48	3000	7.88	0.268	20.5	0.65	16.1	-187.7	Clear	No Odor
14:45	30	100	20.49	3500	7.91	0.265	21.78	0.57	16.5	-186.2	Clear	No Odor
14:50	35	100	20.48	4000	7.93	0.258	29.29	0.53	16.5	-182.7	Clear	No Odor
14:55	40	100	20.48	4500	7.94	0.25	20.22	0.49	16.6	-180.5	Clear	No Odor
15:00	45	100	20.48	5000	7.95	0.245	21.03	0.47	16.9	-178.4	Clear	No Odor
15:05	50	100	20.48	5500	7.95	0.243	10.51	0.46	16.7	-177.8	Clear	No Odor
15:10	55	100	20.49	6000	7.95	0.242	11.39	0.44	16.6	-177.1	Clear	No Odor
15:15	60	100	20.48	6500	7.94	0.244	10.54	0.42	16.9	-177.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-07A	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	15.81	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	16.38	**Gallons in Well**	1.50
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:05	**Total Volume Purged (ml)**	4970	**Sample ID**	SHP-2016-7A-SPR22	**Sample Time**	14:45
Purge End Time	14:45	**Well Volumes Purged (total)**	0.88	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:10	0	142	17.33	710	5.41	0.033	28.72	1.88	13.7	119.8	Clear	No Odor
14:15	5	142	17.4	1420	5.34	0.032	18.06	2.11	13.5	130.1	Clear	No Odor
14:20	10	142	17.41	2130	5.33	0.032	5.14	2.32	13.4	124.8	Clear	No Odor
14:25	15	142	17.41	2840	5.33	0.032	7.27	2.46	13.3	122	Clear	No Odor
14:30	20	142	17.42	3550	5.32	0.032	3.23	2.54	13.4	116.8	Clear	No Odor
14:35	25	142	17.43	4260	5.33	0.032	2.53	2.41	13.3	113.3	Clear	No Odor
14:40	30	142	17.43	4970	5.32	0.032	2.49	2.51	13.1	116.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-07B	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	46.0 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-80.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	22.61	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	57.29	**Gallons in Well**	9.31
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	75	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:22	**Total Volume Purged (ml)**	2970	**Sample ID**	SHP-2016-7B-SPR22	**Sample Time**	10:05
Purge End Time	10:05	**Well Volumes Purged (total)**	0.08	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:25	0	90	24.77	270	6.72	0.295	8.52	2.51	14.1	-35.1	Clear	No Odor
09:30	5	90	25.09	720	6.79	0.293	13.82	1.34	14.1	-36.7	Clear	No Odor
09:35	10	90	25.51	1170	6.82	0.292	24.45	1.09	14.3	-38.5	Clear	No Odor
09:40	15	90	25.93	1620	6.84	0.293	45.3	1.04	14.6	-41	Clear	No Odor
09:45	20	90	26.3	2070	6.85	0.296	3.15	1.03	14.9	-44.6	Clear	No Odor
09:50	25	90	26.56	2520	6.86	0.295	3.2	1.03	14.9	-46.3	Clear	No Odor
09:55	30	90	26.84	2970	6.86	0.298	3.43	1.05	15.3	-47.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Well ID	SHP-2016-1A	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	48.9 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	13.0-23.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.51	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	11.72	**Gallons in Well**	0.48
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	24	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:45	**Total Volume Purged (ml)**	7000	**Sample ID**	Shp-2016-1a-SPR22	**Sample Time**	09:55
Purge End Time	09:51	**Well Volumes Purged (total)**	3.85	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:51	0	100	14.75	6000	5.86	0.048	8.06	8.8	10.8	229.4	Clear	No Odor
08:55	4	100	14.75	1000	5.83	0.049	5.32	8.66	10.9	231.5	Clear	No Odor
09:05	14	100	14.75	2000	5.84	0.049	2.27	8.41	10.9	233.6	Clear	No Odor
09:10	19	100	14.75	2500	5.84	0.049	1.8	8.16	11.2	235.4	Clear	No Odor
09:15	24	100	14.75	3000	5.85	0.05	1.65	8.29	11.3	235.3	Clear	No Odor
09:20	29	100	14.75	3500	5.85	0.05	1.49	8.2	11.5	235.5	Clear	No Odor
09:25	34	100	14.75	4000	5.86	0.05	1.62	8.19	11.4	235.8	Clear	No Odor
09:30	39	100	14.75	4500	5.86	0.05	1.39	8.21	11.6	235.3	Clear	No Odor
09:35	44	125	14.75	5125	5.86	0.051	1.57	8.21	11.8	234.2	Clear	No Odor
09:40	49	125	14.75	5750	5.87	0.051	1.6	8.15	11.9	235.5	Clear	No Odor
09:45	54	125	14.75	6375	5.86	0.051	1.64	8.21	11.8	235.7	Clear	No Odor
09:50	59	125	14.75	7000	5.86	0.051	1.48	8.15	12	236.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None-standpipe?

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-1B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	48.9 degrees F and Light Rain.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	16.24	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	69.67	**Gallons in Well**	2.83
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	83.2	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:15	**Total Volume Purged (ml)**	10125	**Sample ID**	SHP-2016-1B-SPR22	**Sample Time**	11:40
Purge End Time	11:38	**Well Volumes Purged (total)**	0.95	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:25	0	125	15.25	1250	6.45	0.133	20.22	4.18	13.2	-32.7	Clear	No Odor
10:30	5	125	15.39	1875	6.4	150	67.69	1.73	13.3	-48.2	Clear	No Odor
10:35	10	125	15.51	2500	6.4	0.152	33.54	1.32	13.4	-52.2	Clear	No Odor
10:40	15	125	15.77	3125	6.41	0.154	41.15	1.25	13.5	-55.4	Clear	No Odor
10:46	21	125	15.91	3875	6.42	0.157	24.48	1.09	13.7	-59.8	Clear	No Odor
10:50	25	125	16.16	4375	6.42	0.157	13.47	1.07	13.6	-60.1	Clear	No Odor
10:55	30	125	16.44	5000	6.42	0.157	26.12	1.03	13.6	-60.9	Clear	No Odor
11:02	37	125	16.61	5875	6.43	0.16	21.2	0.99	14	-63.6	Clear	No Odor
11:05	40	125	16.68	6250	6.43	0.16	9.93	0.97	13.9	-63.5	Clear	No Odor
11:10	45	125	16.69	6875	6.44	0.16	13.91	0.95	13.9	-65.3	Clear	No Odor
11:17	52	125	16.68	7750	6.45	0.161	9.55	0.93	13.9	-65.7	Clear	No Odor
11:20	55	125	16.69	8125	6.44	0.161	5.39	0.93	14	-65.5	Clear	No Odor
11:25	60	125	16.67	8750	6.44	0.162	8.52	0.91	14.3	-66.2	Clear	No Odor
11:31	66	125	16.68	9500	6.45	0.163	8.55	0.91	14.1	-67.1	Clear	No Odor
11:36	71	125	16.68	10125	6.44	0.163	8.04	0.89	14.1	-66.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
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mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-2A	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	13.74	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	13.75	**Gallons in Well**	0.56
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	24	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:00	**Total Volume Purged (ml)**	7170	**Sample ID**	SHP-2016-2A-SPR22	**Sample Time**	11:45
Purge End Time	11:45	**Well Volumes Purged (total)**	3.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:05	0	188	13.92	940	7.36	0.088	1.26	2.71	9.9	52.3	Clear	No Odor
11:10	5	178	13.91	1830	7.35	0.09	1.13	2.45	10	49.8	Clear	No Odor
11:15	10	178	13.9	2720	7.29	0.09	1.26	2.39	10.1	48.1	Clear	No Odor
11:20	15	178	13.9	3610	7.22	0.089	1.24	2.41	10.1	46.8	Clear	No Odor
11:25	20	178	13.89	4500	7.16	0.089	2.14	2.45	10.2	46.1	Clear	No Odor
11:30	25	178	13.89	5390	7.09	0.088	3.23	2.51	10.2	46.1	Clear	No Odor
11:35	30	178	13.9	6280	7.04	0.087	3.21	2.57	10.4	46.9	Clear	No Odor
11:40	35	178	13.9	7170	7	0.086	3.38	2.65	10.2	48	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-2B	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	13.81	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	74.12	**Gallons in Well**	3.01
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	84	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:20	**Total Volume Purged (ml)**	3750	**Sample ID**	SHP-2016-2B-SPR22	**Sample Time**	12:50
Purge End Time	12:50	**Well Volumes Purged (total)**	0.33	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:25	0	150	13.83	750	6.22	0.255	8.51	1.45	11.1	-65.4	Clear	No Odor
12:30	5	150	13.86	1500	6.19	0.292	3.28	1.05	11	-71.2	Clear	No Odor
12:35	10	150	13.86	2250	6.21	0.306	2.73	0.97	10.9	-75.6	Clear	No Odor
12:40	15	150	13.86	3000	6.21	0.309	2.13	0.93	11	-78.2	Clear	No Odor
12:45	20	150	13.86	3750	6.22	0.308	1.8	0.9	10.9	-80.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-3A	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	10.77	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	16.71	**Gallons in Well**	0.68
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:42	**Total Volume Purged (ml)**	9440	**Sample ID**	SHP-2016-3A-SPR22	**Sample Time**	10:45
Purge End Time	10:42	**Well Volumes Purged (total)**	3.67	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:47	0	146	11.65	730	6.07	0.091	1.4	1.22	7.7	-19.7	Clear	No Odor
09:52	5	146	11.57	1460	6.13	0.089	1.11	1.01	8	-37.3	Clear	No Odor
09:57	10	146	11.51	2190	6.14	0.086	1.12	1.08	7.9	-43.8	Clear	No Odor
10:02	15	82	11.3	2600	6.15	0.085	2.18	1.28	8.5	-47.2	Clear	No Odor
10:07	20	174	11.37	3470	6.13	0.087	2.33	1.44	8.8	-48.3	Clear	No Odor
10:12	25	172	11.79	4330	6.18	0.08	1.55	1.51	7.6	-50.9	Clear	No Odor
10:17	30	172	11.81	5190	6.17	0.078	1.64	1.81	7.6	-49.4	Clear	No Odor
10:22	35	170	11.8	6040	6.17	0.076	1.75	2.09	7.8	-46.8	Clear	No Odor
10:27	40	170	11.79	6890	6.17	0.074	0.98	2.25	7.7	-45.1	Clear	No Odor
10:32	45	170	11.79	7740	6.17	0.073	1.51	2.39	7.7	-43.3	Clear	No Odor
10:37	50	170	11.79	8420	6.17	0.071	1.07	2.49	7.8	-41.6	Clear	No Odor
10:42	55	170	11.79	9440	6.17	0.071	1.14	2.56	7.7	-40.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-3B	**Date**	2022-05-09	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	10.88	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	76.64	**Gallons in Well**	3.11
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:24	**Total Volume Purged (ml)**	8810	**Sample ID**	SHP-2016-3B-SPR22	**Sample Time**	12:20
Purge End Time	12:20	**Well Volumes Purged (total)**	0.75	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:29	0	178	10.91	890	6.06	0.177	1.58	1.37	8.6	-25	Clear	No Odor
11:34	5	176	10.92	1770	6.09	0.185	1.29	1	8.7	-41.8	Clear	No Odor
11:39	10	176	10.89	2650	6.1	0.196	0.99	0.92	8.8	-48.9	Clear	No Odor
11:44	15	176	10.9	3530	6.12	0.204	0.91	0.89	8.8	-53.9	Clear	No Odor
11:49	20	176	10.9	4410	6.13	0.212	0.83	0.86	8.9	-58.1	Clear	No Odor
11:54	25	176	10.89	5290	6.14	0.218	0.71	0.84	8.9	-61.5	Clear	No Odor
11:59	30	176	10.9	6170	6.15	0.223	0.67	0.82	9	-64.2	Clear	No Odor
12:04	35	176	10.89	7050	6.16	0.227	0.6	0.81	9.1	-66.4	Clear	No Odor
12:09	40	176	10.88	7930	6.17	0.23	0.6	0.79	9	-68.8	Clear	No Odor
12:14	45	176	10.9	8810	6.18	0.233	0.51	0.78	9.1	-70.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-4A	**Date**	2022-05-11	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	56 Sunny			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	17.71	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	0.00	**Gallons in Well**	
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:45	**Total Volume Purged (ml)**	3600	**Sample ID**	SHP-2016-4B-SPR22	**Sample Time**	10:11
Purge End Time	10:10	**Well Volumes Purged (total)**		**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	150	18.01	1500	5.82	0.008	5.1	9.16	12.1	217	Clear	No Odor
10:00	5	150	18.01	2250	5.84	0.008	3.3	9.03	12.1	213.9	Clear	No Odor
10:05	10	150	18.01	3000	5.84	0.008	2.8	8.94	12.2	212.7	Clear	No Odor
10:09	14	150	18.01	3600	5.88	0.008	2.2	8.87	12.1	213.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-4B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)				**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	85.0-90.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	17.62	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	0.00	**Gallons in Well**	
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	87.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:34	**Total Volume Purged (ml)**	4650	**Sample ID**	SHP-2016-4B-SPR22	**Sample Time**	15:06
Purge End Time	15:06	**Well Volumes Purged (total)**		**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:40	0	150	17.62	900	6.57	0.039	3.4	1.27	11.1	-120.4	Clear	No Odor
14:45	5	150	17.62	1650	6.57	0.038	3.2	0.93	11.2	-114.8	Clear	No Odor
14:49	9	150	17.62	2250	6.57	0.038	3.5	0.76	11.2	-113	Clear	No Odor
14:55	15	150	17.62	3150	6.58	0.038	4.1	0.71	11.2	-117.6	Clear	No Odor
15:00	20	150	17.62	3900	6.58	0.038	4.6	0.68	11.1	-110.8	Clear	No Odor
15:05	25	150	17.62	4650	6.58	0.039	4.9	0.7	11.1	-110.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-5A	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.41	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	18.04	**Gallons in Well**	0.73
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:47	**Total Volume Purged (ml)**	3956	**Sample ID**	SHP-2016-5A-SPR22	**Sample Time**	11:15
Purge End Time	11:11	**Well Volumes Purged (total)**	1.43	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:50	0	172	14.84	516	6.22	0.138	4.51	1.15	11.4	-17.3	Clear	No Odor
10:55	5	172	14.84	1376	6.2	0.138	4.12	0.96	11.5	-21.5	Clear	No Odor
11:00	10	172	14.84	2236	6.2	0.138	4.31	0.89	11.3	-24.6	Clear	No Odor
11:05	15	172	14.85	3096	6.19	0.139	4.92	0.85	11.4	-26.7	Clear	No Odor
11:10	20	172	14.84	3956	6.19	0.14	4.87	0.82	11.5	-28.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	SHP-2016-5B	**Date**	2022-05-10	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	44.1 degrees F and Light Rain.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	85.0-90.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.75	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	77.87	**Gallons in Well**	3.16
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	88	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:37	**Total Volume Purged (ml)**	4576	**Sample ID**	SHP-2016-5B-SPR22	**Sample Time**	13:10
Purge End Time	13:10	**Well Volumes Purged (total)**	0.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:40	0	162	14.75	486	6.36	0.394	78.91	1.63	12.4	-67.5	Gray	No Odor
12:45	5	162	14.78	1296	6.37	0.396	8.47	1.07	12.3	-78.9	Clear	No Odor
12:50	10	162	14.76	2106	6.38	0.399	2.71	0.96	12.2	-84.1	Clear	No Odor
12:55	15	162	14.75	2916	6.39	0.401	1.45	0.91	12.2	-87.1	Clear	No Odor
13:00	20	162	14.76	3726	6.39	0.399	1.03	0.86	12.1	-88.8	Clear	No Odor
13:05	25	170	14.76	4576	6.39	0.398	1.07	0.85	11.9	-90.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Chloride (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-1A	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Rain 57			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.63	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	12.37	**Gallons in Well**	0.51
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:10	**Total Volume Purged (ml)**	8000	**Sample ID**	EPA-PZ-2012-1A-FAL22	**Sample Time**	11:55
Purge End Time	11:51	**Well Volumes Purged (total)**	4.16	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:15	0	200	12.63	1000	6.5	0.065	5.41	4.38	13.3	23.6	Clear	Slight
11:30	15	200	12.63	4000	5.99	0.065	12.9	1.64	12.9	94.1	Clear	Slight
11:35	20	200	12.63	5000	5.99	0.065	2.22	1.54	12.8	96.6	Clear	Slight
11:40	25	200	12.63	6000	5.97	0.065	1.31	1.4	12.8	100	Clear	Slight
11:45	30	200	12.63	7000	5.97	0.065	1.12	1.37	12.6	100.3	Clear	Slight
11:50	35	200	12.63	8000	5.97	0.065	1.11	1.32	12.6	100.7	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	EPA-PZ-2012-1B	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	59.0 degrees F and Cloudy. The wind is blowing S at 6.9 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.26	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	62.74	**Gallons in Well**	2.57
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	72.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:05	**Total Volume Purged (ml)**	8000	**Sample ID**	EPA-PZ-2012-1B-FAL22	**Sample Time**	12:50
Purge End Time	12:46	**Well Volumes Purged (total)**	0.82	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:10	0	200	12.26	1000	6.22	0.251	3.43	3.27	12.4	11.1	Clear	Slight
12:15	5	200	12.31	2000	6.21	0.25	4.43	1.97	12.2	7.1	Clear	Slight
12:20	10	200	12.31	3000	6.22	0.256	2.05	1.63	12.2	1.2	Clear	Slight
12:25	15	200	12.31	4000	6.28	0.278	1.48	1.49	12	-20.1	Clear	Slight
12:30	20	200	12.31	5000	6.32	0.289	2.21	1.38	12	-33.1	Clear	Slight
12:35	25	200	12.31	6000	6.34	0.293	1.51	1.33	12.2	-37.5	Clear	Slight
12:40	30	200	12.31	7000	6.35	0.293	1.87	1.31	12	-39.6	Clear	Slight
12:45	35	200	12.31	8000	6.35	0.293	2.74	1.27	12	-40.8	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	EPA-PZ-2012-2A	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Rain 56*			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	11.91	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	13.09	**Gallons in Well**	0.54
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:25	**Total Volume Purged (ml)**	10000	**Sample ID**	EPA-PZ-2012-2A-FAL22	**4**	09:20
Purge End Time	09:16	**Well Volumes Purged (total)**	4.91	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:35	0	200	11.93	2000	5.71	0.035	1.02	6.27	11.6	236.7	Brown	No Odor
08:40	5	200	11.93	3000	5.67	0.033	0.55	5.78	11.8	248.5	Clear	No Odor
08:45	10	200	11.93	4000	5.67	0.033	0.41	5.69	11.6	253.8	Clear	No Odor
08:51	16	200	11.93	5200	5.67	0.033	0.42	5.61	11.6	259.1	Clear	No Odor
08:55	20	200	11.93	6000	5.67	0.033	0.79	5.57	11.7	263.9	Clear	No Odor
09:00	25	200	11.93	7000	5.67	0.033	0.26	5.53	12.3	266.1	Clear	No Odor
09:05	30	200	11.93	8000	5.67	0.033	0.29	5.54	11.6	268.1	Clear	No Odor
09:10	35	200	11.92	9000	5.67	0.033	0.35	5.5	11.7	270.1	Clear	No Odor
09:15	40	200	11.92	10000	5.67	0.033	0.87	5.49	11.7	272.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
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Groundwater Sampling Form

Well ID	EPA-PZ-2012-2B	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Rain 56			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-80.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	11.83	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	68.17	**Gallons in Well**	2.79
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	77	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:30	**Total Volume Purged (ml)**	14000	**Sample ID**	EPA-PZ-2012-2B-FAL22	**Sample Time**	10:45
Purge End Time	10:40	**Well Volumes Purged (total)**	1.32	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:36	0	200	11.83	1200	5.98	0.18	2.61	2.89	11.9	92.1	Clear	No Odor
09:41	5	200	11.83	2200	5.96	0.181	2.67	1.93	11.8	79.7	Clear	Slight
09:46	10	200	11.83	3200	5.97	0.18	3.47	1.62	11.7	72.1	Clear	Slight
09:50	14	200	11.83	4000	5.97	0.182	1.32	1.5	11.7	69.3	Clear	Slight
09:55	19	200	11.83	5000	5.98	0.186	1.47	1.41	12	66.7	Clear	Slight
10:00	24	200	11.82	6000	5.97	0.221	5.8	1.35	11.9	59.1	Clear	Slight
10:05	29	200	11.83	7000	5.97	0.254	7.51	1.31	12	35.3	Clear	Slight
10:10	34	200	11.83	8000	5.99	0.271	6.21	1.27	12.4	22.9	Clear	Slight
10:15	39	200	11.83	9000	6	0.275	4.84	1.26	12	18.9	Clear	Slight
10:20	44	200	11.82	10000	6	0.277	4.63	1.23	12.2	16.8	Clear	Slight
10:26	50	200	11.82	11200	6	0.28	9.22	1.2	12.5	15.3	Clear	Slight
10:30	54	200	11.82	12000	6.01	0.281	3.52	1.18	12.5	15	Clear	Slight
10:35	59	200	11.82	13000	6.01	0.281	2.87	1.17	12.5	13.9	Clear	Slight
10:40	64	200	11.83	14000	6.01	0.281	3.31	1.16	12.3	13.2	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-3A	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	60.1 degrees F and Clear. The wind is blowing NW at 9.2 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.06	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	15.38	**Gallons in Well**	0.62
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:05	**Total Volume Purged (ml)**	5850	**Sample ID**	EPA-PZ-2012-3A-FAL22	**Sample Time**	13:55
Purge End Time	13:51	**Well Volumes Purged (total)**	2.49	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:10	0	130	12.12	650	5.82	0.25	5.98	1.23	11.8	419.3	Clear	Strong
13:15	5	130	12.13	1300	5.78	0.251	5.63	0.85	11.8	370.3	Clear	Strong
13:20	10	130	12.12	1950	5.77	0.252	1.49	0.75	11.8	339.5	Clear	Strong
13:25	15	130	12.12	2600	5.77	0.252	1.36	0.69	11.9	320.5	Clear	Strong
13:30	20	130	12.12	3250	5.76	0.253	1.03	0.66	12	305.2	Clear	Strong
13:35	25	130	12.12	3900	5.76	0.252	1.43	0.63	11.8	298.5	Clear	Strong
13:40	30	130	12.12	4550	5.76	0.252	1.56	0.62	11.7	294.2	Clear	Strong
13:45	35	130	12.12	5200	5.75	0.251	1.1	0.6	11.8	288.2	Clear	Strong
13:50	40	130	12.12	5850	5.75	0.252	1.9	0.59	11.8	285.3	Clear	Strong

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-3B	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	60.1 degrees F and Clear. The wind is blowing NW at 9.2 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.02	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	64.60	**Gallons in Well**	2.62
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:22	**Total Volume Purged (ml)**	3752	**Sample ID**	EPA-PZ-2012-3B-FAL22	**Sample Time**	14:55
Purge End Time	14:51	**Well Volumes Purged (total)**	0.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:25	0	134	12.11	402	6.33	0.474	10.08	1.57	12	-90.7	Clear	No Odor
14:30	5	134	12.11	1072	6.41	0.49	6.31	0.95	11.8	-112.7	Clear	No Odor
14:35	10	134	12.11	1742	6.47	0.488	5.54	0.79	11.4	-123.7	Clear	No Odor
14:40	15	134	12.11	2412	6.49	0.486	4.47	0.76	11.3	-127.6	Clear	No Odor
14:45	20	134	12.11	3082	6.51	0.485	4.37	0.71	11.2	-130.9	Clear	No Odor
14:50	25	134	12.11	3752	6.51	0.483	3.21	0.69	11.2	-132.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-4A	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.45	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	11.45	**Gallons in Well**	0.47
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:59	**Total Volume Purged (ml)**	3640	**Sample ID**	EPA-PZ-2012-4A-FAL22	**Sample Time**	09:30
Purge End Time	09:26	**Well Volumes Purged (total)**	2.05	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	140	16.48	840	6.26	0.232	3.52	0.92	14.1	19.1	Clear	Moderate
09:10	5	140	16.56	1540	6.11	0.233	4.43	0.75	14.3	11.5	Clear	Moderate
09:15	10	140	16.56	2240	6.09	0.235	1.35	0.69	14.5	9.1	Clear	Moderate
09:20	15	140	16.47	2940	6.1	0.237	1.4	0.65	14.7	7.9	Clear	Moderate
09:25	20	140	16.55	3640	6.1	0.238	1.41	0.63	14.9	8	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
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mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	EPA-PZ-2012-4B	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-75.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.4	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	60.33	**Gallons in Well**	2.45
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:07	**Total Volume Purged (ml)**	5624	**Sample ID**	EPA-PZ-2012-4B-FAL22	**Sample Time**	10:48
Purge End Time	10:46	**Well Volumes Purged (total)**	0.61	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:15	0	148	16.5	1184	6.42	0.441	15.41	0.91	14.4	-88.7	Clear	Slight
10:20	5	148	16.42	1924	6.45	0.447	6.42	0.83	14.4	-95.7	Clear	Slight
10:25	10	148	16.51	2664	6.47	0.45	4.89	0.78	14.4	-99.2	Clear	Slight
10:30	15	148	16.5	3404	6.48	0.453	4.97	0.74	14.5	-101.3	Clear	Slight
10:35	20	148	16.4	4144	6.49	0.457	3.81	0.61	14.6	-102.9	Clear	Slight
10:40	25	148	16.41	4884	6.5	0.453	3.26	0.6	14.4	-103.2	Clear	Slight
10:45	30	148	16.5	5624	6.49	0.457	3.44	0.58	14.6	-103.3	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-5A	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	39.9 degrees F and Clear. The wind is blowing N at 4.7 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	9.31	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	17.60	**Gallons in Well**	0.71
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:59	**Total Volume Purged (ml)**	6716	**Sample ID**	EPA-PZ-2012-5A-FAL22	**Sample Time**	09:50
Purge End Time	09:46	**Well Volumes Purged (total)**	2.50	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	146	9.35	876	5.02	0.099	7.38	1.16	9.9	310.8	Clear	Strong
09:10	5	146	9.35	1606	5.05	0.98	3.71	0.91	9.8	339	Clear	Strong
09:15	10	146	9.35	2336	5.08	0.097	3.18	0.81	9.8	355.6	Clear	Strong
09:20	15	146	9.35	3066	5.11	0.096	4.84	0.75	9.8	366.2	Clear	Strong
09:25	20	146	9.35	3796	5.13	0.096	4.59	0.71	9.8	375.7	Clear	Strong
09:30	25	146	9.35	4526	5.15	0.095	2.55	0.69	9.7	383	Clear	Strong
09:35	30	146	9.35	5256	5.16	0.094	3.14	0.66	9.9	389.6	Clear	Strong
09:40	35	146	9.35	5986	5.18	0.094	1.78	0.65	9.9	394.8	Clear	Strong
09:45	40	146	9.35	6716	5.19	0.093	2.47	0.64	9.9	399.5	Clear	Strong

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-5B	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62.1 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	8.86	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	76.71	**Gallons in Well**	3.12
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	82	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:34	**Total Volume Purged (ml)**	9028	**Sample ID**	EPA-PZ-2012-5B-FAL22	**Sample Time**	11:40
Purge End Time	11:35	**Well Volumes Purged (total)**	0.76	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:40	0	148	8.59	888	6.16	0.42	45.56	1.12	10.3	70.5	Clear	Slight
10:45	5	148	8.58	1628	6.21	0.421	13.54	0.86	10.3	201.3	Clear	Slight
10:50	10	148	8.58	2368	6.23	0.422	10.91	0.75	10.3	300.1	Clear	Slight
10:55	15	148	8.58	3108	6.24	0.423	10.82	0.7	10.3	354.6	Clear	Slight
11:00	20	148	8.58	3848	6.25	0.423	10.76	0.67	10.4	374.1	Clear	Slight
11:05	25	148	8.58	4588	6.26	0.423	11.88	0.64	10.5	390	Clear	Slight
11:10	30	148	8.58	5328	6.26	0.423	11.22	0.62	10.4	399.2	Clear	Slight
11:15	35	148	8.58	6068	6.27	0.424	10.66	0.61	10.5	407.5	Clear	Slight
11:20	40	148	8.58	6808	6.28	0.425	5.19	0.59	10.5	412.7	Clear	Slight
11:25	45	148	8.58	7548	6.29	0.43	4.59	0.58	10.8	415	Clear	Slight
11:30	50	148	8.58	8288	6.31	0.432	4.57	0.57	10.8	419.2	Clear	Slight
11:35	55	148	8.58	9028	6.31	0.432	3.15	0.57	10.9	423.7	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-6A	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	53.1 degrees F and Light Rain and Fog/Mist. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.55	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	6.45	**Gallons in Well**	0.26
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:35	**Total Volume Purged (ml)**	6500	**Sample ID**	EPA-PZ-2012-6A—FAL22	**Sample Time**	09:45
Purge End Time	09:42	**Well Volumes Purged (total)**	6.49	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:50	0	100	23.55	1500	6.49	0.055	9.92	6.84	11.5	155.4	clear	none
09:10	20	100	23.85	3500	6.33	0.048	2.73	5.9	11.6	174.1	clear	none
09:15	25	100	23.85	0	6.33	0.048	2.56	5.9	11.6	174.8	clear	none
09:21	31	100	23.85	4600	6.33	0.048	3.29	5.83	11.7	176.9	clear	none
09:25	35	100	23.85	5000	6.33	0.048	2.43	5.79	11.7	178.2	clear	none
09:31	41	100	23.85	5600	6.33	0.048	1.81	5.79	11.8	179.8	clear	none
09:36	46	100	23.85	6100	6.33	0.048	2.09	5.84	11.9	180.7	clear	none
09:40	50	100	23.86	6500	6.34	0.049	1.46	5.79	11.9	181.9	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	EPA-PZ-2012-6B	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)				**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-80.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.81	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	56.19	**Gallons in Well**	2.3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	77.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:10	**Total Volume Purged (ml)**	5500	**Sample ID**	EPA-PZ-2012-6B-FAL22	**Sample Time**	11:10
Purge End Time	11:05	**Well Volumes Purged (total)**	0.63	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:15	0	100	23.75	500	6.46	0.058	10.73	6.62	12.5	7.1	Clear	No Odor
10:20	5	100	23.76	1000	6.56	0.103	17.61	2.67	12.3	-79.4	Clear	No Odor
10:25	10	100	23.75	1500	6.61	0.106	21.54	2.35	12.3	-90.9	Clear	No Odor
10:30	15	100	23.75	2000	6.65	0.106	11.81	2.1	12.3	-98.4	Clear	No Odor
10:35	20	100	23.74	2500	6.69	0.106	7.69	1.94	12.4	-103.5	Clear	No Odor
10:41	26	100	23.75	3100	6.7	0.106	7.73	1.83	12.4	-105.5	Clear	No Odor
10:46	31	100	23.76	3600	6.71	0.106	7.12	1.76	12.5	-106.9	Clear	No Odor
10:51	36	100	23.75	4100	6.82	0.106	6.72	1.7	12.4	-107.7	Clear	No Odor
10:56	41	100	23.75	4600	6.7	0.106	4.31	1.65	12.6	-108.2	Clear	No Odor
11:00	45	100	23.75	5000	6.73	0.106	3.37	1.62	12.6	-108.6	Clear	No Odor
11:05	50	100	0.75	5500	6.73	0.105	3.21	1.6	12.6	-108.7	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	EPA-PZ-2012-7A	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Rain 64			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.71	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	6.29	**Gallons in Well**	0.26
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:35	**Total Volume Purged (ml)**	7500	**Sample ID**	EPA-PZ-2012-7A-FAL22	**Sample Time**	14:40
Purge End Time	14:36	**Well Volumes Purged (total)**	7.68	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:50	0	125	23.73	1875	5.98	0.352	2.88	5.67	12.8	50.9	Clear	Moderate
13:55	5	125	23.73	2500	5.91	0.357	2.13	5.26	12.9	66.9	Clear	Moderate
14:00	10	125	23.73	3125	5.9	0.359	2.08	5.13	13.1	76.9	Clear	Moderate
14:05	15	125	23.73	3750	5.89	0.361	1.75	5.02	13.2	83.9	Clear	Moderate
14:10	20	125	23.73	3475	5.88	0.361	2.22	4.97	13.1	90.4	Clear	Moderate
14:15	25	125	23.73	5000	5.88	0.36	3.38	4.96	13	95.5	Clear	Moderate
14:20	30	125	23.75	5625	5.88	0.361	2.47	4.93	13.1	100.7	Clear	Moderate
14:25	35	125	23.75	6250	5.87	0.363	2.18	4.86	13.1	105.7	Clear	Moderate
14:30	40	125	23.73	6875	5.86	0.365	2.57	4.8	13.2	111.5	Clear	Moderate
14:35	45	125	23.73	7500	5.86	0.364	1.81	4.75	13	115.2	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	EPA-PZ-2012-7B	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing N at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-65.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.45	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	41.55	**Gallons in Well**	1.7
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	62.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:10	**Total Volume Purged (ml)**	8750	**Sample ID**	PA-PZ-2012-7B-FAL22	**Sample Time**	13:25
Purge End Time	13:21	**Well Volumes Purged (total)**	1.36	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:15	0	125	23.59	625	6.41	0.088	10.04	4.78	13.5	-51.8	Clear	None
12:20	5	125	23.58	1250	6.53	0.094	6.83	2.64	12.8	-82.7	Clear	None
12:25	10	125	23.58	1875	6.57	0.094	5.81	2.18	12.7	-91.7	Clear	None
12:30	15	125	23.58	2500	6.59	0.094	5.83	1.98	12.6	-95.3	Clear	None
12:35	20	125	23.58	3125	6.61	0.094	5.72	1.82	12.6	-97.7	Clear	None
12:40	25	125	23.58	3750	6.61	0.095	5.64	1.76	12.7	-99.4	Clear	None
12:45	30	125	23.58	4375	6.63	0.094	6.86	1.67	12.4	-100	Clear	None
12:50	35	125	23.58	5000	6.63	0.094	10.07	1.61	12.5	-100	Clear	None
12:56	41	125	23.58	5750	6.63	0.094	10.31	1.57	12.3	-100.5	Clear	None
13:00	45	125	23.58	6250	6.64	0.094	8.55	1.52	12.5	-100.4	Clear	None
13:05	50	125	23.58	6875	6.64	0.094	8.17	1.49	12.5	-100.6	Clear	None
13:10	55	125	23.58	7500	6.62	0.098	9.68	1.46	12.8	-98.5	Clear	None
13:16	61	125	23.58	8250	6.61	0.098	10.32	1.45	12.8	-98.5	Clear	None
13:20	65	125	25.37	8750	6.67	0.098	10.16	1.48	12.8	-99.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
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Groundwater Sampling Form

Well ID	EW-01	**Date**	10/21/2022	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing N at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60 - 85	**Casing Diameter (in)**	6	**Well Casing Material**	NA
Static Water Level (ft-bmp)	NA	**Total Depth (ft-bmp)**		**Water Column(ft)**		**Gallons in Well**	
Depth to Product (ft-bmp)		**Pump Intake Depth(ft-bmp)**		**Purge Method**	No-Purge	**Purging Equipment**	
Purge Start Time		**Total Volume Purged (ml)**		**Sample ID**	EW-01@ATP PORT-FAL22	**Sample Time**	11:35
Purge End Time		**Well Volumes Purged (total)**		**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:30					6.27	0.393	7.82	4.17	14	-67.9	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
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Groundwater Sampling Form

Well ID	EW-04	**Date**	10/21/2022	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing N at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70 - 95	**Casing Diameter (in)**	6	**Well Casing Material**	NA
Static Water Level (ft-bmp)	NA	**Total Depth (ft-bmp)**		**Water Column(ft)**		**Gallons in Well**	
Depth to Product (ft-bmp)		**Pump Intake Depth(ft-bmp)**		**Purge Method**	No-Purge	**Purging Equipment**	
Purge Start Time		**Total Volume Purged (ml)**		**Sample ID**	EW-01@ATP PORT-FAL22	**Sample Time**	11:45
Purge End Time		**Well Volumes Purged (total)**		**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:49					6.34	0.194	2.42	3.49	13.9	-62.4	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	N5-P1	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	54.0 degrees F and Clear. The wind is blowing SW at 8.1 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	95.5-97.5	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	24.71	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.79	**Gallons in Well**	2.98
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	96.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:30	**Total Volume Purged (ml)**	7200	**Sample ID**	N5-P1-FAL22	**Sample Time**	14:10
Purge End Time	14:07	**Well Volumes Purged (total)**	0.64	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:34	0	200	25.7	800	6.58	0.204	138.14	3.39	13.1	-11.3	Clear	Moderate
13:40	6	200	25.71	2000	6.64	0.202	327.11	2	13	-19.4	Clear	Moderate
13:45	11	200	25.72	3000	6.73	0.204	2.61	1.58	13.2	-29.7	Clear	Moderate
13:50	16	200	25.74	4000	6.75	0.204	9.91	1.54	13.3	-33.1	Clear	Moderate
13:55	21	200	25.77	5000	6.8	0.206	2.13	1.46	13.2	-38	Clear	Moderate
14:00	26	200	25.81	6000	6.86	0.206	2.77	1.41	13.5	-43.2	Clear	Moderate
14:06	32	200	25.83	7200	6.9	0.208	3.22	1.37	13.5	-48.2	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: Water level measures from TOC

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-01	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	53.1 degrees F and Light Rain. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.89	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	13.11	**Gallons in Well**	2.14
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	29	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:50	**Total Volume Purged (ml)**	9000	**Sample ID**	PZ-12-01-FAL22	**Sample Time**	09:55
Purge End Time	09:51	**Well Volumes Purged (total)**	1.11	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	150	20.89	2250	6.48	0.444	34.14	2.02	13.1	-64.5	Orange	Slight
09:10	5	150	20.89	3000	6.5	0.437	29.99	1.65	13.1	-68.9	Orange	Slight
09:15	10	150	20.89	3750	6.52	0.44	17.77	1.51	13.6	-71.7	Orange	Slight
09:20	15	150	20.88	4500	6.52	0.441	10.84	1.47	13.7	-72.3	Orange	Slight
09:25	20	150	20.89	5250	6.53	0.442	10.86	1.43	14	-73.2	Orange	Slight
09:30	25	150	20.89	6000	6.54	0.44	12.43	1.38	13.9	-73.7	Orange	Slight
09:35	30	150	20.89	6750	6.54	0.438	11.86	1.36	14	-73.7	Orange	Slight
09:41	36	150	20.88	7650	6.54	0.439	10.27	1.35	14	-73.6	Orange	Slight
09:45	40	150	20.89	8250	6.54	0.439	10.45	1.32	14	-73.7	Orange	Slight
09:50	45	150	20.89	9000	6.54	0.44	9.73	1.31	14.1	-73.8	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-02	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	60.1 degrees F and Cloudy. The wind is blowing E at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.85	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	13.15	**Gallons in Well**	2.14
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	29	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:10	**Total Volume Purged (ml)**	6750	**Sample ID**	PZ-12-02-FAL22	**Sample Time**	11:00
Purge End Time	10:57	**Well Volumes Purged (total)**	0.83	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:25	0	150	20.86	2250	6.43	0.451	5.14	1.9	14.8	-65.3	Orange	Slight
10:30	5	150	20.86	3000	6.45	0.463	5.54	1.51	14.8	-70.6	Orange	Slight
10:35	10	150	20.86	3750	6.45	0.469	4.59	1.37	14.9	-72	Orange	Slight
10:40	15	150	20.85	4500	6.45	0.472	3.78	1.24	15	-72.8	Orange	Slight
10:45	20	150	20.85	5250	6.46	0.474	2.72	1.22	15.1	-73.5	Orange	Slight
10:50	25	150	20.85	6000	6.46	0.475	2.85	1.21	15	-74	Orange	Slight
10:55	30	150	20.85	6750	6.46	0.475	3.91	1.2	14.9	-74	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-03	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Rain, 56 degrees			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	19.55	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	12.45	**Gallons in Well**	2.03
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:45	**Total Volume Purged (ml)**	11000	**Sample ID**	PZ-12-03-FAL22	**Sample Time**	09:45
Purge End Time	09:41	**Well Volumes Purged (total)**	0.88	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:01	0	200	19.55	3200	6.67	0.359	30.92	2	12.5	-88.6	Orange	Slight
09:05	4	200	19.55	4000	6.68	0.359	27.99	1.7	12.5	-92.7	Orange	Slight
09:10	9	200	19.55	5000	6.69	0.36	20.3	1.58	12.5	-94.7	Orange	Slight
09:15	14	200	19.55	6000	6.69	0.359	19.17	1.49	12.5	-95.9	Orange	Slight
09:20	19	200	19.55	7000	6.69	0.359	17.1	1.43	12.5	-96.6	Orange	Slight
09:25	24	200	19.55	8000	6.7	0.358	14.89	1.41	12.5	-97.2	Orange	Slight
09:30	29	200	19.55	9000	6.7	0.358	13.46	1.39	12.5	-97.4	Orange	Slight
09:35	34	200	19.56	10000	6.7	0.357	12.75	1.33	12.5	-97.5	Orange	Slight
09:40	39	200	19.56	11000	6.7	0.357	13.16	1.31	12.5	-97.5	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well ID	PZ-12-04	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	63.0 degrees F and Light Rain. The wind is blowing SE at 10.3 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.65	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	11.35	**Gallons in Well**	1.85
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:35	**Total Volume Purged (ml)**	11000	**Sample ID**	PZ-12-04-FAL22	**Sample Time**	15:35
Purge End Time	15:30	**Well Volumes Purged (total)**	1.57	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:40	0	200	20.65	1000	6.55	0.372	72.66	2.12	15.2	-79	clear	none
14:45	5	200	20.66	2000	6.59	0.394	37.45	1.62	15	-89.7	clear	none
14:50	10	200	20.66	3000	6.6	0.397	17.77	1.4	15	-92.7	clear	none
14:56	16	200	20.66	4200	6.61	0.399	12.33	1.41	15.1	-93.6	clear	none
15:00	20	200	20.67	5000	6.61	0.403	8.43	1.33	15.1	-93.9	clear	none
15:05	25	200	20.67	6000	6.61	0.405	8.86	1.28	15.2	-94.2	clear	none
15:10	30	200	20.67	7000	6.61	0.404	6.37	1.27	15.3	-94.1	clear	none
15:15	35	200	20.67	8000	6.61	0.402	6.32	1.24	15.3	-93.8	clear	none
15:20	40	200	20.67	9000	6.61	0.403	3.67	1.22	15.4	-93.7	clear	none
15:25	45	200	20.67	10000	6.62	0.403	3.83	1.2	15.4	-93.4	clear	none
15:30	50	200	20.67	11000	6.62	0.404	3.66	1.18	15.3	-93.1	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-05	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)				**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	26.0-36.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	21.74	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	14.26	**Gallons in Well**	2.32
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	31	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:05	**Total Volume Purged (ml)**	12000	**Sample ID**	PZ-12-05-FAL22	**Sample Time**	11:10
Purge End Time	11:06	**Well Volumes Purged (total)**	1.36	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:25	0	200	21.74	4000	6.12	0.11	297.1	2.39	13.1	25.7	Orange	Slight
10:30	5	200	21.75	5000	6.1	0.107	205.21	1.91	13.1	32.7	Orange	Slight
10:35	10	200	21.79	6000	6.08	0.104	150.71	1.64	13.2	36.6	Orange	Slight
10:40	15	200	21.79	7000	6.07	0.101	99.7	1.59	13.1	40.1	Orange	Slight
10:50	25	200	20.79	9200	6.04	0.098	43.12	1.42	13.3	48.8	Orange	Slight
10:56	31	200	20.79	10200	6.03	0.097	49.07	1.39	13.5	50.4	Orange	Slight
11:00	35	200	20.79	11000	6.03	0.097	47.25	1.35	13.5	51.6	Orange	Slight
11:05	40	200	20.79	12000	6.03	0.097	47.59	1.33	13.6	47.9	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-06	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	66.0 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	26.0-36.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	24.51	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	11.49	**Gallons in Well**	1.87
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	31	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:30	**Total Volume Purged (ml)**	5400	**Sample ID**	PZ-12-06-FAL22	**Sample Time**	14:20
Purge End Time	14:16	**Well Volumes Purged (total)**	0.76	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:40	0	100	24.51	1000	5.92	0.113	8.66	2.38	17.5	112.4	Clear	Slight
13:45	5	100	24.51	1500	5.9	0.111	5.58	1.77	18.2	111.3	Clear	Slight
13:50	10	100	24.52	2000	1.68	0.113	4.79	1.69	18.1	108.7	Clear	Slight
13:57	17	100	24.55	2700	5.89	0.108	4.14	1.46	17.3	110.3	Clear	Slight
14:00	20	150	24.55	3150	5.89	0.107	3.86	1.4	17	112.9	Clear	Slight
14:06	26	150	24.55	4050	5.88	0.108	3.16	1.28	17.5	114.9	Clear	Slight
14:10	30	150	24.55	4650	5.88	0.107	3.48	1.27	17.2	116.8	Clear	Slight
14:15	35	150	24.54	5400	5.87	0.107	2.85	1.24	17.4	118.5	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-07	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	51.1 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	18.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	27.75	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	0.56	**Gallons in Well**	0.04
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	29	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:40	**Total Volume Purged (ml)**	18000	**Sample ID**	PZ-2-07-FAL22	**Sample Time**	14:15
Purge End Time	14:11	**Well Volumes Purged (total)**	112.13	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:45	0	200	27.75	1000	6.44	0.167	195.53	4.78	12.3	14.3	Brown	Slight
12:50	5	200	27.75	2000	6.47	0.188	103.76	3.93	12.2	-11.3	Brown	Slight
13:05	20	200	27.74	5000	6.57	0.197	75.32	6.44	13.1	-28.1	Brown	Slight
13:10	25	200	27.74	6000	6.54	0.195	96.53	4.68	12.2	-26.4	Brown	Slight
13:15	30	200	27.74	7000	6.55	0.195	66.77	4.59	12.3	-25.9	Brown	Slight
13:20	35	200	27.74	8000	6.55	0.195	69.49	4.47	12.6	-25.6	Brown	Slight
13:31	46	200	27.75	10200	6.58	0.189	113.96	4.89	12.5	-21.9	Brown	Slight
13:36	51	200	27.74	11200	6.55	0.19	93.67	4.35	12.2	-22.1	Brown	Slight
13:40	55	200	27.75	12000	6.54	0.192	81.21	4.17	12.2	-24.7	Brown	Slight
13:45	60	200	27.74	13000	6.55	0.195	69.88	4.01	12.2	-27.6	Brown	Slight
13:50	65	200	27.74	14000	6.56	0.197	55.23	3.98	12.3	-28.4	Brown	Slight
13:55	70	200	27.75	15000	6.56	0.197	53.26	3.91	12.4	-29	Brown	Slight
14:00	75	200	27.75	16000	6.56	0.198	47.07	3.87	12.2	-29.6	Brown	Slight
14:06	81	200	27.75	17200	6.57	0.199	47.9	3.88	12.1	-29.6	Brown	Slight
14:10	85	200	27.74	18000	6.57	0.198	46.84	3.82	12.2	-29.1	Brown	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: Slug of mud enters cell at 13:20, cleaned cell and restarted purge.

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-08	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	53.1 degrees F and Cloudy. The wind is blowing NE at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	18.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	26.24	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	1.66	**Gallons in Well**	0.27
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:40	**Total Volume Purged (ml)**	13000	**Sample ID**	PZ-12-08-FAL22	**Sample Time**	15:50
Purge End Time	15:46	**Well Volumes Purged (total)**	12.68	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:45	0	200	26.3	1000	6.04	0.134	484.6	3.59	12.1	0.3	--	--
14:50	5	200	26.3	2000	5.98	0.132	175.8	1.8	11.9	6.3	--	--
14:55	10	200	26.3	3000	5.97	0.132	145.71	1.6	12	6	Orange	Slight
15:00	15	200	26.3	4000	5.97	0.131	109.49	1.48	11.9	5.8	Orange	Slight
15:05	20	200	26.3	5000	5.97	0.13	91.44	1.41	11.9	5.6	Orange	Slight
15:10	25	200	26.29	6000	5.97	0.13	73.13	1.35	12	5.4	Orange	Slight
15:15	30	200	26.29	7000	5.97	0.13	66.12	1.32	11.9	5.7	Orange	Slight
15:20	35	200	26.29	8000	5.97	0.129	54.3	1.29	11.9	5.4	Orange	Slight
15:25	40	200	26.28	9000	5.97	0.129	48.51	1.28	11.9	5.6	Orange	Slight
15:30	45	200	26.29	10000	5.97	0.129	40.24	1.27	11.8	5.7	Orange	Slight
15:35	50	200	26.28	11000	5.96	0.128	35.44	1.25	11.8	5.9	Orange	Slight
15:40	55	200	26.29	12000	5.96	0.128	34.34	1.24	11.9	5.8	Orange	Slight
15:45	60	200	26.29	13000	5.96	0.129	34.45	1.23	12	5.6	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-09	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	41.0 degrees F and Mostly Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	24.63	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	7.37	**Gallons in Well**	1.2
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:05	**Total Volume Purged (ml)**	12150	**Sample ID**	PZ-12-09-FAL22	**Sample Time**	10:30
Purge End Time	10:27	**Well Volumes Purged (total)**	2.67	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:25	0	150	24.71	3000	7.08	0.185	56.37	6.08	10.8	70.5	Brown	Slight
09:30	5	150	24.73	3750	6.68	0.132	57.74	2.66	10.6	88.1	Brown	Slight
09:35	10	150	24.73	4500	6.64	0.124	50.3	2.36	10.6	95.1	Brown	Slight
09:40	15	150	24.72	5250	6.62	0.121	59.34	2.35	10.6	98.9	Brown	Slight
09:45	20	150	24.71	6000	6.6	0.119	62.45	2.32	10.7	105.9	Brown	Slight
09:51	26	150	24.71	6900	6.6	0.118	57.2	2.34	10.8	108.5	Brown	Slight
09:55	30	150	24.71	7500	6.59	0.118	9.16	2.35	11	113.1	Brown	Slight
10:00	35	150	24.71	8250	6.59	0.118	6.83	2.34	11.2	114.3	Brown	Slight
10:05	40	150	24.71	9000	6.59	0.117	5.41	2.34	11.2	116.7	Brown	Slight
10:10	45	150	24.71	9750	6.59	0.117	5.57	2.36	11.2	119.5	Brown	Slight
10:15	50	150	24.71	10500	6.59	0.116	3.09	2.37	11.2	123.1	Brown	Slight
10:20	55	150	24.71	11250	6.58	0.116	2.67	2.38	11.2	124.5	Brown	Slight
10:26	61	150	25.71	12150	6.58	0.115	0.67	2.43	11.2	127.8	Brown	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	PZ-12-10	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	56, overcast			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	22.0-32.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.47	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	8.53	**Gallons in Well**	1.39
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:40	**Total Volume Purged (ml)**	11000	**Sample ID**	PZ-12-10-FAL22	**Sample Time**	12:40
Purge End Time	12:36	**Well Volumes Purged (total)**	2.09	**Replicate / Code No.**	Not Applicable / PZ-12-10FAL22	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:50	0	200	23.47	2000	6.2	0.053	3.94	6.38	14.7	105.9	--	--
11:55	5	200	23.47	3000	6.17	0.052	4.46	6.17	14.7	124.1	Clear	Slight
12:00	10	200	23.47	4000	6.17	0.053	5.25	6.2	14.7	138.1	Clear	Slight
12:05	15	200	23.47	5000	6.19	0.053	3.48	6.19	15	145.9	Clear	Slight
12:10	20	200	23.47	6000	6.19	0.053	6.69	6.07	15.2	153.7	Clear	No Odor
12:15	25	200	23.47	7000	6.17	0.053	8.06	5.92	15.1	157.2	Clear	Slight
12:20	30	200	23.47	8000	6.16	0.053	3.02	5.58	15.3	163.4	Clear	Slight
12:25	35	200	23.47	9000	6.16	0.053	2.14	5.5	15.2	167.1	Clear	Slight
12:31	41	200	23.47	10200	6.15	0.053	1.54	5.51	15.3	171.9	Clear	No Odor
12:35	45	200	23.47	11000	6.16	0.053	1.28	5.51	15.3	173.4	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-10	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	54° Cloudy. Wind 5mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-39.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	31.86	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	7.14	**Gallons in Well**	1.16
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	36	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:13	**Total Volume Purged (ml)**	9300	**Sample ID**	SHL-10-FAL22	**Sample Time**	11:17
Purge End Time	11:17	**Well Volumes Purged (total)**	2.11	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:25	0	150	31.85	1800	6.12	0.152	12.65	4.93	11.7	184	Clear	No Odor
10:30	5	150	31.85	2550	6.16	0.148	10.75	4.34	11.5	134.6	Clear	No Odor
10:35	10	150	31.85	3300	6.19	0.143	8.79	3.85	11.4	100	Clear	No Odor
10:40	15	150	31.85	4050	6.21	0.138	7.86	3.4	11.4	79.3	Clear	No Odor
10:45	20	150	31.85	4800	6.23	0.134	6.94	3.03	11.4	65.9	Clear	No Odor
10:50	25	150	61.85	5550	6.24	0.127	6.15	2.79	11.4	57.2	Clear	No Odor
10:55	30	150	31.85	6300	6.25	0.127	5.66	2.57	11.4	50.9	Clear	No Odor
11:00	35	150	31.85	7050	6.26	0.124	5.22	2.43	11.4	46.6	Clear	No Odor
11:05	40	150	31.85	7800	6.27	0.119	4.72	2.27	11.3	42.8	Clear	No Odor
11:10	45	150	31.26	8550	6.27	0.118	4.58	2.12	11.4	39.5	Clear	No Odor
11:15	50	150	31.85	9300	6.27	0.117	4.43	2.06	11.3	37.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-11	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	62.1 degrees F and Cloudy.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	12.0-27.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.76	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	8.24	**Gallons in Well**	1.34
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	20	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:25	**Total Volume Purged (ml)**	7000	**Sample ID**	SHL-11-FAL22	**Sample Time**	14:05
Purge End Time	14:02	**Well Volumes Purged (total)**	1.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:31	0	200	18.79	1200	6.71	0.454	3.72	2.68	14.4	-104.8	Orange	Slight
13:36	5	200	18.79	2200	6.74	0.452	0.84	1.63	14.4	-111.8	Orange	Slight
13:40	9	200	18.79	3000	6.75	0.451	0.88	1.46	14.4	-112.9	Orange	Slight
13:45	14	200	18.79	4000	6.76	0.448	0.59	1.31	14.3	-113.9	Orange	Slight
13:51	20	200	18.79	5200	6.77	0.447	0.45	1.21	14.2	-114.1	Orange	Slight
13:55	24	200	18.79	6000	6.77	0.447	0.6	1.16	14.2	-114.2	Orange	Slight
14:00	29	200	18.77	7000	6.77	0.447	0.33	1.12	14.2	-113.8	Orange	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-12	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	60° Mostly Cloudy, rain.Wind 7mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	15.0-30.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.47	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	6.53	**Gallons in Well**	1.06
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:15	**Total Volume Purged (ml)**	5000	**Sample ID**	SHL-12-FAL22	**Sample Time**	14:46
Purge End Time	14:45	**Well Volumes Purged (total)**	1.24	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:20	0	200	23.44	1000	6.42	0.897	282.85	4.44	15	188.9	Brown	No Odor
14:25	5	200	23.44	2000	6.42	0.956	160.79	1.68	13.8	187	Brown	No Odor
14:31	11	150	23.49	2900	6.33	0.94	100.47	1.53	13.9	185.8	Brown	No Odor
14:36	16	150	23.49	3650	6.27	0.904	62.04	1.55	13.9	186.9	Brown	No Odor
14:40	20	150	23.49	4250	6.23	0.895	60.32	1.54	13.9	187.2	Brown	No Odor
14:45	25	150	23.49	5000	6.21	0.881	60.83	1.56	13.9	188.2	Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-15	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	39.9 degrees F and Clear. The wind is blowing N at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	14.5-24.5	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.42	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	4.08	**Gallons in Well**	2.67
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22.4	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:30	**Total Volume Purged (ml)**	10000	**Sample ID**	SHL-15-FAL22	**Sample Time**	09:25
Purge End Time	09:21	**Well Volumes Purged (total)**	0.99	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:40	0	200	20.5	2000	5.75	0.194	4.05	3.69	10.1	2.3	Yellow	Slight
08:45	5	200	20.69	3400	5.74	0.198	2.47	2.28	10.8	-9.1	Yellow	Slight
08:51	11	200	20.74	4200	5.76	0.196	3.74	2.02	10.6	-13	Yellow	Slight
08:55	15	200	20.72	5000	5.78	0.196	2.08	1.9	10.7	-14.9	Yellow	Slight
09:00	20	200	20.71	6000	5.8	0.196	2.03	1.79	10.9	-16.9	Yellow	Slight
09:06	26	200	20.69	7200	5.82	0.196	1.8	1.68	11.1	-18.3	Yellow	Slight
09:11	31	200	20.69	8200	5.83	0.197	2.28	1.6	11.2	-19.4	Yellow	Slight
09:15	35	200	20.69	9000	5.84	0.196	1.74	1.63	11.2	-19.4	Yellow	Slight
09:20	40	200	20.69	10000	5.84	0.197	1.51	1.53	11.4	-19.1	Yellow	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-19	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	46.9 degrees F and Cloudy. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-30.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.65	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	6.35	**Gallons in Well**	4.15
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:55	**Total Volume Purged (ml)**	14250	**Sample ID**	SHL-19-FAL22	**Sample Time**	12:15
Purge End Time	12:11	**Well Volumes Purged (total)**	0.91	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:10	0	150	23.65	2250	6.31	0.106	21.78	3.94	11.2	157.1	Clear	Slight
11:15	5	200	23.65	3250	6.28	0.105	10.11	3.6	11.1	160.6	Clear	Slight
11:20	10	200	23.65	4250	6.28	0.106	7.77	3.81	11.3	163.8	Clear	No Odor
11:25	15	200	23.66	5250	6.28	0.106	5.21	3.7	11.4	165.6	Clear	Slight
11:30	20	200	23.66	6250	6.29	0.106	4.94	4.11	11.3	166.4	Clear	Slight
11:35	25	200	23.67	7250	6.29	0.106	4.91	4.07	11.6	167.3	Clear	Slight
11:40	30	200	23.67	8250	6.29	0.106	6.12	4.03	11.5	168.8	Clear	Slight
11:45	35	200	23.67	9250	6.29	0.107	5.15	4.07	11.6	171.4	Clear	Slight
11:50	40	200	23.67	10250	6.3	0.107	4.54	4.23	11.6	172.7	Clear	Slight
11:55	45	200	23.67	11250	6.3	0.107	5.51	4.16	11.7	172.9	Clear	Slight
12:00	50	200	23.67	12250	6.3	0.108	4.16	3.92	12	171.8	Clear	Slight
12:05	55	200	23.67	13250	6.31	0.108	3.71	3.84	11.9	171.6	Clear	Slight
12:10	60	200	23.67	14250	6.31	0.108	3.32	3.94	11.9	172.1	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-20	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	62.1 degrees F and Cloudy. The wind is blowing S/SE at 11.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	39.0-49.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.83	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	25.17	**Gallons in Well**	16.46
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	44	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:35	**Total Volume Purged (ml)**	14200	**Sample ID**	SHL-20-FAL22	**Sample Time**	12:50
Purge End Time	12:47	**Well Volumes Purged (total)**	0.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:50	0	200	18.83	3000	6.62	0.488	8.35	2.04	14.3	-96.8	clear	none
11:55	5	200	18.83	4000	6.64	0.489	8.99	1.67	14.3	-99.3	clear	none
12:00	10	200	18.83	5000	6.64	0.49	9.01	1.5	14.3	-99.9	clear	none
12:05	15	200	18.83	6000	6.65	0.491	8.14	1.35	14.4	-100.1	clear	none
12:10	20	200	18.83	7000	6.65	0.491	8.12	1.36	14.4	-100.3	clear	none
12:15	25	200	18.83	8000	6.65	0.489	8.59	1.32	14.2	-100.1	clear	none
12:20	30	200	18.83	9000	6.65	0.489	6.57	1.29	14.3	-99.8	clear	none
12:26	36	200	18.83	10200	6.65	0.49	7.19	1.23	14.3	-99.5	clear	none
12:30	40	200	18.83	11000	6.67	0.49	7.01	1.21	14.3	-99.4	clear	none
12:36	46	200	18.83	12200	6.67	0.49	5.9	1.19	14.4	-98.9	clear	none
12:40	50	200	18.83	13000	6.67	0.491	5.41	1.17	14.4	-98.7	clear	none
12:46	56	200	18.83	14200	6.67	0.493	5.65	1.14	14.5	-98.7	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-22	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	64.9 degrees F and Clear. The wind is blowing W at 10.3 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	105.0-115.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	8.85	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	101.02	**Gallons in Well**	65.66
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	110	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:54	**Total Volume Purged (ml)**	4836	**Sample ID**	SHL-22-FAL22	**Sample Time**	12:30
Purge End Time	12:26	**Well Volumes Purged (total)**	0.02	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:00	0	156	9.06	936	6.57	0.572	6	1.66	10.7	87.9	Clear	Slight
12:05	5	156	9.1	1716	6.55	0.575	4.9	1.01	10.6	91.5	Clear	Slight
12:10	10	156	9.12	2496	6.55	0.569	4.4	0.87	10.6	92	Clear	Slight
12:15	15	156	9.12	3276	6.55	0.569	4	0.81	10.6	91.1	Clear	Slight
12:20	20	156	9.12	4056	6.56	0.57	3.7	0.77	10.6	90.1	Clear	Slight
12:25	25	156	9.12	4836	6.56	0.564	3.8	0.74	10.5	89.2	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-23	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, overcast/showers			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	23.0-33.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	30.08	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	2.92	**Gallons in Well**	0.48
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:40	**Total Volume Purged (ml)**	11500	**Sample ID**	SHL-23-FAL22	**Sample Time**	14:30
Purge End Time	14:27	**Well Volumes Purged (total)**	6.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:50	0	250	30.16	2500	6.22	0.024	1.59	9.64	11.6	52.4	Clear	Slight
13:55	5	250	30.21	3750	5.6	0.023	1.53	9.8	11.7	150.6	Clear	Slight
14:00	10	250	30.26	5000	5.57	0.023	1.66	9.83	11.6	160.8	Clear	Slight
14:05	15	250	30.26	6250	5.54	0.023	1.78	9.87	11.8	171.9	Clear	Slight
14:10	20	250	30.26	7500	5.53	0.023	2.4	9.92	11.8	181.8	Clear	Slight
14:15	25	250	30.26	8750	5.52	0.024	2.86	9.98	11.6	189.6	Clear	Slight
14:20	30	250	30.26	10000	5.52	0.024	3.7	10	11.8	193.7	Clear	Slight
14:26	36	250	30.26	11500	5.51	0.024	4.92	9.94	11.7	199.2	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-24	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid-upper 60s, occasional showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	110.0-120.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.77	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	103.23	**Gallons in Well**	67.51
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	115	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:33	**Total Volume Purged (gallons)**	0.6	**Sample ID**	SHL-24--FAL22	**Sample Time**	08:48
Purge End Time	08:48	**Well Volumes Purged (total)**	0.009	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:36	0	200	16.78	0	6.9	0.291	1.87	3.62	13.2	168.6	Clear	No Odor
08:39	3	200	16.99	0.25	7.02	0.291	1.23	2.95	13.1	166.5	Clear	No Odor
08:42	6	200	17.18	0.4	7.06	0.291	0.64	2.77	13	164.7	Clear	No Odor
08:46	10	200	17.38	0.5	7.04	0.29	0.21	2.66	13	163.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-3	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	48° Sunny. Weather 1mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	24.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	30.44	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	3.56	**Gallons in Well**	0.58
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:11	**Total Volume Purged (ml)**	5100	**Sample ID**	SHL-3-FAL22	**Sample Time**	10:46
Purge End Time	10:46	**Well Volumes Purged (total)**	2.32	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:16	0	150	30.5	750	5.72	0.195	22.49	6.17	12.8	198.9	Clear	No Odor
10:20	4	150	30.5	1350	5.66	0.194	20.09	5.67	12.7	200	Clear	No Odor
10:25	9	150	30.5	2100	5.67	0.16	11.25	5.51	12.3	202.4	Clear	No Odor
10:30	14	150	30.5	2850	5.64	0.158	8.66	5.39	12.4	204.8	Clear	No Odor
10:35	19	150	30.5	3600	5.62	0.158	6.03	5.36	12.5	206.7	Clear	No Odor
10:40	24	150	30.5	4350	5.59	0.158	5.9	5.31	12.6	208.5	Clear	No Odor
10:45	29	150	30.5	5100	5.58	0.158	6.26	5.35	12.6	209.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
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S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-4	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	64.0 degrees F and Clear. The wind is blowing W/SW at 10.3 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	3.0-13.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	10.72	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	3.95	**Gallons in Well**	0.64
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	12	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:08	**Total Volume Purged (ml)**	7068	**Sample ID**	SHL-4-FAL22	**Sample Time**	13:10
Purge End Time	13:06	**Well Volumes Purged (total)**	2.92	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:15	0	124	10.73	868	6.2	0.182	102.3	1.13	16.1	-5.1	Orange	No Odor
12:20	5	124	10.73	1488	6.17	0.179	46.48	0.91	15.8	-11.1	Orange	No Odor
12:25	10	124	10.73	2108	6.16	0.18	38.37	0.84	15.8	-12.5	Orange	No Odor
12:30	15	124	10.73	2728	6.17	0.181	23.57	0.78	15.9	-14.5	Orange	No Odor
12:35	20	124	10.73	3348	6.17	0.182	17.23	0.76	16	-15.1	Orange	No Odor
12:40	25	124	10.73	3968	6.17	0.182	13.86	0.74	16.1	-14.6	Orange	No Odor
12:45	30	124	10.73	4588	6.17	0.182	12.54	0.73	16.3	-13.8	Orange	No Odor
12:50	35	124	10.73	5208	6.18	0.183	11.73	0.72	16.6	-14	Orange	No Odor
12:55	40	124	10.73	5828	6.19	0.184	8.63	0.72	16.7	-13.2	Orange	No Odor
13:00	45	124	10.73	6448	6.19	0.184	8.65	0.71	16.8	-11.7	Orange	No Odor
13:05	50	124	10.73	7068	6.19	0.186	7.89	0.7	17.1	-11.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-5	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62.1 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	3.0-13.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	6.7	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	7.08	**Gallons in Well**	1.15
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	10	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:00	**Total Volume Purged (ml)**	18612	**Sample ID**	SHL-5-FAL22	**Sample Time**	11:15
Purge End Time	11:13	**Well Volumes Purged (total)**	4.28	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	141	7.03	705	6.18	0.249	5.22	1.21	11.8	-29.2	Clear	Moderate
09:10	5	141	7.12	1410	5.66	0.251	4.96	0.85	12	-4.9	Clear	Moderate
09:15	10	141	7.16	2115	5.55	0.252	2.96	0.76	12.1	5.6	Clear	Moderate
09:20	15	141	7.22	2820	5.49	0.255	4.54	0.77	12.2	16.7	Clear	Strong
09:25	20	141	7.25	3525	5.47	0.262	4.79	0.82	12.2	29.6	Clear	Strong
09:30	25	141	7.27	4230	5.47	0.267	4.79	0.82	12.2	40.3	Clear	Moderate
09:35	30	141	7.3	4935	5.48	0.272	3.04	0.83	12.2	50.9	Clear	Moderate
09:40	35	141	7.3	5640	5.48	0.277	2.39	0.85	12.2	64.4	Clear	Moderate
09:45	40	141	7.33	6345	5.48	0.282	1.97	0.83	12.3	85.2	Clear	Moderate
09:49	44	141	7.33	6909	5.48	0.285	1.88	0.83	12.3	97.6	Clear	Moderate
09:53	48	141	7.33	7473	5.48	0.288	1.78	0.84	12.3	114.1	Clear	Moderate
09:57	52	141	7.33	8037	5.49	0.289	1.98	0.85	12.3	135.6	Clear	Moderate
10:01	56	141	7.35	8601	5.49	0.287	1.77	0.84	12.3	162.6	Clear	Moderate
10:05	60	141	7.35	9165	5.5	0.286	1.84	0.81	12.3	184.9	Clear	Moderate
10:09	64	141	7.37	9729	5.5	0.289	2	0.8	12.4	214.5	Clear	Moderate
10:13	68	141	7.37	10293	5.49	0.291	1.84	0.78	12.4	246.2	Clear	Moderate
10:17	72	141	7.37	10857	5.5	0.29	1.71	0.76	12.4	276.1	Clear	Moderate
10:21	76	141	7.37	11421	5.5	0.291	1.78	0.77	12.4	302.8	Clear	Moderate
10:25	80	141	7.38	11985	5.5	0.29	1.65	0.77	12.4	323.1	Clear	Moderate
10:29	84	141	7.38	12549	5.51	0.289	1.75	0.76	12.4	343.1	Clear	Moderate
10:33	88	141	7.38	13113	5.51	0.288	1.51	0.75	12.4	360.4	Clear	Moderate
10:37	92	141	7.38	13677	5.52	0.287	1.48	0.75	12.3	376.4	Clear	Moderate
10:41	96	141	7.38	14241	5.52	0.287	1.44	0.74	12.4	390.6	Clear	Moderate
10:45	100	141	7.38	14805	5.52	0.29	1.48	0.75	12.4	402.8	Clear	Moderate
10:48	103	141	7.38	15228	5.51	0.29	1.69	0.76	12.4	411.7	Clear	Moderate
10:51	106	141	7.38	15651	5.52	0.289	2.13	0.75	12.4	419.1	Clear	Moderate
10:54	109	141	7.38	16074	5.51	0.29	2.07	0.76	12.4	427.4	Clear	Moderate
10:57	112	141	7.38	16497	5.51	0.29	1.21	0.77	12.4	435	Clear	Moderate
11:00	115	141	7.38	16920	5.51	0.29	1.16	0.77	12.4	443.9	Clear	Moderate
11:03	118	141	7.38	17343	5.51	0.289	1.18	0.78	12.4	447.7	Clear	Moderate
11:06	121	141	7.38	17766	5.52	0.286	1.27	0.77	12.4	454.1	Clear	Moderate
11:09	124	141	7.38	18189	5.52	0.287	1.23	0.76	12.4	460.1	Clear	Moderate

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
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Groundwater Sampling Form

11:12	127	141	7.38	18612	5.52	0.287	1.29	0.76	12.4	464.3	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-7	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	50° Sunny. Wind 8mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	11.0-21.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.44	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	2.56	**Gallons in Well**	0.42
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	20	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:35	**Total Volume Purged (ml)**	7500	**Sample ID**	SHL-7-FAL22	**Sample Time**	11:27
Purge End Time	11:27	**Well Volumes Purged (total)**	4.75	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:57	0	150	18.48	3300	6.13	0.53	296.22	4.51	11.4	205.8	Clear	No Odor
11:05	8	150	18.48	4500	6.1	0.43	140.65	3.12	11.4	179	Clear	No Odor
11:10	13	150	18.48	5250	6.1	0.413	79.01	1.53	11.6	166.2	Clear	No Odor
11:15	18	150	18.48	6000	6.12	0.383	74.05	1.23	11.7	155.8	Clear	No Odor
11:20	23	150	18.48	6750	6.13	0.386	75.6	1.2	11.7	150.2	Clear	No Odor
11:25	28	150	18.48	7500	6.14	0.378	72.4	1.2	11.7	146.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-8D	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	55° Sunny. Wind 11mph NE			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	68.0-70.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	8.68	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	61.32	**Gallons in Well**	9.99
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	69	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:16	**Total Volume Purged (ml)**	5100	**Sample ID**	SHL-8D-FAL22	**Sample Time**	13:52
Purge End Time	13:52	**Well Volumes Purged (total)**	0.13	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:20	0	150	8.68	600	6.07	0.205	4.72	3.3	11.6	138.4	Clear	No Odor
13:25	5	150	8.68	1350	6.02	0.189	5.86	1.53	11.4	116.5	Clear	No Odor
13:30	10	150	8.68	2100	5.93	0.211	3.07	1.25	11.3	118.4	Clear	No Odor
13:35	15	150	8.68	2850	5.86	0.236	2.92	1.19	11.3	126.9	Clear	No Odor
13:40	20	150	8.68	3600	5.81	0.256	2.76	1.17	11.2	142.6	Clear	No Odor
13:45	25	150	8.68	4350	5.79	0.259	2.61	1.16	11.2	145	Clear	No Odor
13:50	30	150	8.68	5100	5.77	0.262	2.54	1.16	11.1	152.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-8S	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	40° Sunny. Wind 7mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	52.0-54.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	8.74	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	45.26	**Gallons in Well**	7.38
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	53	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:33	**Total Volume Purged (ml)**	2550	**Sample ID**	SHL-8S-FAL22	**Sample Time**	09:51
Purge End Time	09:51	**Well Volumes Purged (total)**	0.09	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:40	0	150	8.76	1050	6.09	0.089	4.49	5.44	10.1	233.8	Clear	No Odor
09:45	5	150	8.76	1800	6.14	0.09	3.72	5.17	10.2	233.8	Clear	No Odor
09:50	10	150	8.76	2550	6.16	0.09	4.49	5.08	10.4	235.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHL-9	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	64.9 degrees F and Clear. The wind is blowing W at 10.3 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	15.0-25.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	11.17	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	14.54	**Gallons in Well**	2.36
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	20	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:18	**Total Volume Purged (ml)**	4160	**Sample ID**	SHL-9-FAL22	**Sample Time**	14:55
Purge End Time	14:51	**Well Volumes Purged (total)**	0.47	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:25	0	130	11.52	910	6.37	0.296	7	0.96	11.9	12.8	Clear	Slight
14:30	5	130	11.52	1560	6.36	0.317	4.9	0.79	11.9	1.4	Clear	Slight
14:35	10	130	11.52	2210	6.35	0.317	3.3	0.71	11.5	-2.4	Clear	Slight
14:40	15	130	11.52	2860	6.35	0.318	2.8	0.67	11.6	-5.4	Clear	Slight
14:45	20	130	11.52	3510	6.34	0.318	2.4	0.62	11.8	-6.1	Clear	Slight
14:50	25	130	11.52	4160	6.34	0.32	2.5	0.61	11.8	-7.7	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-39A	**Date**	2022-11-03	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	34.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	37.0-39.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.44	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	26.56	**Gallons in Well**	4.33
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	38	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:15	**Total Volume Purged (ml)**	4500	**Sample ID**	SHM-05-39A-FAL22	**Sample Time**	09:50
Purge End Time	09:48	**Well Volumes Purged (total)**	0.27	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:20	0	150	12.42	750	6.69	0.122	22.39	8.11	10.7	205.2	Yellow	Slight
09:25	5	150	12.42	1500	6.63	0.121	22.36	7.87	10.9	205.1	Yellow	Slight
09:30	10	150	12.42	2250	6.6	0.12	22.36	7.75	10.8	201.4	Yellow	Slight
09:35	15	150	12.42	3000	6.58	0.121	19.3	7.66	11	198	Yellow	Slight
09:40	20	150	12.42	3750	6.58	0.12	19.37	7.51	10.7	197.8	Yellow	Slight
09:45	25	150	12.41	4500	6.56	0.12	19.31	7.34	10.9	197.1	Yellow	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-39B	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	41.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	66.0-68.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	13.07	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	52.31	**Gallons in Well**	8.50
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	67	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:37	**Total Volume Purged (ml)**	8710	**Sample ID**	SHM-05-39B-FAL22	**Sample Time**	14:45
Purge End Time	14:44	**Well Volumes Purged (total)**	0.27	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:41	0	130	14.45	520	6.42	0.531	91.3	1.3	14.9	6	Clear	No Odor
13:45	4	130	14.84	1040	6.37	0.505	98.2	1.1	15.1	8.7	--	--
13:50	9	130	15.47	1690	6.42	0.557	74.2	0.9	14.6	-12.9	--	--
13:55	14	130	15.95	2340	6.52	0.6	62.8	0.75	14.6	-37.8	--	--
14:00	19	130	16.25	2990	6.56	0.616	59.4	0.73	14.4	-48.1	--	--
14:05	24	130	16.51	3640	6.6	0.629	54	0.72	14.5	-55.9	--	--
14:10	29	130	16.67	4290	6.64	0.639	52.7	0.73	14.7	-62.9	--	--
14:15	34	130	16.81	4940	6.7	0.662	51.4	0.7	14.3	-73.2	--	--
14:20	39	130	16.91	5590	6.76	0.664	46.1	0.73	14.2	-81.3	--	--
14:25	44	130	16.99	6240	6.78	0.677	44.9	0.71	14.3	-86.1	--	--
14:30	49	130	17.06	6890	6.8	0.679	38.6	0.71	14.1	-89.5	--	--
14:35	54	130	17.12	7540	6.82	0.693	31.4	0.68	14.3	-94.1	--	--
14:40	59	130	17.16	8190	6.83	0.701	30.5	0.68	14.2	-97.2	--	--
14:44	63	130	17.19	8710	6.84	0.704	31.2	0.66	14.1	-99	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? no

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-40X	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	41.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	32.0-34.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.22	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	17.88	**Gallons in Well**	2.91
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	33	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:01	**Total Volume Purged (ml)**	5808	**Sample ID**	SHM-05-40X-FAL22	**Sample Time**	09:50
Purge End Time	09:45	**Well Volumes Purged (total)**	0.53	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	132	15.33	528	6.53	0.133	27.8	3.29	12.8	182.6	Clear	No Odor
09:10	5	132	15.33	1188	6.06	0.119	33.7	2.03	12.5	122.3	--	--
09:15	10	132	15.33	1848	6.24	0.436	16.5	1.19	12.5	-32.7	--	--
09:20	15	132	15.33	2508	6.5	0.527	11.7	0.85	12.4	-80.1	--	--
09:25	20	132	15.33	3168	6.55	0.516	11.6	0.78	12.3	-87	--	--
09:30	25	132	15.33	3828	6.57	0.513	9.9	0.75	12.5	-90	--	--
09:35	30	132	15.33	4488	6.59	0.504	8.4	0.73	12.5	-91.2	--	--
09:40	35	132	15.33	5148	6.6	0.502	7.9	0.71	12.5	-92.3	--	--
09:45	40	132	15.33	5808	6.61	0.499	8.1	0.69	12.5	-92.9	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-41A	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	41.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Melissa Miller	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	42.0-44.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.35	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	29.30	**Gallons in Well**	4.76
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	40	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:40	**Total Volume Purged (gallons)**	3.5	**Sample ID**	SHM-05-41A-FAL22	**Sample Time**	13:15
Purge End Time	13:15	**Well Volumes Purged (total)**	0.74	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:40	0	200	12.4	3.5	6.62	0.292	6.27	1.49	10.9	-66.5	Clear	No Odor
11:45	5	200	12.4	3.5	7.03	0.292	4.32	1.18	10.8	-96.9	Clear	No Odor
11:50	10	200	12.4	3.5	7.15	0.272	4.05	1.08	10.8	-112.9	Clear	No Odor
11:55	15	200	12.4	3.5	7.1	0.252	10.36	1.04	10.8	-112.3	Clear	No Odor
12:00	20	200	12.4	3.5	7.09	0.245	11	1.01	10.8	-111.4	Clear	No Odor
12:05	25	200	12.4	3.5	7.05	0.239	11.4	0.99	10.8	-109.4	Clear	No Odor
12:10	30	200	12.4	3.5	7.02	0.225	7.4	0.98	10.8	-105.8	Clear	No Odor
12:15	35	200	12.4	3.5	7	0.219	8.72	0.96	10.8	-103	Clear	No Odor
12:20	40	200	12.4	3.5	6.95	0.219	9.09	0.95	10.7	-98.1	Clear	No Odor
12:25	45	200	12.4	3.5	6.93	0.204	6.08	0.95	10.7	-93.8	Clear	No Odor
12:30	50	200	12.4	3.5	6.92	0.211	4.65	0.94	10.7	-92.6	Clear	No Odor
12:35	55	200	12.4	3.5	6.91	0.199	5.01	0.94	10.7	-90.4	Clear	No Odor
12:40	60	200	12.4	3.5	6.89	0.191	5.97	0.93	10.7	-87	Clear	No Odor
12:45	65	200	12.4	3.5	6.86	0.185	4.05	0.92	10.8	-82.6	Clear	No Odor
12:50	70	200	12.4	3.5	6.85	0.19	3.28	0.92	10.8	-81	Clear	No Odor
12:55	75	200	12.4	3.5	6.83	0.172	3.58	0.91	10.8	-76	Clear	No Odor
13:00	80	200	12.4	3.5	6.79	0.171	3.57	0.91	10.8	-71	Clear	No Odor
13:05	85	200	12.4	3.5	6.77	0.165	3.54	0.91	10.8	-66.7	Clear	No Odor
13:10	90	200	12.4	3.5	6.76	0.166	3.54	0.91	10.8	-64.9	Clear	No Odor
13:15	95	200	12.4	3.5	6.75	0.165	3.54	0.91	10.8	-62.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well Information

Well Labeled Properly:	yes
Is Well in Good Condition?	yes
Well Inspection Comments:	

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-41B	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	41.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Melissa Miller	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	62.0-64.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	11.7	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	49.55	**Gallons in Well**	8.05
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:55	**Total Volume Purged (n/a)**	2.75	**Sample ID**	SHM-05-41B	**Sample Time**	15:10
Purge End Time	15:10	**Well Volumes Purged (total)**	0.34	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:55	0	200	12.25		7.11	0.444	21.8	1.16	11.9	-121.2	Clear	No Odor
14:00	5	200	12.28		7.12	0.42	30	0.94	11	-125.5	Clear	No Odor
14:05	10	200	12.28		7.04	0.379	20.4	0.91	10.9	-121.1	Clear	No Odor
14:10	15	200	12.28		7.01	0.364	18.1	0.9	10.8	-117.2	Clear	No Odor
14:15	20	200	12.28		6.98	0.345	18.3	0.89	10.8	-113.8	Clear	No Odor
14:20	25	200	12.28		6.97	0.333	18.8	0.88	10.8	-111.7	Clear	No Odor
14:25	30	200	12.28		6.98	0.338	16.2	0.87	10.8	-110.8	Clear	No Odor
14:30	35	200	12.28		6.98	0.344	12.4	0.87	10.8	-110.5	Clear	No Odor
14:35	40	200	12.28		6.99	0.348	11.3	0.87	10.8	-111.1	Clear	No Odor
14:40	45	200	12.28		6.99	0.338	10.2	0.87	10.7	-110.3	Clear	No Odor
14:45	50	200	12.28		6.98	0.326	7.68	0.86	10.7	-109.1	Clear	No Odor
14:50	55	200	12.28		6.98	0.333	7.22	0.86	10.7	-108.8	Clear	No Odor
14:55	60	200	12.28		6.93	0.32	5.3	0.84	10.4	-107.8	Clear	No Odor
15:00	65	200	12.28		7	0.318	5.35	0.83	10.8	-110.1	Clear	No Odor
15:05	70	200	12.28		7	0.319	5.4	0.84	10.7	-112.1	Clear	No Odor
15:10	75	200	12.8		7	0.318	5.3	0.85	10.8	-115.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-41C	**Date**	2022-10-17	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	41.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Melissa Miller	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	88.0-93.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.6	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	75.19	**Gallons in Well**	12.22
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	86	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:37	**Total Volume Purged (gallons)**	1.5	**Sample ID**	SHM-05-41C-FAL22	**Sample Time**	10:22
Purge End Time	10:22	**Well Volumes Purged (total)**	0.12	**Replicate / Code No.**	MS/MSD /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:42	0	200	12.54	1.5	6.52	0.368	18.7	2.21	10.7	12.9	Clear	No Odor
09:47	5	200	12.6	1.5	6.51	0.365	23.1	1.3	10.6	-3.6	Clear	No Odor
09:52	10	200	12.6	1.5	6.52	0.364	20.3	1.16	10.6	-9.1	Clear	No Odor
09:57	15	200	12.6	1.5	6.53	0.363	15.5	1.1	10.6	-13.2	Clear	No Odor
10:02	20	200	12.6	1.5	6.53	0.363	15.2	1.06	10.6	-15.1	Clear	No Odor
10:07	25	200	12.6	1.5	6.54	0.362	13.5	1.04	10.5	-16.6	Clear	No Odor
10:12	30	200	12.6	1.5	6.55	0.362	11.06	1.02	10.4	-17.9	Clear	No Odor
10:17	35	200	12.6	1.5	6.55	0.361	11.6	1	10.5	-18.8	Clear	No Odor
10:22	40	200	12.6	1.5	6.54	0.361	10.9	0.99	10.6	-19.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-42A	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	It is Clear. The wind is blowing W/NW at 6.9 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	40.0-42.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	6.17	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	37.64	**Gallons in Well**	1.53
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	41	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:09	**Total Volume Purged (ml)**	9702	**Sample ID**	SHM-05-42A-FAL22	**Sample Time**	10:15
Purge End Time	10:12	**Well Volumes Purged (total)**	1.68	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:15	0	154	6.23	924	5.77	0.083	241.07	1.25	10.2	246.2	Orange	Slight
09:20	5	154	6.22	1694	5.54	0.082	24.7	0.93	10	276.9	--	--
09:25	10	154	6.22	2464	5.5	0.082	8.15	0.82	10	306.4	--	--
09:30	15	154	6.22	3234	5.49	0.082	2.84	0.76	10	328.4	Clear	No Odor
09:35	20	154	6.22	4004	5.47	0.082	2.86	0.73	10	345.2	--	--
09:40	25	154	6.22	4774	5.46	0.082	4.9	0.7	10.1	362.5	--	--
09:45	30	154	6.22	5544	5.47	0.082	4.01	0.68	10.1	371.1	--	--
09:50	35	154	6.22	6314	5.47	0.082	2.53	0.67	10.2	378	--	--
09:55	40	154	6.22	7084	5.49	0.083	1.89	0.65	10.3	385.7	--	--
10:00	45	154	6.22	7854	5.51	0.083	1.64	0.65	10.4	396.8	--	--
10:04	49	154	6.22	8470	5.54	0.083	2.79	0.64	10.5	408.2	--	--
10:08	53	154	6.22	9086	5.55	0.083	2.37	0.63	10.5	414.2	--	--
10:12	57	154	6.22	9702	5.55	0.083	1.91	0.62	10.5	417.9	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-05-42B	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	It is Clear. The wind is blowing W/NW at 6.9 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-72.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	6.24	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	66.98	**Gallons in Well**	2.72
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	71	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:34	**Total Volume Purged (ml)**	4774	**Sample ID**	SHM-05-42B	**Sample Time**	11:05
Purge End Time	11:05	**Well Volumes Purged (total)**	0.46	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:40	0	154	6.29	924	6.17	0.44	5.85	1.05	10.6	17.2	--	--
10:45	5	154	6.28	1694	6.21	0.442	1.51	0.8	10.6	-1.2	--	--
10:50	10	154	6.28	2464	6.22	0.442	1.3	0.71	10.6	-7.2	Clear	No Odor
10:55	15	154	6.28	3234	6.23	0.443	0.83	0.66	10.6	-10.1	--	--
11:00	20	154	6.28	4004	6.24	0.444	0.78	0.63	10.7	-12	--	--
11:05	25	154	6.28	4774	6.24	0.443	0.75	0.62	10.7	-12.5	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-07-05X	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	37.0 degrees F and Clear. The wind is blowing N/NW at 3.4 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	56.0-66.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.54	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	47.99	**Gallons in Well**	7.80
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	61	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:29	**Total Volume Purged (ml)**	15876	**Sample ID**	SHM-07-05X-FAL22	**Sample Time**	12:40
Purge End Time	12:36	**Well Volumes Purged (total)**	0.54	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:35	0	126	13.16	756	6.44	0.251	38.9	1.09	14	20.2	--	--
10:40	5	126	14.21	1386	6.4	0.252	30.1	0.88	13.9	29.4	--	--
10:45	10	126	14.94	2016	6.38	0.253	29.8	0.78	13.8	38.3	--	--
10:50	15	126	15.55	2646	6.36	0.254	27.8	0.76	13.8	40.3	--	--
10:55	20	126	16.52	3276	6.37	0.248	28.9	0.69	13.6	41	--	--
11:00	25	126	17.58	3906	6.35	0.244	30.5	0.68	13.6	41.8	--	--
11:05	30	126	18.49	4536	6.35	0.238	30.7	0.67	13.5	41.5	--	--
11:12	37	126	19.06	5418	6.35	0.25	73.2	1.99	14.7	37.3	--	--
11:15	40	126	19.52	5796	6.33	0.267	89.8	0.97	14.4	43.2	--	--
11:20	45	126	20.27	6426	6.32	0.322	25	0.7	13.4	54.4	--	--
11:25	50	126	20.98	7056	6.34	0.334	23.5	0.67	13.9	59.3	--	--
11:30	55	126	21.7	7686	6.35	0.332	23.9	0.65	13.8	59.2	--	--
11:36	61	126	22.02	8442	6.36	0.327	30.1	0.98	14.5	59	--	--
11:40	65	126	22.53	8946	6.38	0.4	25.9	1.05	15.5	58.7	--	--
11:45	70	126	23.14	9576	6.51	0.598	21.2	0.69	15.5	42.5	--	--
11:50	75	126	23.67	10206	6.57	0.71	20.8	0.66	15.7	29.5	--	--
11:55	80	126	24.15	10836	6.66	1.04	17.9	0.65	15.9	10.6	--	--
12:00	85	126	24.46	11466	6.69	0.971	18.6	0.69	16.4	7.7	--	--
12:05	90	126	25.02	12096	6.69	0.699	21.5	0.66	16.2	17.1	--	--
12:10	95	126	25.53	12726	6.61	0.543	21.7	0.64	16.2	27.7	--	--
12:15	100	126	26.01	13356	6.56	0.495	22.7	0.64	16.4	34.8	--	--
12:19	104	126	26.38	13860	6.53	0.435	23.8	0.63	16.4	37.2	--	--
12:23	108	126	26.81	14364	6.51	0.389	26.1	0.63	16.2	37.5	--	--
12:27	112	126	27.13	14868	6.5	0.354	26.5	0.64	16.3	30.5	--	--
12:31	116	126	27.49	15372	6.5	0.345	26.9	0.63	16.4	27.8	--	--
12:35	120	126	27.78	15876	6.5	0.345	26.2	0.63	16.7	25.8	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Comments: None

Well Information

Well Labeled Properly: no

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-02	**Date**	2022-11-04	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	63° Sunny. Wind 9mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	53.0-63.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.01	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	44.99	**Gallons in Well**	4.14
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	58	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:08	**Total Volume Purged (ml)**	8000	**Sample ID**	SHM-10-02-FAL22	**Sample Time**	11:41
Purge End Time	11:41	**Well Volumes Purged (total)**	0.51	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:16	0	250	18.02	2000	6.39	0.57	5.21	7.2	13.7	292.6	Clear	No Odor
11:20	4	250	18.02	3000	6.41	0.559	4.12	6.84	13.6	293.5	Clear	No Odor
11:25	9	250	18.02	4250	6.42	0.557	3.87	6.25	13.5	293.6	Clear	No Odor
11:30	14	250	18.02	5500	6.4	0.558	3.7	4.55	13.7	292.4	Clear	No Odor
11:35	19	250	18.02	6750	6.38	0.563	3.3	4.39	13.7	290.3	Clear	No Odor
11:40	24	250	18.02	8000	6.35	0.572	3.17	4.28	13.7	286.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-03	**Date**	2022-11-03	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	47° Sunny. Wind 0mph			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	58.5-68.5	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	26.86	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	41.64	**Gallons in Well**	3.83
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	63.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:05	**Total Volume Purged (ml)**	11250	**Sample ID**	SHM-10-03-FAL22	**Sample Time**	10:51
Purge End Time	10:51	**Well Volumes Purged (total)**	0.55	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:15	0	250	26.86	2500	6.84	0.689	3.7	6.07	12.7	166.5	Clear	No Odor
10:20	5	250	26.86	3750	7.02	0.65	3.2	2.31	12.1	102.9	Clear	No Odor
10:25	10	250	26.86	5000	7.03	0.654	3.28	1.63	12.2	75.1	Clear	No Odor
10:30	15	250	26.86	6250	7.04	0.677	3.15	1.48	12.3	63.5	Clear	No Odor
10:35	20	250	26.86	7500	7.06	0.699	3.12	1.35	12.2	60.5	Clear	No Odor
10:40	25	250	26.86	8750	7.03	0.709	3.13	1.23	12.7	60.8	Clear	No Odor
10:45	30	250	26.86	10000	7.02	0.719	3.21	1.22	12.7	60.7	Clear	No Odor
10:50	35	250	26.86	11250	7	0.721	3.18	1.17	12.9	60.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: Can easily access well from a gate in the East of treatment plant. V. Strong smell from treatment plant, odor difficult to determine.

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-04	**Date**	2022-11-03	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	63° Sunny. Wind 5mph N.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	55.0-65.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	6.84	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	58.16	**Gallons in Well**	5.35
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:55	**Total Volume Purged (ml)**	8750	**Sample ID**	SHM-10-04-FAL22	**Sample Time**	13:31
Purge End Time	13:30	**Well Volumes Purged (total)**	0.43	**Replicate / Code No.**	MS/MSD / SHM-10-04-FAL22-MS/MSD	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:00	0	250	6.87	1250	6.94	0.414	4.84	6.88	14.8	134	Clear	No Odor
13:05	5	250	6.87	2500	6.31	0.387	4.15	2.76	14	113.9	Clear	No Odor
13:10	10	250	6.87	3750	6.26	0.385	3.8	1.48	14	124.6	Clear	No Odor
13:15	15	250	6.87	5000	6.25	0.385	3.71	1.25	14.3	132.4	Clear	No Odor
13:20	20	250	6.87	6250	6.25	0.386	3.65	1.17	14.3	138	Clear	No Odor
13:25	25	250	6.87	7500	6.28	0.387	3.7	1.1	14.3	142.4	Clear	No Odor
13:30	30	250	6.87	8750	6.28	0.388	3.67	1.07	14.3	145.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-05A	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	56° Rain. Wind 2mph S.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	25.86	**Total Depth (ft-bmp)**	NM	**Water Column(ft)**	34.14	**Gallons in Well**	3.14
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:12	**Total Volume Purged (ml)**	6450	**Sample ID**	SHM-10-05A-FAL22	**Sample Time**	13:56
Purge End Time	13:56	**Well Volumes Purged (total)**	0.54	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:39	0	150	25.89	4050	6.35	0.277	14.52	3.23	15.4	138.2	Clear	No Odor
13:45	6	150	25.89	4950	6.33	0.294	13.44	1.76	15.3	142.5	Clear	No Odor
13:50	11	150	25.89	5700	6.33	0.294	12.64	1.67	15.2	146.2	Clear	No Odor
13:55	16	150	25.89	6450	6.35	0.294	12.85	1.6	15	149.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

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Groundwater Sampling Form

Well ID	SHM-10-06	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	62.1 degrees F and Cloudy.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-80.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.63	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	61.00	**Gallons in Well**	5.58
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	75	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:02	**Total Volume Purged (ml)**	4422	**Sample ID**	SHM-10-06-FAL22	**Sample Time**	14:40
Purge End Time	14:36	**Well Volumes Purged (total)**	0.21	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:05	0	134	20.67	402	6.27	0.426	21	1.7	13.6	-55.9	Clear	Moderate
14:10	5	134	20.67	1072	6.22	0.465	4.79	1.02	13.5	-75.8	Clear	Moderate
14:15	10	134	20.67	1742	6.27	0.468	2.06	0.83	13.6	-84.7	Clear	Moderate
14:20	15	134	20.67	2412	6.3	0.465	2.85	0.77	13.7	-88.3	Clear	Moderate
14:25	20	134	20.67	3082	6.31	0.457	2.34	0.71	13.4	-89.1	Clear	Moderate
14:30	25	134	20.67	3752	6.31	0.46	2.74	0.67	13.5	-88.6	Clear	Moderate
14:35	30	134	20.67	4422	6.32	0.46	1.61	0.65	13.4	-89.9	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-06A	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Upper 50s, overcast/showers			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	77.0-87.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	35.55	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	51.45	**Gallons in Well**	4.73
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	82	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:55	**Total Volume Purged (ml)**	4050	**Sample ID**	SHM-10-06A-FAL22	**Sample Time**	11:45
Purge End Time	11:40	**Well Volumes Purged (total)**	0.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:00	0	90	35.55	450	5.98	0.268	38.3	7.59	12.9	65.1	clear	none
11:05	5	90	35.55	900	5.96	0.311	20.6	3.52	12.8	50.6	clear	none
11:10	10	90	35.55	1350	5.98	0.328	17.1	4.78	12.7	53.3	clear	none
11:15	15	90	35.55	1800	5.99	0.337	10.4	2.72	12.5	48.5	clear	none
11:20	20	90	35.55	2250	5.99	0.342	11.9	1.45	12.5	39.4	clear	none
11:25	25	90	35.55	2700	6	0.346	10.3	1.19	12.5	33.8	clear	none
11:30	30	90	35.55	3150	6	0.35	10.5	1.11	12.6	30.1	clear	none
11:35	35	90	35.55	3600	6	0.353	9.9	1.04	12.7	34.9	clear	none
11:40	40	90	35.55	4050	6.01	0.356	10.7	1.08	12.7	25.8	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-07	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	57.0 degrees F and Cloudy. The wind is blowing S at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	40.0-50.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	27.8	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	22.20	**Gallons in Well**	3.62
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	45	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:30	**Total Volume Purged (ml)**	18200	**Sample ID**	SHM-10-07-FAL22	**Sample Time**	15:05
Purge End Time	15:03	**Well Volumes Purged (total)**	1.33	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:41	0	200	27.93	2200	6.56	0.377	65.4	2.05	13.7	-105.4	Clear	Slight
13:46	5	200	27.92	3200	6.55	0.38	41.51	1.85	13.6	-106.2	Clear	Slight
13:50	9	200	27.92	4000	6.55	0.383	37.99	1.69	13.6	-106.7	Clear	Slight
13:55	14	200	27.92	5000	6.55	0.385	16.91	1.71	13.8	-106.8	Clear	Slight
14:00	19	200	27.92	6000	6.55	0.387	24.07	1.61	13.6	-107	Clear	Slight
14:05	24	200	27.92	7000	6.55	0.388	30.86	1.52	13.5	-106.8	Clear	Slight
14:10	29	200	27.92	8000	6.55	0.389	11.87	1.49	13.6	-106.8	Clear	Slight
14:15	34	200	27.92	9000	6.55	0.388	9.57	1.52	13.4	-106.6	Clear	Slight
14:20	39	200	27.92	10000	6.55	0.389	10.32	1.44	13.4	-106.2	Clear	Slight
14:25	44	200	27.92	11000	6.54	0.391	8.35	1.41	13.6	-106.3	Clear	Slight
14:31	50	200	27.92	12200	6.54	0.393	12.54	1.4	13.6	-105.9	Clear	Slight
14:36	55	200	27.92	13200	6.54	0.394	7.82	1.37	13.6	-105.5	Clear	Slight
14:40	59	200	27.92	14000	6.54	0.393	6.91	1.41	13.5	-105.3	Clear	Slight
14:45	64	200	27.92	15000	6.54	0.394	7.55	1.38	13.5	-105.4	Clear	Slight
14:51	70	200	27.92	16200	6.54	0.396	8.66	1.31	13.6	-104.9	Clear	Slight
14:55	74	200	27.92	17000	6.54	0.396	8.9	1.41	13.5	-105	Clear	Slight
15:01	80	200	27.92	18200	6.54	0.394	8.32	1.37	13.3	-103.9	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-08	**Date**	2022-11-04	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	69° Sunny. Wind 9mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	46.0-56.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	9.49	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	46.51	**Gallons in Well**	4.28
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	51	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:37	**Total Volume Purged (ml)**	7000	**Sample ID**	SHM-10-08-FAL22	**Sample Time**	13:06
Purge End Time	13:06	**Well Volumes Purged (total)**	0.43	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:45	0	250	9.48	2000	6.33	0.652	3.62	1.57	15.2	246.6	Clear	No Odor
12:50	5	250	9.48	3250	6.3	0.649	3.4	1.22	14.9	244.7	Clear	No Odor
12:55	10	250	9.48	4500	6.3	0.647	3.3	1.1	14.9	235.9	Clear	No Odor
13:00	15	250	9.48	5750	6.29	0.647	3.36	1.04	15.2	232	Clear	No Odor
13:05	20	250	9.48	7000	6.32	0.648	3.59	1.03	15.2	229.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-10	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	52° Sunny. Wind 13mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	56.0-66.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	11.06	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	54.94	**Gallons in Well**	5.05
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	61	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:59	**Total Volume Purged (ml)**	3900	**Sample ID**	SHM-10-10-FAL22	**Sample Time**	15:26
Purge End Time	15:25	**Well Volumes Purged (total)**	0.2	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
15:10	0	150	11.08	1650	7.03	0.846	4.68	6.28	13.4	189.6	Clear	No Odor
15:15	5	150	11.08	2400	6.92	0.855	4.01	5.18	13.2	191.8	Clear	No Odor
15:20	10	150	11.08	3150	6.84	0.855	3.62	5.07	13	194.3	--	--
15:25	15	150	11.08	3900	6.82	0.855	3.22	5.07	12.9	196.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-11	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	35.1 degrees F and Clear. The wind is blowing N/NW at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	41.31	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	18.69	**Gallons in Well**	3.05
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	08:40	**Total Volume Purged (ml)**	17500	**Sample ID**	SHM-10-11-FAL22	**Sample Time**	09:55
Purge End Time	09:51	**Well Volumes Purged (total)**	1.52	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21C00564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:45	0	250	41.31	1250	6.1	0.313	112.39	2.41	10.9	-30.7	clear	no odor
08:50	5	250	41.31	2500	6.06	0.313	106.46	1.94	10.9	-34.7	clear	no odor
08:55	10	250	41.31	3750	6.07	0.312	86.02	1.76	10.7	-36.6	clear	no odor
09:00	15	250	41.31	5000	6.08	0.314	40.61	1.59	11	-38.9	clear	no odor
09:05	20	250	41.31	6250	6.09	0.315	28.37	1.47	11.1	-40.1	clear	no odor
09:10	25	250	41.31	7500	6.09	0.315	22.85	1.38	11.1	-40.9	clear	no odor
09:15	30	250	41.31	8750	6.1	0.317	19.46	1.3	11.1	-42.2	clear	no odor
09:20	35	250	41.31	10000	6.11	0.316	26.24	1.24	11.2	-43.9	clear	no odor
09:25	40	250	41.31	11250	6.11	0.315	25.77	1.2	11.3	-45.2	clear	no odor
09:30	45	250	41.31	12500	6.12	0.315	22.02	1.17	11.4	-46.8	clear	no odor
09:35	50	250	41.31	13750	6.13	0.314	32.9	1.13	11.4	-48.3	clear	no odor
09:40	55	250	41.31	15000	6.13	0.313	3.07	1.1	11.3	-48.6	clear	no odor
09:45	60	250	41.31	16250	6.13	0.315	2.37	1.08	11.5	-49	clear	no odor
09:50	65	250	41.31	17500	6.14	0.315	1.99	1.06	11.6	-49.8	clear	no odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-12	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	48.0 degrees F and Clear. The wind is blowing S/SW at 11.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	45.0-55.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	34.81	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	20.19	**Gallons in Well**	3.29
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	50	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:55	**Total Volume Purged (ml)**	27500	**Sample ID**	SHM-10-12-FAL22	**Sample Time**	12:50
Purge End Time	12:46	**Well Volumes Purged (total)**	2.21	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:00	0	250	34.81	1250	5.94	0.204	311.1	4.08	11.2	-15.9	Clear	Moderate
11:05	5	250	34.81	2500	5.93	0.201	230.87	3.37	11.1	-17.7	Clear	Moderate
11:30	30	250	34.79	8750	5.92	0.204	105.25	4.91	11.7	-27.9	Clear	Moderate
11:35	35	250	34.79	10000	5.91	0.206	55.73	2.05	11.2	-24.8	Clear	Moderate
11:40	40	250	34.79	11250	5.91	0.208	35.01	1.65	11.3	-25.9	Clear	Moderate
11:45	45	250	34.79	12500	5.91	0.21	26.7	1.42	11.3	-26.8	Clear	Moderate
11:50	50	250	34.79	13750	5.91	0.21	21.92	1.3	11.3	-27.6	Clear	Moderate
11:55	55	250	34.79	15000	5.91	0.211	17.88	1.19	11.3	-28.5	Clear	Moderate
12:00	60	250	34.79	16250	5.92	0.21	15.25	1.14	11.3	-29	Clear	Moderate
12:05	65	250	34.79	17500	5.92	0.211	14.79	1.08	11.3	-29.6	Clear	Moderate
12:10	70	250	34.79	18750	5.92	0.212	13.6	1.04	11.3	-30.1	Clear	Moderate
12:15	75	250	34.79	20000	5.92	0.212	11.69	1.01	11.3	-30.6	Clear	Moderate
12:20	80	250	34.79	21250	5.92	0.212	12.31	0.97	11.3	-31.2	Clear	Moderate
12:26	86	250	34.79	22750	5.92	0.213	13.73	0.96	11.4	-31.5	Clear	Moderate
12:30	90	250	34.79	23750	5.92	0.213	14.77	0.94	11.4	-31.9	Clear	Moderate
12:35	95	250	34.79	25000	5.92	0.213	4.05	0.93	11.3	-32	Clear	Moderate
12:40	100	250	34.79	26250	5.92	0.213	4.51	0.91	11.3	-32.4	Clear	Moderate
12:45	105	250	34.79	27500	5.92	0.214	3.73	0.91	11.4	-32.8	Clear	Moderate

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-13	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	54.0 degrees F and Light Rain. The wind is blowing S/SW at 11.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-70.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	26.74	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	43.26	**Gallons in Well**	7.05
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	65	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:55	**Total Volume Purged (ml)**	26250	**Sample ID**	SHM-10-13-FAL22	**Sample Time**	15:45
Purge End Time	15:41	**Well Volumes Purged (total)**	0.98	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:00	0	250	26.75	1250	6.62	0.333	15.92	4.67	14.5	3.6	Orange	Slight
14:10	10	250	24.76	3750	6.48	0.327	20.88	2.19	13.8	25.8	Orange	Slight
14:15	15	250	24.76	5000	6.4	0.33	30.29	1.9	13.8	-0.6	Orange	Slight
14:20	20	250	24.75	6250	6.36	0.342	27.37	1.73	13.8	-39.4	Orange	Slight
14:25	25	250	24.75	7500	6.36	0.366	39.25	1.67	13.9	-60.5	Yellow	Slight
14:30	30	250	24.76	8750	6.38	0.393	21.7	1.53	13.8	-74	Yellow	Slight
14:35	35	250	24.75	10000	6.39	0.41	27.72	1.48	13.8	-81.9	--	--
14:41	41	250	24.76	11500	6.39	0.419	25.39	1.43	13.9	-84.9	Yellow	Slight
14:45	45	250	24.76	12500	6.39	0.422	20.61	1.41	14	-85.8	--	--
14:50	50	250	24.76	13750	6.38	0.431	33.55	1.36	13.9	-86.6	Yellow	Slight
14:55	55	250	24.75	15000	6.38	0.435	29.7	1.36	13.9	-87.1	--	--
15:01	61	250	24.75	16500	6.37	0.441	23.66	1.31	13.8	-88	Yellow	Slight
15:05	65	250	24.75	18000	6.37	0.446	24.19	1.29	13.8	-88.6	--	--
15:10	70	250	24.75	18750	6.38	0.447	21.11	1.27	13.7	-88.8	Yellow	Slight
15:15	75	250	24.76	20000	6.38	0.447	20.42	1.25	13.6	-88.7	Yellow	Slight
15:21	81	250	24.76	21500	6.38	0.447	17.09	1.26	13.6	-88.5	--	--
15:26	86	250	24.75	22750	6.38	0.448	11.57	1.23	13.5	-88.6	--	--
15:30	90	250	24.76	23750	6.38	0.449	6.26	1.23	13.6	-88.7	--	--
15:35	95	250	24.75	25000	6.38	0.449	6.59	1.23	13.6	-88.6	--	--
15:40	100	250	24.75	26250	6.38	0.448	6.51	1.21	13.6	-88.4	Yellow	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Comments: None

Well Information

Well Labeled Properly:	yes
Is Well in Good Condition?	yes
Well Inspection Comments:	

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-14	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	55.0 degrees F and Clear. The wind is blowing W at 11.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-80.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	21.11	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	58.89	**Gallons in Well**	9.59
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	70	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:30	**Total Volume Purged (ml)**	9200	**Sample ID**	SHM-10-14-FAL22	**Sample Time**	15:20
Purge End Time	15:16	**Well Volumes Purged (total)**	0.72	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:35	0	200	21.11	1000	6.31	0.293	2.88	4	12.9	-64.5	none	clear
14:40	5	200	21.12	2000	6.24	0.299	3.77	2.17	12.6	-59.3	--	--
14:46	11	200	21.11	3200	6.19	0.308	4.8	1.51	12.6	-57.7	--	--
14:50	15	200	21.12	4000	6.17	0.312	3.57	1.42	12.4	-57.1	--	--
14:55	20	200	21.12	5000	6.16	0.314	3.59	1.34	12.3	-56.7	--	--
15:00	25	200	21.11	6000	6.15	0.316	3.61	1.28	12.4	-56.1	--	--
15:05	30	200	21.11	7000	6.14	0.317	3.81	1.25	12.2	-55.9	--	--
15:10	35	200	21.12	8000	6.14	0.317	3.07	1.22	12.3	-55.8	--	--
15:16	41	200	21.11	9200	6.14	0.318	2.7	1.19	12.3	-56	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-10-15	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	It is Clear. The wind is blowing NW at 6.9 mph.37			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	45.0-55.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	25.28	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	29.72	**Gallons in Well**	4.84
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	50	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:00	**Total Volume Purged (ml)**	11000	**Sample ID**	SHM-10-15-FAL22	**Sample Time**	11:00
Purge End Time	10:55	**Well Volumes Purged (total)**	0.6	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:05	0	200	25.28	1000	6.39	0.239	43.36	6.06	13	-60.3	clear	none
10:10	5	200	25.3	2000	6.42	0.231	116.94	4.46	12.9	-36.2	--	--
10:15	10	200	25.32	3000	6.31	0.226	47.52	3.07	12.7	-27.8	--	--
10:20	15	200	25.3	4000	6.28	0.231	44.97	2.65	12.7	-32.7	--	--
10:25	20	200	25.3	5000	6.23	0.251	46.94	2.11	12.8	-48.7	--	--
10:30	25	200	25.3	6000	6.23	0.265	47.17	1.96	12.8	-56.3	--	--
10:35	30	200	25.3	7000	6.23	0.277	49.07	1.82	13.3	-60.1	--	--
10:40	35	200	25.3	8000	6.24	0.285	30.25	1.77	13.4	-60.4	--	--
10:45	40	200	25.3	9000	6.2	0.285	40.76	1.74	13.2	-60.1	--	--
10:51	46	200	25.31	10200	6.24	0.285	41.13	1.7	13.2	-59.8	--	--
10:55	50	200	25.3	11000	6.24	0.286	37.2	1.69	13.2	-59.06	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-10-16	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	57.9 degrees F and Cloudy. The wind is blowing SE at 4.7 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-85.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	9.03	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	75.97	**Gallons in Well**	12.38
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	80	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:53	**Total Volume Purged (ml)**	6760	**Sample ID**	SHM-10-16-FAL22	**Sample Time**	11:50
Purge End Time	11:46	**Well Volumes Purged (total)**	0.14	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:00	0	130	9.04	910	6.58	0.734	66	1.35	13.7	-138	Gray	Slight
11:05	5	130	9.03	1560	6.64	0.772	106.7	0.83	13.7	-161.5	Black	Slight
11:10	10	130	9.03	2210	6.66	0.738	95.7	0.78	13.6	-166	--	--
11:15	15	130	9.03	28600	6.63	0.712	90.2	0.79	13.5	-161.3	--	--
11:20	20	130	9.03	3510	6.61	0.694	45.9	0.76	13.2	-159.7	--	--
11:25	25	130	9.03	4160	6.59	0.67	33.9	0.74	13	-159.1	--	--
11:30	30	130	9.03	4810	6.58	0.66	30.3	0.72	13.3	-159.8	--	--
11:35	35	130	9.03	5460	6.57	0.652	15.1	0.71	13.4	-160.7	--	--
11:40	40	130	9.03	6110	6.56	0.64	15.4	0.7	13.1	-161.1	--	--
11:45	45	130	9.03	6760	6.56	0.638	16.1	0.68	13.1	-161.6	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-11-02	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid-upper 60s, occasional showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	39.0-49.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.1	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	46.00	**Gallons in Well**	29.90
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	44	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:14	**Total Volume Purged (gallons)**	1	**Sample ID**	SHM-11-02-FAL22	**Sample Time**	11:38
Purge End Time	11:38	**Well Volumes Purged (total)**	0.03	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	LaMotte 2020WE / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:17	0	200	23.5	0	7.31	0.49	12.4	1.48	12.9	163.3	Clear	No Odor
11:21	4	200	23.76	0.2	7.38	0.487	12.1	1.23	12.9	-181.9	Clear	No Odor
11:25	8	200	24.03	0.5	7.47	0.476	11.7	1.07	12.9	-196.4	Clear	No Odor
11:29	12	200	24.2	0.7	7.51	0.475	12.3	1.02	12.7	-202.8	Gray	No Odor
11:32	15	200	24.35	0.9	7.51	0.474	11.9	0.99	12.8	-203.9	Clear	No Odor
11:35	18	200	24.5	1	7.51	0.468	11.6	0.96	12.8	-207.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-11-06	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid-upper 60s, occasional showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-35.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.81	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	15.01	**Gallons in Well**	2.44
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	30	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:23	**Total Volume Purged (gallons)**	1.7	**Sample ID**	SHM-11-06-FAL22	**Sample Time**	13:00
Purge End Time	13:00	**Well Volumes Purged (total)**	0.70	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	LaMotte 2020WE / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:24	0	200	20.98	0	6.54	0.696	33.6	1.42	13	-66.6	Clear	No Odor
12:28	4	200	20.98	0.1	6.59	0.705	27.1	1.11	12.8	-67.8	Clear	No Odor
12:31	7	200	20.98	0.3	6.17	0.705	17.2	1.01	13	-69.7	Clear	No Odor
12:35	11	200	20.98	0.5	6.1	0.706	15.4	0.97	13	-71.1	Clear	No Odor
12:39	15	200	20.98	0.75	6.1	0.705	8.01	0.93	13.1	-72.1	Clear	No Odor
12:43	19	200	20.98	0.9	6.06	0.704	6.01	0.91	13	-72.7	Clear	No Odor
12:47	23	200	20.98	1.1	6.06	0.704	5.47	0.88	13.1	-73.2	Clear	No Odor
12:51	27	200	20.98	1.3	6.05	0.704	4.75	0.87	12.9	-73.6	Clear	No Odor
12:55	31	200	20.98	1.5	6.04	0.702	4.57	0.86	13	-74.3	Clear	No Odor
12:59	35	200	20.98	1.7	6.03	0.703	4.44	0.85	13	-74.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-01	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	66° Rain. Wind 3mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	39.0-49.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	3.94	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	45.06	**Gallons in Well**	7.34
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	44	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:13	**Total Volume Purged (ml)**	2200	**Sample ID**	SHM-13-01-FAL22	**Sample Time**	14:36
Purge End Time	14:36	**Well Volumes Purged (total)**	0.08	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:20	0	100	3.96	700	5.82	0.354	2.34	7.46	15.1	256.1	Clear	No Odor
14:25	5	100	3.96	1200	5.48	0.378	2.56	7.14	14.8	260.1	Clear	No Odor
14:30	10	100	3.96	1700	5.46	0.385	2.57	7	14.9	261.2	Clear	No Odor
14:35	15	100	3.96	2200	5.42	0.387	2.81	6.95	15	262.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-13-02	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62° Rain. Wind 1mph S.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-70.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.94	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	57.06	**Gallons in Well**	9.3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	65	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:45	**Total Volume Purged (ml)**	3000	**Sample ID**	SHM-13-02-FAL22	**Sample Time**	12:17
Purge End Time	12:16	**Well Volumes Purged (total)**	0.085	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:55	0	100	12.97	1000	6.11	0.373	7.42	7.94	14.9	176.1	Clear	No Odor
12:00	5	100	12.97	1500	5.73	0.375	2.85	4.36	14.6	181.7	Clear	No Odor
12:05	10	100	12.97	2000	5.64	0.375	2.72	3.17	14.8	186.3	Clear	No Odor
12:10	15	100	12.97	2500	5.59	0.375	2.51	3.11	14.8	191.4	Clear	No Odor
12:15	20	100	12.97	3000	5.59	0.375	2.38	2.99	14.9	194.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: Location on the house side of the hill rather than the river side.

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-13-03	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	52° Sunny. Wind 10mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	42.0-52.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	6.07	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	45.93	**Gallons in Well**	7.49
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	47	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:03	**Total Volume Purged (ml)**	4800	**Sample ID**	SHM-13-03-FAL22	**Sample Time**	12:37
Purge End Time	12:37	**Well Volumes Purged (total)**	0.17	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102598
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:10	0	150	6.08	1050	7.16	0.522	10.72	4.39	16	18.4	Clear	No Odor
12:15	5	150	6.08	1800	2.9	0.523	11.02	2.02	15.4	2.3	Clear	No Odor
12:20	10	150	6.08	2550	6.98	0.524	9.28	1.44	15.6	-4.3	Clear	No Odor
12:25	15	150	6.08	3300	7	0.525	14.6	1.15	15.7	-7.8	Clear	No Odor
12:30	20	150	6.08	4050	7.04	0.525	14.12	1.14	15.5	-9.8	Clear	No Odor
12:35	25	150	6.08	4800	7.05	0.525	15.3	1.09	15.6	-11.5	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-04	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-30.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.3	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	9.70	**Gallons in Well**	1.58
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	25	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:20	**Total Volume Purged (gallons)**	1	**Sample ID**	SHM-13-04-FAL22	**Sample Time**	13:43
Purge End Time	13:43	**Well Volumes Purged (total)**	0.63	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:21	0	200	20.33	0	7.22	1.882	99.2	7.2	13.9	96.6	Reddish Brown	No Odor
13:24	3	200	20.34	0.1	6	1.893	89	7.06	13.8	113.4	Reddish Brown	No Odor
13:27	6	200	20.34	0.25	5.95	1.891	90.8	7.05	13.8	122.8	Reddish Brown	No Odor
13:31	10	200	20.34	0.5	5.94	1.884	85.2	7.01	13.9	131	Reddish Brown	No Odor
13:35	14	200	20.34	0.75	5.94	1.859	82.5	6.88	13.9	137.8	Reddish Brown	No Odor
13:39	18	200	20.34	0.8	5.93	1.843	71.7	6.72	13.8	140.1	Reddish Brown	No Odor
13:42	21	200	20.34	1	5.94	1.815	71.7	6.68	13.8	141.7	Reddish Brown	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: High turbidity but able to sample

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-05	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-85.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	17.8	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	68.12	**Gallons in Well**	11.07
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	80	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:52	**Total Volume Purged (gallons)**	1.5	**Sample ID**	SHM-13-05-FAL22	**Sample Time**	15:25
Purge End Time	15:24	**Well Volumes Purged (total)**	0.14	**Replicate / Code No.**	MS/MSD / SHM-13-05-FAL22	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:54	0	200	17.91	0	6.12	0.809	26.7	6	17.5	33	Clear	Slight
14:58	4	200	17.92	0.25	7.16	0.747	19.9	1.63	14.3	-92.5	Clear	No Odor
15:02	8	200	17.92	0.5	7.15	0.773	7.98	1.16	14.4	-110.6	Clear	No Odor
15:06	12	200	17.92	0.7	7.13	0.743	3.16	1.06	14.4	-116.7	Clear	No Odor
15:10	16	200	1.93	0.8	6.99	0.697	1.17	1.01	14.3	-108.8	Clear	No Odor
15:14	20	200	17.93	1	6.92	0.7	1.33	0.98	14.4	-102.7	Clear	No Odor
15:17	23	200	17.93	1.1	6.84	0.726	1.25	0.95	14.6	-91.6	Clear	No Odor
15:20	26	200	17.93	1.3	6.84	0.735	1.25	0.94	14.6	-88.6	Clear	No Odor
15:23	29	200	17.93	1.5	6.81	0.742	1.05	0.92	14.8	-85.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: MS/MDS collected

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-06	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	36.0-46.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.32	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	26.53	**Gallons in Well**	4.31
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	41	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:12	**Total Volume Purged (gallons)**	1.1	**Sample ID**	SHM-13-06-FAL22	**Sample Time**	12:37
Purge End Time	12:37	**Well Volumes Purged (total)**	0.26	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:14	0	200	18.34	0	6.76	0.235	37.6	1.46	13.6	-60.7	Clear	No Odor
12:18	4	200	18.34	0.2	6.93	0.231	26	1.15	13.4	-90.1	Clear	No Odor
12:22	8	200	18.34	0.5	6.97	0.236	22.1	1.05	13.4	-101	Clear	No Odor
12:26	12	200	18.34	0.5	6.97	0.239	19.4	0.98	13.4	-107.1	Clear	No Odor
12:30	16	200	18.34	0.8	6.96	0.24	16.5	0.94	13.4	-110.9	Clear	No Odor
12:33	19	200	18.34	1	6.96	0.242	16.6	0.93	13.4	-112.9	Clear	No Odor
12:36	22	200	18.34	1.1	6.97	0.236	17.5	0.95	13.4	-115.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-07	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	27.0-37.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	19.88	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	15.37	**Gallons in Well**	2.50
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	32	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:53	**Total Volume Purged (gallons)**	1.8	**Sample ID**	SHM-13-07-FAL22	**Sample Time**	11:32
Purge End Time	11:32	**Well Volumes Purged (total)**	0.72	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19k02593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:55	0	200	19.9	0	6.45	0.452	40.7	2.88	14	3.9	Yellow	No Odor
10:59	4	200	19.9	0.25	6.31	0.455	42.7	1.86	14	0.1	Clear	No Odor
11:03	8	200	19.9	0.5	6.37	0.46	32.5	1.32	13.9	-17.7	Clear	No Odor
11:07	12	200	19.9	0.7	6.43	0.462	23.8	1.09	13.9	-32	Clear	No Odor
11:11	16	200	19.9	0.8	6.48	0.46	17.5	1.01	13.9	-42.8	Clear	No Odor
11:14	19	200	19.9	0.9	6.52	0.457	17.5	0.98	13.8	-48	Clear	No Odor
11:18	23	200	19.9	1.1	6.54	0.454	13.6	0.96	13.8	-53	Clear	No Odor
11:21	26	200	19.9	1.2	6.56	0.452	12.7	0.93	13.8	-56.6	Clear	No Odor
11:24	29	200	19.9	1.5	6.56	0.45	11.3	0.92	13.9	-59.2	Clear	No Odor
11:27	32	200	19.9	1.5	6.58	0.447	10.81	0.92	13.8	-61.8	Clear	No Odor
11:30	35	200	19.9	1.7	6.58	0.445	11.1	0.92	13.8	-63.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-08	**Date**	2022-10-13	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	55.0-65.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	21.54	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	42.96	**Gallons in Well**	6.98
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:23	**Total Volume Purged (gallons)**	1.75	**Sample ID**	SHM-13-08-FAL22	**Sample Time**	10:00
Purge End Time	10:00	**Well Volumes Purged (total)**	0.25	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18k102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:27	0	200	21.51	0.125	6.18	0.347	4.18	4.39	15.2	29.8	Clear	No Odor
09:30	3	200	21.52	0.25	6.72	0.345	2.05	1.13	14.2	-64.3	Clear	No Odor
09:34	7	200	21.54	0.4	6.74	0.351	1.53	1.05	14	-86.1	Clear	No Odor
09:38	11	200	21.54	0.6	6.78	0.371	1.74	1	13.9	-103.9	Clear	No Odor
09:42	15	200	21.54	0.75	6.78	0.401	1.87	0.96	13.8	-112.6	Clear	No Odor
09:46	19	200	21.54	1	6.76	0.431	3.77	0.94	13.8	-116.4	Clear	No Odor
09:51	24	200	21.54	1.2	6.76	0.449	4	0.91	13.9	-119.5	Clear	No Odor
09:54	27	200	21.54	1.5	6.76	0.453	3.9	0.91	13.8	-120.6	Clear	No Odor
09:58	31	200	21.54	1.6	6.76	0.455	4.06	0.9	13.8	-121.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-13-14D	**Date**	2022-11-02	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	66° Sunny. Wind 8mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	45.0-55.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	4.05	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	50.95	**Gallons in Well**	8.3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	50	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:45	**Total Volume Purged (ml)**	6250	**Sample ID**	SHM-13-14D	**Sample Time**	12:13
Purge End Time	12:12	**Well Volumes Purged (total)**	0.2	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:50	0	250	4.05	1250	6.32	0.211	9.63	1.68	13.7	219.7	Clear	No Odor
11:55	5	250	4.05	2500	6.36	0.21	5.75	1.12	13.5	204.1	Clear	No Odor
12:05	15	250	4.05	5000	6.34	0.209	5.7	1.03	13.6	206.3	Clear	No Odor
12:10	20	250	4.05	6250	6.35	0.209	5.56	1.01	13.6	202.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-13-14S	**Date**	2022-11-02	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	59° Sunny. Wind 7mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	5.0-15.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	4.36	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	10.64	**Gallons in Well**	1.73
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	10	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:47	**Total Volume Purged (ml)**	8250	**Sample ID**	SHM-13-14S-FAL22	**Sample Time**	11:21
Purge End Time	11:20	**Well Volumes Purged (total)**	1.26	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:55	0	250	4.34	2000	5.86	0.386	14.85	2.14	13.5	170.8	Clear	No Odor
11:00	5	250	4.34	3250	5.76	0.375	13.15	1.84	13.7	177.7	Clear	No Odor
11:05	10	250	4.34	4500	5.71	0.373	10.45	1.82	14.1	183.8	Clear	No Odor
11:10	15	250	4.34	5750	5.72	0.374	9.35	1.88	14.3	188.9	Clear	No Odor
11:15	20	250	4.34	7000	5.7	0.374	8.96	1.9	14.5	193	Clear	No Odor
11:20	25	250	4.34	8250	5.7	0.374	8.49	1.94	14.7	197	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-13-15	**Date**	2022-10-31	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	66° Mostly Sunny. Wind 9mph NE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	4.39	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	55.61	**Gallons in Well**	9.06
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:28	**Total Volume Purged (ml)**	8000	**Sample ID**	SHM-13-15-FAL22	**Sample Time**	14:01
Purge End Time	14:00	**Well Volumes Purged (total)**	0.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:35	0	250	3.49	1750	6.54	0.743	13.5	1.96	15.1	70.8	Clear	No Odor
13:40	5	250	3.49	3000	6.49	0.595	13.65	1.47	15	33.2	Clear	No Odor
13:45	10	250	3.49	4250	6.52	0.734	13.62	1.27	14.5	25	Clear	No Odor
13:50	15	250	3.49	5500	6.58	0.733	13.88	1.12	14.4	21.9	Clear	No Odor
13:55	20	250	3.49	6750	6.61	0.729	13.62	1.11	14.2	20.2	Clear	No Odor
14:00	25	250	3.49	8000	6.64	0.727	13.05	1.03	14.2	19.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-93-10D	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62° Sunny. Wind 7mph E.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	46.0-56.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	30.6	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	25.40	**Gallons in Well**	16.61
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	51	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:22	**Total Volume Purged (ml)**	5700	**Sample ID**	SHM-93-10D	**Sample Time**	14:02
Purge End Time	14:02	**Well Volumes Purged (total)**	0.09	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:40	0	150	30.57	2700	10.54	0.232	31.16	3.91	15	104.1	Clear	No Odor
13:45	5	150	30.57	3450	11.22	0.292	47.85	2.46	14.9	95.7	Clear	No Odor
13:50	10	150	30.57	4200	11.19	0.285	46.03	1.8	14.9	90.3	Clear	No Odor
13:55	15	150	30.57	4950	11.2	0.283	44.14	1.76	15	85.4	Clear	No Odor
14:00	20	150	30.57	5700	11.2	0.288	41.76	1.77	15.1	81.6	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-93-18B	**Date**	2022-11-03	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, sunny			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	78.5-88.5	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	19.1	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	69.40	**Gallons in Well**	45.39
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	83.5	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:10	**Total Volume Purged (ml)**	20200	**Sample ID**	SHM-93-18B-FAL22	**Sample Time**	12:55
Purge End Time	12:51	**Well Volumes Purged (total)**	0.12	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:25	0	200	19.11	3000	6.32	0.503	103.41	5.5	15.7	178.2	Clear	No Odor
11:30	5	200	19.11	4000	6.13	0.546	79.36	2.48	15.5	170.5	Clear	No Odor
11:35	10	200	19.11	5000	6.14	0.548	74.05	1.97	16	163.9	--	--
11:41	16	200	19.11	6200	6.14	0.55	20.61	1.79	16.1	161.6	Clear	No Odor
11:45	20	200	19.12	7000	6.14	0.542	21.37	1.62	15.6	159.7	--	--
11:50	25	200	19.12	8000	6.14	0.546	16.14	1.54	15.9	157.2	Clear	No Odor
11:55	30	200	19.12	9000	6.14	0.554	12.44	1.48	16.5	153.4	--	--
12:00	35	200	19.12	10000	6.15	0.555	13.23	1.4	16.6	150.5	--	--
12:06	41	200	19.12	11200	6.14	0.561	6.97	1.38	16.9	147.6	--	--
12:10	45	200	19.12	12000	6.15	0.561	8.95	1.37	16.9	145.9	--	--
12:15	50	200	19.11	13000	6.15	0.562	10.02	1.35	17	144.1	--	--
12:20	55	200	19.11	14000	6.15	0.564	8.02	1.3	17.2	141.9	--	--
12:25	60	200	19.11	15000	6.14	0.567	5.16	1.33	17.3	140.2	--	--
12:30	65	200	19.11	16000	6.14	0.569	6.07	1.26	17.3	139.4	--	--
12:35	70	200	19.11	17000	6.15	0.569	5.03	1.24	17.3	138.6	--	--
12:40	75	200	19.11	18000	6.14	0.569	2.97	1.22	17.4	139.4	--	--
12:45	80	200	19.11	19000	6.14	0.57	1.16	1.23	17.4	139.4	--	--
12:51	86	200	19.11	20200	6.14	0.571	3.88	1.21	17.5	141.1	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-93-22B	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	62.1 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	82.0-92.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	8.66	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	83.56	**Gallons in Well**	54.31
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	87	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:54	**Total Volume Purged (ml)**	5040	**Sample ID**	SHM-93-22B-FAL22	**Sample Time**	13:35
Purge End Time	13:30	**Well Volumes Purged (total)**	0.02	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:00	0	140	8.66	840	6.45	0.524	9.5	1.01	11	-10.6	Clear	Slight
13:05	5	140	8.66	1540	6.39	0.516	11.7	0.79	11	-10.9	--	--
13:10	10	140	8.66	2240	6.39	0.513	12.4	0.68	10.9	-11.7	--	--
13:15	15	140	8.66	2940	6.38	0.512	11.2	0.66	10.8	-12	--	--
13:20	20	140	8.66	3640	6.38	0.51	9.54	0.64	10.8	-12.5	--	--
13:25	25	140	8.66	4340	6.38	0.509	10.1	0.62	10.8	-13.4	--	--
13:30	30	140	8.66	5040	6.38	0.509	9.3	0.62	10.9	-13.6	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-93-22C	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	62.1 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	124.0-134.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	10.58	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	126.43	**Gallons in Well**	82.18
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	129	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:26	**Total Volume Purged (ml)**	17784	**Sample ID**	SHM-93-22C-FAL22	**Sample Time**	11:30
Purge End Time	11:24	**Well Volumes Purged (total)**	0.06	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:30	0	152	10.86	608	7.5	0.465	145.7	3.19	10.9	-113.2	Black	No Odor
09:40	10	152	11.09	2128	7.44	0.593	142.1	1.56	11	-170	--	--
09:45	15	152	11.29	2888	7.51	0.581	42.7	1	11.2	-180	--	--
09:50	20	152	11.47	3648	7.53	0.575	28.6	0.92	11.2	-182.6	--	--
09:55	25	152	11.64	4408	7.54	0.569	21.9	0.89	11.3	-181.2	--	--
10:00	30	152	11.82	5168	7.56	0.561	11.5	0.86	11.2	-180.4	--	--
10:05	35	152	12	5928	7.57	0.552	13.1	0.85	11.3	-179.2	--	--
10:10	40	152	12.17	6688	7.58	0.547	9.7	0.84	11.3	-176.3	--	--
10:15	45	152	12.33	7448	7.58	0.54	7.3	0.83	11.4	-173.7	--	--
10:20	50	152	12.5	8208	7.6	0.533	7.9	0.83	11.5	-170.5	--	--
10:25	55	152	12.72	8968	7.61	0.517	5.7	0.8	11	-166.5	--	--
10:30	60	152	12.87	9728	7.61	0.51	4.9	0.8	10.9	-163.8	--	--
10:35	65	152	12.14	10488	7.6	0.496	4.9	0.8	10.9	-156.6	--	--
10:40	70	152	13.34	11248	7.59	0.486	4.4	0.82	11	-147.5	--	--
10:44	74	152	13.48	11856	7.59	0.48	4.1	0.85	11.1	-140.9	--	--
10:48	78	152	13.64	12464	7.58	0.471	3.8	0.89	11.1	-131	--	--
10:52	82	152	13.81	13072	7.56	0.456	3.7	0.99	11.2	-119.7	--	--
10:56	86	152	13.95	13680	7.55	0.446	3.5	1.13	11.2	-107.3	--	--
11:00	90	152	14.11	14288	7.53	0.438	3.5	1.26	11.1	-95.5	--	--
11:04	94	152	14.28	14896	7.52	0.427	3.4	1.41	11.1	-83.3	--	--
11:08	98	152	14.45	15504	7.5	0.419	3.2	1.64	11.1	-70.7	--	--
11:11	101	152	14.6	15960	7.5	0.416	3.1	1.74	11.2	-63.8	--	--
11:14	104	152	14.72	16416	7.49	0.415	3	1.85	11.2	-56.7	--	--
11:17	107	152	14.84	16872	7.48	0.412	3.1	1.91	11.1	-50.2	--	--
11:20	110	152	14.96	17328	7.48	0.412	2.8	1.94	11.3	-45.9	--	--
11:23	113	152	15.05	17784	7.48	0.414	2.8	1.98	11.4	-42.1	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

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Groundwater Sampling Form

Comments: None

Well Information

Well Labeled Properly:	yes
Is Well in Good Condition?	yes
Well Inspection Comments:	

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

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Groundwater Sampling Form

Well ID	SHM-93-24A	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid-upper 60s, occasional showers			**Field Technician**		Michael Spaulding	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	13.0-23.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.71	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	7.94	**Gallons in Well**	5.16
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	21	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:33	**Total Volume Purged (gallons)**	0.9	**Sample ID**	SHM-93-24A-FAL22	**Sample Time**	09:55
Purge End Time	09:55	**Well Volumes Purged (total)**	0.17	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	LaMotte 2020WE / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (gal)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:36	0	200	16.73	0	5.42	0.786	1.38	8.39	13.3	204.9	Clear	No Odor
09:40	4	200	16.71	0.25	5.25	0.786	1.07	8.39	13.3	216.7	Clear	No Odor
09:44	8	200	16.73	0.5	5.27	0.806	0.52	8.45	13.3	223.3	Clear	No Odor
09:48	12	200	16.73	0.7	5.27	0.806	0.74	8.51	13.7	229.4	Clear	No Odor
09:52	16	200	16.73	0.9	5.26	0.806	0.38	8.53	13.4	233.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-96-5B	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Mid 50s, sunny/breezy			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	7.77	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	80.54	**Gallons in Well**	13.09
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:04	**Total Volume Purged (ml)**	8512	**Sample ID**	SHM-96-5B-FAL22	**Sample Time**	14:05
Purge End Time	14:00	**Well Volumes Purged (total)**	0.17	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:10	0	152	7.9	912	6.51	0.461	17	2.02	12.2	-154.5	Clear	No Odor
13:15	5	152	7.91	1672	6.45	0.482	11.99	1.4	12.4	-171.3	--	--
13:20	10	152	7.9	2432	6.45	0.487	7.41	1.18	12.3	-176.3	--	--
13:25	15	152	7.9	3192	6.45	0.49	11.1	1.02	12.4	-179.1	--	--
13:30	20	152	7.9	3952	6.45	0.491	14.6	0.92	12.3	-180.6	--	--
13:35	25	152	7.9	4712	6.46	0.491	16.4	0.84	12.3	-182.2	--	--
13:40	30	152	7.9	5472	6.46	0.489	15.6	0.8	12.2	-182.7	--	--
13:45	35	152	7.9	6232	6.45	0.492	14.6	0.74	12.3	-183.2	--	--
13:50	40	152	7.9	6992	6.46	0.49	10.4	0.72	12.2	-183.4	--	--
13:55	45	152	7.9	7752	6.46	0.492	10.22	0.7	12.4	-183.6	--	--
14:00	50	152	7.9	8512	6.46	0.492	10.33	0.69	12.3	-183.7	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-96-5C	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62.1 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	4.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	7.24	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.09	**Gallons in Well**	46.86
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:05	**Total Volume Purged (ml)**	4560	**Sample ID**	SHM-96-5C-FAL22	**Sample Time**	12:35
Purge End Time	12:35	**Well Volumes Purged (total)**	0.03	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:10	0	152	7.26	760	6.33	0.435	8.87	1.09	11.2	-169.1	Clear	Moderate
12:15	5	152	7.26	1520	6.27	0.435	6.62	0.86	11.2	-176.7	--	--
12:20	10	152	7.26	2280	6.25	0.428	3.59	0.75	11.1	-177.7	--	--
12:25	15	152	7.26	3040	6.24	0.426	2.25	0.69	11.1	-176.3	--	--
12:30	20	152	7.26	3800	6.23	0.425	1.55	0.67	11.1	-175.1	--	--
12:35	25	152	7.26	4560	6.23	0.425	1.25	0.65	11.1	-174.3	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-99-31A	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	4.0-14.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	4.42	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	10.79	**Gallons in Well**	1.75
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	10	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:39	**Total Volume Purged (ml)**	19832	**Sample ID**	SHM-99-31A-FAL22	**Sample Time**	10:55
Purge End Time	10:53	**Well Volumes Purged (total)**	2.99	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:45	0	148	4.44	888	5.51	0.331	0.77	1.2	13.4	167.7	Clear	Moderate
08:50	5	148	4.44	1628	5.39	0.329	1.02	0.9	13.2	155.7	--	--
08:55	10	148	4.44	2368	5.38	0.323	0.65	0.76	13.3	162.1	--	--
09:00	15	148	4.44	3108	5.39	0.324	0.61	0.71	13.2	174.6	--	--
09:05	20	148	4.44	3848	5.41	0.325	0.74	0.67	13.2	188.7	--	--
09:10	25	148	4.44	4588	5.42	0.326	0.97	0.63	13.2	200.9	--	--
09:15	30	148	4.44	5328	5.43	0.327	1.05	0.62	13.2	215	--	--
09:20	35	148	4.44	6068	5.43	0.326	1.41	0.6	13.2	228.1	--	--
09:25	40	148	4.44	6808	5.44	0.326	1.89	0.59	13.2	241.8	--	--
09:30	45	148	4.44	7548	5.44	0.325	2.89	0.58	13.2	254.7	--	--
09:35	50	148	4.44	8288	5.45	0.325	3.87	0.57	13.2	268.1	--	--
09:40	55	148	4.44	9028	5.45	0.323	4.98	0.56	13.1	279.9	--	--
09:45	60	148	4.44	9768	5.45	0.325	4.88	0.56	13.2	291.8	--	--
09:50	65	148	4.44	10508	5.46	0.324	4.55	0.55	13.2	301.9	--	--
09:55	70	148	4.44	11248	5.46	0.324	2.79	0.55	13.3	315.5	--	--
10:00	75	148	4.44	11988	5.46	0.325	3.11	0.54	13.3	327.4	--	--
10:05	80	148	4.44	12728	5.47	0.324	4.54	0.54	13.4	339.7	--	--
10:10	85	148	4.44	13468	5.48	0.324	1.97	0.53	13.4	351.6	--	--
10:15	90	148	4.44	14208	5.48	0.324	2.48	0.53	13.4	365.6	--	--
10:20	95	148	4.44	14948	5.49	0.324	1.99	0.53	13.4	376.6	--	--
10:25	100	148	4.44	15688	5.5	0.324	1.21	0.53	13.5	386.6	--	--
10:30	105	148	4.44	16428	5.5	0.325	2.72	0.52	13.6	396.8	--	--
10:35	110	148	4.44	17168	5.51	0.326	1.5	0.52	13.6	410.2	--	--
10:39	114	148	4.44	17760	5.51	0.326	1.19	0.52	13.7	417.1	--	--
10:43	118	148	4.44	18352	5.52	0.326	1.83	0.52	13.7	424.6	--	--
10:47	122	148	4.44	18944	5.52	0.324	2.68	0.52	13.6	434.2	--	--
10:50	125	148	4.44	19388	5.52	0.325	3.15	0.51	13.6	439	--	--
10:53	128	148	4.44	19832	5.52	0.325	3.18	0.51	13.7	443.7	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-99-31B	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	46.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	5.28	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	56.06	**Gallons in Well**	9.11
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:29	**Total Volume Purged (ml)**	6900	**Sample ID**	SHM-99-31B-FAL22	**Sample Time**	12:20
Purge End Time	12:16	**Well Volumes Purged (total)**	0.20	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:35	0	150	5.28	900	6.6	0.109	4.51	5.15	13.2	477.7	Clear	No Odor
11:40	5	150	5.28	1650	6.6	0.108	2.46	4.92	13.3	498.5	--	--
11:45	10	150	5.28	2400	6.61	0.108	2.01	4.84	13.1	513.9	--	--
11:50	15	150	5.28	3150	6.61	0.108	1.72	4.77	13.3	524	--	--
11:55	20	150	5.28	3900	6.62	0.109	1.29	4.73	13.5	531.9	--	--
12:00	25	150	5.28	4650	6.62	0.108	1	4.69	13.4	539.7	--	--
12:05	30	150	5.28	5400	6.61	0.108	1.16	4.66	13.3	546.2	--	--
12:10	35	150	5.28	6150	6.61	0.108	2.84	4.61	13.3	551.8	--	--
12:15	40	150	5.28	6900	6.61	0.109	2.29	4.58	13.6	556.2	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments: No plug because pvc is too high

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHM-99-31C	**Date**	2022-10-14	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	46.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	68.0-78.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	5.55	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	74.28	**Gallons in Well**	12.07
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:35	**Total Volume Purged (ml)**	5250	**Sample ID**	SHM-99-31C-FAL22	**Sample Time**	14:15
Purge End Time	14:11	**Well Volumes Purged (total)**	0.11	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:40	0	150	5.59	750	6.6	0.551	2.63	1.26	14.7	-57.7	Clear	Slight
13:45	5	150	5.59	1500	6.59	0.553	1.89	0.85	14.6	-78.4	--	--
13:50	10	150	5.59	2250	6.6	0.556	1.29	0.75	14.6	-87	--	--
13:55	15	150	5.59	3000	6.61	0.564	1.32	0.69	14.9	-91.3	--	--
14:00	20	150	5.59	3750	6.61	0.568	1.06	0.65	14.7	-92	--	--
14:05	25	150	5.59	4500	6.59	0.579	1.78	0.62	15	-89.5	--	--
14:10	30	150	5.59	5250	6.58	0.574	1.27	0.6	14.6	-87.9	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHM-99-32X	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	46.9 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	72.0-82.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	10.91	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.87	**Gallons in Well**	11.84
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	78	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:07	**Total Volume Purged (ml)**	4312	**Sample ID**	SHM-99-32X-FAL22	**Sample Time**	09:40
Purge End Time	09:36	**Well Volumes Purged (total)**	0.10	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:15	0	154	10.91	1232	6.81	0.374	6.35	1.05	12.5	-46.5	Clear	No Odor
09:20	5	154	10.91	2002	6.62	0.353	5.97	0.89	12.4	-90	--	--
09:25	10	154	10.91	2772	6.54	0.351	4.81	0.8	12.5	-99.6	--	--
09:30	15	154	10.91	3542	6.49	0.35	4.99	0.76	12.4	-103.1	--	--
09:35	20	154	10.91	4312	6.46	0.351	4.68	0.73	12.4	-104.8	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-01-36X	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	63° Fog. Wind 2mph SW.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	3.0-8.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	7.69	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	0.31	**Gallons in Well**	0.012
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	8	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:50	**Total Volume Purged (ml)**	2500	**Sample ID**	SHP-01-36X	**Sample Time**	13:17
Purge End Time	13:17	**Well Volumes Purged (total)**	51.9	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:56	0	100	7.71	600	6.08	0.482	31.7	2.38	15.2	97.1	Clear	No Odor
13:00	4	100	7.71	1000	5.99	0.454	19.56	1.68	15	85.2	Clear	No Odor
13:05	9	100	7.71	1500	5.93	0.434	9.15	1.43	15	78.9	Clear	No Odor
13:10	14	100	7.71	2000	5.88	0.427	9.12	1.32	15	76.5	Clear	No Odor
13:15	19	100	7.71	2500	5.85	0.424	9.02	1.29	15	74.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

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Groundwater Sampling Form

Well ID	SHP-01-37X	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	61° Rainy. Wind 1mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	1.0-6.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	5.53	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	0.47	**Gallons in Well**	0.019
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	6	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:30	**Total Volume Purged (ml)**	4000	**Sample ID**	SHP-01-37X-FAL22	**Sample Time**	10:12
Purge End Time	10:11	**Well Volumes Purged (total)**	54.8	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:35	0	100	5.61	500	6.65	0.926	16.2	3.1	15.1	206.4	Clear	No Odor
09:40	5	100	5.61	1000	7.12	0.811	12.11	2.14	14.8	136.3	Clear	No Odor
09:45	10	100	5.61	1500	6.46	0.673	7.5	2.72	14.9	39.5	Clear	No Odor
09:50	15	100	5.61	2000	6.21	0.538	6.73	2.75	14.9	38.7	Clear	No Odor
09:55	20	100	5.61	2500	6.08	0.469	4.03	2.83	15	44	Clear	No Odor
10:00	25	100	5.61	3000	5.96	0.436	3.17	2.88	14.9	47.2	Clear	No Odor
10:05	30	100	5.61	3500	5.98	0.431	3.12	2.9	14.9	50.2	Clear	No Odor
10:10	35	100	5.61	4000	5.94	0.429	2.87	2.92	14.8	52.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-01-38A	**Date**	2022-10-25	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	59° Fog and light rain. Wind 0mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	1.5-6.5	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	4.2	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	2.30	**Gallons in Well**	0.094
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	6	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:09	**Total Volume Purged (ml)**	4100	**Sample ID**	SHP-01-38A-FAL22	**Sample Time**	10:52
Purge End Time	10:51	**Well Volumes Purged (total)**	11.48	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:20	0	100	3.95	1100	5.6	0.378	21.22	4.07	15	38.2	Clear	No Odor
10:25	5	100	3.95	1600	5.52	0.347	11.48	2.48	14.7	25.2	Clear	No Odor
10:30	10	100	3.95	2100	5.47	0.335	7.57	1.54	14.7	21.5	Clear	No Odor
10:35	15	100	3.95	2600	5.46	0.328	8.67	1.33	14.8	19.5	Clear	No Odor
10:40	20	100	3.95	3100	5.46	0.321	10.67	1.3	14.9	18.3	Clear	No Odor
10:45	25	100	3.95	3600	5.46	0.315	10.46	1.28	14.9	17.7	Clear	No Odor
10:50	30	100	3.95	4100	5.46	0.311	10.3	1.27	15	17.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-06A	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, overcast/showers			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	81.0-86.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	29.74	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	56.26	**Gallons in Well**	5.18
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	82.5	**Purge Method**	Low-Flow	**Purging Equipment**	Mini-Bladder Pump
Purge Start Time	08:45	**Total Volume Purged (ml)**	8750	**Sample ID**	SHP-2016-06A-FAL22	**Sample Time**	10:00
Purge End Time	09:56	**Well Volumes Purged (total)**	0.45	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	125	30.3	2500	7.64	0.296	3.92	7.85	15.2	-69.1	--	--
09:10	5	125	31.05	3125	7.36	0.274	2.71	3.93	14.7	-108.4	--	--
09:16	11	125	31.54	3875	7.37	0.275	4.34	2.68	14.6	-120.8	--	--
09:21	16	125	32.05	4500	7.38	0.275	4.48	2.15	14.6	-128.2	--	--
09:25	20	125	33.58	5000	7.39	0.275	4.87	1.93	14.7	-132.1	--	--
09:30	25	125	33.83	5625	7.4	0.275	4.55	1.78	14.7	-135.4	--	--
09:45	40	125	33.83	7500	7.41	0.275	4.46	1.54	14.8	-140.1	--	--
09:50	45	125	33.96	8125	7.4	0.276	3.44	1.46	15	-141.6	--	--
09:55	50	125	34.07	8750	7.4	0.278	3.01	1.41	15.1	-142.2	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-06B	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	62.1 degrees F and Light Rain and Fog/Mist. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	102.0-112.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	23.86	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	88.14	**Gallons in Well**	8.11
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	107	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:40	**Total Volume Purged (ml)**	19000	**Sample ID**	SHP-2016.06B-FAL22	**Sample Time**	12:00
Purge End Time	11:56	**Well Volumes Purged (total)**	0.62	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:55	0	250	23.9	3750	7.87	0.192	14.07	7.13	14.8	-61.6	clear	slight
11:00	5	250	24.54	5000	7.83	0.184	15.99	5.63	14.3	-84.8	--	--
11:05	10	250	24.76	6750	7.8	0.182	14.3	2.87	14.4	-112.2	--	--
11:10	15	250	25.02	7500	7.8	0.181	15.57	2.36	14.3	-119.2	--	--
11:15	20	250	25.08	8750	7.8	0.18	17.77	2.04	14.1	-126.1	--	--
11:20	25	250	25.12	10000	7.79	0.18	19.03	1.82	14.1	-131.7	--	--
11:25	30	250	25.17	11250	7.79	0.18	20.85	1.7	14.1	-135.3	--	--
11:30	35	250	25.25	12250	7.79	0.18	22.91	1.61	14.2	-138.2	--	--
11:35	40	250	25.25	13750	7.79	0.18	25.15	1.55	14.2	-140.4	--	--
11:40	45	250	25.25	15000	7.79	0.181	30.2	1.46	14.2	-142.9	--	--
11:45	50	250	25.26	16250	7.79	0.181	3.84	1.39	14.3	-143.3	--	--
11:50	55	250	25.27	17500	7.79	0.181	4.25	1.37	14.3	-145.4	--	--
11:56	61	250	25.27	19000	7.79	0.181	4.73	1.45	14.3	-145.1	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-06C	**Date**	2022-10-26	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	Mid 60s, overcast/showers			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	123.0-133.0	**Casing Diameter (in)**	1.5	**Well Casing Material**	NA
Static Water Level (ft-bmp)	24.44	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	108.56	**Gallons in Well**	9.99
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	128	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:30	**Total Volume Purged (ml)**	12750	**Sample ID**	She-2016-06c-FAL22	**Sample Time**	13:25
Purge End Time	13:22	**Well Volumes Purged (total)**	0.34	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:10	0	250	24.36	10750	7.74	0.161	5.29	1.15	15.5	-160.6	Clear	Slight
13:15	5	250	24.36	11250	7.74	0.161	5.57	1.14	15.4	-161.2	--	--
13:21	11	250	24.36	12750	7.75	0.16	5.55	1.1	15.2	-162.6	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments:

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-07B	**Date**	2022-10-18	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	64.0 degrees F and Clear. The wind is blowing W/SW at 10.3 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-80.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	33.89	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	45.93	**Gallons in Well**	7.46
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	75	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:53	**Total Volume Purged (ml)**	9399	**Sample ID**	SHP-2016-7B-FAL22	**Sample Time**	14:30
Purge End Time	14:26	**Well Volumes Purged (total)**	0.33	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:00	0	117	33.65	819	7.27	0.305	262.27	2.62	13	235.4	Gray	No Odor
13:05	5	117	34.05	1404	7.27	0.306	337.08	2.37	12.9	63.2	--	--
13:10	10	117	34.35	1989	7.25	0.306	95.4	1.97	13	-38	--	--
13:16	16	117	35	2691	7.18	0.303	1077.7	1.28	12.5	-108.7	--	--
13:20	20	117	35.42	3159	7.19	0.305	1097.05	1.29	12.9	-125.6	--	--
13:25	25	96	35.38	3639	7.2	0.311	1218.43	1.27	13.7	-132.2	--	--
13:30	30	96	35.57	4119	7.2	0.311	1350.47	1.15	13.5	-137	--	--
13:35	35	96	36	4599	7.22	0.307	745.45	1.17	13.2	-138.3	--	--
13:40	40	96	36.36	5079	7.22	0.306	482.2	1.19	13	-131.9	--	--
13:45	45	96	36.75	5559	7.21	0.315	251.93	1.14	12.7	-123.2	--	--
13:50	50	96	37.02	6039	7.21	0.325	82.5	1.08	12.6	-118.8	--	--
13:55	55	96	37.28	6519	7.23	0.335	44.1	0.99	12.7	-118.9	--	--
14:00	60	96	37.49	6999	7.24	0.34	32.6	0.9	12.6	-123	--	--
14:05	65	96	37.71	7479	7.25	0.341	21.8	0.85	12.4	-130.8	--	--
14:10	70	96	37.96	7959	7.26	0.339	22.9	0.81	12.4	-138	--	--
14:15	75	96	38.18	8439	7.26	0.336	14	0.77	12.2	-143.2	--	--
14:20	80	96	38.29	8919	7.26	0.335	13	0.73	12.2	-146.9	--	--
14:25	85	96	38.55	9399	7.26	0.333	12.92	0.71	12.2	-150.1	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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ARCADIS a joint venture

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-1A	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Mid 60s, sunny			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	13.0-23.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.81	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	6.19	**Gallons in Well**	0.25
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	20	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:30	**Total Volume Purged (ml)**	6750	**Sample ID**	SHP-2016-01A-FAL22	**Sample Time**	09:20
Purge End Time	09:16	**Well Volumes Purged (total)**	7.02	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:40	0	150	16.83	1500	5.68	0.039	48.06	8.28	8.9	156.9	Clear	Slight
08:45	5	150	16.86	2250	5.66	0.038	17.64	7.5	9.3	166.5	Clear	Slight
08:51	11	150	16.84	3150	5.65	0.037	4.8	7.33	9.4	171.9	Clear	Slight
08:55	15	150	16.83	3750	5.65	0.037	3.54	7.19	9.4	175.3	Clear	Slight
09:00	20	150	16.83	4500	5.66	0.036	3.09	7.04	9.5	178.3	Clear	Slight
09:05	25	150	16.84	5250	5.67	0.036	2.46	6.91	9.7	180.1	Clear	No Odor
09:10	30	150	16.83	6000	5.67	0.036	2.07	6.87	9.8	181.7	Clear	Slight
09:15	35	150	16.83	6750	5.67	0.036	2.12	6.77	9.9	183.9	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-1B	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	Mid 60s, sunny			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	75.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	18.22	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	66.78	**Gallons in Well**	2.74
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	80	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:30	**Total Volume Purged (ml)**	15750	**Sample ID**	SHP-2016-1B-FAL22	**Sample Time**	11:20
Purge End Time	11:17	**Well Volumes Purged (total)**	1.52	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:50	0	150	18.28	3000	6.19	0.138	88.9	1.94	10.5	-43.2	Black	Slight
10:05	15	150	18.41	5250	6.24	0.142	45	1.57	11	-52.2	--	--
10:10	20	150	18.31	6000	6.26	0.14	42.84	1.53	11.2	-54.3	--	--
10:20	30	150	18.31	7500	6.24	0.151	33.12	1.45	11.6	-55.4	--	--
10:25	35	150	18.31	8250	6.26	0.149	43.81	1.43	11.6	-56.6	--	--
10:31	41	150	18.31	9150	6.27	0.15	35.51	1.38	11.8	-57.5	--	--
10:35	45	150	18.31	9750	6.25	0.159	41.84	1.36	12.1	-57.5	--	--
10:40	50	150	18.3	10500	6.27	0.156	53.43	1.33	12.2	-58.4	--	--
10:45	55	150	18.21	11250	6.27	0.158	110.42	1.31	12.2	-59.4	--	--
10:50	60	150	18.21	12000	6.26	0.167	118.98	1.29	12.7	-59.6	--	--
10:55	65	150	18.21	12750	6.29	0.161	174.86	1.28	12.8	-61.1	--	--
11:00	70	150	18.21	13500	6.28	0.163	10.1	1.26	12.9	-61.2	--	--
11:06	76	150	18.21	14400	6.27	0.164	4.46	1.25	13	-61.6	Black	Slight
11:10	80	150	18.21	15000	6.29	0.167	2.01	1.24	13.2	-62.6	Black	Slight
11:15	85	150	18.21	15750	6.29	0.166	1.92	1.23	13.3	-62.9	Black	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-2A	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.47	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	11.55	**Gallons in Well**	0.47
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	22	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:39	**Total Volume Purged (ml)**	12420	**Sample ID**	SHP-2016-2A-FAL22	**Sample Time**	13:15
Purge End Time	13:09	**Well Volumes Purged (total)**	6.98	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:45	0	138	15.57	828	7.42	0.106	2.3	1.93	10.3	-16.2	--	--
11:50	5	138	15.57	1518	7.39	0.106	1	1.76	10.2	12.1	--	--
11:55	10	138	15.57	2208	7.33	0.105	0.89	1.78	10.2	48.4	Clear	Slight
12:00	15	138	15.57	2898	7.27	0.104	0.83	1.84	10.3	87.5	--	--
12:05	20	138	15.57	3588	7.21	0.103	0.82	1.9	10.2	134.5	--	--
12:10	25	138	15.57	4278	7.14	0.101	0.69	2.01	10.2	187.1	--	--
12:15	30	138	15.57	4968	7.09	0.1	0.68	2.08	10.3	240.8	--	--
12:20	35	138	15.57	5658	7.03	0.099	0.7	2.16	10.2	295.1	--	--
12:25	40	138	15.57	6348	7	0.097	0.61	2.26	10.2	340.6	--	--
12:30	45	138	15.57	7038	6.98	0.097	0.62	2.35	10.3	386.1	--	--
12:35	50	138	15.57	7728	6.95	0.096	0.58	2.42	10.3	425	--	--
12:39	54	138	15.57	8280	6.93	0.095	0.55	2.51	10.3	445.8	--	--
12:43	58	138	15.57	8832	6.9	0.094	0.62	2.57	10.2	463.7	--	--
12:47	62	138	15.57	9384	6.89	0.094	0.57	2.63	10.3	478.2	--	--
12:51	66	138	15.57	9936	6.87	0.093	0.6	2.67	10.3	489.6	--	--
12:55	70	138	15.57	10488	6.86	0.092	0.64	2.72	10.2	499.7	--	--
12:59	74	138	15.57	11040	6.84	0.092	0.57	2.77	10.3	509.7	--	--
13:03	78	138	15.57	11592	6.84	0.092	0.58	2.81	10.2	518	--	--
13:06	81	138	15.57	12006	6.83	0.091	0.54	2.85	10.2	523	--	--
13:09	84	138	15.57	12420	6.82	0.091	0.57	2.86	10.2	526.8	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Information

Well Labeled Properly:	yes
Is Well in Good Condition?	yes
Well Inspection Comments:	

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-2B	**Date**	2022-10-20	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.45	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	68.41	**Gallons in Well**	2.78
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	83	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:33	**Total Volume Purged (ml)**	4050	**Sample ID**	SHP-2016-2B-FAL22	**Sample Time**	14:05
Purge End Time	14:01	**Well Volumes Purged (total)**	0.38	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:40	0	150	15.51	1050	6.51	0.376	3.17	0.99	10.2	-39.2	Clear	Slight
13:45	5	150	15.49	1800	6.52	0.374	2.36	0.8	10.1	-49.7	--	--
13:50	10	150	15.5	2550	6.52	0.372	1.44	0.72	10.1	-54.6	--	--
13:55	15	150	15.5	3300	6.52	0.37	0.99	0.67	10.1	-57.8	--	--
14:00	20	150	15.5	4050	6.53	0.369	0.93	0.65	10.1	-60	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-3A	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	60.1 degrees F and Clear. The wind is blowing NW at 9.2 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	20.0-25.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.56	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	14.34	**Gallons in Well**	0.58
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	23	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:00	**Total Volume Purged (ml)**	3360	**Sample ID**	SHP-2016-3A-FAL22	**Sample Time**	13:25
Purge End Time	13:25	**Well Volumes Purged (total)**	1.53	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:06	0	140	13.4	840	6.41	0.241	4.7	1.15	9.6	-37.2	Clear	Moderate
13:11	5	140	13.39	1540	6.4	0.24	3.1	0.89	9.4	-36.7	--	--
13:16	10	140	13.39	2240	6.36	0.237	2.8	0.82	9.5	-32.9	--	--
13:20	14	140	13.39	2800	6.34	0.234	2.9	0.78	9.5	-29.8	--	--
13:24	18	140	13.39	3360	6.31	0.232	2.8	0.75	9.4	-27.2	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-3B	**Date**	2022-10-24	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	60.1 degrees F and Clear. The wind is blowing NW at 9.2 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-85.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.59	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	74.55	**Gallons in Well**	3.03
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	82	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:54	**Total Volume Purged (ml)**	3588	**Sample ID**	SHP-2016-3B-FAL22	**Sample Time**	14:20
Purge End Time	14:20	**Well Volumes Purged (total)**	0.31	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:00	0	138	12.6	828	6.31	0.407	4.6	1.17	9.6	-45	Clear	Slight
14:05	5	138	12.6	1518	6.33	0.417	4.5	0.87	9.7	-52.8	--	--
14:10	10	138	12.6	2208	6.34	0.422	4.3	0.79	9.6	-56.4	--	--
14:15	15	138	12.6	2898	6.34	0.43	4.9	0.75	9.6	-59.3	--	--
14:20	20	138	12.6	3588	6.34	0.433	4.5	0.72	9.6	-61.3	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-2016-4A	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	19.5	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	12.86	**Gallons in Well**	0.52
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:56	**Total Volume Purged (ml)**	7452	**Sample ID**	SHP-2016-4A-FAL22	**Sample Time**	10:55
Purge End Time	10:50	**Well Volumes Purged (total)**	3.79	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:00	0	138	19.79	552	6.06	0.115	11.2	3.65	10.3	122.6	Clear	No Odor
10:05	5	138	19.79	1242	5.95	0.116	4.12	3.12	10.1	141.9	--	--
10:10	10	138	19.79	1932	5.92	0.117	3.5	2.74	10	158.4	--	--
10:15	15	138	19.79	2622	5.9	0.117	2.8	2.65	9.9	174.5	--	--
10:20	20	138	19.79	3312	5.89	0.118	2.3	2.65	9.9	185	--	--
10:25	25	138	19.79	4002	5.88	0.118	2.2	2.67	9.9	192.1	--	--
10:30	30	138	19.79	4692	5.88	0.119	2.2	2.69	9.9	200.4	--	--
10:35	35	138	19.79	5382	5.87	0.119	2	2.71	9.9	205.9	--	--
10:40	40	138	19.79	6072	5.87	0.119	2	2.73	10	211.6	--	--
10:45	45	138	19.79	6762	5.86	0.119	2	2.77	10	216.6	--	--
10:50	50	138	19.79	7452	5.86	0.12	2	2.82	10	220	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-4B	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	85.0-90.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	19.27	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.83	**Gallons in Well**	2.96
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	87	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:34	**Total Volume Purged (ml)**	3380	**Sample ID**	SHP-2016-4B-FAL22	**Sample Time**	12:05
Purge End Time	12:00	**Well Volumes Purged (total)**	0.30	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:40	0	130	19.32	780	6.41	0.46	24.8	1.45	10.4	-69	Clear	Slight
11:45	5	130	19.28	1430	6.47	0.459	6.4	0.91	10.4	-81.2	--	--
11:50	10	130	19.3	2080	6.48	0.458	4.8	0.81	10.4	-85.3	--	--
11:55	15	130	19.31	2730	6.49	0.463	2.5	0.76	10.5	-88	--	--
12:00	20	130	19.29	3380	6.5	0.464	2.2	0.73	10.5	-89.4	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-5A	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	25.0-30.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.51	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	15.87	**Gallons in Well**	0.64
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	28	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:33	**Total Volume Purged (ml)**	4352	**Sample ID**	SHP-2016-5A-FAL22	**Sample Time**	13:10
Purge End Time	13:06	**Well Volumes Purged (total)**	1.80	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:40	0	136	16.58	952	6.45	0.217	7	0.97	11.4	-12	Clear	Moderate
12:45	5	136	16.57	1632	6.4	0.215	7.1	0.86	10.9	-13.5	--	--
12:50	10	136	16.58	2312	6.38	0.217	6.9	0.8	11.2	-16	--	--
12:55	15	136	16.58	2992	6.38	0.215	7.5	0.76	10.7	-18.1	--	--
13:00	20	136	16.58	3672	6.37	0.216	7.2	0.78	10.7	-19.9	--	--
13:05	25	136	16.58	4352	6.37	0.216	7.4	0.78	10.6	-21.3	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	SHP-2016-5B	**Date**	2022-10-21	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL / Site Wide	
Weather(°F)	55.9 degrees F and Clear. The wind is blowing NW at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	85.0-90.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.49	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	75.64	**Gallons in Well**	3.07
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	88	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:30	**Total Volume Purged (ml)**	5120	**Sample ID**	SHP-2016-5B-FAL22	**Sample Time**	14:15
Purge End Time	14:11	**Well Volumes Purged (total)**	0.44	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:35	0	128	16.51	640	6.45	0.495	68.8	0.96	11.3	-80.7	Gray	Slight
13:40	5	128	16.52	1280	6.49	0.503	39.3	0.79	11.3	-89.7	--	--
13:45	10	128	16.46	1920	6.5	0.506	20.4	0.71	11.4	-93.6	Clear	Slight
13:50	15	128	16.5	2560	6.51	0.508	12	0.66	11.4	-95.3	--	--
13:55	20	128	16.5	3200	6.52	0.503	6.75	0.64	11.1	-96.3	--	--
14:00	25	128	16.5	3840	6.51	0.502	4.2	0.63	11.3	-96.8	--	--
14:05	30	128	16.5	4480	6.52	0.504	3.5	0.62	11.3	-97.6	--	--
14:10	35	128	16.5	5120	6.52	0.503	3.2	0.61	11.3	-97.9	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	SHP-99-29X	**Date**	2022-10-19	**Event**		Fall 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		SHL	
Weather(°F)	52.0 degrees F and Clear. The wind is blowing W/SW at 10.3 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	19.0-29.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	24.74	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	4.26	**Gallons in Well**	0.69
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	27	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:25	**Total Volume Purged (ml)**	18000	**Sample ID**	SHP-99-29X-FAL22	**Sample Time**	13:00
Purge End Time	12:57	**Well Volumes Purged (total)**	6.84	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21C00564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:50	0	200	24.74	5000	5.72	0.122	80.73	2.44	13.5	18.1	--	--
11:55	5	200	24.74	6400	5.71	0.117	47.43	1.7	13.3	12.5	--	--
12:00	10	200	24.74	7000	5.71	0.117	37.15	1.48	13.5	8.2	--	--
12:05	15	200	24.74	8000	5.72	0.117	41.05	1.46	13.5	7.1	--	--
12:10	20	200	24.7	9000	5.73	0.116	44.87	1.41	13.5	5	--	--
12:15	25	200	24.74	10000	5.74	0.115	37.49	1.38	13.5	4.7	--	--
12:20	30	200	24.74	11000	5.75	0.115	23.08	1.34	13.6	3.6	--	--
12:25	35	200	24.74	12000	5.76	0.114	24.14	1.32	13.4	3.3	--	--
12:30	40	200	24.75	13000	5.76	0.113	18.42	1.29	13.5	3.9	--	--
12:35	45	200	24.75	14000	6.75	0.113	12.37	1.27	13.6	4	--	--
12:40	50	200	24.75	15000	5.75	0.112	9.65	1.24	13.5	3.9	--	--
12:45	55	200	2.75	16000	5.75	0.111	4.39	1.21	13.6	2.4	--	--
12:50	60	200	24.75	17000	5.75	0.111	4.87	1.19	13.7	2.1	--	--
12:55	65	200	24.75	18000	5.75	0.111	3.52	1.16	13.5	0.8	--	--

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon	250 mL Amber	1	H2SO4
Alkalinity	250 mL Plastic	1	HNO3
Chloride, Sulfate	125 mL Plastic	1	None
Dissolved Metals	250 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? no

Well Inspection Comments: Casing riser is cracked, obstructions at several pvc joints.

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/3/2022

SINGLE POINT CALIBRATION

LOT NUMBER	182827722
EXPIRATION DATE	06/03/2023

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.02	4	yes	08:29
pH	7.15	7	yes	08:33
pH	10.11	10	yes	08:37
Conductivity	1.478	1.413	yes	08:23
DO	103	99.9	yes	08:41

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:



SIGNED

5/3/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/4/2022

SINGLE POINT CALIBRATION

LOT NUMBER	21250049
EXPIRATION DATE	07/12/2022

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.96	4	yes	07:45
pH	7.09	7	yes	07:48
pH	9.83	10	yes	07:51
Conductivity	1.408	1.413	yes	07:52
DO	99.6	100	yes	07:57

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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5/4/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/4/2022

TURBIDITY CALIBRATION

CALIBRATION READING			
LOT NUMBER			
EXPIRATION DATE			
PRE-CALIBRATION	POST-CALIBRATION	TURBIDITY CALIBRATION WITHIN RANGE	TIME
0.19	0.01	yes	08:01

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.07	7	yes	08:01
pH	10.59	10.01	yes	07:53
Conductivity	1.491	1.413	yes	07:44
ORP	229.5	240.1	yes	07:51
DO	99.8	99.8	yes	07:37

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/4/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/5/2022

SINGLE POINT CALIBRATION

LOT NUMBER	21250049
EXPIRATION DATE	07/12/2022

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.91	4	yes	07:52
pH	7.02	7	yes	07:56
pH	9.84	10	yes	08:00
Conductivity	1.501	1.413	yes	08:05
DO	99.9	100	yes	08:14

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/5/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/5/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7	7	yes	08:25
pH	4.12	4.02	yes	08:25
Conductivity	1.116	1.413	yes	08:16
ORP	236.2	240.1	yes	08:01
DO	99.1	99.1	yes	08:08
Turbidity	0.55	0	yes	08:20

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/5/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/6/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.06	7	yes	07:58
pH	4.01	4	yes	08:01
pH	10.05	10.02	yes	08:03
Conductivity	0.908	1.433	yes	07:53
ORP	217.9	240.3	yes	07:51
DO	99.3	101.2	yes	07:48
Turbidity	2.08	0	yes	07:50

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/6/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/6/2022

SINGLE POINT CALIBRATION				
LOT NUMBER	21250049			
EXPIRATION DATE	07/12/2022			
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.94	4	yes	07:47
pH	7.12	7	yes	07:51
pH	9.96	10	yes	07:55
Conductivity	1.308	1.413	yes	08:00
DO	99	99.3	yes	08:16

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/6/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI Pro Plus"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/9/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.01	7.01	yes	07:55
pH	10.27	10	yes	07:57
pH	4.01	4.01	yes	07:59
ORP	235.4	239.1	yes	08:02
DO	100.2	100.2	yes	07:47
Turbidity	0.01	0	yes	07:49

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/9/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/9/2022

SINGLE POINT CALIBRATION

LOT NUMBER	21250049
EXPIRATION DATE	07/12/2022

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.9	4	yes	07:53
pH	7.09	7	yes	07:59
pH	10.02	10	yes	08:02
Conductivity	1.269	1.413	yes	08:08
DO	102.7	100.3	yes	08:16

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:



SIGNED

5/9/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/10/2022

SINGLE POINT CALIBRATION				
LOT NUMBER	21250049			
EXPIRATION DATE	07/12/2022			
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.93	4	yes	07:40
pH	7.1	7	yes	07:46
pH	9.89	10	yes	07:49
Conductivity	1.52	1.413	yes	07:51
DO	100.2	100.3	yes	07:55

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/10/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI Pro Plus"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/10/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.02	7	yes	07:45
pH	4.11	4	yes	07:48
pH	10.01	10.01	yes	07:51
Conductivity	1.444	1.413	yes	07:55
DO	100.4	100.1	yes	07:42
Turbidity	6.41	0	yes	07:59

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

Cleaned turbidity probe

SIGNED

5/10/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI Pro Plus","YSI ProDSS"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/11/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7	7	yes	07:39
pH	4.02	4	yes	07:42
pH	9.86	9.98	yes	07:45
Conductivity	1.253	1.413	yes	07:51
ORP	227.7	240	yes	07:36
DO	100.7	100.6	yes	07:34
Turbidity	4.56	0	yes	07:56

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/11/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/11/2022

SINGLE POINT CALIBRATION

LOT NUMBER	21250049
EXPIRATION DATE	07/12/2022

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.05	4	yes	08:11
pH	7.09	7	yes	08:18
pH	9.9	10	yes	08:20
Conductivity	1.418	1.413	yes	08:24
DO	100.7	100.5	yes	08:29

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/11/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI Pro Plus"]
SERIAL NUMBER	19J103221
SAMPLER	Diane Champagne
DATE	5/12/2022

SINGLE POINT CALIBRATION

LOT NUMBER				
EXPIRATION DATE				
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.11	7	yes	07:35
pH	4.02	4	yes	07:35
pH	9.87	9.98	yes	07:31
Conductivity	1.654	1.413	yes	07:38
ORP	236.7	240.2	yes	07:45
DO	99.8	99.8	yes	07:52
Turbidity	2.39	0	yes	07:37

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/12/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/12/2022

SINGLE POINT CALIBRATION

LOT NUMBER	21250049
EXPIRATION DATE	07/12/2022

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.99	4	yes	07:57
pH	7.19	7	yes	08:03
pH	10.03	10	yes	08:07
Conductivity	1.477	1.413	yes	08:11
DO	100.3	100.4	yes	08:14

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

5/12/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/13/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.16	7	yes	07:47
pH	4.03	4	yes	07:44
Conductivity	1.444	1.413	yes	07:39
ORP	233.8	240.1	yes	07:56
DO	99	99.9	yes	07:22
Turbidity	2.36	2.24	no	07:54
Turbidity	1.23	0.07	yes	08:44

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

Had to clean iron staining off turbidity probe to calibrate, see second calibration after purchase of simple green and clr.

SIGNED

10/13/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/13/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.04	4	yes	08:01
pH	7.12	7	yes	08:10
pH	10.04	10	yes	08:15
Conductivity	1.482	1.413	yes	07:49
ORP	221.9	231	yes	07:56
DO	101	99.6	yes	07:52

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/13/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Michael Spaulding
DATE	10/13/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.99	7	yes	08:21
pH	3.74	4	yes	08:25
pH	9.63	10	yes	08:27
Conductivity	1574	1413	no	08:39
ORP	234	234	yes	08:34
DO	98.7	99.3	yes	08:20

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/13/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/14/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	10.1	10.01	yes	07:27
pH	7	7	yes	07:32
pH	4.14	4	yes	07:30
Conductivity	1.496	1.413	yes	07:39
ORP	255.2	240.1	yes	07:42
DO	99.8	99.9	yes	07:24
Turbidity	1.11	1	yes	07:41
Turbidity	0.81	0	yes	--

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/14/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/14/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.94	4	yes	07:37
pH	6.97	7	yes	07:45
pH	9.95	10	yes	07:49
Conductivity	1.392	1.413	yes	08:09
ORP	262.6	231	yes	08:04
DO	98.2	98.8	yes	08:11

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/14/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/17/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.37	7.05	yes	07:59
pH	4.21	4	yes	08:00
pH	10.3	10	yes	08:03
Conductivity	1.696	1.413	yes	08:10
ORP	216.7	240.2	yes	08:06
DO	98.6	98.8	yes	07:55
DO	1.27	0.14	yes	08:27
Turbidity	0.72	0	yes	07:56

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/17/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/17/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.02	4	yes	08:11
pH	7.05	7	yes	08:16
pH	10	10	yes	08:20
Conductivity	1.319	1.413	yes	07:54
ORP	254.6	231	yes	08:00
DO	98.7	98.5	yes	07:56

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/17/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/18/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.94	4	yes	07:38
pH	6.99	7	yes	07:45
pH	9.99	10	yes	07:50
Conductivity	1.415	1.413	yes	07:59
ORP	261.1	242.8	yes	07:54
DO	97.9	97.8	yes	07:58

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/18/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/18/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.03	7.05	yes	07:45
pH	4.14	4.01	yes	07:38
pH	9.9	10	yes	07:49
Conductivity	1.411	1.413	yes	07:52
ORP	245.6	240.3	yes	08:04
DO	99.1	99.2	yes	08:07
Turbidity	7.46	1	yes	08:00

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/18/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/18/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.06	7	yes	--
pH	9.94	10	yes	--
pH	4.05	4	yes	--
Conductivity	1.445	1.413	--	--
ORP	226.5	234	yes	--
DO	98.7	97.9	yes	--
Turbidity	0.8	0	--	--
Turbidity	19	10	--	--

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

Spencer P Gust — 10/18/2022

SIGNED — DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Melissa Miller
DATE	10/19/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7	7	yes	08:33
pH	9.91	10	yes	08:35
pH	3.86	4	yes	08:39
Conductivity	1.405	1.413	yes	08:26
ORP	233.8	234	yes	08:30
DO	98.8	98.4	yes	08:45
Turbidity	0.24	0	yes	08:47

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/19/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/19/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.12	7.05	yes	07:43
pH	9.98	10.01	yes	07:38
Conductivity	1.743	1.413	yes	07:33
ORP	241.1	240.3	yes	07:31
DO	97.8	99.9	yes	07:44
Turbidity	15.79	1	yes	07:33

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/19/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/19/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	10.02	10	yes	08:11
pH	4.19	4	yes	08:04
pH	6.98	7	yes	08:07
Conductivity	1.408	1.413	yes	07:55
ORP	328	242.6	no	07:57
DO	98.1	98.3	yes	07:53

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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10/19/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/20/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.05	7.05	yes	07:48
pH	4.14	4.01	yes	07:45
Conductivity	1.313	1.413	yes	07:59
ORP	225.9	240.2	yes	08:54
DO	99.3	99.4	yes	08:49
Turbidity	7.85	0.01	yes	07:34

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/20/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/20/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.99	4	yes	08:11
pH	6.97	7	yes	08:18
pH	9.9	10	yes	08:20
Conductivity	1.419	1.413	yes	08:32
ORP	66.3	243.2	no	08:26
DO	99.8	99	yes	08:09

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/20/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/20/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.92	7	yes	08:56
pH	9.78	10	yes	08:58
pH	3.85	4	yes	09:00
Conductivity	1.393	1.413	yes	08:53
ORP	235.9	234	yes	08:55
DO	99.1	99.2	yes	09:05
Turbidity	20	0	yes	09:16

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

20.0 and 0.63

SIGNED

10/20/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/21/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.58	7.05	yes	07:50
pH	4.57	4.03	yes	07:57
Conductivity	1.573	1.412	yes	07:32
ORP	243.9	240.3	yes	07:27
DO	97.5	98.2	yes	07:41
Turbidity	14.7	10	yes	07:47
Turbidity	0.03	0.02	yes	07:34

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/21/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/21/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.69	7	no	09:33
pH	10.54	10	no	09:37
pH	4.8	4	no	09:42
Conductivity	1.427	1.413	yes	09:28
ORP	237.6	234	yes	09:30
DO	100.7	99.8	yes	09:48
Turbidity	10.6	0	yes	09:50

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

New Ph solutions next week. 10.6 and 0.4

SIGNED

10/21/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/24/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.53	7.05	yes	07:48
pH	4.01	4.01	yes	08:01
pH	10.96	10	yes	08:07
Conductivity	1.392	1.413	yes	07:42
ORP	289.1	240.2	yes	07:59
DO	100.8	100.9	yes	07:35
Turbidity	0.53	0	yes	07:57
Turbidity	9.04	10	yes	07:52

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/24/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	10/24/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.03	4	yes	08:03
pH	7.06	7	yes	08:11
pH	10.03	10	yes	08:13
Conductivity	1.266	1.413	yes	08:17
ORP	240.4	243.2	yes	08:01
DO	95.8	100.1	yes	08:19

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/24/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	10/25/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.95	4	yes	08:17
pH	7.05	7	yes	08:24
pH	10	10	yes	08:27
Conductivity	1.432	1.413	yes	08:14
ORP	243.1	243.1	yes	08:11
DO	99.8	99.9	yes	08:09

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/25/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/24/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.67	7	no	08:20
pH	9.79	10	no	08:25
pH	3.66	4	no	08:29
Conductivity	1.386	1.413	yes	08:13
ORP	227.8	234	yes	08:16
DO	99.6	100.1	yes	08:32
Turbidity	15	0	yes	08:36

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

15 and 0.25



SIGNED

10/24/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/25/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.38	7	no	08:33
pH	10.69	10	no	08:36
pH	4.5	4	no	08:39
Conductivity	1.407	1.413	--	08:26
ORP	211.2	234	yes	08:30
DO	99.8	99.9	yes	08:43
Turbidity	0.5	0	--	08:43
Turbidity	12	10	--	08:43

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/25/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/26/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.05	7.05	yes	07:56
pH	4.12	4.01	yes	07:58
Conductivity	1.116	1.413	yes	07:48
ORP	245.5	240.2	yes	07:55
DO	99.8	99.8	yes	07:44
Turbidity	0.78	1.02	yes	07:40

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/26/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	10/26/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.06	4	yes	08:03
pH	7.03	7	yes	08:06
pH	9.97	10	yes	08:09
Conductivity	1.439	1.413	yes	07:59
ORP	240.5	241.2	yes	08:12
DO	99	98.9	yes	07:58

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/26/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/26/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.16	7	yes	08:31
pH	10.23	10	no	08:35
pH	4.09	4	yes	08:37
Conductivity	1.408	1.413	yes	08:22
ORP	217.2	234	--	08:27
DO	99	98.9	yes	08:40
Turbidity	9	10	yes	08:40
Turbidity	0.3	0	yes	08:41

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/26/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/31/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.13	7.05	yes	07:53
pH	4.14	4.01	yes	07:54
pH	9.88	10.02	yes	07:59
Conductivity	1.496	1.413	yes	08:02
ORP	255.2	240.1	yes	07:47
DO	100	100.1	yes	08:04
Turbidity	17.14	10	yes	08:08

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/31/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	10/31/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.98	4	yes	08:06
pH	7.03	7	yes	08:11
pH	9.93	10	yes	08:16
Conductivity	1.439	1.413	yes	08:22
ORP	244.8	243.5	yes	08:20
DO	100.3	99.5	yes	08:01

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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10/31/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/31/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.32	7	no	10:17
pH	10.2	10	yes	10:18
pH	4.5	4	no	10:20
Conductivity	1.457	1.413	--	10:13
ORP	234	234	yes	10:16
DO	98.4	99.8	yes	10:24
Turbidity	0.23	0	--	10:24
Turbidity	11.5	10	yes	10:27

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/31/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	11/01/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.66	7	no	08:22
pH	9.74	10	no	08:24
pH	3.76	4	no	08:30
Conductivity	1.627	1.413	--	08:15
ORP	235.5	234	yes	08:18
DO	99.1	99.2	yes	08:34
Turbidity	0.5	0	--	08:35
Turbidity	11.2	10	--	08:38

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

11/1/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	11/03/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.11	7.05	yes	07:37
pH	4.03	4.02	yes	07:40
pH	9.99	10.01	yes	07:45
Conductivity	1.222	1.413	yes	08:07
ORP	257	240.1	yes	07:51
DO	100.6	100.5	yes	08:04
Turbidity	21.59	10	yes	07:58

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

11/3/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	11/03/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.06	7	yes	08:50
pH	9.98	10	yes	08:52
pH	4.2	4	yes	08:57
Conductivity	1.415	1.413	yes	08:39
ORP	234.4	231	yes	08:45
DO	101.8	100	yes	09:03
Turbidity	0.5	0	yes	09:03
Turbidity	17	10	yes	09:05

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

11/3/2022

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	11/04/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.96	7	yes	08:59
pH	10	10	yes	09:02
pH	3.99	4	yes	09:05
Conductivity	1.374	1.413	--	08:36
ORP	235.2	234	--	08:52
DO	98.6	100.4	--	09:08
Turbidity	0.3	0	--	09:09
Turbidity	16	10	--	09:12

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/4/2022

DATE

Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215070-1
Client Project/Site: Fort Devens SHL Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/5/2022 9:47:03 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215070-1	PZ-12-01-SPR22	Water	05/04/22 15:10	05/06/22 10:40
680-215070-2	SHL-4-SPR22	Water	05/03/22 14:30	05/06/22 10:40
680-215070-3	SHM-11-06-SPR22	Water	05/04/22 15:15	05/06/22 10:40

Job ID: 680-215070-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215070-1

Comments
No additional comments.

Receipt
The samples were received on 5/6/2022 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 3.3º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Client Sample ID: PZ-12-01-SPR22

Date Collected: 05/04/22 15:10
Date Received: 05/06/22 10:40

Lab Sample ID: 680-215070-1

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	84		0.50	0.50	0.20	mg/L		05/18/22 19:47	1
Sulfate	17	M	1.0	1.0	0.40	mg/L		05/18/22 19:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	64000		100	50	20	ug/L		05/14/22 23:02	1
Manganese	2500		10	5.0	1.3	ug/L		05/14/22 23:02	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	600		5.0	3.0	0.86	ug/L		05/10/22 17:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	170		5.0	5.0	2.2	mg/L		05/11/22 21:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	3.3		1.0	0.60	0.50	mg/L		05/19/22 08:48	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Client Sample ID: SHL-4-SPR22

Date Collected: 05/03/22 14:30
Date Received: 05/06/22 10:40

Lab Sample ID: 680-215070-2

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.98		0.50	0.50	0.20	mg/L		05/18/22 20:00	1
Sulfate	28		1.0	1.0	0.40	mg/L		05/18/22 20:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	6900		100	50	20	ug/L		05/14/22 22:59	1
Manganese	1400		10	5.0	1.3	ug/L		05/14/22 22:59	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	110		5.0	3.0	0.86	ug/L		05/10/22 17:18	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	73		5.0	5.0	2.2	mg/L		05/11/22 21:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.3		1.0	0.60	0.50	mg/L		05/19/22 09:12	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Client Sample ID: SHM-11-06-SPR22

Date Collected: 05/04/22 15:15
Date Received: 05/06/22 10:40

Lab Sample ID: 680-215070-3

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	60		0.50	0.50	0.20	mg/L		05/18/22 20:13	1
Sulfate	5.1	M	1.0	1.0	0.40	mg/L		05/18/22 20:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	78000		100	50	20	ug/L		05/14/22 23:05	1
Manganese	1900		10	5.0	1.3	ug/L		05/14/22 23:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	770		5.0	3.0	0.86	ug/L		05/10/22 17:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	210		5.0	5.0	2.2	mg/L		05/11/22 21:55	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.7		1.0	0.60	0.50	mg/L		05/19/22 10:27	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-721378/45
Matrix: Water
Analysis Batch: 721378

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/18/22 17:38	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/18/22 17:38	1

Lab Sample ID: LCS 680-721378/46
Matrix: Water
Analysis Batch: 721378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	9.11		mg/L		91	87 - 112

Lab Sample ID: LCSD 680-721378/47
Matrix: Water
Analysis Batch: 721378

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	87 - 111	0	15
Sulfate	10.0	9.14		mg/L		91	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720064/1-A
Matrix: Water
Analysis Batch: 720882

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720064

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/14/22 22:12	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/14/22 22:12	1

Lab Sample ID: LCS 680-720064/2-A
Matrix: Water
Analysis Batch: 720882

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5000		ug/L		100	87 - 115
Manganese	400	402		ug/L		100	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720066/1-A
Matrix: Water
Analysis Batch: 720193

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720066

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/10/22 16:48	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-720066/2-A
Matrix: Water
Analysis Batch: 720193

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720066

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	101		ug/L		101	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-720385/34
Matrix: Water
Analysis Batch: 720385

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		05/11/22 20:51	1

Lab Sample ID: LCS 680-720385/36
Matrix: Water
Analysis Batch: 720385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	235		mg/L		94	90 - 112

Lab Sample ID: LCSD 680-720385/61
Matrix: Water
Analysis Batch: 720385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	237		mg/L		95	90 - 112	1	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-721867/2
Matrix: Water
Analysis Batch: 721867

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/19/22 04:16	1

Lab Sample ID: LCS 680-721867/3
Matrix: Water
Analysis Batch: 721867

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	18.4		mg/L		92	80 - 120

Lab Sample ID: LCSD 680-721867/4
Matrix: Water
Analysis Batch: 721867

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	18.5		mg/L		93	80 - 120	1	20

HPLC/IC

Analysis Batch: 721378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Total/NA	Water	9056A	
680-215070-2	SHL-4-SPR22	Total/NA	Water	9056A	
680-215070-3	SHM-11-06-SPR22	Total/NA	Water	9056A	
MB 680-721378/45	Method Blank	Total/NA	Water	9056A	
LCS 680-721378/46	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721378/47	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 720064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Dissolved	Water	3005A	
680-215070-2	SHL-4-SPR22	Dissolved	Water	3005A	
680-215070-3	SHM-11-06-SPR22	Dissolved	Water	3005A	
MB 680-720064/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720064/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Dissolved	Water	3005A	
680-215070-2	SHL-4-SPR22	Dissolved	Water	3005A	
680-215070-3	SHM-11-06-SPR22	Dissolved	Water	3005A	
MB 680-720066/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720066/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 720193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Dissolved	Water	6020A	720066
680-215070-2	SHL-4-SPR22	Dissolved	Water	6020A	720066
680-215070-3	SHM-11-06-SPR22	Dissolved	Water	6020A	720066
MB 680-720066/1-A	Method Blank	Total Recoverable	Water	6020A	720066
LCS 680-720066/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720066

Analysis Batch: 720882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Dissolved	Water	6010C	720064
680-215070-2	SHL-4-SPR22	Dissolved	Water	6010C	720064
680-215070-3	SHM-11-06-SPR22	Dissolved	Water	6010C	720064
MB 680-720064/1-A	Method Blank	Total Recoverable	Water	6010C	720064
LCS 680-720064/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720064

General Chemistry

Analysis Batch: 720385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Total/NA	Water	2320B-2011	
680-215070-2	SHL-4-SPR22	Total/NA	Water	2320B-2011	
680-215070-3	SHM-11-06-SPR22	Total/NA	Water	2320B-2011	
MB 680-720385/34	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720385/36	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720385/61	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

General Chemistry

Analysis Batch: 721867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215070-1	PZ-12-01-SPR22	Dissolved	Water	9060A	
680-215070-2	SHL-4-SPR22	Dissolved	Water	9060A	
680-215070-3	SHM-11-06-SPR22	Dissolved	Water	9060A	
MB 680-721867/2	Method Blank	Dissolved	Water	9060A	
LCS 680-721867/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-721867/4	Lab Control Sample Dup	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Client Sample ID: PZ-12-01-SPR22

Lab Sample ID: 680-215070-1

Date Collected: 05/04/22 15:10

Matrix: Water

Date Received: 05/06/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721378	05/18/22 19:47	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720064	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/14/22 23:02	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720066	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6020A		1			720193	05/10/22 17:34	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720385	05/11/22 21:39	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721867	05/19/22 08:48	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-4-SPR22

Lab Sample ID: 680-215070-2

Date Collected: 05/03/22 14:30

Matrix: Water

Date Received: 05/06/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721378	05/18/22 20:00	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720064	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/14/22 22:59	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720066	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6020A		1			720193	05/10/22 17:18	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720385	05/11/22 21:46	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721867	05/19/22 09:12	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-11-06-SPR22

Lab Sample ID: 680-215070-3

Date Collected: 05/04/22 15:15

Matrix: Water

Date Received: 05/06/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721378	05/18/22 20:13	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720064	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/14/22 23:05	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720066	05/10/22 10:22	JE	TAL SAV
Dissolved	Analysis	6020A		1			720193	05/10/22 17:36	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Client Sample ID: SHM-11-06-SPR22

Date Collected: 05/04/22 15:15
Date Received: 05/06/22 10:40

Lab Sample ID: 680-215070-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			720385	05/11/22 21:55	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	721867	05/19/22 10:27	JU	TAL SAV
	Instrument ID: TOC7									

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215070-1
Project/Site: Fort Devens SHL Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL Spring 2022

Job ID: 680-215070-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

Boston COC # SHL_SPR22

#215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215070 Chain of Custody

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						**46**	**9**	**9**	**5**	**3**										
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	EPA-PZ-2012-1A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-1A	N1	23.70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-2A	N1	18.14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-2B	N1	73 16	78 16	1	
5	EPA-PZ-2012-3A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-3A	N1	19 09	24.09	1	
6	EPA-PZ-2012-3B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-5A	N1	17.95	22 95	1	
11	EPA-PZ-2012-5B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-6A	N1	24.19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-7A	N1	23.87	28.87	1	
15	EPA-PZ-2012-7B-SPR22	WG					X	X	X	X	X						EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG					X	X	X	X	X						EW-01	N1	60 00	85.00	1	
17	EW-04-SPR22	WG					X	X	X	X	X						EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG	5-4-22	1510	DC		X	X	X	X	X						PZ-12-01	N1	24.00	34.00	1	

Relinquished by: [signature]
Date 5/4/22
Time 4.45

Received by: [signature] 5/4/22 1645
Date
Time

3.9-3.3 3.9-2.8 *

5/6 1040

7/5/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

Boston #215

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4 pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
							46	9	9	5	3											
	Sample ID	Matrix	Date	Time	Samp Init.																	
19	PZ-12-02-SPR22	WG				X	X	X	X	X							PZ-12-02	N1	24.00	34.00	1	
20	PZ-12-03-SPR22	WG				X	X	X	X	X							PZ-12-03	N1	24.00	34.00	1	
21	PZ-12-04-SPR22	WG				X	X	X	X	X							PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG				X	X	X	X	X							PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X							PZ-12-06	N1	25 00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X							PZ-12-06	FD1	25 00	35.00	1	
25	PZ-12-07-SPR22	WG				X	X	X	X	X							PZ-12-07	N1	20 00	30 00	1	
26	PZ-12-08-SPR22	WG				X	X	X	X	X							PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-09-SPR22	WG				X	X	X	X	X							PZ-12-09	N1	20.00	30 00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X							PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X							PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X							PZ-12-10	SD1	20 00	30 00	1	
31	SHL-10-SPR22	WG				X	X	X	X	X							SHL-10	N1	24.00	39 00	1	
32	SHL-11-SPR22	WG				X	X	X	X	X							SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG				X	X	X	X	X							SHL-19	N1	20 00	30 00	1	
34	SHL-20-SPR22	WG				X	X	X	X	X							SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG				X	X	X	X	X							SHL-20	FD1	39.00	49 00	1	
36	SHL-4-SPR22	WG	5-3-22	1430	GS	X	X	X	X	X							SHL-4	N1	3 00	13.00	1	

5/6 1040

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Date 5/4/22
Time @ 4.45

Received by: [signature] 5/4/22 1645
Date
Time

*

7/5/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

Boston #215

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	*Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022*
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
37	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	N1	32.00	34.00	1	
39	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG				X	X	X	X	X	SHM-05-41B	N1	62.00	64.00	1	
41	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	MS1	88.00	93.00	1	
42	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	N1	88.00	93 00	1	
43	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	SD1	88 00	93 00	1	
44	SHM-07-03-SPR22	WG				X	X	X	X	X	SHM-07-03	N1	25.00	35 00	1	
45	SHM-07-05X-SPR22	WG				X	X	X	X	X	SHM-07-05X	N1	55 00	65 00	1	
46	SHM-11-02-SPR22	WG				X	X	X	X	X	SHM-11-02	N1	52.00	66 00	1	
47	SHM-11-06-SPR22	WG	5-4-22	1515	GS	X	X	X	X	X	SHM-11-06	N1	25 00	35 00	1	
48	SHM-13-03-SPR22	WG				X	X	X	X	X	SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG				X	X	X	X	X	SHM-13-04	N1	20 00	30 00	1	
50	SHM-13-06-SPR22	WG				X	X	X	X	X	SHM-13-06	N1	36 00	46 00	1	
51	SHM-13-07-SPR22	WG				X	X	X	X	X	SHM-13-07	N1	27 00	37 00	1	
52	SHM-13-08-SPR22	WG				X	X	X	X	X	SHM-13-08	N1	55 00	65.00	1	
53	SHM-93-22B-SPR22	WG				X	X	X	X	X	SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG				X	X	X	X	X	SHM-96-5B	N1	80 00	90.00	1	

Relinquished by: [signature]
Date 5/4/22
Time 4:45

[signature] 5/5/22

Received by: [signature] 5/6 10 40
Date 5/4/22
Time 1645

*

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

Boston #215

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing/TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
55	SHL-DUP05-SPR22	WG					X	X	X	X	X					SHM-96-5B	FD1	80 00	90 00	1	
56	SHP-01-36X-SPR22	WG					X	X	X	X	X					SHP-01-36X	N1	3 00	8 00	1	
57	SHP-01-37X-SPR22	WG					X	X	X	X	X					SHP-01-37X	N1	1 00	6 00	1	
58	SHP-01-38A-SPR22	WG					X	X	X	X	X					SHP-01-38A	N1	1 50	6.50	1	
59	SHL-DUP03-SPR22	WG					X	X	X	X	X					SHP-01-38A	FD1	1 50	6.50	1	
60	SHP-2016-06A-SPR22	WG					X	X	X	X	X					SHP-2016-06A	N1	81 00	86 00	1	
61	SHP-2016-06B-SPR22	WG					X	X	X	X	X					SHP-2016-06B	N1	102.00	112.00	1	
62	SHP-2016-06C-SPR22	WG					X	X	X	X	X					SHP-2016-06C	N1	123 00	133 00	1	
63	SHP-2016-07A-SPR22	WG					X	X	X	X	X					SHP-2016-07A	N1	22.00	32.00	1	
64	SHP-2016-07B-SPR22	WG					X	X	X	X	X					SHP-2016-07B	N1	70 00	80.00	1	
65	SHP-2016-1A-SPR22	WG					X	X	X	X	X					SHP-2016-1A	N1	13 00	23.00	1	
66	SHP-2016-1B-SPR22	WG					X	X	X	X	X					SHP-2016-1B	N1	75.00	85 00	1	
67	SHP-2016-2A-SPR22	WG					X	X	X	X	X					SHP-2016-2A	N1	20 00	25.00	1	
68	SHP-2016-2B-SPR22	WG					X	X	X	X	X					SHP-2016-2B	N1	80 00	85 00	1	
69	SHP-2016-3A-SPR22	WG					X	X	X	X	X					SHP-2016-3A	N1	20 00	25 00	1	
70	SHP-2016-3B-SPR22	WG					X	X	X	X	X					SHP-2016-3B	N1	80 00	85 00	1	
71	SHP-2016-4A-SPR22	WG					X	X	X	X	X					SHP-2016-4A	N1	25 00	30 00	1	
72	SHP-2016-4B-SPR22	WG					X	X	X	X	X					SHP-2016-4B	N1	85.00	90.00	1	

5/6 1040

Relinquished by:
Date
Time

Received by:
5/7/22 1645
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						**46**	**9**	**9**	**5**	**3**										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
73	SHP-2016-5A-SPR22	WG					X	X	X	X	X							SHP-2016-5A	N1	25 00	30 00	**1**	
74	SHL-DUP06-SPR22	WG					X	X	X	X	X							SHP-2016-5A	FD1	25 00	30 00	**1**	
75	SHP-2016-5B-SPR22	WG					X	X	X	X	X							SHP-2016-5B	N1	85.00	90 00	**1**	
76																							
77																							
78																							
79																							
80																							
81																							
82																							
83																							
84																							

Turnaround Time: Standard

Relinquished by:
Date
Time

Received by:
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215070-1

Login Number: 215070
List Number: 1
Creator: Watters, David

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215133-1
Client Project/Site: Fort Devens SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/5/2022 9:31:10 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

LINKS

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215133-3	EPA-PZ-2012-3A-SPR22	Water	05/05/22 09:40	05/07/22 10:15
680-215133-4	EPA-PZ-2012-3B-SPR22	Water	05/05/22 12:05	05/07/22 10:15
680-215133-5	EPA-PZ-2012-5A-SPR22	Water	05/05/22 13:55	05/07/22 10:15
680-215133-6	EPA-PZ-2012-5B-SPR22	Water	05/05/22 14:50	05/07/22 10:15
680-215133-7	PZ-12-02-SPR22	Water	05/04/22 16:10	05/07/22 10:15
680-215133-8	PZ-12-03-SPR22	Water	05/05/22 15:25	05/07/22 10:15
680-215133-9	PZ-12-04-SPR22	Water	05/05/22 13:55	05/07/22 10:15
680-215133-10	SHL-11-SPR22	Water	05/05/22 12:00	05/07/22 10:15
680-215133-11	SHL-20-SPR22	Water	05/05/22 10:20	05/07/22 10:15
680-215133-12	SHL-DUP02-SPR22	Water	05/05/22 10:20	05/07/22 10:15

Job ID: 680-215133-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215133-1

Comments
No additional comments.

Receipt
The samples were received on 5/7/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.8º C, 2.4º C and 3.7º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: EPA-PZ-2012-3A-SPR22

Lab Sample ID: 680-215133-3

Date Collected: 05/05/22 09:40

Matrix: Water

Date Received: 05/07/22 10:15

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	22		0.50	0.50	0.20	mg/L		05/19/22 13:04	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 13:04	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		05/11/22 19:06	1
Manganese	880	B	10	5.0	1.3	ug/L		05/11/22 19:06	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	17		5.0	3.0	0.86	ug/L		05/11/22 13:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	86		6.0	5.0	2.2	mg/L		05/12/22 20:35	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	8.3		1.0	0.60	0.50	mg/L		05/19/22 12:36	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: EPA-PZ-2012-3B-SPR22

Date Collected: 05/05/22 12:05
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-4

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	33		0.50	0.50	0.20	mg/L		05/19/22 13:17	1
Sulfate	17		1.0	1.0	0.40	mg/L		05/19/22 13:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	38000		100	50	20	ug/L		05/11/22 19:09	1
Manganese	5100	B	10	5.0	1.3	ug/L		05/11/22 19:09	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2600		5.0	3.0	0.86	ug/L		05/11/22 13:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	140		6.0	5.0	2.2	mg/L		05/12/22 20:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.8		1.0	0.60	0.50	mg/L		05/19/22 13:43	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: EPA-PZ-2012-5A-SPR22

Lab Sample ID: 680-215133-5

Date Collected: 05/05/22 13:55

Matrix: Water

Date Received: 05/07/22 10:15

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	14		0.50	0.50	0.20	mg/L		05/19/22 13:30	1
Sulfate	3.9		1.0	1.0	0.40	mg/L		05/19/22 13:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	5800		100	50	20	ug/L		05/11/22 19:12	1
Manganese	87	B	10	5.0	1.3	ug/L		05/11/22 19:12	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.4	J	5.0	3.0	0.86	ug/L		05/11/22 13:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	25		6.0	5.0	2.2	mg/L		05/12/22 20:19	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	6.9		1.0	0.60	0.50	mg/L		05/19/22 14:07	1

Client Sample ID: EPA-PZ-2012-5B-SPR22

Date Collected: 05/05/22 14:50
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-6

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	44		0.50	0.50	0.20	mg/L		05/19/22 13:42	1
Sulfate	15		1.0	1.0	0.40	mg/L		05/19/22 13:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	140		100	50	20	ug/L		05/11/22 19:14	1
Manganese	8800	B	10	5.0	1.3	ug/L		05/11/22 19:14	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.5	J	5.0	3.0	0.86	ug/L		05/11/22 13:25	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	150		6.0	5.0	2.2	mg/L		05/12/22 19:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/19/22 14:31	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: PZ-12-02-SPR22

Date Collected: 05/04/22 16:10
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-7

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**61**		0.50	0.50	0.20	mg/L		05/19/22 13:55	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 13:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**65000**		100	50	20	ug/L		05/11/22 19:04	1
Manganese	**1200**	**B**	10	5.0	1.3	ug/L		05/11/22 19:04	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**250**		5.0	3.0	0.86	ug/L		05/11/22 13:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**210**		6.0	5.0	2.2	mg/L		05/12/22 20:12	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**4.0**		1.0	0.60	0.50	mg/L		05/19/22 14:54	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: PZ-12-03-SPR22

Date Collected: 05/05/22 15:25
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-8

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	75		0.50	0.50	0.20	mg/L		05/19/22 15:11	1
Sulfate	3.5	M	1.0	1.0	0.40	mg/L		05/19/22 15:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	45000		100	50	20	ug/L		05/11/22 19:17	1
Manganese	3600	B	10	5.0	1.3	ug/L		05/11/22 19:17	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	750		5.0	3.0	0.86	ug/L		05/11/22 13:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	160		6.0	5.0	2.2	mg/L		05/12/22 20:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.1		1.0	0.60	0.50	mg/L		05/19/22 15:17	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: PZ-12-04-SPR22

Date Collected: 05/05/22 13:55
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-9

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	49		0.50	0.50	0.20	mg/L		05/19/22 15:23	1
Sulfate	0.88	J M	1.0	1.0	0.40	mg/L		05/19/22 15:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	57000		100	50	20	ug/L		05/11/22 19:25	1
Manganese	1400	B	10	5.0	1.3	ug/L		05/11/22 19:25	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	710		5.0	3.0	0.86	ug/L		05/11/22 13:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	150		6.0	5.0	2.2	mg/L		05/12/22 21:00	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.2		1.0	0.60	0.50	mg/L		05/19/22 15:40	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: SHL-11-SPR22

Date Collected: 05/05/22 12:00
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-10

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	89		0.50	0.50	0.20	mg/L		05/19/22 15:36	1
Sulfate	0.46	J M	1.0	1.0	0.40	mg/L		05/19/22 15:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	87000		100	50	20	ug/L		05/11/22 19:28	1
Manganese	1500	B	10	5.0	1.3	ug/L		05/11/22 19:28	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	930		5.0	3.0	0.86	ug/L		05/11/22 13:33	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	180		6.0	5.0	2.2	mg/L		05/12/22 20:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.4		1.0	0.60	0.50	mg/L		05/19/22 16:03	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: SHL-20-SPR22

Date Collected: 05/05/22 10:20
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-11

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	94		0.50	0.50	0.20	mg/L		05/19/22 15:49	1
Sulfate	51		1.0	1.0	0.40	mg/L		05/19/22 15:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	54000		100	50	20	ug/L		05/11/22 19:30	1
Manganese	4000	B	10	5.0	1.3	ug/L		05/11/22 19:30	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	830		5.0	3.0	0.86	ug/L		05/11/22 13:40	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	95		6.0	5.0	2.2	mg/L		05/12/22 21:16	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.8		1.0	0.60	0.50	mg/L		05/19/22 17:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: SHL-DUP02-SPR22

Date Collected: 05/05/22 10:20
Date Received: 05/07/22 10:15

Lab Sample ID: 680-215133-12

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	94		0.50	0.50	0.20	mg/L		05/19/22 16:01	1
Sulfate	51		1.0	1.0	0.40	mg/L		05/19/22 16:01	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	53000		100	50	20	ug/L		05/11/22 19:33	1
Manganese	3900	B	10	5.0	1.3	ug/L		05/11/22 19:33	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	830		5.0	3.0	0.86	ug/L		05/11/22 13:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	97		6.0	5.0	2.2	mg/L		05/13/22 17:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.0		1.0	0.60	0.50	mg/L		05/19/22 17:30	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-721624/2
Matrix: Water
Analysis Batch: 721624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/19/22 10:28	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 10:28	1

Lab Sample ID: LCS 680-721624/3
Matrix: Water
Analysis Batch: 721624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.0		mg/L		100	87 - 111
Sulfate	10.0	9.42		mg/L		94	87 - 112

Lab Sample ID: LCSD 680-721624/4
Matrix: Water
Analysis Batch: 721624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.0		mg/L		100	87 - 111	0	15
Sulfate	10.0	9.61		mg/L		96	87 - 112	2	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720085/1-A
Matrix: Water
Analysis Batch: 720554

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720085

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/11/22 18:40	1
Manganese	7.31	J	10	5.0	1.3	ug/L		05/11/22 18:40	1

Lab Sample ID: LCS 680-720085/2-A
Matrix: Water
Analysis Batch: 720554

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720085

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4600		ug/L		92	87 - 115
Manganese	400	368		ug/L		92	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720087/1-A
Matrix: Water
Analysis Batch: 720457

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720087

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/11/22 12:38	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-720087/2-A
Matrix: Water
Analysis Batch: 720457

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720087

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	100		ug/L		100	84 - 116		

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-720621/5
Matrix: Water
Analysis Batch: 720621

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/12/22 17:00	1

Lab Sample ID: LCS 680-720621/7
Matrix: Water
Analysis Batch: 720621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	236		mg/L		94	90 - 112		

Lab Sample ID: LCSD 680-720621/32
Matrix: Water
Analysis Batch: 720621

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	238		mg/L		95	90 - 112	1	30

Lab Sample ID: 680-215133-6 DU
Matrix: Water
Analysis Batch: 720621

Client Sample ID: EPA-PZ-2012-5B-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	150			150		mg/L				0.2	30

Lab Sample ID: MB 680-720904/5
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/13/22 16:26	1

Lab Sample ID: LCS 680-720904/7
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	236		mg/L		95	90 - 112		

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-720904/32
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	242		mg/L		97	90 - 112	2	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-721868/2
Matrix: Water
Analysis Batch: 721868

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/19/22 11:16	1

Lab Sample ID: LCS 680-721868/3
Matrix: Water
Analysis Batch: 721868

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	18.8		mg/L		94	80 - 120		

Lab Sample ID: LCSD 680-721868/4
Matrix: Water
Analysis Batch: 721868

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	18.9		mg/L		94	80 - 120	0	20

Lab Sample ID: 680-215133-3 MS
Matrix: Water
Analysis Batch: 721868

Client Sample ID: EPA-PZ-2012-3A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	8.3		20.0	27.8		mg/L		98	80 - 120		

Lab Sample ID: 680-215133-3 MSD
Matrix: Water
Analysis Batch: 721868

Client Sample ID: EPA-PZ-2012-3A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	8.3		20.0	27.9		mg/L		98	80 - 120	0	20

HPLC/IC

Analysis Batch: 721624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Total/NA	Water	9056A	
680-215133-4	EPA-PZ-2012-3B-SPR22	Total/NA	Water	9056A	
680-215133-5	EPA-PZ-2012-5A-SPR22	Total/NA	Water	9056A	
680-215133-6	EPA-PZ-2012-5B-SPR22	Total/NA	Water	9056A	
680-215133-7	PZ-12-02-SPR22	Total/NA	Water	9056A	
680-215133-8	PZ-12-03-SPR22	Total/NA	Water	9056A	
680-215133-9	PZ-12-04-SPR22	Total/NA	Water	9056A	
680-215133-10	SHL-11-SPR22	Total/NA	Water	9056A	
680-215133-11	SHL-20-SPR22	Total/NA	Water	9056A	
680-215133-12	SHL-DUP02-SPR22	Total/NA	Water	9056A	
MB 680-721624/2	Method Blank	Total/NA	Water	9056A	
LCS 680-721624/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721624/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 720085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Dissolved	Water	3005A	
680-215133-4	EPA-PZ-2012-3B-SPR22	Dissolved	Water	3005A	
680-215133-5	EPA-PZ-2012-5A-SPR22	Dissolved	Water	3005A	
680-215133-6	EPA-PZ-2012-5B-SPR22	Dissolved	Water	3005A	
680-215133-7	PZ-12-02-SPR22	Dissolved	Water	3005A	
680-215133-8	PZ-12-03-SPR22	Dissolved	Water	3005A	
680-215133-9	PZ-12-04-SPR22	Dissolved	Water	3005A	
680-215133-10	SHL-11-SPR22	Dissolved	Water	3005A	
680-215133-11	SHL-20-SPR22	Dissolved	Water	3005A	
680-215133-12	SHL-DUP02-SPR22	Dissolved	Water	3005A	
MB 680-720085/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720085/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Dissolved	Water	3005A	
680-215133-4	EPA-PZ-2012-3B-SPR22	Dissolved	Water	3005A	
680-215133-5	EPA-PZ-2012-5A-SPR22	Dissolved	Water	3005A	
680-215133-6	EPA-PZ-2012-5B-SPR22	Dissolved	Water	3005A	
680-215133-7	PZ-12-02-SPR22	Dissolved	Water	3005A	
680-215133-8	PZ-12-03-SPR22	Dissolved	Water	3005A	
680-215133-9	PZ-12-04-SPR22	Dissolved	Water	3005A	
680-215133-10	SHL-11-SPR22	Dissolved	Water	3005A	
680-215133-11	SHL-20-SPR22	Dissolved	Water	3005A	
680-215133-12	SHL-DUP02-SPR22	Dissolved	Water	3005A	
MB 680-720087/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720087/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 720457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Dissolved	Water	6020A	720087
680-215133-4	EPA-PZ-2012-3B-SPR22	Dissolved	Water	6020A	720087
680-215133-5	EPA-PZ-2012-5A-SPR22	Dissolved	Water	6020A	720087

Metals (Continued)

Analysis Batch: 720457 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-6	EPA-PZ-2012-5B-SPR22	Dissolved	Water	6020A	720087
680-215133-7	PZ-12-02-SPR22	Dissolved	Water	6020A	720087
680-215133-8	PZ-12-03-SPR22	Dissolved	Water	6020A	720087
680-215133-9	PZ-12-04-SPR22	Dissolved	Water	6020A	720087
680-215133-10	SHL-11-SPR22	Dissolved	Water	6020A	720087
680-215133-11	SHL-20-SPR22	Dissolved	Water	6020A	720087
680-215133-12	SHL-DUP02-SPR22	Dissolved	Water	6020A	720087
MB 680-720087/1-A	Method Blank	Total Recoverable	Water	6020A	720087
LCS 680-720087/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720087

Analysis Batch: 720554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Dissolved	Water	6010C	720085
680-215133-4	EPA-PZ-2012-3B-SPR22	Dissolved	Water	6010C	720085
680-215133-5	EPA-PZ-2012-5A-SPR22	Dissolved	Water	6010C	720085
680-215133-6	EPA-PZ-2012-5B-SPR22	Dissolved	Water	6010C	720085
680-215133-7	PZ-12-02-SPR22	Dissolved	Water	6010C	720085
680-215133-8	PZ-12-03-SPR22	Dissolved	Water	6010C	720085
680-215133-9	PZ-12-04-SPR22	Dissolved	Water	6010C	720085
680-215133-10	SHL-11-SPR22	Dissolved	Water	6010C	720085
680-215133-11	SHL-20-SPR22	Dissolved	Water	6010C	720085
680-215133-12	SHL-DUP02-SPR22	Dissolved	Water	6010C	720085
MB 680-720085/1-A	Method Blank	Total Recoverable	Water	6010C	720085
LCS 680-720085/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720085

General Chemistry

Analysis Batch: 720621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Total/NA	Water	2320B-2011	
680-215133-4	EPA-PZ-2012-3B-SPR22	Total/NA	Water	2320B-2011	
680-215133-5	EPA-PZ-2012-5A-SPR22	Total/NA	Water	2320B-2011	
680-215133-6	EPA-PZ-2012-5B-SPR22	Total/NA	Water	2320B-2011	
680-215133-7	PZ-12-02-SPR22	Total/NA	Water	2320B-2011	
680-215133-8	PZ-12-03-SPR22	Total/NA	Water	2320B-2011	
680-215133-9	PZ-12-04-SPR22	Total/NA	Water	2320B-2011	
680-215133-10	SHL-11-SPR22	Total/NA	Water	2320B-2011	
680-215133-11	SHL-20-SPR22	Total/NA	Water	2320B-2011	
MB 680-720621/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720621/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720621/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215133-6 DU	EPA-PZ-2012-5B-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 720904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-12	SHL-DUP02-SPR22	Total/NA	Water	2320B-2011	
MB 680-720904/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720904/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720904/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

General Chemistry

Analysis Batch: 721868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215133-3	EPA-PZ-2012-3A-SPR22	Dissolved	Water	9060A	
680-215133-4	EPA-PZ-2012-3B-SPR22	Dissolved	Water	9060A	
680-215133-5	EPA-PZ-2012-5A-SPR22	Dissolved	Water	9060A	
680-215133-6	EPA-PZ-2012-5B-SPR22	Dissolved	Water	9060A	
680-215133-7	PZ-12-02-SPR22	Dissolved	Water	9060A	
680-215133-8	PZ-12-03-SPR22	Dissolved	Water	9060A	
680-215133-9	PZ-12-04-SPR22	Dissolved	Water	9060A	
680-215133-10	SHL-11-SPR22	Dissolved	Water	9060A	
680-215133-11	SHL-20-SPR22	Dissolved	Water	9060A	
680-215133-12	SHL-DUP02-SPR22	Dissolved	Water	9060A	
MB 680-721868/2	Method Blank	Dissolved	Water	9060A	
LCS 680-721868/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-721868/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215133-3 MS	EPA-PZ-2012-3A-SPR22	Dissolved	Water	9060A	
680-215133-3 MSD	EPA-PZ-2012-3A-SPR22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: EPA-PZ-2012-3A-SPR22

Lab Sample ID: 680-215133-3

Date Collected: 05/05/22 09:40

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 13:04	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:06	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:17	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:35	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 12:36	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-3B-SPR22

Lab Sample ID: 680-215133-4

Date Collected: 05/05/22 12:05

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 13:17	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:09	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:20	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:27	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 13:43	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-5A-SPR22

Lab Sample ID: 680-215133-5

Date Collected: 05/05/22 13:55

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 13:30	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:12	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:22	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: EPA-PZ-2012-5A-SPR22

Lab Sample ID: 680-215133-5
Date Collected: 05/05/22 13:55
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:19	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 14:07	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-5B-SPR22

Lab Sample ID: 680-215133-6
Date Collected: 05/05/22 14:50
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 13:42	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:14	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:25	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 19:54	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 14:31	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-02-SPR22

Lab Sample ID: 680-215133-7
Date Collected: 05/04/22 16:10
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 13:55	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:04	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:10	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:12	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 14:54	JU	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: PZ-12-03-SPR22

Lab Sample ID: 680-215133-8

Date Collected: 05/05/22 15:25

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 15:11	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:17	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:27	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:43	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 15:17	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-04-SPR22

Lab Sample ID: 680-215133-9

Date Collected: 05/05/22 13:55

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 15:23	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:25	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:30	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 21:00	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 15:40	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-11-SPR22

Lab Sample ID: 680-215133-10

Date Collected: 05/05/22 12:00

Matrix: Water

Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 15:36	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:28	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:33	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Client Sample ID: SHL-11-SPR22

Lab Sample ID: 680-215133-10
Date Collected: 05/05/22 12:00
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 20:52	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 16:03	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-20-SPR22

Lab Sample ID: 680-215133-11
Date Collected: 05/05/22 10:20
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 15:49	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:30	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:40	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720621	05/12/22 21:16	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 17:07	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP02-SPR22

Lab Sample ID: 680-215133-12
Date Collected: 05/05/22 10:20
Matrix: Water
Date Received: 05/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721624	05/19/22 16:01	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720085	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6010C		1			720554	05/11/22 19:33	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720087	05/10/22 11:26	JE	TAL SAV
Dissolved	Analysis	6020A		1			720457	05/11/22 13:43	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720904	05/13/22 17:27	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	721868	05/19/22 17:30	JU	TAL SAV
	Instrument ID: TOC7									

Laboratory References:
TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215133-1
Project/Site: Fort Devens SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215133-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

680-215133 Chain of Custody

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022					46	9	9	5	3						
1	EPA-PZ-2012-1A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1A	N1	23.70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2B	N1	73.16	78 16	1	
5	EPA-PZ-2012-3A-SPR22	WG	5/5/22	940	GS	X	X	X	X	X	EPA-PZ-2012-3A	N1	19.09	24.09	1	
6	EPA-PZ-2012-3B-SPR22	WG	5-5-22	1205	GS	X	X	X	X	X	EPA-PZ-2012-3B	N1	68 70	73.70	1	
7	EPA-PZ-2012-4A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG	5-5-22	1355	GS	X	X	X	X	X	EPA-PZ-2012-5A	N1	17.95	22.95	1	
11	EPA-PZ-2012-5B-SPR22	WG	5-5-22	1450	GS	X	X	X	X	X	EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-6A	N1	24.19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7A	N1	23 87	28 87	1	
15	EPA-PZ-2012-7B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG				X	X	X	X	X	EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG				X	X	X	X	X	EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X	PZ-12-01	N1	24.00	34.00	1	

Relinquished by: [signature]
Date 5/5/2022
Time 445
[signature] 5/6/22 1300

Received by: [signature] 5/5/22 1645
Date
Time ap 5/7 10:15

43 / 24 | 30 / 24 | 24 / 1e

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Boston #210

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL, plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
							46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
19	PZ-12-02-SPR22	WG	5-4-22	1610	DC	X	X	X	X	X						PZ-12-02	N1	24.00	34.00	1	
20	PZ-12-03-SPR22	WG	5-5-22	1525	DC	X	X	X	X	X						PZ-12-03	N1	24.00	34.00	1	
21	PZ-12-04-SPR22	WG	5-5-22	1355	DC	X	X	X	X	X						PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG				X	X	X	X	X						PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X						PZ-12-06	N1	25 00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X						PZ-12-06	FD1	25 00	35 00	1	
25	PZ-12-07-SPR22	WG				X	X	X	X	X						PZ-12-07	N1	20 00	30.00	1	
26	PZ-12-08-SPR22	WG				X	X	X	X	X						PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-09-SPR22	WG				X	X	X	X	X						PZ-12-09	N1	20 00	30.00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	MS1	20 00	30.00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	SD1	20 00	30.00	1	
31	SHL-10-SPR22	WG				X	X	X	X	X						SHL-10	N1	24 00	39 00	1	
32	SHL-11-SPR22	WG	5-5-22	1200	DC	X	X	X	X	X						SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG				X	X	X	X	X						SHL-19	N1	20 00	30 00	1	
34	SHL-20-SPR22	WG	5-5-20	1020	DC	X	X	X	X	X						SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG	5-5-20	1020	DC	X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
36	SHL-4-SPR22	WG				X	X	X	X	X						SHL-4	N1	3.00	13.00	1	

Relinquished by: [signature] 5/5/22 1645
Date 5/5/22
Time 4:45

Received by: [signature] 5/6/22 1300

Relinquished by: [signature] 5/5/22 1645
Date
Time

Received by: [signature] 5/7 10:15

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215133-1

Login Number: 215133
List Number: 1
Creator: Padayao, Abigail

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215169-1
Client Project/Site: Fort Devens SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/6/2022 11:06:55 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

LINKS

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Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215169-1	PZ-12-05-SPR22	Water	05/09/22 12:05	05/10/22 10:40
680-215169-2	PZ-12-06-SPR22	Water	05/09/22 10:00	05/10/22 10:40
680-215169-3	SHL-DUP01-SPR22	Water	05/09/22 10:00	05/10/22 10:40
680-215169-4	PZ-12-10-SPR22	Water	05/09/22 14:20	05/10/22 10:40
680-215169-5	SHM-05-41B-SPR22	Water	05/09/22 14:15	05/10/22 10:40
680-215169-6	SHM-93-22B-SPR22	Water	05/09/22 15:17	05/10/22 10:40
680-215169-7	SHP-01-37X-SPR22	Water	05/09/22 13:11	05/10/22 10:40
680-215169-8	SHP-01-38A-SPR22	Water	05/09/22 11:26	05/10/22 10:40
680-215169-9	SHL-DUP03-SPR22	Water	05/09/22 11:45	05/10/22 10:40
680-215169-10	SHP-2016-3A-SPR22	Water	05/09/22 10:45	05/10/22 10:40
680-215169-11	SHP-2016-3B-SPR22	Water	05/09/22 12:20	05/10/22 10:40

Job ID: 680-215169-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215169-1

Comments
No additional comments.

Receipt
The samples were received on 5/10/2022 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.6º C and 1.1º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: PZ-12-05-SPR22

Date Collected: 05/09/22 12:05
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-1

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.6		0.50	0.50	0.20	mg/L		05/23/22 13:01	1
Sulfate	6.1		1.0	1.0	0.40	mg/L		05/23/22 13:01	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	6800		100	50	20	ug/L		05/13/22 23:56	1
Manganese	890		10	5.0	1.3	ug/L		05/13/22 23:56	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	6.9		5.0	3.0	0.86	ug/L		05/13/22 18:35	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	35		6.0	5.0	2.2	mg/L		05/16/22 16:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.3		1.0	0.60	0.50	mg/L		05/21/22 23:51	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: PZ-12-06-SPR22

Date Collected: 05/09/22 10:00
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-2

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	3.2		0.50	0.50	0.20	mg/L		05/23/22 13:14	1
Sulfate	36		1.0	1.0	0.40	mg/L		05/23/22 13:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	41	J	100	50	20	ug/L		05/13/22 23:59	1
Manganese	240		10	5.0	1.3	ug/L		05/13/22 23:59	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/13/22 18:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	49		6.0	5.0	2.2	mg/L		05/16/22 16:33	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.3		1.0	0.60	0.50	mg/L		05/22/22 00:13	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHL-DUP01-SPR22

Date Collected: 05/09/22 10:00
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-3

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	3.2		0.50	0.50	0.20	mg/L		05/23/22 13:27	1
Sulfate	36		1.0	1.0	0.40	mg/L		05/23/22 13:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	34	J	100	50	20	ug/L		05/14/22 00:02	1
Manganese	240		10	5.0	1.3	ug/L		05/14/22 00:02	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/13/22 18:40	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	50		6.0	5.0	2.2	mg/L		05/16/22 15:56	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.2		1.0	0.60	0.50	mg/L		05/22/22 00:36	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: PZ-12-10-SPR22

Date Collected: 05/09/22 14:20
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-4

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**1.7**		0.50	0.50	0.20	mg/L		05/23/22 11:05	1
Sulfate	**7.3**		1.0	1.0	0.40	mg/L		05/23/22 11:05	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/13/22 23:02	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/13/22 23:02	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/13/22 18:06	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**49**		6.0	5.0	2.2	mg/L		05/16/22 16:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.87**	**J**	1.0	0.60	0.50	mg/L		05/22/22 00:58	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHM-05-41B-SPR22

Date Collected: 05/09/22 14:15
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-5

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	50		0.50	0.50	0.20	mg/L		05/23/22 13:56	1
Sulfate	3.9		1.0	1.0	0.40	mg/L		05/23/22 13:56	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	21000		100	50	20	ug/L		05/14/22 00:05	1
Manganese	770		10	5.0	1.3	ug/L		05/14/22 00:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	390		5.0	3.0	0.86	ug/L		05/13/22 18:42	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	56		6.0	5.0	2.2	mg/L		05/16/22 16:25	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.8		1.0	0.60	0.50	mg/L		05/22/22 01:59	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHM-93-22B-SPR22

Date Collected: 05/09/22 15:17
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-6

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	39		0.50	0.50	0.20	mg/L		05/23/22 15:00	1
Sulfate	12		1.0	1.0	0.40	mg/L		05/23/22 15:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1100		100	50	20	ug/L		05/14/22 00:08	1
Manganese	6600		10	5.0	1.3	ug/L		05/14/22 00:08	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	34		5.0	3.0	0.86	ug/L		05/13/22 18:45	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	190		6.0	5.0	2.2	mg/L		05/16/22 18:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/22/22 02:23	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-01-37X-SPR22

Date Collected: 05/09/22 13:11
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-7

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	31		0.50	0.50	0.20	mg/L		05/23/22 15:12	1
Sulfate	13		1.0	1.0	0.40	mg/L		05/23/22 15:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	2500		100	50	20	ug/L		05/14/22 00:11	1
Manganese	350		10	5.0	1.3	ug/L		05/14/22 00:11	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	25		5.0	3.0	0.86	ug/L		05/13/22 18:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	51		6.0	5.0	2.2	mg/L		05/16/22 16:18	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/22/22 02:45	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-01-38A-SPR22

Lab Sample ID: 680-215169-8

Date Collected: 05/09/22 11:26

Matrix: Water

Date Received: 05/10/22 10:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.4		0.50	0.50	0.20	mg/L		05/23/22 15:25	1
Sulfate	5.9		1.0	1.0	0.40	mg/L		05/23/22 15:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	17000		100	50	20	ug/L		05/14/22 00:14	1
Manganese	1400		10	5.0	1.3	ug/L		05/14/22 00:14	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	87		5.0	3.0	0.86	ug/L		05/13/22 18:50	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	70		6.0	5.0	2.2	mg/L		05/16/22 18:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.2		1.0	0.60	0.50	mg/L		05/22/22 03:08	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHL-DUP03-SPR22

Date Collected: 05/09/22 11:45
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-9

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.4		0.50	0.50	0.20	mg/L		05/23/22 15:38	1
Sulfate	5.8		1.0	1.0	0.40	mg/L		05/23/22 15:38	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	17000		100	50	20	ug/L		05/14/22 00:17	1
Manganese	1300		10	5.0	1.3	ug/L		05/14/22 00:17	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	85		5.0	3.0	0.86	ug/L		05/13/22 18:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	71		6.0	5.0	2.2	mg/L		05/16/22 16:47	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0		1.0	0.60	0.50	mg/L		05/22/22 04:09	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-2016-3A-SPR22

Date Collected: 05/09/22 10:45
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-10

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.8		0.50	0.50	0.20	mg/L		05/23/22 15:50	1
Sulfate	1.3		1.0	1.0	0.40	mg/L		05/23/22 15:50	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	7000		100	50	20	ug/L		05/14/22 00:20	1
Manganese	270		10	5.0	1.3	ug/L		05/14/22 00:20	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.6	J	5.0	3.0	0.86	ug/L		05/13/22 18:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	33		6.0	5.0	2.2	mg/L		05/16/22 18:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.92	J	1.0	0.60	0.50	mg/L		05/22/22 04:34	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-2016-3B-SPR22

Lab Sample ID: 680-215169-11

Date Collected: 05/09/22 12:20

Matrix: Water

Date Received: 05/10/22 10:40

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	8.3		0.50	0.50	0.20	mg/L		05/23/22 16:03	1
Sulfate	3.9		1.0	1.0	0.40	mg/L		05/23/22 16:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	31000		100	50	20	ug/L		05/14/22 00:29	1
Manganese	2200		10	5.0	1.3	ug/L		05/14/22 00:29	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	210		5.0	3.0	0.86	ug/L		05/13/22 19:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	94		6.0	5.0	2.2	mg/L		05/16/22 18:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.7		1.0	0.60	0.50	mg/L		05/22/22 04:57	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-722183/2
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/23/22 10:08	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/23/22 10:08	1

Lab Sample ID: LCS 680-722183/3
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.2		mg/L		102	87 - 111
Sulfate	10.0	9.61		mg/L		96	87 - 112

Lab Sample ID: LCSD 680-722183/4
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	9.61		mg/L		96	87 - 112	0	15

Lab Sample ID: 680-215169-4MS
Matrix: Water
Analysis Batch: 722183

Client Sample ID: PZ-12-10-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1.7		10.0	11.9		mg/L		102	87 - 111
Sulfate	7.3		10.0	17.0		mg/L		97	87 - 112

Lab Sample ID: 680-215169-4MSD
Matrix: Water
Analysis Batch: 722183

Client Sample ID: PZ-12-10-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1.7		10.0	12.1		mg/L		104	87 - 111	1	15
Sulfate	7.3		10.0	17.1		mg/L		98	87 - 112	1	15

Lab Sample ID: MB 680-722184/2
Matrix: Water
Analysis Batch: 722184

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/23/22 10:06	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/23/22 10:06	1

Lab Sample ID: LCS 680-722184/3
Matrix: Water
Analysis Batch: 722184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.87		mg/L		99	87 - 111
Sulfate	10.0	9.42		mg/L		94	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCSD 680-722184/4
Matrix: Water
Analysis Batch: 722184

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			10.0	9.90		mg/L		99	87 - 111	0	15
Sulfate			10.0	9.86		mg/L		99	87 - 112	5	15

Lab Sample ID: 680-215169-5 MS
Matrix: Water
Analysis Batch: 722184

Client Sample ID: SHM-05-41B-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50		10.0	60.0	4	mg/L		101	87 - 111
Sulfate	3.9		10.0	14.1		mg/L		102	87 - 112

Lab Sample ID: 680-215169-5 MSD
Matrix: Water
Analysis Batch: 722184

Client Sample ID: SHM-05-41B-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50		10.0	60.7	4	mg/L		108	87 - 111	1	15
Sulfate	3.9		10.0	14.7		mg/L		108	87 - 112	4	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720564/1-A
Matrix: Water
Analysis Batch: 720756

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720564

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/13/22 22:56	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/13/22 22:56	1

Lab Sample ID: LCS 680-720564/2-A
Matrix: Water
Analysis Batch: 720756

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720564

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron			5000	5100		ug/L		102	87 - 115
Manganese			400	414		ug/L		103	90 - 114

Lab Sample ID: 680-215169-4MS
Matrix: Water
Analysis Batch: 720756

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved
Prep Batch: 720564

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	4810		ug/L		96	87 - 115
Manganese	5.0	U	400	393		ug/L		98	90 - 114

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 680-215169-4MSD
Matrix: Water
Analysis Batch: 720756

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved
Prep Batch: 720564

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	5040		ug/L		101	87 - 115	5	20
Manganese	5.0	U	400	408		ug/L		102	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720565/1-A
Matrix: Water
Analysis Batch: 720752

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720565

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/13/22 18:01	1

Lab Sample ID: LCS 680-720565/2-A
Matrix: Water
Analysis Batch: 720752

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: 680-215169-4MS
Matrix: Water
Analysis Batch: 720752

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved
Prep Batch: 720565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	3.0	U	100	104		ug/L		104	84 - 116

Lab Sample ID: 680-215169-4MSD
Matrix: Water
Analysis Batch: 720752

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved
Prep Batch: 720565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	108		ug/L		108	84 - 116	3	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-721155/5
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/16/22 15:34	1

Lab Sample ID: LCS 680-721155/7
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	238		mg/L		95	90 - 112

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-721155/32
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	238		mg/L		95	90 - 112	0	30

Lab Sample ID: 680-215169-3 DU
Matrix: Water
Analysis Batch: 721155

Client Sample ID: SHL-DUP01-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	50			49.3		mg/L				0.7	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-722187/3
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/21/22 22:33	1

Lab Sample ID: LCS 680-722187/4
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	18.7		mg/L		94	80 - 120		

Lab Sample ID: LCSD 680-722187/5
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	18.8		mg/L		94	80 - 120	0	20

Lab Sample ID: 680-215169-4MS
Matrix: Water
Analysis Batch: 722187

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	0.87	J	20.0	19.9		mg/L		95	80 - 120		

Lab Sample ID: 680-215169-4MSD
Matrix: Water
Analysis Batch: 722187

Client Sample ID: PZ-12-10-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	0.87	J	20.0	19.5		mg/L		93	80 - 120	2	20

HPLC/IC

Analysis Batch: 722183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Total/NA	Water	9056A	
680-215169-2	PZ-12-06-SPR22	Total/NA	Water	9056A	
680-215169-3	SHL-DUP01-SPR22	Total/NA	Water	9056A	
680-215169-4	PZ-12-10-SPR22	Total/NA	Water	9056A	
MB 680-722183/2	Method Blank	Total/NA	Water	9056A	
LCS 680-722183/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-722183/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215169-4MS	PZ-12-10-SPR22	Total/NA	Water	9056A	
680-215169-4MSD	PZ-12-10-SPR22	Total/NA	Water	9056A	

Analysis Batch: 722184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-5	SHM-05-41B-SPR22	Total/NA	Water	9056A	
680-215169-6	SHM-93-22B-SPR22	Total/NA	Water	9056A	
680-215169-7	SHP-01-37X-SPR22	Total/NA	Water	9056A	
680-215169-8	SHP-01-38A-SPR22	Total/NA	Water	9056A	
680-215169-9	SHL-DUP03-SPR22	Total/NA	Water	9056A	
680-215169-10	SHP-2016-3A-SPR22	Total/NA	Water	9056A	
680-215169-11	SHP-2016-3B-SPR22	Total/NA	Water	9056A	
MB 680-722184/2	Method Blank	Total/NA	Water	9056A	
LCS 680-722184/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-722184/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215169-5 MS	SHM-05-41B-SPR22	Total/NA	Water	9056A	
680-215169-5 MSD	SHM-05-41B-SPR22	Total/NA	Water	9056A	

Metals

Prep Batch: 720564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Dissolved	Water	3005A	
680-215169-2	PZ-12-06-SPR22	Dissolved	Water	3005A	
680-215169-3	SHL-DUP01-SPR22	Dissolved	Water	3005A	
680-215169-4	PZ-12-10-SPR22	Dissolved	Water	3005A	
680-215169-5	SHM-05-41B-SPR22	Dissolved	Water	3005A	
680-215169-6	SHM-93-22B-SPR22	Dissolved	Water	3005A	
680-215169-7	SHP-01-37X-SPR22	Dissolved	Water	3005A	
680-215169-8	SHP-01-38A-SPR22	Dissolved	Water	3005A	
680-215169-9	SHL-DUP03-SPR22	Dissolved	Water	3005A	
680-215169-10	SHP-2016-3A-SPR22	Dissolved	Water	3005A	
680-215169-11	SHP-2016-3B-SPR22	Dissolved	Water	3005A	
MB 680-720564/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720564/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215169-4MS	PZ-12-10-SPR22	Dissolved	Water	3005A	
680-215169-4MSD	PZ-12-10-SPR22	Dissolved	Water	3005A	

Prep Batch: 720565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Dissolved	Water	3005A	
680-215169-2	PZ-12-06-SPR22	Dissolved	Water	3005A	
680-215169-3	SHL-DUP01-SPR22	Dissolved	Water	3005A	
680-215169-4	PZ-12-10-SPR22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 720565 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-5	SHM-05-41B-SPR22	Dissolved	Water	3005A	
680-215169-6	SHM-93-22B-SPR22	Dissolved	Water	3005A	
680-215169-7	SHP-01-37X-SPR22	Dissolved	Water	3005A	
680-215169-8	SHP-01-38A-SPR22	Dissolved	Water	3005A	
680-215169-9	SHL-DUP03-SPR22	Dissolved	Water	3005A	
680-215169-10	SHP-2016-3A-SPR22	Dissolved	Water	3005A	
680-215169-11	SHP-2016-3B-SPR22	Dissolved	Water	3005A	
MB 680-720565/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720565/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215169-4MS	PZ-12-10-SPR22	Dissolved	Water	3005A	
680-215169-4MSD	PZ-12-10-SPR22	Dissolved	Water	3005A	

Analysis Batch: 720752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Dissolved	Water	6020A	720565
680-215169-2	PZ-12-06-SPR22	Dissolved	Water	6020A	720565
680-215169-3	SHL-DUP01-SPR22	Dissolved	Water	6020A	720565
680-215169-4	PZ-12-10-SPR22	Dissolved	Water	6020A	720565
680-215169-5	SHM-05-41B-SPR22	Dissolved	Water	6020A	720565
680-215169-6	SHM-93-22B-SPR22	Dissolved	Water	6020A	720565
680-215169-7	SHP-01-37X-SPR22	Dissolved	Water	6020A	720565
680-215169-8	SHP-01-38A-SPR22	Dissolved	Water	6020A	720565
680-215169-9	SHL-DUP03-SPR22	Dissolved	Water	6020A	720565
680-215169-10	SHP-2016-3A-SPR22	Dissolved	Water	6020A	720565
680-215169-11	SHP-2016-3B-SPR22	Dissolved	Water	6020A	720565
MB 680-720565/1-A	Method Blank	Total Recoverable	Water	6020A	720565
LCS 680-720565/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720565
680-215169-4MS	PZ-12-10-SPR22	Dissolved	Water	6020A	720565
680-215169-4MSD	PZ-12-10-SPR22	Dissolved	Water	6020A	720565

Analysis Batch: 720756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Dissolved	Water	6010C	720564
680-215169-2	PZ-12-06-SPR22	Dissolved	Water	6010C	720564
680-215169-3	SHL-DUP01-SPR22	Dissolved	Water	6010C	720564
680-215169-4	PZ-12-10-SPR22	Dissolved	Water	6010C	720564
680-215169-5	SHM-05-41B-SPR22	Dissolved	Water	6010C	720564
680-215169-6	SHM-93-22B-SPR22	Dissolved	Water	6010C	720564
680-215169-7	SHP-01-37X-SPR22	Dissolved	Water	6010C	720564
680-215169-8	SHP-01-38A-SPR22	Dissolved	Water	6010C	720564
680-215169-9	SHL-DUP03-SPR22	Dissolved	Water	6010C	720564
680-215169-10	SHP-2016-3A-SPR22	Dissolved	Water	6010C	720564
680-215169-11	SHP-2016-3B-SPR22	Dissolved	Water	6010C	720564
MB 680-720564/1-A	Method Blank	Total Recoverable	Water	6010C	720564
LCS 680-720564/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720564
680-215169-4MS	PZ-12-10-SPR22	Dissolved	Water	6010C	720564
680-215169-4MSD	PZ-12-10-SPR22	Dissolved	Water	6010C	720564

General Chemistry

Analysis Batch: 721155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Total/NA	Water	2320B-2011	
680-215169-2	PZ-12-06-SPR22	Total/NA	Water	2320B-2011	
680-215169-3	SHL-DUP01-SPR22	Total/NA	Water	2320B-2011	
680-215169-4	PZ-12-10-SPR22	Total/NA	Water	2320B-2011	
680-215169-5	SHM-05-41B-SPR22	Total/NA	Water	2320B-2011	
680-215169-6	SHM-93-22B-SPR22	Total/NA	Water	2320B-2011	
680-215169-7	SHP-01-37X-SPR22	Total/NA	Water	2320B-2011	
680-215169-8	SHP-01-38A-SPR22	Total/NA	Water	2320B-2011	
680-215169-9	SHL-DUP03-SPR22	Total/NA	Water	2320B-2011	
680-215169-10	SHP-2016-3A-SPR22	Total/NA	Water	2320B-2011	
680-215169-11	SHP-2016-3B-SPR22	Total/NA	Water	2320B-2011	
MB 680-721155/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-721155/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-721155/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215169-3 DU	SHL-DUP01-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 722187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215169-1	PZ-12-05-SPR22	Dissolved	Water	9060A	
680-215169-2	PZ-12-06-SPR22	Dissolved	Water	9060A	
680-215169-3	SHL-DUP01-SPR22	Dissolved	Water	9060A	
680-215169-4	PZ-12-10-SPR22	Dissolved	Water	9060A	
680-215169-5	SHM-05-41B-SPR22	Dissolved	Water	9060A	
680-215169-6	SHM-93-22B-SPR22	Dissolved	Water	9060A	
680-215169-7	SHP-01-37X-SPR22	Dissolved	Water	9060A	
680-215169-8	SHP-01-38A-SPR22	Dissolved	Water	9060A	
680-215169-9	SHL-DUP03-SPR22	Dissolved	Water	9060A	
680-215169-10	SHP-2016-3A-SPR22	Dissolved	Water	9060A	
680-215169-11	SHP-2016-3B-SPR22	Dissolved	Water	9060A	
MB 680-722187/3	Method Blank	Dissolved	Water	9060A	
LCS 680-722187/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-722187/5	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215169-4MS	PZ-12-10-SPR22	Dissolved	Water	9060A	
680-215169-4MSD	PZ-12-10-SPR22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: PZ-12-05-SPR22
Date Collected: 05/09/22 12:05
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722183	05/23/22 13:01	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:56	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:35	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:39	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/21/22 23:51	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-06-SPR22
Date Collected: 05/09/22 10:00
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722183	05/23/22 13:14	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:59	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:37	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:33	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 00:13	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP01-SPR22
Date Collected: 05/09/22 10:00
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722183	05/23/22 13:27	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:02	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:40	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHL-DUP01-SPR22

Lab Sample ID: 680-215169-3
Matrix: Water
Date Collected: 05/09/22 10:00
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 15:56	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 00:36	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-10-SPR22

Lab Sample ID: 680-215169-4
Matrix: Water
Date Collected: 05/09/22 14:20
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722183	05/23/22 11:05	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:02	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:06	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:10	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 00:58	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-05-41B-SPR22

Lab Sample ID: 680-215169-5
Matrix: Water
Date Collected: 05/09/22 14:15
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 13:56	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:05	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:42	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:25	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 01:59	RKJ	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHM-93-22B-SPR22

Lab Sample ID: 680-215169-6

Date Collected: 05/09/22 15:17

Matrix: Water

Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 15:00	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:08	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:45	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:36	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 02:23	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-01-37X-SPR22

Lab Sample ID: 680-215169-7

Date Collected: 05/09/22 13:11

Matrix: Water

Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 15:12	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:11	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:47	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:18	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 02:45	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-01-38A-SPR22

Lab Sample ID: 680-215169-8

Date Collected: 05/09/22 11:26

Matrix: Water

Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 15:25	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:14	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:50	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-01-38A-SPR22

Lab Sample ID: 680-215169-8
Matrix: Water
Date Collected: 05/09/22 11:26
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:21	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 03:08	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP03-SPR22

Lab Sample ID: 680-215169-9
Matrix: Water
Date Collected: 05/09/22 11:45
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 15:38	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:17	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:53	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:47	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 04:09	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-3A-SPR22

Lab Sample ID: 680-215169-10
Matrix: Water
Date Collected: 05/09/22 10:45
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 15:50	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:20	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:55	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:27	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 04:34	RKJ	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Client Sample ID: SHP-2016-3B-SPR22

Date Collected: 05/09/22 12:20
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215169-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722184	05/23/22 16:03	AF	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/14/22 00:29	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 19:03	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:43	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 04:57	RKJ	TAL SAV
	Instrument ID: TOC7									

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215169-1
Project/Site: Fort Devens SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens SHL, Spring 2022

Job ID: 680-215169-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215169 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
1	EPA-PZ-2012-1A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-1A	N1	23.70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-2A	N1	18.14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-2B	N1	73.16	78 16	1	
5	EPA-PZ-2012-3A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-3A	N1	19 09	24.09	1	
6	EPA-PZ-2012-3B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-4B	N1	79 50	84.50	1	
9	SHL-DUP04-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-5A	N1	17 95	22 95	1	
11	EPA-PZ-2012-5B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-6A	N1	24 19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-7A	N1	23 87	28.87	1	
15	EPA-PZ-2012-7B-SPR22	WG				X	X	X	X	X					EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG				X	X	X	X	X					EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG				X	X	X	X	X					EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X					PZ-12-01	N1	24.00	34.00	1	

Relinquished by:
Date
Time

Received by: 5/10 1040 1.7-1.1
Date
Time 1-2-0.6

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
19	PZ-12-02-SPR22	WG					X	X	X	X	X					PZ-12-02	N1	24.00	34.00	1	
20	PZ-12-03-SPR22	WG					X	X	X	X	X					PZ-12-03	N1	24 00	34.00	1	
21	PZ-12-04-SPR22	WG					X	X	X	X	X					PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG	5-9-22	1205	DC		X	X	X	X	X					PZ-12-05	N1	26 00	36.00	1	
23	PZ-12-06-SPR22	WG	5-9-22	1000	DC		X	X	X	X	X					PZ-12-06	N1	25.00	35 00	1	
24	SHL-DUP01-SPR22	WG	5-9-22	1000	DC		X	X	X	X	X					PZ-12-06	FD1	25 00	35 00	1	
25	PZ-12-07-SPR22	WG					X	X	X	X	X					PZ-12-07	N1	20 00	30.00	1	
26	PZ-12-08-SPR22	WG					X	X	X	X	X					PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-08-SPR22	WG					X	X	X	X	X					PZ-12-09	N1	20 00	30 00	1	
28	PZ-12-10-SPR22	WG	5-9-22	1420	DC		X	X	X	X	X					PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG	5-9-22	1420	DC		X	X	X	X	X					PZ-12-10	N1	20 00	30.00	1	
30	PZ-12-10-SPR22	WG	5.9.22	1420	DC		X	X	X	X	X					PZ-12-10	SD1	20 00	30 00	1	
31	SHL-10-SPR22	WG					X	X	X	X	X					SHL-10	N1	24.00	39 00	1	
32	SHL-11-SPR22	WG					X	X	X	X	X					SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG					X	X	X	X	X					SHL-19	N1	20 00	30 00	1	
34	SHL-20-SPR22	WG					X	X	X	X	X					SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG					X	X	X	X	X					SHL-20	FD1	39 00	49 00	1	
36	SHL-4-SPR22	WG					X	X	X	X	X					SHL-4	N1	3 00	13 00	1	

Relinquished by: [signature] 5/9/22 1715
Date 5/9/22
Time 445

Received by: [signature] 5/9/22 1645
Date 5/10
Time 1046

1.7-1.1
1.2-0.6

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022					46	9	9	5	3						
37	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	N1	32.00	34.00	1	
39	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG	5-9-22	1415	GS	X	X	X	X	X	SHM-05-41B	N1	62.00	64.00	1	
41	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	MS1	88 00	93 00	1	
42	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	N1	88 00	93 00	1	
43	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	SD1	88 00	93.00	1	
44	SHM-07-03-SPR22	WG				X	X	X	X	X	SHM-07-03	N1	25.00	35 00	1	
45	SHM-07-05X-SPR22	WG				X	X	X	X	X	SHM-07-05X	N1	55 00	65 00	1	
46	SHM-11-02-SPR22	WG				X	X	X	X	X	SHM-11-02	N1	52.00	66.00	1	
47	SHM-11-06-SPR22	WG				X	X	X	X	X	SHM-11-06	N1	25 00	35 00	1	
48	SHM-13-03-SPR22	WG				X	X	X	X	X	SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG				X	X	X	X	X	SHM-13-04	N1	20 00	30 00	1	
50	SHM-13-06-SPR22	WG				X	X	X	X	X	SHM-13-06	N1	36 00	46 00	1	
51	SHM-13-07-SPR22	WG				X	X	X	X	X	SHM-13-07	N1	27 00	37.00	1	
52	SHM-13-08-SPR22	WG				X	X	X	X	X	SHM-13-08	N1	55.00	65 00	1	
53	SHM-93-22B-SPR22	WG	5-9-22	1517	SG	X	X	X	X	X	SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG				X	X	X	X	X	SHM-96-5B	N1	80 00	90 00	1	

Relinquished by: [signature]
Date 5/9/22
Time 445 [signature] 5/9/22 1715

Received by: [signature] 5/9/22 1645 [signature] 5/10 1040
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
55	SHL-DUP05-SPR22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
56	SHP-01-36X-SPR22	WG				X	X	X	X	X						SHP-01-36X	N1	3 00	8 00	1	
57	SHP-01-37X-SPR22	WG	5-9-22	1311	SG	X	X	X	X	X						SHP-01-37X	N1	1 00	6 00	1	
58	SHP-01-38A-SPR22	WG	5-9-22	1126	SG	X	X	X	X	X						SHP-01-38A	N1	1.50	6.50	1	
59	SHL-DUP03-SPR22	WG	5-9-22	1145	SG	X	X	X	X	X						SHP-01-38A	FD1	1.50	6.50	1	
60	SHP-2016-06A-SPR22	WG				X	X	X	X	X						SHP-2016-06A	N1	81 00	86 00	1	
61	SHP-2016-06B-SPR22	WG				X	X	X	X	X						SHP-2016-06B	N1	102 00	112.00	1	
62	SHP-2016-06C-SPR22	WG				X	X	X	X	X						SHP-2016-06C	N1	123 00	133 00	1	
63	SHP-2016-07A-SPR22	WG				X	X	X	X	X						SHP-2016-07A	N1	22.00	32.00	1	
64	SHP-2016-07B-SPR22	WG				X	X	X	X	X						SHP-2016-07B	N1	70 00	80 00	1	
65	SHP-2016-1A-SPR22	WG				X	X	X	X	X						SHP-2016-1A	N1	13.00	23.00	1	
66	SHP-2016-1B-SPR22	WG				X	X	X	X	X						SHP-2016-1B	N1	75.00	85.00	1	
67	SHP-2016-2A-SPR22	WG				X	X	X	X	X						SHP-2016-2A	N1	20 00	25 00	1	
68	SHP-2016-2B-SPR22	WG				X	X	X	X	X						SHP-2016-2B	N1	80 00	85 00	1	
69	SHP-2016-3A-SPR22	WG	5-9-22	1045	GS	X	X	X	X	X						SHP-2016-3A	N1	20 00	25 00	1	
70	SHP-2016-3B-SPR22	WG	5-9-22	1220	GS	X	X	X	X	X						SHP-2016-3B	N1	80 00	85.00	1	
71	SHP-2016-4A-SPR22	WG				X	X	X	X	X						SHP-2016-4A	N1	25 00	30 00	1	
72	SHP-2016-4B-SPR22	WG				X	X	X	X	X						SHP-2016-4B	N1	85 00	90 00	1	

Relinquished by: [signature] 5/9/22 1715
Date 5/9/22
Time 4:45

Received by: [signature] 5/9/22 1647
Date
Time 5/10 1040

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
73	SHP-2016-5A-SPR22	WG					X	X	X	X	X							SHP-2016-5A	N1	25.00	30 00	1	
74	SHL-DUP06-SPR22	WG					X	X	X	X	X							SHP-2016-5A	FD1	25.00	30 00	1	
75	SHP-2016-5B-SPR22	WG					X	X	X	X	X							SHP-2016-5B	N1	85 00	90 00	1	
76																							
77																							
78																							
79																							
80																							
81																							
82																							
83																							
84																							

Turnaround Time: Standard

Relinquished by:
Date
Time

Received by:
Date
Time

5/10 1040

7/6/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215169-1

Login Number: 215169
List Number: 1
Creator: Watters, David

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215173-1
Client Project/Site: Fort Devens, SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/6/2022 11:10:26 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215173-1	EPA-PZ-2012-6A-SPR22	Water	05/06/22 12:05	05/10/22 10:40
680-215173-2	PZ-12-07-SPR22	Water	05/06/22 12:00	05/10/22 10:40
680-215173-3	PZ-12-08-SPR22	Water	05/06/22 10:05	05/10/22 10:40
680-215173-4	PZ-12-09-SPR22	Water	05/06/22 15:30	05/10/22 10:40
680-215173-5	SHL-19-SPR22	Water	05/06/22 13:40	05/10/22 10:40
680-215173-6	SHM-05-41C-SPR22	Water	05/06/22 14:45	05/10/22 10:40
680-215173-7	SHM-11-02-SPR22	Water	05/06/22 10:25	05/10/22 10:40
680-215173-8	SHM-13-03-SPR22	Water	05/06/22 09:32	05/10/22 10:40
680-215173-9	SHM-13-04-SPR22	Water	05/06/22 15:12	05/10/22 10:40
680-215173-10	SHM-13-06-SPR22	Water	05/06/22 12:22	05/10/22 10:40
680-215173-11	SHM-13-07-SPR22	Water	05/06/22 10:53	05/10/22 10:40
680-215173-12	SHM-13-08-SPR22	Water	05/06/22 13:57	05/10/22 10:40

Job ID: 680-215173-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215173-1

Comments
No additional comments.

Receipt
The samples were received on 5/10/2022 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.7º C and 1.3º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: EPA-PZ-2012-6A-SPR22

Date Collected: 05/06/22 12:05
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-1

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**39**		0.50	0.50	0.20	mg/L		05/19/22 22:46	1
Sulfate	**4.5**		1.0	1.0	0.40	mg/L		05/19/22 22:46	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/15/22 01:00	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/15/22 01:00	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/12/22 20:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**38**		6.0	5.0	2.2	mg/L		05/13/22 18:05	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**1.1**		1.0	0.60	0.50	mg/L		05/22/22 06:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: PZ-12-07-SPR22

Date Collected: 05/06/22 12:00
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-2

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.89		0.50	0.50	0.20	mg/L		05/19/22 22:59	1
Sulfate	16		1.0	1.0	0.40	mg/L		05/19/22 22:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	2900		100	50	20	ug/L		05/15/22 01:16	1
Manganese	980		10	5.0	1.3	ug/L		05/15/22 01:16	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	130		5.0	3.0	0.86	ug/L		05/12/22 20:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	80		6.0	5.0	2.2	mg/L		05/13/22 17:19	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/22/22 06:29	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: PZ-12-08-SPR22

Date Collected: 05/06/22 10:05
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-3

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.69		0.50	0.50	0.20	mg/L		05/19/22 23:12	1
Sulfate	18		1.0	1.0	0.40	mg/L		05/19/22 23:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	12000		100	50	20	ug/L		05/15/22 01:19	1
Manganese	2900		10	5.0	1.3	ug/L		05/15/22 01:19	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.8	J	5.0	3.0	0.86	ug/L		05/12/22 20:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	65		6.0	5.0	2.2	mg/L		05/16/22 17:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/22/22 06:52	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: PZ-12-09-SPR22

Date Collected: 05/06/22 15:30
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-4

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**0.89**		0.50	0.50	0.20	mg/L		05/19/22 19:23	1
Sulfate	**9.8**		1.0	1.0	0.40	mg/L		05/19/22 19:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/15/22 01:22	1
Manganese	**43**		10	5.0	1.3	ug/L		05/15/22 01:22	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.7**	**J**	5.0	3.0	0.86	ug/L		05/12/22 20:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**84**		6.0	5.0	2.2	mg/L		05/16/22 17:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.61**	**J**	1.0	0.60	0.50	mg/L		05/21/22 15:50	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHL-19-SPR22

Date Collected: 05/06/22 13:40
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-5

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.77		0.50	0.50	0.20	mg/L		05/19/22 22:49	1
Sulfate	11		1.0	1.0	0.40	mg/L		05/19/22 22:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	230		100	50	20	ug/L		05/15/22 01:25	1
Manganese	2.8	J	10	5.0	1.3	ug/L		05/15/22 01:25	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	5.6		5.0	3.0	0.86	ug/L		05/12/22 20:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	75		6.0	5.0	2.2	mg/L		05/16/22 16:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.91	J	1.0	0.60	0.50	mg/L		05/21/22 16:12	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-05-41C-SPR22

Date Collected: 05/06/22 14:45
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-6

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	180		0.50	0.50	0.20	mg/L		05/19/22 22:11	1
Sulfate	3.7		1.0	1.0	0.40	mg/L		05/19/22 22:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4700		100	50	20	ug/L		05/15/22 00:51	1
Manganese	940	J1	10	5.0	1.3	ug/L		05/15/22 00:51	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	270	J1	5.0	3.0	0.86	ug/L		05/12/22 19:57	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	260		6.0	5.0	2.2	mg/L		05/16/22 17:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	3.8		1.0	0.60	0.50	mg/L		05/21/22 16:31	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-11-02-SPR22

Date Collected: 05/06/22 10:25
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-7

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	50		0.50	0.50	0.20	mg/L		05/19/22 23:02	1
Sulfate	4.3	M	1.0	1.0	0.40	mg/L		05/19/22 23:02	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	8900		100	50	20	ug/L		05/15/22 01:28	1
Manganese	750		10	5.0	1.3	ug/L		05/15/22 01:28	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	14		5.0	3.0	0.86	ug/L		05/12/22 20:28	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	200		6.0	5.0	2.2	mg/L		05/16/22 17:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/21/22 17:37	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-03-SPR22

Date Collected: 05/06/22 09:32
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-8

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	59		0.50	0.50	0.20	mg/L		05/19/22 19:11	1
Sulfate	3.6		1.0	1.0	0.40	mg/L		05/19/22 19:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	3800		100	50	20	ug/L		05/15/22 01:31	1
Manganese	8400		10	5.0	1.3	ug/L		05/15/22 01:31	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	53		5.0	3.0	0.86	ug/L		05/12/22 20:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	210		6.0	5.0	2.2	mg/L		05/16/22 18:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.5		1.0	0.60	0.50	mg/L		05/21/22 18:00	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-04-SPR22

Date Collected: 05/06/22 15:12
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-9

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	330	D	5.0	5.0	2.0	mg/L		05/23/22 12:48	10
Sulfate	7.7		1.0	1.0	0.40	mg/L		05/19/22 19:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	410		100	50	20	ug/L		05/13/22 23:38	1
Manganese	24		10	5.0	1.3	ug/L		05/13/22 23:38	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	50		5.0	3.0	0.86	ug/L		05/13/22 18:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	33		6.0	5.0	2.2	mg/L		05/16/22 18:04	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.1		1.0	0.60	0.50	mg/L		05/21/22 18:23	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-06-SPR22

Date Collected: 05/06/22 12:22
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-10

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	34		0.50	0.50	0.20	mg/L		05/19/22 19:36	1
Sulfate	6.2		1.0	1.0	0.40	mg/L		05/19/22 19:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		05/13/22 23:41	1
Manganese	1100		10	5.0	1.3	ug/L		05/13/22 23:41	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2400		5.0	3.0	0.86	ug/L		05/13/22 18:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	56		6.0	5.0	2.2	mg/L		05/17/22 15:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.2		1.0	0.60	0.50	mg/L		05/21/22 18:45	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-07-SPR22

Date Collected: 05/06/22 10:53
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-11

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	120	D	1.0	1.0	0.40	mg/L		05/19/22 19:49	2
Sulfate	10	D	2.0	2.0	0.80	mg/L		05/19/22 19:49	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	12000		100	50	20	ug/L		05/13/22 23:44	1
Manganese	1200		10	5.0	1.3	ug/L		05/13/22 23:44	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	210		5.0	3.0	0.86	ug/L		05/13/22 18:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	48		6.0	5.0	2.2	mg/L		05/17/22 14:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0		1.0	0.60	0.50	mg/L		05/21/22 19:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-08-SPR22

Date Collected: 05/06/22 13:57
Date Received: 05/10/22 10:40

Lab Sample ID: 680-215173-12

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	23		0.50	0.50	0.20	mg/L		05/19/22 20:02	1
Sulfate	3.6	M	1.0	1.0	0.40	mg/L		05/19/22 20:02	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	37000		100	50	20	ug/L		05/13/22 23:53	1
Manganese	1100		10	5.0	1.3	ug/L		05/13/22 23:53	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	890		5.0	3.0	0.86	ug/L		05/13/22 18:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	110		6.0	5.0	2.2	mg/L		05/17/22 18:12	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/21/22 20:10	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-721621/15
Matrix: Water
Analysis Batch: 721621

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/19/22 10:30	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 10:30	1

Lab Sample ID: LCS 680-721621/16
Matrix: Water
Analysis Batch: 721621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.2		mg/L		102	87 - 111
Sulfate	10.0	9.41		mg/L		94	87 - 112

Lab Sample ID: LCSD 680-721621/17
Matrix: Water
Analysis Batch: 721621

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	9.34		mg/L		93	87 - 112	1	15

Lab Sample ID: MB 680-721622/45
Matrix: Water
Analysis Batch: 721622

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/19/22 21:32	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 21:32	1

Lab Sample ID: LCS 680-721622/46
Matrix: Water
Analysis Batch: 721622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	9.68		mg/L		97	87 - 112

Lab Sample ID: LCSD 680-721622/47
Matrix: Water
Analysis Batch: 721622

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	87 - 111	0	15
Sulfate	10.0	9.61		mg/L		96	87 - 112	1	15

Lab Sample ID: 680-215173-6 MS
Matrix: Water
Analysis Batch: 721622

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	180		10.0	184	4	mg/L		87	87 - 111
Sulfate	3.7		10.0	13.0		mg/L		93	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-215173-6 MSD
Matrix: Water
Analysis Batch: 721622

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	180		10.0	184	4	mg/L		87	87 - 111	0	15
Sulfate	3.7		10.0	13.1		mg/L		94	87 - 112	1	15

Lab Sample ID: MB 680-721625/33
Matrix: Water
Analysis Batch: 721625

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/19/22 17:17	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/19/22 17:17	1

Lab Sample ID: LCS 680-721625/34
Matrix: Water
Analysis Batch: 721625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	9.89		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-721625/35
Matrix: Water
Analysis Batch: 721625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.0		mg/L		100	87 - 111	0	15
Sulfate	10.0	9.85		mg/L		98	87 - 112	0	15

Lab Sample ID: MB 680-722183/2
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/23/22 10:08	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/23/22 10:08	1

Lab Sample ID: LCS 680-722183/3
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.2		mg/L		102	87 - 111
Sulfate	10.0	9.61		mg/L		96	87 - 112

Lab Sample ID: LCSD 680-722183/4
Matrix: Water
Analysis Batch: 722183

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	9.61		mg/L		96	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720491/1-A
Matrix: Water
Analysis Batch: 720882

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720491

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/15/22 00:45	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/15/22 00:45	1

Lab Sample ID: LCS 680-720491/2-A
Matrix: Water
Analysis Batch: 720882

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720491

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4920		ug/L		98	87 - 115
Manganese	400	399		ug/L		100	90 - 114

Lab Sample ID: MB 680-720564/1-A
Matrix: Water
Analysis Batch: 720756

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720564

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/13/22 22:56	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/13/22 22:56	1

Lab Sample ID: LCS 680-720564/2-A
Matrix: Water
Analysis Batch: 720756

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720564

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5100		ug/L		102	87 - 115
Manganese	400	414		ug/L		103	90 - 114

Lab Sample ID: 680-215173-6 MS
Matrix: Water
Analysis Batch: 720882

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved
Prep Batch: 720491

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4700		5000	9590		ug/L		98	87 - 115
Manganese	940	J1	400	1320		ug/L		96	90 - 114

Lab Sample ID: 680-215173-6 MSD
Matrix: Water
Analysis Batch: 720882

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved
Prep Batch: 720491

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	4700		5000	9590		ug/L		98	87 - 115	0	20
Manganese	940	J1	400	1300		ug/L		92	90 - 114	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720494/1-A
Matrix: Water
Analysis Batch: 720585

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720494

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/12/22 19:52	1

Lab Sample ID: LCS 680-720494/2-A
Matrix: Water
Analysis Batch: 720585

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720494

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	103		ug/L		103	84 - 116

Lab Sample ID: MB 680-720565/1-A
Matrix: Water
Analysis Batch: 720752

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720565

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/13/22 18:01	1

Lab Sample ID: LCS 680-720565/2-A
Matrix: Water
Analysis Batch: 720752

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: 680-215173-6 MS
Matrix: Water
Analysis Batch: 720585

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved
Prep Batch: 720494

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	270	J1	100	387	J1	ug/L		120	84 - 116

Lab Sample ID: 680-215173-6 MSD
Matrix: Water
Analysis Batch: 720585

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved
Prep Batch: 720494

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	270	J1	100	370		ug/L		104	84 - 116	4	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-720904/5
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/13/22 16:26	1

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 680-720904/7
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	236		mg/L		95	90 - 112		

Lab Sample ID: LCSD 680-720904/32
Matrix: Water
Analysis Batch: 720904

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	242		mg/L		97	90 - 112	2	30

Lab Sample ID: MB 680-721155/5
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/16/22 15:34	1

Lab Sample ID: LCS 680-721155/7
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	238		mg/L		95	90 - 112		

Lab Sample ID: LCSD 680-721155/32
Matrix: Water
Analysis Batch: 721155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	238		mg/L		95	90 - 112	0	30

Lab Sample ID: 680-215173-6 DU
Matrix: Water
Analysis Batch: 721155

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	260			260		mg/L				0.1	30

Lab Sample ID: MB 680-721327/5
Matrix: Water
Analysis Batch: 721327

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/17/22 14:36	1

Lab Sample ID: LCS 680-721327/7
Matrix: Water
Analysis Batch: 721327

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	236		mg/L		94	90 - 112		

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: LCSD 680-721327/32
Matrix: Water
Analysis Batch: 721327

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	238		mg/L		95	90 - 112	1	30

Lab Sample ID: 680-215173-11 DU
Matrix: Water
Analysis Batch: 721327

Client Sample ID: SHM-13-07-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	48			47.8		mg/L				0.6	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-722187/3
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/21/22 22:33	1

Lab Sample ID: LCS 680-722187/4
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	18.7		mg/L		94	80 - 120		

Lab Sample ID: LCSD 680-722187/5
Matrix: Water
Analysis Batch: 722187

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	18.8		mg/L		94	80 - 120	0	20

Lab Sample ID: MB 680-722284/2
Matrix: Water
Analysis Batch: 722284

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/21/22 14:25	1

Lab Sample ID: LCS 680-722284/3
Matrix: Water
Analysis Batch: 722284

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	19.1		mg/L		95	80 - 120		

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCSD 680-722284/4
Matrix: Water
Analysis Batch: 722284

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.1		mg/L		96	80 - 120	0	20

Lab Sample ID: 680-215173-6 MS
Matrix: Water
Analysis Batch: 722284

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	3.8		20.0	22.9		mg/L		95	80 - 120		

Lab Sample ID: 680-215173-6 MSD
Matrix: Water
Analysis Batch: 722284

Client Sample ID: SHM-05-41C-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	3.8		20.0	22.6		mg/L		94	80 - 120	1	20

HPLC/IC

Analysis Batch: 721621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-4	PZ-12-09-SPR22	Total/NA	Water	9056A	
MB 680-721621/15	Method Blank	Total/NA	Water	9056A	
LCS 680-721621/16	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721621/17	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 721622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-5	SHL-19-SPR22	Total/NA	Water	9056A	
680-215173-6	SHM-05-41C-SPR22	Total/NA	Water	9056A	
680-215173-7	SHM-11-02-SPR22	Total/NA	Water	9056A	
MB 680-721622/45	Method Blank	Total/NA	Water	9056A	
LCS 680-721622/46	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721622/47	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215173-6 MS	SHM-05-41C-SPR22	Total/NA	Water	9056A	
680-215173-6 MSD	SHM-05-41C-SPR22	Total/NA	Water	9056A	

Analysis Batch: 721625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Total/NA	Water	9056A	
680-215173-2	PZ-12-07-SPR22	Total/NA	Water	9056A	
680-215173-3	PZ-12-08-SPR22	Total/NA	Water	9056A	
680-215173-8	SHM-13-03-SPR22	Total/NA	Water	9056A	
680-215173-9	SHM-13-04-SPR22	Total/NA	Water	9056A	
680-215173-10	SHM-13-06-SPR22	Total/NA	Water	9056A	
680-215173-11	SHM-13-07-SPR22	Total/NA	Water	9056A	
680-215173-12	SHM-13-08-SPR22	Total/NA	Water	9056A	
MB 680-721625/33	Method Blank	Total/NA	Water	9056A	
LCS 680-721625/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721625/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 722183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-9	SHM-13-04-SPR22	Total/NA	Water	9056A	
MB 680-722183/2	Method Blank	Total/NA	Water	9056A	
LCS 680-722183/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-722183/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 720491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Dissolved	Water	3005A	
680-215173-2	PZ-12-07-SPR22	Dissolved	Water	3005A	
680-215173-3	PZ-12-08-SPR22	Dissolved	Water	3005A	
680-215173-4	PZ-12-09-SPR22	Dissolved	Water	3005A	
680-215173-5	SHL-19-SPR22	Dissolved	Water	3005A	
680-215173-6	SHM-05-41C-SPR22	Dissolved	Water	3005A	
680-215173-7	SHM-11-02-SPR22	Dissolved	Water	3005A	
680-215173-8	SHM-13-03-SPR22	Dissolved	Water	3005A	
MB 680-720491/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720491/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 720491 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-6 MS	SHM-05-41C-SPR22	Dissolved	Water	3005A	
680-215173-6 MSD	SHM-05-41C-SPR22	Dissolved	Water	3005A	

Prep Batch: 720494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Dissolved	Water	3005A	
680-215173-2	PZ-12-07-SPR22	Dissolved	Water	3005A	
680-215173-3	PZ-12-08-SPR22	Dissolved	Water	3005A	
680-215173-4	PZ-12-09-SPR22	Dissolved	Water	3005A	
680-215173-5	SHL-19-SPR22	Dissolved	Water	3005A	
680-215173-6	SHM-05-41C-SPR22	Dissolved	Water	3005A	
680-215173-7	SHM-11-02-SPR22	Dissolved	Water	3005A	
680-215173-8	SHM-13-03-SPR22	Dissolved	Water	3005A	
MB 680-720494/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720494/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215173-6 MS	SHM-05-41C-SPR22	Dissolved	Water	3005A	
680-215173-6 MSD	SHM-05-41C-SPR22	Dissolved	Water	3005A	

Prep Batch: 720564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-9	SHM-13-04-SPR22	Dissolved	Water	3005A	
680-215173-10	SHM-13-06-SPR22	Dissolved	Water	3005A	
680-215173-11	SHM-13-07-SPR22	Dissolved	Water	3005A	
680-215173-12	SHM-13-08-SPR22	Dissolved	Water	3005A	
MB 680-720564/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720564/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-9	SHM-13-04-SPR22	Dissolved	Water	3005A	
680-215173-10	SHM-13-06-SPR22	Dissolved	Water	3005A	
680-215173-11	SHM-13-07-SPR22	Dissolved	Water	3005A	
680-215173-12	SHM-13-08-SPR22	Dissolved	Water	3005A	
MB 680-720565/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720565/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 720585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Dissolved	Water	6020A	720494
680-215173-2	PZ-12-07-SPR22	Dissolved	Water	6020A	720494
680-215173-3	PZ-12-08-SPR22	Dissolved	Water	6020A	720494
680-215173-4	PZ-12-09-SPR22	Dissolved	Water	6020A	720494
680-215173-5	SHL-19-SPR22	Dissolved	Water	6020A	720494
680-215173-6	SHM-05-41C-SPR22	Dissolved	Water	6020A	720494
680-215173-7	SHM-11-02-SPR22	Dissolved	Water	6020A	720494
680-215173-8	SHM-13-03-SPR22	Dissolved	Water	6020A	720494
MB 680-720494/1-A	Method Blank	Total Recoverable	Water	6020A	720494
LCS 680-720494/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720494
680-215173-6 MS	SHM-05-41C-SPR22	Dissolved	Water	6020A	720494
680-215173-6 MSD	SHM-05-41C-SPR22	Dissolved	Water	6020A	720494

Metals

Analysis Batch: 720752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-9	SHM-13-04-SPR22	Dissolved	Water	6020A	720565
680-215173-10	SHM-13-06-SPR22	Dissolved	Water	6020A	720565
680-215173-11	SHM-13-07-SPR22	Dissolved	Water	6020A	720565
680-215173-12	SHM-13-08-SPR22	Dissolved	Water	6020A	720565
MB 680-720565/1-A	Method Blank	Total Recoverable	Water	6020A	720565
LCS 680-720565/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720565

Analysis Batch: 720756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-9	SHM-13-04-SPR22	Dissolved	Water	6010C	720564
680-215173-10	SHM-13-06-SPR22	Dissolved	Water	6010C	720564
680-215173-11	SHM-13-07-SPR22	Dissolved	Water	6010C	720564
680-215173-12	SHM-13-08-SPR22	Dissolved	Water	6010C	720564
MB 680-720564/1-A	Method Blank	Total Recoverable	Water	6010C	720564
LCS 680-720564/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720564

Analysis Batch: 720882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Dissolved	Water	6010C	720491
680-215173-2	PZ-12-07-SPR22	Dissolved	Water	6010C	720491
680-215173-3	PZ-12-08-SPR22	Dissolved	Water	6010C	720491
680-215173-4	PZ-12-09-SPR22	Dissolved	Water	6010C	720491
680-215173-5	SHL-19-SPR22	Dissolved	Water	6010C	720491
680-215173-6	SHM-05-41C-SPR22	Dissolved	Water	6010C	720491
680-215173-7	SHM-11-02-SPR22	Dissolved	Water	6010C	720491
680-215173-8	SHM-13-03-SPR22	Dissolved	Water	6010C	720491
MB 680-720491/1-A	Method Blank	Total Recoverable	Water	6010C	720491
LCS 680-720491/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720491
680-215173-6 MS	SHM-05-41C-SPR22	Dissolved	Water	6010C	720491
680-215173-6 MSD	SHM-05-41C-SPR22	Dissolved	Water	6010C	720491

General Chemistry

Analysis Batch: 720904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Total/NA	Water	2320B-2011	
680-215173-2	PZ-12-07-SPR22	Total/NA	Water	2320B-2011	
MB 680-720904/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720904/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720904/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 721155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-3	PZ-12-08-SPR22	Total/NA	Water	2320B-2011	
680-215173-4	PZ-12-09-SPR22	Total/NA	Water	2320B-2011	
680-215173-5	SHL-19-SPR22	Total/NA	Water	2320B-2011	
680-215173-6	SHM-05-41C-SPR22	Total/NA	Water	2320B-2011	
680-215173-7	SHM-11-02-SPR22	Total/NA	Water	2320B-2011	
680-215173-8	SHM-13-03-SPR22	Total/NA	Water	2320B-2011	
680-215173-9	SHM-13-04-SPR22	Total/NA	Water	2320B-2011	
MB 680-721155/5	Method Blank	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 721155 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-721155/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-721155/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215173-6 DU	SHM-05-41C-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 721327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-10	SHM-13-06-SPR22	Total/NA	Water	2320B-2011	
680-215173-11	SHM-13-07-SPR22	Total/NA	Water	2320B-2011	
680-215173-12	SHM-13-08-SPR22	Total/NA	Water	2320B-2011	
MB 680-721327/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-721327/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-721327/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215173-11 DU	SHM-13-07-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 722187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-1	EPA-PZ-2012-6A-SPR22	Dissolved	Water	9060A	
680-215173-2	PZ-12-07-SPR22	Dissolved	Water	9060A	
680-215173-3	PZ-12-08-SPR22	Dissolved	Water	9060A	
MB 680-722187/3	Method Blank	Dissolved	Water	9060A	
LCS 680-722187/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-722187/5	Lab Control Sample Dup	Dissolved	Water	9060A	

Analysis Batch: 722284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215173-4	PZ-12-09-SPR22	Dissolved	Water	9060A	
680-215173-5	SHL-19-SPR22	Dissolved	Water	9060A	
680-215173-6	SHM-05-41C-SPR22	Dissolved	Water	9060A	
680-215173-7	SHM-11-02-SPR22	Dissolved	Water	9060A	
680-215173-8	SHM-13-03-SPR22	Dissolved	Water	9060A	
680-215173-9	SHM-13-04-SPR22	Dissolved	Water	9060A	
680-215173-10	SHM-13-06-SPR22	Dissolved	Water	9060A	
680-215173-11	SHM-13-07-SPR22	Dissolved	Water	9060A	
680-215173-12	SHM-13-08-SPR22	Dissolved	Water	9060A	
MB 680-722284/2	Method Blank	Dissolved	Water	9060A	
LCS 680-722284/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-722284/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215173-6 MS	SHM-05-41C-SPR22	Dissolved	Water	9060A	
680-215173-6 MSD	SHM-05-41C-SPR22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: EPA-PZ-2012-6A-SPR22

Lab Sample ID: 680-215173-1
Date Collected: 05/06/22 12:05
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 22:46	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:00	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:10	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720904	05/13/22 18:05	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 06:07	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-07-SPR22

Lab Sample ID: 680-215173-2
Date Collected: 05/06/22 12:00
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 22:59	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:16	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:13	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720904	05/13/22 17:19	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 06:29	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-08-SPR22

Lab Sample ID: 680-215173-3
Date Collected: 05/06/22 10:05
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 23:12	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:19	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:15	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: PZ-12-08-SPR22

Lab Sample ID: 680-215173-3
Matrix: Water
Date Collected: 05/06/22 10:05
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 17:10	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722187	05/22/22 06:52	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: PZ-12-09-SPR22

Lab Sample ID: 680-215173-4
Matrix: Water
Date Collected: 05/06/22 15:30
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721621	05/19/22 19:23	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:22	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:23	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 17:02	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 15:50	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-19-SPR22

Lab Sample ID: 680-215173-5
Matrix: Water
Date Collected: 05/06/22 13:40
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721622	05/19/22 22:49	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:25	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:26	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 16:54	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 16:12	RKJ	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-05-41C-SPR22

Lab Sample ID: 680-215173-6

Date Collected: 05/06/22 14:45
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721622	05/19/22 22:11	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 00:51	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 19:57	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 17:39	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 16:31	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-11-02-SPR22

Lab Sample ID: 680-215173-7

Date Collected: 05/06/22 10:25
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721622	05/19/22 23:02	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:28	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:28	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 17:57	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 17:37	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-03-SPR22

Lab Sample ID: 680-215173-8

Date Collected: 05/06/22 09:32
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 19:11	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720491	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6010C		1			720882	05/15/22 01:31	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720494	05/12/22 12:02	JE	TAL SAV
Dissolved	Analysis	6020A		1			720585	05/12/22 20:31	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-03-SPR22

Lab Sample ID: 680-215173-8
Date Collected: 05/06/22 09:32
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:13	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 18:00	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-04-SPR22

Lab Sample ID: 680-215173-9
Date Collected: 05/06/22 15:12
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	5 mL	5 mL	722183	05/23/22 12:48	AF	TAL SAV
	Instrument ID: CICH									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 19:24	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:38	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:19	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721155	05/16/22 18:04	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 18:23	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-06-SPR22

Lab Sample ID: 680-215173-10
Date Collected: 05/06/22 12:22
Matrix: Water
Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 19:36	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:41	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:22	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721327	05/17/22 15:11	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 18:45	RKJ	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Client Sample ID: SHM-13-07-SPR22

Lab Sample ID: 680-215173-11

Date Collected: 05/06/22 10:53

Matrix: Water

Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		2	5 mL	5 mL	721625	05/19/22 19:49	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:44	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:24	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721327	05/17/22 14:57	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 19:07	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-08-SPR22

Lab Sample ID: 680-215173-12

Date Collected: 05/06/22 13:57

Matrix: Water

Date Received: 05/10/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	721625	05/19/22 20:02	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720564	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6010C		1			720756	05/13/22 23:53	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720565	05/12/22 16:27	JE	TAL SAV
Dissolved	Analysis	6020A		1			720752	05/13/22 18:32	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			721327	05/17/22 18:12	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722284	05/21/22 20:10	RKJ	TAL SAV
	Instrument ID: TOC7									

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215173-1
Project/Site: Fort Devens, SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, SHL, Spring 2022

Job ID: 680-215173-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215173 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.													Location ID	Type	Top	Bottom	Cooler	Comments
							46	9	9	5	3												
1	EPA-PZ-2012-1A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-1A	N1	23.70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-2B	N1	73.16	78.16	1	
5	EPA-PZ-2012-3A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-5A	N1	17.95	22.95	1	
11	EPA-PZ-2012-5B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG	5-6-22	1205	GS		X	X	X	X	X							EPA-PZ-2012-6A	N1	24 19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-7A	N1	23.87	28.87	1	
15	EPA-PZ-2012-7B-SPR22	WG					X	X	X	X	X							EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG					X	X	X	X	X							EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG					X	X	X	X	X							EW-04	N1	70 00	95.00	1	
18	PZ-12-01-SPR22	WG					X	X	X	X	X							PZ-12-01	N1	24.00	34.00	1	

Relinquished by: Grace Shultz
Date 5/6/22
Time 445

5/9/22 1700

Received by:
Date 5/6/22
Time 1645

5/10 1040

1-3-0-7 LQ-1-3

7/6/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022					46	9	9	5	3						
19	PZ-12-02-SPR22	WG				X	X	X	X	X	PZ-12-02	N1	24 00	34 00	1	
20	PZ-12-03-SPR22	WG				X	X	X	X	X	PZ-12-03	N1	24.00	34.00	1	
21	PZ-12-04-SPR22	WG				X	X	X	X	X	PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG				X	X	X	X	X	PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X	PZ-12-06	N1	25.00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X	PZ-12-06	FD1	25.00	35.00	1	
25	PZ-12-07-SPR22	WG	5-6-22	1200	DC	X	X	X	X	X	PZ-12-07	N1	20 00	30.00	1	
26	PZ-12-08-SPR22	WG	5-6-22	1005	DC	X	X	X	X	X	PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-09-SPR22	WG	5-6-22	1530	DC	X	X	X	X	X	PZ-12-09	N1	20 00	30.00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X	PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X	PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X	PZ-12-10	SD1	20 00	30 00	1	
31	SHL-10-SPR22	WG				X	X	X	X	X	SHL-10	N1	24 00	39 00	1	
32	SHL-11-SPR22	WG				X	X	X	X	X	SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG	5-6-22	1340	DC	X	X	X	X	X	SHL-19	N1	20 00	30 00	1	
34	SHL-20-SPR22	WG				X	X	X	X	X	SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG				X	X	X	X	X	SHL-20	FD1	39 00	49 00	1	
36	SHL-4-SPR22	WG				X	X	X	X	X	SHL-4	N1	3 00	13 00	1	

Relinquished by: [signature]
Date 5/6/22
Time 4.45
[signature] 5/9/22 1700

Received by: [signature] 5/6/22 1645
Date
Time
[signature] 5/10 1040

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	*Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022*
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
37	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	N1	32.00	34.00	1	
39	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG				X	X	X	X	X	SHM-05-41B	N1	62.00	64.00	1	
41	SHM-05-41C-SPR22	WG	5-6-22	1445	GS	X	X	X	X	X	SHM-05-41C	MS1	88.00	93.00	1	
42	SHM-05-41C-SPR22	WG	5-6-22	1500	GS	X	X	X	X	X	SHM-05-41C	N1	88.00	93.00	1	
43	SHM-05-41C-SPR22	WG	5-6-22	1510	GS	X	X	X	X	X	SHM-05-41C	SD1	88.00	93.00	1	
44	SHM-07-03-SPR22	WG				X	X	X	X	X	SHM-07-03	N1	25 00	35.00	1	
45	SHM-07-05X-SPR22	WG				X	X	X	X	X	SHM-07-05X	N1	55.00	65 00	1	
46	SHM-11-02-SPR22	WG	5-6-22	1025	GS	X	X	X	X	X	SHM-11-02	N1	52.00	66 00	1	
47	SHM-11-06-SPR22	WG				X	X	X	X	X	SHM-11-06	N1	25 00	35.00	1	
48	SHM-13-03-SPR22	WG	5-6-22	932	GS	X	X	X	X	X	SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG	5-6-22	1512	SG	X	X	X	X	X	SHM-13-04	N1	20.00	30 00	1	
50	SHM-13-06-SPR22	WG	5-6-22	1222	SG	X	X	X	X	X	SHM-13-06	N1	36 00	46 00	1	
51	SHM-13-07-SPR22	WG	5-6-22	1053	SG	X	X	X	X	X	SHM-13-07	N1	27 00	37.00	1	
52	SHM-13-08-SPR22	WG	5-6-22	1357	SG	X	X	X	X	X	SHM-13-08	N1	55.00	65.00	1	
53	SHM-93-22B-SPR22	WG				X	X	X	X	X	SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG				X	X	X	X	X	SHM-96-5B	N1	80 00	90.00	1	

Relinquished by: [signature]
Date 5/6/22
Time 4:45

[signature] 5/9/22 1700

Received by: [signature] 5/6/22 1645
Date
Time

[signature] 5/10 1040

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus com	
WBS Code	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)								
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3								
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
55	SHL-DUP05-SPR22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
56	SHP-01-36X-SPR22	WG				X	X	X	X	X						SHP-01-36X	N1	3 00	8.00	1	
57	SHP-01-37X-SPR22	WG				X	X	X	X	X						SHP-01-37X	N1	1 00	6 00	1	
58	SHP-01-38A-SPR22	WG				X	X	X	X	X						SHP-01-38A	N1	1.50	6.50	1	
59	SHL-DUP03-SPR22	WG				X	X	X	X	X						SHP-01-38A	FD1	1.50	6.50	1	
60	SHP-2016-06A-SPR22	WG				X	X	X	X	X						SHP-2016-06A	N1	81 00	86.00	1	
61	SHP-2016-06B-SPR22	WG				X	X	X	X	X						SHP-2016-06B	N1	102.00	112.00	1	
62	SHP-2016-06C-SPR22	WG				X	X	X	X	X						SHP-2016-06C	N1	123 00	133.00	1	
63	SHP-2016-07A-SPR22	WG				X	X	X	X	X						SHP-2016-07A	N1	22.00	32.00	1	
64	SHP-2016-07B-SPR22	WG				X	X	X	X	X						SHP-2016-07B	N1	70 00	80 00	1	
65	SHP-2016-1A-SPR22	WG				X	X	X	X	X						SHP-2016-1A	N1	13 00	23.00	1	
66	SHP-2016-1B-SPR22	WG				X	X	X	X	X						SHP-2016-1B	N1	75 00	85 00	1	
67	SHP-2016-2A-SPR22	WG				X	X	X	X	X						SHP-2016-2A	N1	20 00	25 00	1	
68	SHP-2016-2B-SPR22	WG				X	X	X	X	X						SHP-2016-2B	N1	80 00	85 00	1	
69	SHP-2016-3A-SPR22	WG				X	X	X	X	X						SHP-2016-3A	N1	20 00	25.00	1	
70	SHP-2016-3B-SPR22	WG				X	X	X	X	X						SHP-2016-3B	N1	80 00	85 00	1	
71	SHP-2016-4A-SPR22	WG				X	X	X	X	X						SHP-2016-4A	N1	25 00	30 00	1	
72	SHP-2016-4B-SPR22	WG				X	X	X	X	X						SHP-2016-4B	N1	85 00	90.00	1	

5/10 1040

Relinquished by:
Date
Time

Received by:
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method													
						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022					**46**	**9**	**9**	**5**	**3**									
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
73	SHP-2016-5A-SPR22	WG				X	X	X	X	X					SHP-2016-5A	N1	25.00	30 00	**1**	
74	SHL-DUP06-SPR22	WG				X	X	X	X	X					SHP-2016-5A	FD1	25 00	30 00	**1**	
75	SHP-2016-5B-SPR22	WG				X	X	X	X	X					SHP-2016-5B	N1	85.00	90 00	**1**	
76																				
77																				
78																				
79																				
80																				
81																				
82																				
83																				
84																				

Turnaround Time: Standard

5/10 1040

Relinquished by:
Date
Time

Received by:
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215173-1

Login Number: 215173
List Number: 1
Creator: Watters, David

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215360-1
Client Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/6/2022 11:31:13 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Job ID: 680-215360-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215360-1	EPA-PZ-2012-4A-SPR22	Water	05/10/22 13:40	05/12/22 14:38
680-215360-2	EPA-PZ-2012-4B-SPR22	Water	05/10/22 14:55	05/12/22 14:38
680-215360-3	SHL-DUP04-SPR22	Water	05/10/22 14:55	05/12/22 14:38
680-215360-4	EPA-PZ-2012-6B-SPR22	Water	05/10/22 09:45	05/12/22 14:38
680-215360-5	SHM-96-5B-SPR22	Water	05/10/22 12:17	05/12/22 14:38
680-215360-6	SHL-DUP05-SPR22	Water	05/10/22 12:30	05/12/22 14:38
680-215360-7	SHP-01-36X-SPR22	Water	05/10/22 10:20	05/12/22 14:38
680-215360-8	SHP-2016-07A-SPR22	Water	05/10/22 14:45	05/12/22 14:38
680-215360-9	SHP-2016-1A-SPR22	Water	05/10/22 09:55	05/12/22 14:38
680-215360-10	SHP-2016-1B-SPR22	Water	05/10/22 11:40	05/12/22 14:38
680-215360-11	SHP-2016-4B-SPR22	Water	05/10/22 15:06	05/12/22 14:38
680-215360-12	SHP-2016-5A-SPR22	Water	05/10/22 11:15	05/12/22 14:38
680-215360-13	SHL-DUP06-SPR22	Water	05/10/22 11:25	05/12/22 14:38
680-215360-14	SHP-2016-5B-SPR22	Water	05/10/22 13:10	05/12/22 14:38

Job ID: 680-215360-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215360-1

Comments
No additional comments.

Receipt
The samples were received on 5/12/2022 2:38 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.1º C and 1.1º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-4A-SPR22
Lab Sample ID: 680-215360-1

Date Collected: 05/10/22 13:40
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	14		0.50	0.50	0.20	mg/L		05/25/22 16:25	1
Sulfate	1.8		1.0	1.0	0.40	mg/L		05/25/22 16:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4200		100	50	20	ug/L		05/17/22 21:58	1
Manganese	580		10	5.0	1.3	ug/L		05/17/22 21:58	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.8	J	5.0	3.0	0.86	ug/L		05/17/22 17:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	87		6.0	5.0	2.2	mg/L		05/23/22 19:18	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	10		1.0	0.60	0.50	mg/L		05/24/22 01:29	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Job ID: 680-215360-1

Client Sample ID: EPA-PZ-2012-4B-SPR22

Date Collected: 05/10/22 14:55
Date Received: 05/12/22 14:38

Lab Sample ID: 680-215360-2

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	33		0.50	0.50	0.20	mg/L		05/25/22 16:37	1
Sulfate	17		1.0	1.0	0.40	mg/L		05/25/22 16:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50000		100	50	20	ug/L		05/17/22 22:02	1
Manganese	770		10	5.0	1.3	ug/L		05/17/22 22:02	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1800		5.0	3.0	0.86	ug/L		05/17/22 17:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	120		6.0	5.0	2.2	mg/L		05/23/22 20:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/24/22 02:37	1

Client Sample ID: SHL-DUP04-SPR22
Lab Sample ID: 680-215360-3

Date Collected: 05/10/22 14:55
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	33		0.50	0.50	0.20	mg/L		05/25/22 16:50	1
Sulfate	17		1.0	1.0	0.40	mg/L		05/25/22 16:50	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50000		100	50	20	ug/L		05/17/22 22:05	1
Manganese	750		10	5.0	1.3	ug/L		05/17/22 22:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1800		5.0	3.0	0.86	ug/L		05/17/22 17:18	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	100		6.0	5.0	2.2	mg/L		05/23/22 22:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/24/22 03:00	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-6B-SPR22
Lab Sample ID: 680-215360-4
Date Collected: 05/10/22 09:45
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	4.1		0.50	0.50	0.20	mg/L		05/25/22 17:03	1
Sulfate	3.6		1.0	1.0	0.40	mg/L		05/25/22 17:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		05/17/22 22:08	1
Manganese	800		10	5.0	1.3	ug/L		05/17/22 22:08	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	250		5.0	3.0	0.86	ug/L		05/17/22 17:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	31		6.0	5.0	2.2	mg/L		05/23/22 17:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.3		1.0	0.60	0.50	mg/L		05/24/22 03:24	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHM-96-5B-SPR22
Lab Sample ID: 680-215360-5

Date Collected: 05/10/22 12:17
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		05/25/22 17:15	1
Sulfate	21		1.0	1.0	0.40	mg/L		05/25/22 17:15	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	14000		100	50	20	ug/L		05/17/22 22:11	1
Manganese	7800		10	5.0	1.3	ug/L		05/17/22 22:11	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	980		5.0	3.0	0.86	ug/L		05/17/22 17:28	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	170		6.0	5.0	2.2	mg/L		05/23/22 19:03	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/24/22 03:43	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHL-DUP05-SPR22
Lab Sample ID: 680-215360-6

Date Collected: 05/10/22 12:30
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		05/25/22 17:53	1
Sulfate	21		1.0	1.0	0.40	mg/L		05/25/22 17:53	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		05/17/22 22:14	1
Manganese	7900		10	5.0	1.3	ug/L		05/17/22 22:14	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1000		5.0	3.0	0.86	ug/L		05/17/22 17:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	160		6.0	5.0	2.2	mg/L		05/23/22 21:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.5		1.0	0.60	0.50	mg/L		05/24/22 04:10	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-01-36X-SPR22
Lab Sample ID: 680-215360-7

Date Collected: 05/10/22 10:20
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	80		0.50	0.50	0.20	mg/L		05/25/22 18:31	1
Sulfate	5.5		1.0	1.0	0.40	mg/L		05/25/22 18:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1200		100	50	20	ug/L		05/17/22 20:54	1
Manganese	110		10	5.0	1.3	ug/L		05/17/22 20:54	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	7.5		5.0	3.0	0.86	ug/L		05/17/22 17:00	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	22		6.0	5.0	2.2	mg/L		05/23/22 19:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.5		1.0	0.60	0.50	mg/L		05/24/22 04:34	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-07A-SPR22
Lab Sample ID: 680-215360-8

Date Collected: 05/10/22 14:45
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.5		0.50	0.50	0.20	mg/L		05/25/22 18:44	1
Sulfate	4.6		1.0	1.0	0.40	mg/L		05/25/22 18:44	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	210		100	50	20	ug/L		05/17/22 13:46	1
Manganese	1900		10	5.0	1.3	ug/L		05/17/22 13:46	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.2	J	5.0	3.0	0.86	ug/L		05/24/22 16:35	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	9.1		6.0	5.0	2.2	mg/L		05/23/22 22:37	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.89	J	1.0	0.60	0.50	mg/L		05/24/22 04:57	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-1A-SPR22
Lab Sample ID: 680-215360-9

Date Collected: 05/10/22 09:55
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**0.79**		0.50	0.50	0.20	mg/L		05/25/22 18:57	1
Sulfate	**2.4**		1.0	1.0	0.40	mg/L		05/25/22 18:57	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 16:23	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/20/22 16:23	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 15:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**21**		6.0	5.0	2.2	mg/L		05/23/22 22:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.73**	**J**	1.0	0.60	0.50	mg/L		05/24/22 06:01	1

Client Sample ID: SHP-2016-1B-SPR22
Lab Sample ID: 680-215360-10

Date Collected: 05/10/22 11:40
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.5		0.50	0.50	0.20	mg/L		05/25/22 19:09	1
Sulfate	2.4		1.0	1.0	0.40	mg/L		05/25/22 19:09	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	18000		100	50	20	ug/L		05/20/22 16:39	1
Manganese	910		10	5.0	1.3	ug/L		05/20/22 16:39	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	110		5.0	3.0	0.86	ug/L		05/17/22 15:48	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	66		6.0	5.0	2.2	mg/L		05/23/22 19:25	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/24/22 06:20	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-4B-SPR22
Lab Sample ID: 680-215360-11

Date Collected: 05/10/22 15:06
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	4.8		0.50	0.50	0.20	mg/L		05/25/22 19:22	1
Sulfate	3.9		1.0	1.0	0.40	mg/L		05/25/22 19:22	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	31000		100	50	20	ug/L		05/20/22 16:48	1
Manganese	2200		10	5.0	1.3	ug/L		05/20/22 16:48	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	730		5.0	3.0	0.86	ug/L		05/17/22 15:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	67		6.0	5.0	2.2	mg/L		05/23/22 21:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.4		1.0	0.60	0.50	mg/L		05/24/22 06:40	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-5A-SPR22
Lab Sample ID: 680-215360-12
Date Collected: 05/10/22 11:15
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	9.5		0.50	0.50	0.20	mg/L		05/25/22 19:35	1
Sulfate	3.4		1.0	1.0	0.40	mg/L		05/25/22 19:35	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1700		100	50	20	ug/L		05/20/22 16:51	1
Manganese	190		10	5.0	1.3	ug/L		05/20/22 16:51	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.3	J	5.0	3.0	0.86	ug/L		05/17/22 16:01	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	64		6.0	5.0	2.2	mg/L		05/23/22 22:45	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	6.9		1.0	0.60	0.50	mg/L		05/24/22 07:03	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHL-DUP06-SPR22
Lab Sample ID: 680-215360-13
Date Collected: 05/10/22 11:25
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	9.5		0.50	0.50	0.20	mg/L		05/25/22 19:47	1
Sulfate	3.3		1.0	1.0	0.40	mg/L		05/25/22 19:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1800		100	50	20	ug/L		05/20/22 16:54	1
Manganese	200		10	5.0	1.3	ug/L		05/20/22 16:54	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.2	J	5.0	3.0	0.86	ug/L		05/17/22 16:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	65		6.0	5.0	2.2	mg/L		05/23/22 22:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	6.8		1.0	0.60	0.50	mg/L		05/24/22 07:25	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-5B-SPR22
Lab Sample ID: 680-215360-14

Date Collected: 05/10/22 13:10
Matrix: Water
Date Received: 05/12/22 14:38

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	19		0.50	0.50	0.20	mg/L		05/25/22 20:00	1
Sulfate	5.0		1.0	1.0	0.40	mg/L		05/25/22 20:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	56000		100	50	20	ug/L		05/20/22 16:57	1
Manganese	2900		10	5.0	1.3	ug/L		05/20/22 16:57	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	560		5.0	3.0	0.86	ug/L		05/17/22 16:06	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	130		6.0	5.0	2.2	mg/L		05/23/22 21:37	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.2		1.0	0.60	0.50	mg/L		05/24/22 07:46	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-722584/2
Matrix: Water
Analysis Batch: 722584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/25/22 10:32	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/25/22 10:32	1

Lab Sample ID: LCS 680-722584/3
Matrix: Water
Analysis Batch: 722584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.95		mg/L		100	87 - 111
Sulfate	10.0	9.42		mg/L		94	87 - 112

Lab Sample ID: LCSD 680-722584/4
Matrix: Water
Analysis Batch: 722584

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.98		mg/L		100	87 - 111	0	15
Sulfate	10.0	9.74		mg/L		97	87 - 112	3	15

Lab Sample ID: 680-215360-6 MS
Matrix: Water
Analysis Batch: 722584

Client Sample ID: SHL-DUP05-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	35		10.0	45.7		mg/L		104	87 - 111
Sulfate	21		10.0	31.3		mg/L		100	87 - 112

Lab Sample ID: 680-215360-6 MSD
Matrix: Water
Analysis Batch: 722584

Client Sample ID: SHL-DUP05-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	35		10.0	45.7		mg/L		104	87 - 111	0	15
Sulfate	21		10.0	31.3		mg/L		100	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720979/1-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720979

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/17/22 12:30	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/17/22 12:30	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-720979/2-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5010		ug/L		100	87 - 115
Manganese	400	407		ug/L		102	90 - 114

Lab Sample ID: MB 680-720990/1-A
Matrix: Water
Analysis Batch: 721975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720990

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 16:17	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/20/22 16:17	1

Lab Sample ID: LCS 680-720990/2-A
Matrix: Water
Analysis Batch: 721975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720990

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4960		ug/L		99	87 - 115
Manganese	400	400		ug/L		100	90 - 114

Lab Sample ID: MB 680-721066/1-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721066

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/17/22 20:47	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/17/22 20:47	1

Lab Sample ID: LCS 680-721066/2-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721066

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5070		ug/L		101	87 - 115
Manganese	400	411		ug/L		103	90 - 114

Lab Sample ID: 680-215360-9 MS
Matrix: Water
Analysis Batch: 721975

Client Sample ID: SHP-2016-1A-SPR22
Prep Type: Dissolved
Prep Batch: 720990

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	5080		ug/L		102	87 - 115
Manganese	5.0	U	400	413		ug/L		103	90 - 114

Lab Sample ID: 680-215360-9 MSD
Matrix: Water
Analysis Batch: 721975

Client Sample ID: SHP-2016-1A-SPR22
Prep Type: Dissolved
Prep Batch: 720990

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	5150		ug/L		103	87 - 115	1	20
Manganese	5.0	U	400	415		ug/L		104	90 - 114	1	20

Method: 6010C - Metals (ICP)

Lab Sample ID: 680-215360-7 MS
Matrix: Water
Analysis Batch: 721330

Client Sample ID: SHP-01-36X-SPR22
Prep Type: Dissolved
Prep Batch: 721066

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	1200		5000	6360		ug/L		103	87 - 115
Manganese	110		400	502		ug/L		99	90 - 114

Lab Sample ID: 680-215360-7 MSD
Matrix: Water
Analysis Batch: 721330

Client Sample ID: SHP-01-36X-SPR22
Prep Type: Dissolved
Prep Batch: 721066

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	1200		5000	6320		ug/L		103	87 - 115	1	20
Manganese	110		400	521		ug/L		104	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720980/1-A
Matrix: Water
Analysis Batch: 722552

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720980

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/24/22 16:17	1

Lab Sample ID: LCS 680-720980/2-A
Matrix: Water
Analysis Batch: 722552

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	104		ug/L		104	84 - 116

Lab Sample ID: MB 680-720994/1-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720994

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 15:30	1

Lab Sample ID: LCS 680-720994/2-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: MB 680-721067/1-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721067

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 16:55	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-721067/2-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721067

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	104		ug/L		104	84 - 116		

Lab Sample ID: 680-215360-9 MS
Matrix: Water
Analysis Batch: 721331

Client Sample ID: SHP-2016-1A-SPR22
Prep Type: Dissolved
Prep Batch: 720994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	3.0	U	100	100		ug/L		100	84 - 116		

Lab Sample ID: 680-215360-9 MSD
Matrix: Water
Analysis Batch: 721331

Client Sample ID: SHP-2016-1A-SPR22
Prep Type: Dissolved
Prep Batch: 720994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	103		ug/L		103	84 - 116	3	20

Lab Sample ID: 680-215360-7 MS
Matrix: Water
Analysis Batch: 721331

Client Sample ID: SHP-01-36X-SPR22
Prep Type: Dissolved
Prep Batch: 721067

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	7.5		100	113		ug/L		106	84 - 116		

Lab Sample ID: 680-215360-7 MSD
Matrix: Water
Analysis Batch: 721331

Client Sample ID: SHP-01-36X-SPR22
Prep Type: Dissolved
Prep Batch: 721067

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	7.5		100	114		ug/L		106	84 - 116	0	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-722308/34
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/23/22 20:02	1

Lab Sample ID: MB 680-722308/5
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/23/22 15:59	1

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 680-722308/36
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	237		mg/L		95	90 - 112

Lab Sample ID: LCS 680-722308/7
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	244		mg/L		97	90 - 112

Lab Sample ID: LCSD 680-722308/32
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	240		mg/L		96	90 - 112	1	30

Lab Sample ID: LCSD 680-722308/61
Matrix: Water
Analysis Batch: 722308

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	239		mg/L		96	90 - 112	1	30

Lab Sample ID: 680-215360-9 DU
Matrix: Water
Analysis Batch: 722308

Client Sample ID: SHP-2016-1A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	21		20.6		mg/L		4	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-722476/2
Matrix: Water
Analysis Batch: 722476

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/24/22 00:27	1

Lab Sample ID: LCS 680-722476/3
Matrix: Water
Analysis Batch: 722476

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	18.9		mg/L		94	80 - 120

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCSD 680-722476/4
Matrix: Water
Analysis Batch: 722476

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.1		mg/L		95	80 - 120	1	20

Lab Sample ID: 680-215360-1 MS
Matrix: Water
Analysis Batch: 722476

Client Sample ID: EPA-PZ-2012-4A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	10		20.0	30.6		mg/L		103	80 - 120		

Lab Sample ID: 680-215360-1 MSD
Matrix: Water
Analysis Batch: 722476

Client Sample ID: EPA-PZ-2012-4A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	10		20.0	30.2		mg/L		101	80 - 120	1	20

HPLC/IC

Analysis Batch: 722584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Total/NA	Water	9056A	
680-215360-2	EPA-PZ-2012-4B-SPR22	Total/NA	Water	9056A	
680-215360-3	SHL-DUP04-SPR22	Total/NA	Water	9056A	
680-215360-4	EPA-PZ-2012-6B-SPR22	Total/NA	Water	9056A	
680-215360-5	SHM-96-5B-SPR22	Total/NA	Water	9056A	
680-215360-6	SHL-DUP05-SPR22	Total/NA	Water	9056A	
680-215360-7	SHP-01-36X-SPR22	Total/NA	Water	9056A	
680-215360-8	SHP-2016-07A-SPR22	Total/NA	Water	9056A	
680-215360-9	SHP-2016-1A-SPR22	Total/NA	Water	9056A	
680-215360-10	SHP-2016-1B-SPR22	Total/NA	Water	9056A	
680-215360-11	SHP-2016-4B-SPR22	Total/NA	Water	9056A	
680-215360-12	SHP-2016-5A-SPR22	Total/NA	Water	9056A	
680-215360-13	SHL-DUP06-SPR22	Total/NA	Water	9056A	
680-215360-14	SHP-2016-5B-SPR22	Total/NA	Water	9056A	
MB 680-722584/2	Method Blank	Total/NA	Water	9056A	
LCS 680-722584/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-722584/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215360-6 MS	SHL-DUP05-SPR22	Total/NA	Water	9056A	
680-215360-6 MSD	SHL-DUP05-SPR22	Total/NA	Water	9056A	

Metals

Prep Batch: 720979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-8	SHP-2016-07A-SPR22	Dissolved	Water	3005A	
MB 680-720979/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720979/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-8	SHP-2016-07A-SPR22	Dissolved	Water	3005A	
MB 680-720980/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720980/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-9	SHP-2016-1A-SPR22	Dissolved	Water	3005A	
680-215360-10	SHP-2016-1B-SPR22	Dissolved	Water	3005A	
680-215360-11	SHP-2016-4B-SPR22	Dissolved	Water	3005A	
680-215360-12	SHP-2016-5A-SPR22	Dissolved	Water	3005A	
680-215360-13	SHL-DUP06-SPR22	Dissolved	Water	3005A	
680-215360-14	SHP-2016-5B-SPR22	Dissolved	Water	3005A	
MB 680-720990/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720990/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215360-9 MS	SHP-2016-1A-SPR22	Dissolved	Water	3005A	
680-215360-9 MSD	SHP-2016-1A-SPR22	Dissolved	Water	3005A	

Prep Batch: 720994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-9	SHP-2016-1A-SPR22	Dissolved	Water	3005A	
680-215360-10	SHP-2016-1B-SPR22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 720994 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-11	SHP-2016-4B-SPR22	Dissolved	Water	3005A	
680-215360-12	SHP-2016-5A-SPR22	Dissolved	Water	3005A	
680-215360-13	SHL-DUP06-SPR22	Dissolved	Water	3005A	
680-215360-14	SHP-2016-5B-SPR22	Dissolved	Water	3005A	
MB 680-720994/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720994/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215360-9 MS	SHP-2016-1A-SPR22	Dissolved	Water	3005A	
680-215360-9 MSD	SHP-2016-1A-SPR22	Dissolved	Water	3005A	

Prep Batch: 721066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Dissolved	Water	3005A	
680-215360-2	EPA-PZ-2012-4B-SPR22	Dissolved	Water	3005A	
680-215360-3	SHL-DUP04-SPR22	Dissolved	Water	3005A	
680-215360-4	EPA-PZ-2012-6B-SPR22	Dissolved	Water	3005A	
680-215360-5	SHM-96-5B-SPR22	Dissolved	Water	3005A	
680-215360-6	SHL-DUP05-SPR22	Dissolved	Water	3005A	
680-215360-7	SHP-01-36X-SPR22	Dissolved	Water	3005A	
MB 680-721066/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721066/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215360-7 MS	SHP-01-36X-SPR22	Dissolved	Water	3005A	
680-215360-7 MSD	SHP-01-36X-SPR22	Dissolved	Water	3005A	

Prep Batch: 721067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Dissolved	Water	3005A	
680-215360-2	EPA-PZ-2012-4B-SPR22	Dissolved	Water	3005A	
680-215360-3	SHL-DUP04-SPR22	Dissolved	Water	3005A	
680-215360-4	EPA-PZ-2012-6B-SPR22	Dissolved	Water	3005A	
680-215360-5	SHM-96-5B-SPR22	Dissolved	Water	3005A	
680-215360-6	SHL-DUP05-SPR22	Dissolved	Water	3005A	
680-215360-7	SHP-01-36X-SPR22	Dissolved	Water	3005A	
MB 680-721067/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721067/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215360-7 MS	SHP-01-36X-SPR22	Dissolved	Water	3005A	
680-215360-7 MSD	SHP-01-36X-SPR22	Dissolved	Water	3005A	

Analysis Batch: 721330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Dissolved	Water	6010C	721066
680-215360-2	EPA-PZ-2012-4B-SPR22	Dissolved	Water	6010C	721066
680-215360-3	SHL-DUP04-SPR22	Dissolved	Water	6010C	721066
680-215360-4	EPA-PZ-2012-6B-SPR22	Dissolved	Water	6010C	721066
680-215360-5	SHM-96-5B-SPR22	Dissolved	Water	6010C	721066
680-215360-6	SHL-DUP05-SPR22	Dissolved	Water	6010C	721066
680-215360-7	SHP-01-36X-SPR22	Dissolved	Water	6010C	721066
680-215360-8	SHP-2016-07A-SPR22	Dissolved	Water	6010C	720979
MB 680-720979/1-A	Method Blank	Total Recoverable	Water	6010C	720979
MB 680-721066/1-A	Method Blank	Total Recoverable	Water	6010C	721066
LCS 680-720979/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720979
LCS 680-721066/2-A	Lab Control Sample	Total Recoverable	Water	6010C	721066

Metals (Continued)

Analysis Batch: 721330 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-7 MS	SHP-01-36X-SPR22	Dissolved	Water	6010C	721066
680-215360-7 MSD	SHP-01-36X-SPR22	Dissolved	Water	6010C	721066

Analysis Batch: 721331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Dissolved	Water	6020A	721067
680-215360-2	EPA-PZ-2012-4B-SPR22	Dissolved	Water	6020A	721067
680-215360-3	SHL-DUP04-SPR22	Dissolved	Water	6020A	721067
680-215360-4	EPA-PZ-2012-6B-SPR22	Dissolved	Water	6020A	721067
680-215360-5	SHM-96-5B-SPR22	Dissolved	Water	6020A	721067
680-215360-6	SHL-DUP05-SPR22	Dissolved	Water	6020A	721067
680-215360-7	SHP-01-36X-SPR22	Dissolved	Water	6020A	721067
680-215360-9	SHP-2016-1A-SPR22	Dissolved	Water	6020A	720994
680-215360-10	SHP-2016-1B-SPR22	Dissolved	Water	6020A	720994
680-215360-11	SHP-2016-4B-SPR22	Dissolved	Water	6020A	720994
680-215360-12	SHP-2016-5A-SPR22	Dissolved	Water	6020A	720994
680-215360-13	SHL-DUP06-SPR22	Dissolved	Water	6020A	720994
680-215360-14	SHP-2016-5B-SPR22	Dissolved	Water	6020A	720994
MB 680-720994/1-A	Method Blank	Total Recoverable	Water	6020A	720994
MB 680-721067/1-A	Method Blank	Total Recoverable	Water	6020A	721067
LCS 680-720994/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720994
LCS 680-721067/2-A	Lab Control Sample	Total Recoverable	Water	6020A	721067
680-215360-7 MS	SHP-01-36X-SPR22	Dissolved	Water	6020A	721067
680-215360-7 MSD	SHP-01-36X-SPR22	Dissolved	Water	6020A	721067
680-215360-9 MS	SHP-2016-1A-SPR22	Dissolved	Water	6020A	720994
680-215360-9 MSD	SHP-2016-1A-SPR22	Dissolved	Water	6020A	720994

Analysis Batch: 721975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-9	SHP-2016-1A-SPR22	Dissolved	Water	6010C	720990
680-215360-10	SHP-2016-1B-SPR22	Dissolved	Water	6010C	720990
680-215360-11	SHP-2016-4B-SPR22	Dissolved	Water	6010C	720990
680-215360-12	SHP-2016-5A-SPR22	Dissolved	Water	6010C	720990
680-215360-13	SHL-DUP06-SPR22	Dissolved	Water	6010C	720990
680-215360-14	SHP-2016-5B-SPR22	Dissolved	Water	6010C	720990
MB 680-720990/1-A	Method Blank	Total Recoverable	Water	6010C	720990
LCS 680-720990/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720990
680-215360-9 MS	SHP-2016-1A-SPR22	Dissolved	Water	6010C	720990
680-215360-9 MSD	SHP-2016-1A-SPR22	Dissolved	Water	6010C	720990

Analysis Batch: 722552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-8	SHP-2016-07A-SPR22	Dissolved	Water	6020A	720980
MB 680-720980/1-A	Method Blank	Total Recoverable	Water	6020A	720980
LCS 680-720980/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720980

General Chemistry

Analysis Batch: 722308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 722308 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-2	EPA-PZ-2012-4B-SPR22	Total/NA	Water	2320B-2011	
680-215360-3	SHL-DUP04-SPR22	Total/NA	Water	2320B-2011	
680-215360-4	EPA-PZ-2012-6B-SPR22	Total/NA	Water	2320B-2011	
680-215360-5	SHM-96-5B-SPR22	Total/NA	Water	2320B-2011	
680-215360-6	SHL-DUP05-SPR22	Total/NA	Water	2320B-2011	
680-215360-7	SHP-01-36X-SPR22	Total/NA	Water	2320B-2011	
680-215360-8	SHP-2016-07A-SPR22	Total/NA	Water	2320B-2011	
680-215360-9	SHP-2016-1A-SPR22	Total/NA	Water	2320B-2011	
680-215360-10	SHP-2016-1B-SPR22	Total/NA	Water	2320B-2011	
680-215360-11	SHP-2016-4B-SPR22	Total/NA	Water	2320B-2011	
680-215360-12	SHP-2016-5A-SPR22	Total/NA	Water	2320B-2011	
680-215360-13	SHL-DUP06-SPR22	Total/NA	Water	2320B-2011	
680-215360-14	SHP-2016-5B-SPR22	Total/NA	Water	2320B-2011	
MB 680-722308/34	Method Blank	Total/NA	Water	2320B-2011	
MB 680-722308/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-722308/36	Lab Control Sample	Total/NA	Water	2320B-2011	
LCS 680-722308/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-722308/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
LCSD 680-722308/61	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215360-9 DU	SHP-2016-1A-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 722476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215360-1	EPA-PZ-2012-4A-SPR22	Dissolved	Water	9060A	
680-215360-2	EPA-PZ-2012-4B-SPR22	Dissolved	Water	9060A	
680-215360-3	SHL-DUP04-SPR22	Dissolved	Water	9060A	
680-215360-4	EPA-PZ-2012-6B-SPR22	Dissolved	Water	9060A	
680-215360-5	SHM-96-5B-SPR22	Dissolved	Water	9060A	
680-215360-6	SHL-DUP05-SPR22	Dissolved	Water	9060A	
680-215360-7	SHP-01-36X-SPR22	Dissolved	Water	9060A	
680-215360-8	SHP-2016-07A-SPR22	Dissolved	Water	9060A	
680-215360-9	SHP-2016-1A-SPR22	Dissolved	Water	9060A	
680-215360-10	SHP-2016-1B-SPR22	Dissolved	Water	9060A	
680-215360-11	SHP-2016-4B-SPR22	Dissolved	Water	9060A	
680-215360-12	SHP-2016-5A-SPR22	Dissolved	Water	9060A	
680-215360-13	SHL-DUP06-SPR22	Dissolved	Water	9060A	
680-215360-14	SHP-2016-5B-SPR22	Dissolved	Water	9060A	
MB 680-722476/2	Method Blank	Dissolved	Water	9060A	
LCS 680-722476/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-722476/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215360-1 MS	EPA-PZ-2012-4A-SPR22	Dissolved	Water	9060A	
680-215360-1 MSD	EPA-PZ-2012-4A-SPR22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-4A-SPR22
Lab Sample ID: 680-215360-1
Date Collected: 05/10/22 13:40
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 16:25	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 21:58	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:13	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 19:18	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 01:29	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-4B-SPR22
Lab Sample ID: 680-215360-2
Date Collected: 05/10/22 14:55
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 16:37	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 22:02	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:15	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 20:59	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 02:37	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP04-SPR22
Lab Sample ID: 680-215360-3
Date Collected: 05/10/22 14:55
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 16:50	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 22:05	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:18	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHL-DUP04-SPR22
Lab Sample ID: 680-215360-3
Date Collected: 05/10/22 14:55
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 22:32	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 03:00	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-6B-SPR22
Lab Sample ID: 680-215360-4
Date Collected: 05/10/22 09:45
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 17:03	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 22:08	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:26	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 17:29	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 03:24	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-96-5B-SPR22
Lab Sample ID: 680-215360-5
Date Collected: 05/10/22 12:17
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 17:15	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 22:11	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:28	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 19:03	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 03:43	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP05-SPR22
Lab Sample ID: 680-215360-6
Date Collected: 05/10/22 12:30
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 17:53	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 22:14	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:31	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 21:07	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 04:10	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-01-36X-SPR22
Lab Sample ID: 680-215360-7
Date Collected: 05/10/22 10:20
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 18:31	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	721066	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 20:54	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	721067	05/16/22 15:55	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 17:00	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 19:10	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 04:34	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-07A-SPR22
Lab Sample ID: 680-215360-8
Date Collected: 05/10/22 14:45
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 18:44	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720979	05/16/22 09:54	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 13:46	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720980	05/16/22 09:54	JE	TAL SAV
Dissolved	Analysis	6020A		1			722552	05/24/22 16:35	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-07A-SPR22
Lab Sample ID: 680-215360-8
Date Collected: 05/10/22 14:45
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 22:37	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 04:57	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-1A-SPR22
Lab Sample ID: 680-215360-9
Date Collected: 05/10/22 09:55
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 18:57	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:23	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 15:51	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 22:11	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 06:01	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-1B-SPR22
Lab Sample ID: 680-215360-10
Date Collected: 05/10/22 11:40
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 19:09	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:39	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 15:48	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 19:25	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 06:20	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-4B-SPR22
Lab Sample ID: 680-215360-11

Date Collected: 05/10/22 15:06
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 19:22	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:48	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 15:53	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 21:44	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 06:40	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-5A-SPR22
Lab Sample ID: 680-215360-12

Date Collected: 05/10/22 11:15
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 19:35	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:51	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:01	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 22:45	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 07:03	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-DUP06-SPR22
Lab Sample ID: 680-215360-13

Date Collected: 05/10/22 11:25
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 19:47	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:54	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:04	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Client Sample ID: SHL-DUP06-SPR22
Lab Sample ID: 680-215360-13
Date Collected: 05/10/22 11:25
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 22:24	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 07:25	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-5B-SPR22
Lab Sample ID: 680-215360-14
Date Collected: 05/10/22 13:10
Matrix: Water
Date Received: 05/12/22 14:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722584	05/25/22 20:00	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 16:57	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:06	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722308	05/23/22 21:37	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722476	05/24/22 07:46	RKJ	TAL SAV
	Instrument ID: TOC7									

Laboratory References:
TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215360-1
Project/Site: Seres-Arcadis V, LTM, SHL, Spring 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215360 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
					Analytical Test Method	46	9	9	5	3						
1	EPA-PZ-2012-1A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1B	N1	73 56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2B	N1	73.16	78.16	1	
5	EPA-PZ-2012-3A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-3A	N1	19 09	24.09	1	
6	EPA-PZ-2012-3B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-3B	N1	68.70	73.70	1	
7	EPA-PZ-2012-4A-SPR22	WG	5-10-22	1340	DC	X	X	X	X	X	EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG	5-10-22	1455	DC	X	X	X	X	X	EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG*	5-10-22	1455	DC	X	X	X	X	X	EPA-PZ-2012-4B	FD1	79.50	84.50	1	5-10-22 *
10	EPA-PZ-2012-5A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-5A	N1	17 95	22 95	1	
11	EPA-PZ-2012-5B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-6A	N1	24.19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG	5-10-22	945	GS	X	X	X	X	X	EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7A	N1	23 87	28.87	1	
15	EPA-PZ-2012-7B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG				X	X	X	X	X	EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG				X	X	X	X	X	EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X	PZ-12-01	N1	24 00	34.00	1	

Relinquished by: [signature]
Date 5/10/22
Time 4:30
[signature] 5/11/22 1600

Received by: [signature] 5/10/22 1630
Date
Time

[signature] 5/12 1030
1.7-1.1 1.7-1.1

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
19	PZ-12-02-SPR22	WG				X	X	X	X	X						PZ-12-02	N1	24.00	34 00	1	
20	PZ-12-03-SPR22	WG				X	X	X	X	X						PZ-12-03	N1	24 00	34 00	1	
21	PZ-12-04-SPR22	WG				X	X	X	X	X						PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG				X	X	X	X	X						PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X						PZ-12-06	N1	25 00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X						PZ-12-06	FD1	25 00	35 00	1	
25	PZ-12-07-SPR22	WG				X	X	X	X	X						PZ-12-07	N1	20 00	30.00	1	
26	PZ-12-08-SPR22	WG				X	X	X	X	X						PZ-12-08	N1	22.00	32 00	1	
27	PZ-12-09-SPR22	WG				X	X	X	X	X						PZ-12-09	N1	20 00	30 00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	SD1	20 00	30.00	1	
31	SHL-10-SPR22	WG				X	X	X	X	X						SHL-10	N1	24.00	39 00	1	
32	SHL-11-SPR22	WG				X	X	X	X	X						SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG				X	X	X	X	X						SHL-19	N1	20 00	30 00	1	
34	SHL-20-SPR22	WG				X	X	X	X	X						SHL-20	N1	39 00	49.00	1	
35	SHL-DUP02-SPR22	WG				X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
36	SHL-4-SPR22	WG				X	X	X	X	X						SHL-4	N1	3 00	13.00	1	

Relinquished by:
Date
Time

Received by:
Date
Time

5/12 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
					Analytical Test Method	46	9	9	5	3						
37	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	N1	32.00	34.00	1	
39	SHM-05-40X-SPR22	WG				X	X	X	X	X	SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG				X	X	X	X	X	SHM-05-41B	N1	62.00	64 00	1	
41	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	MS1	88.00	93.00	1	
42	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	N1	88.00	93.00	1	
43	SHM-05-41C-SPR22	WG				X	X	X	X	X	SHM-05-41C	SD1	88 00	93 00	1	
44	SHM-07-03-SPR22	WG				X	X	X	X	X	SHM-07-03	N1	25 00	35 00	1	
45	SHM-07-05X-SPR22	WG				X	X	X	X	X	SHM-07-05X	N1	55.00	65 00	1	
46	SHM-11-02-SPR22	WG				X	X	X	X	X	SHM-11-02	N1	52.00	66.00	1	
47	SHM-11-06-SPR22	WG				X	X	X	X	X	SHM-11-06	N1	25.00	35 00	1	
48	SHM-13-03-SPR22	WG				X	X	X	X	X	SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG				X	X	X	X	X	SHM-13-04	N1	20 00	30 00	1	
50	SHM-13-06-SPR22	WG				X	X	X	X	X	SHM-13-06	N1	36.00	46.00	1	
51	SHM-13-07-SPR22	WG				X	X	X	X	X	SHM-13-07	N1	27 00	37.00	1	
52	SHM-13-08-SPR22	WG				X	X	X	X	X	SHM-13-08	N1	55.00	65.00	1	
53	SHM-93-22B-SPR22	WG				X	X	X	X	X	SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG	5-10-22	1217	SG	X	X	X	X	X	SHM-96-5B	N1	80 00	90.00	1	

Relinquished by: [signature]
Date 5/10/22
Time 430
[signature] 5/11/22 1600

Received by: [signature] 5/10/23 1630
Date
Time

[signature] 5/12 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.		46	9	9	5	3							Location ID	Type	Top - Bottom		Cooler	Comments
55	SHL-DUP05-SPR22	WG	5-10-22	1230	SG		X	X	X	X	X							SHM-96-5B	FD1	80 00	90 00	1	
56	SHP-01-36X-SPR22	WG	5-10-22	1020	SG		X	X	X	X	X							SHP-01-36X	N1	3 00	8 00	1	
57	SHP-01-37X-SPR22	WG					X	X	X	X	X							SHP-01-37X	N1	1 00	6 00	1	
58	SHP-01-38A-SPR22	WG					X	X	X	X	X							SHP-01-38A	N1	1.50	6.50	1	
59	SHL-DUP03-SPR22	WG					X	X	X	X	X							SHP-01-38A	FD1	1 50	6.50	1	
60	SHP-2016-06A-SPR22	WG					X	X	X	X	X							SHP-2016-06A	N1	81 00	86.00	1	
61	SHP-2016-06B-SPR22	WG					X	X	X	X	X							SHP-2016-06B	N1	102.00	112.00	1	
62	SHP-2016-06C-SPR22	WG					X	X	X	X	X							SHP-2016-06C	N1	123 00	133 00	1	
63	SHP-2016-07A-SPR22	WG	5-10-22	1445	GS		X	X	X	X	X							SHP-2016-07A	N1	22.00	32.00	1	
64	SHP-2016-07B-SPR22	WG					X	X	X	X	X							SHP-2016-07B	N1	70 00	80 00	1	
65	SHP-2016-1A-SPR22	WG	5-10-22	955	DC		X	X	X	X	X							SHP-2016-1A	N1	13 00	23 00	1	
66	SHP-2016-1B-SPR22	WG	5-10-22	1140	DC		X	X	X	X	X							SHP-2016-1B	N1	75 00	85.00	1	
67	SHP-2016-2A-SPR22	WG					X	X	X	X	X							SHP-2016-2A	N1	20 00	25 00	1	
68	SHP-2016-2B-SPR22	WG					X	X	X	X	X							SHP-2016-2B	N1	80 00	85.00	1	
69	SHP-2016-3A-SPR22	WG					X	X	X	X	X							SHP-2016-3A	N1	20 00	25 00	1	
70	SHP-2016-3B-SPR22	WG					X	X	X	X	X							SHP-2016-3B	N1	80 00	85 00	1	
71	SHP-2016-4A-SPR22	WG					X	X	X	X	X							SHP-2016-4A	N1	25 00	30 00	1	
72	SHP-2016-4B-SPR22	WG	5-10-22	15:06	SG		X	X	X	X	X							SHP-2016-4B	N1	85.00	90.00	1	

Relinquished by: [signature]
Date 5/10/22
Time 430

[signature] 5/11/22 162

Received by: [signature] 5/11/22 1630
Date
Time

[signature] 5/12/0930

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
73	SHP-2016-5A-SPR22	WG	5-10-22	1115	GS		X	X	X	X	X					SHP-2016-5A	N1	25 00	30 00	1	
74	SHL-DUP06-SPR22	WG	5-10-22	1125	GS		X	X	X	X	X					SHP-2016-5A	FD1	25.00	30 00	1	
75	SHP-2016-5B-SPR22	WG	5-10-22	1310	GS		X	X	X	X	X					SHP-2016-5B	N1	85 00	90.00	1	
76																					
77																					
78																					
79																					
80																					
81																					
82																					
83																					
84																					

Turnaround Time: Standard

5/12 1030

Relinquished by: [signature]
Date 5/10/22
Time 4.30

[signature] 5/11/22 160

Received by: [signature] 5/11/22 1630
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215360-1

Login Number: 215360
List Number: 1
Creator: Watters, David

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215367-1
Client Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/6/2022 11:56:43 AM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215367-1	EPA-PZ-2012-1A-SPR22	Water	05/11/22 12:01	05/12/22 10:30
680-215367-2	EPA-PZ-2012-1B-SPR22	Water	05/11/22 14:23	05/12/22 10:30
680-215367-3	SHP-2016-06A-SPR22	Water	05/11/22 11:25	05/12/22 10:30
680-215367-4	SHP-2016-06B-SPR22	Water	05/11/22 13:35	05/12/22 10:30
680-215367-5	SHP-2016-06C-SPR22	Water	05/11/22 15:20	05/12/22 10:30
680-215367-6	SHP-2016-07B-SPR22	Water	05/11/22 10:05	05/12/22 10:30
680-215367-7	SHP-2016-2A-SPR22	Water	05/11/22 11:45	05/12/22 10:30
680-215367-8	SHP-2016-2B-SPR22	Water	05/11/22 12:50	05/12/22 10:30
680-215367-9	SHP-2016-4A-SPR22	Water	05/11/22 10:11	05/12/22 10:30
680-215367-10	SHL-RB01-SPR22	Water	05/11/22 11:50	05/12/22 10:30

Job ID: 680-215367-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215367-1

Comments
No additional comments.

Receipt
The samples were received on 5/12/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.7º C and 2.5º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-1A-SPR22
Lab Sample ID: 680-215367-1

Date Collected: 05/11/22 12:01
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.99		0.50	0.50	0.20	mg/L		05/26/22 16:09	1
Sulfate	1.8	M	1.0	1.0	0.40	mg/L		05/26/22 16:09	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	400		100	50	20	ug/L		05/20/22 17:00	1
Manganese	320		10	5.0	1.3	ug/L		05/20/22 17:00	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.8	J	5.0	3.0	0.86	ug/L		05/17/22 16:09	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	57		6.0	5.0	2.2	mg/L		05/24/22 18:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.3		1.0	0.60	0.50	mg/L		05/24/22 09:35	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-1B-SPR22
Lab Sample ID: 680-215367-2

Date Collected: 05/11/22 14:23
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	36		0.50	0.50	0.20	mg/L		05/26/22 16:47	1
Sulfate	14	M	1.0	1.0	0.40	mg/L		05/26/22 16:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	9400		100	50	20	ug/L		05/20/22 17:03	1
Manganese	8100		10	5.0	1.3	ug/L		05/20/22 17:03	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	150		5.0	3.0	0.86	ug/L		05/17/22 16:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	140		6.0	5.0	2.2	mg/L		05/24/22 18:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.6		1.0	0.60	0.50	mg/L		05/24/22 10:46	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-06A-SPR22
Lab Sample ID: 680-215367-3
Date Collected: 05/11/22 11:25
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.6		0.50	0.50	0.20	mg/L		05/26/22 17:00	1
Sulfate	59		1.0	1.0	0.40	mg/L		05/26/22 17:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	690		100	50	20	ug/L		05/20/22 17:06	1
Manganese	1200		10	5.0	1.3	ug/L		05/20/22 17:06	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1500		5.0	3.0	0.86	ug/L		05/17/22 16:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	150		6.0	5.0	2.2	mg/L		05/24/22 18:19	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	7.0		1.0	0.60	0.50	mg/L		05/24/22 11:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-06B-SPR22
Lab Sample ID: 680-215367-4

Date Collected: 05/11/22 13:35
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.6		0.50	0.50	0.20	mg/L		05/26/22 17:13	1
Sulfate	14	M	1.0	1.0	0.40	mg/L		05/26/22 17:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	100		100	50	20	ug/L		05/20/22 17:09	1
Manganese	190		10	5.0	1.3	ug/L		05/20/22 17:09	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	340		5.0	3.0	0.86	ug/L		05/17/22 16:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	120		6.0	5.0	2.2	mg/L		05/24/22 18:35	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.3		1.0	0.60	0.50	mg/L		05/24/22 11:27	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215367-1

Client Sample ID: SHP-2016-06C-SPR22

Date Collected: 05/11/22 15:20
Date Received: 05/12/22 10:30

Lab Sample ID: 680-215367-5

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.5		0.50	0.50	0.20	mg/L		05/26/22 17:26	1
Sulfate	8.5	M	1.0	1.0	0.40	mg/L		05/26/22 17:26	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	120		100	50	20	ug/L		05/20/22 17:12	1
Manganese	190		10	5.0	1.3	ug/L		05/20/22 17:12	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	360		5.0	3.0	0.86	ug/L		05/17/22 16:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	110		6.0	5.0	2.2	mg/L		05/24/22 18:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.56	J	1.0	0.60	0.50	mg/L		05/24/22 11:50	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215367-1

Client Sample ID: SHP-2016-07B-SPR22

Date Collected: 05/11/22 10:05
Date Received: 05/12/22 10:30

Lab Sample ID: 680-215367-6

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.7		0.50	0.50	0.20	mg/L		05/26/22 17:39	1
Sulfate	28	M	1.0	1.0	0.40	mg/L		05/26/22 17:39	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	110		100	50	20	ug/L		05/20/22 17:15	1
Manganese	350		10	5.0	1.3	ug/L		05/20/22 17:15	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	100		5.0	3.0	0.86	ug/L		05/17/22 16:21	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	130		6.0	5.0	2.2	mg/L		05/24/22 18:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.8		1.0	0.60	0.50	mg/L		05/24/22 12:09	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-2A-SPR22
Lab Sample ID: 680-215367-7

Date Collected: 05/11/22 11:45
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**2.6**		0.50	0.50	0.20	mg/L		05/26/22 17:52	1
Sulfate	**2.7**	**M**	1.0	1.0	0.40	mg/L		05/26/22 17:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 17:25	1
Manganese	**320**		10	5.0	1.3	ug/L		05/20/22 17:25	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.0**	**J**	5.0	3.0	0.86	ug/L		05/17/22 16:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**48**		6.0	5.0	2.2	mg/L		05/24/22 19:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.82**	**J**	1.0	0.60	0.50	mg/L		05/24/22 12:33	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-2B-SPR22
Lab Sample ID: 680-215367-8

Date Collected: 05/11/22 12:50
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	16		0.50	0.50	0.20	mg/L		05/26/22 18:05	1
Sulfate	3.4	M	1.0	1.0	0.40	mg/L		05/26/22 18:05	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	39000		100	50	20	ug/L		05/20/22 17:28	1
Manganese	2500		10	5.0	1.3	ug/L		05/20/22 17:28	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	410		5.0	3.0	0.86	ug/L		05/17/22 16:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	110		6.0	5.0	2.2	mg/L		05/24/22 20:14	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		05/24/22 12:52	1

Client Sample ID: SHP-2016-4A-SPR22
Lab Sample ID: 680-215367-9

Date Collected: 05/11/22 10:11
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**3.2**		0.50	0.50	0.20	mg/L		05/26/22 18:18	1
Sulfate	**4.2**		1.0	1.0	0.40	mg/L		05/26/22 18:18	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 17:31	1
Manganese	**64**		10	5.0	1.3	ug/L		05/20/22 17:31	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 16:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**12**		6.0	5.0	2.2	mg/L		05/24/22 19:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.96**	**J**	1.0	0.60	0.50	mg/L		05/24/22 13:59	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHL-RB01-SPR22
Lab Sample ID: 680-215367-10

Date Collected: 05/11/22 11:50
Matrix: Water
Date Received: 05/12/22 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/26/22 18:30	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/26/22 18:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 17:34	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/20/22 17:34	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 16:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/24/22 20:06	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/24/22 14:18	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-722794/2
Matrix: Water
Analysis Batch: 722794

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/26/22 10:24	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/26/22 10:24	1

Lab Sample ID: LCS 680-722794/3
Matrix: Water
Analysis Batch: 722794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	9.22		mg/L		92	87 - 112

Lab Sample ID: LCSD 680-722794/4
Matrix: Water
Analysis Batch: 722794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	9.21		mg/L		92	87 - 112	0	15

Lab Sample ID: 680-215367-1 MS
Matrix: Water
Analysis Batch: 722794

Client Sample ID: EPA-PZ-2012-1A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.99		10.0	11.3		mg/L		103	87 - 111
Sulfate	1.8	M	10.0	11.4		mg/L		96	87 - 112

Lab Sample ID: 680-215367-1 MSD
Matrix: Water
Analysis Batch: 722794

Client Sample ID: EPA-PZ-2012-1A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	0.99		10.0	11.4		mg/L		104	87 - 111	1	15
Sulfate	1.8	M	10.0	11.5		mg/L		97	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-720990/1-A
Matrix: Water
Analysis Batch: 721975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720990

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/20/22 16:17	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/20/22 16:17	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-720990/2-A
Matrix: Water
Analysis Batch: 721975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720990

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4960		ug/L		99	87 - 115
Manganese	400	400		ug/L		100	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-720994/1-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720994

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/17/22 15:30	1

Lab Sample ID: LCS 680-720994/2-A
Matrix: Water
Analysis Batch: 721331

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-722560/5
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/24/22 17:04	1

Lab Sample ID: LCS 680-722560/7
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	242		mg/L		97	90 - 112

Lab Sample ID: LCSD 680-722560/32
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	239		mg/L		96	90 - 112	1	30

Lab Sample ID: 680-215367-7 DU
Matrix: Water
Analysis Batch: 722560

Client Sample ID: SHP-2016-2A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	48		47.6		mg/L		1	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-722477/2
Matrix: Water
Analysis Batch: 722477

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		05/24/22 08:32	1

Lab Sample ID: LCS 680-722477/3
Matrix: Water
Analysis Batch: 722477

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	18.8		mg/L		94	80 - 120		

Lab Sample ID: LCSD 680-722477/4
Matrix: Water
Analysis Batch: 722477

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	18.8		mg/L		94	80 - 120	0	20

Lab Sample ID: 680-215367-1 MS
Matrix: Water
Analysis Batch: 722477

Client Sample ID: EPA-PZ-2012-1A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	2.3		20.0	22.3		mg/L		100	80 - 120		

Lab Sample ID: 680-215367-1 MSD
Matrix: Water
Analysis Batch: 722477

Client Sample ID: EPA-PZ-2012-1A-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	2.3		20.0	22.3		mg/L		100	80 - 120	0	20

HPLC/IC

Analysis Batch: 722794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Total/NA	Water	9056A	
680-215367-2	EPA-PZ-2012-1B-SPR22	Total/NA	Water	9056A	
680-215367-3	SHP-2016-06A-SPR22	Total/NA	Water	9056A	
680-215367-4	SHP-2016-06B-SPR22	Total/NA	Water	9056A	
680-215367-5	SHP-2016-06C-SPR22	Total/NA	Water	9056A	
680-215367-6	SHP-2016-07B-SPR22	Total/NA	Water	9056A	
680-215367-7	SHP-2016-2A-SPR22	Total/NA	Water	9056A	
680-215367-8	SHP-2016-2B-SPR22	Total/NA	Water	9056A	
680-215367-9	SHP-2016-4A-SPR22	Total/NA	Water	9056A	
680-215367-10	SHL-RB01-SPR22	Total/NA	Water	9056A	
MB 680-722794/2	Method Blank	Total/NA	Water	9056A	
LCS 680-722794/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-722794/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215367-1 MS	EPA-PZ-2012-1A-SPR22	Total/NA	Water	9056A	
680-215367-1 MSD	EPA-PZ-2012-1A-SPR22	Total/NA	Water	9056A	

Metals

Prep Batch: 720990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Dissolved	Water	3005A	
680-215367-2	EPA-PZ-2012-1B-SPR22	Dissolved	Water	3005A	
680-215367-3	SHP-2016-06A-SPR22	Dissolved	Water	3005A	
680-215367-4	SHP-2016-06B-SPR22	Dissolved	Water	3005A	
680-215367-5	SHP-2016-06C-SPR22	Dissolved	Water	3005A	
680-215367-6	SHP-2016-07B-SPR22	Dissolved	Water	3005A	
680-215367-7	SHP-2016-2A-SPR22	Dissolved	Water	3005A	
680-215367-8	SHP-2016-2B-SPR22	Dissolved	Water	3005A	
680-215367-9	SHP-2016-4A-SPR22	Dissolved	Water	3005A	
680-215367-10	SHL-RB01-SPR22	Dissolved	Water	3005A	
MB 680-720990/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720990/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 720994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Dissolved	Water	3005A	
680-215367-2	EPA-PZ-2012-1B-SPR22	Dissolved	Water	3005A	
680-215367-3	SHP-2016-06A-SPR22	Dissolved	Water	3005A	
680-215367-4	SHP-2016-06B-SPR22	Dissolved	Water	3005A	
680-215367-5	SHP-2016-06C-SPR22	Dissolved	Water	3005A	
680-215367-6	SHP-2016-07B-SPR22	Dissolved	Water	3005A	
680-215367-7	SHP-2016-2A-SPR22	Dissolved	Water	3005A	
680-215367-8	SHP-2016-2B-SPR22	Dissolved	Water	3005A	
680-215367-9	SHP-2016-4A-SPR22	Dissolved	Water	3005A	
680-215367-10	SHL-RB01-SPR22	Dissolved	Water	3005A	
MB 680-720994/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720994/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 721331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Dissolved	Water	6020A	720994

Metals (Continued)

Analysis Batch: 721331 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-2	EPA-PZ-2012-1B-SPR22	Dissolved	Water	6020A	720994
680-215367-3	SHP-2016-06A-SPR22	Dissolved	Water	6020A	720994
680-215367-4	SHP-2016-06B-SPR22	Dissolved	Water	6020A	720994
680-215367-5	SHP-2016-06C-SPR22	Dissolved	Water	6020A	720994
680-215367-6	SHP-2016-07B-SPR22	Dissolved	Water	6020A	720994
680-215367-7	SHP-2016-2A-SPR22	Dissolved	Water	6020A	720994
680-215367-8	SHP-2016-2B-SPR22	Dissolved	Water	6020A	720994
680-215367-9	SHP-2016-4A-SPR22	Dissolved	Water	6020A	720994
680-215367-10	SHL-RB01-SPR22	Dissolved	Water	6020A	720994
MB 680-720994/1-A	Method Blank	Total Recoverable	Water	6020A	720994
LCS 680-720994/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720994

Analysis Batch: 721975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Dissolved	Water	6010C	720990
680-215367-2	EPA-PZ-2012-1B-SPR22	Dissolved	Water	6010C	720990
680-215367-3	SHP-2016-06A-SPR22	Dissolved	Water	6010C	720990
680-215367-4	SHP-2016-06B-SPR22	Dissolved	Water	6010C	720990
680-215367-5	SHP-2016-06C-SPR22	Dissolved	Water	6010C	720990
680-215367-6	SHP-2016-07B-SPR22	Dissolved	Water	6010C	720990
680-215367-7	SHP-2016-2A-SPR22	Dissolved	Water	6010C	720990
680-215367-8	SHP-2016-2B-SPR22	Dissolved	Water	6010C	720990
680-215367-9	SHP-2016-4A-SPR22	Dissolved	Water	6010C	720990
680-215367-10	SHL-RB01-SPR22	Dissolved	Water	6010C	720990
MB 680-720990/1-A	Method Blank	Total Recoverable	Water	6010C	720990
LCS 680-720990/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720990

General Chemistry

Analysis Batch: 722477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Dissolved	Water	9060A	
680-215367-2	EPA-PZ-2012-1B-SPR22	Dissolved	Water	9060A	
680-215367-3	SHP-2016-06A-SPR22	Dissolved	Water	9060A	
680-215367-4	SHP-2016-06B-SPR22	Dissolved	Water	9060A	
680-215367-5	SHP-2016-06C-SPR22	Dissolved	Water	9060A	
680-215367-6	SHP-2016-07B-SPR22	Dissolved	Water	9060A	
680-215367-7	SHP-2016-2A-SPR22	Dissolved	Water	9060A	
680-215367-8	SHP-2016-2B-SPR22	Dissolved	Water	9060A	
680-215367-9	SHP-2016-4A-SPR22	Dissolved	Water	9060A	
680-215367-10	SHL-RB01-SPR22	Dissolved	Water	9060A	
MB 680-722477/2	Method Blank	Dissolved	Water	9060A	
LCS 680-722477/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-722477/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215367-1 MS	EPA-PZ-2012-1A-SPR22	Dissolved	Water	9060A	
680-215367-1 MSD	EPA-PZ-2012-1A-SPR22	Dissolved	Water	9060A	

Analysis Batch: 722560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-1	EPA-PZ-2012-1A-SPR22	Total/NA	Water	2320B-2011	
680-215367-2	EPA-PZ-2012-1B-SPR22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 722560 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215367-3	SHP-2016-06A-SPR22	Total/NA	Water	2320B-2011	
680-215367-4	SHP-2016-06B-SPR22	Total/NA	Water	2320B-2011	
680-215367-5	SHP-2016-06C-SPR22	Total/NA	Water	2320B-2011	
680-215367-6	SHP-2016-07B-SPR22	Total/NA	Water	2320B-2011	
680-215367-7	SHP-2016-2A-SPR22	Total/NA	Water	2320B-2011	
680-215367-8	SHP-2016-2B-SPR22	Total/NA	Water	2320B-2011	
680-215367-9	SHP-2016-4A-SPR22	Total/NA	Water	2320B-2011	
680-215367-10	SHL-RB01-SPR22	Total/NA	Water	2320B-2011	
MB 680-722560/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-722560/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-722560/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215367-7 DU	SHP-2016-2A-SPR22	Total/NA	Water	2320B-2011	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-1A-SPR22
Lab Sample ID: 680-215367-1
Date Collected: 05/11/22 12:01
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 16:09	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:00	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:09	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:02	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 09:35	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-1B-SPR22
Lab Sample ID: 680-215367-2
Date Collected: 05/11/22 14:23
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 16:47	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:03	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:11	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:27	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 10:46	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-06A-SPR22
Lab Sample ID: 680-215367-3
Date Collected: 05/11/22 11:25
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 17:00	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:06	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:14	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215367-1

Client Sample ID: SHP-2016-06A-SPR22

Lab Sample ID: 680-215367-3
Date Collected: 05/11/22 11:25
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:19	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 11:07	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-06B-SPR22

Lab Sample ID: 680-215367-4
Date Collected: 05/11/22 13:35
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 17:13	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:09	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:16	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:35	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 11:27	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-06C-SPR22

Lab Sample ID: 680-215367-5
Date Collected: 05/11/22 15:20
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 17:26	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:12	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:19	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:10	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 11:50	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-07B-SPR22
Lab Sample ID: 680-215367-6

Date Collected: 05/11/22 10:05
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 17:39	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:15	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:21	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 18:44	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 12:09	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-2A-SPR22
Lab Sample ID: 680-215367-7

Date Collected: 05/11/22 11:45
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 17:52	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:25	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:24	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 19:11	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 12:33	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-2B-SPR22
Lab Sample ID: 680-215367-8

Date Collected: 05/11/22 12:50
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 18:05	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:28	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:32	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHP-2016-2B-SPR22
Lab Sample ID: 680-215367-8
Date Collected: 05/11/22 12:50
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 20:14	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 12:52	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHP-2016-4A-SPR22
Lab Sample ID: 680-215367-9
Date Collected: 05/11/22 10:11
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 18:18	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:31	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:34	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 19:24	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 13:59	RKJ	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-RB01-SPR22
Lab Sample ID: 680-215367-10
Date Collected: 05/11/22 11:50
Matrix: Water
Date Received: 05/12/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	722794	05/26/22 18:30	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720990	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6010C		1			721975	05/20/22 17:34	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	720994	05/16/22 10:45	JE	TAL SAV
Dissolved	Analysis	6020A		1			721331	05/17/22 16:37	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 20:06	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	722477	05/24/22 14:18	RKJ	TAL SAV
	Instrument ID: TOC7									

Laboratory References:
TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215367-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Manna Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215367 Chain of Custody

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	EPA-PZ-2012-1A-SPR22	WG	5.11.22	1201	SG	X	X	X	X	X						EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG	5.11.22	1423	SG	X	X	X	X	X						EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-2A	N1	18.14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-2B	N1	73.16	78 16	1	
5	EPA-PZ-2012-3A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-5A	N1	17.95	22.95	1	
11	EPA-PZ-2012-5B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-6A	N1	24.19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-7A	N1	23 87	28.87	1	
15	EPA-PZ-2012-7B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG				X	X	X	X	X						EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG				X	X	X	X	X						EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X						PZ-12-01	N1	24.00	34.00	1	

Relinquished by: Shara Shucker
Date 5/11/22
Time 4:45

Received by: 5/11/22 1700

Received by:
Date 5/11/22
Time 1695

5/12 1030

3.1-2.5

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
19	PZ-12-02-SPR22	WG				X	X	X	X	X						PZ-12-02	N1	24.00	34.00	1	
20	PZ-12-03-SPR22	WG				X	X	X	X	X						PZ-12-03	N1	24.00	34.00	1	
21	PZ-12-04-SPR22	WG				X	X	X	X	X						PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-05-SPR22	WG				X	X	X	X	X						PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X						PZ-12-06	N1	25 00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X						PZ-12-06	FD1	25.00	35 00	1	
25	PZ-12-07-SPR22	WG				X	X	X	X	X						PZ-12-07	N1	20 00	30 00	1	
26	PZ-12-08-SPR22	WG				X	X	X	X	X						PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-08-SPR22	WG				X	X	X	X	X						PZ-12-09	N1	20 00	30 00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X						PZ-12-10	SD1	20 00	30.00	1	
31	SHL-10-SPR22	WG				X	X	X	X	X						SHL-10	N1	24.00	39.00	1	
32	SHL-11-SPR22	WG				X	X	X	X	X						SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG				X	X	X	X	X						SHL-19	N1	20 00	30.00	1	
34	SHL-20-SPR22	WG				X	X	X	X	X						SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG				X	X	X	X	X						SHL-20	FD1	39 00	49.00	1	
36	SHL-4-SPR22	WG				X	X	X	X	X						SHL-4	N1	3 00	13.00	1	

Relinquished by:
Date
Time

Received by:
Date
Time

5/12 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC: Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
37	SHM-05-40X-SPR22	WG				X	X	X	X	X						SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG				X	X	X	X	X						SHM-05-40X	N1	32.00	34.00	1	
39	SHM-05-40X-SPR22	WG				X	X	X	X	X						SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG				X	X	X	X	X						SHM-05-41B	N1	62.00	64.00	1	
41	SHM-05-41C-SPR22	WG				X	X	X	X	X						SHM-05-41C	MS1	88 00	93 00	1	
42	SHM-05-41C-SPR22	WG				X	X	X	X	X						SHM-05-41C	N1	88 00	93 00	1	
43	SHM-05-41C-SPR22	WG				X	X	X	X	X						SHM-05-41C	SD1	88 00	93.00	1	
44	SHM-07-03-SPR22	WG				X	X	X	X	X						SHM-07-03	N1	25.00	35 00	1	
45	SHM-07-05X-SPR22	WG				X	X	X	X	X						SHM-07-05X	N1	55 00	65 00	1	
46	SHM-11-02-SPR22	WG				X	X	X	X	X						SHM-11-02	N1	52.00	66 00	1	
47	SHM-11-06-SPR22	WG				X	X	X	X	X						SHM-11-06	N1	25 00	35 00	1	
48	SHM-13-03-SPR22	WG				X	X	X	X	X						SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
50	SHM-13-06-SPR22	WG				X	X	X	X	X						SHM-13-06	N1	36.00	46 00	1	
51	SHM-13-07-SPR22	WG				X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
52	SHM-13-08-SPR22	WG				X	X	X	X	X						SHM-13-08	N1	55.00	65 00	1	
53	SHM-93-22B-SPR22	WG				X	X	X	X	X						SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG				X	X	X	X	X						SHM-96-5B	N1	80 00	90 00	1	

Relinquished by:
Date
Time

Received by:
Date
Time

5/12 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
55	SHL-DUP05-SPR22	WG					X	X	X	X	X					SHM-96-5B	FD1	80 00	90 00	1	
56	SHP-01-36X-SPR22	WG					X	X	X	X	X					SHP-01-36X	N1	3 00	8 00	1	
57	SHP-01-37X-SPR22	WG					X	X	X	X	X					SHP-01-37X	N1	1 00	6 00	1	
58	SHP-01-38A-SPR22	WG					X	X	X	X	X					SHP-01-38A	N1	1.50	6.50	1	
59	SHL-DUP03-SPR22	WG					X	X	X	X	X					SHP-01-38A	FD1	1.50	6.50	1	
60	SHP-2016-06A-SPR22	WG	5-11-22	1125	DC		X	X	X	X	X					SHP-2016-06A	N1	81.00	86 00	1	
61	SHP-2016-06B-SPR22	WG	5-11-22	1335	DC		X	X	X	X	X					SHP-2016-06B	N1	102.00	112.00	1	
62	SHP-2016-06C-SPR22	WG	5-11-22	1520	DC		X	X	X	X	X					SHP-2016-06C	N1	123 00	133 00	1	
63	SHP-2016-07A-SPR22	WG					X	X	X	X	X					SHP-2016-07A	N1	22.00	32.00	1	
64	SHP-2016-07B-SPR22	WG	5-11-22	1005	GS		X	X	X	X	X					SHP-2016-07B	N1	70 00	80 00	1	
65	SHP-2016-1A-SPR22	WG					X	X	X	X	X					SHP-2016-1A	N1	13 00	23 00	1	
66	SHP-2016-1B-SPR22	WG					X	X	X	X	X					SHP-2016-1B	N1	75.00	85 00	1	
67	SHP-2016-2A-SPR22	WG	5-11-22	1145	GS		X	X	X	X	X					SHP-2016-2A	N1	20 00	25 00	1	
68	SHP-2016-2B-SPR22	WG	5-11-22	1250	GS		X	X	X	X	X					SHP-2016-2B	N1	80 00	85.00	1	
69	SHP-2016-3A-SPR22	WG					X	X	X	X	X					SHP-2016-3A	N1	20 00	25 00	1	
70	SHP-2016-3B-SPR22	WG					X	X	X	X	X					SHP-2016-3B	N1	80 00	85 00	1	
71	SHP-2016-4A-SPR22	WG	5-11-22	1011	SG		X	X	X	X	X					SHP-2016-4A	N1	25.00	30 00	1	
72	SHP-2016-4B-SPR22 DC	~~WG~~	~~5-11-22~~	~~1011~~	~~SG~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~					SHP-2016-4B	N1	85.00	90.00	1	

Relinquished by: [signature] 5/11/22 1645
Date 5/11/22
Time 4:45

Received by: [signature] 5/11/22 1645 [signature] 5/12 1030
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es com

COC # SHL_SPR22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022					46	9	9	5	3						
73	SHP-2016-5A-SPR22	WG				X	X	X	X	X	SHP-2016-5A	N1	25.00	30 00	1	
74	SHL-DUP06-SPR22	WG				X	X	X	X	X	SHP-2016-5A	FD1	25 00	30.00	1	
75	SHP-2016-5B-SPR22	WG				X	X	X	X	X	SHP-2016-5B	N1	85.00	90 00	1	
76	SHL-RB01-SPR22	Lab water	5-11-22	1150	DC	X	X	X	X	X						
77																
78																
79																
80																
81																
82																
83																
84																

Turnaround Time: Standard

Relinquished by: Gerard Shuckle
Date 5/11/22
Time 4:45
[signature] 5/11/22 1700

Received by: [signature] 5/11/22 1645
Date
Time
[signature] 5/12 1030

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215367-1

Login Number: 215367
List Number: 1
Creator: Watters, David

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-215476-1
Client Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022
Revision: 1

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
7/6/2022 12:37:41 PM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-215476-1	EW-01-SPR22	Water	05/13/22 12:00	05/14/22 09:50
680-215476-2	EW-04-SPR22	Water	05/13/22 11:45	05/14/22 09:50
680-215476-3	EPA-PZ-2012-2A-SPR22	Water	05/12/22 09:58	05/14/22 09:50
680-215476-4	EPA-PZ-2012-2B-SPR22	Water	05/12/22 11:07	05/14/22 09:50
680-215476-5	EPA-PZ-2012-7A-SPR22	Water	05/12/22 12:25	05/14/22 09:50
680-215476-6	EPA-PZ-2012-7B-SPR22	Water	05/12/22 10:55	05/14/22 09:50
680-215476-7	SHL-10-SPR22	Water	05/12/22 13:53	05/14/22 09:50
680-215476-8	SHM-05-40X-SPR22	Water	05/12/22 10:45	05/14/22 09:50
680-215476-9	SHM-07-03-SPR22	Water	05/12/22 13:50	05/14/22 09:50
680-215476-10	SHM-07-05X-SPR22	Water	05/12/22 12:30	05/14/22 09:50
680-215476-11	SHL-RB02-SPR22	Water	05/12/22 12:00	05/14/22 09:50

Job ID: 680-215476-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-215476-1

Comments
No additional comments.

Receipt
The samples were received on 5/14/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.8º C and 1.6º C.

HPLC/IC
Method 9056A: Due to the high concentration of Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 680-723449 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EW-01-SPR22
Lab Sample ID: 680-215476-1
Date Collected: 05/13/22 12:00
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	18		0.50	0.50	0.20	mg/L		05/31/22 15:20	1
Sulfate	3.7	M	1.0	1.0	0.40	mg/L		05/31/22 15:20	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	70000		100	50	20	ug/L		05/19/22 23:34	1
Manganese	2200		10	5.0	1.3	ug/L		05/19/22 23:34	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1500		5.0	3.0	0.86	ug/L		05/18/22 20:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	200		6.0	5.0	2.2	mg/L		05/24/22 21:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	4.8		1.0	0.60	0.50	mg/L		06/02/22 15:28	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EW-04-SPR22
Lab Sample ID: 680-215476-2
Date Collected: 05/13/22 11:45
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.3		0.50	0.50	0.20	mg/L		05/31/22 15:33	1
Sulfate	4.3	M	1.0	1.0	0.40	mg/L		05/31/22 15:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	41000		100	50	20	ug/L		05/19/22 21:29	1
Manganese	2600		10	5.0	1.3	ug/L		05/19/22 21:29	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3000		5.0	3.0	0.86	ug/L		05/18/22 22:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	100		6.0	5.0	2.2	mg/L		05/24/22 22:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	2.2		1.0	0.60	0.50	mg/L		06/02/22 15:51	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-2A-SPR22
Lab Sample ID: 680-215476-3

Date Collected: 05/12/22 09:58
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.9		0.50	0.50	0.20	mg/L		05/31/22 15:46	1
Sulfate	5.2		1.0	1.0	0.40	mg/L		05/31/22 15:46	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	130		100	50	20	ug/L		05/19/22 23:20	1
Manganese	1.9	J	10	5.0	1.3	ug/L		05/19/22 23:20	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 20:29	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	11		6.0	5.0	2.2	mg/L		05/24/22 21:58	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.75	J	1.0	0.60	0.50	mg/L		06/02/22 16:13	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-2B-SPR22
Lab Sample ID: 680-215476-4

Date Collected: 05/12/22 11:07
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	29		0.50	0.50	0.20	mg/L		05/31/22 17:03	1
Sulfate	5.4	M	1.0	1.0	0.40	mg/L		05/31/22 17:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	5900		100	50	20	ug/L		05/19/22 23:12	1
Manganese	4200		10	5.0	1.3	ug/L		05/19/22 23:12	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.8	J	5.0	3.0	0.86	ug/L		05/18/22 20:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	110		6.0	5.0	2.2	mg/L		05/24/22 22:06	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.3		1.0	0.60	0.50	mg/L		06/02/22 16:31	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-7A-SPR22
Lab Sample ID: 680-215476-5

Date Collected: 05/12/22 12:25
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**160**		0.50	0.50	0.20	mg/L		05/31/22 17:16	1
Sulfate	**4.4**	**M**	1.0	1.0	0.40	mg/L		05/31/22 17:16	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/19/22 21:25	1
Manganese	**6.4**	**J**	10	5.0	1.3	ug/L		05/19/22 21:25	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 22:35	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**24**		6.0	5.0	2.2	mg/L		05/24/22 22:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	**1.1**		1.0	0.60	0.50	mg/L		06/02/22 16:56	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-7B-SPR22
Lab Sample ID: 680-215476-6

Date Collected: 05/12/22 10:55
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.1		0.50	0.50	0.20	mg/L		05/31/22 17:29	1
Sulfate	2.4	M	1.0	1.0	0.40	mg/L		05/31/22 17:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		05/19/22 23:31	1
Manganese	3100		10	5.0	1.3	ug/L		05/19/22 23:31	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1300		5.0	3.0	0.86	ug/L		05/18/22 20:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	31		6.0	5.0	2.2	mg/L		05/25/22 18:01	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.1		1.0	0.60	0.50	mg/L		06/02/22 17:18	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215476-1

Client Sample ID: SHL-10-SPR22

Date Collected: 05/12/22 13:53
Date Received: 05/14/22 09:50

Lab Sample ID: 680-215476-7

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.92		0.50	0.50	0.20	mg/L		05/31/22 17:42	1
Sulfate	1.8	M	1.0	1.0	0.40	mg/L		05/31/22 17:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	28	J	100	50	20	ug/L		05/19/22 21:21	1
Manganese	2.0	J	10	5.0	1.3	ug/L		05/19/22 21:21	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 22:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	11		6.0	5.0	2.2	mg/L		05/24/22 22:35	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	4.6		1.0	0.60	0.50	mg/L		06/02/22 17:37	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHM-05-40X-SPR22
Lab Sample ID: 680-215476-8
Date Collected: 05/12/22 10:45
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	17		0.50	0.50	0.20	mg/L		05/31/22 16:25	1
Sulfate	3.3	M	1.0	1.0	0.40	mg/L		05/31/22 16:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	24000	J1	100	50	20	ug/L		05/19/22 22:54	1
Manganese	730		10	5.0	1.3	ug/L		05/19/22 22:54	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1900	J1	5.0	3.0	0.86	ug/L		05/18/22 19:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	100		6.0	5.0	2.2	mg/L		05/24/22 22:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.9		1.0	0.60	0.50	mg/L		06/02/22 18:03	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHM-07-03-SPR22
Lab Sample ID: 680-215476-9
Date Collected: 05/12/22 13:50
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	240	D	1.0	1.0	0.40	mg/L		05/31/22 17:55	2
Sulfate	6.4	D M	2.0	2.0	0.80	mg/L		05/31/22 17:55	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	75	J	100	50	20	ug/L		05/19/22 20:44	1
Manganese	13		10	5.0	1.3	ug/L		05/19/22 20:44	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 22:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	23		6.0	5.0	2.2	mg/L		05/24/22 22:50	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.78	J	1.0	0.60	0.50	mg/L		06/02/22 19:46	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHM-07-05X-SPR22
Lab Sample ID: 680-215476-10
Date Collected: 05/12/22 12:30
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	360	D	2.5	2.5	1.0	mg/L		05/31/22 18:08	5
Sulfate	5.0	U M	5.0	5.0	2.0	mg/L		05/31/22 18:08	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4200		100	50	20	ug/L		05/19/22 21:18	1
Manganese	110		10	5.0	1.3	ug/L		05/19/22 21:18	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	110		5.0	3.0	0.86	ug/L		05/18/22 22:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	26		6.0	5.0	2.2	mg/L		05/24/22 22:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	3.3		1.0	0.60	0.50	mg/L		06/02/22 20:08	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHL-RB02-SPR22
Lab Sample ID: 680-215476-11
Date Collected: 05/12/22 12:00
Matrix: Water
Date Received: 05/14/22 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/31/22 18:21	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/31/22 18:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/19/22 23:16	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/19/22 23:16	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 20:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	2.2	J	6.0	5.0	2.2	mg/L		05/24/22 23:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		06/02/22 20:31	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-723449/2
Matrix: Water
Analysis Batch: 723449

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		05/31/22 11:19	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		05/31/22 11:19	1

Lab Sample ID: LCS 680-723449/3
Matrix: Water
Analysis Batch: 723449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.2		mg/L		102	87 - 111
Sulfate	10.0	9.40		mg/L		94	87 - 112

Lab Sample ID: LCSD 680-723449/4
Matrix: Water
Analysis Batch: 723449

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	9.38		mg/L		94	87 - 112	0	15

Lab Sample ID: 680-215476-8 MS
Matrix: Water
Analysis Batch: 723449

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	17		10.0	27.4		mg/L		102	87 - 111
Sulfate	3.3	M	10.0	12.9		mg/L		95	87 - 112

Lab Sample ID: 680-215476-8 MSD
Matrix: Water
Analysis Batch: 723449

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	17		10.0	27.5		mg/L		103	87 - 111	0	15
Sulfate	3.3	M	10.0	12.9		mg/L		95	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-721302/1-A
Matrix: Water
Analysis Batch: 721879

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721302

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	35.9	J	100	50	20	ug/L		05/19/22 22:46	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/19/22 22:46	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-721302/2-A
Matrix: Water
Analysis Batch: 721879

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5310		ug/L		106	87 - 115
Manganese	400	413		ug/L		103	90 - 114

Lab Sample ID: MB 680-721309/1-A
Matrix: Water
Analysis Batch: 721879

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721309

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/19/22 20:37	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/19/22 20:37	1

Lab Sample ID: LCS 680-721309/2-A
Matrix: Water
Analysis Batch: 721879

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721309

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5230		ug/L		105	87 - 115
Manganese	400	409		ug/L		102	90 - 114

Lab Sample ID: 680-215476-8 MS
Matrix: Water
Analysis Batch: 721879

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved
Prep Batch: 721302

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	24000	J1	5000	28300	4	ug/L		85	87 - 115
Manganese	730		400	1100		ug/L		94	90 - 114

Lab Sample ID: 680-215476-8 MSD
Matrix: Water
Analysis Batch: 721879

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved
Prep Batch: 721302

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	24000	J1	5000	29000	4	ug/L		98	87 - 115	2	20
Manganese	730		400	1120		ug/L		99	90 - 114	2	20

Lab Sample ID: 680-215476-9 MS
Matrix: Water
Analysis Batch: 721879

Client Sample ID: SHM-07-03-SPR22
Prep Type: Dissolved
Prep Batch: 721309

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	75	J	5000	5230		ug/L		103	87 - 115
Manganese	13		400	409		ug/L		99	90 - 114

Lab Sample ID: 680-215476-9 MSD
Matrix: Water
Analysis Batch: 721879

Client Sample ID: SHM-07-03-SPR22
Prep Type: Dissolved
Prep Batch: 721309

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	75	J	5000	4950		ug/L		98	87 - 115	5	20
Manganese	13		400	388		ug/L		94	90 - 114	5	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-721303/1-A
Matrix: Water
Analysis Batch: 721591

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721303

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 19:22	1

Lab Sample ID: LCS 680-721303/2-A
Matrix: Water
Analysis Batch: 721591

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721303

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	101		ug/L		101	84 - 116

Lab Sample ID: MB 680-721310/1-A
Matrix: Water
Analysis Batch: 721591

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 721310

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		05/18/22 22:12	1

Lab Sample ID: LCS 680-721310/2-A
Matrix: Water
Analysis Batch: 721591

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 721310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	99.7		ug/L		100	84 - 116

Lab Sample ID: 680-215476-8 MS
Matrix: Water
Analysis Batch: 721591

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved
Prep Batch: 721303

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1900	J1	100	1970	4	ug/L		83	84 - 116

Lab Sample ID: 680-215476-8 MSD
Matrix: Water
Analysis Batch: 721591

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved
Prep Batch: 721303

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1900	J1	100	1970	4	ug/L		83	84 - 116	0	20

Lab Sample ID: 680-215476-9 MS
Matrix: Water
Analysis Batch: 721591

Client Sample ID: SHM-07-03-SPR22
Prep Type: Dissolved
Prep Batch: 721310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	3.0	U	100	101		ug/L		101	84 - 116

Lab Sample ID: 680-215476-9 MSD
Matrix: Water
Analysis Batch: 721591

Client Sample ID: SHM-07-03-SPR22
Prep Type: Dissolved
Prep Batch: 721310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	95.7		ug/L		96	84 - 116	5	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-722560/34
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/24/22 21:21	1

Lab Sample ID: LCS 680-722560/36
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	238		mg/L		95	90 - 112

Lab Sample ID: LCSD 680-722560/61
Matrix: Water
Analysis Batch: 722560

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	247		mg/L		99	90 - 112	3	30

Lab Sample ID: 680-215476-1 DU
Matrix: Water
Analysis Batch: 722560

Client Sample ID: EW-01-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	200		204		mg/L		2	30

Lab Sample ID: 680-215476-11 DU
Matrix: Water
Analysis Batch: 722560

Client Sample ID: SHL-RB02-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	2.2	J	5.0	U	mg/L		NC	30

Lab Sample ID: MB 680-722756/5
Matrix: Water
Analysis Batch: 722756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	6.0	5.0	2.2	mg/L		05/25/22 17:12	1

Lab Sample ID: LCS 680-722756/7
Matrix: Water
Analysis Batch: 722756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	236		mg/L		94	90 - 112

Lab Sample ID: LCSD 680-722756/32
Matrix: Water
Analysis Batch: 722756

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	237		mg/L		95	90 - 112	1	30

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215476-1

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-724022/2
Matrix: Water
Analysis Batch: 724022

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.60	U	1.0	0.60	0.50	mg/L		06/02/22 14:04	1

Lab Sample ID: LCS 680-724022/3
Matrix: Water
Analysis Batch: 724022

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	20.1		mg/L		101	80 - 120		

Lab Sample ID: LCSD 680-724022/4
Matrix: Water
Analysis Batch: 724022

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	20.3		mg/L		101	80 - 120	1	20

Lab Sample ID: 680-215476-8 MS
Matrix: Water
Analysis Batch: 724022

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	1.9		20.4	21.2		mg/L		95	80 - 120		

Lab Sample ID: 680-215476-8 MSD
Matrix: Water
Analysis Batch: 724022

Client Sample ID: SHM-05-40X-SPR22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	1.9		20.4	21.3		mg/L		95	80 - 120	0	20

HPLC/IC

Analysis Batch: 723449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Total/NA	Water	9056A	
680-215476-2	EW-04-SPR22	Total/NA	Water	9056A	
680-215476-3	EPA-PZ-2012-2A-SPR22	Total/NA	Water	9056A	
680-215476-4	EPA-PZ-2012-2B-SPR22	Total/NA	Water	9056A	
680-215476-5	EPA-PZ-2012-7A-SPR22	Total/NA	Water	9056A	
680-215476-6	EPA-PZ-2012-7B-SPR22	Total/NA	Water	9056A	
680-215476-7	SHL-10-SPR22	Total/NA	Water	9056A	
680-215476-8	SHM-05-40X-SPR22	Total/NA	Water	9056A	
680-215476-9	SHM-07-03-SPR22	Total/NA	Water	9056A	
680-215476-10	SHM-07-05X-SPR22	Total/NA	Water	9056A	
680-215476-11	SHL-RB02-SPR22	Total/NA	Water	9056A	
MB 680-723449/2	Method Blank	Total/NA	Water	9056A	
LCS 680-723449/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-723449/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-215476-8 MS	SHM-05-40X-SPR22	Total/NA	Water	9056A	
680-215476-8 MSD	SHM-05-40X-SPR22	Total/NA	Water	9056A	

Metals

Prep Batch: 721302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Dissolved	Water	3005A	
680-215476-3	EPA-PZ-2012-2A-SPR22	Dissolved	Water	3005A	
680-215476-4	EPA-PZ-2012-2B-SPR22	Dissolved	Water	3005A	
680-215476-6	EPA-PZ-2012-7B-SPR22	Dissolved	Water	3005A	
680-215476-8	SHM-05-40X-SPR22	Dissolved	Water	3005A	
680-215476-11	SHL-RB02-SPR22	Dissolved	Water	3005A	
MB 680-721302/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721302/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215476-8 MS	SHM-05-40X-SPR22	Dissolved	Water	3005A	
680-215476-8 MSD	SHM-05-40X-SPR22	Dissolved	Water	3005A	

Prep Batch: 721303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Dissolved	Water	3005A	
680-215476-3	EPA-PZ-2012-2A-SPR22	Dissolved	Water	3005A	
680-215476-4	EPA-PZ-2012-2B-SPR22	Dissolved	Water	3005A	
680-215476-6	EPA-PZ-2012-7B-SPR22	Dissolved	Water	3005A	
680-215476-8	SHM-05-40X-SPR22	Dissolved	Water	3005A	
680-215476-11	SHL-RB02-SPR22	Dissolved	Water	3005A	
MB 680-721303/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721303/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215476-8 MS	SHM-05-40X-SPR22	Dissolved	Water	3005A	
680-215476-8 MSD	SHM-05-40X-SPR22	Dissolved	Water	3005A	

Prep Batch: 721309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-2	EW-04-SPR22	Dissolved	Water	3005A	
680-215476-5	EPA-PZ-2012-7A-SPR22	Dissolved	Water	3005A	
680-215476-7	SHL-10-SPR22	Dissolved	Water	3005A	
680-215476-9	SHM-07-03-SPR22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 721309 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-10	SHM-07-05X-SPR22	Dissolved	Water	3005A	
MB 680-721309/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721309/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215476-9 MS	SHM-07-03-SPR22	Dissolved	Water	3005A	
680-215476-9 MSD	SHM-07-03-SPR22	Dissolved	Water	3005A	

Prep Batch: 721310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-2	EW-04-SPR22	Dissolved	Water	3005A	
680-215476-5	EPA-PZ-2012-7A-SPR22	Dissolved	Water	3005A	
680-215476-7	SHL-10-SPR22	Dissolved	Water	3005A	
680-215476-9	SHM-07-03-SPR22	Dissolved	Water	3005A	
680-215476-10	SHM-07-05X-SPR22	Dissolved	Water	3005A	
MB 680-721310/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-721310/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-215476-9 MS	SHM-07-03-SPR22	Dissolved	Water	3005A	
680-215476-9 MSD	SHM-07-03-SPR22	Dissolved	Water	3005A	

Analysis Batch: 721591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Dissolved	Water	6020A	721303
680-215476-2	EW-04-SPR22	Dissolved	Water	6020A	721310
680-215476-3	EPA-PZ-2012-2A-SPR22	Dissolved	Water	6020A	721303
680-215476-4	EPA-PZ-2012-2B-SPR22	Dissolved	Water	6020A	721303
680-215476-5	EPA-PZ-2012-7A-SPR22	Dissolved	Water	6020A	721310
680-215476-6	EPA-PZ-2012-7B-SPR22	Dissolved	Water	6020A	721303
680-215476-7	SHL-10-SPR22	Dissolved	Water	6020A	721310
680-215476-8	SHM-05-40X-SPR22	Dissolved	Water	6020A	721303
680-215476-9	SHM-07-03-SPR22	Dissolved	Water	6020A	721310
680-215476-10	SHM-07-05X-SPR22	Dissolved	Water	6020A	721310
680-215476-11	SHL-RB02-SPR22	Dissolved	Water	6020A	721303
MB 680-721303/1-A	Method Blank	Total Recoverable	Water	6020A	721303
MB 680-721310/1-A	Method Blank	Total Recoverable	Water	6020A	721310
LCS 680-721303/2-A	Lab Control Sample	Total Recoverable	Water	6020A	721303
LCS 680-721310/2-A	Lab Control Sample	Total Recoverable	Water	6020A	721310
680-215476-8 MS	SHM-05-40X-SPR22	Dissolved	Water	6020A	721303
680-215476-8 MSD	SHM-05-40X-SPR22	Dissolved	Water	6020A	721303
680-215476-9 MS	SHM-07-03-SPR22	Dissolved	Water	6020A	721310
680-215476-9 MSD	SHM-07-03-SPR22	Dissolved	Water	6020A	721310

Analysis Batch: 721879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Dissolved	Water	6010C	721302
680-215476-2	EW-04-SPR22	Dissolved	Water	6010C	721309
680-215476-3	EPA-PZ-2012-2A-SPR22	Dissolved	Water	6010C	721302
680-215476-4	EPA-PZ-2012-2B-SPR22	Dissolved	Water	6010C	721302
680-215476-5	EPA-PZ-2012-7A-SPR22	Dissolved	Water	6010C	721309
680-215476-6	EPA-PZ-2012-7B-SPR22	Dissolved	Water	6010C	721302
680-215476-7	SHL-10-SPR22	Dissolved	Water	6010C	721309
680-215476-8	SHM-05-40X-SPR22	Dissolved	Water	6010C	721302
680-215476-9	SHM-07-03-SPR22	Dissolved	Water	6010C	721309

Metals (Continued)

Analysis Batch: 721879 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-10	SHM-07-05X-SPR22	Dissolved	Water	6010C	721309
680-215476-11	SHL-RB02-SPR22	Dissolved	Water	6010C	721302
MB 680-721302/1-A	Method Blank	Total Recoverable	Water	6010C	721302
MB 680-721309/1-A	Method Blank	Total Recoverable	Water	6010C	721309
LCS 680-721302/2-A	Lab Control Sample	Total Recoverable	Water	6010C	721302
LCS 680-721309/2-A	Lab Control Sample	Total Recoverable	Water	6010C	721309
680-215476-8 MS	SHM-05-40X-SPR22	Dissolved	Water	6010C	721302
680-215476-8 MSD	SHM-05-40X-SPR22	Dissolved	Water	6010C	721302
680-215476-9 MS	SHM-07-03-SPR22	Dissolved	Water	6010C	721309
680-215476-9 MSD	SHM-07-03-SPR22	Dissolved	Water	6010C	721309

General Chemistry

Analysis Batch: 722560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Total/NA	Water	2320B-2011	
680-215476-2	EW-04-SPR22	Total/NA	Water	2320B-2011	
680-215476-3	EPA-PZ-2012-2A-SPR22	Total/NA	Water	2320B-2011	
680-215476-4	EPA-PZ-2012-2B-SPR22	Total/NA	Water	2320B-2011	
680-215476-5	EPA-PZ-2012-7A-SPR22	Total/NA	Water	2320B-2011	
680-215476-7	SHL-10-SPR22	Total/NA	Water	2320B-2011	
680-215476-8	SHM-05-40X-SPR22	Total/NA	Water	2320B-2011	
680-215476-9	SHM-07-03-SPR22	Total/NA	Water	2320B-2011	
680-215476-10	SHM-07-05X-SPR22	Total/NA	Water	2320B-2011	
680-215476-11	SHL-RB02-SPR22	Total/NA	Water	2320B-2011	
MB 680-722560/34	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-722560/36	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-722560/61	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-215476-1 DU	EW-01-SPR22	Total/NA	Water	2320B-2011	
680-215476-11 DU	SHL-RB02-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 722756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-6	EPA-PZ-2012-7B-SPR22	Total/NA	Water	2320B-2011	
MB 680-722756/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-722756/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-722756/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 724022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-215476-1	EW-01-SPR22	Dissolved	Water	9060A	
680-215476-2	EW-04-SPR22	Dissolved	Water	9060A	
680-215476-3	EPA-PZ-2012-2A-SPR22	Dissolved	Water	9060A	
680-215476-4	EPA-PZ-2012-2B-SPR22	Dissolved	Water	9060A	
680-215476-5	EPA-PZ-2012-7A-SPR22	Dissolved	Water	9060A	
680-215476-6	EPA-PZ-2012-7B-SPR22	Dissolved	Water	9060A	
680-215476-7	SHL-10-SPR22	Dissolved	Water	9060A	
680-215476-8	SHM-05-40X-SPR22	Dissolved	Water	9060A	
680-215476-9	SHM-07-03-SPR22	Dissolved	Water	9060A	
680-215476-10	SHM-07-05X-SPR22	Dissolved	Water	9060A	
680-215476-11	SHL-RB02-SPR22	Dissolved	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 724022 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-724022/2	Method Blank	Dissolved	Water	9060A	
LCS 680-724022/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-724022/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-215476-8 MS	SHM-05-40X-SPR22	Dissolved	Water	9060A	
680-215476-8 MSD	SHM-05-40X-SPR22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EW-01-SPR22
Lab Sample ID: 680-215476-1
Date Collected: 05/13/22 12:00
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 15:20	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 23:34	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 20:34	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 21:44	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 15:28	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EW-04-SPR22
Lab Sample ID: 680-215476-2
Date Collected: 05/13/22 11:45
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 15:33	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721309	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 21:29	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721310	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 22:43	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:29	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 15:51	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-2A-SPR22
Lab Sample ID: 680-215476-3
Date Collected: 05/12/22 09:58
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 15:46	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 23:20	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 20:29	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Job ID: 680-215476-1

Client Sample ID: EPA-PZ-2012-2A-SPR22

Lab Sample ID: 680-215476-3
Matrix: Water
Date Collected: 05/12/22 09:58
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 21:58	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 16:13	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-2B-SPR22

Lab Sample ID: 680-215476-4
Matrix: Water
Date Collected: 05/12/22 11:07
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 17:03	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 23:12	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 20:24	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:06	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 16:31	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: EPA-PZ-2012-7A-SPR22

Lab Sample ID: 680-215476-5
Matrix: Water
Date Collected: 05/12/22 12:25
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 17:16	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721309	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 21:25	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721310	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 22:35	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:13	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 16:56	JU	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: EPA-PZ-2012-7B-SPR22
Lab Sample ID: 680-215476-6
Date Collected: 05/12/22 10:55
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 17:29	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 23:31	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 20:31	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722756	05/25/22 18:01	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 17:18	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-10-SPR22
Lab Sample ID: 680-215476-7
Date Collected: 05/12/22 13:53
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 17:42	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721309	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 21:21	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721310	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 22:32	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:35	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 17:37	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-05-40X-SPR22
Lab Sample ID: 680-215476-8
Date Collected: 05/12/22 10:45
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 16:25	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 22:54	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 19:27	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: SHM-05-40X-SPR22
Lab Sample ID: 680-215476-8

Date Collected: 05/12/22 10:45
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:43	DR	TAL SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 18:03	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-07-03-SPR22
Lab Sample ID: 680-215476-9

Date Collected: 05/12/22 13:50
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		2	5 mL	5 mL	723449	05/31/22 17:55	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721309	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 20:44	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721310	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 22:17	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:50	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 19:46	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-07-05X-SPR22
Lab Sample ID: 680-215476-10

Date Collected: 05/12/22 12:30
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	723449	05/31/22 18:08	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721309	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 21:18	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721310	05/17/22 17:44	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 22:30	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 22:57	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 20:08	JU	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Client Sample ID: SHL-RB02-SPR22
Lab Sample ID: 680-215476-11

Date Collected: 05/12/22 12:00
Matrix: Water
Date Received: 05/14/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	723449	05/31/22 18:21	OK	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	721302	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6010C		1			721879	05/19/22 23:16	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	721303	05/17/22 17:03	JE	TAL SAV
Dissolved	Analysis	6020A		1			721591	05/18/22 20:26	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			722560	05/24/22 23:21	DR	TAL SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	724022	06/02/22 20:31	JU	TAL SAV
	Instrument ID: TOC7									

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-18-22

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-215476-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Spring 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

680-215476 Chain of Custody

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
1	EPA-PZ-2012-1A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2A	N1	18.14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-2B	N1	73.16	78 16	1	
5	EPA-PZ-2012-3A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-5A	N1	17.95	22 95	1	
11	EPA-PZ-2012-5B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-6A	N1	24 19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7A	N1	23 87	28 87	1	
15	EPA-PZ-2012-7B-SPR22	WG				X	X	X	X	X	EPA-PZ-2012-7B	N1	58 82	63.82	1	
16	EW-01-SPR22	WG	5-13 22	1200	DC	X	X	X	X	X	EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG	5-13-22	1145	DC	X	X	X	X	X	EW-04	N1	70 00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X	PZ-12-01	N1	24.00	34.00	1	

Relinquished by: [signature]
Date 5-13-22
Time 1415

[signature] 5-13-22 1700

Received by: [signature]
Date 5-13-22
Time 1915

950

[signature] 5-14 22

1.4/0.8 22/1.6

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	EPA-PZ-2012-1A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-SPR22	WG	5-12-22	958	SG	X	X	X	X	X						EPA-PZ-2012-2A	N1	18.14	23 14	1	
4	EPA-PZ-2012-2B-SPR22	WG	5-12-22	1107	SG	X	X	X	X	X						EPA-PZ-2012-2B	N1	73.16	78.16	1	
5	EPA-PZ-2012-3A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-3A	N1	19 09	24.09	1	
6	EPA-PZ-2012-3B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-3B	N1	68.70	73 70	1	
7	EPA-PZ-2012-4A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4A	N1	19 56	24.56	1	
8	EPA-PZ-2012-4B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	SHL-DUP04-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-4B	FD1	79.50	84.50	1	
10	EPA-PZ-2012-5A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-5A	N1	17 95	22.95	1	
11	EPA-PZ-2012-5B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-5B	N1	68.46	73.46	1	
12	EPA-PZ-2012-6A-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-6A	N1	24 19	29 19	1	
13	EPA-PZ-2012-6B-SPR22	WG				X	X	X	X	X						EPA-PZ-2012-6B	N1	74.23	79.23	1	
14	EPA-PZ-2012-7A-SPR22	WG	5-12-22	1225	DC	X	X	X	X	X						EPA-PZ-2012-7A	N1	23.87	28 87	1	
15	EPA-PZ-2012-7B-SPR22	WG	5-12-22	1055	DC	X	X	X	X	X						EPA-PZ-2012-7B	N1	58.82	63.82	1	
16	EW-01-SPR22	WG				X	X	X	X	X						EW-01	N1	60 00	85 00	1	
17	EW-04-SPR22	WG				X	X	X	X	X						EW-04	N1	70.00	95 00	1	
18	PZ-12-01-SPR22	WG				X	X	X	X	X						PZ-12-01	N1	24.00	34.00	1	

Relinquished by: Grace Shuckra
Date 5/12/22
Time 3:50

5/13/22 1700

Received by:
Date 5/12/22
Time 3:50

5-14-22 950

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
19	PZ-12-02-SPR22	WG				X	X	X	X	X					PZ-12-02	N1	24.00	34.00	1	
20	PZ-12-03-SPR22	WG				X	X	X	X	X					PZ-12-03	N1	24.00	34.00	1	
21	PZ-12-04-SPR22	WG				X	X	X	X	X					PZ-12-04	N1	24.00	34.00	1	
22	PZ-12-03-SPR22	WG				X	X	X	X	X					PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-SPR22	WG				X	X	X	X	X					PZ-12-06	N1	25 00	35 00	1	
24	SHL-DUP01-SPR22	WG				X	X	X	X	X					PZ-12-06	FD1	25 00	35 00	1	
25	PZ-12-07-SPR22	WG				X	X	X	X	X					PZ-12-07	N1	20 00	30 00	1	
26	PZ-12-08-SPR22	WG				X	X	X	X	X					PZ-12-08	N1	22.00	32.00	1	
27	PZ-12-09-SPR22	WG				X	X	X	X	X					PZ-12-09	N1	20 00	30 00	1	
28	PZ-12-10-SPR22	WG				X	X	X	X	X					PZ-12-10	MS1	20 00	30 00	1	
29	PZ-12-10-SPR22	WG				X	X	X	X	X					PZ-12-10	N1	20 00	30 00	1	
30	PZ-12-10-SPR22	WG				X	X	X	X	X					PZ-12-10	SD1	20 00	30 00	1	
31	SHL-10-SPR22	WG	5-12-22	1353	SG	X	X	X	X	X					SHL-10	N1	24.00	39 00	1	
32	SHL-11-SPR22	WG				X	X	X	X	X					SHL-11	N1	12.00	27 00	1	
33	SHL-19-SPR22	WG				X	X	X	X	X					SHL-19	N1	20 00	30.00	1	
34	SHL-20-SPR22	WG				X	X	X	X	X					SHL-20	N1	39 00	49 00	1	
35	SHL-DUP02-SPR22	WG				X	X	X	X	X					SHL-20	FD1	39 00	49 00	1	
36	SHL-4-SPR22	WG				X	X	X	X	X					SHL-4	N1	3 00	13.00	1	

Relinquished by: [signature]
Date 5/12/22
Time 3:50

[signature] 5/13/22 1700

Received by [signature]
Date 5/12/22
Time 359

[signature] NA 5-14-22 950

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.		46	9	9	5	3							Location ID	Type	Top	Bottom	Cooler	Comments
37	SHM-05-40X-SPR22	WG	5-12-22	1045	GS		X	X	X	X	X							SHM-05-40X	MS1	32.00	34.00	1	
38	SHM-05-40X-SPR22	WG	5-12-22	1055	GS		X	X	X	X	X							SHM-05-40X	N1	32.00	34 00	1	
39	SHM-05-40X-SPR22	WG	5-12-22	1105	GS		X	X	X	X	X							SHM-05-40X	SD1	32.00	34.00	1	
40	SHM-05-41B-SPR22	WG					X	X	X	X	X							SHM-05-41B	N1	62.00	64.00	1	
41	SHM-05-41C-SPR22	WG					X	X	X	X	X							SHM-05-41C	MS1	88.00	93.00	1	
42	SHM-05-41C-SPR22	WG					X	X	X	X	X							SHM-05-41C	N1	88.00	93.00	1	
43	SHM-05-41C-SPR22	WG					X	X	X	X	X							SHM-05-41C	SD1	88 00	93 00	1	
44	SHM-07-03-SPR22	WG	5-12-22	1350	GS		X	X	X	X	X							SHM-07-03	N1	25.00	35 00	1	
45	SHM-07-05X-SPR22	WG	5-12-22	1230	GS		X	X	X	X	X							SHM-07-05X	N1	55.00	65 00	1	
46	SHM-11-02-SPR22	WG					X	X	X	X	X							SHM-11-02	N1	52.00	66 00	1	
47	SHM-11-06-SPR22	WG					X	X	X	X	X							SHM-11-06	N1	25 00	35 00	1	
48	SHM-13-03-SPR22	WG					X	X	X	X	X							SHM-13-03	N1	42.00	52.00	1	
49	SHM-13-04-SPR22	WG					X	X	X	X	X							SHM-13-04	N1	20 00	30 00	1	
50	SHM-13-06-SPR22	WG					X	X	X	X	X							SHM-13-06	N1	36 00	46 00	1	
51	SHM-13-07-SPR22	WG					X	X	X	X	X							SHM-13-07	N1	27 00	37 00	1	
52	SHM-13-08-SPR22	WG					X	X	X	X	X							SHM-13-08	N1	55.00	65 00	1	
53	SHM-93-22B-SPR22	WG					X	X	X	X	X							SHM-93-22B	N1	82.30	92.30	1	
54	SHM-96-5B-SPR22	WG					X	X	X	X	X							SHM-96-5B	N1	80 00	90.00	1	

Relinquished by: Grace Shultz
Date 5/12/22
Time 3:50

5/13/22 1200

Received by:
Date 5/12/22
Time 350

TA 5-14-22 950

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(619) 370-0374, halevesque@seres-es.com

COC # SHL_SPR22

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Analytical Test Method

| | | |

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-215476-1

Login Number: 215476
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-223337-1
Client Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 2022

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
11/9/2022 8:49:31 PM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the {0} Project Manager.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 2022

Job ID: 680-223337-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-223337-1	EPA-PZ-2012-4A-FAL22	Water	10/13/22 09:30	10/15/22 09:20
680-223337-2	EPA-PZ-2012-4B-FAL22	Water	10/13/22 10:48	10/15/22 09:20
680-223337-3	PZ-12-01-FAL22	Water	10/13/22 09:55	10/15/22 09:20
680-223337-4	PZ-12-02-FAL22	Water	10/13/22 11:00	10/15/22 09:20
680-223337-5	PZ-12-03-FAL22	Water	10/14/22 09:45	10/15/22 09:20
680-223337-6	PZ-12-04-FAL22	Water	10/13/22 15:35	10/15/22 09:20
680-223337-7	PZ-12-05-FAL22	Water	10/14/22 11:10	10/15/22 09:20
680-223337-8	PZ-12-06-FAL22	Water	10/14/22 14:20	10/15/22 09:20
680-223337-9	PZ-12-10-FAL22	Water	10/14/22 12:40	10/15/22 09:20
680-223337-10	SHL-11-FAL22	Water	10/13/22 14:05	10/15/22 09:20
680-223337-11	SHL-20-FAL22	Water	10/13/22 12:50	10/15/22 09:20
680-223337-12	SHL-24-FAL22	Water	10/14/22 08:48	10/15/22 09:20
680-223337-13	SHL-4-FAL22	Water	10/13/22 13:10	10/15/22 09:20
680-223337-14	SHL-DUP01-FAL22	Water	10/13/22 10:57	10/15/22 09:20
680-223337-15	SHL-DUP03-FAL22	Water	10/14/22 14:20	10/15/22 09:20
680-223337-16	SHL-DUP04-FAL22	Water	10/13/22 12:50	10/15/22 09:20
680-223337-17	SHL-DUP06-FAL22	Water	10/14/22 08:52	10/15/22 09:20
680-223337-18	SHL-DUP08-FAL22	Water	10/14/22 13:05	10/15/22 09:20
680-223337-19	SHM-10-06-FAL22	Water	10/13/22 14:40	10/15/22 09:20
680-223337-20	SHM-11-02-FAL22	Water	10/14/22 11:38	10/15/22 09:20
680-223337-21	SHM-11-06-FAL22	Water	10/14/22 13:00	10/15/22 09:20
680-223337-22	SHM-13-04-FAL22	Water	10/13/22 13:43	10/15/22 09:20
680-223337-23	SHM-13-05-FAL22	Water	10/13/22 15:24	10/15/22 09:20
680-223337-24	SHM-13-06-FAL22	Water	10/13/22 12:37	10/15/22 09:20
680-223337-25	SHM-13-07-FAL22	Water	10/13/22 11:32	10/15/22 09:20
680-223337-26	SHM-13-08-FAL22	Water	10/13/22 10:00	10/15/22 09:20
680-223337-27	SHM-93-24A-FAL22	Water	10/14/22 09:55	10/15/22 09:20
680-223337-28	SHM-99-31A-FAL22	Water	10/14/22 10:55	10/15/22 09:20
680-223337-29	SHM-99-31B-FAL22	Water	10/14/22 12:20	10/15/22 09:20
680-223337-30	SHM-99-31C-FAL22	Water	10/14/22 14:15	10/15/22 09:20

Job ID: 680-223337-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-223337-1

Receipt
The samples were received on 10/15/2022 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5°C, 2.7°C and 4.7°C

HPLC/IC
Method 9056A_OF_28D_D5: The matrix spike duplicate (MSD) recoveries for analytical batch 680-747920 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: EPA-PZ-2012-4A-FAL22
Lab Sample ID: 680-223337-1

Date Collected: 10/13/22 09:30
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	21		0.50	0.50	0.20	mg/L		10/31/22 16:51	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		10/31/22 16:51	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4400		100	50	20	ug/L		10/20/22 21:04	1
Manganese	610		10	5.0	1.3	ug/L		10/20/22 21:04	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.3	J	5.0	3.0	0.86	ug/L		10/20/22 17:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	88		5.0	5.0	2.2	mg/L		10/21/22 17:17	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	9.3		1.0	0.50	0.50	mg/L		10/26/22 02:36	1

Client Sample ID: EPA-PZ-2012-4B-FAL22
Lab Sample ID: 680-223337-2

Date Collected: 10/13/22 10:48
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	30		0.50	0.50	0.20	mg/L		10/31/22 17:05	1
Sulfate	17	M	1.0	1.0	0.40	mg/L		10/31/22 17:05	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	49000		100	50	20	ug/L		10/17/22 20:15	1
Manganese	810		10	5.0	1.3	ug/L		10/17/22 20:15	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2100		5.0	3.0	0.86	ug/L		10/17/22 17:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	120		5.0	5.0	2.2	mg/L		10/21/22 18:03	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		10/26/22 02:55	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: PZ-12-01-FAL22
Lab Sample ID: 680-223337-3

Date Collected: 10/13/22 09:55
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	86		0.50	0.50	0.20	mg/L		10/31/22 17:18	1
Sulfate	25		1.0	1.0	0.40	mg/L		10/31/22 17:18	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	58000		100	50	20	ug/L		10/17/22 20:21	1
Manganese	2400		10	5.0	1.3	ug/L		10/17/22 20:21	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	570		5.0	3.0	0.86	ug/L		10/17/22 17:59	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		10/21/22 16:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		10/26/22 03:13	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: PZ-12-02-FAL22
Lab Sample ID: 680-223337-4

Date Collected: 10/13/22 11:00
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	81		0.50	0.50	0.20	mg/L		10/31/22 13:54	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		10/31/22 13:54	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	66000		100	50	20	ug/L		10/17/22 20:24	1
Manganese	1200		10	5.0	1.3	ug/L		10/17/22 20:24	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	280		5.0	3.0	0.86	ug/L		10/17/22 18:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	200		5.0	5.0	2.2	mg/L		10/21/22 17:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		10/26/22 03:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: PZ-12-03-FAL22
Lab Sample ID: 680-223337-5

Date Collected: 10/14/22 09:45
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	54		0.50	0.50	0.20	mg/L		10/31/22 14:07	1
Sulfate	7.5		1.0	1.0	0.40	mg/L		10/31/22 14:07	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	53000		100	50	20	ug/L		10/17/22 20:27	1
Manganese	4100		10	5.0	1.3	ug/L		10/17/22 20:27	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	720		5.0	3.0	0.86	ug/L		10/17/22 18:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/21/22 18:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		10/26/22 03:48	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: PZ-12-04-FAL22

Date Collected: 10/13/22 15:35
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	79		0.50	0.50	0.20	mg/L		10/31/22 14:21	1
Sulfate	0.80	J	1.0	1.0	0.40	mg/L		10/31/22 14:21	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	63000		100	50	20	ug/L		10/17/22 20:30	1
Manganese	1700		10	5.0	1.3	ug/L		10/17/22 20:30	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	690		5.0	3.0	0.86	ug/L		10/17/22 18:18	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	130		5.0	5.0	2.2	mg/L		10/21/22 18:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		10/26/22 04:06	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: PZ-12-05-FAL22

Date Collected: 10/14/22 11:10
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-7

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.0		0.50	0.50	0.20	mg/L		10/31/22 14:34	1
Sulfate	7.7		1.0	1.0	0.40	mg/L		10/31/22 14:34	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	5800		100	50	20	ug/L		10/17/22 20:33	1
Manganese	780		10	5.0	1.3	ug/L		10/17/22 20:33	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	14		5.0	3.0	0.86	ug/L		10/17/22 18:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	63		5.0	5.0	2.2	mg/L		10/21/22 17:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		10/26/22 04:24	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: PZ-12-06-FAL22

Date Collected: 10/14/22 14:20
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	8.4		0.50	0.50	0.20	mg/L		10/31/22 14:47	1
Sulfate	9.9	M	1.0	1.0	0.40	mg/L		10/31/22 14:47	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	920		100	50	20	ug/L		10/17/22 20:18	1
Manganese	860		10	5.0	1.3	ug/L		10/17/22 20:18	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.4	J	5.0	3.0	0.86	ug/L		10/17/22 17:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	53		5.0	5.0	2.2	mg/L		10/21/22 18:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	0.83	J	1.0	0.50	0.50	mg/L		10/26/22 05:15	1

Client Sample ID: PZ-12-10-FAL22
Lab Sample ID: 680-223337-9

Date Collected: 10/14/22 12:40
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**1.0**	**J1**	0.50	0.50	0.20	mg/L		10/31/22 12:34	1
Sulfate	**4.5**	**J1**	1.0	1.0	0.40	mg/L		10/31/22 12:34	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 19:48	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 19:48	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/17/22 17:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**37**		5.0	5.0	2.2	mg/L		10/21/22 17:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.74**	**J**	1.0	0.50	0.50	mg/L		10/26/22 01:48	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-11-FAL22

Date Collected: 10/13/22 14:05
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-10

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	94		0.50	0.50	0.20	mg/L		10/31/22 15:01	1
Sulfate	9.5		1.0	1.0	0.40	mg/L		10/31/22 15:01	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	65000		100	50	20	ug/L		10/17/22 20:36	1
Manganese	2000		10	5.0	1.3	ug/L		10/17/22 20:36	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	940		5.0	3.0	0.86	ug/L		10/17/22 18:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	170		5.0	5.0	2.2	mg/L		10/21/22 17:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.0		1.0	0.50	0.50	mg/L		10/26/22 05:33	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-20-FAL22

Date Collected: 10/13/22 12:50
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-11

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	110		0.50	0.50	0.20	mg/L		10/31/22 15:41	1
Sulfate	7.3		1.0	1.0	0.40	mg/L		10/31/22 15:41	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	73000		100	50	20	ug/L		10/17/22 20:39	1
Manganese	2400		10	5.0	1.3	ug/L		10/17/22 20:39	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	870		5.0	3.0	0.86	ug/L		10/17/22 18:29	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		10/22/22 17:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		10/26/22 05:51	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-24-FAL22
Lab Sample ID: 680-223337-12

Date Collected: 10/14/22 08:48
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**41**		0.50	0.50	0.20	mg/L		10/31/22 16:21	1
Sulfate	**25**	**M**	1.0	1.0	0.40	mg/L		10/31/22 16:21	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 20:48	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 20:48	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.8**	**J**	5.0	3.0	0.86	ug/L		10/17/22 18:33	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**48**		5.0	5.0	2.2	mg/L		10/21/22 19:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	0.50	U	1.0	0.50	0.50	mg/L		10/26/22 06:09	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-4-FAL22
Lab Sample ID: 680-223337-13
Date Collected: 10/13/22 13:10
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.2		0.50	0.50	0.20	mg/L		10/31/22 16:34	1
Sulfate	18		1.0	1.0	0.40	mg/L		10/31/22 16:34	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	13000		100	50	20	ug/L		10/17/22 20:51	1
Manganese	1900		10	5.0	1.3	ug/L		10/17/22 20:51	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	120		5.0	3.0	0.86	ug/L		10/17/22 18:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	65		5.0	5.0	2.2	mg/L		10/21/22 19:04	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		10/26/22 06:26	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-DUP01-FAL22

Date Collected: 10/13/22 10:57
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-14

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	32		0.50	0.50	0.20	mg/L		10/31/22 16:47	1
Sulfate	19		1.0	1.0	0.40	mg/L		10/31/22 16:47	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50000		100	50	20	ug/L		10/17/22 20:54	1
Manganese	820		10	5.0	1.3	ug/L		10/17/22 20:54	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2000		5.0	3.0	0.86	ug/L		10/17/22 18:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	120		5.0	5.0	2.2	mg/L		10/21/22 20:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		10/26/22 06:44	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-DUP03-FAL22

Date Collected: 10/14/22 14:20
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-15

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	8.5		0.50	0.50	0.20	mg/L		10/31/22 17:00	1
Sulfate	10		1.0	1.0	0.40	mg/L		10/31/22 17:00	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	930		100	50	20	ug/L		10/17/22 20:57	1
Manganese	860		10	5.0	1.3	ug/L		10/17/22 20:57	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.1	J	5.0	3.0	0.86	ug/L		10/17/22 18:45	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	52		5.0	5.0	2.2	mg/L		10/21/22 19:50	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.0		1.0	0.50	0.50	mg/L		10/26/22 07:02	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-DUP04-FAL22

Date Collected: 10/13/22 12:50
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-16

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	110		0.50	0.50	0.20	mg/L		10/31/22 17:14	1
Sulfate	7.4		1.0	1.0	0.40	mg/L		10/31/22 17:14	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	72000		100	50	20	ug/L		10/17/22 19:15	1
Manganese	2400		10	5.0	1.3	ug/L		10/17/22 19:15	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	830		5.0	3.0	0.86	ug/L		10/18/22 15:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/21/22 19:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		10/26/22 07:19	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-DUP06-FAL22
Lab Sample ID: 680-223337-17
Date Collected: 10/14/22 08:52
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	41		0.50	0.50	0.20	mg/L		10/31/22 17:27	1
Sulfate	25	M	1.0	1.0	0.40	mg/L		10/31/22 17:27	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 18:51	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 18:51	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.6	J	5.0	3.0	0.86	ug/L		10/18/22 14:49	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	51		5.0	5.0	2.2	mg/L		10/21/22 20:17	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	0.99	J	1.0	0.50	0.50	mg/L		10/26/22 07:37	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHL-DUP08-FAL22

Date Collected: 10/14/22 13:05
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-18

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	69		0.50	0.50	0.20	mg/L		10/31/22 17:40	1
Sulfate	17	M	1.0	1.0	0.40	mg/L		10/31/22 17:40	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	51000		100	50	20	ug/L		10/17/22 19:00	1
Manganese	1300		10	5.0	1.3	ug/L		10/17/22 19:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	580		5.0	3.0	0.86	ug/L		10/18/22 14:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/21/22 20:09	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		10/26/22 07:55	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-10-06-FAL22

Date Collected: 10/13/22 14:40
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-19

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	36		0.50	0.50	0.20	mg/L		10/31/22 17:54	1
Sulfate	12		1.0	1.0	0.40	mg/L		10/31/22 17:54	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	73000		100	50	20	ug/L		10/17/22 19:03	1
Manganese	2400		10	5.0	1.3	ug/L		10/17/22 19:03	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	930		5.0	3.0	0.86	ug/L		10/18/22 14:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	100		5.0	5.0	2.2	mg/L		10/21/22 19:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		10/26/22 10:27	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-11-02-FAL22

Date Collected: 10/14/22 11:38
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-20

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	50		0.50	0.50	0.20	mg/L		10/31/22 18:07	1
Sulfate	1.6		1.0	1.0	0.40	mg/L		10/31/22 18:07	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	7000		100	50	20	ug/L		10/17/22 19:06	1
Manganese	550		10	5.0	1.3	ug/L		10/17/22 19:06	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	7.1		5.0	3.0	0.86	ug/L		10/18/22 14:57	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/21/22 19:42	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.4		1.0	0.50	0.50	mg/L		10/26/22 10:45	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-11-06-FAL22

Date Collected: 10/14/22 13:00
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-21

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	65		0.50	0.50	0.20	mg/L		11/01/22 16:43	1
Sulfate	15		1.0	1.0	0.40	mg/L		11/01/22 16:43	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	54000		100	50	20	ug/L		10/17/22 19:09	1
Manganese	1400		10	5.0	1.3	ug/L		10/17/22 19:09	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	630		5.0	3.0	0.86	ug/L		10/18/22 15:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/22/22 14:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		10/26/22 11:03	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHM-13-04-FAL22
Lab Sample ID: 680-223337-22

Date Collected: 10/13/22 13:43
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	9.0		1.0	1.0	0.40	mg/L		11/01/22 16:56	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	560	D	5.0	5.0	2.0	mg/L		11/02/22 12:47	10

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	540		100	50	20	ug/L		10/17/22 19:12	1
Manganese	17		10	5.0	1.3	ug/L		10/17/22 19:12	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	96		5.0	3.0	0.86	ug/L		10/18/22 15:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	38		5.0	5.0	2.2	mg/L		10/22/22 15:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.0		1.0	0.50	0.50	mg/L		10/26/22 11:21	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-13-05-FAL22

Date Collected: 10/13/22 15:24
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-23

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	36		0.50	0.50	0.20	mg/L		11/01/22 12:59	1
Sulfate	7.6		1.0	1.0	0.40	mg/L		11/01/22 12:59	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	2500		100	50	20	ug/L		10/17/22 18:42	1
Manganese	3300	J1	10	5.0	1.3	ug/L		10/17/22 18:42	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	17		5.0	3.0	0.86	ug/L		10/18/22 14:38	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	360		5.0	5.0	2.2	mg/L		10/22/22 15:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		10/26/22 09:36	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHM-13-06-FAL22
Lab Sample ID: 680-223337-24

Date Collected: 10/13/22 12:37
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	24		0.50	0.50	0.20	mg/L		11/01/22 17:09	1
Sulfate	3.6		1.0	1.0	0.40	mg/L		11/01/22 17:09	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		10/17/22 19:18	1
Manganese	1400		10	5.0	1.3	ug/L		10/17/22 19:18	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2300		5.0	3.0	0.86	ug/L		10/18/22 15:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	54		5.0	5.0	2.2	mg/L		10/22/22 15:18	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.1		1.0	0.50	0.50	mg/L		10/26/22 11:36	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-13-07-FAL22

Date Collected: 10/13/22 11:32
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-25

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	97		0.50	0.50	0.20	mg/L		11/01/22 17:22	1
Sulfate	5.5		1.0	1.0	0.40	mg/L		11/01/22 17:22	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		10/17/22 19:21	1
Manganese	2000		10	5.0	1.3	ug/L		10/17/22 19:21	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	350		5.0	3.0	0.86	ug/L		10/18/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	54		5.0	5.0	2.2	mg/L		10/22/22 15:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		10/26/22 11:56	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-13-08-FAL22

Date Collected: 10/13/22 10:00
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-26

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	37		0.50	0.50	0.20	mg/L		11/01/22 17:35	1
Sulfate	2.5		1.0	1.0	0.40	mg/L		11/01/22 17:35	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	38000		100	50	20	ug/L		10/17/22 19:24	1
Manganese	1100		10	5.0	1.3	ug/L		10/17/22 19:24	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	890		5.0	3.0	0.86	ug/L		10/18/22 15:21	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	120		5.0	5.0	2.2	mg/L		10/22/22 15:48	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.9		1.0	0.50	0.50	mg/L		10/26/22 12:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHM-93-24A-FAL22
Lab Sample ID: 680-223337-27

Date Collected: 10/14/22 09:55
Matrix: Water
Date Received: 10/15/22 09:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**45**		1.0	1.0	0.40	mg/L		11/01/22 17:48	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**210**	**D**	2.5	2.5	1.0	mg/L		11/02/22 13:00	5

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 19:27	1
Manganese	**11**		10	5.0	1.3	ug/L		10/17/22 19:27	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/18/22 15:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**15**		5.0	5.0	2.2	mg/L		10/22/22 15:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.71**	**J**	1.0	0.50	0.50	mg/L		10/26/22 13:03	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-99-31A-FAL22

Date Collected: 10/14/22 10:55
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-28

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	89		0.50	0.50	0.20	mg/L		11/01/22 18:01	1
Sulfate	0.95	J	1.0	1.0	0.40	mg/L		11/01/22 18:01	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	13000		100	50	20	ug/L		10/17/22 19:36	1
Manganese	650		10	5.0	1.3	ug/L		10/17/22 19:36	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	29		5.0	3.0	0.86	ug/L		10/18/22 15:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	30		5.0	5.0	2.2	mg/L		10/22/22 16:05	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	3.1		1.0	0.50	0.50	mg/L		10/26/22 13:18	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-99-31B-FAL22

Date Collected: 10/14/22 12:20
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-29

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	8.3		0.50	0.50	0.20	mg/L		11/02/22 01:25	1
Sulfate	5.8		1.0	1.0	0.40	mg/L		11/02/22 01:25	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	2400	J1	100	50	20	ug/L		10/21/22 12:38	1
Manganese	7.4	J	10	5.0	1.3	ug/L		10/21/22 12:38	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.6	J	5.0	3.0	0.86	ug/L		10/21/22 14:12	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	34		5.0	5.0	2.2	mg/L		10/22/22 17:09	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		10/26/22 13:36	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Client Sample ID: SHM-99-31C-FAL22

Date Collected: 10/14/22 14:15
Date Received: 10/15/22 09:20

Lab Sample ID: 680-223337-30

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	30		0.50	0.50	0.20	mg/L		11/02/22 01:38	1
Sulfate	7.0		1.0	1.0	0.40	mg/L		11/02/22 01:38	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4700		100	50	20	ug/L		10/17/22 19:39	1
Manganese	5100		10	5.0	1.3	ug/L		10/17/22 19:39	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	56		5.0	3.0	0.86	ug/L		10/18/22 15:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	260		5.0	5.0	2.2	mg/L		10/22/22 17:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		10/26/22 13:52	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-747920/2
Matrix: Water
Analysis Batch: 747920

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		10/31/22 10:25	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		10/31/22 10:25	1

Lab Sample ID: LCS 680-747920/3
Matrix: Water
Analysis Batch: 747920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.3		mg/L		103	87 - 111
Sulfate	10.0	10.1		mg/L		101	87 - 112

Lab Sample ID: LCSD 680-747920/4
Matrix: Water
Analysis Batch: 747920

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.3		mg/L		103	87 - 111	0	15
Sulfate	10.0	10.1		mg/L		101	87 - 112	0	15

Lab Sample ID: 680-223337-9 MS
Matrix: Water
Analysis Batch: 747920

Client Sample ID: PZ-12-10-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1.0	J1	10.0	11.9		mg/L		109	87 - 111
Sulfate	4.5	J1	10.0	15.5		mg/L		109	87 - 112

Lab Sample ID: 680-223337-9 MSD
Matrix: Water
Analysis Batch: 747920

Client Sample ID: PZ-12-10-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1.0	J1	10.0	12.3	J1	mg/L		113	87 - 111	4	15
Sulfate	4.5	J1	10.0	16.2	J1	mg/L		117	87 - 112	5	15

Lab Sample ID: 680-223337-11 MS
Matrix: Water
Analysis Batch: 747920

Client Sample ID: SHL-20-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	110		10.0	123	4	mg/L		99	87 - 111
Sulfate	7.3		10.0	17.8	M	mg/L		105	87 - 112

Lab Sample ID: 680-223337-11 MSD
Matrix: Water
Analysis Batch: 747920

Client Sample ID: SHL-20-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110		10.0	123	4	mg/L		100	87 - 111	0	15
Sulfate	7.3		10.0	17.9		mg/L		106	87 - 112	1	15

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-747921/2
Matrix: Water
Analysis Batch: 747921

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		10/31/22 10:26	1
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		10/31/22 10:26	1

Lab Sample ID: LCS 680-747921/3
Matrix: Water
Analysis Batch: 747921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.76		mg/L		98	87 - 111
Sulfate	10.0	9.46		mg/L		95	87 - 112

Lab Sample ID: LCSD 680-747921/4
Matrix: Water
Analysis Batch: 747921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.77		mg/L		98	87 - 111	0	15
Sulfate	10.0	9.47		mg/L		95	87 - 112	0	15

Lab Sample ID: MB 680-748102/2
Matrix: Water
Analysis Batch: 748102

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/01/22 10:39	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/01/22 10:39	1

Lab Sample ID: LCS 680-748102/3
Matrix: Water
Analysis Batch: 748102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.45		mg/L		94	87 - 111
Sulfate	10.0	9.21		mg/L		92	87 - 112

Lab Sample ID: LCSD 680-748102/4
Matrix: Water
Analysis Batch: 748102

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.45		mg/L		94	87 - 111	0	15
Sulfate	10.0	9.26		mg/L		93	87 - 112	1	15

Lab Sample ID: 680-223337-23 MS
Matrix: Water
Analysis Batch: 748102

Client Sample ID: SHM-13-05-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	36		10.0	46.1		mg/L		103	87 - 111
Sulfate	7.6		10.0	17.4	M	mg/L		98	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-223337-23 MSD
Matrix: Water
Analysis Batch: 748102

Client Sample ID: SHM-13-05-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	36		10.0	46.3		mg/L		105	87 - 111	0	15
Sulfate	7.6		10.0	17.5		mg/L		99	87 - 112	1	15

Lab Sample ID: MB 680-748177/2
Matrix: Water
Analysis Batch: 748177

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U M	0.50	0.50	0.20	mg/L		11/01/22 14:18	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/01/22 14:18	1

Lab Sample ID: LCS 680-748177/3
Matrix: Water
Analysis Batch: 748177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	9.88		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-748177/4
Matrix: Water
Analysis Batch: 748177

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	87 - 111	0	15
Sulfate	10.0	9.86		mg/L		99	87 - 112	0	15

Lab Sample ID: MB 680-748339/2
Matrix: Water
Analysis Batch: 748339

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/02/22 10:59	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/02/22 10:59	1

Lab Sample ID: LCS 680-748339/3
Matrix: Water
Analysis Batch: 748339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.90		mg/L		99	87 - 111
Sulfate	10.0	10.2		mg/L		102	87 - 112

Lab Sample ID: LCSD 680-748339/4
Matrix: Water
Analysis Batch: 748339

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.90		mg/L		99	87 - 111	0	15
Sulfate	10.0	10.3		mg/L		103	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-745397/1-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745397

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 19:42	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 19:42	1

Lab Sample ID: LCS 680-745397/2-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5000		ug/L		100	87 - 115
Manganese	400	419		ug/L		105	90 - 114

Lab Sample ID: MB 680-745404/1-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745404

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 18:36	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 18:36	1

Lab Sample ID: LCS 680-745404/2-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5050		ug/L		101	87 - 115
Manganese	400	424		ug/L		106	90 - 114

Lab Sample ID: MB 680-745974/1-A
Matrix: Water
Analysis Batch: 746198

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745974

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/20/22 20:43	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/20/22 20:43	1

Lab Sample ID: LCS 680-745974/2-A
Matrix: Water
Analysis Batch: 746198

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5050		ug/L		101	87 - 115
Manganese	400	409		ug/L		102	90 - 114

Lab Sample ID: MB 680-746115/1-A
Matrix: Water
Analysis Batch: 746387

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746115

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/21/22 12:32	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/21/22 12:32	1

Method: 6010C - Metals (ICP)

Lab Sample ID: LCS 680-746115/2-A
Matrix: Water
Analysis Batch: 746387

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4930		ug/L		99	87 - 115
Manganese	400	400		ug/L		100	90 - 114

Lab Sample ID: 680-223337-9 MS
Matrix: Water
Analysis Batch: 745559

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved
Prep Batch: 745397

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	4650		ug/L		93	87 - 115
Manganese	5.0	U	400	391		ug/L		98	90 - 114

Lab Sample ID: 680-223337-9 MSD
Matrix: Water
Analysis Batch: 745559

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved
Prep Batch: 745397

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	4670		ug/L		93	87 - 115	0	20
Manganese	5.0	U	400	391		ug/L		98	90 - 114	0	20

Lab Sample ID: 680-223337-23 MS
Matrix: Water
Analysis Batch: 745559

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved
Prep Batch: 745404

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	2500		5000	7540		ug/L		101	87 - 115
Manganese	3300	J1	400	3830	4	ug/L		138	90 - 114

Lab Sample ID: 680-223337-23 MSD
Matrix: Water
Analysis Batch: 745559

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved
Prep Batch: 745404

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	2500		5000	7290		ug/L		96	87 - 115	3	20
Manganese	3300	J1	400	3780	4	ug/L		126	90 - 114	1	20

Lab Sample ID: 680-223337-29 MS
Matrix: Water
Analysis Batch: 746387

Client Sample ID: SHM-99-31B-FAL22
Prep Type: Dissolved
Prep Batch: 746115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	2400	J1	5000	4780	J1	ug/L		48	87 - 115
Manganese	7.4	J	400	392		ug/L		96	90 - 114

Lab Sample ID: 680-223337-29 MSD
Matrix: Water
Analysis Batch: 746387

Client Sample ID: SHM-99-31B-FAL22
Prep Type: Dissolved
Prep Batch: 746115

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	2400	J1	5000	4910	J1	ug/L		51	87 - 115	3	20
Manganese	7.4	J	400	398		ug/L		98	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-745399/1-A
Matrix: Water
Analysis Batch: 745561

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745399

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/17/22 17:28	1

Lab Sample ID: LCS 680-745399/2-A
Matrix: Water
Analysis Batch: 745561

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	99.0		ug/L		99	84 - 116

Lab Sample ID: MB 680-745403/1-A
Matrix: Water
Analysis Batch: 745805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745403

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/18/22 14:32	1

Lab Sample ID: LCS 680-745403/2-A
Matrix: Water
Analysis Batch: 745805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745403

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	106		ug/L		106	84 - 116

Lab Sample ID: MB 680-745975/1-A
Matrix: Water
Analysis Batch: 746229

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745975

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/20/22 16:50	1

Lab Sample ID: LCS 680-745975/2-A
Matrix: Water
Analysis Batch: 746229

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: MB 680-746116/1-A
Matrix: Water
Analysis Batch: 746403

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746116

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/21/22 14:07	1

Lab Sample ID: LCS 680-746116/2-A
Matrix: Water
Analysis Batch: 746403

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	107		ug/L		107	84 - 116

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 680-223337-9 MS
Matrix: Water
Analysis Batch: 745561

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved
Prep Batch: 745399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	3.0	U	100	93.0		ug/L		93	84 - 116		

Lab Sample ID: 680-223337-9 MSD
Matrix: Water
Analysis Batch: 745561

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved
Prep Batch: 745399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	98.1		ug/L		98	84 - 116	5	20

Lab Sample ID: 680-223337-23 MS
Matrix: Water
Analysis Batch: 745805

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved
Prep Batch: 745403

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	17		100	123		ug/L		106	84 - 116		

Lab Sample ID: 680-223337-23 MSD
Matrix: Water
Analysis Batch: 745805

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved
Prep Batch: 745403

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	17		100	118		ug/L		100	84 - 116	5	20

Lab Sample ID: 680-223337-29 MS
Matrix: Water
Analysis Batch: 746403

Client Sample ID: SHM-99-31B-FAL22
Prep Type: Dissolved
Prep Batch: 746116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	1.6	J	100	104		ug/L		102	84 - 116		

Lab Sample ID: 680-223337-29 MSD
Matrix: Water
Analysis Batch: 746403

Client Sample ID: SHM-99-31B-FAL22
Prep Type: Dissolved
Prep Batch: 746116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.6	J	100	109		ug/L		107	84 - 116	5	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-746428/4
Matrix: Water
Analysis Batch: 746428

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/21/22 16:32	1

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 680-746428/6
Matrix: Water
Analysis Batch: 746428

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	248		mg/L		99	90 - 112		

Lab Sample ID: LCSD 680-746428/31
Matrix: Water
Analysis Batch: 746428

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	250		mg/L		100	90 - 112	1	30

Lab Sample ID: 680-223337-3 DU
Matrix: Water
Analysis Batch: 746428

Client Sample ID: PZ-12-01-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	140			140		mg/L				2	30

Lab Sample ID: 680-223337-13 DU
Matrix: Water
Analysis Batch: 746428

Client Sample ID: SHL-4-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	65			62.9		mg/L				3	30

Lab Sample ID: MB 680-746628/4
Matrix: Water
Analysis Batch: 746628

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/22/22 14:14	1

Lab Sample ID: LCS 680-746628/6
Matrix: Water
Analysis Batch: 746628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	251		mg/L		101	90 - 112		

Lab Sample ID: LCSD 680-746628/31
Matrix: Water
Analysis Batch: 746628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	252		mg/L		101	90 - 112	0	30

Lab Sample ID: 680-223337-21 DU
Matrix: Water
Analysis Batch: 746628

Client Sample ID: SHM-11-06-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	180			184		mg/L				2	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-747167/2
Matrix: Water
Analysis Batch: 747167

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.50	U	1.0	0.50	0.50	mg/L		10/26/22 00:43	1

Lab Sample ID: LCS 680-747167/3
Matrix: Water
Analysis Batch: 747167

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	18.6		mg/L		93	80 - 120

Lab Sample ID: LCSD 680-747167/4
Matrix: Water
Analysis Batch: 747167

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	18.8		mg/L		94	80 - 120	1	20

Lab Sample ID: 680-223337-9 MS
Matrix: Water
Analysis Batch: 747167

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	0.74	J	20.0	19.9		mg/L		96	80 - 120

Lab Sample ID: 680-223337-9 MSD
Matrix: Water
Analysis Batch: 747167

Client Sample ID: PZ-12-10-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	0.74	J	20.0	19.8		mg/L		95	80 - 120	1	20

Lab Sample ID: MB 680-747168/2
Matrix: Water
Analysis Batch: 747168

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	0.50	U	1.0	0.50	0.50	mg/L		10/26/22 08:30	1

Lab Sample ID: LCS 680-747168/3
Matrix: Water
Analysis Batch: 747168

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	18.7		mg/L		93	80 - 120

Lab Sample ID: LCSD 680-747168/4
Matrix: Water
Analysis Batch: 747168

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	18.6		mg/L		93	80 - 120	0	20

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: 680-223337-23 MS
Matrix: Water
Analysis Batch: 747168

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	2.3		20.0	22.4		mg/L		101	80 - 120		

Lab Sample ID: 680-223337-23 MSD
Matrix: Water
Analysis Batch: 747168

Client Sample ID: SHM-13-05-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	2.3		20.0	22.2		mg/L		99	80 - 120	1	20

HPLC/IC

Analysis Batch: 747920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-4	PZ-12-02-FAL22	Total/NA	Water	9056A	
680-223337-5	PZ-12-03-FAL22	Total/NA	Water	9056A	
680-223337-6	PZ-12-04-FAL22	Total/NA	Water	9056A	
680-223337-7	PZ-12-05-FAL22	Total/NA	Water	9056A	
680-223337-8	PZ-12-06-FAL22	Total/NA	Water	9056A	
680-223337-9	PZ-12-10-FAL22	Total/NA	Water	9056A	
680-223337-10	SHL-11-FAL22	Total/NA	Water	9056A	
680-223337-11	SHL-20-FAL22	Total/NA	Water	9056A	
680-223337-12	SHL-24-FAL22	Total/NA	Water	9056A	
680-223337-13	SHL-4-FAL22	Total/NA	Water	9056A	
680-223337-14	SHL-DUP01-FAL22	Total/NA	Water	9056A	
680-223337-15	SHL-DUP03-FAL22	Total/NA	Water	9056A	
680-223337-16	SHL-DUP04-FAL22	Total/NA	Water	9056A	
680-223337-17	SHL-DUP06-FAL22	Total/NA	Water	9056A	
680-223337-18	SHL-DUP08-FAL22	Total/NA	Water	9056A	
680-223337-19	SHM-10-06-FAL22	Total/NA	Water	9056A	
680-223337-20	SHM-11-02-FAL22	Total/NA	Water	9056A	
MB 680-747920/2	Method Blank	Total/NA	Water	9056A	
LCS 680-747920/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-747920/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223337-9 MS	PZ-12-10-FAL22	Total/NA	Water	9056A	
680-223337-9 MSD	PZ-12-10-FAL22	Total/NA	Water	9056A	
680-223337-11 MS	SHL-20-FAL22	Total/NA	Water	9056A	
680-223337-11 MSD	SHL-20-FAL22	Total/NA	Water	9056A	

Analysis Batch: 747921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Total/NA	Water	9056A	
680-223337-2	EPA-PZ-2012-4B-FAL22	Total/NA	Water	9056A	
680-223337-3	PZ-12-01-FAL22	Total/NA	Water	9056A	
MB 680-747921/2	Method Blank	Total/NA	Water	9056A	
LCS 680-747921/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-747921/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 748102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-21	SHM-11-06-FAL22	Total/NA	Water	9056A	
680-223337-22	SHM-13-04-FAL22	Total/NA	Water	9056A	
680-223337-23	SHM-13-05-FAL22	Total/NA	Water	9056A	
680-223337-24	SHM-13-06-FAL22	Total/NA	Water	9056A	
680-223337-25	SHM-13-07-FAL22	Total/NA	Water	9056A	
680-223337-26	SHM-13-08-FAL22	Total/NA	Water	9056A	
680-223337-27	SHM-93-24A-FAL22	Total/NA	Water	9056A	
680-223337-28	SHM-99-31A-FAL22	Total/NA	Water	9056A	
MB 680-748102/2	Method Blank	Total/NA	Water	9056A	
LCS 680-748102/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-748102/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223337-23 MS	SHM-13-05-FAL22	Total/NA	Water	9056A	
680-223337-23 MSD	SHM-13-05-FAL22	Total/NA	Water	9056A	

HPLC/IC

Analysis Batch: 748177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-29	SHM-99-31B-FAL22	Total/NA	Water	9056A	
680-223337-30	SHM-99-31C-FAL22	Total/NA	Water	9056A	
MB 680-748177/2	Method Blank	Total/NA	Water	9056A	
LCS 680-748177/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-748177/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 748339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-22 - DL	SHM-13-04-FAL22	Total/NA	Water	9056A	
680-223337-27 - DL	SHM-93-24A-FAL22	Total/NA	Water	9056A	
MB 680-748339/2	Method Blank	Total/NA	Water	9056A	
LCS 680-748339/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-748339/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 745397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-2	EPA-PZ-2012-4B-FAL22	Dissolved	Water	3005A	
680-223337-3	PZ-12-01-FAL22	Dissolved	Water	3005A	
680-223337-4	PZ-12-02-FAL22	Dissolved	Water	3005A	
680-223337-5	PZ-12-03-FAL22	Dissolved	Water	3005A	
680-223337-6	PZ-12-04-FAL22	Dissolved	Water	3005A	
680-223337-7	PZ-12-05-FAL22	Dissolved	Water	3005A	
680-223337-8	PZ-12-06-FAL22	Dissolved	Water	3005A	
680-223337-9	PZ-12-10-FAL22	Dissolved	Water	3005A	
680-223337-10	SHL-11-FAL22	Dissolved	Water	3005A	
680-223337-11	SHL-20-FAL22	Dissolved	Water	3005A	
680-223337-12	SHL-24-FAL22	Dissolved	Water	3005A	
680-223337-13	SHL-4-FAL22	Dissolved	Water	3005A	
680-223337-14	SHL-DUP01-FAL22	Dissolved	Water	3005A	
680-223337-15	SHL-DUP03-FAL22	Dissolved	Water	3005A	
MB 680-745397/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745397/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-9 MS	PZ-12-10-FAL22	Dissolved	Water	3005A	
680-223337-9 MSD	PZ-12-10-FAL22	Dissolved	Water	3005A	

Prep Batch: 745399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-2	EPA-PZ-2012-4B-FAL22	Dissolved	Water	3005A	
680-223337-3	PZ-12-01-FAL22	Dissolved	Water	3005A	
680-223337-4	PZ-12-02-FAL22	Dissolved	Water	3005A	
680-223337-5	PZ-12-03-FAL22	Dissolved	Water	3005A	
680-223337-6	PZ-12-04-FAL22	Dissolved	Water	3005A	
680-223337-7	PZ-12-05-FAL22	Dissolved	Water	3005A	
680-223337-8	PZ-12-06-FAL22	Dissolved	Water	3005A	
680-223337-9	PZ-12-10-FAL22	Dissolved	Water	3005A	
680-223337-10	SHL-11-FAL22	Dissolved	Water	3005A	
680-223337-11	SHL-20-FAL22	Dissolved	Water	3005A	
680-223337-12	SHL-24-FAL22	Dissolved	Water	3005A	
680-223337-13	SHL-4-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 745399 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-14	SHL-DUP01-FAL22	Dissolved	Water	3005A	
680-223337-15	SHL-DUP03-FAL22	Dissolved	Water	3005A	
MB 680-745399/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745399/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-9 MS	PZ-12-10-FAL22	Dissolved	Water	3005A	
680-223337-9 MSD	PZ-12-10-FAL22	Dissolved	Water	3005A	

Prep Batch: 745403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-16	SHL-DUP04-FAL22	Dissolved	Water	3005A	
680-223337-17	SHL-DUP06-FAL22	Dissolved	Water	3005A	
680-223337-18	SHL-DUP08-FAL22	Dissolved	Water	3005A	
680-223337-19	SHM-10-06-FAL22	Dissolved	Water	3005A	
680-223337-20	SHM-11-02-FAL22	Dissolved	Water	3005A	
680-223337-21	SHM-11-06-FAL22	Dissolved	Water	3005A	
680-223337-22	SHM-13-04-FAL22	Dissolved	Water	3005A	
680-223337-23	SHM-13-05-FAL22	Dissolved	Water	3005A	
680-223337-24	SHM-13-06-FAL22	Dissolved	Water	3005A	
680-223337-25	SHM-13-07-FAL22	Dissolved	Water	3005A	
680-223337-26	SHM-13-08-FAL22	Dissolved	Water	3005A	
680-223337-27	SHM-93-24A-FAL22	Dissolved	Water	3005A	
680-223337-28	SHM-99-31A-FAL22	Dissolved	Water	3005A	
680-223337-30	SHM-99-31C-FAL22	Dissolved	Water	3005A	
MB 680-745403/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745403/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-23 MS	SHM-13-05-FAL22	Dissolved	Water	3005A	
680-223337-23 MSD	SHM-13-05-FAL22	Dissolved	Water	3005A	

Prep Batch: 745404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-16	SHL-DUP04-FAL22	Dissolved	Water	3005A	
680-223337-17	SHL-DUP06-FAL22	Dissolved	Water	3005A	
680-223337-18	SHL-DUP08-FAL22	Dissolved	Water	3005A	
680-223337-19	SHM-10-06-FAL22	Dissolved	Water	3005A	
680-223337-20	SHM-11-02-FAL22	Dissolved	Water	3005A	
680-223337-21	SHM-11-06-FAL22	Dissolved	Water	3005A	
680-223337-22	SHM-13-04-FAL22	Dissolved	Water	3005A	
680-223337-23	SHM-13-05-FAL22	Dissolved	Water	3005A	
680-223337-24	SHM-13-06-FAL22	Dissolved	Water	3005A	
680-223337-25	SHM-13-07-FAL22	Dissolved	Water	3005A	
680-223337-26	SHM-13-08-FAL22	Dissolved	Water	3005A	
680-223337-27	SHM-93-24A-FAL22	Dissolved	Water	3005A	
680-223337-28	SHM-99-31A-FAL22	Dissolved	Water	3005A	
680-223337-30	SHM-99-31C-FAL22	Dissolved	Water	3005A	
MB 680-745404/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745404/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-23 MS	SHM-13-05-FAL22	Dissolved	Water	3005A	
680-223337-23 MSD	SHM-13-05-FAL22	Dissolved	Water	3005A	

Metals

Analysis Batch: 745559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-2	EPA-PZ-2012-4B-FAL22	Dissolved	Water	6010C	745397
680-223337-3	PZ-12-01-FAL22	Dissolved	Water	6010C	745397
680-223337-4	PZ-12-02-FAL22	Dissolved	Water	6010C	745397
680-223337-5	PZ-12-03-FAL22	Dissolved	Water	6010C	745397
680-223337-6	PZ-12-04-FAL22	Dissolved	Water	6010C	745397
680-223337-7	PZ-12-05-FAL22	Dissolved	Water	6010C	745397
680-223337-8	PZ-12-06-FAL22	Dissolved	Water	6010C	745397
680-223337-9	PZ-12-10-FAL22	Dissolved	Water	6010C	745397
680-223337-10	SHL-11-FAL22	Dissolved	Water	6010C	745397
680-223337-11	SHL-20-FAL22	Dissolved	Water	6010C	745397
680-223337-12	SHL-24-FAL22	Dissolved	Water	6010C	745397
680-223337-13	SHL-4-FAL22	Dissolved	Water	6010C	745397
680-223337-14	SHL-DUP01-FAL22	Dissolved	Water	6010C	745397
680-223337-15	SHL-DUP03-FAL22	Dissolved	Water	6010C	745397
680-223337-16	SHL-DUP04-FAL22	Dissolved	Water	6010C	745404
680-223337-17	SHL-DUP06-FAL22	Dissolved	Water	6010C	745404
680-223337-18	SHL-DUP08-FAL22	Dissolved	Water	6010C	745404
680-223337-19	SHM-10-06-FAL22	Dissolved	Water	6010C	745404
680-223337-20	SHM-11-02-FAL22	Dissolved	Water	6010C	745404
680-223337-21	SHM-11-06-FAL22	Dissolved	Water	6010C	745404
680-223337-22	SHM-13-04-FAL22	Dissolved	Water	6010C	745404
680-223337-23	SHM-13-05-FAL22	Dissolved	Water	6010C	745404
680-223337-24	SHM-13-06-FAL22	Dissolved	Water	6010C	745404
680-223337-25	SHM-13-07-FAL22	Dissolved	Water	6010C	745404
680-223337-26	SHM-13-08-FAL22	Dissolved	Water	6010C	745404
680-223337-27	SHM-93-24A-FAL22	Dissolved	Water	6010C	745404
680-223337-28	SHM-99-31A-FAL22	Dissolved	Water	6010C	745404
680-223337-30	SHM-99-31C-FAL22	Dissolved	Water	6010C	745404
MB 680-745397/1-A	Method Blank	Total Recoverable	Water	6010C	745397
MB 680-745404/1-A	Method Blank	Total Recoverable	Water	6010C	745404
LCS 680-745397/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745397
LCS 680-745404/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745404
680-223337-9 MS	PZ-12-10-FAL22	Dissolved	Water	6010C	745397
680-223337-9 MSD	PZ-12-10-FAL22	Dissolved	Water	6010C	745397
680-223337-23 MS	SHM-13-05-FAL22	Dissolved	Water	6010C	745404
680-223337-23 MSD	SHM-13-05-FAL22	Dissolved	Water	6010C	745404

Analysis Batch: 745561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-2	EPA-PZ-2012-4B-FAL22	Dissolved	Water	6020A	745399
680-223337-3	PZ-12-01-FAL22	Dissolved	Water	6020A	745399
680-223337-4	PZ-12-02-FAL22	Dissolved	Water	6020A	745399
680-223337-5	PZ-12-03-FAL22	Dissolved	Water	6020A	745399
680-223337-6	PZ-12-04-FAL22	Dissolved	Water	6020A	745399
680-223337-7	PZ-12-05-FAL22	Dissolved	Water	6020A	745399
680-223337-8	PZ-12-06-FAL22	Dissolved	Water	6020A	745399
680-223337-9	PZ-12-10-FAL22	Dissolved	Water	6020A	745399
680-223337-10	SHL-11-FAL22	Dissolved	Water	6020A	745399
680-223337-11	SHL-20-FAL22	Dissolved	Water	6020A	745399
680-223337-12	SHL-24-FAL22	Dissolved	Water	6020A	745399
680-223337-13	SHL-4-FAL22	Dissolved	Water	6020A	745399

Metals (Continued)

Analysis Batch: 745561 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-14	SHL-DUP01-FAL22	Dissolved	Water	6020A	745399
680-223337-15	SHL-DUP03-FAL22	Dissolved	Water	6020A	745399
MB 680-745399/1-A	Method Blank	Total Recoverable	Water	6020A	745399
LCS 680-745399/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745399
680-223337-9 MS	PZ-12-10-FAL22	Dissolved	Water	6020A	745399
680-223337-9 MSD	PZ-12-10-FAL22	Dissolved	Water	6020A	745399

Analysis Batch: 745805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-16	SHL-DUP04-FAL22	Dissolved	Water	6020A	745403
680-223337-17	SHL-DUP06-FAL22	Dissolved	Water	6020A	745403
680-223337-18	SHL-DUP08-FAL22	Dissolved	Water	6020A	745403
680-223337-19	SHM-10-06-FAL22	Dissolved	Water	6020A	745403
680-223337-20	SHM-11-02-FAL22	Dissolved	Water	6020A	745403
680-223337-21	SHM-11-06-FAL22	Dissolved	Water	6020A	745403
680-223337-22	SHM-13-04-FAL22	Dissolved	Water	6020A	745403
680-223337-23	SHM-13-05-FAL22	Dissolved	Water	6020A	745403
680-223337-24	SHM-13-06-FAL22	Dissolved	Water	6020A	745403
680-223337-25	SHM-13-07-FAL22	Dissolved	Water	6020A	745403
680-223337-26	SHM-13-08-FAL22	Dissolved	Water	6020A	745403
680-223337-27	SHM-93-24A-FAL22	Dissolved	Water	6020A	745403
680-223337-28	SHM-99-31A-FAL22	Dissolved	Water	6020A	745403
680-223337-30	SHM-99-31C-FAL22	Dissolved	Water	6020A	745403
MB 680-745403/1-A	Method Blank	Total Recoverable	Water	6020A	745403
LCS 680-745403/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745403
680-223337-23 MS	SHM-13-05-FAL22	Dissolved	Water	6020A	745403
680-223337-23 MSD	SHM-13-05-FAL22	Dissolved	Water	6020A	745403

Prep Batch: 745974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Dissolved	Water	3005A	
MB 680-745974/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745974/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 745975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Dissolved	Water	3005A	
MB 680-745975/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745975/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 746115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-29	SHM-99-31B-FAL22	Dissolved	Water	3005A	
MB 680-746115/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746115/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-29 MS	SHM-99-31B-FAL22	Dissolved	Water	3005A	
680-223337-29 MSD	SHM-99-31B-FAL22	Dissolved	Water	3005A	

Prep Batch: 746116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-29	SHM-99-31B-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 746116 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-746116/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746116/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223337-29 MS	SHM-99-31B-FAL22	Dissolved	Water	3005A	
680-223337-29 MSD	SHM-99-31B-FAL22	Dissolved	Water	3005A	

Analysis Batch: 746198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Dissolved	Water	6010C	745974
MB 680-745974/1-A	Method Blank	Total Recoverable	Water	6010C	745974
LCS 680-745974/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745974

Analysis Batch: 746229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Dissolved	Water	6020A	745975
MB 680-745975/1-A	Method Blank	Total Recoverable	Water	6020A	745975
LCS 680-745975/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745975

Analysis Batch: 746387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-29	SHM-99-31B-FAL22	Dissolved	Water	6010C	746115
MB 680-746115/1-A	Method Blank	Total Recoverable	Water	6010C	746115
LCS 680-746115/2-A	Lab Control Sample	Total Recoverable	Water	6010C	746115
680-223337-29 MS	SHM-99-31B-FAL22	Dissolved	Water	6010C	746115
680-223337-29 MSD	SHM-99-31B-FAL22	Dissolved	Water	6010C	746115

Analysis Batch: 746403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-29	SHM-99-31B-FAL22	Dissolved	Water	6020A	746116
MB 680-746116/1-A	Method Blank	Total Recoverable	Water	6020A	746116
LCS 680-746116/2-A	Lab Control Sample	Total Recoverable	Water	6020A	746116
680-223337-29 MS	SHM-99-31B-FAL22	Dissolved	Water	6020A	746116
680-223337-29 MSD	SHM-99-31B-FAL22	Dissolved	Water	6020A	746116

General Chemistry

Analysis Batch: 746428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Total/NA	Water	2320B-2011	
680-223337-2	EPA-PZ-2012-4B-FAL22	Total/NA	Water	2320B-2011	
680-223337-3	PZ-12-01-FAL22	Total/NA	Water	2320B-2011	
680-223337-4	PZ-12-02-FAL22	Total/NA	Water	2320B-2011	
680-223337-5	PZ-12-03-FAL22	Total/NA	Water	2320B-2011	
680-223337-6	PZ-12-04-FAL22	Total/NA	Water	2320B-2011	
680-223337-7	PZ-12-05-FAL22	Total/NA	Water	2320B-2011	
680-223337-8	PZ-12-06-FAL22	Total/NA	Water	2320B-2011	
680-223337-9	PZ-12-10-FAL22	Total/NA	Water	2320B-2011	
680-223337-10	SHL-11-FAL22	Total/NA	Water	2320B-2011	
680-223337-12	SHL-24-FAL22	Total/NA	Water	2320B-2011	
680-223337-13	SHL-4-FAL22	Total/NA	Water	2320B-2011	
680-223337-14	SHL-DUP01-FAL22	Total/NA	Water	2320B-2011	
680-223337-15	SHL-DUP03-FAL22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 746428 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-16	SHL-DUP04-FAL22	Total/NA	Water	2320B-2011	
680-223337-17	SHL-DUP06-FAL22	Total/NA	Water	2320B-2011	
680-223337-18	SHL-DUP08-FAL22	Total/NA	Water	2320B-2011	
680-223337-19	SHM-10-06-FAL22	Total/NA	Water	2320B-2011	
680-223337-20	SHM-11-02-FAL22	Total/NA	Water	2320B-2011	
MB 680-746428/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-746428/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-746428/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223337-3 DU	PZ-12-01-FAL22	Total/NA	Water	2320B-2011	
680-223337-13 DU	SHL-4-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 746628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-11	SHL-20-FAL22	Total/NA	Water	2320B-2011	
680-223337-21	SHM-11-06-FAL22	Total/NA	Water	2320B-2011	
680-223337-22	SHM-13-04-FAL22	Total/NA	Water	2320B-2011	
680-223337-23	SHM-13-05-FAL22	Total/NA	Water	2320B-2011	
680-223337-24	SHM-13-06-FAL22	Total/NA	Water	2320B-2011	
680-223337-25	SHM-13-07-FAL22	Total/NA	Water	2320B-2011	
680-223337-26	SHM-13-08-FAL22	Total/NA	Water	2320B-2011	
680-223337-27	SHM-93-24A-FAL22	Total/NA	Water	2320B-2011	
680-223337-28	SHM-99-31A-FAL22	Total/NA	Water	2320B-2011	
680-223337-29	SHM-99-31B-FAL22	Total/NA	Water	2320B-2011	
680-223337-30	SHM-99-31C-FAL22	Total/NA	Water	2320B-2011	
MB 680-746628/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-746628/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-746628/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223337-21 DU	SHM-11-06-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 747167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-1	EPA-PZ-2012-4A-FAL22	Dissolved	Water	9060A	
680-223337-2	EPA-PZ-2012-4B-FAL22	Dissolved	Water	9060A	
680-223337-3	PZ-12-01-FAL22	Dissolved	Water	9060A	
680-223337-4	PZ-12-02-FAL22	Dissolved	Water	9060A	
680-223337-5	PZ-12-03-FAL22	Dissolved	Water	9060A	
680-223337-6	PZ-12-04-FAL22	Dissolved	Water	9060A	
680-223337-7	PZ-12-05-FAL22	Dissolved	Water	9060A	
680-223337-8	PZ-12-06-FAL22	Dissolved	Water	9060A	
680-223337-9	PZ-12-10-FAL22	Dissolved	Water	9060A	
680-223337-10	SHL-11-FAL22	Dissolved	Water	9060A	
680-223337-11	SHL-20-FAL22	Dissolved	Water	9060A	
680-223337-12	SHL-24-FAL22	Dissolved	Water	9060A	
680-223337-13	SHL-4-FAL22	Dissolved	Water	9060A	
680-223337-14	SHL-DUP01-FAL22	Dissolved	Water	9060A	
680-223337-15	SHL-DUP03-FAL22	Dissolved	Water	9060A	
680-223337-16	SHL-DUP04-FAL22	Dissolved	Water	9060A	
680-223337-17	SHL-DUP06-FAL22	Dissolved	Water	9060A	
680-223337-18	SHL-DUP08-FAL22	Dissolved	Water	9060A	
MB 680-747167/2	Method Blank	Dissolved	Water	9060A	
LCS 680-747167/3	Lab Control Sample	Dissolved	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 747167 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-747167/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-223337-9 MS	PZ-12-10-FAL22	Dissolved	Water	9060A	
680-223337-9 MSD	PZ-12-10-FAL22	Dissolved	Water	9060A	

Analysis Batch: 747168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223337-19	SHM-10-06-FAL22	Dissolved	Water	9060A	
680-223337-20	SHM-11-02-FAL22	Dissolved	Water	9060A	
680-223337-21	SHM-11-06-FAL22	Dissolved	Water	9060A	
680-223337-22	SHM-13-04-FAL22	Dissolved	Water	9060A	
680-223337-23	SHM-13-05-FAL22	Dissolved	Water	9060A	
680-223337-24	SHM-13-06-FAL22	Dissolved	Water	9060A	
680-223337-25	SHM-13-07-FAL22	Dissolved	Water	9060A	
680-223337-26	SHM-13-08-FAL22	Dissolved	Water	9060A	
680-223337-27	SHM-93-24A-FAL22	Dissolved	Water	9060A	
680-223337-28	SHM-99-31A-FAL22	Dissolved	Water	9060A	
680-223337-29	SHM-99-31B-FAL22	Dissolved	Water	9060A	
680-223337-30	SHM-99-31C-FAL22	Dissolved	Water	9060A	
MB 680-747168/2	Method Blank	Dissolved	Water	9060A	
LCS 680-747168/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-747168/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-223337-23 MS	SHM-13-05-FAL22	Dissolved	Water	9060A	
680-223337-23 MSD	SHM-13-05-FAL22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: EPA-PZ-2012-4A-FAL22
Lab Sample ID: 680-223337-1
Date Collected: 10/13/22 09:30
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747921	10/31/22 16:51	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745974	10/20/22 05:28	RR	EET SAV
Dissolved	Analysis	6010C		1			746198	10/20/22 21:04	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745975	10/20/22 05:28	RR	EET SAV
Dissolved	Analysis	6020A		1			746229	10/20/22 17:36	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 17:17	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 02:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-4B-FAL22
Lab Sample ID: 680-223337-2
Date Collected: 10/13/22 10:48
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747921	10/31/22 17:05	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:15	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 17:51	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 18:03	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 02:55	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-01-FAL22
Lab Sample ID: 680-223337-3
Date Collected: 10/13/22 09:55
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747921	10/31/22 17:18	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:21	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 17:59	BWR	EET SAV
	Instrument ID: ICPMSC									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: PZ-12-01-FAL22
Lab Sample ID: 680-223337-3
Date Collected: 10/13/22 09:55
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 16:59	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 03:13	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-02-FAL22
Lab Sample ID: 680-223337-4
Date Collected: 10/13/22 11:00
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 13:54	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:24	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:03	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 17:27	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 03:31	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-03-FAL22
Lab Sample ID: 680-223337-5
Date Collected: 10/14/22 09:45
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 14:07	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:27	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:14	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 18:13	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 03:48	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-04-FAL22
Lab Sample ID: 680-223337-6

Date Collected: 10/13/22 15:35
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 14:21	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:30	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:18	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 18:23	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 04:06	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-05-FAL22
Lab Sample ID: 680-223337-7

Date Collected: 10/14/22 11:10
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 14:34	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:33	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:22	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 17:36	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 04:24	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-06-FAL22
Lab Sample ID: 680-223337-8

Date Collected: 10/14/22 14:20
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 14:47	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:18	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 17:55	BWR	EET SAV
	Instrument ID: ICPMSC									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: PZ-12-06-FAL22
Lab Sample ID: 680-223337-8
Date Collected: 10/14/22 14:20
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 18:32	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 05:15	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-10-FAL22
Lab Sample ID: 680-223337-9
Date Collected: 10/14/22 12:40
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 12:34	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:48	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 17:36	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 17:54	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 01:48	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-11-FAL22
Lab Sample ID: 680-223337-10
Date Collected: 10/13/22 14:05
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 15:01	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:36	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:26	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 17:46	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 05:33	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-20-FAL22
Lab Sample ID: 680-223337-11
Date Collected: 10/13/22 12:50
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 15:41	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:39	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:29	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 17:41	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 05:51	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-24-FAL22
Lab Sample ID: 680-223337-12
Date Collected: 10/14/22 08:48
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 16:21	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:48	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:33	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:59	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 06:09	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-4-FAL22
Lab Sample ID: 680-223337-13
Date Collected: 10/13/22 13:10
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 16:34	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:51	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:37	BWR	EET SAV
	Instrument ID: ICPMSC									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-4-FAL22
Lab Sample ID: 680-223337-13
Date Collected: 10/13/22 13:10
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:04	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 06:26	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP01-FAL22
Lab Sample ID: 680-223337-14
Date Collected: 10/13/22 10:57
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 16:47	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:41	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 20:27	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 06:44	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP03-FAL22
Lab Sample ID: 680-223337-15
Date Collected: 10/14/22 14:20
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 17:00	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745397	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 20:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745399	10/17/22 05:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 18:45	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 07:02	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-DUP04-FAL22
Lab Sample ID: 680-223337-16
Date Collected: 10/13/22 12:50
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 17:14	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:15	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:13	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:23	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 07:19	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP06-FAL22
Lab Sample ID: 680-223337-17
Date Collected: 10/14/22 08:52
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 17:27	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:51	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 14:49	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 20:17	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 07:37	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP08-FAL22
Lab Sample ID: 680-223337-18
Date Collected: 10/14/22 13:05
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 17:40	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 14:51	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHL-DUP08-FAL22
Lab Sample ID: 680-223337-18
Date Collected: 10/14/22 13:05
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 20:09	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	747167	10/26/22 07:55	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-06-FAL22
Lab Sample ID: 680-223337-19
Date Collected: 10/13/22 14:40
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 17:54	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 14:54	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:32	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 10:27	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-11-02-FAL22
Lab Sample ID: 680-223337-20
Date Collected: 10/14/22 11:38
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	747920	10/31/22 18:07	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:06	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 14:57	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746428	10/21/22 19:42	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 10:45	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-11-06-FAL22
Lab Sample ID: 680-223337-21

Date Collected: 10/14/22 13:00
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 16:43	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:09	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:05	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 14:41	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 11:03	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-13-04-FAL22
Lab Sample ID: 680-223337-22

Date Collected: 10/13/22 13:43
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	5 mL	5 mL	748339	11/02/22 12:47	UI	EET SAV
	Instrument ID: CICH									
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 16:56	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:12	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:08	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:10	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 11:21	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-13-05-FAL22
Lab Sample ID: 680-223337-23

Date Collected: 10/13/22 15:24
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 12:59	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:42	BJB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: SHM-13-05-FAL22
Lab Sample ID: 680-223337-23

Date Collected: 10/13/22 15:24
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 14:38	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:39	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 09:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-13-06-FAL22
Lab Sample ID: 680-223337-24

Date Collected: 10/13/22 12:37
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 17:09	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:18	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:16	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:18	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 11:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-13-07-FAL22
Lab Sample ID: 680-223337-25

Date Collected: 10/13/22 11:32
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 17:22	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:21	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:19	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:27	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 11:56	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Client Sample ID: SHM-13-08-FAL22
Lab Sample ID: 680-223337-26
Date Collected: 10/13/22 10:00
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 17:35	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:24	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:21	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 12:12	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-93-24A-FAL22
Lab Sample ID: 680-223337-27
Date Collected: 10/14/22 09:55
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	5	5 mL	5 mL	748339	11/02/22 13:00	UI	EET SAV
	Instrument ID: CICH									
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 17:48	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:27	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:24	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 15:57	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 13:03	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-99-31A-FAL22
Lab Sample ID: 680-223337-28
Date Collected: 10/14/22 10:55
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748102	11/01/22 18:01	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:36	BJB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: SHM-99-31A-FAL22
Lab Sample ID: 680-223337-28

Date Collected: 10/14/22 10:55
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:27	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 16:05	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 13:18	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-99-31B-FAL22
Lab Sample ID: 680-223337-29

Date Collected: 10/14/22 12:20
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748177	11/02/22 01:25	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	746115	10/20/22 13:45	RR	EET SAV
Dissolved	Analysis	6010C		1			746387	10/21/22 12:38	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746116	10/20/22 13:45	RR	EET SAV
Dissolved	Analysis	6020A		1			746403	10/21/22 14:12	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 17:09	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 13:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-99-31C-FAL22
Lab Sample ID: 680-223337-30

Date Collected: 10/14/22 14:15
Matrix: Water
Date Received: 10/15/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	748177	11/02/22 01:38	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	745404	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 19:39	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745403	10/17/22 06:06	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 15:30	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			746628	10/22/22 17:21	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	747168	10/26/22 13:52	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223337-1
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens-Sered-Arcadis JV LTM,SHL,Fall 202:

Job ID: 680-223337-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus.com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
1	EPA-PZ-2012-1A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-1B	N1	73.56	78.56	1	
3	EPA-PZ-2012-2A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-2B	N1	73 16	78 16	1	
5	EPA-PZ-2012-3A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-3B	N1	68 70	73 70	1	
7	EPA-PZ-2012-4A-FAL22	WG	10.13.22	930	GS	X	X	X	X	X	EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-FAL22	WG	10.13.22	1048	GS	X	X	X	X	X	EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	EPA-PZ-2012-5A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-5A	N1	17 95	22 95	1	
10	EPA-PZ-2012-5B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-5B	N1	68.46	73.46	1	
11	EPA-PZ-2012-6A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-6A	N1	24 19	29 19	1	
12	EPA-PZ-2012-6B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-6B	N1	74.23	79.23	1	
13	EPA-PZ-2012-7A-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-7A	N1	23 87	28 87	1	
14	EPA-PZ-2012-7B-FAL22	WG				X	X	X	X	X	EPA-PZ-2012-7B	N1	58 82	63 82	1	
15	EW-01-FAL22	WG				X	X	X	X	X	EW-01	N1	60 00	85 00	1	
16	EW-04-FAL22	WG				X	X	X	X	X	EW-04	N1	70 00	95 00	1	
17	N5-P1-FAL22	WG				X	X	X	X	X	N5-P1	N1	95.50	97.50	1	
18	PZ-12-01-FAL22	WG	10.13.22	955	DC	X	X	X	X	X	PZ-12-01	N1	24 00	34 00	1	
19	PZ-12-02-FAL22	WG	10.13.22	1100	DC	X	X	X	X	X	PZ-12-02	N1	24 00	34 00	1	
20	PZ-12-03-FAL22	WG	10.14.22	945	DC	X	X	X	X	X	PZ-12-03	N1	24 00	34 00	1	

680-223337 Chain of Custody

Relinquished by: (Signature) Diane Clapp
Date 10-14-22
Time 1535
Received by: (Signature)

Received by Laboratory (Signature)
Date 10/14/22
Time 1700

09:20 2.7 | 25 | 4.7
10/15/22 2.7 | 2.5 | 4.7

Page 68 of 75

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus.com	
WBS Code.	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Analytical Test Method					**46**	**9**	**9**	**5**	**3**										
21	PZ-12-04-FAL22	WG	10.13.22	1535	DC	X	X	X	X	X						PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG	10.14.22	1110	DC	X	X	X	X	X						PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG	10.14.22	1420	DC	X	X	X	X	X						PZ-12-06	N1	25 00	35 00	1	
24	PZ-12-07-FAL22	WG				X	X	X	X	X						PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG				X	X	X	X	X						PZ-12-08	N1	22 00	32 00	1	
26	PZ-12-09-FAL22	WG				X	X	X	X	X						PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG	10.14.22	1240	DC	X	X	X	X	X						PZ-12-10	MS1	20 00	30 00	1	
28	PZ-12-10-FAL22	WG	10.14.22	1240	DC	X	X	X	X	X						PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG	10.14.22	1240	DC	X	X	X	X	X						PZ-12-10	SD1	20 00	30 00	1	
30	SHL-10-FAL22	WG				X	X	X	X	X						SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG	10.13.22	1405	DC	X	X	X	X	X						SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG				X	X	X	X	X						SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG				X	X	X	X	X						SHL-15	N1	14 00	24 00	1	
34	SHL-19-FAL22	WG				X	X	X	X	X						SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG	10.13.22	1250	DC	X	X	X	X	X						SHL-20	N1	39 00	49.00	1	
36	SHL-22-FAL22	WG				X	X	X	X	X						SHL-22	N1	105 00	115 00	1	
37	SHL-23-FAL22	WG				X	X	X	X	X						SHL-23	N1	23 00	33 00	1	
38	SHL-24-FAL22	WG	10.14.22	0848	MS	X	X	X	X	X						SHL-24	N1	110 00	120 00	1	
39	SHL-3-FAL22	WG				X	X	X	X	X						SHL-3	N1	24.00	34 00	1	
40	SHL-4-FAL22	WG	10.13.22	1310	GS	X	X	X	X	X						SHL-4	N1	3 00	13 00	1	

Relinquished by: (Signature) Diane Clergo
Date 10-14-22
Time 1535
Received by (Signature)

Received by Laboratory: (Signature) 10-14-22 1700
Date
Time

X

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code:	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #2

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3											
41	SHL-5-FAL22	WG				X	X	X	X	X						SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG				X	X	X	X	X						SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG				X	X	X	X	X						SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG				X	X	X	X	X						SHL-8S	N1	52 00	54 00	1	
45	SHL-9-FAL22	WG				X	X	X	X	X						SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG	10.13.22	1057	GS	X	X	X	X	X						EPA-PZ-2012-4B	FD1	79 50	84.50	1	
47	SHL-DUP02-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG	10.14.22	1420	DC	X	X	X	X	X						PZ-12-06	FD1	25 00	35 00	1	
49	SHL-DUP04-FAL22	WG	10.13.22	1250	DC	X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG				X	X	X	X	X						SHL-22	FD1	105 00	115 00	1	
51	SHL-DUP06-FAL22	WG	10.14.22	0852	MS	X	X	X	X	X						SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG				X	X	X	X	X						SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG	10.14.22	1305	MS	X	X	X	X	X						SHM-11-06	FD1	25 00	35 00	1	
54	SHL-DUP09-FAL22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG				X	X	X	X	X						SHP-01-38A	FD1	1.50	6.50	1	
56	SHL-DUP11-FAL22	WG				X	X	X	X	X						SHP-2016-07A	FD1	22 00	32 00	1	
57	SHM-05-39A-FAL22	WG				X	X	X	X	X						SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG				X	X	X	X	X						SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG				X	X	X	X	X						SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG				X	X	X	X	X						SHM-05-41A	N1	42 00	44 00	1	

Relinquished by: (Signature) Diane Clapper
Date 10-14-22
Time
Received by (Signature) 1535

6/14/22 1700
Received by Laboratory: (Signature)
Date
Time

X

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry.lanier@eurofinsus.com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #21

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
61	SHM-05-41B-FAL22	WG				X	X	X	X	X	SHM-05-41B	N1	62 00	64 00	1	
62	SHM-05-41C-FAL22	WG				X	X	X	X	X	SHM-05-41C	MS1	88 00	93 00	1	
63	SHM-05-41C-FAL22	WG				X	X	X	X	X	SHM-05-41C	N1	88 00	93 00	1	
64	SHM-05-41C-FAL22	WG				X	X	X	X	X	SHM-05-41C	SD1	88 00	93 00	1	
65	SHM-05-42A-FAL22	WG				X	X	X	X	X	SHM-05-42A	N1	40 00	42 00	1	
66	SHM-05-42B-FAL22	WG				X	X	X	X	X	SHM-05-42B	N1	70 00	72 00	1	
67	SHM-07-03-FAL22	WG				X	X	X	X	X	SHM-07-03	N1	25 00	35 00	1	
68	SHM-07-05X-FAL22	WG				X	X	X	X	X	SHM-07-05X	N1	55 00	65 00	1	
69	SHM-10-02-FAL22	WG				X	X	X	X	X	SHM-10-02	N1	53 00	63 00	1	
70	SHM-10-03-FAL22	WG				X	X	X	X	X	SHM-10-03	N1	58 50	68.50	1	
71	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	MS1	55 00	65 00	1	
72	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	N1	55 00	65 00	1	
73	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	SD1	55 00	65 00	1	
74	SHM-10-05A-FAL22	WG				X	X	X	X	X	SHM-10-05A	N1	50 00	60 00	1	
75	SHM-10-06-FAL22	WG	10.13.22	1440	GS	X	X	X	X	X	SHM-10-06	N1	69.50	79.50	1	
76	SHM-10-06A-FAL22	WG				X	X	X	X	X	SHM-10-06A	N1	77 00	87 00	1	
77	SHM-10-07-FAL22	WG				X	X	X	X	X	SHM-10-07	N1	40 00	50 00	1	
78	SHM-10-08-FAL22	WG				X	X	X	X	X	SHM-10-08	N1	46 00	56 00	1	
79	SHM-10-10-FAL22	WG				X	X	X	X	X	SHM-10-10	N1	56 00	66 00	1	
80	SHM-10-11-FAL22	WG				X	X	X	X	X	SHM-10-11	N1	50 00	60 00	1	

Relinquished by: (Signature) Dave Clergo
Date 10-14-22
Time 1535
Received by (Signature)

Received by Laboratory (Signature)
Date 10-14-22
Time 1000

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry.lanier@eurofinsus.com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Analytical Test Method					46	9	9	5	3											
81	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	MS1	45 00	55 00	1	
82	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	N1	45 00	55 00	1	
83	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	SD1	45 00	55 00	1	
84	SHM-10-13-FAL22	WG				X	X	X	X	X						SHM-10-13	N1	60 00	70 00	1	
85	SHM-10-14-FAL22	WG				X	X	X	X	X						SHM-10-14	N1	60 00	80 00	1	
86	SHM-10-15-FAL22	WG				X	X	X	X	X						SHM-10-15	N1	45 00	55 00	1	
87	SHM-10-16-FAL22	WG				X	X	X	X	X						SHM-10-16	N1	75 00	85 00	1	
88	SHM-11-02-FAL22	WG	10.14.22	1138	MS	X	X	X	X	X						SHM-11-02	N1	52 00	66 00	1	
89	SHM-11-06-FAL22	WG	10.14.22	1300	MS	X	X	X	X	X						SHM-11-06	N1	25 00	35 00	1	
90	SHM-13-01-FAL22	WG				X	X	X	X	X						SHM-13-01	N1	39 00	49 00	1	
91	SHM-13-02-FAL22	WG				X	X	X	X	X						SHM-13-02	N1	60 00	70 00	1	
92	SHM-13-03-FAL22	WG				X	X	X	X	X						SHM-13-03	N1	42 00	52.00	1	
93	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	MS1	20 00	30 00	1	
94	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG	10.13.22	1343	MS	X	X	X	X	X						SHM-13-04	SD1	20 00	30 00	1	
96	SHM-13-05-FAL22	WG	10.13-22	1524	MS	X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	with MS/MSD
97	SHM-13-06-FAL22	WG	10.13.22	1237	MS	X	X	X	X	X						SHM-13-06	N1	36 00	46 00	1	
98	SHM-13-07-FAL22	WG	10.13.22	1132	MS	X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
99	SHM-13-08-FAL22	WG	10.13.22	1000	MS	X	X	X	X	X						SHM-13-08	N1	55 00	65 00	1	
100	SHM-13-14D-FAL22	WG				X	X	X	X	X						SHM-13-14D	N1	45 00	55 00	1	

Relinquished by: (Signature) Diane Clapper
Date 10-14-22
Time
Received by: (Signature) 1535

Received by Laboratory: (Signature) 10/14/22 1700
Date
Time

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
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WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Bost
#21

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
101	SHM-13-14S-FAL22	WG				X	X	X	X	X					SHM-13-14S	N1	5.00	15 00	1	
102	SHM-13-15-FAL22	WG				X	X	X	X	X					SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG				X	X	X	X	X					SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG				X	X	X	X	X					SHM-93-22B	N1	82.30	92 30	1	
108	SHM-93-22C-FAL22	WG				X	X	X	X	X					SHM-93-22C	N1	124.30	134 30	1	
109	SHM-93-24A-FAL22	WG	10.14.22	955	MS	X	X	X	X	X					SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG				X	X	X	X	X					SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG				X	X	X	X	X					SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG	10.14.22	1055	GS	X	X	X	X	X					SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG	10.14.22	1220	GS	X	X	X	X	X					SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG	10.14.22	1415	GS	X	X	X	X	X					SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG				X	X	X	X	X					SHM-99-32X	N1	72 00	82.00	1	
116	SHP-01-36X-FAL22	WG				X	X	X	X	X					SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG				X	X	X	X	X					SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG				X	X	X	X	X					SHP-01-38A	N1	1.50	6.50	1	
119	SHP-2016-06A-FAL22	WG				X	X	X	X	X					SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG				X	X	X	X	X					SHP-2016-06B	N1	102 00	112.00	1	

Relinquished by: (Signature) Diane C
Date 10-14-22
Time
Received by (Signature) 1535

Received by Laboratory (Signature) 10-14-22
Date
Time 1700

11/9/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
121	SHP-2016-06C-FAL22	WG					X	X	X	X	X							SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG					X	X	X	X	X							SHP-2016-07A	N1	22 00	32 00	1	
123	SHP-2016-07B-FAL22	WG					X	X	X	X	X							SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG					X	X	X	X	X							SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG					X	X	X	X	X							SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG					X	X	X	X	X							SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG					X	X	X	X	X							SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG					X	X	X	X	X							SHP-2016-3A	N1	20 00	25 00	1	
129	SHP-2016-3B-FAL22	WG					X	X	X	X	X							SHP-2016-3B	N1	80 00	85 00	1	
130	SHP-2016-4A-FAL22	WG					X	X	X	X	X							SHP-2016-4A	N1	25 00	30 00	1	
131	SHP-2016-4B-FAL22	WG					X	X	X	X	X							SHP-2016-4B	N1	85 00	90 00	1	
132	SHP-2016-5A-FAL22	WG					X	X	X	X	X							SHP-2016-5A	N1	25 00	30 00	1	
133	SHP-2016-5B-FAL22	WG					X	X	X	X	X							SHP-2016-5B	N1	85 00	90 00	1	
134	SHP-99-29X-FAL22	WG					X	X	X	X	X							SHP-99-29X	N1	19 00	29 00	1	
135																							
136																							
137																							
138																							
139																							

Turnaround Time: Standard

Relinquished by (Signature)
Date
Time
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

11/9/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-223337-1

Login Number: 223337
List Number: 1
Creator: Padayao, Abigail

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-223686-1
Client Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
11/11/2022 6:23:18 PM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the {0} Project Manager.

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-223686-1	EPA-PZ-2012-5A-FAL22	Water	10/19/22 09:50	10/20/22 10:30
680-223686-2	EPA-PZ-2012-5B-FAL22	Water	10/19/22 11:40	10/20/22 10:30
680-223686-3	N5-P1-FAL22	Water	10/19/22 14:10	10/20/22 10:30
680-223686-4	SHL-15-FAL22	Water	10/19/22 09:25	10/20/22 10:30
680-223686-5	SHL-7-FAL22	Water	10/19/22 11:27	10/20/22 10:30
680-223686-6	SHL-8D-FAL22	Water	10/19/22 13:42	10/20/22 10:30
680-223686-7	SHL-DUP09-FAL22	Water	10/19/22 14:12	10/20/22 10:30
680-223686-8	SHM-10-14-FAL22	Water	10/19/22 15:20	10/20/22 10:30
680-223686-9	SHM-10-15-FAL22	Water	10/19/22 11:00	10/20/22 10:30
680-223686-10	SHM-96-5B-FAL22	Water	10/19/22 14:05	10/20/22 10:30
680-223686-11	SHM-96-5C-FAL22	Water	10/19/22 12:35	10/20/22 10:30
680-223686-12	SHP-99-29X-FAL22	Water	10/19/22 13:00	10/20/22 10:30

Job ID: 680-223686-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-223686-1

Receipt
The samples were received on 10/20/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.6°C and 4.0°C

HPLC/IC
Method 9056A_OF_28D_D5: The matrix spike (MS) recoveries for analytical batch 680-749279 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 2320B: The sample duplicate precision for the following sample associated with analytical batch 680-747095 was outside control limits: (680-223686-A-5 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: EPA-PZ-2012-5A-FAL22

Lab Sample ID: 680-223686-1

Date Collected: 10/19/22 09:50

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	13		0.50	0.50	0.20	mg/L		11/07/22 14:47	1
Sulfate	3.2		1.0	1.0	0.40	mg/L		11/07/22 14:47	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4700		100	50	20	ug/L		10/24/22 12:26	1
Manganese	88		10	5.0	1.3	ug/L		10/24/22 12:26	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.2	J	5.0	3.0	0.86	ug/L		10/24/22 13:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	24		5.0	5.0	2.2	mg/L		10/25/22 15:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	6.7		1.0	0.50	0.50	mg/L		11/02/22 14:46	1
DOC Result 2 (SW846 9060A)	6.7		1.0	0.50	0.50	mg/L		11/02/22 14:46	1
DOC Result 3 (SW846 9060A)	6.6		1.0	0.50	0.50	mg/L		11/02/22 14:46	1
DOC Result 4 (SW846 9060A)	6.7		1.0	0.50	0.50	mg/L		11/02/22 14:46	1
Dissolved Organic Carbon (SW846 9060A)	6.7		1.0	0.50	0.50	mg/L		11/02/22 14:46	1

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-5B-FAL22
Lab Sample ID: 680-223686-2
Date Collected: 10/19/22 11:40
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	43		0.50	0.50	0.20	mg/L		11/07/22 14:33	1
Sulfate	16		1.0	1.0	0.40	mg/L		11/07/22 14:33	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	180		100	50	20	ug/L		10/24/22 12:47	1
Manganese	9600		10	5.0	1.3	ug/L		10/24/22 12:47	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.4	J	5.0	3.0	0.86	ug/L		10/24/22 13:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/25/22 15:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/02/22 15:37	1
DOC Result 2 (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		11/02/22 15:37	1
DOC Result 3 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/02/22 15:37	1
DOC Result 4 (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		11/02/22 15:37	1
Dissolved Organic Carbon (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/02/22 15:37	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: N5-P1-FAL22

Date Collected: 10/19/22 14:10
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223686-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	18		0.50	0.50	0.20	mg/L		11/07/22 16:20	1
Sulfate	16	M	1.0	1.0	0.40	mg/L		11/07/22 16:20	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	380		100	50	20	ug/L		10/24/22 12:50	1
Manganese	1300		10	5.0	1.3	ug/L		10/24/22 12:50	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	560		5.0	3.0	0.86	ug/L		10/24/22 13:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	130		5.0	5.0	2.2	mg/L		10/25/22 18:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		11/02/22 15:55	1
DOC Result 2 (SW846 9060A)	1.0		1.0	0.50	0.50	mg/L		11/02/22 15:55	1
DOC Result 3 (SW846 9060A)	0.97	J	1.0	0.50	0.50	mg/L		11/02/22 15:55	1
DOC Result 4 (SW846 9060A)	0.96	J	1.0	0.50	0.50	mg/L		11/02/22 15:55	1
Dissolved Organic Carbon (SW846 9060A)	1.0		1.0	0.50	0.50	mg/L		11/02/22 15:55	1

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-15-FAL22
Lab Sample ID: 680-223686-4

Date Collected: 10/19/22 09:25
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	24	J1	0.50	0.50	0.20	mg/L		11/07/22 15:27	1
Sulfate	10		1.0	1.0	0.40	mg/L		11/07/22 15:27	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4200		100	50	20	ug/L		10/24/22 12:53	1
Manganese	220		10	5.0	1.3	ug/L		10/24/22 12:53	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	40		5.0	3.0	0.86	ug/L		10/24/22 13:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	110		5.0	5.0	2.2	mg/L		10/25/22 16:03	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		11/02/22 16:13	1
DOC Result 2 (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		11/02/22 16:13	1
DOC Result 3 (SW846 9060A)	3.3		1.0	0.50	0.50	mg/L		11/02/22 16:13	1
DOC Result 4 (SW846 9060A)	3.4		1.0	0.50	0.50	mg/L		11/02/22 16:13	1
Dissolved Organic Carbon (SW846 9060A)	3.4		1.0	0.50	0.50	mg/L		11/02/22 16:13	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHL-7-FAL22
Date Collected: 10/19/22 11:27
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223686-5
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	56		0.50	0.50	0.20	mg/L		11/07/22 16:07	1
Sulfate	12	M	1.0	1.0	0.40	mg/L		11/07/22 16:07	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	87	J	100	50	20	ug/L		10/24/22 12:56	1
Manganese	13		10	5.0	1.3	ug/L		10/24/22 12:56	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 13:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	67		5.0	5.0	2.2	mg/L		10/25/22 18:09	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/02/22 16:31	1
DOC Result 2 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/02/22 16:31	1
DOC Result 3 (SW846 9060A)	1.1		1.0	0.50	0.50	mg/L		11/02/22 16:31	1
DOC Result 4 (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		11/02/22 16:31	1
Dissolved Organic Carbon (SW846 9060A)	1.2		1.0	0.50	0.50	mg/L		11/02/22 16:31	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHL-8D-FAL22

Date Collected: 10/19/22 13:42
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223686-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**62**		0.50	0.50	0.20	mg/L		11/07/22 17:53	1
Sulfate	**5.1**		1.0	1.0	0.40	mg/L		11/07/22 17:53	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 12:59	1
Manganese	**1.3**	**J**	10	5.0	1.3	ug/L		10/24/22 12:59	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 13:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**13**		5.0	5.0	2.2	mg/L		10/25/22 18:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	**0.98**	**J**	1.0	0.50	0.50	mg/L		11/02/22 16:49	1
DOC Result 2 (SW846 9060A)	**0.88**	**J**	1.0	0.50	0.50	mg/L		11/02/22 16:49	1
DOC Result 3 (SW846 9060A)	**0.87**	**J**	1.0	0.50	0.50	mg/L		11/02/22 16:49	1
DOC Result 4 (SW846 9060A)	**0.83**	**J**	1.0	0.50	0.50	mg/L		11/02/22 16:49	1
Dissolved Organic Carbon (SW846 9060A)	**0.89**	**J**	1.0	0.50	0.50	mg/L		11/02/22 16:49	1

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-DUP09-FAL22
Lab Sample ID: 680-223686-7

Date Collected: 10/19/22 14:12
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		11/07/22 16:33	1
Sulfate	20		1.0	1.0	0.40	mg/L		11/07/22 16:33	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	12000		100	50	20	ug/L		10/24/22 13:02	1
Manganese	8900		10	5.0	1.3	ug/L		10/24/22 13:02	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	830		5.0	3.0	0.86	ug/L		10/24/22 13:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/25/22 19:34	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/02/22 17:06	1
DOC Result 2 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 17:06	1
DOC Result 3 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 17:06	1
DOC Result 4 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 17:06	1
Dissolved Organic Carbon (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 17:06	1

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-14-FAL22
Lab Sample ID: 680-223686-8
Date Collected: 10/19/22 15:20
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	4.3		0.50	0.50	0.20	mg/L		11/07/22 17:00	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/07/22 17:00	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	80000		100	50	20	ug/L		10/24/22 13:11	1
Manganese	2300		10	5.0	1.3	ug/L		10/24/22 13:11	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	4900		5.0	3.0	0.86	ug/L		10/24/22 13:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	230		5.0	5.0	2.2	mg/L		10/25/22 18:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.9		1.0	0.50	0.50	mg/L		11/02/22 17:24	1
DOC Result 2 (SW846 9060A)	3.8		1.0	0.50	0.50	mg/L		11/02/22 17:24	1
DOC Result 3 (SW846 9060A)	3.6		1.0	0.50	0.50	mg/L		11/02/22 17:24	1
DOC Result 4 (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/02/22 17:24	1
Dissolved Organic Carbon (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/02/22 17:24	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHM-10-15-FAL22

Lab Sample ID: 680-223686-9

Date Collected: 10/19/22 11:00

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.7		0.50	0.50	0.20	mg/L		11/07/22 16:47	1
Sulfate	7.5		1.0	1.0	0.40	mg/L		11/07/22 16:47	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	44000		100	50	20	ug/L		10/24/22 13:14	1
Manganese	7600		10	5.0	1.3	ug/L		10/24/22 13:14	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	7500		5.0	3.0	0.86	ug/L		10/24/22 13:42	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	200		5.0	5.0	2.2	mg/L		10/25/22 15:53	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.9		1.0	0.50	0.50	mg/L		11/02/22 18:21	1
DOC Result 2 (SW846 9060A)	3.1		1.0	0.50	0.50	mg/L		11/02/22 18:21	1
DOC Result 3 (SW846 9060A)	2.9		1.0	0.50	0.50	mg/L		11/02/22 18:21	1
DOC Result 4 (SW846 9060A)	3.0		1.0	0.50	0.50	mg/L		11/02/22 18:21	1
Dissolved Organic Carbon (SW846 9060A)	3.0		1.0	0.50	0.50	mg/L		11/02/22 18:21	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHM-96-5B-FAL22

Lab Sample ID: 680-223686-10

Date Collected: 10/19/22 14:05

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		11/07/22 17:40	1
Sulfate	20	M	1.0	1.0	0.40	mg/L		11/07/22 17:40	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	11000		100	50	20	ug/L		10/24/22 13:17	1
Manganese	8800		10	5.0	1.3	ug/L		10/24/22 13:17	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	840		5.0	3.0	0.86	ug/L		10/24/22 13:44	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/25/22 19:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/02/22 18:39	1
DOC Result 2 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/02/22 18:39	1
DOC Result 3 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 18:39	1
DOC Result 4 (SW846 9060A)	1.4		1.0	0.50	0.50	mg/L		11/02/22 18:39	1
Dissolved Organic Carbon (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/02/22 18:39	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHM-96-5C-FAL22

Lab Sample ID: 680-223686-11

Date Collected: 10/19/22 12:35

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		11/07/22 17:27	1
Sulfate	5.1		1.0	1.0	0.40	mg/L		11/07/22 17:27	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	29000		100	50	20	ug/L		10/24/22 13:20	1
Manganese	5700		10	5.0	1.3	ug/L		10/24/22 13:20	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	54		5.0	3.0	0.86	ug/L		10/24/22 13:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/25/22 19:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		11/02/22 18:57	1
DOC Result 2 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 18:57	1
DOC Result 3 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/02/22 18:57	1
DOC Result 4 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 18:57	1
Dissolved Organic Carbon (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 18:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-99-29X-FAL22
Lab Sample ID: 680-223686-12
Date Collected: 10/19/22 13:00
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.0		0.50	0.50	0.20	mg/L		11/07/22 17:13	1
Sulfate	2.4		1.0	1.0	0.40	mg/L		11/07/22 17:13	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	30000		100	50	20	ug/L		10/24/22 13:23	1
Manganese	4200		10	5.0	1.3	ug/L		10/24/22 13:23	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2300		5.0	3.0	0.86	ug/L		10/24/22 13:50	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	78		5.0	5.0	2.2	mg/L		10/25/22 19:03	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		11/02/22 19:14	1
DOC Result 2 (SW846 9060A)	1.9		1.0	0.50	0.50	mg/L		11/02/22 19:14	1
DOC Result 3 (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		11/02/22 19:14	1
DOC Result 4 (SW846 9060A)	1.9		1.0	0.50	0.50	mg/L		11/02/22 19:14	1
Dissolved Organic Carbon (SW846 9060A)	2.0		1.0	0.50	0.50	mg/L		11/02/22 19:14	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-749279/2
Matrix: Water
Analysis Batch: 749279

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/07/22 10:41	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/07/22 10:41	1

Lab Sample ID: LCS 680-749279/3
Matrix: Water
Analysis Batch: 749279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.89		mg/L		99	87 - 111
Sulfate	10.0	9.28		mg/L		93	87 - 112

Lab Sample ID: LCSD 680-749279/4
Matrix: Water
Analysis Batch: 749279

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.88		mg/L		99	87 - 111	0	15
Sulfate	10.0	9.21		mg/L		92	87 - 112	1	15

Lab Sample ID: 680-223686-4 MS
Matrix: Water
Analysis Batch: 749279

Client Sample ID: SHL-15-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	24	J1	10.0	35.4	J1	mg/L		112	87 - 111
Sulfate	10		10.0	21.1		mg/L		108	87 - 112

Lab Sample ID: 680-223686-4 MSD
Matrix: Water
Analysis Batch: 749279

Client Sample ID: SHL-15-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	24	J1	10.0	35.2		mg/L		110	87 - 111	1	15
Sulfate	10		10.0	20.9		mg/L		105	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-746300/1-A
Matrix: Water
Analysis Batch: 746802

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746300

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 12:20	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/24/22 12:20	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-746300/2-A
Matrix: Water
Analysis Batch: 746802

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746300

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5150		ug/L		103	87 - 115
Manganese	400	414		ug/L		103	90 - 114

Lab Sample ID: 680-223686-1 MS
Matrix: Water
Analysis Batch: 746802

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved
Prep Batch: 746300

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4700		5000	9970		ug/L		105	87 - 115
Manganese	88		400	503		ug/L		104	90 - 114

Lab Sample ID: 680-223686-1 MSD
Matrix: Water
Analysis Batch: 746802

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved
Prep Batch: 746300

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	4700		5000	9870		ug/L		103	87 - 115	1	20
Manganese	88		400	499		ug/L		103	90 - 114	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-746302/1-A
Matrix: Water
Analysis Batch: 746820

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746302

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 12:58	1

Lab Sample ID: LCS 680-746302/2-A
Matrix: Water
Analysis Batch: 746820

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	112		ug/L		112	84 - 116

Lab Sample ID: 680-223686-1 MS
Matrix: Water
Analysis Batch: 746820

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved
Prep Batch: 746302

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.2	J	100	106		ug/L		105	84 - 116

Lab Sample ID: 680-223686-1 MSD
Matrix: Water
Analysis Batch: 746820

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved
Prep Batch: 746302

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.2	J	100	107		ug/L		106	84 - 116	1	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-747090/4
Matrix: Water
Analysis Batch: 747090

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/25/22 12:33	1

Lab Sample ID: LCS 680-747090/6
Matrix: Water
Analysis Batch: 747090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	252		mg/L		101	90 - 112		

Lab Sample ID: LCSD 680-747090/31
Matrix: Water
Analysis Batch: 747090

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	248		mg/L		99	90 - 112	2	30

Lab Sample ID: MB 680-747095/4
Matrix: Water
Analysis Batch: 747095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/25/22 17:44	1

Lab Sample ID: LCS 680-747095/6
Matrix: Water
Analysis Batch: 747095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	248		mg/L		99	90 - 112		

Lab Sample ID: LCSD 680-747095/31
Matrix: Water
Analysis Batch: 747095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	249		mg/L		100	90 - 112	1	30

Lab Sample ID: 680-223686-5 DU
Matrix: Water
Analysis Batch: 747095

Client Sample ID: SHL-7-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	67			65.8		mg/L				2	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-748627/3
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 2	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 3	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 4	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
Dissolved Organic Carbon	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1

Lab Sample ID: LCS 680-748627/4
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DOC Result 1			20.0	19.6		mg/L		98	80 - 120		
DOC Result 2			20.0	19.5		mg/L		97	80 - 120		
DOC Result 3			20.0	19.3		mg/L		97	80 - 120		
DOC Result 4			20.0	19.2		mg/L		96	80 - 120		
Dissolved Organic Carbon			20.0	19.4		mg/L		97	80 - 120		

Lab Sample ID: LCSD 680-748627/5
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1			20.0	19.7		mg/L		99	80 - 120	1	20
DOC Result 2			20.0	19.7		mg/L		98	80 - 120	1	20
DOC Result 3			20.0	19.4		mg/L		97	80 - 120	0	20
DOC Result 4			20.0	19.6		mg/L		98	80 - 120	2	20
Dissolved Organic Carbon			20.0	19.6		mg/L		98	80 - 120	1	20

Lab Sample ID: 680-223686-1 MS
Matrix: Water
Analysis Batch: 748627

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
DOC Result 1	6.7		20.0	26.8		mg/L		100	80 - 120		
DOC Result 2	6.7		20.0	26.8		mg/L		100	80 - 120		
DOC Result 3	6.6		20.0	26.8		mg/L		101	80 - 120		
DOC Result 4	6.7		20.0	26.6		mg/L		100	80 - 120		
Dissolved Organic Carbon	6.7		20.0	26.8		mg/L		100	80 - 120		

Lab Sample ID: 680-223686-1 MSD
Matrix: Water
Analysis Batch: 748627

Client Sample ID: EPA-PZ-2012-5A-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1	6.7		20.0	26.8		mg/L		100	80 - 120	0	20
DOC Result 2	6.7		20.0	27.0		mg/L		101	80 - 120	1	20
DOC Result 3	6.6		20.0	27.0		mg/L		102	80 - 120	1	20
DOC Result 4	6.7		20.0	27.0		mg/L		101	80 - 120	1	20
Dissolved Organic Carbon	6.7		20.0	26.9		mg/L		101	80 - 120	1	20

HPLC/IC

Analysis Batch: 749279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Total/NA	Water	9056A	
680-223686-2	EPA-PZ-2012-5B-FAL22	Total/NA	Water	9056A	
680-223686-3	N5-P1-FAL22	Total/NA	Water	9056A	
680-223686-4	SHL-15-FAL22	Total/NA	Water	9056A	
680-223686-5	SHL-7-FAL22	Total/NA	Water	9056A	
680-223686-6	SHL-8D-FAL22	Total/NA	Water	9056A	
680-223686-7	SHL-DUP09-FAL22	Total/NA	Water	9056A	
680-223686-8	SHM-10-14-FAL22	Total/NA	Water	9056A	
680-223686-9	SHM-10-15-FAL22	Total/NA	Water	9056A	
680-223686-10	SHM-96-5B-FAL22	Total/NA	Water	9056A	
680-223686-11	SHM-96-5C-FAL22	Total/NA	Water	9056A	
680-223686-12	SHP-99-29X-FAL22	Total/NA	Water	9056A	
MB 680-749279/2	Method Blank	Total/NA	Water	9056A	
LCS 680-749279/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-749279/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223686-4 MS	SHL-15-FAL22	Total/NA	Water	9056A	
680-223686-4 MSD	SHL-15-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 746300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	
680-223686-2	EPA-PZ-2012-5B-FAL22	Dissolved	Water	3005A	
680-223686-3	N5-P1-FAL22	Dissolved	Water	3005A	
680-223686-4	SHL-15-FAL22	Dissolved	Water	3005A	
680-223686-5	SHL-7-FAL22	Dissolved	Water	3005A	
680-223686-6	SHL-8D-FAL22	Dissolved	Water	3005A	
680-223686-7	SHL-DUP09-FAL22	Dissolved	Water	3005A	
680-223686-8	SHM-10-14-FAL22	Dissolved	Water	3005A	
680-223686-9	SHM-10-15-FAL22	Dissolved	Water	3005A	
680-223686-10	SHM-96-5B-FAL22	Dissolved	Water	3005A	
680-223686-11	SHM-96-5C-FAL22	Dissolved	Water	3005A	
680-223686-12	SHP-99-29X-FAL22	Dissolved	Water	3005A	
MB 680-746300/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746300/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223686-1 MS	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	
680-223686-1 MSD	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	

Prep Batch: 746302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	
680-223686-2	EPA-PZ-2012-5B-FAL22	Dissolved	Water	3005A	
680-223686-3	N5-P1-FAL22	Dissolved	Water	3005A	
680-223686-4	SHL-15-FAL22	Dissolved	Water	3005A	
680-223686-5	SHL-7-FAL22	Dissolved	Water	3005A	
680-223686-6	SHL-8D-FAL22	Dissolved	Water	3005A	
680-223686-7	SHL-DUP09-FAL22	Dissolved	Water	3005A	
680-223686-8	SHM-10-14-FAL22	Dissolved	Water	3005A	
680-223686-9	SHM-10-15-FAL22	Dissolved	Water	3005A	
680-223686-10	SHM-96-5B-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 746302 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-11	SHM-96-5C-FAL22	Dissolved	Water	3005A	
680-223686-12	SHP-99-29X-FAL22	Dissolved	Water	3005A	
MB 680-746302/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746302/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223686-1 MS	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	
680-223686-1 MSD	EPA-PZ-2012-5A-FAL22	Dissolved	Water	3005A	

Analysis Batch: 746802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6010C	746300
680-223686-2	EPA-PZ-2012-5B-FAL22	Dissolved	Water	6010C	746300
680-223686-3	N5-P1-FAL22	Dissolved	Water	6010C	746300
680-223686-4	SHL-15-FAL22	Dissolved	Water	6010C	746300
680-223686-5	SHL-7-FAL22	Dissolved	Water	6010C	746300
680-223686-6	SHL-8D-FAL22	Dissolved	Water	6010C	746300
680-223686-7	SHL-DUP09-FAL22	Dissolved	Water	6010C	746300
680-223686-8	SHM-10-14-FAL22	Dissolved	Water	6010C	746300
680-223686-9	SHM-10-15-FAL22	Dissolved	Water	6010C	746300
680-223686-10	SHM-96-5B-FAL22	Dissolved	Water	6010C	746300
680-223686-11	SHM-96-5C-FAL22	Dissolved	Water	6010C	746300
680-223686-12	SHP-99-29X-FAL22	Dissolved	Water	6010C	746300
MB 680-746300/1-A	Method Blank	Total Recoverable	Water	6010C	746300
LCS 680-746300/2-A	Lab Control Sample	Total Recoverable	Water	6010C	746300
680-223686-1 MS	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6010C	746300
680-223686-1 MSD	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6010C	746300

Analysis Batch: 746820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6020A	746302
680-223686-2	EPA-PZ-2012-5B-FAL22	Dissolved	Water	6020A	746302
680-223686-3	N5-P1-FAL22	Dissolved	Water	6020A	746302
680-223686-4	SHL-15-FAL22	Dissolved	Water	6020A	746302
680-223686-5	SHL-7-FAL22	Dissolved	Water	6020A	746302
680-223686-6	SHL-8D-FAL22	Dissolved	Water	6020A	746302
680-223686-7	SHL-DUP09-FAL22	Dissolved	Water	6020A	746302
680-223686-8	SHM-10-14-FAL22	Dissolved	Water	6020A	746302
680-223686-9	SHM-10-15-FAL22	Dissolved	Water	6020A	746302
680-223686-10	SHM-96-5B-FAL22	Dissolved	Water	6020A	746302
680-223686-11	SHM-96-5C-FAL22	Dissolved	Water	6020A	746302
680-223686-12	SHP-99-29X-FAL22	Dissolved	Water	6020A	746302
MB 680-746302/1-A	Method Blank	Total Recoverable	Water	6020A	746302
LCS 680-746302/2-A	Lab Control Sample	Total Recoverable	Water	6020A	746302
680-223686-1 MS	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6020A	746302
680-223686-1 MSD	EPA-PZ-2012-5A-FAL22	Dissolved	Water	6020A	746302

General Chemistry

Analysis Batch: 747090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Total/NA	Water	2320B-2011	
680-223686-2	EPA-PZ-2012-5B-FAL22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 747090 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-4	SHL-15-FAL22	Total/NA	Water	2320B-2011	
680-223686-9	SHM-10-15-FAL22	Total/NA	Water	2320B-2011	
MB 680-747090/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-747090/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-747090/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 747095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-3	N5-P1-FAL22	Total/NA	Water	2320B-2011	
680-223686-5	SHL-7-FAL22	Total/NA	Water	2320B-2011	
680-223686-6	SHL-8D-FAL22	Total/NA	Water	2320B-2011	
680-223686-7	SHL-DUP09-FAL22	Total/NA	Water	2320B-2011	
680-223686-8	SHM-10-14-FAL22	Total/NA	Water	2320B-2011	
680-223686-10	SHM-96-5B-FAL22	Total/NA	Water	2320B-2011	
680-223686-11	SHM-96-5C-FAL22	Total/NA	Water	2320B-2011	
680-223686-12	SHP-99-29X-FAL22	Total/NA	Water	2320B-2011	
MB 680-747095/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-747095/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-747095/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223686-5 DU	SHL-7-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 748627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223686-1	EPA-PZ-2012-5A-FAL22	Dissolved	Water	9060A	
680-223686-2	EPA-PZ-2012-5B-FAL22	Dissolved	Water	9060A	
680-223686-3	N5-P1-FAL22	Dissolved	Water	9060A	
680-223686-4	SHL-15-FAL22	Dissolved	Water	9060A	
680-223686-5	SHL-7-FAL22	Dissolved	Water	9060A	
680-223686-6	SHL-8D-FAL22	Dissolved	Water	9060A	
680-223686-7	SHL-DUP09-FAL22	Dissolved	Water	9060A	
680-223686-8	SHM-10-14-FAL22	Dissolved	Water	9060A	
680-223686-9	SHM-10-15-FAL22	Dissolved	Water	9060A	
680-223686-10	SHM-96-5B-FAL22	Dissolved	Water	9060A	
680-223686-11	SHM-96-5C-FAL22	Dissolved	Water	9060A	
680-223686-12	SHP-99-29X-FAL22	Dissolved	Water	9060A	
MB 680-748627/3	Method Blank	Dissolved	Water	9060A	
LCS 680-748627/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-748627/5	Lab Control Sample Dup	Dissolved	Water	9060A	
680-223686-1 MS	EPA-PZ-2012-5A-FAL22	Dissolved	Water	9060A	
680-223686-1 MSD	EPA-PZ-2012-5A-FAL22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: EPA-PZ-2012-5A-FAL22

Lab Sample ID: 680-223686-1

Date Collected: 10/19/22 09:50
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 14:47	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:26	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:04	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747090	10/25/22 15:32	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 14:46	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-5B-FAL22

Lab Sample ID: 680-223686-2

Date Collected: 10/19/22 11:40
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 14:33	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:47	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:17	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747090	10/25/22 15:43	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 15:37	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: N5-P1-FAL22

Lab Sample ID: 680-223686-3

Date Collected: 10/19/22 14:10
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 16:20	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:50	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:20	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: N5-P1-FAL22

Lab Sample ID: 680-223686-3

Date Collected: 10/19/22 14:10

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 18:36	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 15:55	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-15-FAL22

Lab Sample ID: 680-223686-4

Date Collected: 10/19/22 09:25

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 15:27	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:53	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:23	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747090	10/25/22 16:03	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 16:13	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-7-FAL22

Lab Sample ID: 680-223686-5

Date Collected: 10/19/22 11:27

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 16:07	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:56	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:31	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 18:09	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 16:31	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-8D-FAL22

Lab Sample ID: 680-223686-6

Date Collected: 10/19/22 13:42

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 17:53	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 12:59	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:34	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 18:44	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 16:49	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP09-FAL22

Lab Sample ID: 680-223686-7

Date Collected: 10/19/22 14:12

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 16:33	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:02	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:36	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 19:34	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 17:06	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-14-FAL22

Lab Sample ID: 680-223686-8

Date Collected: 10/19/22 15:20

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 17:00	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:11	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:39	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223686-1

Client Sample ID: SHM-10-14-FAL22

Lab Sample ID: 680-223686-8

Date Collected: 10/19/22 15:20
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 18:54	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 17:24	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-15-FAL22

Lab Sample ID: 680-223686-9

Date Collected: 10/19/22 11:00
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 16:47	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:14	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:42	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747090	10/25/22 15:53	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 18:21	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-96-5B-FAL22

Lab Sample ID: 680-223686-10

Date Collected: 10/19/22 14:05
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 17:40	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:17	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:44	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 19:44	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 18:39	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-96-5C-FAL22
Lab Sample ID: 680-223686-11

Date Collected: 10/19/22 12:35
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 17:27	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:20	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:47	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 19:13	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 18:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-99-29X-FAL22
Lab Sample ID: 680-223686-12

Date Collected: 10/19/22 13:00
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749279	11/07/22 17:13	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746300	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 13:23	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746302	10/21/22 13:59	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 13:50	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 19:03	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 19:14	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223686-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Analytical Test Method

| | | |

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name. Former Fort Devens, Long Term Monitoring	Laboratory· Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number· 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus.com	
WBS Code·	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)											
	Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3											
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
21	PZ-12-04-FAL22	WG					X	X	X	X	X					PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG					X	X	X	X	X					PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG					X	X	X	X	X					PZ-12-06	N1	25 00	35 00	1	
24	PZ-12-07-FAL22	WG					X	X	X	X	X					PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG					X	X	X	X	X					PZ-12-08	N1	22.00	32 00	1	
26	PZ-12-09-FAL22	WG					X	X	X	X	X					PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	MS1	20 00	30 00	1	
28	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	SD1	20 00	30 00	1	
30	SHL-10-FAL22	WG					X	X	X	X	X					SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG					X	X	X	X	X					SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG					X	X	X	X	X					SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG	10-19-22	0925	DC		X	X	X	X	X					SHL-15	N1	14 00	24 00	1	
34	SHL-19-FAL22	WG					X	X	X	X	X					SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG					X	X	X	X	X					SHL-20	N1	39 00	49 00	1	
36	SHL-22-FAL22	WG					X	X	X	X	X					SHL-22	N1	105 00	115 00	1	
37	SHL-23-FAL22	WG					X	X	X	X	X					SHL-23	N1	23 00	33 00	1	
38	SHL-24-FAL22	WG					X	X	X	X	X					SHL-24	N1	110 00	120 00	1	
39	SHL-3-FAL22	WG					X	X	X	X	X					SHL-3	N1	24 00	34 00	1	
40	SHL-4-FAL22	WG					X	X	X	X	X					SHL-4	N1	3 00	13 00	1	

Relinquished by· (Signature) [signature]
Date 12/19/22
Time 16 40
Received by· (Signature) [signature]

[signature] 10/19/22 17:00
Received by Laboratory· (Signature)
Date
Time

[signature] TA 10-20-22 1030

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
							46	9	9	5	3											
	Sample ID	Matrix	Date	Time	Samp Init.																	
41	SHL-5-FAL22	WG				X	X	X	X	X							SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG	10.19.22	1127	SG	X	X	X	X	X							SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG	10.19.22	1342	SG	X	X	X	X	X							SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG				X	X	X	X	X							SHL-8S	N1	52 00	54 00	1	
45	SHL-9-FAL22	WG				X	X	X	X	X							SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-4B	FD1	79.50	84.50	1	
47	SHL-DUP02-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG				X	X	X	X	X							PZ-12-06	FD1	25 00	35 00	1	
49	SHL-DUP04-FAL22	WG				X	X	X	X	X							SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG				X	X	X	X	X							SHL-22	FD1	105 00	115 00	1	
51	SHL-DUP06-FAL22	WG				X	X	X	X	X							SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG				X	X	X	X	X							SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG				X	X	X	X	X							SHM-11-06	FD1	25 00	35 00	1	
54	SHL-DUP09-FAL22	WG	10.19.22	1412	GS	X	X	X	X	X							SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG				X	X	X	X	X							SHP-01-38A	FD1	1 50	6 50	1	
56	SHL-DUP11-FAL22	WG				X	X	X	X	X							SHP-2016-07A	FD1	22 00	32 00	1	
57	SHM-05-39A-FAL22	WG				X	X	X	X	X							SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG				X	X	X	X	X							SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG				X	X	X	X	X							SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG				X	X	X	X	X							SHM-05-41A	N1	42 00	44.00	1	

Relinquished by: (Signature) Jennifer Singer
Date 10/19/22
Time 16:40
Received by: (Signature) Ryan Smith

Received by Laboratory (Signature) [illegible] 10/19/22 17:00
Date
Time

[illegible] 10-20-22 1030

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3											
81	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	MS1	45 00	55 00	1	
82	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	N1	45 00	55 00	1	
83	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	SD1	45 00	55 00	1	
84	SHM-10-13-FAL22	WG				X	X	X	X	X						SHM-10-13	N1	60 00	70 00	1	
85	SHM-10-14-FAL22	WG	10.19.22	1520	DC	X	X	X	X	X						SHM-10-14	N1	60 00	80 00	1	
86	SHM-10-15-FAL22	WG	10.19.22	1100	DC	X	X	X	X	X						SHM-10-15	N1	45 00	55 00	1	
87	SHM-10-16-FAL22	WG				X	X	X	X	X						SHM-10-16	N1	75 00	85 00	1	
88	SHM-11-02-FAL22	WG				X	X	X	X	X						SHM-11-02	N1	52.00	66 00	1	
89	SHM-11-06-FAL22	WG				X	X	X	X	X						SHM-11-06	N1	25 00	35 00	1	
90	SHM-13-01-FAL22	WG				X	X	X	X	X						SHM-13-01	N1	39 00	49 00	1	
91	SHM-13-02-FAL22	WG				X	X	X	X	X						SHM-13-02	N1	60 00	70 00	1	
92	SHM-13-03-FAL22	WG				X	X	X	X	X						SHM-13-03	N1	42 00	52.00	1	
93	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	MS1	20 00	30 00	1	
94	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	SD1	20 00	30.00	1	
96	SHM-13-05-FAL22	WG				X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	
97	SHM-13-06-FAL22	WG				X	X	X	X	X						SHM-13-06	N1	36 00	46 00	1	
98	SHM-13-07-FAL22	WG				X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
99	SHM-13-08-FAL22	WG				X	X	X	X	X						SHM-13-08	N1	55 00	65 00	1	
100	SHM-13-14D-FAL22	WG				X	X	X	X	X						SHM-13-14D	N1	45 00	55 00	1	

Relinquished by: (Signature) [signature]
Date 10/19/22
Time 16 40
Received by: (Signature) [signature]

10/19/22 1700

Received by Laboratory (Signature) [signature] TA
Date 10-20-22
Time 1020

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus com	
WBS Code	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
101	SHM-13-14S-FAL22	WG				X	X	X	X	X					SHM-13-14S	N1	5 00	15 00	1	
102	SHM-13-15-FAL22	WG				X	X	X	X	X					SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG				X	X	X	X	X					SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG				X	X	X	X	X					SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG				X	X	X	X	X					SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG				X	X	X	X	X					SHM-93-22C	N1	124.30	134.30	1	
109	SHM-93-24A-FAL22	WG				X	X	X	X	X					SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG	10.19.22	1405	GS	X	X	X	X	X					SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG	10.19.22	1235	[redacted]	X	X	X	X	X					SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG				X	X	X	X	X					SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG				X	X	X	X	X					SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG				X	X	X	X	X					SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG				X	X	X	X	X					SHM-99-32X	N1	72 00	82 00	1	
116	SHP-01-36X-FAL22	WG				X	X	X	X	X					SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG				X	X	X	X	X					SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG				X	X	X	X	X					SHP-01-38A	N1	1 50	6.50	1	
119	SHP-2016-06A-FAL22	WG				X	X	X	X	X					SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG				X	X	X	X	X					SHP-2016-06B	N1	102.00	112.00	1	

Relinquished by: (Signature) [signature]
Date 10/19/22
Time 16 40
Received by (Signature) [signature]

[signature] 1. 5/12 17:40

Received by Laboratory (Signature) [signature] TA 10-30-22 1030
Date
Time

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3											
121	SHP-2016-06C-FAL22	WG				X	X	X	X	X						SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG				X	X	X	X	X						SHP-2016-07A	N1	22 00	32 00	1	
123	SHP-2016-07B-FAL22	WG				X	X	X	X	X						SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG				X	X	X	X	X						SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG				X	X	X	X	X						SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG				X	X	X	X	X						SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG				X	X	X	X	X						SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG				X	X	X	X	X						SHP-2016-3A	N1	20 00	25 00	1	
129	SHP-2016-3B-FAL22	WG				X	X	X	X	X						SHP-2016-3B	N1	80 00	85 00	1	
130	SHP-2016-4A-FAL22	WG				X	X	X	X	X						SHP-2016-4A	N1	25 00	30 00	1	
131	SHP-2016-4B-FAL22	WG				X	X	X	X	X						SHP-2016-4B	N1	85 00	90 00	1	
132	SHP-2016-5A-FAL22	WG				X	X	X	X	X						SHP-2016-5A	N1	25 00	30 00	1	
133	SHP-2016-5B-FAL22	WG				X	X	X	X	X						SHP-2016-5B	N1	85 00	90 00	1	
134	SHP-99-29X-FAL22	WG	10.19.22	1300	DC	X	X	X	X	X						SHP-99-29X	N1	19 00	29 00	1	
135																					
136																					
137																					
138																					
139																					

Turnaround Time Standard

Relinquished by: (Signature) [signature]
Date 10/19/22
Time 1640
Received by: (Signature) [signature]

[signature] 10 19 22, 17

Received by Laboratory (Signature) [signature] TA 10-20-22 1030
Date
Time

11/11/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-223686-1

Login Number: 223686

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-223687-1
Client Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

For:
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Attn: Heather Levesque

Authorized for release by:
11/11/2022 6:25:08 PM

Jerry Lanier, Project Manager I
(912)250-0281
Jerry.Lanier@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the {0} Project Manager.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-223687-1	EPA-PZ-2012-1A-FAL22	Water	10/18/22 11:55	10/20/22 10:30
680-223687-2	EPA-PZ-2012-1B-FAL22	Water	10/18/22 12:50	10/20/22 10:30
680-223687-3	EPA-PZ-2012-2A-FAL22	Water	10/18/22 09:20	10/20/22 10:30
680-223687-4	EPA-PZ-2012-2B-FAL22	Water	10/18/22 10:45	10/20/22 10:30
680-223687-5	EPA-PZ-2012-3A-FAL22	Water	10/17/22 13:55	10/20/22 10:30
680-223687-6	EPA-PZ-2012-3B-FAL22	Water	10/17/22 14:55	10/20/22 10:30
680-223687-7	PZ-12-07-FAL22	Water	10/17/22 14:15	10/20/22 10:30
680-223687-8	PZ-12-08-FAL22	Water	10/17/22 15:50	10/20/22 10:30
680-223687-9	PZ-12-09-FAL22	Water	10/17/22 10:30	10/20/22 10:30
680-223687-10	SHL-12-FAL22	Water	10/18/22 14:46	10/20/22 10:30
680-223687-11	SHL-19-FAL22	Water	10/17/22 12:15	10/20/22 10:30
680-223687-12	SHL-5-FAL22	Water	10/17/22 11:15	10/20/22 10:30
680-223687-13	SHL-DUP11-FAL22	Water	10/18/22 14:35	10/20/22 10:30
680-223687-14	SHM-05-41A-FAL22	Water	10/17/22 13:15	10/20/22 10:30
680-223687-15	SHM-05-41B-FAL22	Water	10/17/22 15:10	10/20/22 10:30
680-223687-16	SHM-05-41C-FAL22	Water	10/17/22 10:22	10/20/22 10:30
680-223687-17	SHM-10-07-FAL22	Water	10/18/22 15:05	10/20/22 10:30
680-223687-18	SHM-10-16-FAL22	Water	10/18/22 11:50	10/20/22 10:30
680-223687-19	SHM-99-32X-FAL22	Water	10/18/22 09:40	10/20/22 10:30
680-223687-20	SHP-2016-07B-FAL22	Water	10/18/22 14:30	10/20/22 10:30

Job ID: 680-223687-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-223687-1

Receipt
The samples were received on 10/20/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.4°C and 3.6°C

HPLC/IC
Method 9056A_OF_28D_D5: The matrix spike (MS) recovery for analytical batch 680-749750 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-1A-FAL22
Lab Sample ID: 680-223687-1
Date Collected: 10/18/22 11:55
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	3.7		0.50	0.50	0.20	mg/L		11/09/22 19:37	1
Sulfate	1.3		1.0	1.0	0.40	mg/L		11/09/22 19:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	400		100	50	20	ug/L		10/24/22 18:57	1
Manganese	240		10	5.0	1.3	ug/L		10/24/22 18:57	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.1	J	5.0	3.0	0.86	ug/L		10/24/22 15:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	46		5.0	5.0	2.2	mg/L		10/25/22 18:26	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.0		1.0	0.50	0.50	mg/L		11/02/22 19:42	1
DOC Result 2 (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/02/22 19:42	1
DOC Result 3 (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/02/22 19:42	1
DOC Result 4 (SW846 9060A)	2.0		1.0	0.50	0.50	mg/L		11/02/22 19:42	1
Dissolved Organic Carbon (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/02/22 19:42	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-1B-FAL22

Lab Sample ID: 680-223687-2

Date Collected: 10/18/22 12:50

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	35		0.50	0.50	0.20	mg/L		11/09/22 19:50	1
Sulfate	21		1.0	1.0	0.40	mg/L		11/09/22 19:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	12000		100	50	20	ug/L		10/24/22 19:00	1
Manganese	7000		10	5.0	1.3	ug/L		10/24/22 19:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	200		5.0	3.0	0.86	ug/L		10/24/22 15:40	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/25/22 19:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.6		1.0	0.50	0.50	mg/L		11/02/22 20:01	1
DOC Result 2 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:01	1
DOC Result 3 (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/02/22 20:01	1
DOC Result 4 (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/02/22 20:01	1
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:01	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-2A-FAL22

Lab Sample ID: 680-223687-3

Date Collected: 10/18/22 09:20

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	3.7		0.50	0.50	0.20	mg/L		11/09/22 20:04	1
Sulfate	5.6	M	1.0	1.0	0.40	mg/L		11/09/22 20:04	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 19:03	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/24/22 19:03	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 15:42	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	12		5.0	5.0	2.2	mg/L		10/25/22 20:34	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.0		1.0	0.50	0.50	mg/L		11/02/22 20:19	1
DOC Result 2 (SW846 9060A)	0.84	J	1.0	0.50	0.50	mg/L		11/02/22 20:19	1
DOC Result 3 (SW846 9060A)	0.81	J	1.0	0.50	0.50	mg/L		11/02/22 20:19	1
DOC Result 4 (SW846 9060A)	0.81	J	1.0	0.50	0.50	mg/L		11/02/22 20:19	1
Dissolved Organic Carbon (SW846 9060A)	0.87	J	1.0	0.50	0.50	mg/L		11/02/22 20:19	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-2B-FAL22
Lab Sample ID: 680-223687-4
Date Collected: 10/18/22 10:45
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	51		0.50	0.50	0.20	mg/L		11/09/22 20:17	1
Sulfate	8.3		1.0	1.0	0.40	mg/L		11/09/22 20:17	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	10000		100	50	20	ug/L		10/24/22 19:12	1
Manganese	6600		10	5.0	1.3	ug/L		10/24/22 19:12	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.7	J	5.0	3.0	0.86	ug/L		10/24/22 15:50	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		10/25/22 20:16	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:37	1
DOC Result 2 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:37	1
DOC Result 3 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:37	1
DOC Result 4 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:37	1
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/02/22 20:37	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-3A-FAL22
Lab Sample ID: 680-223687-5

Date Collected: 10/17/22 13:55
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	24		0.50	0.50	0.20	mg/L		11/09/22 20:30	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 20:30	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		10/24/22 19:15	1
Manganese	880		10	5.0	1.3	ug/L		10/24/22 19:15	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	15		5.0	3.0	0.86	ug/L		10/24/22 15:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	83		5.0	5.0	2.2	mg/L		10/25/22 20:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	9.5		1.0	0.50	0.50	mg/L		11/02/22 20:55	1
DOC Result 2 (SW846 9060A)	9.5		1.0	0.50	0.50	mg/L		11/02/22 20:55	1
DOC Result 3 (SW846 9060A)	9.5		1.0	0.50	0.50	mg/L		11/02/22 20:55	1
DOC Result 4 (SW846 9060A)	9.5		1.0	0.50	0.50	mg/L		11/02/22 20:55	1
Dissolved Organic Carbon (SW846 9060A)	9.5		1.0	0.50	0.50	mg/L		11/02/22 20:55	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-3B-FAL22

Lab Sample ID: 680-223687-6

Date Collected: 10/17/22 14:55

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	34		0.50	0.50	0.20	mg/L		11/09/22 20:44	1
Sulfate	18		1.0	1.0	0.40	mg/L		11/09/22 20:44	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	37000		100	50	20	ug/L		10/24/22 19:18	1
Manganese	5800		10	5.0	1.3	ug/L		10/24/22 19:18	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2700		5.0	3.0	0.86	ug/L		10/24/22 15:56	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		10/25/22 21:40	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 21:14	1
DOC Result 2 (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		11/02/22 21:14	1
DOC Result 3 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 21:14	1
DOC Result 4 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/02/22 21:14	1
Dissolved Organic Carbon (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/02/22 21:14	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: PZ-12-07-FAL22
Lab Sample ID: 680-223687-7
Date Collected: 10/17/22 14:15
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.3		0.50	0.50	0.20	mg/L		11/09/22 20:57	1
Sulfate	59		1.0	1.0	0.40	mg/L		11/09/22 20:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	3300		100	50	20	ug/L		10/24/22 19:21	1
Manganese	1600		10	5.0	1.3	ug/L		10/24/22 19:21	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	110		5.0	3.0	0.86	ug/L		10/24/22 15:59	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	99		5.0	5.0	2.2	mg/L		10/25/22 21:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/02/22 23:44	1
DOC Result 2 (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		11/02/22 23:44	1
DOC Result 3 (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/02/22 23:44	1
DOC Result 4 (SW846 9060A)	2.2		1.0	0.50	0.50	mg/L		11/02/22 23:44	1
Dissolved Organic Carbon (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/02/22 23:44	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: PZ-12-08-FAL22
Lab Sample ID: 680-223687-8
Date Collected: 10/17/22 15:50
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.9		0.50	0.50	0.20	mg/L		11/09/22 21:10	1
Sulfate	9.0		1.0	1.0	0.40	mg/L		11/09/22 21:10	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	18000		100	50	20	ug/L		10/24/22 19:24	1
Manganese	2300		10	5.0	1.3	ug/L		10/24/22 19:24	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	14		5.0	3.0	0.86	ug/L		10/24/22 16:02	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	91		5.0	5.0	2.2	mg/L		10/25/22 21:20	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/03/22 00:02	1
DOC Result 2 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 00:02	1
DOC Result 3 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/03/22 00:02	1
DOC Result 4 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 00:02	1
Dissolved Organic Carbon (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 00:02	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: PZ-12-09-FAL22
Lab Sample ID: 680-223687-9
Date Collected: 10/17/22 10:30
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.82		0.50	0.50	0.20	mg/L		11/09/22 21:24	1
Sulfate	9.2		1.0	1.0	0.40	mg/L		11/09/22 21:24	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 19:27	1
Manganese	3.0	J	10	5.0	1.3	ug/L		10/24/22 19:27	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.0	J	5.0	3.0	0.86	ug/L		10/24/22 16:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	87		5.0	5.0	2.2	mg/L		10/25/22 21:30	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.1		1.0	0.50	0.50	mg/L		11/03/22 00:19	1
DOC Result 2 (SW846 9060A)	0.84	J	1.0	0.50	0.50	mg/L		11/03/22 00:19	1
DOC Result 3 (SW846 9060A)	0.75	J	1.0	0.50	0.50	mg/L		11/03/22 00:19	1
DOC Result 4 (SW846 9060A)	0.78	J	1.0	0.50	0.50	mg/L		11/03/22 00:19	1
Dissolved Organic Carbon (SW846 9060A)	0.86	J	1.0	0.50	0.50	mg/L		11/03/22 00:19	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHL-12-FAL22

Date Collected: 10/18/22 14:46
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223687-10

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	93		0.50	0.50	0.20	mg/L		11/09/22 22:04	1
Sulfate	130	M J1	1.0	1.0	0.40	mg/L		11/09/22 22:04	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 19:30	1
Manganese	100		10	5.0	1.3	ug/L		10/24/22 19:30	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 16:07	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	110		5.0	5.0	2.2	mg/L		10/25/22 20:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/03/22 00:37	1
DOC Result 2 (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/03/22 00:37	1
DOC Result 3 (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/03/22 00:37	1
DOC Result 4 (SW846 9060A)	2.0		1.0	0.50	0.50	mg/L		11/03/22 00:37	1
Dissolved Organic Carbon (SW846 9060A)	2.1		1.0	0.50	0.50	mg/L		11/03/22 00:37	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHL-19-FAL22

Date Collected: 10/17/22 12:15
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223687-11

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.80		0.50	0.50	0.20	mg/L		11/09/22 22:43	1
Sulfate	12		1.0	1.0	0.40	mg/L		11/09/22 22:43	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 19:33	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/24/22 19:33	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.2	J	5.0	3.0	0.86	ug/L		10/24/22 16:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	78		5.0	5.0	2.2	mg/L		10/25/22 21:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 00:55	1
DOC Result 2 (SW846 9060A)	1.4		1.0	0.50	0.50	mg/L		11/03/22 00:55	1
DOC Result 3 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/03/22 00:55	1
DOC Result 4 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/03/22 00:55	1
Dissolved Organic Carbon (SW846 9060A)	1.4		1.0	0.50	0.50	mg/L		11/03/22 00:55	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHL-5-FAL22

Date Collected: 10/17/22 11:15
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223687-12

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	73		0.50	0.50	0.20	mg/L		11/09/22 22:57	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 22:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	7900		100	50	20	ug/L		10/24/22 19:51	1
Manganese	710		10	5.0	1.3	ug/L		10/24/22 19:51	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	14		5.0	3.0	0.86	ug/L		10/24/22 16:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	25		5.0	5.0	2.2	mg/L		10/26/22 15:31	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/03/22 01:13	1
DOC Result 2 (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/03/22 01:13	1
DOC Result 3 (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/03/22 01:13	1
DOC Result 4 (SW846 9060A)	3.6		1.0	0.50	0.50	mg/L		11/03/22 01:13	1
Dissolved Organic Carbon (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/03/22 01:13	1

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-DUP11-FAL22
Lab Sample ID: 680-223687-13

Date Collected: 10/18/22 14:35
Matrix: Water
Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.8		0.50	0.50	0.20	mg/L		11/09/22 23:10	1
Sulfate	32		1.0	1.0	0.40	mg/L		11/09/22 23:10	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	580		100	50	20	ug/L		10/24/22 19:54	1
Manganese	530		10	5.0	1.3	ug/L		10/24/22 19:54	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	160		5.0	3.0	0.86	ug/L		10/24/22 16:29	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		10/26/22 15:58	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.9		1.0	0.50	0.50	mg/L		11/03/22 01:31	1
DOC Result 2 (SW846 9060A)	4.0		1.0	0.50	0.50	mg/L		11/03/22 01:31	1
DOC Result 3 (SW846 9060A)	3.8		1.0	0.50	0.50	mg/L		11/03/22 01:31	1
DOC Result 4 (SW846 9060A)	3.9		1.0	0.50	0.50	mg/L		11/03/22 01:31	1
Dissolved Organic Carbon (SW846 9060A)	3.9		1.0	0.50	0.50	mg/L		11/03/22 01:31	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-05-41A-FAL22

Lab Sample ID: 680-223687-14

Date Collected: 10/17/22 13:15

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	16		0.50	0.50	0.20	mg/L		11/09/22 23:23	1
Sulfate	5.2		1.0	1.0	0.40	mg/L		11/09/22 23:23	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	10000		100	50	20	ug/L		10/24/22 19:36	1
Manganese	180		10	5.0	1.3	ug/L		10/24/22 19:36	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	48		5.0	3.0	0.86	ug/L		10/24/22 16:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	31		5.0	5.0	2.2	mg/L		10/26/22 15:48	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 02:22	1
DOC Result 2 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 02:22	1
DOC Result 3 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/03/22 02:22	1
DOC Result 4 (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 02:22	1
Dissolved Organic Carbon (SW846 9060A)	1.6		1.0	0.50	0.50	mg/L		11/03/22 02:22	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-05-41B-FAL22

Lab Sample ID: 680-223687-15

Date Collected: 10/17/22 15:10

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	110	M	0.50	0.50	0.20	mg/L		11/09/22 23:37	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 23:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	15000		100	50	20	ug/L		10/24/22 19:39	1
Manganese	150		10	5.0	1.3	ug/L		10/24/22 19:39	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	710		5.0	3.0	0.86	ug/L		10/24/22 16:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	31		5.0	5.0	2.2	mg/L		10/26/22 16:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	9.1		1.0	0.50	0.50	mg/L		11/03/22 02:38	1
DOC Result 2 (SW846 9060A)	9.1		1.0	0.50	0.50	mg/L		11/03/22 02:38	1
DOC Result 3 (SW846 9060A)	9.2		1.0	0.50	0.50	mg/L		11/03/22 02:38	1
DOC Result 4 (SW846 9060A)	9.2		1.0	0.50	0.50	mg/L		11/03/22 02:38	1
Dissolved Organic Carbon (SW846 9060A)	9.2		1.0	0.50	0.50	mg/L		11/03/22 02:38	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-05-41C-FAL22

Lab Sample ID: 680-223687-16

Date Collected: 10/17/22 10:22

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	86		0.50	0.50	0.20	mg/L		11/09/22 18:57	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 18:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1600		100	50	20	ug/L		10/24/22 18:42	1
Manganese	39		10	5.0	1.3	ug/L		10/24/22 18:42	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	28		5.0	3.0	0.86	ug/L		10/24/22 15:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	25		5.0	5.0	2.2	mg/L		10/26/22 16:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.4		1.0	0.50	0.50	mg/L		11/02/22 22:53	1
DOC Result 2 (SW846 9060A)	3.6		1.0	0.50	0.50	mg/L		11/02/22 22:53	1
DOC Result 3 (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		11/02/22 22:53	1
DOC Result 4 (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		11/02/22 22:53	1
Dissolved Organic Carbon (SW846 9060A)	3.5		1.0	0.50	0.50	mg/L		11/02/22 22:53	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-10-07-FAL22

Lab Sample ID: 680-223687-17

Date Collected: 10/18/22 15:05

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	88		0.50	0.50	0.20	mg/L		11/09/22 23:50	1
Sulfate	12	M	1.0	1.0	0.40	mg/L		11/09/22 23:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	42000		100	50	20	ug/L		10/24/22 19:48	1
Manganese	2300		10	5.0	1.3	ug/L		10/24/22 19:48	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1100		5.0	3.0	0.86	ug/L		10/24/22 16:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	120		5.0	5.0	2.2	mg/L		10/26/22 16:16	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/03/22 02:57	1
DOC Result 2 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/03/22 02:57	1
DOC Result 3 (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/03/22 02:57	1
DOC Result 4 (SW846 9060A)	2.3		1.0	0.50	0.50	mg/L		11/03/22 02:57	1
Dissolved Organic Carbon (SW846 9060A)	2.4		1.0	0.50	0.50	mg/L		11/03/22 02:57	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-10-16-FAL22

Date Collected: 10/18/22 11:50
Date Received: 10/20/22 10:30

Lab Sample ID: 680-223687-18

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	30		0.50	0.50	0.20	mg/L		11/10/22 00:03	1
Sulfate	5.3		1.0	1.0	0.40	mg/L		11/10/22 00:03	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	30000		100	50	20	ug/L		10/24/22 19:57	1
Manganese	2400		10	5.0	1.3	ug/L		10/24/22 19:57	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1000		5.0	3.0	0.86	ug/L		10/24/22 16:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	250		5.0	5.0	2.2	mg/L		10/26/22 16:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		11/03/22 03:15	1
DOC Result 2 (SW846 9060A)	1.8		1.0	0.50	0.50	mg/L		11/03/22 03:15	1
DOC Result 3 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/03/22 03:15	1
DOC Result 4 (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/03/22 03:15	1
Dissolved Organic Carbon (SW846 9060A)	1.7		1.0	0.50	0.50	mg/L		11/03/22 03:15	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHM-99-32X-FAL22

Lab Sample ID: 680-223687-19

Date Collected: 10/18/22 09:40

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	72		0.50	0.50	0.20	mg/L		11/09/22 17:37	1
Sulfate	8.7	M	1.0	1.0	0.40	mg/L		11/09/22 17:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4200		100	50	20	ug/L		10/24/22 20:00	1
Manganese	3100		10	5.0	1.3	ug/L		10/24/22 20:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	24		5.0	3.0	0.86	ug/L		10/24/22 16:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	54		5.0	5.0	2.2	mg/L		10/26/22 16:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	1.5		1.0	0.50	0.50	mg/L		11/03/22 03:33	1
DOC Result 2 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/03/22 03:33	1
DOC Result 3 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/03/22 03:33	1
DOC Result 4 (SW846 9060A)	1.3		1.0	0.50	0.50	mg/L		11/03/22 03:33	1
Dissolved Organic Carbon (SW846 9060A)	1.4		1.0	0.50	0.50	mg/L		11/03/22 03:33	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHP-2016-07B-FAL22

Lab Sample ID: 680-223687-20

Date Collected: 10/18/22 14:30

Matrix: Water

Date Received: 10/20/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.8		0.50	0.50	0.20	mg/L		11/09/22 17:50	1
Sulfate	33		1.0	1.0	0.40	mg/L		11/09/22 17:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	560		100	50	20	ug/L		10/24/22 20:03	1
Manganese	510		10	5.0	1.3	ug/L		10/24/22 20:03	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	160		5.0	3.0	0.86	ug/L		10/24/22 16:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		10/26/22 16:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1 (SW846 9060A)	3.9		1.0	0.50	0.50	mg/L		11/03/22 03:49	1
DOC Result 2 (SW846 9060A)	3.8		1.0	0.50	0.50	mg/L		11/03/22 03:49	1
DOC Result 3 (SW846 9060A)	3.8		1.0	0.50	0.50	mg/L		11/03/22 03:49	1
DOC Result 4 (SW846 9060A)	3.7		1.0	0.50	0.50	mg/L		11/03/22 03:49	1
Dissolved Organic Carbon (SW846 9060A)	3.8		1.0	0.50	0.50	mg/L		11/03/22 03:49	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-749714/2
Matrix: Water
Analysis Batch: 749714

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/09/22 11:05	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 11:05	1

Lab Sample ID: LCS 680-749714/3
Matrix: Water
Analysis Batch: 749714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.78		mg/L		98	87 - 111
Sulfate	10.0	9.47		mg/L		95	87 - 112

Lab Sample ID: LCSD 680-749714/4
Matrix: Water
Analysis Batch: 749714

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.78		mg/L		98	87 - 111	0	15
Sulfate	10.0	9.45		mg/L		94	87 - 112	0	15

Lab Sample ID: MB 680-749750/32
Matrix: Water
Analysis Batch: 749750

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/09/22 18:17	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/09/22 18:17	1

Lab Sample ID: LCS 680-749750/33
Matrix: Water
Analysis Batch: 749750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.80		mg/L		98	87 - 111
Sulfate	10.0	8.92		mg/L		89	87 - 112

Lab Sample ID: LCSD 680-749750/34
Matrix: Water
Analysis Batch: 749750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.77		mg/L		98	87 - 111	0	15
Sulfate	10.0	8.93		mg/L		89	87 - 112	0	15

Lab Sample ID: 680-223687-10 MS
Matrix: Water
Analysis Batch: 749750

Client Sample ID: SHL-12-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	93		10.0	102	4	mg/L		97	87 - 111
Sulfate	130	M J1	10.0	137	4	mg/L		86	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-223687-10 MSD
Matrix: Water
Analysis Batch: 749750

Client Sample ID: SHL-12-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	93		10.0	102	4	mg/L		97	87 - 111	0	15
Sulfate	130	M J1	10.0	137	M 4	mg/L		88	87 - 112	0	15

Lab Sample ID: 680-223687-16 MS
Matrix: Water
Analysis Batch: 749750

Client Sample ID: SHM-05-41C-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	86		10.0	96.1	M 4	mg/L		101	87 - 111
Sulfate	1.0	U	10.0	9.81		mg/L		98	87 - 112

Lab Sample ID: 680-223687-16 MSD
Matrix: Water
Analysis Batch: 749750

Client Sample ID: SHM-05-41C-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	86		10.0	96.3	4	mg/L		103	87 - 111	0	15
Sulfate	1.0	U	10.0	9.91		mg/L		99	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-746291/1-A
Matrix: Water
Analysis Batch: 746802

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746291

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/24/22 18:36	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/24/22 18:36	1

Lab Sample ID: LCS 680-746291/2-A
Matrix: Water
Analysis Batch: 746802

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746291

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4890		ug/L		98	87 - 115
Manganese	400	409		ug/L		102	90 - 114

Lab Sample ID: 680-223687-16 MS
Matrix: Water
Analysis Batch: 746802

Client Sample ID: SHM-05-41C-FAL22
Prep Type: Dissolved
Prep Batch: 746291

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	1600		5000	6250		ug/L		93	87 - 115
Manganese	39		400	431		ug/L		98	90 - 114

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 680-223687-16 MSD — **Client Sample ID: SHM-05-41C-FAL22**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 746802 — **Prep Batch: 746291**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	1600		5000	6540		ug/L		98	87 - 115	4	20
Manganese	39		400	446		ug/L		102	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-746292/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 746820 — **Prep Batch: 746292**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/24/22 15:18	1

Lab Sample ID: LCS 680-746292/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 746820 — **Prep Batch: 746292**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: 680-223687-16 MS — **Client Sample ID: SHM-05-41C-FAL22**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 746820 — **Prep Batch: 746292**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	28		100	130		ug/L		102	84 - 116

Lab Sample ID: 680-223687-16 MSD — **Client Sample ID: SHM-05-41C-FAL22**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 746820 — **Prep Batch: 746292**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	28		100	134		ug/L		106	84 - 116	3	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-747095/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 747095

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/25/22 17:44	1

Lab Sample ID: LCS 680-747095/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 747095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	248		mg/L		99	90 - 112

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-747095/31
Matrix: Water
Analysis Batch: 747095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	249		mg/L		100	90 - 112	1	30

Lab Sample ID: 680-223687-4 DU
Matrix: Water
Analysis Batch: 747095

Client Sample ID: EPA-PZ-2012-2B-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	150			150		mg/L				2	30

Lab Sample ID: MB 680-747299/4
Matrix: Water
Analysis Batch: 747299

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/26/22 15:06	1

Lab Sample ID: LCS 680-747299/6
Matrix: Water
Analysis Batch: 747299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	248		mg/L		99	90 - 112		

Lab Sample ID: LCSD 680-747299/31
Matrix: Water
Analysis Batch: 747299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	249		mg/L		100	90 - 112	0	30

Lab Sample ID: 680-223687-12 DU
Matrix: Water
Analysis Batch: 747299

Client Sample ID: SHL-5-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	25			25.0		mg/L				0.3	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-748627/3
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 2	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 3	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
DOC Result 4	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1
Dissolved Organic Carbon	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 13:10	1

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 680-748627/4
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DOC Result 1	20.0	19.6		mg/L		98	80 - 120
DOC Result 2	20.0	19.5		mg/L		97	80 - 120
DOC Result 3	20.0	19.3		mg/L		97	80 - 120
DOC Result 4	20.0	19.2		mg/L		96	80 - 120
Dissolved Organic Carbon	20.0	19.4		mg/L		97	80 - 120

Lab Sample ID: LCSD 680-748627/5
Matrix: Water
Analysis Batch: 748627

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1	20.0	19.7		mg/L		99	80 - 120	1	20
DOC Result 2	20.0	19.7		mg/L		98	80 - 120	1	20
DOC Result 3	20.0	19.4		mg/L		97	80 - 120	0	20
DOC Result 4	20.0	19.6		mg/L		98	80 - 120	2	20
Dissolved Organic Carbon	20.0	19.6		mg/L		98	80 - 120	1	20

Lab Sample ID: MB 680-748628/2
Matrix: Water
Analysis Batch: 748628

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
DOC Result 1	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 21:49	1
DOC Result 2	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 21:49	1
DOC Result 3	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 21:49	1
DOC Result 4	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 21:49	1
Dissolved Organic Carbon	0.50	U	1.0	0.50	0.50	mg/L		11/02/22 21:49	1

Lab Sample ID: LCS 680-748628/3
Matrix: Water
Analysis Batch: 748628

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DOC Result 1	20.0	19.7		mg/L		99	80 - 120
DOC Result 2	20.0	20.0		mg/L		100	80 - 120
DOC Result 3	20.0	19.8		mg/L		99	80 - 120
DOC Result 4	20.0	19.8		mg/L		99	80 - 120
Dissolved Organic Carbon	20.0	19.8		mg/L		99	80 - 120

Lab Sample ID: LCSD 680-748628/4
Matrix: Water
Analysis Batch: 748628

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1	20.0	20.1		mg/L		101	80 - 120	2	20
DOC Result 2	20.0	20.0		mg/L		100	80 - 120	0	20
DOC Result 3	20.0	20.1		mg/L		101	80 - 120	2	20
DOC Result 4	20.0	19.8		mg/L		99	80 - 120	0	20
Dissolved Organic Carbon	20.0	20.0		mg/L		100	80 - 120	1	20

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: 680-223687-16 MS
Client Sample ID: SHM-05-41C-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 748628

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
DOC Result 1	3.4		20.0	24.2		mg/L		104	80 - 120		
DOC Result 2	3.6		20.0	24.6		mg/L		105	80 - 120		
DOC Result 3	3.5		20.0	24.7		mg/L		106	80 - 120		
DOC Result 4	3.5		20.0	24.3		mg/L		104	80 - 120		
Dissolved Organic Carbon	3.5		20.0	24.5		mg/L		105	80 - 120		

Lab Sample ID: 680-223687-16 MSD
Client Sample ID: SHM-05-41C-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 748628

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1	3.4		20.0	24.4		mg/L		105	80 - 120	1	20
DOC Result 2	3.6		20.0	24.8		mg/L		106	80 - 120	1	20
DOC Result 3	3.5		20.0	24.7		mg/L		106	80 - 120	0	20
DOC Result 4	3.5		20.0	24.4		mg/L		104	80 - 120	0	20
Dissolved Organic Carbon	3.5		20.0	24.6		mg/L		105	80 - 120	0	20

HPLC/IC

Analysis Batch: 749714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-19	SHM-99-32X-FAL22	Total/NA	Water	9056A	
680-223687-20	SHP-2016-07B-FAL22	Total/NA	Water	9056A	
MB 680-749714/2	Method Blank	Total/NA	Water	9056A	
LCS 680-749714/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-749714/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 749750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Total/NA	Water	9056A	
680-223687-2	EPA-PZ-2012-1B-FAL22	Total/NA	Water	9056A	
680-223687-3	EPA-PZ-2012-2A-FAL22	Total/NA	Water	9056A	
680-223687-4	EPA-PZ-2012-2B-FAL22	Total/NA	Water	9056A	
680-223687-5	EPA-PZ-2012-3A-FAL22	Total/NA	Water	9056A	
680-223687-6	EPA-PZ-2012-3B-FAL22	Total/NA	Water	9056A	
680-223687-7	PZ-12-07-FAL22	Total/NA	Water	9056A	
680-223687-8	PZ-12-08-FAL22	Total/NA	Water	9056A	
680-223687-9	PZ-12-09-FAL22	Total/NA	Water	9056A	
680-223687-10	SHL-12-FAL22	Total/NA	Water	9056A	
680-223687-11	SHL-19-FAL22	Total/NA	Water	9056A	
680-223687-12	SHL-5-FAL22	Total/NA	Water	9056A	
680-223687-13	SHL-DUP11-FAL22	Total/NA	Water	9056A	
680-223687-14	SHM-05-41A-FAL22	Total/NA	Water	9056A	
680-223687-15	SHM-05-41B-FAL22	Total/NA	Water	9056A	
680-223687-16	SHM-05-41C-FAL22	Total/NA	Water	9056A	
680-223687-17	SHM-10-07-FAL22	Total/NA	Water	9056A	
680-223687-18	SHM-10-16-FAL22	Total/NA	Water	9056A	
MB 680-749750/32	Method Blank	Total/NA	Water	9056A	
LCS 680-749750/33	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-749750/34	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223687-10 MS	SHL-12-FAL22	Total/NA	Water	9056A	
680-223687-10 MSD	SHL-12-FAL22	Total/NA	Water	9056A	
680-223687-16 MS	SHM-05-41C-FAL22	Total/NA	Water	9056A	
680-223687-16 MSD	SHM-05-41C-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 746291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Dissolved	Water	3005A	
680-223687-2	EPA-PZ-2012-1B-FAL22	Dissolved	Water	3005A	
680-223687-3	EPA-PZ-2012-2A-FAL22	Dissolved	Water	3005A	
680-223687-4	EPA-PZ-2012-2B-FAL22	Dissolved	Water	3005A	
680-223687-5	EPA-PZ-2012-3A-FAL22	Dissolved	Water	3005A	
680-223687-6	EPA-PZ-2012-3B-FAL22	Dissolved	Water	3005A	
680-223687-7	PZ-12-07-FAL22	Dissolved	Water	3005A	
680-223687-8	PZ-12-08-FAL22	Dissolved	Water	3005A	
680-223687-9	PZ-12-09-FAL22	Dissolved	Water	3005A	
680-223687-10	SHL-12-FAL22	Dissolved	Water	3005A	
680-223687-11	SHL-19-FAL22	Dissolved	Water	3005A	
680-223687-12	SHL-5-FAL22	Dissolved	Water	3005A	
680-223687-13	SHL-DUP11-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 746291 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-14	SHM-05-41A-FAL22	Dissolved	Water	3005A	
680-223687-15	SHM-05-41B-FAL22	Dissolved	Water	3005A	
680-223687-16	SHM-05-41C-FAL22	Dissolved	Water	3005A	
680-223687-17	SHM-10-07-FAL22	Dissolved	Water	3005A	
680-223687-18	SHM-10-16-FAL22	Dissolved	Water	3005A	
680-223687-19	SHM-99-32X-FAL22	Dissolved	Water	3005A	
680-223687-20	SHP-2016-07B-FAL22	Dissolved	Water	3005A	
MB 680-746291/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746291/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223687-16 MS	SHM-05-41C-FAL22	Dissolved	Water	3005A	
680-223687-16 MSD	SHM-05-41C-FAL22	Dissolved	Water	3005A	

Prep Batch: 746292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Dissolved	Water	3005A	
680-223687-2	EPA-PZ-2012-1B-FAL22	Dissolved	Water	3005A	
680-223687-3	EPA-PZ-2012-2A-FAL22	Dissolved	Water	3005A	
680-223687-4	EPA-PZ-2012-2B-FAL22	Dissolved	Water	3005A	
680-223687-5	EPA-PZ-2012-3A-FAL22	Dissolved	Water	3005A	
680-223687-6	EPA-PZ-2012-3B-FAL22	Dissolved	Water	3005A	
680-223687-7	PZ-12-07-FAL22	Dissolved	Water	3005A	
680-223687-8	PZ-12-08-FAL22	Dissolved	Water	3005A	
680-223687-9	PZ-12-09-FAL22	Dissolved	Water	3005A	
680-223687-10	SHL-12-FAL22	Dissolved	Water	3005A	
680-223687-11	SHL-19-FAL22	Dissolved	Water	3005A	
680-223687-12	SHL-5-FAL22	Dissolved	Water	3005A	
680-223687-13	SHL-DUP11-FAL22	Dissolved	Water	3005A	
680-223687-14	SHM-05-41A-FAL22	Dissolved	Water	3005A	
680-223687-15	SHM-05-41B-FAL22	Dissolved	Water	3005A	
680-223687-16	SHM-05-41C-FAL22	Dissolved	Water	3005A	
680-223687-17	SHM-10-07-FAL22	Dissolved	Water	3005A	
680-223687-18	SHM-10-16-FAL22	Dissolved	Water	3005A	
680-223687-19	SHM-99-32X-FAL22	Dissolved	Water	3005A	
680-223687-20	SHP-2016-07B-FAL22	Dissolved	Water	3005A	
MB 680-746292/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746292/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223687-16 MS	SHM-05-41C-FAL22	Dissolved	Water	3005A	
680-223687-16 MSD	SHM-05-41C-FAL22	Dissolved	Water	3005A	

Analysis Batch: 746802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Dissolved	Water	6010C	746291
680-223687-2	EPA-PZ-2012-1B-FAL22	Dissolved	Water	6010C	746291
680-223687-3	EPA-PZ-2012-2A-FAL22	Dissolved	Water	6010C	746291
680-223687-4	EPA-PZ-2012-2B-FAL22	Dissolved	Water	6010C	746291
680-223687-5	EPA-PZ-2012-3A-FAL22	Dissolved	Water	6010C	746291
680-223687-6	EPA-PZ-2012-3B-FAL22	Dissolved	Water	6010C	746291
680-223687-7	PZ-12-07-FAL22	Dissolved	Water	6010C	746291
680-223687-8	PZ-12-08-FAL22	Dissolved	Water	6010C	746291
680-223687-9	PZ-12-09-FAL22	Dissolved	Water	6010C	746291
680-223687-10	SHL-12-FAL22	Dissolved	Water	6010C	746291

Metals (Continued)

Analysis Batch: 746802 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-11	SHL-19-FAL22	Dissolved	Water	6010C	746291
680-223687-12	SHL-5-FAL22	Dissolved	Water	6010C	746291
680-223687-13	SHL-DUP11-FAL22	Dissolved	Water	6010C	746291
680-223687-14	SHM-05-41A-FAL22	Dissolved	Water	6010C	746291
680-223687-15	SHM-05-41B-FAL22	Dissolved	Water	6010C	746291
680-223687-16	SHM-05-41C-FAL22	Dissolved	Water	6010C	746291
680-223687-17	SHM-10-07-FAL22	Dissolved	Water	6010C	746291
680-223687-18	SHM-10-16-FAL22	Dissolved	Water	6010C	746291
680-223687-19	SHM-99-32X-FAL22	Dissolved	Water	6010C	746291
680-223687-20	SHP-2016-07B-FAL22	Dissolved	Water	6010C	746291
MB 680-746291/1-A	Method Blank	Total Recoverable	Water	6010C	746291
LCS 680-746291/2-A	Lab Control Sample	Total Recoverable	Water	6010C	746291
680-223687-16 MS	SHM-05-41C-FAL22	Dissolved	Water	6010C	746291
680-223687-16 MSD	SHM-05-41C-FAL22	Dissolved	Water	6010C	746291

Analysis Batch: 746820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Dissolved	Water	6020A	746292
680-223687-2	EPA-PZ-2012-1B-FAL22	Dissolved	Water	6020A	746292
680-223687-3	EPA-PZ-2012-2A-FAL22	Dissolved	Water	6020A	746292
680-223687-4	EPA-PZ-2012-2B-FAL22	Dissolved	Water	6020A	746292
680-223687-5	EPA-PZ-2012-3A-FAL22	Dissolved	Water	6020A	746292
680-223687-6	EPA-PZ-2012-3B-FAL22	Dissolved	Water	6020A	746292
680-223687-7	PZ-12-07-FAL22	Dissolved	Water	6020A	746292
680-223687-8	PZ-12-08-FAL22	Dissolved	Water	6020A	746292
680-223687-9	PZ-12-09-FAL22	Dissolved	Water	6020A	746292
680-223687-10	SHL-12-FAL22	Dissolved	Water	6020A	746292
680-223687-11	SHL-19-FAL22	Dissolved	Water	6020A	746292
680-223687-12	SHL-5-FAL22	Dissolved	Water	6020A	746292
680-223687-13	SHL-DUP11-FAL22	Dissolved	Water	6020A	746292
680-223687-14	SHM-05-41A-FAL22	Dissolved	Water	6020A	746292
680-223687-15	SHM-05-41B-FAL22	Dissolved	Water	6020A	746292
680-223687-16	SHM-05-41C-FAL22	Dissolved	Water	6020A	746292
680-223687-17	SHM-10-07-FAL22	Dissolved	Water	6020A	746292
680-223687-18	SHM-10-16-FAL22	Dissolved	Water	6020A	746292
680-223687-19	SHM-99-32X-FAL22	Dissolved	Water	6020A	746292
680-223687-20	SHP-2016-07B-FAL22	Dissolved	Water	6020A	746292
MB 680-746292/1-A	Method Blank	Total Recoverable	Water	6020A	746292
LCS 680-746292/2-A	Lab Control Sample	Total Recoverable	Water	6020A	746292
680-223687-16 MS	SHM-05-41C-FAL22	Dissolved	Water	6020A	746292
680-223687-16 MSD	SHM-05-41C-FAL22	Dissolved	Water	6020A	746292

General Chemistry

Analysis Batch: 747095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Total/NA	Water	2320B-2011	
680-223687-2	EPA-PZ-2012-1B-FAL22	Total/NA	Water	2320B-2011	
680-223687-3	EPA-PZ-2012-2A-FAL22	Total/NA	Water	2320B-2011	
680-223687-4	EPA-PZ-2012-2B-FAL22	Total/NA	Water	2320B-2011	
680-223687-5	EPA-PZ-2012-3A-FAL22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 747095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-6	EPA-PZ-2012-3B-FAL22	Total/NA	Water	2320B-2011	
680-223687-7	PZ-12-07-FAL22	Total/NA	Water	2320B-2011	
680-223687-8	PZ-12-08-FAL22	Total/NA	Water	2320B-2011	
680-223687-9	PZ-12-09-FAL22	Total/NA	Water	2320B-2011	
680-223687-10	SHL-12-FAL22	Total/NA	Water	2320B-2011	
680-223687-11	SHL-19-FAL22	Total/NA	Water	2320B-2011	
MB 680-747095/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-747095/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-747095/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223687-4 DU	EPA-PZ-2012-2B-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 747299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-12	SHL-5-FAL22	Total/NA	Water	2320B-2011	
680-223687-13	SHL-DUP11-FAL22	Total/NA	Water	2320B-2011	
680-223687-14	SHM-05-41A-FAL22	Total/NA	Water	2320B-2011	
680-223687-15	SHM-05-41B-FAL22	Total/NA	Water	2320B-2011	
680-223687-16	SHM-05-41C-FAL22	Total/NA	Water	2320B-2011	
680-223687-17	SHM-10-07-FAL22	Total/NA	Water	2320B-2011	
680-223687-18	SHM-10-16-FAL22	Total/NA	Water	2320B-2011	
680-223687-19	SHM-99-32X-FAL22	Total/NA	Water	2320B-2011	
680-223687-20	SHP-2016-07B-FAL22	Total/NA	Water	2320B-2011	
MB 680-747299/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-747299/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-747299/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223687-12 DU	SHL-5-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 748627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-1	EPA-PZ-2012-1A-FAL22	Dissolved	Water	9060A	
680-223687-2	EPA-PZ-2012-1B-FAL22	Dissolved	Water	9060A	
680-223687-3	EPA-PZ-2012-2A-FAL22	Dissolved	Water	9060A	
680-223687-4	EPA-PZ-2012-2B-FAL22	Dissolved	Water	9060A	
680-223687-5	EPA-PZ-2012-3A-FAL22	Dissolved	Water	9060A	
680-223687-6	EPA-PZ-2012-3B-FAL22	Dissolved	Water	9060A	
MB 680-748627/3	Method Blank	Dissolved	Water	9060A	
LCS 680-748627/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-748627/5	Lab Control Sample Dup	Dissolved	Water	9060A	

Analysis Batch: 748628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-7	PZ-12-07-FAL22	Dissolved	Water	9060A	
680-223687-8	PZ-12-08-FAL22	Dissolved	Water	9060A	
680-223687-9	PZ-12-09-FAL22	Dissolved	Water	9060A	
680-223687-10	SHL-12-FAL22	Dissolved	Water	9060A	
680-223687-11	SHL-19-FAL22	Dissolved	Water	9060A	
680-223687-12	SHL-5-FAL22	Dissolved	Water	9060A	
680-223687-13	SHL-DUP11-FAL22	Dissolved	Water	9060A	
680-223687-14	SHM-05-41A-FAL22	Dissolved	Water	9060A	
680-223687-15	SHM-05-41B-FAL22	Dissolved	Water	9060A	
680-223687-16	SHM-05-41C-FAL22	Dissolved	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 748628 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223687-17	SHM-10-07-FAL22	Dissolved	Water	9060A	
680-223687-18	SHM-10-16-FAL22	Dissolved	Water	9060A	
680-223687-19	SHM-99-32X-FAL22	Dissolved	Water	9060A	
680-223687-20	SHP-2016-07B-FAL22	Dissolved	Water	9060A	
MB 680-748628/2	Method Blank	Dissolved	Water	9060A	
LCS 680-748628/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-748628/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-223687-16 MS	SHM-05-41C-FAL22	Dissolved	Water	9060A	
680-223687-16 MSD	SHM-05-41C-FAL22	Dissolved	Water	9060A	

Client Sample ID: EPA-PZ-2012-1A-FAL22

Lab Sample ID: 680-223687-1

Date Collected: 10/18/22 11:55
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 19:37	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 18:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:37	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 18:26	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 19:42	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-1B-FAL22

Lab Sample ID: 680-223687-2

Date Collected: 10/18/22 12:50
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 19:50	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:40	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 19:23	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 20:01	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-2A-FAL22

Lab Sample ID: 680-223687-3

Date Collected: 10/18/22 09:20
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 20:04	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:42	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: EPA-PZ-2012-2A-FAL22

Lab Sample ID: 680-223687-3

Date Collected: 10/18/22 09:20

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 20:34	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 20:19	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-2B-FAL22

Lab Sample ID: 680-223687-4

Date Collected: 10/18/22 10:45

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 20:17	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:12	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:50	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 20:16	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 20:37	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-3A-FAL22

Lab Sample ID: 680-223687-5

Date Collected: 10/17/22 13:55

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 20:30	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:15	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:53	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 20:43	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 20:55	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-3B-FAL22

Lab Sample ID: 680-223687-6

Date Collected: 10/17/22 14:55

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 20:44	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:18	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:56	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 21:40	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748627	11/02/22 21:14	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-07-FAL22

Lab Sample ID: 680-223687-7

Date Collected: 10/17/22 14:15

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 20:57	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:21	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:59	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 21:11	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/02/22 23:44	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-08-FAL22

Lab Sample ID: 680-223687-8

Date Collected: 10/17/22 15:50

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 21:10	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:24	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:02	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: PZ-12-08-FAL22

Lab Sample ID: 680-223687-8

Date Collected: 10/17/22 15:50
Date Received: 10/20/22 10:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 21:20	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 00:02	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: PZ-12-09-FAL22

Lab Sample ID: 680-223687-9

Date Collected: 10/17/22 10:30
Date Received: 10/20/22 10:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 21:24	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:27	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:04	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 21:30	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 00:19	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-12-FAL22

Lab Sample ID: 680-223687-10

Date Collected: 10/18/22 14:46
Date Received: 10/20/22 10:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 22:04	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:30	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:07	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 20:52	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 00:37	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-19-FAL22

Lab Sample ID: 680-223687-11

Date Collected: 10/17/22 12:15

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 22:43	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:33	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:10	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747095	10/25/22 21:02	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 00:55	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-5-FAL22

Lab Sample ID: 680-223687-12

Date Collected: 10/17/22 11:15

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 22:57	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:51	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:26	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 15:31	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 01:13	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP11-FAL22

Lab Sample ID: 680-223687-13

Date Collected: 10/18/22 14:35

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 23:10	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:29	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Client Sample ID: SHL-DUP11-FAL22

Lab Sample ID: 680-223687-13

Date Collected: 10/18/22 14:35
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 15:58	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 01:31	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-05-41A-FAL22

Lab Sample ID: 680-223687-14

Date Collected: 10/17/22 13:15
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 23:23	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:36	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:13	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 15:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 02:22	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-05-41B-FAL22

Lab Sample ID: 680-223687-15

Date Collected: 10/17/22 15:10
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 23:37	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:39	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:15	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:36	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 02:38	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-05-41C-FAL22

Lab Sample ID: 680-223687-16

Date Collected: 10/17/22 10:22

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 18:57	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 18:42	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 15:23	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:07	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/02/22 22:53	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-07-FAL22

Lab Sample ID: 680-223687-17

Date Collected: 10/18/22 15:05

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/09/22 23:50	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:48	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:23	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:16	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 02:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-16-FAL22

Lab Sample ID: 680-223687-18

Date Collected: 10/18/22 11:50

Matrix: Water

Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749750	11/10/22 00:03	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 19:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:32	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-16-FAL22
Lab Sample ID: 680-223687-18
Date Collected: 10/18/22 11:50
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:27	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 03:15	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-99-32X-FAL22
Lab Sample ID: 680-223687-19
Date Collected: 10/18/22 09:40
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749714	11/09/22 17:37	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 20:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:34	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:54	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 03:33	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-07B-FAL22
Lab Sample ID: 680-223687-20
Date Collected: 10/18/22 14:30
Matrix: Water
Date Received: 10/20/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	749714	11/09/22 17:50	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746291	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6010C		1			746802	10/24/22 20:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746292	10/21/22 13:38	RR	EET SAV
Dissolved	Analysis	6020A		1			746820	10/24/22 16:37	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747299	10/26/22 16:46	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	748628	11/03/22 03:49	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223687-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223687-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC: Jerry Lanier 912-250-0281 jerry lanier@eurofinsus com	
WBS Code	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
1	~~EPA-PZ-2012-1A-FAL22~~	WG	10.18.22	1155	DC	X	X	X	X	X					EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	~~EPA-PZ-2012-1B-FAL22~~	WG	10.18.22	1250	DC	X	X	X	X	X					EPA-PZ-2012-1B	N1	73 56	78.56	1	
3	~~EPA-PZ-2012-2A-FAL22~~	WG	10.18.22	920	DC	X	X	X	X	X					EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	~~EPA-PZ-2012-2B-FAL22~~	WG	10.18.22	1045	DC	X	X	X	X	X					EPA-PZ-2012-2B	N1	73 16	78 16	1	
5	~~EPA-PZ-2012-3A-FAL22~~	WG	10.17.22	1355	GS	X	X	X	X	X					EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	~~EPA-PZ-2012-3B-FAL22~~	WG	10.17.22	1455	GS	X	X	X	X	X					EPA-PZ-2012-3B	N1	68 70	73 70	1	
7	EPA-PZ-2012-4A-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-4A	N1	19.56	24 56	1	
8	EPA-PZ-2012-4B-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-4B	N1	79 50	84.50	1	
9	EPA-PZ-2012-5A-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-5A	N1	17.95	22.95	1	
10	EPA-PZ-2012-5B-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-5B	N1	68.46	73.46	1	
11	EPA-PZ-2012-6A-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-6A	N1	24 19	29 19	1	
12	EPA-PZ-2012-6B-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-6B	N1	74.23	79.23	1	
13	EPA-PZ-2012-7A-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-7A	N1	23.87	28 87	1	
14	EPA-PZ-2012-7B-FAL22	WG				X	X	X	X	X					EPA-PZ-2012-7B	N1	58 82			
15	EW-01-FAL22	WG				X	X	X	X	X					EW-01	N1	60 00			
16	EW-04-FAL22	WG				X	X	X	X	X					EW-04	N1	70 00			
17	N5-P1-FAL22	WG				X	X	X	X	X					N5-P1	N1	95 50			
18	PZ-12-01-FAL22	WG				X	X	X	X	X					PZ-12-01	N1	24 00			
19	PZ-12-02-FAL22	WG				X	X	X	X	X					PZ-12-02	N1	24 00			
20	PZ-12-03-FAL22	WG				X	X	X	X	X					PZ-12-03	N1	24.00	34 00		

680-223687 Chain of Custody

Relinquished by: (Signature) Erica Krebs
Date 10/18/22
Time 4 30 pm
Received by: (Signature)

10/18/22 17:30

Received by Laboratory (Signature) M
Date 10.20.22
Time 1030

3.6/3.6 2.4/24

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281 jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)															
	Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3															
	Sample ID	Matrix	Date	Time	Samp Init.													Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
21	PZ-12-04-FAL22	WG					X	X	X	X	X							PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG					X	X	X	X	X							PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG					X	X	X	X	X							PZ-12-06	N1	25 00	35 00	1	
24	PZ-12-07-FAL22	WG	10.17.22	1415	DC		X	X	X	X	X							PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG	10.17.22	1550	DC		X	X	X	X	X							PZ-12-08	N1	22 00	32 00	1	
26	PZ-12-09-FAL22	WG	10.17.22	1030	DC		X	X	X	X	X							PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG					X	X	X	X	X							PZ-12-10	MS1	20 00	30.00	1	
28	PZ-12-10-FAL22	WG					X	X	X	X	X							PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG					X	X	X	X	X							PZ-12-10	SD1	20 00	30 00	1	
30	SHL-10-FAL22	WG					X	X	X	X	X							SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG					X	X	X	X	X							SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG	10.18.22	1446	SG		X	X	X	X	X							SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG					X	X	X	X	X							SHL-15	N1	14 00	24 00	1	
34	SHL-19-FAL22	WG	10.17.22	1215	DC		X	X	X	X	X							SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG					X	X	X	X	X							SHL-20	N1	39 00	49 00	1	
36	SHL-22-FAL22	WG					X	X	X	X	X							SHL-22	N1	105 00	115 00	1	
37	SHL-23-FAL22	WG					X	X	X	X	X							SHL-23	N1	23 00	33 00	1	
38	SHL-24-FAL22	WG					X	X	X	X	X							SHL-24	N1	110 00	120 00	1	
39	SHL-3-FAL22	WG					X	X	X	X	X							SHL-3	N1	24 00	34 00	1	
40	SHL-4-FAL22	WG					X	X	X	X	X							SHL-4	N1	3 00	13 00	1	

Relinquished by: (Signature) [signature]
Date 10/18/22
Time 4 30
Received by (Signature) [signature]

[signature] 10/19/22 17:30

Received by Laboratory (Signature) [signature] TA
Date 10-30-22
Time 1030

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name. Former Fort Devens, Long Term Monitoring	Laboratory· Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number· 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah GA 31404	

Comments·
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
41	SHL-5-FAL22	WG	10.17.22	1115	GS	X	X	X	X	X						SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG				X	X	X	X	X						SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG				X	X	X	X	X						SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG				X	X	X	X	X						SHL-8S	N1	52 00	54 00	1	
45	SHL-9-FAL22	WG				X	X	X	X	X						SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-4B	FD1	79.50	84.50	1	
47	SHL-DUP02-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG				X	X	X	X	X						PZ-12-06	FD1	25 00	35.00	1	
49	SHL-DUP04-FAL22	WG				X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG				X	X	X	X	X						SHL-22	FD1	105 00	115 00	1	
51	SHL-DUP06-FAL22	WG				X	X	X	X	X						SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG				X	X	X	X	X						SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG				X	X	X	X	X						SHM-11-06	FD1	25 00	35 00	1	
54	SHL-DUP09-FAL22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG				X	X	X	X	X						SHP-01-38A	FD1	1 50	6.50	1	
56	SHL-DUP11-FAL22	WG	10.18.22	1435	GS	X	X	X	X	X						SHP-2016-07B	FD1	22 00	32 00	1	SHP-2016-07B
57	SHM-05-39A-FAL22	WG				X	X	X	X	X						SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG				X	X	X	X	X						SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG				X	X	X	X	X						SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG	10.17.22	1315	MM	X	X	X	X	X						SHM-05-41A	N1	42 00	44 00	1	

Relinquished by· (Signature)
Date 10/18/22
Time 1.30
Received by (Signature)

Received by Laboratory (Signature) 10-20-22 1030
Date
Time

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
61	SHM-05-41B-FAL22	WG	10.17.22	1510	MM	X	X	X	X	X	SHM-05-41B	N1	62 00	64 00	1	
62	SHM-05-41C-FAL22	WG	10.17.22	1022	MM	X	X	X	X	X	SHM-05-41C	MS1	88 00	93 00	1	
63	SHM-05-41C-FAL22	WG	10.17.22	1022	MM	X	X	X	X	X	SHM-05-41C	N1	88 00	93 00	1	
64	SHM-05-41C-FAL22	WG	10.17.22	1022	MM	X	X	X	X	X	SHM-05-41C	SD1	88 00	93 00	1	
65	SHM-05-42A-FAL22	WG				X	X	X	X	X	SHM-05-42A	N1	40 00	42 00	1	
66	SHM-05-42B-FAL22	WG				X	X	X	X	X	SHM-05-42B	N1	70 00	72 00	1	
67	SHM-07-03-FAL22	WG				X	X	X	X	X	SHM-07-03	N1	25 00	35 00	1	
68	SHM-07-05X-FAL22	WG				X	X	X	X	X	SHM-07-05X	N1	55 00	65 00	1	
69	SHM-10-02-FAL22	WG				X	X	X	X	X	SHM-10-02	N1	53 00	63 00	1	
70	SHM-10-03-FAL22	WG				X	X	X	X	X	SHM-10-03	N1	58 50	68.50	1	
71	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	MS1	55 00	65 00	1	
72	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	N1	55 00	65 00	1	
73	SHM-10-04-FAL22	WG				X	X	X	X	X	SHM-10-04	SD1	55 00	65 00	1	
74	SHM-10-05A-FAL22	WG				X	X	X	X	X	SHM-10-05A	N1	50 00	60 00	1	
75	SHM-10-06-FAL22	WG				X	X	X	X	X	SHM-10-06	N1	69.50	79.50	1	
76	SHM-10-06A-FAL22	WG				X	X	X	X	X	SHM-10-06A	N1	77 00	87.00	1	
77	SHM-10-07-FAL22	WG	10.18.22	1505	DC	X	X	X	X	X	SHM-10-07	N1	40 00	50.00	1	
78	SHM-10-08-FAL22	WG				X	X	X	X	X	SHM-10-08	N1	46 00	56 00	1	
79	SHM-10-10-FAL22	WG				X	X	X	X	X	SHM-10-10	N1	56 00	66 00	1	
80	SHM-10-11-FAL22	WG				X	X	X	X	X	SHM-10-11	N1	50 00	60 00	1	

Relinquished by: (Signature) [signature]
Date 10/18/22
Time 4 30
Received by (Signature) [signature]

[signature] 10/19/22 700

Received by Laboratory: (Signature) [signature] TA 10-20-22 1030
Date
Time

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

Analytical Test Method

| | | |

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Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)													
	Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3													
	Sample ID	Matrix	Date	Time	Samp Init.													Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
101	SHM-13-14S-FAL22	WG					X	X	X	X	X							SHM-13-14S	N1	5 00	15 00	1	
102	SHM-13-15-FAL22	WG					X	X	X	X	X							SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG					X	X	X	X	X							SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	SD1	78 50	88.50	1	
107	SHM-93-22B-FAL22	WG					X	X	X	X	X							SHM-93-22B	N1	82 30	92 30	1	
108	SHM-93-22C-FAL22	WG					X	X	X	X	X							SHM-93-22C	N1	124 30	134.30	1	
109	SHM-93-24A-FAL22	WG					X	X	X	X	X							SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG					X	X	X	X	X							SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG					X	X	X	X	X							SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG					X	X	X	X	X							SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG					X	X	X	X	X							SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG					X	X	X	X	X							SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG	10.18.22	940	GS		X	X	X	X	X							SHM-99-32X	N1	72 00	82 00	1	
116	SHP-01-36X-FAL22	WG					X	X	X	X	X							SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG					X	X	X	X	X							SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG					X	X	X	X	X							SHP-01-38A	N1	1 50	6 50	1	
119	SHP-2016-06A-FAL22	WG					X	X	X	X	X							SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG					X	X	X	X	X							SHP-2016-06B	N1	102.00	112.00	1	

Relinquished by: (Signature) [signature] [signature] 10/19/22 1200
Date 10/18/22
Time 4:30
Received by: (Signature) [signature]

Received by Laboratory (Signature) [signature] TA 10-2022 1030
Date
Time

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
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COC # SHL_FAL2022

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46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3											
121	SHP-2016-06C-FAL22	WG				X	X	X	X	X						SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG				X	X	X	X	X						SHP-2016-07A	N1	22 00	32 00	1	
123	SHP-2016-07B-FAL22	WG	10.18.22	1430	GS	X	X	X	X	X						SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG				X	X	X	X	X						SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG				X	X	X	X	X						SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG				X	X	X	X	X						SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG				X	X	X	X	X						SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG				X	X	X	X	X						SHP-2016-3A	N1	20 00	25 00	1	
129	SHP-2016-3B-FAL22	WG				X	X	X	X	X						SHP-2016-3B	N1	80 00	85 00	1	
130	SHP-2016-4A-FAL22	WG				X	X	X	X	X						SHP-2016-4A	N1	25 00	30 00	1	
131	SHP-2016-4B-FAL22	WG				X	X	X	X	X						SHP-2016-4B	N1	85 00	90 00	1	
132	SHP-2016-5A-FAL22	WG				X	X	X	X	X						SHP-2016-5A	N1	25 00	30 00	1	
133	SHP-2016-5B-FAL22	WG				X	X	X	X	X						SHP-2016-5B	N1	85 00	90.00	1	
134	SHP-99-29X-FAL22	WG				X	X	X	X	X						SHP-99-29X	N1	19 00	29 00	1	
135																					
136																					
137																					
138																					
139																					

Turnaround Time. Standard

Relinquished by: (Signature) [signature]
Date 10/18/22
Time 4:30
Received by (Signature) [signature] 10.19.22

Received by Laboratory (Signature) [signature] TA
Date 10-20-22
Time 1030

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-223687-1

Login Number: 223687

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 12/8/2022 8:41:54 AM Revision 1

JOB DESCRIPTION

Seres-Arcadis JV, LTM, SHL, Fall 2022

JOB NUMBER

680-223842-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
12/8/2022 8:41:54 AM
Revision 1

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-223842-1	EW-01-FALL22	Water	10/21/22 11:35	10/22/22 10:00
680-223842-2	EW-04-FALL22	Water	10/21/22 11:45	10/22/22 10:00
680-223842-3	SHL-3-FALL22	Water	10/21/22 10:46	10/22/22 10:00
680-223842-4	SHL-8S-FALL22	Water	10/20/22 09:51	10/22/22 10:00
680-223842-5	SHM-05-42A-FALL22	Water	10/20/22 10:15	10/22/22 10:00
680-223842-6	SHM-05-42B-FALL22	Water	10/20/22 11:05	10/22/22 10:00
680-223842-7	SHM-10-10-FALL22	Water	10/20/22 15:26	10/22/22 10:00
680-223842-8	SHM-10-11-FALL22	Water	10/20/22 09:55	10/22/22 10:00
680-223842-9	SHM-10-12-FALL22	Water	10/20/22 12:50	10/22/22 10:00
680-223842-10	SHM-10-13-FALL22	Water	10/20/22 15:45	10/22/22 10:00
680-223842-11	SHM-13-03-FALL22	Water	10/20/22 12:37	10/22/22 10:00
680-223842-12	SHM-93-10D-FALL22	Water	10/21/22 14:02	10/22/22 10:00
680-223842-13	SHP-2016-1A-FALL22	Water	10/21/22 09:20	10/22/22 10:00
680-223842-14	SHP-2016-1B-FALL22	Water	10/21/22 11:20	10/22/22 10:00
680-223842-15	SHP-2016-2A-FALL22	Water	10/20/22 13:15	10/22/22 10:00
680-223842-16	SHP-2016-2B-FALL22	Water	10/20/22 14:05	10/22/22 10:00
680-223842-17	SHP-2016-4A-FALL22	Water	10/21/22 10:55	10/22/22 10:00
680-223842-18	SHP-2016-4B-FALL22	Water	10/21/22 12:05	10/22/22 10:00
680-223842-19	SHP-2016-5A-FALL22	Water	10/21/22 13:10	10/22/22 10:00
680-223842-20	SHP-2016-5B-FALL22	Water	10/21/22 14:15	10/22/22 10:00

Job ID: 680-223842-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-223842-1

REVISION

The report being provided is a revision of the original report sent on 11/27/2022. The report (revision 1) is being revised due to DOC results 1-4 need to be removed for the EDD. Also the LOQ an LOD limits were elevated so LOQ>LOD>DL.

Report revision history

Receipt
The samples were received on 10/22/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8°C and 3.5°C

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: EW-01-FALL22

Date Collected: 10/21/22 11:35
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-1

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	18		0.50	0.50	0.20	mg/L		11/11/22 13:32	1
Sulfate	4.5		1.0	1.0	0.40	mg/L		11/11/22 13:32	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	64000		100	50	20	ug/L		10/26/22 09:55	1
Manganese	2100		10	5.0	1.3	ug/L		10/26/22 09:55	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1600		5.0	3.0	0.86	ug/L		10/25/22 21:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	230		5.0	5.0	2.2	mg/L		10/27/22 19:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	4.6		1.5	1.0	0.50	mg/L		11/15/22 18:04	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EW-04-FALL22
Lab Sample ID: 680-223842-2
Date Collected: 10/21/22 11:45
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	5.6		0.50	0.50	0.20	mg/L		11/11/22 13:45	1
Sulfate	3.9		1.0	1.0	0.40	mg/L		11/11/22 13:45	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	37000		100	50	20	ug/L		10/26/22 09:58	1
Manganese	2400		10	5.0	1.3	ug/L		10/26/22 09:58	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3000		5.0	3.0	0.86	ug/L		10/25/22 21:46	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	120		5.0	5.0	2.2	mg/L		10/27/22 18:33	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.9		1.5	1.0	0.50	mg/L		11/15/22 18:28	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHL-3-FALL22

Date Collected: 10/21/22 10:46
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.9		0.50	0.50	0.20	mg/L		11/11/22 13:58	1
Sulfate	3.8		1.0	1.0	0.40	mg/L		11/11/22 13:58	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	27	J	100	50	20	ug/L		10/26/22 10:01	1
Manganese	2.9	J	10	5.0	1.3	ug/L		10/26/22 10:01	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 21:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	67		5.0	5.0	2.2	mg/L		10/27/22 19:04	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.5		1.5	1.0	0.50	mg/L		11/15/22 18:52	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-8S-FALL22
Lab Sample ID: 680-223842-4
Date Collected: 10/20/22 09:51
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**6.4**		0.50	0.50	0.20	mg/L		11/11/22 14:12	1
Sulfate	**5.0**		1.0	1.0	0.40	mg/L		11/11/22 14:12	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 10:10	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/26/22 10:10	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 21:57	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**25**		5.0	5.0	2.2	mg/L		10/27/22 19:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.54**	**J**	1.5	1.0	0.50	mg/L		11/15/22 19:15	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHM-05-42A-FALL22

Date Collected: 10/20/22 10:15
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-5

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.3		0.50	0.50	0.20	mg/L		11/11/22 14:25	1
Sulfate	6.5		1.0	1.0	0.40	mg/L		11/11/22 14:25	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	69	J	100	50	20	ug/L		10/26/22 10:13	1
Manganese	76		10	5.0	1.3	ug/L		10/26/22 10:13	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 22:00	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	28		5.0	5.0	2.2	mg/L		10/27/22 19:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.0	J	1.5	1.0	0.50	mg/L		11/07/22 10:56	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-05-42B-FALL22
Lab Sample ID: 680-223842-6

Date Collected: 10/20/22 11:05
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	45		0.50	0.50	0.20	mg/L		11/11/22 14:38	1
Sulfate	7.5		1.0	1.0	0.40	mg/L		11/11/22 14:38	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	26000		100	50	20	ug/L		10/26/22 10:16	1
Manganese	5800		10	5.0	1.3	ug/L		10/26/22 10:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	150		5.0	3.0	0.86	ug/L		10/25/22 22:02	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		10/27/22 18:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.3	J	1.5	1.0	0.50	mg/L		11/07/22 11:16	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-10-FALL22
Lab Sample ID: 680-223842-7
Date Collected: 10/20/22 15:26
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**180**		0.50	0.50	0.20	mg/L		11/11/22 14:52	1
Sulfate	**12**		1.0	1.0	0.40	mg/L		11/11/22 14:52	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 10:19	1
Manganese	**1.5**	**J**	10	5.0	1.3	ug/L		10/26/22 10:19	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 22:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**95**		5.0	5.0	2.2	mg/L		10/27/22 18:14	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.4**	**J**	1.5	1.0	0.50	mg/L		11/07/22 11:33	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-11-FALL22
Lab Sample ID: 680-223842-8
Date Collected: 10/20/22 09:55
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	42		0.50	0.50	0.20	mg/L		11/11/22 15:05	1
Sulfate	53		1.0	1.0	0.40	mg/L		11/11/22 15:05	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	55000		100	50	20	ug/L		10/26/22 10:22	1
Manganese	2500		10	5.0	1.3	ug/L		10/26/22 10:22	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	530		5.0	3.0	0.86	ug/L		10/25/22 22:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/27/22 19:34	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.0		1.5	1.0	0.50	mg/L		11/07/22 11:51	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-12-FALL22
Lab Sample ID: 680-223842-9

Date Collected: 10/20/22 12:50
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.5		0.50	0.50	0.20	mg/L		11/11/22 12:52	1
Sulfate	1.5		1.0	1.0	0.40	mg/L		11/11/22 12:52	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	66000	J1	100	50	20	ug/L		10/26/22 09:40	1
Manganese	5200	J1	10	5.0	1.3	ug/L		10/26/22 09:40	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3200	J1	5.0	3.0	0.86	ug/L		10/25/22 21:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		10/27/22 17:26	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	3.7		1.5	1.0	0.50	mg/L		11/07/22 12:09	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-13-FALL22
Lab Sample ID: 680-223842-10
Date Collected: 10/20/22 15:45
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	29		0.50	0.50	0.20	mg/L		11/11/22 15:18	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/11/22 15:18	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	52000		100	50	20	ug/L		10/26/22 10:25	1
Manganese	790		10	5.0	1.3	ug/L		10/26/22 10:25	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	410		5.0	3.0	0.86	ug/L		10/25/22 22:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	280		5.0	5.0	2.2	mg/L		10/27/22 17:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	4.9		1.5	1.0	0.50	mg/L		11/07/22 13:00	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHM-13-03-FALL22

Date Collected: 10/20/22 12:37
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-11

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	52		0.50	0.50	0.20	mg/L		11/14/22 18:45	1
Sulfate	3.7		1.0	1.0	0.40	mg/L		11/14/22 18:45	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4900		100	50	20	ug/L		10/26/22 10:28	1
Manganese	7500		10	5.0	1.3	ug/L		10/26/22 10:28	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	69		5.0	3.0	0.86	ug/L		10/25/22 22:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/27/22 16:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.8		1.5	1.0	0.50	mg/L		11/07/22 13:18	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-93-10D-FALL22
Lab Sample ID: 680-223842-12
Date Collected: 10/21/22 14:02
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	31		0.50	0.50	0.20	mg/L		11/12/22 13:30	1
Sulfate	20	M	1.0	1.0	0.40	mg/L		11/12/22 13:30	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	140		100	50	20	ug/L		10/26/22 10:31	1
Manganese	2.5	J	10	5.0	1.3	ug/L		10/26/22 10:31	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.6	J	5.0	3.0	0.86	ug/L		10/25/22 22:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	54		5.0	5.0	2.2	mg/L		10/27/22 17:16	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.4	J	1.5	1.0	0.50	mg/L		11/07/22 13:36	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-1A-FALL22
Lab Sample ID: 680-223842-13
Date Collected: 10/21/22 09:20
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**0.84**		0.50	0.50	0.20	mg/L		11/12/22 12:50	1
Sulfate	**2.9**		1.0	1.0	0.40	mg/L		11/12/22 12:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 10:34	1
Manganese	**2.9**	**J**	10	5.0	1.3	ug/L		10/26/22 10:34	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 22:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**23**		5.0	5.0	2.2	mg/L		10/27/22 17:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.0**	**J**	1.5	1.0	0.50	mg/L		11/07/22 14:27	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHP-2016-1B-FALL22

Date Collected: 10/21/22 11:20
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-14

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	7.5		0.50	0.50	0.20	mg/L		11/12/22 13:44	1
Sulfate	5.9		1.0	1.0	0.40	mg/L		11/12/22 13:44	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	27000		100	50	20	ug/L		10/26/22 10:37	1
Manganese	1300		10	5.0	1.3	ug/L		10/26/22 10:37	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	140		5.0	3.0	0.86	ug/L		10/25/22 22:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	110		5.0	5.0	2.2	mg/L		10/27/22 17:56	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.8		1.5	1.0	0.50	mg/L		11/07/22 14:43	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-2A-FALL22
Lab Sample ID: 680-223842-15
Date Collected: 10/20/22 13:15
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**2.5**		0.50	0.50	0.20	mg/L		11/12/22 13:57	1
Sulfate	**2.5**		1.0	1.0	0.40	mg/L		11/12/22 13:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 10:46	1
Manganese	**590**		10	5.0	1.3	ug/L		10/26/22 10:46	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**2.0**	**J**	5.0	3.0	0.86	ug/L		10/25/22 22:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**48**		5.0	5.0	2.2	mg/L		10/27/22 18:04	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.65**	**J**	1.5	1.0	0.50	mg/L		11/07/22 15:01	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-2B-FALL22
Lab Sample ID: 680-223842-16

Date Collected: 10/20/22 14:05
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	14		0.50	0.50	0.20	mg/L		11/12/22 14:10	1
Sulfate	4.7		1.0	1.0	0.40	mg/L		11/12/22 14:10	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	38000		100	50	20	ug/L		10/26/22 10:49	1
Manganese	2400		10	5.0	1.3	ug/L		10/26/22 10:49	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	480		5.0	3.0	0.86	ug/L		10/25/22 22:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		10/27/22 20:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.0		1.5	1.0	0.50	mg/L		11/07/22 15:18	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHP-2016-4A-FALL22

Date Collected: 10/21/22 10:55
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-17

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**3.4**		0.50	0.50	0.20	mg/L		11/12/22 14:24	1
Sulfate	**2.9**		1.0	1.0	0.40	mg/L		11/12/22 14:24	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 10:52	1
Manganese	**67**		10	5.0	1.3	ug/L		10/26/22 10:52	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 22:35	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**16**		5.0	5.0	2.2	mg/L		10/27/22 20:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.81**	**J**	1.5	1.0	0.50	mg/L		11/07/22 15:36	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-4B-FALL22
Lab Sample ID: 680-223842-18
Date Collected: 10/21/22 12:05
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	26		0.50	0.50	0.20	mg/L		11/12/22 14:37	1
Sulfate	11	M	1.0	1.0	0.40	mg/L		11/12/22 14:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	45000		100	50	20	ug/L		10/26/22 10:55	1
Manganese	2800		10	5.0	1.3	ug/L		10/26/22 10:55	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1400		5.0	3.0	0.86	ug/L		10/25/22 22:38	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		10/27/22 20:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.5	1.0	0.50	mg/L		11/07/22 15:52	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-5A-FALL22
Lab Sample ID: 680-223842-19

Date Collected: 10/21/22 13:10
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	3.2		0.50	0.50	0.20	mg/L		11/12/22 14:50	1
Sulfate	1.1		1.0	1.0	0.40	mg/L		11/12/22 14:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1300		100	50	20	ug/L		10/26/22 10:58	1
Manganese	140		10	5.0	1.3	ug/L		10/26/22 10:58	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.5	J	5.0	3.0	0.86	ug/L		10/25/22 22:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	61		5.0	5.0	2.2	mg/L		10/27/22 20:01	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	7.6		1.5	1.0	0.50	mg/L		11/07/22 16:10	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-5B-FALL22
Lab Sample ID: 680-223842-20

Date Collected: 10/21/22 14:15
Matrix: Water
Date Received: 10/22/22 10:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	21		0.50	0.50	0.20	mg/L		11/12/22 15:04	1
Sulfate	7.2		1.0	1.0	0.40	mg/L		11/12/22 15:04	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	58000		100	50	20	ug/L		10/26/22 11:01	1
Manganese	3500		10	5.0	1.3	ug/L		10/26/22 11:01	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	710		5.0	3.0	0.86	ug/L		10/25/22 22:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	160		5.0	5.0	2.2	mg/L		10/27/22 20:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.3		1.5	1.0	0.50	mg/L		11/07/22 16:29	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-750177/2
Matrix: Water
Analysis Batch: 750177

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/11/22 11:18	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/11/22 11:18	1

Lab Sample ID: LCS 680-750177/3
Matrix: Water
Analysis Batch: 750177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.83		mg/L		98	87 - 111
Sulfate	10.0	9.58		mg/L		96	87 - 112

Lab Sample ID: LCSD 680-750177/4
Matrix: Water
Analysis Batch: 750177

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.81		mg/L		98	87 - 111	0	15
Sulfate	10.0	9.38		mg/L		94	87 - 112	2	15

Lab Sample ID: 680-223842-9 MS
Matrix: Water
Analysis Batch: 750177

Client Sample ID: SHM-10-12-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2.5		10.0	13.3		mg/L		108	87 - 111
Sulfate	1.5		10.0	11.3		mg/L		99	87 - 112

Lab Sample ID: 680-223842-9 MSD
Matrix: Water
Analysis Batch: 750177

Client Sample ID: SHM-10-12-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2.5		10.0	13.5		mg/L		110	87 - 111	1	15
Sulfate	1.5		10.0	12.0		mg/L		105	87 - 112	5	15

Lab Sample ID: MB 680-750331/2
Matrix: Water
Analysis Batch: 750331

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/12/22 11:57	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/12/22 11:57	1

Lab Sample ID: LCS 680-750331/3
Matrix: Water
Analysis Batch: 750331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.88		mg/L		99	87 - 111
Sulfate	10.0	10.0		mg/L		100	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCSD 680-750331/4
Matrix: Water
Analysis Batch: 750331

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			10.0	9.88		mg/L		99	87 - 111	0	15
Sulfate			10.0	10.0		mg/L		100	87 - 112	0	15

Lab Sample ID: 680-223842-13 MS
Matrix: Water
Analysis Batch: 750331

Client Sample ID: SHP-2016-1A-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	0.84		10.0	11.1		mg/L		103	87 - 111		
Sulfate	2.9		10.0	13.1		mg/L		102	87 - 112		

Lab Sample ID: 680-223842-13 MSD
Matrix: Water
Analysis Batch: 750331

Client Sample ID: SHP-2016-1A-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	0.84		10.0	10.8		mg/L		100	87 - 111	2	15
Sulfate	2.9		10.0	12.7		mg/L		98	87 - 112	3	15

Lab Sample ID: MB 680-750493/2
Matrix: Water
Analysis Batch: 750493

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/14/22 11:36	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/14/22 11:36	1

Lab Sample ID: LCS 680-750493/3
Matrix: Water
Analysis Batch: 750493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			10.0	9.90		mg/L		99	87 - 111		
Sulfate			10.0	10.3	M	mg/L		103	87 - 112		

Lab Sample ID: LCSD 680-750493/4
Matrix: Water
Analysis Batch: 750493

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			10.0	9.91		mg/L		99	87 - 111	0	15
Sulfate			10.0	10.5		mg/L		105	87 - 112	3	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-746768/1-A
Matrix: Water
Analysis Batch: 747234

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746768

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/22 09:34	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/26/22 09:34	1

Lab Sample ID: LCS 680-746768/2-A
Matrix: Water
Analysis Batch: 747234

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746768

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4940		ug/L		99	87 - 115
Manganese	400	395		ug/L		99	90 - 114

Lab Sample ID: 680-223842-9 MS
Matrix: Water
Analysis Batch: 747234

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved
Prep Batch: 746768

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	66000	J1	5000	70200	4	ug/L		78	87 - 115
Manganese	5200	J1	400	5560	4	ug/L		80	90 - 114

Lab Sample ID: 680-223842-9 MSD
Matrix: Water
Analysis Batch: 747234

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved
Prep Batch: 746768

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	66000	J1	5000	67500	4	ug/L		25	87 - 115	4	20
Manganese	5200	J1	400	5350	4	ug/L		25	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-746769/1-A
Matrix: Water
Analysis Batch: 747058

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 746769

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/22 21:24	1

Lab Sample ID: LCS 680-746769/2-A
Matrix: Water
Analysis Batch: 747058

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 746769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: 680-223842-9 MS
Matrix: Water
Analysis Batch: 747058

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved
Prep Batch: 746769

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	3200	J1	100	3410	4	ug/L		182	84 - 116

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-223842-9 MSD
Matrix: Water
Analysis Batch: 747058

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved
Prep Batch: 746769

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3200	J1	100	3480	4	ug/L		255	84 - 116	2	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-747555/4
Matrix: Water
Analysis Batch: 747555

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		10/27/22 16:29	1

Lab Sample ID: LCS 680-747555/6
Matrix: Water
Analysis Batch: 747555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	251		mg/L		101	90 - 112

Lab Sample ID: LCSD 680-747555/31
Matrix: Water
Analysis Batch: 747555

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	250		mg/L		100	90 - 112	0	30

Lab Sample ID: 680-223842-3 DU
Matrix: Water
Analysis Batch: 747555

Client Sample ID: SHL-3-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	67		65.5		mg/L		3	30

Lab Sample ID: 680-223842-11 DU
Matrix: Water
Analysis Batch: 747555

Client Sample ID: SHM-13-03-FALL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	160		162		mg/L		2	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-749540/2
Matrix: Water
Analysis Batch: 749540

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/07/22 09:52	1

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 680-749540/3
Matrix: Water
Analysis Batch: 749540

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	20.1		mg/L		101	80 - 120		

Lab Sample ID: LCSD 680-749540/4
Matrix: Water
Analysis Batch: 749540

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	20.4		mg/L		102	80 - 120	1	20

Lab Sample ID: 680-223842-9 MS
Matrix: Water
Analysis Batch: 749540

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	3.7		20.0	24.4		mg/L		104	80 - 120		

Lab Sample ID: 680-223842-9 MSD
Matrix: Water
Analysis Batch: 749540

Client Sample ID: SHM-10-12-FALL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	3.7		20.0	23.8		mg/L		100	80 - 120	3	20

Lab Sample ID: MB 680-750961/4
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/15/22 15:14	1

Lab Sample ID: LCS 680-750961/5
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	19.5		mg/L		97	80 - 120		

Lab Sample ID: LCSD 680-750961/6
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.7		mg/L		99	80 - 120	1	20

HPLC/IC

Analysis Batch: 750177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Total/NA	Water	9056A	
680-223842-2	EW-04-FALL22	Total/NA	Water	9056A	
680-223842-3	SHL-3-FALL22	Total/NA	Water	9056A	
680-223842-4	SHL-8S-FALL22	Total/NA	Water	9056A	
680-223842-5	SHM-05-42A-FALL22	Total/NA	Water	9056A	
680-223842-6	SHM-05-42B-FALL22	Total/NA	Water	9056A	
680-223842-7	SHM-10-10-FALL22	Total/NA	Water	9056A	
680-223842-8	SHM-10-11-FALL22	Total/NA	Water	9056A	
680-223842-9	SHM-10-12-FALL22	Total/NA	Water	9056A	
680-223842-10	SHM-10-13-FALL22	Total/NA	Water	9056A	
MB 680-750177/2	Method Blank	Total/NA	Water	9056A	
LCS 680-750177/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-750177/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223842-9 MS	SHM-10-12-FALL22	Total/NA	Water	9056A	
680-223842-9 MSD	SHM-10-12-FALL22	Total/NA	Water	9056A	

Analysis Batch: 750331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-12	SHM-93-10D-FALL22	Total/NA	Water	9056A	
680-223842-13	SHP-2016-1A-FALL22	Total/NA	Water	9056A	
680-223842-14	SHP-2016-1B-FALL22	Total/NA	Water	9056A	
680-223842-15	SHP-2016-2A-FALL22	Total/NA	Water	9056A	
680-223842-16	SHP-2016-2B-FALL22	Total/NA	Water	9056A	
680-223842-17	SHP-2016-4A-FALL22	Total/NA	Water	9056A	
680-223842-18	SHP-2016-4B-FALL22	Total/NA	Water	9056A	
680-223842-19	SHP-2016-5A-FALL22	Total/NA	Water	9056A	
680-223842-20	SHP-2016-5B-FALL22	Total/NA	Water	9056A	
MB 680-750331/2	Method Blank	Total/NA	Water	9056A	
LCS 680-750331/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-750331/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223842-13 MS	SHP-2016-1A-FALL22	Total/NA	Water	9056A	
680-223842-13 MSD	SHP-2016-1A-FALL22	Total/NA	Water	9056A	

Analysis Batch: 750493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-11	SHM-13-03-FALL22	Total/NA	Water	9056A	
MB 680-750493/2	Method Blank	Total/NA	Water	9056A	
LCS 680-750493/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-750493/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 746768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Dissolved	Water	3005A	
680-223842-2	EW-04-FALL22	Dissolved	Water	3005A	
680-223842-3	SHL-3-FALL22	Dissolved	Water	3005A	
680-223842-4	SHL-8S-FALL22	Dissolved	Water	3005A	
680-223842-5	SHM-05-42A-FALL22	Dissolved	Water	3005A	
680-223842-6	SHM-05-42B-FALL22	Dissolved	Water	3005A	
680-223842-7	SHM-10-10-FALL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 746768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-8	SHM-10-11-FALL22	Dissolved	Water	3005A	
680-223842-9	SHM-10-12-FALL22	Dissolved	Water	3005A	
680-223842-10	SHM-10-13-FALL22	Dissolved	Water	3005A	
680-223842-11	SHM-13-03-FALL22	Dissolved	Water	3005A	
680-223842-12	SHM-93-10D-FALL22	Dissolved	Water	3005A	
680-223842-13	SHP-2016-1A-FALL22	Dissolved	Water	3005A	
680-223842-14	SHP-2016-1B-FALL22	Dissolved	Water	3005A	
680-223842-15	SHP-2016-2A-FALL22	Dissolved	Water	3005A	
680-223842-16	SHP-2016-2B-FALL22	Dissolved	Water	3005A	
680-223842-17	SHP-2016-4A-FALL22	Dissolved	Water	3005A	
680-223842-18	SHP-2016-4B-FALL22	Dissolved	Water	3005A	
680-223842-19	SHP-2016-5A-FALL22	Dissolved	Water	3005A	
680-223842-20	SHP-2016-5B-FALL22	Dissolved	Water	3005A	
MB 680-746768/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746768/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223842-9 MS	SHM-10-12-FALL22	Dissolved	Water	3005A	
680-223842-9 MSD	SHM-10-12-FALL22	Dissolved	Water	3005A	

Prep Batch: 746769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Dissolved	Water	3005A	
680-223842-2	EW-04-FALL22	Dissolved	Water	3005A	
680-223842-3	SHL-3-FALL22	Dissolved	Water	3005A	
680-223842-4	SHL-8S-FALL22	Dissolved	Water	3005A	
680-223842-5	SHM-05-42A-FALL22	Dissolved	Water	3005A	
680-223842-6	SHM-05-42B-FALL22	Dissolved	Water	3005A	
680-223842-7	SHM-10-10-FALL22	Dissolved	Water	3005A	
680-223842-8	SHM-10-11-FALL22	Dissolved	Water	3005A	
680-223842-9	SHM-10-12-FALL22	Dissolved	Water	3005A	
680-223842-10	SHM-10-13-FALL22	Dissolved	Water	3005A	
680-223842-11	SHM-13-03-FALL22	Dissolved	Water	3005A	
680-223842-12	SHM-93-10D-FALL22	Dissolved	Water	3005A	
680-223842-13	SHP-2016-1A-FALL22	Dissolved	Water	3005A	
680-223842-14	SHP-2016-1B-FALL22	Dissolved	Water	3005A	
680-223842-15	SHP-2016-2A-FALL22	Dissolved	Water	3005A	
680-223842-16	SHP-2016-2B-FALL22	Dissolved	Water	3005A	
680-223842-17	SHP-2016-4A-FALL22	Dissolved	Water	3005A	
680-223842-18	SHP-2016-4B-FALL22	Dissolved	Water	3005A	
680-223842-19	SHP-2016-5A-FALL22	Dissolved	Water	3005A	
680-223842-20	SHP-2016-5B-FALL22	Dissolved	Water	3005A	
MB 680-746769/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-746769/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-223842-9 MS	SHM-10-12-FALL22	Dissolved	Water	3005A	
680-223842-9 MSD	SHM-10-12-FALL22	Dissolved	Water	3005A	

Analysis Batch: 747058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Dissolved	Water	6020A	746769
680-223842-2	EW-04-FALL22	Dissolved	Water	6020A	746769
680-223842-3	SHL-3-FALL22	Dissolved	Water	6020A	746769
680-223842-4	SHL-8S-FALL22	Dissolved	Water	6020A	746769

Metals (Continued)

Analysis Batch: 747058 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-5	SHM-05-42A-FALL22	Dissolved	Water	6020A	746769
680-223842-6	SHM-05-42B-FALL22	Dissolved	Water	6020A	746769
680-223842-7	SHM-10-10-FALL22	Dissolved	Water	6020A	746769
680-223842-8	SHM-10-11-FALL22	Dissolved	Water	6020A	746769
680-223842-9	SHM-10-12-FALL22	Dissolved	Water	6020A	746769
680-223842-10	SHM-10-13-FALL22	Dissolved	Water	6020A	746769
680-223842-11	SHM-13-03-FALL22	Dissolved	Water	6020A	746769
680-223842-12	SHM-93-10D-FALL22	Dissolved	Water	6020A	746769
680-223842-13	SHP-2016-1A-FALL22	Dissolved	Water	6020A	746769
680-223842-14	SHP-2016-1B-FALL22	Dissolved	Water	6020A	746769
680-223842-15	SHP-2016-2A-FALL22	Dissolved	Water	6020A	746769
680-223842-16	SHP-2016-2B-FALL22	Dissolved	Water	6020A	746769
680-223842-17	SHP-2016-4A-FALL22	Dissolved	Water	6020A	746769
680-223842-18	SHP-2016-4B-FALL22	Dissolved	Water	6020A	746769
680-223842-19	SHP-2016-5A-FALL22	Dissolved	Water	6020A	746769
680-223842-20	SHP-2016-5B-FALL22	Dissolved	Water	6020A	746769
MB 680-746769/1-A	Method Blank	Total Recoverable	Water	6020A	746769
LCS 680-746769/2-A	Lab Control Sample	Total Recoverable	Water	6020A	746769
680-223842-9 MS	SHM-10-12-FALL22	Dissolved	Water	6020A	746769
680-223842-9 MSD	SHM-10-12-FALL22	Dissolved	Water	6020A	746769

Analysis Batch: 747234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Dissolved	Water	6010C	746768
680-223842-2	EW-04-FALL22	Dissolved	Water	6010C	746768
680-223842-3	SHL-3-FALL22	Dissolved	Water	6010C	746768
680-223842-4	SHL-8S-FALL22	Dissolved	Water	6010C	746768
680-223842-5	SHM-05-42A-FALL22	Dissolved	Water	6010C	746768
680-223842-6	SHM-05-42B-FALL22	Dissolved	Water	6010C	746768
680-223842-7	SHM-10-10-FALL22	Dissolved	Water	6010C	746768
680-223842-8	SHM-10-11-FALL22	Dissolved	Water	6010C	746768
680-223842-9	SHM-10-12-FALL22	Dissolved	Water	6010C	746768
680-223842-10	SHM-10-13-FALL22	Dissolved	Water	6010C	746768
680-223842-11	SHM-13-03-FALL22	Dissolved	Water	6010C	746768
680-223842-12	SHM-93-10D-FALL22	Dissolved	Water	6010C	746768
680-223842-13	SHP-2016-1A-FALL22	Dissolved	Water	6010C	746768
680-223842-14	SHP-2016-1B-FALL22	Dissolved	Water	6010C	746768
680-223842-15	SHP-2016-2A-FALL22	Dissolved	Water	6010C	746768
680-223842-16	SHP-2016-2B-FALL22	Dissolved	Water	6010C	746768
680-223842-17	SHP-2016-4A-FALL22	Dissolved	Water	6010C	746768
680-223842-18	SHP-2016-4B-FALL22	Dissolved	Water	6010C	746768
680-223842-19	SHP-2016-5A-FALL22	Dissolved	Water	6010C	746768
680-223842-20	SHP-2016-5B-FALL22	Dissolved	Water	6010C	746768
MB 680-746768/1-A	Method Blank	Total Recoverable	Water	6010C	746768
LCS 680-746768/2-A	Lab Control Sample	Total Recoverable	Water	6010C	746768
680-223842-9 MS	SHM-10-12-FALL22	Dissolved	Water	6010C	746768
680-223842-9 MSD	SHM-10-12-FALL22	Dissolved	Water	6010C	746768

General Chemistry

Analysis Batch: 747555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Total/NA	Water	2320B-2011	
680-223842-2	EW-04-FALL22	Total/NA	Water	2320B-2011	
680-223842-3	SHL-3-FALL22	Total/NA	Water	2320B-2011	
680-223842-4	SHL-8S-FALL22	Total/NA	Water	2320B-2011	
680-223842-5	SHM-05-42A-FALL22	Total/NA	Water	2320B-2011	
680-223842-6	SHM-05-42B-FALL22	Total/NA	Water	2320B-2011	
680-223842-7	SHM-10-10-FALL22	Total/NA	Water	2320B-2011	
680-223842-8	SHM-10-11-FALL22	Total/NA	Water	2320B-2011	
680-223842-9	SHM-10-12-FALL22	Total/NA	Water	2320B-2011	
680-223842-10	SHM-10-13-FALL22	Total/NA	Water	2320B-2011	
680-223842-11	SHM-13-03-FALL22	Total/NA	Water	2320B-2011	
680-223842-12	SHM-93-10D-FALL22	Total/NA	Water	2320B-2011	
680-223842-13	SHP-2016-1A-FALL22	Total/NA	Water	2320B-2011	
680-223842-14	SHP-2016-1B-FALL22	Total/NA	Water	2320B-2011	
680-223842-15	SHP-2016-2A-FALL22	Total/NA	Water	2320B-2011	
680-223842-16	SHP-2016-2B-FALL22	Total/NA	Water	2320B-2011	
680-223842-17	SHP-2016-4A-FALL22	Total/NA	Water	2320B-2011	
680-223842-18	SHP-2016-4B-FALL22	Total/NA	Water	2320B-2011	
680-223842-19	SHP-2016-5A-FALL22	Total/NA	Water	2320B-2011	
680-223842-20	SHP-2016-5B-FALL22	Total/NA	Water	2320B-2011	
MB 680-747555/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-747555/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-747555/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223842-3 DU	SHL-3-FALL22	Total/NA	Water	2320B-2011	
680-223842-11 DU	SHM-13-03-FALL22	Total/NA	Water	2320B-2011	

Analysis Batch: 749540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-5	SHM-05-42A-FALL22	Dissolved	Water	9060A	
680-223842-6	SHM-05-42B-FALL22	Dissolved	Water	9060A	
680-223842-7	SHM-10-10-FALL22	Dissolved	Water	9060A	
680-223842-8	SHM-10-11-FALL22	Dissolved	Water	9060A	
680-223842-9	SHM-10-12-FALL22	Dissolved	Water	9060A	
680-223842-10	SHM-10-13-FALL22	Dissolved	Water	9060A	
680-223842-11	SHM-13-03-FALL22	Dissolved	Water	9060A	
680-223842-12	SHM-93-10D-FALL22	Dissolved	Water	9060A	
680-223842-13	SHP-2016-1A-FALL22	Dissolved	Water	9060A	
680-223842-14	SHP-2016-1B-FALL22	Dissolved	Water	9060A	
680-223842-15	SHP-2016-2A-FALL22	Dissolved	Water	9060A	
680-223842-16	SHP-2016-2B-FALL22	Dissolved	Water	9060A	
680-223842-17	SHP-2016-4A-FALL22	Dissolved	Water	9060A	
680-223842-18	SHP-2016-4B-FALL22	Dissolved	Water	9060A	
680-223842-19	SHP-2016-5A-FALL22	Dissolved	Water	9060A	
680-223842-20	SHP-2016-5B-FALL22	Dissolved	Water	9060A	
MB 680-749540/2	Method Blank	Dissolved	Water	9060A	
LCS 680-749540/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-749540/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-223842-9 MS	SHM-10-12-FALL22	Dissolved	Water	9060A	
680-223842-9 MSD	SHM-10-12-FALL22	Dissolved	Water	9060A	

QC Association Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

General Chemistry

Analysis Batch: 750961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223842-1	EW-01-FALL22	Dissolved	Water	9060A	
680-223842-2	EW-04-FALL22	Dissolved	Water	9060A	
680-223842-3	SHL-3-FALL22	Dissolved	Water	9060A	
680-223842-4	SHL-8S-FALL22	Dissolved	Water	9060A	
MB 680-750961/4	Method Blank	Dissolved	Water	9060A	
LCS 680-750961/5	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750961/6	Lab Control Sample Dup	Dissolved	Water	9060A	

Client Sample ID: EW-01-FALL22
Lab Sample ID: 680-223842-1
Date Collected: 10/21/22 11:35
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 13:32	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 09:55	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 21:43	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 19:24	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 18:04	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: EW-04-FALL22
Lab Sample ID: 680-223842-2
Date Collected: 10/21/22 11:45
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 13:45	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 09:58	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 21:46	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 18:33	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 18:28	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-3-FALL22
Lab Sample ID: 680-223842-3
Date Collected: 10/21/22 10:46
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 13:58	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:01	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 21:54	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHL-3-FALL22

Date Collected: 10/21/22 10:46
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 19:04	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 18:52	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHL-8S-FALL22

Date Collected: 10/20/22 09:51
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 14:12	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:10	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 21:57	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 19:43	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 19:15	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-05-42A-FALL22

Date Collected: 10/20/22 10:15
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 14:25	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:13	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:00	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 19:52	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 10:56	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-05-42B-FALL22

Lab Sample ID: 680-223842-6

Date Collected: 10/20/22 11:05

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 14:38	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:16	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:02	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 18:23	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 11:16	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-10-FALL22

Lab Sample ID: 680-223842-7

Date Collected: 10/20/22 15:26

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 14:52	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:19	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:05	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 18:14	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 11:33	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-11-FALL22

Lab Sample ID: 680-223842-8

Date Collected: 10/20/22 09:55

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 15:05	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:22	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:08	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHM-10-11-FALL22

Lab Sample ID: 680-223842-8

Date Collected: 10/20/22 09:55
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 19:34	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 11:51	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-12-FALL22

Lab Sample ID: 680-223842-9

Date Collected: 10/20/22 12:50
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 12:52	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 09:40	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 21:30	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 17:26	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 12:09	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-13-FALL22

Lab Sample ID: 680-223842-10

Date Collected: 10/20/22 15:45
Matrix: Water
Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750177	11/11/22 15:18	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:25	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:10	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 17:38	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 13:00	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-13-03-FALL22

Lab Sample ID: 680-223842-11

Date Collected: 10/20/22 12:37

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750493	11/14/22 18:45	T1C	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:28	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:13	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 16:57	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 13:18	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-93-10D-FALL22

Lab Sample ID: 680-223842-12

Date Collected: 10/21/22 14:02

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 13:30	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:31	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:16	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 17:16	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 13:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-1A-FALL22

Lab Sample ID: 680-223842-13

Date Collected: 10/21/22 09:20

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 12:50	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:34	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:24	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHP-2016-1A-FALL22

Lab Sample ID: 680-223842-13

Date Collected: 10/21/22 09:20
Date Received: 10/22/22 10:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 17:46	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 14:27	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-1B-FALL22

Lab Sample ID: 680-223842-14

Date Collected: 10/21/22 11:20
Date Received: 10/22/22 10:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 13:44	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:37	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:27	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 17:56	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 14:43	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-2A-FALL22

Lab Sample ID: 680-223842-15

Date Collected: 10/20/22 13:15
Date Received: 10/22/22 10:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 13:57	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:46	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:30	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 18:04	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 15:01	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-2B-FALL22

Lab Sample ID: 680-223842-16

Date Collected: 10/20/22 14:05

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 14:10	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:49	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:32	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 20:21	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 15:18	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-4A-FALL22

Lab Sample ID: 680-223842-17

Date Collected: 10/21/22 10:55

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 14:24	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:52	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:35	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 20:29	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 15:36	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-4B-FALL22

Lab Sample ID: 680-223842-18

Date Collected: 10/21/22 12:05

Matrix: Water

Date Received: 10/22/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 14:37	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:55	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:38	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-223842-1

Client Sample ID: SHP-2016-4B-FALL22

Date Collected: 10/21/22 12:05
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 20:11	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 15:52	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-5A-FALL22

Date Collected: 10/21/22 13:10
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 14:50	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 10:58	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:41	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 20:01	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 16:10	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-5B-FALL22

Date Collected: 10/21/22 14:15
Date Received: 10/22/22 10:00

Lab Sample ID: 680-223842-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750331	11/12/22 15:04	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	746768	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			747234	10/26/22 11:01	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	746769	10/25/22 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			747058	10/25/22 22:43	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			747555	10/27/22 20:39	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	749540	11/07/22 16:29	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-223842-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah GA 31404	

Comments.
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Bostor #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
1	EPA-PZ-2012-1A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-1B	N1	73 56	78.56	1	
3	EPA-PZ-2012-2A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-2B	N1	73 16	78 16	1	
5	EPA-PZ-2012-3A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-3B	N1	68 70	73 70	1	
7	EPA-PZ-2012-4A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-4B	N1	79.50	84 50	1	
9	EPA-PZ-2012-5A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-5A	N1	17 95	22.95	1	
10	EPA-PZ-2012-5B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-5B	N1	68.46	73.46	1	
11	EPA-PZ-2012-6A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-6A	N1	24 19	29 19	1	
12	EPA-PZ-2012-6B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-6B	N1	74.23	79.23	1	
13	EPA-PZ-2012-7A-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-7A	N1	23 87	28.87	1	
14	EPA-PZ-2012-7B-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-7B	N1	58 82	63 82	1	
15	EW-01-FAL22	WG	10.21.22	1135	DC	X	X	X	X	X						EW-01	N1	60 00	85 00	1	
16	EW-04-FAL22	WG	10.21.22	1145	DC	X	X	X	X	X						EW-04	N1	70 00	95 00	1	
17	N5-P1-FAL22	WG				X	X	X	X	X						N5-P1	N1	95.50	97.50	1	
18	PZ-12-01-FAL22	WG				X	X	X	X	X						PZ-12-01	N1	24 00	34 00	1	
19	PZ-12-02-FAL22	WG				X	X	X	X	X						PZ-12-02	N1	24 00	34 00	1	
20	PZ-12-03-FAL22	WG				X	X	X	X	X						PZ-12-03	N1	24.00	34 00	1	

680-223842 Chain of Custody

Relinquished by: (Signature) Diane Clapp
Date 10-21-22
Time 1625
Received by: (Signature)

Received by Laboratory (Signature) 10/21/22 1700
Date 10/22
Time 10:00

3.5 / 3.5 | 1.8 / 1.8

12/8/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
21	PZ-12-04-FAL22	WG					X	X	X	X	X					PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG					X	X	X	X	X					PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG					X	X	X	X	X					PZ-12-06	N1	25 00	35.00	1	
24	PZ-12-07-FAL22	WG					X	X	X	X	X					PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG					X	X	X	X	X					PZ-12-08	N1	22 00	32 00	1	
26	PZ-12-09-FAL22	WG					X	X	X	X	X					PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	MS1	20 00	30 00	1	
28	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG					X	X	X	X	X					PZ-12-10	SD1	20 00	30.00	1	
30	SHL-10-FAL22	WG					X	X	X	X	X					SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG					X	X	X	X	X					SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG					X	X	X	X	X					SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG					X	X	X	X	X					SHL-15	N1	14 00	24 00	1	
34	SHL-19-FAL22	WG					X	X	X	X	X					SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG					X	X	X	X	X					SHL-20	N1	39 00	49 00	1	
36	SHL-22-FAL22	WG					X	X	X	X	X					SHL-22	N1	105 00	115 00	1	
37	SHL-23-FAL22	WG					X	X	X	X	X					SHL-23	N1	23 00	33 00	1	
38	SHL-24-FAL22	WG					X	X	X	X	X					SHL-24	N1	110 00	120 00	1	
39	SHL-3-FAL22	WG	10-21-22	1046	SG		X	X	X	X	X					SHL-3	N1	24 00	34 00	1	
40	SHL-4-FAL22	WG					X	X	X	X	X					SHL-4	N1	3.00	13 00	1	

Relinquished by. (Signature) Dan Clapp
Date 10-21-22
Time 1625
Received by: (Signature)

10-21-22
1700
Received by Laboratory: (Signature)
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue Savannah GA 31404	

Comments
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
41	SHL-5-FAL22	WG				X	X	X	X	X						SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG				X	X	X	X	X						SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG				X	X	X	X	X						SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG	10.20.22	951	SG	X	X	X	X	X						SHL-8S	N1	52 00	54 00	1	
45	SHL-9-FAL22	WG				X	X	X	X	X						SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-4B	FD1	79 50	84.50	1	
47	SHL-DUP02-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG				X	X	X	X	X						PZ-12-06	FD1	25 00	35 00	1	
49	SHL-DUP04-FAL22	WG				X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG				X	X	X	X	X						SHL-22	FD1	105.00	115 00	1	
51	SHL-DUP06-FAL22	WG				X	X	X	X	X						SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG				X	X	X	X	X						SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG				X	X	X	X	X						SHM-11-06	FD1	25 00	35 00	1	
54	SHL-DUP09-FAL22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG				X	X	X	X	X						SHP-01-38A	FD1	1 50	6.50	1	
56	SHL-DUP11-FAL22	WG				X	X	X	X	X						SHP-2016-07A	FD1	22 00	32 00	1	
57	SHM-05-39A-FAL22	WG				X	X	X	X	X						SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG				X	X	X	X	X						SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG				X	X	X	X	X						SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG				X	X	X	X	X						SHM-05-41A	N1	42 00	44 00	1	

Relinquished by: (Signature) Diane Depew
Date 10-21-22
Time 1625
Received by (Signature)

Received by Laboratory (Signature)
Date 10-21-22
Time 1700

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name. Former Fort Devens, Long Term Monitoring	Laboratory· Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL Fall 2022
Project Number· 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code·	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments·
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Analytical Test Method

| | | |

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code.	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3											
81	SHM-10-12-FAL22	WG	10.20.22	1256	DC	X	X	X	X	X						SHM-10-12	MS1	45 00	55 00	1	
82	SHM-10-12-FAL22	WG	10.20.22	1250	DC	X	X	X	X	X						SHM-10-12	N1	45 00	55 00	1	
83	SHM-10-12-FAL22	WG	10.20.22	1250	DC	X	X	X	X	X						SHM-10-12	SD1	45 00	55 00	1	
84	SHM-10-13-FAL22	WG	10.20.22	1545	DC	X	X	X	X	X						SHM-10-13	N1	60 00	70 00	1	
85	SHM-10-14-FAL22	WG				X	X	X	X	X						SHM-10-14	N1	60 00	80 00	1	
86	SHM-10-15-FAL22	WG				X	X	X	X	X						SHM-10-15	N1	45.00	55 00	1	
87	SHM-10-16-FAL22	WG				X	X	X	X	X						SHM-10-16	N1	75 00	85 00	1	
88	SHM-11-02-FAL22	WG				X	X	X	X	X						SHM-11-02	N1	52 00	66 00	1	
89	SHM-11-06-FAL22	WG				X	X	X	X	X						SHM-11-06	N1	25 00	35.00	1	
90	SHM-13-01-FAL22	WG				X	X	X	X	X						SHM-13-01	N1	39 00	49 00	1	
91	SHM-13-02-FAL22	WG				X	X	X	X	X						SHM-13-02	N1	60 00	70 00	1	
92	SHM-13-03-FAL22	WG	10.20.22	1237	SG	X	X	X	X	X						SHM-13-03	N1	42 00	52 00	1	
93	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	MS1	20 00	30 00	1	
94	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	SD1	20 00	30 00	1	
96	SHM-13-05-FAL22	WG				X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	
97	SHM-13-06-FAL22	WG				X	X	X	X	X						SHM-13-06	N1	36 00	46 00	1	
98	SHM-13-07-FAL22	WG				X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
99	SHM-13-08-FAL22	WG				X	X	X	X	X						SHM-13-08	N1	55 00	65 00	1	
100	SHM-13-14D-FAL22	WG				X	X	X	X	X						SHM-13-14D	N1	45 00	55 00	1	

Relinquished by: (Signature) Drake Clapper
Date 10-21-22
Time 1625
Received by: (Signature)

Received by Laboratory (Signature) 6-21-22
Date 1709
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.	46	9	9	5	3						Location ID	Sample Type	Top	Bottom	Cooler	Comments
101	SHM-13-14S-FAL22	WG				X	X	X	X	X						SHM-13-14S	N1	5 00	15 00	1	
102	SHM-13-15-FAL22	WG				X	X	X	X	X						SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG	10.21.22	1402	SG	X	X	X	X	X						SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG				X	X	X	X	X						SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG				X	X	X	X	X						SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG				X	X	X	X	X						SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG				X	X	X	X	X						SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG				X	X	X	X	X						SHM-93-22C	N1	124 30	134.30	1	
109	SHM-93-24A-FAL22	WG				X	X	X	X	X						SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG				X	X	X	X	X						SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG				X	X	X	X	X						SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG				X	X	X	X	X						SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG				X	X	X	X	X						SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG				X	X	X	X	X						SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG				X	X	X	X	X						SHM-99-32X	N1	72 00	82.00	1	
116	SHP-01-36X-FAL22	WG				X	X	X	X	X						SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG				X	X	X	X	X						SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG				X	X	X	X	X						SHP-01-38A	N1	1.50	6.50	1	
119	SHP-2016-06A-FAL22	WG				X	X	X	X	X						SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG				X	X	X	X	X						SHP-2016-06B	N1	102.00	112 00	1	

Relinquished by: (Signature)
Date
Time
Received by (Signature)

Received by Laboratory: (Signature)
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC: Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3										
121	SHP-2016-06C-FAL22	WG				X	X	X	X	X					SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG				X	X	X	X	X					SHP-2016-07A	N1	22.00	32 00	1	
123	SHP-2016-07B-FAL22	WG				X	X	X	X	X					SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG	10.21.22	920	DC	X	X	X	X	X					SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG	10.21.22	1125	DC	X	X	X	X	X					SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG	10.20.22	1315	GS	X	X	X	X	X					SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG	10.20.22	1405	GS	X	X	X	X	X					SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG				X	X	X	X	X					SHP-2016-3A	N1	20 00	25.00	1	
129	SHP-2016-3B-FAL22	WG				X	X	X	X	X					SHP-2016-3B	N1	80 00	85 00	1	
130	SHP-2016-4A-FAL22	WG	10.21.22	1055	GS	X	X	X	X	X					SHP-2016-4A	N1	25 00	30 00	1	
131	SHP-2016-4B-FAL22	WG	10.21.22	1205	GS	X	X	X	X	X					SHP-2016-4B	N1	85 00	90 00	1	
132	SHP-2016-5A-FAL22	WG	10.21.22	1310	GS	X	X	X	X	X					SHP-2016-5A	N1	25 00	30 00	1	
133	SHP-2016-5B-FAL22	WG	10.21.22	1415	GS	X	X	X	X	X					SHP-2016-5B	N1	85 00	90 00	1	
134	SHP-99-29X-FAL22	WG				X	X	X	X	X					SHP-99-29X	N1	19 00	29 00	1	
135																				
136																				
137																				
138																				
139																				

Turnaround Time: Standard

Relinquished by: (Signature) Diane Clare
Date 10-21-22
Time 1625
Received by (Signature)

10-21-22
Received by Laboratory: (Signature)
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-223842-1

Login Number: 223842
List Number: 1
Creator: Padayao, Abigail

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 12/8/2022 9:11:22 AM Revision 1

JOB DESCRIPTION

Serea-Arcadis JV, LTM, SHL, Fall 2022

JOB NUMBER

680-224054-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
12/8/2022 9:11:22 AM
Revision 1

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-224054-1	EPA-PZ-2012-6A-FAL22	Water	10/24/22 09:45	10/26/22 10:30
680-224054-2	EPA-PZ-2012-6B-FAL22	Water	10/24/22 11:10	10/26/22 10:30
680-224054-3	EPA-PZ-2012-7A-FAL22	Water	10/24/22 14:40	10/26/22 10:30
680-224054-4	EPA-PZ-2012-7B-FAL22	Water	10/24/22 13:25	10/26/22 10:30
680-224054-5	SHL-10-FAL22	Water	10/24/22 11:17	10/26/22 10:30
680-224054-6	SHL-22-FAL22	Water	10/25/22 12:30	10/26/22 10:30
680-224054-7	SHL-9-FAL22	Water	10/25/22 14:55	10/26/22 10:30
680-224054-8	SHL-DUP02-FAL22	Water	10/24/22 11:10	10/26/22 10:30
680-224054-9	SHL-DUP05-FAL22	Water	10/25/22 13:50	10/26/22 10:30
680-224054-10	SHL-DUP10-FAL22	Water	10/25/22 10:52	10/26/22 10:30
680-224054-11	SHM-10-05A-FAL22	Water	10/24/22 13:56	10/26/22 10:30
680-224054-12	SHM-10-06A-FAL22	Water	10/24/22 11:45	10/26/22 10:30
680-224054-13	SHM-93-22B-FAL22	Water	10/25/22 13:35	10/26/22 10:30
680-224054-14	SHM-93-22C-FAL22	Water	10/25/22 11:30	10/26/22 10:30
680-224054-15	SHP-01-36X-FAL22	Water	10/25/22 13:17	10/26/22 10:30
680-224054-16	SHP-01-38A-FAL22	Water	10/25/22 10:52	10/26/22 10:30
680-224054-17	SHP-2016-3A-FAL22	Water	10/24/22 13:25	10/26/22 10:30
680-224054-18	SHP-2016-3B-FAL22	Water	10/24/22 14:20	10/26/22 10:30

Job ID: 680-224054-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-224054-1

Receipt
The samples were received on 10/26/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.6°C and 3.1°C

Revision
The report being provided is a revision of the original report sent on 11/27/2022. The report (revision 1) is being revised due to DOC results 1-4 need to be removed for the EDD. Also the LOQ an LOD limits were elevated so LOQ>LOD>DL.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-6A-FAL22
Lab Sample ID: 680-224054-1

Date Collected: 10/24/22 09:45
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**1.8**		0.50	0.50	0.20	mg/L		11/16/22 16:29	1
Sulfate	**2.4**		1.0	1.0	0.40	mg/L		11/16/22 16:29	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/28/22 11:39	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/28/22 11:39	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/28/22 17:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**35**		5.0	5.0	2.2	mg/L		11/02/22 17:04	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.98**	**J**	1.5	1.0	0.50	mg/L		11/10/22 13:43	1

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: EPA-PZ-2012-6B-FAL22

Date Collected: 10/24/22 11:10
Date Received: 10/26/22 10:30

Lab Sample ID: 680-224054-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.0		0.50	0.50	0.20	mg/L		11/16/22 16:42	1
Sulfate	5.6		1.0	1.0	0.40	mg/L		11/16/22 16:42	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	21000		100	50	20	ug/L		10/28/22 11:54	1
Manganese	1100		10	5.0	1.3	ug/L		10/28/22 11:54	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	300		5.0	3.0	0.86	ug/L		10/28/22 17:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	52		5.0	5.0	2.2	mg/L		11/02/22 16:12	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.4	J	1.5	1.0	0.50	mg/L		11/10/22 14:01	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-7A-FAL22
Lab Sample ID: 680-224054-3

Date Collected: 10/24/22 14:40
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**170**		0.50	0.50	0.20	mg/L		11/16/22 16:55	1
Sulfate	**4.3**		1.0	1.0	0.40	mg/L		11/16/22 16:55	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/28/22 11:57	1
Manganese	**2.8**	**J**	10	5.0	1.3	ug/L		10/28/22 11:57	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/28/22 17:38	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**21**		5.0	5.0	2.2	mg/L		11/02/22 16:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.3**	**J**	1.5	1.0	0.50	mg/L		11/10/22 14:17	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: EPA-PZ-2012-7B-FAL22
Lab Sample ID: 680-224054-4

Date Collected: 10/24/22 13:25
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	51		0.50	0.50	0.20	mg/L		11/16/22 17:09	1
Sulfate	0.59	J	1.0	1.0	0.40	mg/L		11/16/22 17:09	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	12000		100	50	20	ug/L		10/28/22 12:00	1
Manganese	1600		10	5.0	1.3	ug/L		10/28/22 12:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	770		5.0	3.0	0.86	ug/L		10/28/22 17:46	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	40		5.0	5.0	2.2	mg/L		11/02/22 16:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.8		1.5	1.0	0.50	mg/L		11/10/22 14:34	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-10-FAL22
Lab Sample ID: 680-224054-5

Date Collected: 10/24/22 11:17
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	2.0		0.50	0.50	0.20	mg/L		11/16/22 17:22	1
Sulfate	6.4		1.0	1.0	0.40	mg/L		11/16/22 17:22	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	2400		100	50	20	ug/L		10/28/22 12:10	1
Manganese	1100		10	5.0	1.3	ug/L		10/28/22 12:10	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	7.7		5.0	3.0	0.86	ug/L		10/28/22 17:49	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	41		5.0	5.0	2.2	mg/L		11/02/22 16:55	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.3		1.5	1.0	0.50	mg/L		11/10/22 14:50	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-22-FAL22
Lab Sample ID: 680-224054-6

Date Collected: 10/25/22 12:30
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	31		0.50	0.50	0.20	mg/L		11/16/22 17:35	1
Sulfate	13	M	1.0	1.0	0.40	mg/L		11/16/22 17:35	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	39	J	100	50	20	ug/L		10/28/22 12:13	1
Manganese	7900		10	5.0	1.3	ug/L		10/28/22 12:13	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	4.4	J	5.0	3.0	0.86	ug/L		10/28/22 17:52	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	270		5.0	5.0	2.2	mg/L		11/02/22 17:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.3	J	1.5	1.0	0.50	mg/L		11/10/22 15:39	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-9-FAL22
Lab Sample ID: 680-224054-7

Date Collected: 10/25/22 14:55
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.9		0.50	0.50	0.20	mg/L		11/16/22 17:49	1
Sulfate	0.76	J	1.0	1.0	0.40	mg/L		11/16/22 17:49	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4800		100	50	20	ug/L		10/28/22 12:16	1
Manganese	270		10	5.0	1.3	ug/L		10/28/22 12:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	40		5.0	3.0	0.86	ug/L		10/28/22 17:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	92		5.0	5.0	2.2	mg/L		11/02/22 18:16	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	7.6		1.5	1.0	0.50	mg/L		11/10/22 15:57	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-DUP02-FAL22
Lab Sample ID: 680-224054-8
Date Collected: 10/24/22 11:10
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	6.0		0.50	0.50	0.20	mg/L		11/16/22 18:02	1
Sulfate	5.5		1.0	1.0	0.40	mg/L		11/16/22 18:02	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	21000		100	50	20	ug/L		10/28/22 12:19	1
Manganese	1200		10	5.0	1.3	ug/L		10/28/22 12:19	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	290		5.0	3.0	0.86	ug/L		10/28/22 17:57	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	53		5.0	5.0	2.2	mg/L		11/02/22 17:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.6		1.5	1.0	0.50	mg/L		11/10/22 16:14	1

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: SHL-DUP05-FAL22

Date Collected: 10/25/22 13:50
Date Received: 10/26/22 10:30

Lab Sample ID: 680-224054-9

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	31		0.50	0.50	0.20	mg/L		11/16/22 18:15	1
Sulfate	13		1.0	1.0	0.40	mg/L		11/16/22 18:15	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	48	J	100	50	20	ug/L		10/28/22 12:22	1
Manganese	8000		10	5.0	1.3	ug/L		10/28/22 12:22	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	5.0		5.0	3.0	0.86	ug/L		10/28/22 18:00	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	270		5.0	5.0	2.2	mg/L		11/02/22 17:15	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.3	J	1.5	1.0	0.50	mg/L		11/10/22 16:29	1

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: SHL-DUP10-FAL22

Date Collected: 10/25/22 10:52
Date Received: 10/26/22 10:30

Lab Sample ID: 680-224054-10

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	13		0.50	0.50	0.20	mg/L		11/17/22 11:03	1
Sulfate	6.1		1.0	1.0	0.40	mg/L		11/17/22 11:03	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	25000		100	50	20	ug/L		10/28/22 12:25	1
Manganese	1800		10	5.0	1.3	ug/L		10/28/22 12:25	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	140		5.0	3.0	0.86	ug/L		10/28/22 18:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	96		5.0	5.0	2.2	mg/L		11/02/22 17:33	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.4	J	1.5	1.0	0.50	mg/L		11/10/22 16:49	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-05A-FAL22
Lab Sample ID: 680-224054-11
Date Collected: 10/24/22 13:56
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	62		0.50	0.50	0.20	mg/L		11/17/22 11:16	1
Sulfate	6.5	M	1.0	1.0	0.40	mg/L		11/17/22 11:16	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	58	J	100	50	20	ug/L		10/28/22 12:28	1
Manganese	3.8	J	10	5.0	1.3	ug/L		10/28/22 12:28	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.3	J	5.0	3.0	0.86	ug/L		10/28/22 18:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	23		5.0	5.0	2.2	mg/L		11/03/22 02:22	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	0.71	J	1.5	1.0	0.50	mg/L		11/10/22 17:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-06A-FAL22
Lab Sample ID: 680-224054-12
Date Collected: 10/24/22 11:45
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	12		0.50	0.50	0.20	mg/L		11/17/22 11:56	1
Sulfate	5.7		1.0	1.0	0.40	mg/L		11/17/22 11:56	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	9100		100	50	20	ug/L		10/28/22 12:31	1
Manganese	1200		10	5.0	1.3	ug/L		10/28/22 12:31	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	66		5.0	3.0	0.86	ug/L		10/28/22 18:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	81		5.0	5.0	2.2	mg/L		11/03/22 21:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.5	1.0	0.50	mg/L		11/10/22 17:25	1

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-93-22B-FAL22
Lab Sample ID: 680-224054-13

Date Collected: 10/25/22 13:35
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	40		0.50	0.50	0.20	mg/L		11/17/22 12:09	1
Sulfate	13		1.0	1.0	0.40	mg/L		11/17/22 12:09	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	6500		100	50	20	ug/L		10/28/22 12:34	1
Manganese	9300		10	5.0	1.3	ug/L		10/28/22 12:34	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	120		5.0	3.0	0.86	ug/L		10/28/22 18:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	180		5.0	5.0	2.2	mg/L		11/03/22 21:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.4	J	1.5	1.0	0.50	mg/L		11/10/22 17:40	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-93-22C-FAL22
Lab Sample ID: 680-224054-14

Date Collected: 10/25/22 11:30
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	19		0.50	0.50	0.20	mg/L		11/17/22 12:23	1
Sulfate	4.7		1.0	1.0	0.40	mg/L		11/17/22 12:23	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	54	J	100	50	20	ug/L		10/28/22 12:37	1
Manganese	17		10	5.0	1.3	ug/L		10/28/22 12:37	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	11		5.0	3.0	0.86	ug/L		10/28/22 18:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	130		5.0	5.0	2.2	mg/L		11/03/22 22:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	3.0		1.5	1.0	0.50	mg/L		11/10/22 18:07	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-01-36X-FAL22
Lab Sample ID: 680-224054-15

Date Collected: 10/25/22 13:17
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	86		0.50	0.50	0.20	mg/L		11/17/22 12:36	1
Sulfate	14	M	1.0	1.0	0.40	mg/L		11/17/22 12:36	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	620		100	50	20	ug/L		10/28/22 12:46	1
Manganese	98		10	5.0	1.3	ug/L		10/28/22 12:46	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	6.6		5.0	3.0	0.86	ug/L		10/28/22 18:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	33		5.0	5.0	2.2	mg/L		11/03/22 21:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	3.4		1.5	1.0	0.50	mg/L		11/10/22 18:23	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-01-38A-FAL22
Lab Sample ID: 680-224054-16

Date Collected: 10/25/22 10:52
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	13		0.50	0.50	0.20	mg/L		11/17/22 12:49	1
Sulfate	5.8		1.0	1.0	0.40	mg/L		11/17/22 12:49	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	24000		100	50	20	ug/L		10/28/22 12:49	1
Manganese	1800		10	5.0	1.3	ug/L		10/28/22 12:49	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	140		5.0	3.0	0.86	ug/L		10/28/22 18:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	73		5.0	5.0	2.2	mg/L		11/03/22 21:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.3	J	1.5	1.0	0.50	mg/L		11/10/22 19:16	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-3A-FAL22
Lab Sample ID: 680-224054-17

Date Collected: 10/24/22 13:25
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	7.5		0.50	0.50	0.20	mg/L		11/17/22 13:03	1
Sulfate	1.0	M	1.0	1.0	0.40	mg/L		11/17/22 13:03	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	11000		100	50	20	ug/L		10/28/22 12:52	1
Manganese	410		10	5.0	1.3	ug/L		10/28/22 12:52	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	4.6	J	5.0	3.0	0.86	ug/L		10/28/22 18:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	37		5.0	5.0	2.2	mg/L		11/03/22 22:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.1	J	1.5	1.0	0.50	mg/L		11/10/22 19:34	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-3B-FAL22
Lab Sample ID: 680-224054-18

Date Collected: 10/24/22 14:20
Matrix: Water
Date Received: 10/26/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	18		0.50	0.50	0.20	mg/L		11/17/22 13:16	1
Sulfate	5.6		1.0	1.0	0.40	mg/L		11/17/22 13:16	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	34000		100	50	20	ug/L		10/28/22 12:55	1
Manganese	2900		10	5.0	1.3	ug/L		10/28/22 12:55	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	260		5.0	3.0	0.86	ug/L		10/28/22 18:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	110		5.0	5.0	2.2	mg/L		11/03/22 22:12	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.5	1.0	0.50	mg/L		11/11/22 21:18	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-750942/2
Matrix: Water
Analysis Batch: 750942

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/16/22 11:05	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/16/22 11:05	1

Lab Sample ID: LCS 680-750942/4
Matrix: Water
Analysis Batch: 750942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.82		mg/L		98	87 - 111
Sulfate	10.0	9.84		mg/L		98	87 - 112

Lab Sample ID: LCSD 680-750942/5
Matrix: Water
Analysis Batch: 750942

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.83		mg/L		98	87 - 111	0	15
Sulfate	10.0	9.93		mg/L		99	87 - 112	1	15

Lab Sample ID: MB 680-751137/2
Matrix: Water
Analysis Batch: 751137

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/17/22 10:09	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/17/22 10:09	1

Lab Sample ID: LCS 680-751137/4
Matrix: Water
Analysis Batch: 751137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	10.0		mg/L		100	87 - 112

Lab Sample ID: LCSD 680-751137/5
Matrix: Water
Analysis Batch: 751137

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	87 - 111	0	15
Sulfate	10.0	10.0		mg/L		100	87 - 112	0	15

Lab Sample ID: 680-224054-11 MS
Matrix: Water
Analysis Batch: 751137

Client Sample ID: SHM-10-05A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	62		10.0	71.5	4	mg/L		99	87 - 111
Sulfate	6.5	M	10.0	16.7		mg/L		102	87 - 112

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-224054-11 MSD
Matrix: Water
Analysis Batch: 751137

Client Sample ID: SHM-10-05A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	62		10.0	71.0	4	mg/L		94	87 - 111	1	15
Sulfate	6.5	M	10.0	16.3	M	mg/L		98	87 - 112	3	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-747354/1-A
Matrix: Water
Analysis Batch: 747848

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 747354

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/28/22 11:33	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/28/22 11:33	1

Lab Sample ID: LCS 680-747354/2-A
Matrix: Water
Analysis Batch: 747848

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 747354

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4970		ug/L		99	87 - 115
Manganese	400	400		ug/L		100	90 - 114

Lab Sample ID: 680-224054-1 MS
Matrix: Water
Analysis Batch: 747848

Client Sample ID: EPA-PZ-2012-6A-FAL22
Prep Type: Dissolved
Prep Batch: 747354

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	4870		ug/L		97	87 - 115
Manganese	5.0	U	400	384		ug/L		96	90 - 114

Lab Sample ID: 680-224054-1 MSD
Matrix: Water
Analysis Batch: 747848

Client Sample ID: EPA-PZ-2012-6A-FAL22
Prep Type: Dissolved
Prep Batch: 747354

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	4930		ug/L		99	87 - 115	1	20
Manganese	5.0	U	400	400		ug/L		100	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-747356/1-A
Matrix: Water
Analysis Batch: 747850

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 747356

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/28/22 17:17	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-747356/2-A
Matrix: Water
Analysis Batch: 747850

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 747356

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	105		ug/L		105	84 - 116		

Lab Sample ID: 680-224054-1 MS
Matrix: Water
Analysis Batch: 747850

Client Sample ID: EPA-PZ-2012-6A-FAL22
Prep Type: Dissolved
Prep Batch: 747356

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	3.0	U	100	109		ug/L		109	84 - 116		

Lab Sample ID: 680-224054-1 MSD
Matrix: Water
Analysis Batch: 747850

Client Sample ID: EPA-PZ-2012-6A-FAL22
Prep Type: Dissolved
Prep Batch: 747356

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	115		ug/L		115	84 - 116	5	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-748600/4
Matrix: Water
Analysis Batch: 748600

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/02/22 15:46	1

Lab Sample ID: LCS 680-748600/6
Matrix: Water
Analysis Batch: 748600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	244		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-748600/31
Matrix: Water
Analysis Batch: 748600

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	247		mg/L		99	90 - 112	1	30

Lab Sample ID: 680-224054-2 DU
Matrix: Water
Analysis Batch: 748600

Client Sample ID: EPA-PZ-2012-6B-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	52			50.2		mg/L				4	30

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: 680-224054-7 DU
Matrix: Water
Analysis Batch: 748600

Client Sample ID: SHL-9-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	92			90.1		mg/L				2	30

Lab Sample ID: MB 680-748603/4
Matrix: Water
Analysis Batch: 748603

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/02/22 21:40	1

Lab Sample ID: LCS 680-748603/6
Matrix: Water
Analysis Batch: 748603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	246		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-748603/31
Matrix: Water
Analysis Batch: 748603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	253		mg/L		101	90 - 112	3	30

Lab Sample ID: MB 680-748847/4
Matrix: Water
Analysis Batch: 748847

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/03/22 18:49	1

Lab Sample ID: LCS 680-748847/6
Matrix: Water
Analysis Batch: 748847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	246		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-748847/31
Matrix: Water
Analysis Batch: 748847

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	251		mg/L		101	90 - 112	2	30

Lab Sample ID: LLCS 680-748847/5
Matrix: Water
Analysis Batch: 748847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			5.00	4.96	J	mg/L		99	50 - 150		

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-750329/3
Matrix: Water
Analysis Batch: 750329

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/10/22 11:06	1

Lab Sample ID: LCS 680-750329/4
Matrix: Water
Analysis Batch: 750329

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	20.2		mg/L		101	80 - 120

Lab Sample ID: LCSD 680-750329/5
Matrix: Water
Analysis Batch: 750329

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	20.4		mg/L		102	80 - 120	1	20

Lab Sample ID: MB 680-750346/3
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/11/22 20:11	1

Lab Sample ID: LCS 680-750346/4
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	20.3		mg/L		101	80 - 120

Lab Sample ID: LCSD 680-750346/5
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	20.3		mg/L		101	80 - 120	0	20

Lab Sample ID: 680-224054-18 MS
Matrix: Water
Analysis Batch: 750346

Client Sample ID: SHP-2016-3B-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	1.7		20.0	22.4		mg/L		103	80 - 120

Lab Sample ID: 680-224054-18 MSD
Matrix: Water
Analysis Batch: 750346

Client Sample ID: SHP-2016-3B-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	1.7		20.0	22.4		mg/L		103	80 - 120	0	20

HPLC/IC

Analysis Batch: 750942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Total/NA	Water	9056A	
680-224054-2	EPA-PZ-2012-6B-FAL22	Total/NA	Water	9056A	
680-224054-3	EPA-PZ-2012-7A-FAL22	Total/NA	Water	9056A	
680-224054-4	EPA-PZ-2012-7B-FAL22	Total/NA	Water	9056A	
680-224054-5	SHL-10-FAL22	Total/NA	Water	9056A	
680-224054-6	SHL-22-FAL22	Total/NA	Water	9056A	
680-224054-7	SHL-9-FAL22	Total/NA	Water	9056A	
680-224054-8	SHL-DUP02-FAL22	Total/NA	Water	9056A	
680-224054-9	SHL-DUP05-FAL22	Total/NA	Water	9056A	
MB 680-750942/2	Method Blank	Total/NA	Water	9056A	
LCS 680-750942/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-750942/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 751137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-10	SHL-DUP10-FAL22	Total/NA	Water	9056A	
680-224054-11	SHM-10-05A-FAL22	Total/NA	Water	9056A	
680-224054-12	SHM-10-06A-FAL22	Total/NA	Water	9056A	
680-224054-13	SHM-93-22B-FAL22	Total/NA	Water	9056A	
680-224054-14	SHM-93-22C-FAL22	Total/NA	Water	9056A	
680-224054-15	SHP-01-36X-FAL22	Total/NA	Water	9056A	
680-224054-16	SHP-01-38A-FAL22	Total/NA	Water	9056A	
680-224054-17	SHP-2016-3A-FAL22	Total/NA	Water	9056A	
680-224054-18	SHP-2016-3B-FAL22	Total/NA	Water	9056A	
MB 680-751137/2	Method Blank	Total/NA	Water	9056A	
LCS 680-751137/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-751137/5	Lab Control Sample Dup	Total/NA	Water	9056A	
680-224054-11 MS	SHM-10-05A-FAL22	Total/NA	Water	9056A	
680-224054-11 MSD	SHM-10-05A-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 747354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	
680-224054-2	EPA-PZ-2012-6B-FAL22	Dissolved	Water	3005A	
680-224054-3	EPA-PZ-2012-7A-FAL22	Dissolved	Water	3005A	
680-224054-4	EPA-PZ-2012-7B-FAL22	Dissolved	Water	3005A	
680-224054-5	SHL-10-FAL22	Dissolved	Water	3005A	
680-224054-6	SHL-22-FAL22	Dissolved	Water	3005A	
680-224054-7	SHL-9-FAL22	Dissolved	Water	3005A	
680-224054-8	SHL-DUP02-FAL22	Dissolved	Water	3005A	
680-224054-9	SHL-DUP05-FAL22	Dissolved	Water	3005A	
680-224054-10	SHL-DUP10-FAL22	Dissolved	Water	3005A	
680-224054-11	SHM-10-05A-FAL22	Dissolved	Water	3005A	
680-224054-12	SHM-10-06A-FAL22	Dissolved	Water	3005A	
680-224054-13	SHM-93-22B-FAL22	Dissolved	Water	3005A	
680-224054-14	SHM-93-22C-FAL22	Dissolved	Water	3005A	
680-224054-15	SHP-01-36X-FAL22	Dissolved	Water	3005A	
680-224054-16	SHP-01-38A-FAL22	Dissolved	Water	3005A	
680-224054-17	SHP-2016-3A-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 747354 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-18	SHP-2016-3B-FAL22	Dissolved	Water	3005A	
MB 680-747354/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-747354/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224054-1 MS	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	
680-224054-1 MSD	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	

Prep Batch: 747356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	
680-224054-2	EPA-PZ-2012-6B-FAL22	Dissolved	Water	3005A	
680-224054-3	EPA-PZ-2012-7A-FAL22	Dissolved	Water	3005A	
680-224054-4	EPA-PZ-2012-7B-FAL22	Dissolved	Water	3005A	
680-224054-5	SHL-10-FAL22	Dissolved	Water	3005A	
680-224054-6	SHL-22-FAL22	Dissolved	Water	3005A	
680-224054-7	SHL-9-FAL22	Dissolved	Water	3005A	
680-224054-8	SHL-DUP02-FAL22	Dissolved	Water	3005A	
680-224054-9	SHL-DUP05-FAL22	Dissolved	Water	3005A	
680-224054-10	SHL-DUP10-FAL22	Dissolved	Water	3005A	
680-224054-11	SHM-10-05A-FAL22	Dissolved	Water	3005A	
680-224054-12	SHM-10-06A-FAL22	Dissolved	Water	3005A	
680-224054-13	SHM-93-22B-FAL22	Dissolved	Water	3005A	
680-224054-14	SHM-93-22C-FAL22	Dissolved	Water	3005A	
680-224054-15	SHP-01-36X-FAL22	Dissolved	Water	3005A	
680-224054-16	SHP-01-38A-FAL22	Dissolved	Water	3005A	
680-224054-17	SHP-2016-3A-FAL22	Dissolved	Water	3005A	
680-224054-18	SHP-2016-3B-FAL22	Dissolved	Water	3005A	
MB 680-747356/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-747356/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224054-1 MS	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	
680-224054-1 MSD	EPA-PZ-2012-6A-FAL22	Dissolved	Water	3005A	

Analysis Batch: 747848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6010C	747354
680-224054-2	EPA-PZ-2012-6B-FAL22	Dissolved	Water	6010C	747354
680-224054-3	EPA-PZ-2012-7A-FAL22	Dissolved	Water	6010C	747354
680-224054-4	EPA-PZ-2012-7B-FAL22	Dissolved	Water	6010C	747354
680-224054-5	SHL-10-FAL22	Dissolved	Water	6010C	747354
680-224054-6	SHL-22-FAL22	Dissolved	Water	6010C	747354
680-224054-7	SHL-9-FAL22	Dissolved	Water	6010C	747354
680-224054-8	SHL-DUP02-FAL22	Dissolved	Water	6010C	747354
680-224054-9	SHL-DUP05-FAL22	Dissolved	Water	6010C	747354
680-224054-10	SHL-DUP10-FAL22	Dissolved	Water	6010C	747354
680-224054-11	SHM-10-05A-FAL22	Dissolved	Water	6010C	747354
680-224054-12	SHM-10-06A-FAL22	Dissolved	Water	6010C	747354
680-224054-13	SHM-93-22B-FAL22	Dissolved	Water	6010C	747354
680-224054-14	SHM-93-22C-FAL22	Dissolved	Water	6010C	747354
680-224054-15	SHP-01-36X-FAL22	Dissolved	Water	6010C	747354
680-224054-16	SHP-01-38A-FAL22	Dissolved	Water	6010C	747354
680-224054-17	SHP-2016-3A-FAL22	Dissolved	Water	6010C	747354
680-224054-18	SHP-2016-3B-FAL22	Dissolved	Water	6010C	747354

Metals (Continued)

Analysis Batch: 747848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-747354/1-A	Method Blank	Total Recoverable	Water	6010C	747354
LCS 680-747354/2-A	Lab Control Sample	Total Recoverable	Water	6010C	747354
680-224054-1 MS	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6010C	747354
680-224054-1 MSD	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6010C	747354

Analysis Batch: 747850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6020A	747356
680-224054-2	EPA-PZ-2012-6B-FAL22	Dissolved	Water	6020A	747356
680-224054-3	EPA-PZ-2012-7A-FAL22	Dissolved	Water	6020A	747356
680-224054-4	EPA-PZ-2012-7B-FAL22	Dissolved	Water	6020A	747356
680-224054-5	SHL-10-FAL22	Dissolved	Water	6020A	747356
680-224054-6	SHL-22-FAL22	Dissolved	Water	6020A	747356
680-224054-7	SHL-9-FAL22	Dissolved	Water	6020A	747356
680-224054-8	SHL-DUP02-FAL22	Dissolved	Water	6020A	747356
680-224054-9	SHL-DUP05-FAL22	Dissolved	Water	6020A	747356
680-224054-10	SHL-DUP10-FAL22	Dissolved	Water	6020A	747356
680-224054-11	SHM-10-05A-FAL22	Dissolved	Water	6020A	747356
680-224054-12	SHM-10-06A-FAL22	Dissolved	Water	6020A	747356
680-224054-13	SHM-93-22B-FAL22	Dissolved	Water	6020A	747356
680-224054-14	SHM-93-22C-FAL22	Dissolved	Water	6020A	747356
680-224054-15	SHP-01-36X-FAL22	Dissolved	Water	6020A	747356
680-224054-16	SHP-01-38A-FAL22	Dissolved	Water	6020A	747356
680-224054-17	SHP-2016-3A-FAL22	Dissolved	Water	6020A	747356
680-224054-18	SHP-2016-3B-FAL22	Dissolved	Water	6020A	747356
MB 680-747356/1-A	Method Blank	Total Recoverable	Water	6020A	747356
LCS 680-747356/2-A	Lab Control Sample	Total Recoverable	Water	6020A	747356
680-224054-1 MS	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6020A	747356
680-224054-1 MSD	EPA-PZ-2012-6A-FAL22	Dissolved	Water	6020A	747356

General Chemistry

Analysis Batch: 748600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Total/NA	Water	2320B-2011	
680-224054-2	EPA-PZ-2012-6B-FAL22	Total/NA	Water	2320B-2011	
680-224054-3	EPA-PZ-2012-7A-FAL22	Total/NA	Water	2320B-2011	
680-224054-4	EPA-PZ-2012-7B-FAL22	Total/NA	Water	2320B-2011	
680-224054-5	SHL-10-FAL22	Total/NA	Water	2320B-2011	
680-224054-6	SHL-22-FAL22	Total/NA	Water	2320B-2011	
680-224054-7	SHL-9-FAL22	Total/NA	Water	2320B-2011	
680-224054-8	SHL-DUP02-FAL22	Total/NA	Water	2320B-2011	
680-224054-9	SHL-DUP05-FAL22	Total/NA	Water	2320B-2011	
680-224054-10	SHL-DUP10-FAL22	Total/NA	Water	2320B-2011	
MB 680-748600/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-748600/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-748600/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-224054-2 DU	EPA-PZ-2012-6B-FAL22	Total/NA	Water	2320B-2011	
680-224054-7 DU	SHL-9-FAL22	Total/NA	Water	2320B-2011	

General Chemistry

Analysis Batch: 748603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-11	SHM-10-05A-FAL22	Total/NA	Water	2320B-2011	
MB 680-748603/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-748603/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-748603/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 748847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-12	SHM-10-06A-FAL22	Total/NA	Water	2320B-2011	
680-224054-13	SHM-93-22B-FAL22	Total/NA	Water	2320B-2011	
680-224054-14	SHM-93-22C-FAL22	Total/NA	Water	2320B-2011	
680-224054-15	SHP-01-36X-FAL22	Total/NA	Water	2320B-2011	
680-224054-16	SHP-01-38A-FAL22	Total/NA	Water	2320B-2011	
680-224054-17	SHP-2016-3A-FAL22	Total/NA	Water	2320B-2011	
680-224054-18	SHP-2016-3B-FAL22	Total/NA	Water	2320B-2011	
MB 680-748847/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-748847/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-748847/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
LLCS 680-748847/5	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 750329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-1	EPA-PZ-2012-6A-FAL22	Dissolved	Water	9060A	
680-224054-2	EPA-PZ-2012-6B-FAL22	Dissolved	Water	9060A	
680-224054-3	EPA-PZ-2012-7A-FAL22	Dissolved	Water	9060A	
680-224054-4	EPA-PZ-2012-7B-FAL22	Dissolved	Water	9060A	
680-224054-5	SHL-10-FAL22	Dissolved	Water	9060A	
680-224054-6	SHL-22-FAL22	Dissolved	Water	9060A	
680-224054-7	SHL-9-FAL22	Dissolved	Water	9060A	
680-224054-8	SHL-DUP02-FAL22	Dissolved	Water	9060A	
680-224054-9	SHL-DUP05-FAL22	Dissolved	Water	9060A	
680-224054-10	SHL-DUP10-FAL22	Dissolved	Water	9060A	
680-224054-11	SHM-10-05A-FAL22	Dissolved	Water	9060A	
680-224054-12	SHM-10-06A-FAL22	Dissolved	Water	9060A	
680-224054-13	SHM-93-22B-FAL22	Dissolved	Water	9060A	
680-224054-14	SHM-93-22C-FAL22	Dissolved	Water	9060A	
680-224054-15	SHP-01-36X-FAL22	Dissolved	Water	9060A	
680-224054-16	SHP-01-38A-FAL22	Dissolved	Water	9060A	
680-224054-17	SHP-2016-3A-FAL22	Dissolved	Water	9060A	
MB 680-750329/3	Method Blank	Dissolved	Water	9060A	
LCS 680-750329/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750329/5	Lab Control Sample Dup	Dissolved	Water	9060A	

Analysis Batch: 750346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224054-18	SHP-2016-3B-FAL22	Dissolved	Water	9060A	
MB 680-750346/3	Method Blank	Dissolved	Water	9060A	
LCS 680-750346/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750346/5	Lab Control Sample Dup	Dissolved	Water	9060A	
680-224054-18 MS	SHP-2016-3B-FAL22	Dissolved	Water	9060A	
680-224054-18 MSD	SHP-2016-3B-FAL22	Dissolved	Water	9060A	

Client Sample ID: EPA-PZ-2012-6A-FAL22

Lab Sample ID: 680-224054-1

Date Collected: 10/24/22 09:45

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 16:29	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 11:39	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:22	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 17:04	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 13:43	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-6B-FAL22

Lab Sample ID: 680-224054-2

Date Collected: 10/24/22 11:10

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 16:42	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 11:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:36	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 16:12	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 14:01	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-7A-FAL22

Lab Sample ID: 680-224054-3

Date Collected: 10/24/22 14:40

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 16:55	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 11:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:38	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: EPA-PZ-2012-7A-FAL22

Lab Sample ID: 680-224054-3

Date Collected: 10/24/22 14:40
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 16:46	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 14:17	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: EPA-PZ-2012-7B-FAL22

Lab Sample ID: 680-224054-4

Date Collected: 10/24/22 13:25
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 17:09	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:46	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 16:29	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 14:34	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-10-FAL22

Lab Sample ID: 680-224054-5

Date Collected: 10/24/22 11:17
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 17:22	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:10	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:49	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 16:55	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 14:50	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-22-FAL22

Lab Sample ID: 680-224054-6

Date Collected: 10/25/22 12:30

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 17:35	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:13	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:52	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 17:44	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 15:39	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-9-FAL22

Lab Sample ID: 680-224054-7

Date Collected: 10/25/22 14:55

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 17:49	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:16	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:55	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 18:16	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 15:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP02-FAL22

Lab Sample ID: 680-224054-8

Date Collected: 10/24/22 11:10

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 18:02	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:19	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 17:57	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: SHL-DUP02-FAL22

Lab Sample ID: 680-224054-8

Date Collected: 10/24/22 11:10
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 17:24	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 16:14	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP05-FAL22

Lab Sample ID: 680-224054-9

Date Collected: 10/25/22 13:50
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	750942	11/16/22 18:15	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:22	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:00	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 17:15	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 16:29	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP10-FAL22

Lab Sample ID: 680-224054-10

Date Collected: 10/25/22 10:52
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 11:03	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:25	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:03	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748600	11/02/22 17:33	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 16:49	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-05A-FAL22

Lab Sample ID: 680-224054-11

Date Collected: 10/24/22 13:56

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 11:16	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:28	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:05	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748603	11/03/22 02:22	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 17:07	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-10-06A-FAL22

Lab Sample ID: 680-224054-12

Date Collected: 10/24/22 11:45

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 11:56	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:31	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:14	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 21:41	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 17:25	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-93-22B-FAL22

Lab Sample ID: 680-224054-13

Date Collected: 10/25/22 13:35

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 12:09	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:34	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:16	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224054-1

Client Sample ID: SHM-93-22B-FAL22

Lab Sample ID: 680-224054-13

Date Collected: 10/25/22 13:35
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 21:52	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 17:40	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHM-93-22C-FAL22

Lab Sample ID: 680-224054-14

Date Collected: 10/25/22 11:30
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 12:23	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:37	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:19	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 22:02	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 18:07	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-01-36X-FAL22

Lab Sample ID: 680-224054-15

Date Collected: 10/25/22 13:17
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 12:36	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:46	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:22	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 21:32	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 18:23	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-01-38A-FAL22

Lab Sample ID: 680-224054-16

Date Collected: 10/25/22 10:52

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 12:49	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:49	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:24	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 21:24	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 19:16	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-3A-FAL22

Lab Sample ID: 680-224054-17

Date Collected: 10/24/22 13:25

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 13:03	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:52	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:27	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 22:21	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750329	11/10/22 19:34	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-3B-FAL22

Lab Sample ID: 680-224054-18

Date Collected: 10/24/22 14:20

Matrix: Water

Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751137	11/17/22 13:16	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747354	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6010C		1			747848	10/28/22 12:55	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747356	10/27/22 13:31	RR	EET SAV
Dissolved	Analysis	6020A		1			747850	10/28/22 18:30	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-3B-FAL22
Lab Sample ID: 680-224054-18
Date Collected: 10/24/22 14:20
Matrix: Water
Date Received: 10/26/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			748847	11/03/22 22:12	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 21:18	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224054-1
Project/Site: Serea-Arcadis JV, LTM, SHL, Fall 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code.	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.	46	9	9	5	3							Location ID	Type	Top	Bottom	Cooler	Comments
1	EPA-PZ-2012-1A-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-1A	N1	23 70	28 70	1	
2	EPA-PZ-2012-1B-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-1B	N1	73.56	78 56	1	
3	EPA-PZ-2012-2A-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-2A	N1	18 14	23 14	1	
4	EPA-PZ-2012-2B-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-2B	N1	73 16	78 16	1	
5	EPA-PZ-2012-3A-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-3A	N1	19 09	24 09	1	
6	EPA-PZ-2012-3B-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-3B	N1	68 70	73 70	1	
7	EPA-PZ-2012-4A-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-4A	N1	19.56	24.56	1	
8	EPA-PZ-2012-4B-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-4B	N1	79.50	84.50	1	
9	EPA-PZ-2012-5A-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-5A	N1	17 95	22.95	1	
10	EPA-PZ-2012-5B-FAL22	WG				X	X	X	X	X							EPA-PZ-2012-5B	N1	68.46	73.46	1	
11	EPA-PZ-2012-6A-FAL22	WG	10.24.22	945	DC	X	X	X	X	X							EPA-PZ-2012-6A	N1	24.19	29 19	1	
12	EPA-PZ-2012-6B-FAL22	WG	10.24.22	1110	DC	X	X	X	X	X							EPA-PZ-2012-6B	N1	74.23	79.23	1	
13	EPA-PZ-2012-7A-FAL22	WG	10.24.22	1440	DC	X	X	X	X	X							EPA-PZ-2012-7A	N1	23 87	28.87	1	
14	EPA-PZ-2012-7B-FAL22	WG	10.24.22	1325	DC	X	X	X	X	X							EPA-PZ-2012-7B	N1	58 82	63 82	1	
15	EW-01-FAL22	WG				X	X	X	X	X							EW-01	N1	60 00	85 00	1	
16	EW-04-FAL22	WG				X	X	X	X	X							EW-04	N1	70 00	95 00	1	
17	N5-P1-FAL22	WG				X	X	X	X	X							N5-P1	N1	95 50	97.50	1	
18	PZ-12-01-FAL22	WG				X	X	X	X	X							PZ-12-01	N1	24 00	34 00	1	
19	PZ-12-02-FAL22	WG				X	X	X	X	X							PZ-12-02	N1	24 00	34 00	1	
20	PZ-12-03-FAL22	WG				X	X	X	X	X							PZ-12-03	N1	24.00	34 00	1	

680-224054 Chain of Custody

Relinquished by: (Signature) Dana Hurley
Date 10/25/22
Time 16:15
Received by: (Signature)

1/25/22 17:0

Received by Laboratory: (Signature)
Date
Time

10/25 10:30
3.1 | 2.6
3.1 | 2.6

12/8/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)						Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.	46	9	9	5	3						Location ID	Type	Top	Bottom	Cooler	Comments
21	PZ-12-04-FAL22	WG				X	X	X	X	X						PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG				X	X	X	X	X						PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG				X	X	X	X	X						PZ-12-06	N1	25 00	35 00	1	
24	PZ-12-07-FAL22	WG				X	X	X	X	X						PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG				X	X	X	X	X						PZ-12-08	N1	22 00	32.00	1	
26	PZ-12-09-FAL22	WG				X	X	X	X	X						PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG				X	X	X	X	X						PZ-12-10	MS1	20 00	30 00	1	
28	PZ-12-10-FAL22	WG				X	X	X	X	X						PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG				X	X	X	X	X						PZ-12-10	SD1	20 00	30 00	1	
30	SHL-10-FAL22	WG	10.24.22	1117	SG	X	X	X	X	X						SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG				X	X	X	X	X						SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG				X	X	X	X	X						SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG				X	X	X	X	X						SHL-15	N1	14 00	24.00	1	
34	SHL-19-FAL22	WG				X	X	X	X	X						SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG				X	X	X	X	X						SHL-20	N1	39 00	49 00	1	
36	SHL-22-FAL22	WG	10 25 22	12:30	GS	X	X	X	X	X						SHL-22	N1	105 00	115 00	1	
37	SHL-23-FAL22	WG				X	X	X	X	X						SHL-23	N1	23 00	33 00	1	
38	SHL-24-FAL22	WG				X	X	X	X	X						SHL-24	N1	110 00	120 00	1	
39	SHL-3-FAL22	WG				X	X	X	X	X						SHL-3	N1	24 00	34 00	1	
40	SHL-4-FAL22	WG				X	X	X	X	X						SHL-4	N1	3 00	13 00	1	

Relinquished by: (Signature) Grace Shuttle
Date 10/25/22
Time 1615
Received by: (Signature)

10/25/22 1700

Received by Laboratory: (Signature) [signature] 10/25 10:30
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
							46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
41	SHL-5-FAL22	WG				X	X	X	X	X						SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG				X	X	X	X	X						SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG				X	X	X	X	X						SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG				X	X	X	X	X						SHL-8S	N1	52 00	54 00	1	
45	SHL-9-FAL22	WG	10.25.22	14.55	GS	X	X	X	X	X						SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG				X	X	X	X	X						EPA-PZ-2012-4B	FD1	79.50	84.50	1	
47	SHL-DUP02-FAL22	WG	10.24.22	1110	DC	X	X	X	X	X						EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG				X	X	X	X	X						PZ-12-06	FD1	25 00	35 00	1	
49	SHL-DUP04-FAL22	WG				X	X	X	X	X						SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG	10.25.22	13.50	GS	X	X	X	X	X						SHL-22	FD1	105.00	115 00	1	
51	SHL-DUP06-FAL22	WG				X	X	X	X	X						SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG				X	X	X	X	X						SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG				X	X	X	X	X						SHM-11-06	FD1	25 00	35 00	1	
54	SHL-DUP09-FAL22	WG				X	X	X	X	X						SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG	10.25.22	10:52	SG	X	X	X	X	X						SHP-01-38A	FD1	1 50	6.50	1	
56	SHL-DUP11-FAL22	WG				X	X	X	X	X						SHP-2016-07A	FD1	22 00	32 00	1	
57	SHM-05-39A-FAL22	WG				X	X	X	X	X						SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG				X	X	X	X	X						SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG				X	X	X	X	X						SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG				X	X	X	X	X						SHM-05-41A	N1	42 00	44 00	1	

Relinquished by: (Signature) Grace Shubb
Date 10/25/22
Time 16:15
Received by: (Signature)

Received by Laboratory: (Signature) 10/25 10:30
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Analytical Test Method

| | | |

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus.com	
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WG	Ground Water

Code	Container/Preservative
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5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
81	SHM-10-12-FAL22	WG					X	X	X	X	X						SHM-10-12	MS1	45 00	55 00	1	
82	SHM-10-12-FAL22	WG					X	X	X	X	X						SHM-10-12	N1	45 00	55 00	1	
83	SHM-10-12-FAL22	WG					X	X	X	X	X						SHM-10-12	SD1	45 00	55 00	1	
84	SHM-10-13-FAL22	WG					X	X	X	X	X						SHM-10-13	N1	60 00	70 00	1	
85	SHM-10-14-FAL22	WG					X	X	X	X	X						SHM-10-14	N1	60 00	80 00	1	
86	SHM-10-15-FAL22	WG					X	X	X	X	X						SHM-10-15	N1	45 00	55 00	1	
87	SHM-10-16-FAL22	WG					X	X	X	X	X						SHM-10-16	N1	75 00	85 00	1	
88	SHM-11-02-FAL22	WG					X	X	X	X	X						SHM-11-02	N1	52 00	66 00	1	
89	SHM-11-06-FAL22	WG					X	X	X	X	X						SHM-11-06	N1	25 00	35 00	1	
90	SHM-13-01-FAL22	WG					X	X	X	X	X						SHM-13-01	N1	39 00	49 00	1	
91	SHM-13-02-FAL22	WG					X	X	X	X	X						SHM-13-02	N1	60 00	70 00	1	
92	SHM-13-03-FAL22	WG					X	X	X	X	X						SHM-13-03	N1	42 00	52 00	1	
93	SHM-13-04-FAL22	WG					X	X	X	X	X						SHM-13-04	MS1	20 00	30 00	1	
94	SHM-13-04-FAL22	WG					X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG					X	X	X	X	X						SHM-13-04	SD1	20 00	30 00	1	
96	SHM-13-05-FAL22	WG					X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	
97	SHM-13-06-FAL22	WG					X	X	X	X	X						SHM-13-06	N1	36 00	46 00	1	
98	SHM-13-07-FAL22	WG					X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
99	SHM-13-08-FAL22	WG					X	X	X	X	X						SHM-13-08	N1	55 00	65 00	1	
100	SHM-13-14D-FAL22	WG					X	X	X	X	X						SHM-13-14D	N1	45 00	55 00	1	

10/25 10:30

Relinquished by: (Signature)
Date
Time
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top	Bottom	Cooler	Comments
	Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3											
101	SHM-13-14S-FAL22	WG					X	X	X	X	X						SHM-13-14S	N1	5.00	15 00	1	
102	SHM-13-15-FAL22	WG					X	X	X	X	X						SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG					X	X	X	X	X						SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG					X	X	X	X	X						SHM-93-18B	MS1	78 50	88.50	1	
105	SHM-93-18B-FAL22	WG					X	X	X	X	X						SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG					X	X	X	X	X						SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG	10.25.22	13:35	GS		X	X	X	X	X						SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG	10.25 22	11:30	GS		X	X	X	X	X						SHM-93-22C	N1	124 30	134 30	1	
109	SHM-93-24A-FAL22	WG					X	X	X	X	X						SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG					X	X	X	X	X						SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG					X	X	X	X	X						SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG					X	X	X	X	X						SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG					X	X	X	X	X						SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG					X	X	X	X	X						SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG					X	X	X	X	X						SHM-99-32X	N1	72 00	82 00	1	
116	SHP-01-36X-FAL22	WG	10 25 22	13.17	SG		X	X	X	X	X						SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG					X	X	X	X	X						SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG	10/25/22	10:52	SG		X	X	X	X	X						SHP-01-38A	N1	1.50	6.50	1	
119	SHP-2016-06A-FAL22	WG					X	X	X	X	X						SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG					X	X	X	X	X						SHP-2016-06B	N1	102.00	112.00	1	

Relinquished by: (Signature) [signature]
Date 10/25/22
Time 16:15
Received by: (Signature) [signature]

[signature] 10/25/22 11:30
Received by Laboratory (Signature)
Date
Time

[signature] 10/25 10:20

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL, Fall 2022
Project Number: 30130800	POC Jerry Lanier 912-250-0281, jerry.lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue Savannah, GA 31404	

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SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
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Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
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5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
					Analytical Test Method	46	9	9	5	3						
121	SHP-2016-06C-FAL22	WG				X	X	X	X	X	SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG				X	X	X	X	X	SHP-2016-07A	N1	22 00	32 00	1	
123	SHP-2016-07B-FAL22	WG				X	X	X	X	X	SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG				X	X	X	X	X	SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG				X	X	X	X	X	SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG				X	X	X	X	X	SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG				X	X	X	X	X	SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG	10.24.22	1325	GS	X	X	X	X	X	SHP-2016-3A	N1	20 00	25.00	1	
129	SHP-2016-3B-FAL22	WG	10.24-22	1420	GS	X	X	X	X	X	SHP-2016-3B	N1	80 00	85.00	1	
130	SHP-2016-4A-FAL22	WG				X	X	X	X	X	SHP-2016-4A	N1	25 00	30 00	1	
131	SHP-2016-4B-FAL22	WG				X	X	X	X	X	SHP-2016-4B	N1	85 00	90 00	1	
132	SHP-2016-5A-FAL22	WG				X	X	X	X	X	SHP-2016-5A	N1	25 00	30 00	1	
133	SHP-2016-5B-FAL22	WG				X	X	X	X	X	SHP-2016-5B	N1	85 00	90 00	1	
134	SHP-99-29X-FAL22	WG				X	X	X	X	X	SHP-99-29X	N1	19 00	29 00	1	
135																
136																
137																
138																
139																

Turnaround Time. Standard

Relinquished by: (Signature) [signature] 10/25/22 1700
Date 10/25/22
Time 1615
Received by: (Signature) [signature]

Received by Laboratory (Signature) [signature] 10/25 10:30
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-224054-1

Login Number: 224054
List Number: 1
Creator: Padayao, Abigail

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 12/8/2022 1:11:42 PM Revision 1

JOB DESCRIPTION

Seres-Arcadis JV, LTM, SHL, Fall 2022

JOB NUMBER

680-224164-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-224164-1	SHL-23-FAL22	Water	10/26/22 14:30	10/27/22 10:30
680-224164-2	SHL-DUP07-FAL22	Water	10/26/22 09:55	10/27/22 10:30
680-224164-3	SHM-05-39B-FAL22	Water	10/26/22 14:45	10/27/22 10:30
680-224164-4	SHM-05-40X-FAL22	Water	10/26/22 09:50	10/27/22 10:30
680-224164-5	SHM-07-05X-FAL22	Water	10/26/22 12:40	10/27/22 10:30
680-224164-6	SHM-13-01-FAL22	Water	10/26/22 14:36	10/27/22 10:30
680-224164-7	SHM-13-02-FAL22	Water	10/26/22 12:17	10/27/22 10:30
680-224164-8	SHP-01-37X-FAL22	Water	10/26/22 10:15	10/27/22 10:30
680-224164-9	SHP-2016-06A-FAL22	Water	10/26/22 10:00	10/27/22 10:30
680-224164-10	SHP-2016-06B-FAL22	Water	10/26/22 12:00	10/27/22 10:30
680-224164-11	SHP-2016-06C-FAL22	Water	10/26/22 13:25	10/27/22 10:30
680-224164-12	SHL-RB01-FAL22	Water	10/26/22 10:30	10/27/22 10:30

Job ID: 680-224164-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-224164-1

REVISION

The report being provided is a revision of the original report sent on 11/27/2022. The report (revision 1) is being revised due to DOC results 1-4 need to be removed for the EDD. Also the LOQ an LOD limits were elevated so LOQ>LOD>DL..

Report revision history

Receipt
The samples were received on 10/27/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.2°C and 1.9°C

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-23-FAL22
Lab Sample ID: 680-224164-1
Date Collected: 10/26/22 14:30
Matrix: Water
Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**3.8**		0.50	0.50	0.20	mg/L		11/21/22 16:40	1
Sulfate	**4.9**		1.0	1.0	0.40	mg/L		11/21/22 16:40	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/01/22 02:57	1
Manganese	**12**		10	5.0	1.3	ug/L		11/01/22 02:57	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/31/22 20:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**5.2**		5.0	5.0	2.2	mg/L		11/05/22 20:20	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.6**		1.5	1.0	0.50	mg/L		11/11/22 22:11	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHL-DUP07-FAL22

Date Collected: 10/26/22 09:55
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	17		0.50	0.50	0.20	mg/L		11/21/22 16:53	1
Sulfate	4.1		1.0	1.0	0.40	mg/L		11/21/22 16:53	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	30000		100	50	20	ug/L		11/01/22 03:13	1
Manganese	890		10	5.0	1.3	ug/L		11/01/22 03:13	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2300		5.0	3.0	0.86	ug/L		10/31/22 20:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		11/05/22 20:13	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.5	1.0	0.50	mg/L		11/15/22 19:34	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHM-05-39B-FAL22

Date Collected: 10/26/22 14:45
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	150	D	1.0	1.0	0.40	mg/L		11/21/22 17:48	2
Sulfate	6.8	D M	2.0	2.0	0.80	mg/L		11/21/22 17:48	2

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	18000		100	50	20	ug/L		11/01/22 03:16	1
Manganese	810		10	5.0	1.3	ug/L		11/01/22 03:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	440		5.0	3.0	0.86	ug/L		10/31/22 20:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	50		5.0	5.0	2.2	mg/L		11/05/22 21:05	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.5		1.5	1.0	0.50	mg/L		11/15/22 20:01	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHM-05-40X-FAL22

Date Collected: 10/26/22 09:50
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	17		0.50	0.50	0.20	mg/L		11/21/22 18:00	1
Sulfate	4.4	M	1.0	1.0	0.40	mg/L		11/21/22 18:00	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	29000		100	50	20	ug/L		11/01/22 03:19	1
Manganese	880		10	5.0	1.3	ug/L		11/01/22 03:19	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2200		5.0	3.0	0.86	ug/L		10/31/22 20:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	150		5.0	5.0	2.2	mg/L		11/05/22 20:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.7		1.5	1.0	0.50	mg/L		11/15/22 20:25	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-07-05X-FAL22
Lab Sample ID: 680-224164-5

Date Collected: 10/26/22 12:40
Matrix: Water
Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	37	D	2.5	2.5	1.0	mg/L		11/21/22 18:13	5
Sulfate	7.8	D M	5.0	5.0	2.0	mg/L		11/21/22 18:13	5

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	740		100	50	20	ug/L		11/01/22 03:28	1
Manganese	200		10	5.0	1.3	ug/L		11/01/22 03:28	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	60		5.0	3.0	0.86	ug/L		10/31/22 20:45	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	26		5.0	5.0	2.2	mg/L		11/05/22 20:47	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	13		1.5	1.0	0.50	mg/L		11/15/22 21:32	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHM-13-01-FAL22

Date Collected: 10/26/22 14:36
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	83	D M	1.0	1.0	0.40	mg/L		11/21/22 18:25	2
Sulfate	12	D	2.0	2.0	0.80	mg/L		11/21/22 18:25	2

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	130		100	50	20	ug/L		11/01/22 03:31	1
Manganese	2.4	J	10	5.0	1.3	ug/L		11/01/22 03:31	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.2	J	5.0	3.0	0.86	ug/L		10/31/22 20:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	23		5.0	5.0	2.2	mg/L		11/05/22 20:56	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	0.74	J	1.5	1.0	0.50	mg/L		11/15/22 21:57	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-13-02-FAL22
Lab Sample ID: 680-224164-7
Date Collected: 10/26/22 12:17
Matrix: Water
Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**42**	**M**	0.50	0.50	0.20	mg/L		11/21/22 18:38	1
Sulfate	**6.6**		1.0	1.0	0.40	mg/L		11/21/22 18:38	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/01/22 03:34	1
Manganese	**2500**		10	5.0	1.3	ug/L		11/01/22 03:34	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/31/22 20:50	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**100**		5.0	5.0	2.2	mg/L		11/05/22 21:14	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.5**		1.5	1.0	0.50	mg/L		11/11/22 22:27	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHP-01-37X-FAL22

Date Collected: 10/26/22 10:15
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	85		0.50	0.50	0.20	mg/L		11/21/22 18:50	1
Sulfate	14		1.0	1.0	0.40	mg/L		11/21/22 18:50	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	670		100	50	20	ug/L		11/01/22 03:37	1
Manganese	55		10	5.0	1.3	ug/L		11/01/22 03:37	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	5.0		5.0	3.0	0.86	ug/L		10/31/22 20:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	30		5.0	5.0	2.2	mg/L		11/05/22 20:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	5.3		1.5	1.0	0.50	mg/L		11/11/22 22:45	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHP-2016-06A-FAL22

Date Collected: 10/26/22 10:00
Date Received: 10/27/22 10:30

Lab Sample ID: 680-224164-9

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	5.6		0.50	0.50	0.20	mg/L		11/21/22 19:02	1
Sulfate	70		1.0	1.0	0.40	mg/L		11/21/22 19:02	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1200		100	50	20	ug/L		11/01/22 03:40	1
Manganese	1400		10	5.0	1.3	ug/L		11/01/22 03:40	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1900		5.0	3.0	0.86	ug/L		10/31/22 20:56	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	140		5.0	5.0	2.2	mg/L		11/06/22 16:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	7.8		1.5	1.0	0.50	mg/L		11/11/22 23:01	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-06B-FAL22
Lab Sample ID: 680-224164-10

Date Collected: 10/26/22 12:00
Matrix: Water
Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.5		0.50	0.50	0.20	mg/L		11/21/22 19:15	1
Sulfate	19		1.0	1.0	0.40	mg/L		11/21/22 19:15	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	140		100	50	20	ug/L		11/01/22 03:43	1
Manganese	210		10	5.0	1.3	ug/L		11/01/22 03:43	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	290		5.0	3.0	0.86	ug/L		10/31/22 20:58	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	130		5.0	5.0	2.2	mg/L		11/06/22 16:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.6		1.5	1.0	0.50	mg/L		11/11/22 23:20	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHP-2016-06C-FAL22

Lab Sample ID: 680-224164-11

Date Collected: 10/26/22 13:25

Matrix: Water

Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	1.4		0.50	0.50	0.20	mg/L		11/21/22 19:27	1
Sulfate	13		1.0	1.0	0.40	mg/L		11/21/22 19:27	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	150		100	50	20	ug/L		11/01/22 03:46	1
Manganese	180		10	5.0	1.3	ug/L		11/01/22 03:46	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	380		5.0	3.0	0.86	ug/L		10/31/22 21:01	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	110		5.0	5.0	2.2	mg/L		11/06/22 16:59	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	1.2	J	1.5	1.0	0.50	mg/L		11/11/22 23:38	1

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHL-RB01-FAL22
Lab Sample ID: 680-224164-12
Date Collected: 10/26/22 10:30
Matrix: Water
Date Received: 10/27/22 10:30

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/22/22 14:14	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/22/22 14:14	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/01/22 03:49	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/01/22 03:49	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/31/22 21:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	2.2	mg/L		11/06/22 16:50	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.9**		1.5	1.0	0.50	mg/L		11/11/22 23:56	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-751641/2
Matrix: Water
Analysis Batch: 751641

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/21/22 07:12	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/21/22 07:12	1

Lab Sample ID: LCS 680-751641/4
Matrix: Water
Analysis Batch: 751641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.99	M	mg/L		100	87 - 111
Sulfate	10.0	10.2		mg/L		102	87 - 112

Lab Sample ID: LCSD 680-751641/5
Matrix: Water
Analysis Batch: 751641

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1	M	mg/L		101	87 - 111	1	15
Sulfate	10.0	10.4		mg/L		104	87 - 112	1	15

Lab Sample ID: MB 680-751715/33
Matrix: Water
Analysis Batch: 751715

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/21/22 14:53	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/21/22 14:53	1

Lab Sample ID: LCS 680-751715/36
Matrix: Water
Analysis Batch: 751715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	10.3		mg/L		103	87 - 112

Lab Sample ID: LCSD 680-751715/37
Matrix: Water
Analysis Batch: 751715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	87 - 111	0	15
Sulfate	10.0	10.7		mg/L		107	87 - 112	4	15

Lab Sample ID: MB 680-751886/2
Matrix: Water
Analysis Batch: 751886

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/22/22 11:03	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/22/22 11:03	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCS 680-751886/4
Matrix: Water
Analysis Batch: 751886

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.1		mg/L		101	87 - 111
Sulfate	10.0	10.7	M	mg/L		107	87 - 112

Lab Sample ID: LCSD 680-751886/5
Matrix: Water
Analysis Batch: 751886

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	87 - 111	0	15
Sulfate	10.0	10.8	M	mg/L		108	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-747580/1-A
Matrix: Water
Analysis Batch: 748082

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 747580

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/01/22 02:51	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/01/22 02:51	1

Lab Sample ID: LCS 680-747580/2-A
Matrix: Water
Analysis Batch: 748082

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 747580

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5030		ug/L		101	87 - 115
Manganese	400	408		ug/L		102	90 - 114

Lab Sample ID: 680-224164-1 MS
Matrix: Water
Analysis Batch: 748082

Client Sample ID: SHL-23-FAL22
Prep Type: Dissolved
Prep Batch: 747580

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	4850		ug/L		97	87 - 115
Manganese	12		400	406		ug/L		98	90 - 114

Lab Sample ID: 680-224164-1 MSD
Matrix: Water
Analysis Batch: 748082

Client Sample ID: SHL-23-FAL22
Prep Type: Dissolved
Prep Batch: 747580

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	5210		ug/L		104	87 - 115	7	20
Manganese	12		400	436		ug/L		106	90 - 114	7	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-747583/1-A
Matrix: Water
Analysis Batch: 748115

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 747583

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/31/22 20:12	1

Lab Sample ID: LCS 680-747583/2-A
Matrix: Water
Analysis Batch: 748115

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 747583

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	102		ug/L		102	84 - 116

Lab Sample ID: 680-224164-1 MS
Matrix: Water
Analysis Batch: 748115

Client Sample ID: SHL-23-FAL22
Prep Type: Dissolved
Prep Batch: 747583

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	3.0	U	100	104		ug/L		104	84 - 116

Lab Sample ID: 680-224164-1 MSD
Matrix: Water
Analysis Batch: 748115

Client Sample ID: SHL-23-FAL22
Prep Type: Dissolved
Prep Batch: 747583

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	106		ug/L		106	84 - 116	2	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-749183/4
Matrix: Water
Analysis Batch: 749183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/05/22 17:32	1

Lab Sample ID: LCS 680-749183/6
Matrix: Water
Analysis Batch: 749183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	248		mg/L		99	90 - 112

Lab Sample ID: LCSD 680-749183/31
Matrix: Water
Analysis Batch: 749183

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	248		mg/L		99	90 - 112	0	30

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: MB 680-749283/4
Matrix: Water
Analysis Batch: 749283

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/06/22 15:55	1

Lab Sample ID: LCS 680-749283/6
Matrix: Water
Analysis Batch: 749283

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	245		mg/L		98	90 - 112

Lab Sample ID: LCSD 680-749283/31
Matrix: Water
Analysis Batch: 749283

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	251		mg/L		100	90 - 112	2	30

Lab Sample ID: 680-224164-10 DU
Matrix: Water
Analysis Batch: 749283

Client Sample ID: SHP-2016-06B-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	130		126		mg/L		5	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-750346/3
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/11/22 20:11	1

Lab Sample ID: LCS 680-750346/4
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	20.3		mg/L		101	80 - 120

Lab Sample ID: LCSD 680-750346/5
Matrix: Water
Analysis Batch: 750346

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	20.3		mg/L		101	80 - 120	0	20

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: MB 680-750961/4
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/15/22 15:14	1

Lab Sample ID: LCS 680-750961/5
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	19.5		mg/L		97	80 - 120		

Lab Sample ID: LCSD 680-750961/6
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.7		mg/L		99	80 - 120	1	20

HPLC/IC

Analysis Batch: 751641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-3	SHM-05-39B-FAL22	Total/NA	Water	9056A	
680-224164-4	SHM-05-40X-FAL22	Total/NA	Water	9056A	
680-224164-5	SHM-07-05X-FAL22	Total/NA	Water	9056A	
680-224164-6	SHM-13-01-FAL22	Total/NA	Water	9056A	
680-224164-7	SHM-13-02-FAL22	Total/NA	Water	9056A	
680-224164-8	SHP-01-37X-FAL22	Total/NA	Water	9056A	
680-224164-9	SHP-2016-06A-FAL22	Total/NA	Water	9056A	
680-224164-10	SHP-2016-06B-FAL22	Total/NA	Water	9056A	
680-224164-11	SHP-2016-06C-FAL22	Total/NA	Water	9056A	
MB 680-751641/2	Method Blank	Total/NA	Water	9056A	
LCS 680-751641/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-751641/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 751715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Total/NA	Water	9056A	
680-224164-2	SHL-DUP07-FAL22	Total/NA	Water	9056A	
MB 680-751715/33	Method Blank	Total/NA	Water	9056A	
LCS 680-751715/36	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-751715/37	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 751886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-12	SHL-RB01-FAL22	Total/NA	Water	9056A	
MB 680-751886/2	Method Blank	Total/NA	Water	9056A	
LCS 680-751886/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-751886/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 747580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Dissolved	Water	3005A	
680-224164-2	SHL-DUP07-FAL22	Dissolved	Water	3005A	
680-224164-3	SHM-05-39B-FAL22	Dissolved	Water	3005A	
680-224164-4	SHM-05-40X-FAL22	Dissolved	Water	3005A	
680-224164-5	SHM-07-05X-FAL22	Dissolved	Water	3005A	
680-224164-6	SHM-13-01-FAL22	Dissolved	Water	3005A	
680-224164-7	SHM-13-02-FAL22	Dissolved	Water	3005A	
680-224164-8	SHP-01-37X-FAL22	Dissolved	Water	3005A	
680-224164-9	SHP-2016-06A-FAL22	Dissolved	Water	3005A	
680-224164-10	SHP-2016-06B-FAL22	Dissolved	Water	3005A	
680-224164-11	SHP-2016-06C-FAL22	Dissolved	Water	3005A	
680-224164-12	SHL-RB01-FAL22	Dissolved	Water	3005A	
MB 680-747580/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-747580/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224164-1 MS	SHL-23-FAL22	Dissolved	Water	3005A	
680-224164-1 MSD	SHL-23-FAL22	Dissolved	Water	3005A	

Metals

Prep Batch: 747583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Dissolved	Water	3005A	
680-224164-2	SHL-DUP07-FAL22	Dissolved	Water	3005A	
680-224164-3	SHM-05-39B-FAL22	Dissolved	Water	3005A	
680-224164-4	SHM-05-40X-FAL22	Dissolved	Water	3005A	
680-224164-5	SHM-07-05X-FAL22	Dissolved	Water	3005A	
680-224164-6	SHM-13-01-FAL22	Dissolved	Water	3005A	
680-224164-7	SHM-13-02-FAL22	Dissolved	Water	3005A	
680-224164-8	SHP-01-37X-FAL22	Dissolved	Water	3005A	
680-224164-9	SHP-2016-06A-FAL22	Dissolved	Water	3005A	
680-224164-10	SHP-2016-06B-FAL22	Dissolved	Water	3005A	
680-224164-11	SHP-2016-06C-FAL22	Dissolved	Water	3005A	
680-224164-12	SHL-RB01-FAL22	Dissolved	Water	3005A	
MB 680-747583/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-747583/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224164-1 MS	SHL-23-FAL22	Dissolved	Water	3005A	
680-224164-1 MSD	SHL-23-FAL22	Dissolved	Water	3005A	

Analysis Batch: 748082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Dissolved	Water	6010C	747580
680-224164-2	SHL-DUP07-FAL22	Dissolved	Water	6010C	747580
680-224164-3	SHM-05-39B-FAL22	Dissolved	Water	6010C	747580
680-224164-4	SHM-05-40X-FAL22	Dissolved	Water	6010C	747580
680-224164-5	SHM-07-05X-FAL22	Dissolved	Water	6010C	747580
680-224164-6	SHM-13-01-FAL22	Dissolved	Water	6010C	747580
680-224164-7	SHM-13-02-FAL22	Dissolved	Water	6010C	747580
680-224164-8	SHP-01-37X-FAL22	Dissolved	Water	6010C	747580
680-224164-9	SHP-2016-06A-FAL22	Dissolved	Water	6010C	747580
680-224164-10	SHP-2016-06B-FAL22	Dissolved	Water	6010C	747580
680-224164-11	SHP-2016-06C-FAL22	Dissolved	Water	6010C	747580
680-224164-12	SHL-RB01-FAL22	Dissolved	Water	6010C	747580
MB 680-747580/1-A	Method Blank	Total Recoverable	Water	6010C	747580
LCS 680-747580/2-A	Lab Control Sample	Total Recoverable	Water	6010C	747580
680-224164-1 MS	SHL-23-FAL22	Dissolved	Water	6010C	747580
680-224164-1 MSD	SHL-23-FAL22	Dissolved	Water	6010C	747580

Analysis Batch: 748115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Dissolved	Water	6020A	747583
680-224164-2	SHL-DUP07-FAL22	Dissolved	Water	6020A	747583
680-224164-3	SHM-05-39B-FAL22	Dissolved	Water	6020A	747583
680-224164-4	SHM-05-40X-FAL22	Dissolved	Water	6020A	747583
680-224164-5	SHM-07-05X-FAL22	Dissolved	Water	6020A	747583
680-224164-6	SHM-13-01-FAL22	Dissolved	Water	6020A	747583
680-224164-7	SHM-13-02-FAL22	Dissolved	Water	6020A	747583
680-224164-8	SHP-01-37X-FAL22	Dissolved	Water	6020A	747583
680-224164-9	SHP-2016-06A-FAL22	Dissolved	Water	6020A	747583
680-224164-10	SHP-2016-06B-FAL22	Dissolved	Water	6020A	747583
680-224164-11	SHP-2016-06C-FAL22	Dissolved	Water	6020A	747583
680-224164-12	SHL-RB01-FAL22	Dissolved	Water	6020A	747583
MB 680-747583/1-A	Method Blank	Total Recoverable	Water	6020A	747583

Metals (Continued)

Analysis Batch: 748115 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-747583/2-A	Lab Control Sample	Total Recoverable	Water	6020A	747583
680-224164-1 MS	SHL-23-FAL22	Dissolved	Water	6020A	747583
680-224164-1 MSD	SHL-23-FAL22	Dissolved	Water	6020A	747583

General Chemistry

Analysis Batch: 749183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Total/NA	Water	2320B-2011	
680-224164-2	SHL-DUP07-FAL22	Total/NA	Water	2320B-2011	
680-224164-3	SHM-05-39B-FAL22	Total/NA	Water	2320B-2011	
680-224164-4	SHM-05-40X-FAL22	Total/NA	Water	2320B-2011	
680-224164-5	SHM-07-05X-FAL22	Total/NA	Water	2320B-2011	
680-224164-6	SHM-13-01-FAL22	Total/NA	Water	2320B-2011	
680-224164-7	SHM-13-02-FAL22	Total/NA	Water	2320B-2011	
680-224164-8	SHP-01-37X-FAL22	Total/NA	Water	2320B-2011	
MB 680-749183/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-749183/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-749183/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 749283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-9	SHP-2016-06A-FAL22	Total/NA	Water	2320B-2011	
680-224164-10	SHP-2016-06B-FAL22	Total/NA	Water	2320B-2011	
680-224164-11	SHP-2016-06C-FAL22	Total/NA	Water	2320B-2011	
680-224164-12	SHL-RB01-FAL22	Total/NA	Water	2320B-2011	
MB 680-749283/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-749283/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-749283/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-224164-10 DU	SHP-2016-06B-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 750346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-1	SHL-23-FAL22	Dissolved	Water	9060A	
680-224164-7	SHM-13-02-FAL22	Dissolved	Water	9060A	
680-224164-8	SHP-01-37X-FAL22	Dissolved	Water	9060A	
680-224164-9	SHP-2016-06A-FAL22	Dissolved	Water	9060A	
680-224164-10	SHP-2016-06B-FAL22	Dissolved	Water	9060A	
680-224164-11	SHP-2016-06C-FAL22	Dissolved	Water	9060A	
680-224164-12	SHL-RB01-FAL22	Dissolved	Water	9060A	
MB 680-750346/3	Method Blank	Dissolved	Water	9060A	
LCS 680-750346/4	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750346/5	Lab Control Sample Dup	Dissolved	Water	9060A	

Analysis Batch: 750961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224164-2	SHL-DUP07-FAL22	Dissolved	Water	9060A	
680-224164-3	SHM-05-39B-FAL22	Dissolved	Water	9060A	
680-224164-4	SHM-05-40X-FAL22	Dissolved	Water	9060A	
680-224164-5	SHM-07-05X-FAL22	Dissolved	Water	9060A	
680-224164-6	SHM-13-01-FAL22	Dissolved	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 750961 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-750961/4	Method Blank	Dissolved	Water	9060A	
LCS 680-750961/5	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750961/6	Lab Control Sample Dup	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHL-23-FAL22

Lab Sample ID: 680-224164-1
Date Collected: 10/26/22 14:30
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751715	11/21/22 16:40	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 02:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:17	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:20	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 22:11	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-DUP07-FAL22

Lab Sample ID: 680-224164-2
Date Collected: 10/26/22 09:55
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751715	11/21/22 16:53	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:13	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:31	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:13	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 19:34	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-05-39B-FAL22

Lab Sample ID: 680-224164-3
Date Collected: 10/26/22 14:45
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		2	5 mL	5 mL	751641	11/21/22 17:48	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:16	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:34	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHM-05-39B-FAL22

Lab Sample ID: 680-224164-3
Date Collected: 10/26/22 14:45
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 21:05	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 20:01	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-05-40X-FAL22

Lab Sample ID: 680-224164-4
Date Collected: 10/26/22 09:50
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 18:00	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:19	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:36	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:38	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 20:25	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-07-05X-FAL22

Lab Sample ID: 680-224164-5
Date Collected: 10/26/22 12:40
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	751641	11/21/22 18:13	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:28	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:45	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:47	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 21:32	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-01-FAL22

Lab Sample ID: 680-224164-6

Date Collected: 10/26/22 14:36

Matrix: Water

Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		2	5 mL	5 mL	751641	11/21/22 18:25	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:31	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:47	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:56	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 21:57	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-02-FAL22

Lab Sample ID: 680-224164-7

Date Collected: 10/26/22 12:17

Matrix: Water

Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 18:38	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:34	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:50	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 21:14	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 22:27	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-01-37X-FAL22

Lab Sample ID: 680-224164-8

Date Collected: 10/26/22 10:15

Matrix: Water

Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 18:50	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:37	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:53	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Client Sample ID: SHP-01-37X-FAL22

Lab Sample ID: 680-224164-8
Date Collected: 10/26/22 10:15
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			749183	11/05/22 20:29	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 22:45	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-06A-FAL22

Lab Sample ID: 680-224164-9
Date Collected: 10/26/22 10:00
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 19:02	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:40	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:56	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749283	11/06/22 16:44	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 23:01	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHP-2016-06B-FAL22

Lab Sample ID: 680-224164-10
Date Collected: 10/26/22 12:00
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 19:15	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:43	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 20:58	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749283	11/06/22 16:24	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 23:20	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHP-2016-06C-FAL22
Lab Sample ID: 680-224164-11
Date Collected: 10/26/22 13:25
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751641	11/21/22 19:27	UI	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:46	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 21:01	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749283	11/06/22 16:59	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 23:38	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: SHL-RB01-FAL22
Lab Sample ID: 680-224164-12
Date Collected: 10/26/22 10:30
Matrix: Water
Date Received: 10/27/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	751886	11/22/22 14:14	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	747580	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6010C		1			748082	11/01/22 03:49	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	747583	10/28/22 12:15	RR	EET SAV
Dissolved	Analysis	6020A		1			748115	10/31/22 21:04	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			749283	11/06/22 16:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750346	11/11/22 23:56	JU	EET SAV
	Instrument ID: TOC8									

Laboratory References:
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224164-1
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224164-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281 jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
					Analytical Test Method	46	9	9	5	3						
21	PZ-12-04-FAL22	WG				X	X	X	X	X	PZ-12-04	N1	24 00	34 00	1	
22	PZ-12-05-FAL22	WG				X	X	X	X	X	PZ-12-05	N1	26 00	36 00	1	
23	PZ-12-06-FAL22	WG				X	X	X	X	X	PZ-12-06	N1	25 00	35 00	1	
24	PZ-12-07-FAL22	WG				X	X	X	X	X	PZ-12-07	N1	20 00	30 00	1	
25	PZ-12-08-FAL22	WG				X	X	X	X	X	PZ-12-08	N1	22 00	32.00	1	
26	PZ-12-09-FAL22	WG				X	X	X	X	X	PZ-12-09	N1	20 00	30 00	1	
27	PZ-12-10-FAL22	WG				X	X	X	X	X	PZ-12-10	MS1	20 00	30 00	1	
28	PZ-12-10-FAL22	WG				X	X	X	X	X	PZ-12-10	N1	20 00	30 00	1	
29	PZ-12-10-FAL22	WG				X	X	X	X	X	PZ-12-10	SD1	20 00	30 00	1	
30	SHL-10-FAL22	WG				X	X	X	X	X	SHL-10	N1	24 00	39 00	1	
31	SHL-11-FAL22	WG				X	X	X	X	X	SHL-11	N1	12 00	27 00	1	
32	SHL-12-FAL22	WG				X	X	X	X	X	SHL-12	N1	15 00	30 00	1	
33	SHL-15-FAL22	WG				X	X	X	X	X	SHL-15	N1	14 00	24 00	1	
34	SHL-19-FAL22	WG				X	X	X	X	X	SHL-19	N1	20 00	30 00	1	
35	SHL-20-FAL22	WG				X	X	X	X	X	SHL-20	N1	39 00			
36	SHL-22-FAL22	WG				X	X	X	X	X	SHL-22	N1	105 00			
37	SHL-23-FAL22	WG	10.26.22	1430	DC	X	X	X	X	X	SHL-23	N1	23 00			
38	SHL-24-FAL22	WG				X	X	X	X	X	SHL-24	N1	110 00			
39	SHL-3-FAL22	WG				X	X	X	X	X	SHL-3	N1	24 00			
40	SHL-4-FAL22	WG				X	X	X	X	X	SHL-4	N1	3 00			

680-224164 Chain of Custody

Relinquished by: (Signature) [signature]
Date 10/26/22
Time 16:20
Received by: (Signature) [signature]

[signature] 10/26/22 1700

Received by Laboratory: (Signature) [signature] JA 10.27.22 1030
Date
Time

1.9/1.9 1.2/1.2

12/8/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374 jennifer.singer@arcadis com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
41	SHL-5-FAL22	WG					X	X	X	X	X					SHL-5	N1	3 00	13 00	1	
42	SHL-7-FAL22	WG					X	X	X	X	X					SHL-7	N1	11 00	21 00	1	
43	SHL-8D-FAL22	WG					X	X	X	X	X					SHL-8D	N1	68 00	70 00	1	
44	SHL-8S-FAL22	WG					X	X	X	X	X					SHL-8S	N1	52 00	54.00	1	
45	SHL-9-FAL22	WG					X	X	X	X	X					SHL-9	N1	15 00	25 00	1	
46	SHL-DUP01-FAL22	WG					X	X	X	X	X					EPA-PZ-2012-4B	FD1	79 50	84.50	1	
47	SHL-DUP02-FAL22	WG					X	X	X	X	X					EPA-PZ-2012-6B	FD1	74.23	79.23	1	
48	SHL-DUP03-FAL22	WG					X	X	X	X	X					PZ-12-06	FD1	25 00	35 00	1	
49	SHL-DUP04-FAL22	WG					X	X	X	X	X					SHL-20	FD1	39 00	49 00	1	
50	SHL-DUP05-FAL22	WG					X	X	X	X	X					SHL-22	FD1	105 00	115 00	1	
51	SHL-DUP06-FAL22	WG					X	X	X	X	X					SHL-24	FD1	110 00	120 00	1	
52	SHL-DUP07-FAL22	WG	10/26/22	955	GS		X	X	X	X	X					SHM-05-40X	FD1	32 00	34 00	1	
53	SHL-DUP08-FAL22	WG					X	X	X	X	X					SHM-11-06	FD1	25 00	35.00	1	
54	SHL-DUP09-FAL22	WG					X	X	X	X	X					SHM-96-5B	FD1	80 00	90 00	1	
55	SHL-DUP10-FAL22	WG					X	X	X	X	X					SHP-01-38A	FD1	1.50	6 50	1	
56	SHL-DUP11-FAL22	WG					X	X	X	X	X					SHP-2016-07A	FD1	22 00	32 00	1	
57	SHM-05-39A-FAL22	WG					X	X	X	X	X					SHM-05-39A	N1	37 00	39 00	1	
58	SHM-05-39B-FAL22	WG	10.26.22	1445	GS		X	X	X	X	X					SHM-05-39B	N1	66 00	68 00	1	
59	SHM-05-40X-FAL22	WG	10/26/22	950	GS		X	X	X	X	X					SHM-05-40X	N1	32 00	34 00	1	
60	SHM-05-41A-FAL22	WG					X	X	X	X	X					SHM-05-41A	N1	42 00	44 00	1	

Relinquished by: (Signature) [signature] 10/26/22 1720
Date 10/26/22
Time 16:20
Received by: (Signature) [signature]

Received by Laboratory: (Signature) [signature] TA 10.27.22 1030
Date
Time

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code:	Ship to: Eurofins TestAmerica 5102 LaRoche Avenue, Savannah GA 31404	

Comments
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top	Bottom	Cooler	Comments
							46	9	9	5	3											
61	SHM-05-41B-FAL22	WG					X	X	X	X	X						SHM-05-41B	N1	62 00	64 00	1	
62	SHM-05-41C-FAL22	WG					X	X	X	X	X						SHM-05-41C	MS1	88 00	93 00	1	
63	SHM-05-41C-FAL22	WG					X	X	X	X	X						SHM-05-41C	N1	88 00	93 00	1	
64	SHM-05-41C-FAL22	WG					X	X	X	X	X						SHM-05-41C	SD1	88 00	93 00	1	
65	SHM-05-42A-FAL22	WG					X	X	X	X	X						SHM-05-42A	N1	40 00	42.00	1	
66	SHM-05-42B-FAL22	WG					X	X	X	X	X						SHM-05-42B	N1	70 00	72 00	1	
67	SHM-07-03-FAL22	WG					X	X	X	X	X						SHM-07-03	N1	25 00	35 00	1	
68	SHM-07-05X-FAL22	WG	10.26.22	1240	GS		X	X	X	X	X						SHM-07-05X	N1	55 00	65 00	1	
69	SHM-10-02-FAL22	WG					X	X	X	X	X						SHM-10-02	N1	53 00	63 00	1	
70	SHM-10-03-FAL22	WG					X	X	X	X	X						SHM-10-03	N1	58.50	68.50	1	
71	SHM-10-04-FAL22	WG					X	X	X	X	X						SHM-10-04	MS1	55 00	65 00	1	
72	SHM-10-04-FAL22	WG					X	X	X	X	X						SHM-10-04	N1	55 00	65 00	1	
73	SHM-10-04-FAL22	WG					X	X	X	X	X						SHM-10-04	SD1	55 00	65 00	1	
74	SHM-10-05A-FAL22	WG					X	X	X	X	X						SHM-10-05A	N1	50 00	60 00	1	
75	SHM-10-06-FAL22	WG					X	X	X	X	X						SHM-10-06	N1	69 50	79.50	1	
76	SHM-10-06A-FAL22	WG					X	X	X	X	X						SHM-10-06A	N1	77 00	87 00	1	
77	SHM-10-07-FAL22	WG					X	X	X	X	X						SHM-10-07	N1	40 00	50 00	1	
78	SHM-10-08-FAL22	WG					X	X	X	X	X						SHM-10-08	N1	46 00	56 00	1	
79	SHM-10-10-FAL22	WG					X	X	X	X	X						SHM-10-10	N1	56 00	66 00	1	
80	SHM-10-11-FAL22	WG					X	X	X	X	X						SHM-10-11	N1	50 00	60 00	1	

Relinquished by: (Signature) [signature]
Date 10/26/22
Time 16:20
Received by (Signature) [signature] 10/26/22 1720

Received by Laboratory (Signature) [signature] TA
Date 10-27-22
Time 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
							46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
81	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	MS1	45 00	55 00	1	
82	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	N1	45 00	55 00	1	
83	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	SD1	45 00	55 00	1	
84	SHM-10-13-FAL22	WG				X	X	X	X	X						SHM-10-13	N1	60 00	70 00	1	
85	SHM-10-14-FAL22	WG				X	X	X	X	X						SHM-10-14	N1	60 00	80 00	1	
86	SHM-10-15-FAL22	WG				X	X	X	X	X						SHM-10-15	N1	45 00	55 00	1	
87	SHM-10-16-FAL22	WG				X	X	X	X	X						SHM-10-16	N1	75 00	85 00	1	
88	SHM-11-02-FAL22	WG				X	X	X	X	X						SHM-11-02	N1	52 00	66 00	1	
89	SHM-11-06-FAL22	WG				X	X	X	X	X						SHM-11-06	N1	25 00	35 00	1	
90	SHM-13-01-FAL22	WG	10.26.22	1436	SE	X	X	X	X	X						SHM-13-01	N1	39 00	49 00	1	
91	SHM-13-02-FAL22	WG	10.26.22	1217	SG	X	X	X	X	X						SHM-13-02	N1	60 00	70 00	1	
92	SHM-13-03-FAL22	WG				X	X	X	X	X						SHM-13-03	N1	42 00	52 00	1	
93	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	MS1	20 00	30 00	1	
94	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	SD1	20 00	30.00	1	
96	SHM-13-05-FAL22	WG				X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	
97	SHM-13-06-FAL22	WG				X	X	X	X	X						SHM-13-06	N1	36 00	46.00	1	
98	SHM-13-07-FAL22	WG				X	X	X	X	X						SHM-13-07	N1	27 00	37 00	1	
99	SHM-13-08-FAL22	WG				X	X	X	X	X						SHM-13-08	N1	55 00	65 00	1	
100	SHM-13-14D-FAL22	WG				X	X	X	X	X						SHM-13-14D	N1	45 00	55 00	1	

Relinquished by: (Signature)
Date 10/26/22
Time 1630
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

TA 10.27.22 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV Long Term Monitoring SHL Fall 2022
Project Number: 30130800	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com	
WBS Code:	Ship to. Eurofins TestAmerica, 5102 LaRoche Avenue Savannah GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2, Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)
	46	**9**	**9**	**5**	**3**

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
101	SHM-13-14S-FAL22	WG				SHM-13-14S	N1	5 00	15 00	1	
102	SHM-13-15-FAL22	WG				SHM-13-15	N1	50 00	60 00	1	
103	SHM-93-10D-FAL22	WG				SHM-93-10D	N1	48 70	58 70	1	
104	SHM-93-18B-FAL22	WG				SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG				SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG				SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG				SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG				SHM-93-22C	N1	124 30	134 30	1	
109	SHM-93-24A-FAL22	WG				SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG				SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG				SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG				SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG				SHM-99-31B	N1	50 00	60 00	1	
114	SHM-99-31C-FAL22	WG				SHM-99-31C	N1	68 00	78 00	1	
115	SHM-99-32X-FAL22	WG				SHM-99-32X	N1	72 00	82.00	1	
116	SHP-01-36X-FAL22	WG				SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG	10-26-22	1015	SG	SHP-01-37X	N1	1 00	6 00	1	
118	SHP-01-38A-FAL22	WG				SHP-01-38A	N1	1.50	6 50	1	
119	SHP-2016-06A-FAL22	WG	10.26.22	1000	DC	SHP-2016-06A	N1	81 00	86 00	1	
120	SHP-2016-06B-FAL22	WG	10.26.22	1200	DC	SHP-2016-06B	N1	102 00	112.00	1	

Relinquished by: (Signature)
Date 10/26/22
Time 16.20
Received by: (Signature)

Received by Laboratory (Signature) 10/26/22 17:00
Date
Time

TA 10-27-22 / 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
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COC # SHL_FAL2022

Boston #215

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WG	Ground Water

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3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
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46	1x 250mL, plastic, Cool < 6degC

Analytical Test Method

Event: Seres-Arcadis JV Long Term Monitoring, SHL, Fall 2022

						A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)									
						46	9	9	5	3									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
121	~~SHP-2016-06C-FAL22~~	WG	10.26.22	1325	DC	X	X	X	X	X						SHP-2016-06C	N1	123 00	133 00	1	
122	SHP-2016-07A-FAL22	WG				X	X	X	X	X						SHP-2016-07A	N1	22 00	32 00	1	
123	SHP-2016-07B-FAL22	WG				X	X	X	X	X						SHP-2016-07B	N1	70 00	80 00	1	
124	SHP-2016-1A-FAL22	WG				X	X	X	X	X						SHP-2016-1A	N1	13 00	23 00	1	
125	SHP-2016-1B-FAL22	WG				X	X	X	X	X						SHP-2016-1B	N1	75 00	85 00	1	
126	SHP-2016-2A-FAL22	WG				X	X	X	X	X						SHP-2016-2A	N1	20 00	25 00	1	
127	SHP-2016-2B-FAL22	WG				X	X	X	X	X						SHP-2016-2B	N1	80 00	85 00	1	
128	SHP-2016-3A-FAL22	WG				X	X	X	X	X						SHP-2016-3A	N1	20 00	25 00	1	
129	SHP-2016-3B-FAL22	WG				X	X	X	X	X						SHP-2016-3B	N1	80 00	85 00	1	
130	SHP-2016-4A-FAL22	WG				X	X	X	X	X						SHP-2016-4A	N1	25 00	30.00	1	
131	SHP-2016-4B-FAL22	WG				X	X	X	X	X						SHP-2016-4B	N1	85 00	90.00	1	
132	SHP-2016-5A-FAL22	WG				X	X	X	X	X						SHP-2016-5A	N1	25 00	30.00	1	
133	SHP-2016-5B-FAL22	WG				X	X	X	X	X						SHP-2016-5B	N1	85 00	90.00	1	
134	SHP-99-29X-FAL22	WG				X	X	X	X	X						SHP-99-29X	N1	19 00	29.00	1	
135	SHL-FB02-Fal22	Lab water	10.26.22	1030	DC	X	X	X	X	X						Field Blank					
136																					
137																					
138																					
139																					

Turnaround Time: Standard

Relinquished by: (Signature) [signature]
Date 10/26/22
Time 1627
Received by: (Signature) [signature]

[signature] 10/26/22 1730

Received by Laboratory: (Signature) [signature] TA
Date 10-27-22
Time 1030

12/8/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-224164-1

Login Number: 224164
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 12/12/2022 3:52:47 PM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, SHL, Fall 2022

JOB NUMBER

680-224679-2

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-224679-7	SHM-13-15-FAL22	Water	10/31/22 14:01	11/03/22 11:00

Case Narrative

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224679-2

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-224679-2

Receipt
The samples were received on 11/3/2022 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.8°C, 2.9°C and 5.2°C

Receipt Exceptions
The following samples were submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): AAFES-2-FAL22 (680-224679-1), AAFES-7-FAL22 (680-224679-2), AOC43G-DUP01-FAL22 (680-224679-3), XGM-93-02X-FAL22 (680-224679-4), XGM-94-04X-FAL22 (680-224679-5), XGM-94-04X-FAL22 (680-224679-5[MS]), XGM-94-04X-FAL22 (680-224679-5[MSD]), XGM-97-12X-FAL22 (680-224679-6) and SHM-13-15-FAL22 (680-224679-7)

Received 6 voa vials 40ml - HCL. 3 marked for MAVPH...and 3 marked for 8260. No 8260 analysis listed on COC.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 2320B: The following sample(s) was analyzed outside of analytical holding time due to scheduling error. SHM-13-15-FAL22 (680-224679-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-13-15-FAL22
Lab Sample ID: 680-224679-7
Date Collected: 10/31/22 14:01
Matrix: Water
Date Received: 11/03/22 11:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	54		0.50	0.50	0.20	mg/L		11/28/22 18:34	1
Sulfate	12		1.0	1.0	0.40	mg/L		11/28/22 18:34	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	850		100	50	20	ug/L		11/09/22 21:50	1
Manganese	4300		10	5.0	1.3	ug/L		11/09/22 21:50	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	7.0		5.0	3.0	0.86	ug/L		11/08/22 19:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	270	H	5.0	5.0	2.2	mg/L		11/15/22 01:17	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	2.5		1.5	1.0	0.50	mg/L		11/15/22 22:16	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224679-2

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-752526/14
Matrix: Water
Analysis Batch: 752526

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/28/22 12:55	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/28/22 12:55	1

Lab Sample ID: LCS 680-752526/12
Matrix: Water
Analysis Batch: 752526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.4		mg/L		104	87 - 111
Sulfate	10.0	10.2	M	mg/L		102	87 - 112

Lab Sample ID: LCSD 680-752526/13
Matrix: Water
Analysis Batch: 752526

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.6	M	mg/L		106	87 - 111	2	15
Sulfate	10.0	10.5	M	mg/L		105	87 - 112	3	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-748987/1-A
Matrix: Water
Analysis Batch: 749946

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 748987

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/09/22 21:01	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/09/22 21:01	1

Lab Sample ID: LCS 680-748987/2-A
Matrix: Water
Analysis Batch: 749946

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 748987

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4850		ug/L		97	87 - 115
Manganese	400	415		ug/L		104	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-748988/1-A
Matrix: Water
Analysis Batch: 749688

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 748988

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 19:12	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-748988/2-A
Matrix: Water
Analysis Batch: 749688

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 748988

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	102		ug/L		102	84 - 116		

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-750717/4
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/14/22 23:51	1

Lab Sample ID: LCS 680-750717/6
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	244		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-750717/31
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	246		mg/L		98	90 - 112	1	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-750961/4
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/15/22 15:14	1

Lab Sample ID: LCS 680-750961/5
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	19.5		mg/L		97	80 - 120		

Lab Sample ID: LCSD 680-750961/6
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.7		mg/L		99	80 - 120	1	20

QC Association Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

HPLC/IC

Analysis Batch: 752526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Total/NA	Water	9056A	
MB 680-752526/14	Method Blank	Total/NA	Water	9056A	
LCS 680-752526/12	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-752526/13	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 748987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Dissolved	Water	3005A	
MB 680-748987/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-748987/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 748988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Dissolved	Water	3005A	
MB 680-748988/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-748988/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 749688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Dissolved	Water	6020A	748988
MB 680-748988/1-A	Method Blank	Total Recoverable	Water	6020A	748988
LCS 680-748988/2-A	Lab Control Sample	Total Recoverable	Water	6020A	748988

Analysis Batch: 749946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Dissolved	Water	6010C	748987
MB 680-748987/1-A	Method Blank	Total Recoverable	Water	6010C	748987
LCS 680-748987/2-A	Lab Control Sample	Total Recoverable	Water	6010C	748987

General Chemistry

Analysis Batch: 750717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Total/NA	Water	2320B-2011	
MB 680-750717/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-750717/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-750717/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 750961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224679-7	SHM-13-15-FAL22	Dissolved	Water	9060A	
MB 680-750961/4	Method Blank	Dissolved	Water	9060A	
LCS 680-750961/5	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750961/6	Lab Control Sample Dup	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224679-2

Client Sample ID: SHM-13-15-FAL22
Date Collected: 10/31/22 14:01
Date Received: 11/03/22 11:00

Lab Sample ID: 680-224679-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752526	11/28/22 18:34	KMB	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	748987	11/05/22 08:45	BCB	EET SAV
Dissolved	Analysis	6010C		1			749946	11/09/22 21:50	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	748988	11/05/22 08:47	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 19:31	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			750717	11/15/22 01:17	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 22:16	JU	EET SAV
	Instrument ID: TOC7									

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224679-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Bostor #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Project Number: 30130800	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)							Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.													Location ID	Type	Top	Bottom	Cooler	Comments
							46	9	9	5	3												
101	SHM-13-14S-FAL22	WG					X	X	X	X	X							SHM-13-14S	N1	5 00	15.00	1	
102	SHM-13-15-FAL22	WG	10.31.22	1401	SG		X	X	X	X	X							SHM-13-15	N1	50 00	60.00	1	
103	SHM-93-10D-FAL22	WG					X	X	X	X	X							SHM-93-10D	N1	48.70	58 70	1	
104	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG					X	X	X	X	X							SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG					X	X	X	X	X							SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG					X	X	X	X	X							SHM-93-22C	N1	124 30	134.30	1	
109	SHM-93-24A-FAL22	WG					X	X	X	X	X							SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG					X	X	X	X	X							SHM-96-5B	N1	80.00	90 00	1	
111	SHM-96-5C-FAL22	WG					X	X	X	X	X							SHM-96-5C	N1	50 00	60 00	1	
112	SHM-99-31A-FAL22	WG					X	X	X	X	X							SHM-99-31A	N1	4.00	14.00	1	
113	SHM-99-31B-FAL22	WG					X	X	X	X	X							SHM-99-31B	N1	50 00	60.00	1	
114	SHM-99-31C-FAL22	WG					X	X	X	X	X							SHM-99-31C	N1	68.00	78.00	1	
115	SHM-99-32X-FAL22	WG					X	X	X	X	X							SHM-99-32X	N1	72.00	82.00	1	
116	SHP-01-36X-FAL22	WG					X	X	X	X	X							SHP-01-36X	N1	3.00	8.00	1	
117	SHP-01-37X-FAL22	WG					X	X	X	X	X							SHP-01-37X	N1	1 00	6.00	1	
118	SHP-01-38A-FAL22	WG					X	X	X	X	X							SHP-01-38A	N1	1.50	6.50	1	
119	SHP-2016-06A-FAL22	WG					X	X	X	X	X							SHP-2016-06A	N1	81.00	86.00	1	
120	SHP-2016-06B-FAL22	WG					X	X	X	X	X							SHP-2016-06B	N1	102.00	112.00	1	

Relinquished by: (Signature) Diane Clapp
Date 11-2-22
Time 1520
Received by: (Signature)

Received by Laboratory: (Signature) 11/2/22 7:30
Date
Time FA 11-3-22 1100

12/12/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-224679-2

Login Number: 224679

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 12/18/2022 3:35:23 PM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, SHL, Fall 2022

JOB NUMBER

680-224848-2

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
Jerry Lanier, Project Manager I
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(912)250-0281

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
H	Sample was prepped or analyzed beyond the specified holding time
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-224848-2	SHM-05-39A-FAL22	Water	11/03/22 09:50	11/05/22 11:38
680-224848-3	SHM-10-02-FAL22	Water	11/04/22 11:41	11/05/22 11:38
680-224848-4	SHM-10-03-FAL22	Water	11/03/22 10:51	11/05/22 11:38
680-224848-5	SHM-10-04-FAL22	Water	11/03/22 13:31	11/05/22 11:38
680-224848-6	SHM-10-08-FAL22	Water	11/04/22 13:06	11/05/22 11:38
680-224848-7	SHM-13-14D-FAL22	Water	11/02/22 12:13	11/05/22 11:38
680-224848-8	SHM-13-14S-FAL22	Water	11/02/22 11:21	11/05/22 11:38
680-224848-9	SHM-93-18B-FAL22	Water	11/03/22 12:55	11/05/22 11:38

Job ID: 680-224848-2

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-224848-2

Receipt
The samples were received on 11/5/2022 11:38 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

HPLC/IC
Method 9056A_OF_28D_D5: The matrix spike duplicate (MSD) recoveries for analytical batch 680-753235 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Sample and MS/MSD for SHM-10-04-FAL22 (680-224848-5) were re-analyzed outside of holding time for sulfate and chloride du to QC failures in the original analysis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 2320B: The sample duplicate precision for the following sample associated with analytical batch 680-751150 was outside control limits: (680-224848-B-3 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-05-39A-FAL22
Lab Sample ID: 680-224848-2

Date Collected: 11/03/22 09:50
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**31**		0.50	0.50	0.20	mg/L		11/30/22 18:44	1
Sulfate	**5.7**		1.0	1.0	0.40	mg/L		11/30/22 18:44	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:25	1
Manganese	**3.0**	**J**	10	5.0	1.3	ug/L		11/10/22 22:25	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**2.4**	**J**	5.0	3.0	0.86	ug/L		11/08/22 18:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**43**		5.0	5.0	2.2	mg/L		11/15/22 15:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.3**	**J**	1.5	1.0	0.50	mg/L		11/15/22 22:40	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-02-FAL22
Lab Sample ID: 680-224848-3
Date Collected: 11/04/22 11:41
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**100**		0.50	0.50	0.20	mg/L		11/30/22 18:57	1
Sulfate	**6.4**		1.0	1.0	0.40	mg/L		11/30/22 18:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/17/22 15:00	1
Manganese	**940**		10	5.0	1.3	ug/L		11/17/22 15:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/17/22 16:12	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**110**		5.0	5.0	2.2	mg/L		11/16/22 18:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.2**	**J**	1.5	1.0	0.50	mg/L		11/15/22 23:04	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-03-FAL22
Lab Sample ID: 680-224848-4
Date Collected: 11/03/22 10:51
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**130**		0.50	0.50	0.20	mg/L		11/30/22 19:10	1
Sulfate	**6.7**		1.0	1.0	0.40	mg/L		11/30/22 19:10	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:28	1
Manganese	**9.0**	**J**	10	5.0	1.3	ug/L		11/10/22 22:28	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 18:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**170**		5.0	5.0	2.2	mg/L		11/15/22 15:48	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.95**	**J**	1.5	1.0	0.50	mg/L		11/15/22 23:27	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-04-FAL22
Lab Sample ID: 680-224848-5

Date Collected: 11/03/22 13:31
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**47**	**H**	0.50	0.50	0.20	mg/L		12/02/22 17:06	1
Sulfate	**34**	**H**	1.0	1.0	0.40	mg/L		12/02/22 17:06	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:16	1
Manganese	**290**		10	5.0	1.3	ug/L		11/10/22 22:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 18:09	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**62**		5.0	5.0	2.2	mg/L		11/15/22 15:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.2**	**J**	1.5	1.0	0.50	mg/L		11/15/22 17:00	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-10-08-FAL22
Lab Sample ID: 680-224848-6

Date Collected: 11/04/22 13:06
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**120**		0.50	0.50	0.20	mg/L		11/30/22 20:03	1
Sulfate	**5.8**		1.0	1.0	0.40	mg/L		11/30/22 20:03	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:38	1
Manganese	**570**		10	5.0	1.3	ug/L		11/10/22 22:38	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 18:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**120**		5.0	5.0	2.2	mg/L		11/16/22 18:45	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.0**	**J**	1.5	1.0	0.50	mg/L		11/15/22 23:50	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-13-14D-FAL22
Lab Sample ID: 680-224848-7

Date Collected: 11/02/22 12:13
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**29**		0.50	0.50	0.20	mg/L		11/29/22 15:04	1
Sulfate	**5.1**	**M**	1.0	1.0	0.40	mg/L		11/29/22 15:04	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:41	1
Manganese	**300**		10	5.0	1.3	ug/L		11/10/22 22:41	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 18:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**41**		5.0	5.0	2.2	mg/L		11/15/22 22:48	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.2**	**J**	1.5	1.0	0.50	mg/L		11/16/22 00:13	1

Client Sample Results

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224848-2

Client Sample ID: SHM-13-14S-FAL22

Date Collected: 11/02/22 11:21
Date Received: 11/05/22 11:38

Lab Sample ID: 680-224848-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**73**		0.50	0.50	0.20	mg/L		11/29/22 15:18	1
Sulfate	**12**	**M**	1.0	1.0	0.40	mg/L		11/29/22 15:18	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 22:44	1
Manganese	**160**		10	5.0	1.3	ug/L		11/10/22 22:44	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 18:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**33**		5.0	5.0	2.2	mg/L		11/15/22 01:54	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**1.2**	**J**	1.5	1.0	0.50	mg/L		11/16/22 00:37	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-93-18B-FAL22
Lab Sample ID: 680-224848-9

Date Collected: 11/03/22 12:55
Matrix: Water
Date Received: 11/05/22 11:38

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**220**	**D J1**	2.5	2.5	1.0	mg/L		12/01/22 21:09	5
Sulfate	**34**	**D**	5.0	5.0	2.0	mg/L		12/01/22 21:09	5

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 21:46	1
Manganese	**750**		10	5.0	1.3	ug/L		11/10/22 21:46	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 17:42	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**45**		5.0	5.0	2.2	mg/L		11/15/22 16:31	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon (SW846 9060A)	**0.50**	**J**	1.5	1.0	0.50	mg/L		11/20/22 04:54	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-752695/2
Matrix: Water
Analysis Batch: 752695

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/29/22 08:21	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/29/22 08:21	1

Lab Sample ID: LCS 680-752695/4
Matrix: Water
Analysis Batch: 752695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.3		mg/L		103	87 - 111
Sulfate	10.0	10.6		mg/L		106	87 - 112

Lab Sample ID: LCSD 680-752695/5
Matrix: Water
Analysis Batch: 752695

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	10.3		mg/L		103	87 - 111	0	15
Sulfate	10.0	10.7		mg/L		107	87 - 112	1	15

Lab Sample ID: MB 680-752987/1012
Matrix: Water
Analysis Batch: 752987

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		11/30/22 16:56	1
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		11/30/22 16:56	1

Lab Sample ID: LCS 680-752987/13
Matrix: Water
Analysis Batch: 752987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.54		mg/L		95	87 - 111
Sulfate	10.0	9.50		mg/L		95	87 - 112

Lab Sample ID: LCSD 680-752987/14
Matrix: Water
Analysis Batch: 752987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.78		mg/L		98	87 - 111	3	15
Sulfate	10.0	9.75		mg/L		97	87 - 112	3	15

Lab Sample ID: MB 680-753235/33
Matrix: Water
Analysis Batch: 753235

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		12/01/22 20:29	1
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		12/01/22 20:29	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCS 680-753235/34
Matrix: Water
Analysis Batch: 753235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			10.0	10.7		mg/L		107	87 - 111		
Sulfate			10.0	10.5		mg/L		105	87 - 112		

Lab Sample ID: LCSD 680-753235/35
Matrix: Water
Analysis Batch: 753235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			10.0	10.7		mg/L		107	87 - 111	0	15
Sulfate			10.0	10.5		mg/L		105	87 - 112	1	15

Lab Sample ID: 680-224848-9 MS
Matrix: Water
Analysis Batch: 753235

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	220	D J1	50.0	274	D 4	mg/L		109	87 - 111		
Sulfate	34	D	50.0	88.4	D	mg/L		108	87 - 112		

Lab Sample ID: 680-224848-9 MSD
Matrix: Water
Analysis Batch: 753235

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	220	D J1	50.0	259	D 4	mg/L		79	87 - 111	6	15
Sulfate	34	D	50.0	83.4	D	mg/L		98	87 - 112	6	15

Lab Sample ID: MB 680-753344/2
Matrix: Water
Analysis Batch: 753344

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.50	U	0.50	0.50	0.20	mg/L		12/02/22 11:31	1
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		12/02/22 11:31	1

Lab Sample ID: LCS 680-753344/4
Matrix: Water
Analysis Batch: 753344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			10.0	10.0		mg/L		100	87 - 111		
Sulfate			10.0	9.65		mg/L		96	87 - 112		

Lab Sample ID: LCSD 680-753344/5
Matrix: Water
Analysis Batch: 753344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			10.0	10.0		mg/L		100	87 - 111	0	15
Sulfate			10.0	9.66		mg/L		97	87 - 112	0	15

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-224848-5 MS
Matrix: Water
Analysis Batch: 753344

Client Sample ID: SHM-10-04-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	47	H	10.0	57.4	H 4	mg/L		99	87 - 111
Sulfate	34	H	10.0	44.4	M H	mg/L		100	87 - 112

Lab Sample ID: 680-224848-5 MSD
Matrix: Water
Analysis Batch: 753344

Client Sample ID: SHM-10-04-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	47	H	10.0	57.4	H 4	mg/L		99	87 - 111	0	15
Sulfate	34	H	10.0	44.3	M H	mg/L		99	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-749294/1-A
Matrix: Water
Analysis Batch: 750151

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 749294

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/10/22 21:40	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/10/22 21:40	1

Lab Sample ID: LCS 680-749294/2-A
Matrix: Water
Analysis Batch: 750151

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 749294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5090		ug/L		102	87 - 115
Manganese	400	409		ug/L		102	90 - 114

Lab Sample ID: MB 680-751062/1-A
Matrix: Water
Analysis Batch: 751275

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 751062

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/17/22 14:45	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/17/22 14:45	1

Lab Sample ID: LCS 680-751062/2-A
Matrix: Water
Analysis Batch: 751275

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 751062

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5040		ug/L		101	87 - 115
Manganese	400	411		ug/L		103	90 - 114

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 680-224848-5 MS
Matrix: Water
Analysis Batch: 750151

Client Sample ID: SHM-10-04-FAL22
Prep Type: Dissolved
Prep Batch: 749294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	5030		ug/L		101	87 - 115
Manganese	290		400	698		ug/L		102	90 - 114

Lab Sample ID: 680-224848-5 MSD
Matrix: Water
Analysis Batch: 750151

Client Sample ID: SHM-10-04-FAL22
Prep Type: Dissolved
Prep Batch: 749294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	5040		ug/L		101	87 - 115	0	20
Manganese	290		400	692		ug/L		101	90 - 114	1	20

Lab Sample ID: 680-224848-9 MS
Matrix: Water
Analysis Batch: 750151

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Dissolved
Prep Batch: 749294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50	U	5000	4940		ug/L		99	87 - 115
Manganese	750		400	1120		ug/L		90	90 - 114

Lab Sample ID: 680-224848-9 MSD
Matrix: Water
Analysis Batch: 750151

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Dissolved
Prep Batch: 749294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	50	U	5000	5040		ug/L		101	87 - 115	2	20
Manganese	750		400	1160		ug/L		101	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-749296/1-A
Matrix: Water
Analysis Batch: 749688

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 749296

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/08/22 17:37	1

Lab Sample ID: LCS 680-749296/2-A
Matrix: Water
Analysis Batch: 749688

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 749296

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	103		ug/L		103	84 - 116

Lab Sample ID: MB 680-751063/1-A
Matrix: Water
Analysis Batch: 751302

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 751063

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/17/22 15:26	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-751063/2-A
Matrix: Water
Analysis Batch: 751302

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 751063

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	104		ug/L		104	84 - 116		

Lab Sample ID: 680-224848-5 MS
Matrix: Water
Analysis Batch: 749688

Client Sample ID: SHM-10-04-FAL22
Prep Type: Dissolved
Prep Batch: 749296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	3.0	U	100	98.7		ug/L		99	84 - 116		

Lab Sample ID: 680-224848-5 MSD
Matrix: Water
Analysis Batch: 749688

Client Sample ID: SHM-10-04-FAL22
Prep Type: Dissolved
Prep Batch: 749296

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	101		ug/L		101	84 - 116	3	20

Lab Sample ID: 680-224848-9 MS
Matrix: Water
Analysis Batch: 749688

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Dissolved
Prep Batch: 749296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	3.0	U	100	102		ug/L		102	84 - 116		

Lab Sample ID: 680-224848-9 MSD
Matrix: Water
Analysis Batch: 749688

Client Sample ID: SHM-93-18B-FAL22
Prep Type: Dissolved
Prep Batch: 749296

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	3.0	U	100	103		ug/L		103	84 - 116	1	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-750717/4
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/14/22 23:51	1

Lab Sample ID: LCS 680-750717/6
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	244		mg/L		98	90 - 112		

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-750717/31
Matrix: Water
Analysis Batch: 750717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	246		mg/L		98	90 - 112	1	30

Lab Sample ID: MB 680-750938/4
Matrix: Water
Analysis Batch: 750938

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/15/22 14:19	1

Lab Sample ID: LCS 680-750938/6
Matrix: Water
Analysis Batch: 750938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	243		mg/L		97	90 - 112		

Lab Sample ID: LCSD 680-750938/31
Matrix: Water
Analysis Batch: 750938

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	244		mg/L		98	90 - 112	0	30

Lab Sample ID: MB 680-750939/4
Matrix: Water
Analysis Batch: 750939

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/15/22 20:35	1

Lab Sample ID: LCS 680-750939/6
Matrix: Water
Analysis Batch: 750939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	243		mg/L		97	90 - 112		

Lab Sample ID: LCSD 680-750939/31
Matrix: Water
Analysis Batch: 750939

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	245		mg/L		98	90 - 112	1	30

Lab Sample ID: MB 680-751150/4
Matrix: Water
Analysis Batch: 751150

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		11/16/22 17:36	1

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: LCS 680-751150/6
Matrix: Water
Analysis Batch: 751150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	242		mg/L		97	90 - 112		

Lab Sample ID: LCSD 680-751150/31
Matrix: Water
Analysis Batch: 751150

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity			250	249		mg/L		99	90 - 112	3	30

Lab Sample ID: 680-224848-3 DU
Matrix: Water
Analysis Batch: 751150

Client Sample ID: SHM-10-02-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	110			112		mg/L				0.2	30

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-750961/4
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/15/22 15:14	1

Lab Sample ID: LCS 680-750961/5
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			20.0	19.5		mg/L		97	80 - 120		

Lab Sample ID: LCSD 680-750961/6
Matrix: Water
Analysis Batch: 750961

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	19.7		mg/L		99	80 - 120	1	20

Lab Sample ID: 680-224848-5 MS
Matrix: Water
Analysis Batch: 750961

Client Sample ID: SHM-10-04-FAL22
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon	1.2	J	20.4	21.2		mg/L		98	80 - 120		

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: 680-224848-5 MSD
Client Sample ID: SHM-10-04-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 750961

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	1.2	J	20.4	21.1		mg/L		98	80 - 120	1	20

Lab Sample ID: MB 680-751880/2
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 751880

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/20/22 03:26	1

Lab Sample ID: LCS 680-751880/3
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 751880

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	19.1		mg/L		96	80 - 120

Lab Sample ID: LCSD 680-751880/4
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 751880

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	19.1		mg/L		96	80 - 120	0	20

Lab Sample ID: 680-224848-9 MS
Client Sample ID: SHM-93-18B-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 751880

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	0.50	J	20.0	20.2		mg/L		101	80 - 120

Lab Sample ID: 680-224848-9 MSD
Client Sample ID: SHM-93-18B-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 751880

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	0.50	J	20.0	20.0		mg/L		100	80 - 120	1	20

HPLC/IC

Analysis Batch: 752695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-7	SHM-13-14D-FAL22	Total/NA	Water	9056A	
680-224848-8	SHM-13-14S-FAL22	Total/NA	Water	9056A	
MB 680-752695/2	Method Blank	Total/NA	Water	9056A	
LCS 680-752695/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-752695/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 752987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Total/NA	Water	9056A	
680-224848-3	SHM-10-02-FAL22	Total/NA	Water	9056A	
680-224848-4	SHM-10-03-FAL22	Total/NA	Water	9056A	
680-224848-6	SHM-10-08-FAL22	Total/NA	Water	9056A	
MB 680-752987/1012	Method Blank	Total/NA	Water	9056A	
LCS 680-752987/13	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-752987/14	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 753235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-9	SHM-93-18B-FAL22	Total/NA	Water	9056A	
MB 680-753235/33	Method Blank	Total/NA	Water	9056A	
LCS 680-753235/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-753235/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-224848-9 MS	SHM-93-18B-FAL22	Total/NA	Water	9056A	
680-224848-9 MSD	SHM-93-18B-FAL22	Total/NA	Water	9056A	

Analysis Batch: 753344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-5	SHM-10-04-FAL22	Total/NA	Water	9056A	
MB 680-753344/2	Method Blank	Total/NA	Water	9056A	
LCS 680-753344/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-753344/5	Lab Control Sample Dup	Total/NA	Water	9056A	
680-224848-5 MS	SHM-10-04-FAL22	Total/NA	Water	9056A	
680-224848-5 MSD	SHM-10-04-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 749294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Dissolved	Water	3005A	
680-224848-4	SHM-10-03-FAL22	Dissolved	Water	3005A	
680-224848-5	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-6	SHM-10-08-FAL22	Dissolved	Water	3005A	
680-224848-7	SHM-13-14D-FAL22	Dissolved	Water	3005A	
680-224848-8	SHM-13-14S-FAL22	Dissolved	Water	3005A	
680-224848-9	SHM-93-18B-FAL22	Dissolved	Water	3005A	
MB 680-749294/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-749294/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224848-5 MS	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-5 MSD	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-9 MS	SHM-93-18B-FAL22	Dissolved	Water	3005A	
680-224848-9 MSD	SHM-93-18B-FAL22	Dissolved	Water	3005A	

Metals

Prep Batch: 749296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Dissolved	Water	3005A	
680-224848-4	SHM-10-03-FAL22	Dissolved	Water	3005A	
680-224848-5	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-6	SHM-10-08-FAL22	Dissolved	Water	3005A	
680-224848-7	SHM-13-14D-FAL22	Dissolved	Water	3005A	
680-224848-8	SHM-13-14S-FAL22	Dissolved	Water	3005A	
680-224848-9	SHM-93-18B-FAL22	Dissolved	Water	3005A	
MB 680-749296/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-749296/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-224848-5 MS	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-5 MSD	SHM-10-04-FAL22	Dissolved	Water	3005A	
680-224848-9 MS	SHM-93-18B-FAL22	Dissolved	Water	3005A	
680-224848-9 MSD	SHM-93-18B-FAL22	Dissolved	Water	3005A	

Analysis Batch: 749688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Dissolved	Water	6020A	749296
680-224848-4	SHM-10-03-FAL22	Dissolved	Water	6020A	749296
680-224848-5	SHM-10-04-FAL22	Dissolved	Water	6020A	749296
680-224848-6	SHM-10-08-FAL22	Dissolved	Water	6020A	749296
680-224848-7	SHM-13-14D-FAL22	Dissolved	Water	6020A	749296
680-224848-8	SHM-13-14S-FAL22	Dissolved	Water	6020A	749296
680-224848-9	SHM-93-18B-FAL22	Dissolved	Water	6020A	749296
MB 680-749296/1-A	Method Blank	Total Recoverable	Water	6020A	749296
LCS 680-749296/2-A	Lab Control Sample	Total Recoverable	Water	6020A	749296
680-224848-5 MS	SHM-10-04-FAL22	Dissolved	Water	6020A	749296
680-224848-5 MSD	SHM-10-04-FAL22	Dissolved	Water	6020A	749296
680-224848-9 MS	SHM-93-18B-FAL22	Dissolved	Water	6020A	749296
680-224848-9 MSD	SHM-93-18B-FAL22	Dissolved	Water	6020A	749296

Analysis Batch: 750151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Dissolved	Water	6010C	749294
680-224848-4	SHM-10-03-FAL22	Dissolved	Water	6010C	749294
680-224848-5	SHM-10-04-FAL22	Dissolved	Water	6010C	749294
680-224848-6	SHM-10-08-FAL22	Dissolved	Water	6010C	749294
680-224848-7	SHM-13-14D-FAL22	Dissolved	Water	6010C	749294
680-224848-8	SHM-13-14S-FAL22	Dissolved	Water	6010C	749294
680-224848-9	SHM-93-18B-FAL22	Dissolved	Water	6010C	749294
MB 680-749294/1-A	Method Blank	Total Recoverable	Water	6010C	749294
LCS 680-749294/2-A	Lab Control Sample	Total Recoverable	Water	6010C	749294
680-224848-5 MS	SHM-10-04-FAL22	Dissolved	Water	6010C	749294
680-224848-5 MSD	SHM-10-04-FAL22	Dissolved	Water	6010C	749294
680-224848-9 MS	SHM-93-18B-FAL22	Dissolved	Water	6010C	749294
680-224848-9 MSD	SHM-93-18B-FAL22	Dissolved	Water	6010C	749294

Prep Batch: 751062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-3	SHM-10-02-FAL22	Dissolved	Water	3005A	
MB 680-751062/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-751062/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 751063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-3	SHM-10-02-FAL22	Dissolved	Water	3005A	
MB 680-751063/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-751063/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 751275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-3	SHM-10-02-FAL22	Dissolved	Water	6010C	751062
MB 680-751062/1-A	Method Blank	Total Recoverable	Water	6010C	751062
LCS 680-751062/2-A	Lab Control Sample	Total Recoverable	Water	6010C	751062

Analysis Batch: 751302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-3	SHM-10-02-FAL22	Dissolved	Water	6020A	751063
MB 680-751063/1-A	Method Blank	Total Recoverable	Water	6020A	751063
LCS 680-751063/2-A	Lab Control Sample	Total Recoverable	Water	6020A	751063

General Chemistry

Analysis Batch: 750717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-8	SHM-13-14S-FAL22	Total/NA	Water	2320B-2011	
MB 680-750717/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-750717/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-750717/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 750938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Total/NA	Water	2320B-2011	
680-224848-4	SHM-10-03-FAL22	Total/NA	Water	2320B-2011	
680-224848-5	SHM-10-04-FAL22	Total/NA	Water	2320B-2011	
680-224848-9	SHM-93-18B-FAL22	Total/NA	Water	2320B-2011	
MB 680-750938/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-750938/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-750938/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 750939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-7	SHM-13-14D-FAL22	Total/NA	Water	2320B-2011	
MB 680-750939/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-750939/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-750939/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 750961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-2	SHM-05-39A-FAL22	Dissolved	Water	9060A	
680-224848-3	SHM-10-02-FAL22	Dissolved	Water	9060A	
680-224848-4	SHM-10-03-FAL22	Dissolved	Water	9060A	
680-224848-5	SHM-10-04-FAL22	Dissolved	Water	9060A	
680-224848-6	SHM-10-08-FAL22	Dissolved	Water	9060A	
680-224848-7	SHM-13-14D-FAL22	Dissolved	Water	9060A	
680-224848-8	SHM-13-14S-FAL22	Dissolved	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 750961 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-750961/4	Method Blank	Dissolved	Water	9060A	
LCS 680-750961/5	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-750961/6	Lab Control Sample Dup	Dissolved	Water	9060A	
680-224848-5 MS	SHM-10-04-FAL22	Dissolved	Water	9060A	
680-224848-5 MSD	SHM-10-04-FAL22	Dissolved	Water	9060A	

Analysis Batch: 751150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-3	SHM-10-02-FAL22	Total/NA	Water	2320B-2011	
680-224848-6	SHM-10-08-FAL22	Total/NA	Water	2320B-2011	
MB 680-751150/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-751150/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-751150/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-224848-3 DU	SHM-10-02-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 751880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-224848-9	SHM-93-18B-FAL22	Dissolved	Water	9060A	
MB 680-751880/2	Method Blank	Dissolved	Water	9060A	
LCS 680-751880/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-751880/4	Lab Control Sample Dup	Dissolved	Water	9060A	
680-224848-9 MS	SHM-93-18B-FAL22	Dissolved	Water	9060A	
680-224848-9 MSD	SHM-93-18B-FAL22	Dissolved	Water	9060A	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224848-2

Client Sample ID: SHM-05-39A-FAL22

Lab Sample ID: 680-224848-2
Date Collected: 11/03/22 09:50
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752987	11/30/22 18:44	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:25	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:17	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			750938	11/15/22 15:38	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 22:40	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-10-02-FAL22

Lab Sample ID: 680-224848-3
Date Collected: 11/04/22 11:41
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752987	11/30/22 18:57	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	751062	11/17/22 04:54	RR	EET SAV
Dissolved	Analysis	6010C		1			751275	11/17/22 15:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	751063	11/17/22 04:54	RR	EET SAV
Dissolved	Analysis	6020A		1			751302	11/17/22 16:12	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			751150	11/16/22 18:02	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 23:04	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-10-03-FAL22

Lab Sample ID: 680-224848-4
Date Collected: 11/03/22 10:51
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752987	11/30/22 19:10	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:28	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:20	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Job ID: 680-224848-2

Client Sample ID: SHM-10-03-FAL22

Lab Sample ID: 680-224848-4

Date Collected: 11/03/22 10:51
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			750938	11/15/22 15:48	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 23:27	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-10-04-FAL22

Lab Sample ID: 680-224848-5

Date Collected: 11/03/22 13:31
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	753344	12/02/22 17:06	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:16	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:09	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			750938	11/15/22 15:29	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 17:00	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-10-08-FAL22

Lab Sample ID: 680-224848-6

Date Collected: 11/04/22 13:06
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752987	11/30/22 20:03	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:38	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:23	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			751150	11/16/22 18:45	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/15/22 23:50	JU	EET SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-13-14D-FAL22
Lab Sample ID: 680-224848-7
Date Collected: 11/02/22 12:13
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752695	11/29/22 15:04	KMB	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:41	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:31	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			750939	11/15/22 22:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/16/22 00:13	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-13-14S-FAL22
Lab Sample ID: 680-224848-8
Date Collected: 11/02/22 11:21
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	752695	11/29/22 15:18	KMB	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 22:44	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 18:34	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			750717	11/15/22 01:54	PG	EET SAV
	Instrument ID: MANTECH 2									
Dissolved	Analysis	9060A		1	40 mL	40 mL	750961	11/16/22 00:37	JU	EET SAV
	Instrument ID: TOC7									

Client Sample ID: SHM-93-18B-FAL22
Lab Sample ID: 680-224848-9
Date Collected: 11/03/22 12:55
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	753235	12/01/22 21:09	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	749294	11/07/22 11:42	BCB	EET SAV
Dissolved	Analysis	6010C		1			750151	11/10/22 21:46	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	749296	11/07/22 11:44	BCB	EET SAV
Dissolved	Analysis	6020A		1			749688	11/08/22 17:42	BWR	EET SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Client Sample ID: SHM-93-18B-FAL22
Lab Sample ID: 680-224848-9

Date Collected: 11/03/22 12:55
Matrix: Water
Date Received: 11/05/22 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			750938	11/15/22 16:31	PG	EET SAV
Dissolved	Analysis	9060A		1	40 mL	40 mL	751880	11/20/22 04:54	JU	EET SAV
	Instrument ID: TOC7									

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-224848-2
Project/Site: Seres-Arcadis JV, LTM, SHL, Fall 2022

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

Analytical Test Method

| | | |

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
61	SHM-05-41B-FAL22	WG					X	X	X	X	X					SHM-05-41B	N1	62 00	64.00	1	
62	SHM-05-41C-FAL22	WG					X	X	X	X	X					SHM-05-41C	MS1	88.00	93.00	1	
63	SHM-05-41C-FAL22	WG					X	X	X	X	X					SHM-05-41C	N1	88.00	93.00	1	
64	SHM-05-41C-FAL22	WG					X	X	X	X	X					SHM-05-41C	SD1	88.00	93.00	1	
65	SHM-05-42A-FAL22	WG					X	X	X	X	X					SHM-05-42A	N1	40 00	42.00	1	
66	SHM-05-42B-FAL22	WG					X	X	X	X	X					SHM-05-42B	N1	70.00	72.00	1	
67	SHM-07-03-FAL22	WG					X	X	X	X	X					SHM-07-03	N1	25.00	35.00	1	
68	SHM-07-05X-FAL22	WG					X	X	X	X	X					SHM-07-05X	N1	55.00	65.00	1	
69	SHM-10-02-FAL22	WG	11-4-22	1141	SG		X	X	X	X	X					SHM-10-02	N1	53.00	63.00	1	
70	SHM-10-03-FAL22	WG	11.3.22	1051	SG		X	X	X	X	X					SHM-10-03	N1	58.50	68.50	1	
71	SHM-10-04-FAL22	WG	11.3.22	1331	SG		X	X	X	X	X					SHM-10-04	MS1	55.00	65.00	1	
72	SHM-10-04-FAL22	WG	11.3.22	1331	SG		X	X	X	X	X					SHM-10-04	N1	55.00	65.00	1	
73	SHM-10-04-FAL22	WG	11.3.22	1331	SG		X	X	X	X	X					SHM-10-04	SD1	55.00	65.00	1	
74	SHM-10-05A-FAL22	WG					X	X	X	X	X					SHM-10-05A	N1	50.00	60.00	1	
75	SHM-10-06-FAL22	WG					X	X	X	X	X					SHM-10-06	N1	69.50	79.50	1	
76	SHM-10-06A-FAL22	WG					X	X	X	X	X					SHM-10-06A	N1	77 00	87.00	1	
77	SHM-10-07-FAL22	WG					X	X	X	X	X					SHM-10-07	N1	40.00	50.00	1	
78	SHM-10-08-FAL22	WG	11-4-22	1306	SG		X	X	X	X	X					SHM-10-08	N1	46.00	56 00	1	
79	SHM-10-10-FAL22	WG					X	X	X	X	X					SHM-10-10	N1	56.00	66.00	1	
80	SHM-10-11-FAL22	WG					X	X	X	X	X					SHM-10-11	N1	50.00	60 00	1	

Relinquished by: (Signature) Diane Clapper Pratt
Date 11-4-22
Time 1510
Received by: (Signature)

Received by Laboratory: (Signature) [illegible]
Date 11/5/22
Time 11:38

12/18/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
Project Number: 30130800	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
81	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	MS1	45.00	55.00	1	
82	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	N1	45 00	55.00	1	
83	SHM-10-12-FAL22	WG				X	X	X	X	X						SHM-10-12	SD1	45.00	55 00	1	
84	SHM-10-13-FAL22	WG				X	X	X	X	X						SHM-10-13	N1	60.00	70.00	1	
85	SHM-10-14-FAL22	WG				X	X	X	X	X						SHM-10-14	N1	60 00	80.00	1	
86	SHM-10-15-FAL22	WG				X	X	X	X	X						SHM-10-15	N1	45.00	55.00	1	
87	SHM-10-16-FAL22	WG				X	X	X	X	X						SHM-10-16	N1	75 00	85.00	1	
88	SHM-11-02-FAL22	WG				X	X	X	X	X						SHM-11-02	N1	52.00	66.00	1	
89	SHM-11-06-FAL22	WG				X	X	X	X	X						SHM-11-06	N1	25.00	35 00	1	
90	SHM-13-01-FAL22	WG				X	X	X	X	X						SHM-13-01	N1	39 00	49.00	1	
91	SHM-13-02-FAL22	WG				X	X	X	X	X						SHM-13-02	N1	60 00	70.00	1	
92	SHM-13-03-FAL22	WG				X	X	X	X	X						SHM-13-03	N1	42.00	52.00	1	
93	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	MS1	20.00	30 00	1	
94	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	N1	20 00	30 00	1	
95	SHM-13-04-FAL22	WG				X	X	X	X	X						SHM-13-04	SD1	20.00	30.00	1	
96	SHM-13-05-FAL22	WG				X	X	X	X	X						SHM-13-05	N1	75 00	85 00	1	
97	SHM-13-06-FAL22	WG				X	X	X	X	X						SHM-13-06	N1	36.00	46.00	1	
98	SHM-13-07-FAL22	WG				X	X	X	X	X						SHM-13-07	N1	27.00	37.00	1	
99	SHM-13-08-FAL22	WG				X	X	X	X	X						SHM-13-08	N1	55.00	65.00	1	
100	SHM-13-14D-FAL22	WG	11-2-22	1213	SG	X	X	X	X	X						SHM-13-14D	N1	45.00	55.00	1	

Relinquished by: (Signature) Diane Chupone
Date 11-4-22
Time 1510
Received by: (Signature)

Received by Laboratory: (Signature)
Date 11/4/22
Time 1715

11/5/22 11:38

12/18/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # SHL_FAL2022

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
Project Number: 30130800	POC. Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus.com
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

						Analytical Test Method	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)										
	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022						46	9	9	5	3										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
101	SHM-13-14S-FAL22	WG	11/2/22	1121	SG	X	X	X	X	X						SHM-13-14S	N1	5.00	15 00	1	
102	SHM-13-15-FAL22	WG				X	X	X	X	X						SHM-13-15	N1	50 00	60.00	1	
103	SHM-93-10D-FAL22	WG				X	X	X	X	X						SHM-93-10D	N1	48.70	58.70	1	
104	SHM-93-18B-FAL22	WG	11.3.22	1255	DC	X	X	X	X	X						SHM-93-18B	MS1	78.50	88.50	1	
105	SHM-93-18B-FAL22	WG	11-3-22	1255	DC	X	X	X	X	X						SHM-93-18B	N1	78.50	88.50	1	
106	SHM-93-18B-FAL22	WG	11-3-22	1255	DC	X	X	X	X	X						SHM-93-18B	SD1	78.50	88.50	1	
107	SHM-93-22B-FAL22	WG				X	X	X	X	X						SHM-93-22B	N1	82.30	92.30	1	
108	SHM-93-22C-FAL22	WG				X	X	X	X	X						SHM-93-22C	N1	124.30	134.30	1	
109	SHM-93-24A-FAL22	WG				X	X	X	X	X						SHM-93-24A	N1	13.20	23.20	1	
110	SHM-96-5B-FAL22	WG				X	X	X	X	X						SHM-96-5B	N1	80 00	90 00	1	
111	SHM-96-5C-FAL22	WG				X	X	X	X	X						SHM-96-5C	N1	50.00	60 00	1	
112	SHM-99-31A-FAL22	WG				X	X	X	X	X						SHM-99-31A	N1	4 00	14 00	1	
113	SHM-99-31B-FAL22	WG				X	X	X	X	X						SHM-99-31B	N1	50.00	60.00	1	
114	SHM-99-31C-FAL22	WG				X	X	X	X	X						SHM-99-31C	N1	68.00	78.00	1	
115	SHM-99-32X-FAL22	WG				X	X	X	X	X						SHM-99-32X	N1	72 00	82.00	1	
116	SHP-01-36X-FAL22	WG				X	X	X	X	X						SHP-01-36X	N1	3 00	8 00	1	
117	SHP-01-37X-FAL22	WG				X	X	X	X	X						SHP-01-37X	N1	1 00	6.00	1	
118	SHP-01-38A-FAL22	WG				X	X	X	X	X						SHP-01-38A	N1	1.50	6.50	1	
119	SHP-2016-06A-FAL22	WG				X	X	X	X	X						SHP-2016-06A	N1	81.00	86.00	1	
120	SHP-2016-06B-FAL22	WG				X	X	X	X	X						SHP-2016-06B	N1	102.00	112.00	1	

Relinquished by: (Signature) Diane Clysgne
Date 11-4-22
Time 1510
Received by: (Signature)

Received by Laboratory: (Signature)
Date 11/5/22
Time 11:38

12/18/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-224848-2

Login Number: 224848
List Number: 1
Creator: Padayao, Abigail

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL), Devens, MA

AC001.J02

SGS Job Number: JD37967

Sampling Date: 01/10/22



Report to:

Sovereign Consulting
9 Payson Road Suite 150
Foxborough, MA 02035
SPassafaro@SovCon.com

ATTN: Steve Passafaro

Total number of pages in report: 358

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Mike Earp
General Manager

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: JD37967

Shepley's Hill (SHL), Devens, MA
Project No: AC001.J02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD37967-1	01/10/22	09:45	JWR	01/10/22	AQ	Effluent	EFFLUENT

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Sovereign Consulting	**Job No**	JD37967
Site:	Shepley's Hill (SHL), Devens, MA	**Report Date**	1/18/2022 5:22:44 PM

On 01/10/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD37967 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP30757

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD37967-1MS, JD37967-1MSD, JD37967-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP30757-SD1. Serial dilution indicates possible matrix interference.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD37967
Account: Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA
Collected: 01/10/22

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JD37967-1	**EFFLUENT**					
Arsenic		8.0	3.0	1.5	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	JD37967-1	**Date Sampled:**	01/10/22
Matrix:	AQ - Effluent	**Date Received:**	01/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL), Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	8.0	3.0	1.5	0.39	ug/l	2	01/13/22	01/14/22	LM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA51735
(2) Prep QC Batch: MP30757

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS

GW

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

JD37967

PAGE 1 OF 1

FED-EX Tracking #

Bottle Order Control # TF-083021-182

SGS Quote #

SGS Job #

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: Sovereign Consulting Inc.	Project Name: Shepley's Hill (SHL), Devens, MA		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL- Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 9 Payson Road, Suite 150	Street:	Billing Information (if different from Report to)	
City: Foxborough State: MA Zip: 02035	City: Devens State: MA	Company Name	
Project Contact: Steve Passafaro E-mail: (spassafaro@sovcon.com)	Project #: AC001.J02	Street Address	
Phone #: (508) 339-3200 Fax #: (	Client Purchase Order #:	City State Zip	
Sampler(s) Name(s): Joe Rogers Phone #:	Project Manager: Steve Passafaro	Attention:	

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Total As - 6020A	LAB USE ONLY
1	Effluent		1/10/22	9:45	JWR	GW	1			X						X	A28

Initial Assessment 28 EIN

Label Verification

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [X] 5 Day RUSH - Arsenic Only
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Approved by (SGS Project Manager)/Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other See QAPP

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See Project QAPP for all specfic project requirements
5 Day Rush on Arsenic

1/10 SGS Service Center Northborough, MA

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	1-10-22 16:45	1 [signature]	2 [signature]	1/10/22 18:00	2 FEDEX
3 FedEx	1/11/22 10:35	3	4		4
5		5	Custody Seal # 30646 ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp.

5.2

Form:SM088-03C (revised 2/12/18)

http://www.sgs.com/en/terms-and-conditions.

5.1

5

JD37967: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD37967 **Client:** SOVEREIGN CONSULTING **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 1/10/2022 6:00:00 PM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (5.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JD37967: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Sovereign Consulting

Job No: JD37967

Shepley's Hill (SHL), Devens, MA
Project No: AC001.J02

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD37967-1 EFFLUENT	Collected: 10-JAN-22 09:45 By: JWR			Received: 10-JAN-22 By: KG		
JD37967-1	SW846 6020B	14-JAN-22 13:48	LM	13-JAN-22	SF	ASMS

SGS Internal Chain of Custody

Job Number: JD37967
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA
Received: 01/10/22

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD37967-1.1	Epiphania Njoku	Secured Storage	01/11/22 12:53	Return to Storage
JD37967-1.1	Secured Storage	Benjamin Gaines	01/12/22 16:01	Retrieve from Storage
JD37967-1.1	Benjamin Gaines	Secured Staging Area	01/12/22 16:01	Return to Storage
JD37967-1.1	Secured Staging Area	Alyssa Koshy	01/13/22 08:26	Retrieve from Storage
JD37967-1.1	Alyssa Koshy	Secured Storage	01/13/22 10:31	Return to Storage
JD37967-1.1.1	Alyssa Koshy	Metals Digestion	01/13/22 10:13	Digestate from JD37967-1.1
JD37967-1.1.1	Metals Digestion	Alyssa Koshy	01/13/22 10:13	Digestate from JD37967-1.1
JD37967-1.1.1	Alyssa Koshy	Metals Digestate Storage	01/13/22 10:13	Return to Storage

QC Evaluation: DOD QSM5.x Limits

Job Number: JD37967
Account: Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA
Collected: 01/10/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP30757	SW846 6020B						
MP30757-B1	7440-38-2	Arsenic	BSP	REC	93.5	%	84-116
MP30757-S1	7440-38-2	Arsenic	MS	REC	95.1	%	84-116
MP30757-S2	7440-38-2	Arsenic	MSD	REC	97.3	%	84-116
MP30757-S2	7440-38-2	Arsenic	MSD	RPD	2	%	20

* Sample used for QC is not from job JD37967

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:00	MA51735-STD1	1		STDA
11:04	MA51735-STD2	1		STDA
11:07	MA51735-STD3	1		STDA
11:10	MA51735-STD4	1		STDB
11:14	MA51735-STD5	1		STDC
11:17	MA51735-STD6	1		STDD
11:21	MA51735-STD7	1		STDE
11:24	MA51735-STD8	1		STDF
11:27	MA51735-STD9	1		STDG
11:31	MA51735-STD10	1		STDH
11:34	MA51735-STD11	1		STDI
11:37	MA51735-STD12	1		STDJ
11:44	ZZZZZZ	1		
11:47	MA51735-ICVA1	1		
11:50	MA51735-ICV1	1		
11:54	MA51735-ICB1	1		
11:57	MA51735-CCVA1	1		
12:00	MA51735-CCB1	1		
12:03	MA51735-CRI1	1		
12:12	MA51735-ICSA1	1		
12:15	MA51735-ICSAB1	1		
12:48	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:22	MA51735-CCVA2	1		
13:25	MA51735-CCB2	1		
13:29	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:35	MP30757-MB1	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:38	MP30757-B1	2		
13:41	MP30757-S1	2		
13:44	MP30757-S2	2		
13:48	JD37967-1	2		
13:51	MP30757-SD1	10		
13:54	MP30757-PS1	2		
---------->	Last reportable sample/prep for job JD37967			
13:57	MA51735-CCVA3	1		
14:00	MA51735-CCB3	1		
14:03	MP30647-MB1	1		
14:06	MP30647-B1	1		
14:09	MP30647-S1	1		
14:13	MP30647-S2	1		
14:16	JD37213-1	1		(sample used for QC only; not part of login JD37967)
14:19	MP30647-S3	1		
14:22	JD37213-3	1		(sample used for QC only; not part of login JD37967)
14:25	MA51735-CCVA4	1		
14:28	MA51735-CCB4	1		
14:31	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:37	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:53	MA51735-CCVA5	1		
14:56	MA51735-CCB5	1		
14:59	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:11	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:17	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:20	ZZZZZZ	5		
15:24	MA51735-CCVA6	1		
15:27	MA51735-CCB6	1		
15:31	MP30773-MB1	5		
15:34	MP30773-B1	5		
15:37	MP30773-S1	5		
15:40	MP30773-S2	5		
15:43	JD38054-1	5		(sample used for QC only; not part of login JD37967)
15:46	MP30773-SD1	25		
15:49	ZZZZZZ	5		
15:53	ZZZZZZ	5		
15:56	ZZZZZZ	5		
15:59	MA51735-CCVA7	1		
16:02	MA51735-CCB7	1		
16:05	ZZZZZZ	5		
16:08	ZZZZZZ	5		
16:11	ZZZZZZ	5		
16:14	ZZZZZZ	5		
16:18	ZZZZZZ	5		
16:21	ZZZZZZ	5		
16:24	MA51735-CCVA8	1		
16:28	MA51735-CCB8	1		
16:31	MP30773-S1	20		
16:35	MP30773-S2	20		
16:38	JD38054-1	20		(sample used for QC only; not part of login JD37967)
16:41	MP30773-SD1	100		
16:44	ZZZZZZ	20		
16:47	ZZZZZZ	10		
16:50	ZZZZZZ	10		
16:54	ZZZZZZ	20		
16:57	MA51735-CCVA9	1		
17:00	MA51735-CCB9	1		
17:03	ZZZZZZ	20		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:06	ZZZZZZ	50		
17:09	ZZZZZZ	10		
17:12	ZZZZZZ	10		
17:16	ZZZZZZ	20		
17:19	ZZZZZZ	50		
17:22	MA51735-CCVA10	1		
17:25	MA51735-CCB10	1		
17:28	MP30776A-MB1	2		
17:31	MP30776A-B2	2		
17:35	MP30776A-S3	2		
17:38	MP30776A-S4	2		
17:41	JD38050-2	2		(sample used for QC only; not part of login JD37967)
17:44	MP30776A-SD1	10		
17:47	ZZZZZZ	2		
17:50	ZZZZZZ	2		
17:54	MA51735-CCVA11	1		
17:57	MA51735-CCB11	1		
18:00	MA51735-ICSA2	1		
18:03	MA51735-ICSAB2	1		
18:08	MA51735-ICSAB3	1		
18:11	ZZZZZZ	1		
18:15	MP30753A-MB1	2		
18:18	MP30753A-B3	2		
18:21	MA51735-CCVA12	1		
18:24	MA51735-CCB12	1		
---------->	Last reportable CCB for job JD37967			
18:28	MP30753A-B4	2		
18:31	ZZZZZZ	2		
18:34	ZZZZZZ	2		
18:37	ZZZZZZ	5		
18:40	MP30753A-S3	2		
18:43	MP30753A-S4	2		
18:47	JD38008-10	2		(sample used for QC only; not part of login JD37967)
18:50	MP30753A-SD1	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:53	MA51735-CCVA13	1		
18:56	MA51735-CCB13	1		
18:59	ZZZZZZ	2		
19:02	ZZZZZZ	2		
19:05	ZZZZZZ	2		
19:08	ZZZZZZ	2		
19:12	ZZZZZZ	2		
19:15	ZZZZZZ	2		
19:18	ZZZZZZ	2		
19:21	ZZZZZZ	2		
19:24	MA51735-CCVA14	1		
19:27	MA51735-CCB14	1		
19:31	ZZZZZZ	2		
19:34	ZZZZZZ	2		
19:37	ZZZZZZ	2		
19:40	ZZZZZZ	2		
19:43	MP30778-MB1	2		
19:46	MP30778-B1	2		
19:49	MP30778-S1	2		CCV out
19:53	MP30778-S2	2		CCV out
19:56	MA51735-CCVA15	1		
19:59	MA51735-CCB15	1		
20:02	JD38050-2F	2		(sample used for QC only; not part of login JD37967)
20:05	MP30778-SD1	10		CCV out
20:08	ZZZZZZ	2		
20:12	ZZZZZZ	2		
20:15	ZZZZZZ	2		
20:18	ZZZZZZ	2		
20:21	ZZZZZZ	2		
20:24	ZZZZZZ	2		
20:27	ZZZZZZ	2		
20:30	MA51735-CCVA16	1		
20:33	MA51735-CCB16	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:37	ZZZZZZ	2		
20:40	ZZZZZZ	2		
20:43	ZZZZZZ	2		
20:46	ZZZZZZ	2		
20:49	ZZZZZZ	2		
20:52	ZZZZZZ	2		
20:56	ZZZZZZ	2		
20:59	ZZZZZZ	2		
21:02	MA51735-CCVA17	1		
21:05	MA51735-CCB17	1		
21:08	ZZZZZZ	2		
21:11	ZZZZZZ	2		
21:15	ZZZZZZ	2		
21:18	MP30777A-MB1	2		CCV out
21:21	MP30777A-B2	2		CCV out
21:24	MP30777A-S3	2		CCV out. FE very high
21:27	MP30777A-S4	2		CCV out. FE very high
21:30	JD38065-1	2		(sample used for QC only; not part of login JD37967)
21:33	MP30777A-SD1	10		CCV out. FE very high
21:36	ZZZZZZ	1		
21:40	MA51735-CCVA18	1		
21:43	MA51735-CCB18	1		
21:46	ZZZZZZ	2		
21:49	ZZZZZZ	2		
21:52	ZZZZZZ	2		
21:56	ZZZZZZ	2		
21:59	ZZZZZZ	2		
22:02	ZZZZZZ	2		
22:05	ZZZZZZ	2		
22:08	ZZZZZZ	1		
22:11	MA51735-CCVA19	1		
22:14	MA51735-CCB19	1		
22:18	MA51735-CCVA20	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:21	MA51735-CCB20	1		
22:24	ZZZZZZ	1		
22:27	ZZZZZZ	1		
22:30	ZZZZZZ	1		
22:33	MA51735-CCVA21	1		
22:36	MA51735-CCB21	1		
22:40	MP30774-MB1	1		
22:43	MP30774-B1	1		
22:46	MP30774-S1	1		
22:49	MP30774-S2	1		
22:52	JD38029-2	1		(sample used for QC only; not part of login JD37967)
22:55	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:04	ZZZZZZ	1		
23:07	MA51735-CCVA22	1		
23:10	MA51735-CCB22	1		
23:14	ZZZZZZ	2		
23:17	MP30761-S2	2		
23:20	MP30761-S3	2		
23:23	ZZZZZZ	2		
23:26	ZZZZZZ	2		
23:30	ZZZZZZ	1		
23:33	ZZZZZZ	1		
23:36	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:42	MA51735-CCVA23	1		
23:45	MA51735-CCB23	1		
23:48	ZZZZZZ	1		
23:51	ZZZZZZ	1		
23:55	ZZZZZZ	1		
23:58	ZZZZZZ	1		
00:01	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:04	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:13	ZZZZZZ	1		
00:16	MA51735-CCVA24	1		
00:19	MA51735-CCB24	1		
00:23	ZZZZZZ	10		
00:26	ZZZZZZ	10		
00:29	ZZZZZZ	10		
00:32	ZZZZZZ	10		
00:35	ZZZZZZ	10		
00:38	MA51735-CCVA25	1		
00:41	MA51735-CCB25	1		
00:45	ZZZZZZ	1		
00:48	ZZZZZZ	1		
00:51	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As
11:44	ZZZZZZ	1	
11:47	MA51735-ICVA1	1	X
11:50	MA51735-ICV1	1	X
11:54	MA51735-ICB1	1	X
11:57	MA51735-CCVA1	1	X
12:00	MA51735-CCB1	1	X
12:03	MA51735-CRI1	1	X
12:12	MA51735-ICSA1	1	X
12:15	MA51735-ICSAB1	1	X
12:48	ZZZZZZ	1	
12:56	ZZZZZZ	1	
12:59	ZZZZZZ	1	
13:03	ZZZZZZ	1	
13:06	ZZZZZZ	1	
13:15	ZZZZZZ	1	
13:19	ZZZZZZ	1	
13:22	MA51735-CCVA2	1	X
13:25	MA51735-CCB2	1	X
13:29	ZZZZZZ	1	
13:32	ZZZZZZ	1	
13:35	MP30757-MB1	2	X
13:38	MP30757-B1	2	X
13:41	MP30757-S1	2	X
13:44	MP30757-S2	2	X
13:48	JD37967-1	2	X
13:51	MP30757-SD1	10	X
13:54	MP30757-PS1	2	
13:57	MA51735-CCVA3	1	X
14:00	MA51735-CCB3	1	X
14:03	MP30647-MB1	1	
14:06	MP30647-B1	1	
14:09	MP30647-S1	1	
14:13	MP30647-S2	1	
		Element:	As

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As	
14:16	JD37213-1	1		(a)
14:19	MP30647-S3	1		
14:22	JD37213-3	1		(a)
14:25	MA51735-CCVA4	1	X	
14:28	MA51735-CCB4	1	X	
14:31	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:37	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:53	MA51735-CCVA5	1	X	
14:56	MA51735-CCB5	1	X	
14:59	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:11	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:17	ZZZZZZ	1		
15:20	ZZZZZZ	5		
15:24	MA51735-CCVA6	1	X	
15:27	MA51735-CCB6	1	X	
15:31	MP30773-MB1	5	X	
15:34	MP30773-B1	5	X	
15:37	MP30773-S1	5	X	
15:40	MP30773-S2	5	X	
15:43	JD38054-1	5	X	(a)
15:46	MP30773-SD1	25	X	
15:49	ZZZZZZ	5		
15:53	ZZZZZZ	5		
15:56	ZZZZZZ	5		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As	
15:59	MA51735-CCVA7	1	X	
16:02	MA51735-CCB7	1	X	
16:05	ZZZZZZ	5		
16:08	ZZZZZZ	5		
16:11	ZZZZZZ	5		
16:14	ZZZZZZ	5		
16:18	ZZZZZZ	5		
16:21	ZZZZZZ	5		
16:24	MA51735-CCVA8	1	X	
16:28	MA51735-CCB8	1	X	
16:31	MP30773-S1	20		
16:35	MP30773-S2	20		
16:38	JD38054-1	20		(a)
16:41	MP30773-SD1	100		
16:44	ZZZZZZ	20		
16:47	ZZZZZZ	10		
16:50	ZZZZZZ	10		
16:54	ZZZZZZ	20		
16:57	MA51735-CCVA9	1	X	
17:00	MA51735-CCB9	1	X	
17:03	ZZZZZZ	20		
17:06	ZZZZZZ	50		
17:09	ZZZZZZ	10		
17:12	ZZZZZZ	10		
17:16	ZZZZZZ	20		
17:19	ZZZZZZ	50		
17:22	MA51735-CCVA10	1	X	
17:25	MA51735-CCB10	1	X	
17:28	MP30776A-MB1	2	X	
17:31	MP30776A-B2	2	X	
17:35	MP30776A-S3	2	X	
17:38	MP30776A-S4	2	X	
17:41	JD38050-2	2	X	(a)
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As
17:44	MP30776A-SD1	10	X
17:47	ZZZZZZ	2	
17:50	ZZZZZZ	2	
17:54	MA51735-CCVA11	1	X
17:57	MA51735-CCB11	1	X
18:00	MA51735-ICSA2	1	X
18:03	MA51735-ICSAB2	1	
18:08	MA51735-ICSAB3	1	X
18:11	ZZZZZZ	1	
18:15	MP30753A-MB1	2	
18:18	MP30753A-B3	2	
18:21	MA51735-CCVA12	1	X
18:24	MA51735-CCB12	1	X
18:28	MP30753A-B4	2	
18:31	ZZZZZZ	2	
18:34	ZZZZZZ	2	
18:37	ZZZZZZ	5	
18:40	MP30753A-S3	2	
18:43	MP30753A-S4	2	
18:47	JD38008-10	2	(a)
18:50	MP30753A-SD1	10	
18:53	MA51735-CCVA13	1	X
18:56	MA51735-CCB13	1	X
18:59	ZZZZZZ	2	
19:02	ZZZZZZ	2	
19:05	ZZZZZZ	2	
19:08	ZZZZZZ	2	
19:12	ZZZZZZ	2	
19:15	ZZZZZZ	2	
19:18	ZZZZZZ	2	
19:21	ZZZZZZ	2	
19:24	MA51735-CCVA14	1	X
19:27	MA51735-CCB14	1	X
		Element:	As

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As	
19:31	ZZZZZZ	2		
19:34	ZZZZZZ	2		
19:37	ZZZZZZ	2		
19:40	ZZZZZZ	2		
19:43	MP30778-MB1	2	X	
19:46	MP30778-B1	2	X	
19:49	MP30778-S1	2	X	
19:53	MP30778-S2	2	X	
19:56	MA51735-CCVA15	1	X	
19:59	MA51735-CCB15	1	X	
20:02	JD38050-2F	2	X	(a)
20:05	MP30778-SD1	10	X	
20:08	ZZZZZZ	2		
20:12	ZZZZZZ	2		
20:15	ZZZZZZ	2		
20:18	ZZZZZZ	2		
20:21	ZZZZZZ	2		
20:24	ZZZZZZ	2		
20:27	ZZZZZZ	2		
20:30	MA51735-CCVA16	1	X	
20:33	MA51735-CCB16	1	X	
20:37	ZZZZZZ	2		
20:40	ZZZZZZ	2		
20:43	ZZZZZZ	2		
20:46	ZZZZZZ	2		
20:49	ZZZZZZ	2		
20:52	ZZZZZZ	2		
20:56	ZZZZZZ	2		
20:59	ZZZZZZ	2		
21:02	MA51735-CCVA17	1	X	
21:05	MA51735-CCB17	1	X	
21:08	ZZZZZZ	2		
21:11	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As	
21:15	ZZZZZZ	2		
21:18	MP30777A-MB1	2		
21:21	MP30777A-B2	2		
21:24	MP30777A-S3	2		
21:27	MP30777A-S4	2		
21:30	JD38065-1	2		(a)
21:33	MP30777A-SD1	10		
21:36	ZZZZZZ	1		
21:40	MA51735-CCVA18	1	X	
21:43	MA51735-CCB18	1	X	
21:46	ZZZZZZ	2		
21:49	ZZZZZZ	2		
21:52	ZZZZZZ	2		
21:56	ZZZZZZ	2		
21:59	ZZZZZZ	2		
22:02	ZZZZZZ	2		
22:05	ZZZZZZ	2		
22:08	ZZZZZZ	1		
22:11	MA51735-CCVA19	1	X	
22:14	MA51735-CCB19	1	X	
22:18	MA51735-CCVA20	1	X	
22:21	MA51735-CCB20	1	X	
22:24	ZZZZZZ	1		
22:27	ZZZZZZ	1		
22:30	ZZZZZZ	1		
22:33	MA51735-CCVA21	1	X	
22:36	MA51735-CCB21	1	X	
22:40	MP30774-MB1	1		
22:43	MP30774-B1	1		
22:46	MP30774-S1	1		
22:49	MP30774-S2	1		
22:52	JD38029-2	1		(a)
22:55	ZZZZZZ	1		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As
22:58	ZZZZZZ	1	
23:01	ZZZZZZ	1	
23:04	ZZZZZZ	1	
23:07	MA51735-CCVA22	1	X
23:10	MA51735-CCB22	1	X
23:14	ZZZZZZ	2	
23:17	MP30761-S2	2	
23:20	MP30761-S3	2	
23:23	ZZZZZZ	2	
23:26	ZZZZZZ	2	
23:30	ZZZZZZ	1	
23:33	ZZZZZZ	1	
23:36	ZZZZZZ	1	
23:39	ZZZZZZ	1	
23:42	MA51735-CCVA23	1	X
23:45	MA51735-CCB23	1	X
23:48	ZZZZZZ	1	
23:51	ZZZZZZ	1	
23:55	ZZZZZZ	1	
23:58	ZZZZZZ	1	
00:01	ZZZZZZ	1	
00:04	ZZZZZZ	1	
00:07	ZZZZZZ	1	
00:10	ZZZZZZ	1	
00:13	ZZZZZZ	1	
00:16	MA51735-CCVA24	1	X
00:19	MA51735-CCB24	1	X
00:23	ZZZZZZ	10	
00:26	ZZZZZZ	10	
00:29	ZZZZZZ	10	
00:32	ZZZZZZ	10	
00:35	ZZZZZZ	10	
00:38	MA51735-CCVA25	1	
		Element:	As

REPORTED ELEMENTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Element: Dilution	As
00:41	MA51735-CCB25	1	
00:45	ZZZZZZ	1	
00:48	ZZZZZZ	1	
00:51	ZZZZZZ	1	

(a) Sample used for QC only; not part of login JD37967.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:00	MA51735-STD1	100	100	100	100	100	100	100	100
11:04	MA51735-STD2	100	100	100	100	100	100	100	100
11:07	MA51735-STD3	100	100	100	100	100	100	100	100
11:10	MA51735-STD4	101.487	101.203	100.62	99.825	100.621	101.597	100.711	101.497
11:14	MA51735-STD5	102.137	103.805	99.523	98.878	103.154	101.048	100.148	103.638
11:17	MA51735-STD6	103.002	102.354	99.71	97.887	101.832	102.329	100.322	102.387
11:21	MA51735-STD7	101.218	100.99	100.055	98.567	101.73	104.324	102.526	101.94
11:24	MA51735-STD8	100.574	101.168	99.036	99.341	100.858	105.37	103.683	101.126
11:27	MA51735-STD9	102.85	103.082	101.111	99.152	102.571	103.215	101.909	102.379
11:31	MA51735-STD10	103.981	104.342	102.544	99.973	103.128	104.407	102.822	103.725
11:34	MA51735-STD11	104.566	104.898	104.307	103.245	104.798	104.618	101.467	103.981
11:37	MA51735-STD12	106.629	107.161	104.925	103.272	106.634	105.909	102.354	105.702
11:44	ZZZZZZ	108.078	109.142	107.228	103.12	107.884	103.266	100.746	107.62
11:47	MA51735-ICVA1	107.744	108.458	105.04	102.466	107.639	108.756	104.734	106.251
11:50	MA51735-ICV1	108.934	107.613	105.913	104.08	106.786	105.431	103.842	106.808
11:54	MA51735-ICB1	109.774	109.715	105.672	103.792	107.969	103.291	101.651	108.427
11:57	MA51735-CCVA1	106.884	107.195	104.618	103.741	106.86	108.623	106.376	105.593
12:00	MA51735-CCB1	110.89	109.466	106.92	103.911	107.745	106.496	103.967	108.416
12:03	MA51735-CRI1	109.647	108.45	105.526	103.989	108.143	105.782	103.938	108.584
12:12	MA51735-ICSA1	99.292	102.295	101.625	97.895	110.769	128.349	106.96	96.07
12:15	MA51735-ICSAB1	99.304	103.607	100.154	98.061	112.167	129.569	109.015	97.643
12:48	ZZZZZZ	101.925	105.864	101.906	99.167	113.161	124.42	106.177	99.041
12:56	ZZZZZZ	109.746	114.737	105.911	108.234	113.776	102.541	104.429	114.581
12:59	ZZZZZZ	110.898	114.334	106.503	108.588	113.499	104.525	105.422	113.254
13:03	ZZZZZZ	111.828	115.498	106.606	109.838	113.064	105.819	107.049	113.981
13:06	ZZZZZZ	0.2 !	0.034 !	0.019 !	0.015 !	0.092 !	0.043 !	0.043 !	0.062 !
13:15	ZZZZZZ	112.414	116.976	110.896	110.182	114.52	104.429	105.756	115.371
13:19	ZZZZZZ	112.878	116.68	109.83	108.382	115.755	109.008	106.191	114.984
13:22	MA51735-CCVA2	112.645	114.982	109.079	108.279	114.977	112.558	110.276	113.596
13:25	MA51735-CCB2	114.062	116.942	112.286	111.514	115.492	111.688	110.16	115.411
13:29	ZZZZZZ	113.646	117.527	112.02	111.747	116.04	115.226	113.001	116.612
13:32	ZZZZZZ	118.45	121.465	117.225	111.902	120.527	118.521	112.74	120.579
13:35	MP30757-MB1	123.743	122.247	113.931	113.364	117.091	109.135	109.991	117.262

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
13:38	MP30757-B1	120.781	121.369	108.723	113.732	116.288	109.206	112.979	116.381
13:41	MP30757-S1	114.562	114.42	102.355	111.279	108.572	104.05	111.685	109.283
13:44	MP30757-S2	115.266	112.712	102.419	109.232	108.279	102.926	111.428	108.344
13:48	JD37967-1	114.738	112.69	103.297	110.923	108.742	100.801	109.955	109.179
13:51	MP30757-SD1	116.669	116.382	111.282	111.738	114.782	111.714	111.979	115.86
13:54	MP30757-PS1	115.026	114.447	103.244	110.163	110.478	102.806	110.916	109.538
13:57	MA51735-CCVA3	117.087	117.949	112.393	111.201	115.904	117.198	113.507	115.886
14:00	MA51735-CCB3	116.976	117.215	114.17	112.671	114.855	112.828	111.348	115.3
14:03	MP30647-MB1	120.585	120.499	115.198	110.957	116.565	112.826	110.171	117.77
14:06	MP30647-B1	119.422	118.644	110.392	110.003	117.34	115.819	112.607	115.692
14:09	MP30647-S1	110.243	114.36	114.996	109.975	111.255	116.717	112.855	112.688
14:13	MP30647-S2	110.453	115.036	114.216	108.525	111.026	115.906	112.245	110.706
14:16	JD37213-1	110.191	113.263	112.849	107.978	109.126	110.022	108.111	110.808
14:19	MP30647-S3	108.382	110.755	105.506	105.248	108.62	111.418	109.638	108.7
14:22	JD37213-3	108.709	111.171	105.75	104.533	109.283	108.031	106.486	109.055
14:25	MA51735-CCVA4	111.042	112.204	106.545	106.84	108.901	110.145	108.391	108.698
14:28	MA51735-CCB4	112.513	111.423	106.619	106.602	109.616	106.187	106.477	110.801
14:31	ZZZZZZ	108.011	111.96	107.325	104.085	107.787	104.743	103.391	108.37
14:34	ZZZZZZ	105.904	107.744	103.868	102.322	106.359	104.577	103.793	106.138
14:37	ZZZZZZ	108.748	108.824	106.272	104.623	106.078	103.212	103.367	106.741
14:40	ZZZZZZ	105.73	107.829	105.214	103.466	105.536	103.859	103.841	105.702
14:43	ZZZZZZ	106.518	107.324	105.672	103.797	104.879	102.965	103.123	105.954
14:47	ZZZZZZ	107.868	108.249	104.883	103.028	105.787	101.288	102.067	106.325
14:50	ZZZZZZ	105.805	106.435	103.178	101.418	104.779	103.003	103.077	104.372
14:53	MA51735-CCVA5	109.746	108.078	103.098	104.404	106.327	107.192	106.079	105.653
14:56	MA51735-CCB5	111.895	111.161	103.776	105.355	109.494	103.373	103.358	109.746
14:59	ZZZZZZ	105.533	107.085	105.329	101.391	105.166	104.479	103.764	106.09
15:02	ZZZZZZ	102.761	105.329	105.41	103.281	103.054	102.489	101.862	103.284
15:05	ZZZZZZ	105.979	106.334	105.037	103.745	103.942	102.296	101.979	105.125
15:08	ZZZZZZ	106.918	107.902	106.15	101.959	105.282	101.727	101.048	105.502
15:11	ZZZZZZ	105.512	105.568	103.387	101.478	103.277	101.55	101.171	103.597
15:14	ZZZZZZ	106.603	107.539	104.561	102.474	103.782	101.064	100.689	104.421
15:17	ZZZZZZ	105.582	106.381	103.887	101.168	104.45	101.19	100.1	103.595

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
15:20	ZZZZZZ	106.525	104.504	101.726	99.669	104.63	103.914	101.234	104.223
15:24	MA51735-CCVA6	108.182	106.681	101.201	102.631	105.163	105.918	104.335	104.688
15:27	MA51735-CCB6	110.729	107.643	102.906	102.31	106.432	103.185	101.709	107.652
15:31	MP30773-MB1	110.281	108.225	101.028	102.242	106.442	100.199	100.328	106.303
15:34	MP30773-B1	109.785	106.641	102.333	102.989	106.309	105.267	104.824	106.355
15:37	MP30773-S1	109.387	109.651	106.449	108.138	110.711	120.824	109.227	102.518
15:40	MP30773-S2	114.558	115.221	106.956	107.005	115.329	123.749	108.993	107.424
15:43	JD38054-1	114.541	115.614	108.426	107.727	115.88	120.631	107.548	108.801
15:46	MP30773-SD1	114.183	114.589	109.867	107.27	113.36	115.138	108.219	111.941
15:49	ZZZZZZ	116.188	114.611	110.094	108.73	119.462	130.969 !	110.597	109.549
15:53	ZZZZZZ	117.007	116.943	111.574	110.34	122.974	135.135 !	111.605	109.567
15:56	ZZZZZZ	115.434	115.288	110.268	109.214	121.222	138.617 !	111.885	108.318
15:59	MA51735-CCVA7	105.552	103.363	99.739	103.489	103.518	104.817	104.978	102.976
16:02	MA51735-CCB7	108.617	106.822	101.56	102.423	106.22	100.876	102.061	106.398
16:05	ZZZZZZ	111.87	116.251	112.577	115.552	117.415	135.003 !	110.799	104.968
16:08	ZZZZZZ	106.764	109.411	105.194	104.904	113.28	126.062	106.52	103.069
16:11	ZZZZZZ	111.679	111.389	108.444	108.744	115.281	126.097	108.912	107.135
16:14	ZZZZZZ	115.731	114.775	110.549	108.161	120.868	138.943 !	111.851	107.269
16:18	ZZZZZZ	106.132	105.534	105.524	100.002	103.147	107.255	108.217	97.927
16:21	ZZZZZZ	112.643	119.509	114.611	112.084	123.718	141.869 !	111.491	110.061
16:24	MA51735-CCVA8	112.21	113.44	109.207	106.989	112.382	114.326	108.334	112.266
16:28	MA51735-CCB8	115.884	115.566	110.996	107.725	113.122	108.604	105.773	113.934
16:31	MP30773-S1	113.264	114.37	111.131	108.218	113.097	116.304	107.897	112.081
16:35	MP30773-S2	112.382	114.524	109.796	108.758	112.599	115.766	107.853	110.72
16:38	JD38054-1	115.033	114.727	109.344	107.215	113.623	115.579	107.193	112.69
16:41	MP30773-SD1	115.085	114.947	111.427	106.943	113.261	115.017	107.824	113.091
16:44	ZZZZZZ	116.273	115.089	112.322	106.425	115.928	118.494	107.84	114.302
16:47	ZZZZZZ	113.887	114.004	112.426	110.266	116.68	125.375	109.528	111.241
16:50	ZZZZZZ	114.109	115.37	111.369	107.377	117.042	126.107	109.067	110.964
16:54	ZZZZZZ	108.886	111.489	108.779	107.649	111.743	117.416	107.29	107.481
16:57	MA51735-CCVA9	105.193	103.893	100.383	102.386	103.426	105.603	102.839	102.706
17:00	MA51735-CCB9	106.423	106.045	103.032	102.444	104.826	102.404	101.694	105.722
17:03	ZZZZZZ	109.239	109.268	106.358	104.252	110.458	114.82	104.357	107.775

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
17:06	ZZZZZZ	106.546	109.22	107.986	104.794	108.663	112.955	105.315	107.351
17:09	ZZZZZZ	109.604	111.213	108.79	105.891	111.479	118.232	105.926	107.572
17:12	ZZZZZZ	112.063	112.055	110.8	108.453	114.889	124.763	109.318	109.187
17:16	ZZZZZZ	109.308	109.763	107.969	103.674	108.732	108.508	103.61	107.014
17:19	ZZZZZZ	109.757	111.131	110.183	105.325	110.854	114.823	105.697	108.565
17:22	MA51735-CCVA10	108.298	109.331	107.766	104.879	108.251	110.523	105.253	107.822
17:25	MA51735-CCB10	108.623	108.364	106.001	104.088	106.981	105.26	102.394	107.769
17:28	MP30776A-MB1	107.151	106.146	102.55	106.314	102.918	98.416	101.383	103.56
17:31	MP30776A-B2	108.173	105.659	105.329	107.532	104.208	104.374	105.817	104.34
17:35	MP30776A-S3	107.835	106.329	101.261	105.673	110.087	119.219	108.168	103.292
17:38	MP30776A-S4	109.998	109.05	102.466	105.527	111.971	119.602	108.314	104.672
17:41	JD38050-2	109.387	107.624	101.746	106.95	110.523	117.111	107.074	104.195
17:44	MP30776A-SD1	111.966	112.505	108.226	108.366	111.677	111.236	106.804	110.71
17:47	ZZZZZZ	107.746	107.114	98.953	103.071	106.424	101.746	101.433	104.128
17:50	ZZZZZZ	106.428	105.923	99.254	104.793	106.412	101.021	101.796	103.334
17:54	MA51735-CCVA11	111.691	112.244	107.071	105.394	110.494	110.281	106.911	110.075
17:57	MA51735-CCB11	112.486	111.028	106.598	104.614	109.357	105.183	102.398	110.457
18:00	MA51735-ICSA2	102.069	104.21	100.951	95.821	112.966	131.153 !	105.182	96.608
18:03	MA51735-ICSAB2	No results reported for the elements associated with this internal standard.							
18:08	MA51735-ICSAB3	98.207	103.281	96.303	98.054	112.065	127.993	108.022	97.173
18:11	ZZZZZZ	105.776	108.876	98.55	107.857	109.431	99.913	106.57	110.67
18:15	MP30753A-MB1	108.418	113.308	104.957	102.153	112.733	105.588	98.041	114.084
18:18	MP30753A-B3	108.277	111.251	99.613	108.632	109.718	100.386	107.779	110.407
18:21	MA51735-CCVA12	109.338	112.815	102.063	109.053	110.927	107.315	109.117	110.671
18:24	MA51735-CCB12	107.831	110.645	103.393	108.489	110.228	103.721	106.254	111.619
18:28	MP30753A-B4	110.278	109.449	99.956	107.269	107.743	100.228	106.617	107.476
18:31	ZZZZZZ	102.156	105.791	88.36	103.59	102.083	91.751	102.249	101.663
18:34	ZZZZZZ	100.377	103.732	87.432	105.205	99.25	87.281	101.035	100.591
18:37	ZZZZZZ	106.819	109.218	100.547	105.804	107.597	96.819	103.561	108.134
18:40	MP30753A-S3	107.658	109.871	101.085	108.127	118.002	130.563 !	112.528	107.992
18:43	MP30753A-S4	107.168	108.982	98.509	108.486	117.382	129.266	112.261	105.456
18:47	JD38008-10	106.782	108.566	98.29	108.587	115.945	125.594	109.613	105.777
18:50	MP30753A-SD1	110.46	110.696	105.202	107.61	112.881	111.086	107.146	110.961

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
18:53	MA51735-CCVA13	110.093	111.529	105.099	109.436	110.593	109.252	109.868	110.645
18:56	MA51735-CCB13	111.193	111.861	106.2	108.543	111.509	105.84	106.023	112.471
18:59	ZZZZZZ	108.038	108.126	96.603	107.621	105.982	97.979	103.534	105.108
19:02	ZZZZZZ	106.668	105.631	96.559	105.865	108.569	108.43	104.357	102.088
19:05	ZZZZZZ	108.325	107.345	99.081	107.174	110.521	111.807	106.421	104.288
19:08	ZZZZZZ	107.993	109.71	101.04	108.421	117.065	126.279	109.392	105.921
19:12	ZZZZZZ	109.319	109.218	99.548	108.724	111.308	112.889	107.253	106.063
19:15	ZZZZZZ	109.17	108.5	101.358	110.515	116.702	125.468	110.804	106.691
19:18	ZZZZZZ	110.008	108.778	99.627	109.698	109.138	101.876	106.891	107.831
19:21	ZZZZZZ	108.641	108.684	99.917	108.503	106.92	99.187	105.236	106.426
19:24	MA51735-CCVA14	114.129	113.464	109.001	112.059	111.657	113.221	111.303	112.794
19:27	MA51735-CCB14	115.637	116.494	109.515	109.631	113.106	107.619	107.536	113.667
19:31	ZZZZZZ	110.128	108.262	93.722	104.7	109.144	98.234	101.643	104.894
19:34	ZZZZZZ	106.514	107.246	98.021	107.815	107.285	100.191	103.856	105.987
19:37	ZZZZZZ	108.918	106.738	99.799	106.158	111.094	114.607	105.699	104.318
19:40	ZZZZZZ	110.039	107.17	100.039	107.652	107.766	103.545	104.439	103.822
19:43	MP30778-MB1	111.252	107.58	100.328	107.761	106.446	95.818	102.252	106.804
19:46	MP30778-B1	111.209	108.934	101.309	107.431	107.193	100.891	106.302	105.71
19:49	MP30778-S1	108.342	107.142	100.297	108.418	111.061	118.232	109.641	104.623
19:53	MP30778-S2	109.503	110.211	100.565	108.981	112.875	118.527	110.548	106.645
19:56	MA51735-CCVA15	113.886	113.46	108.864	110.083	111.163	113	110.06	112.311
19:59	MA51735-CCB15	112.809	111.843	108.518	109.137	110.133	106.956	105.552	111.102
20:02	JD38050-2F	111.575	108.38	101.421	107.643	111.357	113.451	106.327	104.953
20:05	MP30778-SD1	112.26	111.621	107.06	107.42	111.511	108.22	104.816	109.482
20:08	ZZZZZZ	105.992	107.203	98.752	105.926	100.378	90.904	101.101	100.376
20:12	ZZZZZZ	109.009	106.775	98.841	107.377	106.678	100.669	103.324	104.099
20:15	ZZZZZZ	108.144	107.551	98.197	105.009	106.621	99.228	101.681	104.388
20:18	ZZZZZZ	106.14	104.47	97.96	105.969	104.376	97.333	102.771	103.779
20:21	ZZZZZZ	105.876	103.775	98.134	106.55	105.294	106.303	103.698	101.478
20:24	ZZZZZZ	105.54	104.8	99.448	106.435	108.365	112.136	104.947	102.334
20:27	ZZZZZZ	106.449	106.718	99.721	107.786	115.27	125.069	108.38	104.235
20:30	MA51735-CCVA16	113.681	113.374	110.152	109.253	112.062	111.862	109.162	111.959
20:33	MA51735-CCB16	112.49	113.069	108.069	107.55	110.815	106.61	104.933	111.211

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
20:37	ZZZZZZ	108.797	107.668	100.57	106.877	112.393	114.168	104.412	103.663
20:40	ZZZZZZ	109.327	107.709	102.175	107.807	114.902	124.643	107.048	103.808
20:43	ZZZZZZ	108.761	105.737	99.358	106.451	106.628	101.509	103.968	105.009
20:46	ZZZZZZ	109.726	107.953	100.307	107.13	106.71	99.692	103.999	106.8
20:49	ZZZZZZ	107.534	107.228	100.125	106.661	107.327	104.773	103.087	104.852
20:52	ZZZZZZ	111.604	109.123	101.67	107.553	107.32	101.213	104.204	106.998
20:56	ZZZZZZ	108.722	108.63	101.399	106.714	113.701	116.087	105.294	105.009
20:59	ZZZZZZ	109.304	107.822	101.03	105.859	107.998	104.719	102.82	104.748
21:02	MA51735-CCVA17	112.723	111.193	108.661	106.635	110.312	110.852	106.907	110.426
21:05	MA51735-CCB17	112.582	110.522	107.138	105.394	108.724	105.139	103.255	110.158
21:08	ZZZZZZ	108.581	107.038	101.461	106.431	105.951	96.571	101.193	105.496
21:11	ZZZZZZ	108.347	107.53	101.032	106.189	105.467	96.608	103.105	105.106
21:15	ZZZZZZ	110.834	108.603	103.65	107.5	106.971	96.624	101.937	107.287
21:18	MP30777A-MB1	112.787	109.838	104.01	108.726	106.187	97.079	101.569	107.355
21:21	MP30777A-B2	111.509	111.128	104.573	109.95	107.841	103.123	106.831	107.837
21:24	MP30777A-S3	92.626	96.412	95.395	94.41	208.01 !	406.886 !	128.075	89.998
21:27	MP30777A-S4	88.802	99.322	95.364	97.226	194.131 !	394.989 !	132.102	!a92.474
21:30	JD38065-1	84.55	100.1	87.524	97.304	187.786 !	396.628 !	130.105	!a92.665
21:33	MP30777A-SD1	91.053	102.1	77.028	103.224	123.81	152.216 !	112.232	102.85
21:36	ZZZZZZ	88.198	98.469	75.137	100.05	102.509	90.091	99.789	102.115
21:40	MA51735-CCVA18	87.69	97.279	76.374	98.837	100.508	90.584	99.319	101.012
21:43	MA51735-CCB18	87.935	96.24	73.687	97.804	99.851	86.48	95.346	100.703
21:46	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:49	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:52	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:56	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:59	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:02	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:05	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:08	ZZZZZZ	72.223	85.537	61.697 !	90.004	91.701	74.836	89.201	92.897
22:11	MA51735-CCVA19	72.394	85.477	64.709 !b	89.598	91.788	79.604	90.379	91.726
22:14	MA51735-CCB19	70.802	84.126	63.312 !	88.327	90.359	76.227	87.021	91.486
22:18	MA51735-CCVA20	71.285	84.827	65.942 !b	87.101	90.978	79.925	88.388	90.38

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
22:21	MA51735-CCB20	70.724	84.555	64.075 !b	87.016	90.482	76.305	85.958	90.74
22:24	ZZZZZZ	70.039	83.399	63.261 !	85.162	88.821	75.5	83.717	89.322
22:27	ZZZZZZ	69.845 !	84.318	63.446 !	85.028	88.95	75.706	83.423	89.149
22:30	ZZZZZZ	69.72 !	82.717	62.965 !	85.21	88.121	75.019	83.077	87.457
22:33	MA51735-CCVA21	71.372	84.064	66.814	86.103	88.437	80.159	87.026	88.396
22:36	MA51735-CCB21	73.091	85.033	65.356	85.28	89.724	77.948	84.528	89.846
22:40	MP30774-MB1	71.158	83.839	64.082	84.461	88.428	76.462	82.276	88.309
22:43	MP30774-B1	70.521	82.66	67.304	84.749	87.245	80.649	86.764	87.312
22:46	MP30774-S1	69.834	82.665	67.314	83.912	86.067	79.339	85.01	86.357
22:49	MP30774-S2	71.819	83.728	67.997	86.39	87.899	79.825	86.966	86.936
22:52	JD38029-2	73.265	84.519	66.366	86.512	88.741	77.497	85.753	88.579
22:55	ZZZZZZ	72.063	84.339	65.78	82.862	83.455	70.323	88.393	83.061
22:58	ZZZZZZ	71.437	83.191	64.364	82.937	82.438	68.569	88.084	83.03
23:01	ZZZZZZ	72.662	83.229	63.436	83.209	83.3	68.236	89.182	82.856
23:04	ZZZZZZ	71.675	83.557	62.883	84.15	83.837	67.916	89.092	84.165
23:07	MA51735-CCVA22	72.623	84.773	65.295	88.779	90.728	79.296	89.046	90.204
23:10	MA51735-CCB22	74.71	86.436	65.544	89.209	92.097	78.464	87.052	92.243
23:14	ZZZZZZ	72.76	85.356	67.436	85.372	89.673	80.443	86.563	89.836
23:17	MP30761-S2	72.3	84.509	67.495	85.237	88.505	80.188	86.576	88.758
23:20	MP30761-S3	72.858	85.142	67.933	85.584	88.663	80.232	87.085	88.073
23:23	ZZZZZZ	72.492	84.253	67.939	84.148	87.843	79.645	85.036	88.075
23:26	ZZZZZZ	72.072	83.983	68.225	85.481	88.715	80.374	85.403	88.112
23:30	ZZZZZZ	72.079	84.043	68.251	85.649	87.373	78.528	84.391	87.601
23:33	ZZZZZZ	72.841	85.342	67.985	85.569	87.788	78.15	84.718	88.908
23:36	ZZZZZZ	72.679	85.521	68.556	85.098	88.719	78.604	84.433	87.829
23:39	ZZZZZZ	72.298	84.481	67.672	84.448	85.778	78.125	83.243	86.223
23:42	MA51735-CCVA23	74.695	84.961	66.495 !b	83.525	88.993	79.682	82.694	88.95
23:45	MA51735-CCB23	75.178	84.506	66.448 !b	86.261	88.859	78.359	84.184	88.935
23:48	ZZZZZZ	129.008	134.943 !	64.214 !	82.683	143.036 !	67.161 !	80.385	144.19 !
23:51	ZZZZZZ	71.571	82.659	67.486	83.105	85.745	77.208	82.196	85.496
23:55	ZZZZZZ	72.458	84.25	67.842	83.739	86.158	77.196	82.587	85.85
23:58	ZZZZZZ	72.291	83.268	67.625	83.279	86.597	77.422	82.59	86.285
00:01	ZZZZZZ	72.703	84.464	67.822	84.082	86.073	77.64	82.703	85.913

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
00:04	ZZZZZZ	72.312	84.135	67.658	83.686	86.595	77.646	82.661	85.797
00:07	ZZZZZZ	72.503	84.314	67.64	83.988	86.473	77.463	83.403	86.076
00:10	ZZZZZZ	74.685	84.211	66.25	85.954	88.229	77.847	83.361	87.915
00:13	ZZZZZZ	75.469	84.979	68.168	84.606	88.753	81.379	85.728	88.658
00:16	MA51735-CCVA24	74.23	84.177	67.876 !a	85.923	87.56	80.966	85.549	87.821
00:19	MA51735-CCB24	74.849	84.193	66.646 !b	84.854	88.464	78.334	82.651	88.031
00:23	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:26	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:29	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:32	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:35	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:38	MA51735-CCVA25	No results reported for the elements associated with this internal standard.							
00:41	MA51735-CCB25	No results reported for the elements associated with this internal standard.							
00:45	ZZZZZZ	68.49 !	79.486	59.526 !	83.93	86.463	71.601	81.202	86.054
00:48	ZZZZZZ	68.211 !	79.891	59.83 !	82.8	85.105	71.555	80.617	85.45
00:51	ZZZZZZ	67.667 !	79.907	59.598 !	82.056	84.882	71.282	79.939	85.378

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Lithium	60-125 %
Istd#2	Scandium (45-1)	60-125 %
Istd#3	Scandium (45-2)	60-125 %
Istd#4	Scandium (45-3)	60-125 %
Istd#5	Germanium (72-1)	60-125 %
Istd#6	Germanium (72-2)	60-125 %
Istd#7	Germanium (72-3)	60-125 %
Istd#8	Germanium (74-1)	60-125 %

(a) No samples reported for the elements associated with this internal standard.
(b) No samples reported for this element in the area bracketed by this QC.

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
11:00	MA51735-STD1	100	100	100	100	100	100	100	100
11:04	MA51735-STD2	100	100	100	100	100	100	100	100
11:07	MA51735-STD3	100	100	100	100	100	100	100	100
11:10	MA51735-STD4	101.81	100.803	101.425	98.049	98.851	101.642	99.691	100.759
11:14	MA51735-STD5	101.538	100.175	102.807	98.71	98.927	103.986	100.136	103.07
11:17	MA51735-STD6	103.008	100.394	101.651	97.966	98.312	101.961	99.315	101.733
11:21	MA51735-STD7	104.782	102.338	101.8	97.918	99.833	102.16	99.097	101.542
11:24	MA51735-STD8	105.908	104.093	99.518	97.255	99.122	101.017	99.547	100.896
11:27	MA51735-STD9	103.455	101.896	101.61	98.118	99.162	103.754	99.349	102.061
11:31	MA51735-STD10	104.712	102.998	102.544	99.427	99.46	104.036	101.736	103.151
11:34	MA51735-STD11	103.161	101.567	100.554	97.02	99.29	103.075	100.743	102.9
11:37	MA51735-STD12	101.801	101.193	101.725	95.658	98.81	103.677	99.928	104.328
11:44	ZZZZZZ	103.416	100.779	107.723	103.519	102.215	108.688	105.293	106.355
11:47	MA51735-ICVA1	107.14	104.804	102.955	99.01	99.904	105.841	102.122	104.265
11:50	MA51735-ICV1	106.423	103.922	106.492	102.819	102.572	108.674	104.709	106.051
11:54	MA51735-ICB1	104.004	101.391	107.868	102.085	102.775	107.862	104.621	106.299
11:57	MA51735-CCVA1	106.987	105.724	103.511	99.05	100.851	105.599	102.185	104.477
12:00	MA51735-CCB1	107.138	103.313	106.572	103.569	103.146	107.955	106.601	106.766
12:03	MA51735-CRI1	106.498	103.749	106.52	102.983	102.012	107.692	105.533	105.938
12:12	MA51735-ICSA1	88.805	104.739	91.692	83.132	118.493	96.334	90.94	100.665
12:15	MA51735-ICSAB1	90.134	105.874	93.732	82.312	118.586	99.299	90.798	103.206
12:48	ZZZZZZ	86.704	103.584	95.035	83.896	120.366	99.875	91.107	102.965
12:56	ZZZZZZ	102.748	104.147	114.795	105.963	107.007	115.83	108.058	112.523
12:59	ZZZZZZ	104.591	105.615	112.367	105.306	105.815	114.021	107.961	111.87
13:03	ZZZZZZ	105.449	106.694	112.937	105.926	107.226	114.122	107.773	111.645
13:06	ZZZZZZ	0.047 !	0.041 !	0.021 !	0.019 !	0.018 !	0.021 !	0.022 !	0.006 !
13:15	ZZZZZZ	104.354	105.765	114.466	108.524	108.49	114.759	109.972	111.792
13:19	ZZZZZZ	109.099	106.139	113.221	107.683	106.405	114.537	111.303	110.265
13:22	MA51735-CCVA2	111.45	110.546	109.645	103.19	103.048	111.531	106.999	110.097
13:25	MA51735-CCB2	111.984	110.096	113.51	108.445	108.103	114.606	111.276	111.089
13:29	ZZZZZZ	115.777	113.027	111.887	108.214	108.195	114.276	112.723	110.004
13:32	ZZZZZZ	118.798	113.089	117.224	113.665	109.454	117.012	116.462	113.381
13:35	MP30757-MB1	110.034	110.456	116.434	111.738	109.205	118.452	112.609	114.194

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
13:38	MP30757-B1	108.618	112.737	114.286	104.23	107.18	114.815	105.78	114.476
13:41	MP30757-S1	103.623	111.64	107.035	96.778	104.493	109.382	98.673	108.64
13:44	MP30757-S2	103.055	111.043	105.56	96.055	102.59	108.188	98.37	109.7
13:48	JD37967-1	100.495	109.627	106.201	97.073	104.751	111.589	99.386	109.18
13:51	MP30757-SD1	112.56	111.987	111.566	107	107.455	115.38	109.131	109.514
13:54	MP30757-PS1	102.434	110.293	106.676	96.556	101.999	109.914	99.392	109.699
13:57	MA51735-CCVA3	115.017	113.043	112.312	104.835	105.086	114.03	107.908	111.883
14:00	MA51735-CCB3	113.574	111.567	112.552	109.113	108	114.204	111.639	110.182
14:03	MP30647-MB1	113.24	110.146	115.382	109.396	107.993	115.541	111.828	111.187
14:06	MP30647-B1	115.512	112.855	114.464	105.617	105.358	114.348	109.171	110.627
14:09	MP30647-S1	116.989	112.888	103.573	100.658	101.46	109.988	107.477	106.348
14:13	MP30647-S2	116.284	111.856	103.317	99.437	100.922	108.577	106.652	106.627
14:16	JD37213-1	110.737	107.991	103.904	98.168	99.924	107.698	106.234	105.529
14:19	MP30647-S3	112.127	109.653	102.623	97.131	98.934	107.876	104.516	105.625
14:22	JD37213-3	108.132	106.88	103.522	97.191	98.104	107.322	104.641	106.746
14:25	MA51735-CCVA4	109.056	108.419	105.967	100.102	101.566	109.323	104.724	106.74
14:28	MA51735-CCB4	106.747	106.231	109.922	104.611	105.713	110.803	107.19	108.318
14:31	ZZZZZZ	105.071	102.982	101.186	95.848	98.058	106.531	102.383	104.469
14:34	ZZZZZZ	104.828	103.653	100.267	95.452	97.444	104.597	102.687	104.863
14:37	ZZZZZZ	103.293	102.963	99.991	93.313	97.234	104.404	101.257	104.656
14:40	ZZZZZZ	103.82	103.371	99.653	93.697	96.874	103.953	101.85	104.008
14:43	ZZZZZZ	103.504	103.133	99.866	94.528	97.992	104.296	101.474	103.817
14:47	ZZZZZZ	101.786	102.112	101.515	94.042	97.439	105.508	100.796	106.211
14:50	ZZZZZZ	103.186	102.763	99.788	95.006	96.927	103.859	102.095	104.445
14:53	MA51735-CCVA5	105.657	105.508	103.586	98.584	101.299	106.655	102.516	104.889
14:56	MA51735-CCB5	104.233	102.808	110.105	102.368	103.335	110.883	105.696	107.685
14:59	ZZZZZZ	105.293	103.751	99.992	95.883	97.146	104.357	103.051	103.176
15:02	ZZZZZZ	103.056	102.505	96.996	94.033	96.588	103.254	101.426	102.157
15:05	ZZZZZZ	102.784	101.802	98.837	93.654	97.771	102.651	100.927	103.212
15:08	ZZZZZZ	101.987	101.129	100.276	93.55	96.813	104.694	101.308	103.92
15:11	ZZZZZZ	102.013	101.514	98.481	92.759	96.614	102.635	100.823	103.829
15:14	ZZZZZZ	101.599	100.927	99.296	93.319	97.287	103.408	100.861	104.194
15:17	ZZZZZZ	101.654	100.538	99.346	93.221	96.214	104.224	101.003	102.882

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
15:20	ZZZZZZ	104.812	101.268	101.259	97.849	98.73	104.543	102.966	101.928
15:24	MA51735-CCVA6	103.767	103.693	102.266	96.106	99.481	105.549	100.832	104.465
15:27	MA51735-CCB6	103.663	101.741	106.122	102.009	102.588	107.511	104.914	106.001
15:31	MP30773-MB1	100.725	100.336	106.068	100.702	102.224	106.151	103.857	104.556
15:34	MP30773-B1	105.202	104.768	103.495	98.712	100.184	105.731	102.927	106.017
15:37	MP30773-S1	102.691	106.503	98.554	92.512	101.587	101.1	98	102.653
15:40	MP30773-S2	104.706	105.504	102.064	94.193	99.251	104.988	99.848	105.946
15:43	JD38054-1	103.21	105.028	103.191	95.148	100.053	106.777	99.787	105.99
15:46	MP30773-SD1	111.243	107.717	107.165	102.566	102.452	109.257	108.008	105.813
15:49	ZZZZZZ	108.598	107.033	104.993	99.955	102.794	109.157	104.787	107.161
15:53	ZZZZZZ	107.446	107.9	106.119	98.691	102.192	109.397	104.634	106.944
15:56	ZZZZZZ	108.563	107.51	104.897	99.017	100.945	107.107	103.859	105.327
15:59	MA51735-CCVA7	103.047	104.406	100.144	95.728	99.088	103.982	100.012	102.388
16:02	MA51735-CCB7	101.852	101.697	105.389	100.409	100.942	107.07	103.263	104.438
16:05	ZZZZZZ	103.193	105.82	100.875	95.324	100.551	105.083	101.04	103.992
16:08	ZZZZZZ	100.692	103.301	98.55	92.503	99.227	103.304	98.784	103.503
16:11	ZZZZZZ	106.481	106.405	102.466	99.141	101.936	105.652	103.734	103.125
16:14	ZZZZZZ	108.689	107.169	104.018	99.982	101.923	108.61	104.317	104.4
16:18	ZZZZZZ	95.195	108.419	93.096	86.28	119.499	98.943	93.743	100.221
16:21	ZZZZZZ	107.528	106.938	105.677	97.31	101.561	109.605	103.049	108.289
16:24	MA51735-CCVA8	111.871	108.082	109.035	102.972	100.766	110.83	107.793	107.195
16:28	MA51735-CCB8	109.273	106.063	112.223	108.15	105.354	112.883	110.679	108.676
16:31	MP30773-S1	112	107.506	107.198	103.372	102.1	109.538	108.856	107.3
16:35	MP30773-S2	110.745	107.203	107.482	103.12	101.934	109.558	107.002	106.587
16:38	JD38054-1	110.683	106.509	108.617	102.628	102.198	110.028	107.099	107.008
16:41	MP30773-SD1	113.889	107.857	110.69	105.95	102.997	111.54	110.527	108.113
16:44	ZZZZZZ	113.709	107.579	109.98	106.257	102.849	111.238	110.219	106.038
16:47	ZZZZZZ	111.524	107.481	106.44	103.484	102.336	108.591	109.144	105.366
16:50	ZZZZZZ	111.113	106.569	106.543	102.494	101.274	108.246	107.445	105.86
16:54	ZZZZZZ	108.854	106.648	104.338	101.695	101.722	108.074	105.682	104.2
16:57	MA51735-CCVA9	103.579	102.853	100.495	96.492	98.004	103.351	99.978	101.376
17:00	MA51735-CCB9	103.552	101.614	103.272	101.834	101.958	106.083	104.33	103.021
17:03	ZZZZZZ	108.033	104.05	105.046	99.415	99.362	107.197	105.616	103.803

INTERNAL STANDARD SUMMARY

Login Number: JD37967
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Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
17:06	ZZZZZZ	110.659	105.332	103.767	103.508	101.685	105.672	108.063	102.353
17:09	ZZZZZZ	108.279	104.795	104.891	101.141	101.542	106.108	105.888	103.283
17:12	ZZZZZZ	110.155	106.93	104.977	103.442	102.607	107.996	107.985	104.795
17:16	ZZZZZZ	105.927	103.344	103.022	97.842	98.486	105.682	104.32	103.53
17:19	ZZZZZZ	111.628	105.577	106.41	105.217	101.979	107.433	109.918	103.506
17:22	MA51735-CCVA10	108.551	105.317	104.798	100.364	100.815	107.417	105.126	104.222
17:25	MA51735-CCB10	105.482	102.674	105.616	104.104	103.02	107.854	107.699	103.389
17:28	MP30776A-MB1	99.11	101.749	102.437	101.123	104.18	104.505	103.213	101.39
17:31	MP30776A-B2	103.808	105.843	101.869	100.74	102.424	105.722	102.98	102.379
17:35	MP30776A-S3	100.478	105.458	99.443	94.509	100.246	103.329	97.871	102.055
17:38	MP30776A-S4	101.394	105.682	101.695	95.628	100.874	105.549	98.622	103.759
17:41	JD38050-2	99.658	104.686	101.784	96.307	101.277	104.615	99.274	103.088
17:44	MP30776A-SD1	108.173	106.231	107.231	104.018	102.351	109.312	109.261	106.056
17:47	ZZZZZZ	94.744	100.265	100.802	94.044	100.209	103.975	97.551	104.298
17:50	ZZZZZZ	94.397	100.859	99.777	93.421	100.258	103.973	96.927	102.213
17:54	MA51735-CCVA11	108.664	106.916	107.244	101.785	102.068	110.159	105.813	106.377
17:57	MA51735-CCB11	106.013	101.806	107.91	103.709	101.441	110.697	107.779	106.145
18:00	MA51735-ICSA2	90.186	103.095	90.915	81.907	116.458	96.925	91.06	98.9
18:03	MA51735-ICSAB2	No results reported for the elements associated with this internal standard.							
18:08	MA51735-ICSAB3	88.675	105.406	92.86	81.006	117.786	98.747	89.578	101.738
18:11	ZZZZZZ	100.283	106.792	110.097	102.293	106.977	113.264	104.552	109.482
18:15	MP30753A-MB1	106.012	98.228	112.141	107.807	98.817	115.372	109.952	110.414
18:18	MP30753A-B3	100.573	107.985	109.995	100.222	105.705	112.662	102.326	109.811
18:21	MA51735-CCVA12	105.761	108.987	107.881	99.944	103.086	111.047	103.651	108.873
18:24	MA51735-CCB12	104.623	106.032	111.01	103.754	106.822	112.174	106.3	108.993
18:28	MP30753A-B4	99.707	107.373	106.597	98.912	104.886	110.391	100.297	108.493
18:31	ZZZZZZ	90.128	102.109	97.309	87.888	99.96	104.299	92.834	104.025
18:34	ZZZZZZ	88.135	101.216	96.322	86.786	101.25	102.372	92.071	102
18:37	ZZZZZZ	97.829	104.293	103.318	95.079	100.777	107.792	98.785	106.007
18:40	MP30753A-S3	99.914	107.472	103.577	95.813	103.692	109.679	98.758	107.283
18:43	MP30753A-S4	98.415	107.912	102.854	94.182	104.777	106.191	96.662	104.861
18:47	JD38008-10	96.935	105.443	102.364	93.993	103.113	106.166	96.361	104.576
18:50	MP30753A-SD1	105.623	106.043	107.661	102.501	103.236	109.985	105.128	106.203

INTERNAL STANDARD SUMMARY

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Account: SCMAW - Sovereign Consulting
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Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
18:53	MA51735-CCVA13	107.76	109.38	105.268	101.716	103.27	110.096	103.981	106.064
18:56	MA51735-CCB13	106.394	106.879	110.076	105.718	106.226	112.017	108.164	106.811
18:59	ZZZZZZ	94.987	102.948	102.632	94.896	101.211	106.64	97.126	104.316
19:02	ZZZZZZ	93.506	102.287	99.629	92.259	100.325	104.089	95.629	101.792
19:05	ZZZZZZ	95.762	104.121	101.032	94.799	102.678	105.899	97.399	103.711
19:08	ZZZZZZ	97.672	105.233	103.036	95.447	102.661	107.839	99.04	105.317
19:12	ZZZZZZ	96.461	104.555	102.324	95.39	103.608	107.522	97.358	104.957
19:15	ZZZZZZ	97.195	106.662	102.421	95.447	104.796	106.522	99.107	105.033
19:18	ZZZZZZ	97.182	106.231	104.225	96.378	103.776	108.983	98.39	105.941
19:21	ZZZZZZ	96.877	105.138	103.075	96.288	102.84	107.627	98.456	104.578
19:24	MA51735-CCVA14	111.148	110.622	108.078	103.502	104.429	109.894	107.349	107.016
19:27	MA51735-CCB14	108.431	106.955	109.846	106.809	106.747	113.326	109.499	107.099
19:31	ZZZZZZ	88.812	100.34	101.335	88.592	98.576	105.17	91.795	102.409
19:34	ZZZZZZ	96.779	103.096	102.663	96.893	101.512	106.627	98.814	104.335
19:37	ZZZZZZ	94.766	101.991	99.956	93.656	101.752	104.733	96.424	102.751
19:40	ZZZZZZ	95.126	102.779	101.069	93.125	101.547	104.715	97.101	103.349
19:43	MP30778-MB1	96.573	102.066	106.096	100.139	103.493	108.78	100.231	106.058
19:46	MP30778-B1	101.309	106.239	104.359	98.753	103.031	107.437	100.281	103.464
19:49	MP30778-S1	100.167	106.712	100.241	94.407	101.43	103.942	96.769	102.318
19:53	MP30778-S2	100.646	107.312	101.825	94.445	101.536	105.713	98.442	103.887
19:56	MA51735-CCVA15	111.452	109.928	107.163	103.035	103.99	110.004	106.195	106.444
19:59	MA51735-CCB15	107.164	105.364	108.143	105.116	105.2	110.323	108.679	103.926
20:02	JD38050-2F	96.741	103.229	101.741	95.533	102.408	105.523	98.6	102.906
20:05	MP30778-SD1	105.133	104.214	105.582	102.056	102.37	110.422	105.375	104.515
20:08	ZZZZZZ	90.954	100.856	94.833	87.839	98.413	100.516	92.495	100.752
20:12	ZZZZZZ	94.358	102.215	99.93	92.935	100.899	105.212	96.328	103.259
20:15	ZZZZZZ	92.991	100.397	99.99	92.517	100.541	105.817	95.337	104.148
20:18	ZZZZZZ	93.76	101.452	99.442	94.037	100.298	103.606	95.829	100.319
20:21	ZZZZZZ	92.249	101.636	97.455	90.734	100.308	101.983	94.76	100.908
20:24	ZZZZZZ	95.608	102.973	99.913	94.225	101.166	102.494	97.038	101.98
20:27	ZZZZZZ	96.269	104.15	99.474	94.075	101.487	104.327	97.849	101.845
20:30	MA51735-CCVA16	110.037	108.34	106.893	103.112	103.457	110.018	106.433	106.85
20:33	MA51735-CCB16	107.452	104.898	108.771	105.499	103.956	112.55	108.562	104.749

INTERNAL STANDARD SUMMARY

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Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
20:37	ZZZZZZ	94.395	101.655	100.41	93.912	101.88	103.774	96.986	102.054
20:40	ZZZZZZ	96.541	102.921	100.112	95.22	101.249	104.574	98.299	103.47
20:43	ZZZZZZ	96.549	102.822	101.465	95.38	101.121	105.588	98.713	102.943
20:46	ZZZZZZ	97.937	104.298	101.307	96.203	101.122	107.833	98.769	103.837
20:49	ZZZZZZ	94.913	101.61	100.511	93.671	101.281	104.078	96.625	102.015
20:52	ZZZZZZ	98.682	104.177	103.901	97.83	102.428	107.885	99.972	103.845
20:56	ZZZZZZ	96.411	101.98	100.529	94.693	102.1	104.186	96.98	103.282
20:59	ZZZZZZ	95.502	101.753	100.082	94.137	100.932	104.006	97.375	102.647
21:02	MA51735-CCVA17	108.731	106.775	105.122	102.186	101.787	109.138	106.446	104.78
21:05	MA51735-CCB17	105.066	102.953	107.499	103.976	102.5	109.919	107.165	104.829
21:08	ZZZZZZ	97.419	101.012	103.414	99.565	103.846	106.321	101.617	102.441
21:11	ZZZZZZ	97.492	103.59	103.641	99.679	103.645	107.522	100.743	103.527
21:15	ZZZZZZ	97.55	102.22	105.875	100.617	103.473	108.116	101.264	104.246
21:18	MP30777A-MB1	97.613	101.37	106.265	102.067	104.28	107.677	103.241	104.577
21:21	MP30777A-B2	102.818	106.507	105.143	101.382	103.669	107.974	103.308	105.012
21:24	MP30777A-S3	86.437	100.58	83.732	75.256	112.865	91.746	82.596	92.979
21:27	MP30777A-S4	87.764	103.938	86.111	76.094	114.982	94.787	82.719	93.917
21:30	JD38065-1	84.322	101.549	85.814	74.899	114.537	94.793	81.29	93.247
21:33	MP30777A-SD1	88.965	100.655	97.949	85.856	96.179	104.746	88.819	100.868
21:36	ZZZZZZ	89.082	99.728	99.997	87.448	95.389	104.328	88.927	102.09
21:40	MA51735-CCVA18	89.771	99.243	97.876	87.728	94.268	103.364	89.733	100.759
21:43	MA51735-CCB18	87.372	95.034	99.963	90.74	95.346	104.395	91.288	99.631
21:46	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:49	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:52	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:56	ZZZZZZ	No results reported for the elements associated with this internal standard.							
21:59	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:02	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:05	ZZZZZZ	No results reported for the elements associated with this internal standard.							
22:08	ZZZZZZ	75.75	89.179	93.169	80.836	91.814	99.602	83.066	96.533
22:11	MA51735-CCVA19	78.485	90.441	90.656	78.788	90.312	96.139	82.037	95.234
22:14	MA51735-CCB19	77.111	87.271	92.437	80.573	90.159	98.219	83.346	94.721
22:18	MA51735-CCVA20	79.297	88.731	89.682	79.126	87.271	95.999	83.163	94.288

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22:21	MA51735-CCB20	77.628	85.489	90.74	80.813	87.929	96.111	83.812	93.003
22:24	ZZZZZZ	76.279	83.976	89.839	80.313	87.204	94.789	83.313	92.009
22:27	ZZZZZZ	76.396	83.587	89.217	80.358	86.889	94.941	83.769	92.141
22:30	ZZZZZZ	75.808	82.884	88.304	80.169	86.336	92.74	83.585	90.918
22:33	MA51735-CCVA21	79.256	87.025	87.889	78.991	85.445	93.017	83.127	91.855
22:36	MA51735-CCB21	78.677	84.322	90.432	81.824	87.109	95.219	84.919	93.39
22:40	MP30774-MB1	77.006	82.246	87.413	80.377	85.873	92.377	84.213	90.476
22:43	MP30774-B1	80.698	86.622	86.445	80.157	85.658	91.882	83.421	90.439
22:46	MP30774-S1	79.277	85.122	84.373	76.511	83.26	90.051	81.279	90.305
22:49	MP30774-S2	79.821	87.278	84.901	76.849	85.083	91.745	81.695	90.767
22:52	JD38029-2	78.229	85.78	86.515	77.769	84.687	92.767	82.034	91.65
22:55	ZZZZZZ	70.522	88.898	78.489	67.92	101.157	87.366	75.843	89.604
22:58	ZZZZZZ	69.269	88.818	78.835	67.315	100.901	88.22	75.393	89.897
23:01	ZZZZZZ	68.893	89.877	79.337	66.998	100.776	88.424	75.469	90.902
23:04	ZZZZZZ	68.779	89.578	79.89	66.895	101.357	89.15	74.814	91.486
23:07	MA51735-CCVA22	78.431	88.959	89.84	79.058	88.924	96.259	82.251	94.497
23:10	MA51735-CCB22	79.197	87.168	92.505	82.907	90.46	97.292	85.534	94.322
23:14	ZZZZZZ	80.839	87.162	85.482	77.203	85.471	93.425	84.051	91.62
23:17	MP30761-S2	80.987	86.41	85.183	76.853	84.88	90.683	84.313	89.853
23:20	MP30761-S3	80.772	87.429	85.652	77.012	84.981	92.252	83.747	90.974
23:23	ZZZZZZ	80.236	85.607	85.115	77.69	83.885	91.864	84.182	90.869
23:26	ZZZZZZ	81.474	85.786	84.29	77.284	84.333	91.29	84.356	89.709
23:30	ZZZZZZ	79.238	84.573	83.62	76.512	84.512	89.561	83.627	90.546
23:33	ZZZZZZ	79.17	84.596	83.768	76.31	84.387	91.048	83.417	90.741
23:36	ZZZZZZ	79.373	84.309	83.708	76.305	83.87	91.051	83.782	90.191
23:39	ZZZZZZ	78.588	83.828	82.166	75.167	83.442	89.176	82.925	89.317
23:42	MA51735-CCVA23	78.668	82.969	87.277	77.696	82.539	91.886	81.93	90.327
23:45	MA51735-CCB23	79.369	84.034	88.664	81.74	87.207	93.966	85.919	91.446
23:48	ZZZZZZ	68.423 !	80.052	138.744 !	66.827 !	80.616	146.336 !	73.652	143.983 !
23:51	ZZZZZZ	78.285	82.511	81.409	74.785	82.273	89.024	83.193	88.283
23:55	ZZZZZZ	78.169	82.511	81.357	74.211	81.767	88.13	81.756	88.382
23:58	ZZZZZZ	78.241	82.655	81.92	74.612	82.623	87.975	82.548	87.054
00:01	ZZZZZZ	78.21	82.513	81.251	74.859	82.238	88.678	82.311	87.976

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
00:04	ZZZZZZ	78.279	82.421	82.25	74.831	82.367	88.922	82.775	88.223
00:07	ZZZZZZ	77.86	83.423	82.078	74.865	82.614	88.79	82.979	87.185
00:10	ZZZZZZ	78.131	83.297	87.942	81.35	86.566	91.786	84.751	90.316
00:13	ZZZZZZ	81.255	86.002	86.816	79.676	85.65	92.657	83.713	90.069
00:16	MA51735-CCVA24	80.145	85.248	85.331	78.493	84.994	90.594	82.762	89.006
00:19	MA51735-CCB24	79.082	83.003	87.577	81.076	86.097	92.68	84.898	90.144
00:23	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:26	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:29	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:32	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:35	ZZZZZZ	No results reported for the elements associated with this internal standard.							
00:38	MA51735-CCVA25	No results reported for the elements associated with this internal standard.							
00:41	MA51735-CCB25	No results reported for the elements associated with this internal standard.							
00:45	ZZZZZZ	72.215	80.989	87.05	77.065	85.369	92.491	80.018	90.073
00:48	ZZZZZZ	72.381	80.991	85.253	77.374	85.889	91.712	80.942	89.274
00:51	ZZZZZZ	72.125	80.195	85.643	77.575	84.917	91.185	80.371	89.082

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#9	Germanium (74-2)	60-125 %
Istd#10	Germanium (74-3)	60-125 %
Istd#11	Rhodium (103-1)	60-125 %
Istd#12	Rhodium (103-2)	60-125 %
Istd#13	Rhodium (103-3)	60-125 %
Istd#14	Indium (115-1)	60-125 %
Istd#15	Indium (115-2)	60-125 %
Istd#16	Terbium (159-1)	60-125 %

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
11:00	MA51735-STD1	100	100	100	100	100	100
11:04	MA51735-STD2	100	100	100	100	100	100
11:07	MA51735-STD3	100	100	100	100	100	100
11:10	MA51735-STD4	100.156	100.655	99.963	100.139	100.846	99.641
11:14	MA51735-STD5	100.089	98.674	102.128	99.744	101.769	100.26
11:17	MA51735-STD6	99.027	97.957	100.775	99.803	101.604	100.293
11:21	MA51735-STD7	98.748	99.251	101.948	99.475	101.31	99.557
11:24	MA51735-STD8	99.331	99.365	100.209	99.616	101.154	99.681
11:27	MA51735-STD9	100.171	98.328	101.773	100.103	102.812	99.918
11:31	MA51735-STD10	100.49	99.357	102.79	101.623	102.346	99.837
11:34	MA51735-STD11	101.355	100.809	101.86	101.837	99.581	97.814
11:37	MA51735-STD12	101.642	100.635	103.021	100.743	99.373	94.834
11:44	ZZZZZZ	103.968	100.578	105.205	104.873	104.066	104.151
11:47	MA51735-ICVA1	102.045	100.77	104.711	102.259	100.343	97.351
11:50	MA51735-ICV1	103.698	100.434	105.331	103.713	104.55	103.088
11:54	MA51735-ICB1	103.301	100.253	105.176	103.144	104.797	102.263
11:57	MA51735-CCVA1	102.463	101.576	103.439	103.09	101.1	97.948
12:00	MA51735-CCB1	104.712	101.138	106.353	105.051	104.355	104.105
12:03	MA51735-CRI1	103.754	100.049	106.307	104.055	104.151	103.225
12:12	MA51735-ICSA1	94.291	143.704 !	100.517	94.625	86.579	79.029
12:15	MA51735-ICSAB1	94.234	141.885 !	102.312	94.645	88.507	78.993
12:48	ZZZZZZ	95.142	141.879 !	103.385	95.612	88.845	79.398
12:56	ZZZZZZ	106.995	103.445	111.554	107.29	109.899	105.505
12:59	ZZZZZZ	106.403	102.344	109.788	106.42	108.756	105.497
13:03	ZZZZZZ	106.514	102.519	109.777	106.67	107.815	105.357
13:06	ZZZZZZ	0.01 !	0.009 !	0.006 !	0.01 !	0.098 !	0.071 !
13:15	ZZZZZZ	108.433	104.118	110.541	107.861	107.733	106.206
13:19	ZZZZZZ	107.416	101.955	108.703	107.523	107.807	107.091
13:22	MA51735-CCVA2	106.278	101.844	109.134	106.677	104.315	101.666
13:25	MA51735-CCB2	108.592	102.471	110.233	107.998	108.332	106.721
13:29	ZZZZZZ	108.8	101.935	108.629	108.011	109.239	109.727
13:32	ZZZZZZ	111.462	102.799	112.877	111.067	109.549	110.935
13:35	MP30757-MB1	111.56	104.41	112.171	110.987	108.166	107.051

INTERNAL STANDARD SUMMARY

Login Number: JD37967
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Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
13:38	MP30757-B1	107.762	104.943	112.772	107.706	106.066	100.458
13:41	MP30757-S1	102.597	106.307	108.412	102.854	98.576	92.954
13:44	MP30757-S2	102.655	103.864	108.563	102.374	99.042	92.63
13:48	JD37967-1	102.534	104.813	109.606	103.171	101.139	94.407
13:51	MP30757-SD1	107.634	103.44	109.065	107.096	105.591	104.772
13:54	MP30757-PS1	102.531	103.824	109.016	102.725	99.972	92.809
13:57	MA51735-CCVA3	107.32	102.596	110.136	107.621	105.034	101.863
14:00	MA51735-CCB3	108.046	102.401	108.686	108.608	105.954	106.303
14:03	MP30647-MB1	108.281	101.196	109.971	108.049	107.272	106.472
14:06	MP30647-B1	106.742	100.753	109.878	107.204	106.208	103.274
14:09	MP30647-S1	105.743	101.831	105.767	105.876	97.663	95.58
14:13	MP30647-S2	105.81	102.503	106.47	105.385	96.501	95.605
14:16	JD37213-1	104.665	101.352	106.25	105.69	98.164	95.956
14:19	MP30647-S3	103.839	99.578	105.981	103.405	99.009	96.946
14:22	JD37213-3	103.799	100.802	104.731	103.909	99.768	97.206
14:25	MA51735-CCVA4	104.713	100.65	105.345	104.613	101.855	100.042
14:28	MA51735-CCB4	105.531	101.694	107.197	105.564	104.639	104.456
14:31	ZZZZZZ	101.95	99.726	105.725	102.538	99.166	93.988
14:34	ZZZZZZ	102.215	98.216	103.503	102.611	98.735	95.611
14:37	ZZZZZZ	101.283	99.895	104.772	101.858	96.48	93.582
14:40	ZZZZZZ	102.561	100.198	104.187	102.559	95.598	93.784
14:43	ZZZZZZ	102.165	101.037	104.543	102.779	96.592	93.671
14:47	ZZZZZZ	101.375	99.874	105.423	102.114	98.081	92.996
14:50	ZZZZZZ	101.792	98.471	103.246	101.818	97.644	95.349
14:53	MA51735-CCVA5	102.954	100.25	104.257	102.81	100.273	98.636
14:56	MA51735-CCB5	104.713	99.014	108.15	104.5	105.89	103.833
14:59	ZZZZZZ	102.624	98.116	103.601	103.092	97.6	95.598
15:02	ZZZZZZ	101.131	99.132	101.484	101.803	94.353	92.75
15:05	ZZZZZZ	101.83	98.589	102.804	102.222	95.633	93.409
15:08	ZZZZZZ	100.327	99.88	104.385	100.994	96.094	91.825
15:11	ZZZZZZ	100.296	99.478	103.471	101.321	94.968	92.403
15:14	ZZZZZZ	100.561	99.463	103.566	99.868	95.607	91.51
15:17	ZZZZZZ	101.423	97.717	104.09	101.452	94.84	92.096

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
15:20	ZZZZZZ	102.57	96.599	100.862	102.125	99.842	100.855
15:24	MA51735-CCVA6	102.136	98.406	104.767	102.394	99.654	97.553
15:27	MA51735-CCB6	104.017	97.891	105.537	103.458	102.84	102.465
15:31	MP30773-MB1	102.129	98.598	103.851	102.41	102.258	101.89
15:34	MP30773-B1	102.99	99.826	103.708	103.085	100.597	99.743
15:37	MP30773-S1	99.546	104.596	101.792	99.759	93.378	89.643
15:40	MP30773-S2	100.497	100.473	105.105	99.663	96.78	90.463
15:43	JD38054-1	100.332	100.431	105.178	100.471	97.491	91.279
15:46	MP30773-SD1	105.446	98.345	105.218	104.845	102.067	101.627
15:49	ZZZZZZ	103.804	100.79	106.675	103.147	99.386	97.779
15:53	ZZZZZZ	103.232	101.137	106.766	102.617	99.336	95.968
15:56	ZZZZZZ	103.442	99.813	106.09	103.183	98.018	94.872
15:59	MA51735-CCVA7	100.47	98.626	101.285	101.161	97.557	96.032
16:02	MA51735-CCB7	101.78	97.663	103.108	101.299	101.992	101.013
16:05	ZZZZZZ	100.855	101.068	103.963	100.81	96.409	92.972
16:08	ZZZZZZ	99.445	100.544	102.206	99.736	95.447	91.62
16:11	ZZZZZZ	103.414	100.113	103.572	103.244	96.964	96.503
16:14	ZZZZZZ	103.499	99.752	103.936	102.556	97.829	97.398
16:18	ZZZZZZ	94.209	136.846 !	99.9	95.1	87.002	79.892
16:21	ZZZZZZ	102.408	100.346	106.684	102.375	97.426	93.844
16:24	MA51735-CCVA8	106.122	98.023	105.584	105.77	101.703	99.868
16:28	MA51735-CCB8	107.411	98.553	107.195	106.569	104.45	106.333
16:31	MP30773-S1	105.711	98.684	105.762	106.069	101.417	101.36
16:35	MP30773-S2	105.295	97.883	106.132	104.746	100.729	100.113
16:38	JD38054-1	104.199	97.425	105.913	104.858	101.696	101.166
16:41	MP30773-SD1	106.091	96.759	106.657	106.399	104.808	105.361
16:44	ZZZZZZ	106.833	96.945	106.322	106.451	104.21	104.465
16:47	ZZZZZZ	104.712	99.347	103.883	105.472	99.853	100.225
16:50	ZZZZZZ	105.234	97.675	105.686	104.745	99.451	99.817
16:54	ZZZZZZ	103.44	96.591	104.159	103.849	100.458	100.766
16:57	MA51735-CCVA9	100.039	95.836	101.649	100.958	96.425	95.896
17:00	MA51735-CCB9	102.437	96.708	101.756	102.778	99.187	101.786
17:03	ZZZZZZ	103.014	96.316	103.192	102.565	99.533	100.191

INTERNAL STANDARD SUMMARY

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File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
17:06	ZZZZZZ	104.719	96.33	101.837	105.023	100.088	103.431
17:09	ZZZZZZ	103.757	97.179	102.515	103.482	97.536	100.104
17:12	ZZZZZZ	104.859	98.178	102.81	104.916	99.086	101.054
17:16	ZZZZZZ	102.344	96.996	103.779	102.703	96.322	94.579
17:19	ZZZZZZ	105.614	96.523	102.78	105.4	101.314	104.309
17:22	MA51735-CCVA10	103.458	96.392	104.905	104.656	98.647	98.884
17:25	MA51735-CCB10	103.07	96.498	103.091	103.45	99.981	102
17:28	MP30776A-MB1	103.075	98.909	100.61	103.465	96.331	99.392
17:31	MP30776A-B2	103.682	99.428	102.077	104.056	95.501	98.489
17:35	MP30776A-S3	99.733	100.783	102.009	100.431	94.03	91.438
17:38	MP30776A-S4	100.908	100.675	104.349	101.082	95.356	92.491
17:41	JD38050-2	100.477	99.674	102.725	99.961	95.005	93.367
17:44	MP30776A-SD1	105.605	98.051	105.099	105.559	100.373	104.068
17:47	ZZZZZZ	99.381	99.319	103.215	99.863	95.367	91.665
17:50	ZZZZZZ	97.986	100.947	101.487	98.63	93.561	90.193
17:54	MA51735-CCVA11	104.044	98.327	105.996	103.963	99.439	99.085
17:57	MA51735-CCB11	104.039	95.185	104.446	103.635	101.704	102.482
18:00	MA51735-ICSA2	92.373	135.768 !	98.291	92.934	83.702	77.217
18:03	MA51735-ICSAB2	No results reported for the elements associated with this internal standard.					
18:08	MA51735-ICSAB3	92.658	138.232 !	101.245	92.37	85.845	77.175
18:11	ZZZZZZ	103.441	101.401	108.2	104.097	103.83	104.04
18:15	MP30753A-MB1	107.679	93.818	108.859	108.96	105.684	107.985
18:18	MP30753A-B3	104.143	103.134	108.398	104.629	101.751	98.489
18:21	MA51735-CCVA12	103.052	100.685	107.227	104.223	101.675	99.367
18:24	MA51735-CCB12	105.561	100.074	107.821	105.745	103.185	104.134
18:28	MP30753A-B4	102.432	101.076	106.817	103.472	100.325	96.821
18:31	ZZZZZZ	97.154	103.212	103.776	98.585	92.225	85.988
18:34	ZZZZZZ	95.385	104.727	101.54	96.417	88.67	81.978
18:37	ZZZZZZ	100.823	100.536	105.451	100.689	95.922	92.234
18:40	MP30753A-S3	101.938	104.443	106.727	102.16	95.707	91.709
18:43	MP30753A-S4	100.186	104.911	105.14	101.076	94.154	91.103
18:47	JD38008-10	98.954	101.756	104.372	99.082	94.358	90.723
18:50	MP30753A-SD1	104.554	99.713	106.775	104.352	101.289	101.589

INTERNAL STANDARD SUMMARY

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Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
18:53	MA51735-CCVA13	104.22	99.234	104.927	103.713	99.681	97.876
18:56	MA51735-CCB13	104.532	100.178	107.36	104.927	102.407	102.856
18:59	ZZZZZZ	98.81	99.975	103.62	101.071	95.889	92.546
19:02	ZZZZZZ	97.812	100.553	102.022	98.5	92.858	90.047
19:05	ZZZZZZ	99.369	100.795	103.657	100.233	94.706	92.065
19:08	ZZZZZZ	99.897	101.582	103.923	101.052	94.332	92.081
19:12	ZZZZZZ	100.155	102.384	103.868	100.536	95.353	91.506
19:15	ZZZZZZ	100.909	103.143	103.828	101.247	94.429	91.613
19:18	ZZZZZZ	101.038	102.603	105.106	100.723	96.506	93.249
19:21	ZZZZZZ	100.362	99.938	103.818	100.288	94.924	92.643
19:24	MA51735-CCVA14	104.335	100.113	105.624	105.116	99.17	99.35
19:27	MA51735-CCB14	105.299	98.972	106.682	105.18	101.872	103.128
19:31	ZZZZZZ	93.335	98.317	101.796	93.665	93.84	84.459
19:34	ZZZZZZ	99.836	98.766	103.751	100.55	95.813	93.768
19:37	ZZZZZZ	97.827	100.426	101.227	98.705	92.659	89.6
19:40	ZZZZZZ	99.056	101.327	102.099	99.159	93.643	89.618
19:43	MP30778-MB1	101.157	98.744	104.52	101.65	98.702	96.425
19:46	MP30778-B1	101.327	98.438	103.554	101.748	96.42	94.562
19:49	MP30778-S1	99.308	100.26	102.226	99.626	93.452	90.277
19:53	MP30778-S2	100.083	100.669	104.204	100.347	93.19	90.21
19:56	MA51735-CCVA15	103.882	99.038	106.061	103.75	99.126	98.112
19:59	MA51735-CCB15	103.773	97.304	103.916	103.35	99.227	101.68
20:02	JD38050-2F	99.234	100.205	102.394	100.127	93.926	91.526
20:05	MP30778-SD1	102.923	97.042	102.458	103.027	98.852	100.705
20:08	ZZZZZZ	96.071	100.991	99.597	95.851	86.106	81.68
20:12	ZZZZZZ	98.21	100.427	102.659	98.355	91.85	89.144
20:15	ZZZZZZ	97.334	99.79	103.19	97.574	94.331	88.863
20:18	ZZZZZZ	97.923	99.157	99.782	96.97	93.867	90.749
20:21	ZZZZZZ	95.992	100.778	99.863	96.82	90.605	88.174
20:24	ZZZZZZ	97.873	98.813	101.106	97.755	92.399	90.945
20:27	ZZZZZZ	98.297	99.876	101.417	99.256	91.919	90.763
20:30	MA51735-CCVA16	104.455	97.574	105.704	103.568	98.111	98.615
20:33	MA51735-CCB16	104.449	97.824	103.821	104.213	100.042	101.575

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
20:37	ZZZZZZ	98.633	100.335	101.599	99.636	93.077	89.739
20:40	ZZZZZZ	100.293	101.018	102.052	100.461	93.231	91.357
20:43	ZZZZZZ	99.355	98.756	102.324	100.039	94.831	92.213
20:46	ZZZZZZ	99.44	97.648	102.478	100.108	94.162	92.291
20:49	ZZZZZZ	97.912	99.441	102.304	98.392	92.441	89.454
20:52	ZZZZZZ	100.632	98.627	103.404	100.797	96.076	94.391
20:56	ZZZZZZ	99.259	100.449	102.631	99.491	91.765	89.858
20:59	ZZZZZZ	98.636	99.183	102.058	99.15	91.823	89.871
21:02	MA51735-CCVA17	103.043	97.785	103.565	103.536	97.495	97.937
21:05	MA51735-CCB17	102.325	96.902	104.585	102.425	100.01	101.178
21:08	ZZZZZZ	100.261	97.778	101.207	101.135	97.112	97.325
21:11	ZZZZZZ	101.055	98.747	102.629	100.737	97.671	98.138
21:15	ZZZZZZ	101.03	98.373	103.582	102.139	98.164	97.078
21:18	MP30777A-MB1	102.898	98.614	103.714	102.846	97.486	98.231
21:21	MP30777A-B2	102.752	99.024	105.276	102.606	95.923	96.009
21:24	MP30777A-S3	84.804	134.966 !	92.301	85.497	74.802	69.576 !
21:27	MP30777A-S4	84.247	135.794 !	93.388	84.338	74.472	68.792 !
21:30	JD38065-1	82.214	136.089 !	92	82.704	73.037	66.939 !
21:33	MP30777A-SD1	90.86	97.045	100.62	91.982	90.536	85.061
21:36	ZZZZZZ	92.203	93.122	101.36	92.68	94.695	88.671
21:40	MA51735-CCVA18	92.731	92.573	100.326	93.501	93.348	89.583
21:43	MA51735-CCB18	92.063	90.738	99.649	94.134	95.36	92.921
21:46	ZZZZZZ	No results reported for the elements associated with this internal standard.					
21:49	ZZZZZZ	No results reported for the elements associated with this internal standard.					
21:52	ZZZZZZ	No results reported for the elements associated with this internal standard.					
21:56	ZZZZZZ	No results reported for the elements associated with this internal standard.					
21:59	ZZZZZZ	No results reported for the elements associated with this internal standard.					
22:02	ZZZZZZ	No results reported for the elements associated with this internal standard.					
22:05	ZZZZZZ	No results reported for the elements associated with this internal standard.					
22:08	ZZZZZZ	86.754	90.607	96.197	87.434	91.947	87.868
22:11	MA51735-CCVA19	86.159	89.996	94.803	87.334	89.625	84.387
22:14	MA51735-CCB19	86.665	87.293	94.571	87.34	90.12	86.995
22:18	MA51735-CCVA20	86.248	86.614	94.085	87.122	89.146	84.562

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
22:21	MA51735-CCB20	86.711	86.137	93.217	87.155	89.74	87.241
22:24	ZZZZZZ	85.504	84.486	92.209	86.433	89.089	87.093
22:27	ZZZZZZ	86.16	84.819	91.734	86.404	89.571	86.791
22:30	ZZZZZZ	85.435	84.229	90.555	86.222	88.414	86.576
22:33	MA51735-CCVA21	86.409	85.933	91.064	86.499	86.887	83.865
22:36	MA51735-CCB21	87.241	84.484	93.152	87.852	90.093	87.348
22:40	MP30774-MB1	85.62	83.156	91.457	86.946	88.745	86.941
22:43	MP30774-B1	85.875	83.663	89.635	86.211	86.799	84.948
22:46	MP30774-S1	84.863	83.628	90.007	85.696	84	80.762
22:49	MP30774-S2	85.656	85.144	91.015	85.889	85.073	80.813
22:52	JD38029-2	85.252	84.585	91.423	86.848	86.074	82.285
22:55	ZZZZZZ	79.818	120.797	89.203	80.964	77.609	68.744
22:58	ZZZZZZ	80.047	121.658	89.661	81.269	78.17	68.626
23:01	ZZZZZZ	79.834	121.928	90.691	80.985	79.171	68.792
23:04	ZZZZZZ	79.354	122.954	91.354	80.855	79.556	68.436
23:07	MA51735-CCVA22	87.034	88.871	94.657	87.921	89.412	84.863
23:10	MA51735-CCB22	87.992	87.998	94.975	89.158	91.231	88.497
23:14	ZZZZZZ	85.421	86.564	91.839	86.953	85.646	82.349
23:17	MP30761-S2	86.023	85.174	89.968	86.827	84.693	82.089
23:20	MP30761-S3	85.743	86.216	91.094	87.214	85.917	82.511
23:23	ZZZZZZ	86.788	85.829	91.744	88.107	85.547	82.707
23:26	ZZZZZZ	85.398	85.437	89.662	86.919	85.504	82.752
23:30	ZZZZZZ	86.065	86.154	89.908	87.032	82.953	79.946
23:33	ZZZZZZ	85.439	86.354	90.018	86.569	83.364	79.919
23:36	ZZZZZZ	86.277	86.309	90.42	87.392	82.819	80.179
23:39	ZZZZZZ	84.086	85.175	88.884	85.809	81.525	78.067
23:42	MA51735-CCVA23	84.083	81.987	90.258	85.515	86.488	82.391
23:45	MA51735-CCB23	87.118	85.077	90.455	87.419	88.184	87.402
23:48	ZZZZZZ	75.455	85.006	146.047 !	76.313	138.074 !	69.746 !
23:51	ZZZZZZ	84.573	85.995	88.066	86.131	81.536	78.967
23:55	ZZZZZZ	84.292	85.301	88.321	84.848	81.181	77.814
23:58	ZZZZZZ	83.807	84.77	87.08	85.133	80.783	77.981
00:01	ZZZZZZ	84.058	85.256	88.093	84.983	81.776	78.186

INTERNAL STANDARD SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
Analyst: LM Run ID: MA51735
Parameters: As

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
00:04	ZZZZZZ	84.239	84.656	88.1	84.929	81.205	78.244
00:07	ZZZZZZ	84.156	85.689	87.541	85.603	81.11	77.96
00:10	ZZZZZZ	85.712	83.91	90.104	86.82	87.482	86.102
00:13	ZZZZZZ	85.185	83.531	89.811	86.686	86.978	84.526
00:16	MA51735-CCVA24	85.175	85.284	89.675	86.421	85.401	82.455
00:19	MA51735-CCB24	85.44	84.353	89.388	86.436	88.526	86.318
00:23	ZZZZZZ	No results reported for the elements associated with this internal standard.					
00:26	ZZZZZZ	No results reported for the elements associated with this internal standard.					
00:29	ZZZZZZ	No results reported for the elements associated with this internal standard.					
00:32	ZZZZZZ	No results reported for the elements associated with this internal standard.					
00:35	ZZZZZZ	No results reported for the elements associated with this internal standard.					
00:38	MA51735-CCVA25	No results reported for the elements associated with this internal standard.					
00:41	MA51735-CCB25	No results reported for the elements associated with this internal standard.					
00:45	ZZZZZZ	82.77	84.141	90.407	84.312	87.885	84.835
00:48	ZZZZZZ	82.587	84.82	89.567	83.24	87.111	84.031
00:51	ZZZZZZ	82.797	83.553	88.425	83.611	86.961	83.838

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#17	Terbium (159-2)	60-125 %
Istd#18	Terbium (159-3)	60-125 %
Istd#19	Holmium (165-1)	60-125 %
Istd#20	Holmium (165-2)	60-125 %
Istd#21	Bismuth (209-1)	60-125 %
Istd#22	Bismuth (209-2)	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: result < 1/2 RL Run ID: MA51735 Units: ug/l

Time: / Sample ID:				11:54 ICB1		12:00 CCB1		13:25 CCB2	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	25	.27	20						
Antimony	2.0	.022	1.5						
Arsenic	0.50	.009	0.75	-0.0177	<1.5	-0.0103	<1.5	-0.0144	<1.5
Barium	1.0	.009	0.50						
Beryllium	0.50	.003	0.25						
Boron	25	.87	20						
Cadmium	0.50	.007	2.0						
Calcium	250	7.6	200						
Chromium	1.0	.015	3.0						
Cobalt	0.50	.002	0.25						
Copper	2.0	.012	4.0						
Iron	25	.56	13						
Lead	0.50	.007	1.0						
Magnesium	250	.37	130						
Manganese	1.0	.009	1.0						
Molybdenum	1.0	.027	0.50						
Nickel	1.0	.008	3.0						
Potassium	250	1.2	50						
Selenium	0.50	.35	0.50						
Silver	0.50	.002	0.50						
Sodium	250	.53	240						
Strontium	5.0	.016	5.0						
Thallium	0.50	.009	0.50						
Tin	5.0	.035	2.5						
Titanium	1.0	.045	1.0						
Vanadium	1.0	.017	1.0						
Zinc	5.0	.048	7.5						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: result < 1/2 RL Run ID: MA51735 Units: ug/l

Time: / Sample ID:				14:00 CCB3		14:28 CCB4		14:56 CCB5	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	25	.27	20						
Antimony	2.0	.022	1.5						
Arsenic	0.50	.009	0.75	-0.00960	<1.5	-0.00604	<0.50	-0.0149	<0.50
Barium	1.0	.009	0.50						
Beryllium	0.50	.003	0.25						
Boron	25	.87	20						
Cadmium	0.50	.007	2.0						
Calcium	250	7.6	200						
Chromium	1.0	.015	3.0						
Cobalt	0.50	.002	0.25						
Copper	2.0	.012	4.0						
Iron	25	.56	13						
Lead	0.50	.007	1.0						
Magnesium	250	.37	130						
Manganese	1.0	.009	1.0						
Molybdenum	1.0	.027	0.50						
Nickel	1.0	.008	3.0						
Potassium	250	1.2	50						
Selenium	0.50	.35	0.50						
Silver	0.50	.002	0.50						
Sodium	250	.53	240						
Strontium	5.0	.016	5.0						
Thallium	0.50	.009	0.50						
Tin	5.0	.035	2.5						
Titanium	1.0	.045	1.0						
Vanadium	1.0	.017	1.0						
Zinc	5.0	.048	7.5						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: result < 1/2 RL Run ID: MA51735 Units: ug/l

Time: / Sample ID:				15:27 CCB6		16:02 CCB7		16:28 CCB8	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	25	.27	20						
Antimony	2.0	.022	1.5						
Arsenic	0.50	.009	0.75	-0.0192	<0.50	-0.00106	<0.50	-0.00238	<0.50
Barium	1.0	.009	0.50						
Beryllium	0.50	.003	0.25						
Boron	25	.87	20						
Cadmium	0.50	.007	2.0						
Calcium	250	7.6	200						
Chromium	1.0	.015	3.0						
Cobalt	0.50	.002	0.25						
Copper	2.0	.012	4.0						
Iron	25	.56	13						
Lead	0.50	.007	1.0						
Magnesium	250	.37	130						
Manganese	1.0	.009	1.0						
Molybdenum	1.0	.027	0.50						
Nickel	1.0	.008	3.0						
Potassium	250	1.2	50						
Selenium	0.50	.35	0.50						
Silver	0.50	.002	0.50						
Sodium	250	.53	240						
Strontium	5.0	.016	5.0						
Thallium	0.50	.009	0.50						
Tin	5.0	.035	2.5						
Titanium	1.0	.045	1.0						
Vanadium	1.0	.017	1.0						
Zinc	5.0	.048	7.5						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: result < 1/2 RL Run ID: MA51735 Units: ug/l

Time:				17:00		17:25		17:57	
Sample ID:				CCB9		CCB10		CCB11	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	25	.27	20						
Antimony	2.0	.022	1.5						
Arsenic	0.50	.009	0.75	0.00215	<0.50	0.000523	<0.50	-0.0101	<0.50
Barium	1.0	.009	0.50						
Beryllium	0.50	.003	0.25						
Boron	25	.87	20						
Cadmium	0.50	.007	2.0						
Calcium	250	7.6	200						
Chromium	1.0	.015	3.0						
Cobalt	0.50	.002	0.25						
Copper	2.0	.012	4.0						
Iron	25	.56	13						
Lead	0.50	.007	1.0						
Magnesium	250	.37	130						
Manganese	1.0	.009	1.0						
Molybdenum	1.0	.027	0.50						
Nickel	1.0	.008	3.0						
Potassium	250	1.2	50						
Selenium	0.50	.35	0.50						
Silver	0.50	.002	0.50						
Sodium	250	.53	240						
Strontium	5.0	.016	5.0						
Thallium	0.50	.009	0.50						
Tin	5.0	.035	2.5						
Titanium	1.0	.045	1.0						
Vanadium	1.0	.017	1.0						
Zinc	5.0	.048	7.5						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: result < 1/2 RL Run ID: MA51735 Units: ug/l

Time:				18:24	
Sample ID:				CCB12	
Metal	RL	IDL	LOD	raw	final
Aluminum	25	.27	20		
Antimony	2.0	.022	1.5		
Arsenic	0.50	.009	0.75	-0.00442	<0.50
Barium	1.0	.009	0.50		
Beryllium	0.50	.003	0.25		
Boron	25	.87	20		
Cadmium	0.50	.007	2.0		
Calcium	250	7.6	200		
Chromium	1.0	.015	3.0		
Cobalt	0.50	.002	0.25		
Copper	2.0	.012	4.0		
Iron	25	.56	13		
Lead	0.50	.007	1.0		
Magnesium	250	.37	130		
Manganese	1.0	.009	1.0		
Molybdenum	1.0	.027	0.50		
Nickel	1.0	.008	3.0		
Potassium	250	1.2	50		
Selenium	0.50	.35	0.50		
Silver	0.50	.002	0.50		
Sodium	250	.53	240		
Strontium	5.0	.016	5.0		
Thallium	0.50	.009	0.50		
Tin	5.0	.035	2.5		
Titanium	1.0	.045	1.0		
Vanadium	1.0	.017	1.0		
Zinc	5.0	.048	7.5		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA51735 Units: ug/l

Time:		11:47			11:50			11:57	
Sample ID:	ICVA	ICVA1		ICV	ICV1		CCVA	CCVA1	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic	60	58.7	97.8				50	49.0	98.0
Barium	anr								
Beryllium									
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA51735 Units: ug/l

Time:		13:22			13:57			14:25	
Sample ID:	CCVA	CCVA2		CCVA	CCVA3		CCVA	CCVA4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic	50	48.8	97.6	50	49.4	98.8	50	48.9	97.8
Barium	anr								
Beryllium									
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA51735 Units: ug/l

Time:		14:53			15:24			15:59	
Sample ID:	CCVA	CCVA5		CCVA	CCVA6		CCVA	CCVA7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic	50	49.3	98.6	50	50.2	100.4	50	49.6	99.2
Barium	anr								
Beryllium									
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA51735 Units: ug/l

Time:		16:24			16:57			17:22	
Sample ID:	CCVA	CCVA8		CCVA	CCVA9		CCVA	CCVA10	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic	50	49.8	99.6	50	50.0	100.0	50	49.9	99.8
Barium	anr								
Beryllium									
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA51735 Units: ug/l

Time:		17:54			18:21	
Sample ID:	CCVA	CCVA11		CCVA	CCVA12	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic	50	48.9	97.8	50	51.7	103.4
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA51735 Units: ug/l

Time:			12:03	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec
Aluminum	25	25		
Antimony	2.0	0.25		
Arsenic	0.50	0.50	0.433	86.6
Barium	1.0	0.50	anr	
Beryllium	0.50	0.25		
Boron	25	2.5		
Cadmium	0.50	0.25	anr	
Calcium	250	125		
Chromium	1.0	2.0	anr	
Cobalt	0.50	0.25	anr	
Copper	2.0	2.0	anr	
Iron	25	25	anr	
Lead	0.50	0.25	anr	
Magnesium	250	125	anr	
Manganese	1.0	0.25		
Molybdenum	1.0	0.50		
Nickel	1.0	2.0	anr	
Potassium	250	125		
Selenium	0.50	0.50	anr	
Silver	0.50	1.0	anr	
Sodium	250	125		
Strontium	5.0	0.50		
Thallium	0.50	0.25	anr	
Tin	5.0	0.50		
Titanium	1.0	0.50		
Vanadium	1.0	2.0		
Zinc	5.0	2.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

File ID: XB011422M1L.CSV Date Analyzed: 01/14/22 Methods: EPA 200.8, SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA51735 Units: ug/l

Time:			12:12		12:15		18:00		18:08	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	100000	100000	91500HH	91.5	90700HH	90.7	95100HH	95.1	95200HH	95.2
Antimony			0.0386		0.229		0.0420		0.0573	
Arsenic		20	0.0521		17.0	85.0	0.0772		17.5	87.5
Barium			0.103		0.127		0.136		0.179	
Beryllium			-0.00446		-0.00432		-0.00256		0.00254	
Boron		50	1.98		46.9	93.8	2.75		46.0	92.0
Cadmium		20	-0.321		16.7	83.5	-0.333*b		16.4	82.0
Calcium	100000	100000	98200HH	98.2	96300HH	96.3	104000HH	104.0	103000HH	103.0
Chromium		20	0.794		18.6	93.0	0.826*(b		19.1	95.5
Cobalt		20	-0.155		16.9	84.5	-0.178		17.2	86.0
Copper		20	0.690		15.5	77.5*(a)	0.713		16.1	80.5
Iron	100000	100000	85700	85.7	85100	85.1	88700	88.7	90900	90.9
Lead			0.0318		0.0447		0.0397		0.0935	
Magnesium	100000	100000	89800	89.8	89200	89.2	93600	93.6	92700	92.7
Manganese		20	0.112		17.4	87.0	0.265		18.1	90.5
Molybdenum	2000	2000	2040HH	102.0	1990HH	99.5	2150HH	107.5	2120HH	106.0
Nickel		20	0.450		16.5	82.5	0.482		17.0	85.0
Potassium	100000	100000	93500HH	93.5	94100HH	94.1	99000HH	99.0	101000HH	101.0
Selenium		20	0.0749		19.8	99.0	0.155		19.3	96.5
Silver		20	0.0148		18.1	90.5	0.0254		18.0	90.0
Sodium	100000	100000	93100HH	93.1	92700HH	92.7	96700HH	96.7	96700HH	96.7
Strontium	2000	2000	2020HH	101.0	1950HH	97.5	2200HH	110.0	2140HH	107.0
Thallium			-0.0610		0.0578		0.0356		-0.000285	
Tin	2000	2000	1750HH	87.5	1750HH	87.5	1850HH	92.5	1860HH	93.0
Titanium	2000	2000	1680HH	84.0	1710HH	85.5	1770HH	88.5	1800HH	90.0
Vanadium		20	0.0652		19.3	96.5	0.0923		22.7	113.5
Zinc		20	2.07		16.2	81.0	2.21		20.2	101.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.
(b) No DOD samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

QC Batch ID: MP30757
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 01/13/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.54	32		
Antimony	4.0	.044	1.7		
Arsenic	3.0	.018	.39	0.055	<3.0
Barium	2.0	.018	.73		
Beryllium	1.0	.006	.15		
Boron	50	1.7	14		
Cadmium	6.0	.014	.17		
Calcium	500	15	200		
Chromium	8.0	.03	.62		
Cobalt	1.0	.004	.17		
Copper	10	.024	1.9		
Iron	50	1.1	19		
Lead	3.0	.014	.52		
Magnesium	500	.74	46		
Manganese	4.0	.018	.63		
Molybdenum	2.0	.054	.45		
Nickel	8.0	.016	.95		
Potassium	500	2.4	68		
Selenium	2.0	.7	.55		
Silver	2.0	.004	.16		
Sodium	500	1.1	470		
Strontium	20	.032	2.4		
Thallium	2.0	.018	.17		
Tin	10	.07	2.6		
Titanium	4.0	.09	1.6		
Vanadium	3.0	.034	1.8		
Zinc	20	.096	5.4		

Associated samples MP30757: JD37967-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

QC Batch ID: MP30757
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 01/13/22

Metal	JD37967-1 Original	MS	Spikelot MP6020AQ3%	Rec	QC Limits
Aluminum					
Antimony					
Arsenic	8.0	84.1	80	95.1	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP30757: JD37967-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

QC Batch ID: MP30757 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/13/22

Metal	JD37967-1 Original	MSD	Spikelot MP6020AQ3%	Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	8.0	85.8	80	97.3	2.0	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP30757: JD37967-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

QC Batch ID: MP30757
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 01/13/22

Metal	BSP Result	Spikelot MP6020AQ3%	Rec	QC Limits
Aluminum				
Antimony				
Arsenic	74.8	80	93.5	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP30757: JD37967-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD37967
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

QC Batch ID: MP30757
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 01/13/22

Metal	JD37967-1 Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	8.02	9.32	16.2*(a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP30757: JD37967-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

Instrument Detection Limits

Job Number: JD37967
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

Instrument ID: AGICPMS2 **Effective Date:** 02/24/20

Analyte	IDL ug/l
Aluminum	.054
Aluminum	.272
Antimony	.022
Arsenic	.322
Arsenic	.009
Barium	.009
Beryllium	.003
Boron	.865
Cadmium	.005
Cadmium	.007
Calcium	7.625
Chromium	.016
Chromium	.015
Cobalt	.002
Cobalt	.002
Copper	.017
Copper	.012
Iron	1.023
Iron	.562
Lead	.007
Magnesium	.057
Magnesium	.372
Manganese	.005
Manganese	.009
Molybdenum	.027
Nickel	.009
Nickel	.008
Potassium	1.317
Potassium	1.22
Selenium	.367
Selenium	.352
Silver	.002
Sodium	1.677
Sodium	.531
Strontium	.016
Thallium	.009
Tin	.016
Tin	.035
Titanium	.023
Titanium	.045
Vanadium	.091
Vanadium	.017
Zinc	.105
Zinc	.048

Instrument Detection Limits

Job Number: JD37967
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

Instrument ID: AGICPMS2 **Effective Date:** 02/24/20

Analyte	IDL ug/l

The above applies to the following instrument runs:
MA51735

Instrument Linear Ranges

Job Number: JD37967
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

Instrument ID: AGICPMS2 **Effective Date:** 09/10/18

Analyte	Linear Range ug/l
Aluminum	10000
Aluminum	10000
Antimony	100
Arsenic	100
Arsenic	100
Barium	100
Beryllium	100
Boron	200
Cadmium	100
Cadmium	100
Calcium	10000
Chromium	100
Chromium	100
Cobalt	100
Cobalt	100
Copper	100
Copper	100
Iron	10000
Iron	10000
Lithium	100
Lead	100
Magnesium	10000
Magnesium	10000
Manganese	100
Manganese	100
Molybdenum	100
Nickel	100
Nickel	100
Potassium	10000
Potassium	10000
Selenium	400
Selenium	400
Silver	100
Sodium	10000
Sodium	10000
Strontium	100
Thallium	100
Tin	100
Tin	100
Titanium	100
Titanium	100
Tungsten	100
Uranium	100
Vanadium	100
Vanadium	100
Zinc	100

Instrument Linear Ranges

Job Number: JD37967
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL), Devens, MA

Instrument ID: AGICPMS2 **Effective Date:** 09/10/18

Analyte	Linear Range ug/l
Zinc	100

The above applies to the following instrument runs:
MA51735

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:00
Sample Name STDA 5
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.009	ppb	44.02	173.33	9.528E-06	Pulse	0.25	3
B			1	0.068	ppb	53.54	4,438.37	2.434E-04	Pulse	0.15	3
Ca			1	1.080	ppb	31.44	21,966.50	9.830E-04	Pulse	0.10	3
Sr			1	0.010	ppb	41.30	4,183.92	1.852E-04	Pulse	0.10	3
Mo			1	0.025	ppb	10.87	323.34	1.431E-05	Pulse	0.10	3
Ag			1	0.002	ppb	117.88	93.33	4.567E-06	Pulse	0.10	3
Sn			1	0.035	ppb	19.75	1,250.08	6.108E-05	Pulse	0.10	3
Sb			1	0.003	ppb	118.78	210.01	7.847E-06	Pulse	0.10	3
Ba			1	0.006	ppb	113.64	126.67	4.738E-06	Pulse	0.10	3
Tl			1	0.361	ppb	28.71	81,259.46	5.163E-03	Pulse	0.10	3
Pb			1	0.007	ppb	70.61	436.69	2.775E-05	Pulse	0.10	3
Pb			1	0.007	ppb	89.48	390.02	2.475E-05	Pulse	0.10	3
Pb			1	0.008	ppb	17.21	1,710.09	1.086E-04	Pulse	0.10	3
Na			2	2.339	ppb	4.96	14,692.31	1.044E-02	Pulse	0.30	3
Mg			2	0.525	ppb	17.15	3,358.10	2.385E-03	Pulse	0.30	3
Al			2	-7.203	ppb	-0.73	320.01	2.274E-04	Pulse	0.30	3
K			2	0.593	ppb	53.74	10,395.13	7.388E-03	Pulse	0.30	3
Ca			2	0.905	ppb	101.09	328.89	2.333E-04	Pulse	0.30	3
Ti			2	0.019	ppb	92.02	8.89	6.269E-06	Pulse	0.30	3
V			2	0.012	ppb	92.25	2,441.29	1.735E-03	Pulse	0.30	3
Cr			2	0.076	ppb	8.43	1,057.82	7.520E-04	Pulse	0.30	3
Mn			2	0.033	ppb	7.07	557.79	3.964E-04	Pulse	0.30	3
Fe			2	1.604	ppb	8.83	26,816.95	1.907E-02	Pulse	0.30	3
Co			2	0.157	ppb	23.65	35,949.91	2.555E-02	Pulse	0.30	3
Ni			2	0.086	ppb	4.84	455.56	3.238E-04	Pulse	0.30	3
Cu			2	0.618	ppb	1.00	1,943.45	1.381E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.407	ppb	3.79	303.34	2.155E-04	Pulse	0.30	3
As			2	0.022	ppb	22.42	77.00	5.472E-05	Pulse	1.00	3
Sn			2	0.038	ppb	11.75	481.12	9.603E-05	Pulse	0.30	3
Cd			2	0.026	ppb	16.04	83.01	1.657E-05	Pulse	0.30	3
Se			3	0.014	ppb	44.29	23.33	3.197E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,254,532.94	2.52	100.0	Analog	0.10	3
1	Sc		22,346,985.50	0.97	100.0	Analog	0.10	3
1	Ge		4,433,366.81	1.35	100.0	Analog	0.10	3
1	Rh		22,592,890.49	0.54	100.0	Analog	0.10	3
1	In		20,471,888.15	0.78	100.0	Analog	0.10	3
1	Tb		26,743,007.10	1.40	100.0	Analog	0.10	3
1	Ho		27,390,743.76	0.97	100.0	Analog	0.10	3
1	Bi		15,743,868.93	1.30	100.0	Analog	0.10	3
1	Ge		3,268,175.78	1.44	100.0	Analog	0.10	3
2	Sc		1,407,589.88	2.30	100.0	Analog	0.30	3
2	Ge		854,493.85	1.12	100.0	Pulse	0.30	3
2	Rh		13,487,825.85	1.04	100.0	Analog	0.30	3
2	In		5,009,447.08	0.87	100.0	Analog	0.30	3
2	Tb		15,528,687.16	1.18	100.0	Analog	0.30	3
2	Ho		15,818,503.26	0.86	100.0	Analog	0.30	3
2	Bi		10,138,733.76	1.27	100.0	Analog	0.30	3
2	Ge		581,337.67	1.50	100.0	Pulse	0.30	3
3	Sc		1,779,144.65	1.72	100.0	Analog	0.30	3
3	Ge		729,904.52	0.32	100.0	Pulse	0.30	3
3	Rh		3,849,042.91	1.53	100.0	Analog	0.30	3
3	Tb		8,037,363.29	1.12	100.0	Analog	0.30	3
3	Ge		500,457.86	0.28	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:04
Sample Name	STDA
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.007	ppb	30.13	150.67	8.446E-06	Pulse	0.25	3
B			1	0.044	ppb	54.88	4,116.07	2.313E-04	Pulse	0.15	3
Ca			1	0.097	ppb	798.55	20,358.19	9.365E-04	Pulse	0.10	3
Sr			1	-0.007	ppb	-54.58	3,380.41	1.534E-04	Pulse	0.10	3
Mo			1	0.005	ppb	90.03	143.34	6.499E-06	Pulse	0.10	3
Ag			1	0.001	ppb	216.76	66.67	3.285E-06	Pulse	0.10	3
Sn			1	0.004	ppb	117.95	900.05	4.435E-05	Pulse	0.10	3
Sb			1	-0.002	ppb	-62.60	146.67	5.576E-06	Pulse	0.10	3
Ba			1	-0.002	ppb	-116.70	83.33	3.171E-06	Pulse	0.10	3
Tl			1	-0.005	ppb	-806.84	70,041.80	4.470E-03	Pulse	0.10	3
Pb			1	0.001	ppb	574.02	370.01	2.360E-05	Pulse	0.10	3
Pb			1	0.007	ppb	142.72	393.35	2.509E-05	Pulse	0.10	3
Pb			1	0.005	ppb	34.29	1,580.07	1.008E-04	Pulse	0.10	3
Na			2	0.590	ppb	25.30	10,957.61	7.879E-03	Pulse	0.30	3
Mg			2	0.244	ppb	39.22	3,038.04	2.184E-03	Pulse	0.30	3
Al			2	-7.444	ppb	-1.57	214.45	1.544E-04	Pulse	0.30	3
K			2	0.206	ppb	167.03	9,993.79	7.186E-03	Pulse	0.30	3
Ca			2	-0.542	ppb	-156.31	267.78	1.925E-04	Pulse	0.30	3
Ti			2	0.000	ppb	-19301.44	3.33	2.407E-06	Pulse	0.30	3
V			2	0.015	ppb	37.86	2,437.95	1.753E-03	Pulse	0.30	3
Cr			2	0.005	ppb	44.19	342.23	2.461E-04	Pulse	0.30	3
Mn			2	0.001	ppb	750.32	350.01	2.516E-04	Pulse	0.30	3
Fe			2	0.211	ppb	19.59	14,289.96	1.028E-02	Pulse	0.30	3
Co			2	0.075	ppb	36.24	34,222.30	2.461E-02	Pulse	0.30	3
Ni			2	0.003	ppb	45.91	103.33	7.429E-05	Pulse	0.30	3
Cu			2	0.603	ppb	0.75	1,755.65	1.263E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.368	ppb	1.23	227.78	1.638E-04	Pulse	0.30	3
As			2	0.005	ppb	209.86	62.33	4.483E-05	Pulse	1.00	3
Sn			2	-0.002	ppb	-237.54	318.89	6.366E-05	Pulse	0.30	3
Cd			2	0.007	ppb	68.21	43.22	8.640E-06	Pulse	0.30	3
Se			3	-0.017	ppb	-204.67	17.00	2.385E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,809,068.24	1.98	100.0	Analog	0.10	3
1	Sc		21,741,423.84	0.47	100.0	Analog	0.10	3
1	Ge		4,359,238.27	1.37	100.0	Analog	0.10	3
1	Rh		22,029,313.84	0.65	100.0	Analog	0.10	3
1	In		20,292,464.21	0.48	100.0	Analog	0.10	3
1	Tb		26,304,297.11	0.81	100.0	Analog	0.10	3
1	Ho		26,661,162.93	0.69	100.0	Analog	0.10	3
1	Bi		15,669,081.85	0.84	100.0	Analog	0.10	3
1	Ge		3,236,635.68	0.93	100.0	Analog	0.10	3
2	Sc		1,390,743.31	0.69	100.0	Analog	0.30	3
2	Ge		817,388.00	0.60	100.0	Pulse	0.30	3
2	Rh		13,538,101.13	1.59	100.0	Analog	0.30	3
2	In		5,006,613.38	1.23	100.0	Analog	0.30	3
2	Tb		15,426,970.50	1.93	100.0	Analog	0.30	3
2	Ho		15,836,169.37	1.70	100.0	Analog	0.30	3
2	Bi		10,180,309.32	1.87	100.0	Analog	0.30	3
2	Ge		554,847.90	0.84	100.0	Pulse	0.30	3
3	Sc		1,787,959.79	0.94	100.0	Analog	0.30	3
3	Ge		714,234.21	0.84	100.0	Pulse	0.30	3
3	Rh		3,894,158.73	1.47	100.0	Analog	0.30	3
3	Tb		8,123,223.57	1.99	100.0	Analog	0.30	3
3	Ge		491,286.53	1.22	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:07
Sample Name STDA
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.000	ppb	---	85.33	4.790E-06	Pulse	0.25	3
B			1	0.032	ppb	43.11	4,000.49	2.252E-04	Pulse	0.15	3
Ca			1	0.000	ppb	---	20,211.21	9.319E-04	Pulse	0.10	3
Sr			1	0.000	ppb	---	3,643.80	1.661E-04	Pulse	0.10	3
Mo			1	0.003	ppb	55.78	126.67	5.773E-06	Pulse	0.10	3
Ag			1	-0.001	ppb	-282.24	46.67	2.310E-06	Pulse	0.10	3
Sn			1	0.001	ppb	504.62	870.04	4.316E-05	Pulse	0.10	3
Sb			1	0.000	ppb	---	170.01	6.511E-06	Pulse	0.10	3
Ba			1	0.000	ppb	---	93.33	3.567E-06	Pulse	0.10	3
Tl			1	0.004	ppb	346.49	70,135.33	4.487E-03	Pulse	0.10	3
Pb			1	0.000	ppb	---	363.35	2.324E-05	Pulse	0.10	3
Pb			1	0.005	ppb	334.76	373.35	2.381E-05	Pulse	0.10	3
Pb			1	0.003	ppb	140.20	1,486.74	9.502E-05	Pulse	0.10	3
Na			2	0.000	ppb	---	9,764.76	7.017E-03	Pulse	0.30	3
Mg			2	0.000	ppb	---	2,798.01	2.010E-03	Pulse	0.30	3
Al			2	-7.368	ppb	-0.72	246.67	1.774E-04	Pulse	0.30	3
K			2	0.000	ppb	---	9,849.29	7.079E-03	Pulse	0.30	3
Ca			2	-1.103	ppb	-108.39	245.56	1.767E-04	Pulse	0.30	3
Ti			2	0.004	ppb	478.74	4.44	3.183E-06	Pulse	0.30	3
V			2	0.000	ppb	---	2,320.16	1.668E-03	Pulse	0.30	3
Cr			2	0.000	ppb	---	295.56	2.123E-04	Pulse	0.30	3
Mn			2	0.000	ppb	---	344.45	2.476E-04	Pulse	0.30	3
Fe			2	0.000	ppb	-5248.67	12,444.20	8.944E-03	Pulse	0.30	3
Co			2	0.046	ppb	81.64	33,787.09	2.429E-02	Pulse	0.30	3
Ni			2	0.002	ppb	139.18	100.00	7.185E-05	Pulse	0.30	3
Cu			2	0.594	ppb	1.76	1,655.65	1.190E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.366	ppb	6.71	223.34	1.606E-04	Pulse	0.30	3
As			2	0.001	ppb	747.30	59.00	4.238E-05	Pulse	1.00	3
Sn			2	0.000	ppb	---	326.67	6.548E-05	Pulse	0.30	3
Cd			2	0.001	ppb	610.04	31.05	6.247E-06	Pulse	0.30	3
Se			3	0.000	ppb	---	20.00	2.824E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,774,499.45	2.36	100.0	Analog	0.10	3
1	Sc		21,689,761.35	0.50	100.0	Analog	0.10	3
1	Ge		4,302,582.96	0.50	100.0	Analog	0.10	3
1	Rh		21,941,873.00	0.13	100.0	Analog	0.10	3
1	In		20,162,275.48	0.67	100.0	Analog	0.10	3
1	Tb		26,136,372.11	0.88	100.0	Analog	0.10	3
1	Ho		26,864,024.60	0.65	100.0	Analog	0.10	3
1	Bi		15,631,818.10	1.27	100.0	Analog	0.10	3
1	Ge		3,179,198.08	0.63	100.0	Analog	0.10	3
2	Sc		1,391,426.23	0.99	100.0	Analog	0.30	3
2	Ge		806,111.76	0.47	100.0	Pulse	0.30	3
2	Rh		13,776,786.68	3.57	100.0	Analog	0.30	3
2	In		4,984,797.02	1.03	100.0	Analog	0.30	3
2	Tb		15,523,205.50	1.49	100.0	Analog	0.30	3
2	Ho		15,843,841.04	0.96	100.0	Analog	0.30	3
2	Bi		10,135,163.48	1.51	100.0	Analog	0.30	3
2	Ge		550,299.14	0.58	100.0	Pulse	0.30	3
3	Sc		1,784,636.95	0.44	100.0	Analog	0.30	3
3	Ge		708,057.09	0.91	100.0	Pulse	0.30	3
3	Rh		3,878,419.98	1.44	100.0	Analog	0.30	3
3	Tb		8,136,813.57	0.20	100.0	Analog	0.30	3
3	Ge		486,530.64	0.64	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:10
Sample Name STDB
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.477	ppb	2.01	4,816.64	2.670E-04	Pulse	0.25	3
B			1	23.681	ppb	1.57	216,360.69	1.199E-02	Pulse	0.15	3
Ca			1	257.556	ppb	3.15	288,100.92	1.313E-02	Pulse	0.10	3
Sr			1	4.677	ppb	1.08	199,976.90	8.985E-03	Pulse	0.10	3
Mo			1	0.902	ppb	2.01	7,928.59	3.563E-04	Pulse	0.10	3
Ag			1	0.607	ppb	3.16	11,804.20	5.760E-04	Pulse	0.10	3
Sn			1	4.784	ppb	2.04	52,514.77	2.563E-03	Pulse	0.10	3
Sb			1	1.855	ppb	3.27	25,585.72	9.717E-04	Pulse	0.10	3
Ba			1	0.964	ppb	4.09	4,704.08	1.787E-04	Pulse	0.10	3
Tl			1	0.456	ppb	13.48	84,203.49	5.342E-03	Pulse	0.10	3
Pb			1	0.491	ppb	2.19	5,477.74	3.475E-04	Pulse	0.10	3
Pb			1	0.488	ppb	4.26	4,637.44	2.943E-04	Pulse	0.10	3
Pb			1	0.495	ppb	4.31	21,452.74	1.361E-03	Pulse	0.10	3
Na			2	255.389	ppb	3.08	532,297.32	3.803E-01	Pulse	0.30	3
Mg			2	261.232	ppb	3.21	263,527.57	1.883E-01	Pulse	0.30	3
Al			2	27.260	ppb	6.20	14,904.77	1.065E-02	Pulse	0.30	3
K			2	252.384	ppb	2.87	193,722.82	1.384E-01	Pulse	0.30	3
Ca			2	286.148	ppb	5.71	11,584.73	8.279E-03	Pulse	0.30	3
Ti			2	0.827	ppb	18.12	237.78	1.701E-04	Pulse	0.30	3
V			2	0.949	ppb	5.83	9,811.50	7.011E-03	Pulse	0.30	3
Cr			2	0.994	ppb	3.16	10,169.48	7.266E-03	Pulse	0.30	3
Mn			2	0.940	ppb	3.01	6,317.77	4.514E-03	Pulse	0.30	3
Fe			2	24.772	ppb	3.29	231,243.81	1.652E-01	Pulse	0.30	3
Co			2	0.540	ppb	13.43	41,897.20	2.993E-02	Pulse	0.30	3
Ni			2	0.983	ppb	2.30	4,240.51	3.029E-03	Pulse	0.30	3
Cu			2	2.404	ppb	3.21	21,390.13	1.528E-02	Pulse	0.30	3
Zn			2	5.487	ppb	2.75	9,660.35	6.902E-03	Pulse	0.30	3
As			2	0.479	ppb	10.65	455.01	3.253E-04	Pulse	1.00	3
Sn			2	4.546	ppb	2.82	18,286.14	3.680E-03	Pulse	0.30	3
Cd			2	0.496	ppb	5.77	1,067.25	2.148E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.490	ppb	25.29	112.67	1.578E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,038,885.06	0.41	101.5	Analog	0.10	3
1	Sc		21,950,638.84	1.35	101.2	Analog	0.10	3
1	Ge		4,366,986.08	0.46	101.5	Analog	0.10	3
1	Rh		22,254,463.83	1.69	101.4	Analog	0.10	3
1	In		20,493,365.56	1.08	101.6	Analog	0.10	3
1	Tb		26,334,696.27	0.58	100.8	Analog	0.10	3
1	Ho		26,853,962.10	1.03	100.0	Analog	0.10	3
1	Bi		15,763,990.18	1.04	100.8	Analog	0.10	3
1	Ge		3,198,929.01	0.43	100.6	Analog	0.10	3
2	Sc		1,400,059.15	1.51	100.6	Analog	0.30	3
2	Ge		820,701.50	0.29	101.8	Pulse	0.30	3
2	Rh		13,507,944.74	0.69	98.0	Analog	0.30	3
2	In		4,969,413.45	1.14	99.7	Analog	0.30	3
2	Tb		15,547,427.16	0.76	100.2	Analog	0.30	3
2	Ho		15,865,799.93	1.15	100.1	Analog	0.30	3
2	Bi		10,098,758.21	1.60	99.6	Analog	0.30	3
2	Ge		559,085.26	0.59	101.6	Pulse	0.30	3
3	Sc		1,781,509.23	0.78	99.8	Analog	0.30	3
3	Ge		713,740.50	0.74	100.8	Pulse	0.30	3
3	Rh		3,833,849.43	0.23	98.9	Analog	0.30	3
3	Tb		8,190,146.34	1.74	100.7	Analog	0.30	3
3	Ge		489,992.06	0.71	100.7	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:14
Sample Name STDC
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	4.722	ppb	2.78	47,247.61	2.603E-03	Pulse	0.25	3
B			1	5.190	ppb	1.83	50,692.95	2.792E-03	Pulse	0.15	3
Ca			1	8.173	ppb	6.59	29,693.91	1.319E-03	Pulse	0.10	3
Sr			1	4.727	ppb	2.05	204,822.76	9.080E-03	Pulse	0.10	3
Mo			1	4.702	ppb	1.39	41,464.59	1.838E-03	Pulse	0.10	3
Ag			1	4.940	ppb	0.65	97,823.38	4.666E-03	Pulse	0.10	3
Sn			1	4.978	ppb	1.07	55,868.80	2.665E-03	Pulse	0.10	3
Sb			1	4.676	ppb	2.55	65,681.97	2.439E-03	Pulse	0.10	3
Ba			1	4.758	ppb	4.03	23,356.15	8.674E-04	Pulse	0.10	3
Tl			1	4.982	ppb	0.92	221,245.47	1.391E-02	Pulse	0.10	3
Pb			1	4.689	ppb	1.02	49,618.37	3.119E-03	Pulse	0.10	3
Pb			1	4.748	ppb	1.53	42,645.80	2.681E-03	Pulse	0.10	3
Pb			1	4.827	ppb	1.71	198,944.86	1.251E-02	Pulse	0.10	3
Na			2	5.766	ppb	3.66	21,386.33	1.545E-02	Pulse	0.30	3
Mg			2	5.535	ppb	8.21	8,246.27	5.957E-03	Pulse	0.30	3
Al			2	-1.332	ppb	-25.35	2,772.45	2.003E-03	Pulse	0.30	3
K			2	5.927	ppb	8.48	14,074.15	1.016E-02	Pulse	0.30	3
Ca			2	37.675	ppb	3.14	1,758.99	1.270E-03	Pulse	0.30	3
Ti			2	4.932	ppb	5.18	1,387.84	1.003E-03	Pulse	0.30	3
V			2	4.779	ppb	3.18	39,560.31	2.857E-02	Pulse	0.30	3
Cr			2	4.761	ppb	2.53	47,065.25	3.399E-02	Pulse	0.30	3
Mn			2	4.670	ppb	1.84	29,681.25	2.144E-02	Pulse	0.30	3
Fe			2	4.953	ppb	3.39	55,644.43	4.019E-02	Pulse	0.30	3
Co			2	4.877	ppb	3.28	110,160.87	7.956E-02	Pulse	0.30	3
Ni			2	4.798	ppb	3.68	20,120.90	1.453E-02	Pulse	0.30	3
Cu			2	5.233	ppb	2.28	51,662.31	3.731E-02	Pulse	0.30	3
Zn			2	5.250	ppb	0.97	9,124.52	6.590E-03	Pulse	0.30	3
As			2	4.812	ppb	2.00	3,996.11	2.886E-03	Pulse	1.00	3
Sn			2	4.636	ppb	2.46	18,726.58	3.752E-03	Pulse	0.30	3
Cd			2	4.813	ppb	2.40	10,159.39	2.036E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	4.829	ppb	2.67	926.36	1.306E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,154,421.16	0.08	102.1	Analog	0.10	3
1	Sc		22,514,978.83	0.17	103.8	Analog	0.10	3
1	Ge		4,459,090.04	0.32	103.6	Analog	0.10	3
1	Rh		22,557,744.66	0.30	102.8	Analog	0.10	3
1	In		20,965,997.24	1.15	104.0	Analog	0.10	3
1	Tb		26,938,802.10	1.62	103.1	Analog	0.10	3
1	Ho		27,435,579.59	0.88	102.1	Analog	0.10	3
1	Bi		15,908,286.84	0.15	101.8	Analog	0.10	3
1	Ge		3,279,462.24	0.51	103.2	Analog	0.10	3
2	Sc		1,384,791.54	1.21	99.5	Analog	0.30	3
2	Ge		818,512.09	0.53	101.5	Pulse	0.30	3
2	Rh		13,599,092.24	1.70	98.7	Analog	0.30	3
2	In		4,991,562.86	1.08	100.1	Analog	0.30	3
2	Tb		15,537,086.05	1.48	100.1	Analog	0.30	3
2	Ho		15,803,262.15	0.51	99.7	Analog	0.30	3
2	Bi		10,161,507.65	0.78	100.3	Analog	0.30	3
2	Ge		556,067.17	0.27	101.0	Pulse	0.30	3
3	Sc		1,764,617.36	0.29	98.9	Analog	0.30	3
3	Ge		709,299.22	0.74	100.2	Pulse	0.30	3
3	Rh		3,836,801.93	0.62	98.9	Analog	0.30	3
3	Tb		8,028,881.62	0.86	98.7	Analog	0.30	3
3	Ge		487,250.03	0.37	100.1	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:17
Sample Name STDD
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	23.620	ppb	3.11	237,967.93	1.300E-02	Pulse	0.25	3
B			1	24.526	ppb	3.81	227,262.48	1.241E-02	Pulse	0.15	3
Ca			1	42.130	ppb	2.88	64,978.63	2.927E-03	Pulse	0.10	3
Sr			1	23.891	ppb	3.63	1,008,554.33	4.522E-02	Pulse	0.10	3
Mo			1	24.197	ppb	2.52	210,557.59	9.440E-03	Pulse	0.10	3
Ag			1	25.308	ppb	1.47	491,227.36	2.389E-02	Pulse	0.10	3
Sn			1	25.062	ppb	3.30	272,334.44	1.324E-02	Pulse	0.10	3
Sb			1	23.746	ppb	2.26	328,638.06	1.236E-02	Pulse	0.10	3
Ba			1	23.635	ppb	2.54	114,191.36	4.294E-03	Pulse	0.10	3
Tl			1	24.802	ppb	4.20	816,448.08	5.142E-02	Pulse	0.10	3
Pb			1	23.795	ppb	4.58	249,808.91	1.573E-02	Pulse	0.10	3
Pb			1	24.257	ppb	2.49	216,088.34	1.361E-02	Pulse	0.10	3
Pb			1	24.292	ppb	3.42	993,833.05	6.259E-02	Pulse	0.10	3
Na			2	27.051	ppb	2.68	64,577.20	4.656E-02	Pulse	0.30	3
Mg			2	26.750	ppb	4.25	29,242.20	2.109E-02	Pulse	0.30	3
Al			2	21.060	ppb	2.88	12,172.82	8.776E-03	Pulse	0.30	3
K			2	26.994	ppb	1.66	29,306.92	2.113E-02	Pulse	0.30	3
Ca			2	188.404	ppb	2.34	7,659.38	5.522E-03	Pulse	0.30	3
Ti			2	24.773	ppb	2.35	6,971.32	5.026E-03	Pulse	0.30	3
V			2	24.375	ppb	2.21	192,673.59	1.389E-01	Pulse	0.30	3
Cr			2	24.222	ppb	2.77	238,675.29	1.721E-01	Pulse	0.30	3
Mn			2	24.148	ppb	2.54	152,312.65	1.098E-01	Pulse	0.30	3
Fe			2	24.660	ppb	3.54	228,173.21	1.645E-01	Pulse	0.30	3
Co			2	24.644	ppb	3.36	424,088.97	3.058E-01	Pulse	0.30	3
Ni			2	24.545	ppb	3.04	102,736.11	7.407E-02	Pulse	0.30	3
Cu			2	24.471	ppb	3.15	259,558.02	1.871E-01	Pulse	0.30	3
Zn			2	24.475	ppb	3.16	44,238.00	3.189E-02	Pulse	0.30	3
As			2	24.985	ppb	2.59	20,540.36	1.481E-02	Pulse	1.00	3
Sn			2	23.909	ppb	2.73	94,438.42	1.908E-02	Pulse	0.30	3
Cd			2	24.633	ppb	1.87	51,457.41	1.039E-02	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	24.499	ppb	1.83	4,628.26	6.511E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,308,049.61	0.66	103.0	Analog	0.10	3
1	Sc		22,200,418.84	0.77	102.4	Analog	0.10	3
1	Ge		4,405,284.62	0.85	102.4	Analog	0.10	3
1	Rh		22,304,070.50	0.90	101.7	Analog	0.10	3
1	In		20,557,745.66	1.63	102.0	Analog	0.10	3
1	Tb		26,589,302.10	1.22	101.7	Analog	0.10	3
1	Ho		27,072,128.76	0.57	100.8	Analog	0.10	3
1	Bi		15,882,546.85	1.74	101.6	Analog	0.10	3
1	Ge		3,237,433.29	0.53	101.8	Analog	0.10	3
2	Sc		1,387,393.45	1.47	99.7	Analog	0.30	3
2	Ge		830,358.77	0.39	103.0	Pulse	0.30	3
2	Rh		13,496,615.30	1.75	98.0	Analog	0.30	3
2	In		4,950,657.81	0.60	99.3	Analog	0.30	3
2	Tb		15,372,156.61	1.31	99.0	Analog	0.30	3
2	Ho		15,812,652.15	0.38	99.8	Analog	0.30	3
2	Bi		10,164,863.76	0.92	100.3	Analog	0.30	3
2	Ge		563,115.71	0.24	102.3	Pulse	0.30	3
3	Sc		1,746,927.40	0.74	97.9	Analog	0.30	3
3	Ge		710,847.89	0.15	100.4	Pulse	0.30	3
3	Rh		3,812,959.43	1.20	98.3	Analog	0.30	3
3	Tb		7,970,577.46	0.19	98.0	Analog	0.30	3
3	Ge		488,096.20	0.37	100.3	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:21
Sample Name STDE
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	47.127	ppb	4.58	466,250.82	2.593E-02	Pulse	0.25	3
B			1	48.634	ppb	3.13	439,031.38	2.441E-02	Pulse	0.15	3
Ca			1	84.996	ppb	4.94	108,556.86	4.956E-03	Pulse	0.10	3
Sr			1	47.329	ppb	2.85	1,997,058.20	8.942E-02	Analog	0.10	3
Mo			1	47.397	ppb	3.70	412,843.36	1.849E-02	Pulse	0.10	3
Ag			1	50.933	ppb	3.38	990,142.82	4.808E-02	Pulse	0.10	3
Sn			1	50.173	ppb	3.66	545,120.50	2.647E-02	Pulse	0.10	3
Sb			1	47.503	ppb	3.16	655,852.66	2.472E-02	Pulse	0.10	3
Ba			1	47.083	ppb	4.38	226,887.98	8.551E-03	Pulse	0.10	3
Tl			1	49.322	ppb	2.55	1,549,140.76	9.782E-02	Analog	0.10	3
Pb			1	46.979	ppb	2.39	491,504.32	3.104E-02	Pulse	0.10	3
Pb			1	48.289	ppb	4.04	428,639.27	2.707E-02	Pulse	0.10	3
Pb			1	48.283	ppb	2.54	1,968,560.23	1.243E-01	Analog	0.10	3
Na			2	53.124	ppb	2.37	117,861.52	8.467E-02	Pulse	0.30	3
Mg			2	52.743	ppb	3.60	55,149.54	3.962E-02	Pulse	0.30	3
Al			2	47.773	ppb	4.72	23,462.12	1.686E-02	Pulse	0.30	3
K			2	53.066	ppb	1.97	48,294.24	3.469E-02	Pulse	0.30	3
Ca			2	362.366	ppb	3.24	14,516.76	1.043E-02	Pulse	0.30	3
Ti			2	48.457	ppb	2.92	13,681.69	9.829E-03	Pulse	0.30	3
V			2	48.190	ppb	2.63	380,009.90	2.730E-01	Pulse	0.30	3
Cr			2	47.860	ppb	2.66	473,020.55	3.398E-01	Pulse	0.30	3
Mn			2	48.230	ppb	3.06	304,950.92	2.191E-01	Pulse	0.30	3
Fe			2	49.136	ppb	3.06	443,947.97	3.189E-01	Pulse	0.30	3
Co			2	48.949	ppb	2.84	812,780.89	5.839E-01	Pulse	0.30	3
Ni			2	48.682	ppb	3.24	204,416.16	1.469E-01	Pulse	0.30	3
Cu			2	48.372	ppb	2.76	519,610.48	3.733E-01	Pulse	0.30	3
Zn			2	48.656	ppb	2.41	88,706.44	6.372E-02	Pulse	0.30	3
As			2	49.753	ppb	1.71	40,992.76	2.945E-02	Pulse	1.00	3
Sn			2	48.575	ppb	2.99	191,082.70	3.869E-02	Pulse	0.30	3
Cd			2	49.426	ppb	3.35	102,973.62	2.085E-02	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	49.075	ppb	1.09	9,430.09	1.301E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,990,982.44	1.88	101.2	Analog	0.10	3
1	Sc		21,904,584.67	0.48	101.0	Analog	0.10	3
1	Ge		4,386,054.83	0.75	101.9	Analog	0.10	3
1	Rh		22,336,798.00	1.00	101.8	Analog	0.10	3
1	In		20,597,796.15	0.96	102.2	Analog	0.10	3
1	Tb		26,539,471.27	0.73	101.5	Analog	0.10	3
1	Ho		27,387,410.43	1.22	101.9	Analog	0.10	3
1	Bi		15,836,558.09	0.27	101.3	Analog	0.10	3
1	Ge		3,234,205.47	0.22	101.7	Analog	0.10	3
2	Sc		1,392,193.87	0.67	100.1	Analog	0.30	3
2	Ge		844,656.65	0.22	104.8	Pulse	0.30	3
2	Rh		13,489,964.74	1.14	97.9	Analog	0.30	3
2	In		4,939,790.58	1.24	99.1	Analog	0.30	3
2	Tb		15,328,821.06	1.14	98.7	Analog	0.30	3
2	Ho		15,760,618.26	0.31	99.5	Analog	0.30	3
2	Bi		10,090,235.43	0.82	99.6	Analog	0.30	3
2	Ge		574,095.64	0.68	104.3	Pulse	0.30	3
3	Sc		1,759,067.64	0.52	98.6	Analog	0.30	3
3	Ge		724,611.60	0.47	102.3	Pulse	0.30	3
3	Rh		3,871,930.96	0.45	99.8	Analog	0.30	3
3	Tb		8,075,847.74	1.46	99.3	Analog	0.30	3
3	Ge		498,819.02	0.66	102.5	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:24
Sample Name STDF
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	101.795	ppb	2.89	1,000,941.44	5.600E-02	Pulse	0.25	3
B			1	103.165	ppb	3.51	921,246.53	5.155E-02	Pulse	0.15	3
Ca			1	176.604	ppb	3.74	203,862.25	9.294E-03	Pulse	0.10	3
Sr			1	101.642	ppb	2.58	4,188,936.40	1.918E-01	Analog	0.10	3
Mo			1	104.164	ppb	2.88	886,983.48	4.062E-02	Pulse	0.10	3
Ag			1	106.026	ppb	2.63	2,038,261.59	1.001E-01	Analog	0.10	3
Sn			1	107.682	ppb	2.12	1,156,046.96	5.676E-02	Analog	0.10	3
Sb			1	101.581	ppb	1.80	1,393,447.37	5.285E-02	Analog	0.10	3
Ba			1	101.812	ppb	2.13	487,444.12	1.849E-02	Pulse	0.10	3
Tl			1	100.637	ppb	0.91	3,082,215.48	1.949E-01	Analog	0.10	3
Pb			1	101.827	ppb	1.91	1,063,283.18	6.725E-02	Analog	0.10	3
Pb			1	102.891	ppb	1.31	911,669.15	5.765E-02	Pulse	0.10	3
Pb			1	102.761	ppb	1.55	4,181,888.14	2.645E-01	Analog	0.10	3
Na			2	111.089	ppb	1.95	233,392.57	1.694E-01	Pulse	0.30	3
Mg			2	111.438	ppb	2.60	112,250.85	8.147E-02	Pulse	0.30	3
Al			2	106.761	ppb	2.03	47,806.89	3.470E-02	Pulse	0.30	3
K			2	107.968	ppb	2.06	87,160.92	6.326E-02	Pulse	0.30	3
Ca			2	748.193	ppb	0.95	29,365.06	2.131E-02	Pulse	0.30	3
Ti			2	102.141	ppb	1.40	28,542.64	2.072E-02	Pulse	0.30	3
V			2	101.073	ppb	2.39	786,339.41	5.707E-01	Pulse	0.30	3
Cr			2	101.276	ppb	1.96	990,395.03	7.188E-01	Pulse	0.30	3
Mn			2	101.115	ppb	2.19	632,428.43	4.590E-01	Pulse	0.30	3
Fe			2	118.706	ppb	2.16	1,044,111.31	7.578E-01	Pulse	0.30	3
Co			2	101.495	ppb	2.18	1,633,002.78	1.185E+00	Analog	0.30	3
Ni			2	102.085	ppb	2.47	424,171.29	3.079E-01	Pulse	0.30	3
Cu			2	100.926	ppb	2.16	1,078,202.60	7.826E-01	Pulse	0.30	3
Zn			2	100.766	ppb	2.21	182,300.51	1.323E-01	Pulse	0.30	3
As			2	103.892	ppb	1.71	84,660.79	6.144E-02	Pulse	1.00	3
Sn			2	101.026	ppb	2.42	398,875.63	8.040E-02	Pulse	0.30	3
Cd			2	103.144	ppb	1.53	215,863.59	4.351E-02	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	99.183	ppb	0.47	19,364.14	2.627E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,876,545.37	1.74	100.6	Analog	0.10	3
1	Sc		21,943,088.01	1.78	101.2	Analog	0.10	3
1	Ge		4,351,042.85	0.34	101.1	Analog	0.10	3
1	Rh		21,836,113.84	0.27	99.5	Analog	0.10	3
1	In		20,367,275.01	0.74	101.0	Analog	0.10	3
1	Tb		26,370,634.61	0.98	100.9	Analog	0.10	3
1	Ho		26,920,272.93	0.63	100.2	Analog	0.10	3
1	Bi		15,812,246.43	1.38	101.2	Analog	0.10	3
1	Ge		3,206,479.33	0.47	100.9	Analog	0.10	3
2	Sc		1,378,006.02	1.06	99.0	Analog	0.30	3
2	Ge		853,737.88	0.35	105.9	Pulse	0.30	3
2	Rh		13,398,573.91	1.12	97.3	Analog	0.30	3
2	In		4,962,211.14	1.38	99.5	Analog	0.30	3
2	Tb		15,419,309.94	1.23	99.3	Analog	0.30	3
2	Ho		15,783,028.82	1.22	99.6	Analog	0.30	3
2	Bi		10,102,800.99	0.66	99.7	Analog	0.30	3
2	Ge		579,849.72	0.62	105.4	Pulse	0.30	3
3	Sc		1,772,882.08	0.68	99.3	Analog	0.30	3
3	Ge		737,035.96	0.87	104.1	Pulse	0.30	3
3	Rh		3,844,351.93	1.61	99.1	Analog	0.30	3
3	Tb		8,085,124.40	1.22	99.4	Analog	0.30	3
3	Ge		504,450.83	0.38	103.7	Pulse	0.30	3

Quantitation Report

File Name 009CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:27
Sample Name STDG
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.011	ppb	20.04	194.67	1.065E-05	Pulse	0.25	3
B			1	200.181	ppb	4.18	1,824,243.26	9.983E-02	Analog	0.15	3
Ca			1	528.606	ppb	1.73	580,432.58	2.596E-02	Pulse	0.10	3
Sr			1	0.027	ppb	27.22	4,824.12	2.164E-04	Pulse	0.10	3
Mo			1	0.123	ppb	7.36	1,166.73	5.233E-05	Pulse	0.10	3
Ag			1	0.017	ppb	16.59	393.35	1.882E-05	Pulse	0.10	3
Sn			1	0.174	ppb	8.92	2,803.64	1.340E-04	Pulse	0.10	3
Sb			1	0.130	ppb	8.64	1,983.50	7.436E-05	Pulse	0.10	3
Ba			1	0.061	ppb	11.63	390.02	1.462E-05	Pulse	0.10	3
Tl			1	0.054	ppb	59.64	73,610.36	4.581E-03	Pulse	0.10	3
Pb			1	0.031	ppb	19.29	700.03	4.354E-05	Pulse	0.10	3
Pb			1	0.034	ppb	28.51	643.37	4.005E-05	Pulse	0.10	3
Pb			1	0.033	ppb	6.15	2,776.84	1.728E-04	Pulse	0.10	3
Na			2	518.848	ppb	2.07	1,076,711.24	7.654E-01	Pulse	0.30	3
Mg			2	528.379	ppb	2.15	532,837.41	3.788E-01	Pulse	0.30	3
Al			2	524.810	ppb	2.70	226,676.04	1.611E-01	Pulse	0.30	3
K			2	508.996	ppb	1.88	382,536.12	2.719E-01	Pulse	0.30	3
Ca			2	525.055	ppb	2.32	21,125.16	1.502E-02	Pulse	0.30	3
Ti			2	0.120	ppb	61.99	37.78	2.680E-05	Pulse	0.30	3
V			2	-0.014	ppb	-137.33	2,231.26	1.586E-03	Pulse	0.30	3
Cr			2	0.034	ppb	8.97	636.69	4.527E-04	Pulse	0.30	3
Mn			2	0.119	ppb	13.74	1,110.04	7.890E-04	Pulse	0.30	3
Fe			2	497.937	ppb	1.51	4,431,652.32	3.150E+00	Analog	0.30	3
Co			2	0.080	ppb	42.41	34,702.35	2.467E-02	Pulse	0.30	3
Ni			2	0.045	ppb	22.58	282.23	2.004E-04	Pulse	0.30	3
Cu			2	0.616	ppb	1.36	1,912.34	1.359E-03	Pulse	0.30	3
Zn			2	1.516	ppb	5.37	2,355.73	1.675E-03	Pulse	0.30	3
As			2	0.012	ppb	49.73	68.67	4.880E-05	Pulse	1.00	3
Sn			2	0.201	ppb	15.28	1,115.60	2.253E-04	Pulse	0.30	3
Cd			2	0.018	ppb	42.97	64.81	1.309E-05	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	200.609	ppb	0.67	38,319.56	5.311E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,280,988.97	1.53	102.8	Analog	0.10	3
1	Sc		22,358,300.50	0.21	103.1	Analog	0.10	3
1	Ge		4,404,921.50	0.11	102.4	Analog	0.10	3
1	Rh		22,295,137.17	0.66	101.6	Analog	0.10	3
1	In		20,919,085.42	1.07	103.8	Analog	0.10	3
1	Tb		26,674,966.27	0.93	102.1	Analog	0.10	3
1	Ho		27,340,397.92	0.22	101.8	Analog	0.10	3
1	Bi		16,071,373.51	1.22	102.8	Analog	0.10	3
1	Ge		3,260,944.74	0.50	102.6	Analog	0.10	3
2	Sc		1,406,887.31	0.87	101.1	Analog	0.30	3
2	Ge		833,965.64	0.18	103.5	Pulse	0.30	3
2	Rh		13,517,496.69	0.96	98.1	Analog	0.30	3
2	In		4,952,350.40	0.60	99.3	Analog	0.30	3
2	Tb		15,549,779.94	0.98	100.2	Analog	0.30	3
2	Ho		15,860,153.26	0.90	100.1	Analog	0.30	3
2	Bi		10,126,867.10	0.68	99.9	Analog	0.30	3
2	Ge		567,993.87	0.23	103.2	Pulse	0.30	3
3	Sc		1,769,502.50	1.10	99.2	Analog	0.30	3
3	Ge		721,479.61	0.55	101.9	Pulse	0.30	3
3	Rh		3,845,911.24	0.47	99.2	Analog	0.30	3
3	Tb		8,000,745.79	1.75	98.3	Analog	0.30	3
3	Ge		495,819.36	0.55	101.9	Pulse	0.30	3

Quantitation Report

File Name 010CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:31
Sample Name STDH
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.002	ppb	66.42	112.00	6.066E-06	Pulse	0.25	3
B			1	4.498	ppb	4.92	45,232.83	2.448E-03	Pulse	0.15	3
Ca			1	991.765	ppb	2.20	1,083,801.63	4.789E-02	Pulse	0.10	3
Sr			1	0.019	ppb	19.86	4,534.02	2.015E-04	Pulse	0.10	3
Mo			1	0.026	ppb	17.09	333.34	1.482E-05	Pulse	0.10	3
Ag			1	0.094	ppb	5.16	1,913.49	9.121E-05	Pulse	0.10	3
Sn			1	0.043	ppb	16.74	1,366.76	6.514E-05	Pulse	0.10	3
Sb			1	0.053	ppb	22.10	923.38	3.426E-05	Pulse	0.10	3
Ba			1	0.051	ppb	6.77	343.34	1.274E-05	Pulse	0.10	3
Tl			1	0.006	ppb	347.43	71,832.44	4.490E-03	Pulse	0.10	3
Pb			1	0.011	ppb	68.97	490.02	3.065E-05	Pulse	0.10	3
Pb			1	0.018	ppb	49.59	503.36	3.144E-05	Pulse	0.10	3
Pb			1	0.018	ppb	13.74	2,126.79	1.329E-04	Pulse	0.10	3
Na			2	1012.537	ppb	3.83	2,121,290.75	1.487E+00	Analog	0.30	3
Mg			2	1024.502	ppb	2.79	1,045,097.77	7.325E-01	Pulse	0.30	3
Al			2	1033.608	ppb	2.62	449,455.92	3.150E-01	Pulse	0.30	3
K			2	1011.296	ppb	2.00	760,846.58	5.333E-01	Pulse	0.30	3
Ca			2	1028.487	ppb	2.27	41,684.64	2.922E-02	Pulse	0.30	3
Ti			2	0.042	ppb	30.09	15.55	1.088E-05	Pulse	0.30	3
V			2	-0.001	ppb	-2118.08	2,372.39	1.663E-03	Pulse	0.30	3
Cr			2	0.029	ppb	4.33	596.68	4.181E-04	Pulse	0.30	3
Mn			2	0.043	ppb	6.91	631.13	4.423E-04	Pulse	0.30	3
Fe			2	974.389	ppb	2.18	8,782,170.49	6.156E+00	Analog	0.30	3
Co			2	0.066	ppb	58.66	34,961.24	2.451E-02	Pulse	0.30	3
Ni			2	0.067	ppb	6.87	380.01	2.663E-04	Pulse	0.30	3
Cu			2	0.639	ppb	0.67	2,194.59	1.538E-03	Pulse	0.30	3
Zn			2	2.057	ppb	1.97	3,405.90	2.387E-03	Pulse	0.30	3
As			2	-0.002	ppb	-412.67	58.00	4.067E-05	Pulse	1.00	3
Sn			2	0.047	ppb	8.36	520.01	1.026E-04	Pulse	0.30	3
Cd			2	0.000	ppb	-3475.39	28.49	5.631E-06	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	400.049	ppb	0.54	77,219.59	1.059E-01	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,482,152.09	1.23	104.0	Analog	0.10	3
1	Sc		22,631,587.99	0.64	104.3	Analog	0.10	3
1	Ge		4,462,846.49	0.39	103.7	Analog	0.10	3
1	Rh		22,500,078.00	0.58	102.5	Analog	0.10	3
1	In		20,975,926.41	0.76	104.0	Analog	0.10	3
1	Tb		26,960,035.43	0.45	103.2	Analog	0.10	3
1	Ho		27,613,476.26	0.56	102.8	Analog	0.10	3
1	Bi		15,998,536.01	0.74	102.3	Analog	0.10	3
1	Ge		3,278,645.99	1.32	103.1	Analog	0.10	3
2	Sc		1,426,817.34	1.26	102.5	Analog	0.30	3
2	Ge		844,092.01	0.23	104.7	Pulse	0.30	3
2	Rh		13,697,815.57	0.42	99.4	Analog	0.30	3
2	In		5,071,337.60	2.43	101.7	Analog	0.30	3
2	Tb		15,599,339.38	1.35	100.5	Analog	0.30	3
2	Ho		16,100,964.92	0.81	101.6	Analog	0.30	3
2	Bi		10,118,679.32	1.10	99.8	Analog	0.30	3
2	Ge		574,549.96	0.40	104.4	Pulse	0.30	3
3	Sc		1,784,158.05	0.47	100.0	Analog	0.30	3
3	Ge		729,283.69	0.60	103.0	Pulse	0.30	3
3	Rh		3,857,457.63	0.76	99.5	Analog	0.30	3
3	Tb		8,084,486.90	0.93	99.4	Analog	0.30	3
3	Ge		500,260.07	0.82	102.8	Pulse	0.30	3

Quantitation Report

File Name	011CALS.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:34
Sample Name	STDI
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.000	ppb	571.32	93.33	5.027E-06	Pulse	0.25	3
B			1	2.231	ppb	3.56	24,526.89	1.320E-03	Pulse	0.15	3
Ca			1	4865.110	ppb	2.24	5,262,761.17	2.313E-01	Analog	0.10	3
Sr			1	0.039	ppb	8.99	5,270.92	2.389E-04	Pulse	0.10	3
Mo			1	0.020	ppb	62.31	273.34	1.240E-05	Pulse	0.10	3
Ag			1	0.004	ppb	74.71	140.00	6.739E-06	Pulse	0.10	3
Sn			1	0.011	ppb	125.68	1,000.06	4.813E-05	Pulse	0.10	3
Sb			1	0.041	ppb	12.65	750.03	2.791E-05	Pulse	0.10	3
Ba			1	0.040	ppb	19.56	290.01	1.077E-05	Pulse	0.10	3
Tl			1	0.032	ppb	183.24	70,651.02	4.540E-03	Pulse	0.10	3
Pb			1	0.000	ppb	4702.69	363.35	2.338E-05	Pulse	0.10	3
Pb			1	-0.001	ppb	-495.66	320.01	2.054E-05	Pulse	0.10	3
Pb			1	0.005	ppb	62.20	1,570.08	1.009E-04	Pulse	0.10	3
Na			2	4860.541	ppb	3.33	10,318,469.59	7.111E+00	Analog	0.30	3
Mg			2	4890.869	ppb	2.67	5,063,415.49	3.490E+00	Analog	0.30	3
Al			2	4901.499	ppb	2.47	2,154,718.59	1.485E+00	Analog	0.30	3
K			2	4844.899	ppb	1.69	3,668,636.66	2.528E+00	Analog	0.30	3
Ca			2	4868.506	ppb	3.63	199,542.98	1.375E-01	Pulse	0.30	3
Ti			2	0.041	ppb	55.96	15.55	1.068E-05	Pulse	0.30	3
V			2	-0.009	ppb	-106.69	2,343.50	1.615E-03	Pulse	0.30	3
Cr			2	0.092	ppb	1.90	1,251.16	8.622E-04	Pulse	0.30	3
Mn			2	0.072	ppb	15.05	830.03	5.723E-04	Pulse	0.30	3
Fe			2	4665.793	ppb	2.87	42,722,824.97	2.944E+01	Analog	0.30	3
Co			2	0.021	ppb	103.63	34,816.07	2.399E-02	Pulse	0.30	3
Ni			2	0.110	ppb	11.19	576.68	3.974E-04	Pulse	0.30	3
Cu			2	0.610	ppb	2.21	1,911.22	1.317E-03	Pulse	0.30	3
Zn			2	0.623	ppb	1.40	724.47	4.993E-04	Pulse	0.30	3
As			2	-0.002	ppb	-666.12	59.67	4.106E-05	Pulse	1.00	3
Sn			2	0.022	ppb	27.69	417.80	8.326E-05	Pulse	0.30	3
Cd			2	-0.003	ppb	-117.66	21.96	4.393E-06	Pulse	0.30	3
Se			3	0.077	ppb	6.78	35.00	4.867E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,586,082.61	0.95	104.6	Analog	0.10	3
1	Sc		22,752,114.66	1.27	104.9	Analog	0.10	3
1	Ge		4,473,859.20	1.51	104.0	Analog	0.10	3

Quantitation Report

1	Rh		22,063,540.50	0.52	100.6	Analog	0.10	3
1	In		20,782,337.71	0.25	103.1	Analog	0.10	3
1	Tb		26,894,282.93	1.92	102.9	Analog	0.10	3
1	Ho		27,363,826.26	0.20	101.9	Analog	0.10	3
1	Bi		15,566,328.52	1.27	99.6	Analog	0.10	3
1	Ge		3,331,720.26	0.93	104.8	Analog	0.10	3
2	Sc		1,451,352.44	1.23	104.3	Analog	0.30	3
2	Ge		831,589.94	0.23	103.2	Pulse	0.30	3
2	Rh		13,366,188.63	1.33	97.0	Analog	0.30	3
2	In		5,021,853.99	1.92	100.7	Analog	0.30	3
2	Tb		15,733,488.26	1.32	101.4	Analog	0.30	3
2	Ho		16,134,928.25	0.56	101.8	Analog	0.30	3
2	Bi		9,913,635.16	1.16	97.8	Analog	0.30	3
2	Ge		575,712.34	0.55	104.6	Pulse	0.30	3
3	Sc		1,842,540.62	0.42	103.2	Analog	0.30	3
3	Ge		719,149.24	0.33	101.6	Pulse	0.30	3
3	Rh		3,850,883.46	0.67	99.3	Analog	0.30	3
3	Tb		8,202,609.95	1.49	100.8	Analog	0.30	3
3	Ge		493,670.29	0.51	101.5	Pulse	0.30	3

Quantitation Report

File Name 012CALS.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:37
Sample Name STDJ
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.005	ppb	26.92	142.67	7.524E-06	Pulse	0.25	3
B			1	1.361	ppb	6.80	16,800.83	8.867E-04	Pulse	0.15	3
Ca			1	10066.649	ppb	2.48	11,099,596.08	4.776E-01	Analog	0.10	3
Sr			1	0.108	ppb	5.37	8,252.09	3.698E-04	Pulse	0.10	3
Mo			1	0.021	ppb	15.95	280.01	1.255E-05	Pulse	0.10	3
Ag			1	0.010	ppb	11.01	256.68	1.227E-05	Pulse	0.10	3
Sn			1	0.039	ppb	33.31	1,320.09	6.318E-05	Pulse	0.10	3
Sb			1	0.070	ppb	9.40	1,176.74	4.317E-05	Pulse	0.10	3
Ba			1	0.141	ppb	7.46	793.38	2.910E-05	Pulse	0.10	3
Tl			1	0.005	ppb	878.36	69,727.12	4.488E-03	Pulse	0.10	3
Pb			1	0.030	ppb	13.70	666.70	4.292E-05	Pulse	0.10	3
Pb			1	0.037	ppb	4.04	653.36	4.206E-05	Pulse	0.10	3
Pb			1	0.036	ppb	2.31	2,800.17	1.803E-04	Pulse	0.10	3
Na			2	10067.399	ppb	1.56	21,490,984.70	1.472E+01	Analog	0.30	3
Mg			2	10050.415	ppb	2.13	10,464,027.92	7.169E+00	Analog	0.30	3
Al			2	10044.597	ppb	3.50	4,437,737.88	3.041E+00	Analog	0.30	3
K			2	10075.912	ppb	2.53	7,663,169.97	5.250E+00	Analog	0.30	3
Ca			2	10053.345	ppb	2.44	414,206.95	2.838E-01	Pulse	0.30	3
Ti			2	0.026	ppb	68.49	11.11	7.639E-06	Pulse	0.30	3
V			2	0.008	ppb	196.14	2,495.74	1.710E-03	Pulse	0.30	3
Cr			2	0.170	ppb	2.38	2,067.91	1.417E-03	Pulse	0.30	3
Mn			2	0.403	ppb	5.49	3,031.38	2.077E-03	Pulse	0.30	3
Fe			2	9555.186	ppb	2.51	87,999,747.61	6.029E+01	Analog	0.30	3
Co			2	0.030	ppb	47.53	35,182.51	2.410E-02	Pulse	0.30	3
Ni			2	0.302	ppb	4.49	1,425.62	9.762E-04	Pulse	0.30	3
Cu			2	0.788	ppb	2.02	3,942.67	2.701E-03	Pulse	0.30	3
Zn			2	2.322	ppb	4.24	3,992.68	2.736E-03	Pulse	0.30	3
As			2	0.013	ppb	54.47	72.67	4.979E-05	Pulse	1.00	3
Sn			2	0.032	ppb	40.42	453.34	9.103E-05	Pulse	0.30	3
Cd			2	0.002	ppb	208.57	33.09	6.646E-06	Pulse	0.30	3
Se			3	0.027	ppb	48.00	25.33	3.535E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,952,848.17	0.87	106.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,243,018.82	0.72	107.2	Analog	0.10	3
1	Ge		4,547,936.18	0.20	105.7	Analog	0.10	3
1	Rh		22,320,423.83	0.96	101.7	Analog	0.10	3
1	In		20,903,694.60	1.37	103.7	Analog	0.10	3
1	Tb		27,267,451.26	1.41	104.3	Analog	0.10	3
1	Ho		27,675,507.92	0.96	103.0	Analog	0.10	3
1	Bi		15,533,853.52	1.20	99.4	Analog	0.10	3
1	Ge		3,390,100.05	0.50	106.6	Analog	0.10	3
2	Sc		1,459,957.16	1.29	104.9	Analog	0.30	3
2	Ge		820,628.30	0.86	101.8	Pulse	0.30	3
2	Rh		13,178,562.81	1.43	95.7	Analog	0.30	3
2	In		4,981,199.85	1.50	99.9	Analog	0.30	3
2	Tb		15,778,046.04	1.89	101.6	Analog	0.30	3
2	Ho		15,961,544.37	2.02	100.7	Analog	0.30	3
2	Bi		9,611,602.12	1.89	94.8	Analog	0.30	3
2	Ge		582,818.78	0.42	105.9	Pulse	0.30	3
3	Sc		1,843,033.95	0.89	103.3	Analog	0.30	3
3	Ge		716,501.15	0.30	101.2	Pulse	0.30	3
3	Rh		3,832,260.26	0.58	98.8	Analog	0.30	3
3	Tb		8,188,490.23	0.45	100.6	Analog	0.30	3
3	Ge		497,985.64	0.14	102.4	Pulse	0.30	3

Quantitation Report

File Name	013SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:44
Sample Name	rinseconf
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-36.08	49.33	2.572E-06	Pulse	0.25	3
B			1	0.748	ppb	2.17	11,176.75	5.818E-04	Pulse	0.15	3
Ca			1	-1.476	ppb	-28.19	20,401.44	8.620E-04	Pulse	0.10	3
Sr			1	-0.008	ppb	-23.79	3,573.78	1.512E-04	Pulse	0.10	3
Mo			1	-0.003	ppb	-92.29	76.67	3.235E-06	Pulse	0.10	3
Ag			1	0.000	ppb	121.56	70.00	3.195E-06	Pulse	0.10	3
Sn			1	0.014	ppb	62.12	1,096.73	5.005E-05	Pulse	0.10	3
Sb			1	0.006	ppb	109.92	263.34	9.475E-06	Pulse	0.10	3
Ba			1	-0.003	ppb	-100.53	83.33	3.000E-06	Pulse	0.10	3
Tl			1	-0.114	ppb	-26.01	69,342.66	4.263E-03	Pulse	0.10	3
Pb			1	-0.014	ppb	-19.19	230.01	1.415E-05	Pulse	0.10	3
Pb			1	-0.001	ppb	-568.31	333.35	2.051E-05	Pulse	0.10	3
Pb			1	-0.009	ppb	-28.30	1,050.05	6.452E-05	Pulse	0.10	3
Na			2	-1.070	ppb	-7.57	8,132.88	5.453E-03	Pulse	0.30	3
Mg			2	0.133	ppb	68.79	3,140.28	2.106E-03	Pulse	0.30	3
Al			2	-6.528	ppb	-0.68	643.35	4.313E-04	Pulse	0.30	3
K			2	0.313	ppb	40.72	10,806.48	7.242E-03	Pulse	0.30	3
Ca			2	-2.145	ppb	-36.91	220.00	1.473E-04	Pulse	0.30	3
Ti			2	0.003	ppb	582.17	4.44	3.011E-06	Pulse	0.30	3
V			2	0.005	ppb	79.58	2,533.52	1.698E-03	Pulse	0.30	3
Cr			2	-0.002	ppb	-209.37	296.67	1.991E-04	Pulse	0.30	3
Mn			2	-0.005	ppb	-52.47	333.34	2.236E-04	Pulse	0.30	3
Fe			2	2.644	ppb	11.00	38,200.01	2.563E-02	Pulse	0.30	3
Co			2	-0.018	ppb	-121.66	35,131.73	2.355E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-21.05	58.89	3.939E-05	Pulse	0.30	3
Cu			2	0.574	ppb	1.41	1,543.41	1.034E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.348	ppb	2.90	204.45	1.372E-04	Pulse	0.30	3
As			2	-0.022	ppb	-14.35	43.67	2.929E-05	Pulse	1.00	3
Sn			2	-0.009	ppb	-74.14	305.56	5.827E-05	Pulse	0.30	3
Cd			2	-0.008	ppb	-40.25	12.12	2.316E-06	Pulse	0.30	3
Se			3	0.033	ppb	50.34	26.33	3.689E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,210,376.98	1.57	108.1	Analog	0.10	3
1	Sc		23,672,696.31	1.42	109.1	Analog	0.10	3
1	Ge		4,630,447.12	2.01	107.6	Analog	0.10	3
1	Rh		23,636,552.15	1.29	107.7	Analog	0.10	3
1	In		21,913,975.00	0.50	108.7	Analog	0.10	3
1	Tb		27,797,391.25	0.62	106.4	Analog	0.10	3
1	Ho		28,262,169.58	0.76	105.2	Analog	0.10	3
1	Bi		16,267,353.09	0.82	104.1	Analog	0.10	3
1	Ge		3,429,832.35	1.42	107.9	Analog	0.10	3
2	Sc		1,492,000.98	2.10	107.2	Analog	0.30	3
2	Ge		833,649.67	1.37	103.4	Pulse	0.30	3
2	Rh		14,261,592.21	1.47	103.5	Analog	0.30	3
2	In		5,248,665.24	1.76	105.3	Analog	0.30	3
2	Tb		16,139,187.69	1.80	104.0	Analog	0.30	3
2	Ho		16,615,880.45	1.32	104.9	Analog	0.30	3
2	Bi		10,555,877.92	1.34	104.2	Analog	0.30	3
2	Ge		568,273.66	1.08	103.3	Pulse	0.30	3
3	Sc		1,840,322.50	0.86	103.1	Analog	0.30	3
3	Ge		713,571.85	0.38	100.8	Pulse	0.30	3
3	Rh		3,964,318.87	1.61	102.2	Analog	0.30	3
3	Tb		8,183,874.95	0.51	100.6	Analog	0.30	3
3	Ge		490,158.73	0.47	100.7	Pulse	0.30	3

Quantitation Report

File Name 014SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 11:47
Sample Name ICVA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	56.063	ppb	2.72	590,738.48	3.085E-02	Pulse	0.25	3
B			1	116.142	ppb	2.31	1,110,964.09	5.801E-02	Mix	0.15	3
Ca			1	5389.185	ppb	3.14	6,024,485.75	2.561E-01	Analog	0.10	3
Sr			1	58.358	ppb	3.67	2,489,139.13	1.102E-01	Analog	0.10	3
Mo			1	54.370	ppb	3.52	478,916.07	2.121E-02	Pulse	0.10	3
Ag			1	62.517	ppb	1.99	1,259,291.78	5.902E-02	Analog	0.10	3
Sn			1	56.056	ppb	2.90	631,047.75	2.957E-02	Pulse	0.10	3
Sb			1	55.426	ppb	3.13	785,770.54	2.884E-02	Pulse	0.10	3
Ba			1	56.718	ppb	3.54	280,657.53	1.030E-02	Pulse	0.10	3
Tl			1	61.600	ppb	3.10	1,898,515.39	1.211E-01	Analog	0.10	3
Pb			1	56.337	ppb	4.77	583,581.06	3.722E-02	Pulse	0.10	3
Pb			1	55.885	ppb	4.60	491,205.66	3.132E-02	Pulse	0.10	3
Pb			1	57.981	ppb	3.95	2,340,747.06	1.493E-01	Analog	0.10	3
Na			2	5486.574	ppb	2.60	11,725,683.42	8.027E+00	Analog	0.30	3
Mg			2	5432.238	ppb	3.00	5,661,399.77	3.876E+00	Analog	0.30	3
Al			2	5486.563	ppb	3.32	2,427,411.08	1.662E+00	Analog	0.30	3
K			2	5413.188	ppb	3.17	4,124,637.75	2.824E+00	Analog	0.30	3
Ca			2	5914.626	ppb	3.71	243,957.90	1.670E-01	Pulse	0.30	3
Ti			2	54.886	ppb	4.22	16,258.19	1.113E-02	Pulse	0.30	3
V			2	57.239	ppb	4.27	473,066.63	3.239E-01	Pulse	0.30	3
Cr			2	57.039	ppb	4.51	591,329.02	4.049E-01	Pulse	0.30	3
Mn			2	56.971	ppb	4.40	377,837.18	2.587E-01	Pulse	0.30	3
Fe			2	5256.212	ppb	2.82	48,451,056.96	3.317E+01	Analog	0.30	3
Co			2	57.225	ppb	4.82	990,927.30	6.786E-01	Pulse	0.30	3
Ni			2	56.434	ppb	4.67	248,576.66	1.702E-01	Pulse	0.30	3
Cu			2	54.858	ppb	4.07	618,900.86	4.238E-01	Pulse	0.30	3
Zn			2	56.241	ppb	4.55	107,637.07	7.371E-02	Pulse	0.30	3
As			2	58.746	ppb	3.80	50,771.10	3.476E-02	Pulse	1.00	3
Sn			2	54.586	ppb	3.78	221,150.59	4.347E-02	Pulse	0.30	3
Cd			2	57.919	ppb	4.06	124,291.71	2.443E-02	Pulse	0.30	3
Se			3	251.676	ppb	0.45	49,439.78	6.662E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,151,037.60	1.16	107.7	Analog	0.10	3
1	Sc		23,524,176.32	1.09	108.5	Analog	0.10	3
1	Ge		4,571,557.54	0.83	106.3	Analog	0.10	3

Quantitation Report

1	Rh		22,590,330.50	1.11	103.0	Analog	0.10	3
1	In		21,339,920.41	1.44	105.8	Analog	0.10	3
1	Tb		27,251,157.10	0.50	104.3	Analog	0.10	3
1	Ho		28,129,614.58	0.27	104.7	Analog	0.10	3
1	Bi		15,685,377.68	1.32	100.3	Analog	0.10	3
1	Ge		3,422,063.28	0.21	107.6	Analog	0.10	3
2	Sc		1,461,558.17	2.88	105.0	Analog	0.30	3
2	Ge		863,667.69	0.98	107.1	Pulse	0.30	3
2	Rh		13,640,373.62	1.96	99.0	Analog	0.30	3
2	In		5,090,558.82	2.65	102.1	Analog	0.30	3
2	Tb		15,840,663.26	2.47	102.0	Analog	0.30	3
2	Ho		16,201,694.36	2.72	102.3	Analog	0.30	3
2	Bi		9,866,725.17	2.08	97.4	Analog	0.30	3
2	Ge		598,483.05	1.41	108.8	Pulse	0.30	3
3	Sc		1,828,646.32	1.31	102.5	Analog	0.30	3
3	Ge		742,075.42	0.37	104.8	Pulse	0.30	3
3	Rh		3,874,704.71	1.31	99.9	Analog	0.30	3
3	Tb		8,199,476.34	0.58	100.8	Analog	0.30	3
3	Ge		509,562.51	0.38	104.7	Pulse	0.30	3

Quantitation Report

File Name	015SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:50
Sample Name	ICV
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.000	ppb	735.50	94.67	4.889E-06	Pulse	0.25	3
B			1	2.187	ppb	4.19	25,129.83	1.298E-03	Pulse	0.15	3
Ca			1	14.995	ppb	1.05	38,322.70	1.642E-03	Pulse	0.10	3
Sr			1	0.073	ppb	8.28	7,101.58	3.039E-04	Pulse	0.10	3
Mo			1	0.118	ppb	4.26	1,183.41	5.064E-05	Pulse	0.10	3
Ag			1	0.008	ppb	37.53	223.34	1.015E-05	Pulse	0.10	3
Sn			1	0.120	ppb	13.21	2,313.54	1.055E-04	Pulse	0.10	3
Sb			1	0.016	ppb	15.38	416.69	1.504E-05	Pulse	0.10	3
Ba			1	0.068	ppb	17.89	440.02	1.588E-05	Pulse	0.10	3
Tl			1	0.059	ppb	68.00	75,006.63	4.590E-03	Pulse	0.10	3
Pb			1	0.013	ppb	61.43	523.36	3.203E-05	Pulse	0.10	3
Pb			1	0.013	ppb	32.28	463.35	2.836E-05	Pulse	0.10	3
Pb			1	0.013	ppb	7.83	1,966.76	1.204E-04	Pulse	0.10	3
Na			2	60.696	ppb	1.93	141,062.36	9.574E-02	Pulse	0.30	3
Mg			2	4.661	ppb	5.48	7,860.55	5.334E-03	Pulse	0.30	3
Al			2	63.119	ppb	2.07	31,674.96	2.150E-02	Pulse	0.30	3
K			2	6.751	ppb	2.81	15,609.79	1.059E-02	Pulse	0.30	3
Ca			2	14.415	ppb	4.22	905.59	6.144E-04	Pulse	0.30	3
Ti			2	0.133	ppb	30.02	43.33	2.947E-05	Pulse	0.30	3
V			2	0.009	ppb	148.43	2,534.64	1.721E-03	Pulse	0.30	3
Cr			2	0.052	ppb	8.53	857.80	5.822E-04	Pulse	0.30	3
Mn			2	0.057	ppb	19.98	742.24	5.040E-04	Pulse	0.30	3
Fe			2	6.338	ppb	6.42	72,073.10	4.893E-02	Pulse	0.30	3
Co			2	0.032	ppb	16.58	35,543.48	2.412E-02	Pulse	0.30	3
Ni			2	0.090	ppb	6.59	496.68	3.370E-04	Pulse	0.30	3
Cu			2	0.915	ppb	0.63	5,433.05	3.686E-03	Pulse	0.30	3
Zn			2	2.254	ppb	5.30	3,897.11	2.646E-03	Pulse	0.30	3
As			2	-0.015	ppb	-38.12	49.00	3.322E-05	Pulse	1.00	3
Sn			2	0.118	ppb	11.21	831.14	1.593E-04	Pulse	0.30	3
Cd			2	-0.009	ppb	-28.19	9.06	1.735E-06	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.087	ppb	8.38	37.67	5.119E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,362,421.71	0.73	108.9	Analog	0.10	3
1	Sc		23,341,051.32	0.39	107.6	Analog	0.10	3
1	Ge		4,595,516.39	1.12	106.8	Analog	0.10	3
1	Rh		23,366,448.82	0.40	106.5	Analog	0.10	3
1	In		21,911,075.20	2.45	108.7	Analog	0.10	3
1	Tb		27,717,873.75	0.45	106.1	Analog	0.10	3
1	Ho		28,296,122.08	0.82	105.3	Analog	0.10	3
1	Bi		16,343,038.51	0.79	104.5	Analog	0.10	3
1	Ge		3,394,952.97	1.41	106.8	Analog	0.10	3
2	Sc		1,473,701.57	1.34	105.9	Analog	0.30	3
2	Ge		857,888.98	0.72	106.4	Pulse	0.30	3
2	Rh		14,165,088.88	1.02	102.8	Analog	0.30	3
2	In		5,219,553.52	2.26	104.7	Analog	0.30	3
2	Tb		16,097,219.36	1.80	103.7	Analog	0.30	3
2	Ho		16,432,200.46	1.92	103.7	Analog	0.30	3
2	Bi		10,448,162.08	1.51	103.1	Analog	0.30	3
2	Ge		580,185.72	0.76	105.4	Pulse	0.30	3
3	Sc		1,857,444.02	0.72	104.1	Analog	0.30	3
3	Ge		735,828.97	1.37	103.9	Pulse	0.30	3
3	Rh		3,978,191.51	0.57	102.6	Analog	0.30	3
3	Tb		8,172,094.12	0.97	100.4	Analog	0.30	3
3	Ge		505,222.17	0.79	103.8	Pulse	0.30	3

Quantitation Report

File Name	016SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:54
Sample Name	ICB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-25.58	54.67	2.801E-06	Pulse	0.25	3
B			1	0.978	ppb	4.41	13,580.49	6.960E-04	Pulse	0.15	3
Ca			1	-1.834	ppb	-22.24	20,104.40	8.450E-04	Pulse	0.10	3
Sr			1	-0.007	ppb	-32.85	3,607.11	1.524E-04	Pulse	0.10	3
Mo			1	0.004	ppb	72.07	146.67	6.196E-06	Pulse	0.10	3
Ag			1	0.003	ppb	100.84	120.00	5.507E-06	Pulse	0.10	3
Sn			1	-0.005	ppb	-36.42	860.04	3.954E-05	Pulse	0.10	3
Sb			1	-0.001	ppb	-167.82	163.34	5.870E-06	Pulse	0.10	3
Ba			1	-0.003	ppb	-128.54	83.33	2.997E-06	Pulse	0.10	3
Tl			1	-0.042	ppb	-143.08	72,070.43	4.400E-03	Pulse	0.10	3
Pb			1	-0.012	ppb	-25.40	253.34	1.545E-05	Pulse	0.10	3
Pb			1	-0.011	ppb	-31.72	243.34	1.484E-05	Pulse	0.10	3
Pb			1	-0.010	ppb	-40.89	1,020.04	6.218E-05	Pulse	0.10	3
Na			2	-1.198	ppb	-6.37	7,742.72	5.266E-03	Pulse	0.30	3
Mg			2	0.167	ppb	66.90	3,131.39	2.130E-03	Pulse	0.30	3
Al			2	-7.027	ppb	-1.12	412.23	2.804E-04	Pulse	0.30	3
K			2	0.641	ppb	27.36	10,898.73	7.413E-03	Pulse	0.30	3
Ca			2	-1.254	ppb	-68.89	253.34	1.724E-04	Pulse	0.30	3
Ti			2	0.018	ppb	73.82	8.89	6.064E-06	Pulse	0.30	3
V			2	-0.004	ppb	-354.32	2,416.85	1.643E-03	Pulse	0.30	3
Cr			2	-0.001	ppb	-447.41	297.78	2.028E-04	Pulse	0.30	3
Mn			2	0.040	ppb	16.20	627.79	4.272E-04	Pulse	0.30	3
Fe			2	0.547	ppb	18.58	18,220.05	1.240E-02	Pulse	0.30	3
Co			2	-0.017	ppb	-181.06	34,643.05	2.356E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-21.25	57.78	3.929E-05	Pulse	0.30	3
Cu			2	0.574	ppb	1.16	1,516.74	1.032E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.341	ppb	3.14	188.89	1.284E-04	Pulse	0.30	3
As			2	-0.018	ppb	-65.85	46.33	3.153E-05	Pulse	1.00	3
Sn			2	0.002	ppb	859.95	350.01	6.724E-05	Pulse	0.30	3
Cd			2	-0.005	ppb	-57.15	17.68	3.387E-06	Pulse	0.30	3
Se			3	0.020	ppb	29.26	24.00	3.343E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,511,694.98	0.42	109.8	Analog	0.10	3
1	Sc		23,796,883.81	1.72	109.7	Analog	0.10	3
1	Ge		4,665,172.85	0.20	108.4	Analog	0.10	3
1	Rh		23,668,345.48	0.72	107.9	Analog	0.10	3
1	In		21,747,491.86	0.75	107.9	Analog	0.10	3
1	Tb		27,782,703.75	1.29	106.3	Analog	0.10	3
1	Ho		28,254,540.41	2.01	105.2	Analog	0.10	3
1	Bi		16,381,636.42	1.33	104.8	Analog	0.10	3
1	Ge		3,432,559.33	0.27	108.0	Analog	0.10	3
2	Sc		1,470,342.02	0.99	105.7	Analog	0.30	3
2	Ge		838,389.97	0.85	104.0	Pulse	0.30	3
2	Rh		14,064,051.94	1.74	102.1	Analog	0.30	3
2	In		5,215,155.41	1.39	104.6	Analog	0.30	3
2	Tb		16,035,672.14	1.95	103.3	Analog	0.30	3
2	Ho		16,341,957.68	2.28	103.1	Analog	0.30	3
2	Bi		10,364,507.65	1.48	102.3	Analog	0.30	3
2	Ge		568,406.82	0.76	103.3	Pulse	0.30	3
3	Sc		1,852,310.55	0.81	103.8	Analog	0.30	3
3	Ge		717,903.08	0.61	101.4	Pulse	0.30	3
3	Rh		3,986,031.09	0.69	102.8	Analog	0.30	3
3	Tb		8,157,374.40	0.79	100.3	Analog	0.30	3
3	Ge		494,564.39	1.00	101.7	Pulse	0.30	3

Quantitation Report

File Name	017SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 11:57
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	47.457	ppb	3.82	495,942.50	2.611E-02	Pulse	0.25	3
B			1	97.507	ppb	3.78	925,557.85	4.873E-02	Pulse	0.15	3
Ca			1	4979.454	ppb	3.06	5,502,479.08	2.367E-01	Analog	0.10	3
Sr			1	48.725	ppb	2.96	2,090,294.92	9.205E-02	Analog	0.10	3
Mo			1	48.037	ppb	3.79	425,425.58	1.874E-02	Pulse	0.10	3
Ag			1	49.679	ppb	2.06	998,516.13	4.690E-02	Pulse	0.10	3
Sn			1	48.752	ppb	3.60	547,685.62	2.572E-02	Pulse	0.10	3
Sb			1	47.156	ppb	4.10	669,786.19	2.454E-02	Pulse	0.10	3
Ba			1	47.150	ppb	3.50	233,776.94	8.563E-03	Pulse	0.10	3
Tl			1	50.139	ppb	1.45	1,570,447.95	9.937E-02	Analog	0.10	3
Pb			1	45.852	ppb	4.45	478,747.17	3.029E-02	Pulse	0.10	3
Pb			1	47.165	ppb	3.49	417,823.09	2.644E-02	Pulse	0.10	3
Pb			1	47.723	ppb	1.90	1,941,818.44	1.229E-01	Analog	0.10	3
Na			2	5039.072	ppb	1.91	10,730,832.63	7.372E+00	Analog	0.30	3
Mg			2	5054.936	ppb	2.68	5,249,230.21	3.607E+00	Analog	0.30	3
Al			2	5033.645	ppb	1.45	2,219,660.88	1.525E+00	Analog	0.30	3
K			2	5053.550	ppb	1.15	3,838,367.21	2.637E+00	Analog	0.30	3
Ca			2	5407.389	ppb	2.66	222,292.96	1.527E-01	Pulse	0.30	3
Ti			2	48.390	ppb	0.25	14,287.68	9.815E-03	Pulse	0.30	3
V			2	48.497	ppb	2.46	399,855.68	2.747E-01	Pulse	0.30	3
Cr			2	47.410	ppb	2.65	489,938.64	3.366E-01	Pulse	0.30	3
Mn			2	47.303	ppb	2.79	312,737.65	2.149E-01	Pulse	0.30	3
Fe			2	4758.908	ppb	1.88	43,711,092.71	3.003E+01	Analog	0.30	3
Co			2	47.589	ppb	2.99	827,193.55	5.683E-01	Pulse	0.30	3
Ni			2	46.643	ppb	2.36	204,795.94	1.407E-01	Pulse	0.30	3
Cu			2	46.608	ppb	2.48	523,316.68	3.595E-01	Pulse	0.30	3
Zn			2	45.766	ppb	1.88	87,214.84	5.992E-02	Pulse	0.30	3
As			2	49.050	ppb	1.67	42,257.22	2.903E-02	Pulse	1.00	3
Sn			2	47.549	ppb	3.99	192,839.23	3.788E-02	Pulse	0.30	3
Cd			2	47.988	ppb	4.36	103,069.05	2.025E-02	Pulse	0.30	3
Se			3	198.441	ppb	0.33	39,329.01	5.254E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,998,108.34	1.66	106.9	Analog	0.10	3
1	Sc		23,250,336.32	0.79	107.2	Analog	0.10	3
1	Ge		4,543,207.85	0.29	105.6	Analog	0.10	3

Quantitation Report

1	Rh		22,712,270.49	1.03	103.5	Analog	0.10	3
1	In		21,291,120.00	0.37	105.6	Analog	0.10	3
1	Tb		27,306,519.59	1.07	104.5	Analog	0.10	3
1	Ho		27,787,998.75	1.03	103.4	Analog	0.10	3
1	Bi		15,803,786.43	0.56	101.1	Analog	0.10	3
1	Ge		3,397,275.68	1.33	106.9	Analog	0.10	3
2	Sc		1,455,686.09	0.84	104.6	Analog	0.30	3
2	Ge		862,431.70	0.69	107.0	Pulse	0.30	3
2	Rh		13,645,891.40	2.40	99.0	Analog	0.30	3
2	In		5,093,690.79	1.77	102.2	Analog	0.30	3
2	Tb		15,905,537.70	1.28	102.5	Analog	0.30	3
2	Ho		16,333,391.02	1.14	103.1	Analog	0.30	3
2	Bi		9,927,203.77	1.80	97.9	Analog	0.30	3
2	Ge		597,753.47	0.64	108.6	Pulse	0.30	3
3	Sc		1,851,396.38	0.76	103.7	Analog	0.30	3
3	Ge		748,584.47	0.25	105.7	Pulse	0.30	3
3	Rh		3,911,444.29	1.60	100.9	Analog	0.30	3
3	Tb		8,265,016.34	1.65	101.6	Analog	0.30	3
3	Ge		517,553.28	0.43	106.4	Pulse	0.30	3

Quantitation Report

File Name	018SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 12:00
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.001	ppb	-121.72	86.67	4.401E-06	Pulse	0.25	3
B			1	1.894	ppb	2.09	22,697.97	1.152E-03	Pulse	0.15	3
Ca			1	-0.981	ppb	-54.24	21,018.78	8.854E-04	Pulse	0.10	3
Sr			1	-0.005	ppb	-98.91	3,650.45	1.562E-04	Pulse	0.10	3
Mo			1	0.050	ppb	12.55	563.36	2.408E-05	Pulse	0.10	3
Ag			1	0.004	ppb	16.67	153.34	7.045E-06	Pulse	0.10	3
Sn			1	0.059	ppb	31.29	1,603.45	7.369E-05	Pulse	0.10	3
Sb			1	0.015	ppb	25.12	403.35	1.444E-05	Pulse	0.10	3
Ba			1	-0.002	ppb	-309.77	86.67	3.115E-06	Pulse	0.10	3
Tl			1	0.011	ppb	398.64	73,396.46	4.499E-03	Pulse	0.10	3
Pb			1	0.003	ppb	200.40	406.68	2.493E-05	Pulse	0.10	3
Pb			1	0.005	ppb	165.10	390.02	2.391E-05	Pulse	0.10	3
Pb			1	0.003	ppb	214.74	1,536.74	9.421E-05	Pulse	0.10	3
Na			2	-1.090	ppb	-8.65	8,071.75	5.424E-03	Pulse	0.30	3
Mg			2	0.359	ppb	30.90	3,372.54	2.266E-03	Pulse	0.30	3
Al			2	-6.690	ppb	-2.20	570.01	3.826E-04	Pulse	0.30	3
K			2	0.778	ppb	25.79	11,135.57	7.484E-03	Pulse	0.30	3
Ca			2	-1.525	ppb	-74.95	245.56	1.648E-04	Pulse	0.30	3
Ti			2	0.040	ppb	44.62	15.56	1.051E-05	Pulse	0.30	3
V			2	-0.002	ppb	-266.13	2,467.96	1.659E-03	Pulse	0.30	3
Cr			2	0.006	ppb	55.62	380.01	2.554E-04	Pulse	0.30	3
Mn			2	0.044	ppb	27.63	662.24	4.451E-04	Pulse	0.30	3
Fe			2	2.024	ppb	9.70	32,282.27	2.171E-02	Pulse	0.30	3
Co			2	0.050	ppb	97.52	36,186.01	2.433E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-25.58	55.56	3.739E-05	Pulse	0.30	3
Cu			2	0.575	ppb	0.99	1,551.19	1.042E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.355	ppb	0.96	217.78	1.463E-04	Pulse	0.30	3
As			2	-0.010	ppb	-74.07	53.33	3.591E-05	Pulse	1.00	3
Sn			2	0.057	ppb	29.73	587.79	1.108E-04	Pulse	0.30	3
Cd			2	-0.003	ppb	-46.70	22.92	4.312E-06	Pulse	0.30	3
Se			3	0.060	ppb	8.27	32.33	4.421E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,710,090.64	2.26	110.9	Analog	0.10	3
1	Sc		23,742,820.48	1.17	109.5	Analog	0.10	3
1	Ge		4,664,670.24	0.25	108.4	Analog	0.10	3
1	Rh		23,383,962.15	0.97	106.6	Analog	0.10	3
1	In		21,766,201.62	0.33	108.0	Analog	0.10	3
1	Tb		27,904,805.42	1.34	106.8	Analog	0.10	3
1	Ho		28,570,785.41	1.04	106.4	Analog	0.10	3
1	Bi		16,312,615.59	0.08	104.4	Analog	0.10	3
1	Ge		3,425,424.64	1.08	107.7	Analog	0.10	3
2	Sc		1,487,715.74	2.02	106.9	Analog	0.30	3
2	Ge		863,653.99	1.64	107.1	Pulse	0.30	3
2	Rh		14,268,414.99	2.41	103.6	Analog	0.30	3
2	In		5,313,824.36	2.33	106.6	Analog	0.30	3
2	Tb		16,254,611.02	0.80	104.7	Analog	0.30	3
2	Ho		16,644,127.67	1.47	105.1	Analog	0.30	3
2	Bi		10,551,171.80	1.36	104.1	Analog	0.30	3
2	Ge		586,047.41	1.31	106.5	Pulse	0.30	3
3	Sc		1,854,436.25	0.29	103.9	Analog	0.30	3
3	Ge		731,511.64	1.24	103.3	Pulse	0.30	3
3	Rh		4,000,419.29	1.41	103.1	Analog	0.30	3
3	Tb		8,229,400.51	1.73	101.1	Analog	0.30	3
3	Ge		505,830.12	1.52	104.0	Pulse	0.30	3

Quantitation Report

File Name 019SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 12:03
Sample Name CRI
Sample Type Sample
Comment STD B
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.454	ppb	2.21	4,960.68	2.545E-04	Pulse	0.25	3
B			1	24.393	ppb	1.99	240,663.18	1.235E-02	Pulse	0.15	3
Ca			1	251.784	ppb	1.84	302,344.66	1.285E-02	Pulse	0.10	3
Sr			1	4.710	ppb	2.28	211,454.04	9.047E-03	Pulse	0.10	3
Mo			1	0.906	ppb	4.69	8,362.17	3.577E-04	Pulse	0.10	3
Ag			1	0.582	ppb	3.53	11,984.30	5.520E-04	Pulse	0.10	3
Sn			1	4.627	ppb	2.87	53,842.25	2.480E-03	Pulse	0.10	3
Sb			1	1.809	ppb	4.01	26,229.92	9.473E-04	Pulse	0.10	3
Ba			1	0.907	ppb	3.87	4,660.76	1.683E-04	Pulse	0.10	3
Tl			1	0.485	ppb	6.73	87,866.21	5.397E-03	Pulse	0.10	3
Pb			1	0.513	ppb	3.15	5,887.87	3.617E-04	Pulse	0.10	3
Pb			1	0.496	ppb	5.21	4,870.86	2.992E-04	Pulse	0.10	3
Pb			1	0.510	ppb	4.60	22,780.16	1.399E-03	Pulse	0.10	3
Na			2	251.030	ppb	3.84	548,808.78	3.739E-01	Pulse	0.30	3
Mg			2	258.373	ppb	4.38	273,326.58	1.862E-01	Pulse	0.30	3
Al			2	22.506	ppb	5.29	13,521.49	9.213E-03	Pulse	0.30	3
K			2	251.372	ppb	3.40	202,370.14	1.379E-01	Pulse	0.30	3
Ca			2	283.505	ppb	3.71	12,041.67	8.204E-03	Pulse	0.30	3
Ti			2	0.897	ppb	15.88	270.00	1.842E-04	Pulse	0.30	3
V			2	0.949	ppb	6.36	10,287.33	7.010E-03	Pulse	0.30	3
Cr			2	0.950	ppb	4.14	10,201.71	6.951E-03	Pulse	0.30	3
Mn			2	0.899	ppb	3.33	6,347.79	4.325E-03	Pulse	0.30	3
Fe			2	24.342	ppb	4.54	238,494.05	1.625E-01	Pulse	0.30	3
Co			2	0.547	ppb	8.86	44,058.82	3.001E-02	Pulse	0.30	3
Ni			2	1.028	ppb	8.02	4,643.95	3.166E-03	Pulse	0.30	3
Cu			2	2.393	ppb	2.57	22,314.52	1.520E-02	Pulse	0.30	3
Zn			2	5.597	ppb	3.45	10,341.82	7.046E-03	Pulse	0.30	3
As			2	0.433	ppb	6.61	437.01	2.978E-04	Pulse	1.00	3
Sn			2	4.341	ppb	4.27	18,496.35	3.518E-03	Pulse	0.30	3
Cd			2	0.483	ppb	3.70	1,101.36	2.094E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.507	ppb	7.14	119.33	1.625E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,489,128.16	0.19	109.6	Analog	0.10	3
1	Sc		23,522,578.82	0.79	108.5	Analog	0.10	3
1	Ge		4,671,930.35	0.52	108.6	Analog	0.10	3
1	Rh		23,372,427.15	0.94	106.5	Analog	0.10	3
1	In		21,713,204.93	1.05	107.7	Analog	0.10	3
1	Tb		27,688,232.09	0.66	105.9	Analog	0.10	3
1	Ho		28,558,320.41	1.11	106.3	Analog	0.10	3
1	Bi		16,280,737.68	0.53	104.2	Analog	0.10	3
1	Ge		3,438,091.20	1.36	108.1	Analog	0.10	3
2	Sc		1,468,318.87	1.83	105.5	Analog	0.30	3
2	Ge		858,495.42	0.52	106.5	Pulse	0.30	3
2	Rh		14,187,695.82	1.96	103.0	Analog	0.30	3
2	In		5,260,611.27	1.70	105.5	Analog	0.30	3
2	Tb		16,105,994.36	1.57	103.8	Analog	0.30	3
2	Ho		16,486,317.68	1.61	104.1	Analog	0.30	3
2	Bi		10,462,069.86	1.43	103.2	Analog	0.30	3
2	Ge		582,116.94	0.92	105.8	Pulse	0.30	3
3	Sc		1,855,823.82	0.83	104.0	Analog	0.30	3
3	Ge		734,601.48	0.63	103.7	Pulse	0.30	3
3	Rh		3,956,436.65	1.25	102.0	Analog	0.30	3
3	Tb		8,140,837.45	1.24	100.0	Analog	0.30	3
3	Ge		505,688.21	0.17	103.9	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 12:12
Sample Name ICSA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-18.52	41.33	2.339E-06	Pulse	0.25	3
B			1	1.982	ppb	1.26	21,102.87	1.196E-03	Pulse	0.15	3
Ca			1	98240.734	ppb	1.13	103,219,805.13	4.652E+00	Analog	0.10	3
Sr			1	2023.690	ppb	3.03	76,753,705.52	3.816E+00	Analog	0.10	3
Mo			1	2040.753	ppb	2.44	16,005,317.26	7.958E-01	Analog	0.10	3
Ag			1	0.015	ppb	32.24	326.68	1.679E-05	Pulse	0.10	3
Sn			1	1899.175	ppb	1.92	19,429,510.54	1.000E+00	Analog	0.10	3
Sb			1	0.039	ppb	11.82	700.03	2.659E-05	Pulse	0.10	3
Ba			1	0.103	ppb	6.07	583.36	2.218E-05	Pulse	0.10	3
Tl			1	-0.061	ppb	-55.15	59,052.15	4.364E-03	Pulse	0.10	3
Pb			1	0.028	ppb	34.76	566.69	4.190E-05	Pulse	0.10	3
Pb			1	0.026	ppb	20.79	480.02	3.547E-05	Pulse	0.10	3
Pb			1	0.032	ppb	27.19	2,286.79	1.691E-04	Pulse	0.10	3
Na			2	93113.086	ppb	1.91	192,409,481.24	1.361E+02	Analog	0.30	3
Mg			2	89841.597	ppb	2.24	90,562,396.40	6.406E+01	Analog	0.30	3
Al			2	91480.635	ppb	1.37	39,121,492.89	2.767E+01	Analog	0.30	3
K			2	93455.121	ppb	2.19	68,751,835.04	4.864E+01	Analog	0.30	3
Ca			2	103437.735	ppb	2.25	4,124,544.84	2.918E+00	Analog	0.30	3
Ti			2	1676.629	ppb	2.77	480,583.73	3.400E-01	Pulse	0.30	3
V			2	0.065	ppb	12.58	2,876.91	2.035E-03	Pulse	0.30	3
Cr			2	0.794	ppb	3.16	8,264.09	5.846E-03	Pulse	0.30	3
Mn			2	0.112	ppb	3.81	1,071.15	7.575E-04	Pulse	0.30	3
Fe			2	85716.426	ppb	2.21	764,420,680.74	5.408E+02	Analog	0.30	3
Co			2	-0.155	ppb	-26.97	31,066.48	2.198E-02	Pulse	0.30	3
Ni			2	0.450	ppb	7.88	2,011.24	1.424E-03	Pulse	0.30	3
Cu			2	0.690	ppb	0.77	2,739.11	1.937E-03	Pulse	0.30	3
Zn			2	2.069	ppb	5.62	3,395.90	2.403E-03	Pulse	0.30	3
As			2	0.052	ppb	24.10	103.00	7.276E-05	Pulse	1.00	3
Sn			2	1749.212	ppb	2.00	6,303,543.36	1.391E+00	Analog	0.30	3
Cd			2	-0.321	ppb	-19.69	-588.96	-1.296E-04	Pulse	0.30	3
Se			3	0.075	ppb	41.86	35.67	4.807E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,648,659.32	0.95	99.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,187,486.34	0.62	102.3	Analog	0.10	3
1	Ge		4,133,485.35	0.78	96.1	Analog	0.10	3
1	Rh		20,118,903.04	1.75	91.7	Analog	0.10	3
1	In		19,423,205.83	0.97	96.3	Analog	0.10	3
1	Tb		26,310,174.61	1.18	100.7	Analog	0.10	3
1	Ho		27,002,831.26	1.31	100.5	Analog	0.10	3
1	Bi		13,533,853.97	0.75	86.6	Analog	0.10	3
1	Ge		3,521,570.47	0.34	110.8	Analog	0.10	3
2	Sc		1,414,034.04	2.07	101.6	Analog	0.30	3
2	Ge		715,870.28	0.50	88.8	Pulse	0.30	3
2	Rh		11,452,878.99	1.54	83.1	Analog	0.30	3
2	In		4,533,180.49	2.62	90.9	Analog	0.30	3
2	Tb		14,636,982.20	2.06	94.3	Analog	0.30	3
2	Ho		14,992,244.96	1.88	94.6	Analog	0.30	3
2	Bi		8,009,711.90	1.72	79.0	Analog	0.30	3
2	Ge		706,301.95	1.23	128.3	Pulse	0.30	3
3	Sc		1,747,069.90	0.19	97.9	Analog	0.30	3
3	Ge		741,609.34	0.68	104.7	Pulse	0.30	3
3	Rh		4,595,643.71	0.67	118.5	Analog	0.30	3
3	Tb		11,692,903.70	0.89	143.7	Analog	0.30	3
3	Ge		520,391.26	0.86	107.0	Pulse	0.30	3

Quantitation Report

File Name 021SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 12:15
Sample Name ICSAB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-38.22	42.67	2.416E-06	Pulse	0.25	3
B			1	46.862	ppb	2.43	415,330.85	2.353E-02	Pulse	0.15	3
Ca			1	96319.404	ppb	2.43	102,497,965.14	4.561E+00	Analog	0.10	3
Sr			1	1949.866	ppb	1.75	75,632,180.54	3.677E+00	Analog	0.10	3
Mo			1	1988.449	ppb	1.41	15,947,690.60	7.754E-01	Analog	0.10	3
Ag			1	18.096	ppb	2.47	342,041.66	1.708E-02	Pulse	0.10	3
Sn			1	1854.104	ppb	2.70	19,553,463.46	9.767E-01	Analog	0.10	3
Sb			1	0.229	ppb	0.54	3,393.74	1.258E-04	Pulse	0.10	3
Ba			1	0.127	ppb	11.16	716.70	2.657E-05	Pulse	0.10	3
Tl			1	0.058	ppb	59.39	63,485.22	4.589E-03	Pulse	0.10	3
Pb			1	0.035	ppb	16.85	640.03	4.627E-05	Pulse	0.10	3
Pb			1	0.046	ppb	3.98	650.03	4.699E-05	Pulse	0.10	3
Pb			1	0.045	ppb	11.12	2,796.84	2.022E-04	Pulse	0.10	3
Na			2	92691.186	ppb	1.71	188,805,272.50	1.355E+02	Analog	0.30	3
Mg			2	89244.311	ppb	1.95	88,679,803.14	6.364E+01	Analog	0.30	3
Al			2	90703.434	ppb	2.05	38,231,266.26	2.744E+01	Analog	0.30	3
K			2	94066.123	ppb	0.67	68,217,497.29	4.895E+01	Analog	0.30	3
Ca			2	104139.263	ppb	1.19	4,093,511.78	2.938E+00	Analog	0.30	3
Ti			2	1705.183	ppb	2.22	481,839.94	3.458E-01	Pulse	0.30	3
V			2	19.322	ppb	2.53	153,917.86	1.105E-01	Pulse	0.30	3
Cr			2	18.578	ppb	2.88	183,984.44	1.320E-01	Pulse	0.30	3
Mn			2	17.413	ppb	1.79	110,443.66	7.925E-02	Pulse	0.30	3
Fe			2	85121.398	ppb	0.82	748,339,028.04	5.370E+02	Analog	0.30	3
Co			2	16.940	ppb	2.02	303,231.94	2.176E-01	Pulse	0.30	3
Ni			2	16.545	ppb	2.58	69,606.28	4.995E-02	Pulse	0.30	3
Cu			2	15.496	ppb	1.91	163,384.05	1.172E-01	Pulse	0.30	3
Zn			2	16.238	ppb	3.25	29,336.45	2.105E-02	Pulse	0.30	3
As			2	16.994	ppb	2.15	14,055.34	1.009E-02	Pulse	1.00	3
Sn			2	1753.039	ppb	3.20	6,306,739.75	1.394E+00	Analog	0.30	3
Cd			2	16.664	ppb	5.87	31,807.86	7.034E-03	Pulse	0.30	3
Se			3	19.847	ppb	2.15	3,958.10	5.280E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,650,720.20	0.61	99.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,472,023.83	0.62	103.6	Analog	0.10	3
1	Ge		4,201,171.81	0.48	97.6	Analog	0.10	3
1	Rh		20,566,504.69	0.77	93.7	Analog	0.10	3
1	In		20,021,012.26	0.61	99.3	Analog	0.10	3
1	Tb		26,974,372.93	0.18	103.2	Analog	0.10	3
1	Ho		27,485,125.42	0.30	102.3	Analog	0.10	3
1	Bi		13,835,235.63	0.82	88.5	Analog	0.10	3
1	Ge		3,565,996.20	0.24	112.2	Analog	0.10	3
2	Sc		1,393,568.52	0.89	100.2	Analog	0.30	3
2	Ge		726,583.82	0.18	90.1	Pulse	0.30	3
2	Rh		11,340,001.77	1.22	82.3	Analog	0.30	3
2	In		4,526,093.15	2.26	90.8	Analog	0.30	3
2	Tb		14,628,194.42	1.64	94.2	Analog	0.30	3
2	Ho		14,995,391.63	1.14	94.6	Analog	0.30	3
2	Bi		8,006,032.18	1.16	79.0	Analog	0.30	3
2	Ge		713,019.41	1.57	129.6	Pulse	0.30	3
3	Sc		1,750,032.99	1.15	98.1	Analog	0.30	3
3	Ge		749,649.03	0.26	105.9	Pulse	0.30	3
3	Rh		4,599,278.15	0.47	118.6	Analog	0.30	3
3	Tb		11,544,927.04	0.48	141.9	Analog	0.30	3
3	Ge		530,390.41	0.03	109.0	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 12:48
Sample Name SAMPLECONF
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-22.15	48.00	2.653E-06	Pulse	0.25	3
B			1	43.317	ppb	3.04	394,304.00	2.177E-02	Pulse	0.15	3
Ca			1	93296.052	ppb	1.67	101,447,771.82	4.418E+00	Analog	0.10	3
Sr			1	1992.685	ppb	2.99	78,345,133.83	3.758E+00	Analog	0.10	3
Mo			1	1941.376	ppb	3.14	15,782,038.93	7.570E-01	Analog	0.10	3
Ag			1	16.363	ppb	2.64	311,075.15	1.545E-02	Pulse	0.10	3
Sn			1	1877.958	ppb	2.75	19,919,986.37	9.893E-01	Analog	0.10	3
Sb			1	0.031	ppb	6.19	610.03	2.267E-05	Pulse	0.10	3
Ba			1	0.089	ppb	30.94	530.03	1.969E-05	Pulse	0.10	3
Tl			1	-0.208	ppb	-7.13	56,737.52	4.085E-03	Pulse	0.10	3
Pb			1	0.013	ppb	28.85	440.02	3.167E-05	Pulse	0.10	3
Pb			1	0.010	ppb	91.87	373.35	2.687E-05	Pulse	0.10	3
Pb			1	0.015	ppb	16.99	1,743.42	1.255E-04	Pulse	0.10	3
Na			2	90617.393	ppb	1.38	187,802,761.43	1.325E+02	Analog	0.30	3
Mg			2	87768.080	ppb	1.59	88,735,187.59	6.259E+01	Analog	0.30	3
Al			2	88811.273	ppb	1.21	38,091,336.26	2.686E+01	Analog	0.30	3
K			2	91702.056	ppb	0.59	67,667,228.42	4.772E+01	Analog	0.30	3
Ca			2	101956.005	ppb	1.32	4,077,625.95	2.876E+00	Analog	0.30	3
Ti			2	1600.638	ppb	3.08	460,166.86	3.246E-01	Pulse	0.30	3
V			2	20.749	ppb	3.51	167,974.67	1.185E-01	Pulse	0.30	3
Cr			2	17.429	ppb	3.21	175,625.00	1.239E-01	Pulse	0.30	3
Mn			2	16.301	ppb	2.60	105,209.69	7.421E-02	Pulse	0.30	3
Fe			2	83497.868	ppb	2.43	746,798,245.88	5.268E+02	Analog	0.30	3
Co			2	15.699	ppb	3.49	288,353.92	2.034E-01	Pulse	0.30	3
Ni			2	15.434	ppb	3.84	66,063.70	4.660E-02	Pulse	0.30	3
Cu			2	14.368	ppb	3.19	153,756.92	1.085E-01	Pulse	0.30	3
Zn			2	13.612	ppb	2.79	24,945.66	1.760E-02	Pulse	0.30	3
As			2	15.782	ppb	2.51	13,284.09	9.369E-03	Pulse	1.00	3
Sn			2	1761.523	ppb	2.17	6,359,627.52	1.401E+00	Analog	0.30	3
Cd			2	15.055	ppb	9.46	28,817.34	6.355E-03	Pulse	0.30	3
Se			3	19.201	ppb	2.08	3,747.05	5.109E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,116,731.45	1.28	101.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,961,621.33	0.24	105.9	Analog	0.10	3
1	Ge		4,261,319.94	0.31	99.0	Analog	0.10	3
1	Rh		20,852,512.61	1.13	95.0	Analog	0.10	3
1	In		20,137,038.98	0.59	99.9	Analog	0.10	3
1	Tb		26,911,436.27	0.18	103.0	Analog	0.10	3
1	Ho		27,773,315.42	0.89	103.4	Analog	0.10	3
1	Bi		13,888,049.79	0.58	88.8	Analog	0.10	3
1	Ge		3,597,606.93	0.68	113.2	Analog	0.10	3
2	Sc		1,417,945.05	1.00	101.9	Analog	0.30	3
2	Ge		698,934.44	0.62	86.7	Pulse	0.30	3
2	Rh		11,558,185.10	1.64	83.9	Analog	0.30	3
2	In		4,541,516.09	2.47	91.1	Analog	0.30	3
2	Tb		14,769,095.52	1.62	95.1	Analog	0.30	3
2	Ho		15,148,549.96	1.92	95.6	Analog	0.30	3
2	Bi		8,047,127.46	1.73	79.4	Analog	0.30	3
2	Ge		684,682.79	2.21	124.4	Pulse	0.30	3
3	Sc		1,769,769.51	0.55	99.2	Analog	0.30	3
3	Ge		733,434.73	0.34	103.6	Pulse	0.30	3
3	Rh		4,668,317.45	0.59	120.4	Analog	0.30	3
3	Tb		11,544,451.21	0.83	141.9	Analog	0.30	3
3	Ge		516,585.09	0.48	106.2	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 12:56
Sample Name	rinseconf
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-16.80	24.00	1.225E-06	Pulse	0.25	3
B			1	0.200	ppb	14.19	6,027.69	3.091E-04	Pulse	0.15	3
Ca			1	-2.824	ppb	-11.16	19,860.80	7.982E-04	Pulse	0.10	3
Sr			1	0.014	ppb	50.96	4,834.12	1.919E-04	Pulse	0.10	3
Mo			1	0.321	ppb	4.66	3,270.38	1.298E-04	Pulse	0.10	3
Ag			1	0.001	ppb	234.85	83.33	3.564E-06	Pulse	0.10	3
Sn			1	0.247	ppb	6.86	4,030.60	1.726E-04	Pulse	0.10	3
Sb			1	-0.006	ppb	-40.17	96.67	3.289E-06	Pulse	0.10	3
Ba			1	-0.001	ppb	-910.35	100.00	3.403E-06	Pulse	0.10	3
Tl			1	-0.182	ppb	-5.61	71,045.84	4.136E-03	Pulse	0.10	3
Pb			1	-0.018	ppb	-30.79	193.34	1.125E-05	Pulse	0.10	3
Pb			1	-0.016	ppb	-22.81	210.01	1.223E-05	Pulse	0.10	3
Pb			1	-0.015	ppb	-16.08	843.37	4.909E-05	Pulse	0.10	3
Na			2	2.156	ppb	10.17	14,983.68	1.017E-02	Pulse	0.30	3
Mg			2	2.617	ppb	2.35	5,713.12	3.876E-03	Pulse	0.30	3
Al			2	-1.912	ppb	-27.94	2,691.32	1.827E-03	Pulse	0.30	3
K			2	2.935	ppb	9.12	12,684.30	8.606E-03	Pulse	0.30	3
Ca			2	1.406	ppb	90.18	364.45	2.475E-04	Pulse	0.30	3
Ti			2	0.424	ppb	36.73	130.00	8.836E-05	Pulse	0.30	3
V			2	-0.025	ppb	-66.72	2,251.26	1.528E-03	Pulse	0.30	3
Cr			2	-0.001	ppb	-460.98	298.89	2.032E-04	Pulse	0.30	3
Mn			2	0.041	ppb	34.78	635.57	4.315E-04	Pulse	0.30	3
Fe			2	11.096	ppb	9.47	116,276.21	7.895E-02	Pulse	0.30	3
Co			2	-0.050	ppb	-46.87	34,163.01	2.318E-02	Pulse	0.30	3
Ni			2	-0.008	ppb	-25.77	62.22	4.226E-05	Pulse	0.30	3
Cu			2	0.561	ppb	1.66	1,374.51	9.333E-04	Pulse	0.30	3
Zn			2	0.341	ppb	3.11	190.00	1.288E-04	Pulse	0.30	3
As			2	-0.019	ppb	-5.42	45.33	3.077E-05	Pulse	1.00	3
Sn			2	0.327	ppb	12.74	1,751.21	3.255E-04	Pulse	0.30	3
Cd			2	-0.011	ppb	-20.04	5.15	9.670E-07	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	-0.009	ppb	-102.72	19.00	2.578E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,506,797.11	1.29	109.7	Analog	0.10	3
1	Sc		24,886,172.13	1.18	114.7	Analog	0.10	3
1	Ge		4,929,962.01	0.11	114.6	Analog	0.10	3
1	Rh		25,188,142.96	0.75	114.8	Analog	0.10	3
1	In		23,353,909.59	0.49	115.8	Analog	0.10	3
1	Tb		29,409,444.56	0.43	112.5	Analog	0.10	3
1	Ho		29,967,862.05	1.20	111.6	Analog	0.10	3
1	Bi		17,179,160.57	0.08	109.9	Analog	0.10	3
1	Ge		3,617,159.74	0.58	113.8	Analog	0.10	3
2	Sc		1,473,668.38	1.32	105.9	Analog	0.30	3
2	Ge		828,266.60	0.81	102.7	Pulse	0.30	3
2	Rh		14,598,341.08	1.85	106.0	Analog	0.30	3
2	In		5,386,480.36	1.90	108.1	Analog	0.30	3
2	Tb		16,609,053.23	2.00	107.0	Analog	0.30	3
2	Ho		16,998,920.44	2.16	107.3	Analog	0.30	3
2	Bi		10,693,127.36	1.64	105.5	Analog	0.30	3
2	Ge		564,282.70	1.16	102.5	Pulse	0.30	3
3	Sc		1,931,587.77	0.43	108.2	Analog	0.30	3
3	Ge		737,417.96	0.81	104.1	Pulse	0.30	3
3	Rh		4,150,176.50	0.86	107.0	Analog	0.30	3
3	Tb		8,417,136.89	0.49	103.4	Analog	0.30	3
3	Ge		508,078.96	1.17	104.4	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 12:59
Sample Name	rinseconf
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-10.29	24.00	1.220E-06	Pulse	0.25	3
B			1	0.142	ppb	32.96	5,514.19	2.799E-04	Pulse	0.15	3
Ca			1	-2.831	ppb	-16.76	19,780.80	7.978E-04	Pulse	0.10	3
Sr			1	0.001	ppb	47.46	4,153.92	1.685E-04	Pulse	0.10	3
Mo			1	0.123	ppb	15.52	1,293.42	5.251E-05	Pulse	0.10	3
Ag			1	0.001	ppb	29.37	83.33	3.624E-06	Pulse	0.10	3
Sn			1	0.072	ppb	27.01	1,843.48	8.024E-05	Pulse	0.10	3
Sb			1	-0.007	ppb	-0.94	80.00	2.736E-06	Pulse	0.10	3
Ba			1	-0.006	ppb	-77.26	70.00	2.394E-06	Pulse	0.10	3
Tl			1	-0.132	ppb	-28.02	71,899.78	4.229E-03	Pulse	0.10	3
Pb			1	-0.017	ppb	-15.40	203.34	1.196E-05	Pulse	0.10	3
Pb			1	-0.018	ppb	-37.64	190.01	1.119E-05	Pulse	0.10	3
Pb			1	-0.013	ppb	-23.37	913.37	5.375E-05	Pulse	0.10	3
Na			2	0.737	ppb	4.11	11,994.90	8.094E-03	Pulse	0.30	3
Mg			2	1.478	ppb	3.07	4,541.68	3.065E-03	Pulse	0.30	3
Al			2	-5.382	ppb	-2.91	1,152.27	7.781E-04	Pulse	0.30	3
K			2	1.625	ppb	22.75	11,740.35	7.925E-03	Pulse	0.30	3
Ca			2	-0.483	ppb	-160.05	287.78	1.942E-04	Pulse	0.30	3
Ti			2	0.106	ppb	29.77	35.56	2.392E-05	Pulse	0.30	3
V			2	-0.017	ppb	-31.56	2,332.39	1.574E-03	Pulse	0.30	3
Cr			2	-0.001	ppb	-147.29	304.45	2.055E-04	Pulse	0.30	3
Mn			2	0.051	ppb	14.48	710.02	4.793E-04	Pulse	0.30	3
Fe			2	3.538	ppb	7.87	46,296.90	3.126E-02	Pulse	0.30	3
Co			2	0.004	ppb	994.84	35,260.82	2.380E-02	Pulse	0.30	3
Ni			2	-0.013	ppb	-15.82	41.11	2.779E-05	Pulse	0.30	3
Cu			2	0.565	ppb	2.11	1,424.51	9.624E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.339	ppb	2.33	186.67	1.261E-04	Pulse	0.30	3
As			2	-0.024	ppb	-19.69	41.00	2.769E-05	Pulse	1.00	3
Sn			2	0.109	ppb	26.65	816.69	1.519E-04	Pulse	0.30	3
Cd			2	-0.010	ppb	-16.75	7.96	1.475E-06	Pulse	0.30	3
Se			3	-0.007	ppb	-278.88	19.67	2.630E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,711,633.39	1.13	110.9	Analog	0.10	3
1	Sc		24,798,697.96	1.09	114.3	Analog	0.10	3
1	Ge		4,872,851.60	1.15	113.3	Analog	0.10	3
1	Rh		24,655,485.47	1.33	112.4	Analog	0.10	3
1	In		22,989,153.86	0.83	114.0	Analog	0.10	3
1	Tb		29,238,653.73	1.29	111.9	Analog	0.10	3
1	Ho		29,493,525.39	0.73	109.8	Analog	0.10	3
1	Bi		17,000,547.66	0.60	108.8	Analog	0.10	3
1	Ge		3,608,362.76	0.95	113.5	Analog	0.10	3
2	Sc		1,481,903.76	1.86	106.5	Analog	0.30	3
2	Ge		843,122.90	1.06	104.6	Pulse	0.30	3
2	Rh		14,507,743.87	1.43	105.3	Analog	0.30	3
2	In		5,381,644.42	0.73	108.0	Analog	0.30	3
2	Tb		16,517,171.56	0.82	106.4	Analog	0.30	3
2	Ho		16,861,038.22	1.37	106.4	Analog	0.30	3
2	Bi		10,692,295.96	1.23	105.5	Analog	0.30	3
2	Ge		575,198.95	1.26	104.5	Pulse	0.30	3
3	Sc		1,937,896.45	0.20	108.6	Analog	0.30	3
3	Ge		747,816.57	0.46	105.6	Pulse	0.30	3
3	Rh		4,103,948.59	0.25	105.8	Analog	0.30	3
3	Tb		8,327,538.84	0.35	102.3	Analog	0.30	3
3	Ge		512,908.54	0.82	105.4	Pulse	0.30	3

Quantitation Report

File Name	025SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:03
Sample Name	rinseconf
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-7.17	29.33	1.476E-06	Pulse	0.25	3
B			1	0.112	ppb	8.68	5,269.70	2.651E-04	Pulse	0.15	3
Ca			1	-2.895	ppb	-2.19	19,910.98	7.948E-04	Pulse	0.10	3
Sr			1	0.000	ppb	7884.04	4,117.24	1.661E-04	Pulse	0.10	3
Mo			1	0.071	ppb	27.58	796.70	3.216E-05	Pulse	0.10	3
Ag			1	0.000	ppb	765.20	66.67	2.899E-06	Pulse	0.10	3
Sn			1	0.058	ppb	26.35	1,680.12	7.300E-05	Pulse	0.10	3
Sb			1	-0.006	ppb	-26.49	103.34	3.541E-06	Pulse	0.10	3
Ba			1	-0.007	ppb	-66.60	66.67	2.282E-06	Pulse	0.10	3
Tl			1	-0.083	ppb	-37.54	72,850.29	4.323E-03	Pulse	0.10	3
Pb			1	-0.012	ppb	-9.04	253.34	1.503E-05	Pulse	0.10	3
Pb			1	-0.016	ppb	-14.29	203.34	1.207E-05	Pulse	0.10	3
Pb			1	-0.012	ppb	-10.70	956.71	5.678E-05	Pulse	0.10	3
Na			2	0.419	ppb	35.79	11,320.06	7.630E-03	Pulse	0.30	3
Mg			2	1.142	ppb	13.38	4,191.60	2.825E-03	Pulse	0.30	3
Al			2	-5.738	ppb	-1.87	994.48	6.704E-04	Pulse	0.30	3
K			2	1.452	ppb	20.92	11,619.15	7.835E-03	Pulse	0.30	3
Ca			2	-0.724	ppb	-46.10	277.78	1.874E-04	Pulse	0.30	3
Ti			2	0.081	ppb	53.26	27.78	1.882E-05	Pulse	0.30	3
V			2	0.000	ppb	3978.66	2,476.85	1.669E-03	Pulse	0.30	3
Cr			2	-0.003	ppb	-202.51	285.56	1.928E-04	Pulse	0.30	3
Mn			2	0.047	ppb	10.44	685.57	4.619E-04	Pulse	0.30	3
Fe			2	2.324	ppb	5.78	35,003.79	2.360E-02	Pulse	0.30	3
Co			2	0.019	ppb	102.29	35,551.39	2.397E-02	Pulse	0.30	3
Ni			2	-0.011	ppb	-30.51	47.78	3.213E-05	Pulse	0.30	3
Cu			2	0.570	ppb	1.49	1,491.19	1.006E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.343	ppb	1.60	194.45	1.310E-04	Pulse	0.30	3
As			2	-0.021	ppb	-70.24	44.33	2.982E-05	Pulse	1.00	3
Sn			2	0.069	ppb	36.67	646.68	1.207E-04	Pulse	0.30	3
Cd			2	-0.011	ppb	-13.99	4.73	8.718E-07	Pulse	0.30	3
Se			3	-0.012	ppb	-82.49	19.00	2.515E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,876,839.15	0.61	111.8	Analog	0.10	3
1	Sc		25,051,182.13	0.18	115.5	Analog	0.10	3
1	Ge		4,904,132.74	0.88	114.0	Analog	0.10	3
1	Rh		24,780,543.80	1.04	112.9	Analog	0.10	3
1	In		23,009,647.13	0.44	114.1	Analog	0.10	3
1	Tb		29,179,925.40	0.54	111.6	Analog	0.10	3
1	Ho		29,490,577.06	0.57	109.8	Analog	0.10	3
1	Bi		16,853,475.58	0.55	107.8	Analog	0.10	3
1	Ge		3,594,535.05	0.63	113.1	Analog	0.10	3
2	Sc		1,483,348.62	1.61	106.6	Analog	0.30	3
2	Ge		850,034.48	0.95	105.4	Pulse	0.30	3
2	Rh		14,593,267.75	2.17	105.9	Analog	0.30	3
2	In		5,372,240.71	2.17	107.8	Analog	0.30	3
2	Tb		16,534,332.12	1.99	106.5	Analog	0.30	3
2	Ho		16,900,700.44	1.37	106.7	Analog	0.30	3
2	Bi		10,678,056.25	1.26	105.4	Analog	0.30	3
2	Ge		582,320.31	1.04	105.8	Pulse	0.30	3
3	Sc		1,960,205.20	1.57	109.8	Analog	0.30	3
3	Ge		755,457.77	0.94	106.7	Pulse	0.30	3
3	Rh		4,158,693.59	0.38	107.2	Analog	0.30	3
3	Tb		8,341,811.33	0.82	102.5	Analog	0.30	3
3	Ge		520,827.06	1.57	107.0	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:06
Sample Name SAMPLECONF
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	1.830	ppb	20.46	36.00	1.011E-03	Pulse	0.25	3
B			1	252.594	ppb	2.58	4,471.70	1.259E-01	Pulse	0.15	3
Ca			1	55586.180	ppb	7.03	19,296.90	2.633E+00	Pulse	0.10	3
Sr			1	52.872	ppb	16.64	453.35	9.987E-02	Pulse	0.10	3
Mo			1	323.928	ppb	12.53	573.36	1.263E-01	Pulse	0.10	3
Ag			1	11.499	ppb	51.83	46.67	1.086E-02	Pulse	0.10	3
Sn			1	479.590	ppb	8.40	1,076.73	2.527E-01	Pulse	0.10	3
Sb			1	33.950	ppb	51.38	26.67	1.767E-02	Pulse	0.10	3
Ba			1	101.161	ppb	25.19	26.67	1.837E-02	Pulse	0.10	3
Tl			1	25.074	ppb	19.09	793.38	5.193E-02	Pulse	0.10	3
Pb			1	7.547	ppb	17.93	76.67	5.006E-03	Pulse	0.10	3
Pb			1	8.713	ppb	43.16	76.67	4.901E-03	Pulse	0.10	3
Pb			1	6.953	ppb	1.69	276.67	1.798E-02	Pulse	0.10	3
Na			2	22880.805	ppb	9.96	8,804.28	3.345E+01	Pulse	0.30	3
Mg			2	7551.614	ppb	5.62	1,423.40	5.387E+00	Pulse	0.30	3
Al			2	8505.148	ppb	14.75	676.68	2.575E+00	Pulse	0.30	3
K			2	81896.622	ppb	9.86	11,220.04	4.262E+01	Pulse	0.30	3
Ca			2	25980.101	ppb	17.91	192.23	7.330E-01	Pulse	0.30	3
Ti			2	111.683	ppb	91.33	5.56	2.265E-02	Pulse	0.30	3
V			2	1650.561	ppb	11.25	2,443.51	9.295E+00	Pulse	0.30	3
Cr			2	85.364	ppb	24.04	160.00	6.059E-01	Pulse	0.30	3
Mn			2	225.190	ppb	15.01	267.78	1.022E+00	Pulse	0.30	3
Fe			2	9556.016	ppb	7.00	15,915.81	6.029E+01	Pulse	0.30	3
Co			2	15.650	ppb	14.02	54.40	2.028E-01	Pulse	0.30	3
Ni			2	30.335	ppb	9.02	24.44	9.153E-02	Pulse	0.30	3
Cu			2	108.428	ppb	14.39	223.34	8.410E-01	Pulse	0.30	3
Zn			2	118.555	ppb	33.83	42.22	1.557E-01	Pulse	0.30	3
As			2	123.246	ppb	21.30	19.00	7.288E-02	Pulse	1.00	3
Sn			2	434.026	ppb	5.67	382.23	3.452E-01	Pulse	0.30	3
Cd			2	17.608	ppb	77.05	8.36	7.432E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	181.914	ppb	9.42	14.00	4.816E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		35,500.41	2.37	0.2	Pulse	0.10	3
1	Sc		7,348.28	5.52	0.0	Pulse	0.10	3
1	Ge		2,680.29	1.35	0.1	Pulse	0.10	3
1	Rh		4,507.34	8.68	0.0	Pulse	0.10	3
1	In		4,267.92	3.25	0.0	Pulse	0.10	3
1	Tb		1,463.45	9.28	0.0	Pulse	0.10	3
1	Ho		1,480.11	8.78	0.0	Pulse	0.10	3
1	Bi		15,380.86	5.92	0.1	Pulse	0.10	3
1	Ge		2,920.35	7.08	0.1	Pulse	0.10	3
2	Sc		265.56	13.42	0.0	Pulse	0.30	3
2	Ge		380.01	9.12	0.0	Pulse	0.30	3
2	Rh		2,642.45	16.55	0.0	Pulse	0.30	3
2	In		1,106.57	6.14	0.0	Pulse	0.30	3
2	Tb		1,567.87	7.64	0.0	Pulse	0.30	3
2	Ho		1,596.76	17.51	0.0	Pulse	0.30	3
2	Bi		7,176.08	10.05	0.1	Pulse	0.30	3
2	Ge		235.56	15.26	0.0	Pulse	0.30	3
3	Sc		275.56	1.85	0.0	Pulse	0.30	3
3	Ge		291.12	2.65	0.0	Pulse	0.30	3
3	Rh		690.02	11.39	0.0	Pulse	0.30	3
3	Tb		751.14	5.58	0.0	Pulse	0.30	3
3	Ge		210.00	5.72	0.0	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:15
Sample Name	SAMPLECONF
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-7.03	33.33	1.667E-06	Pulse	0.25	3
B			1	0.029	ppb	69.57	4,467.27	2.236E-04	Pulse	0.15	3
Ca			1	-2.505	ppb	-14.40	20,635.11	8.133E-04	Pulse	0.10	3
Sr			1	0.001	ppb	322.66	4,200.59	1.673E-04	Pulse	0.10	3
Mo			1	0.041	ppb	21.27	520.02	2.068E-05	Pulse	0.10	3
Ag			1	0.003	ppb	63.22	136.67	5.905E-06	Pulse	0.10	3
Sn			1	0.030	ppb	22.27	1,343.43	5.804E-05	Pulse	0.10	3
Sb			1	-0.007	ppb	-19.17	90.00	3.076E-06	Pulse	0.10	3
Ba			1	-0.004	ppb	-151.79	83.33	2.858E-06	Pulse	0.10	3
Tl			1	-0.199	ppb	-10.00	69,087.85	4.102E-03	Pulse	0.10	3
Pb			1	-0.018	ppb	-4.91	190.01	1.128E-05	Pulse	0.10	3
Pb			1	-0.015	ppb	-42.68	210.01	1.246E-05	Pulse	0.10	3
Pb			1	-0.015	ppb	-4.03	833.37	4.948E-05	Pulse	0.10	3
Na			2	0.250	ppb	143.58	11,386.77	7.382E-03	Pulse	0.30	3
Mg			2	1.578	ppb	13.46	4,837.31	3.136E-03	Pulse	0.30	3
Al			2	-5.316	ppb	-4.50	1,230.05	7.979E-04	Pulse	0.30	3
K			2	1.341	ppb	21.87	12,001.65	7.777E-03	Pulse	0.30	3
Ca			2	-0.011	ppb	-3981.63	320.01	2.075E-04	Pulse	0.30	3
Ti			2	0.091	ppb	56.39	32.22	2.093E-05	Pulse	0.30	3
V			2	-0.020	ppb	-44.55	2,403.51	1.557E-03	Pulse	0.30	3
Cr			2	0.001	ppb	1003.39	333.34	2.165E-04	Pulse	0.30	3
Mn			2	0.045	ppb	5.88	698.91	4.528E-04	Pulse	0.30	3
Fe			2	2.824	ppb	17.15	41,255.11	2.676E-02	Pulse	0.30	3
Co			2	-0.084	ppb	-28.60	35,162.91	2.279E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-6.72	58.89	3.819E-05	Pulse	0.30	3
Cu			2	0.573	ppb	2.29	1,583.41	1.027E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.360	ppb	7.98	237.78	1.540E-04	Pulse	0.30	3
As			2	-0.021	ppb	-44.83	45.67	2.958E-05	Pulse	1.00	3
Sn			2	0.052	ppb	26.82	583.35	1.065E-04	Pulse	0.30	3
Cd			2	-0.010	ppb	-8.20	7.20	1.315E-06	Pulse	0.30	3
Se			3	-0.006	ppb	-236.91	20.00	2.672E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,981,028.50	0.86	112.4	Analog	0.10	3
1	Sc		25,371,772.12	1.23	117.0	Analog	0.10	3
1	Ge		4,963,946.59	0.78	115.4	Analog	0.10	3
1	Rh		25,115,920.46	1.01	114.5	Analog	0.10	3
1	In		23,137,993.81	1.35	114.8	Analog	0.10	3
1	Tb		29,218,337.90	1.79	111.8	Analog	0.10	3
1	Ho		29,695,837.06	0.87	110.5	Analog	0.10	3
1	Bi		16,840,586.83	0.70	107.7	Analog	0.10	3
1	Ge		3,640,819.64	0.39	114.5	Analog	0.10	3
2	Sc		1,543,029.97	1.65	110.9	Analog	0.30	3
2	Ge		841,212.88	0.50	104.4	Pulse	0.30	3
2	Rh		14,951,127.19	2.52	108.5	Analog	0.30	3
2	In		5,481,864.14	1.20	110.0	Analog	0.30	3
2	Tb		16,832,202.11	1.43	108.4	Analog	0.30	3
2	Ho		17,089,392.10	1.52	107.9	Analog	0.30	3
2	Bi		10,764,192.63	0.93	106.2	Analog	0.30	3
2	Ge		574,673.26	0.50	104.4	Pulse	0.30	3
3	Sc		1,966,352.91	1.02	110.2	Analog	0.30	3
3	Ge		748,874.97	0.76	105.8	Pulse	0.30	3
3	Rh		4,207,712.33	0.39	108.5	Analog	0.30	3
3	Tb		8,471,914.11	0.56	104.1	Analog	0.30	3
3	Ge		514,537.50	1.18	105.8	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:19
Sample Name	JD38065-7UNDIG
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.007	ppb	-20.92	24.00	1.206E-06	Pulse	0.25	3
B			1	-0.004	ppb	-284.69	4,158.31	2.072E-04	Pulse	0.15	3
Ca			1	-1.746	ppb	-17.24	21,492.65	8.492E-04	Pulse	0.10	3
Sr			1	0.001	ppb	506.50	4,180.60	1.684E-04	Pulse	0.10	3
Mo			1	0.015	ppb	9.06	256.68	1.033E-05	Pulse	0.10	3
Ag			1	0.000	ppb	-6.55	60.00	2.598E-06	Pulse	0.10	3
Sn			1	-0.021	ppb	-16.17	730.03	3.161E-05	Pulse	0.10	3
Sb			1	-0.008	ppb	-20.22	73.33	2.545E-06	Pulse	0.10	3
Ba			1	-0.009	ppb	-85.71	56.67	1.959E-06	Pulse	0.10	3
Tl			1	-0.127	ppb	-19.20	71,427.86	4.238E-03	Pulse	0.10	3
Pb			1	-0.018	ppb	-5.12	190.01	1.128E-05	Pulse	0.10	3
Pb			1	-0.017	ppb	-18.18	196.68	1.167E-05	Pulse	0.10	3
Pb			1	-0.016	ppb	-15.42	793.37	4.709E-05	Pulse	0.10	3
Na			2	-0.529	ppb	-15.66	9,542.43	6.244E-03	Pulse	0.30	3
Mg			2	0.729	ppb	10.92	3,865.97	2.530E-03	Pulse	0.30	3
Al			2	-6.385	ppb	-1.24	725.58	4.745E-04	Pulse	0.30	3
K			2	1.043	ppb	1.62	11,648.09	7.622E-03	Pulse	0.30	3
Ca			2	-0.699	ppb	-124.28	287.78	1.881E-04	Pulse	0.30	3
Ti			2	0.027	ppb	21.26	12.22	7.989E-06	Pulse	0.30	3
V			2	-0.206	ppb	-1.04	776.69	5.082E-04	Pulse	0.30	3
Cr			2	0.111	ppb	8.80	1,532.30	1.003E-03	Pulse	0.30	3
Mn			2	0.003	ppb	138.59	396.67	2.597E-04	Pulse	0.30	3
Fe			2	0.822	ppb	4.49	21,590.28	1.413E-02	Pulse	0.30	3
Co			2	-0.012	ppb	-245.20	36,091.38	2.362E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-27.89	57.78	3.774E-05	Pulse	0.30	3
Cu			2	0.496	ppb	0.22	657.80	4.303E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.353	ppb	2.06	220.01	1.440E-04	Pulse	0.30	3
As			2	-0.032	ppb	-10.37	35.33	2.314E-05	Pulse	1.00	3
Sn			2	-0.014	ppb	-21.99	300.01	5.409E-05	Pulse	0.30	3
Cd			2	-0.011	ppb	-7.02	5.24	9.429E-07	Pulse	0.30	3
Se			3	-0.028	ppb	-41.85	15.67	2.085E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,063,496.56	2.08	112.9	Analog	0.10	3
1	Sc		25,307,632.96	1.02	116.7	Analog	0.10	3
1	Ge		4,947,291.90	0.15	115.0	Analog	0.10	3
1	Rh		24,842,702.96	1.42	113.2	Analog	0.10	3
1	In		23,093,337.94	0.54	114.5	Analog	0.10	3
1	Tb		28,819,333.74	1.25	110.3	Analog	0.10	3
1	Ho		29,202,097.07	0.80	108.7	Analog	0.10	3
1	Bi		16,852,180.17	0.31	107.8	Analog	0.10	3
1	Ge		3,680,069.53	0.64	115.8	Analog	0.10	3
2	Sc		1,528,196.67	1.81	109.8	Analog	0.30	3
2	Ge		879,463.28	1.25	109.1	Pulse	0.30	3
2	Rh		14,835,242.19	1.08	107.7	Analog	0.30	3
2	In		5,548,211.00	2.22	111.3	Analog	0.30	3
2	Tb		16,674,343.78	1.88	107.4	Analog	0.30	3
2	Ho		17,035,819.32	2.02	107.5	Analog	0.30	3
2	Bi		10,853,833.18	1.36	107.1	Analog	0.30	3
2	Ge		599,868.13	0.93	109.0	Pulse	0.30	3
3	Sc		1,934,220.41	0.76	108.4	Analog	0.30	3
3	Ge		751,526.24	0.43	106.1	Pulse	0.30	3
3	Rh		4,126,849.56	0.83	106.4	Analog	0.30	3
3	Tb		8,295,913.28	0.55	102.0	Analog	0.30	3
3	Ge		516,653.84	0.61	106.2	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:22
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.262	ppb	3.79	509,604.36	2.545E-02	Pulse	0.25	3
B			1	94.692	ppb	2.25	947,598.64	4.733E-02	Pulse	0.15	3
Ca			1	4931.598	ppb	2.50	5,846,502.42	2.344E-01	Analog	0.10	3
Sr			1	49.236	ppb	4.11	2,237,126.84	9.301E-02	Analog	0.10	3
Mo			1	47.595	ppb	3.56	446,509.21	1.856E-02	Pulse	0.10	3
Ag			1	49.634	ppb	2.28	1,053,701.83	4.686E-02	Mix	0.10	3
Sn			1	48.205	ppb	3.32	572,029.63	2.543E-02	Pulse	0.10	3
Sb			1	46.814	ppb	3.68	700,932.70	2.436E-02	Pulse	0.10	3
Ba			1	47.233	ppb	3.18	246,852.84	8.578E-03	Pulse	0.10	3
Tl			1	49.485	ppb	1.47	1,600,267.79	9.813E-02	Analog	0.10	3
Pb			1	45.223	ppb	2.68	487,246.27	2.988E-02	Pulse	0.10	3
Pb			1	45.948	ppb	2.94	420,043.80	2.576E-02	Pulse	0.10	3
Pb			1	47.030	ppb	2.61	1,974,577.37	1.211E-01	Analog	0.10	3
Na			2	4891.213	ppb	2.90	10,858,297.07	7.156E+00	Analog	0.30	3
Mg			2	4866.926	ppb	3.28	5,268,644.79	3.472E+00	Analog	0.30	3
Al			2	4841.632	ppb	2.89	2,225,647.00	1.467E+00	Analog	0.30	3
K			2	4931.344	ppb	1.47	3,904,687.20	2.573E+00	Analog	0.30	3
Ca			2	5348.886	ppb	3.19	229,225.43	1.511E-01	Pulse	0.30	3
Ti			2	48.012	ppb	2.51	14,776.94	9.739E-03	Pulse	0.30	3
V			2	47.721	ppb	3.08	410,190.78	2.703E-01	Pulse	0.30	3
Cr			2	46.859	ppb	3.41	504,783.31	3.327E-01	Pulse	0.30	3
Mn			2	46.324	ppb	3.59	319,254.05	2.104E-01	Pulse	0.30	3
Fe			2	4667.044	ppb	1.42	44,693,761.56	2.945E+01	Analog	0.30	3
Co			2	47.097	ppb	3.82	853,712.82	5.627E-01	Pulse	0.30	3
Ni			2	46.523	ppb	3.29	212,929.27	1.403E-01	Pulse	0.30	3
Cu			2	46.095	ppb	3.12	539,450.53	3.555E-01	Pulse	0.30	3
Zn			2	45.035	ppb	2.54	89,459.75	5.896E-02	Pulse	0.30	3
As			2	48.771	ppb	2.84	43,800.13	2.887E-02	Pulse	1.00	3
Sn			2	47.105	ppb	4.43	200,000.97	3.752E-02	Pulse	0.30	3
Cd			2	47.485	ppb	3.96	106,784.12	2.003E-02	Pulse	0.30	3
Se			3	197.584	ppb	0.54	40,945.17	5.231E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,022,010.42	2.15	112.6	Analog	0.10	3
1	Sc		24,939,411.29	0.92	115.0	Analog	0.10	3
1	Ge		4,887,554.61	0.57	113.6	Analog	0.10	3

Quantitation Report

1	Rh		24,058,151.31	0.96	109.6	Analog	0.10	3
1	In		22,487,178.09	0.78	111.5	Analog	0.10	3
1	Tb		28,775,455.40	0.36	110.1	Analog	0.10	3
1	Ho		29,317,730.40	0.72	109.1	Analog	0.10	3
1	Bi		16,306,317.26	0.57	104.3	Analog	0.10	3
1	Ge		3,655,337.45	0.68	115.0	Analog	0.10	3
2	Sc		1,517,752.75	1.55	109.1	Analog	0.30	3
2	Ge		898,414.75	0.79	111.5	Pulse	0.30	3
2	Rh		14,216,200.55	2.16	103.2	Analog	0.30	3
2	In		5,333,659.50	2.28	107.0	Analog	0.30	3
2	Tb		16,497,692.12	1.89	106.3	Analog	0.30	3
2	Ho		16,901,736.55	1.76	106.7	Analog	0.30	3
2	Bi		10,304,036.54	1.89	101.7	Analog	0.30	3
2	Ge		619,403.72	0.29	112.6	Pulse	0.30	3
3	Sc		1,932,386.66	1.26	108.3	Analog	0.30	3
3	Ge		782,731.48	0.49	110.5	Pulse	0.30	3
3	Rh		3,996,652.90	1.30	103.0	Analog	0.30	3
3	Tb		8,286,876.61	0.77	101.8	Analog	0.30	3
3	Ge		536,524.84	0.35	110.3	Pulse	0.30	3

Quantitation Report

File Name 030SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:25
Sample Name CCB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-47.25	60.00	2.961E-06	Pulse	0.25	3
B			1	1.476	ppb	4.01	19,131.87	9.437E-04	Pulse	0.15	3
Ca			1	-1.800	ppb	-24.02	21,469.33	8.467E-04	Pulse	0.10	3
Sr			1	0.002	ppb	137.45	4,253.94	1.708E-04	Pulse	0.10	3
Mo			1	0.077	ppb	21.77	860.04	3.451E-05	Pulse	0.10	3
Ag			1	0.005	ppb	76.28	180.01	7.801E-06	Pulse	0.10	3
Sn			1	0.049	ppb	13.07	1,576.78	6.821E-05	Pulse	0.10	3
Sb			1	0.017	ppb	24.83	450.02	1.548E-05	Pulse	0.10	3
Ba			1	0.001	ppb	344.59	106.67	3.672E-06	Pulse	0.10	3
Tl			1	0.014	ppb	240.88	76,276.12	4.505E-03	Pulse	0.10	3
Pb			1	-0.009	ppb	-31.45	296.68	1.754E-05	Pulse	0.10	3
Pb			1	0.000	ppb	981.00	360.02	2.127E-05	Pulse	0.10	3
Pb			1	-0.004	ppb	-22.50	1,306.73	7.716E-05	Pulse	0.10	3
Na			2	-0.574	ppb	-15.02	9,651.36	6.178E-03	Pulse	0.30	3
Mg			2	0.445	ppb	26.87	3,635.93	2.327E-03	Pulse	0.30	3
Al			2	-6.235	ppb	-1.60	812.25	5.200E-04	Pulse	0.30	3
K			2	1.080	ppb	17.37	11,937.15	7.641E-03	Pulse	0.30	3
Ca			2	-1.824	ppb	-32.09	244.45	1.563E-04	Pulse	0.30	3
Ti			2	0.037	ppb	83.66	15.56	1.002E-05	Pulse	0.30	3
V			2	-0.007	ppb	-366.48	2,544.64	1.629E-03	Pulse	0.30	3
Cr			2	0.001	ppb	353.77	338.90	2.169E-04	Pulse	0.30	3
Mn			2	0.028	ppb	37.62	582.23	3.730E-04	Pulse	0.30	3
Fe			2	2.152	ppb	9.90	35,169.63	2.252E-02	Pulse	0.30	3
Co			2	0.020	ppb	78.61	37,476.26	2.399E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-36.33	62.22	3.977E-05	Pulse	0.30	3
Cu			2	0.566	ppb	1.45	1,517.85	9.721E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.356	ppb	2.19	232.23	1.485E-04	Pulse	0.30	3
As			2	-0.014	ppb	-22.90	52.33	3.348E-05	Pulse	1.00	3
Sn			2	0.060	ppb	33.84	626.68	1.131E-04	Pulse	0.30	3
Cd			2	-0.010	ppb	-35.06	7.19	1.301E-06	Pulse	0.30	3
Se			3	0.024	ppb	119.78	27.00	3.463E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,273,888.29	1.00	114.1	Analog	0.10	3
1	Sc		25,364,462.96	1.71	116.9	Analog	0.10	3
1	Ge		4,965,634.09	0.84	115.4	Analog	0.10	3
1	Rh		24,906,117.13	0.50	113.5	Analog	0.10	3
1	In		23,107,115.33	1.08	114.6	Analog	0.10	3
1	Tb		29,034,514.57	1.78	111.1	Analog	0.10	3
1	Ho		29,612,887.06	1.16	110.2	Analog	0.10	3
1	Bi		16,934,215.58	1.77	108.3	Analog	0.10	3
1	Ge		3,671,706.92	1.06	115.5	Analog	0.10	3
2	Sc		1,562,379.94	1.46	112.3	Analog	0.30	3
2	Ge		902,717.88	1.01	112.0	Pulse	0.30	3
2	Rh		14,940,181.63	1.35	108.4	Analog	0.30	3
2	In		5,546,876.00	1.52	111.3	Analog	0.30	3
2	Tb		16,856,908.77	1.33	108.6	Analog	0.30	3
2	Ho		17,110,963.76	1.25	108.0	Analog	0.30	3
2	Bi		10,816,378.74	1.86	106.7	Analog	0.30	3
2	Ge		614,619.92	0.90	111.7	Pulse	0.30	3
3	Sc		1,990,128.88	0.51	111.5	Analog	0.30	3
3	Ge		779,541.43	0.55	110.1	Pulse	0.30	3
3	Rh		4,192,685.11	1.17	108.1	Analog	0.30	3
3	Tb		8,337,845.78	0.42	102.5	Analog	0.30	3
3	Ge		535,961.52	0.57	110.2	Pulse	0.30	3

Quantitation Report

File Name 031SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:29
Sample Name JD38065-8UNDIG
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.094	ppb	4.66	1,137.38	5.630E-05	Pulse	0.25	3
B			1	18.357	ppb	1.02	188,781.64	9.345E-03	Pulse	0.15	3
Ca			1	367.968	ppb	2.26	467,843.82	1.835E-02	Pulse	0.10	3
Sr			1	4.299	ppb	1.45	203,116.68	8.273E-03	Pulse	0.10	3
Mo			1	0.031	ppb	9.90	403.35	1.643E-05	Pulse	0.10	3
Ag			1	0.001	ppb	34.62	96.67	4.194E-06	Pulse	0.10	3
Sn			1	-0.024	ppb	-37.30	690.03	2.993E-05	Pulse	0.10	3
Sb			1	0.005	ppb	50.09	260.01	9.032E-06	Pulse	0.10	3
Ba			1	14.152	ppb	0.99	73,966.57	2.573E-03	Pulse	0.10	3
Tl			1	-0.040	ppb	-32.46	75,190.98	4.403E-03	Pulse	0.10	3
Pb			1	0.049	ppb	21.18	953.39	5.580E-05	Pulse	0.10	3
Pb			1	0.046	ppb	21.24	796.71	4.667E-05	Pulse	0.10	3
Pb			1	0.044	ppb	15.55	3,420.24	2.002E-04	Pulse	0.10	3
Na			2	33.911	ppb	3.51	88,165.19	5.658E-02	Pulse	0.30	3
Mg			2	14.033	ppb	1.29	18,728.08	1.202E-02	Pulse	0.30	3
Al			2	16.588	ppb	4.76	11,566.87	7.423E-03	Pulse	0.30	3
K			2	6.572	ppb	1.64	16,363.76	1.050E-02	Pulse	0.30	3
Ca			2	231.791	ppb	3.78	10,510.75	6.746E-03	Pulse	0.30	3
Ti			2	0.065	ppb	25.62	24.44	1.570E-05	Pulse	0.30	3
V			2	-0.185	ppb	-1.47	971.14	6.232E-04	Pulse	0.30	3
Cr			2	1.205	ppb	2.06	13,659.58	8.766E-03	Pulse	0.30	3
Mn			2	2.558	ppb	1.39	18,471.40	1.185E-02	Pulse	0.30	3
Fe			2	51.677	ppb	3.97	521,846.91	3.350E-01	Pulse	0.30	3
Co			2	0.318	ppb	6.62	42,686.01	2.739E-02	Pulse	0.30	3
Ni			2	3.766	ppb	3.26	17,794.10	1.142E-02	Pulse	0.30	3
Cu			2	124.195	ppb	1.81	1,501,904.52	9.638E-01	Analog	0.30	3
Zn			2	26.930	ppb	2.75	54,735.64	3.513E-02	Pulse	0.30	3
As			2	-0.016	ppb	-8.50	50.67	3.250E-05	Pulse	1.00	3
Sn			2	-0.029	ppb	-46.80	240.00	4.269E-05	Pulse	0.30	3
Cd			2	-0.008	ppb	-48.62	12.93	2.320E-06	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.048	ppb	36.87	32.67	4.084E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,200,035.68	1.25	113.6	Analog	0.10	3
1	Sc		25,491,294.62	0.47	117.5	Analog	0.10	3
1	Ge		5,017,308.05	0.60	116.6	Analog	0.10	3
1	Rh		24,550,187.97	0.81	111.9	Analog	0.10	3
1	In		23,040,650.21	0.54	114.3	Analog	0.10	3
1	Tb		28,751,003.74	1.50	110.0	Analog	0.10	3
1	Ho		29,182,161.23	0.36	108.6	Analog	0.10	3
1	Bi		17,075,994.74	1.06	109.2	Analog	0.10	3
1	Ge		3,689,133.59	0.58	116.0	Analog	0.10	3
2	Sc		1,558,676.12	1.83	112.0	Analog	0.30	3
2	Ge		933,294.61	0.39	115.8	Pulse	0.30	3
2	Rh		14,908,438.85	1.49	108.2	Analog	0.30	3
2	In		5,619,034.81	1.83	112.7	Analog	0.30	3
2	Tb		16,889,222.66	1.70	108.8	Analog	0.30	3
2	Ho		17,113,163.77	2.05	108.0	Analog	0.30	3
2	Bi		11,121,034.00	1.19	109.7	Analog	0.30	3
2	Ge		634,088.08	0.72	115.2	Pulse	0.30	3
3	Sc		1,994,280.82	0.92	111.7	Analog	0.30	3
3	Ge		800,293.69	0.73	113.0	Pulse	0.30	3
3	Rh		4,196,272.47	0.23	108.2	Analog	0.30	3
3	Tb		8,294,244.95	1.29	101.9	Analog	0.30	3
3	Ge		549,784.23	0.53	113.0	Pulse	0.30	3

Quantitation Report

File Name	032SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:32
Sample Name	JD38065-9UNDIG
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.005	ppb	-32.27	45.33	2.153E-06	Pulse	0.25	3
B			1	0.624	ppb	5.47	10,947.69	5.200E-04	Pulse	0.15	3
Ca			1	0.148	ppb	66.57	24,733.46	9.389E-04	Pulse	0.10	3
Sr			1	0.011	ppb	35.15	4,784.09	1.861E-04	Pulse	0.10	3
Mo			1	0.010	ppb	88.82	220.01	8.509E-06	Pulse	0.10	3
Ag			1	0.000	ppb	538.56	70.00	2.973E-06	Pulse	0.10	3
Sn			1	-0.042	ppb	-14.78	483.35	2.047E-05	Pulse	0.10	3
Sb			1	-0.006	ppb	-71.39	106.67	3.607E-06	Pulse	0.10	3
Ba			1	0.009	ppb	75.71	156.67	5.291E-06	Pulse	0.10	3
Tl			1	-0.014	ppb	-241.23	76,239.03	4.452E-03	Pulse	0.10	3
Pb			1	-0.007	ppb	-85.45	316.68	1.851E-05	Pulse	0.10	3
Pb			1	-0.012	ppb	-51.47	246.68	1.442E-05	Pulse	0.10	3
Pb			1	-0.005	ppb	-43.62	1,266.73	7.400E-05	Pulse	0.10	3
Na			2	-0.897	ppb	-11.19	9,304.52	5.706E-03	Pulse	0.30	3
Mg			2	0.369	ppb	56.51	3,709.28	2.274E-03	Pulse	0.30	3
Al			2	-6.919	ppb	-1.36	510.01	3.130E-04	Pulse	0.30	3
K			2	0.730	ppb	23.15	12,165.06	7.459E-03	Pulse	0.30	3
Ca			2	-0.705	ppb	-256.87	305.56	1.879E-04	Pulse	0.30	3
Ti			2	0.032	ppb	91.44	14.44	8.818E-06	Pulse	0.30	3
V			2	-0.199	ppb	-1.61	887.81	5.445E-04	Pulse	0.30	3
Cr			2	0.148	ppb	4.10	2,054.57	1.260E-03	Pulse	0.30	3
Mn			2	-0.009	ppb	-41.50	337.78	2.073E-04	Pulse	0.30	3
Fe			2	0.592	ppb	5.03	20,679.22	1.268E-02	Pulse	0.30	3
Co			2	0.050	ppb	79.40	39,668.55	2.433E-02	Pulse	0.30	3
Ni			2	-0.006	ppb	-108.39	77.78	4.780E-05	Pulse	0.30	3
Cu			2	0.520	ppb	1.81	994.48	6.103E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.410	ppb	3.68	356.68	2.188E-04	Pulse	0.30	3
As			2	-0.032	ppb	-14.16	37.33	2.291E-05	Pulse	1.00	3
Sn			2	-0.031	ppb	-32.25	235.56	4.067E-05	Pulse	0.30	3
Cd			2	-0.009	ppb	-18.37	10.90	1.886E-06	Pulse	0.30	3
Se			3	0.000	ppb	8841.52	22.67	2.832E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		21,053,885.65	0.84	118.4	Analog	0.10	3
1	Sc		26,345,382.11	1.65	121.5	Analog	0.10	3
1	Ge		5,188,023.36	0.46	120.6	Analog	0.10	3
1	Rh		25,721,127.12	1.94	117.2	Analog	0.10	3
1	In		23,592,380.78	1.44	117.0	Analog	0.10	3
1	Tb		29,633,579.56	0.66	113.4	Analog	0.10	3
1	Ho		30,323,388.72	0.34	112.9	Analog	0.10	3
1	Bi		17,124,431.00	0.86	109.5	Analog	0.10	3
1	Ge		3,831,797.76	0.37	120.5	Analog	0.10	3
2	Sc		1,631,099.03	1.84	117.2	Analog	0.30	3
2	Ge		957,644.23	1.00	118.8	Pulse	0.30	3
2	Rh		15,659,328.82	1.31	113.7	Analog	0.30	3
2	In		5,805,375.15	1.71	116.5	Analog	0.30	3
2	Tb		17,302,495.42	1.76	111.5	Analog	0.30	3
2	Ho		17,597,308.74	2.02	111.1	Analog	0.30	3
2	Bi		11,243,411.50	1.06	110.9	Analog	0.30	3
2	Ge		652,220.11	0.73	118.5	Pulse	0.30	3
3	Sc		1,997,048.39	0.43	111.9	Analog	0.30	3
3	Ge		800,737.24	0.31	113.1	Pulse	0.30	3
3	Rh		4,245,069.55	0.71	109.5	Analog	0.30	3
3	Tb		8,364,528.83	1.19	102.8	Analog	0.30	3
3	Ge		548,514.74	0.40	112.7	Pulse	0.30	3

Quantitation Report

File Name	033SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:35
Sample Name	MP30757-MB1 5
Sample Type	Sample
Comment	DOD
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.010	ppb	-13.83	44.00	2.003E-06	Pulse	0.25	3
B			1	1.232	ppb	4.85	11,347.92	5.160E-04	Pulse	0.15	3
Ca			1	26.339	ppb	4.51	41,242.09	1.555E-03	Pulse	0.10	3
Sr			1	0.028	ppb	24.55	4,914.13	1.924E-04	Pulse	0.10	3
Mo			1	0.075	ppb	15.83	490.02	1.918E-05	Pulse	0.10	3
Ag			1	0.009	ppb	12.99	166.67	6.974E-06	Pulse	0.10	3
Sn			1	0.298	ppb	3.40	2,890.32	1.210E-04	Pulse	0.10	3
Sb			1	0.016	ppb	18.91	316.68	1.061E-05	Pulse	0.10	3
Ba			1	0.054	ppb	15.78	253.34	8.484E-06	Pulse	0.10	3
Tl			1	-0.048	ppb	-138.24	74,956.52	4.433E-03	Pulse	0.10	3
Pb			1	-0.009	ppb	-49.88	340.01	2.011E-05	Pulse	0.10	3
Pb			1	-0.013	ppb	-49.73	293.35	1.736E-05	Pulse	0.10	3
Pb			1	-0.001	ppb	-651.98	1,450.07	8.581E-05	Pulse	0.10	3
Na			2	5.920	ppb	2.87	17,980.68	1.134E-02	Pulse	0.30	3
Mg			2	7.675	ppb	3.09	7,523.74	4.747E-03	Pulse	0.30	3
Al			2	-11.072	ppb	-3.78	1,158.93	7.315E-04	Pulse	0.30	3
K			2	1.468	ppb	34.02	11,825.98	7.461E-03	Pulse	0.30	3
Ca			2	23.792	ppb	2.71	861.14	5.433E-04	Pulse	0.30	3
Ti			2	0.149	ppb	10.54	27.78	1.755E-05	Pulse	0.30	3
V			2	1.316	ppb	5.68	8,517.53	5.374E-03	Pulse	0.30	3
Cr			2	0.134	ppb	5.46	1,088.93	6.873E-04	Pulse	0.30	3
Mn			2	0.191	ppb	6.65	1,080.04	6.809E-04	Pulse	0.30	3
Fe			2	26.066	ppb	3.65	144,483.93	9.117E-02	Pulse	0.30	3
Co			2	0.043	ppb	229.76	38,032.58	2.400E-02	Pulse	0.30	3
Ni			2	0.016	ppb	18.62	143.34	9.046E-05	Pulse	0.30	3
Cu			2	1.102	ppb	0.78	1,353.39	8.541E-04	Pulse	0.30	3
Zn			2	4.333	ppb	1.20	4,011.58	2.531E-03	Pulse	0.30	3
As			2	0.055	ppb	11.20	92.33	5.827E-05	Pulse	1.00	3
Sn			2	0.265	ppb	5.95	958.92	1.708E-04	Pulse	0.30	3
Cd			2	-0.023	ppb	-7.22	4.13	7.369E-07	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.025	ppb	282.07	24.67	3.154E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		21,994,651.84	1.18	123.7	Analog	0.10	3
1	Sc		26,515,056.27	0.59	122.2	Analog	0.10	3
1	Ge		5,045,298.36	0.98	117.3	Analog	0.10	3
1	Rh		25,547,847.96	1.45	116.4	Analog	0.10	3
1	In		23,882,614.08	1.45	118.5	Analog	0.10	3
1	Tb		29,846,268.72	0.78	114.2	Analog	0.10	3
1	Ho		30,133,664.55	0.44	112.2	Analog	0.10	3
1	Bi		16,908,295.58	0.94	108.2	Analog	0.10	3
1	Ge		3,722,554.74	0.32	117.1	Analog	0.10	3
2	Sc		1,585,263.58	2.12	113.9	Analog	0.30	3
2	Ge		886,993.65	0.52	110.0	Pulse	0.30	3
2	Rh		15,393,911.05	1.43	111.7	Analog	0.30	3
2	In		5,613,326.87	0.71	112.6	Analog	0.30	3
2	Tb		17,317,690.98	1.53	111.6	Analog	0.30	3
2	Ho		17,584,654.86	1.87	111.0	Analog	0.30	3
2	Bi		10,849,782.90	1.58	107.1	Analog	0.30	3
2	Ge		600,571.57	0.35	109.1	Pulse	0.30	3
3	Sc		2,023,134.57	4.40	113.4	Analog	0.30	3
3	Ge		782,091.10	4.05	110.5	Pulse	0.30	3
3	Rh		4,235,414.97	3.78	109.2	Analog	0.30	3
3	Tb		8,495,662.16	5.43	104.4	Analog	0.30	3
3	Ge		535,139.00	4.21	110.0	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 13:38
Sample Name	MP30757-B1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	86.138	ppb	1.13	508,694.90	2.370E-02	Pulse	0.25	3
B			1	92.414	ppb	1.17	498,104.89	2.320E-02	Pulse	0.15	3
Ca			1	4578.232	ppb	0.67	2,877,704.12	1.093E-01	Analog	0.10	3
Sr			1	95.304	ppb	0.83	2,257,552.78	9.003E-02	Analog	0.10	3
Mo			1	90.631	ppb	0.89	443,205.05	1.767E-02	Pulse	0.10	3
Ag			1	92.855	ppb	0.63	1,014,573.66	4.383E-02	Pulse	0.10	3
Sn			1	94.406	ppb	1.67	576,552.23	2.491E-02	Pulse	0.10	3
Sb			1	84.992	ppb	0.95	661,569.42	2.211E-02	Pulse	0.10	3
Ba			1	91.777	ppb	1.98	249,342.65	8.334E-03	Pulse	0.10	3
Tl			1	92.969	ppb	0.57	1,532,936.02	9.246E-02	Analog	0.10	3
Pb			1	89.941	ppb	1.70	492,587.04	2.971E-02	Pulse	0.10	3
Pb			1	92.104	ppb	1.30	428,006.76	2.582E-02	Pulse	0.10	3
Pb			1	93.749	ppb	0.25	2,000,954.28	1.207E-01	Analog	0.10	3
Na			2	4067.432	ppb	0.19	4,507,666.63	2.980E+00	Analog	0.30	3
Mg			2	4134.733	ppb	1.69	2,232,743.80	1.476E+00	Analog	0.30	3
Al			2	4167.868	ppb	0.24	957,183.12	6.327E-01	Pulse	0.30	3
K			2	4031.897	ppb	0.91	1,597,697.19	1.056E+00	Analog	0.30	3
Ca			2	4675.576	ppb	1.07	100,057.14	6.615E-02	Pulse	0.30	3
Ti			2	84.149	ppb	2.20	12,911.14	8.534E-03	Pulse	0.30	3
V			2	84.680	ppb	1.23	363,101.60	2.401E-01	Pulse	0.30	3
Cr			2	83.376	ppb	1.12	447,742.10	2.960E-01	Pulse	0.30	3
Mn			2	82.172	ppb	1.06	282,343.64	1.867E-01	Pulse	0.30	3
Fe			2	3960.901	ppb	0.76	18,912,743.14	1.250E+01	Analog	0.30	3
Co			2	84.133	ppb	1.06	764,071.04	5.051E-01	Pulse	0.30	3
Ni			2	82.937	ppb	1.61	189,216.54	1.251E-01	Pulse	0.30	3
Cu			2	81.051	ppb	1.22	472,182.19	3.122E-01	Pulse	0.30	3
Zn			2	68.161	ppb	1.69	67,365.56	4.454E-02	Pulse	0.30	3
As			2	74.793	ppb	1.30	33,495.45	2.214E-02	Pulse	1.00	3
Sn			2	81.048	ppb	1.92	170,207.07	3.229E-02	Pulse	0.30	3
Cd			2	78.073	ppb	1.43	86,821.28	1.647E-02	Pulse	0.30	3
Se			3	351.743	ppb	0.61	37,170.56	4.657E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		21,468,192.68	1.72	120.8	Analog	0.10	3
1	Sc		26,324,600.44	0.14	121.4	Analog	0.10	3
1	Ge		5,007,406.80	0.40	116.4	Analog	0.10	3

Quantitation Report

1	Rh		25,076,496.29	0.95	114.3	Analog	0.10	3
1	In		23,149,267.36	0.37	114.8	Analog	0.10	3
1	Tb		29,919,958.72	0.45	114.5	Analog	0.10	3
1	Ho		30,295,112.05	0.38	112.8	Analog	0.10	3
1	Bi		16,579,988.08	0.64	106.1	Analog	0.10	3
1	Ge		3,697,025.15	1.03	116.3	Analog	0.10	3
2	Sc		1,512,800.81	1.76	108.7	Analog	0.30	3
2	Ge		875,579.17	0.53	108.6	Pulse	0.30	3
2	Rh		14,359,612.76	2.73	104.2	Analog	0.30	3
2	In		5,272,896.20	2.61	105.8	Analog	0.30	3
2	Tb		16,728,115.45	1.83	107.8	Analog	0.30	3
2	Ho		17,064,824.32	2.26	107.7	Analog	0.30	3
2	Bi		10,181,589.32	1.23	100.5	Analog	0.30	3
2	Ge		600,958.94	0.67	109.2	Pulse	0.30	3
3	Sc		2,029,706.79	0.52	113.7	Analog	0.30	3
3	Ge		798,244.50	0.26	112.7	Pulse	0.30	3
3	Rh		4,156,891.36	0.21	107.2	Analog	0.30	3
3	Tb		8,539,052.16	0.70	104.9	Analog	0.30	3
3	Ge		549,678.09	0.18	113.0	Pulse	0.30	3

Quantitation Report

File Name 035SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:41
Sample Name MP30757-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	85.233	ppb	0.76	477,469.87	2.345E-02	Pulse	0.25	3
B			1	195.910	ppb	0.24	996,893.64	4.896E-02	Pulse	0.15	3
Ca			1	48318.964	ppb	1.19	28,413,192.08	1.145E+00	Analog	0.10	3
Sr			1	414.433	ppb	2.02	9,179,018.40	3.909E-01	Analog	0.10	3
Mo			1	95.468	ppb	0.31	437,251.63	1.862E-02	Pulse	0.10	3
Ag			1	95.184	ppb	1.64	990,807.02	4.493E-02	Pulse	0.10	3
Sn			1	97.423	ppb	0.83	566,817.06	2.570E-02	Pulse	0.10	3
Sb			1	88.284	ppb	0.74	652,174.44	2.297E-02	Pulse	0.10	3
Ba			1	107.802	ppb	1.07	277,938.15	9.789E-03	Pulse	0.10	3
Tl			1	94.988	ppb	0.50	1,454,050.24	9.437E-02	Analog	0.10	3
Pb			1	92.202	ppb	1.18	469,334.72	3.046E-02	Pulse	0.10	3
Pb			1	94.792	ppb	0.52	409,397.27	2.657E-02	Pulse	0.10	3
Pb			1	94.801	ppb	1.06	1,880,534.38	1.220E-01	Analog	0.10	3
Na			2	29523.987	ppb	0.40	30,741,018.78	2.158E+01	Analog	0.30	3
Mg			2	9395.772	ppb	0.54	4,773,752.03	3.352E+00	Analog	0.30	3
Al			2	4272.981	ppb	1.39	923,617.91	6.486E-01	Pulse	0.30	3
K			2	10975.733	ppb	1.15	4,076,888.73	2.863E+00	Analog	0.30	3
Ca			2	46642.321	ppb	0.19	937,102.88	6.580E-01	Pulse	0.30	3
Ti			2	86.625	ppb	1.94	12,510.87	8.786E-03	Pulse	0.30	3
V			2	85.835	ppb	1.15	346,470.68	2.433E-01	Pulse	0.30	3
Cr			2	83.667	ppb	0.99	422,999.63	2.970E-01	Pulse	0.30	3
Mn			2	90.909	ppb	1.01	294,036.01	2.065E-01	Pulse	0.30	3
Fe			2	4262.400	ppb	0.94	19,161,348.68	1.345E+01	Analog	0.30	3
Co			2	82.582	ppb	1.26	706,675.86	4.963E-01	Pulse	0.30	3
Ni			2	85.166	ppb	1.53	182,921.80	1.285E-01	Pulse	0.30	3
Cu			2	108.418	ppb	0.90	596,296.54	4.187E-01	Pulse	0.30	3
Zn			2	78.920	ppb	1.18	73,508.54	5.162E-02	Pulse	0.30	3
As			2	84.108	ppb	0.84	35,456.74	2.490E-02	Pulse	1.00	3
Sn			2	84.474	ppb	1.22	165,496.58	3.365E-02	Pulse	0.30	3
Cd			2	78.653	ppb	2.02	81,589.41	1.659E-02	Pulse	0.30	3
Se			3	347.874	ppb	0.44	36,404.72	4.605E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,362,814.04	1.20	114.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,817,317.96	0.81	114.4	Analog	0.10	3
1	Ge		4,701,985.77	0.62	109.3	Analog	0.10	3
1	Rh		23,485,474.65	1.65	107.0	Analog	0.10	3
1	In		22,053,946.60	0.55	109.4	Analog	0.10	3
1	Tb		28,394,539.57	1.16	108.6	Analog	0.10	3
1	Ho		29,123,692.07	0.53	108.4	Analog	0.10	3
1	Bi		15,409,189.77	1.16	98.6	Analog	0.10	3
1	Ge		3,451,726.30	0.83	108.6	Analog	0.10	3
2	Sc		1,424,193.00	1.58	102.4	Analog	0.30	3
2	Ge		835,314.48	0.98	103.6	Pulse	0.30	3
2	Rh		13,332,908.64	1.51	96.8	Analog	0.30	3
2	In		4,918,661.82	1.91	98.7	Analog	0.30	3
2	Tb		15,926,408.26	2.10	102.6	Analog	0.30	3
2	Ho		16,296,034.91	1.74	102.9	Analog	0.30	3
2	Bi		9,421,016.01	1.14	93.0	Analog	0.30	3
2	Ge		572,588.02	0.58	104.1	Pulse	0.30	3
3	Sc		1,985,918.25	1.62	111.3	Analog	0.30	3
3	Ge		790,475.10	0.29	111.6	Pulse	0.30	3
3	Rh		4,052,680.26	0.43	104.5	Analog	0.30	3
3	Tb		8,650,001.32	0.81	106.3	Analog	0.30	3
3	Ge		543,381.94	0.26	111.7	Pulse	0.30	3

Quantitation Report

File Name 036SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:44
Sample Name MP30757-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	88.508	ppb	1.95	498,817.07	2.435E-02	Pulse	0.25	3
B			1	200.505	ppb	2.60	1,026,326.35	5.010E-02	Pulse	0.15	3
Ca			1	49280.671	ppb	1.84	28,539,462.08	1.168E+00	Analog	0.10	3
Sr			1	424.086	ppb	1.58	9,264,824.45	4.000E-01	Analog	0.10	3
Mo			1	98.747	ppb	0.84	446,017.13	1.926E-02	Pulse	0.10	3
Ag			1	98.113	ppb	1.83	1,010,081.26	4.631E-02	Pulse	0.10	3
Sn			1	101.300	ppb	1.36	582,872.15	2.672E-02	Pulse	0.10	3
Sb			1	91.188	ppb	1.83	680,112.67	2.372E-02	Pulse	0.10	3
Ba			1	112.099	ppb	1.79	291,814.90	1.018E-02	Pulse	0.10	3
Tl			1	99.217	ppb	0.66	1,522,869.40	9.837E-02	Analog	0.10	3
Pb			1	97.232	ppb	0.78	497,239.43	3.212E-02	Pulse	0.10	3
Pb			1	99.224	ppb	1.12	430,557.83	2.781E-02	Pulse	0.10	3
Pb			1	99.682	ppb	0.30	1,986,652.95	1.283E-01	Analog	0.10	3
Na			2	29560.950	ppb	0.67	30,799,698.77	2.161E+01	Analog	0.30	3
Mg			2	9471.059	ppb	0.76	4,814,662.73	3.379E+00	Analog	0.30	3
Al			2	4243.614	ppb	1.22	917,891.07	6.442E-01	Pulse	0.30	3
K			2	11131.738	ppb	0.55	4,137,280.95	2.903E+00	Analog	0.30	3
Ca			2	47429.134	ppb	1.26	953,446.14	6.691E-01	Pulse	0.30	3
Ti			2	88.685	ppb	1.08	12,817.74	8.994E-03	Pulse	0.30	3
V			2	89.393	ppb	1.10	360,967.67	2.533E-01	Pulse	0.30	3
Cr			2	86.835	ppb	0.74	439,296.74	3.083E-01	Pulse	0.30	3
Mn			2	94.600	ppb	1.24	306,148.17	2.149E-01	Pulse	0.30	3
Fe			2	4207.480	ppb	0.66	18,925,132.58	1.328E+01	Analog	0.30	3
Co			2	86.505	ppb	1.40	739,095.09	5.187E-01	Pulse	0.30	3
Ni			2	89.493	ppb	1.24	192,340.64	1.350E-01	Pulse	0.30	3
Cu			2	111.989	ppb	1.48	616,455.84	4.326E-01	Pulse	0.30	3
Zn			2	81.727	ppb	1.87	76,180.30	5.347E-02	Pulse	0.30	3
As			2	85.772	ppb	0.88	36,177.82	2.539E-02	Pulse	1.00	3
Sn			2	87.331	ppb	0.98	170,570.49	3.479E-02	Pulse	0.30	3
Cd			2	83.736	ppb	1.38	86,602.81	1.766E-02	Pulse	0.30	3
Se			3	358.052	ppb	1.94	37,260.40	4.740E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,488,021.71	1.24	115.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,447,020.47	1.31	112.7	Analog	0.10	3
1	Ge		4,661,596.18	0.95	108.3	Analog	0.10	3
1	Rh		23,161,937.99	0.70	105.6	Analog	0.10	3
1	In		21,813,234.05	0.64	108.2	Analog	0.10	3
1	Tb		28,671,476.24	0.78	109.7	Analog	0.10	3
1	Ho		29,164,471.23	0.33	108.6	Analog	0.10	3
1	Bi		15,482,077.69	0.93	99.0	Analog	0.10	3
1	Ge		3,442,398.80	0.27	108.3	Analog	0.10	3
2	Sc		1,425,086.82	1.47	102.4	Analog	0.30	3
2	Ge		830,738.70	0.73	103.1	Pulse	0.30	3
2	Rh		13,233,299.47	1.30	96.1	Analog	0.30	3
2	In		4,903,566.64	1.67	98.4	Analog	0.30	3
2	Tb		15,935,349.37	1.80	102.7	Analog	0.30	3
2	Ho		16,219,916.58	2.04	102.4	Analog	0.30	3
2	Bi		9,388,232.13	1.05	92.6	Analog	0.30	3
2	Ge		566,403.07	0.81	102.9	Pulse	0.30	3
3	Sc		1,949,399.92	1.82	109.2	Analog	0.30	3
3	Ge		786,248.48	1.74	111.0	Pulse	0.30	3
3	Rh		3,978,860.40	1.54	102.6	Analog	0.30	3
3	Tb		8,451,229.39	2.60	103.9	Analog	0.30	3
3	Ge		542,130.69	1.33	111.4	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:48
Sample Name JD37967-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.007	ppb	10.32	137.33	6.732E-06	Pulse	0.25	3
B			1	107.421	ppb	2.36	549,257.31	2.694E-02	Pulse	0.15	3
Ca			1	43830.057	ppb	0.81	25,383,835.45	1.039E+00	Analog	0.10	3
Sr			1	323.249	ppb	0.37	7,105,976.35	3.049E-01	Analog	0.10	3
Mo			1	0.344	ppb	3.63	1,670.12	7.166E-05	Pulse	0.10	3
Ag			1	0.019	ppb	20.62	260.01	1.154E-05	Pulse	0.10	3
Sn			1	0.414	ppb	4.19	3,407.09	1.514E-04	Pulse	0.10	3
Sb			1	0.070	ppb	3.50	706.70	2.477E-05	Pulse	0.10	3
Ba			1	15.498	ppb	2.64	40,236.79	1.410E-03	Pulse	0.10	3
Tl			1	0.249	ppb	20.19	74,538.31	4.715E-03	Pulse	0.10	3
Pb			1	0.132	ppb	3.54	1,056.73	6.684E-05	Pulse	0.10	3
Pb			1	0.157	ppb	16.90	1,026.72	6.498E-05	Pulse	0.10	3
Pb			1	0.169	ppb	9.35	4,807.11	3.040E-04	Pulse	0.10	3
Na			2	25019.743	ppb	0.91	26,288,414.51	1.829E+01	Analog	0.30	3
Mg			2	5328.577	ppb	0.88	2,733,192.53	1.902E+00	Analog	0.30	3
Al			2	-10.758	ppb	-2.74	1,118.93	7.790E-04	Pulse	0.30	3
K			2	6924.218	ppb	0.74	2,599,174.20	1.809E+00	Analog	0.30	3
Ca			2	40669.665	ppb	1.25	824,539.55	5.738E-01	Pulse	0.30	3
Ti			2	0.281	ppb	17.11	44.45	3.093E-05	Pulse	0.30	3
V			2	1.418	ppb	5.92	8,129.59	5.659E-03	Pulse	0.30	3
Cr			2	0.476	ppb	5.29	2,729.11	1.900E-03	Pulse	0.30	3
Mn			2	9.594	ppb	0.21	31,638.84	2.201E-02	Pulse	0.30	3
Fe			2	237.199	ppb	0.76	1,088,128.08	7.571E-01	Pulse	0.30	3
Co			2	0.370	ppb	29.18	37,173.97	2.587E-02	Pulse	0.30	3
Ni			2	5.005	ppb	3.05	10,937.74	7.612E-03	Pulse	0.30	3
Cu			2	30.108	ppb	1.58	163,534.79	1.138E-01	Pulse	0.30	3
Zn			2	13.461	ppb	1.06	12,271.89	8.539E-03	Pulse	0.30	3
As			2	8.019	ppb	0.52	3,466.33	2.412E-03	Pulse	1.00	3
Sn			2	0.365	ppb	8.82	1,042.26	2.104E-04	Pulse	0.30	3
Cd			2	-0.018	ppb	-8.89	9.80	1.981E-06	Pulse	0.30	3
Se			3	0.163	ppb	64.19	38.67	4.985E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,394,059.13	1.65	114.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,442,213.80	0.71	112.7	Analog	0.10	3
1	Ge		4,697,521.39	0.43	109.2	Analog	0.10	3
1	Rh		23,302,385.48	0.56	106.2	Analog	0.10	3
1	In		22,498,827.23	1.27	111.6	Analog	0.10	3
1	Tb		28,535,690.41	1.58	109.2	Analog	0.10	3
1	Ho		29,444,457.89	0.09	109.6	Analog	0.10	3
1	Bi		15,809,897.26	0.70	101.1	Analog	0.10	3
1	Ge		3,457,124.63	0.65	108.7	Analog	0.10	3
2	Sc		1,437,306.09	2.16	103.3	Analog	0.30	3
2	Ge		810,098.02	0.94	100.5	Pulse	0.30	3
2	Rh		13,373,597.80	1.70	97.1	Analog	0.30	3
2	In		4,954,180.67	2.18	99.4	Analog	0.30	3
2	Tb		15,916,616.03	1.80	102.5	Analog	0.30	3
2	Ho		16,346,177.13	1.92	103.2	Analog	0.30	3
2	Bi		9,568,262.68	2.17	94.4	Analog	0.30	3
2	Ge		554,708.09	0.75	100.8	Pulse	0.30	3
3	Sc		1,979,569.72	1.10	110.9	Analog	0.30	3
3	Ge		776,222.73	0.62	109.6	Pulse	0.30	3
3	Rh		4,062,688.59	1.18	104.8	Analog	0.30	3
3	Tb		8,528,450.77	0.04	104.8	Analog	0.30	3
3	Ge		534,964.44	0.97	110.0	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:51
Sample Name MP30757-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.046	ppb	-22.39	46.67	2.247E-06	Pulse	0.25	3
B			1	112.405	ppb	1.60	120,324.90	5.803E-03	Pulse	0.15	3
Ca			1	43815.017	ppb	0.75	5,260,287.94	2.084E-01	Analog	0.10	3
Sr			1	319.353	ppb	0.48	1,478,250.03	6.039E-02	Analog	0.10	3
Mo			1	0.293	ppb	26.58	390.01	1.594E-05	Pulse	0.10	3
Ag			1	0.040	ppb	57.74	153.34	6.604E-06	Pulse	0.10	3
Sn			1	-0.120	ppb	-43.70	840.04	3.609E-05	Pulse	0.10	3
Sb			1	0.043	ppb	39.30	250.01	8.731E-06	Pulse	0.10	3
Ba			1	15.479	ppb	4.92	8,145.47	2.846E-04	Pulse	0.10	3
Tl			1	0.373	ppb	109.70	75,094.03	4.550E-03	Pulse	0.10	3
Pb			1	0.033	ppb	5.73	420.02	2.545E-05	Pulse	0.10	3
Pb			1	0.017	ppb	529.36	363.35	2.202E-05	Pulse	0.10	3
Pb			1	0.072	ppb	58.51	1,743.43	1.056E-04	Pulse	0.10	3
Na			2	24744.567	ppb	0.43	5,611,305.47	3.624E+00	Analog	0.30	3
Mg			2	5351.800	ppb	1.33	593,939.99	3.836E-01	Pulse	0.30	3
Al			2	-69.428	ppb	-1.32	473.34	3.060E-04	Pulse	0.30	3
K			2	7002.332	ppb	0.88	575,092.81	3.714E-01	Pulse	0.30	3
Ca			2	41115.182	ppb	0.77	179,878.78	1.162E-01	Pulse	0.30	3
Ti			2	0.127	ppb	124.22	7.78	4.997E-06	Pulse	0.30	3
V			2	-0.106	ppb	-57.54	2,489.08	1.608E-03	Pulse	0.30	3
Cr			2	0.451	ppb	12.25	824.47	5.325E-04	Pulse	0.30	3
Mn			2	9.216	ppb	1.52	6,859.08	4.429E-03	Pulse	0.30	3
Fe			2	232.329	ppb	1.59	240,767.50	1.555E-01	Pulse	0.30	3
Co			2	0.339	ppb	103.05	37,376.55	2.414E-02	Pulse	0.30	3
Ni			2	4.990	ppb	2.16	2,431.29	1.570E-03	Pulse	0.30	3
Cu			2	35.766	ppb	0.62	37,807.11	2.442E-02	Pulse	0.30	3
Zn			2	19.398	ppb	0.84	3,457.01	2.233E-03	Pulse	0.30	3
As			2	9.321	ppb	4.62	917.69	5.929E-04	Pulse	1.00	3
Sn			2	-0.081	ppb	-54.80	321.12	5.904E-05	Pulse	0.30	3
Cd			2	-0.097	ppb	-31.12	8.54	1.565E-06	Pulse	0.30	3
Se			3	0.045	ppb	342.46	23.33	2.943E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,737,298.56	1.70	116.7	Analog	0.10	3
1	Sc		25,242,981.29	0.31	116.4	Analog	0.10	3
1	Ge		4,984,992.64	0.76	115.9	Analog	0.10	3

Quantitation Report

1	Rh		24,479,613.80	0.93	111.6	Analog	0.10	3
1	In		23,263,314.64	0.93	115.4	Analog	0.10	3
1	Tb		28,623,048.74	1.16	109.5	Analog	0.10	3
1	Ho		29,299,281.23	0.76	109.1	Analog	0.10	3
1	Bi		16,505,770.17	0.50	105.6	Analog	0.10	3
1	Ge		3,649,145.26	0.29	114.8	Analog	0.10	3
2	Sc		1,548,409.90	1.50	111.3	Analog	0.30	3
2	Ge		907,356.39	0.75	112.6	Pulse	0.30	3
2	Rh		14,741,183.30	1.74	107.0	Analog	0.30	3
2	In		5,439,976.67	2.26	109.1	Analog	0.30	3
2	Tb		16,708,321.56	2.23	107.6	Analog	0.30	3
2	Ho		16,968,181.55	1.83	107.1	Analog	0.30	3
2	Bi		10,618,818.74	1.24	104.8	Analog	0.30	3
2	Ge		614,760.05	0.51	111.7	Pulse	0.30	3
3	Sc		1,994,124.85	0.15	111.7	Analog	0.30	3
3	Ge		792,929.10	0.63	112.0	Pulse	0.30	3
3	Rh		4,167,547.20	0.51	107.5	Analog	0.30	3
3	Tb		8,416,710.50	0.81	103.4	Analog	0.30	3
3	Ge		544,812.43	1.14	112.0	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:54
Sample Name MP30757-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	93.650	ppb	2.30	526,697.75	2.576E-02	Pulse	0.25	3
B			1	200.471	ppb	2.38	1,024,031.76	5.009E-02	Pulse	0.15	3
Ca			1	46807.516	ppb	1.15	27,528,937.09	1.109E+00	Analog	0.10	3
Sr			1	412.359	ppb	0.53	9,104,275.70	3.890E-01	Analog	0.10	3
Mo			1	96.431	ppb	1.17	440,191.26	1.881E-02	Pulse	0.10	3
Ag			1	62.498	ppb	1.80	653,692.99	2.950E-02	Pulse	0.10	3
Sn			1	96.226	ppb	1.50	562,568.26	2.539E-02	Pulse	0.10	3
Sb			1	88.565	ppb	0.54	660,591.24	2.304E-02	Pulse	0.10	3
Ba			1	113.819	ppb	1.30	296,331.04	1.033E-02	Pulse	0.10	3
Tl			1	103.356	ppb	0.81	1,598,444.72	1.023E-01	Analog	0.10	3
Pb			1	99.090	ppb	1.13	511,512.26	3.273E-02	Pulse	0.10	3
Pb			1	101.703	ppb	1.28	445,442.58	2.850E-02	Pulse	0.10	3
Pb			1	102.304	ppb	0.47	2,057,982.90	1.317E-01	Analog	0.10	3
Na			2	28531.012	ppb	1.05	29,958,597.70	2.086E+01	Analog	0.30	3
Mg			2	9457.027	ppb	1.68	4,845,197.59	3.374E+00	Analog	0.30	3
Al			2	4552.911	ppb	2.15	992,207.53	6.909E-01	Pulse	0.30	3
K			2	10891.627	ppb	1.65	4,079,777.76	2.841E+00	Analog	0.30	3
Ca			2	44585.179	ppb	1.26	903,374.93	6.290E-01	Pulse	0.30	3
Ti			2	85.658	ppb	2.12	12,475.28	8.687E-03	Pulse	0.30	3
V			2	92.133	ppb	2.36	374,830.17	2.610E-01	Pulse	0.30	3
Cr			2	90.315	ppb	2.23	460,417.97	3.206E-01	Pulse	0.30	3
Mn			2	97.722	ppb	1.89	318,710.72	2.219E-01	Pulse	0.30	3
Fe			2	4477.705	ppb	0.91	20,299,404.19	1.413E+01	Analog	0.30	3
Co			2	88.821	ppb	2.55	763,892.49	5.320E-01	Pulse	0.30	3
Ni			2	91.680	ppb	2.84	198,544.43	1.383E-01	Pulse	0.30	3
Cu			2	111.955	ppb	2.14	621,073.08	4.325E-01	Pulse	0.30	3
Zn			2	84.627	ppb	2.14	79,518.60	5.537E-02	Pulse	0.30	3
As			2	83.982	ppb	1.93	35,699.89	2.486E-02	Pulse	1.00	3
Sn			2	83.751	ppb	0.85	165,287.66	3.336E-02	Pulse	0.30	3
Cd			2	84.693	ppb	0.89	88,506.31	1.787E-02	Pulse	0.30	3
Se			3	366.865	ppb	0.40	37,927.41	4.857E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,445,384.18	0.79	115.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,823,347.13	1.25	114.4	Analog	0.10	3
1	Ge		4,712,969.10	1.53	109.5	Analog	0.10	3
1	Rh		23,406,672.98	0.69	106.7	Analog	0.10	3
1	In		22,161,253.24	1.08	109.9	Analog	0.10	3
1	Tb		28,671,278.74	0.82	109.7	Analog	0.10	3
1	Ho		29,286,145.40	0.76	109.0	Analog	0.10	3
1	Bi		15,627,408.10	0.17	100.0	Analog	0.10	3
1	Ge		3,512,321.09	0.15	110.5	Analog	0.10	3
2	Sc		1,436,568.69	2.82	103.2	Analog	0.30	3
2	Ge		825,730.82	1.07	102.4	Pulse	0.30	3
2	Rh		13,302,359.75	2.01	96.6	Analog	0.30	3
2	In		4,954,494.10	1.79	99.4	Analog	0.30	3
2	Tb		15,916,154.37	2.00	102.5	Analog	0.30	3
2	Ho		16,275,602.68	1.27	102.7	Analog	0.30	3
2	Bi		9,406,358.52	1.31	92.8	Analog	0.30	3
2	Ge		565,738.43	1.11	102.8	Pulse	0.30	3
3	Sc		1,966,009.02	0.49	110.2	Analog	0.30	3
3	Ge		780,938.81	0.47	110.3	Pulse	0.30	3
3	Rh		3,955,951.09	0.37	102.0	Analog	0.30	3
3	Tb		8,447,984.11	0.32	103.8	Analog	0.30	3
3	Ge		539,641.67	0.42	110.9	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 13:57
Sample Name CCVA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	47.440	ppb	3.56	543,156.39	2.610E-02	Pulse	0.25	3
B			1	100.377	ppb	3.12	1,043,819.75	5.016E-02	Pulse	0.15	3
Ca			1	5002.481	ppb	2.94	6,082,979.70	2.378E-01	Analog	0.10	3
Sr			1	49.523	ppb	0.39	2,305,459.44	9.355E-02	Analog	0.10	3
Mo			1	49.172	ppb	4.08	472,619.77	1.918E-02	Pulse	0.10	3
Ag			1	51.227	ppb	2.79	1,111,661.24	4.836E-02	Mix	0.10	3
Sn			1	50.509	ppb	3.50	612,605.46	2.665E-02	Pulse	0.10	3
Sb			1	49.475	ppb	2.62	752,842.38	2.574E-02	Pulse	0.10	3
Ba			1	49.052	ppb	3.59	260,553.06	8.908E-03	Pulse	0.10	3
Tl			1	50.104	ppb	1.69	1,630,409.77	9.930E-02	Analog	0.10	3
Pb			1	48.042	ppb	3.56	521,074.47	3.174E-02	Pulse	0.10	3
Pb			1	49.002	ppb	4.00	450,950.22	2.747E-02	Pulse	0.10	3
Pb			1	49.010	ppb	3.04	2,071,544.10	1.262E-01	Analog	0.10	3
Na			2	4974.650	ppb	3.44	11,376,506.21	7.278E+00	Analog	0.30	3
Mg			2	4912.576	ppb	3.48	5,478,552.28	3.505E+00	Analog	0.30	3
Al			2	4860.350	ppb	3.07	2,301,755.60	1.472E+00	Analog	0.30	3
K			2	4922.941	ppb	2.44	4,015,814.70	2.569E+00	Analog	0.30	3
Ca			2	5422.707	ppb	3.64	239,393.24	1.532E-01	Pulse	0.30	3
Ti			2	48.831	ppb	5.19	15,477.51	9.905E-03	Pulse	0.30	3
V			2	48.291	ppb	3.67	427,575.13	2.736E-01	Pulse	0.30	3
Cr			2	47.444	ppb	3.67	526,507.46	3.369E-01	Pulse	0.30	3
Mn			2	46.875	ppb	3.50	332,814.01	2.129E-01	Pulse	0.30	3
Fe			2	4684.951	ppb	2.39	46,218,337.05	2.956E+01	Analog	0.30	3
Co			2	47.639	ppb	4.01	889,173.64	5.689E-01	Pulse	0.30	3
Ni			2	46.908	ppb	4.03	221,156.56	1.415E-01	Pulse	0.30	3
Cu			2	46.857	ppb	3.61	564,998.82	3.615E-01	Pulse	0.30	3
Zn			2	45.507	ppb	3.93	93,118.63	5.958E-02	Pulse	0.30	3
As			2	49.397	ppb	2.78	45,703.35	2.924E-02	Pulse	1.00	3
Sn			2	48.646	ppb	3.75	208,339.09	3.875E-02	Pulse	0.30	3
Cd			2	48.813	ppb	3.09	110,729.97	2.059E-02	Pulse	0.30	3
Se			3	197.514	ppb	0.41	41,855.51	5.229E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,811,576.85	0.83	117.1	Analog	0.10	3
1	Sc		25,582,872.12	0.25	117.9	Analog	0.10	3
1	Ge		4,986,078.47	0.29	115.9	Analog	0.10	3

Quantitation Report

1	Rh		24,643,282.97	0.66	112.3	Analog	0.10	3
1	In		22,991,099.34	1.01	114.0	Analog	0.10	3
1	Tb		29,242,177.90	0.95	111.9	Analog	0.10	3
1	Ho		29,587,014.56	0.09	110.1	Analog	0.10	3
1	Bi		16,418,719.76	0.58	105.0	Analog	0.10	3
1	Ge		3,684,814.95	0.90	115.9	Analog	0.10	3
2	Sc		1,563,864.14	2.20	112.4	Analog	0.30	3
2	Ge		927,167.81	1.18	115.0	Pulse	0.30	3
2	Rh		14,442,934.43	2.21	104.8	Analog	0.30	3
2	In		5,379,009.56	1.76	107.9	Analog	0.30	3
2	Tb		16,659,426.56	1.50	107.3	Analog	0.30	3
2	Ho		17,051,356.54	2.05	107.6	Analog	0.30	3
2	Bi		10,324,020.70	1.56	101.9	Analog	0.30	3
2	Ge		644,939.96	0.86	117.2	Pulse	0.30	3
3	Sc		1,984,533.05	0.88	111.2	Analog	0.30	3
3	Ge		800,406.41	0.28	113.0	Pulse	0.30	3
3	Rh		4,075,666.50	0.61	105.1	Analog	0.30	3
3	Tb		8,348,012.17	0.62	102.6	Analog	0.30	3
3	Ge		552,248.69	0.49	113.5	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:00
Sample Name CCB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.001	ppb	543.39	105.33	5.076E-06	Pulse	0.25	3
B			1	2.498	ppb	4.64	30,194.91	1.453E-03	Pulse	0.15	3
Ca			1	-0.640	ppb	-79.64	22,921.05	9.016E-04	Pulse	0.10	3
Sr			1	0.000	ppb	728.06	4,120.58	1.669E-04	Pulse	0.10	3
Mo			1	0.066	ppb	15.17	750.04	3.038E-05	Pulse	0.10	3
Ag			1	0.007	ppb	4.25	226.68	9.845E-06	Pulse	0.10	3
Sn			1	0.053	ppb	28.11	1,623.45	7.053E-05	Pulse	0.10	3
Sb			1	0.022	ppb	8.16	510.02	1.771E-05	Pulse	0.10	3
Ba			1	-0.008	ppb	-54.32	63.33	2.205E-06	Pulse	0.10	3
Tl			1	0.015	ppb	221.23	74,655.57	4.508E-03	Pulse	0.10	3
Pb			1	-0.002	ppb	-242.65	366.68	2.215E-05	Pulse	0.10	3
Pb			1	0.010	ppb	50.53	440.02	2.658E-05	Pulse	0.10	3
Pb			1	0.006	ppb	37.53	1,680.08	1.015E-04	Pulse	0.10	3
Na			2	0.020	ppb	451.06	11,196.65	7.047E-03	Pulse	0.30	3
Mg			2	0.300	ppb	99.16	3,534.80	2.224E-03	Pulse	0.30	3
Al			2	-6.751	ppb	-2.31	577.79	3.641E-04	Pulse	0.30	3
K			2	1.361	ppb	10.51	12,371.88	7.787E-03	Pulse	0.30	3
Ca			2	-0.366	ppb	-254.00	313.34	1.975E-04	Pulse	0.30	3
Ti			2	0.026	ppb	91.71	12.22	7.675E-06	Pulse	0.30	3
V			2	0.005	ppb	256.93	2,695.77	1.697E-03	Pulse	0.30	3
Cr			2	0.003	ppb	103.81	365.56	2.303E-04	Pulse	0.30	3
Mn			2	0.034	ppb	11.18	641.13	4.034E-04	Pulse	0.30	3
Fe			2	1.759	ppb	15.00	31,814.87	2.004E-02	Pulse	0.30	3
Co			2	0.026	ppb	63.51	38,211.02	2.406E-02	Pulse	0.30	3
Ni			2	-0.011	ppb	-17.21	52.22	3.292E-05	Pulse	0.30	3
Cu			2	0.571	ppb	0.75	1,612.30	1.015E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.360	ppb	1.17	244.45	1.538E-04	Pulse	0.30	3
As			2	-0.010	ppb	-66.27	57.67	3.632E-05	Pulse	1.00	3
Sn			2	0.054	ppb	32.33	605.57	1.088E-04	Pulse	0.30	3
Cd			2	-0.007	ppb	-29.07	13.98	2.512E-06	Pulse	0.30	3
Se			3	0.040	ppb	70.41	30.67	3.879E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,791,911.80	1.07	117.0	Analog	0.10	3
1	Sc		25,423,603.79	0.72	117.2	Analog	0.10	3
1	Ge		4,960,857.95	0.96	115.3	Analog	0.10	3
1	Rh		24,695,923.80	0.22	112.6	Analog	0.10	3
1	In		23,026,197.97	0.59	114.2	Analog	0.10	3
1	Tb		28,797,530.40	1.48	110.2	Analog	0.10	3
1	Ho		29,197,476.23	0.96	108.7	Analog	0.10	3
1	Bi		16,562,544.75	0.91	106.0	Analog	0.10	3
1	Ge		3,651,482.65	0.56	114.9	Analog	0.10	3
2	Sc		1,588,596.57	1.40	114.2	Analog	0.30	3
2	Ge		915,536.91	0.76	113.6	Pulse	0.30	3
2	Rh		15,032,288.85	0.85	109.1	Analog	0.30	3
2	In		5,564,996.45	1.51	111.6	Analog	0.30	3
2	Tb		16,772,191.56	1.70	108.0	Analog	0.30	3
2	Ho		17,207,709.32	2.41	108.6	Analog	0.30	3
2	Bi		10,773,995.40	1.20	106.3	Analog	0.30	3
2	Ge		620,893.76	0.95	112.8	Pulse	0.30	3
3	Sc		2,010,767.84	0.52	112.7	Analog	0.30	3
3	Ge		789,954.86	0.85	111.6	Pulse	0.30	3
3	Rh		4,188,692.75	0.58	108.0	Analog	0.30	3
3	Tb		8,332,174.95	0.60	102.4	Analog	0.30	3
3	Ge		541,739.75	1.21	111.3	Pulse	0.30	3

Quantitation Report

File Name 042SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:03
Sample Name MP30647-MB1 8
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-84.72	77.33	3.618E-06	Pulse	0.25	3
B			1	1.288	ppb	4.20	18,215.34	8.501E-04	Pulse	0.15	3
Ca			1	-1.198	ppb	-16.57	22,870.92	8.752E-04	Pulse	0.10	3
Sr			1	-0.001	ppb	-224.65	4,143.91	1.637E-04	Pulse	0.10	3
Mo			1	0.011	ppb	13.31	223.34	8.821E-06	Pulse	0.10	3
Ag			1	0.002	ppb	47.41	116.67	5.017E-06	Pulse	0.10	3
Sn			1	0.005	ppb	163.48	1,053.39	4.522E-05	Pulse	0.10	3
Sb			1	0.002	ppb	217.51	223.34	7.696E-06	Pulse	0.10	3
Ba			1	0.006	ppb	167.65	136.67	4.705E-06	Pulse	0.10	3
Tl			1	-0.035	ppb	-17.09	74,012.26	4.414E-03	Pulse	0.10	3
Pb			1	-0.004	ppb	-140.50	350.01	2.087E-05	Pulse	0.10	3
Pb			1	-0.005	ppb	-114.28	310.01	1.849E-05	Pulse	0.10	3
Pb			1	-0.003	ppb	-69.30	1,336.72	7.972E-05	Pulse	0.10	3
Na			2	-0.339	ppb	-22.64	10,452.90	6.521E-03	Pulse	0.30	3
Mg			2	0.041	ppb	278.17	3,269.19	2.040E-03	Pulse	0.30	3
Al			2	-7.081	ppb	-0.86	423.34	2.641E-04	Pulse	0.30	3
K			2	1.277	ppb	42.58	12,414.13	7.744E-03	Pulse	0.30	3
Ca			2	-0.901	ppb	-50.64	292.23	1.824E-04	Pulse	0.30	3
Ti			2	0.005	ppb	115.38	5.56	3.469E-06	Pulse	0.30	3
V			2	-0.006	ppb	-57.78	2,620.20	1.635E-03	Pulse	0.30	3
Cr			2	0.005	ppb	68.06	395.56	2.467E-04	Pulse	0.30	3
Mn			2	-0.012	ppb	-69.48	306.67	1.913E-04	Pulse	0.30	3
Fe			2	0.255	ppb	38.54	16,907.69	1.055E-02	Pulse	0.30	3
Co			2	-0.014	ppb	-332.15	37,806.92	2.359E-02	Pulse	0.30	3
Ni			2	-0.003	ppb	-76.25	93.33	5.825E-05	Pulse	0.30	3
Cu			2	0.501	ppb	0.28	743.36	4.638E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.380	ppb	5.65	287.78	1.797E-04	Pulse	0.30	3
As			2	-0.014	ppb	-50.21	54.33	3.391E-05	Pulse	1.00	3
Sn			2	0.008	ppb	34.49	400.01	7.177E-05	Pulse	0.30	3
Cd			2	-0.010	ppb	-8.02	8.66	1.552E-06	Pulse	0.30	3
Se			3	0.000	ppb	-5994.55	22.00	2.819E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		21,433,353.08	1.55	120.6	Analog	0.10	3
1	Sc		26,135,856.28	1.71	120.5	Analog	0.10	3
1	Ge		5,067,136.69	0.70	117.8	Analog	0.10	3
1	Rh		25,317,052.96	0.59	115.4	Analog	0.10	3
1	In		23,295,742.29	1.23	115.5	Analog	0.10	3
1	Tb		29,060,175.40	0.64	111.2	Analog	0.10	3
1	Ho		29,542,586.23	0.71	110.0	Analog	0.10	3
1	Bi		16,768,517.67	0.13	107.3	Analog	0.10	3
1	Ge		3,705,836.82	0.11	116.6	Analog	0.10	3
2	Sc		1,602,896.43	0.83	115.2	Analog	0.30	3
2	Ge		912,838.30	0.70	113.2	Pulse	0.30	3
2	Rh		15,071,316.07	0.74	109.4	Analog	0.30	3
2	In		5,574,393.13	1.57	111.8	Analog	0.30	3
2	Tb		16,808,755.44	1.72	108.3	Analog	0.30	3
2	Ho		17,119,187.10	0.81	108.0	Analog	0.30	3
2	Bi		10,791,134.30	0.86	106.5	Analog	0.30	3
2	Ge		620,878.92	1.13	112.8	Pulse	0.30	3
3	Sc		1,980,172.35	0.60	111.0	Analog	0.30	3
3	Ge		779,899.80	1.55	110.1	Pulse	0.30	3
3	Rh		4,188,432.89	0.20	108.0	Analog	0.30	3
3	Tb		8,234,132.17	0.67	101.2	Analog	0.30	3
3	Ge		536,014.28	1.58	110.2	Pulse	0.30	3

Quantitation Report

File Name 043SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:06
Sample Name MP30647-B1
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	78.831	ppb	2.81	920,500.40	4.337E-02	Pulse	0.25	3
B			1	82.102	ppb	3.48	871,538.78	4.107E-02	Pulse	0.15	3
Ca			1	2173.685	ppb	1.57	2,672,407.56	1.039E-01	Analog	0.10	3
Sr			1	81.711	ppb	1.34	3,874,276.09	1.543E-01	Analog	0.10	3
Mo			1	78.427	ppb	3.32	768,208.37	3.059E-02	Pulse	0.10	3
Ag			1	80.872	ppb	3.31	1,759,813.62	7.634E-02	Analog	0.10	3
Sn			1	82.273	ppb	4.22	1,000,019.83	4.338E-02	Pulse	0.10	3
Sb			1	82.704	ppb	1.65	1,244,014.07	4.303E-02	Analog	0.10	3
Ba			1	82.148	ppb	3.54	431,267.51	1.492E-02	Pulse	0.10	3
Tl			1	83.179	ppb	3.35	2,687,423.19	1.619E-01	Analog	0.10	3
Pb			1	78.963	ppb	4.41	865,654.39	5.215E-02	Pulse	0.10	3
Pb			1	80.961	ppb	4.66	753,030.75	4.537E-02	Pulse	0.10	3
Pb			1	81.864	ppb	3.56	3,497,507.03	2.107E-01	Analog	0.10	3
Na			2	2110.273	ppb	1.87	4,748,240.23	3.092E+00	Analog	0.30	3
Mg			2	2116.403	ppb	0.97	2,321,059.21	1.511E+00	Analog	0.30	3
Al			2	2182.525	ppb	1.99	1,017,587.56	6.625E-01	Pulse	0.30	3
K			2	2141.024	ppb	0.71	1,722,134.10	1.121E+00	Analog	0.30	3
Ca			2	2713.388	ppb	1.99	117,866.08	7.674E-02	Pulse	0.30	3
Ti			2	82.435	ppb	2.08	25,679.67	1.672E-02	Pulse	0.30	3
V			2	82.650	ppb	1.55	717,290.72	4.670E-01	Pulse	0.30	3
Cr			2	81.501	ppb	2.25	888,497.99	5.785E-01	Pulse	0.30	3
Mn			2	81.299	ppb	2.53	566,903.19	3.691E-01	Pulse	0.30	3
Fe			2	2019.842	ppb	0.90	19,585,792.56	1.275E+01	Analog	0.30	3
Co			2	82.708	ppb	1.70	1,490,192.34	9.702E-01	Analog	0.30	3
Ni			2	81.693	ppb	2.32	378,411.35	2.464E-01	Pulse	0.30	3
Cu			2	80.562	ppb	2.14	958,344.44	6.240E-01	Pulse	0.30	3
Zn			2	81.030	ppb	2.12	163,317.98	1.063E-01	Pulse	0.30	3
As			2	82.338	ppb	1.67	74,808.12	4.871E-02	Pulse	1.00	3
Sn			2	79.813	ppb	3.63	345,561.27	6.353E-02	Pulse	0.30	3
Cd			2	81.865	ppb	3.73	187,828.53	3.453E-02	Pulse	0.30	3
Se			3	202.985	ppb	1.47	42,939.96	5.374E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		21,226,596.48	2.61	119.4	Analog	0.10	3
1	Sc		25,733,604.62	0.60	118.6	Analog	0.10	3
1	Ge		4,977,765.76	0.03	115.7	Analog	0.10	3

Quantitation Report

1	Rh		25,115,442.13	0.40	114.5	Analog	0.10	3
1	In		23,055,185.19	1.15	114.3	Analog	0.10	3
1	Tb		28,913,931.23	0.87	110.6	Analog	0.10	3
1	Ho		29,517,541.23	0.86	109.9	Analog	0.10	3
1	Bi		16,602,263.09	0.86	106.2	Analog	0.10	3
1	Ge		3,730,461.40	0.41	117.3	Analog	0.10	3
2	Sc		1,536,020.88	0.70	110.4	Analog	0.30	3
2	Ge		931,157.15	0.90	115.5	Pulse	0.30	3
2	Rh		14,550,612.76	1.98	105.6	Analog	0.30	3
2	In		5,441,939.67	2.16	109.2	Analog	0.30	3
2	Tb		16,569,831.01	2.05	106.7	Analog	0.30	3
2	Ho		16,985,302.10	1.94	107.2	Analog	0.30	3
2	Bi		10,466,963.19	0.65	103.3	Analog	0.30	3
2	Ge		637,351.11	0.79	115.8	Pulse	0.30	3
3	Sc		1,963,155.76	1.49	110.0	Analog	0.30	3
3	Ge		799,076.97	0.94	112.9	Pulse	0.30	3
3	Rh		4,086,215.81	1.63	105.4	Analog	0.30	3
3	Tb		8,198,056.62	0.90	100.8	Analog	0.30	3
3	Ge		547,869.74	0.68	112.6	Pulse	0.30	3

Quantitation Report

File Name 044SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:09
Sample Name MP30647-S1
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	84.397	ppb	3.88	909,826.44	4.643E-02	Pulse	0.25	3
B			1	132.329	ppb	2.93	1,294,447.80	6.606E-02	Analog	0.15	3
Ca			1	37425.468	ppb	1.25	43,980,874.35	1.773E+00	Analog	0.10	3
Sr			1	208.771	ppb	1.69	8,950,595.07	3.939E-01	Analog	0.10	3
Mo			1	0.508	ppb	3.38	4,604.04	2.026E-04	Pulse	0.10	3
Ag			1	0.010	ppb	28.66	263.34	1.189E-05	Pulse	0.10	3
Sn			1	0.047	ppb	26.47	1,490.11	6.715E-05	Pulse	0.10	3
Sb			1	0.195	ppb	11.82	3,000.34	1.079E-04	Pulse	0.10	3
Ba			1	147.116	ppb	4.09	742,451.71	2.671E-02	Pulse	0.10	3
Tl			1	86.540	ppb	2.30	2,568,555.17	1.683E-01	Analog	0.10	3
Pb			1	81.726	ppb	3.28	823,934.03	5.398E-02	Pulse	0.10	3
Pb			1	84.067	ppb	3.80	719,105.25	4.711E-02	Pulse	0.10	3
Pb			1	83.637	ppb	3.61	3,286,134.15	2.153E-01	Analog	0.10	3
Na			2	49365.315	ppb	2.48	115,452,182.08	7.216E+01	Analog	0.30	3
Mg			2	6643.125	ppb	1.44	7,582,138.59	4.739E+00	Analog	0.30	3
Al			2	13.048	ppb	3.99	10,162.76	6.352E-03	Pulse	0.30	3
K			2	2150.504	ppb	0.63	1,801,836.87	1.126E+00	Analog	0.30	3
Ca			2	39346.949	ppb	1.68	1,776,014.86	1.110E+00	Analog	0.30	3
Ti			2	0.221	ppb	35.20	75.56	4.723E-05	Pulse	0.30	3
V			2	84.185	ppb	2.38	760,972.23	4.756E-01	Pulse	0.30	3
Cr			2	80.306	ppb	2.63	911,936.70	5.700E-01	Pulse	0.30	3
Mn			2	80.126	ppb	3.17	581,982.74	3.638E-01	Pulse	0.30	3
Fe			2	4.911	ppb	5.80	63,876.00	3.993E-02	Pulse	0.30	3
Co			2	79.295	ppb	1.91	1,489,730.95	9.311E-01	Analog	0.30	3
Ni			2	77.271	ppb	3.04	372,831.16	2.330E-01	Pulse	0.30	3
Cu			2	76.245	ppb	2.43	944,463.36	5.903E-01	Pulse	0.30	3
Zn			2	417.061	ppb	3.26	877,696.21	5.486E-01	Pulse	0.30	3
As			2	0.801	ppb	7.42	824.02	5.152E-04	Pulse	1.00	3
Sn			2	0.052	ppb	4.16	571.12	1.066E-04	Pulse	0.30	3
Cd			2	83.049	ppb	2.90	187,628.54	3.503E-02	Pulse	0.30	3
Se			3	90.522	ppb	1.16	19,168.27	2.398E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,595,202.04	0.50	110.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,804,484.63	1.16	114.4	Analog	0.10	3
1	Ge		4,848,482.01	0.04	112.7	Analog	0.10	3
1	Rh		22,725,929.66	0.73	103.6	Analog	0.10	3
1	In		22,176,050.80	1.15	110.0	Analog	0.10	3
1	Tb		27,795,436.25	0.49	106.3	Analog	0.10	3
1	Ho		28,413,184.58	0.86	105.8	Analog	0.10	3
1	Bi		15,266,511.86	1.20	97.7	Analog	0.10	3
1	Ge		3,537,030.89	0.59	111.3	Analog	0.10	3
2	Sc		1,600,087.02	0.92	115.0	Analog	0.30	3
2	Ge		943,062.32	0.41	117.0	Pulse	0.30	3
2	Rh		13,867,453.34	2.24	100.7	Analog	0.30	3
2	In		5,357,494.89	1.54	107.5	Analog	0.30	3
2	Tb		16,414,766.57	2.08	105.7	Analog	0.30	3
2	Ho		16,774,873.78	2.05	105.9	Analog	0.30	3
2	Bi		9,687,202.11	1.61	95.6	Analog	0.30	3
2	Ge		642,295.08	0.15	116.7	Pulse	0.30	3
3	Sc		1,962,652.28	0.20	110.0	Analog	0.30	3
3	Ge		799,308.30	0.49	112.9	Pulse	0.30	3
3	Rh		3,935,048.32	1.31	101.5	Analog	0.30	3
3	Tb		8,285,792.45	0.01	101.8	Analog	0.30	3
3	Ge		549,071.89	0.68	112.9	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:13
Sample Name MP30647-S2
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	87.351	ppb	2.82	943,322.83	4.806E-02	Pulse	0.25	3
B			1	135.254	ppb	1.28	1,325,776.20	6.752E-02	Analog	0.15	3
Ca			1	38672.694	ppb	2.02	45,704,785.99	1.832E+00	Analog	0.10	3
Sr			1	219.343	ppb	3.88	9,378,343.82	4.138E-01	Analog	0.10	3
Mo			1	0.454	ppb	6.90	4,110.56	1.814E-04	Pulse	0.10	3
Ag			1	0.007	ppb	6.92	200.01	9.136E-06	Pulse	0.10	3
Sn			1	-0.014	ppb	-46.28	770.04	3.519E-05	Pulse	0.10	3
Sb			1	0.173	ppb	3.74	2,690.27	9.655E-05	Pulse	0.10	3
Ba			1	153.361	ppb	2.46	775,920.14	2.784E-02	Pulse	0.10	3
Tl			1	90.359	ppb	1.35	2,647,053.50	1.755E-01	Analog	0.10	3
Pb			1	86.937	ppb	2.48	866,026.91	5.742E-02	Pulse	0.10	3
Pb			1	88.880	ppb	2.58	751,191.74	4.980E-02	Pulse	0.10	3
Pb			1	89.157	ppb	2.21	3,461,047.63	2.295E-01	Analog	0.10	3
Na			2	50951.883	ppb	2.13	118,338,257.52	7.448E+01	Analog	0.30	3
Mg			2	6835.681	ppb	2.18	7,747,495.80	4.876E+00	Analog	0.30	3
Al			2	13.975	ppb	3.04	10,538.52	6.633E-03	Pulse	0.30	3
K			2	2201.433	ppb	1.58	1,831,349.16	1.153E+00	Analog	0.30	3
Ca			2	40255.596	ppb	1.53	1,804,477.36	1.136E+00	Analog	0.30	3
Ti			2	0.239	ppb	13.24	81.11	5.096E-05	Pulse	0.30	3
V			2	86.528	ppb	2.73	776,622.35	4.888E-01	Pulse	0.30	3
Cr			2	82.787	ppb	3.08	933,516.94	5.876E-01	Pulse	0.30	3
Mn			2	82.679	ppb	3.00	596,326.14	3.754E-01	Pulse	0.30	3
Fe			2	4.466	ppb	13.66	58,922.26	3.712E-02	Pulse	0.30	3
Co			2	81.035	ppb	1.03	1,511,254.78	9.510E-01	Analog	0.30	3
Ni			2	79.341	ppb	3.89	380,104.91	2.393E-01	Pulse	0.30	3
Cu			2	78.042	ppb	2.94	960,080.17	6.043E-01	Pulse	0.30	3
Zn			2	429.354	ppb	3.11	897,283.71	5.648E-01	Pulse	0.30	3
As			2	0.807	ppb	9.61	824.02	5.191E-04	Pulse	1.00	3
Sn			2	-0.017	ppb	-17.11	276.67	5.203E-05	Pulse	0.30	3
Cd			2	86.344	ppb	4.02	193,514.09	3.642E-02	Pulse	0.30	3
Se			3	92.024	ppb	0.62	19,307.75	2.438E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,632,382.09	1.99	110.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,950,957.96	0.84	115.0	Analog	0.10	3
1	Ge		4,763,219.72	0.84	110.7	Analog	0.10	3
1	Rh		22,669,672.16	0.93	103.3	Analog	0.10	3
1	In		21,891,676.53	0.74	108.6	Analog	0.10	3
1	Tb		27,868,332.09	0.63	106.6	Analog	0.10	3
1	Ho		28,602,027.91	0.37	106.5	Analog	0.10	3
1	Bi		15,084,924.78	1.20	96.5	Analog	0.10	3
1	Ge		3,529,732.86	0.20	111.0	Analog	0.10	3
2	Sc		1,589,226.98	1.85	114.2	Analog	0.30	3
2	Ge		937,379.37	0.20	116.3	Pulse	0.30	3
2	Rh		13,699,157.51	2.80	99.4	Analog	0.30	3
2	In		5,316,371.50	2.28	106.7	Analog	0.30	3
2	Tb		16,425,076.57	1.50	105.8	Analog	0.30	3
2	Ho		16,697,097.67	1.07	105.4	Analog	0.30	3
2	Bi		9,689,762.12	1.60	95.6	Analog	0.30	3
2	Ge		637,830.46	0.86	115.9	Pulse	0.30	3
3	Sc		1,936,784.79	1.63	108.5	Analog	0.30	3
3	Ge		792,002.09	0.28	111.9	Pulse	0.30	3
3	Rh		3,914,188.04	0.85	100.9	Analog	0.30	3
3	Tb		8,340,470.23	1.10	102.5	Analog	0.30	3
3	Ge		546,106.44	0.44	112.2	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:16
Sample Name JD37213-1
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.005	ppb	27.47	142.67	7.286E-06	Pulse	0.25	3
B			1	50.515	ppb	1.76	496,451.05	2.535E-02	Pulse	0.15	3
Ca			1	39934.798	ppb	2.16	46,467,144.31	1.892E+00	Analog	0.10	3
Sr			1	127.685	ppb	3.23	5,492,989.30	2.409E-01	Analog	0.10	3
Mo			1	0.435	ppb	6.03	3,967.21	1.740E-04	Pulse	0.10	3
Ag			1	0.003	ppb	21.22	116.67	5.374E-06	Pulse	0.10	3
Sn			1	-0.038	ppb	-10.41	483.35	2.226E-05	Pulse	0.10	3
Sb			1	0.180	ppb	5.26	2,756.95	9.996E-05	Pulse	0.10	3
Ba			1	66.546	ppb	2.53	333,281.95	1.208E-02	Pulse	0.10	3
Tl			1	0.091	ppb	48.32	71,354.42	4.651E-03	Pulse	0.10	3
Pb			1	0.035	ppb	11.61	706.70	4.603E-05	Pulse	0.10	3
Pb			1	0.021	ppb	23.60	503.35	3.279E-05	Pulse	0.10	3
Pb			1	0.034	ppb	3.60	2,676.83	1.745E-04	Pulse	0.10	3
Na			2	51580.704	ppb	1.61	118,377,257.52	7.540E+01	Analog	0.30	3
Mg			2	6929.906	ppb	3.27	7,759,844.41	4.943E+00	Analog	0.30	3
Al			2	12.035	ppb	5.71	9,490.18	6.046E-03	Pulse	0.30	3
K			2	2227.555	ppb	1.89	1,830,803.95	1.166E+00	Analog	0.30	3
Ca			2	40179.176	ppb	2.14	1,779,425.90	1.133E+00	Analog	0.30	3
Ti			2	0.166	ppb	17.29	56.67	3.603E-05	Pulse	0.30	3
V			2	0.119	ppb	10.38	3,668.16	2.337E-03	Pulse	0.30	3
Cr			2	0.099	ppb	2.97	1,436.74	9.150E-04	Pulse	0.30	3
Mn			2	1.115	ppb	2.93	8,331.91	5.307E-03	Pulse	0.30	3
Fe			2	2.986	ppb	4.69	43,606.09	2.778E-02	Pulse	0.30	3
Co			2	-0.042	ppb	-46.38	36,538.86	2.327E-02	Pulse	0.30	3
Ni			2	0.379	ppb	6.24	1,894.56	1.207E-03	Pulse	0.30	3
Cu			2	1.542	ppb	2.45	13,461.59	8.576E-03	Pulse	0.30	3
Zn			2	342.796	ppb	2.21	707,829.36	4.509E-01	Pulse	0.30	3
As			2	0.202	ppb	9.23	253.00	1.612E-04	Pulse	1.00	3
Sn			2	-0.040	ppb	-3.48	180.00	3.398E-05	Pulse	0.30	3
Cd			2	-0.002	ppb	-135.49	24.72	4.663E-06	Pulse	0.30	3
Se			3	0.228	ppb	24.71	67.67	8.853E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,585,983.73	0.56	110.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,566,572.97	0.97	113.3	Analog	0.10	3
1	Ge		4,767,610.97	0.83	110.8	Analog	0.10	3
1	Rh		22,798,454.66	0.88	103.9	Analog	0.10	3
1	In		21,714,383.31	1.31	107.7	Analog	0.10	3
1	Tb		27,581,379.59	0.37	105.5	Analog	0.10	3
1	Ho		28,542,924.57	0.38	106.2	Analog	0.10	3
1	Bi		15,344,788.94	1.40	98.2	Analog	0.10	3
1	Ge		3,469,327.24	0.95	109.1	Analog	0.10	3
2	Sc		1,570,204.76	1.55	112.8	Analog	0.30	3
2	Ge		892,660.24	1.17	110.7	Pulse	0.30	3
2	Rh		13,524,356.41	2.23	98.2	Analog	0.30	3
2	In		5,295,567.81	1.82	106.2	Analog	0.30	3
2	Tb		16,247,378.24	1.48	104.7	Analog	0.30	3
2	Ho		16,745,294.89	2.11	105.7	Analog	0.30	3
2	Bi		9,725,265.45	1.70	96.0	Analog	0.30	3
2	Ge		605,449.24	0.99	110.0	Pulse	0.30	3
3	Sc		1,927,021.80	1.15	108.0	Analog	0.30	3
3	Ge		764,635.61	0.40	108.0	Pulse	0.30	3
3	Rh		3,875,488.74	0.41	99.9	Analog	0.30	3
3	Tb		8,246,831.89	0.52	101.4	Analog	0.30	3
3	Ge		525,991.84	0.33	108.1	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:19
Sample Name MP30647-S3
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	78.880	ppb	4.21	835,904.38	4.340E-02	Pulse	0.25	3
B			1	95.673	ppb	3.71	921,138.85	4.782E-02	Pulse	0.15	3
Ca			1	19439.963	ppb	3.15	22,132,731.34	9.214E-01	Analog	0.10	3
Sr			1	156.884	ppb	2.33	6,665,553.44	2.960E-01	Analog	0.10	3
Mo			1	0.275	ppb	9.29	2,516.90	1.117E-04	Pulse	0.10	3
Ag			1	0.003	ppb	53.64	126.67	5.823E-06	Pulse	0.10	3
Sn			1	-0.033	ppb	-11.55	543.36	2.499E-05	Pulse	0.10	3
Sb			1	0.105	ppb	12.72	1,683.46	6.095E-05	Pulse	0.10	3
Ba			1	95.284	ppb	4.07	477,628.30	1.730E-02	Pulse	0.10	3
Tl			1	80.887	ppb	2.35	2,438,489.03	1.576E-01	Analog	0.10	3
Pb			1	75.444	ppb	3.58	771,223.17	4.983E-02	Pulse	0.10	3
Pb			1	77.698	ppb	4.43	673,899.73	4.354E-02	Pulse	0.10	3
Pb			1	78.265	ppb	2.91	3,117,762.14	2.014E-01	Analog	0.10	3
Na			2	37188.332	ppb	1.66	79,803,990.16	5.436E+01	Analog	0.30	3
Mg			2	6842.062	ppb	2.57	7,164,388.60	4.881E+00	Analog	0.30	3
Al			2	7.448	ppb	9.89	6,837.94	4.659E-03	Pulse	0.30	3
K			2	1526.569	ppb	2.17	1,176,348.01	8.014E-01	Mix	0.30	3
Ca			2	21244.756	ppb	2.74	879,900.82	5.994E-01	Pulse	0.30	3
Ti			2	0.253	ppb	23.32	78.89	5.382E-05	Pulse	0.30	3
V			2	81.180	ppb	2.95	673,340.91	4.587E-01	Pulse	0.30	3
Cr			2	78.209	ppb	3.02	814,871.53	5.551E-01	Pulse	0.30	3
Mn			2	84.580	ppb	3.06	563,654.91	3.840E-01	Pulse	0.30	3
Fe			2	112.933	ppb	3.32	1,058,894.33	7.214E-01	Pulse	0.30	3
Co			2	77.721	ppb	2.03	1,340,355.45	9.131E-01	Analog	0.30	3
Ni			2	75.669	ppb	3.81	334,986.58	2.282E-01	Pulse	0.30	3
Cu			2	76.765	ppb	2.95	872,479.36	5.944E-01	Pulse	0.30	3
Zn			2	82.931	ppb	3.20	159,754.60	1.088E-01	Pulse	0.30	3
As			2	0.774	ppb	2.54	733.02	4.993E-04	Pulse	1.00	3
Sn			2	-0.029	ppb	-6.65	220.00	4.224E-05	Pulse	0.30	3
Cd			2	80.568	ppb	3.79	177,004.85	3.399E-02	Pulse	0.30	3
Se			3	87.639	ppb	0.73	18,026.45	2.322E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,264,443.46	0.74	108.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,022,456.31	0.26	110.8	Analog	0.10	3
1	Ge		4,676,919.31	0.45	108.7	Analog	0.10	3
1	Rh		22,517,498.83	1.52	102.6	Analog	0.10	3
1	In		21,750,265.75	0.54	107.9	Analog	0.10	3
1	Tb		27,606,434.59	0.68	105.6	Analog	0.10	3
1	Ho		28,470,663.74	0.42	106.0	Analog	0.10	3
1	Bi		15,476,956.85	1.39	99.0	Analog	0.10	3
1	Ge		3,453,251.09	0.68	108.6	Analog	0.10	3
2	Sc		1,468,042.30	0.98	105.5	Analog	0.30	3
2	Ge		903,869.09	0.38	112.1	Pulse	0.30	3
2	Rh		13,381,578.08	1.34	97.1	Analog	0.30	3
2	In		5,209,908.87	1.29	104.5	Analog	0.30	3
2	Tb		16,119,066.03	1.57	103.8	Analog	0.30	3
2	Ho		16,383,357.68	1.17	103.4	Analog	0.30	3
2	Bi		9,825,641.55	1.07	96.9	Analog	0.30	3
2	Ge		613,130.96	0.55	111.4	Pulse	0.30	3
3	Sc		1,878,303.40	0.30	105.2	Analog	0.30	3
3	Ge		776,402.97	0.58	109.7	Pulse	0.30	3
3	Rh		3,837,087.49	0.50	98.9	Analog	0.30	3
3	Tb		8,102,456.07	0.14	99.6	Analog	0.30	3
3	Ge		533,420.26	0.41	109.6	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:22
Sample Name JD37213-3
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.005	ppb	77.21	141.33	7.330E-06	Pulse	0.25	3
B			1	16.745	ppb	3.39	165,008.30	8.542E-03	Pulse	0.15	3
Ca			1	19190.100	ppb	2.73	21,928,530.51	9.095E-01	Analog	0.10	3
Sr			1	74.100	ppb	2.68	3,177,479.85	1.399E-01	Analog	0.10	3
Mo			1	0.237	ppb	5.84	2,203.53	9.702E-05	Pulse	0.10	3
Ag			1	0.005	ppb	74.92	153.34	7.072E-06	Pulse	0.10	3
Sn			1	-0.043	ppb	-17.26	433.35	2.004E-05	Pulse	0.10	3
Sb			1	0.101	ppb	7.12	1,643.45	5.889E-05	Pulse	0.10	3
Ba			1	17.095	ppb	1.26	86,687.78	3.107E-03	Pulse	0.10	3
Tl			1	0.048	ppb	110.94	71,267.04	4.570E-03	Pulse	0.10	3
Pb			1	0.022	ppb	12.43	590.03	3.782E-05	Pulse	0.10	3
Pb			1	0.027	ppb	22.81	566.69	3.635E-05	Pulse	0.10	3
Pb			1	0.029	ppb	10.61	2,506.82	1.608E-04	Pulse	0.10	3
Na			2	36714.423	ppb	2.55	78,951,794.64	5.367E+01	Analog	0.30	3
Mg			2	6701.373	ppb	3.72	7,031,494.58	4.781E+00	Analog	0.30	3
Al			2	6.523	ppb	8.42	6,441.13	4.379E-03	Pulse	0.30	3
K			2	1497.055	ppb	3.40	1,156,220.40	7.861E-01	Pulse	0.30	3
Ca			2	20185.678	ppb	3.64	837,768.13	5.696E-01	Pulse	0.30	3
Ti			2	0.230	ppb	21.51	72.22	4.903E-05	Pulse	0.30	3
V			2	-0.070	ppb	-25.58	1,869.00	1.271E-03	Pulse	0.30	3
Cr			2	0.095	ppb	6.84	1,306.72	8.884E-04	Pulse	0.30	3
Mn			2	6.910	ppb	5.13	46,470.66	3.160E-02	Pulse	0.30	3
Fe			2	108.757	ppb	3.47	1,022,353.95	6.950E-01	Pulse	0.30	3
Co			2	0.011	ppb	560.72	35,131.28	2.388E-02	Pulse	0.30	3
Ni			2	0.413	ppb	2.13	1,930.11	1.311E-03	Pulse	0.30	3
Cu			2	2.778	ppb	3.44	26,771.48	1.820E-02	Pulse	0.30	3
Zn			2	2.666	ppb	4.66	4,689.51	3.189E-03	Pulse	0.30	3
As			2	0.164	ppb	22.39	204.33	1.391E-04	Pulse	1.00	3
Sn			2	-0.048	ppb	-9.85	141.12	2.703E-05	Pulse	0.30	3
Cd			2	0.004	ppb	39.67	38.65	7.405E-06	Pulse	0.30	3
Se			3	0.093	ppb	41.11	40.00	5.283E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,322,432.37	1.51	108.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,112,733.81	0.77	111.2	Analog	0.10	3
1	Ge		4,692,191.18	1.45	109.1	Analog	0.10	3
1	Rh		22,714,729.66	0.81	103.5	Analog	0.10	3
1	In		21,638,647.39	0.85	107.3	Analog	0.10	3
1	Tb		27,899,486.25	0.81	106.7	Analog	0.10	3
1	Ho		28,134,847.08	0.66	104.7	Analog	0.10	3
1	Bi		15,595,628.10	1.15	99.8	Analog	0.10	3
1	Ge		3,474,310.05	0.31	109.3	Analog	0.10	3
2	Sc		1,471,426.78	1.60	105.7	Analog	0.30	3
2	Ge		871,662.93	0.17	108.1	Pulse	0.30	3
2	Rh		13,389,864.74	1.67	97.2	Analog	0.30	3
2	In		5,216,165.47	2.05	104.6	Analog	0.30	3
2	Tb		16,112,957.14	1.46	103.8	Analog	0.30	3
2	Ho		16,463,188.79	1.88	103.9	Analog	0.30	3
2	Bi		9,852,005.72	1.83	97.2	Analog	0.30	3
2	Ge		594,491.16	0.10	108.0	Pulse	0.30	3
3	Sc		1,865,543.26	0.65	104.5	Analog	0.30	3
3	Ge		756,770.78	0.99	106.9	Pulse	0.30	3
3	Rh		3,804,885.54	0.38	98.1	Analog	0.30	3
3	Tb		8,202,038.84	0.27	100.8	Analog	0.30	3
3	Ge		518,085.39	0.82	106.5	Pulse	0.30	3

Quantitation Report

File Name	049SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 14:25
Sample Name	CCVA 4
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.677	ppb	3.53	506,894.68	2.568E-02	Pulse	0.25	3
B			1	98.695	ppb	4.11	973,527.46	4.933E-02	Pulse	0.15	3
Ca			1	4962.270	ppb	1.92	5,740,330.75	2.359E-01	Analog	0.10	3
Sr			1	49.321	ppb	2.50	2,166,361.11	9.317E-02	Analog	0.10	3
Mo			1	48.978	ppb	3.67	444,147.22	1.910E-02	Pulse	0.10	3
Ag			1	50.280	ppb	3.25	1,046,344.36	4.746E-02	Mix	0.10	3
Sn			1	49.581	ppb	3.15	576,651.45	2.616E-02	Pulse	0.10	3
Sb			1	48.580	ppb	3.33	705,111.53	2.528E-02	Pulse	0.10	3
Ba			1	48.728	ppb	3.26	246,871.75	8.850E-03	Pulse	0.10	3
Tl			1	49.978	ppb	3.27	1,577,363.78	9.907E-02	Analog	0.10	3
Pb			1	47.108	ppb	3.34	495,592.15	3.112E-02	Pulse	0.10	3
Pb			1	48.442	ppb	3.29	432,410.97	2.715E-02	Pulse	0.10	3
Pb			1	48.381	ppb	2.29	1,983,432.53	1.246E-01	Analog	0.10	3
Na			2	4876.428	ppb	1.83	10,574,216.53	7.135E+00	Analog	0.30	3
Mg			2	4883.688	ppb	2.49	5,163,443.27	3.484E+00	Analog	0.30	3
Al			2	4882.489	ppb	3.06	2,191,762.76	1.479E+00	Analog	0.30	3
K			2	4907.135	ppb	2.29	3,794,513.46	2.560E+00	Analog	0.30	3
Ca			2	5335.098	ppb	3.87	223,258.81	1.507E-01	Pulse	0.30	3
Ti			2	48.616	ppb	2.43	14,614.59	9.861E-03	Pulse	0.30	3
V			2	47.630	ppb	3.96	399,779.79	2.698E-01	Pulse	0.30	3
Cr			2	46.955	ppb	3.67	493,943.68	3.334E-01	Pulse	0.30	3
Mn			2	46.713	ppb	3.78	314,374.41	2.122E-01	Pulse	0.30	3
Fe			2	4659.353	ppb	2.94	43,569,328.27	2.940E+01	Analog	0.30	3
Co			2	47.000	ppb	3.82	832,067.16	5.616E-01	Pulse	0.30	3
Ni			2	46.639	ppb	4.37	208,428.78	1.407E-01	Pulse	0.30	3
Cu			2	46.209	ppb	3.97	528,077.18	3.564E-01	Pulse	0.30	3
Zn			2	45.094	ppb	3.65	87,466.01	5.903E-02	Pulse	0.30	3
As			2	48.922	ppb	3.57	42,901.05	2.896E-02	Pulse	1.00	3
Sn			2	47.678	ppb	4.74	198,105.97	3.798E-02	Pulse	0.30	3
Cd			2	47.761	ppb	3.46	105,123.04	2.015E-02	Pulse	0.30	3
Se			3	199.183	ppb	0.68	40,482.17	5.273E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,737,090.18	0.26	111.0	Analog	0.10	3
1	Sc		24,336,752.14	0.45	112.2	Analog	0.10	3
1	Ge		4,676,805.55	0.89	108.7	Analog	0.10	3

Quantitation Report

1	Rh		23,251,095.48	0.20	106.0	Analog	0.10	3
1	In		22,042,035.90	0.55	109.3	Analog	0.10	3
1	Tb		27,897,901.25	0.47	106.7	Analog	0.10	3
1	Ho		28,299,812.91	1.21	105.3	Analog	0.10	3
1	Bi		15,921,777.68	1.21	101.9	Analog	0.10	3
1	Ge		3,462,185.16	0.83	108.9	Analog	0.10	3
2	Sc		1,482,494.00	2.52	106.5	Analog	0.30	3
2	Ge		879,111.20	0.87	109.1	Pulse	0.30	3
2	Rh		13,790,808.62	1.98	100.1	Analog	0.30	3
2	In		5,220,297.74	2.53	104.7	Analog	0.30	3
2	Tb		16,254,841.02	0.58	104.7	Analog	0.30	3
2	Ho		16,574,672.12	1.44	104.6	Analog	0.30	3
2	Bi		10,139,404.88	1.30	100.0	Analog	0.30	3
2	Ge		606,126.82	0.90	110.1	Pulse	0.30	3
3	Sc		1,906,708.39	1.77	106.8	Analog	0.30	3
3	Ge		767,666.08	0.25	108.4	Pulse	0.30	3
3	Rh		3,939,151.23	0.74	101.6	Analog	0.30	3
3	Tb		8,189,736.62	0.70	100.7	Analog	0.30	3
3	Ge		527,356.96	0.77	108.4	Pulse	0.30	3

Quantitation Report

File Name	050SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 14:28
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.002	ppb	16.11	117.33	5.869E-06	Pulse	0.25	3
B			1	3.059	ppb	3.49	34,622.27	1.732E-03	Pulse	0.15	3
Ca			1	-0.273	ppb	-211.54	22,206.80	9.189E-04	Pulse	0.10	3
Sr			1	0.002	ppb	230.82	4,087.26	1.694E-04	Pulse	0.10	3
Mo			1	0.050	ppb	26.42	576.70	2.389E-05	Pulse	0.10	3
Ag			1	0.010	ppb	14.63	263.34	1.178E-05	Pulse	0.10	3
Sn			1	0.049	ppb	47.00	1,526.79	6.838E-05	Pulse	0.10	3
Sb			1	0.023	ppb	20.16	523.36	1.848E-05	Pulse	0.10	3
Ba			1	0.000	ppb	1077.60	103.33	3.648E-06	Pulse	0.10	3
Tl			1	0.005	ppb	261.43	73,429.97	4.489E-03	Pulse	0.10	3
Pb			1	0.010	ppb	1.20	490.02	2.996E-05	Pulse	0.10	3
Pb			1	0.011	ppb	47.57	446.69	2.730E-05	Pulse	0.10	3
Pb			1	0.011	ppb	18.16	1,896.77	1.160E-04	Pulse	0.10	3
Na			2	5.140	ppb	14.13	21,553.49	1.453E-02	Pulse	0.30	3
Mg			2	0.721	ppb	21.35	3,744.84	2.524E-03	Pulse	0.30	3
Al			2	-6.862	ppb	-0.67	490.01	3.303E-04	Pulse	0.30	3
K			2	1.601	ppb	39.49	11,737.03	7.912E-03	Pulse	0.30	3
Ca			2	1.315	ppb	26.49	363.34	2.449E-04	Pulse	0.30	3
Ti			2	0.029	ppb	117.78	12.22	8.227E-06	Pulse	0.30	3
V			2	-0.001	ppb	-2896.31	2,467.96	1.664E-03	Pulse	0.30	3
Cr			2	0.008	ppb	34.08	397.79	2.681E-04	Pulse	0.30	3
Mn			2	0.034	ppb	25.47	598.90	4.037E-04	Pulse	0.30	3
Fe			2	1.629	ppb	7.27	28,519.57	1.922E-02	Pulse	0.30	3
Co			2	0.017	ppb	206.34	35,522.49	2.394E-02	Pulse	0.30	3
Ni			2	-0.003	ppb	-32.64	82.22	5.542E-05	Pulse	0.30	3
Cu			2	0.577	ppb	0.52	1,573.41	1.061E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.399	ppb	3.24	303.34	2.045E-04	Pulse	0.30	3
As			2	-0.006	ppb	-96.08	57.00	3.843E-05	Pulse	1.00	3
Sn			2	0.055	ppb	39.28	583.35	1.094E-04	Pulse	0.30	3
Cd			2	0.003	ppb	198.95	36.25	6.762E-06	Pulse	0.30	3
Se			3	0.049	ppb	60.96	31.00	4.120E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,998,668.02	1.72	112.5	Analog	0.10	3
1	Sc		24,167,340.47	0.45	111.4	Analog	0.10	3
1	Ge		4,767,284.62	0.20	110.8	Analog	0.10	3
1	Rh		24,118,896.31	1.46	109.9	Analog	0.10	3
1	In		22,340,446.92	0.64	110.8	Analog	0.10	3
1	Tb		28,310,329.58	0.55	108.3	Analog	0.10	3
1	Ho		28,797,459.57	2.35	107.2	Analog	0.10	3
1	Bi		16,357,012.68	0.27	104.6	Analog	0.10	3
1	Ge		3,484,924.95	0.65	109.6	Analog	0.10	3
2	Sc		1,483,522.27	0.22	106.6	Analog	0.30	3
2	Ge		860,499.01	1.80	106.7	Pulse	0.30	3
2	Rh		14,411,981.09	1.40	104.6	Analog	0.30	3
2	In		5,343,205.12	2.44	107.2	Analog	0.30	3
2	Tb		16,381,741.01	1.21	105.5	Analog	0.30	3
2	Ho		16,725,448.22	1.47	105.6	Analog	0.30	3
2	Bi		10,586,808.19	1.78	104.5	Analog	0.30	3
2	Ge		584,348.90	1.67	106.2	Pulse	0.30	3
3	Sc		1,902,466.87	0.69	106.6	Analog	0.30	3
3	Ge		752,176.97	0.19	106.2	Pulse	0.30	3
3	Rh		4,099,999.00	1.53	105.7	Analog	0.30	3
3	Tb		8,274,657.17	1.12	101.7	Analog	0.30	3
3	Ge		518,044.75	1.02	106.5	Pulse	0.30	3

Quantitation Report

File Name 051SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:31
Sample Name JD37213-2 8
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.000	ppb	7312.87	92.00	4.809E-06	Pulse	0.25	3
B			1	47.521	ppb	3.77	457,900.97	2.386E-02	Pulse	0.15	3
Ca			1	37326.044	ppb	2.51	42,939,396.03	1.768E+00	Analog	0.10	3
Sr			1	123.586	ppb	3.06	5,177,506.28	2.332E-01	Analog	0.10	3
Mo			1	0.388	ppb	4.83	3,463.77	1.560E-04	Pulse	0.10	3
Ag			1	0.006	ppb	58.73	190.01	8.848E-06	Pulse	0.10	3
Sn			1	0.070	ppb	18.80	1,703.46	7.927E-05	Pulse	0.10	3
Sb			1	0.170	ppb	8.41	2,586.92	9.474E-05	Pulse	0.10	3
Ba			1	65.239	ppb	2.46	323,465.47	1.185E-02	Pulse	0.10	3
Tl			1	0.003	ppb	508.69	69,529.20	4.485E-03	Pulse	0.10	3
Pb			1	28.401	ppb	3.47	290,973.31	1.877E-02	Pulse	0.10	3
Pb			1	27.764	ppb	3.32	241,364.19	1.557E-02	Pulse	0.10	3
Pb			1	28.392	ppb	3.01	1,133,557.35	7.313E-02	Pulse	0.10	3
Na			2	50183.960	ppb	3.35	109,491,080.09	7.336E+01	Analog	0.30	3
Mg			2	6764.662	ppb	3.97	7,201,828.60	4.826E+00	Analog	0.30	3
Al			2	60.003	ppb	6.71	30,665.61	2.055E-02	Pulse	0.30	3
K			2	2175.964	ppb	1.67	1,700,947.57	1.139E+00	Analog	0.30	3
Ca			2	38784.172	ppb	3.23	1,633,079.69	1.094E+00	Analog	0.30	3
Ti			2	0.190	ppb	30.76	61.11	4.103E-05	Pulse	0.30	3
V			2	0.125	ppb	14.98	3,542.58	2.374E-03	Pulse	0.30	3
Cr			2	0.096	ppb	5.85	1,335.62	8.946E-04	Pulse	0.30	3
Mn			2	4.350	ppb	5.47	29,819.22	1.999E-02	Pulse	0.30	3
Fe			2	40.582	ppb	4.56	395,395.25	2.650E-01	Pulse	0.30	3
Co			2	-0.040	ppb	-56.27	34,781.23	2.329E-02	Pulse	0.30	3
Ni			2	0.466	ppb	4.27	2,194.60	1.470E-03	Pulse	0.30	3
Cu			2	2.351	ppb	3.55	22,197.75	1.487E-02	Pulse	0.30	3
Zn			2	375.237	ppb	4.10	736,611.08	4.936E-01	Pulse	0.30	3
As			2	0.213	ppb	13.58	250.33	1.679E-04	Pulse	1.00	3
Sn			2	0.058	ppb	22.60	567.79	1.113E-04	Pulse	0.30	3
Cd			2	-0.005	ppb	-77.90	17.68	3.475E-06	Pulse	0.30	3
Se			3	0.263	ppb	13.42	71.33	9.780E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,198,502.59	1.91	108.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,283,892.97	0.22	112.0	Analog	0.10	3
1	Ge		4,662,711.28	0.40	108.4	Analog	0.10	3
1	Rh		22,202,062.17	0.89	101.2	Analog	0.10	3
1	In		21,479,152.63	1.22	106.5	Analog	0.10	3
1	Tb		27,304,494.59	0.64	104.5	Analog	0.10	3
1	Ho		28,401,862.91	0.56	105.7	Analog	0.10	3
1	Bi		15,501,436.85	0.45	99.2	Analog	0.10	3
1	Ge		3,426,760.26	0.51	107.8	Analog	0.10	3
2	Sc		1,493,341.92	2.44	107.3	Analog	0.30	3
2	Ge		846,990.43	0.90	105.1	Pulse	0.30	3
2	Rh		13,204,761.42	2.27	95.8	Analog	0.30	3
2	In		5,103,583.01	1.04	102.4	Analog	0.30	3
2	Tb		15,825,964.37	1.58	102.0	Analog	0.30	3
2	Ho		16,245,939.35	1.16	102.5	Analog	0.30	3
2	Bi		9,525,836.57	1.73	94.0	Analog	0.30	3
2	Ge		576,398.76	0.92	104.7	Pulse	0.30	3
3	Sc		1,857,532.84	1.28	104.1	Analog	0.30	3
3	Ge		729,171.95	0.46	103.0	Pulse	0.30	3
3	Rh		3,803,100.40	0.91	98.1	Analog	0.30	3
3	Tb		8,114,489.68	1.09	99.7	Analog	0.30	3
3	Ge		503,028.54	0.50	103.4	Pulse	0.30	3

Quantitation Report

File Name 052SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:34
Sample Name JD37213-4
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-64.13	72.00	3.823E-06	Pulse	0.25	3
B			1	15.727	ppb	3.12	151,283.39	8.036E-03	Pulse	0.15	3
Ca			1	19474.992	ppb	3.12	21,569,107.18	9.230E-01	Analog	0.10	3
Sr			1	76.693	ppb	2.27	3,185,814.85	1.448E-01	Analog	0.10	3
Mo			1	0.264	ppb	5.57	2,363.55	1.075E-04	Pulse	0.10	3
Ag			1	0.013	ppb	7.79	323.34	1.533E-05	Pulse	0.10	3
Sn			1	1.212	ppb	3.71	14,359.45	6.808E-04	Pulse	0.10	3
Sb			1	0.103	ppb	8.63	1,643.46	5.999E-05	Pulse	0.10	3
Ba			1	17.879	ppb	3.40	89,046.37	3.249E-03	Pulse	0.10	3
Tl			1	0.025	ppb	160.19	69,847.77	4.526E-03	Pulse	0.10	3
Pb			1	268.623	ppb	0.88	2,737,337.25	1.774E-01	Analog	0.10	3
Pb			1	266.849	ppb	2.38	2,307,254.86	1.495E-01	Analog	0.10	3
Pb			1	267.428	ppb	1.56	10,620,643.07	6.881E-01	Analog	0.10	3
Na			2	37061.013	ppb	2.74	78,279,521.34	5.418E+01	Analog	0.30	3
Mg			2	6802.801	ppb	2.90	7,011,617.36	4.853E+00	Analog	0.30	3
Al			2	22.718	ppb	5.67	13,402.51	9.277E-03	Pulse	0.30	3
K			2	1498.277	ppb	3.11	1,136,632.11	7.867E-01	Pulse	0.30	3
Ca			2	20085.782	ppb	3.57	818,802.22	5.667E-01	Pulse	0.30	3
Ti			2	0.307	ppb	18.42	93.34	6.469E-05	Pulse	0.30	3
V			2	-0.067	ppb	-4.41	1,867.89	1.293E-03	Pulse	0.30	3
Cr			2	0.087	ppb	13.40	1,194.49	8.273E-04	Pulse	0.30	3
Mn			2	16.319	ppb	3.51	107,328.30	7.429E-02	Pulse	0.30	3
Fe			2	235.923	ppb	2.27	2,163,502.00	1.497E+00	Analog	0.30	3
Co			2	-0.029	ppb	-99.58	33,851.41	2.342E-02	Pulse	0.30	3
Ni			2	0.429	ppb	3.63	1,963.45	1.359E-03	Pulse	0.30	3
Cu			2	7.194	ppb	3.21	75,977.96	5.259E-02	Pulse	0.30	3
Zn			2	7.868	ppb	5.28	14,496.83	1.004E-02	Pulse	0.30	3
As			2	0.159	ppb	5.58	196.67	1.361E-04	Pulse	1.00	3
Sn			2	1.159	ppb	3.62	5,049.65	9.869E-04	Pulse	0.30	3
Cd			2	-0.005	ppb	-77.96	17.61	3.443E-06	Pulse	0.30	3
Se			3	0.061	ppb	17.38	32.67	4.451E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,823,830.27	0.60	105.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,369,513.82	0.65	107.7	Analog	0.10	3
1	Ge		4,566,686.08	1.56	106.1	Analog	0.10	3
1	Rh		22,000,448.84	1.23	100.3	Analog	0.10	3
1	In		21,089,185.73	0.67	104.6	Analog	0.10	3
1	Tb		27,407,317.93	0.77	104.9	Analog	0.10	3
1	Ho		27,805,077.92	1.02	103.5	Analog	0.10	3
1	Bi		15,434,027.69	0.65	98.7	Analog	0.10	3
1	Ge		3,381,366.31	0.67	106.4	Analog	0.10	3
2	Sc		1,445,252.41	1.47	103.9	Analog	0.30	3
2	Ge		845,031.79	0.65	104.8	Pulse	0.30	3
2	Rh		13,150,246.42	2.82	95.5	Analog	0.30	3
2	In		5,118,729.00	2.48	102.7	Analog	0.30	3
2	Tb		15,867,073.26	2.07	102.2	Analog	0.30	3
2	Ho		16,257,499.35	2.22	102.6	Analog	0.30	3
2	Bi		9,690,312.11	1.74	95.6	Analog	0.30	3
2	Ge		575,487.27	0.87	104.6	Pulse	0.30	3
3	Sc		1,826,072.70	0.97	102.3	Analog	0.30	3
3	Ge		733,923.15	0.67	103.7	Pulse	0.30	3
3	Rh		3,779,287.63	0.82	97.4	Analog	0.30	3
3	Tb		7,991,688.85	0.40	98.2	Analog	0.30	3
3	Ge		504,982.79	0.46	103.8	Pulse	0.30	3

Quantitation Report

File Name 053SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:37
Sample Name JD37213-5
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-38.74	56.00	2.895E-06	Pulse	0.25	3
B			1	45.641	ppb	2.25	443,028.54	2.292E-02	Pulse	0.15	3
Ca			1	39596.006	ppb	2.43	44,278,509.34	1.876E+00	Analog	0.10	3
Sr			1	128.252	ppb	2.95	5,309,286.48	2.420E-01	Analog	0.10	3
Mo			1	0.368	ppb	8.04	3,250.39	1.481E-04	Pulse	0.10	3
Ag			1	0.004	ppb	51.35	130.00	6.178E-06	Pulse	0.10	3
Sn			1	-0.042	ppb	-8.87	430.02	2.043E-05	Pulse	0.10	3
Sb			1	0.149	ppb	4.26	2,303.56	8.421E-05	Pulse	0.10	3
Ba			1	63.468	ppb	2.49	315,240.64	1.153E-02	Pulse	0.10	3
Tl			1	0.030	ppb	40.73	68,404.93	4.536E-03	Pulse	0.10	3
Pb			1	0.067	ppb	6.93	1,020.06	6.763E-05	Pulse	0.10	3
Pb			1	0.070	ppb	15.53	906.72	6.008E-05	Pulse	0.10	3
Pb			1	0.070	ppb	15.09	4,023.64	2.667E-04	Pulse	0.10	3
Na			2	50361.582	ppb	3.96	108,791,069.01	7.362E+01	Analog	0.30	3
Mg			2	7093.626	ppb	3.35	7,478,511.37	5.060E+00	Analog	0.30	3
Al			2	15.035	ppb	8.08	10,273.91	6.954E-03	Pulse	0.30	3
K			2	2161.493	ppb	2.69	1,673,033.30	1.132E+00	Analog	0.30	3
Ca			2	41131.698	ppb	2.71	1,715,085.66	1.160E+00	Analog	0.30	3
Ti			2	0.159	ppb	32.76	51.11	3.462E-05	Pulse	0.30	3
V			2	0.113	ppb	6.76	3,409.22	2.305E-03	Pulse	0.30	3
Cr			2	0.077	ppb	9.31	1,116.71	7.558E-04	Pulse	0.30	3
Mn			2	1.130	ppb	3.90	7,943.96	5.375E-03	Pulse	0.30	3
Fe			2	4.065	ppb	5.55	51,117.13	3.459E-02	Pulse	0.30	3
Co			2	-0.100	ppb	-32.53	33,418.52	2.261E-02	Pulse	0.30	3
Ni			2	0.340	ppb	3.29	1,613.42	1.092E-03	Pulse	0.30	3
Cu			2	1.596	ppb	3.41	13,299.26	8.998E-03	Pulse	0.30	3
Zn			2	309.972	ppb	3.50	602,520.06	4.077E-01	Pulse	0.30	3
As			2	0.188	ppb	5.34	226.67	1.534E-04	Pulse	1.00	3
Sn			2	-0.040	ppb	-15.72	170.00	3.372E-05	Pulse	0.30	3
Cd			2	-0.010	ppb	-17.52	7.66	1.512E-06	Pulse	0.30	3
Se			3	0.216	ppb	21.23	62.33	8.552E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,329,347.39	0.86	108.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,603,584.65	0.75	108.8	Analog	0.10	3
1	Ge		4,592,610.77	0.71	106.7	Analog	0.10	3
1	Rh		21,939,794.67	0.86	100.0	Analog	0.10	3
1	In		21,050,292.45	0.39	104.4	Analog	0.10	3
1	Tb		27,353,222.92	0.40	104.7	Analog	0.10	3
1	Ho		28,145,847.08	1.18	104.8	Analog	0.10	3
1	Bi		15,081,533.94	1.04	96.5	Analog	0.10	3
1	Ge		3,372,424.53	0.26	106.1	Analog	0.10	3
2	Sc		1,478,692.34	2.41	106.3	Analog	0.30	3
2	Ge		832,654.10	0.97	103.3	Pulse	0.30	3
2	Rh		12,855,495.32	1.13	93.3	Analog	0.30	3
2	In		5,047,437.41	1.87	101.3	Analog	0.30	3
2	Tb		15,722,312.71	1.32	101.3	Analog	0.30	3
2	Ho		16,138,159.36	0.89	101.9	Analog	0.30	3
2	Bi		9,484,732.96	1.82	93.6	Analog	0.30	3
2	Ge		567,975.34	0.61	103.2	Pulse	0.30	3
3	Sc		1,867,147.77	0.12	104.6	Analog	0.30	3
3	Ge		729,034.50	0.20	103.0	Pulse	0.30	3
3	Rh		3,771,154.16	0.26	97.2	Analog	0.30	3
3	Tb		8,128,307.18	0.47	99.9	Analog	0.30	3
3	Ge		502,913.64	0.49	103.4	Pulse	0.30	3

Quantitation Report

File Name 054SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:40
Sample Name JD37213-6
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-58.30	62.67	3.333E-06	Pulse	0.25	3
B			1	47.952	ppb	2.31	452,402.48	2.407E-02	Pulse	0.15	3
Ca			1	40779.576	ppb	2.99	45,176,970.99	1.932E+00	Analog	0.10	3
Sr			1	131.478	ppb	3.36	5,423,360.54	2.481E-01	Analog	0.10	3
Mo			1	0.410	ppb	2.49	3,593.79	1.643E-04	Pulse	0.10	3
Ag			1	0.004	ppb	77.26	140.00	6.708E-06	Pulse	0.10	3
Sn			1	0.212	ppb	10.90	3,237.05	1.543E-04	Pulse	0.10	3
Sb			1	0.160	ppb	15.25	2,443.56	8.984E-05	Pulse	0.10	3
Ba			1	69.310	ppb	3.07	342,174.12	1.259E-02	Pulse	0.10	3
Tl			1	0.092	ppb	20.76	69,532.80	4.653E-03	Pulse	0.10	3
Pb			1	74.017	ppb	1.79	730,550.54	4.889E-02	Pulse	0.10	3
Pb			1	72.308	ppb	1.92	605,532.12	4.052E-02	Pulse	0.10	3
Pb			1	74.767	ppb	2.00	2,875,819.88	1.924E-01	Analog	0.10	3
Na			2	51343.653	ppb	3.34	109,833,033.42	7.505E+01	Analog	0.30	3
Mg			2	7288.337	ppb	2.83	7,608,965.26	5.199E+00	Analog	0.30	3
Al			2	41.185	ppb	3.97	21,754.60	1.486E-02	Pulse	0.30	3
K			2	2198.134	ppb	1.65	1,684,549.86	1.151E+00	Analog	0.30	3
Ca			2	41688.828	ppb	1.19	1,721,544.86	1.176E+00	Analog	0.30	3
Ti			2	0.201	ppb	27.86	63.33	4.312E-05	Pulse	0.30	3
V			2	0.140	ppb	13.91	3,597.04	2.458E-03	Pulse	0.30	3
Cr			2	0.089	ppb	10.74	1,231.17	8.417E-04	Pulse	0.30	3
Mn			2	6.322	ppb	3.25	42,344.28	2.893E-02	Pulse	0.30	3
Fe			2	55.413	ppb	2.39	524,730.74	3.585E-01	Pulse	0.30	3
Co			2	-0.079	ppb	-17.21	33,442.86	2.285E-02	Pulse	0.30	3
Ni			2	0.399	ppb	7.49	1,857.88	1.269E-03	Pulse	0.30	3
Cu			2	2.781	ppb	2.74	26,663.54	1.822E-02	Pulse	0.30	3
Zn			2	340.308	ppb	2.52	655,134.07	4.476E-01	Pulse	0.30	3
As			2	0.225	ppb	9.86	256.33	1.749E-04	Pulse	1.00	3
Sn			2	0.200	ppb	5.30	1,137.83	2.242E-04	Pulse	0.30	3
Cd			2	-0.003	ppb	-202.94	22.25	4.403E-06	Pulse	0.30	3
Se			3	0.234	ppb	9.36	66.00	9.015E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,792,974.91	0.31	105.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,387,902.99	1.09	107.8	Analog	0.10	3
1	Ge		4,547,914.31	0.67	105.7	Analog	0.10	3
1	Rh		21,865,718.84	1.33	99.7	Analog	0.10	3
1	In		20,959,200.21	2.12	104.0	Analog	0.10	3
1	Tb		27,183,871.26	0.56	104.0	Analog	0.10	3
1	Ho		27,988,793.75	0.27	104.2	Analog	0.10	3
1	Bi		14,943,773.53	0.47	95.6	Analog	0.10	3
1	Ge		3,355,202.03	0.67	105.5	Analog	0.10	3
2	Sc		1,463,981.68	1.95	105.2	Analog	0.30	3
2	Ge		836,904.97	0.73	103.8	Pulse	0.30	3
2	Rh		12,908,382.54	2.43	93.7	Analog	0.30	3
2	In		5,077,017.43	2.45	101.9	Analog	0.30	3
2	Tb		15,920,811.59	2.35	102.6	Analog	0.30	3
2	Ho		16,249,279.36	2.27	102.6	Analog	0.30	3
2	Bi		9,505,177.40	1.69	93.8	Analog	0.30	3
2	Ge		571,533.89	0.82	103.9	Pulse	0.30	3
3	Sc		1,846,501.18	1.24	103.5	Analog	0.30	3
3	Ge		731,924.90	0.81	103.4	Pulse	0.30	3
3	Rh		3,757,191.94	1.36	96.9	Analog	0.30	3
3	Tb		8,152,961.62	0.14	100.2	Analog	0.30	3
3	Ge		505,219.39	0.93	103.8	Pulse	0.30	3

Quantitation Report

File Name 055SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:43
Sample Name JD37213-1F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-32.59	49.33	2.602E-06	Pulse	0.25	3
B			1	47.094	ppb	2.37	447,659.05	2.365E-02	Pulse	0.15	3
Ca			1	37144.595	ppb	1.82	40,959,100.22	1.760E+00	Analog	0.10	3
Sr			1	120.277	ppb	2.94	4,973,125.13	2.270E-01	Analog	0.10	3
Mo			1	0.357	ppb	10.17	3,150.36	1.438E-04	Pulse	0.10	3
Ag			1	0.011	ppb	5.33	280.01	1.332E-05	Pulse	0.10	3
Sn			1	-0.045	ppb	-7.73	390.02	1.856E-05	Pulse	0.10	3
Sb			1	0.153	ppb	7.37	2,340.22	8.628E-05	Pulse	0.10	3
Ba			1	64.286	ppb	3.34	316,707.84	1.167E-02	Pulse	0.10	3
Tl			1	0.022	ppb	27.78	68,257.75	4.521E-03	Pulse	0.10	3
Pb			1	0.057	ppb	7.94	916.72	6.071E-05	Pulse	0.10	3
Pb			1	0.055	ppb	14.07	786.71	5.210E-05	Pulse	0.10	3
Pb			1	0.058	ppb	9.82	3,553.60	2.354E-04	Pulse	0.10	3
Na			2	50429.747	ppb	2.31	108,365,402.36	7.372E+01	Analog	0.30	3
Mg			2	6643.731	ppb	2.55	6,966,825.42	4.739E+00	Analog	0.30	3
Al			2	4.511	ppb	25.57	5,538.62	3.770E-03	Pulse	0.30	3
K			2	2186.900	ppb	2.91	1,683,057.29	1.145E+00	Analog	0.30	3
Ca			2	38662.125	ppb	1.57	1,603,449.80	1.091E+00	Analog	0.30	3
Ti			2	0.168	ppb	32.06	53.34	3.639E-05	Pulse	0.30	3
V			2	0.108	ppb	24.12	3,344.77	2.276E-03	Pulse	0.30	3
Cr			2	0.068	ppb	3.31	1,020.04	6.939E-04	Pulse	0.30	3
Mn			2	0.473	ppb	5.98	3,514.81	2.392E-03	Pulse	0.30	3
Fe			2	0.864	ppb	9.34	21,159.95	1.440E-02	Pulse	0.30	3
Co			2	-0.075	ppb	-40.25	33,664.65	2.290E-02	Pulse	0.30	3
Ni			2	0.365	ppb	7.48	1,714.54	1.167E-03	Pulse	0.30	3
Cu			2	1.712	ppb	1.71	14,543.52	9.894E-03	Pulse	0.30	3
Zn			2	318.600	ppb	3.25	615,928.71	4.190E-01	Pulse	0.30	3
As			2	0.188	ppb	13.61	225.00	1.532E-04	Pulse	1.00	3
Sn			2	-0.048	ppb	-15.49	138.89	2.752E-05	Pulse	0.30	3
Cd			2	-0.007	ppb	-70.78	13.17	2.583E-06	Pulse	0.30	3
Se			3	0.202	ppb	12.42	59.67	8.172E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,933,040.72	1.64	106.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,278,227.15	0.42	107.3	Analog	0.10	3
1	Ge		4,558,743.58	0.51	106.0	Analog	0.10	3
1	Rh		21,912,560.51	0.78	99.9	Analog	0.10	3
1	In		21,028,488.88	0.69	104.3	Analog	0.10	3
1	Tb		27,133,991.26	0.76	103.8	Analog	0.10	3
1	Ho		28,084,536.25	0.84	104.5	Analog	0.10	3
1	Bi		15,099,043.52	0.39	96.6	Analog	0.10	3
1	Ge		3,334,309.85	0.23	104.9	Analog	0.10	3
2	Sc		1,470,341.02	1.54	105.7	Analog	0.30	3
2	Ge		834,356.65	1.52	103.5	Pulse	0.30	3
2	Rh		13,022,912.82	2.33	94.5	Analog	0.30	3
2	In		5,058,283.01	1.76	101.5	Analog	0.30	3
2	Tb		15,859,266.59	2.46	102.2	Analog	0.30	3
2	Ho		16,284,191.02	2.16	102.8	Analog	0.30	3
2	Bi		9,493,751.57	1.39	93.7	Analog	0.30	3
2	Ge		566,615.20	0.88	103.0	Pulse	0.30	3
3	Sc		1,852,403.95	1.18	103.8	Analog	0.30	3
3	Ge		730,241.05	0.52	103.1	Pulse	0.30	3
3	Rh		3,800,544.02	0.42	98.0	Analog	0.30	3
3	Tb		8,221,158.84	0.77	101.0	Analog	0.30	3
3	Ge		501,725.35	0.72	103.1	Pulse	0.30	3

Quantitation Report

File Name 056SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:47
Sample Name JD37213-2F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.005	ppb	-33.93	37.33	1.956E-06	Pulse	0.25	3
B			1	46.375	ppb	3.54	446,314.79	2.329E-02	Pulse	0.15	3
Ca			1	37093.578	ppb	1.56	41,257,508.55	1.757E+00	Analog	0.10	3
Sr			1	118.754	ppb	1.36	4,992,235.86	2.241E-01	Analog	0.10	3
Mo			1	0.380	ppb	3.12	3,403.74	1.528E-04	Pulse	0.10	3
Ag			1	0.007	ppb	20.73	196.68	9.243E-06	Pulse	0.10	3
Sn			1	0.046	ppb	8.24	1,413.44	6.644E-05	Pulse	0.10	3
Sb			1	0.155	ppb	7.48	2,420.22	8.718E-05	Pulse	0.10	3
Ba			1	65.942	ppb	1.86	332,411.32	1.197E-02	Pulse	0.10	3
Tl			1	0.017	ppb	186.16	69,157.39	4.511E-03	Pulse	0.10	3
Pb			1	7.134	ppb	4.15	72,548.96	4.733E-03	Pulse	0.10	3
Pb			1	7.032	ppb	0.90	60,708.74	3.960E-03	Pulse	0.10	3
Pb			1	7.144	ppb	3.28	283,101.57	1.847E-02	Pulse	0.10	3
Na			2	49826.044	ppb	2.72	106,255,326.89	7.284E+01	Analog	0.30	3
Mg			2	6607.265	ppb	3.86	6,874,846.26	4.713E+00	Analog	0.30	3
Al			2	5.447	ppb	12.64	5,910.95	4.053E-03	Pulse	0.30	3
K			2	2150.855	ppb	3.16	1,642,852.05	1.126E+00	Analog	0.30	3
Ca			2	38742.516	ppb	3.26	1,594,264.97	1.093E+00	Analog	0.30	3
Ti			2	0.176	ppb	13.98	55.55	3.809E-05	Pulse	0.30	3
V			2	0.112	ppb	23.39	3,352.55	2.299E-03	Pulse	0.30	3
Cr			2	0.077	ppb	7.71	1,103.38	7.562E-04	Pulse	0.30	3
Mn			2	0.474	ppb	6.29	3,499.25	2.400E-03	Pulse	0.30	3
Fe			2	0.741	ppb	15.59	19,861.72	1.362E-02	Pulse	0.30	3
Co			2	-0.092	ppb	-21.25	33,121.41	2.270E-02	Pulse	0.30	3
Ni			2	0.404	ppb	3.98	1,873.44	1.284E-03	Pulse	0.30	3
Cu			2	1.624	ppb	2.26	13,442.73	9.216E-03	Pulse	0.30	3
Zn			2	319.640	ppb	4.45	613,144.44	4.204E-01	Pulse	0.30	3
As			2	0.177	ppb	7.44	214.33	1.468E-04	Pulse	1.00	3
Sn			2	0.028	ppb	43.30	440.01	8.763E-05	Pulse	0.30	3
Cd			2	-0.006	ppb	-11.93	15.54	3.091E-06	Pulse	0.30	3
Se			3	0.172	ppb	31.78	53.33	7.366E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,173,015.96	1.87	107.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,478,971.32	0.93	108.2	Analog	0.10	3
1	Ge		4,574,738.06	0.10	106.3	Analog	0.10	3
1	Rh		22,274,272.17	0.89	101.5	Analog	0.10	3
1	In		21,272,875.29	0.24	105.5	Analog	0.10	3
1	Tb		27,759,609.59	0.03	106.2	Analog	0.10	3
1	Ho		28,320,792.08	1.08	105.4	Analog	0.10	3
1	Bi		15,331,817.69	0.78	98.1	Analog	0.10	3
1	Ge		3,363,175.16	0.51	105.8	Analog	0.10	3
2	Sc		1,459,366.58	2.26	104.9	Analog	0.30	3
2	Ge		820,512.57	0.88	101.8	Pulse	0.30	3
2	Rh		12,955,952.54	1.86	94.0	Analog	0.30	3
2	In		5,024,463.11	1.65	100.8	Analog	0.30	3
2	Tb		15,736,667.71	1.41	101.4	Analog	0.30	3
2	Ho		16,178,857.13	1.63	102.1	Analog	0.30	3
2	Bi		9,425,292.96	1.91	93.0	Analog	0.30	3
2	Ge		557,384.59	0.39	101.3	Pulse	0.30	3
3	Sc		1,838,673.61	1.04	103.0	Analog	0.30	3
3	Ge		723,009.85	1.19	102.1	Pulse	0.30	3
3	Rh		3,779,074.71	1.41	97.4	Analog	0.30	3
3	Tb		8,126,584.96	0.30	99.9	Analog	0.30	3
3	Ge		496,586.04	0.69	102.1	Pulse	0.30	3

Quantitation Report

File Name 057SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:50
Sample Name JD37213-3F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-23.73	46.67	2.483E-06	Pulse	0.25	3
B			1	15.984	ppb	3.34	153,497.84	8.164E-03	Pulse	0.15	3
Ca			1	19143.193	ppb	3.09	20,944,628.44	9.073E-01	Analog	0.10	3
Sr			1	74.903	ppb	3.33	3,096,252.77	1.414E-01	Analog	0.10	3
Mo			1	0.239	ppb	7.93	2,143.52	9.789E-05	Pulse	0.10	3
Ag			1	0.004	ppb	21.35	140.00	6.686E-06	Pulse	0.10	3
Sn			1	-0.043	ppb	-17.40	413.35	1.972E-05	Pulse	0.10	3
Sb			1	0.090	ppb	11.40	1,450.10	5.315E-05	Pulse	0.10	3
Ba			1	21.436	ppb	4.46	106,299.25	3.895E-03	Pulse	0.10	3
Tl			1	-0.014	ppb	-80.75	67,952.98	4.452E-03	Pulse	0.10	3
Pb			1	0.021	ppb	17.23	563.36	3.690E-05	Pulse	0.10	3
Pb			1	0.021	ppb	54.95	503.36	3.300E-05	Pulse	0.10	3
Pb			1	0.022	ppb	15.29	2,203.46	1.444E-04	Pulse	0.10	3
Na			2	36589.729	ppb	2.22	76,771,494.73	5.349E+01	Analog	0.30	3
Mg			2	6656.830	ppb	2.10	6,816,111.40	4.749E+00	Analog	0.30	3
Al			2	7.689	ppb	8.52	6,790.13	4.732E-03	Pulse	0.30	3
K			2	1460.177	ppb	3.60	1,100,505.37	7.669E-01	Pulse	0.30	3
Ca			2	19701.614	ppb	4.13	797,723.04	5.559E-01	Pulse	0.30	3
Ti			2	0.275	ppb	9.83	83.33	5.810E-05	Pulse	0.30	3
V			2	-0.059	ppb	-18.88	1,920.11	1.338E-03	Pulse	0.30	3
Cr			2	0.083	ppb	2.19	1,145.60	7.980E-04	Pulse	0.30	3
Mn			2	6.223	ppb	5.19	40,866.55	2.848E-02	Pulse	0.30	3
Fe			2	41.841	ppb	4.34	391,618.62	2.729E-01	Pulse	0.30	3
Co			2	-0.049	ppb	-61.31	33,298.55	2.320E-02	Pulse	0.30	3
Ni			2	0.365	ppb	4.85	1,674.53	1.167E-03	Pulse	0.30	3
Cu			2	2.438	ppb	3.81	22,316.73	1.555E-02	Pulse	0.30	3
Zn			2	11.250	ppb	4.44	20,789.47	1.449E-02	Pulse	0.30	3
As			2	0.150	ppb	11.76	187.67	1.308E-04	Pulse	1.00	3
Sn			2	-0.052	ppb	-16.35	122.22	2.412E-05	Pulse	0.30	3
Cd			2	-0.007	ppb	-41.77	14.27	2.819E-06	Pulse	0.30	3
Se			3	0.047	ppb	56.61	29.67	4.079E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,806,312.41	1.14	105.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,085,455.49	0.27	106.4	Analog	0.10	3
1	Ge		4,490,712.02	0.37	104.4	Analog	0.10	3
1	Rh		21,895,447.17	0.30	99.8	Analog	0.10	3
1	In		20,940,346.45	0.55	103.9	Analog	0.10	3
1	Tb		27,298,054.59	0.99	104.4	Analog	0.10	3
1	Ho		27,736,142.92	0.92	103.2	Analog	0.10	3
1	Bi		15,263,581.44	0.99	97.6	Analog	0.10	3
1	Ge		3,331,122.97	0.38	104.8	Analog	0.10	3
2	Sc		1,435,652.48	1.77	103.2	Analog	0.30	3
2	Ge		831,795.51	0.33	103.2	Pulse	0.30	3
2	Rh		13,088,731.42	1.11	95.0	Analog	0.30	3
2	In		5,089,232.84	2.28	102.1	Analog	0.30	3
2	Tb		15,801,365.48	1.17	101.8	Analog	0.30	3
2	Ho		16,131,922.14	1.88	101.8	Analog	0.30	3
2	Bi		9,663,799.62	1.73	95.3	Analog	0.30	3
2	Ge		566,825.58	0.44	103.0	Pulse	0.30	3
3	Sc		1,809,937.77	1.23	101.4	Analog	0.30	3
3	Ge		727,619.22	0.51	102.8	Pulse	0.30	3
3	Rh		3,759,245.68	0.38	96.9	Analog	0.30	3
3	Tb		8,012,406.63	0.32	98.5	Analog	0.30	3
3	Ge		501,503.21	0.12	103.1	Pulse	0.30	3

Quantitation Report

File Name 058SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:53
Sample Name CCVA 4
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.167	ppb	5.84	495,013.03	2.540E-02	Pulse	0.25	3
B			1	95.669	ppb	5.42	931,888.54	4.782E-02	Pulse	0.15	3
Ca			1	4992.786	ppb	3.44	5,561,489.92	2.373E-01	Analog	0.10	3
Sr			1	49.830	ppb	5.14	2,138,162.73	9.413E-02	Analog	0.10	3
Mo			1	48.556	ppb	3.88	430,228.54	1.894E-02	Pulse	0.10	3
Ag			1	50.192	ppb	2.13	1,018,813.21	4.738E-02	Pulse	0.10	3
Sn			1	49.671	ppb	3.48	563,513.42	2.621E-02	Pulse	0.10	3
Sb			1	48.087	ppb	2.93	685,743.66	2.502E-02	Pulse	0.10	3
Ba			1	48.296	ppb	5.02	240,357.86	8.771E-03	Pulse	0.10	3
Tl			1	49.981	ppb	3.11	1,552,471.75	9.907E-02	Analog	0.10	3
Pb			1	46.830	ppb	4.77	484,729.28	3.094E-02	Pulse	0.10	3
Pb			1	48.151	ppb	5.08	422,865.89	2.699E-02	Pulse	0.10	3
Pb			1	48.465	ppb	4.09	1,955,015.13	1.248E-01	Analog	0.10	3
Na			2	4934.172	ppb	2.31	10,354,815.14	7.219E+00	Analog	0.30	3
Mg			2	4936.266	ppb	1.47	5,051,864.11	3.522E+00	Analog	0.30	3
Al			2	4952.305	ppb	2.36	2,151,939.78	1.500E+00	Analog	0.30	3
K			2	4972.784	ppb	1.72	3,721,769.99	2.595E+00	Analog	0.30	3
Ca			2	5363.421	ppb	2.36	217,286.26	1.515E-01	Pulse	0.30	3
Ti			2	49.103	ppb	3.05	14,285.46	9.960E-03	Pulse	0.30	3
V			2	48.007	ppb	2.62	390,082.92	2.720E-01	Pulse	0.30	3
Cr			2	47.101	ppb	2.56	479,660.85	3.344E-01	Pulse	0.30	3
Mn			2	47.058	ppb	3.04	306,590.45	2.138E-01	Pulse	0.30	3
Fe			2	4713.998	ppb	1.87	42,671,491.64	2.975E+01	Analog	0.30	3
Co			2	46.804	ppb	2.99	802,263.91	5.593E-01	Pulse	0.30	3
Ni			2	46.575	ppb	2.97	201,514.11	1.405E-01	Pulse	0.30	3
Cu			2	46.280	ppb	2.70	512,025.34	3.570E-01	Pulse	0.30	3
Zn			2	45.609	ppb	2.93	85,646.61	5.971E-02	Pulse	0.30	3
As			2	49.344	ppb	1.89	41,891.74	2.921E-02	Pulse	1.00	3
Sn			2	47.733	ppb	3.04	194,236.19	3.802E-02	Pulse	0.30	3
Cd			2	47.911	ppb	4.47	103,233.40	2.021E-02	Pulse	0.30	3
Se			3	198.653	ppb	0.27	39,290.23	5.259E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,506,738.78	2.73	109.7	Analog	0.10	3
1	Sc		23,441,779.65	1.65	108.1	Analog	0.10	3
1	Ge		4,545,819.52	1.07	105.7	Analog	0.10	3

Quantitation Report

1	Rh		22,728,694.66	1.97	103.6	Analog	0.10	3
1	In		21,503,982.50	0.70	106.7	Analog	0.10	3
1	Tb		27,414,307.09	1.21	104.9	Analog	0.10	3
1	Ho		28,007,512.92	1.23	104.3	Analog	0.10	3
1	Bi		15,674,568.10	1.55	100.3	Analog	0.10	3
1	Ge		3,380,360.68	0.18	106.3	Analog	0.10	3
2	Sc		1,434,529.14	0.79	103.1	Analog	0.30	3
2	Ge		851,714.55	1.34	105.7	Pulse	0.30	3
2	Rh		13,581,653.63	1.42	98.6	Analog	0.30	3
2	In		5,110,212.62	1.89	102.5	Analog	0.30	3
2	Tb		15,981,698.25	1.94	103.0	Analog	0.30	3
2	Ho		16,289,127.69	2.23	102.8	Analog	0.30	3
2	Bi		9,996,950.16	1.50	98.6	Analog	0.30	3
2	Ge		589,877.58	0.54	107.2	Pulse	0.30	3
3	Sc		1,863,234.58	0.81	104.4	Analog	0.30	3
3	Ge		747,059.47	0.89	105.5	Pulse	0.30	3
3	Rh		3,928,802.21	0.91	101.3	Analog	0.30	3
3	Tb		8,157,142.45	0.30	100.2	Analog	0.30	3
3	Ge		516,105.67	1.13	106.1	Pulse	0.30	3

Quantitation Report

File Name	059SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 14:56
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-106.59	72.00	3.628E-06	Pulse	0.25	3
B			1	2.344	ppb	3.35	27,355.05	1.376E-03	Pulse	0.15	3
Ca			1	-1.445	ppb	-7.13	20,818.49	8.635E-04	Pulse	0.10	3
Sr			1	-0.002	ppb	-245.60	3,920.53	1.623E-04	Pulse	0.10	3
Mo			1	0.049	ppb	16.24	570.02	2.361E-05	Pulse	0.10	3
Ag			1	0.007	ppb	43.73	210.01	9.417E-06	Pulse	0.10	3
Sn			1	0.043	ppb	26.86	1,456.77	6.514E-05	Pulse	0.10	3
Sb			1	0.019	ppb	25.01	460.02	1.634E-05	Pulse	0.10	3
Ba			1	-0.002	ppb	-351.22	90.00	3.200E-06	Pulse	0.10	3
Tl			1	-0.004	ppb	-201.56	74,018.74	4.472E-03	Pulse	0.10	3
Pb			1	0.007	ppb	90.87	460.02	2.778E-05	Pulse	0.10	3
Pb			1	0.010	ppb	32.14	440.02	2.659E-05	Pulse	0.10	3
Pb			1	0.012	ppb	9.40	1,946.78	1.176E-04	Pulse	0.10	3
Na			2	5.663	ppb	13.35	22,092.77	1.530E-02	Pulse	0.30	3
Mg			2	0.705	ppb	31.65	3,630.36	2.513E-03	Pulse	0.30	3
Al			2	-6.779	ppb	-0.22	513.34	3.555E-04	Pulse	0.30	3
K			2	1.407	ppb	10.51	11,278.97	7.811E-03	Pulse	0.30	3
Ca			2	0.853	ppb	125.89	334.45	2.319E-04	Pulse	0.30	3
Ti			2	-0.001	ppb	-1783.19	3.33	2.292E-06	Pulse	0.30	3
V			2	-0.001	ppb	-891.44	2,399.07	1.662E-03	Pulse	0.30	3
Cr			2	0.003	ppb	253.29	333.34	2.305E-04	Pulse	0.30	3
Mn			2	0.033	ppb	9.67	571.13	3.954E-04	Pulse	0.30	3
Fe			2	1.776	ppb	14.94	29,069.34	2.015E-02	Pulse	0.30	3
Co			2	0.003	ppb	851.06	34,352.58	2.379E-02	Pulse	0.30	3
Ni			2	-0.008	ppb	-13.86	61.11	4.235E-05	Pulse	0.30	3
Cu			2	0.575	ppb	1.02	1,501.19	1.040E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.382	ppb	7.27	264.45	1.828E-04	Pulse	0.30	3
As			2	-0.015	ppb	-50.90	48.00	3.320E-05	Pulse	1.00	3
Sn			2	0.054	ppb	9.11	572.24	1.086E-04	Pulse	0.30	3
Cd			2	-0.008	ppb	-27.57	11.89	2.251E-06	Pulse	0.30	3
Se			3	0.002	ppb	1495.44	21.00	2.883E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,888,860.77	1.12	111.9	Analog	0.10	3
1	Sc		24,110,567.97	0.61	111.2	Analog	0.10	3
1	Ge		4,721,912.95	0.29	109.7	Analog	0.10	3
1	Rh		24,159,017.97	1.08	110.1	Analog	0.10	3
1	In		22,356,626.29	1.25	110.9	Analog	0.10	3
1	Tb		28,145,008.75	0.22	107.7	Analog	0.10	3
1	Ho		29,053,312.07	0.56	108.1	Analog	0.10	3
1	Bi		16,552,531.84	0.79	105.9	Analog	0.10	3
1	Ge		3,481,040.47	1.09	109.5	Analog	0.10	3
2	Sc		1,443,964.98	1.48	103.8	Analog	0.30	3
2	Ge		840,237.50	1.45	104.2	Pulse	0.30	3
2	Rh		14,102,973.05	1.42	102.4	Analog	0.30	3
2	In		5,268,744.74	1.21	105.7	Analog	0.30	3
2	Tb		16,254,849.91	2.40	104.7	Analog	0.30	3
2	Ho		16,556,788.79	2.18	104.5	Analog	0.30	3
2	Bi		10,523,679.86	1.71	103.8	Analog	0.30	3
2	Ge		568,858.66	1.57	103.4	Pulse	0.30	3
3	Sc		1,880,199.09	0.44	105.4	Analog	0.30	3
3	Ge		727,937.19	0.86	102.8	Pulse	0.30	3
3	Rh		4,007,751.78	0.97	103.3	Analog	0.30	3
3	Tb		8,056,616.07	0.53	99.0	Analog	0.30	3
3	Ge		502,865.95	1.02	103.4	Pulse	0.30	3

Quantitation Report

File Name 060SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 14:59
Sample Name JD37213-4F 8
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-23.35	53.33	2.845E-06	Pulse	0.25	3
B			1	15.693	ppb	3.56	150,387.39	8.019E-03	Pulse	0.15	3
Ca			1	19323.934	ppb	3.00	21,273,658.43	9.159E-01	Analog	0.10	3
Sr			1	75.213	ppb	3.57	3,114,936.62	1.420E-01	Analog	0.10	3
Mo			1	0.276	ppb	5.85	2,456.90	1.120E-04	Pulse	0.10	3
Ag			1	0.004	ppb	92.71	130.00	6.185E-06	Pulse	0.10	3
Sn			1	0.061	ppb	16.25	1,573.44	7.478E-05	Pulse	0.10	3
Sb			1	0.113	ppb	5.83	1,756.80	6.515E-05	Pulse	0.10	3
Ba			1	23.614	ppb	4.01	115,691.41	4.290E-03	Pulse	0.10	3
Tl			1	-0.003	ppb	-612.97	68,244.28	4.473E-03	Pulse	0.10	3
Pb			1	42.752	ppb	2.94	430,955.15	2.825E-02	Pulse	0.10	3
Pb			1	41.876	ppb	3.60	358,178.08	2.348E-02	Pulse	0.10	3
Pb			1	42.442	ppb	2.90	1,667,265.72	1.093E-01	Pulse	0.10	3
Na			2	36624.574	ppb	2.10	78,450,687.99	5.354E+01	Analog	0.30	3
Mg			2	6580.490	ppb	2.57	6,878,067.23	4.694E+00	Analog	0.30	3
Al			2	4.336	ppb	8.80	5,447.48	3.717E-03	Pulse	0.30	3
K			2	1473.135	ppb	2.83	1,133,445.44	7.736E-01	Pulse	0.30	3
Ca			2	19796.762	ppb	3.26	818,377.05	5.586E-01	Pulse	0.30	3
Ti			2	0.283	ppb	3.74	87.78	5.989E-05	Pulse	0.30	3
V			2	-0.078	ppb	-23.34	1,801.22	1.230E-03	Pulse	0.30	3
Cr			2	0.059	ppb	1.93	927.81	6.330E-04	Pulse	0.30	3
Mn			2	6.912	ppb	4.50	46,304.71	3.161E-02	Pulse	0.30	3
Fe			2	50.974	ppb	3.08	484,237.05	3.305E-01	Pulse	0.30	3
Co			2	-0.052	ppb	-50.18	33,942.80	2.316E-02	Pulse	0.30	3
Ni			2	0.402	ppb	5.25	1,873.44	1.279E-03	Pulse	0.30	3
Cu			2	3.598	ppb	3.86	36,020.32	2.459E-02	Pulse	0.30	3
Zn			2	10.049	ppb	4.53	18,905.28	1.291E-02	Pulse	0.30	3
As			2	0.156	ppb	9.35	196.33	1.339E-04	Pulse	1.00	3
Sn			2	0.048	ppb	34.85	532.23	1.039E-04	Pulse	0.30	3
Cd			2	-0.006	ppb	-127.08	15.27	3.020E-06	Pulse	0.30	3
Se			3	0.089	ppb	47.99	38.00	5.167E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,757,977.37	0.98	105.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,226,412.15	0.30	107.1	Analog	0.10	3
1	Ge		4,564,627.74	0.26	106.1	Analog	0.10	3
1	Rh		21,940,081.34	0.92	100.0	Analog	0.10	3
1	In		21,040,704.58	0.69	104.4	Analog	0.10	3
1	Tb		26,966,380.43	0.13	103.2	Analog	0.10	3
1	Ho		27,831,287.09	0.34	103.6	Analog	0.10	3
1	Bi		15,256,670.19	0.26	97.6	Analog	0.10	3
1	Ge		3,343,448.18	1.33	105.2	Analog	0.10	3
2	Sc		1,465,574.21	1.74	105.3	Analog	0.30	3
2	Ge		848,776.77	1.15	105.3	Pulse	0.30	3
2	Rh		13,209,588.92	2.14	95.9	Analog	0.30	3
2	In		5,136,865.89	3.30	103.1	Analog	0.30	3
2	Tb		15,930,532.14	1.26	102.6	Analog	0.30	3
2	Ho		16,333,748.79	2.57	103.1	Analog	0.30	3
2	Bi		9,689,032.39	1.24	95.6	Analog	0.30	3
2	Ge		574,947.53	1.28	104.5	Pulse	0.30	3
3	Sc		1,809,458.26	1.16	101.4	Analog	0.30	3
3	Ge		734,613.20	0.83	103.8	Pulse	0.30	3
3	Rh		3,767,711.52	1.50	97.1	Analog	0.30	3
3	Tb		7,983,550.79	0.59	98.1	Analog	0.30	3
3	Ge		504,845.85	0.61	103.8	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:02
Sample Name JD37213-5F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-47.58	53.33	2.921E-06	Pulse	0.25	3
B			1	47.843	ppb	2.11	438,729.38	2.402E-02	Pulse	0.15	3
Ca			1	40230.065	ppb	3.16	43,533,166.02	1.906E+00	Analog	0.10	3
Sr			1	132.211	ppb	1.86	5,309,499.92	2.495E-01	Analog	0.10	3
Mo			1	0.393	ppb	10.73	3,357.07	1.578E-04	Pulse	0.10	3
Ag			1	0.002	ppb	73.73	106.67	5.130E-06	Pulse	0.10	3
Sn			1	-0.045	ppb	-23.77	393.35	1.887E-05	Pulse	0.10	3
Sb			1	0.168	ppb	10.40	2,506.93	9.383E-05	Pulse	0.10	3
Ba			1	67.657	ppb	1.42	328,033.28	1.229E-02	Pulse	0.10	3
Tl			1	0.029	ppb	42.32	66,885.55	4.535E-03	Pulse	0.10	3
Pb			1	0.015	ppb	109.90	490.03	3.318E-05	Pulse	0.10	3
Pb			1	0.020	ppb	70.98	476.69	3.231E-05	Pulse	0.10	3
Pb			1	0.021	ppb	20.11	2,080.12	1.410E-04	Pulse	0.10	3
Na			2	51125.941	ppb	3.60	109,554,926.76	7.474E+01	Analog	0.30	3
Mg			2	7199.840	ppb	3.86	7,527,796.37	5.136E+00	Analog	0.30	3
Al			2	11.397	ppb	6.00	8,579.75	5.853E-03	Pulse	0.30	3
K			2	2180.438	ppb	3.51	1,673,420.49	1.142E+00	Analog	0.30	3
Ca			2	41245.344	ppb	2.84	1,705,719.13	1.164E+00	Analog	0.30	3
Ti			2	0.242	ppb	12.42	75.56	5.146E-05	Pulse	0.30	3
V			2	0.114	ppb	10.98	3,387.00	2.310E-03	Pulse	0.30	3
Cr			2	0.070	ppb	2.50	1,036.70	7.070E-04	Pulse	0.30	3
Mn			2	0.432	ppb	1.65	3,235.86	2.207E-03	Pulse	0.30	3
Fe			2	1.053	ppb	13.63	22,843.98	1.559E-02	Pulse	0.30	3
Co			2	-0.079	ppb	-66.96	33,501.04	2.285E-02	Pulse	0.30	3
Ni			2	0.343	ppb	3.52	1,613.42	1.099E-03	Pulse	0.30	3
Cu			2	1.591	ppb	3.32	13,129.15	8.957E-03	Pulse	0.30	3
Zn			2	295.402	ppb	3.46	569,494.89	3.885E-01	Pulse	0.30	3
As			2	0.198	ppb	6.63	232.67	1.588E-04	Pulse	1.00	3
Sn			2	-0.039	ppb	-7.37	175.56	3.471E-05	Pulse	0.30	3
Cd			2	-0.005	ppb	-54.07	18.76	3.708E-06	Pulse	0.30	3
Se			3	0.187	ppb	22.76	56.33	7.767E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,265,210.22	0.71	102.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,845,689.66	0.68	105.3	Analog	0.10	3
1	Ge		4,443,888.06	0.87	103.3	Analog	0.10	3
1	Rh		21,282,633.02	0.89	97.0	Analog	0.10	3
1	In		20,818,393.83	0.59	103.3	Analog	0.10	3
1	Tb		26,700,057.10	0.97	102.2	Analog	0.10	3
1	Ho		27,262,584.59	0.65	101.5	Analog	0.10	3
1	Bi		14,749,014.78	0.60	94.4	Analog	0.10	3
1	Ge		3,276,282.87	0.46	103.1	Analog	0.10	3
2	Sc		1,466,704.32	2.77	105.4	Analog	0.30	3
2	Ge		830,743.49	1.15	103.1	Pulse	0.30	3
2	Rh		12,954,657.54	2.55	94.0	Analog	0.30	3
2	In		5,055,874.13	1.38	101.4	Analog	0.30	3
2	Tb		15,698,719.93	2.07	101.1	Analog	0.30	3
2	Ho		16,129,567.69	2.55	101.8	Analog	0.30	3
2	Bi		9,400,325.74	1.29	92.7	Analog	0.30	3
2	Ge		563,997.50	0.89	102.5	Pulse	0.30	3
3	Sc		1,843,183.33	0.40	103.3	Analog	0.30	3
3	Ge		725,791.27	0.67	102.5	Pulse	0.30	3
3	Rh		3,746,105.82	0.90	96.6	Analog	0.30	3
3	Tb		8,066,190.51	0.53	99.1	Analog	0.30	3
3	Ge		495,590.05	0.13	101.9	Pulse	0.30	3

Quantitation Report

File Name 062SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:05
Sample Name JD37213-6F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.005	ppb	-34.60	37.33	1.985E-06	Pulse	0.25	3
B			1	46.739	ppb	3.23	442,035.80	2.347E-02	Pulse	0.15	3
Ca			1	39671.051	ppb	2.49	43,335,036.02	1.879E+00	Analog	0.10	3
Sr			1	126.856	ppb	4.16	5,187,928.98	2.394E-01	Analog	0.10	3
Mo			1	0.405	ppb	6.86	3,523.76	1.626E-04	Pulse	0.10	3
Ag			1	0.006	ppb	26.69	180.01	8.712E-06	Pulse	0.10	3
Sn			1	0.122	ppb	15.31	2,203.53	1.066E-04	Pulse	0.10	3
Sb			1	0.163	ppb	9.02	2,463.57	9.135E-05	Pulse	0.10	3
Ba			1	67.175	ppb	2.27	329,035.60	1.220E-02	Pulse	0.10	3
Tl			1	0.005	ppb	1287.53	67,086.31	4.489E-03	Pulse	0.10	3
Pb			1	16.551	ppb	3.24	163,648.09	1.095E-02	Pulse	0.10	3
Pb			1	16.226	ppb	3.54	136,140.45	9.109E-03	Pulse	0.10	3
Pb			1	16.484	ppb	3.07	635,123.06	4.250E-02	Pulse	0.10	3
Na			2	50339.423	ppb	1.67	107,536,942.39	7.359E+01	Analog	0.30	3
Mg			2	7074.221	ppb	2.59	7,374,191.65	5.046E+00	Analog	0.30	3
Al			2	12.308	ppb	7.13	8,954.36	6.128E-03	Pulse	0.30	3
K			2	2171.363	ppb	1.68	1,661,472.29	1.137E+00	Analog	0.30	3
Ca			2	41182.474	ppb	2.36	1,697,723.72	1.162E+00	Analog	0.30	3
Ti			2	0.235	ppb	20.35	73.33	5.014E-05	Pulse	0.30	3
V			2	0.119	ppb	22.23	3,417.01	2.339E-03	Pulse	0.30	3
Cr			2	0.077	ppb	9.64	1,106.71	7.574E-04	Pulse	0.30	3
Mn			2	0.585	ppb	1.97	4,238.29	2.900E-03	Pulse	0.30	3
Fe			2	2.423	ppb	4.35	35,405.62	2.423E-02	Pulse	0.30	3
Co			2	-0.082	ppb	-6.71	33,339.58	2.281E-02	Pulse	0.30	3
Ni			2	0.354	ppb	8.31	1,657.87	1.134E-03	Pulse	0.30	3
Cu			2	1.993	ppb	1.22	17,664.01	1.209E-02	Pulse	0.30	3
Zn			2	298.223	ppb	2.60	573,141.00	3.922E-01	Pulse	0.30	3
As			2	0.200	ppb	11.65	234.00	1.602E-04	Pulse	1.00	3
Sn			2	0.117	ppb	5.20	798.91	1.587E-04	Pulse	0.30	3
Cd			2	-0.007	ppb	-61.56	13.26	2.662E-06	Pulse	0.30	3
Se			3	0.209	ppb	11.55	60.33	8.367E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,837,271.85	0.98	106.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,063,492.99	1.13	106.3	Analog	0.10	3
1	Ge		4,523,082.54	0.55	105.1	Analog	0.10	3
1	Rh		21,686,788.84	2.52	98.8	Analog	0.10	3
1	In		20,696,845.61	1.43	102.7	Analog	0.10	3
1	Tb		26,975,772.10	0.53	103.2	Analog	0.10	3
1	Ho		27,617,405.42	2.25	102.8	Analog	0.10	3
1	Bi		14,949,197.69	1.19	95.6	Analog	0.10	3
1	Ge		3,304,532.03	1.80	103.9	Analog	0.10	3
2	Sc		1,461,512.13	0.94	105.0	Analog	0.30	3
2	Ge		828,550.35	0.74	102.8	Pulse	0.30	3
2	Rh		12,902,571.15	1.11	93.7	Analog	0.30	3
2	In		5,030,981.79	2.75	100.9	Analog	0.30	3
2	Tb		15,807,338.82	1.87	101.8	Analog	0.30	3
2	Ho		16,195,886.02	1.41	102.2	Analog	0.30	3
2	Bi		9,467,109.90	0.62	93.4	Analog	0.30	3
2	Ge		562,932.53	0.81	102.3	Pulse	0.30	3
3	Sc		1,851,468.54	0.81	103.7	Analog	0.30	3
3	Ge		720,815.01	0.93	101.8	Pulse	0.30	3
3	Rh		3,791,975.96	0.48	97.8	Analog	0.30	3
3	Tb		8,021,993.57	0.84	98.6	Analog	0.30	3
3	Ge		496,158.94	1.38	102.0	Pulse	0.30	3

Quantitation Report

File Name 063SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:08
Sample Name JD37991-11
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-48.96	54.67	2.874E-06	Pulse	0.25	3
B			1	47.401	ppb	3.13	452,257.13	2.380E-02	Pulse	0.15	3
Ca			1	44058.361	ppb	1.74	48,846,615.94	2.087E+00	Analog	0.10	3
Sr			1	141.464	ppb	3.28	5,872,789.08	2.669E-01	Analog	0.10	3
Mo			1	0.338	ppb	3.51	3,000.31	1.364E-04	Pulse	0.10	3
Ag			1	0.002	ppb	47.15	100.00	4.733E-06	Pulse	0.10	3
Sn			1	-0.044	ppb	-14.58	403.35	1.910E-05	Pulse	0.10	3
Sb			1	0.140	ppb	6.01	2,146.86	7.908E-05	Pulse	0.10	3
Ba			1	72.413	ppb	2.47	357,070.59	1.315E-02	Pulse	0.10	3
Tl			1	0.006	ppb	298.12	67,443.90	4.490E-03	Pulse	0.10	3
Pb			1	0.034	ppb	31.41	683.37	4.548E-05	Pulse	0.10	3
Pb			1	0.037	ppb	8.89	630.03	4.195E-05	Pulse	0.10	3
Pb			1	0.039	ppb	0.80	2,833.52	1.886E-04	Pulse	0.10	3
Na			2	54389.210	ppb	3.39	117,391,262.00	7.951E+01	Analog	0.30	3
Mg			2	7949.206	ppb	2.39	8,372,975.50	5.670E+00	Analog	0.30	3
Al			2	15.152	ppb	7.90	10,317.29	6.989E-03	Pulse	0.30	3
K			2	2075.910	ppb	1.85	1,605,632.27	1.087E+00	Analog	0.30	3
Ca			2	45347.162	ppb	2.60	1,889,010.83	1.279E+00	Analog	0.30	3
Ti			2	0.144	ppb	13.97	46.67	3.156E-05	Pulse	0.30	3
V			2	0.044	ppb	16.51	2,826.90	1.914E-03	Pulse	0.30	3
Cr			2	0.082	ppb	1.52	1,172.27	7.937E-04	Pulse	0.30	3
Mn			2	1.792	ppb	3.74	12,367.48	8.377E-03	Pulse	0.30	3
Fe			2	7.986	ppb	4.05	87,590.56	5.932E-02	Pulse	0.30	3
Co			2	-0.101	ppb	-27.00	33,378.42	2.260E-02	Pulse	0.30	3
Ni			2	0.630	ppb	5.29	2,902.48	1.966E-03	Pulse	0.30	3
Cu			2	3.080	ppb	2.38	30,340.21	2.055E-02	Pulse	0.30	3
Zn			2	312.774	ppb	3.24	607,400.58	4.114E-01	Pulse	0.30	3
As			2	0.219	ppb	9.48	253.00	1.712E-04	Pulse	1.00	3
Sn			2	-0.047	ppb	-4.50	143.34	2.838E-05	Pulse	0.30	3
Cd			2	-0.005	ppb	-57.70	16.96	3.359E-06	Pulse	0.30	3
Se			3	0.201	ppb	11.01	58.33	8.148E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,004,125.10	0.47	106.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,403,610.48	0.94	107.9	Analog	0.10	3
1	Ge		4,539,319.10	0.54	105.5	Analog	0.10	3
1	Rh		22,002,414.67	0.50	100.3	Analog	0.10	3
1	In		21,108,755.76	1.14	104.7	Analog	0.10	3
1	Tb		27,161,012.93	1.40	103.9	Analog	0.10	3
1	Ho		28,041,962.92	1.23	104.4	Analog	0.10	3
1	Bi		15,021,226.86	0.46	96.1	Analog	0.10	3
1	Ge		3,347,110.16	1.03	105.3	Analog	0.10	3
2	Sc		1,476,994.42	1.60	106.1	Analog	0.30	3
2	Ge		822,125.87	0.70	102.0	Pulse	0.30	3
2	Rh		12,888,216.71	1.22	93.6	Analog	0.30	3
2	In		5,049,975.99	2.06	101.3	Analog	0.30	3
2	Tb		15,574,032.71	2.23	100.3	Analog	0.30	3
2	Ho		16,001,284.92	0.77	101.0	Analog	0.30	3
2	Bi		9,306,615.19	1.63	91.8	Analog	0.30	3
2	Ge		559,800.77	0.87	101.7	Pulse	0.30	3
3	Sc		1,819,601.18	1.08	102.0	Analog	0.30	3
3	Ge		716,049.54	0.27	101.1	Pulse	0.30	3
3	Rh		3,754,801.80	0.58	96.8	Analog	0.30	3
3	Tb		8,127,032.18	1.87	99.9	Analog	0.30	3
3	Ge		491,631.47	0.45	101.0	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:11
Sample Name JD37991-12
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-19.27	58.67	3.128E-06	Pulse	0.25	3
B			1	46.535	ppb	3.12	438,202.73	2.337E-02	Pulse	0.15	3
Ca			1	43641.337	ppb	2.94	47,334,909.29	2.067E+00	Analog	0.10	3
Sr			1	139.028	ppb	2.34	5,668,120.75	2.623E-01	Analog	0.10	3
Mo			1	0.346	ppb	4.05	3,013.65	1.395E-04	Pulse	0.10	3
Ag			1	0.002	ppb	15.54	103.33	4.996E-06	Pulse	0.10	3
Sn			1	-0.028	ppb	-15.63	573.36	2.772E-05	Pulse	0.10	3
Sb			1	0.142	ppb	4.43	2,176.86	8.021E-05	Pulse	0.10	3
Ba			1	71.674	ppb	2.15	353,177.69	1.302E-02	Pulse	0.10	3
Tl			1	0.017	ppb	160.37	66,962.49	4.511E-03	Pulse	0.10	3
Pb			1	3.443	ppb	2.09	34,085.68	2.296E-03	Pulse	0.10	3
Pb			1	3.256	ppb	4.09	27,379.91	1.845E-03	Pulse	0.10	3
Pb			1	3.334	ppb	4.02	128,598.94	8.665E-03	Pulse	0.10	3
Na			2	54482.831	ppb	2.50	114,551,186.56	7.964E+01	Analog	0.30	3
Mg			2	7971.853	ppb	3.13	8,178,673.29	5.686E+00	Analog	0.30	3
Al			2	21.744	ppb	4.57	12,918.85	8.983E-03	Pulse	0.30	3
K			2	2148.832	ppb	1.63	1,618,507.33	1.125E+00	Analog	0.30	3
Ca			2	45912.401	ppb	1.43	1,863,078.67	1.295E+00	Analog	0.30	3
Ti			2	0.346	ppb	10.83	104.44	7.264E-05	Pulse	0.30	3
V			2	0.053	ppb	29.66	2,823.57	1.963E-03	Pulse	0.30	3
Cr			2	0.056	ppb	11.77	875.58	6.089E-04	Pulse	0.30	3
Mn			2	1.554	ppb	3.59	10,495.22	7.297E-03	Pulse	0.30	3
Fe			2	2.506	ppb	6.20	35,598.21	2.475E-02	Pulse	0.30	3
Co			2	-0.027	ppb	-122.64	33,720.27	2.344E-02	Pulse	0.30	3
Ni			2	0.477	ppb	2.56	2,164.59	1.505E-03	Pulse	0.30	3
Cu			2	1.313	ppb	1.75	9,768.16	6.791E-03	Pulse	0.30	3
Zn			2	568.071	ppb	2.84	1,074,977.77	7.474E-01	Pulse	0.30	3
As			2	0.220	ppb	12.35	247.33	1.720E-04	Pulse	1.00	3
Sn			2	-0.031	ppb	-15.41	205.56	4.095E-05	Pulse	0.30	3
Cd			2	-0.007	ppb	-78.80	14.14	2.815E-06	Pulse	0.30	3
Se			3	0.291	ppb	8.51	75.67	1.052E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,754,152.10	0.46	105.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,897,485.49	0.33	105.6	Analog	0.10	3
1	Ge		4,457,343.89	1.78	103.6	Analog	0.10	3
1	Rh		21,608,665.51	1.18	98.5	Analog	0.10	3
1	In		20,693,611.15	1.36	102.6	Analog	0.10	3
1	Tb		27,137,214.60	0.40	103.8	Analog	0.10	3
1	Ho		27,796,414.59	0.90	103.5	Analog	0.10	3
1	Bi		14,845,192.70	0.91	95.0	Analog	0.10	3
1	Ge		3,283,391.31	0.31	103.3	Analog	0.10	3
2	Sc		1,438,555.57	1.04	103.4	Analog	0.30	3
2	Ge		822,335.00	0.99	102.0	Pulse	0.30	3
2	Rh		12,779,246.71	1.76	92.8	Analog	0.30	3
2	In		5,025,834.51	1.98	100.8	Analog	0.30	3
2	Tb		15,569,193.27	1.42	100.3	Analog	0.30	3
2	Ho		16,053,190.47	2.72	101.3	Analog	0.30	3
2	Bi		9,365,196.85	2.10	92.4	Analog	0.30	3
2	Ge		558,830.73	0.95	101.6	Pulse	0.30	3
3	Sc		1,811,016.32	0.65	101.5	Analog	0.30	3
3	Ge		718,775.72	0.58	101.5	Pulse	0.30	3
3	Rh		3,747,085.69	1.23	96.6	Analog	0.30	3
3	Tb		8,094,326.34	0.85	99.5	Analog	0.30	3
3	Ge		492,230.19	0.49	101.2	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:14
Sample Name JD37991-11F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.005	ppb	-15.28	38.67	2.038E-06	Pulse	0.25	3
B			1	46.989	ppb	1.40	447,079.13	2.359E-02	Pulse	0.15	3
Ca			1	43708.732	ppb	3.04	48,292,480.95	2.070E+00	Analog	0.10	3
Sr			1	141.650	ppb	1.78	5,823,008.04	2.673E-01	Analog	0.10	3
Mo			1	0.361	ppb	6.68	3,163.71	1.452E-04	Pulse	0.10	3
Ag			1	0.005	ppb	74.46	160.01	7.676E-06	Pulse	0.10	3
Sn			1	-0.044	ppb	-15.49	406.69	1.950E-05	Pulse	0.10	3
Sb			1	0.135	ppb	2.81	2,093.52	7.688E-05	Pulse	0.10	3
Ba			1	72.410	ppb	2.37	358,080.22	1.315E-02	Pulse	0.10	3
Tl			1	-0.008	ppb	-360.95	66,711.16	4.464E-03	Pulse	0.10	3
Pb			1	0.005	ppb	98.80	393.35	2.632E-05	Pulse	0.10	3
Pb			1	0.023	ppb	53.74	510.03	3.412E-05	Pulse	0.10	3
Pb			1	0.012	ppb	30.47	1,750.09	1.171E-04	Pulse	0.10	3
Na			2	54638.671	ppb	2.13	116,187,808.71	7.987E+01	Analog	0.30	3
Mg			2	7957.041	ppb	1.53	8,256,959.39	5.676E+00	Analog	0.30	3
Al			2	6.078	ppb	8.99	6,173.25	4.244E-03	Pulse	0.30	3
K			2	2068.054	ppb	1.22	1,575,802.13	1.083E+00	Analog	0.30	3
Ca			2	45404.163	ppb	3.03	1,863,218.75	1.281E+00	Analog	0.30	3
Ti			2	0.202	ppb	23.10	63.33	4.347E-05	Pulse	0.30	3
V			2	0.032	ppb	31.14	2,684.66	1.846E-03	Pulse	0.30	3
Cr			2	0.056	ppb	21.32	883.36	6.077E-04	Pulse	0.30	3
Mn			2	0.320	ppb	3.06	2,469.07	1.697E-03	Pulse	0.30	3
Fe			2	0.633	ppb	2.04	18,828.40	1.294E-02	Pulse	0.30	3
Co			2	-0.092	ppb	-26.80	33,022.33	2.270E-02	Pulse	0.30	3
Ni			2	0.350	ppb	5.61	1,633.42	1.123E-03	Pulse	0.30	3
Cu			2	1.201	ppb	1.17	8,614.27	5.921E-03	Pulse	0.30	3
Zn			2	270.477	ppb	2.31	517,420.62	3.557E-01	Pulse	0.30	3
As			2	0.215	ppb	9.30	246.33	1.692E-04	Pulse	1.00	3
Sn			2	-0.051	ppb	-2.87	125.56	2.497E-05	Pulse	0.30	3
Cd			2	-0.006	ppb	-30.85	15.90	3.157E-06	Pulse	0.30	3
Se			3	0.216	ppb	10.72	61.00	8.536E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,948,193.29	0.94	106.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,324,852.98	0.45	107.5	Analog	0.10	3
1	Ge		4,492,817.64	0.23	104.4	Analog	0.10	3
1	Rh		21,787,493.84	0.63	99.3	Analog	0.10	3
1	In		20,849,494.05	0.24	103.4	Analog	0.10	3
1	Tb		27,232,604.59	0.34	104.2	Analog	0.10	3
1	Ho		27,822,012.92	1.08	103.6	Analog	0.10	3
1	Bi		14,945,068.53	0.64	95.6	Analog	0.10	3
1	Ge		3,299,445.37	0.86	103.8	Analog	0.10	3
2	Sc		1,454,884.77	1.04	104.6	Analog	0.30	3
2	Ge		818,997.47	1.03	101.6	Pulse	0.30	3
2	Rh		12,856,304.77	2.33	93.3	Analog	0.30	3
2	In		5,027,702.65	1.15	100.9	Analog	0.30	3
2	Tb		15,610,224.94	1.98	100.6	Analog	0.30	3
2	Ho		15,822,892.15	1.32	99.9	Analog	0.30	3
2	Bi		9,274,709.08	1.57	91.5	Analog	0.30	3
2	Ge		556,155.05	1.05	101.1	Pulse	0.30	3
3	Sc		1,828,780.21	2.35	102.5	Analog	0.30	3
3	Ge		714,624.14	0.80	100.9	Pulse	0.30	3
3	Rh		3,773,212.07	0.94	97.3	Analog	0.30	3
3	Tb		8,093,105.23	1.49	99.5	Analog	0.30	3
3	Ge		489,882.91	0.51	100.7	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:17
Sample Name JD37991-12F
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-27.64	30.67	1.630E-06	Pulse	0.25	3
B			1	47.640	ppb	3.97	448,655.75	2.392E-02	Pulse	0.15	3
Ca			1	42763.418	ppb	3.40	46,732,600.97	2.026E+00	Analog	0.10	3
Sr			1	135.754	ppb	2.32	5,584,150.13	2.562E-01	Analog	0.10	3
Mo			1	0.352	ppb	10.66	3,090.34	1.418E-04	Pulse	0.10	3
Ag			1	0.004	ppb	32.99	140.00	6.664E-06	Pulse	0.10	3
Sn			1	-0.030	ppb	-18.61	556.69	2.650E-05	Pulse	0.10	3
Sb			1	0.149	ppb	3.99	2,263.54	8.418E-05	Pulse	0.10	3
Ba			1	72.406	ppb	2.32	353,573.72	1.315E-02	Pulse	0.10	3
Tl			1	0.016	ppb	130.77	66,848.30	4.509E-03	Pulse	0.10	3
Pb			1	0.758	ppb	5.40	7,762.01	5.235E-04	Pulse	0.10	3
Pb			1	0.717	ppb	9.09	6,264.69	4.227E-04	Pulse	0.10	3
Pb			1	0.741	ppb	2.36	29,557.70	1.994E-03	Pulse	0.10	3
Na			2	53558.601	ppb	2.82	113,140,106.62	7.829E+01	Analog	0.30	3
Mg			2	7828.366	ppb	3.05	8,069,300.51	5.584E+00	Analog	0.30	3
Al			2	8.627	ppb	7.58	7,246.97	5.015E-03	Pulse	0.30	3
K			2	2089.972	ppb	2.05	1,581,938.86	1.095E+00	Analog	0.30	3
Ca			2	44407.007	ppb	3.19	1,810,293.33	1.253E+00	Analog	0.30	3
Ti			2	0.281	ppb	19.76	85.56	5.931E-05	Pulse	0.30	3
V			2	0.036	ppb	43.93	2,700.21	1.869E-03	Pulse	0.30	3
Cr			2	0.053	ppb	15.00	854.47	5.917E-04	Pulse	0.30	3
Mn			2	0.327	ppb	8.75	2,500.19	1.731E-03	Pulse	0.30	3
Fe			2	0.330	ppb	0.96	15,941.31	1.103E-02	Pulse	0.30	3
Co			2	-0.084	ppb	-31.04	32,947.81	2.280E-02	Pulse	0.30	3
Ni			2	0.469	ppb	5.82	2,139.03	1.481E-03	Pulse	0.30	3
Cu			2	1.195	ppb	1.90	8,487.54	5.874E-03	Pulse	0.30	3
Zn			2	376.058	ppb	3.40	714,790.61	4.947E-01	Pulse	0.30	3
As			2	0.236	ppb	11.77	262.33	1.816E-04	Pulse	1.00	3
Sn			2	-0.039	ppb	-9.25	172.22	3.425E-05	Pulse	0.30	3
Cd			2	-0.010	ppb	-23.97	8.08	1.590E-06	Pulse	0.30	3
Se			3	0.244	ppb	6.79	66.00	9.269E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,766,717.22	1.77	105.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,073,824.66	0.93	106.4	Analog	0.10	3
1	Ge		4,457,263.16	0.65	103.6	Analog	0.10	3
1	Rh		21,798,470.51	0.19	99.3	Analog	0.10	3
1	In		21,013,886.40	0.34	104.2	Analog	0.10	3
1	Tb		26,889,708.77	0.49	102.9	Analog	0.10	3
1	Ho		27,962,858.75	1.15	104.1	Analog	0.10	3
1	Bi		14,825,146.86	0.43	94.8	Analog	0.10	3
1	Ge		3,320,686.31	0.78	104.5	Analog	0.10	3
2	Sc		1,445,515.36	1.76	103.9	Analog	0.30	3
2	Ge		819,442.01	0.99	101.7	Pulse	0.30	3
2	Rh		12,842,879.21	1.92	93.2	Analog	0.30	3
2	In		5,034,813.21	2.32	101.0	Analog	0.30	3
2	Tb		15,744,061.60	1.30	101.4	Analog	0.30	3
2	Ho		16,073,830.47	1.62	101.5	Analog	0.30	3
2	Bi		9,334,130.46	2.55	92.1	Analog	0.30	3
2	Ge		556,850.05	0.81	101.2	Pulse	0.30	3
3	Sc		1,805,472.70	0.77	101.2	Analog	0.30	3
3	Ge		711,867.82	0.79	100.5	Pulse	0.30	3
3	Rh		3,731,564.16	1.45	96.2	Analog	0.30	3
3	Tb		7,951,081.07	0.25	97.7	Analog	0.30	3
3	Ge		487,018.26	0.09	100.1	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:20
Sample Name JD37213-4
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.023	ppb	-36.04	42.67	2.243E-06	Pulse	0.25	3
B			1	24.635	ppb	1.72	50,380.89	2.661E-03	Pulse	0.15	3
Ca			1	23919.023	ppb	0.99	5,155,215.65	2.274E-01	Analog	0.10	3
Sr			1	87.749	ppb	0.83	738,965.46	3.326E-02	Pulse	0.10	3
Mo			1	0.263	ppb	7.77	556.69	2.505E-05	Pulse	0.10	3
Ag			1	0.028	ppb	17.51	170.00	8.063E-06	Pulse	0.10	3
Sn			1	1.319	ppb	4.81	3,823.86	1.814E-04	Pulse	0.10	3
Sb			1	0.089	ppb	36.66	420.02	1.577E-05	Pulse	0.10	3
Ba			1	21.741	ppb	2.94	21,123.26	7.929E-04	Pulse	0.10	3
Tl			1	-0.286	ppb	-26.16	68,217.38	4.371E-03	Pulse	0.10	3
Pb			1	313.824	ppb	0.28	647,046.57	4.146E-02	Pulse	0.10	3
Pb			1	307.052	ppb	0.36	537,155.75	3.442E-02	Pulse	0.10	3
Pb			1	318.398	ppb	0.36	2,558,292.81	1.639E-01	Analog	0.10	3
Na			2	39286.678	ppb	0.89	16,264,459.35	1.149E+01	Analog	0.30	3
Mg			2	7474.791	ppb	1.61	1,511,921.15	1.068E+00	Analog	0.30	3
Al			2	-4.218	ppb	-12.98	3,044.71	2.151E-03	Pulse	0.30	3
K			2	1592.242	ppb	1.11	244,571.22	1.728E-01	Pulse	0.30	3
Ca			2	21780.831	ppb	1.35	174,185.63	1.231E-01	Pulse	0.30	3
Ti			2	0.349	ppb	52.39	23.33	1.659E-05	Pulse	0.30	3
V			2	-0.870	ppb	-5.23	972.26	6.876E-04	Pulse	0.30	3
Cr			2	0.072	ppb	30.74	444.45	3.140E-04	Pulse	0.30	3
Mn			2	17.591	ppb	1.71	22,938.53	1.621E-02	Pulse	0.30	3
Fe			2	246.007	ppb	0.81	451,958.77	3.193E-01	Pulse	0.30	3
Co			2	-0.100	ppb	-87.38	33,300.63	2.352E-02	Pulse	0.30	3
Ni			2	0.399	ppb	4.25	433.34	3.062E-04	Pulse	0.30	3
Cu			2	9.992	ppb	0.56	17,165.78	1.213E-02	Pulse	0.30	3
Zn			2	11.091	ppb	2.48	3,678.18	2.599E-03	Pulse	0.30	3
As			2	0.068	ppb	89.10	71.00	5.006E-05	Pulse	1.00	3
Sn			2	1.040	ppb	9.10	1,185.61	2.308E-04	Pulse	0.30	3
Cd			2	-0.053	ppb	-14.86	6.16	1.210E-06	Pulse	0.30	3
Se			3	0.064	ppb	102.59	22.67	3.161E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,934,197.01	1.68	106.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,666,614.66	1.01	104.5	Analog	0.10	3
1	Ge		4,484,296.08	2.03	104.2	Analog	0.10	3
1	Rh		22,218,086.34	0.89	101.3	Analog	0.10	3
1	In		21,078,346.88	0.36	104.5	Analog	0.10	3
1	Tb		26,640,215.43	0.34	101.9	Analog	0.10	3
1	Ho		27,095,565.43	0.69	100.9	Analog	0.10	3
1	Bi		15,607,068.94	0.71	99.8	Analog	0.10	3
1	Ge		3,326,392.56	0.78	104.6	Analog	0.10	3
2	Sc		1,415,441.12	2.15	101.7	Analog	0.30	3
2	Ge		844,904.86	1.12	104.8	Pulse	0.30	3
2	Rh		13,480,450.58	1.85	97.8	Analog	0.30	3
2	In		5,132,623.10	2.39	103.0	Analog	0.30	3
2	Tb		15,922,208.26	2.62	102.6	Analog	0.30	3
2	Ho		16,180,464.36	2.08	102.1	Analog	0.30	3
2	Bi		10,221,849.87	2.21	100.9	Analog	0.30	3
2	Ge		571,835.32	1.65	103.9	Pulse	0.30	3
3	Sc		1,778,723.06	1.51	99.7	Analog	0.30	3
3	Ge		717,032.63	0.32	101.3	Pulse	0.30	3
3	Rh		3,829,162.76	0.71	98.7	Analog	0.30	3
3	Tb		7,860,071.08	1.24	96.6	Analog	0.30	3
3	Ge		492,535.88	0.67	101.2	Pulse	0.30	3

Quantitation Report

File Name	068SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 15:24
Sample Name	CCVA 4
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	48.010	ppb	3.94	507,787.66	2.642E-02	Pulse	0.25	3
B			1	99.241	ppb	3.80	953,398.92	4.960E-02	Pulse	0.15	3
Ca			1	5212.856	ppb	1.75	5,732,221.58	2.477E-01	Analog	0.10	3
Sr			1	51.354	ppb	3.53	2,176,065.91	9.701E-02	Analog	0.10	3
Mo			1	50.270	ppb	5.26	439,746.61	1.961E-02	Pulse	0.10	3
Ag			1	51.692	ppb	3.73	1,038,277.01	4.880E-02	Mix	0.10	3
Sn			1	51.429	ppb	2.95	577,355.47	2.713E-02	Pulse	0.10	3
Sb			1	49.073	ppb	3.62	696,999.57	2.553E-02	Pulse	0.10	3
Ba			1	49.009	ppb	3.92	242,963.55	8.901E-03	Pulse	0.10	3
Tl			1	51.510	ppb	2.43	1,588,235.13	1.020E-01	Analog	0.10	3
Pb			1	48.265	ppb	3.91	496,634.46	3.189E-02	Pulse	0.10	3
Pb			1	49.026	ppb	3.74	428,020.70	2.748E-02	Pulse	0.10	3
Pb			1	50.051	ppb	3.17	2,007,018.08	1.289E-01	Analog	0.10	3
Na			2	5035.152	ppb	3.52	10,367,558.20	7.367E+00	Analog	0.30	3
Mg			2	5033.270	ppb	4.17	5,053,019.80	3.591E+00	Analog	0.30	3
Al			2	5038.225	ppb	2.36	2,148,418.18	1.526E+00	Analog	0.30	3
K			2	5029.559	ppb	2.21	3,694,308.60	2.624E+00	Analog	0.30	3
Ca			2	5476.341	ppb	3.46	217,671.11	1.547E-01	Pulse	0.30	3
Ti			2	48.679	ppb	4.40	13,892.94	9.874E-03	Pulse	0.30	3
V			2	48.660	ppb	3.21	387,923.31	2.756E-01	Pulse	0.30	3
Cr			2	48.089	ppb	3.85	480,450.00	3.414E-01	Pulse	0.30	3
Mn			2	48.115	ppb	3.62	307,564.92	2.185E-01	Pulse	0.30	3
Fe			2	4819.278	ppb	2.27	42,808,392.74	3.041E+01	Analog	0.30	3
Co			2	47.945	ppb	4.13	805,474.64	5.724E-01	Pulse	0.30	3
Ni			2	47.117	ppb	3.46	200,020.34	1.421E-01	Pulse	0.30	3
Cu			2	47.101	ppb	3.77	511,352.58	3.634E-01	Pulse	0.30	3
Zn			2	46.475	ppb	3.56	85,636.54	6.085E-02	Pulse	0.30	3
As			2	50.158	ppb	2.66	41,784.18	2.969E-02	Pulse	1.00	3
Sn			2	49.041	ppb	4.07	196,172.93	3.906E-02	Pulse	0.30	3
Cd			2	49.049	ppb	4.75	103,902.01	2.069E-02	Pulse	0.30	3
Se			3	200.102	ppb	0.71	38,896.10	5.298E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,228,846.08	1.34	108.2	Analog	0.10	3
1	Sc		23,138,778.82	0.92	106.7	Analog	0.10	3
1	Ge		4,504,267.01	0.85	104.7	Analog	0.10	3

Quantitation Report

1	Rh		22,439,128.83	1.38	102.3	Analog	0.10	3
1	In		21,281,141.25	0.73	105.5	Analog	0.10	3
1	Tb		27,303,277.09	0.87	104.5	Analog	0.10	3
1	Ho		28,144,608.75	1.48	104.8	Analog	0.10	3
1	Bi		15,577,692.69	0.64	99.7	Analog	0.10	3
1	Ge		3,343,344.33	1.41	105.2	Analog	0.10	3
2	Sc		1,408,141.06	2.64	101.2	Analog	0.30	3
2	Ge		836,480.02	0.60	103.8	Pulse	0.30	3
2	Rh		13,240,261.14	2.38	96.1	Analog	0.30	3
2	In		5,026,270.85	3.24	100.8	Analog	0.30	3
2	Tb		15,854,781.04	2.08	102.1	Analog	0.30	3
2	Ho		16,223,152.13	1.30	102.4	Analog	0.30	3
2	Bi		9,887,177.39	2.52	97.6	Analog	0.30	3
2	Ge		582,866.59	0.82	105.9	Pulse	0.30	3
3	Sc		1,831,598.40	0.45	102.6	Analog	0.30	3
3	Ge		734,202.63	0.22	103.7	Pulse	0.30	3
3	Rh		3,858,309.85	0.80	99.5	Analog	0.30	3
3	Tb		8,007,133.02	0.77	98.4	Analog	0.30	3
3	Ge		507,620.50	0.35	104.3	Pulse	0.30	3

Quantitation Report

File Name 069SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:27
Sample Name CCB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.004	ppb	-37.50	52.00	2.639E-06	Pulse	0.25	3
B			1	2.237	ppb	6.15	26,013.10	1.323E-03	Pulse	0.15	3
Ca			1	-0.577	ppb	-26.87	21,118.90	9.045E-04	Pulse	0.10	3
Sr			1	0.006	ppb	129.28	4,127.24	1.774E-04	Pulse	0.10	3
Mo			1	0.051	ppb	9.87	570.03	2.446E-05	Pulse	0.10	3
Ag			1	0.009	ppb	12.20	236.68	1.092E-05	Pulse	0.10	3
Sn			1	0.048	ppb	21.39	1,470.11	6.778E-05	Pulse	0.10	3
Sb			1	0.017	ppb	3.46	430.02	1.552E-05	Pulse	0.10	3
Ba			1	0.003	ppb	107.04	113.33	4.092E-06	Pulse	0.10	3
Tl			1	0.001	ppb	6499.56	72,020.06	4.480E-03	Pulse	0.10	3
Pb			1	0.006	ppb	108.08	436.68	2.714E-05	Pulse	0.10	3
Pb			1	0.020	ppb	37.03	520.02	3.233E-05	Pulse	0.10	3
Pb			1	0.015	ppb	30.14	2,016.77	1.254E-04	Pulse	0.10	3
Na			2	7.597	ppb	1.01	25,949.69	1.812E-02	Pulse	0.30	3
Mg			2	0.970	ppb	12.59	3,870.42	2.702E-03	Pulse	0.30	3
Al			2	-6.923	ppb	-0.67	446.67	3.120E-04	Pulse	0.30	3
K			2	1.525	ppb	0.53	11,272.31	7.873E-03	Pulse	0.30	3
Ca			2	2.212	ppb	16.45	386.67	2.702E-04	Pulse	0.30	3
Ti			2	0.034	ppb	65.29	13.33	9.250E-06	Pulse	0.30	3
V			2	-0.006	ppb	-357.64	2,341.28	1.636E-03	Pulse	0.30	3
Cr			2	-0.001	ppb	-115.79	290.00	2.026E-04	Pulse	0.30	3
Mn			2	0.031	ppb	10.80	558.90	3.901E-04	Pulse	0.30	3
Fe			2	1.535	ppb	10.04	26,653.40	1.863E-02	Pulse	0.30	3
Co			2	0.023	ppb	191.25	34,377.05	2.401E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-28.60	56.67	3.947E-05	Pulse	0.30	3
Cu			2	0.563	ppb	0.84	1,353.39	9.457E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.398	ppb	5.88	292.23	2.038E-04	Pulse	0.30	3
As			2	-0.019	ppb	-44.58	44.00	3.066E-05	Pulse	1.00	3
Sn			2	0.042	ppb	41.82	514.46	9.853E-05	Pulse	0.30	3
Cd			2	-0.008	ppb	-19.65	13.02	2.488E-06	Pulse	0.30	3
Se			3	0.044	ppb	59.91	28.67	3.983E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,681,489.33	2.14	110.7	Analog	0.10	3
1	Sc		23,347,549.65	1.13	107.6	Analog	0.10	3
1	Ge		4,631,837.54	0.28	107.7	Analog	0.10	3
1	Rh		23,285,074.65	1.32	106.1	Analog	0.10	3
1	In		21,676,755.27	1.23	107.5	Analog	0.10	3
1	Tb		27,704,865.42	0.75	106.0	Analog	0.10	3
1	Ho		28,351,500.41	0.76	105.5	Analog	0.10	3
1	Bi		16,075,693.09	0.74	102.8	Analog	0.10	3
1	Ge		3,383,699.95	0.56	106.4	Analog	0.10	3
2	Sc		1,431,860.64	2.09	102.9	Analog	0.30	3
2	Ge		835,637.45	1.53	103.7	Pulse	0.30	3
2	Rh		14,053,575.00	0.71	102.0	Analog	0.30	3
2	In		5,229,736.30	1.82	104.9	Analog	0.30	3
2	Tb		16,146,777.69	1.86	104.0	Analog	0.30	3
2	Ho		16,391,700.46	1.68	103.5	Analog	0.30	3
2	Bi		10,384,994.59	1.49	102.5	Analog	0.30	3
2	Ge		567,825.01	1.23	103.2	Pulse	0.30	3
3	Sc		1,825,866.73	0.99	102.3	Analog	0.30	3
3	Ge		720,386.12	0.93	101.7	Pulse	0.30	3
3	Rh		3,978,809.29	1.55	102.6	Analog	0.30	3
3	Tb		7,965,212.74	1.80	97.9	Analog	0.30	3
3	Ge		494,844.72	0.92	101.7	Pulse	0.30	3

Quantitation Report

File Name	070SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 15:31
Sample Name	MP30773-MB1 4
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-187.47	89.33	4.556E-06	Pulse	0.25	3
B			1	10.689	ppb	4.52	24,945.21	1.273E-03	Pulse	0.15	3
Ca			1	81.680	ppb	3.46	40,026.23	1.705E-03	Pulse	0.10	3
Sr			1	0.443	ppb	6.52	7,748.51	3.330E-04	Pulse	0.10	3
Mo			1	0.368	ppb	3.59	773.37	3.324E-05	Pulse	0.10	3
Ag			1	0.047	ppb	58.26	250.01	1.167E-05	Pulse	0.10	3
Sn			1	18.546	ppb	1.37	42,718.85	1.996E-03	Pulse	0.10	3
Sb			1	0.015	ppb	77.77	220.01	8.044E-06	Pulse	0.10	3
Ba			1	4.773	ppb	3.27	4,834.13	1.769E-04	Pulse	0.10	3
Tl			1	-0.355	ppb	-67.74	69,455.78	4.345E-03	Pulse	0.10	3
Pb			1	0.175	ppb	3.64	740.04	4.630E-05	Pulse	0.10	3
Pb			1	0.242	ppb	10.99	770.04	4.818E-05	Pulse	0.10	3
Pb			1	0.244	ppb	6.07	3,400.25	2.127E-04	Pulse	0.10	3
Na			2	66.639	ppb	4.60	37,240.21	2.650E-02	Pulse	0.30	3
Mg			2	18.719	ppb	2.80	6,577.84	4.680E-03	Pulse	0.30	3
Al			2	-11.773	ppb	-28.78	2,379.08	1.694E-03	Pulse	0.30	3
K			2	30.458	ppb	3.23	14,407.74	1.025E-02	Pulse	0.30	3
Ca			2	80.598	ppb	6.84	931.14	6.625E-04	Pulse	0.30	3
Ti			2	0.759	ppb	7.12	46.67	3.319E-05	Pulse	0.30	3
V			2	0.588	ppb	10.55	3,274.76	2.330E-03	Pulse	0.30	3
Cr			2	0.436	ppb	4.22	1,167.82	8.309E-04	Pulse	0.30	3
Mn			2	0.320	ppb	12.85	756.69	5.382E-04	Pulse	0.30	3
Fe			2	31.600	ppb	3.56	68,607.97	4.882E-02	Pulse	0.30	3
Co			2	-0.022	ppb	-253.19	33,322.75	2.370E-02	Pulse	0.30	3
Ni			2	0.304	ppb	3.08	350.01	2.489E-04	Pulse	0.30	3
Cu			2	2.952	ppb	1.08	1,633.42	1.162E-03	Pulse	0.30	3
Zn			2	5.280	ppb	3.21	1,503.41	1.069E-03	Pulse	0.30	3
As			2	-0.073	ppb	-47.30	47.00	3.340E-05	Pulse	1.00	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Sn			2	15.813	ppb	0.98	13,357.37	2.580E-03	Pulse	0.30	3
Cd			2	-0.018	ppb	-139.50	21.61	4.176E-06	Pulse	0.30	3
Se			3	0.113	ppb	67.66	24.33	3.423E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,601,817.40	1.99	110.3	Analog	0.10	3
1	Sc		23,473,787.15	1.24	108.2	Analog	0.10	3
1	Ge		4,573,788.06	0.23	106.3	Analog	0.10	3
1	Rh		23,273,298.82	1.18	106.1	Analog	0.10	3
1	In		21,402,377.34	1.95	106.2	Analog	0.10	3
1	Tb		27,327,054.59	1.03	104.6	Analog	0.10	3
1	Ho		27,898,458.75	1.92	103.9	Analog	0.10	3
1	Bi		15,984,815.59	0.50	102.3	Analog	0.10	3
1	Ge		3,384,004.22	1.10	106.4	Analog	0.10	3
2	Sc		1,405,735.81	1.23	101.0	Analog	0.30	3
2	Ge		811,958.32	1.37	100.7	Pulse	0.30	3
2	Rh		13,873,520.28	2.55	100.7	Analog	0.30	3
2	In		5,177,039.38	1.52	103.9	Analog	0.30	3
2	Tb		15,853,771.04	2.73	102.1	Analog	0.30	3
2	Ho		16,225,719.91	2.64	102.4	Analog	0.30	3
2	Bi		10,326,736.81	1.72	101.9	Analog	0.30	3
2	Ge		551,394.16	1.34	100.2	Pulse	0.30	3
3	Sc		1,824,648.54	1.60	102.2	Analog	0.30	3
3	Ge		710,438.13	1.02	100.3	Pulse	0.30	3
3	Rh		3,964,680.95	0.72	102.2	Analog	0.30	3
3	Tb		8,022,701.35	1.13	98.6	Analog	0.30	3
3	Ge		488,126.65	1.53	100.3	Pulse	0.30	3

Quantitation Report

File Name 071SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:34
Sample Name MP30773-B1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	215.173	ppb	0.93	462,059.11	2.368E-02	Pulse	0.25	3
B			1	215.564	ppb	1.48	422,753.54	2.166E-02	Pulse	0.15	3
Ca			1	11588.601	ppb	3.41	2,558,803.76	1.107E-01	Analog	0.10	3
Sr			1	233.656	ppb	0.80	2,004,892.57	8.829E-02	Analog	0.10	3
Mo			1	216.414	ppb	1.99	383,341.28	1.688E-02	Pulse	0.10	3
Ag			1	114.726	ppb	0.64	461,795.27	2.166E-02	Pulse	0.10	3
Sn			1	240.920	ppb	0.72	541,990.72	2.542E-02	Pulse	0.10	3
Sb			1	202.167	ppb	1.62	582,924.76	2.104E-02	Pulse	0.10	3
Ba			1	219.807	ppb	2.29	221,211.08	7.984E-03	Pulse	0.10	3
Tl			1	225.673	ppb	0.93	1,413,620.81	8.990E-02	Analog	0.10	3
Pb			1	212.503	ppb	2.22	441,527.32	2.808E-02	Pulse	0.10	3
Pb			1	217.899	ppb	1.88	384,150.25	2.443E-02	Pulse	0.10	3
Pb			1	222.122	ppb	0.69	1,798,596.81	1.144E-01	Mix	0.10	3
Na			2	9858.136	ppb	1.22	4,112,539.28	2.889E+00	Analog	0.30	3
Mg			2	10102.958	ppb	2.00	2,053,677.07	1.443E+00	Analog	0.30	3
Al			2	10174.152	ppb	2.24	879,408.16	6.179E-01	Pulse	0.30	3
K			2	9930.521	ppb	2.29	1,481,060.77	1.041E+00	Analog	0.30	3
Ca			2	11483.156	ppb	1.93	92,502.60	6.499E-02	Pulse	0.30	3
Ti			2	198.851	ppb	1.27	11,484.66	8.067E-03	Pulse	0.30	3
V			2	200.267	ppb	1.87	323,370.78	2.272E-01	Pulse	0.30	3
Cr			2	198.487	ppb	1.76	401,242.57	2.819E-01	Pulse	0.30	3
Mn			2	198.539	ppb	2.54	256,758.22	1.804E-01	Pulse	0.30	3
Fe			2	9665.584	ppb	1.63	17,372,274.31	1.220E+01	Analog	0.30	3
Co			2	200.391	ppb	2.40	686,560.13	4.824E-01	Pulse	0.30	3
Ni			2	198.407	ppb	2.51	170,383.25	1.197E-01	Pulse	0.30	3
Cu			2	195.452	ppb	1.86	428,430.03	3.010E-01	Pulse	0.30	3
Zn			2	195.106	ppb	2.89	72,638.46	5.104E-02	Pulse	0.30	3
As			2	201.311	ppb	1.98	33,929.91	2.384E-02	Pulse	1.00	3
Sn			2	210.675	ppb	1.20	172,227.06	3.357E-02	Pulse	0.30	3
Cd			2	198.736	ppb	1.01	86,028.45	1.677E-02	Pulse	0.30	3
Se			3	493.779	ppb	0.51	19,405.84	2.616E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,513,792.32	1.11	109.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,130,137.99	1.77	106.6	Analog	0.10	3
1	Ge		4,576,033.16	0.53	106.4	Analog	0.10	3
1	Rh		22,708,708.83	0.49	103.5	Analog	0.10	3
1	In		21,317,808.19	0.81	105.7	Analog	0.10	3
1	Tb		27,709,004.59	0.76	106.0	Analog	0.10	3
1	Ho		27,860,032.92	0.72	103.7	Analog	0.10	3
1	Bi		15,725,103.10	0.80	100.6	Analog	0.10	3
1	Ge		3,379,778.18	0.95	106.3	Analog	0.10	3
2	Sc		1,423,892.41	2.79	102.3	Analog	0.30	3
2	Ge		848,047.07	1.09	105.2	Pulse	0.30	3
2	Rh		13,599,390.57	1.58	98.7	Analog	0.30	3
2	In		5,130,682.78	1.61	102.9	Analog	0.30	3
2	Tb		15,987,411.03	2.58	103.0	Analog	0.30	3
2	Ho		16,332,664.91	2.01	103.1	Analog	0.30	3
2	Bi		10,109,118.76	2.04	99.7	Analog	0.30	3
2	Ge		579,284.73	0.40	105.3	Pulse	0.30	3
3	Sc		1,837,985.00	0.59	103.0	Analog	0.30	3
3	Ge		741,816.60	0.27	104.8	Pulse	0.30	3
3	Rh		3,885,548.04	0.52	100.2	Analog	0.30	3
3	Tb		8,122,669.40	0.91	99.8	Analog	0.30	3
3	Ge		510,002.17	0.20	104.8	Pulse	0.30	3

Quantitation Report

File Name 072SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:37
Sample Name MP30773-S1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	220.460	ppb	0.58	471,705.50	2.426E-02	Pulse	0.25	3
B			1	276.034	ppb	1.03	538,238.92	2.768E-02	Pulse	0.15	3
Ca			1	238902.538	ppb	0.57	53,826,315.87	2.263E+00	Analog	0.10	3
Sr			1	612.762	ppb	1.00	5,000,885.24	2.313E-01	Analog	0.10	3
Mo			1	219.283	ppb	0.66	369,894.06	1.711E-02	Pulse	0.10	3
Ag			1	115.101	ppb	0.31	443,002.01	2.173E-02	Pulse	0.10	3
Sn			1	246.172	ppb	1.04	529,505.53	2.598E-02	Pulse	0.10	3
Sb			1	63.241	ppb	2.31	176,683.59	6.586E-03	Pulse	0.10	3
Ba			1	1307.688	ppb	0.91	1,273,940.08	4.748E-02	Analog	0.10	3
Tl			1	233.156	ppb	0.71	1,353,626.44	9.273E-02	Analog	0.10	3
Pb			1	551.566	ppb	2.10	1,063,255.84	7.285E-02	Analog	0.10	3
Pb			1	527.015	ppb	1.35	862,015.12	5.906E-02	Pulse	0.10	3
Pb			1	545.651	ppb	0.87	4,099,373.33	2.809E-01	Analog	0.10	3
Na			2	15453.654	ppb	1.44	6,701,996.96	4.525E+00	Analog	0.30	3
Mg			2	145188.305	ppb	2.04	30,669,467.67	2.071E+01	Analog	0.30	3
Al			2	247051.091	ppb	1.32	22,136,231.34	1.495E+01	Analog	0.30	3
K			2	42653.533	ppb	1.13	6,584,898.35	4.446E+00	Analog	0.30	3
Ca			2	221096.632	ppb	1.61	1,847,440.55	1.247E+00	Analog	0.30	3
Ti			2	8927.009	ppb	1.48	536,190.34	3.621E-01	Pulse	0.30	3
V			2	535.175	ppb	1.12	894,963.02	6.043E-01	Pulse	0.30	3
Cr			2	401.356	ppb	1.20	843,820.82	5.698E-01	Pulse	0.30	3
Mn			2	3310.610	ppb	0.94	4,449,662.88	3.004E+00	Analog	0.30	3
Fe			2	185165.389	ppb	1.63	346,003,799.58	2.336E+02	Analog	0.30	3
Co			2	256.192	ppb	1.51	903,492.00	6.101E-01	Pulse	0.30	3
Ni			2	299.899	ppb	1.72	267,915.16	1.809E-01	Pulse	0.30	3
Cu			2	311.415	ppb	1.35	713,243.55	4.816E-01	Pulse	0.30	3
Zn			2	554.819	ppb	2.02	215,814.94	1.457E-01	Pulse	0.30	3
As			2	213.341	ppb	1.45	37,409.24	2.526E-02	Pulse	1.00	3
Sn			2	213.144	ppb	1.49	165,881.32	3.396E-02	Pulse	0.30	3
Cd			2	193.060	ppb	1.79	79,560.59	1.629E-02	Pulse	0.30	3
Se			3	468.073	ppb	0.76	18,701.46	2.480E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,442,999.43	0.49	109.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,783,049.65	0.87	109.7	Analog	0.10	3
1	Ge		4,410,930.66	1.28	102.5	Analog	0.10	3
1	Rh		21,624,528.84	1.02	98.6	Analog	0.10	3
1	In		20,384,010.06	0.47	101.1	Analog	0.10	3
1	Tb		26,829,699.60	0.57	102.7	Analog	0.10	3
1	Ho		27,345,297.93	1.03	101.8	Analog	0.10	3
1	Bi		14,596,675.61	0.74	93.4	Analog	0.10	3
1	Ge		3,519,722.76	0.84	110.7	Analog	0.10	3
2	Sc		1,481,158.66	1.57	106.4	Analog	0.30	3
2	Ge		827,805.25	0.67	102.7	Pulse	0.30	3
2	Rh		12,745,229.77	1.50	92.5	Analog	0.30	3
2	In		4,885,113.73	2.19	98.0	Analog	0.30	3
2	Tb		15,452,734.94	1.69	99.5	Analog	0.30	3
2	Ho		15,805,612.15	2.01	99.8	Analog	0.30	3
2	Bi		9,085,453.53	1.10	89.6	Analog	0.30	3
2	Ge		664,892.06	0.74	120.8	Pulse	0.30	3
3	Sc		1,929,869.44	0.99	108.1	Analog	0.30	3
3	Ge		754,099.83	0.67	106.5	Pulse	0.30	3
3	Rh		3,939,982.06	0.32	101.6	Analog	0.30	3
3	Tb		8,510,746.33	0.56	104.6	Analog	0.30	3
3	Ge		531,421.21	0.49	109.2	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:40
Sample Name MP30773-S2
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	222.835	ppb	0.85	499,298.95	2.452E-02	Pulse	0.25	3
B			1	254.995	ppb	1.32	521,016.39	2.559E-02	Pulse	0.15	3
Ca			1	167676.944	ppb	0.48	39,705,774.41	1.589E+00	Analog	0.10	3
Sr			1	604.373	ppb	1.57	5,107,951.38	2.281E-01	Analog	0.10	3
Mo			1	224.563	ppb	1.25	392,271.42	1.752E-02	Pulse	0.10	3
Ag			1	115.282	ppb	1.47	460,707.44	2.177E-02	Pulse	0.10	3
Sn			1	251.155	ppb	1.99	560,902.15	2.650E-02	Pulse	0.10	3
Sb			1	65.654	ppb	1.51	189,301.54	6.837E-03	Pulse	0.10	3
Ba			1	1319.947	ppb	1.33	1,327,076.05	4.793E-02	Analog	0.10	3
Tl			1	231.523	ppb	1.31	1,393,498.73	9.211E-02	Analog	0.10	3
Pb			1	527.684	ppb	1.17	1,054,355.89	6.970E-02	Analog	0.10	3
Pb			1	505.139	ppb	0.58	856,394.75	5.661E-02	Pulse	0.10	3
Pb			1	523.357	ppb	0.61	4,075,305.46	2.694E-01	Analog	0.10	3
Na			2	15354.412	ppb	0.63	6,690,273.21	4.496E+00	Analog	0.30	3
Mg			2	96710.248	ppb	1.29	20,528,433.07	1.379E+01	Analog	0.30	3
Al			2	275399.133	ppb	1.08	24,795,877.90	1.666E+01	Analog	0.30	3
K			2	44025.466	ppb	1.41	6,828,374.31	4.589E+00	Analog	0.30	3
Ca			2	156052.926	ppb	1.59	1,310,478.94	8.805E-01	Analog	0.30	3
Ti			2	9585.542	ppb	1.34	578,471.85	3.888E-01	Pulse	0.30	3
V			2	529.127	ppb	1.16	889,069.68	5.975E-01	Pulse	0.30	3
Cr			2	411.104	ppb	1.28	868,400.29	5.836E-01	Pulse	0.30	3
Mn			2	3052.360	ppb	0.84	4,122,278.45	2.770E+00	Analog	0.30	3
Fe			2	188744.782	ppb	0.58	354,406,074.81	2.382E+02	Analog	0.30	3
Co			2	265.526	ppb	1.30	939,581.99	6.314E-01	Pulse	0.30	3
Ni			2	310.701	ppb	1.11	278,894.69	1.874E-01	Pulse	0.30	3
Cu			2	308.441	ppb	1.27	709,740.53	4.770E-01	Pulse	0.30	3
Zn			2	590.451	ppb	1.61	230,800.94	1.551E-01	Pulse	0.30	3
As			2	223.828	ppb	1.21	39,430.72	2.650E-02	Pulse	1.00	3
Sn			2	213.892	ppb	1.73	169,587.66	3.408E-02	Pulse	0.30	3
Cd			2	196.598	ppb	2.55	82,534.66	1.659E-02	Pulse	0.30	3
Se			3	471.041	ppb	1.24	18,643.40	2.496E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,362,149.78	0.85	114.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,991,111.29	1.39	115.2	Analog	0.10	3
1	Ge		4,621,991.60	1.73	107.4	Analog	0.10	3
1	Rh		22,394,835.50	0.84	102.1	Analog	0.10	3
1	In		21,168,000.99	1.17	105.0	Analog	0.10	3
1	Tb		27,690,463.75	1.49	105.9	Analog	0.10	3
1	Ho		28,235,535.41	0.47	105.1	Analog	0.10	3
1	Bi		15,128,548.94	0.49	96.8	Analog	0.10	3
1	Ge		3,666,538.49	0.90	115.3	Analog	0.10	3
2	Sc		1,488,213.17	1.84	107.0	Analog	0.30	3
2	Ge		844,044.22	0.42	104.7	Pulse	0.30	3
2	Rh		12,976,770.04	1.60	94.2	Analog	0.30	3
2	In		4,977,244.75	2.67	99.8	Analog	0.30	3
2	Tb		15,600,294.38	2.03	100.5	Analog	0.30	3
2	Ho		15,790,388.82	1.75	99.7	Analog	0.30	3
2	Bi		9,168,565.75	1.30	90.5	Analog	0.30	3
2	Ge		680,990.16	0.20	123.7	Pulse	0.30	3
3	Sc		1,909,644.85	0.96	107.0	Analog	0.30	3
3	Ge		747,029.00	0.78	105.5	Pulse	0.30	3
3	Rh		3,849,366.79	0.68	99.3	Analog	0.30	3
3	Tb		8,175,327.17	0.99	100.5	Analog	0.30	3
3	Ge		530,286.75	0.98	109.0	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 15:43
Sample Name	JD38054-1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	9.587	ppb	1.59	21,569.33	1.060E-03	Pulse	0.25	3
B			1	73.068	ppb	2.01	152,299.73	7.482E-03	Pulse	0.15	3
Ca			1	181910.463	ppb	0.51	43,219,414.36	1.724E+00	Analog	0.10	3
Sr			1	437.860	ppb	0.89	3,742,748.07	1.653E-01	Analog	0.10	3
Mo			1	5.865	ppb	3.09	10,456.62	4.619E-04	Pulse	0.10	3
Ag			1	0.647	ppb	2.79	2,690.28	1.250E-04	Pulse	0.10	3
Sn			1	33.732	ppb	0.40	77,422.01	3.596E-03	Pulse	0.10	3
Sb			1	0.785	ppb	13.05	2,443.57	8.822E-05	Pulse	0.10	3
Ba			1	1162.124	ppb	0.40	1,168,955.32	4.220E-02	Analog	0.10	3
Tl			1	3.441	ppb	8.33	88,100.97	5.782E-03	Pulse	0.10	3
Pb			1	252.911	ppb	1.47	509,198.61	3.342E-02	Pulse	0.10	3
Pb			1	244.036	ppb	0.67	416,922.44	2.736E-02	Pulse	0.10	3
Pb			1	255.010	ppb	1.06	2,000,880.44	1.313E-01	Analog	0.10	3
Na			2	5917.767	ppb	1.16	2,620,733.51	1.737E+00	Analog	0.30	3
Mg			2	109143.912	ppb	0.82	23,487,573.51	1.557E+01	Analog	0.30	3
Al			2	248956.905	ppb	0.97	22,725,937.43	1.506E+01	Analog	0.30	3
K			2	36275.028	ppb	0.82	5,706,022.13	3.782E+00	Analog	0.30	3
Ca			2	167816.609	ppb	0.85	1,428,587.34	9.469E-01	Analog	0.30	3
Ti			2	8854.269	ppb	0.88	541,727.63	3.591E-01	Pulse	0.30	3
V			2	344.510	ppb	0.74	587,741.71	3.896E-01	Pulse	0.30	3
Cr			2	221.481	ppb	0.70	474,479.32	3.145E-01	Pulse	0.30	3
Mn			2	3217.204	ppb	0.24	4,404,764.69	2.920E+00	Analog	0.30	3
Fe			2	181181.393	ppb	1.19	344,927,995.18	2.286E+02	Analog	0.30	3
Co			2	81.241	ppb	0.17	316,342.43	2.097E-01	Pulse	0.30	3
Ni			2	133.546	ppb	0.69	121,589.71	8.060E-02	Pulse	0.30	3
Cu			2	156.816	ppb	1.02	363,275.20	2.408E-01	Pulse	0.30	3
Zn			2	405.504	ppb	1.28	160,548.71	1.064E-01	Pulse	0.30	3
As			2	35.991	ppb	0.95	6,481.81	4.296E-03	Pulse	1.00	3
Sn			2	28.997	ppb	1.82	23,259.71	4.677E-03	Pulse	0.30	3
Cd			2	0.440	ppb	9.53	212.86	4.279E-05	Pulse	0.30	3
Se			3	5.988	ppb	3.14	256.67	3.451E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,359,148.90	1.40	114.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,076,437.96	0.82	115.6	Analog	0.10	3
1	Ge		4,681,270.04	1.12	108.8	Analog	0.10	3
1	Rh		22,642,093.00	0.84	103.2	Analog	0.10	3
1	In		21,528,724.42	1.16	106.8	Analog	0.10	3
1	Tb		27,701,897.09	0.26	106.0	Analog	0.10	3
1	Ho		28,255,001.25	0.52	105.2	Analog	0.10	3
1	Bi		15,239,648.52	1.06	97.5	Analog	0.10	3
1	Ge		3,684,065.57	0.80	115.9	Analog	0.10	3
2	Sc		1,508,663.55	1.30	108.4	Analog	0.30	3
2	Ge		831,987.03	0.82	103.2	Pulse	0.30	3
2	Rh		13,108,376.98	1.59	95.1	Analog	0.30	3
2	In		4,974,193.38	2.32	99.8	Analog	0.30	3
2	Tb		15,574,741.05	1.80	100.3	Analog	0.30	3
2	Ho		15,918,436.59	1.55	100.5	Analog	0.30	3
2	Bi		9,251,252.69	1.60	91.3	Analog	0.30	3
2	Ge		663,830.81	0.37	120.6	Pulse	0.30	3
3	Sc		1,922,530.41	0.64	107.7	Analog	0.30	3
3	Ge		743,656.05	0.29	105.0	Pulse	0.30	3
3	Rh		3,880,486.51	1.09	100.1	Analog	0.30	3
3	Tb		8,171,883.01	0.92	100.4	Analog	0.30	3
3	Ge		523,255.21	0.16	107.5	Pulse	0.30	3

Quantitation Report

File Name 075SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:46
Sample Name MP30773-SD1
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	9.365	ppb	2.96	4,279.18	2.109E-04	Pulse	0.25	3
B			1	90.871	ppb	2.42	40,954.42	2.018E-03	Pulse	0.15	3
Ca			1	181954.858	ppb	1.23	8,587,793.62	3.455E-01	Analog	0.10	3
Sr			1	413.126	ppb	0.80	736,606.55	3.133E-02	Pulse	0.10	3
Mo			1	5.328	ppb	8.65	2,060.18	8.761E-05	Pulse	0.10	3
Ag			1	0.723	ppb	20.17	663.36	3.010E-05	Pulse	0.10	3
Sn			1	32.270	ppb	2.43	15,914.15	7.224E-04	Pulse	0.10	3
Sb			1	0.654	ppb	17.93	556.69	2.012E-05	Pulse	0.10	3
Ba			1	1103.735	ppb	1.15	221,748.95	8.018E-03	Pulse	0.10	3
Tl			1	2.424	ppb	36.74	74,390.33	4.663E-03	Pulse	0.10	3
Pb			1	246.036	ppb	2.33	104,025.89	6.520E-03	Pulse	0.10	3
Pb			1	235.622	ppb	1.50	84,562.78	5.300E-03	Pulse	0.10	3
Pb			1	243.090	ppb	1.36	400,521.52	2.510E-02	Pulse	0.10	3
Na			2	5898.064	ppb	0.63	537,856.04	3.519E-01	Pulse	0.30	3
Mg			2	112380.891	ppb	0.41	4,903,280.22	3.207E+00	Analog	0.30	3
Al			2	256427.304	ppb	0.25	4,746,283.56	3.105E+00	Analog	0.30	3
K			2	37472.147	ppb	1.87	1,203,311.41	7.870E-01	Mix	0.30	3
Ca			2	170326.668	ppb	0.83	294,063.56	1.924E-01	Pulse	0.30	3
Ti			2	8884.742	ppb	0.75	110,166.53	7.207E-02	Pulse	0.30	3
V			2	345.664	ppb	1.00	121,543.26	7.951E-02	Pulse	0.30	3
Cr			2	226.738	ppb	0.65	98,695.11	6.456E-02	Pulse	0.30	3
Mn			2	3234.781	ppb	0.79	897,756.32	5.873E-01	Pulse	0.30	3
Fe			2	188231.862	ppb	0.43	72,629,266.00	4.751E+01	Analog	0.30	3
Co			2	84.475	ppb	2.37	95,409.48	6.242E-02	Pulse	0.30	3
Ni			2	141.447	ppb	0.47	26,180.60	1.713E-02	Pulse	0.30	3
Cu			2	180.332	ppb	1.26	80,614.02	5.274E-02	Pulse	0.30	3
Zn			2	493.926	ppb	0.43	39,265.78	2.568E-02	Pulse	0.30	3
As			2	39.100	ppb	3.76	1,477.73	9.664E-04	Pulse	1.00	3
Sn			2	26.775	ppb	2.53	4,936.28	9.171E-04	Pulse	0.30	3
Cd			2	0.156	ppb	7.79	44.68	8.301E-06	Pulse	0.30	3
Se			3	6.583	ppb	18.85	74.67	9.791E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,295,433.48	1.28	114.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,853,991.30	0.21	114.6	Analog	0.10	3
1	Ge		4,816,342.64	0.34	111.9	Analog	0.10	3
1	Rh		23,513,934.65	1.17	107.2	Analog	0.10	3
1	In		22,028,784.22	0.72	109.3	Analog	0.10	3
1	Tb		27,655,572.92	0.65	105.8	Analog	0.10	3
1	Ho		28,265,727.91	0.45	105.2	Analog	0.10	3
1	Bi		15,954,958.51	0.31	102.1	Analog	0.10	3
1	Ge		3,603,925.47	0.52	113.4	Analog	0.10	3
2	Sc		1,528,719.35	1.55	109.9	Analog	0.30	3
2	Ge		896,741.70	0.71	111.2	Pulse	0.30	3
2	Rh		14,130,359.99	1.54	102.6	Analog	0.30	3
2	In		5,383,961.79	1.99	108.0	Analog	0.30	3
2	Tb		16,368,534.90	1.87	105.4	Analog	0.30	3
2	Ho		16,611,536.01	1.81	104.8	Analog	0.30	3
2	Bi		10,300,048.48	1.98	101.6	Analog	0.30	3
2	Ge		633,601.18	0.81	115.1	Pulse	0.30	3
3	Sc		1,914,382.98	0.34	107.3	Analog	0.30	3
3	Ge		762,699.55	0.48	107.7	Pulse	0.30	3
3	Rh		3,973,509.15	0.51	102.5	Analog	0.30	3
3	Tb		8,002,161.63	1.05	98.3	Analog	0.30	3
3	Ge		526,516.71	1.06	108.2	Pulse	0.30	3

Quantitation Report

File Name	076SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 15:49
Sample Name	JD38053-1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	10.458	ppb	2.29	23,859.97	1.155E-03	Pulse	0.25	3
B			1	43.531	ppb	1.57	93,801.56	4.542E-03	Pulse	0.15	3
Ca			1	27285.582	ppb	1.88	6,445,189.69	2.593E-01	Analog	0.10	3
Sr			1	128.951	ppb	2.09	1,124,159.78	4.880E-02	Mix	0.10	3
Mo			1	4.211	ppb	3.46	7,668.49	3.329E-04	Pulse	0.10	3
Ag			1	0.482	ppb	9.08	2,063.51	9.379E-05	Pulse	0.10	3
Sn			1	24.221	ppb	0.84	57,092.54	2.594E-03	Pulse	0.10	3
Sb			1	1.717	ppb	4.31	5,184.23	1.851E-04	Pulse	0.10	3
Ba			1	1291.810	ppb	0.69	1,313,710.66	4.691E-02	Analog	0.10	3
Tl			1	1.585	ppb	21.10	78,900.77	5.079E-03	Pulse	0.10	3
Pb			1	248.340	ppb	1.83	509,748.56	3.281E-02	Pulse	0.10	3
Pb			1	243.086	ppb	0.70	423,378.92	2.725E-02	Pulse	0.10	3
Pb			1	252.669	ppb	0.78	2,021,158.74	1.301E-01	Analog	0.10	3
Na			2	3346.478	ppb	1.05	1,509,327.23	9.853E-01	Analog	0.30	3
Mg			2	42252.680	ppb	1.85	9,234,529.08	6.028E+00	Analog	0.30	3
Al			2	95281.877	ppb	1.00	8,833,310.21	5.766E+00	Analog	0.30	3
K			2	20353.117	ppb	1.01	3,255,661.68	2.125E+00	Analog	0.30	3
Ca			2	24801.522	ppb	0.39	214,641.19	1.401E-01	Pulse	0.30	3
Ti			2	1712.058	ppb	0.33	106,370.74	6.944E-02	Pulse	0.30	3
V			2	181.620	ppb	0.36	315,846.17	2.062E-01	Pulse	0.30	3
Cr			2	159.357	ppb	0.85	346,757.03	2.264E-01	Pulse	0.30	3
Mn			2	6300.097	ppb	0.69	8,758,102.99	5.717E+00	Analog	0.30	3
Fe			2	220393.850	ppb	0.70	426,000,223.07	2.781E+02	Analog	0.30	3
Co			2	119.885	ppb	0.37	456,698.88	2.981E-01	Pulse	0.30	3
Ni			2	197.102	ppb	0.26	182,176.82	1.189E-01	Pulse	0.30	3
Cu			2	123.063	ppb	0.09	288,360.74	1.882E-01	Pulse	0.30	3
Zn			2	678.909	ppb	0.43	273,291.54	1.784E-01	Pulse	0.30	3
As			2	35.228	ppb	0.94	6,443.13	4.206E-03	Pulse	1.00	3
Sn			2	21.186	ppb	2.94	17,938.01	3.435E-03	Pulse	0.30	3
Cd			2	1.343	ppb	7.50	621.01	1.190E-04	Pulse	0.30	3
Se			3	4.810	ppb	2.72	214.33	2.828E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,651,835.93	0.68	116.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,858,827.13	1.27	114.6	Analog	0.10	3
1	Ge		4,713,420.35	0.61	109.5	Analog	0.10	3
1	Rh		23,037,446.33	0.48	105.0	Analog	0.10	3
1	In		22,008,532.33	0.59	109.2	Analog	0.10	3
1	Tb		28,007,935.42	0.63	107.2	Analog	0.10	3
1	Ho		28,657,064.57	1.03	106.7	Analog	0.10	3
1	Bi		15,535,839.35	0.46	99.4	Analog	0.10	3
1	Ge		3,797,945.88	0.57	119.5	Analog	0.10	3
2	Sc		1,531,874.35	0.64	110.1	Analog	0.30	3
2	Ge		875,418.31	0.40	108.6	Pulse	0.30	3
2	Rh		13,770,540.56	2.01	100.0	Analog	0.30	3
2	In		5,223,435.44	1.33	104.8	Analog	0.30	3
2	Tb		16,113,652.69	1.48	103.8	Analog	0.30	3
2	Ho		16,342,495.46	1.52	103.1	Analog	0.30	3
2	Bi		9,910,084.05	1.66	97.8	Analog	0.30	3
2	Ge		720,719.30	0.57	131.0	Pulse	0.30	3
3	Sc		1,940,433.32	1.65	108.7	Analog	0.30	3
3	Ge		757,857.45	0.21	107.0	Pulse	0.30	3
3	Rh		3,986,768.17	1.26	102.8	Analog	0.30	3
3	Tb		8,201,078.29	0.69	100.8	Analog	0.30	3
3	Ge		538,087.91	0.31	110.6	Pulse	0.30	3

Quantitation Report

File Name 077SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:53
Sample Name JD38055-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	7.736	ppb	1.09	17,801.54	8.559E-04	Pulse	0.25	3
B			1	40.685	ppb	0.68	88,569.67	4.259E-03	Pulse	0.15	3
Ca			1	33970.984	ppb	1.46	8,182,864.46	3.226E-01	Analog	0.10	3
Sr			1	260.900	ppb	2.50	2,294,722.62	9.856E-02	Analog	0.10	3
Mo			1	13.338	ppb	2.00	24,326.83	1.045E-03	Pulse	0.10	3
Ag			1	1.035	ppb	4.72	4,370.64	1.982E-04	Pulse	0.10	3
Sn			1	50.020	ppb	0.25	117,170.88	5.312E-03	Pulse	0.10	3
Sb			1	1.913	ppb	4.12	5,744.41	2.055E-04	Pulse	0.10	3
Ba			1	820.026	ppb	0.17	832,304.65	2.978E-02	Pulse	0.10	3
Tl			1	2.486	ppb	5.94	84,163.74	5.420E-03	Pulse	0.10	3
Pb			1	693.654	ppb	0.74	1,422,507.53	9.161E-02	Analog	0.10	3
Pb			1	688.146	ppb	1.22	1,197,327.41	7.711E-02	Analog	0.10	3
Pb			1	688.250	ppb	0.26	5,500,505.10	3.542E-01	Analog	0.10	3
Na			2	2655.793	ppb	0.94	1,216,307.80	7.834E-01	Analog	0.30	3
Mg			2	33077.515	ppb	0.57	7,326,782.76	4.719E+00	Analog	0.30	3
Al			2	238204.394	ppb	0.28	22,374,638.00	1.441E+01	Analog	0.30	3
K			2	23211.420	ppb	0.83	3,761,395.82	2.423E+00	Analog	0.30	3
Ca			2	31452.786	ppb	0.38	275,774.02	1.776E-01	Pulse	0.30	3
Ti			2	4514.284	ppb	0.78	284,217.66	1.831E-01	Pulse	0.30	3
V			2	423.030	ppb	0.78	742,056.76	4.780E-01	Pulse	0.30	3
Cr			2	284.336	ppb	1.39	626,667.04	4.037E-01	Pulse	0.30	3
Mn			2	2390.257	ppb	0.80	3,367,642.09	2.169E+00	Analog	0.30	3
Fe			2	266528.801	ppb	0.64	522,117,010.36	3.363E+02	Analog	0.30	3
Co			2	64.965	ppb	1.56	267,664.58	1.724E-01	Pulse	0.30	3
Ni			2	137.185	ppb	1.60	128,513.16	8.279E-02	Pulse	0.30	3
Cu			2	265.382	ppb	1.21	636,302.04	4.099E-01	Pulse	0.30	3
Zn			2	883.833	ppb	1.44	360,665.47	2.323E-01	Pulse	0.30	3
As			2	64.812	ppb	1.79	11,957.19	7.703E-03	Pulse	1.00	3
Sn			2	43.552	ppb	1.84	36,457.28	6.992E-03	Pulse	0.30	3
Cd			2	2.008	ppb	2.70	912.59	1.750E-04	Pulse	0.30	3
Se			3	6.772	ppb	4.73	295.33	3.866E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,797,384.54	1.29	117.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,364,755.45	0.54	116.9	Analog	0.10	3
1	Ge		4,714,216.49	1.21	109.6	Analog	0.10	3
1	Rh		23,284,457.15	0.85	106.1	Analog	0.10	3
1	In		22,056,934.66	1.22	109.4	Analog	0.10	3
1	Tb		27,951,382.08	0.13	106.9	Analog	0.10	3
1	Ho		28,681,687.91	0.79	106.8	Analog	0.10	3
1	Bi		15,528,042.69	0.49	99.3	Analog	0.10	3
1	Ge		3,909,600.15	0.60	123.0	Analog	0.10	3
2	Sc		1,552,473.79	1.49	111.6	Analog	0.30	3
2	Ge		866,132.26	0.38	107.4	Pulse	0.30	3
2	Rh		13,596,463.63	2.35	98.7	Analog	0.30	3
2	In		5,215,813.11	2.52	104.6	Analog	0.30	3
2	Tb		16,024,908.25	1.79	103.2	Analog	0.30	3
2	Ho		16,258,485.46	1.70	102.6	Analog	0.30	3
2	Bi		9,726,533.78	1.24	96.0	Analog	0.30	3
2	Ge		743,645.44	0.10	135.1	Pulse	0.30	3
3	Sc		1,969,170.69	0.34	110.3	Analog	0.30	3
3	Ge		763,991.92	0.40	107.9	Pulse	0.30	3
3	Rh		3,963,449.70	0.31	102.2	Analog	0.30	3
3	Tb		8,229,297.17	1.04	101.1	Analog	0.30	3
3	Ge		542,991.00	0.43	111.6	Pulse	0.30	3

Quantitation Report

File Name 078SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:56
Sample Name JD38055-3
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	20.493	ppb	1.52	46,354.88	2.260E-03	Pulse	0.25	3
B			1	157.635	ppb	1.22	326,183.27	1.590E-02	Pulse	0.15	3
Ca			1	16210.861	ppb	0.86	3,861,775.88	1.544E-01	Analog	0.10	3
Sr			1	116.012	ppb	0.95	1,010,830.43	4.392E-02	Pulse	0.10	3
Mo			1	28.682	ppb	0.58	51,587.27	2.241E-03	Pulse	0.10	3
Ag			1	1.805	ppb	6.09	7,415.06	3.435E-04	Pulse	0.10	3
Sn			1	227.112	ppb	1.05	517,577.73	2.397E-02	Pulse	0.10	3
Sb			1	7.594	ppb	1.50	21,927.30	7.965E-04	Pulse	0.10	3
Ba			1	862.225	ppb	0.25	861,892.07	3.131E-02	Pulse	0.10	3
Tl			1	2.895	ppb	5.87	85,413.02	5.575E-03	Pulse	0.10	3
Pb			1	597.789	ppb	0.69	1,209,654.46	7.895E-02	Analog	0.10	3
Pb			1	581.058	ppb	2.25	997,540.56	6.511E-02	Analog	0.10	3
Pb			1	588.212	ppb	1.38	4,638,509.52	3.028E-01	Analog	0.10	3
Na			2	2678.466	ppb	1.60	1,211,882.83	7.900E-01	Pulse	0.30	3
Mg			2	45652.229	ppb	0.86	9,991,469.05	6.513E+00	Analog	0.30	3
Al			2	217003.219	ppb	0.53	20,143,685.87	1.313E+01	Analog	0.30	3
K			2	34947.083	ppb	0.49	5,590,617.83	3.644E+00	Analog	0.30	3
Ca			2	15329.407	ppb	1.62	132,971.34	8.668E-02	Pulse	0.30	3
Ti			2	6322.799	ppb	1.86	393,359.03	2.564E-01	Pulse	0.30	3
V			2	458.555	ppb	1.79	794,621.83	5.180E-01	Pulse	0.30	3
Cr			2	403.082	ppb	1.42	877,803.40	5.722E-01	Pulse	0.30	3
Mn			2	2683.353	ppb	0.86	3,736,097.77	2.435E+00	Analog	0.30	3
Fe			2	301078.684	ppb	0.47	582,825,879.06	3.799E+02	Analog	0.30	3
Co			2	133.510	ppb	2.01	505,154.62	3.293E-01	Pulse	0.30	3
Ni			2	682.324	ppb	1.93	631,260.11	4.115E-01	Pulse	0.30	3
Cu			2	1111.276	ppb	0.37	2,650,283.65	1.727E+00	Analog	0.30	3
Zn			2	3206.809	ppb	0.72	1,294,685.89	8.439E-01	Analog	0.30	3
As			2	38.586	ppb	0.99	7,061.69	4.603E-03	Pulse	1.00	3
Sn			2	195.061	ppb	1.03	160,929.82	3.109E-02	Pulse	0.30	3
Cd			2	1.768	ppb	7.75	800.83	1.548E-04	Pulse	0.30	3
Se			3	9.280	ppb	3.44	395.34	5.193E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,517,814.35	1.45	115.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,005,768.79	0.87	115.3	Analog	0.10	3
1	Ge		4,660,458.99	1.03	108.3	Analog	0.10	3
1	Rh		23,016,266.32	0.72	104.9	Analog	0.10	3
1	In		21,595,226.10	0.98	107.1	Analog	0.10	3
1	Tb		27,528,732.09	0.32	105.3	Analog	0.10	3
1	Ho		28,499,988.74	0.78	106.1	Analog	0.10	3
1	Bi		15,321,933.52	0.75	98.0	Analog	0.10	3
1	Ge		3,853,902.86	1.01	121.2	Analog	0.10	3
2	Sc		1,534,300.08	1.92	110.3	Analog	0.30	3
2	Ge		875,142.71	0.47	108.6	Pulse	0.30	3
2	Rh		13,641,362.23	2.24	99.0	Analog	0.30	3
2	In		5,177,156.11	1.37	103.9	Analog	0.30	3
2	Tb		16,057,442.14	1.40	103.4	Analog	0.30	3
2	Ho		16,348,144.35	1.82	103.2	Analog	0.30	3
2	Bi		9,615,441.84	2.28	94.9	Analog	0.30	3
2	Ge		762,806.01	0.88	138.6	Pulse	0.30	3
3	Sc		1,949,077.42	1.72	109.2	Analog	0.30	3
3	Ge		761,234.31	0.62	107.5	Pulse	0.30	3
3	Rh		3,915,074.29	0.12	100.9	Analog	0.30	3
3	Tb		8,121,564.12	0.58	99.8	Analog	0.30	3
3	Ge		544,354.39	0.88	111.9	Pulse	0.30	3

Quantitation Report

File Name 079SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 15:59
Sample Name CCVA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.755	ppb	2.86	482,622.78	2.573E-02	Pulse	0.25	3
B			1	96.078	ppb	4.51	900,901.75	4.802E-02	Pulse	0.15	3
Ca			1	5069.182	ppb	3.91	5,401,418.15	2.409E-01	Analog	0.10	3
Sr			1	50.222	ppb	1.99	2,084,598.93	9.487E-02	Analog	0.10	3
Mo			1	49.197	ppb	3.43	421,591.13	1.919E-02	Pulse	0.10	3
Ag			1	50.084	ppb	1.30	991,338.58	4.728E-02	Pulse	0.10	3
Sn			1	50.097	ppb	2.48	554,256.52	2.643E-02	Pulse	0.10	3
Sb			1	48.903	ppb	2.83	680,965.38	2.544E-02	Pulse	0.10	3
Ba			1	48.513	ppb	2.93	235,787.56	8.811E-03	Pulse	0.10	3
Tl			1	50.649	ppb	2.12	1,530,258.52	1.003E-01	Analog	0.10	3
Pb			1	47.925	ppb	3.48	482,879.88	3.166E-02	Pulse	0.10	3
Pb			1	48.245	ppb	3.51	412,452.87	2.704E-02	Pulse	0.10	3
Pb			1	49.152	ppb	3.30	1,929,915.10	1.265E-01	Analog	0.10	3
Na			2	4947.701	ppb	2.74	10,043,354.60	7.239E+00	Analog	0.30	3
Mg			2	4921.913	ppb	3.23	4,871,686.20	3.512E+00	Analog	0.30	3
Al			2	4950.672	ppb	2.55	2,080,810.96	1.500E+00	Analog	0.30	3
K			2	4980.383	ppb	2.70	3,605,221.52	2.599E+00	Analog	0.30	3
Ca			2	5365.396	ppb	2.74	210,247.09	1.515E-01	Pulse	0.30	3
Ti			2	48.901	ppb	4.26	13,759.51	9.919E-03	Pulse	0.30	3
V			2	48.073	ppb	2.63	377,830.83	2.723E-01	Pulse	0.30	3
Cr			2	47.220	ppb	2.74	465,136.91	3.353E-01	Pulse	0.30	3
Mn			2	47.239	ppb	3.35	297,677.17	2.146E-01	Pulse	0.30	3
Fe			2	4763.300	ppb	2.65	41,702,795.01	3.006E+01	Analog	0.30	3
Co			2	47.453	ppb	3.29	786,270.96	5.668E-01	Pulse	0.30	3
Ni			2	46.916	ppb	3.24	196,335.61	1.415E-01	Pulse	0.30	3
Cu			2	46.701	ppb	3.74	499,752.59	3.603E-01	Pulse	0.30	3
Zn			2	45.833	ppb	3.81	83,242.52	6.001E-02	Pulse	0.30	3
As			2	49.650	ppb	3.06	40,768.27	2.939E-02	Pulse	1.00	3
Sn			2	48.223	ppb	3.00	191,437.49	3.841E-02	Pulse	0.30	3
Cd			2	47.994	ppb	2.48	100,911.98	2.025E-02	Pulse	0.30	3
Se			3	198.448	ppb	1.26	38,839.66	5.254E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,761,343.72	0.96	105.6	Analog	0.10	3
1	Sc		22,419,262.17	0.45	103.4	Analog	0.10	3
1	Ge		4,430,637.43	0.22	103.0	Analog	0.10	3

Quantitation Report

1	Rh		21,973,577.17	0.48	100.1	Analog	0.10	3
1	In		20,965,116.27	1.34	104.0	Analog	0.10	3
1	Tb		26,760,590.43	0.72	102.4	Analog	0.10	3
1	Ho		27,209,131.26	0.47	101.3	Analog	0.10	3
1	Bi		15,249,903.52	0.96	97.6	Analog	0.10	3
1	Ge		3,291,045.58	1.04	103.5	Analog	0.10	3
2	Sc		1,387,799.28	1.71	99.7	Analog	0.30	3
2	Ge		830,670.71	1.31	103.0	Pulse	0.30	3
2	Rh		13,188,187.81	2.17	95.7	Analog	0.30	3
2	In		4,985,402.38	1.89	100.0	Analog	0.30	3
2	Tb		15,596,222.72	2.23	100.5	Analog	0.30	3
2	Ho		16,027,804.92	1.70	101.2	Analog	0.30	3
2	Bi		9,733,046.84	1.77	96.0	Analog	0.30	3
2	Ge		576,806.73	0.63	104.8	Pulse	0.30	3
3	Sc		1,846,902.15	0.44	103.5	Analog	0.30	3
3	Ge		739,257.49	0.21	104.4	Pulse	0.30	3
3	Rh		3,843,048.18	1.92	99.1	Analog	0.30	3
3	Tb		8,024,998.85	0.66	98.6	Analog	0.30	3
3	Ge		510,752.08	0.13	105.0	Pulse	0.30	3

Quantitation Report

File Name	080SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 16:02
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-32.28	73.33	3.799E-06	Pulse	0.25	3
B			1	1.954	ppb	5.99	22,820.33	1.182E-03	Pulse	0.15	3
Ca			1	-2.081	ppb	-43.02	19,306.97	8.334E-04	Pulse	0.10	3
Sr			1	-0.001	ppb	-908.00	3,810.52	1.648E-04	Pulse	0.10	3
Mo			1	0.053	ppb	10.60	583.36	2.523E-05	Pulse	0.10	3
Ag			1	0.012	ppb	56.69	296.68	1.376E-05	Pulse	0.10	3
Sn			1	0.033	ppb	17.71	1,293.42	5.990E-05	Pulse	0.10	3
Sb			1	0.021	ppb	27.95	476.69	1.746E-05	Pulse	0.10	3
Ba			1	0.005	ppb	115.99	120.00	4.395E-06	Pulse	0.10	3
Tl			1	0.004	ppb	887.66	71,524.81	4.487E-03	Pulse	0.10	3
Pb			1	0.041	ppb	6.13	803.38	5.040E-05	Pulse	0.10	3
Pb			1	0.040	ppb	19.22	696.71	4.372E-05	Pulse	0.10	3
Pb			1	0.045	ppb	10.43	3,243.55	2.034E-04	Pulse	0.10	3
Na			2	0.259	ppb	108.37	10,455.56	7.395E-03	Pulse	0.30	3
Mg			2	1.261	ppb	10.39	4,111.58	2.909E-03	Pulse	0.30	3
Al			2	-2.908	ppb	-3.21	2,156.80	1.526E-03	Pulse	0.30	3
K			2	2.120	ppb	7.88	11,562.48	8.182E-03	Pulse	0.30	3
Ca			2	0.270	ppb	114.64	304.45	2.154E-04	Pulse	0.30	3
Ti			2	0.244	ppb	13.22	73.33	5.192E-05	Pulse	0.30	3
V			2	-0.002	ppb	-706.70	2,341.28	1.657E-03	Pulse	0.30	3
Cr			2	0.007	ppb	34.91	365.56	2.586E-04	Pulse	0.30	3
Mn			2	0.088	ppb	5.95	914.48	6.469E-04	Pulse	0.30	3
Fe			2	8.173	ppb	5.32	85,485.84	6.051E-02	Pulse	0.30	3
Co			2	-0.011	ppb	-80.89	33,386.22	2.363E-02	Pulse	0.30	3
Ni			2	-0.003	ppb	-151.54	82.22	5.823E-05	Pulse	0.30	3
Cu			2	0.582	ppb	1.49	1,555.63	1.101E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.414	ppb	1.27	316.67	2.241E-04	Pulse	0.30	3
As			2	-0.001	ppb	-1696.65	58.33	4.137E-05	Pulse	1.00	3
Sn			2	0.072	ppb	73.50	636.90	1.230E-04	Pulse	0.30	3
Cd			2	-0.009	ppb	-18.35	9.55	1.867E-06	Pulse	0.30	3
Se			3	0.044	ppb	74.61	28.67	3.985E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,306,156.21	0.10	108.6	Analog	0.10	3
1	Sc		23,169,454.66	1.08	106.8	Analog	0.10	3
1	Ge		4,577,874.72	0.50	106.4	Analog	0.10	3
1	Rh		23,124,257.99	0.29	105.4	Analog	0.10	3
1	In		21,587,806.24	0.65	107.1	Analog	0.10	3
1	Tb		27,296,267.92	0.49	104.4	Analog	0.10	3
1	Ho		27,699,075.42	1.24	103.1	Analog	0.10	3
1	Bi		15,943,240.18	0.98	102.0	Analog	0.10	3
1	Ge		3,376,947.45	1.11	106.2	Analog	0.10	3
2	Sc		1,413,132.58	1.29	101.6	Analog	0.30	3
2	Ge		821,039.15	1.07	101.9	Pulse	0.30	3
2	Rh		13,833,112.23	1.49	100.4	Analog	0.30	3
2	In		5,147,462.12	2.59	103.3	Analog	0.30	3
2	Tb		15,799,473.82	2.56	101.8	Analog	0.30	3
2	Ho		16,049,592.70	1.68	101.3	Analog	0.30	3
2	Bi		10,237,810.15	1.53	101.0	Analog	0.30	3
2	Ge		555,117.76	0.97	100.9	Pulse	0.30	3
3	Sc		1,827,882.70	1.00	102.4	Analog	0.30	3
3	Ge		720,075.77	1.01	101.7	Pulse	0.30	3
3	Rh		3,914,950.82	0.92	100.9	Analog	0.30	3
3	Tb		7,946,643.30	1.21	97.7	Analog	0.30	3
3	Ge		496,558.52	1.06	102.1	Pulse	0.30	3

Quantitation Report

File Name 081SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:05
Sample Name JD38151-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	11.878	ppb	1.13	26,078.85	1.312E-03	Pulse	0.25	3
B			1	26.425	ppb	0.77	56,459.68	2.839E-03	Pulse	0.15	3
Ca			1	16594.382	ppb	1.51	3,985,322.23	1.581E-01	Analog	0.10	3
Sr			1	72.473	ppb	0.26	608,665.99	2.750E-02	Pulse	0.10	3
Mo			1	7.055	ppb	2.01	12,277.78	5.547E-04	Pulse	0.10	3
Ag			1	0.282	ppb	7.69	1,186.74	5.602E-05	Pulse	0.10	3
Sn			1	26.231	ppb	1.86	59,453.03	2.806E-03	Pulse	0.10	3
Sb			1	0.896	ppb	6.99	2,710.28	9.970E-05	Pulse	0.10	3
Ba			1	1305.363	ppb	0.92	1,288,194.69	4.740E-02	Analog	0.10	3
Tl			1	2.292	ppb	4.95	80,569.09	5.347E-03	Pulse	0.10	3
Pb			1	126.574	ppb	1.47	252,190.62	1.674E-02	Pulse	0.10	3
Pb			1	123.022	ppb	1.96	207,965.60	1.380E-02	Pulse	0.10	3
Pb			1	125.332	ppb	1.80	973,039.97	6.458E-02	Pulse	0.10	3
Na			2	3442.024	ppb	0.40	1,587,166.91	1.013E+00	Analog	0.30	3
Mg			2	48778.012	ppb	0.48	10,899,775.12	6.958E+00	Analog	0.30	3
Al			2	240404.545	ppb	0.74	22,783,749.10	1.455E+01	Analog	0.30	3
K			2	31566.885	ppb	0.77	5,157,103.69	3.292E+00	Analog	0.30	3
Ca			2	15079.640	ppb	1.16	133,575.24	8.527E-02	Pulse	0.30	3
Ti			2	19098.056	ppb	2.01	1,213,378.39	7.746E-01	Mix	0.30	3
V			2	1043.071	ppb	1.78	1,842,560.34	1.176E+00	Analog	0.30	3
Cr			2	377.301	ppb	1.17	839,008.71	5.356E-01	Pulse	0.30	3
Mn			2	2408.938	ppb	0.94	3,424,549.87	2.186E+00	Analog	0.30	3
Fe			2	309799.275	ppb	0.64	612,306,251.22	3.909E+02	Analog	0.30	3
Co			2	110.193	ppb	1.87	432,231.59	2.759E-01	Pulse	0.30	3
Ni			2	133.387	ppb	0.97	126,097.05	8.050E-02	Pulse	0.30	3
Cu			2	198.557	ppb	1.07	479,049.53	3.058E-01	Pulse	0.30	3
Zn			2	382.675	ppb	0.54	157,299.05	1.004E-01	Pulse	0.30	3
As			2	39.553	ppb	1.68	7,388.82	4.717E-03	Pulse	1.00	3
Sn			2	23.024	ppb	1.95	18,769.98	3.727E-03	Pulse	0.30	3
Cd			2	0.386	ppb	7.91	192.28	3.820E-05	Pulse	0.30	3
Se			3	5.519	ppb	10.59	240.00	3.203E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,884,358.71	1.31	111.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,214,602.96	1.13	116.3	Analog	0.10	3
1	Ge		4,516,343.58	0.55	105.0	Analog	0.10	3
1	Rh		22,133,908.84	0.78	100.9	Analog	0.10	3
1	In		21,187,039.67	1.38	105.1	Analog	0.10	3
1	Tb		27,179,607.10	0.94	104.0	Analog	0.10	3
1	Ho		27,928,746.25	0.69	104.0	Analog	0.10	3
1	Bi		15,070,434.77	1.75	96.4	Analog	0.10	3
1	Ge		3,732,869.32	0.74	117.4	Analog	0.10	3
2	Sc		1,566,428.03	0.54	112.6	Analog	0.30	3
2	Ge		831,853.47	1.08	103.2	Pulse	0.30	3
2	Rh		13,132,585.87	1.29	95.3	Analog	0.30	3
2	In		5,036,663.18	1.20	101.0	Analog	0.30	3
2	Tb		15,655,981.04	1.35	100.9	Analog	0.30	3
2	Ho		15,972,185.47	1.49	100.8	Analog	0.30	3
2	Bi		9,422,873.51	1.50	93.0	Analog	0.30	3
2	Ge		742,922.83	1.90	135.0	Pulse	0.30	3
3	Sc		2,062,183.74	2.20	115.6	Analog	0.30	3
3	Ge		749,265.00	0.31	105.8	Pulse	0.30	3
3	Rh		3,899,787.20	1.37	100.6	Analog	0.30	3
3	Tb		8,223,737.73	1.25	101.1	Analog	0.30	3
3	Ge		539,070.41	0.95	110.8	Pulse	0.30	3

Quantitation Report

File Name 082SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:08
Sample Name JD38152-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	5.474	ppb	0.79	11,519.47	6.070E-04	Pulse	0.25	3
B			1	54.872	ppb	0.60	107,611.41	5.671E-03	Pulse	0.15	3
Ca			1	277625.160	ppb	0.89	62,405,420.74	2.630E+00	Analog	0.10	3
Sr			1	370.772	ppb	0.40	3,027,396.10	1.400E-01	Analog	0.10	3
Mo			1	57.686	ppb	0.84	97,378.43	4.503E-03	Pulse	0.10	3
Ag			1	1.245	ppb	4.34	4,950.83	2.378E-04	Pulse	0.10	3
Sn			1	150.022	ppb	1.36	330,062.29	1.585E-02	Pulse	0.10	3
Sb			1	7.003	ppb	3.00	19,884.97	7.351E-04	Pulse	0.10	3
Ba			1	1599.244	ppb	0.99	1,570,773.99	5.807E-02	Analog	0.10	3
Tl			1	1.818	ppb	11.35	77,096.13	5.167E-03	Pulse	0.10	3
Pb			1	626.412	ppb	0.61	1,234,380.45	8.273E-02	Analog	0.10	3
Pb			1	607.150	ppb	0.89	1,015,111.73	6.804E-02	Analog	0.10	3
Pb			1	617.490	ppb	0.40	4,741,961.52	3.178E-01	Analog	0.10	3
Na			2	3819.769	ppb	2.11	1,644,427.78	1.124E+00	Analog	0.30	3
Mg			2	76864.072	ppb	0.63	16,047,467.14	1.096E+01	Analog	0.30	3
Al			2	159159.486	ppb	1.81	14,094,773.89	9.630E+00	Analog	0.30	3
K			2	25100.585	ppb	1.68	3,833,810.40	2.619E+00	Analog	0.30	3
Ca			2	254083.143	ppb	1.71	2,098,190.68	1.434E+00	Analog	0.30	3
Ti			2	9537.760	ppb	0.81	566,166.17	3.868E-01	Pulse	0.30	3
V			2	744.701	ppb	1.96	1,230,052.73	8.402E-01	Mix	0.30	3
Cr			2	3588.642	ppb	1.62	7,454,111.65	5.093E+00	Analog	0.30	3
Mn			2	18679.179	ppb	1.23	24,809,202.90	1.695E+01	Analog	0.30	3
Fe			2	263875.927	ppb	1.31	487,295,802.86	3.329E+02	Analog	0.30	3
Co			2	71.308	ppb	1.67	273,613.09	1.870E-01	Pulse	0.30	3
Ni			2	335.408	ppb	0.84	296,127.19	2.023E-01	Pulse	0.30	3
Cu			2	905.690	ppb	0.77	2,059,698.81	1.407E+00	Analog	0.30	3
Zn			2	873.294	ppb	0.98	336,003.40	2.296E-01	Pulse	0.30	3
As			2	22.667	ppb	2.29	3,983.77	2.721E-03	Pulse	1.00	3
Sn			2	129.177	ppb	1.43	101,470.28	2.061E-02	Pulse	0.30	3
Cd			2	2.749	ppb	4.72	1,169.09	2.375E-04	Pulse	0.30	3
Se			3	6.155	ppb	8.44	259.00	3.540E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,976,802.76	1.11	106.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,731,037.15	1.33	109.4	Analog	0.10	3
1	Ge		4,434,636.08	0.82	103.1	Analog	0.10	3
1	Rh		21,623,723.01	0.27	98.6	Analog	0.10	3
1	In		20,828,493.01	1.11	103.3	Analog	0.10	3
1	Tb		27,051,855.43	0.88	103.5	Analog	0.10	3
1	Ho		27,456,620.42	0.29	102.2	Analog	0.10	3
1	Bi		14,920,054.78	0.56	95.4	Analog	0.10	3
1	Ge		3,601,391.30	0.87	113.3	Analog	0.10	3
2	Sc		1,463,703.79	1.22	105.2	Analog	0.30	3
2	Ge		811,692.00	0.03	100.7	Pulse	0.30	3
2	Rh		12,743,908.94	1.53	92.5	Analog	0.30	3
2	In		4,924,197.20	1.53	98.8	Analog	0.30	3
2	Tb		15,437,034.39	1.67	99.4	Analog	0.30	3
2	Ho		15,802,022.71	1.85	99.7	Analog	0.30	3
2	Bi		9,285,815.47	0.04	91.6	Analog	0.30	3
2	Ge		693,716.36	0.93	126.1	Pulse	0.30	3
3	Sc		1,872,157.70	1.20	104.9	Analog	0.30	3
3	Ge		731,431.98	0.83	103.3	Pulse	0.30	3
3	Rh		3,848,433.60	0.56	99.2	Analog	0.30	3
3	Tb		8,181,056.06	0.07	100.5	Analog	0.30	3
3	Ge		518,254.41	0.36	106.5	Pulse	0.30	3

Quantitation Report

File Name	083SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 16:11
Sample Name	JD38153-1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	5.702	ppb	2.70	12,546.79	6.322E-04	Pulse	0.25	3
B			1	35.296	ppb	2.01	73,877.80	3.722E-03	Pulse	0.15	3
Ca			1	37435.805	ppb	0.38	8,587,042.79	3.554E-01	Analog	0.10	3
Sr			1	160.433	ppb	1.00	1,364,121.59	6.067E-02	Analog	0.10	3
Mo			1	7.477	ppb	3.50	13,211.83	5.876E-04	Pulse	0.10	3
Ag			1	0.728	ppb	5.63	2,990.33	1.403E-04	Pulse	0.10	3
Sn			1	27.721	ppb	2.06	63,109.66	2.963E-03	Pulse	0.10	3
Sb			1	1.831	ppb	4.54	5,307.59	1.970E-04	Pulse	0.10	3
Ba			1	872.949	ppb	2.55	854,111.52	3.170E-02	Pulse	0.10	3
Tl			1	1.832	ppb	3.25	78,399.01	5.172E-03	Pulse	0.10	3
Pb			1	232.046	ppb	0.07	464,738.44	3.066E-02	Pulse	0.10	3
Pb			1	226.075	ppb	0.47	384,187.50	2.535E-02	Pulse	0.10	3
Pb			1	231.247	ppb	0.24	1,804,877.64	1.191E-01	Pulse	0.10	3
Na			2	3838.230	ppb	0.14	1,703,658.23	1.129E+00	Analog	0.30	3
Mg			2	39199.719	ppb	1.36	8,437,286.61	5.592E+00	Analog	0.30	3
Al			2	131588.273	ppb	2.33	12,013,223.69	7.962E+00	Analog	0.30	3
K			2	20465.318	ppb	1.56	3,224,110.36	2.137E+00	Analog	0.30	3
Ca			2	34146.572	ppb	1.31	290,928.00	1.928E-01	Pulse	0.30	3
Ti			2	5566.028	ppb	2.04	340,547.81	2.257E-01	Pulse	0.30	3
V			2	296.683	ppb	1.39	506,541.80	3.357E-01	Pulse	0.30	3
Cr			2	279.325	ppb	1.60	598,329.21	3.966E-01	Pulse	0.30	3
Mn			2	2903.007	ppb	0.49	3,975,237.90	2.634E+00	Analog	0.30	3
Fe			2	193627.443	ppb	0.54	368,632,483.13	2.443E+02	Analog	0.30	3
Co			2	104.284	ppb	1.45	395,916.41	2.624E-01	Pulse	0.30	3
Ni			2	329.919	ppb	1.32	300,255.02	1.990E-01	Pulse	0.30	3
Cu			2	159.626	ppb	1.96	369,888.26	2.452E-01	Pulse	0.30	3
Zn			2	640.762	ppb	2.26	253,977.72	1.684E-01	Pulse	0.30	3
As			2	39.139	ppb	1.50	7,043.02	4.668E-03	Pulse	1.00	3
Sn			2	23.895	ppb	2.77	19,983.51	3.866E-03	Pulse	0.30	3
Cd			2	1.021	ppb	6.42	474.76	9.180E-05	Pulse	0.30	3
Se			3	4.919	ppb	6.44	217.33	2.886E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,850,349.73	1.44	111.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,160,115.47	0.88	111.4	Analog	0.10	3
1	Ge		4,609,592.33	0.15	107.1	Analog	0.10	3
1	Rh		22,483,008.83	0.37	102.5	Analog	0.10	3
1	In		21,301,927.68	1.37	105.7	Analog	0.10	3
1	Tb		26,953,075.43	1.76	103.1	Analog	0.10	3
1	Ho		27,823,604.59	0.23	103.6	Analog	0.10	3
1	Bi		15,157,188.52	0.47	97.0	Analog	0.10	3
1	Ge		3,665,017.44	0.70	115.3	Analog	0.10	3
2	Sc		1,508,921.37	1.74	108.4	Analog	0.30	3
2	Ge		858,357.05	0.12	106.5	Pulse	0.30	3
2	Rh		13,658,400.57	1.20	99.1	Analog	0.30	3
2	In		5,170,945.23	1.64	103.7	Analog	0.30	3
2	Tb		16,053,236.59	0.96	103.4	Analog	0.30	3
2	Ho		16,357,773.24	1.72	103.2	Analog	0.30	3
2	Bi		9,780,702.39	1.34	96.5	Analog	0.30	3
2	Ge		693,908.93	0.19	126.1	Pulse	0.30	3
3	Sc		1,940,682.98	0.70	108.7	Analog	0.30	3
3	Ge		753,409.62	0.95	106.4	Pulse	0.30	3
3	Rh		3,953,505.26	1.27	101.9	Analog	0.30	3
3	Tb		8,145,990.51	1.13	100.1	Analog	0.30	3
3	Ge		529,892.06	0.31	108.9	Pulse	0.30	3

Quantitation Report

File Name 084SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:14
Sample Name JD38154-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	8.212	ppb	1.21	18,682.39	9.083E-04	Pulse	0.25	3
B			1	38.490	ppb	0.65	83,110.61	4.040E-03	Pulse	0.15	3
Ca			1	20469.833	ppb	2.05	4,847,762.95	1.948E-01	Analog	0.10	3
Sr			1	152.184	ppb	0.80	1,313,757.92	5.756E-02	Analog	0.10	3
Mo			1	41.904	ppb	0.66	74,687.53	3.272E-03	Pulse	0.10	3
Ag			1	0.728	ppb	2.33	3,070.35	1.402E-04	Pulse	0.10	3
Sn			1	35.479	ppb	1.58	82,772.75	3.780E-03	Pulse	0.10	3
Sb			1	3.515	ppb	7.44	10,150.04	3.721E-04	Pulse	0.10	3
Ba			1	768.349	ppb	2.09	761,200.33	2.790E-02	Pulse	0.10	3
Tl			1	2.182	ppb	13.70	81,125.10	5.305E-03	Pulse	0.10	3
Pb			1	472.116	ppb	1.68	953,602.61	6.236E-02	Mix	0.10	3
Pb			1	456.774	ppb	1.11	782,838.17	5.119E-02	Pulse	0.10	3
Pb			1	473.851	ppb	0.84	3,729,995.23	2.439E-01	Analog	0.10	3
Na			2	1937.429	ppb	1.29	881,902.29	5.734E-01	Pulse	0.30	3
Mg			2	26548.239	ppb	0.71	5,826,628.38	3.788E+00	Analog	0.30	3
Al			2	175861.283	ppb	0.39	16,367,307.68	1.064E+01	Analog	0.30	3
K			2	7836.284	ppb	1.05	1,265,266.93	8.226E-01	Analog	0.30	3
Ca			2	19244.202	ppb	1.01	167,293.37	1.088E-01	Pulse	0.30	3
Ti			2	3057.652	ppb	0.80	190,768.04	1.240E-01	Pulse	0.30	3
V			2	353.635	ppb	1.26	615,032.22	3.999E-01	Pulse	0.30	3
Cr			2	268.674	ppb	1.58	586,727.53	3.815E-01	Pulse	0.30	3
Mn			2	2759.649	ppb	0.66	3,852,479.57	2.504E+00	Analog	0.30	3
Fe			2	285929.341	ppb	0.81	554,980,404.61	3.608E+02	Analog	0.30	3
Co			2	80.321	ppb	1.48	319,274.01	2.076E-01	Pulse	0.30	3
Ni			2	149.891	ppb	1.40	139,123.98	9.045E-02	Pulse	0.30	3
Cu			2	146.834	ppb	1.23	346,471.32	2.253E-01	Pulse	0.30	3
Zn			2	768.979	ppb	1.06	310,868.59	2.021E-01	Pulse	0.30	3
As			2	97.189	ppb	1.64	17,733.47	1.153E-02	Pulse	1.00	3
Sn			2	31.200	ppb	0.80	26,143.67	5.028E-03	Pulse	0.30	3
Cd			2	1.731	ppb	1.94	788.60	1.517E-04	Pulse	0.30	3
Se			3	6.995	ppb	5.70	302.33	3.985E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,570,539.13	0.77	115.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,894,415.46	1.42	114.8	Analog	0.10	3
1	Ge		4,615,344.31	1.22	107.3	Analog	0.10	3
1	Rh		22,823,584.66	0.45	104.0	Analog	0.10	3
1	In		21,898,178.86	0.73	108.6	Analog	0.10	3
1	Tb		27,286,435.43	1.31	104.4	Analog	0.10	3
1	Ho		27,921,476.25	0.66	103.9	Analog	0.10	3
1	Bi		15,292,506.02	0.61	97.8	Analog	0.10	3
1	Ge		3,842,627.65	0.40	120.9	Analog	0.10	3
2	Sc		1,538,214.63	1.29	110.5	Analog	0.30	3
2	Ge		876,151.37	0.56	108.7	Pulse	0.30	3
2	Rh		13,774,294.18	1.15	100.0	Analog	0.30	3
2	In		5,199,990.67	2.02	104.3	Analog	0.30	3
2	Tb		16,066,341.03	1.51	103.5	Analog	0.30	3
2	Ho		16,248,854.35	1.74	102.6	Analog	0.30	3
2	Bi		9,871,454.89	1.59	97.4	Analog	0.30	3
2	Ge		764,599.61	0.95	138.9	Pulse	0.30	3
3	Sc		1,930,274.23	0.11	108.2	Analog	0.30	3
3	Ge		758,814.28	0.20	107.2	Pulse	0.30	3
3	Rh		3,952,998.18	0.67	101.9	Analog	0.30	3
3	Tb		8,116,650.23	1.36	99.8	Analog	0.30	3
3	Ge		544,188.73	0.84	111.9	Pulse	0.30	3

Quantitation Report

File Name 085SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:18
Sample Name JD38155-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	4.769	ppb	1.70	9,986.65	5.294E-04	Pulse	0.25	3
B			1	15.265	ppb	1.13	32,609.96	1.729E-03	Pulse	0.15	3
Ca			1	1221125.147	ppb	2.37	264,657,422.72	1.156E+01	Analog	0.10	3
Sr			1	392.607	ppb	0.67	3,028,118.08	1.482E-01	Analog	0.10	3
Mo			1	5.629	ppb	3.89	9,059.17	4.435E-04	Pulse	0.10	3
Ag			1	0.292	ppb	3.32	1,156.74	5.797E-05	Pulse	0.10	3
Sn			1	19.391	ppb	1.21	41,602.71	2.085E-03	Pulse	0.10	3
Sb			1	0.588	ppb	6.90	1,773.47	6.770E-05	Pulse	0.10	3
Ba			1	1023.258	ppb	1.70	973,238.37	3.716E-02	Pulse	0.10	3
Tl			1	2.446	ppb	13.02	73,499.53	5.405E-03	Pulse	0.10	3
Pb			1	173.868	ppb	1.79	312,497.86	2.298E-02	Pulse	0.10	3
Pb			1	169.608	ppb	1.61	258,667.98	1.902E-02	Pulse	0.10	3
Pb			1	171.916	ppb	1.35	1,204,169.75	8.855E-02	Pulse	0.10	3
Na			2	1952.702	ppb	1.56	848,366.02	5.779E-01	Pulse	0.30	3
Mg			2	619794.607	ppb	0.86	129,778,088.18	8.839E+01	Analog	0.30	3
Al			2	109326.948	ppb	0.09	9,714,018.78	6.616E+00	Analog	0.30	3
K			2	29059.750	ppb	0.78	4,451,053.57	3.031E+00	Analog	0.30	3
Ca			2	1096960.249	ppb	0.22	9,086,379.09	6.188E+00	Analog	0.30	3
Ti			2	7273.922	ppb	0.17	433,155.74	2.950E-01	Pulse	0.30	3
V			2	267.649	ppb	1.05	444,934.93	3.031E-01	Pulse	0.30	3
Cr			2	292.966	ppb	1.00	610,702.60	4.160E-01	Pulse	0.30	3
Mn			2	2927.776	ppb	1.12	3,901,290.54	2.657E+00	Analog	0.30	3
Fe			2	122147.397	ppb	0.24	226,301,902.12	1.541E+02	Analog	0.30	3
Co			2	57.182	ppb	1.47	227,011.89	1.546E-01	Pulse	0.30	3
Ni			2	133.599	ppb	1.63	118,375.01	8.063E-02	Pulse	0.30	3
Cu			2	90.384	ppb	0.70	201,649.28	1.373E-01	Pulse	0.30	3
Zn			2	356.427	ppb	1.15	137,287.24	9.351E-02	Pulse	0.30	3
As			2	17.422	ppb	2.33	3,084.93	2.101E-03	Pulse	1.00	3
Sn			2	16.560	ppb	1.43	12,611.19	2.699E-03	Pulse	0.30	3
Cd			2	0.846	ppb	6.77	359.88	7.701E-05	Pulse	0.30	3
Se			3	2.699	ppb	13.21	131.33	1.711E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,864,494.56	1.03	106.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,890,155.49	1.50	105.5	Analog	0.10	3
1	Ge		4,213,402.33	1.08	97.9	Analog	0.10	3
1	Rh		20,427,028.03	0.57	93.1	Analog	0.10	3
1	In		19,949,156.49	1.21	98.9	Analog	0.10	3
1	Tb		26,194,232.11	0.32	100.2	Analog	0.10	3
1	Ho		26,837,062.10	0.73	99.9	Analog	0.10	3
1	Bi		13,599,986.47	0.73	87.0	Analog	0.10	3
1	Ge		3,279,247.14	1.05	103.1	Analog	0.10	3
2	Sc		1,468,290.70	1.13	105.5	Analog	0.30	3
2	Ge		767,376.22	0.37	95.2	Pulse	0.30	3
2	Rh		11,886,552.86	2.20	86.3	Analog	0.30	3
2	In		4,672,918.43	1.28	93.7	Analog	0.30	3
2	Tb		14,624,227.75	1.56	94.2	Analog	0.30	3
2	Ho		15,067,429.96	1.00	95.1	Analog	0.30	3
2	Bi		8,097,226.07	1.21	79.9	Analog	0.30	3
2	Ge		590,220.81	0.38	107.3	Pulse	0.30	3
3	Sc		1,784,678.06	0.72	100.0	Analog	0.30	3
3	Ge		767,670.56	0.43	108.4	Pulse	0.30	3
3	Rh		4,634,662.73	0.22	119.5	Analog	0.30	3
3	Tb		11,134,902.61	0.81	136.8	Analog	0.30	3
3	Ge		526,507.42	0.20	108.2	Pulse	0.30	3

Quantitation Report

File Name 086SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:21
Sample Name JD38156-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	11.711	ppb	2.99	25,887.93	1.293E-03	Pulse	0.25	3
B			1	18.515	ppb	1.66	41,083.71	2.052E-03	Pulse	0.15	3
Ca			1	66688.701	ppb	1.58	16,392,217.67	6.324E-01	Analog	0.10	3
Sr			1	107.831	ppb	1.39	946,808.50	4.083E-02	Pulse	0.10	3
Mo			1	5.082	ppb	1.63	9,295.95	4.009E-04	Pulse	0.10	3
Ag			1	0.461	ppb	11.26	1,986.84	8.989E-05	Pulse	0.10	3
Sn			1	32.246	ppb	2.27	76,009.54	3.440E-03	Pulse	0.10	3
Sb			1	0.508	ppb	7.43	1,680.14	5.935E-05	Pulse	0.10	3
Ba			1	2069.962	ppb	0.97	2,127,153.87	7.516E-02	Analog	0.10	3
Tl			1	1.706	ppb	5.17	78,047.19	5.125E-03	Pulse	0.10	3
Pb			1	189.186	ppb	1.45	380,807.46	2.500E-02	Pulse	0.10	3
Pb			1	185.662	ppb	1.38	317,092.67	2.082E-02	Pulse	0.10	3
Pb			1	191.672	ppb	0.94	1,503,434.25	9.871E-02	Pulse	0.10	3
Na			2	2440.534	ppb	2.76	1,148,261.59	7.205E-01	Pulse	0.30	3
Mg			2	67261.209	ppb	1.74	15,295,736.06	9.594E+00	Analog	0.30	3
Al			2	242570.959	ppb	2.61	23,391,110.18	1.468E+01	Analog	0.30	3
K			2	25300.931	ppb	1.83	4,208,571.78	2.640E+00	Analog	0.30	3
Ca			2	61270.904	ppb	2.12	551,277.86	3.458E-01	Pulse	0.30	3
Ti			2	8000.787	ppb	2.73	517,166.42	3.245E-01	Pulse	0.30	3
V			2	830.143	ppb	1.77	1,492,806.37	9.364E-01	Analog	0.30	3
Cr			2	461.901	ppb	2.55	1,045,072.46	6.557E-01	Pulse	0.30	3
Mn			2	6597.809	ppb	1.69	9,546,099.90	5.987E+00	Analog	0.30	3
Fe			2	318731.113	ppb	2.22	641,049,272.30	4.022E+02	Analog	0.30	3
Co			2	123.742	ppb	2.78	489,234.43	3.070E-01	Pulse	0.30	3
Ni			2	127.019	ppb	2.97	122,175.94	7.666E-02	Pulse	0.30	3
Cu			2	118.951	ppb	2.18	289,841.39	1.818E-01	Pulse	0.30	3
Zn			2	582.776	ppb	2.86	243,993.90	1.531E-01	Pulse	0.30	3
As			2	28.876	ppb	3.09	5,506.49	3.455E-03	Pulse	1.00	3
Sn			2	28.717	ppb	4.21	23,781.50	4.633E-03	Pulse	0.30	3
Cd			2	0.422	ppb	14.46	212.26	4.125E-05	Pulse	0.30	3
Se			3	8.017	ppb	2.53	342.67	4.525E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,021,813.02	1.38	112.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,921,280.45	1.28	119.5	Analog	0.10	3
1	Ge		4,735,464.20	0.46	110.1	Analog	0.10	3
1	Rh		23,187,485.49	0.94	105.7	Analog	0.10	3
1	In		22,098,871.29	0.31	109.6	Analog	0.10	3
1	Tb		28,302,849.58	1.18	108.3	Analog	0.10	3
1	Ho		28,659,634.57	0.90	106.7	Analog	0.10	3
1	Bi		15,229,521.44	1.01	97.4	Analog	0.10	3
1	Ge		3,933,230.36	0.76	123.7	Analog	0.10	3
2	Sc		1,594,724.35	3.26	114.6	Analog	0.30	3
2	Ge		866,795.44	0.35	107.5	Pulse	0.30	3
2	Rh		13,406,131.97	2.46	97.3	Analog	0.30	3
2	In		5,136,762.81	2.24	103.0	Analog	0.30	3
2	Tb		15,897,063.26	3.32	102.4	Analog	0.30	3
2	Ho		16,220,168.25	3.37	102.4	Analog	0.30	3
2	Bi		9,511,226.29	1.86	93.8	Analog	0.30	3
2	Ge		780,703.09	0.67	141.9	Pulse	0.30	3
3	Sc		2,000,286.03	0.32	112.1	Analog	0.30	3
3	Ge		757,185.02	0.36	106.9	Pulse	0.30	3
3	Rh		3,938,967.90	1.29	101.6	Analog	0.30	3
3	Tb		8,164,970.23	1.55	100.3	Analog	0.30	3
3	Ge		542,437.06	0.63	111.5	Pulse	0.30	3

Quantitation Report

File Name	087SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 16:24
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.985	ppb	3.18	515,562.14	2.585E-02	Pulse	0.25	3
B			1	95.366	ppb	2.20	950,687.74	4.767E-02	Pulse	0.15	3
Ca			1	5119.508	ppb	5.04	5,986,204.91	2.433E-01	Analog	0.10	3
Sr			1	49.847	ppb	4.78	2,252,353.15	9.417E-02	Analog	0.10	3
Mo			1	48.896	ppb	4.56	456,149.71	1.907E-02	Pulse	0.10	3
Ag			1	50.738	ppb	3.03	1,070,405.66	4.790E-02	Mix	0.10	3
Sn			1	50.354	ppb	2.45	593,694.64	2.657E-02	Pulse	0.10	3
Sb			1	49.241	ppb	3.19	717,786.97	2.562E-02	Pulse	0.10	3
Ba			1	49.973	ppb	3.20	254,249.98	9.076E-03	Pulse	0.10	3
Tl			1	50.253	ppb	2.96	1,583,073.00	9.959E-02	Analog	0.10	3
Pb			1	47.362	ppb	3.56	497,430.71	3.129E-02	Pulse	0.10	3
Pb			1	48.391	ppb	3.59	431,220.54	2.713E-02	Pulse	0.10	3
Pb			1	49.152	ppb	2.64	2,011,688.05	1.265E-01	Analog	0.10	3
Na			2	4950.471	ppb	3.95	10,999,699.01	7.243E+00	Analog	0.30	3
Mg			2	4940.910	ppb	3.85	5,353,662.56	3.525E+00	Analog	0.30	3
Al			2	4933.120	ppb	1.91	2,270,359.42	1.494E+00	Analog	0.30	3
K			2	5090.146	ppb	2.78	4,033,761.23	2.656E+00	Analog	0.30	3
Ca			2	5440.847	ppb	3.65	233,389.37	1.537E-01	Pulse	0.30	3
Ti			2	49.592	ppb	2.96	15,278.46	1.006E-02	Pulse	0.30	3
V			2	48.651	ppb	3.25	418,565.58	2.756E-01	Pulse	0.30	3
Cr			2	47.782	ppb	4.06	515,207.92	3.392E-01	Pulse	0.30	3
Mn			2	47.529	ppb	3.71	327,880.97	2.159E-01	Pulse	0.30	3
Fe			2	4761.005	ppb	2.76	45,634,701.52	3.004E+01	Analog	0.30	3
Co			2	47.507	ppb	4.04	861,687.90	5.674E-01	Pulse	0.30	3
Ni			2	47.197	ppb	3.44	216,231.16	1.424E-01	Pulse	0.30	3
Cu			2	46.946	ppb	3.48	550,050.98	3.622E-01	Pulse	0.30	3
Zn			2	46.016	ppb	3.61	91,501.84	6.025E-02	Pulse	0.30	3
As			2	49.831	ppb	2.94	44,796.19	2.949E-02	Pulse	1.00	3
Sn			2	48.478	ppb	3.14	207,410.68	3.861E-02	Pulse	0.30	3
Cd			2	48.105	ppb	3.44	109,004.32	2.029E-02	Pulse	0.30	3
Se			3	198.825	ppb	1.39	40,281.41	5.264E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,944,755.48	0.56	112.2	Analog	0.10	3
1	Sc		24,604,876.30	0.61	113.4	Analog	0.10	3
1	Ge		4,830,345.14	0.59	112.3	Analog	0.10	3

Quantitation Report

1	Rh		23,924,346.31	0.85	109.0	Analog	0.10	3
1	In		22,345,757.79	0.72	110.8	Analog	0.10	3
1	Tb		28,016,992.08	0.99	107.2	Analog	0.10	3
1	Ho		28,364,210.41	1.43	105.6	Analog	0.10	3
1	Bi		15,898,051.01	0.60	101.7	Analog	0.10	3
1	Ge		3,572,856.30	0.23	112.4	Analog	0.10	3
2	Sc		1,519,534.25	2.22	109.2	Analog	0.30	3
2	Ge		901,808.99	1.09	111.9	Pulse	0.30	3
2	Rh		14,186,166.38	1.53	103.0	Analog	0.30	3
2	In		5,373,279.78	1.80	107.8	Analog	0.30	3
2	Tb		16,473,581.01	1.07	106.1	Analog	0.30	3
2	Ho		16,758,029.89	1.65	105.8	Analog	0.30	3
2	Bi		10,121,801.54	1.27	99.9	Analog	0.30	3
2	Ge		629,136.18	0.68	114.3	Pulse	0.30	3
3	Sc		1,909,369.37	1.19	107.0	Analog	0.30	3
3	Ge		765,279.40	0.84	108.1	Pulse	0.30	3
3	Rh		3,908,146.65	1.65	100.8	Analog	0.30	3
3	Tb		7,975,975.52	0.52	98.0	Analog	0.30	3
3	Ge		527,077.13	0.45	108.3	Pulse	0.30	3

Quantitation Report

File Name	088SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 16:28
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-15.98	62.67	3.041E-06	Pulse	0.25	3
B			1	1.286	ppb	1.34	17,499.26	8.496E-04	Pulse	0.15	3
Ca			1	-0.060	ppb	-506.12	23,284.78	9.290E-04	Pulse	0.10	3
Sr			1	-0.003	ppb	-197.09	3,953.87	1.606E-04	Pulse	0.10	3
Mo			1	0.032	ppb	28.36	416.68	1.690E-05	Pulse	0.10	3
Ag			1	0.006	ppb	26.29	200.01	8.795E-06	Pulse	0.10	3
Sn			1	0.046	ppb	99.52	1,521.03	6.673E-05	Pulse	0.10	3
Sb			1	0.010	ppb	71.89	333.35	1.173E-05	Pulse	0.10	3
Ba			1	0.011	ppb	120.61	156.67	5.515E-06	Pulse	0.10	3
Tl			1	-0.059	ppb	-37.24	71,303.79	4.367E-03	Pulse	0.10	3
Pb			1	0.020	ppb	41.00	593.37	3.636E-05	Pulse	0.10	3
Pb			1	0.019	ppb	33.52	516.69	3.166E-05	Pulse	0.10	3
Pb			1	0.019	ppb	8.37	2,223.46	1.362E-04	Pulse	0.10	3
Na			2	-0.894	ppb	-16.96	8,817.63	5.711E-03	Pulse	0.30	3
Mg			2	3.427	ppb	1.43	6,879.05	4.454E-03	Pulse	0.30	3
Al			2	-2.882	ppb	-7.11	2,369.06	1.534E-03	Pulse	0.30	3
K			2	1.632	ppb	12.47	12,245.16	7.928E-03	Pulse	0.30	3
Ca			2	3.979	ppb	17.49	494.46	3.200E-04	Pulse	0.30	3
Ti			2	0.322	ppb	36.45	104.45	6.781E-05	Pulse	0.30	3
V			2	0.009	ppb	211.98	2,652.44	1.718E-03	Pulse	0.30	3
Cr			2	0.012	ppb	22.12	463.35	3.000E-04	Pulse	0.30	3
Mn			2	0.141	ppb	5.16	1,368.95	8.867E-04	Pulse	0.30	3
Fe			2	9.104	ppb	8.72	102,445.46	6.638E-02	Pulse	0.30	3
Co			2	-0.023	ppb	-144.69	36,275.95	2.349E-02	Pulse	0.30	3
Ni			2	-0.003	ppb	-135.32	85.56	5.539E-05	Pulse	0.30	3
Cu			2	0.578	ppb	0.92	1,640.09	1.062E-03	Pulse	0.30	3
Zn			2	0.382	ppb	2.28	282.23	1.828E-04	Pulse	0.30	3
As			2	-0.002	ppb	-237.10	62.67	4.059E-05	Pulse	1.00	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Sn			2	0.011	ppb	80.70	410.01	7.429E-05	Pulse	0.30	3
Cd			2	-0.008	ppb	-25.33	11.98	2.167E-06	Pulse	0.30	3
Se			3	0.051	ppb	15.03	31.33	4.172E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,597,778.03	0.67	115.9	Analog	0.10	3
1	Sc		25,065,906.29	0.90	115.6	Analog	0.10	3
1	Ge		4,902,089.20	0.85	113.9	Analog	0.10	3
1	Rh		24,623,752.13	1.07	112.2	Analog	0.10	3
1	In		22,759,793.66	0.67	112.9	Analog	0.10	3
1	Tb		28,404,017.08	0.83	108.7	Analog	0.10	3
1	Ho		28,796,912.90	0.22	107.2	Analog	0.10	3
1	Bi		16,327,486.84	0.53	104.5	Analog	0.10	3
1	Ge		3,596,367.76	0.90	113.1	Analog	0.10	3
2	Sc		1,544,429.56	1.44	111.0	Analog	0.30	3
2	Ge		880,858.68	1.27	109.3	Pulse	0.30	3
2	Rh		14,899,529.96	0.86	108.1	Analog	0.30	3
2	In		5,517,133.67	1.90	110.7	Analog	0.30	3
2	Tb		16,673,651.56	2.41	107.4	Analog	0.30	3
2	Ho		16,884,697.66	2.18	106.6	Analog	0.30	3
2	Bi		10,776,996.24	1.14	106.3	Analog	0.30	3
2	Ge		597,644.58	0.99	108.6	Pulse	0.30	3
3	Sc		1,922,496.52	0.49	107.7	Analog	0.30	3
3	Ge		750,989.93	0.57	106.1	Pulse	0.30	3
3	Rh		4,086,075.25	0.29	105.4	Analog	0.30	3
3	Tb		8,019,104.13	0.71	98.6	Analog	0.30	3
3	Ge		514,615.66	0.86	105.8	Pulse	0.30	3

Quantitation Report

File Name 089SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:31
Sample Name MP30773-S1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	225.432	ppb	2.11	124,915.38	6.206E-03	Pulse	0.25	3
B			1	278.462	ppb	1.70	143,692.98	7.138E-03	Pulse	0.15	3
Ca			1	246249.867	ppb	0.65	14,483,995.62	5.839E-01	Analog	0.10	3
Sr			1	608.803	ppb	1.06	1,354,070.34	5.757E-02	Analog	0.10	3
Mo			1	208.483	ppb	0.55	95,716.06	4.069E-03	Pulse	0.10	3
Ag			1	112.181	ppb	2.16	116,990.04	5.297E-03	Pulse	0.10	3
Sn			1	235.752	ppb	1.76	138,067.65	6.252E-03	Pulse	0.10	3
Sb			1	61.737	ppb	0.56	45,212.98	1.612E-03	Pulse	0.10	3
Ba			1	1218.785	ppb	1.27	310,362.88	1.107E-02	Pulse	0.10	3
Tl			1	209.930	ppb	4.20	385,839.26	2.434E-02	Pulse	0.10	3
Pb			1	509.659	ppb	2.42	267,023.76	1.685E-02	Pulse	0.10	3
Pb			1	505.690	ppb	3.29	224,786.53	1.418E-02	Pulse	0.10	3
Pb			1	511.990	ppb	2.24	1,045,312.96	6.595E-02	Pulse	0.10	3
Na			2	16077.974	ppb	1.05	1,827,661.45	1.182E+00	Analog	0.30	3
Mg			2	154053.427	ppb	0.70	8,495,678.83	5.495E+00	Analog	0.30	3
Al			2	257041.072	ppb	0.28	6,014,586.57	3.890E+00	Analog	0.30	3
K			2	45433.022	ppb	1.14	1,838,783.82	1.189E+00	Analog	0.30	3
Ca			2	224805.827	ppb	0.15	490,560.29	3.172E-01	Pulse	0.30	3
Ti			2	8996.627	ppb	1.15	141,042.15	9.122E-02	Pulse	0.30	3
V			2	540.504	ppb	0.71	237,849.58	1.538E-01	Pulse	0.30	3
Cr			2	410.009	ppb	0.65	225,241.23	1.457E-01	Pulse	0.30	3
Mn			2	3564.305	ppb	2.15	1,250,771.30	8.088E-01	Analog	0.30	3
Fe			2	194526.395	ppb	0.98	94,891,336.23	6.137E+01	Analog	0.30	3
Co			2	265.765	ppb	0.62	271,848.77	1.758E-01	Pulse	0.30	3
Ni			2	316.780	ppb	0.37	73,946.25	4.782E-02	Pulse	0.30	3
Cu			2	347.201	ppb	1.33	203,715.74	1.318E-01	Pulse	0.30	3
Zn			2	681.603	ppb	1.23	68,860.98	4.454E-02	Pulse	0.30	3
As			2	237.326	ppb	0.10	10,909.55	7.055E-03	Pulse	1.00	3
Sn			2	200.337	ppb	1.53	43,567.67	8.031E-03	Pulse	0.30	3
Cd			2	196.105	ppb	2.17	22,464.56	4.141E-03	Pulse	0.30	3
Se			3	530.662	ppb	0.82	5,365.79	7.049E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,132,143.77	1.03	113.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,806,574.63	1.03	114.4	Analog	0.10	3
1	Ge		4,822,373.57	0.59	112.1	Analog	0.10	3
1	Rh		23,521,327.98	1.31	107.2	Analog	0.10	3
1	In		22,085,344.13	0.40	109.5	Analog	0.10	3
1	Tb		28,044,441.25	1.06	107.3	Analog	0.10	3
1	Ho		28,412,023.74	1.09	105.8	Analog	0.10	3
1	Bi		15,853,396.85	1.44	101.4	Analog	0.10	3
1	Ge		3,595,570.26	0.85	113.1	Analog	0.10	3
2	Sc		1,546,307.79	1.46	111.1	Analog	0.30	3
2	Ge		902,842.22	0.62	112.0	Pulse	0.30	3
2	Rh		14,241,376.66	1.30	103.4	Analog	0.30	3
2	In		5,426,271.87	2.26	108.9	Analog	0.30	3
2	Tb		16,409,799.35	1.64	105.7	Analog	0.30	3
2	Ho		16,805,327.11	1.75	106.1	Analog	0.30	3
2	Bi		10,272,982.09	0.94	101.4	Analog	0.30	3
2	Ge		640,019.70	0.69	116.3	Pulse	0.30	3
3	Sc		1,931,304.86	0.99	108.2	Analog	0.30	3
3	Ge		761,203.53	0.27	107.5	Pulse	0.30	3
3	Rh		3,959,853.59	0.98	102.1	Analog	0.30	3
3	Tb		8,029,693.01	0.34	98.7	Analog	0.30	3
3	Ge		524,952.60	0.61	107.9	Pulse	0.30	3

Quantitation Report

File Name 090SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:35
Sample Name MP30773-S2
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	223.772	ppb	1.98	123,017.98	6.160E-03	Pulse	0.25	3
B			1	252.035	ppb	1.75	129,433.69	6.481E-03	Pulse	0.15	3
Ca			1	166848.817	ppb	1.25	9,834,322.35	3.959E-01	Analog	0.10	3
Sr			1	577.227	ppb	0.89	1,287,418.97	5.459E-02	Analog	0.10	3
Mo			1	205.217	ppb	0.12	94,465.64	4.006E-03	Pulse	0.10	3
Ag			1	109.687	ppb	2.99	114,383.08	5.180E-03	Pulse	0.10	3
Sn			1	231.460	ppb	1.02	135,583.58	6.139E-03	Pulse	0.10	3
Sb			1	62.528	ppb	1.43	45,485.65	1.633E-03	Pulse	0.10	3
Ba			1	1200.196	ppb	0.97	303,591.69	1.090E-02	Pulse	0.10	3
Tl			1	212.020	ppb	0.88	386,415.89	2.454E-02	Pulse	0.10	3
Pb			1	477.558	ppb	0.78	248,570.10	1.579E-02	Pulse	0.10	3
Pb			1	472.683	ppb	2.02	208,745.62	1.326E-02	Pulse	0.10	3
Pb			1	480.647	ppb	0.78	974,911.40	6.192E-02	Pulse	0.10	3
Na			2	15596.206	ppb	1.53	1,751,778.41	1.147E+00	Analog	0.30	3
Mg			2	97609.438	ppb	1.00	5,319,000.76	3.482E+00	Analog	0.30	3
Al			2	278222.684	ppb	1.28	6,430,420.99	4.210E+00	Analog	0.30	3
K			2	45168.817	ppb	0.74	1,806,304.86	1.182E+00	Analog	0.30	3
Ca			2	154425.973	ppb	1.66	332,946.76	2.180E-01	Pulse	0.30	3
Ti			2	9367.977	ppb	1.86	145,070.08	9.499E-02	Pulse	0.30	3
V			2	514.890	ppb	1.70	223,927.68	1.466E-01	Pulse	0.30	3
Cr			2	406.497	ppb	1.89	220,577.65	1.444E-01	Pulse	0.30	3
Mn			2	3015.385	ppb	1.86	1,045,121.31	6.843E-01	Pulse	0.30	3
Fe			2	191604.130	ppb	0.97	92,331,116.33	6.045E+01	Analog	0.30	3
Co			2	266.496	ppb	2.38	269,146.24	1.762E-01	Pulse	0.30	3
Ni			2	318.577	ppb	0.93	73,463.24	4.809E-02	Pulse	0.30	3
Cu			2	332.312	ppb	1.90	192,377.48	1.260E-01	Pulse	0.30	3
Zn			2	684.936	ppb	1.96	68,360.29	4.476E-02	Pulse	0.30	3
As			2	238.182	ppb	0.75	10,815.83	7.080E-03	Pulse	1.00	3
Sn			2	203.113	ppb	2.32	43,411.69	8.141E-03	Pulse	0.30	3
Cd			2	200.184	ppb	1.14	22,543.98	4.227E-03	Pulse	0.30	3
Se			3	517.476	ppb	1.85	5,218.08	6.875E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,975,258.29	1.93	112.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,839,966.30	0.78	114.5	Analog	0.10	3
1	Ge		4,763,832.53	0.54	110.7	Analog	0.10	3
1	Rh		23,583,580.48	0.58	107.5	Analog	0.10	3
1	In		22,089,391.98	1.49	109.6	Analog	0.10	3
1	Tb		27,857,859.59	0.49	106.6	Analog	0.10	3
1	Ho		28,511,355.41	1.35	106.1	Analog	0.10	3
1	Bi		15,745,715.60	1.62	100.7	Analog	0.10	3
1	Ge		3,579,731.30	1.14	112.6	Analog	0.10	3
2	Sc		1,527,723.86	2.39	109.8	Analog	0.30	3
2	Ge		892,728.05	0.27	110.7	Pulse	0.30	3
2	Rh		14,206,638.60	1.91	103.1	Analog	0.30	3
2	In		5,333,823.51	1.89	107.0	Analog	0.30	3
2	Tb		16,345,117.68	1.65	105.3	Analog	0.30	3
2	Ho		16,595,786.01	2.26	104.7	Analog	0.30	3
2	Bi		10,146,604.88	1.10	100.1	Analog	0.30	3
2	Ge		637,060.72	0.28	115.8	Pulse	0.30	3
3	Sc		1,940,938.12	1.13	108.8	Analog	0.30	3
3	Ge		759,061.85	0.40	107.2	Pulse	0.30	3
3	Rh		3,953,441.37	1.73	101.9	Analog	0.30	3
3	Tb		7,964,591.90	1.29	97.9	Analog	0.30	3
3	Ge		524,735.57	0.33	107.9	Pulse	0.30	3

Quantitation Report

File Name 091SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:38
Sample Name JD38054-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	9.584	ppb	3.31	5,486.15	2.684E-04	Pulse	0.25	3
B			1	74.831	ppb	2.04	42,346.44	2.071E-03	Pulse	0.15	3
Ca			1	183108.448	ppb	1.50	10,809,354.01	4.344E-01	Analog	0.10	3
Sr			1	405.329	ppb	1.14	914,719.31	3.838E-02	Pulse	0.10	3
Mo			1	5.575	ppb	7.53	2,696.94	1.132E-04	Pulse	0.10	3
Ag			1	0.819	ppb	10.06	920.05	4.148E-05	Pulse	0.10	3
Sn			1	31.362	ppb	4.16	19,264.22	8.684E-04	Pulse	0.10	3
Sb			1	0.648	ppb	8.46	653.37	2.336E-05	Pulse	0.10	3
Ba			1	1066.264	ppb	0.98	270,790.56	9.682E-03	Pulse	0.10	3
Tl			1	2.636	ppb	21.49	75,164.54	4.729E-03	Pulse	0.10	3
Pb			1	242.004	ppb	1.45	127,343.79	8.011E-03	Pulse	0.10	3
Pb			1	231.778	ppb	2.47	103,503.03	6.512E-03	Pulse	0.10	3
Pb			1	237.931	ppb	0.99	487,907.44	3.069E-02	Pulse	0.10	3
Na			2	5772.708	ppb	2.18	652,319.83	4.289E-01	Pulse	0.30	3
Mg			2	112598.111	ppb	1.50	6,109,386.70	4.017E+00	Analog	0.30	3
Al			2	253845.290	ppb	1.64	5,842,733.10	3.841E+00	Analog	0.30	3
K			2	37744.505	ppb	0.75	1,504,957.96	9.891E-01	Analog	0.30	3
Ca			2	167792.548	ppb	1.67	360,244.35	2.368E-01	Pulse	0.30	3
Ti			2	8911.355	ppb	1.67	137,433.76	9.036E-02	Pulse	0.30	3
V			2	342.563	ppb	1.68	149,233.67	9.810E-02	Pulse	0.30	3
Cr			2	225.548	ppb	1.70	122,031.47	8.023E-02	Pulse	0.30	3
Mn			2	3196.424	ppb	2.22	1,103,195.96	7.254E-01	Pulse	0.30	3
Fe			2	185592.447	ppb	1.76	89,056,958.68	5.855E+01	Analog	0.30	3
Co			2	83.031	ppb	3.78	108,374.79	7.126E-02	Pulse	0.30	3
Ni			2	141.058	ppb	1.89	32,448.13	2.133E-02	Pulse	0.30	3
Cu			2	176.320	ppb	2.47	99,186.71	6.522E-02	Pulse	0.30	3
Zn			2	477.311	ppb	2.64	47,284.35	3.109E-02	Pulse	0.30	3
As			2	38.455	ppb	0.95	1,792.76	1.178E-03	Pulse	1.00	3
Sn			2	27.297	ppb	0.71	6,143.33	1.151E-03	Pulse	0.30	3
Cd			2	0.195	ppb	130.79	52.10	9.788E-06	Pulse	0.30	3
Se			3	6.019	ppb	17.38	81.33	1.079E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,446,468.23	1.50	115.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,883,984.63	0.76	114.7	Analog	0.10	3
1	Ge		4,848,580.97	1.11	112.7	Analog	0.10	3
1	Rh		23,832,503.81	0.99	108.6	Analog	0.10	3
1	In		22,184,191.80	0.42	110.0	Analog	0.10	3
1	Tb		27,968,077.08	0.34	107.0	Analog	0.10	3
1	Ho		28,452,387.91	1.24	105.9	Analog	0.10	3
1	Bi		15,896,864.35	1.18	101.7	Analog	0.10	3
1	Ge		3,612,284.53	1.05	113.6	Analog	0.10	3
2	Sc		1,521,444.49	2.56	109.3	Analog	0.30	3
2	Ge		892,230.10	0.93	110.7	Pulse	0.30	3
2	Rh		14,138,907.22	1.01	102.6	Analog	0.30	3
2	In		5,338,658.39	1.89	107.1	Analog	0.30	3
2	Tb		16,175,028.25	2.34	104.2	Analog	0.30	3
2	Ho		16,613,601.01	2.20	104.9	Analog	0.30	3
2	Bi		10,253,294.87	1.95	101.2	Analog	0.30	3
2	Ge		636,032.96	0.39	115.6	Pulse	0.30	3
3	Sc		1,913,395.06	0.83	107.2	Analog	0.30	3
3	Ge		754,147.00	0.60	106.5	Pulse	0.30	3
3	Rh		3,963,671.23	0.34	102.2	Analog	0.30	3
3	Tb		7,927,311.91	0.51	97.4	Analog	0.30	3
3	Ge		521,527.71	0.96	107.2	Pulse	0.30	3

Quantitation Report

File Name 092SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:41
Sample Name MP30773-SD1
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	8.792	ppb	13.48	1,086.71	5.316E-05	Pulse	0.25	3
B			1	97.184	ppb	2.70	14,178.74	6.930E-04	Pulse	0.15	3
Ca			1	166848.206	ppb	2.53	1,992,593.46	7.993E-02	Analog	0.10	3
Sr			1	358.878	ppb	1.56	168,388.02	6.934E-03	Pulse	0.10	3
Mo			1	4.361	ppb	30.27	523.36	2.152E-05	Pulse	0.10	3
Ag			1	0.723	ppb	12.69	216.68	9.632E-06	Pulse	0.10	3
Sn			1	24.315	ppb	4.72	3,833.86	1.705E-04	Pulse	0.10	3
Sb			1	-0.117	ppb	-192.39	166.67	5.904E-06	Pulse	0.10	3
Ba			1	961.568	ppb	2.04	49,420.76	1.749E-03	Pulse	0.10	3
Tl			1	-2.829	ppb	-220.37	72,495.86	4.426E-03	Pulse	0.10	3
Pb			1	204.420	ppb	1.97	22,489.01	1.373E-03	Pulse	0.10	3
Pb			1	198.736	ppb	1.76	18,580.91	1.134E-03	Pulse	0.10	3
Pb			1	206.390	ppb	1.35	88,418.33	5.397E-03	Pulse	0.10	3
Na			2	4851.893	ppb	0.57	120,832.96	7.794E-02	Pulse	0.30	3
Mg			2	100015.118	ppb	0.73	1,108,768.81	7.152E-01	Pulse	0.30	3
Al			2	231687.117	ppb	0.46	1,090,151.55	7.032E-01	Pulse	0.30	3
K			2	31820.511	ppb	0.88	267,659.58	1.727E-01	Pulse	0.30	3
Ca			2	147167.311	ppb	0.56	64,677.51	4.172E-02	Pulse	0.30	3
Ti			2	7873.915	ppb	0.14	24,759.58	1.597E-02	Pulse	0.30	3
V			2	288.090	ppb	1.87	27,729.38	1.789E-02	Pulse	0.30	3
Cr			2	198.257	ppb	0.76	22,137.52	1.428E-02	Pulse	0.30	3
Mn			2	2827.908	ppb	0.87	199,311.03	1.286E-01	Pulse	0.30	3
Fe			2	167324.723	ppb	1.03	16,381,384.90	1.056E+01	Analog	0.30	3
Co			2	76.753	ppb	6.65	50,436.88	3.254E-02	Pulse	0.30	3
Ni			2	126.600	ppb	1.06	6,021.01	3.883E-03	Pulse	0.30	3
Cu			2	199.077	ppb	1.33	18,707.24	1.207E-02	Pulse	0.30	3
Zn			2	481.052	ppb	2.08	9,322.40	6.011E-03	Pulse	0.30	3
As			2	30.932	ppb	9.06	348.33	2.248E-04	Pulse	1.00	3
Sn			2	20.079	ppb	18.10	1,240.06	2.251E-04	Pulse	0.30	3
Cd			2	-0.555	ppb	-63.52	18.41	3.333E-06	Pulse	0.30	3
Se			3	5.001	ppb	21.57	31.67	4.147E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,455,844.88	1.35	115.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,931,775.46	0.76	114.9	Analog	0.10	3
1	Ge		4,865,844.72	0.95	113.1	Analog	0.10	3
1	Rh		24,287,464.64	0.87	110.7	Analog	0.10	3
1	In		22,488,935.87	1.07	111.5	Analog	0.10	3
1	Tb		28,256,721.25	1.06	108.1	Analog	0.10	3
1	Ho		28,652,239.57	1.59	106.7	Analog	0.10	3
1	Bi		16,383,462.67	0.88	104.8	Analog	0.10	3
1	Ge		3,600,805.26	0.10	113.3	Analog	0.10	3
2	Sc		1,550,419.66	1.82	111.4	Analog	0.30	3
2	Ge		918,072.08	0.69	113.9	Pulse	0.30	3
2	Rh		14,596,496.64	1.52	105.9	Analog	0.30	3
2	In		5,509,531.72	1.61	110.5	Analog	0.30	3
2	Tb		16,468,758.79	1.15	106.1	Analog	0.30	3
2	Ho		16,857,681.55	1.91	106.4	Analog	0.30	3
2	Bi		10,678,501.24	1.76	105.4	Analog	0.30	3
2	Ge		632,936.54	1.12	115.0	Pulse	0.30	3
3	Sc		1,908,545.76	0.53	106.9	Analog	0.30	3
3	Ge		763,686.27	0.70	107.9	Pulse	0.30	3
3	Rh		3,994,667.48	0.33	103.0	Analog	0.30	3
3	Tb		7,873,130.80	1.30	96.8	Analog	0.30	3
3	Ge		524,597.91	0.54	107.8	Pulse	0.30	3

Quantitation Report

File Name 093SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:44
Sample Name JD38053-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	10.351	ppb	1.47	5,983.63	2.895E-04	Pulse	0.25	3
B			1	42.812	ppb	1.59	26,340.49	1.275E-03	Pulse	0.15	3
Ca			1	27480.248	ppb	2.06	1,647,194.56	6.599E-02	Analog	0.10	3
Sr			1	120.064	ppb	1.75	277,167.38	1.149E-02	Pulse	0.10	3
Mo			1	3.813	ppb	6.41	1,903.49	7.885E-05	Pulse	0.10	3
Ag			1	0.457	ppb	9.18	546.69	2.438E-05	Pulse	0.10	3
Sn			1	23.125	ppb	2.86	14,609.76	6.515E-04	Pulse	0.10	3
Sb			1	1.429	ppb	4.13	1,210.08	4.367E-05	Pulse	0.10	3
Ba			1	1206.306	ppb	0.26	303,559.60	1.095E-02	Pulse	0.10	3
Tl			1	0.695	ppb	180.81	74,025.62	4.545E-03	Pulse	0.10	3
Pb			1	235.597	ppb	0.89	127,055.19	7.800E-03	Pulse	0.10	3
Pb			1	226.777	ppb	1.15	103,794.41	6.372E-03	Pulse	0.10	3
Pb			1	231.826	ppb	0.97	487,187.96	2.991E-02	Pulse	0.10	3
Na			2	3145.338	ppb	1.77	370,103.60	2.369E-01	Pulse	0.30	3
Mg			2	42193.167	ppb	2.29	2,353,208.72	1.506E+00	Analog	0.30	3
Al			2	97437.084	ppb	2.02	2,305,890.39	1.476E+00	Analog	0.30	3
K			2	19874.033	ppb	1.53	818,929.99	5.241E-01	Pulse	0.30	3
Ca			2	24599.337	ppb	2.43	54,520.21	3.490E-02	Pulse	0.30	3
Ti			2	1684.274	ppb	0.90	26,691.17	1.708E-02	Pulse	0.30	3
V			2	176.360	ppb	1.82	80,171.47	5.131E-02	Pulse	0.30	3
Cr			2	156.492	ppb	1.30	87,081.80	5.573E-02	Pulse	0.30	3
Mn			2	6372.784	ppb	1.96	2,258,974.07	1.446E+00	Analog	0.30	3
Fe			2	219376.513	ppb	1.26	108,134,949.04	6.921E+01	Analog	0.30	3
Co			2	118.510	ppb	2.54	143,045.37	9.156E-02	Pulse	0.30	3
Ni			2	198.822	ppb	1.98	46,937.61	3.004E-02	Pulse	0.30	3
Cu			2	132.643	ppb	2.46	75,314.22	4.821E-02	Pulse	0.30	3
Zn			2	754.020	ppb	2.77	77,013.76	4.930E-02	Pulse	0.30	3
As			2	35.645	ppb	4.35	1,710.75	1.095E-03	Pulse	1.00	3
Sn			2	19.612	ppb	4.57	4,646.20	8.453E-04	Pulse	0.30	3
Cd			2	1.564	ppb	14.66	212.68	3.866E-05	Pulse	0.30	3
Se			3	4.483	ppb	10.84	66.67	8.755E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,666,884.19	1.23	116.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,962,490.46	0.57	115.1	Analog	0.10	3
1	Ge		4,917,951.59	0.19	114.3	Analog	0.10	3
1	Rh		24,131,699.64	1.06	110.0	Analog	0.10	3
1	In		22,428,067.81	0.74	111.2	Analog	0.10	3
1	Tb		27,714,439.59	0.55	106.0	Analog	0.10	3
1	Ho		28,562,282.08	1.00	106.3	Analog	0.10	3
1	Bi		16,289,880.59	0.82	104.2	Analog	0.10	3
1	Ge		3,685,575.57	0.34	115.9	Analog	0.10	3
2	Sc		1,562,879.14	2.94	112.3	Analog	0.30	3
2	Ge		916,618.68	1.07	113.7	Pulse	0.30	3
2	Rh		14,638,817.75	1.87	106.3	Analog	0.30	3
2	In		5,494,180.14	2.20	110.2	Analog	0.30	3
2	Tb		16,583,962.12	2.29	106.8	Analog	0.30	3
2	Ho		16,865,924.33	3.05	106.5	Analog	0.30	3
2	Bi		10,587,662.64	2.44	104.5	Analog	0.30	3
2	Ge		652,069.77	0.74	118.5	Pulse	0.30	3
3	Sc		1,899,292.56	1.19	106.4	Analog	0.30	3
3	Ge		761,723.50	0.86	107.6	Pulse	0.30	3
3	Rh		3,988,919.70	1.10	102.8	Analog	0.30	3
3	Tb		7,888,244.13	0.29	96.9	Analog	0.30	3
3	Ge		524,675.46	0.86	107.8	Pulse	0.30	3

Quantitation Report

File Name 094SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:47
Sample Name JD38055-1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	7.780	ppb	0.78	8,760.71	4.328E-04	Pulse	0.25	3
B			1	38.688	ppb	0.89	43,210.57	2.135E-03	Pulse	0.15	3
Ca			1	33563.887	ppb	2.56	3,951,914.21	1.598E-01	Analog	0.10	3
Sr			1	242.796	ppb	0.93	1,073,177.33	4.595E-02	Pulse	0.10	3
Mo			1	12.787	ppb	2.47	11,750.79	5.031E-04	Pulse	0.10	3
Ag			1	0.949	ppb	3.98	2,023.51	9.241E-05	Pulse	0.10	3
Sn			1	47.423	ppb	0.59	55,620.88	2.540E-03	Pulse	0.10	3
Sb			1	1.834	ppb	4.85	2,806.96	1.019E-04	Pulse	0.10	3
Ba			1	802.624	ppb	1.02	401,341.23	1.457E-02	Pulse	0.10	3
Tl			1	1.837	ppb	8.68	75,341.77	4.827E-03	Pulse	0.10	3
Pb			1	634.419	ppb	0.72	654,101.33	4.191E-02	Pulse	0.10	3
Pb			1	620.785	ppb	0.06	543,062.85	3.479E-02	Pulse	0.10	3
Pb			1	644.440	ppb	0.36	2,589,291.15	1.659E-01	Analog	0.10	3
Na			2	2596.648	ppb	1.47	604,582.49	3.866E-01	Pulse	0.30	3
Mg			2	32873.969	ppb	1.04	3,669,573.60	2.346E+00	Analog	0.30	3
Al			2	238392.390	ppb	0.94	11,281,874.83	7.213E+00	Analog	0.30	3
K			2	23747.633	ppb	0.43	1,944,118.81	1.243E+00	Analog	0.30	3
Ca			2	31326.388	ppb	1.40	138,519.31	8.857E-02	Pulse	0.30	3
Ti			2	4461.446	ppb	1.28	141,504.48	9.047E-02	Pulse	0.30	3
V			2	419.052	ppb	1.91	371,590.96	2.376E-01	Pulse	0.30	3
Cr			2	283.681	ppb	1.74	315,129.02	2.015E-01	Pulse	0.30	3
Mn			2	2445.299	ppb	1.28	1,735,630.45	1.110E+00	Analog	0.30	3
Fe			2	267199.396	ppb	1.40	263,659,562.86	1.686E+02	Analog	0.30	3
Co			2	65.217	ppb	2.51	153,861.38	9.838E-02	Pulse	0.30	3
Ni			2	139.048	ppb	2.48	65,666.74	4.199E-02	Pulse	0.30	3
Cu			2	273.985	ppb	2.07	328,316.31	2.099E-01	Pulse	0.30	3
Zn			2	956.269	ppb	2.06	196,341.78	1.255E-01	Pulse	0.30	3
As			2	66.999	ppb	2.24	6,258.74	4.002E-03	Pulse	1.00	3
Sn			2	41.463	ppb	2.43	18,290.60	3.363E-03	Pulse	0.30	3
Cd			2	2.118	ppb	9.28	516.46	9.500E-05	Pulse	0.30	3
Se			3	7.059	ppb	7.06	163.67	2.150E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,242,858.81	0.83	113.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,727,299.63	1.06	114.0	Analog	0.10	3
1	Ge		4,786,235.55	0.29	111.2	Analog	0.10	3
1	Rh		23,354,835.48	0.35	106.4	Analog	0.10	3
1	In		21,894,371.75	0.51	108.6	Analog	0.10	3
1	Tb		27,538,791.26	1.00	105.4	Analog	0.10	3
1	Ho		27,907,276.25	0.85	103.9	Analog	0.10	3
1	Bi		15,608,876.02	0.64	99.9	Analog	0.10	3
1	Ge		3,709,491.40	1.02	116.7	Analog	0.10	3
2	Sc		1,564,319.91	2.13	112.4	Analog	0.30	3
2	Ge		899,005.90	0.58	111.5	Pulse	0.30	3
2	Rh		14,256,821.10	2.00	103.5	Analog	0.30	3
2	In		5,440,615.17	1.61	109.1	Analog	0.30	3
2	Tb		16,254,662.69	2.26	104.7	Analog	0.30	3
2	Ho		16,710,816.00	2.27	105.5	Analog	0.30	3
2	Bi		10,157,933.21	1.13	100.2	Analog	0.30	3
2	Ge		689,936.95	0.76	125.4	Pulse	0.30	3
3	Sc		1,967,856.03	0.75	110.3	Analog	0.30	3
3	Ge		761,023.32	0.75	107.5	Pulse	0.30	3
3	Rh		3,969,026.92	0.95	102.3	Analog	0.30	3
3	Tb		8,083,646.62	1.49	99.3	Analog	0.30	3
3	Ge		532,886.40	0.45	109.5	Pulse	0.30	3

Quantitation Report

File Name 095SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:50
Sample Name JD38055-3
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	19.813	ppb	1.41	22,204.74	1.095E-03	Pulse	0.25	3
B			1	153.678	ppb	1.69	159,360.17	7.857E-03	Pulse	0.15	3
Ca			1	15954.961	ppb	1.52	1,913,337.32	7.647E-02	Analog	0.10	3
Sr			1	109.217	ppb	0.64	485,346.58	2.076E-02	Pulse	0.10	3
Mo			1	26.572	ppb	0.25	24,326.99	1.041E-03	Pulse	0.10	3
Ag			1	1.860	ppb	3.65	3,893.86	1.784E-04	Pulse	0.10	3
Sn			1	218.058	ppb	0.45	251,612.54	1.153E-02	Pulse	0.10	3
Sb			1	7.240	ppb	2.61	10,596.73	3.831E-04	Pulse	0.10	3
Ba			1	825.369	ppb	1.50	414,593.64	1.499E-02	Pulse	0.10	3
Tl			1	2.533	ppb	24.06	77,072.54	4.959E-03	Pulse	0.10	3
Pb			1	553.402	ppb	0.46	568,297.18	3.656E-02	Pulse	0.10	3
Pb			1	532.449	ppb	0.85	463,925.83	2.984E-02	Pulse	0.10	3
Pb			1	555.209	ppb	0.64	2,221,904.52	1.429E-01	Analog	0.10	3
Na			2	2576.327	ppb	2.96	594,103.48	3.836E-01	Pulse	0.30	3
Mg			2	44543.151	ppb	1.48	4,923,713.14	3.178E+00	Analog	0.30	3
Al			2	213461.634	ppb	2.12	10,005,868.21	6.459E+00	Analog	0.30	3
K			2	34368.930	ppb	1.48	2,782,050.93	1.795E+00	Analog	0.30	3
Ca			2	14971.620	ppb	2.34	65,734.29	4.244E-02	Pulse	0.30	3
Ti			2	6174.256	ppb	2.59	193,934.17	1.252E-01	Pulse	0.30	3
V			2	443.968	ppb	2.40	389,772.16	2.516E-01	Pulse	0.30	3
Cr			2	392.157	ppb	2.60	431,313.63	2.785E-01	Pulse	0.30	3
Mn			2	2670.381	ppb	2.33	1,877,435.20	1.212E+00	Analog	0.30	3
Fe			2	294299.750	ppb	2.03	287,663,375.24	1.857E+02	Analog	0.30	3
Co			2	130.495	ppb	3.06	268,086.01	1.731E-01	Pulse	0.30	3
Ni			2	670.734	ppb	2.27	313,363.95	2.023E-01	Pulse	0.30	3
Cu			2	1145.083	ppb	1.18	1,376,275.19	8.883E-01	Analog	0.30	3
Zn			2	3266.044	ppb	2.49	665,373.07	4.296E-01	Pulse	0.30	3
As			2	37.911	ppb	2.49	3,535.68	2.283E-03	Pulse	1.00	3
Sn			2	187.431	ppb	1.13	80,163.38	1.497E-02	Pulse	0.30	3
Cd			2	1.543	ppb	8.86	378.34	7.073E-05	Pulse	0.30	3
Se			3	9.283	ppb	3.83	206.67	2.739E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		20,282,347.42	0.34	114.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		25,023,570.46	2.17	115.4	Analog	0.10	3
1	Ge		4,774,309.51	0.66	111.0	Analog	0.10	3
1	Rh		23,377,488.82	0.59	106.5	Analog	0.10	3
1	In		21,824,772.31	0.41	108.2	Analog	0.10	3
1	Tb		27,667,904.59	1.80	105.9	Analog	0.10	3
1	Ho		28,391,452.08	2.13	105.7	Analog	0.10	3
1	Bi		15,546,001.85	1.26	99.5	Analog	0.10	3
1	Ge		3,720,981.92	1.67	117.0	Analog	0.10	3
2	Sc		1,549,619.94	2.76	111.4	Analog	0.30	3
2	Ge		895,691.60	0.45	111.1	Pulse	0.30	3
2	Rh		14,120,441.11	2.04	102.5	Analog	0.30	3
2	In		5,355,935.63	2.53	107.4	Analog	0.30	3
2	Tb		16,335,714.35	2.57	105.2	Analog	0.30	3
2	Ho		16,595,571.56	2.34	104.7	Analog	0.30	3
2	Bi		10,116,634.88	2.35	99.8	Analog	0.30	3
2	Ge		693,968.34	0.51	126.1	Pulse	0.30	3
3	Sc		1,916,292.01	1.56	107.4	Analog	0.30	3
3	Ge		754,569.12	0.77	106.6	Pulse	0.30	3
3	Rh		3,927,834.98	1.29	101.3	Analog	0.30	3
3	Tb		7,947,595.52	0.66	97.7	Analog	0.30	3
3	Ge		530,645.45	0.69	109.1	Pulse	0.30	3

Quantitation Report

File Name 096SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 16:54
Sample Name JD38151-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	12.120	ppb	1.87	6,543.82	3.382E-04	Pulse	0.25	3
B			1	29.400	ppb	1.54	18,208.77	9.409E-04	Pulse	0.15	3
Ca			1	16790.865	ppb	0.66	983,760.53	4.068E-02	Pulse	0.10	3
Sr			1	69.798	ppb	1.23	154,458.62	6.747E-03	Pulse	0.10	3
Mo			1	6.873	ppb	5.79	3,170.37	1.385E-04	Pulse	0.10	3
Ag			1	0.287	ppb	29.23	356.68	1.637E-05	Pulse	0.10	3
Sn			1	26.317	ppb	1.24	16,027.64	7.356E-04	Pulse	0.10	3
Sb			1	0.860	ppb	6.60	786.71	2.889E-05	Pulse	0.10	3
Ba			1	1212.311	ppb	0.93	299,780.99	1.101E-02	Pulse	0.10	3
Tl			1	1.564	ppb	25.14	72,662.64	4.627E-03	Pulse	0.10	3
Pb			1	121.134	ppb	2.18	63,154.21	4.022E-03	Pulse	0.10	3
Pb			1	116.208	ppb	0.82	51,437.34	3.276E-03	Pulse	0.10	3
Pb			1	119.894	ppb	1.09	243,561.82	1.551E-02	Pulse	0.10	3
Na			2	3441.459	ppb	1.30	391,287.82	2.585E-01	Pulse	0.30	3
Mg			2	51142.690	ppb	0.58	2,762,982.67	1.825E+00	Analog	0.30	3
Al			2	256802.362	ppb	0.90	5,882,084.35	3.886E+00	Analog	0.30	3
K			2	33574.728	ppb	1.48	1,332,784.05	8.806E-01	Analog	0.30	3
Ca			2	15860.204	ppb	0.63	34,168.54	2.258E-02	Pulse	0.30	3
Ti			2	19671.364	ppb	1.07	301,878.00	1.995E-01	Pulse	0.30	3
V			2	1044.724	ppb	1.36	447,636.77	2.958E-01	Pulse	0.30	3
Cr			2	400.580	ppb	1.01	215,418.93	1.423E-01	Pulse	0.30	3
Mn			2	2517.755	ppb	0.99	864,834.55	5.714E-01	Pulse	0.30	3
Fe			2	329965.033	ppb	1.26	157,536,313.74	1.041E+02	Analog	0.30	3
Co			2	119.619	ppb	1.08	139,538.70	9.220E-02	Pulse	0.30	3
Ni			2	144.404	ppb	1.86	33,046.98	2.184E-02	Pulse	0.30	3
Cu			2	227.838	ppb	0.66	129,077.46	8.528E-02	Pulse	0.30	3
Zn			2	458.984	ppb	2.12	45,230.38	2.989E-02	Pulse	0.30	3
As			2	44.282	ppb	2.20	2,044.12	1.351E-03	Pulse	1.00	3
Sn			2	22.830	ppb	2.03	5,126.34	9.732E-04	Pulse	0.30	3
Cd			2	0.255	ppb	58.71	58.12	1.104E-05	Pulse	0.30	3
Se			3	4.474	ppb	10.74	66.00	8.743E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,353,892.14	1.41	108.9	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,181,796.31	0.15	111.5	Analog	0.10	3
1	Ge		4,624,471.29	1.26	107.5	Analog	0.10	3
1	Rh		22,893,734.66	0.95	104.3	Analog	0.10	3
1	In		21,790,079.20	0.31	108.1	Analog	0.10	3
1	Tb		27,234,058.76	0.37	104.2	Analog	0.10	3
1	Ho		27,981,245.42	0.67	104.2	Analog	0.10	3
1	Bi		15,703,343.52	0.08	100.5	Analog	0.10	3
1	Ge		3,552,517.24	1.89	111.7	Analog	0.10	3
2	Sc		1,513,577.72	0.84	108.8	Analog	0.30	3
2	Ge		877,488.75	0.44	108.9	Pulse	0.30	3
2	Rh		14,010,261.11	0.60	101.7	Analog	0.30	3
2	In		5,268,013.96	0.82	105.7	Analog	0.30	3
2	Tb		16,057,159.92	1.47	103.4	Analog	0.30	3
2	Ho		16,453,711.57	1.53	103.8	Analog	0.30	3
2	Bi		10,212,811.81	0.56	100.8	Analog	0.30	3
2	Ge		646,137.93	1.37	117.4	Pulse	0.30	3
3	Sc		1,921,145.83	0.70	107.6	Analog	0.30	3
3	Ge		755,132.17	0.87	106.6	Pulse	0.30	3
3	Rh		3,945,192.90	1.41	101.7	Analog	0.30	3
3	Tb		7,859,421.08	1.01	96.6	Analog	0.30	3
3	Ge		521,998.23	0.64	107.3	Pulse	0.30	3

Quantitation Report

File Name	097SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 16:57
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	47.100	ppb	4.50	484,325.31	2.592E-02	Pulse	0.25	3
B			1	95.467	ppb	4.35	891,845.54	4.772E-02	Pulse	0.15	3
Ca			1	5123.985	ppb	3.77	5,486,983.05	2.435E-01	Analog	0.10	3
Sr			1	50.396	ppb	1.39	2,099,180.80	9.520E-02	Analog	0.10	3
Mo			1	49.539	ppb	4.11	426,015.81	1.932E-02	Pulse	0.10	3
Ag			1	50.262	ppb	2.74	988,693.50	4.745E-02	Pulse	0.10	3
Sn			1	51.107	ppb	4.15	561,858.00	2.696E-02	Pulse	0.10	3
Sb			1	49.613	ppb	3.36	683,911.42	2.581E-02	Pulse	0.10	3
Ba			1	49.635	ppb	3.78	238,830.04	9.014E-03	Pulse	0.10	3
Tl			1	50.900	ppb	3.26	1,519,446.13	1.008E-01	Analog	0.10	3
Pb			1	47.403	ppb	3.54	472,009.03	3.132E-02	Pulse	0.10	3
Pb			1	49.000	ppb	3.98	413,969.25	2.747E-02	Pulse	0.10	3
Pb			1	49.201	ppb	4.29	1,909,117.98	1.267E-01	Mix	0.10	3
Na			2	4980.111	ppb	1.60	10,177,366.26	7.286E+00	Analog	0.30	3
Mg			2	5041.432	ppb	1.25	5,023,897.99	3.597E+00	Analog	0.30	3
Al			2	5028.339	ppb	0.44	2,127,669.43	1.523E+00	Analog	0.30	3
K			2	5061.762	ppb	0.68	3,688,761.94	2.641E+00	Analog	0.30	3
Ca			2	5505.525	ppb	1.37	217,187.95	1.555E-01	Pulse	0.30	3
Ti			2	50.509	ppb	1.88	14,308.83	1.024E-02	Pulse	0.30	3
V			2	48.888	ppb	1.79	386,789.83	2.769E-01	Pulse	0.30	3
Cr			2	48.175	ppb	1.85	477,739.18	3.420E-01	Pulse	0.30	3
Mn			2	47.865	ppb	1.91	303,666.91	2.174E-01	Pulse	0.30	3
Fe			2	4879.434	ppb	1.52	43,006,918.29	3.079E+01	Analog	0.30	3
Co			2	47.835	ppb	2.86	797,720.58	5.711E-01	Pulse	0.30	3
Ni			2	47.516	ppb	1.76	200,205.83	1.433E-01	Pulse	0.30	3
Cu			2	47.226	ppb	1.83	508,904.42	3.643E-01	Pulse	0.30	3
Zn			2	46.580	ppb	1.76	85,187.83	6.099E-02	Pulse	0.30	3
As			2	50.014	ppb	1.55	41,345.55	2.960E-02	Pulse	1.00	3
Sn			2	48.956	ppb	2.87	194,275.53	3.899E-02	Pulse	0.30	3
Cd			2	48.777	ppb	3.53	102,511.34	2.058E-02	Pulse	0.30	3
Se			3	200.195	ppb	1.52	38,597.80	5.300E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,697,567.75	1.98	105.2	Analog	0.10	3
1	Sc		22,534,174.66	0.72	103.9	Analog	0.10	3
1	Ge		4,419,004.83	0.34	102.7	Analog	0.10	3

Quantitation Report

1	Rh		22,050,553.84	1.10	100.5	Analog	0.10	3
1	In		20,837,931.34	0.33	103.4	Analog	0.10	3
1	Tb		26,496,089.61	0.74	101.4	Analog	0.10	3
1	Ho		27,307,054.59	0.74	101.6	Analog	0.10	3
1	Bi		15,073,057.69	0.39	96.4	Analog	0.10	3
1	Ge		3,288,103.29	0.98	103.4	Analog	0.10	3
2	Sc		1,396,751.79	0.52	100.4	Analog	0.30	3
2	Ge		834,963.61	0.67	103.6	Pulse	0.30	3
2	Rh		13,293,455.31	1.54	96.5	Analog	0.30	3
2	In		4,983,703.02	1.70	100.0	Analog	0.30	3
2	Tb		15,529,316.05	1.58	100.0	Analog	0.30	3
2	Ho		15,995,567.14	0.99	101.0	Analog	0.30	3
2	Bi		9,719,208.78	1.32	95.9	Analog	0.30	3
2	Ge		581,134.11	0.71	105.6	Pulse	0.30	3
3	Sc		1,827,218.33	1.16	102.4	Analog	0.30	3
3	Ge		728,260.32	0.80	102.9	Pulse	0.30	3
3	Rh		3,801,012.63	0.78	98.0	Analog	0.30	3
3	Tb		7,797,974.97	1.26	95.8	Analog	0.30	3
3	Ge		500,340.99	0.89	102.8	Pulse	0.30	3

Quantitation Report

File Name	098SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 17:00
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-30.59	62.67	3.314E-06	Pulse	0.25	3
B			1	1.566	ppb	1.92	18,702.55	9.887E-04	Pulse	0.15	3
Ca			1	-1.855	ppb	-24.52	19,410.39	8.441E-04	Pulse	0.10	3
Sr			1	-0.005	ppb	-164.85	3,533.77	1.560E-04	Pulse	0.10	3
Mo			1	0.050	ppb	15.04	543.36	2.399E-05	Pulse	0.10	3
Ag			1	0.008	ppb	14.97	230.01	1.075E-05	Pulse	0.10	3
Sn			1	0.036	ppb	24.70	1,313.42	6.136E-05	Pulse	0.10	3
Sb			1	0.021	ppb	15.41	473.35	1.758E-05	Pulse	0.10	3
Ba			1	0.005	ppb	42.65	120.00	4.457E-06	Pulse	0.10	3
Tl			1	-0.020	ppb	-180.48	68,870.25	4.442E-03	Pulse	0.10	3
Pb			1	0.015	ppb	30.75	510.02	3.291E-05	Pulse	0.10	3
Pb			1	0.012	ppb	25.32	433.35	2.796E-05	Pulse	0.10	3
Pb			1	0.018	ppb	19.98	2,050.11	1.323E-04	Pulse	0.10	3
Na			2	-1.289	ppb	-5.72	7,359.23	5.133E-03	Pulse	0.30	3
Mg			2	0.736	ppb	5.26	3,633.71	2.535E-03	Pulse	0.30	3
Al			2	-4.369	ppb	-4.68	1,553.41	1.085E-03	Pulse	0.30	3
K			2	1.628	ppb	14.63	11,365.67	7.926E-03	Pulse	0.30	3
Ca			2	-1.240	ppb	-55.95	247.78	1.728E-04	Pulse	0.30	3
Ti			2	0.249	ppb	20.76	75.55	5.286E-05	Pulse	0.30	3
V			2	-0.007	ppb	-139.27	2,335.72	1.630E-03	Pulse	0.30	3
Cr			2	0.005	ppb	98.65	351.12	2.453E-04	Pulse	0.30	3
Mn			2	0.064	ppb	30.02	771.13	5.390E-04	Pulse	0.30	3
Fe			2	6.790	ppb	10.74	74,133.82	5.178E-02	Pulse	0.30	3
Co			2	0.013	ppb	281.21	34,259.99	2.390E-02	Pulse	0.30	3
Ni			2	-0.003	ppb	-88.83	82.22	5.736E-05	Pulse	0.30	3
Cu			2	0.574	ppb	0.37	1,483.40	1.035E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.385	ppb	3.05	266.67	1.860E-04	Pulse	0.30	3
As			2	0.002	ppb	123.80	62.00	4.327E-05	Pulse	1.00	3
Sn			2	0.030	ppb	2.80	463.34	8.910E-05	Pulse	0.30	3
Cd			2	-0.011	ppb	-14.20	6.32	1.210E-06	Pulse	0.30	3
Se			3	0.103	ppb	30.41	40.00	5.559E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,916,210.03	0.56	106.4	Analog	0.10	3
1	Sc		23,000,937.99	1.34	106.0	Analog	0.10	3
1	Ge		4,548,780.04	0.73	105.7	Analog	0.10	3
1	Rh		22,659,787.16	0.67	103.3	Analog	0.10	3
1	In		21,388,825.11	1.57	106.1	Analog	0.10	3
1	Tb		26,925,924.60	0.45	103.0	Analog	0.10	3
1	Ho		27,335,878.76	1.73	101.8	Analog	0.10	3
1	Bi		15,504,659.77	0.87	99.2	Analog	0.10	3
1	Ge		3,332,625.58	0.64	104.8	Analog	0.10	3
2	Sc		1,433,609.63	2.36	103.0	Analog	0.30	3
2	Ge		834,747.23	1.19	103.6	Pulse	0.30	3
2	Rh		14,029,437.78	2.13	101.8	Analog	0.30	3
2	In		5,200,633.45	2.31	104.3	Analog	0.30	3
2	Tb		15,901,574.37	1.86	102.4	Analog	0.30	3
2	Ho		16,284,058.24	2.08	102.8	Analog	0.30	3
2	Bi		10,316,149.87	1.37	101.8	Analog	0.30	3
2	Ge		563,526.19	1.35	102.4	Pulse	0.30	3
3	Sc		1,828,260.07	0.69	102.4	Analog	0.30	3
3	Ge		719,486.92	0.23	101.6	Pulse	0.30	3
3	Rh		3,954,344.57	0.23	102.0	Analog	0.30	3
3	Tb		7,868,978.85	1.20	96.7	Analog	0.30	3
3	Ge		494,772.76	0.10	101.7	Pulse	0.30	3

Quantitation Report

File Name 099SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:03
Sample Name JD38152-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	5.695	ppb	2.36	3,133.61	1.614E-04	Pulse	0.25	3
B			1	63.656	ppb	0.59	34,818.12	1.793E-03	Pulse	0.15	3
Ca			1	280240.859	ppb	1.10	15,744,516.02	6.644E-01	Analog	0.10	3
Sr			1	346.699	ppb	0.60	757,291.76	3.286E-02	Pulse	0.10	3
Mo			1	55.692	ppb	1.12	25,131.30	1.090E-03	Pulse	0.10	3
Ag			1	1.309	ppb	5.40	1,396.76	6.462E-05	Pulse	0.10	3
Sn			1	144.839	ppb	1.64	83,352.19	3.857E-03	Pulse	0.10	3
Sb			1	6.799	ppb	6.41	4,974.16	1.834E-04	Pulse	0.10	3
Ba			1	1496.543	ppb	0.67	368,636.39	1.359E-02	Pulse	0.10	3
Tl			1	1.552	ppb	44.56	71,977.10	4.626E-03	Pulse	0.10	3
Pb			1	583.896	ppb	0.55	300,222.20	1.930E-02	Pulse	0.10	3
Pb			1	572.444	ppb	1.38	249,739.89	1.605E-02	Pulse	0.10	3
Pb			1	580.494	ppb	0.63	1,163,138.43	7.476E-02	Pulse	0.10	3
Na			2	3764.320	ppb	1.59	417,441.61	2.821E-01	Pulse	0.30	3
Mg			2	79783.188	ppb	2.51	4,211,375.80	2.847E+00	Analog	0.30	3
Al			2	166135.152	ppb	2.39	3,721,175.41	2.515E+00	Analog	0.30	3
K			2	25492.621	ppb	1.62	991,820.10	6.703E-01	Pulse	0.30	3
Ca			2	256104.385	ppb	0.78	534,773.45	3.614E-01	Pulse	0.30	3
Ti			2	9678.959	ppb	1.14	145,218.75	9.814E-02	Pulse	0.30	3
V			2	739.355	ppb	0.65	310,464.83	2.098E-01	Pulse	0.30	3
Cr			2	3675.335	ppb	1.33	1,929,841.04	1.304E+00	Analog	0.30	3
Mn			2	19361.904	ppb	0.79	6,500,167.80	4.393E+00	Analog	0.30	3
Fe			2	273094.717	ppb	1.90	127,468,866.05	8.615E+01	Analog	0.30	3
Co			2	74.616	ppb	2.48	98,315.77	6.645E-02	Pulse	0.30	3
Ni			2	356.578	ppb	1.61	79,637.09	5.382E-02	Pulse	0.30	3
Cu			2	969.977	ppb	1.43	553,788.01	3.743E-01	Pulse	0.30	3
Zn			2	1027.628	ppb	1.07	99,601.87	6.731E-02	Pulse	0.30	3
As			2	23.636	ppb	4.09	1,095.37	7.405E-04	Pulse	1.00	3
Sn			2	125.001	ppb	1.56	26,506.46	5.035E-03	Pulse	0.30	3
Cd			2	2.870	ppb	13.06	347.96	6.620E-05	Pulse	0.30	3
Se			3	6.310	ppb	16.63	82.33	1.117E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,416,746.84	2.20	109.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,699,931.31	1.09	109.3	Analog	0.10	3
1	Ge		4,637,127.53	0.75	107.8	Analog	0.10	3
1	Rh		23,049,001.33	0.25	105.0	Analog	0.10	3
1	In		21,613,287.73	1.60	107.2	Analog	0.10	3
1	Tb		27,130,232.10	0.15	103.8	Analog	0.10	3
1	Ho		27,721,614.59	1.18	103.2	Analog	0.10	3
1	Bi		15,558,859.77	1.51	99.5	Analog	0.10	3
1	Ge		3,511,690.15	0.62	110.5	Analog	0.10	3
2	Sc		1,479,886.19	1.69	106.4	Analog	0.30	3
2	Ge		870,867.12	0.39	108.0	Pulse	0.30	3
2	Rh		13,696,256.40	1.43	99.4	Analog	0.30	3
2	In		5,264,746.10	2.15	105.6	Analog	0.30	3
2	Tb		15,991,113.81	1.97	103.0	Analog	0.30	3
2	Ho		16,250,183.24	1.71	102.6	Analog	0.30	3
2	Bi		10,154,561.82	2.15	100.2	Analog	0.30	3
2	Ge		631,851.00	0.29	114.8	Pulse	0.30	3
3	Sc		1,860,522.64	0.72	104.3	Analog	0.30	3
3	Ge		736,732.96	0.38	104.0	Pulse	0.30	3
3	Rh		3,853,669.99	0.83	99.4	Analog	0.30	3
3	Tb		7,837,030.80	1.56	96.3	Analog	0.30	3
3	Ge		507,728.02	0.71	104.4	Pulse	0.30	3

Quantitation Report

File Name 100SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:06
Sample Name JD38152-1
Sample Type Sample
Comment
Prep Dilution 50.000
Auto Dilution N/A
Total Dilution 50.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	5.198	ppb	12.28	1,174.72	6.199E-05	Pulse	0.25	3
B			1	78.159	ppb	3.00	18,693.64	9.873E-04	Pulse	0.15	3
Ca			1	275798.682	ppb	1.06	6,208,761.57	2.621E-01	Analog	0.10	3
Sr			1	344.499	ppb	0.91	299,612.69	1.316E-02	Pulse	0.10	3
Mo			1	55.098	ppb	1.61	9,886.28	4.342E-04	Pulse	0.10	3
Ag			1	1.352	ppb	17.07	603.36	2.833E-05	Pulse	0.10	3
Sn			1	147.359	ppb	0.95	33,979.70	1.595E-03	Pulse	0.10	3
Sb			1	6.406	ppb	2.97	1,956.82	7.315E-05	Pulse	0.10	3
Ba			1	1505.985	ppb	1.31	146,362.27	5.471E-03	Pulse	0.10	3
Tl			1	-0.888	ppb	-174.38	69,546.49	4.446E-03	Pulse	0.10	3
Pb			1	570.109	ppb	1.03	118,125.46	7.551E-03	Pulse	0.10	3
Pb			1	559.138	ppb	3.06	98,304.95	6.285E-03	Pulse	0.10	3
Pb			1	566.171	ppb	1.60	457,108.46	2.922E-02	Pulse	0.10	3
Na			2	3608.362	ppb	1.43	169,015.84	1.125E-01	Pulse	0.30	3
Mg			2	80314.685	ppb	1.29	1,723,873.75	1.147E+00	Analog	0.30	3
Al			2	167741.947	ppb	0.97	1,528,116.64	1.017E+00	Analog	0.30	3
K			2	24987.374	ppb	1.63	401,305.96	2.671E-01	Pulse	0.30	3
Ca			2	254745.790	ppb	1.51	216,211.46	1.439E-01	Pulse	0.30	3
Ti			2	9583.969	ppb	1.84	58,401.91	3.887E-02	Pulse	0.30	3
V			2	719.387	ppb	0.70	124,213.94	8.267E-02	Pulse	0.30	3
Cr			2	3586.638	ppb	1.27	764,995.86	5.092E-01	Pulse	0.30	3
Mn			2	19344.801	ppb	0.52	2,638,031.15	1.756E+00	Analog	0.30	3
Fe			2	272734.393	ppb	1.74	51,719,375.72	3.442E+01	Analog	0.30	3
Co			2	73.810	ppb	3.61	61,066.48	4.065E-02	Pulse	0.30	3
Ni			2	353.629	ppb	1.61	32,135.40	2.139E-02	Pulse	0.30	3
Cu			2	988.074	ppb	1.22	226,049.47	1.505E-01	Pulse	0.30	3
Zn			2	1087.595	ppb	1.46	42,531.77	2.831E-02	Pulse	0.30	3
As			2	22.859	ppb	4.27	469.01	3.122E-04	Pulse	1.00	3
Sn			2	119.884	ppb	1.77	10,622.13	1.972E-03	Pulse	0.30	3
Cd			2	2.519	ppb	2.72	144.98	2.692E-05	Pulse	0.30	3
Se			3	6.234	ppb	20.81	45.67	6.123E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,937,968.12	1.85	106.5	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,689,634.65	0.73	109.2	Analog	0.10	3
1	Ge		4,618,876.81	0.21	107.4	Analog	0.10	3
1	Rh		22,768,416.33	0.35	103.8	Analog	0.10	3
1	In		21,305,965.05	0.42	105.7	Analog	0.10	3
1	Tb		26,751,357.10	0.52	102.4	Analog	0.10	3
1	Ho		27,357,592.09	0.28	101.8	Analog	0.10	3
1	Bi		15,645,511.85	1.12	100.1	Analog	0.10	3
1	Ge		3,454,597.87	0.38	108.7	Analog	0.10	3
2	Sc		1,502,544.21	1.50	108.0	Analog	0.30	3
2	Ge		892,037.71	0.92	110.7	Pulse	0.30	3
2	Rh		14,260,037.21	1.43	103.5	Analog	0.30	3
2	In		5,386,709.02	1.24	108.1	Analog	0.30	3
2	Tb		16,255,696.58	0.72	104.7	Analog	0.30	3
2	Ho		16,639,733.23	0.77	105.0	Analog	0.30	3
2	Bi		10,482,869.03	1.09	103.4	Analog	0.30	3
2	Ge		621,588.83	0.66	113.0	Pulse	0.30	3
3	Sc		1,870,194.72	1.00	104.8	Analog	0.30	3
3	Ge		745,808.15	0.42	105.3	Pulse	0.30	3
3	Rh		3,943,769.70	1.24	101.7	Analog	0.30	3
3	Tb		7,838,160.52	0.36	96.3	Analog	0.30	3
3	Ge		512,388.63	0.60	105.3	Pulse	0.30	3

Quantitation Report

File Name 101SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:09
Sample Name JD38153-1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	5.690	ppb	2.28	6,190.37	3.178E-04	Pulse	0.25	3
B			1	34.625	ppb	1.33	37,650.41	1.933E-03	Pulse	0.15	3
Ca			1	36283.958	ppb	0.70	4,166,402.65	1.727E-01	Analog	0.10	3
Sr			1	145.331	ppb	0.51	634,579.50	2.757E-02	Pulse	0.10	3
Mo			1	7.162	ppb	5.58	6,531.35	2.838E-04	Pulse	0.10	3
Ag			1	0.726	ppb	5.89	1,526.77	7.133E-05	Pulse	0.10	3
Sn			1	26.059	ppb	0.58	30,273.08	1.415E-03	Pulse	0.10	3
Sb			1	1.784	ppb	8.70	2,680.27	9.931E-05	Pulse	0.10	3
Ba			1	849.062	ppb	0.59	416,192.39	1.542E-02	Pulse	0.10	3
Tl			1	1.771	ppb	10.43	73,402.71	4.814E-03	Pulse	0.10	3
Pb			1	221.554	ppb	0.82	223,356.30	1.465E-02	Pulse	0.10	3
Pb			1	217.946	ppb	1.92	186,439.05	1.223E-02	Pulse	0.10	3
Pb			1	222.331	ppb	1.16	873,435.68	5.729E-02	Pulse	0.10	3
Na			2	3739.719	ppb	1.85	837,834.71	5.536E-01	Pulse	0.30	3
Mg			2	38727.605	ppb	0.56	4,183,075.53	2.764E+00	Analog	0.30	3
Al			2	130665.221	ppb	1.43	5,985,073.10	3.955E+00	Analog	0.30	3
K			2	20861.312	ppb	0.60	1,653,755.70	1.093E+00	Analog	0.30	3
Ca			2	33846.619	ppb	1.41	144,796.38	9.567E-02	Pulse	0.30	3
Ti			2	5434.653	ppb	2.86	166,769.23	1.102E-01	Pulse	0.30	3
V			2	291.749	ppb	1.51	251,118.25	1.659E-01	Pulse	0.30	3
Cr			2	272.974	ppb	0.73	293,482.57	1.939E-01	Pulse	0.30	3
Mn			2	2941.952	ppb	1.44	2,020,638.53	1.335E+00	Analog	0.30	3
Fe			2	195368.297	ppb	0.89	186,557,472.59	1.233E+02	Analog	0.30	3
Co			2	103.647	ppb	2.14	215,436.37	1.424E-01	Pulse	0.30	3
Ni			2	327.690	ppb	2.44	149,609.12	9.887E-02	Pulse	0.30	3
Cu			2	163.913	ppb	2.23	187,965.54	1.242E-01	Pulse	0.30	3
Zn			2	684.239	ppb	2.21	135,801.19	8.974E-02	Pulse	0.30	3
As			2	39.665	ppb	1.04	3,611.69	2.386E-03	Pulse	1.00	3
Sn			2	22.516	ppb	2.84	9,793.87	1.856E-03	Pulse	0.30	3
Cd			2	1.011	ppb	7.80	255.11	4.832E-05	Pulse	0.30	3
Se			3	5.095	ppb	3.84	121.00	1.631E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,481,539.40	1.08	109.6	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,121,915.47	0.57	111.2	Analog	0.10	3
1	Ge		4,628,389.20	1.23	107.6	Analog	0.10	3
1	Rh		23,014,962.99	0.54	104.9	Analog	0.10	3
1	In		21,393,822.78	1.61	106.1	Analog	0.10	3
1	Tb		26,994,421.27	0.71	103.3	Analog	0.10	3
1	Ho		27,539,628.76	1.07	102.5	Analog	0.10	3
1	Bi		15,246,673.10	0.37	97.5	Analog	0.10	3
1	Ge		3,544,150.57	0.95	111.5	Analog	0.10	3
2	Sc		1,513,732.27	2.27	108.8	Analog	0.30	3
2	Ge		872,848.06	1.18	108.3	Pulse	0.30	3
2	Rh		13,934,038.34	1.66	101.1	Analog	0.30	3
2	In		5,278,315.39	1.54	105.9	Analog	0.30	3
2	Tb		16,106,456.03	1.49	103.8	Analog	0.30	3
2	Ho		16,395,555.46	2.54	103.5	Analog	0.30	3
2	Bi		10,145,675.71	1.60	100.1	Analog	0.30	3
2	Ge		650,629.84	0.85	118.2	Pulse	0.30	3
3	Sc		1,889,774.85	1.17	105.9	Analog	0.30	3
3	Ge		742,005.42	0.64	104.8	Pulse	0.30	3
3	Rh		3,938,209.71	0.51	101.5	Analog	0.30	3
3	Tb		7,907,256.63	0.39	97.2	Analog	0.30	3
3	Ge		515,363.97	0.39	105.9	Pulse	0.30	3

Quantitation Report

File Name 102SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:12
Sample Name JD38154-1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	8.217	ppb	1.85	9,096.86	4.568E-04	Pulse	0.25	3
B			1	38.195	ppb	1.41	42,025.61	2.110E-03	Pulse	0.15	3
Ca			1	20560.587	ppb	2.19	2,388,334.34	9.828E-02	Analog	0.10	3
Sr			1	141.369	ppb	0.54	617,870.74	2.682E-02	Pulse	0.10	3
Mo			1	40.479	ppb	2.68	36,457.24	1.583E-03	Pulse	0.10	3
Ag			1	0.656	ppb	7.53	1,410.09	6.477E-05	Pulse	0.10	3
Sn			1	33.770	ppb	0.50	39,658.24	1.821E-03	Pulse	0.10	3
Sb			1	3.357	ppb	2.22	4,960.84	1.811E-04	Pulse	0.10	3
Ba			1	736.583	ppb	1.21	366,353.55	1.338E-02	Pulse	0.10	3
Tl			1	1.419	ppb	14.02	73,536.83	4.748E-03	Pulse	0.10	3
Pb			1	446.852	ppb	1.92	457,265.24	2.952E-02	Pulse	0.10	3
Pb			1	439.122	ppb	1.36	381,284.80	2.462E-02	Pulse	0.10	3
Pb			1	452.528	ppb	2.56	1,804,694.30	1.165E-01	Mix	0.10	3
Na			2	1902.886	ppb	1.29	439,584.57	2.852E-01	Pulse	0.30	3
Mg			2	26023.576	ppb	0.68	2,863,803.57	1.858E+00	Analog	0.30	3
Al			2	175673.493	ppb	0.84	8,195,918.29	5.316E+00	Analog	0.30	3
K			2	7642.798	ppb	0.38	624,012.67	4.048E-01	Pulse	0.30	3
Ca			2	18972.259	ppb	0.59	82,817.17	5.372E-02	Pulse	0.30	3
Ti			2	3098.239	ppb	6.82	96,815.65	6.283E-02	Pulse	0.30	3
V			2	344.165	ppb	0.63	301,296.90	1.954E-01	Pulse	0.30	3
Cr			2	263.812	ppb	0.89	288,892.61	1.874E-01	Pulse	0.30	3
Mn			2	2798.743	ppb	0.99	1,957,902.42	1.270E+00	Analog	0.30	3
Fe			2	285552.541	ppb	0.26	277,744,522.30	1.802E+02	Analog	0.30	3
Co			2	78.951	ppb	1.50	175,889.90	1.141E-01	Pulse	0.30	3
Ni			2	147.349	ppb	1.88	68,589.35	4.449E-02	Pulse	0.30	3
Cu			2	150.008	ppb	1.42	174,788.60	1.134E-01	Pulse	0.30	3
Zn			2	817.828	ppb	0.76	165,455.39	1.073E-01	Pulse	0.30	3
As			2	99.409	ppb	1.81	9,121.25	5.917E-03	Pulse	1.00	3
Sn			2	29.437	ppb	1.87	12,950.36	2.406E-03	Pulse	0.30	3
Cd			2	1.570	ppb	8.33	387.24	7.189E-05	Pulse	0.30	3
Se			3	7.398	ppb	7.38	169.67	2.240E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,918,612.12	1.88	112.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,304,567.14	1.00	112.1	Analog	0.10	3
1	Ge		4,697,847.85	0.94	109.2	Analog	0.10	3
1	Rh		23,033,872.16	0.96	105.0	Analog	0.10	3
1	In		21,774,548.77	0.29	108.0	Analog	0.10	3
1	Tb		27,389,523.76	0.68	104.8	Analog	0.10	3
1	Ho		27,618,832.92	0.59	102.8	Analog	0.10	3
1	Bi		15,488,933.94	0.71	99.1	Analog	0.10	3
1	Ge		3,652,543.59	0.80	114.9	Analog	0.10	3
2	Sc		1,541,701.43	1.22	110.8	Analog	0.30	3
2	Ge		887,972.22	1.46	110.2	Pulse	0.30	3
2	Rh		14,250,941.10	1.13	103.4	Analog	0.30	3
2	In		5,382,831.41	1.51	108.0	Analog	0.30	3
2	Tb		16,277,426.57	2.11	104.9	Analog	0.30	3
2	Ho		16,622,783.23	1.90	104.9	Analog	0.30	3
2	Bi		10,241,981.81	2.06	101.1	Analog	0.30	3
2	Ge		686,570.72	0.79	124.8	Pulse	0.30	3
3	Sc		1,935,485.62	2.46	108.5	Analog	0.30	3
3	Ge		757,127.80	1.00	106.9	Pulse	0.30	3
3	Rh		3,979,546.37	0.82	102.6	Analog	0.30	3
3	Tb		7,988,530.52	1.04	98.2	Analog	0.30	3
3	Ge		531,865.95	0.58	109.3	Pulse	0.30	3

Quantitation Report

File Name 103SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:16
Sample Name JD38155-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	4.662	ppb	2.60	2,584.20	1.330E-04	Pulse	0.25	3
B			1	18.340	ppb	3.22	12,933.37	6.657E-04	Pulse	0.15	3
Ca			1	1196181.400	ppb	1.58	67,434,558.99	2.833E+00	Analog	0.10	3
Sr			1	349.529	ppb	0.37	748,717.51	3.312E-02	Pulse	0.10	3
Mo			1	5.450	ppb	7.56	2,503.58	1.108E-04	Pulse	0.10	3
Ag			1	0.292	ppb	2.32	353.34	1.658E-05	Pulse	0.10	3
Sn			1	17.438	ppb	3.12	10,690.14	5.017E-04	Pulse	0.10	3
Sb			1	0.574	ppb	23.37	580.03	2.143E-05	Pulse	0.10	3
Ba			1	997.466	ppb	2.13	245,044.26	9.057E-03	Pulse	0.10	3
Tl			1	1.678	ppb	44.14	69,827.75	4.638E-03	Pulse	0.10	3
Pb			1	161.211	ppb	1.10	80,468.91	5.345E-03	Pulse	0.10	3
Pb			1	156.226	ppb	1.55	66,189.47	4.396E-03	Pulse	0.10	3
Pb			1	159.673	ppb	0.45	310,577.30	2.063E-02	Pulse	0.10	3
Na			2	1895.439	ppb	0.58	218,639.31	1.455E-01	Pulse	0.30	3
Mg			2	633765.808	ppb	0.95	33,950,258.65	2.260E+01	Analog	0.30	3
Al			2	111490.011	ppb	1.30	2,536,904.69	1.688E+00	Analog	0.30	3
K			2	28842.381	ppb	2.75	1,138,222.42	7.575E-01	Mix	0.30	3
Ca			2	1105160.424	ppb	0.49	2,341,891.16	1.559E+00	Analog	0.30	3
Ti			2	7129.244	ppb	1.07	108,587.49	7.229E-02	Pulse	0.30	3
V			2	265.779	ppb	0.29	114,904.49	7.649E-02	Pulse	0.30	3
Cr			2	295.058	ppb	1.19	157,564.28	1.049E-01	Pulse	0.30	3
Mn			2	2907.133	ppb	0.74	991,082.60	6.597E-01	Pulse	0.30	3
Fe			2	127793.174	ppb	0.37	60,571,084.26	4.032E+01	Analog	0.30	3
Co			2	58.778	ppb	2.18	86,199.73	5.738E-02	Pulse	0.30	3
Ni			2	145.109	ppb	0.43	32,962.80	2.194E-02	Pulse	0.30	3
Cu			2	106.202	ppb	1.51	56,956.50	3.792E-02	Pulse	0.30	3
Zn			2	451.214	ppb	2.70	44,119.89	2.938E-02	Pulse	0.30	3
As			2	18.757	ppb	2.93	896.02	5.963E-04	Pulse	1.00	3
Sn			2	15.648	ppb	2.18	3,574.83	6.876E-04	Pulse	0.30	3
Cd			2	0.532	ppb	7.23	87.78	1.689E-05	Pulse	0.30	3
Se			3	2.375	ppb	47.71	43.67	5.966E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,428,907.86	0.64	109.3	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,807,234.64	1.03	109.8	Analog	0.10	3
1	Ge		4,604,371.81	0.12	107.0	Analog	0.10	3
1	Rh		22,604,888.83	0.46	103.0	Analog	0.10	3
1	In		21,307,931.24	0.99	105.7	Analog	0.10	3
1	Tb		27,058,880.43	1.24	103.5	Analog	0.10	3
1	Ho		27,879,117.92	1.24	103.8	Analog	0.10	3
1	Bi		15,056,863.53	0.72	96.3	Analog	0.10	3
1	Ge		3,456,816.72	1.18	108.7	Analog	0.10	3
2	Sc		1,502,304.84	1.34	108.0	Analog	0.30	3
2	Ge		853,891.86	0.34	105.9	Pulse	0.30	3
2	Rh		13,479,419.47	1.48	97.8	Analog	0.30	3
2	In		5,200,163.34	2.57	104.3	Analog	0.30	3
2	Tb		15,887,041.03	1.82	102.3	Analog	0.30	3
2	Ho		16,272,138.80	1.54	102.7	Analog	0.30	3
2	Bi		9,585,702.40	1.24	94.6	Analog	0.30	3
2	Ge		597,118.92	0.60	108.5	Pulse	0.30	3
3	Sc		1,850,199.72	0.50	103.7	Analog	0.30	3
3	Ge		731,731.17	0.68	103.3	Pulse	0.30	3
3	Rh		3,819,716.79	0.61	98.5	Analog	0.30	3
3	Tb		7,892,408.02	0.73	97.0	Analog	0.30	3
3	Ge		504,095.66	0.46	103.6	Pulse	0.30	3

Quantitation Report

File Name 104SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:19
Sample Name JD38156-1
Sample Type Sample
Comment
Prep Dilution 50.000
Auto Dilution N/A
Total Dilution 50.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	11.041	ppb	8.61	2,462.85	1.263E-04	Pulse	0.25	3
B			1	24.794	ppb	3.44	8,899.97	4.562E-04	Pulse	0.15	3
Ca			1	69877.582	ppb	1.40	1,617,451.75	6.710E-02	Analog	0.10	3
Sr			1	101.913	ppb	2.04	93,620.68	4.010E-03	Pulse	0.10	3
Mo			1	5.226	ppb	12.50	1,056.72	4.527E-05	Pulse	0.10	3
Ag			1	0.545	ppb	26.91	283.35	1.309E-05	Pulse	0.10	3
Sn			1	29.764	ppb	3.38	7,711.89	3.560E-04	Pulse	0.10	3
Sb			1	0.095	ppb	177.42	203.34	7.495E-06	Pulse	0.10	3
Ba			1	1973.625	ppb	1.16	193,930.52	7.169E-03	Pulse	0.10	3
Tl			1	-2.719	ppb	-32.16	69,305.48	4.376E-03	Pulse	0.10	3
Pb			1	174.733	ppb	1.89	36,905.38	2.330E-03	Pulse	0.10	3
Pb			1	171.035	ppb	1.63	30,679.14	1.937E-03	Pulse	0.10	3
Pb			1	176.952	ppb	0.27	145,581.98	9.192E-03	Pulse	0.10	3
Na			2	2366.078	ppb	2.12	116,767.16	7.619E-02	Pulse	0.30	3
Mg			2	72178.161	ppb	1.07	1,580,998.72	1.031E+00	Analog	0.30	3
Al			2	255850.924	ppb	0.66	2,376,461.09	1.550E+00	Analog	0.30	3
K			2	25918.291	ppb	1.30	424,296.53	2.768E-01	Pulse	0.30	3
Ca			2	62764.781	ppb	0.99	54,594.88	3.561E-02	Pulse	0.30	3
Ti			2	8125.611	ppb	1.96	50,512.73	3.296E-02	Pulse	0.30	3
V			2	811.330	ppb	1.54	142,589.52	9.303E-02	Pulse	0.30	3
Cr			2	531.004	ppb	16.22	116,133.48	7.557E-02	Pulse	0.30	3
Mn			2	6750.650	ppb	1.46	939,311.00	6.128E-01	Pulse	0.30	3
Fe			2	343276.696	ppb	0.27	66,412,950.70	4.332E+01	Analog	0.30	3
Co			2	128.899	ppb	6.47	81,601.26	5.325E-02	Pulse	0.30	3
Ni			2	134.905	ppb	3.09	12,567.62	8.201E-03	Pulse	0.30	3
Cu			2	150.791	ppb	1.30	30,735.32	2.005E-02	Pulse	0.30	3
Zn			2	737.166	ppb	1.71	29,253.01	1.909E-02	Pulse	0.30	3
As			2	30.261	ppb	3.29	612.68	3.997E-04	Pulse	1.00	3
Sn			2	24.757	ppb	5.09	2,514.65	4.592E-04	Pulse	0.30	3
Cd			2	-0.117	ppb	-69.27	25.65	4.688E-06	Pulse	0.30	3
Se			3	8.834	ppb	17.27	56.00	7.499E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,508,733.40	0.81	109.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,104,131.31	0.24	111.1	Analog	0.10	3
1	Ge		4,671,093.78	1.05	108.6	Analog	0.10	3
1	Rh		23,348,439.65	0.37	106.4	Analog	0.10	3
1	In		21,660,874.77	1.12	107.4	Analog	0.10	3
1	Tb		27,052,746.26	1.85	103.5	Analog	0.10	3
1	Ho		27,610,810.42	1.41	102.8	Analog	0.10	3
1	Bi		15,837,162.26	0.50	101.3	Analog	0.10	3
1	Ge		3,524,275.16	0.53	110.9	Analog	0.10	3
2	Sc		1,533,115.01	2.26	110.2	Analog	0.30	3
2	Ge		899,842.57	0.18	111.6	Pulse	0.30	3
2	Rh		14,495,540.53	1.29	105.2	Analog	0.30	3
2	In		5,479,192.31	2.06	109.9	Analog	0.30	3
2	Tb		16,394,723.79	0.88	105.6	Analog	0.30	3
2	Ho		16,699,472.11	1.56	105.4	Analog	0.30	3
2	Bi		10,571,869.86	1.86	104.3	Analog	0.30	3
2	Ge		631,869.59	0.42	114.8	Pulse	0.30	3
3	Sc		1,879,668.88	0.98	105.3	Analog	0.30	3
3	Ge		747,545.44	1.44	105.6	Pulse	0.30	3
3	Rh		3,955,166.93	2.26	102.0	Analog	0.30	3
3	Tb		7,853,882.74	0.83	96.5	Analog	0.30	3
3	Ge		514,249.06	1.55	105.7	Pulse	0.30	3

Quantitation Report

File Name 105SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:22
Sample Name CCVA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	50.849	ppb	2.86	538,506.50	2.798E-02	Pulse	0.25	3
B			1	100.794	ppb	2.83	969,491.73	5.037E-02	Pulse	0.15	3
Ca			1	5462.952	ppb	3.39	6,155,144.28	2.596E-01	Analog	0.10	3
Sr			1	53.692	ppb	1.38	2,332,008.77	1.014E-01	Analog	0.10	3
Mo			1	51.670	ppb	2.09	463,435.88	2.015E-02	Pulse	0.10	3
Ag			1	52.745	ppb	3.48	1,078,062.75	4.979E-02	Analog	0.10	3
Sn			1	53.370	ppb	3.10	609,681.32	2.816E-02	Pulse	0.10	3
Sb			1	51.325	ppb	1.62	727,514.68	2.670E-02	Pulse	0.10	3
Ba			1	53.191	ppb	1.72	263,166.37	9.660E-03	Pulse	0.10	3
Tl			1	53.571	ppb	3.46	1,632,026.95	1.059E-01	Analog	0.10	3
Pb			1	50.362	ppb	4.16	512,868.42	3.327E-02	Pulse	0.10	3
Pb			1	51.582	ppb	3.80	445,698.29	2.891E-02	Pulse	0.10	3
Pb			1	52.198	ppb	2.96	2,071,678.41	1.344E-01	Analog	0.10	3
Na			2	5039.821	ppb	0.95	11,055,355.39	7.374E+00	Analog	0.30	3
Mg			2	5049.977	ppb	2.00	5,401,353.40	3.603E+00	Analog	0.30	3
Al			2	5107.996	ppb	1.32	2,319,929.84	1.547E+00	Analog	0.30	3
K			2	5083.250	ppb	0.23	3,976,895.12	2.652E+00	Analog	0.30	3
Ca			2	5541.565	ppb	2.23	234,636.19	1.565E-01	Pulse	0.30	3
Ti			2	50.099	ppb	1.17	15,235.11	1.016E-02	Pulse	0.30	3
V			2	49.444	ppb	2.29	419,825.53	2.800E-01	Pulse	0.30	3
Cr			2	48.301	ppb	1.95	514,101.30	3.429E-01	Pulse	0.30	3
Mn			2	48.152	ppb	1.97	327,890.71	2.187E-01	Pulse	0.30	3
Fe			2	4885.605	ppb	1.89	46,220,887.05	3.083E+01	Analog	0.30	3
Co			2	47.987	ppb	2.11	858,813.21	5.729E-01	Pulse	0.30	3
Ni			2	47.471	ppb	1.56	214,690.13	1.432E-01	Pulse	0.30	3
Cu			2	47.115	ppb	2.24	544,901.52	3.635E-01	Pulse	0.30	3
Zn			2	46.341	ppb	2.23	90,960.39	6.068E-02	Pulse	0.30	3
As			2	49.887	ppb	1.43	44,266.57	2.953E-02	Pulse	1.00	3
Sn			2	49.600	ppb	2.24	206,964.79	3.951E-02	Pulse	0.30	3
Cd			2	49.569	ppb	3.00	109,536.91	2.091E-02	Pulse	0.30	3
Se			3	198.857	ppb	0.90	39,259.87	5.265E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,249,479.34	0.69	108.3	Analog	0.10	3
1	Sc		23,713,571.31	0.45	109.3	Analog	0.10	3
1	Ge		4,639,137.85	0.97	107.8	Analog	0.10	3

Quantitation Report

1	Rh		22,994,750.49	1.27	104.8	Analog	0.10	3
1	In		21,657,766.26	1.69	107.4	Analog	0.10	3
1	Tb		27,239,843.76	1.32	104.2	Analog	0.10	3
1	Ho		28,181,707.91	0.88	104.9	Analog	0.10	3
1	Bi		15,420,361.85	1.29	98.6	Analog	0.10	3
1	Ge		3,441,512.03	0.32	108.3	Analog	0.10	3
2	Sc		1,499,486.26	1.75	107.8	Analog	0.30	3
2	Ge		875,042.36	0.08	108.6	Pulse	0.30	3
2	Rh		13,826,887.23	2.26	100.4	Analog	0.30	3
2	In		5,240,333.10	2.14	105.1	Analog	0.30	3
2	Tb		16,059,997.14	1.90	103.5	Analog	0.30	3
2	Ho		16,581,546.56	1.90	104.7	Analog	0.30	3
2	Bi		10,022,014.88	1.49	98.9	Analog	0.30	3
2	Ge		608,206.54	0.53	110.5	Pulse	0.30	3
3	Sc		1,871,701.11	0.42	104.9	Analog	0.30	3
3	Ge		745,704.45	0.10	105.3	Pulse	0.30	3
3	Rh		3,910,029.70	0.57	100.8	Analog	0.30	3
3	Tb		7,843,239.97	0.52	96.4	Analog	0.30	3
3	Ge		512,086.28	0.29	105.3	Pulse	0.30	3

Quantitation Report

File Name	106SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 17:25
Sample Name	CCB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.002	ppb	-24.65	72.00	3.732E-06	Pulse	0.25	3
B			1	1.535	ppb	3.31	18,784.87	9.731E-04	Pulse	0.15	3
Ca			1	-0.628	ppb	-119.86	21,195.67	9.021E-04	Pulse	0.10	3
Sr			1	-0.005	ppb	-41.93	3,623.79	1.564E-04	Pulse	0.10	3
Mo			1	0.062	ppb	17.07	663.36	2.864E-05	Pulse	0.10	3
Ag			1	0.007	ppb	14.75	213.34	9.816E-06	Pulse	0.10	3
Sn			1	0.037	ppb	18.19	1,346.75	6.195E-05	Pulse	0.10	3
Sb			1	0.019	ppb	30.21	443.35	1.641E-05	Pulse	0.10	3
Ba			1	0.005	ppb	220.37	120.00	4.451E-06	Pulse	0.10	3
Tl			1	-0.030	ppb	-83.75	69,107.66	4.422E-03	Pulse	0.10	3
Pb			1	0.013	ppb	38.60	496.69	3.177E-05	Pulse	0.10	3
Pb			1	0.020	ppb	29.99	503.36	3.224E-05	Pulse	0.10	3
Pb			1	0.021	ppb	17.15	2,200.13	1.408E-04	Pulse	0.10	3
Na			2	1.867	ppb	292.77	14,466.99	9.746E-03	Pulse	0.30	3
Mg			2	1.106	ppb	17.89	4,127.14	2.799E-03	Pulse	0.30	3
Al			2	-5.444	ppb	-0.97	1,120.04	7.593E-04	Pulse	0.30	3
K			2	1.815	ppb	8.72	11,833.75	8.023E-03	Pulse	0.30	3
Ca			2	-0.396	ppb	-280.54	290.01	1.966E-04	Pulse	0.30	3
Ti			2	0.148	ppb	12.62	47.78	3.242E-05	Pulse	0.30	3
V			2	-0.003	ppb	-365.54	2,434.62	1.650E-03	Pulse	0.30	3
Cr			2	0.007	ppb	44.76	382.23	2.590E-04	Pulse	0.30	3
Mn			2	0.061	ppb	19.14	771.14	5.232E-04	Pulse	0.30	3
Fe			2	5.894	ppb	11.88	67,988.46	4.613E-02	Pulse	0.30	3
Co			2	-0.003	ppb	-354.52	34,985.80	2.372E-02	Pulse	0.30	3
Ni			2	-0.010	ppb	-11.24	51.11	3.466E-05	Pulse	0.30	3
Cu			2	0.566	ppb	1.46	1,437.85	9.745E-04	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.372	ppb	5.13	250.01	1.697E-04	Pulse	0.30	3
As			2	0.001	ppb	1964.81	62.33	4.231E-05	Pulse	1.00	3
Sn			2	0.025	ppb	101.16	455.57	8.515E-05	Pulse	0.30	3
Cd			2	-0.010	ppb	-20.86	7.40	1.366E-06	Pulse	0.30	3
Se			3	0.075	ppb	26.70	35.00	4.817E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,307,240.19	1.71	108.6	Analog	0.10	3
1	Sc		23,503,838.82	1.87	108.4	Analog	0.10	3
1	Ge		4,636,870.76	1.03	107.8	Analog	0.10	3
1	Rh		23,174,039.65	0.91	105.6	Analog	0.10	3
1	In		21,745,839.61	0.81	107.9	Analog	0.10	3
1	Tb		27,022,076.26	0.87	103.4	Analog	0.10	3
1	Ho		27,694,387.92	0.58	103.1	Analog	0.10	3
1	Bi		15,628,921.85	1.52	100.0	Analog	0.10	3
1	Ge		3,401,126.51	0.89	107.0	Analog	0.10	3
2	Sc		1,474,929.21	1.19	106.0	Analog	0.30	3
2	Ge		850,301.55	0.93	105.5	Pulse	0.30	3
2	Rh		14,342,132.21	1.72	104.1	Analog	0.30	3
2	In		5,368,572.58	2.33	107.7	Analog	0.30	3
2	Tb		15,999,753.25	2.33	103.1	Analog	0.30	3
2	Ho		16,390,448.79	0.69	103.4	Analog	0.30	3
2	Bi		10,337,865.98	1.67	102.0	Analog	0.30	3
2	Ge		579,247.08	1.54	105.3	Pulse	0.30	3
3	Sc		1,857,591.17	1.00	104.1	Analog	0.30	3
3	Ge		726,989.45	0.73	102.7	Pulse	0.30	3
3	Rh		3,995,549.29	0.61	103.0	Analog	0.30	3
3	Tb		7,851,849.97	0.83	96.5	Analog	0.30	3
3	Ge		498,180.33	0.55	102.4	Pulse	0.30	3

Quantitation Report

File Name	107SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 17:28
Sample Name	MP30776A-MB1 4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.007	ppb	-55.87	54.67	2.867E-06	Pulse	0.25	3
B			1	2.104	ppb	3.18	13,954.09	7.329E-04	Pulse	0.15	3
Ca			1	8.613	ppb	48.24	26,131.06	1.136E-03	Pulse	0.10	3
Sr			1	0.008	ppb	117.48	3,900.53	1.736E-04	Pulse	0.10	3
Mo			1	0.053	ppb	24.90	333.35	1.486E-05	Pulse	0.10	3
Ag			1	0.019	ppb	18.75	253.34	1.200E-05	Pulse	0.10	3
Sn			1	0.421	ppb	8.71	3,230.40	1.534E-04	Pulse	0.10	3
Sb			1	0.030	ppb	29.71	380.02	1.438E-05	Pulse	0.10	3
Ba			1	0.061	ppb	58.50	240.02	9.105E-06	Pulse	0.10	3
Tl			1	-0.108	ppb	-55.16	65,891.67	4.377E-03	Pulse	0.10	3
Pb			1	0.050	ppb	18.80	596.69	3.959E-05	Pulse	0.10	3
Pb			1	0.029	ppb	29.36	440.02	2.918E-05	Pulse	0.10	3
Pb			1	0.089	ppb	79.63	3,015.12	2.015E-04	Pulse	0.10	3
Na			2	2.197	ppb	14.69	12,306.22	8.623E-03	Pulse	0.30	3
Mg			2	1.728	ppb	9.38	3,747.06	2.626E-03	Pulse	0.30	3
Al			2	-7.684	ppb	-5.09	1,774.54	1.244E-03	Pulse	0.30	3
K			2	3.904	ppb	9.62	11,551.36	8.095E-03	Pulse	0.30	3
Ca			2	6.525	ppb	18.11	427.79	2.998E-04	Pulse	0.30	3
Ti			2	0.690	ppb	13.91	103.33	7.234E-05	Pulse	0.30	3
V			2	1.386	ppb	6.20	7,943.95	5.569E-03	Pulse	0.30	3
Cr			2	0.075	ppb	7.52	684.46	4.797E-04	Pulse	0.30	3
Mn			2	0.054	ppb	14.95	527.79	3.700E-04	Pulse	0.30	3
Fe			2	15.338	ppb	7.31	81,759.39	5.732E-02	Pulse	0.30	3
Co			2	-0.029	ppb	-85.07	33,660.04	2.359E-02	Pulse	0.30	3
Ni			2	0.014	ppb	76.28	123.33	8.630E-05	Pulse	0.30	3
Cu			2	1.136	ppb	0.46	1,411.18	9.888E-04	Pulse	0.30	3
Zn			2	2.217	ppb	8.91	1,623.42	1.139E-03	Pulse	0.30	3
As			2	0.061	ppb	25.37	85.67	6.007E-05	Pulse	1.00	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Sn			2	0.293	ppb	3.04	935.59	1.818E-04	Pulse	0.30	3
Cd			2	-0.020	ppb	-24.32	7.60	1.488E-06	Pulse	0.30	3
Se			3	0.067	ppb	124.91	26.67	3.706E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,045,539.67	2.12	107.2	Analog	0.10	3
1	Sc		23,022,901.32	1.25	106.1	Analog	0.10	3
1	Ge		4,455,762.75	2.14	103.6	Analog	0.10	3
1	Rh		22,476,610.50	1.87	102.4	Analog	0.10	3
1	In		21,070,635.30	2.09	104.5	Analog	0.10	3
1	Tb		26,499,537.94	2.39	101.4	Analog	0.10	3
1	Ho		27,027,811.26	1.06	100.6	Analog	0.10	3
1	Bi		15,058,333.94	2.38	96.3	Analog	0.10	3
1	Ge		3,271,960.26	1.26	102.9	Analog	0.10	3
2	Sc		1,426,913.73	1.35	102.6	Analog	0.30	3
2	Ge		798,940.40	1.08	99.1	Pulse	0.30	3
2	Rh		13,931,516.67	1.45	101.1	Analog	0.30	3
2	In		5,144,952.94	1.87	103.2	Analog	0.30	3
2	Tb		16,000,585.47	2.02	103.1	Analog	0.30	3
2	Ho		16,392,831.57	1.28	103.5	Analog	0.30	3
2	Bi		10,073,529.60	1.92	99.4	Analog	0.30	3
2	Ge		541,581.49	1.63	98.4	Pulse	0.30	3
3	Sc		1,897,322.91	0.34	106.3	Analog	0.30	3
3	Ge		720,437.87	1.01	101.7	Pulse	0.30	3
3	Rh		4,040,545.95	0.36	104.2	Analog	0.30	3
3	Tb		8,048,022.46	1.56	98.9	Analog	0.30	3
3	Ge		493,257.88	0.80	101.4	Pulse	0.30	3

Quantitation Report

File Name	108SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 17:31
Sample Name	MP30776A-B2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	88.797	ppb	1.20	469,643.51	2.443E-02	Pulse	0.25	3
B			1	91.889	ppb	0.36	443,654.75	2.307E-02	Pulse	0.15	3
Ca			1	4904.111	ppb	1.88	2,681,632.25	1.170E-01	Analog	0.10	3
Sr			1	99.798	ppb	1.94	2,106,619.50	9.426E-02	Analog	0.10	3
Mo			1	92.499	ppb	0.77	403,162.12	1.804E-02	Pulse	0.10	3
Ag			1	92.803	ppb	0.93	933,728.53	4.380E-02	Pulse	0.10	3
Sn			1	94.008	ppb	0.11	528,676.74	2.480E-02	Pulse	0.10	3
Sb			1	90.424	ppb	0.86	629,419.25	2.352E-02	Pulse	0.10	3
Ba			1	94.554	ppb	0.86	229,732.85	8.586E-03	Pulse	0.10	3
Tl			1	96.573	ppb	1.93	1,430,922.79	9.587E-02	Analog	0.10	3
Pb			1	90.375	ppb	1.00	445,651.24	2.985E-02	Pulse	0.10	3
Pb			1	92.445	ppb	0.98	386,783.78	2.591E-02	Pulse	0.10	3
Pb			1	94.092	ppb	1.37	1,808,278.19	1.211E-01	Mix	0.10	3
Na			2	3910.361	ppb	1.34	4,199,082.61	2.865E+00	Analog	0.30	3
Mg			2	4007.648	ppb	1.00	2,097,196.65	1.431E+00	Analog	0.30	3
Al			2	3931.376	ppb	0.11	874,868.16	5.970E-01	Pulse	0.30	3
K			2	3927.995	ppb	0.32	1,508,127.58	1.029E+00	Analog	0.30	3
Ca			2	4515.416	ppb	0.53	93,637.07	6.389E-02	Pulse	0.30	3
Ti			2	79.101	ppb	0.77	11,757.06	8.023E-03	Pulse	0.30	3
V			2	79.958	ppb	0.56	332,319.66	2.268E-01	Pulse	0.30	3
Cr			2	78.352	ppb	0.24	407,692.20	2.782E-01	Pulse	0.30	3
Mn			2	77.126	ppb	0.24	256,779.95	1.752E-01	Pulse	0.30	3
Fe			2	3800.360	ppb	1.07	17,582,661.52	1.200E+01	Analog	0.30	3
Co			2	78.242	ppb	1.29	690,830.03	4.714E-01	Pulse	0.30	3
Ni			2	77.491	ppb	0.32	171,306.87	1.169E-01	Pulse	0.30	3
Cu			2	76.517	ppb	1.00	431,595.76	2.945E-01	Pulse	0.30	3
Zn			2	69.286	ppb	0.28	66,360.91	4.528E-02	Pulse	0.30	3
As			2	75.573	ppb	0.24	32,791.20	2.237E-02	Pulse	1.00	3
Sn			2	78.328	ppb	1.19	160,177.49	3.121E-02	Pulse	0.30	3
Cd			2	76.887	ppb	1.89	83,238.84	1.622E-02	Pulse	0.30	3
Se			3	370.586	ppb	0.84	36,765.44	4.906E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,227,170.41	1.74	108.2	Analog	0.10	3
1	Sc		22,917,254.66	1.26	105.7	Analog	0.10	3
1	Ge		4,489,321.91	2.07	104.3	Analog	0.10	3

Quantitation Report

1	Rh		22,352,033.83	1.89	101.9	Analog	0.10	3
1	In		21,316,059.90	0.85	105.7	Analog	0.10	3
1	Tb		26,758,087.10	1.31	102.4	Analog	0.10	3
1	Ho		27,422,117.92	1.96	102.1	Analog	0.10	3
1	Bi		14,928,592.70	1.23	95.5	Analog	0.10	3
1	Ge		3,312,969.01	1.60	104.2	Analog	0.10	3
2	Sc		1,465,570.12	1.29	105.3	Analog	0.30	3
2	Ge		836,805.87	0.47	103.8	Pulse	0.30	3
2	Rh		13,878,760.84	1.39	100.7	Analog	0.30	3
2	In		5,133,362.87	2.07	103.0	Analog	0.30	3
2	Tb		16,094,779.92	1.52	103.7	Analog	0.30	3
2	Ho		16,486,457.12	1.02	104.1	Analog	0.30	3
2	Bi		9,982,066.55	1.12	98.5	Analog	0.30	3
2	Ge		574,369.78	0.22	104.4	Pulse	0.30	3
3	Sc		1,919,055.20	1.08	107.5	Analog	0.30	3
3	Ge		749,425.61	0.43	105.8	Pulse	0.30	3
3	Rh		3,972,426.93	1.07	102.4	Analog	0.30	3
3	Tb		8,090,240.79	0.47	99.4	Analog	0.30	3
3	Ge		514,830.48	0.36	105.8	Pulse	0.30	3

Quantitation Report

File Name 109SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:35
Sample Name MP30776A-S3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	89.850	ppb	3.21	473,685.67	2.472E-02	Pulse	0.25	3
B			1	174.218	ppb	3.29	834,722.94	4.356E-02	Pulse	0.15	3
Ca			1	35362.824	ppb	0.73	19,327,476.38	8.381E-01	Analog	0.10	3
Sr			1	382.580	ppb	0.82	7,874,465.30	3.609E-01	Analog	0.10	3
Mo			1	93.358	ppb	1.73	397,249.93	1.821E-02	Pulse	0.10	3
Ag			1	93.139	ppb	2.10	915,905.61	4.396E-02	Pulse	0.10	3
Sn			1	95.786	ppb	2.19	526,476.25	2.527E-02	Pulse	0.10	3
Sb			1	88.918	ppb	1.62	617,030.12	2.313E-02	Pulse	0.10	3
Ba			1	248.110	ppb	1.94	600,783.56	2.252E-02	Pulse	0.10	3
Tl			1	96.537	ppb	1.20	1,408,563.05	9.583E-02	Analog	0.10	3
Pb			1	93.078	ppb	2.96	451,925.81	3.075E-02	Pulse	0.10	3
Pb			1	95.050	ppb	2.27	391,569.22	2.664E-02	Pulse	0.10	3
Pb			1	96.571	ppb	1.43	1,827,230.88	1.243E-01	Mix	0.10	3
Na			2	20639.120	ppb	1.03	21,264,157.49	1.509E+01	Analog	0.30	3
Mg			2	16701.337	ppb	0.45	8,392,353.83	5.957E+00	Analog	0.30	3
Al			2	4412.873	ppb	0.88	943,620.79	6.698E-01	Pulse	0.30	3
K			2	7245.346	ppb	0.54	2,666,054.48	1.892E+00	Analog	0.30	3
Ca			2	33697.888	ppb	0.50	669,882.61	4.754E-01	Pulse	0.30	3
Ti			2	96.294	ppb	9.96	13,750.18	9.766E-03	Pulse	0.30	3
V			2	88.291	ppb	0.77	352,531.68	2.502E-01	Pulse	0.30	3
Cr			2	84.888	ppb	0.21	424,621.07	3.014E-01	Pulse	0.30	3
Mn			2	3025.462	ppb	0.27	9,670,492.12	6.864E+00	Analog	0.30	3
Fe			2	82756.695	ppb	0.46	367,816,003.16	2.610E+02	Analog	0.30	3
Co			2	82.606	ppb	1.07	699,349.77	4.964E-01	Pulse	0.30	3
Ni			2	81.223	ppb	1.27	172,611.88	1.225E-01	Pulse	0.30	3
Cu			2	79.483	ppb	0.45	431,227.99	3.061E-01	Pulse	0.30	3
Zn			2	74.562	ppb	0.16	68,689.29	4.875E-02	Pulse	0.30	3
As			2	80.886	ppb	0.72	33,735.23	2.394E-02	Pulse	1.00	3
Sn			2	82.670	ppb	1.40	160,646.84	3.293E-02	Pulse	0.30	3
Cd			2	82.405	ppb	1.50	84,790.71	1.738E-02	Pulse	0.30	3
Se			3	383.011	ppb	0.27	37,859.61	5.070E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,167,067.31	1.08	107.8	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,062,611.32	1.42	106.3	Analog	0.10	3
1	Ge		4,444,243.79	0.68	103.3	Analog	0.10	3
1	Rh		21,819,665.51	0.20	99.4	Analog	0.10	3
1	In		20,833,571.03	0.14	103.3	Analog	0.10	3
1	Tb		26,673,512.94	1.06	102.1	Analog	0.10	3
1	Ho		27,403,612.09	2.17	102.0	Analog	0.10	3
1	Bi		14,698,526.86	0.11	94.0	Analog	0.10	3
1	Ge		3,499,873.28	0.72	110.1	Analog	0.10	3
2	Sc		1,408,976.75	1.37	101.3	Analog	0.30	3
2	Ge		809,964.71	1.01	100.5	Pulse	0.30	3
2	Rh		13,020,237.54	1.12	94.5	Analog	0.30	3
2	In		4,878,651.03	1.96	97.9	Analog	0.30	3
2	Tb		15,481,808.83	1.82	99.7	Analog	0.30	3
2	Ho		15,912,172.15	1.33	100.4	Analog	0.30	3
2	Bi		9,267,376.85	1.57	91.4	Analog	0.30	3
2	Ge		656,062.84	0.62	119.2	Pulse	0.30	3
3	Sc		1,885,873.47	0.92	105.7	Analog	0.30	3
3	Ge		746,703.89	0.46	105.5	Pulse	0.30	3
3	Rh		3,887,968.18	0.11	100.2	Analog	0.30	3
3	Tb		8,200,544.67	0.60	100.8	Analog	0.30	3
3	Ge		526,270.64	0.64	108.2	Pulse	0.30	3

Quantitation Report

File Name 110SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:38
Sample Name MP30776A-S4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	85.090	ppb	1.28	457,683.40	2.341E-02	Pulse	0.25	3
B			1	170.828	ppb	0.85	835,162.15	4.272E-02	Pulse	0.15	3
Ca			1	35781.022	ppb	0.86	20,057,080.12	8.480E-01	Analog	0.10	3
Sr			1	378.218	ppb	1.11	7,960,438.01	3.568E-01	Analog	0.10	3
Mo			1	91.704	ppb	1.90	398,987.86	1.788E-02	Pulse	0.10	3
Ag			1	92.522	ppb	0.54	929,335.87	4.367E-02	Pulse	0.10	3
Sn			1	94.004	ppb	1.14	527,802.91	2.480E-02	Pulse	0.10	3
Sb			1	87.801	ppb	0.53	619,449.17	2.284E-02	Pulse	0.10	3
Ba			1	246.550	ppb	0.96	607,001.71	2.238E-02	Pulse	0.10	3
Tl			1	94.139	ppb	0.69	1,394,612.90	9.356E-02	Analog	0.10	3
Pb			1	90.403	ppb	1.55	445,157.06	2.986E-02	Pulse	0.10	3
Pb			1	92.180	ppb	1.20	385,125.63	2.584E-02	Pulse	0.10	3
Pb			1	92.760	ppb	1.30	1,779,956.85	1.194E-01	Mix	0.10	3
Na			2	20888.336	ppb	0.46	21,775,354.69	1.527E+01	Analog	0.30	3
Mg			2	16809.986	ppb	0.83	8,548,003.82	5.995E+00	Analog	0.30	3
Al			2	4408.000	ppb	0.59	953,834.51	6.690E-01	Pulse	0.30	3
K			2	7156.536	ppb	0.70	2,664,849.27	1.869E+00	Analog	0.30	3
Ca			2	33797.694	ppb	0.54	679,876.33	4.769E-01	Pulse	0.30	3
Ti			2	92.662	ppb	3.41	13,398.35	9.398E-03	Pulse	0.30	3
V			2	85.994	ppb	0.60	347,514.00	2.438E-01	Pulse	0.30	3
Cr			2	82.269	ppb	0.45	416,415.58	2.921E-01	Pulse	0.30	3
Mn			2	3056.772	ppb	0.40	9,887,370.44	6.935E+00	Analog	0.30	3
Fe			2	83416.477	ppb	1.13	375,187,176.20	2.631E+02	Analog	0.30	3
Co			2	80.341	ppb	0.58	689,212.64	4.834E-01	Pulse	0.30	3
Ni			2	78.842	ppb	1.46	169,537.75	1.189E-01	Pulse	0.30	3
Cu			2	79.405	ppb	0.64	435,926.12	3.058E-01	Pulse	0.30	3
Zn			2	69.278	ppb	0.91	64,543.36	4.527E-02	Pulse	0.30	3
As			2	77.615	ppb	0.39	32,759.50	2.298E-02	Pulse	1.00	3
Sn			2	82.080	ppb	1.61	160,739.42	3.270E-02	Pulse	0.30	3
Cd			2	78.425	ppb	1.24	81,318.36	1.654E-02	Pulse	0.30	3
Se			3	367.004	ppb	0.20	36,355.60	4.858E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,551,519.85	0.30	110.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,652,681.32	0.40	109.0	Analog	0.10	3
1	Ge		4,503,584.83	0.76	104.7	Analog	0.10	3
1	Rh		22,313,827.17	1.34	101.7	Analog	0.10	3
1	In		21,281,129.58	0.70	105.5	Analog	0.10	3
1	Tb		27,118,918.76	0.68	103.8	Analog	0.10	3
1	Ho		28,032,275.41	0.48	104.3	Analog	0.10	3
1	Bi		14,905,862.28	0.40	95.4	Analog	0.10	3
1	Ge		3,559,774.22	1.21	112.0	Analog	0.10	3
2	Sc		1,425,737.58	1.27	102.5	Analog	0.30	3
2	Ge		817,348.23	0.46	101.4	Pulse	0.30	3
2	Rh		13,174,438.64	1.57	95.6	Analog	0.30	3
2	In		4,916,119.09	1.87	98.6	Analog	0.30	3
2	Tb		15,664,169.93	1.99	100.9	Analog	0.30	3
2	Ho		16,015,297.70	2.68	101.1	Analog	0.30	3
2	Bi		9,374,152.68	1.26	92.5	Analog	0.30	3
2	Ge		658,167.67	0.84	119.6	Pulse	0.30	3
3	Sc		1,883,276.24	0.73	105.5	Analog	0.30	3
3	Ge		748,289.94	0.20	105.7	Pulse	0.30	3
3	Rh		3,912,321.93	0.70	100.9	Analog	0.30	3
3	Tb		8,191,744.12	1.10	100.7	Analog	0.30	3
3	Ge		526,980.95	0.44	108.3	Pulse	0.30	3

Quantitation Report

File Name 111SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:41
Sample Name JD38050-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.034	ppb	9.16	277.34	1.427E-05	Pulse	0.25	3
B			1	81.889	ppb	0.97	400,221.95	2.059E-02	Pulse	0.15	3
Ca			1	30944.024	ppb	1.70	17,121,814.33	7.335E-01	Analog	0.10	3
Sr			1	279.165	ppb	0.69	5,882,000.75	2.634E-01	Analog	0.10	3
Mo			1	0.287	ppb	14.82	1,350.09	6.039E-05	Pulse	0.10	3
Ag			1	0.027	ppb	21.06	323.34	1.535E-05	Pulse	0.10	3
Sn			1	0.390	ppb	1.86	3,060.35	1.451E-04	Pulse	0.10	3
Sb			1	0.043	ppb	19.38	476.69	1.770E-05	Pulse	0.10	3
Ba			1	149.622	ppb	0.41	366,011.00	1.358E-02	Pulse	0.10	3
Tl			1	0.119	ppb	92.30	68,201.15	4.592E-03	Pulse	0.10	3
Pb			1	0.200	ppb	13.16	1,326.77	8.935E-05	Pulse	0.10	3
Pb			1	0.190	ppb	11.66	1,103.41	7.429E-05	Pulse	0.10	3
Pb			1	0.189	ppb	7.17	4,913.85	3.309E-04	Pulse	0.10	3
Na			2	16983.143	ppb	0.96	17,579,558.19	1.242E+01	Analog	0.30	3
Mg			2	13102.591	ppb	1.47	6,614,594.46	4.674E+00	Analog	0.30	3
Al			2	331.466	ppb	4.86	74,378.29	5.253E-02	Pulse	0.30	3
K			2	3208.324	ppb	0.66	1,191,596.65	8.418E-01	Mix	0.30	3
Ca			2	28627.546	ppb	1.19	571,741.02	4.039E-01	Pulse	0.30	3
Ti			2	10.703	ppb	13.72	1,543.69	1.088E-03	Pulse	0.30	3
V			2	3.939	ppb	4.16	18,046.49	1.276E-02	Pulse	0.30	3
Cr			2	1.654	ppb	3.58	8,604.25	6.081E-03	Pulse	0.30	3
Mn			2	2995.271	ppb	2.07	9,616,368.23	6.795E+00	Analog	0.30	3
Fe			2	80284.161	ppb	0.91	358,467,461.31	2.532E+02	Analog	0.30	3
Co			2	0.180	ppb	84.82	35,065.64	2.479E-02	Pulse	0.30	3
Ni			2	0.390	ppb	12.22	924.51	6.543E-04	Pulse	0.30	3
Cu			2	1.300	ppb	1.68	2,306.83	1.628E-03	Pulse	0.30	3
Zn			2	3.359	ppb	7.31	2,673.55	1.890E-03	Pulse	0.30	3
As			2	3.009	ppb	2.77	1,317.72	9.312E-04	Pulse	1.00	3
Sn			2	0.311	ppb	12.60	934.48	1.890E-04	Pulse	0.30	3
Cd			2	-0.016	ppb	-48.45	11.26	2.260E-06	Pulse	0.30	3
Se			3	0.368	ppb	19.86	57.00	7.693E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,443,042.43	1.06	109.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,343,468.82	1.15	107.6	Analog	0.10	3
1	Ge		4,483,092.75	0.38	104.2	Analog	0.10	3
1	Rh		22,333,404.67	1.16	101.8	Analog	0.10	3
1	In		21,092,752.42	1.28	104.6	Analog	0.10	3
1	Tb		26,943,355.43	0.72	103.1	Analog	0.10	3
1	Ho		27,596,167.09	0.27	102.7	Analog	0.10	3
1	Bi		14,850,955.61	0.34	95.0	Analog	0.10	3
1	Ge		3,513,734.43	0.55	110.5	Analog	0.10	3
2	Sc		1,415,723.28	2.84	101.7	Analog	0.30	3
2	Ge		803,356.52	1.13	99.7	Pulse	0.30	3
2	Rh		13,268,023.36	1.50	96.3	Analog	0.30	3
2	In		4,948,627.69	1.71	99.3	Analog	0.30	3
2	Tb		15,597,271.05	0.72	100.5	Analog	0.30	3
2	Ho		15,837,693.82	1.67	100.0	Analog	0.30	3
2	Bi		9,462,938.79	1.42	93.4	Analog	0.30	3
2	Ge		644,458.81	0.45	117.1	Pulse	0.30	3
3	Sc		1,908,663.60	1.21	106.9	Analog	0.30	3
3	Ge		741,234.36	0.78	104.7	Pulse	0.30	3
3	Rh		3,927,932.90	0.70	101.3	Analog	0.30	3
3	Tb		8,110,300.51	0.86	99.7	Analog	0.30	3
3	Ge		520,947.90	0.66	107.1	Pulse	0.30	3

Quantitation Report

File Name 112SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:44
Sample Name MP30776A-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-1121.76	92.00	4.619E-06	Pulse	0.25	3
B			1	84.240	ppb	0.90	87,600.98	4.402E-03	Pulse	0.15	3
Ca			1	29792.775	ppb	1.73	3,464,939.64	1.420E-01	Analog	0.10	3
Sr			1	266.236	ppb	2.82	1,185,244.62	5.037E-02	Analog	0.10	3
Mo			1	0.193	ppb	40.81	283.34	1.205E-05	Pulse	0.10	3
Ag			1	0.066	ppb	27.71	200.01	9.087E-06	Pulse	0.10	3
Sn			1	-0.093	ppb	-23.45	826.71	3.752E-05	Pulse	0.10	3
Sb			1	-0.033	ppb	-10.45	133.34	4.810E-06	Pulse	0.10	3
Ba			1	143.055	ppb	1.09	72,078.91	2.601E-03	Pulse	0.10	3
Tl			1	0.159	ppb	12.80	70,751.15	4.509E-03	Pulse	0.10	3
Pb			1	0.127	ppb	81.52	496.69	3.163E-05	Pulse	0.10	3
Pb			1	0.177	ppb	15.02	486.69	3.102E-05	Pulse	0.10	3
Pb			1	0.141	ppb	9.57	1,936.77	1.234E-04	Pulse	0.10	3
Na			2	15886.840	ppb	1.39	3,507,586.18	2.329E+00	Analog	0.30	3
Mg			2	12661.819	ppb	1.25	1,362,705.71	9.049E-01	Analog	0.30	3
Al			2	288.803	ppb	10.56	16,774.08	1.114E-02	Pulse	0.30	3
K			2	3058.407	ppb	0.30	250,305.69	1.662E-01	Pulse	0.30	3
Ca			2	27369.097	ppb	0.63	116,563.49	7.740E-02	Pulse	0.30	3
Ti			2	12.929	ppb	39.91	397.88	2.646E-04	Pulse	0.30	3
V			2	2.064	ppb	6.06	4,261.64	2.830E-03	Pulse	0.30	3
Cr			2	1.673	ppb	6.24	2,107.93	1.400E-03	Pulse	0.30	3
Mn			2	2934.992	ppb	1.90	2,005,725.96	1.332E+00	Analog	0.30	3
Fe			2	78104.173	ppb	1.31	74,211,892.61	4.928E+01	Analog	0.30	3
Co			2	-0.269	ppb	-93.15	35,308.80	2.345E-02	Pulse	0.30	3
Ni			2	0.227	ppb	9.85	202.22	1.343E-04	Pulse	0.30	3
Cu			2	5.133	ppb	0.63	846.69	5.622E-04	Pulse	0.30	3
Zn			2	6.280	ppb	1.04	762.24	5.062E-04	Pulse	0.30	3
As			2	2.841	ppb	8.09	316.00	2.099E-04	Pulse	1.00	3
Sn			2	-0.213	ppb	-29.43	264.45	4.858E-05	Pulse	0.30	3
Cd			2	-0.068	ppb	-48.42	15.35	2.812E-06	Pulse	0.30	3
Se			3	0.391	ppb	128.19	29.00	3.859E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,901,451.36	0.77	112.0	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		24,402,134.64	0.02	112.5	Analog	0.10	3
1	Ge		4,763,406.70	1.71	110.7	Analog	0.10	3
1	Rh		23,528,553.82	0.66	107.2	Analog	0.10	3
1	In		22,039,741.52	1.35	109.3	Analog	0.10	3
1	Tb		27,719,203.75	1.35	106.1	Analog	0.10	3
1	Ho		28,233,852.91	1.13	105.1	Analog	0.10	3
1	Bi		15,690,177.27	0.90	100.4	Analog	0.10	3
1	Ge		3,550,424.64	0.69	111.7	Analog	0.10	3
2	Sc		1,505,881.02	0.56	108.2	Analog	0.30	3
2	Ge		871,994.88	0.92	108.2	Pulse	0.30	3
2	Rh		14,330,338.32	1.84	104.0	Analog	0.30	3
2	In		5,446,451.12	1.29	109.3	Analog	0.30	3
2	Tb		16,393,287.13	1.01	105.6	Analog	0.30	3
2	Ho		16,724,652.11	2.32	105.6	Analog	0.30	3
2	Bi		10,547,437.36	1.35	104.1	Analog	0.30	3
2	Ge		612,129.44	0.69	111.2	Pulse	0.30	3
3	Sc		1,933,931.73	1.76	108.4	Analog	0.30	3
3	Ge		752,173.46	0.76	106.2	Pulse	0.30	3
3	Rh		3,969,606.23	1.17	102.4	Analog	0.30	3
3	Tb		7,978,264.68	1.27	98.1	Analog	0.30	3
3	Ge		519,634.51	1.46	106.8	Pulse	0.30	3

Quantitation Report

File Name 113SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:47
Sample Name JD38050-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.030	ppb	31.50	249.34	1.302E-05	Pulse	0.25	3
B			1	148.332	ppb	0.39	710,867.87	3.712E-02	Pulse	0.15	3
Ca			1	93475.246	ppb	0.23	51,433,414.23	2.214E+00	Analog	0.10	3
Sr			1	442.297	ppb	1.74	9,226,785.49	4.172E-01	Analog	0.10	3
Mo			1	0.983	ppb	2.75	4,337.32	1.961E-04	Pulse	0.10	3
Ag			1	0.045	ppb	10.02	506.69	2.416E-05	Pulse	0.10	3
Sn			1	0.535	ppb	5.13	3,843.86	1.834E-04	Pulse	0.10	3
Sb			1	0.145	ppb	20.71	1,203.43	4.423E-05	Pulse	0.10	3
Ba			1	96.442	ppb	2.27	238,665.77	8.758E-03	Pulse	0.10	3
Tl			1	-0.082	ppb	-32.67	65,623.38	4.402E-03	Pulse	0.10	3
Pb			1	2.923	ppb	3.54	14,726.94	9.880E-04	Pulse	0.10	3
Pb			1	2.771	ppb	2.60	11,884.53	7.972E-04	Pulse	0.10	3
Pb			1	2.905	ppb	1.74	57,006.62	3.824E-03	Pulse	0.10	3
Na			2	7033.341	ppb	1.19	7,087,099.02	5.147E+00	Analog	0.30	3
Mg			2	29726.128	ppb	0.95	14,596,033.31	1.060E+01	Analog	0.30	3
Al			2	136.024	ppb	4.77	31,639.62	2.298E-02	Pulse	0.30	3
K			2	5036.641	ppb	2.02	1,814,109.58	1.317E+00	Analog	0.30	3
Ca			2	87149.246	ppb	1.04	1,692,550.83	1.229E+00	Analog	0.30	3
Ti			2	9.000	ppb	25.68	1,261.66	9.150E-04	Pulse	0.30	3
V			2	4.811	ppb	2.39	20,940.59	1.521E-02	Pulse	0.30	3
Cr			2	4.082	ppb	1.21	20,232.06	1.469E-02	Pulse	0.30	3
Mn			2	7261.847	ppb	1.40	22,682,911.32	1.647E+01	Analog	0.30	3
Fe			2	33338.605	ppb	0.46	144,805,323.14	1.052E+02	Analog	0.30	3
Co			2	0.583	ppb	7.68	37,296.91	2.709E-02	Pulse	0.30	3
Ni			2	1.917	ppb	2.80	4,069.36	2.956E-03	Pulse	0.30	3
Cu			2	14.910	ppb	0.58	75,207.06	5.462E-02	Pulse	0.30	3
Zn			2	9.363	ppb	0.34	8,042.91	5.841E-03	Pulse	0.30	3
As			2	2.947	ppb	2.54	1,256.71	9.129E-04	Pulse	1.00	3
Sn			2	0.425	ppb	6.70	1,141.16	2.345E-04	Pulse	0.30	3
Cd			2	0.055	ppb	22.32	83.84	1.721E-05	Pulse	0.30	3
Se			3	0.553	ppb	21.74	72.00	1.014E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,151,309.46	0.58	107.7	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		23,232,810.49	0.77	107.1	Analog	0.10	3
1	Ge		4,480,179.94	0.42	104.1	Analog	0.10	3
1	Rh		22,117,838.84	0.78	100.8	Analog	0.10	3
1	In		20,963,642.42	0.48	104.0	Analog	0.10	3
1	Tb		27,259,751.26	1.92	104.3	Analog	0.10	3
1	Ho		27,727,598.75	0.74	103.2	Analog	0.10	3
1	Bi		14,907,668.11	0.49	95.4	Analog	0.10	3
1	Ge		3,383,425.37	0.44	106.4	Analog	0.10	3
2	Sc		1,376,860.61	0.92	99.0	Analog	0.30	3
2	Ge		763,744.38	1.22	94.7	Pulse	0.30	3
2	Rh		12,956,233.93	1.17	94.0	Analog	0.30	3
2	In		4,862,701.97	2.22	97.6	Analog	0.30	3
2	Tb		15,427,086.61	0.88	99.4	Analog	0.30	3
2	Ho		15,822,128.82	1.61	99.9	Analog	0.30	3
2	Bi		9,290,369.35	1.25	91.7	Analog	0.30	3
2	Ge		559,907.58	1.06	101.7	Pulse	0.30	3
3	Sc		1,839,442.01	0.42	103.1	Analog	0.30	3
3	Ge		709,936.59	0.12	100.3	Pulse	0.30	3
3	Rh		3,886,510.96	0.96	100.2	Analog	0.30	3
3	Tb		8,081,436.34	0.71	99.3	Analog	0.30	3
3	Ge		493,504.20	0.52	101.4	Pulse	0.30	3

Quantitation Report

File Name 114SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:50
Sample Name JD38050-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.030	ppb	29.68	245.34	1.298E-05	Pulse	0.25	3
B			1	157.448	ppb	2.11	745,001.50	3.939E-02	Pulse	0.15	3
Ca			1	97351.387	ppb	2.09	52,969,039.21	2.306E+00	Analog	0.10	3
Sr			1	456.579	ppb	3.22	9,426,556.94	4.307E-01	Analog	0.10	3
Mo			1	1.066	ppb	6.62	4,650.71	2.124E-04	Pulse	0.10	3
Ag			1	0.059	ppb	12.39	646.70	3.086E-05	Pulse	0.10	3
Sn			1	0.503	ppb	5.23	3,663.78	1.748E-04	Pulse	0.10	3
Sb			1	0.127	ppb	1.52	1,056.73	3.956E-05	Pulse	0.10	3
Ba			1	105.034	ppb	0.90	254,782.96	9.537E-03	Pulse	0.10	3
Tl			1	0.040	ppb	325.86	66,058.75	4.517E-03	Pulse	0.10	3
Pb			1	2.170	ppb	2.11	10,813.84	7.394E-04	Pulse	0.10	3
Pb			1	2.302	ppb	2.91	9,736.41	6.658E-04	Pulse	0.10	3
Pb			1	2.223	ppb	1.10	43,099.48	2.947E-03	Pulse	0.10	3
Na			2	7239.450	ppb	1.59	7,314,622.76	5.298E+00	Analog	0.30	3
Mg			2	30428.954	ppb	0.91	14,983,734.40	1.085E+01	Analog	0.30	3
Al			2	99.983	ppb	3.51	24,203.23	1.753E-02	Pulse	0.30	3
K			2	5180.335	ppb	0.53	1,871,124.16	1.355E+00	Analog	0.30	3
Ca			2	88754.875	ppb	1.50	1,728,526.56	1.252E+00	Analog	0.30	3
Ti			2	5.306	ppb	11.73	747.81	5.404E-04	Pulse	0.30	3
V			2	4.778	ppb	2.68	20,872.75	1.512E-02	Pulse	0.30	3
Cr			2	4.512	ppb	3.59	22,389.40	1.622E-02	Pulse	0.30	3
Mn			2	7460.865	ppb	0.55	23,372,729.63	1.693E+01	Analog	0.30	3
Fe			2	35172.675	ppb	0.67	153,219,349.47	1.110E+02	Analog	0.30	3
Co			2	0.509	ppb	16.85	36,819.88	2.667E-02	Pulse	0.30	3
Ni			2	1.809	ppb	1.35	3,858.21	2.794E-03	Pulse	0.30	3
Cu			2	21.182	ppb	1.10	109,141.83	7.904E-02	Pulse	0.30	3
Zn			2	8.322	ppb	4.24	7,115.85	5.156E-03	Pulse	0.30	3
As			2	3.279	ppb	2.45	1,395.72	1.011E-03	Pulse	1.00	3
Sn			2	0.388	ppb	5.42	1,062.27	2.199E-04	Pulse	0.30	3
Cd			2	0.017	ppb	42.01	44.84	9.295E-06	Pulse	0.30	3
Se			3	0.566	ppb	16.78	73.67	1.031E-04	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,917,064.05	0.80	106.4	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,974,384.66	0.56	105.9	Analog	0.10	3
1	Ge		4,446,022.95	1.24	103.3	Analog	0.10	3
1	Rh		21,892,868.84	1.10	99.8	Analog	0.10	3
1	In		20,963,234.26	1.28	104.0	Analog	0.10	3
1	Tb		26,714,717.94	1.13	102.2	Analog	0.10	3
1	Ho		27,263,378.76	0.72	101.5	Analog	0.10	3
1	Bi		14,625,217.28	0.33	93.6	Analog	0.10	3
1	Ge		3,383,035.68	1.58	106.4	Analog	0.10	3
2	Sc		1,381,046.40	2.78	99.3	Analog	0.30	3
2	Ge		760,942.54	1.20	94.4	Pulse	0.30	3
2	Rh		12,870,360.88	2.76	93.4	Analog	0.30	3
2	In		4,831,614.95	2.11	96.9	Analog	0.30	3
2	Tb		15,210,641.06	2.61	98.0	Analog	0.30	3
2	Ho		15,626,827.71	1.84	98.6	Analog	0.30	3
2	Bi		9,141,194.64	1.31	90.2	Analog	0.30	3
2	Ge		555,919.27	1.41	101.0	Pulse	0.30	3
3	Sc		1,870,166.10	0.78	104.8	Analog	0.30	3
3	Ge		714,137.35	0.37	100.9	Pulse	0.30	3
3	Rh		3,888,436.79	1.34	100.3	Analog	0.30	3
3	Tb		8,213,844.40	0.54	100.9	Analog	0.30	3
3	Ge		495,268.43	0.34	101.8	Pulse	0.30	3

Quantitation Report

File Name	115SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 17:54
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	46.019	ppb	2.14	502,735.11	2.532E-02	Pulse	0.25	3
B			1	95.391	ppb	1.46	946,675.17	4.768E-02	Pulse	0.15	3
Ca			1	5142.838	ppb	2.61	5,951,012.62	2.444E-01	Analog	0.10	3
Sr			1	49.694	ppb	3.20	2,208,943.87	9.388E-02	Analog	0.10	3
Mo			1	47.545	ppb	2.88	436,358.94	1.854E-02	Pulse	0.10	3
Ag			1	49.899	ppb	1.88	1,046,209.10	4.710E-02	Mix	0.10	3
Sn			1	48.781	ppb	3.64	571,506.01	2.574E-02	Pulse	0.10	3
Sb			1	47.648	ppb	3.50	689,126.89	2.479E-02	Pulse	0.10	3
Ba			1	48.651	ppb	4.24	245,592.22	8.836E-03	Pulse	0.10	3
Tl			1	51.214	ppb	1.74	1,576,053.26	1.014E-01	Analog	0.10	3
Pb			1	46.553	ppb	5.72	477,875.67	3.076E-02	Pulse	0.10	3
Pb			1	47.274	ppb	4.22	411,778.53	2.650E-02	Pulse	0.10	3
Pb			1	48.735	ppb	3.81	1,949,741.12	1.255E-01	Analog	0.10	3
Na			2	4977.433	ppb	3.10	10,844,130.12	7.282E+00	Analog	0.30	3
Mg			2	4928.289	ppb	4.41	5,234,808.12	3.516E+00	Analog	0.30	3
Al			2	4936.506	ppb	4.46	2,226,440.88	1.496E+00	Analog	0.30	3
K			2	5033.609	ppb	2.54	3,911,053.59	2.626E+00	Analog	0.30	3
Ca			2	5383.033	ppb	4.16	226,360.84	1.520E-01	Pulse	0.30	3
Ti			2	48.006	ppb	2.37	14,501.18	9.737E-03	Pulse	0.30	3
V			2	47.654	ppb	3.20	402,000.72	2.700E-01	Pulse	0.30	3
Cr			2	46.775	ppb	3.86	494,461.78	3.321E-01	Pulse	0.30	3
Mn			2	46.896	ppb	3.16	317,194.63	2.130E-01	Pulse	0.30	3
Fe			2	4733.276	ppb	2.90	44,478,631.56	2.987E+01	Analog	0.30	3
Co			2	46.788	ppb	4.45	832,462.98	5.592E-01	Pulse	0.30	3
Ni			2	46.337	ppb	3.39	208,130.21	1.398E-01	Pulse	0.30	3
Cu			2	45.988	ppb	3.50	528,151.56	3.547E-01	Pulse	0.30	3
Zn			2	44.937	ppb	3.70	87,591.09	5.883E-02	Pulse	0.30	3
As			2	48.865	ppb	2.79	43,069.77	2.892E-02	Pulse	1.00	3
Sn			2	47.509	ppb	3.86	199,469.31	3.784E-02	Pulse	0.30	3
Cd			2	47.319	ppb	3.29	105,232.01	1.996E-02	Pulse	0.30	3
Se			3	196.762	ppb	0.70	39,433.89	5.209E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,852,575.25	0.89	111.7	Analog	0.10	3
1	Sc		24,345,370.47	0.22	112.2	Analog	0.10	3
1	Ge		4,736,087.95	0.29	110.1	Analog	0.10	3

Quantitation Report

1	Rh		23,531,362.15	2.50	107.2	Analog	0.10	3
1	In		22,210,580.89	1.09	110.2	Analog	0.10	3
1	Tb		27,803,019.59	0.95	106.4	Analog	0.10	3
1	Ho		28,474,679.57	0.68	106.0	Analog	0.10	3
1	Bi		15,544,191.02	1.23	99.4	Analog	0.10	3
1	Ge		3,512,821.82	0.92	110.5	Analog	0.10	3
2	Sc		1,489,807.06	2.40	107.1	Analog	0.30	3
2	Ge		875,952.21	1.09	108.7	Pulse	0.30	3
2	Rh		14,022,758.05	1.54	101.8	Analog	0.30	3
2	In		5,274,562.14	2.73	105.8	Analog	0.30	3
2	Tb		16,150,921.58	1.59	104.0	Analog	0.30	3
2	Ho		16,471,787.12	2.29	104.0	Analog	0.30	3
2	Bi		10,042,416.27	1.65	99.1	Analog	0.30	3
2	Ge		606,875.77	1.22	110.3	Pulse	0.30	3
3	Sc		1,880,891.87	2.05	105.4	Analog	0.30	3
3	Ge		757,024.12	1.36	106.9	Pulse	0.30	3
3	Rh		3,958,622.34	0.73	102.1	Analog	0.30	3
3	Tb		8,000,646.63	1.21	98.3	Analog	0.30	3
3	Ge		520,153.11	1.36	106.9	Pulse	0.30	3

Quantitation Report

File Name 116SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 17:57
Sample Name CCB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.001	ppb	-314.95	86.67	4.333E-06	Pulse	0.25	3
B			1	2.311	ppb	4.12	27,176.96	1.359E-03	Pulse	0.15	3
Ca			1	-0.267	ppb	-152.18	22,136.72	9.192E-04	Pulse	0.10	3
Sr			1	0.000	ppb	-817.86	3,910.52	1.651E-04	Pulse	0.10	3
Mo			1	0.051	ppb	23.70	576.69	2.436E-05	Pulse	0.10	3
Ag			1	0.009	ppb	21.56	250.01	1.119E-05	Pulse	0.10	3
Sn			1	0.039	ppb	49.19	1,406.76	6.311E-05	Pulse	0.10	3
Sb			1	0.020	ppb	24.07	470.02	1.694E-05	Pulse	0.10	3
Ba			1	0.004	ppb	340.11	116.67	4.207E-06	Pulse	0.10	3
Tl			1	-0.024	ppb	-142.06	70,486.88	4.434E-03	Pulse	0.10	3
Pb			1	-0.001	ppb	-1016.36	363.35	2.286E-05	Pulse	0.10	3
Pb			1	0.002	ppb	349.47	350.01	2.201E-05	Pulse	0.10	3
Pb			1	0.002	ppb	116.72	1,486.74	9.351E-05	Pulse	0.10	3
Na			2	-0.663	ppb	-49.12	8,962.15	6.048E-03	Pulse	0.30	3
Mg			2	1.415	ppb	26.85	4,473.89	3.019E-03	Pulse	0.30	3
Al			2	-6.267	ppb	-1.63	756.69	5.105E-04	Pulse	0.30	3
K			2	1.681	ppb	15.69	11,794.85	7.954E-03	Pulse	0.30	3
Ca			2	1.553	ppb	100.71	373.34	2.516E-04	Pulse	0.30	3
Ti			2	0.036	ppb	67.62	14.44	9.662E-06	Pulse	0.30	3
V			2	0.001	ppb	1013.21	2,483.52	1.676E-03	Pulse	0.30	3
Cr			2	0.001	ppb	1139.74	320.01	2.165E-04	Pulse	0.30	3
Mn			2	0.293	ppb	22.05	2,330.17	1.575E-03	Pulse	0.30	3
Fe			2	6.319	ppb	10.79	72,284.80	4.881E-02	Pulse	0.30	3
Co			2	-0.004	ppb	-891.98	35,149.46	2.370E-02	Pulse	0.30	3
Ni			2	-0.004	ppb	-43.08	78.89	5.310E-05	Pulse	0.30	3
Cu			2	0.573	ppb	0.89	1,527.86	1.031E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.355	ppb	6.06	216.67	1.464E-04	Pulse	0.30	3
As			2	-0.010	ppb	-94.73	53.33	3.605E-05	Pulse	1.00	3
Sn			2	0.031	ppb	22.36	485.57	9.042E-05	Pulse	0.30	3
Cd			2	-0.010	ppb	-16.51	7.52	1.393E-06	Pulse	0.30	3
Se			3	0.077	ppb	19.14	35.00	4.854E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,993,832.52	0.60	112.5	Analog	0.10	3
1	Sc		24,081,805.47	0.15	111.0	Analog	0.10	3
1	Ge		4,752,497.01	0.81	110.5	Analog	0.10	3
1	Rh		23,677,573.82	0.49	107.9	Analog	0.10	3
1	In		22,318,946.21	1.22	110.7	Analog	0.10	3
1	Tb		27,742,531.26	0.09	106.1	Analog	0.10	3
1	Ho		28,058,287.92	1.14	104.4	Analog	0.10	3
1	Bi		15,898,160.59	0.40	101.7	Analog	0.10	3
1	Ge		3,476,669.85	0.04	109.4	Analog	0.10	3
2	Sc		1,483,230.39	2.55	106.6	Analog	0.30	3
2	Ge		854,580.45	1.38	106.0	Pulse	0.30	3
2	Rh		14,287,713.88	2.05	103.7	Analog	0.30	3
2	In		5,372,582.97	1.97	107.8	Analog	0.30	3
2	Tb		16,150,154.91	1.67	104.0	Analog	0.30	3
2	Ho		16,419,839.35	2.15	103.6	Analog	0.30	3
2	Bi		10,386,730.98	1.69	102.5	Analog	0.30	3
2	Ge		578,821.47	0.90	105.2	Pulse	0.30	3
3	Sc		1,866,973.61	1.40	104.6	Analog	0.30	3
3	Ge		720,842.61	0.59	101.8	Pulse	0.30	3
3	Rh		3,934,324.01	1.90	101.4	Analog	0.30	3
3	Tb		7,745,039.69	1.37	95.2	Analog	0.30	3
3	Ge		498,195.43	0.94	102.4	Pulse	0.30	3

Quantitation Report

File Name 117SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 18:00
Sample Name ICSA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-39.54	61.33	3.381E-06	Pulse	0.25	3
B			1	2.754	ppb	0.55	28,661.38	1.580E-03	Pulse	0.15	3
Ca			1	104248.997	ppb	2.00	111,599,258.34	4.937E+00	Analog	0.10	3
Sr			1	2197.919	ppb	2.12	82,681,097.10	4.145E+00	Analog	0.10	3
Mo			1	2153.547	ppb	1.60	16,751,019.33	8.397E-01	Analog	0.10	3
Ag			1	0.025	ppb	8.29	523.35	2.680E-05	Pulse	0.10	3
Sn			1	2031.273	ppb	2.67	20,907,018.86	1.070E+00	Analog	0.10	3
Sb			1	0.042	ppb	9.52	733.37	2.837E-05	Pulse	0.10	3
Ba			1	0.136	ppb	16.05	730.04	2.825E-05	Pulse	0.10	3
Tl			1	0.036	ppb	22.31	59,487.68	4.547E-03	Pulse	0.10	3
Pb			1	0.034	ppb	4.07	596.70	4.560E-05	Pulse	0.10	3
Pb			1	0.037	ppb	12.50	550.02	4.204E-05	Pulse	0.10	3
Pb			1	0.040	ppb	13.96	2,476.81	1.892E-04	Pulse	0.10	3
Na			2	96746.530	ppb	1.53	198,613,854.33	1.414E+02	Analog	0.30	3
Mg			2	93571.102	ppb	1.06	93,713,698.50	6.672E+01	Analog	0.30	3
Al			2	95132.405	ppb	0.47	40,419,390.62	2.878E+01	Analog	0.30	3
K			2	99032.916	ppb	0.50	72,394,897.12	5.154E+01	Analog	0.30	3
Ca			2	108945.538	ppb	1.35	4,316,002.33	3.073E+00	Analog	0.30	3
Ti			2	1768.598	ppb	1.85	503,667.95	3.586E-01	Pulse	0.30	3
V			2	0.092	ppb	8.90	3,071.39	2.187E-03	Pulse	0.30	3
Cr			2	0.826	ppb	2.36	8,524.22	6.070E-03	Pulse	0.30	3
Mn			2	0.265	ppb	3.03	2,036.79	1.450E-03	Pulse	0.30	3
Fe			2	88737.592	ppb	1.41	786,232,235.42	5.598E+02	Analog	0.30	3
Co			2	-0.178	ppb	-19.84	30,510.02	2.172E-02	Pulse	0.30	3
Ni			2	0.482	ppb	3.15	2,134.59	1.519E-03	Pulse	0.30	3
Cu			2	0.713	ppb	1.74	2,974.70	2.119E-03	Pulse	0.30	3
Zn			2	2.207	ppb	3.11	3,631.51	2.585E-03	Pulse	0.30	3
As			2	0.077	ppb	9.56	123.00	8.761E-05	Pulse	1.00	3
Sn			2	1847.130	ppb	1.45	6,666,175.85	1.469E+00	Analog	0.30	3
Cd			2	-0.333	ppb	-122.13	-621.36	-1.346E-04	Pulse	0.30	3
Se			3	0.155	ppb	20.22	50.67	6.938E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,142,208.20	0.82	102.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,602,944.66	1.20	104.2	Analog	0.10	3
1	Ge		4,156,622.33	0.62	96.6	Analog	0.10	3
1	Rh		19,948,435.12	0.30	90.9	Analog	0.10	3
1	In		19,542,350.54	1.62	96.9	Analog	0.10	3
1	Tb		25,848,819.62	0.90	98.9	Analog	0.10	3
1	Ho		26,404,877.94	1.34	98.3	Analog	0.10	3
1	Bi		13,084,121.05	0.57	83.7	Analog	0.10	3
1	Ge		3,591,410.99	0.86	113.0	Analog	0.10	3
2	Sc		1,404,662.55	1.76	101.0	Analog	0.30	3
2	Ge		727,001.25	1.50	90.2	Pulse	0.30	3
2	Rh		11,284,149.00	2.80	81.9	Analog	0.30	3
2	In		4,539,159.49	2.11	91.1	Analog	0.30	3
2	Tb		14,339,310.54	1.20	92.4	Analog	0.30	3
2	Ho		14,724,361.64	1.44	92.9	Analog	0.30	3
2	Bi		7,826,067.74	1.91	77.2	Analog	0.30	3
2	Ge		721,734.31	0.32	131.2	Pulse	0.30	3
3	Sc		1,710,065.28	0.81	95.8	Analog	0.30	3
3	Ge		729,969.31	0.60	103.1	Pulse	0.30	3
3	Rh		4,516,732.32	0.47	116.5	Analog	0.30	3
3	Tb		11,047,175.11	1.09	135.8	Analog	0.30	3
3	Ge		511,740.85	0.45	105.2	Pulse	0.30	3

Quantitation Report

File Name 118SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 18:03
Sample Name ICSAB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.003	ppb	-48.62	60.00	3.374E-06	Pulse	0.25	3
B			1	44.324	ppb	1.72	396,203.13	2.227E-02	Pulse	0.15	3
Ca			1	98022.884	ppb	3.11	103,718,108.46	4.642E+00	Analog	0.10	3
Sr			1	2044.833	ppb	2.77	78,181,712.17	3.856E+00	Analog	0.10	3
Mo			1	2016.654	ppb	1.66	15,943,898.10	7.864E-01	Analog	0.10	3
Ag			1	17.815	ppb	1.80	334,193.94	1.682E-02	Pulse	0.10	3
Sn			1	1899.048	ppb	3.48	19,876,121.78	1.000E+00	Analog	0.10	3
Sb			1	0.044	ppb	9.48	776.70	2.948E-05	Pulse	0.10	3
Ba			1	0.135	ppb	6.99	740.03	2.810E-05	Pulse	0.10	3
Tl			1	-0.015	ppb	-74.27	59,741.49	4.451E-03	Pulse	0.10	3
Pb			1	0.028	ppb	23.98	560.03	4.172E-05	Pulse	0.10	3
Pb			1	0.033	ppb	42.31	530.02	3.949E-05	Pulse	0.10	3
Pb			1	0.032	ppb	11.18	2,283.47	1.701E-04	Pulse	0.10	3
Na			2	92366.432	ppb	4.45	184,798,628.21	1.350E+02	Analog	0.30	3
Mg			2	89037.066	ppb	4.06	86,910,720.99	6.349E+01	Analog	0.30	3
Al			2	90642.951	ppb	3.60	37,535,096.29	2.742E+01	Analog	0.30	3
K			2	96300.974	ppb	2.10	68,633,728.38	5.012E+01	Analog	0.30	3
Ca			2	105776.083	ppb	3.10	4,085,156.64	2.984E+00	Analog	0.30	3
Ti			2	1728.361	ppb	4.42	479,743.16	3.505E-01	Pulse	0.30	3
V			2	21.841	ppb	4.61	170,588.85	1.246E-01	Pulse	0.30	3
Cr			2	18.307	ppb	4.28	178,093.50	1.301E-01	Pulse	0.30	3
Mn			2	17.550	ppb	4.50	109,326.24	7.987E-02	Pulse	0.30	3
Fe			2	86294.095	ppb	4.33	745,162,850.39	5.444E+02	Analog	0.30	3
Co			2	16.770	ppb	4.22	295,227.41	2.157E-01	Pulse	0.30	3
Ni			2	16.247	ppb	4.52	67,138.64	4.905E-02	Pulse	0.30	3
Cu			2	15.354	ppb	4.37	158,957.59	1.161E-01	Pulse	0.30	3
Zn			2	14.540	ppb	4.39	25,755.66	1.882E-02	Pulse	0.30	3
As			2	17.064	ppb	3.07	13,865.53	1.013E-02	Pulse	1.00	3
Sn			2	1792.410	ppb	3.00	6,463,309.88	1.425E+00	Analog	0.30	3
Cd			2	16.192	ppb	5.49	30,978.62	6.835E-03	Pulse	0.30	3
Se			3	18.917	ppb	1.55	3,720.05	5.034E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,794,099.77	0.59	100.1	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,347,216.34	0.93	103.0	Analog	0.10	3
1	Ge		4,192,026.50	0.77	97.4	Analog	0.10	3
1	Rh		20,275,766.37	0.96	92.4	Analog	0.10	3
1	In		19,870,661.32	0.59	98.6	Analog	0.10	3
1	Tb		26,341,749.61	0.36	100.8	Analog	0.10	3
1	Ho		26,698,010.43	0.83	99.4	Analog	0.10	3
1	Bi		13,422,033.55	0.14	85.9	Analog	0.10	3
1	Ge		3,559,792.86	0.25	112.0	Analog	0.10	3
2	Sc		1,370,168.48	3.64	98.5	Analog	0.30	3
2	Ge		724,229.52	1.06	89.8	Pulse	0.30	3
2	Rh		11,296,428.16	2.03	82.0	Analog	0.30	3
2	In		4,536,514.27	2.54	91.0	Analog	0.30	3
2	Tb		14,446,469.98	2.67	93.1	Analog	0.30	3
2	Ho		14,935,911.63	2.09	94.3	Analog	0.30	3
2	Bi		7,937,413.30	2.42	78.3	Analog	0.30	3
2	Ge		711,448.86	1.06	129.3	Pulse	0.30	3
3	Sc		1,735,211.91	0.96	97.2	Analog	0.30	3
3	Ge		738,948.56	0.52	104.4	Pulse	0.30	3
3	Rh		4,533,106.07	1.00	116.9	Analog	0.30	3
3	Tb		11,183,147.89	0.65	137.4	Analog	0.30	3
3	Ge		520,145.78	0.33	106.9	Pulse	0.30	3

Quantitation Report

File Name 119SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 18:08
Sample Name ICSAB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.003	ppb	5.09	108.00	6.188E-06	Pulse	0.25	3
B			1	46.036	ppb	2.29	403,521.85	2.312E-02	Pulse	0.15	3
Ca			1	102908.977	ppb	3.68	109,168,245.04	4.873E+00	Analog	0.10	3
Sr			1	2136.247	ppb	2.97	82,071,615.45	4.029E+00	Analog	0.10	3
Mo			1	2122.535	ppb	2.62	16,861,105.58	8.276E-01	Analog	0.10	3
Ag			1	18.014	ppb	2.19	338,576.84	1.701E-02	Pulse	0.10	3
Sn			1	1983.676	ppb	3.22	20,801,397.19	1.045E+00	Analog	0.10	3
Sb			1	0.057	ppb	25.01	963.39	3.631E-05	Pulse	0.10	3
Ba			1	0.179	ppb	4.87	960.06	3.611E-05	Pulse	0.10	3
Tl			1	0.000	ppb	-18375.28	60,083.06	4.479E-03	Pulse	0.10	3
Pb			1	0.089	ppb	23.11	1,096.73	8.189E-05	Pulse	0.10	3
Pb			1	0.095	ppb	18.25	996.73	7.431E-05	Pulse	0.10	3
Pb			1	0.093	ppb	8.72	4,393.70	3.277E-04	Pulse	0.10	3
Na			2	96708.814	ppb	2.93	189,338,245.81	1.414E+02	Analog	0.30	3
Mg			2	92708.695	ppb	2.95	88,545,052.04	6.611E+01	Analog	0.30	3
Al			2	95164.254	ppb	2.86	38,555,916.25	2.879E+01	Analog	0.30	3
K			2	100836.064	ppb	2.93	70,288,812.76	5.248E+01	Analog	0.30	3
Ca			2	110753.278	ppb	2.20	4,184,847.61	3.124E+00	Analog	0.30	3
Ti			2	1803.387	ppb	3.43	489,773.95	3.657E-01	Pulse	0.30	3
V			2	22.713	ppb	3.13	173,511.66	1.295E-01	Pulse	0.30	3
Cr			2	19.082	ppb	3.93	181,601.11	1.356E-01	Pulse	0.30	3
Mn			2	18.148	ppb	3.94	110,596.55	8.259E-02	Pulse	0.30	3
Fe			2	90948.726	ppb	2.59	768,535,738.35	5.738E+02	Analog	0.30	3
Co			2	17.203	ppb	4.11	295,452.02	2.206E-01	Pulse	0.30	3
Ni			2	16.980	ppb	4.04	68,650.63	5.126E-02	Pulse	0.30	3
Cu			2	16.115	ppb	4.05	163,461.70	1.221E-01	Pulse	0.30	3
Zn			2	20.167	ppb	3.68	35,121.99	2.623E-02	Pulse	0.30	3
As			2	17.536	ppb	3.79	13,935.58	1.041E-02	Pulse	1.00	3
Sn			2	1858.046	ppb	3.25	6,593,182.65	1.478E+00	Analog	0.30	3
Cd			2	16.413	ppb	7.67	30,889.92	6.928E-03	Pulse	0.30	3
Se			3	19.315	ppb	1.66	3,835.74	5.139E-03	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		17,455,758.51	1.14	98.2	Analog	0.10	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		22,401,442.17	0.35	103.3	Analog	0.10	3
1	Ge		4,180,969.83	1.00	97.2	Analog	0.10	3
1	Rh		20,375,282.20	0.88	92.9	Analog	0.10	3
1	In		19,909,581.38	0.70	98.7	Analog	0.10	3
1	Tb		26,590,643.77	1.57	101.7	Analog	0.10	3
1	Ho		27,198,607.93	1.51	101.2	Analog	0.10	3
1	Bi		13,419,105.63	1.80	85.8	Analog	0.10	3
1	Ge		3,562,764.74	0.72	112.1	Analog	0.10	3
2	Sc		1,339,979.46	2.31	96.3	Analog	0.30	3
2	Ge		714,823.43	0.22	88.7	Pulse	0.30	3
2	Rh		11,159,959.83	1.98	81.0	Analog	0.30	3
2	In		4,465,258.06	3.24	89.6	Analog	0.30	3
2	Tb		14,383,568.87	1.86	92.7	Analog	0.30	3
2	Ho		14,634,929.42	1.77	92.4	Analog	0.30	3
2	Bi		7,821,814.41	2.13	77.2	Analog	0.30	3
2	Ge		704,346.46	1.50	128.0	Pulse	0.30	3
3	Sc		1,749,899.48	0.70	98.1	Analog	0.30	3
3	Ge		746,337.54	0.64	105.4	Pulse	0.30	3
3	Rh		4,568,252.18	0.44	117.8	Analog	0.30	3
3	Tb		11,247,652.88	0.72	138.2	Analog	0.30	3
3	Ge		525,559.94	0.40	108.0	Pulse	0.30	3

Quantitation Report

File Name	120SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 18:11
Sample Name	rinseconf
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.006	ppb	-6.91	26.67	1.417E-06	Pulse	0.25	3
B			1	0.909	ppb	3.06	12,439.70	6.615E-04	Pulse	0.15	3
Ca			1	1.611	ppb	39.85	23,805.54	1.008E-03	Pulse	0.10	3
Sr			1	0.086	ppb	13.38	7,921.93	3.279E-04	Pulse	0.10	3
Mo			1	1.612	ppb	6.94	15,293.46	6.329E-04	Pulse	0.10	3
Ag			1	0.014	ppb	38.22	360.01	1.576E-05	Pulse	0.10	3
Sn			1	0.281	ppb	4.55	4,347.34	1.903E-04	Pulse	0.10	3
Sb			1	-0.005	ppb	-44.77	110.00	3.842E-06	Pulse	0.10	3
Ba			1	-0.007	ppb	-57.28	66.67	2.326E-06	Pulse	0.10	3
Tl			1	-0.074	ppb	-29.99	70,420.24	4.339E-03	Pulse	0.10	3
Pb			1	-0.010	ppb	-54.79	270.01	1.663E-05	Pulse	0.10	3
Pb			1	-0.016	ppb	-19.96	196.68	1.212E-05	Pulse	0.10	3
Pb			1	-0.011	ppb	-25.03	946.71	5.834E-05	Pulse	0.10	3
Na			2	10.116	ppb	5.55	29,899.83	2.180E-02	Pulse	0.30	3
Mg			2	6.988	ppb	5.25	9,590.25	6.993E-03	Pulse	0.30	3
Al			2	2.441	ppb	10.13	4,311.62	3.144E-03	Pulse	0.30	3
K			2	8.781	ppb	8.35	15,972.32	1.165E-02	Pulse	0.30	3
Ca			2	5.962	ppb	12.10	515.57	3.760E-04	Pulse	0.30	3
Ti			2	0.596	ppb	23.01	168.89	1.232E-04	Pulse	0.30	3
V			2	-0.026	ppb	-43.93	2,087.91	1.523E-03	Pulse	0.30	3
Cr			2	-0.004	ppb	-137.01	250.01	1.824E-04	Pulse	0.30	3
Mn			2	0.097	ppb	5.84	945.59	6.896E-04	Pulse	0.30	3
Fe			2	17.963	ppb	4.06	167,646.99	1.223E-01	Pulse	0.30	3
Co			2	0.036	ppb	93.54	33,142.22	2.417E-02	Pulse	0.30	3
Ni			2	-0.009	ppb	-47.61	52.22	3.804E-05	Pulse	0.30	3
Cu			2	0.577	ppb	0.33	1,448.96	1.057E-03	Pulse	0.30	3
Zn			2	0.375	ppb	2.70	237.78	1.734E-04	Pulse	0.30	3
As			2	-0.018	ppb	-37.48	43.00	3.137E-05	Pulse	1.00	3
Sn			2	0.342	ppb	9.76	1,755.66	3.372E-04	Pulse	0.30	3
Cd			2	-0.004	ppb	-36.02	21.21	4.062E-06	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Se			3	0.008	ppb	72.55	23.00	3.043E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		18,801,164.62	1.18	105.8	Analog	0.10	3
1	Sc		23,614,900.48	0.72	108.9	Analog	0.10	3
1	Ge		4,761,675.45	1.01	110.7	Analog	0.10	3
1	Rh		24,157,292.97	1.33	110.1	Analog	0.10	3
1	In		22,836,615.72	0.41	113.3	Analog	0.10	3
1	Tb		28,614,524.57	2.15	109.5	Analog	0.10	3
1	Ho		29,066,745.40	0.59	108.2	Analog	0.10	3
1	Bi		16,230,526.43	0.44	103.8	Analog	0.10	3
1	Ge		3,479,033.18	1.35	109.4	Analog	0.10	3
2	Sc		1,371,253.59	0.46	98.6	Analog	0.30	3
2	Ge		808,391.98	0.78	100.3	Pulse	0.30	3
2	Rh		14,092,743.05	0.98	102.3	Analog	0.30	3
2	In		5,211,715.30	2.04	104.6	Analog	0.30	3
2	Tb		16,057,433.25	1.54	103.4	Analog	0.30	3
2	Ho		16,492,960.45	1.48	104.1	Analog	0.30	3
2	Bi		10,544,604.30	2.51	104.0	Analog	0.30	3
2	Ge		549,822.60	0.57	99.9	Pulse	0.30	3
3	Sc		1,924,853.47	1.95	107.9	Analog	0.30	3
3	Ge		756,149.22	0.92	106.8	Pulse	0.30	3
3	Rh		4,149,034.69	0.73	107.0	Analog	0.30	3
3	Tb		8,250,826.34	0.20	101.4	Analog	0.30	3
3	Ge		518,496.19	1.28	106.6	Pulse	0.30	3

Quantitation Report

File Name	121SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 18:15
Sample Name	mp30753a-mb1 4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	-0.011	ppb	-25.20	33.33	1.724E-06	Pulse	0.25	3
B			1	1.098	ppb	1.19	9,302.36	4.827E-04	Pulse	0.15	3
Ca			1	8.266	ppb	18.24	27,707.44	1.128E-03	Pulse	0.10	3
Sr			1	0.078	ppb	2.18	5,891.12	2.394E-04	Pulse	0.10	3
Mo			1	0.608	ppb	6.60	3,027.00	1.230E-04	Pulse	0.10	3
Ag			1	0.013	ppb	22.86	203.34	8.739E-06	Pulse	0.10	3
Sn			1	0.183	ppb	7.62	2,110.19	9.070E-05	Pulse	0.10	3
Sb			1	-0.005	ppb	-125.04	153.34	5.322E-06	Pulse	0.10	3
Ba			1	0.024	ppb	70.76	166.67	5.762E-06	Pulse	0.10	3
Tl			1	-0.264	ppb	-20.16	69,867.46	4.229E-03	Pulse	0.10	3
Pb			1	-0.020	ppb	-79.26	273.34	1.656E-05	Pulse	0.10	3
Pb			1	-0.011	ppb	-122.73	296.68	1.796E-05	Pulse	0.10	3
Pb			1	-0.006	ppb	-73.61	1,310.06	7.931E-05	Pulse	0.10	3
Na			2	12.979	ppb	0.60	24,100.68	1.650E-02	Pulse	0.30	3
Mg			2	8.820	ppb	1.42	7,528.18	5.155E-03	Pulse	0.30	3
Al			2	-3.742	ppb	-22.37	2,685.77	1.840E-03	Pulse	0.30	3
K			2	11.502	ppb	5.31	14,710.21	1.007E-02	Pulse	0.30	3
Ca			2	13.447	ppb	21.42	580.02	3.974E-04	Pulse	0.30	3
Ti			2	0.493	ppb	17.22	76.67	5.244E-05	Pulse	0.30	3
V			2	-0.238	ppb	-14.27	1,455.63	9.974E-04	Pulse	0.30	3
Cr			2	0.012	ppb	58.50	371.12	2.541E-04	Pulse	0.30	3
Mn			2	0.253	ppb	1.80	1,198.94	8.210E-04	Pulse	0.30	3
Fe			2	14.882	ppb	7.83	81,580.89	5.589E-02	Pulse	0.30	3
Co			2	-0.001	ppb	-3648.11	34,677.37	2.375E-02	Pulse	0.30	3
Ni			2	0.009	ppb	57.76	115.56	7.917E-05	Pulse	0.30	3
Cu			2	1.195	ppb	0.71	1,778.99	1.218E-03	Pulse	0.30	3
Zn			2	4.034	ppb	4.18	3,408.12	2.334E-03	Pulse	0.30	3
As			2	-0.045	ppb	-7.48	42.00	2.876E-05	Pulse	1.00	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Sn			2	0.248	ppb	20.32	897.81	1.639E-04	Pulse	0.30	3
Cd			2	-0.020	ppb	-16.41	7.66	1.401E-06	Pulse	0.30	3
Se			3	0.038	ppb	149.11	23.33	3.331E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,270,728.92	2.09	108.4	Analog	0.10	3
1	Sc		24,576,237.13	0.67	113.3	Analog	0.10	3
1	Ge		4,908,563.99	0.75	114.1	Analog	0.10	3
1	Rh		24,605,861.30	1.21	112.1	Analog	0.10	3
1	In		23,261,701.54	0.50	115.4	Analog	0.10	3
1	Tb		28,858,217.07	1.30	110.4	Analog	0.10	3
1	Ho		29,244,040.40	0.69	108.9	Analog	0.10	3
1	Bi		16,520,278.92	0.47	105.7	Analog	0.10	3
1	Ge		3,584,016.61	1.29	112.7	Analog	0.10	3
2	Sc		1,460,396.33	1.04	105.0	Analog	0.30	3
2	Ge		854,573.38	0.24	106.0	Pulse	0.30	3
2	Rh		14,852,356.63	0.75	107.8	Analog	0.30	3
2	In		5,480,860.99	1.10	110.0	Analog	0.30	3
2	Tb		16,715,309.89	0.69	107.7	Analog	0.30	3
2	Ho		17,263,391.54	1.45	109.0	Analog	0.30	3
2	Bi		10,944,426.23	0.97	108.0	Analog	0.30	3
2	Ge		581,049.61	0.45	105.6	Pulse	0.30	3
3	Sc		1,823,058.23	16.07	102.2	Analog	0.30	3
3	Ge		695,507.28	14.26	98.2	Pulse	0.30	3
3	Rh		3,832,553.67	14.03	98.8	Analog	0.30	3
3	Tb		7,633,759.28	13.96	93.8	Analog	0.30	3
3	Ge		476,997.59	14.69	98.0	Pulse	0.30	3

Quantitation Report

File Name	122SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 18:18
Sample Name	mp30753a-b3
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	83.838	ppb	1.51	443,868.65	2.307E-02	Pulse	0.25	3
B			1	88.644	ppb	0.11	428,530.24	2.227E-02	Pulse	0.15	3
Ca			1	4867.554	ppb	2.41	2,802,996.42	1.162E-01	Analog	0.10	3
Sr			1	97.032	ppb	1.39	2,211,811.58	9.166E-02	Analog	0.10	3
Mo			1	88.467	ppb	1.41	416,325.80	1.725E-02	Pulse	0.10	3
Ag			1	89.833	ppb	3.85	962,754.39	4.240E-02	Mix	0.10	3
Sn			1	92.378	ppb	2.39	553,481.46	2.437E-02	Pulse	0.10	3
Sb			1	85.782	ppb	1.70	640,438.92	2.232E-02	Pulse	0.10	3
Ba			1	92.821	ppb	1.84	241,892.54	8.429E-03	Pulse	0.10	3
Tl			1	96.064	ppb	1.38	1,516,951.59	9.538E-02	Analog	0.10	3
Pb			1	89.231	ppb	2.37	468,833.49	2.948E-02	Pulse	0.10	3
Pb			1	91.405	ppb	1.83	407,465.71	2.562E-02	Pulse	0.10	3
Pb			1	94.148	ppb	1.46	1,927,505.38	1.212E-01	Analog	0.10	3
Na			2	4107.095	ppb	0.74	4,170,213.03	3.009E+00	Analog	0.30	3
Mg			2	4108.612	ppb	0.70	2,033,219.78	1.467E+00	Analog	0.30	3
Al			2	4045.009	ppb	0.73	851,163.59	6.141E-01	Pulse	0.30	3
K			2	4142.818	ppb	1.43	1,503,944.42	1.085E+00	Analog	0.30	3
Ca			2	4694.107	ppb	0.86	92,047.16	6.641E-02	Pulse	0.30	3
Ti			2	80.879	ppb	2.52	11,366.82	8.203E-03	Pulse	0.30	3
V			2	84.437	ppb	0.84	331,745.14	2.394E-01	Pulse	0.30	3
Cr			2	83.437	ppb	1.42	410,521.40	2.962E-01	Pulse	0.30	3
Mn			2	82.335	ppb	1.56	259,189.72	1.870E-01	Pulse	0.30	3
Fe			2	4105.679	ppb	0.23	17,961,865.95	1.296E+01	Analog	0.30	3
Co			2	84.061	ppb	1.47	699,468.25	5.047E-01	Pulse	0.30	3
Ni			2	82.782	ppb	1.32	173,050.52	1.249E-01	Pulse	0.30	3
Cu			2	81.591	ppb	1.12	435,539.68	3.143E-01	Pulse	0.30	3
Zn			2	68.909	ppb	1.29	62,406.15	4.503E-02	Pulse	0.30	3
As			2	74.707	ppb	1.07	30,654.24	2.212E-02	Pulse	1.00	3
Sn			2	80.452	ppb	0.45	163,495.14	3.205E-02	Pulse	0.30	3
Cd			2	77.668	ppb	0.63	83,573.11	1.638E-02	Pulse	0.30	3
Se			3	355.537	ppb	0.52	35,987.88	4.707E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,245,729.17	1.02	108.3	Analog	0.10	3
1	Sc		24,130,007.14	1.47	111.3	Analog	0.10	3
1	Ge		4,750,350.76	1.20	110.4	Analog	0.10	3

Quantitation Report

1	Rh		24,135,060.47	1.93	110.0	Analog	0.10	3
1	In		22,715,211.12	1.71	112.7	Analog	0.10	3
1	Tb		28,700,536.24	1.02	109.8	Analog	0.10	3
1	Ho		29,120,072.07	0.34	108.4	Analog	0.10	3
1	Bi		15,905,543.93	1.29	101.8	Analog	0.10	3
1	Ge		3,488,149.12	1.03	109.7	Analog	0.10	3
2	Sc		1,386,036.13	1.46	99.6	Analog	0.30	3
2	Ge		810,729.05	0.33	100.6	Pulse	0.30	3
2	Rh		13,807,403.62	1.03	100.2	Analog	0.30	3
2	In		5,100,748.58	0.45	102.3	Analog	0.30	3
2	Tb		16,166,311.02	2.16	104.1	Analog	0.30	3
2	Ho		16,577,226.57	2.45	104.6	Analog	0.30	3
2	Bi		9,982,039.32	2.38	98.5	Analog	0.30	3
2	Ge		552,420.83	0.83	100.4	Pulse	0.30	3
3	Sc		1,938,689.64	1.76	108.6	Analog	0.30	3
3	Ge		764,598.08	0.58	108.0	Pulse	0.30	3
3	Rh		4,099,675.12	0.69	105.7	Analog	0.30	3
3	Tb		8,391,861.34	0.58	103.1	Analog	0.30	3
3	Ge		524,379.79	0.98	107.8	Pulse	0.30	3

Quantitation Report

File Name	123SMPL.d
File Path	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File	
Method Path	
Acq Time	2022-01-14 18:21
Sample Name	CCVA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	Metals
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2022-01-15 18:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	49.727	ppb	3.85	531,575.82	2.736E-02	Pulse	0.25	3
B			1	101.061	ppb	3.07	981,256.70	5.050E-02	Pulse	0.15	3
Ca			1	5535.756	ppb	2.30	6,435,099.28	2.630E-01	Analog	0.10	3
Sr			1	55.120	ppb	2.05	2,464,010.07	1.041E-01	Analog	0.10	3
Mo			1	53.204	ppb	3.27	491,081.36	2.075E-02	Pulse	0.10	3
Ag			1	54.400	ppb	0.90	1,149,807.66	5.135E-02	Analog	0.10	3
Sn			1	55.017	ppb	1.30	649,868.86	2.902E-02	Pulse	0.10	3
Sb			1	52.502	ppb	3.70	777,102.91	2.732E-02	Pulse	0.10	3
Ba			1	53.676	ppb	2.96	277,329.01	9.748E-03	Pulse	0.10	3
Tl			1	54.109	ppb	2.60	1,698,614.40	1.069E-01	Analog	0.10	3
Pb			1	50.673	ppb	2.80	531,998.21	3.348E-02	Pulse	0.10	3
Pb			1	52.273	ppb	3.16	465,618.29	2.930E-02	Pulse	0.10	3
Pb			1	52.908	ppb	2.45	2,164,615.78	1.362E-01	Analog	0.10	3
Na			2	5076.287	ppb	2.26	10,543,832.64	7.427E+00	Analog	0.30	3
Mg			2	5121.926	ppb	1.66	5,188,393.82	3.654E+00	Analog	0.30	3
Al			2	5026.545	ppb	2.29	2,161,754.08	1.523E+00	Analog	0.30	3
K			2	5185.025	ppb	1.14	3,840,882.76	2.705E+00	Analog	0.30	3
Ca			2	5608.139	ppb	2.40	224,855.23	1.584E-01	Pulse	0.30	3
Ti			2	49.944	ppb	3.93	14,377.75	1.013E-02	Pulse	0.30	3
V			2	50.645	ppb	2.44	407,160.24	2.868E-01	Pulse	0.30	3
Cr			2	49.696	ppb	2.66	500,868.73	3.528E-01	Pulse	0.30	3
Mn			2	49.306	ppb	2.17	317,938.54	2.240E-01	Pulse	0.30	3
Fe			2	4994.691	ppb	1.64	44,749,357.11	3.152E+01	Analog	0.30	3
Co			2	49.721	ppb	2.32	841,466.42	5.927E-01	Pulse	0.30	3
Ni			2	49.121	ppb	1.99	210,364.09	1.482E-01	Pulse	0.30	3
Cu			2	49.080	ppb	2.58	537,721.07	3.788E-01	Pulse	0.30	3
Zn			2	47.999	ppb	2.56	89,234.26	6.286E-02	Pulse	0.30	3
As			2	51.654	ppb	1.98	43,401.21	3.057E-02	Pulse	1.00	3
Sn			2	50.317	ppb	1.65	207,037.72	4.008E-02	Pulse	0.30	3
Cd			2	50.002	ppb	0.49	108,985.78	2.109E-02	Pulse	0.30	3
Se			3	197.944	ppb	0.38	40,441.38	5.241E-02	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,434,299.65	1.22	109.3	Analog	0.10	3
1	Sc		24,469,222.14	1.21	112.8	Analog	0.10	3
1	Ge		4,761,708.36	0.39	110.7	Analog	0.10	3

Quantitation Report

1	Rh		23,671,085.48	1.22	107.9	Analog	0.10	3
1	In		22,389,501.62	1.14	111.0	Analog	0.10	3
1	Tb		28,455,426.24	1.23	108.9	Analog	0.10	3
1	Ho		28,805,393.74	1.62	107.2	Analog	0.10	3
1	Bi		15,893,610.18	0.59	101.7	Analog	0.10	3
1	Ge		3,526,586.72	0.17	110.9	Analog	0.10	3
2	Sc		1,420,129.94	2.26	102.1	Analog	0.30	3
2	Ge		852,551.36	1.41	105.8	Pulse	0.30	3
2	Rh		13,769,015.56	1.74	99.9	Analog	0.30	3
2	In		5,166,773.40	1.41	103.7	Analog	0.30	3
2	Tb		15,997,018.81	2.34	103.1	Analog	0.30	3
2	Ho		16,512,944.34	1.37	104.2	Analog	0.30	3
2	Bi		10,071,000.99	1.50	99.4	Analog	0.30	3
2	Ge		590,551.78	0.56	107.3	Pulse	0.30	3
3	Sc		1,946,195.13	0.90	109.1	Analog	0.30	3
3	Ge		771,690.94	0.58	109.0	Pulse	0.30	3
3	Rh		3,998,109.98	1.83	103.1	Analog	0.30	3
3	Tb		8,192,576.06	0.76	100.7	Analog	0.30	3
3	Ge		530,885.33	0.37	109.1	Pulse	0.30	3

Quantitation Report

File Name 124SMPL.d
File Path D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Method File
Method Path
Acq Time 2022-01-14 18:24
Sample Name CCB
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name Metals
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2022-01-15 18:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	
2	
3	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Be			1	0.000	ppb	-455.53	89.33	4.656E-06	Pulse	0.25	3
B			1	1.908	ppb	2.81	22,217.38	1.159E-03	Pulse	0.15	3
Ca			1	-2.178	ppb	-38.29	19,887.51	8.287E-04	Pulse	0.10	3
Sr			1	0.012	ppb	50.94	4,594.02	1.886E-04	Pulse	0.10	3
Mo			1	0.147	ppb	13.87	1,503.44	6.170E-05	Pulse	0.10	3
Ag			1	0.011	ppb	21.18	293.34	1.296E-05	Pulse	0.10	3
Sn			1	0.071	ppb	12.08	1,810.14	8.003E-05	Pulse	0.10	3
Sb			1	0.029	ppb	6.68	610.03	2.141E-05	Pulse	0.10	3
Ba			1	-0.001	ppb	-500.98	96.67	3.392E-06	Pulse	0.10	3
Tl			1	-0.016	ppb	-264.79	71,745.49	4.448E-03	Pulse	0.10	3
Pb			1	0.008	ppb	63.01	456.69	2.829E-05	Pulse	0.10	3
Pb			1	0.007	ppb	20.32	400.02	2.479E-05	Pulse	0.10	3
Pb			1	0.009	ppb	23.72	1,773.43	1.099E-04	Pulse	0.10	3
Na			2	1.615	ppb	20.55	13,487.00	9.378E-03	Pulse	0.30	3
Mg			2	1.852	ppb	5.67	4,792.85	3.331E-03	Pulse	0.30	3
Al			2	-4.736	ppb	-3.07	1,400.06	9.735E-04	Pulse	0.30	3
K			2	3.323	ppb	19.14	12,668.74	8.808E-03	Pulse	0.30	3
Ca			2	0.903	ppb	185.72	335.56	2.333E-04	Pulse	0.30	3
Ti			2	0.110	ppb	38.51	35.56	2.467E-05	Pulse	0.30	3
V			2	-0.018	ppb	-24.96	2,250.16	1.564E-03	Pulse	0.30	3
Cr			2	0.001	ppb	174.27	313.34	2.177E-04	Pulse	0.30	3
Mn			2	0.059	ppb	14.51	741.13	5.154E-04	Pulse	0.30	3
Fe			2	4.419	ppb	3.39	52,987.83	3.683E-02	Pulse	0.30	3
Co			2	0.011	ppb	297.14	34,356.94	2.388E-02	Pulse	0.30	3
Ni			2	-0.008	ppb	-34.35	61.11	4.254E-05	Pulse	0.30	3
Cu			2	0.575	ppb	1.08	1,494.52	1.039E-03	Pulse	0.30	3

Quantitation Report

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Zn			2	0.347	ppb	5.08	196.67	1.368E-04	Pulse	0.30	3
As			2	-0.004	ppb	-25.04	56.67	3.938E-05	Pulse	1.00	3
Sn			2	0.101	ppb	18.31	771.13	1.457E-04	Pulse	0.30	3
Cd			2	-0.008	ppb	-9.40	11.62	2.190E-06	Pulse	0.30	3
Se			3	0.106	ppb	54.45	42.33	5.639E-05	Pulse	1.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Li		19,166,338.37	1.61	107.8	Analog	0.10	3
1	Sc		23,998,691.31	0.65	110.6	Analog	0.10	3
1	Ge		4,802,490.66	0.22	111.6	Analog	0.10	3
1	Rh		24,357,717.14	0.51	111.0	Analog	0.10	3
1	In		22,616,833.52	0.64	112.2	Analog	0.10	3
1	Tb		28,486,737.91	0.56	109.0	Analog	0.10	3
1	Ho		28,965,101.23	1.32	107.8	Analog	0.10	3
1	Bi		16,129,623.51	1.37	103.2	Analog	0.10	3
1	Ge		3,504,366.40	0.90	110.2	Analog	0.10	3
2	Sc		1,438,641.75	1.17	103.4	Analog	0.30	3
2	Ge		843,375.64	1.29	104.6	Pulse	0.30	3
2	Rh		14,293,964.99	2.10	103.8	Analog	0.30	3
2	In		5,298,860.80	2.32	106.3	Analog	0.30	3
2	Tb		16,386,467.68	2.35	105.6	Analog	0.30	3
2	Ho		16,754,023.23	1.57	105.7	Analog	0.30	3
2	Bi		10,554,164.86	1.35	104.1	Analog	0.30	3
2	Ge		570,775.36	0.85	103.7	Pulse	0.30	3
3	Sc		1,936,137.28	0.77	108.5	Analog	0.30	3
3	Ge		750,766.98	0.02	106.0	Pulse	0.30	3
3	Rh		4,142,997.34	0.72	106.8	Analog	0.30	3
3	Tb		8,142,807.45	0.85	100.1	Analog	0.30	3
3	Ge		516,957.96	0.57	106.3	Pulse	0.30	3

Current Signal

Operator Name	Metals
Acq. Date-Time	2022-01-14 10:38:12
Instrument Name	G3281A JP12412081
Batch Folder	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b

[1]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	10000	6834	6747	1.765
2	59	10000	7122	6870	2.553
3	89	10000	8709	8922	2.553
4	140	10000	7303	7176	1.741
5	205	10000	4939	4903	2.271
6	156/140	5	1.725 %	1.799 %	9.273
7	70/140	10	6.546 %	6.793 %	8.084
8	9	100	50	50	15.734
9	11	1000	532	541	3.852
10	88	100	63	67	14.256
11	95	500	213	209	5.938
12	107	50	14	17	21.068
13	121	200	92	96	8.129
14	137	100	35	39	21.640
15	208	200	125	132	7.732

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.55 L/min	Makeup Gas	0.55 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.40 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	7.8 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-60 V
Extract 2	-125.0 V	Q1 Exit	---	Deflect	13.2 V
Omega Bias	-65 V	Cell Focus	---	Plate Bias	-50 V
Omega Lens	6.3 V	Cell Entrance	-38 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Axial Acceleration	---
He Flow	0.0 mL/min	4th Gas Flow	---	OctP RF	160 V
H2 Flow	---	OctP Bias	-8.0 V	Energy Discrimination	5.0 V

US EPA Tune Check Report

Operator Name	Metals
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\.b011422m1l.b
Acq. Date-Time	2022-01-14 10:45:35
Report Comment	---
Instrument Name	G3281A JP12412081

[1]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/(ug/l)]	Resp (Flag)	RSD%	RSD% (Required)
9	20.00	19820	198196.12			0.445	5.000
24	20.00	70047	700470.94			0.284	5.000
25	20.00	9381	93811.06			0.677	5.000
26	20.00	10567	105671.08			0.468	5.000
59	20.00	61806	618063.89			0.390	5.000
115	20.00	46354	463536.93			0.489	5.000
206	20.00	17677	176769.64			1.743	5.000
207	20.00	15304	153043.40			1.911	5.000
208	20.00	37711	377114.96			1.461	5.000

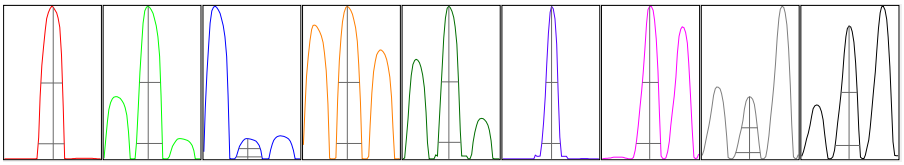
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	19755	19715	19822	19872	19934
24	69885	69925	70296	70229	69900
25	9292	9367	9367	9461	9418
26	10520	10521	10557	10620	10617
59	62195	61680	61591	61879	61687
115	46612	46170	46440	46478	46068
206	17160	17663	17827	17773	17961
207	14817	15257	15437	15552	15459
208	36863	37544	37893	38335	37923

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	31741.30	9.05	8.90 - 9.10	
24	113550.69	23.90	23.90 - 24.10	
25	14996.23	24.90	24.90 - 25.10	
26	17123.61	25.90	25.90 - 26.10	
59	120039.36	58.95	58.90 - 59.10	
115	122392.41	115.05	114.90 - 115.10	
206	35435.07	206.00	205.90 - 206.10	
207	30639.07	207.00	206.90 - 207.10	
208	75298.70	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.65	0.800	0.900	
24	0.65	0.792	0.900	
25	0.66	0.790	0.900	
26	0.65	0.774	0.900	
59	0.53	0.698	0.900	
115	0.37	0.570	0.900	
206	0.49	0.750	0.900	
207	0.49	0.749	0.900	
208	0.49	0.758	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.55 L/min	Makeup Gas	0.55 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.40 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	7.8 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	6.3 V	Deflect	13.2 V
Extract 2	-125.0 V	Cell Entrance	-38 V	Plate Bias	-50 V
Omega Bias	-65 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V

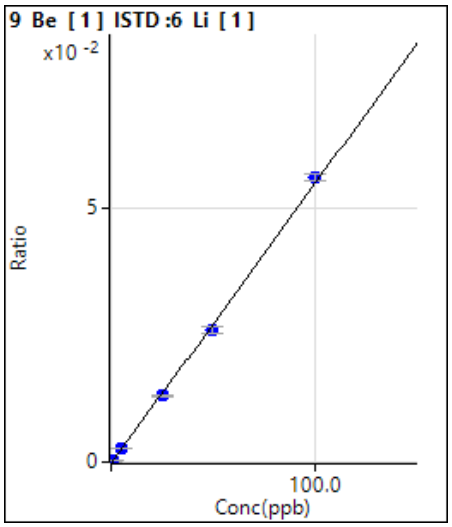
US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	160 V		
QP Parameters					
Mass Gain	79	Axis Gain	0.9887	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	-0.05		
Hardware Settings					
Torch					
Torch H	-0.6 mm	Torch V	1.4 mm		
EM					
Discriminator	7.8 mV	Analog HV	1571 V	Pulse HV	1553 V

Calibration for 247SMPL.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\.b011422m1l.b\
Analysis File: .b011422m1l.batch.bin
DA Date-Time: 2022-01-15 00:54:02
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

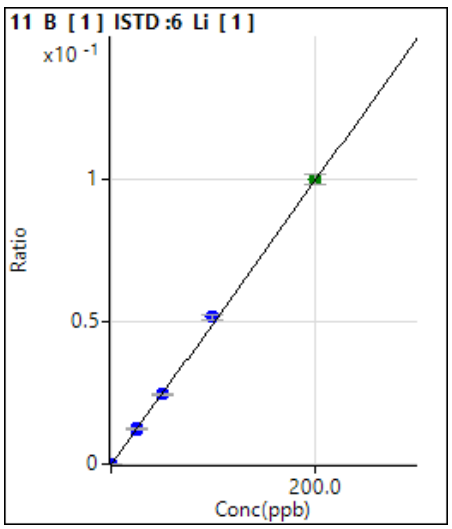
Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	STDA	2022-01-14 11:07:28
2	004CALS.d	STDB	2022-01-14 11:10:54
3	005CALS.d	STDC	2022-01-14 11:14:20
4	006CALS.d	STDD	2022-01-14 11:17:43
5	007CALS.d	STDE	2022-01-14 11:21:07
6	008CALS.d	STDF	2022-01-14 11:24:31
7	009CALS.d	STDG	2022-01-14 11:27:50
8	010CALS.d	STDH	2022-01-14 11:31:08
9	011CALS.d	STDI	2022-01-14 11:34:25
10	012CALS.d	STDJ	2022-01-14 11:37:38



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	85.33	0.0000	P	14.2	
2	☐	0.500	0.477	4816.64	0.0003	P	2.0	-4.7
3	☐	5.000	4.722	47247.61	0.0026	P	2.8	-5.6
4	☐	25.000	23.620	237967.93	0.0130	P	3.1	-5.5
5	☐	50.000	47.127	466250.82	0.0259	P	4.6	-5.7
6	☐	100.000	101.795	1000941.44	0.0560	P	2.9	1.8
7	☐			194.67	0.0000	P	11.0	
8	☐			112.00	0.0000	P	14.0	
9	☐			93.33	0.0000	P	26.9	
10	☐			142.67	0.0000	P	9.8	

y = 5.5012E-004 * x + 4.7905E-006
R = 0.9993
DL = 0.003703 ppb
BEC = 0.008708 ppb

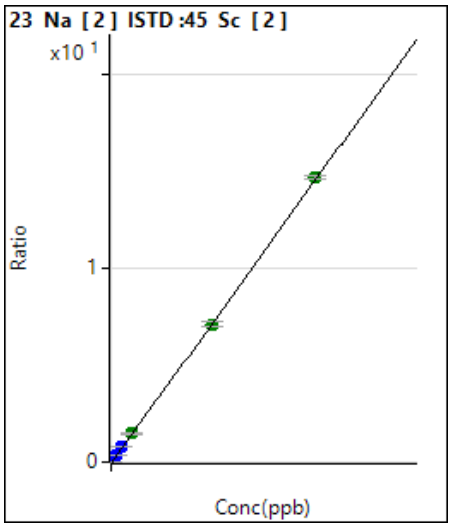
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.032	4000.49	0.0002	P	3.0	
2	☐	25.000	23.681	216360.69	0.0120	P	1.5	-5.3
3	☐			50692.95	0.0028	P	1.7	
4	☐	25.000	24.526	227262.48	0.0124	P	3.7	-1.9
5	☐	50.000	48.634	439031.38	0.0244	P	3.1	-2.7
6	☐	100.000	103.165	921246.53	0.0516	P	3.5	3.2
7	☐	200.000	200.181	1824243.26	0.0998	A	4.2	0.1
8	☐			45232.83	0.0024	P	4.5	
9	☐			24526.89	0.0013	P	3.0	
10	☐			16800.83	0.0009	P	5.2	

y = 4.976570E-004 * x + 2.093803E-004
R = 0.9998
DL = 0.04105 ppb
BEC = 0.4207 ppb

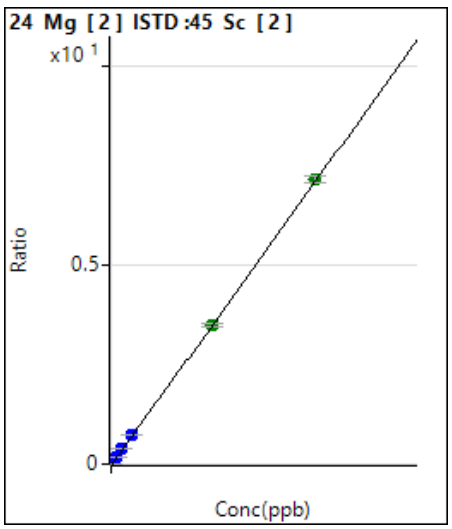
Weight: 1/y
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	9764.76	0.0070	P	1.6	
2	☐	250.000	255.389	532297.32	0.3803	P	3.0	2.2
3	☐			21386.33	0.0154	P	2.0	
4	☐			64577.20	0.0466	P	2.3	
5	☐			117861.52	0.0847	P	2.2	
6	☐			233392.57	0.1694	P	1.9	
7	☐	500.000	518.848	1076711.24	0.7654	P	2.1	3.8
8	☐	1000.000	1012.537	2121290.75	1.4870	A	3.8	1.3
9	☐	5000.000	4860.541	10318469.59	7.1115	A	3.3	-2.8
10	☐	10000.000	10067.399	21490984.70	14.7222	A	1.6	0.7

y = 0.0015 * x + 0.0070
R = 0.9998
DL = 0.2315 ppb
BEC = 4.801 ppb

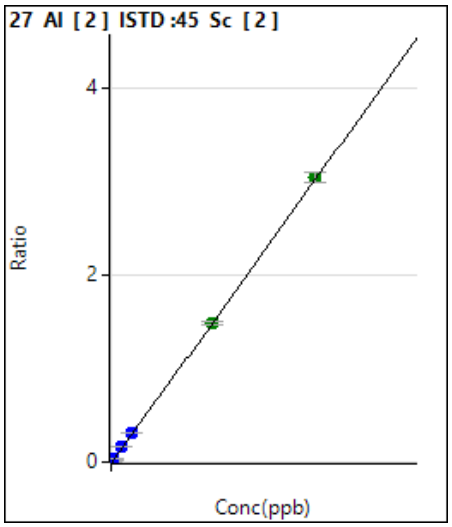
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	2798.01	0.0020	P	4.7	
2	☐	250.000	261.232	263527.57	0.1883	P	3.2	4.5
3	☐			8246.27	0.0060	P	5.4	
4	☐			29242.20	0.0211	P	3.8	
5	☐			55149.54	0.0396	P	3.4	
6	☐			112250.85	0.0815	P	2.5	
7	☐	500.000	528.379	532837.41	0.3788	P	2.1	5.7
8	☐	1000.000	1024.502	1045097.77	0.7325	P	2.8	2.5
9	☐	5000.000	4890.869	5063415.49	3.4895	A	2.7	-2.2
10	☐	10000.000	10050.415	10464027.92	7.1686	A	2.1	0.5

y = 7.1307E-004 * x + 0.0020
R = 0.9999
DL = 0.4005 ppb
BEC = 2.819 ppb

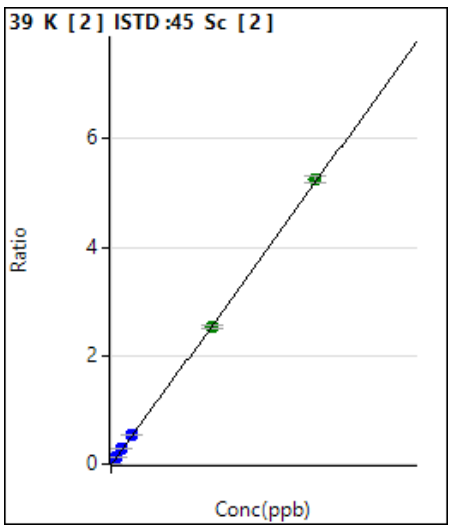
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	-7.368	246.67	0.0002	P	9.1	
2	☐	25.000	27.260	14904.77	0.0107	P	4.8	9.0
3	☐			2772.45	0.0020	P	5.1	
4	☐	25.000	21.060	12172.82	0.0088	P	2.1	-15.8
5	☐	50.000	47.773	23462.12	0.0169	P	4.0	-4.5
6	☐	100.000	106.761	47806.89	0.0347	P	1.9	6.8
7	☐	500.000	524.810	226676.04	0.1611	P	2.7	5.0
8	☐	1000.000	1033.608	449455.92	0.3150	P	2.6	3.4
9	☐	5000.000	4901.499	2154718.59	1.4849	A	2.5	-2.0
10	☐	10000.000	10044.597	4437737.88	3.0405	A	3.5	0.4

y = 3.024618E-004 * x + 0.002406
R = 0.9999
DL = 0.16 ppb
BEC = 7.954 ppb

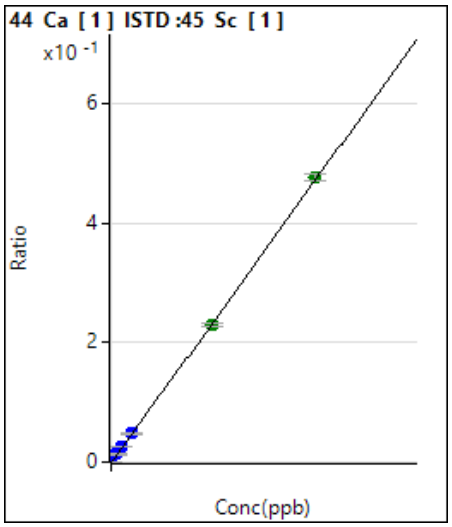
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	9849.29	0.0071	P	1.2	
2	☐	250.000	252.384	193722.82	0.1384	P	2.7	1.0
3	☐			14074.15	0.0102	P	2.6	
4	☐			29306.92	0.0211	P	1.1	
5	☐			48294.24	0.0347	P	1.6	
6	☐			87160.92	0.0633	P	1.8	
7	☐	500.000	508.996	382536.12	0.2719	P	1.8	1.8
8	☐	1000.000	1011.296	760846.58	0.5333	P	2.0	1.1
9	☐	5000.000	4844.899	3668636.66	2.5281	A	1.7	-3.1
10	☐	10000.000	10075.912	7663169.97	5.2500	A	2.5	0.8

y = 5.2034E-004 * x + 0.0071
R = 0.9998
DL = 0.4988 ppb
BEC = 13.6 ppb

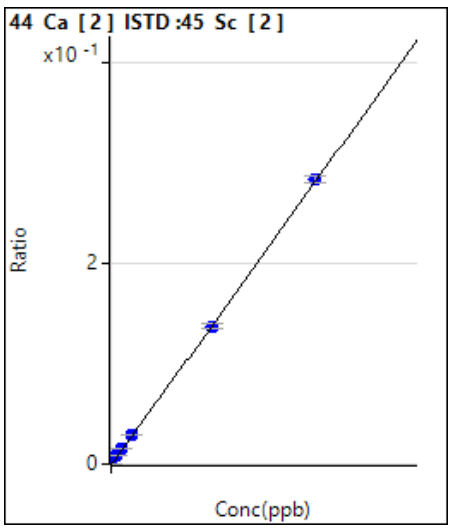
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	20211.21	0.0009	P	3.0	
2	☐	250.000	257.556	288100.92	0.0131	P	2.9	3.0
3	☐			29693.91	0.0013	P	1.9	
4	☐			64978.63	0.0029	P	2.0	
5	☐			108556.86	0.0050	P	4.0	
6	☐			203862.25	0.0093	P	3.4	
7	☐	500.000	528.606	580432.58	0.0260	P	1.7	5.7
8	☐	1000.000	991.765	1083801.63	0.0479	P	2.2	-0.8
9	☐	5000.000	4865.110	5262761.17	0.2313	A	2.2	-2.7
10	☐	10000.000	10066.649	11099596.08	0.4776	A	2.5	0.7

y = 4.7347E-005 * x + 9.3188E-004
R = 0.9999
DL = 1.783 ppb
BEC = 19.68 ppb

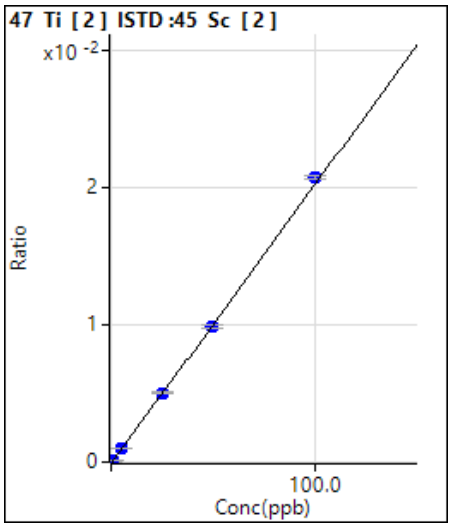
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	-1.103	245.56	0.0002	P	19.1	
2	☐	250.000	286.148	11584.73	0.0083	P	5.6	14.5
3	☐			1758.99	0.0013	P	2.6	
4	☐			7659.38	0.0055	P	2.3	
5	☐			14516.76	0.0104	P	3.2	
6	☐			29365.06	0.0213	P	0.9	
7	☐	500.000	525.055	21125.16	0.0150	P	2.3	5.0
8	☐	1000.000	1028.487	41684.64	0.0292	P	2.3	2.8
9	☐	5000.000	4868.506	199542.98	0.1375	P	3.6	-2.6
10	☐	10000.000	10053.345	414206.95	0.2838	P	2.4	0.5

y = 2.820583E-005 * x + 2.077982E-004
R = 0.9999
DL = 3.586 ppb
BEC = 7.367 ppb

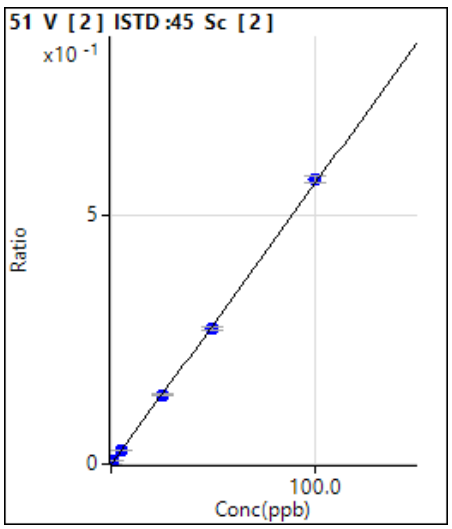
Weight: 1/y
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.004	4.44	0.0000	P	114.9	
2	☐	1.000	0.827	237.78	0.0002	P	17.9	-17.3
3	☐	5.000	4.932	1387.84	0.0010	P	5.2	-1.4
4	☐	25.000	24.773	6971.32	0.0050	P	2.3	-0.9
5	☐	50.000	48.457	13681.69	0.0098	P	2.9	-3.1
6	☐	100.000	102.141	28542.64	0.0207	P	1.4	2.1
7	☐			37.78	0.0000	P	56.4	
8	☐			15.55	0.0000	P	23.4	
9	☐			15.55	0.0000	P	43.3	
10	☐			11.11	0.0000	P	46.8	

y = 2.027843E-004 * x + 2.419132E-006
R = 0.9997
DL = 0.0541 ppb
BEC = 0.01193 ppb

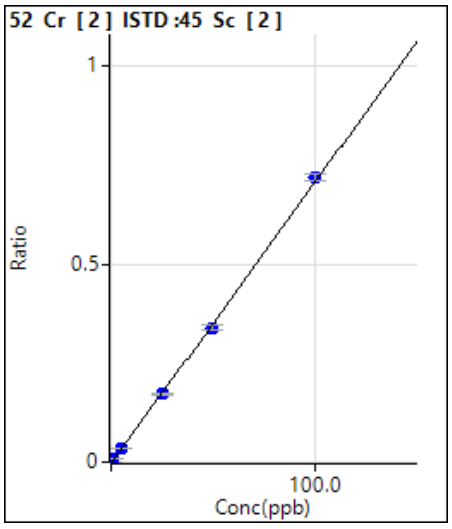
Weight: 1/y
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	2320.16	0.0017	P	4.7	
2	☐	1.000	0.949	9811.50	0.0070	P	4.4	-5.1
3	☐	5.000	4.779	39560.31	0.0286	P	3.0	-4.4
4	☐	25.000	24.375	192673.59	0.1389	P	2.2	-2.5
5	☐	50.000	48.190	380009.90	0.2730	P	2.6	-3.6
6	☐	100.000	101.073	786339.41	0.5707	P	2.4	1.1
7	☐			2231.26	0.0016	P	7.0	
8	☐			2372.39	0.0017	P	5.7	
9	☐			2343.50	0.0016	P	3.5	
10	☐			2495.74	0.0017	P	4.9	

y = 0.0056 * x + 0.0017
R = 0.9997
DL = 0.04189 ppb
BEC = 0.2962 ppb

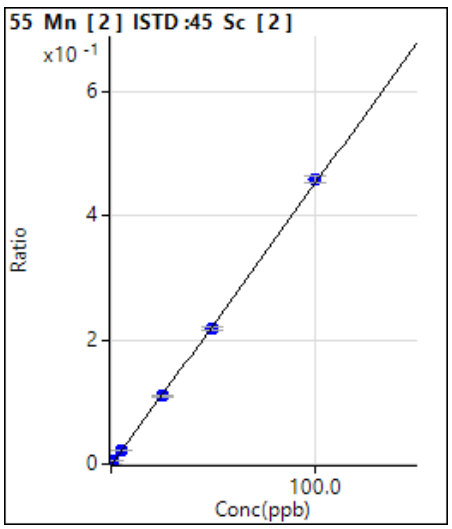
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	295.56	0.0002	P	5.8	
2	☐	1.000	0.994	10169.48	0.0073	P	3.1	-0.6
3	☐	5.000	4.761	47065.25	0.0340	P	2.5	-4.8
4	☐	25.000	24.222	238675.29	0.1721	P	2.8	-3.1
5	☐	50.000	47.860	473020.55	0.3398	P	2.7	-4.3
6	☐	100.000	101.276	990395.03	0.7188	P	2.0	1.3
7	☐			636.69	0.0005	P	4.8	
8	☐			596.68	0.0004	P	2.1	
9	☐			1251.16	0.0009	P	1.4	
10	☐			2067.91	0.0014	P	2.0	

y = 0.0071 * x + 2.1234E-004
R = 0.9996
DL = 0.005236 ppb
BEC = 0.02993 ppb

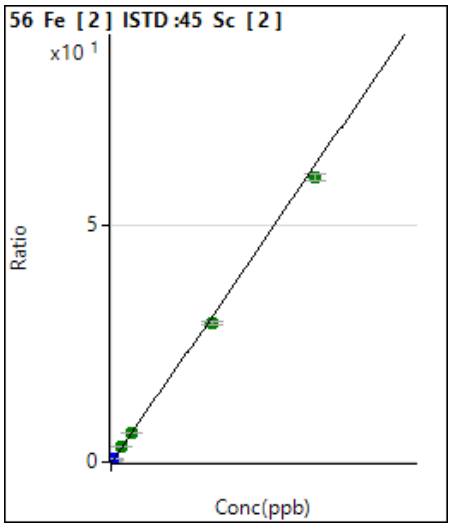
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	344.45	0.0002	P	3.3	
2	☐	1.000	0.940	6317.77	0.0045	P	2.8	-6.0
3	☐	5.000	4.670	29681.25	0.0214	P	1.8	-6.6
4	☐	25.000	24.148	152312.65	0.1098	P	2.5	-3.4
5	☐	50.000	48.230	304950.92	0.2191	P	3.1	-3.5
6	☐	100.000	101.115	632428.43	0.4590	P	2.2	1.1
7	☐			1110.04	0.0008	P	9.4	
8	☐			631.13	0.0004	P	3.0	
9	☐			830.03	0.0006	P	8.5	
10	☐			3031.38	0.0021	P	4.8	

y = 0.0045 * x + 2.4757E-004
R = 0.9997
DL = 0.005381 ppb
BEC = 0.05457 ppb

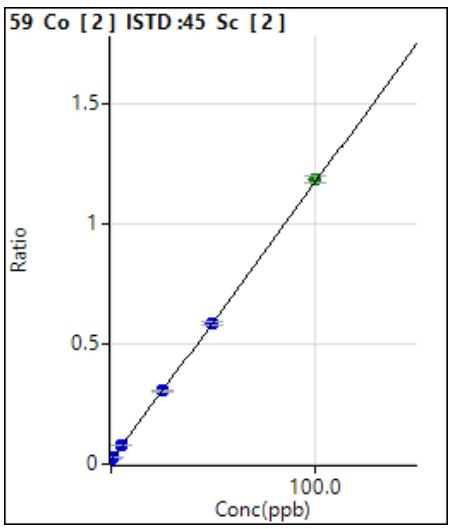
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	12444.20	0.0089	P	0.9	
2	☐	25.000	24.772	231243.81	0.1652	P	3.1	-0.9
3	☐			55644.43	0.0402	P	2.6	
4	☐	25.000	24.660	228173.21	0.1645	P	3.4	-1.4
5	☐	50.000	49.136	443947.97	0.3189	P	3.0	-1.7
6	☐	100.000	118.706	1044111.31	0.7578	P	2.1	18.7
7	☐	500.000	497.937	4431652.32	3.1502	A	1.5	-0.4
8	☐	1000.000	974.389	8782170.49	6.1559	A	2.2	-2.6
9	☐	5000.000	4665.793	42722824.97	29.4434	A	2.9	-6.7
10	☐	10000.000	9555.186	87999747.61	60.2885	A	2.5	-4.4

y = 0.0063 * x + 0.0089
R = 0.9999
DL = 0.03682 ppb
BEC = 1.418 ppb

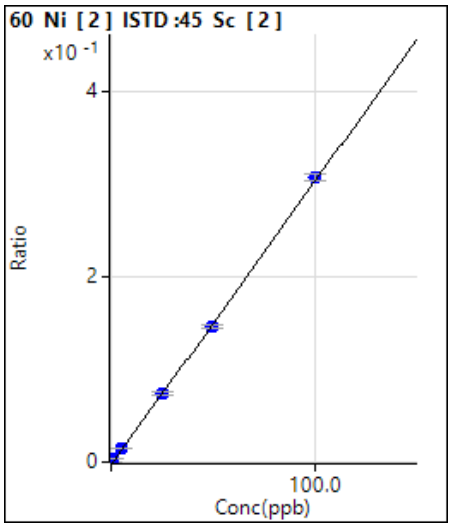
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.368	33787.09	0.0243	P	1.8	
2	☐	0.500	0.857	41897.20	0.0299	P	2.8	71.3
3	☐	5.000	5.146	110160.87	0.0796	P	2.3	2.9
4	☐	25.000	24.696	424088.97	0.3058	P	3.1	-1.2
5	☐	50.000	48.733	812780.89	0.5839	P	2.7	-2.5
6	☐	100.000	100.701	1633002.78	1.1852	A	2.1	0.7
7	☐			34702.35	0.0247	P	1.6	
8	☐			34961.24	0.0245	P	1.8	
9	☐			34816.07	0.0240	P	1.0	
10	☐			35182.51	0.0241	P	0.7	

y = 0.011570 * x + 0.020022
R = 0.9998
DL = 0.1123 ppb
BEC = 1.73 ppb

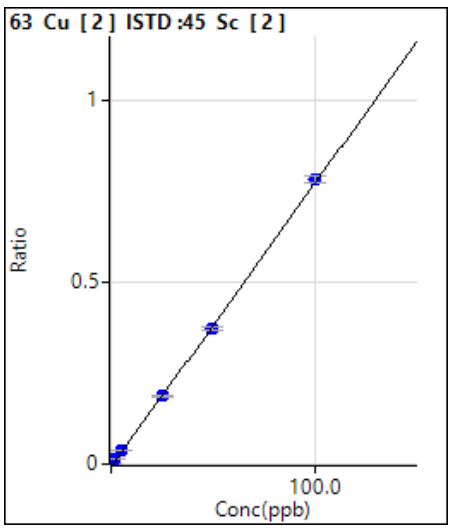
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.478	100.00	0.0001	P	11.7	
2	☐	1.000	1.443	4240.51	0.0030	P	2.3	44.3
3	☐	5.000	5.196	20120.90	0.0145	P	3.7	3.9
4	☐	25.000	24.620	102736.11	0.0741	P	3.0	-1.5
5	☐	50.000	48.365	204416.16	0.1469	P	3.2	-3.3
6	☐	100.000	100.898	424171.29	0.3079	P	2.5	0.9
7	☐			282.23	0.0002	P	15.2	
8	☐			380.01	0.0003	P	5.2	
9	☐			576.68	0.0004	P	9.3	
10	☐			1425.62	0.0010	P	4.2	

y = 0.003065 * x - 0.001392
R = 0.9997
DL = 0.008223 ppb
BEC = -0.4543 ppb

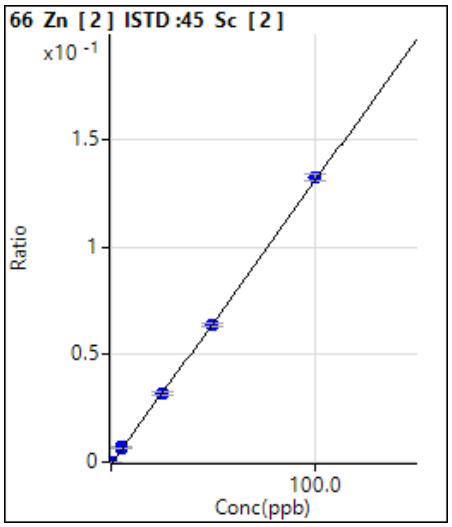
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.594	1655.65	0.0012	P	6.8	
2	☐	2.000	2.404	21390.13	0.0153	P	3.9	20.2
3	☐	5.000	5.233	51662.31	0.0373	P	2.5	4.7
4	☐	25.000	24.471	259558.02	0.1871	P	3.2	-2.1
5	☐	50.000	48.372	519610.48	0.3733	P	2.8	-3.3
6	☐	100.000	100.926	1078202.60	0.7826	P	2.2	0.9
7	☐			1912.34	0.0014	P	4.8	
8	☐			2194.59	0.0015	P	2.2	
9	☐			1911.22	0.0013	P	8.0	
10	☐			3942.67	0.0027	P	4.6	

y = 0.007788 * x - 0.003436
R = 0.9997
DL = 0.03131 ppb
BEC = -0.4411 ppb

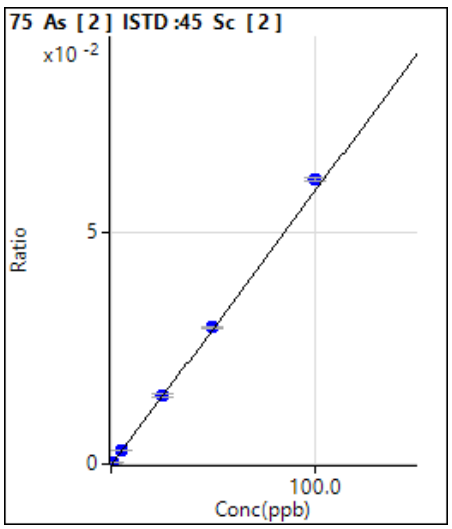
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.366	223.34	0.0002	P	20.1	
2	☐	5.000	5.487	9660.35	0.0069	P	2.9	9.7
3	☐	5.000	5.250	9124.52	0.0066	P	1.0	5.0
4	☐	25.000	24.475	44238.00	0.0319	P	3.2	-2.1
5	☐	50.000	48.656	88706.44	0.0637	P	2.4	-2.7
6	☐	100.000	100.766	182300.51	0.1323	P	2.2	0.8
7	☐			2355.73	0.0017	P	6.4	
8	☐			3405.90	0.0024	P	2.2	
9	☐			724.47	0.0005	P	2.3	
10	☐			3992.68	0.0027	P	4.7	

y = 0.001316 * x - 3.204595E-004
R = 0.9998
DL = 0.07356 ppb
BEC = -0.2435 ppb

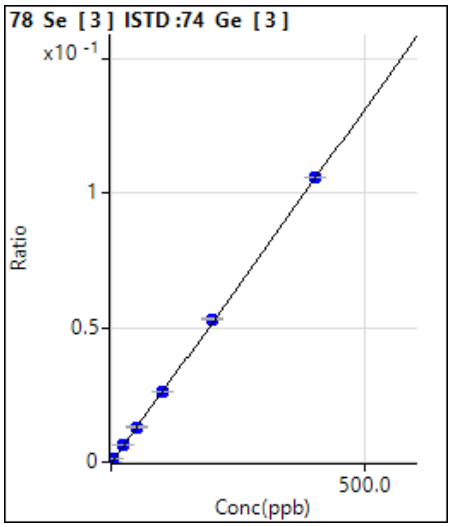
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.001	59.00	0.0000	P	6.8	
2	☐	0.500	0.479	455.01	0.0003	P	9.3	-4.1
3	☐	5.000	4.812	3996.11	0.0029	P	2.0	-3.8
4	☐	25.000	24.985	20540.36	0.0148	P	2.6	-0.1
5	☐	50.000	49.753	40992.76	0.0294	P	1.7	-0.5
6	☐	100.000	103.892	84660.79	0.0614	P	1.7	3.9
7	☐			68.67	0.0000	P	6.9	
8	☐			58.00	0.0000	P	13.5	
9	☐			59.67	0.0000	P	15.2	
10	☐			72.67	0.0000	P	8.5	

y = 5.9102E-004 * x + 4.1998E-005
R = 0.9998
DL = 0.01464 ppb
BEC = 0.07106 ppb

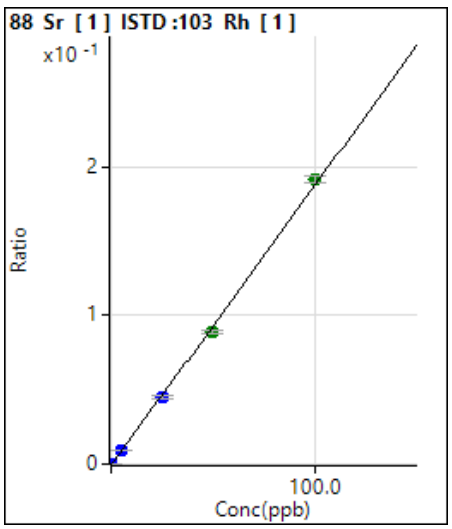
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	20.00	0.0000	P	25.8	
2	☐	0.500	0.490	112.67	0.0002	P	20.8	-2.1
3	☐	5.000	4.829	926.36	0.0013	P	2.6	-3.4
4	☐	25.000	24.499	4628.26	0.0065	P	1.8	-2.0
5	☐	50.000	49.075	9430.09	0.0130	P	1.1	-1.9
6	☐	100.000	99.183	19364.14	0.0263	P	0.5	-0.8
7	☐	200.000	200.609	38319.56	0.0531	P	0.7	0.3
8	☐	400.000	400.049	77219.59	0.1059	P	0.5	0.0
9	☐			35.00	0.0000	P	2.8	
10	☐			25.33	0.0000	P	9.7	

y = 2.6461E-004 * x + 2.8238E-005
R = 1.0000
DL = 0.08272 ppb
BEC = 0.1067 ppb

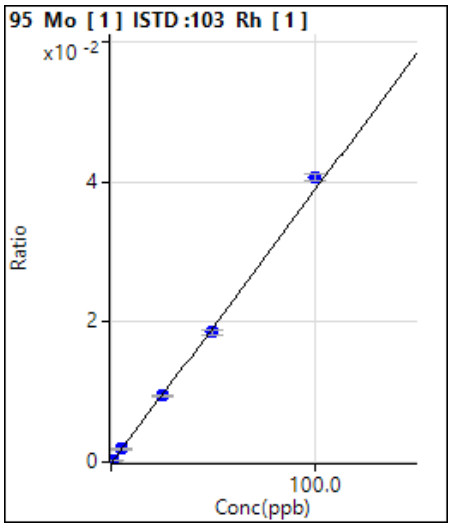
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	3643.80	0.0002	P	7.2	
2	☐	5.000	4.677	199976.90	0.0090	P	1.1	-6.5
3	☐	5.000	4.727	204822.76	0.0091	P	2.0	-5.5
4	☐	25.000	23.891	1008554.33	0.0452	P	3.6	-4.4
5	☐	50.000	47.329	1997058.20	0.0894	A	2.8	-5.3
6	☐	100.000	101.642	4188936.40	0.1918	A	2.6	1.6
7	☐			4824.12	0.0002	P	6.3	
8	☐			4534.02	0.0002	P	3.5	
9	☐			5270.92	0.0002	P	2.7	
10	☐			8252.09	0.0004	P	3.0	

y = 0.0019 * x + 1.6607E-004
R = 0.9994
DL = 0.01892 ppb
BEC = 0.08807 ppb

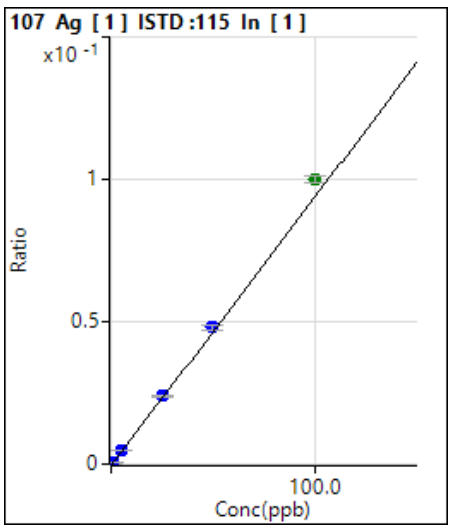
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.003	126.67	0.0000	P	12.2	
2	☐	1.000	0.902	7928.59	0.0004	P	2.0	-9.8
3	☐	5.000	4.702	41464.59	0.0018	P	1.4	-6.0
4	☐	25.000	24.197	210557.59	0.0094	P	2.5	-3.2
5	☐	50.000	47.397	412843.36	0.0185	P	3.7	-5.2
6	☐	100.000	104.164	886983.48	0.0406	P	2.9	4.2
7	☐			1166.73	0.0001	P	6.7	
8	☐			333.34	0.0000	P	11.9	
9	☐			273.34	0.0000	P	39.6	
10	☐			280.01	0.0000	P	10.2	

y = 3.899325E-004 * x + 4.513931E-006
R = 0.9990
DL = 0.005405 ppb
BEC = 0.01158 ppb

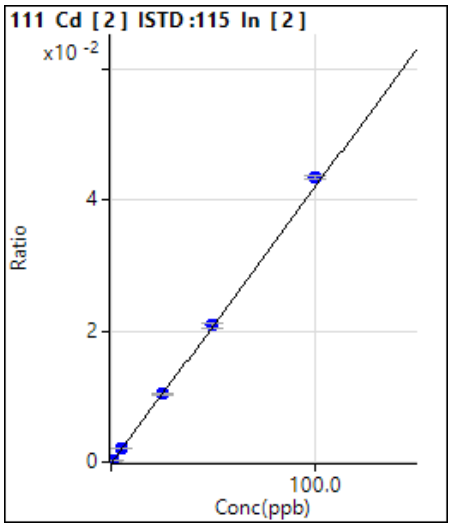
Weight: 1/y
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	-0.001	46.67	0.0000	P	61.3	
2	☐	0.500	0.607	11804.20	0.0006	P	3.1	21.4
3	☐	5.000	4.940	97823.38	0.0047	P	0.6	-1.2
4	☐	25.000	25.308	491227.36	0.0239	P	1.5	1.2
5	☐	50.000	50.933	990142.82	0.0481	P	3.4	1.9
6	☐	100.000	106.026	2038261.59	0.1001	A	2.6	6.0
7	☐			393.35	0.0000	P	14.1	
8	☐			1913.49	0.0001	P	5.0	
9	☐			140.00	0.0000	P	43.5	
10	☐			256.68	0.0000	P	8.5	

y = 9.4395E-004 * x + 2.8110E-006
R = 0.9998
DL = 0.004498 ppb
BEC = 0.002978 ppb

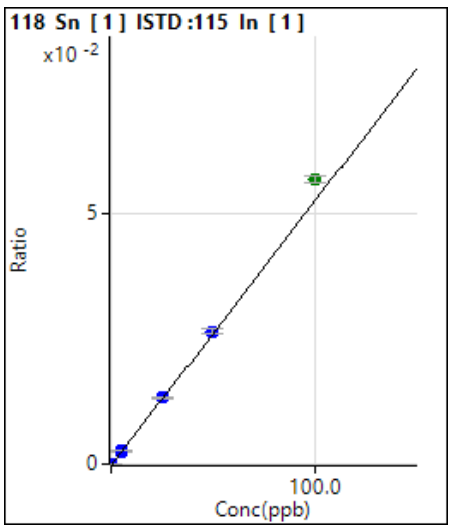
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.001	31.05	0.0000	P	56.1	
2	☐	0.500	0.496	1067.25	0.0002	P	5.6	-0.8
3	☐	5.000	4.813	10159.39	0.0020	P	2.4	-3.7
4	☐	25.000	24.633	51457.41	0.0104	P	1.9	-1.5
5	☐	50.000	49.426	102973.62	0.0209	P	3.4	-1.1
6	☐	100.000	103.144	215863.59	0.0435	P	1.5	3.1
7	☐			64.81	0.0000	P	24.3	
8	☐			28.49	0.0000	P	25.9	
9	☐			21.96	0.0000	P	34.3	
10	☐			33.09	0.0000	P	30.5	

y = 4.2176E-004 * x + 5.6725E-006
R = 0.9998
DL = 0.02492 ppb
BEC = 0.01345 ppb

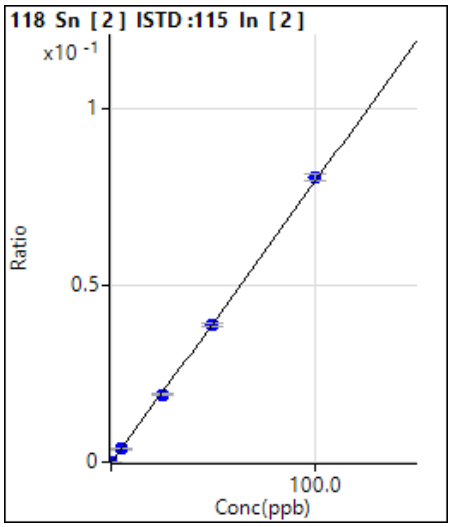
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.001	870.04	0.0000	P	8.4	
2	☐	5.000	4.784	52514.77	0.0026	P	2.0	-4.3
3	☐	5.000	4.978	55868.80	0.0027	P	1.1	-0.4
4	☐	25.000	25.062	272334.44	0.0132	P	3.3	0.2
5	☐	50.000	50.173	545120.50	0.0265	P	3.7	0.3
6	☐	100.000	107.682	1156046.96	0.0568	A	2.1	7.7
7	☐			2803.64	0.0001	P	6.1	
8	☐			1366.76	0.0001	P	5.8	
9	☐			1000.06	0.0000	P	14.9	
10	☐			1320.09	0.0001	P	10.9	

y = 5.2675E-004 * x + 4.2439E-005
R = 0.9994
DL = 0.0206 ppb
BEC = 0.08057 ppb

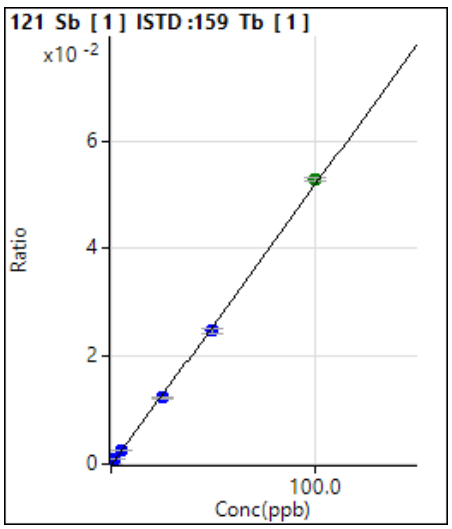
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	326.67	0.0001	P	15.0	
2	☐	5.000	4.546	18286.14	0.0037	P	2.8	-9.1
3	☐	5.000	4.636	18726.58	0.0038	P	2.4	-7.3
4	☐	25.000	23.909	94438.42	0.0191	P	2.7	-4.4
5	☐	50.000	48.575	191082.70	0.0387	P	3.0	-2.9
6	☐	100.000	101.026	398875.63	0.0804	P	2.4	1.0
7	☐			1115.60	0.0002	P	10.8	
8	☐			520.01	0.0001	P	3.0	
9	☐			417.80	0.0001	P	5.9	
10	☐			453.34	0.0001	P	11.3	

y = 7.9519E-004 * x + 6.5481E-005
R = 0.9998
DL = 0.03715 ppb
BEC = 0.08235 ppb

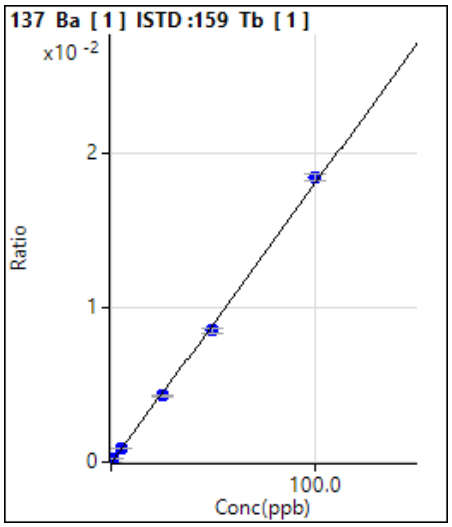
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	170.01	0.0000	P	26.1	
2	☐	2.000	1.855	25585.72	0.0010	P	3.2	-7.2
3	☐	5.000	4.676	65681.97	0.0024	P	2.5	-6.5
4	☐	25.000	23.746	328638.06	0.0124	P	2.3	-5.0
5	☐	50.000	47.503	655852.66	0.0247	P	3.2	-5.0
6	☐	100.000	101.581	1393447.37	0.0528	A	1.8	1.6
7	☐			1983.50	0.0001	P	7.9	
8	☐			923.38	0.0000	P	17.9	
9	☐			750.03	0.0000	P	9.7	
10	☐			1176.74	0.0000	P	8.0	

y = 5.2017E-004 * x + 6.5110E-006
R = 0.9995
DL = 0.009788 ppb
BEC = 0.01252 ppb

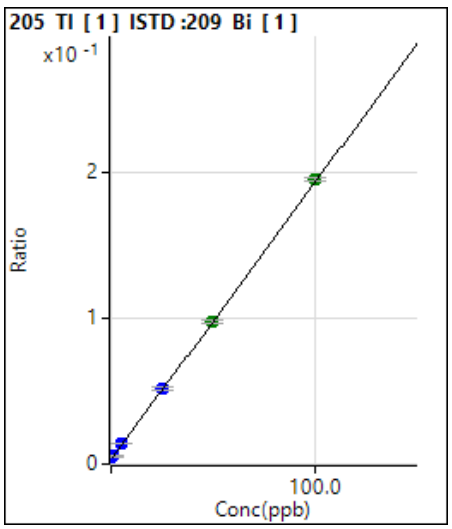
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	93.33	0.0000	P	44.3	
2	☐	1.000	0.964	4704.08	0.0002	P	4.0	-3.6
3	☐	5.000	4.758	23356.15	0.0009	P	4.0	-4.8
4	☐	25.000	23.635	114191.36	0.0043	P	2.5	-5.5
5	☐	50.000	47.083	226887.98	0.0086	P	4.4	-5.8
6	☐	100.000	101.812	487444.12	0.0185	P	2.1	1.8
7	☐			390.02	0.0000	P	8.8	
8	☐			343.34	0.0000	P	4.9	
9	☐			290.01	0.0000	P	13.1	
10	☐			793.38	0.0000	P	6.5	

y = 1.8154E-004 * x + 3.5666E-006
R = 0.9993
DL = 0.0261 ppb
BEC = 0.01965 ppb

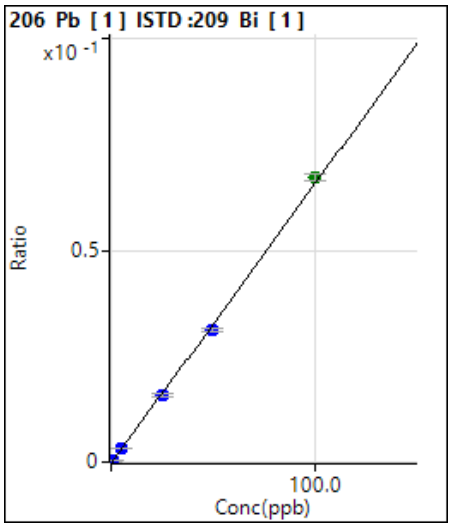
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.004	70135.33	0.0045	P	0.6	
2	☐	0.500	0.456	84203.49	0.0053	P	2.2	-8.8
3	☐	5.000	4.982	221245.47	0.0139	P	0.6	-0.4
4	☐	25.000	24.802	816448.08	0.0514	P	3.8	-0.8
5	☐	50.000	49.322	1549140.76	0.0978	A	2.4	-1.4
6	☐	100.000	100.637	3082215.48	0.1949	A	0.9	0.6
7	☐			73610.36	0.0046	P	1.3	
8	☐			71832.44	0.0045	P	0.8	
9	☐			70651.02	0.0045	P	2.4	
10	☐			69727.12	0.0045	P	1.8	

y = 0.0019 * x + 0.0045
R = 1.0000
DL = 0.04276 ppb
BEC = 2.367 ppb

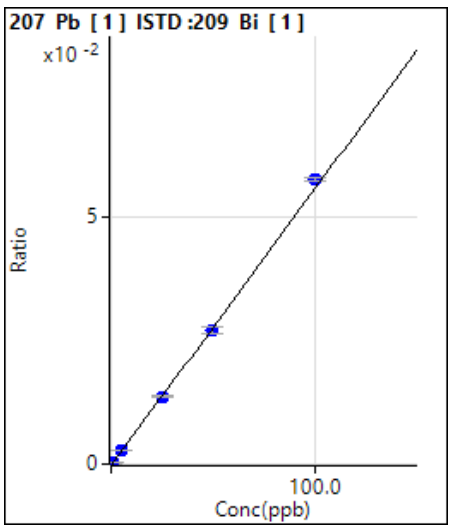
Weight: 1/SD^2
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.000	363.35	0.0000	P	8.2	
2	☐	0.500	0.491	5477.74	0.0003	P	2.0	-1.8
3	☐	5.000	4.689	49618.37	0.0031	P	1.0	-6.2
4	☐	25.000	23.795	249808.91	0.0157	P	4.6	-4.8
5	☐	50.000	46.979	491504.32	0.0310	P	2.4	-6.0
6	☐	100.000	101.827	1063283.18	0.0672	A	1.9	1.8
7	☐			700.03	0.0000	P	9.0	
8	☐			490.02	0.0000	P	16.7	
9	☐			363.35	0.0000	P	29.5	
10	☐			666.70	0.0000	P	6.3	

y = 6.6017E-004 * x + 2.3237E-005
R = 0.9992
DL = 0.008664 ppb
BEC = 0.0352 ppb

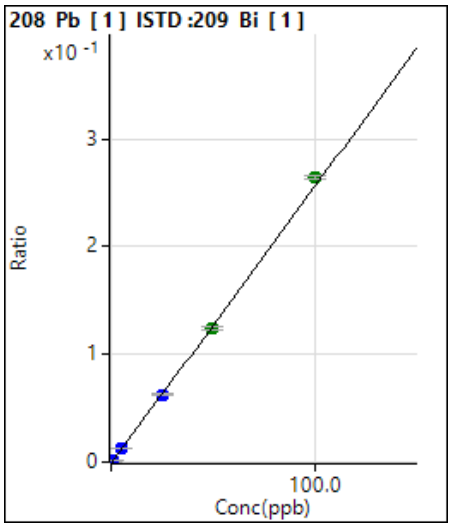
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.005	373.35	0.0000	P	38.1	
2	☐	0.500	0.488	4637.44	0.0003	P	4.0	-2.5
3	☐	5.000	4.748	42645.80	0.0027	P	1.5	-5.0
4	☐	25.000	24.257	216088.34	0.0136	P	2.5	-3.0
5	☐	50.000	48.289	428639.27	0.0271	P	4.0	-3.4
6	☐	100.000	102.891	911669.15	0.0577	P	1.3	2.9
7	☐			643.37	0.0000	P	13.5	
8	☐			503.36	0.0000	P	16.3	
9	☐			320.01	0.0000	P	13.4	
10	☐			653.36	0.0000	P	2.0	

y = 5.601114E-004 * x + 2.109606E-005
R = 0.9995
DL = 0.04863 ppb
BEC = 0.03766 ppb

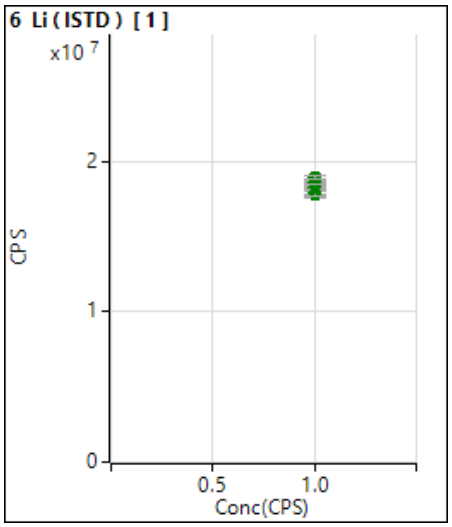
Weight: 1/y
Min Conc: <None>



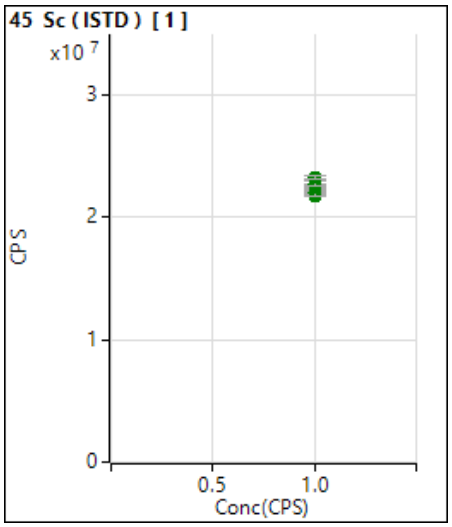
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	0.000	0.003	1486.74	0.0001	P	11.6	
2	☐	0.500	0.495	21452.74	0.0014	P	4.0	-1.0
3	☐	5.000	4.827	198944.86	0.0125	P	1.7	-3.5
4	☐	25.000	24.292	993833.05	0.0626	P	3.4	-2.8
5	☐	50.000	48.283	1968560.23	0.1243	A	2.5	-3.4
6	☐	100.000	102.761	4181888.14	0.2645	A	1.6	2.8
7	☐			2776.84	0.0002	P	3.0	
8	☐			2126.79	0.0001	P	4.7	
9	☐			1570.08	0.0001	P	8.5	
10	☐			2800.17	0.0002	P	1.2	

y = 0.002573 * x + 8.718471E-005
R = 0.9995
DL = 0.01281 ppb
BEC = 0.03389 ppb

Weight: 1/y
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	1.000		17774499.45		A	2.4	
2	☐	1.000		18038885.06		A	0.4	
3	☐	1.000		18154421.16		A	0.1	
4	☐	1.000		18308049.61		A	0.7	
5	☐	1.000		17990982.44		A	1.9	
6	☐	1.000		17876545.37		A	1.7	
7	☐	1.000		18280988.97		A	1.5	
8	☐	1.000		18482152.09		A	1.2	
9	☐	1.000		18586082.61		A	0.9	
10	☐	1.000		18952848.17		A	0.9	



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	1.000		21689761.35		A	0.5	
2	☐	1.000		21950638.84		A	1.4	
3	☐	1.000		22514978.83		A	0.2	
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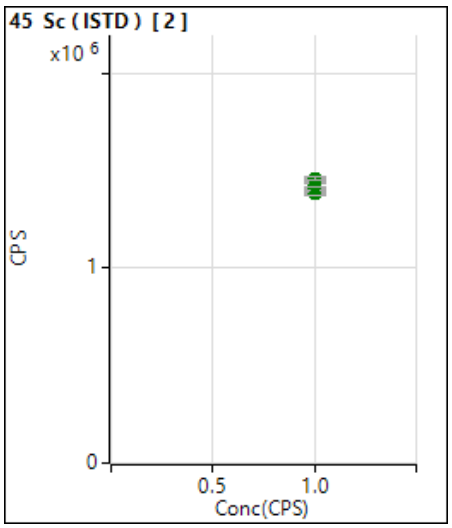

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4	☐	1.000		1387393.45		A	1.5	
5	☐	1.000		1392193.87		A	0.7	
6	☐	1.000		1378006.02		A	1.1	
7	☐	1.000		1406887.31		A	0.9	
8	☐	1.000		1426817.34		A	1.3	
9	☐	1.000		1451352.44		A	1.2	
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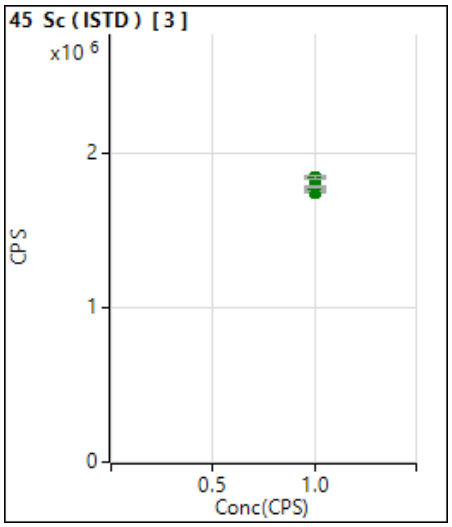

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3	☐	1.000		1764617.36		A	0.3	
4	☐	1.000		1746927.40		A	0.7	
5	☐	1.000		1759067.64		A	0.5	
6	☐	1.000		1772882.08		A	0.7	
7	☐	1.000		1769502.50		A	1.1	
8	☐	1.000		1784158.05		A	0.5	
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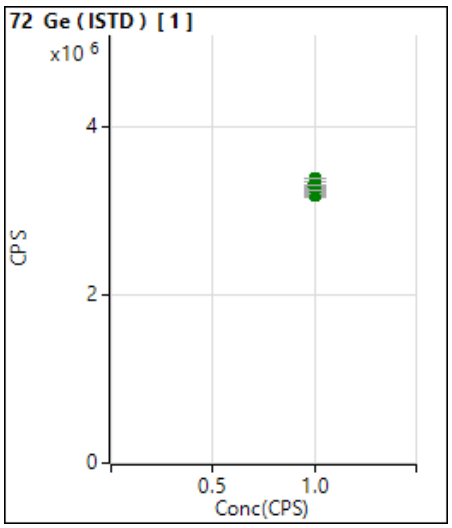

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3	☐	1.000		3279462.24		A	0.5	
4	☐	1.000		3237433.29		A	0.5	
5	☐	1.000		3234205.47		A	0.2	
6	☐	1.000		3206479.33		A	0.5	
7	☐	1.000		3260944.74		A	0.5	
8	☐	1.000		3278645.99		A	1.3	
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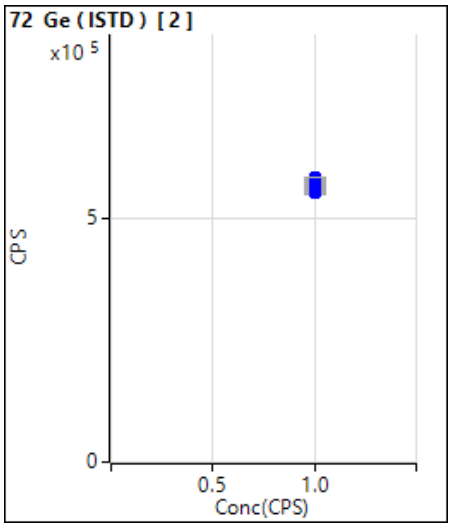

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2	☐	1.000		559085.26		P	0.6	
3	☐	1.000		556067.17		P	0.3	
4	☐	1.000		563115.71		P	0.2	
5	☐	1.000		574095.64		P	0.7	
6	☐	1.000		579849.72		P	0.6	
7	☐	1.000		567993.87		P	0.2	
8	☐	1.000		574549.96		P	0.4	
9	☐	1.000		575712.34		P	0.5	
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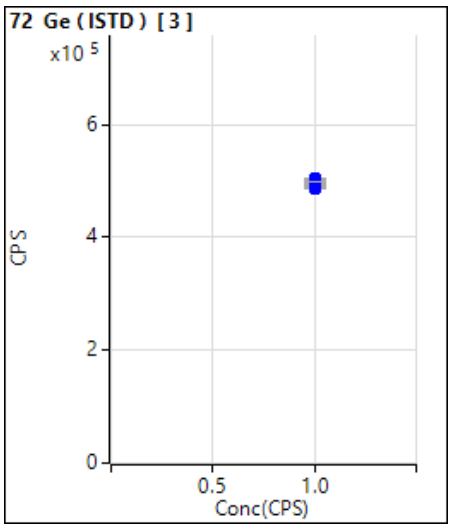

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2	☐	1.000		489992.06		P	0.7	
3	☐	1.000		487250.03		P	0.4	
4	☐	1.000		488096.20		P	0.4	
5	☐	1.000		498819.02		P	0.7	
6	☐	1.000		504450.83		P	0.4	
7	☐	1.000		495819.36		P	0.6	
8	☐	1.000		500260.07		P	0.8	
9	☐	1.000		493670.29		P	0.5	
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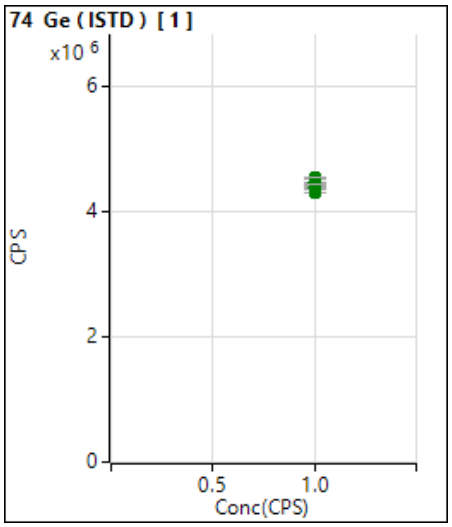

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2	☐	1.000		4366986.08		A	0.5	
3	☐	1.000		4459090.04		A	0.3	
4	☐	1.000		4405284.62		A	0.8	
5	☐	1.000		4386054.83		A	0.8	
6	☐	1.000		4351042.85		A	0.3	
7	☐	1.000		4404921.50		A	0.1	
8	☐	1.000		4462846.49		A	0.4	
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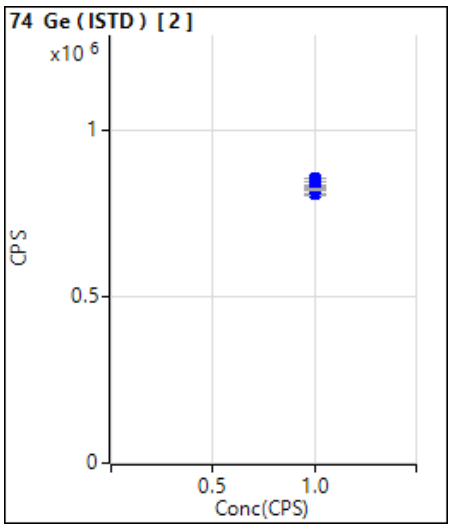

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3	☐	1.000		818512.09		P	0.5	
4	☐	1.000		830358.77		P	0.4	
5	☐	1.000		844656.65		P	0.2	
6	☐	1.000		853737.88		P	0.3	
7	☐	1.000		833965.64		P	0.2	
8	☐	1.000		844092.01		P	0.2	
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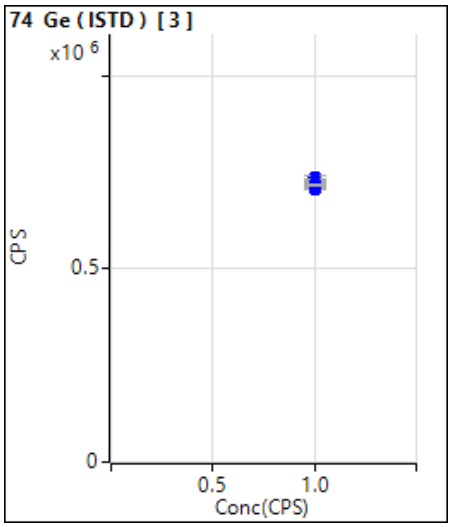

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2	☐	1.000		713740.50		P	0.7	
3	☐	1.000		709299.22		P	0.7	
4	☐	1.000		710847.89		P	0.1	
5	☐	1.000		724611.60		P	0.5	
6	☐	1.000		737035.96		P	0.9	
7	☐	1.000		721479.61		P	0.6	
8	☐	1.000		729283.69		P	0.6	
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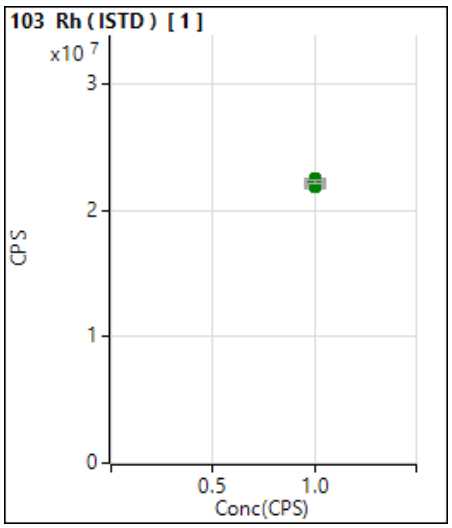

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3	☐	1.000		22557744.66		A	0.3	
4	☐	1.000		22304070.50		A	0.9	
5	☐	1.000		22336798.00		A	1.0	
6	☐	1.000		21836113.84		A	0.3	
7	☐	1.000		22295137.17		A	0.7	
8	☐	1.000		22500078.00		A	0.6	
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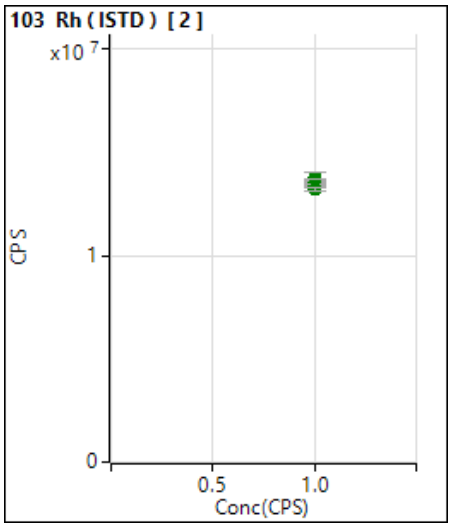

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3	☐	1.000		13599092.24		A	1.7	
4	☐	1.000		13496615.30		A	1.7	
5	☐	1.000		13489964.74		A	1.1	
6	☐	1.000		13398573.91		A	1.1	
7	☐	1.000		13517496.69		A	1.0	
8	☐	1.000		13697815.57		A	0.4	
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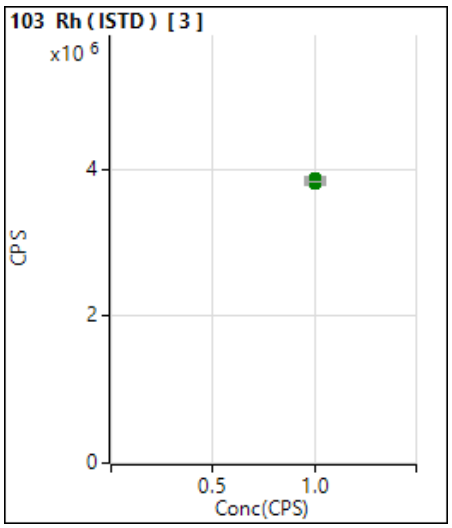

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5	☐	1.000		3871930.96		A	0.5	
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7	☐	1.000		3845911.24		A	0.5	
8	☐	1.000		3857457.63		A	0.8	
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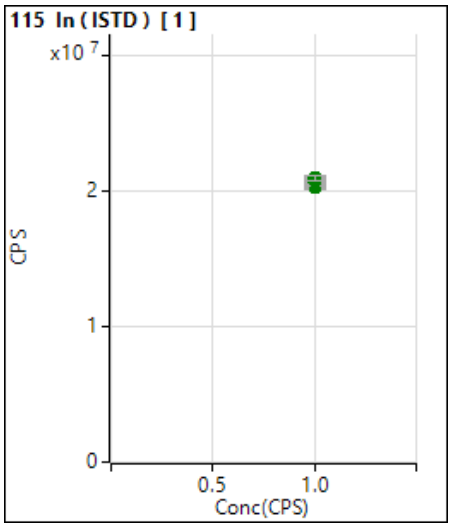

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4	☐	1.000		20557745.66		A	1.6	
5	☐	1.000		20597796.15		A	1.0	
6	☐	1.000		20367275.01		A	0.7	
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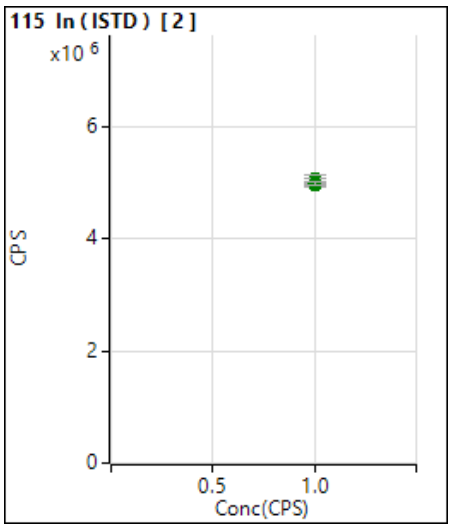

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3	☐	1.000		4991562.86		A	1.1	
4	☐	1.000		4950657.81		A	0.6	
5	☐	1.000		4939790.58		A	1.2	
6	☐	1.000		4962211.14		A	1.4	
7	☐	1.000		4952350.40		A	0.6	
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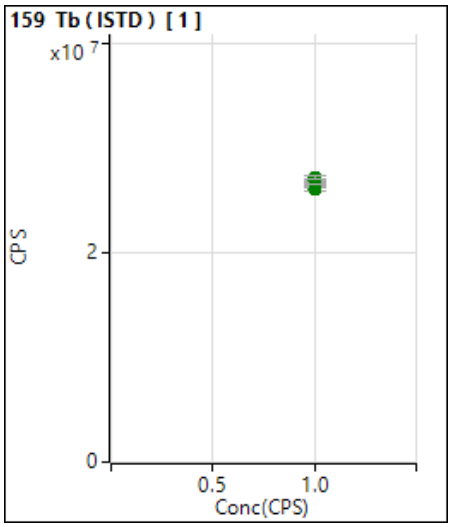

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3	☐	1.000		26938802.10		A	1.6	
4	☐	1.000		26589302.10		A	1.2	
5	☐	1.000		26539471.27		A	0.7	
6	☐	1.000		26370634.61		A	1.0	
7	☐	1.000		26674966.27		A	0.9	
8	☐	1.000		26960035.43		A	0.4	
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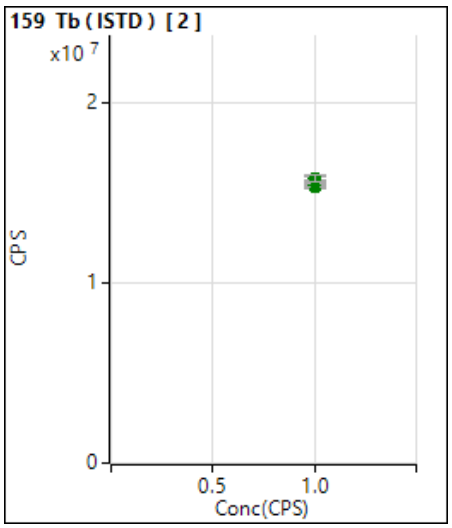

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3	☐	1.000		15537086.05		A	1.5	
4	☐	1.000		15372156.61		A	1.3	
5	☐	1.000		15328821.06		A	1.1	
6	☐	1.000		15419309.94		A	1.2	
7	☐	1.000		15549779.94		A	1.0	
8	☐	1.000		15599339.38		A	1.3	
9	☐	1.000		15733488.26		A	1.3	
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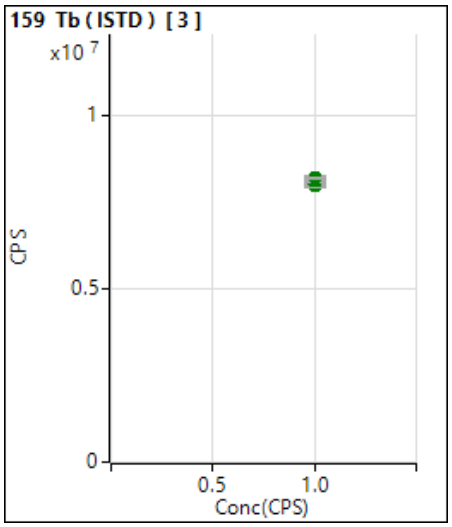

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4	☐	1.000		7970577.46		A	0.2	
5	☐	1.000		8075847.74		A	1.5	
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7	☐	1.000		8000745.79		A	1.8	
8	☐	1.000		8084486.90		A	0.9	
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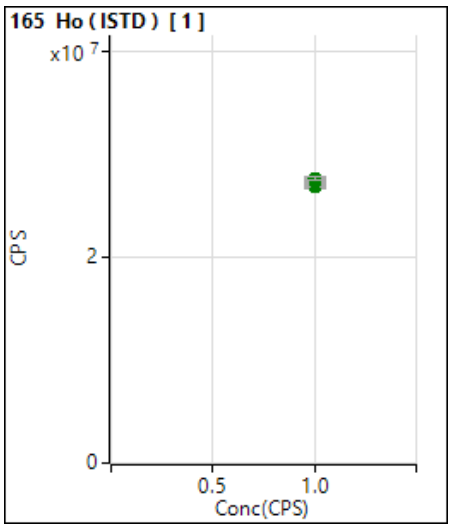

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3	☐	1.000		27435579.59		A	0.9	
4	☐	1.000		27072128.76		A	0.6	
5	☐	1.000		27387410.43		A	1.2	
6	☐	1.000		26920272.93		A	0.6	
7	☐	1.000		27340397.92		A	0.2	
8	☐	1.000		27613476.26		A	0.6	
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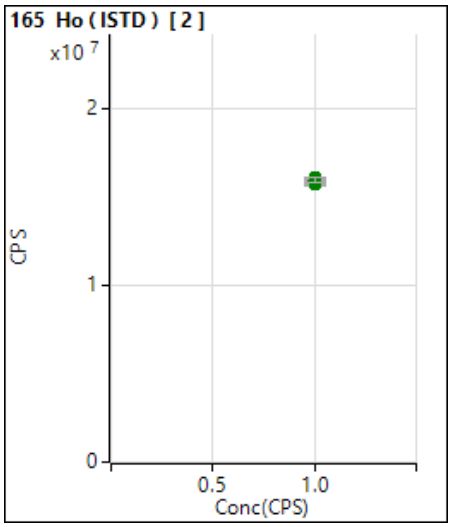

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
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2	☐	1.000		15865799.93		A	1.2	
3	☐	1.000		15803262.15		A	0.5	
4	☐	1.000		15812652.15		A	0.4	
5	☐	1.000		15760618.26		A	0.3	
6	☐	1.000		15783028.82		A	1.2	
7	☐	1.000		15860153.26		A	0.9	
8	☐	1.000		16100964.92		A	0.8	
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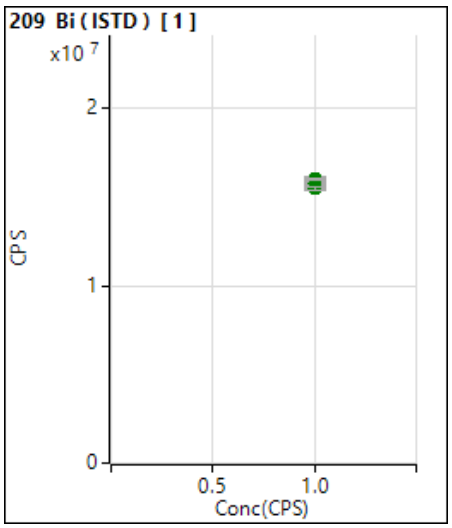

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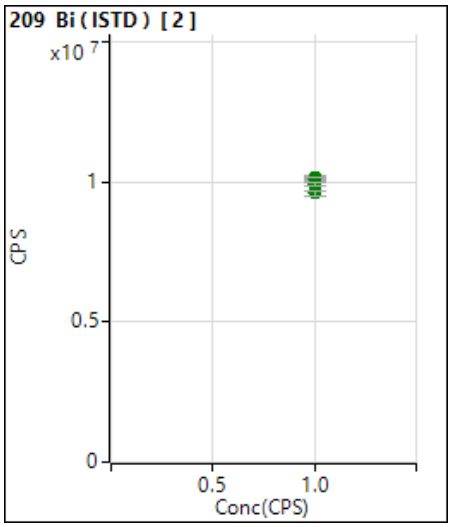
3	☐	1.000		15908286.84		A	0.1	
4	☐	1.000		15882546.85		A	1.7	
5	☐	1.000		15836558.09		A	0.3	
6	☐	1.000		15812246.43		A	1.4	
7	☐	1.000		16071373.51		A	1.2	
8	☐	1.000		15998536.01		A	0.7	
9	☐	1.000		15566328.52		A	1.3	
10	☐	1.000		15533853.52		A	1.2	



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD	%RE
1	☐	1.000		10135163.48		A	1.5	
2	☐	1.000		10098758.21		A	1.6	
3	☐	1.000		10161507.65		A	0.8	
4	☐	1.000		10164863.76		A	0.9	
5	☐	1.000		10090235.43		A	0.8	
6	☐	1.000		10102800.99		A	0.7	
7	☐	1.000		10126867.10		A	0.7	
8	☐	1.000		10118679.32		A	1.1	
9	☐	1.000		9913635.16		A	1.2	
10	☐	1.000		9611602.12		A	1.9	

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP30 157 **Date:** 01/13/2022

Matrix: ALL

Standard/Reagent Type	Exp. Date	Standard/Reagent ID
Spiking Solution- (ACCUTEST 13A REV1)	6/13/2022	MP-015-501
Spiking Solution- (ACCUTEST 14A REV1)	6/13/2022	MP-015-502
Spiking Solution - 5000 mg/l Minerals	11/24/2022	S2-MEB707059 MFG: INO.VENT.
Spiking Solution - Sulfur 1000ppm	12/10/2023	LOT: 121020 MFG: ABSOLUTE STD.
Spiking Solution - Si 1000ppm	11/29/2022	S2-S1700841 MFG: INO.VENT.
Spiking Solution - Bi 1000ppm	5/24/2022	P2-BI687736 MFG: INO.VENT.
Spiking Solution - Se 20ppm	5/27/2022	MP-015-504
Spiking Solution - Li 1000ppm	11/2/2022	S2-L1701641 MFG: INO.VENT.
Spiking Solution- Ag 20 ppm	4/23/2022	MP-21-59-01
Spiking Solution - (ACCUTEST 13B REV1)	4/20/2022	MP-017-40-69
Spiking Solution - (ACCUTEST 14B REV1)	4/20/2022	MP-017-40-72
Spiking Solution - 1000ppm Minerals	6/6/2022	MP-015-496
Spiking Solution- P		
Nitric Acid	1/6/2024	LOT: MKCP2488 MFG: SIGMA-ALDRICH
Nitric Acid (1:1)	6/22/2022	MP-21-60-04 1:1 HNO3
Hydrochloric Acid	1/5/2024	LOT: 281827 MFG: BAKER
Hydrochloric Acid (1:1)	6/22/2022	MP-21-60-05 1:1 HCL
Hydrogen Peroxide	12/2/2023	LOT: 206258 MFG: FISHER
Soil Lab Control/Soil LC	7/3/2022	LOT: D110-540 MFG: ERA
Teflon Chips(For Soil MB and Blank Spike)	N/A	LOT: 27407287 MFG: SAINT-GOBAIN
Digestion Tubes	N/A	LOT: 2108282 MFG: ENV. EXPRESS
pH Paper	5/1/2024	LOT: 212521 MFG: HYDRION
Filter paper Q8	N/A	LOT: 17403535 MFG: FISHER
Filter paper Q5	N/A	LOT: 17254486 MFG: FISHER

Spike witnessed By: AK

Validated By:

Validated On:

metals digestion reagents information log 2022
1/17/18

SGS North America Inc.

Aqueous Metals Digestion Form

Batch Information

Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2
MP30757	1/13/2022	9:50	1/13/2022	15:20	JD37967-1	

Temperature

		Block ID1	Therm. ID#	Temperature	Correction	Corrected Temp
1	Start	MP 9	4156517	96	-1	95
1	End	MP 9	4156517	96	-1	95
2	Start					
2	End					

Methods and Equipment

	Dig. Method	Heating Method		Auto Pipette #	Digestion Tube Lot #	
	SW846 3010A	Digestion Block		M-81	2104009	

Sample ID	Bottle Number	Pres (Y/N)	Initial Sample Volume	Final Volume in ML	Reagent Groups Added	Spike Groups Added	Comments
MP30757-MB1	N/A	N	50	50	AB		
MP30757-B1	N/A	N	50	50	AB	ABCDE	
MP30757-S1	1	Y	50	50	AB	ABCDE	
MP30757-S2	1	Y	50	50	AB	ABCDE	
MP30757-SD1	1	Y	50	50	AB		
JD37967-1	1	Y	50	50	AB		

Reagents Groups

Group	Description	MLs Used
A	CONC HNO3	3
B	1:1 HCL	5
C		
D		
E		
F		
G		
H		

Spike Groups

Group	Description	MLs Used
A	ACCUTEST 13B REV1	0.2
B	ACCUTEST 14B REV1	0.2
C	MINERALS 1000 PPM	0.2
D	AG 20 PPM	0.2
E	SE 20 PPM	0.8
F		
G		
H		
I		

Comments:

Analyst SARAHF **Approved by** SHAHANID **Approved on** 1/14/2022

Note: Reagent traceability for batch Start Date can be seen on the reagent traceability page for this batch.
Serial Dilution samples shown for QC purposes only.
Acceptable Temperature range is 90-95 degrees C unless otherwise noted

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA92962

Sampling Date: 02/03/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **141**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA92962

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA92962-1	02/03/22	12:00	JR	02/08/22	AQ	Ground Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA92962

Site: Shepley's Hill (SHL); Devens, MA **Report Date** 2/17/2022 9:43:38 AM

On 02/08/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA92962 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP40298

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA92962
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 02/03/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA92962-1	**EFFLUENT**					
Arsenic		8.8	2.0	1.0	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA92962-1	**Date Sampled:**	02/03/22
Matrix:	AQ - Ground Water	**Date Received:**	02/08/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	8.8	2.0	1.0	0.21	ug/l	2	02/15/22	02/16/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18459
(2) Prep QC Batch: MP40298

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

CHAIN OF CUSTODY

FA92962 PAGE 1 OF 1

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

FED-EX Tracking # | Bottle Order Control #
SGS Quote # | SGS Job #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Street Address: 9 Payson Road, Suite 150
City State Zip: Foxborough MA 02035
Project Contact E-mail: Steve Passafaro (spassafaro@sovcon.com)
Phone # Fax #: (508) 339-3200 (
Sampler(s) Name(s) Phone #: JWR

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City State: Devens MA
Project #: AC001.J01
Client Purchase Order #:
Project Manager: Steve Passafaro

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Total As - 6020A	LAB USE ONLY
1	Effluent		2/3/22	12:00	JWR	GW	1			X						X	

INITIAL ASSESSMENT
LABEL VERIFICATION SM
SGS Service Center: Northborough, MA 2/3

Turnaround Time (Business days)

Approved by (SGS Project Manager)/Date:

- [ ] Std. 10 Business Days
- [X] 5 Day RUSH - Arsenic Only
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [X] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other See QAPP

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See Project QAPP for all specfic project requirements
1 Day Rush on Arsenic
5 day EQ

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:
1		02/03/22 1500	1 Theresa Fley
3	BC	2-3-22 1840	3 Brandon Mallory
5	BC	2-4-22 0850	5 Ed Ey

	Relinquished By:	Date Time:	Received By:
2	Theresa Fley	2-3-22 1840	2 BC
4	Brandon Mallory	2/3/22 1840	4 Baker

Custody Seal # 30107 Intact Not intact
Preserved where applicable
On Ice
Cooler Temp. 3.8C IR1

Tamat McIver 2/8/22 1030

Form:SM088-03C (revised 2/12/18)

http://www.sgs.com/en/terms-and-conditions

5.1 5

FA92962: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA92962 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 2/8/2022 10:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 2/8/2022 10:30:00 AM Reviewer: _____ Date: _____

FA92962: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FA92962
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 02/03/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP40298	SW846 6020B						
MP40298-B1	7440-38-2	Arsenic	BSP	REC	98.5	%	84-116
MP40298-S1	7440-38-2	Arsenic	MS	REC	104.2	%	84-116
MP40298-S2	7440-38-2	Arsenic	MSD	REC	103.7	%	84-116
MP40298-S2	7440-38-2	Arsenic	MSD	RPD	.5	%	20
MP40298-D1	7440-38-2	Arsenic	DUP	RPD	4.3	%	20

* Sample used for QC is not from job FA92962

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:12	MA18459-STD1	1		STDA
08:16	MA18459-STD2	1		STDB
08:20	MA18459-STD3	1		STDC
08:23	MA18459-STD4	1		STDD
08:27	MA18459-STD5	1		STDE
08:31	MA18459-STD6	1		STDF
08:35	MA18459-STD7	1		STDG
08:39	MA18459-HSTD1	1		
08:43	MA18459-HSTD2	1		
08:47	MA18459-ICV1	1		
08:51	MA18459-ICB1	1		
08:55	MA18459-CRIA1	1		
08:58	MA18459-ICSA1	1		
09:02	MA18459-ICSAB1	1		
09:06	MA18459-CCV1	1		
09:10	MA18459-CCV2	1		
09:14	MA18459-CCB1	1		
09:17	MP40297-MB1	5		
09:21	MP40297-B1	5		
09:25	FA91967-1R	5		(sample used for QC only; not part of login FA92962)
09:29	MP40297-D1	5		
09:33	MP40297-SD1	25		
09:37	MP40297-S1	5		
09:40	MP40297-S2	5		
09:44	MP40297-PS1	5		
09:48	ZZZZZZ	5		
09:52	ZZZZZZ	5		
09:56	MA18459-CCV3	1		
09:59	MA18459-CCV4	1		
10:03	MA18459-CCB2	1		
10:07	ZZZZZZ	10		
10:11	ZZZZZZ	20		
10:15	MP40298-MB1	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:18	MP40298-B1	2		
10:22	TD78320-1A	2		(sample used for QC only; not part of login FA92962)
10:26	MP40298-D1	2		
10:30	MP40298-SD1	10		
10:34	MP40298-S1	2		
10:37	MP40298-S2	2		
10:41	MP40298-PS1	2		
10:45	MA18459-CCV5	1		
10:49	MA18459-CCV6	1		
10:53	MA18459-CCB3	1		
10:56	FA92962-1	2		
---------->	Last reportable sample/prep for job FA92962			
11:00	ZZZZZZ	2		
11:04	MA18459-CCV7	1		
11:08	MA18459-CCV8	1		
11:12	MA18459-CCB4	1		
---------->	Last reportable CCB for job FA92962			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:39	MA18459-HSTD1	1		
08:43	MA18459-HSTD2	1	X	
08:47	MA18459-ICV1	1	X	
08:51	MA18459-ICB1	1	X	
08:55	MA18459-CRIA1	1	X	
08:58	MA18459-ICSA1	1	X	
09:02	MA18459-ICSAB1	1	X	
09:06	MA18459-CCV1	1		
09:10	MA18459-CCV2	1	X	
09:14	MA18459-CCB1	1	X	
09:17	MP40297-MB1	5	X	
09:21	MP40297-B1	5	X	
09:25	FA91967-1R	5		(a)
09:29	MP40297-D1	5	X	
09:33	MP40297-SD1	25	X	
09:37	MP40297-S1	5	X	
09:40	MP40297-S2	5	X	
09:44	MP40297-PS1	5		
09:48	ZZZZZZ	5		
09:52	ZZZZZZ	5		
09:56	MA18459-CCV3	1		
09:59	MA18459-CCV4	1	X	
10:03	MA18459-CCB2	1	X	
10:07	ZZZZZZ	10		
10:11	ZZZZZZ	20		
10:15	MP40298-MB1	2	X	
10:18	MP40298-B1	2	X	
10:22	TD78320-1A	2		(a)
10:26	MP40298-D1	2	X	
10:30	MP40298-SD1	10	X	
10:34	MP40298-S1	2	X	
10:37	MP40298-S2	2	X	
10:41	MP40298-PS1	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Dilution	Element: As
10:45	MA18459-CCV5	1	
10:49	MA18459-CCV6	1	X
10:53	MA18459-CCB3	1	X
10:56	FA92962-1	2	X
11:00	ZZZZZZ	2	
11:04	MA18459-CCV7	1	
11:08	MA18459-CCV8	1	X
11:12	MA18459-CCB4	1	X

(a) Sample used for QC only; not part of login FA92962.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:12	MA18459-STD1	100	100	100	100	100	100	100
08:16	MA18459-STD2	103.9	99.6	101.1	100.1	101.4	100	100.2
08:20	MA18459-STD3	91	101	101.3	100.7	102.7	100.8	100.9
08:23	MA18459-STD4	100.7	99.5	100.6	100.4	101.4	99.1	100
08:27	MA18459-STD5	92.7	99.8	100	99.4	99.9	99.3	97.7
08:31	MA18459-STD6	85.8	97.1	97.5	96.4	96.6	97.2	94.8
08:35	MA18459-STD7	87.7	94.3	94.6	93.9	93.7	94.8	90.8
08:39	MA18459-HSTD1	88.7	95.1	95.3	95.4	95.3	96	93.8
08:43	MA18459-HSTD2	86.5	94.5	94.6	93.8	93.1	94.7	90.9
08:47	MA18459-ICV1	94.1	94	94.6	94.4	93.6	95.8	92.6
08:51	MA18459-ICB1	89.8	95.3	95.6	95.1	96.3	95.7	95.9
08:55	MA18459-CRIA1	91.6	96.7	96.6	95.7	97.5	96.4	96.7
08:58	MA18459-ICSA1	83.8	93.9	92.9	90.9	88.7	90.7	83.7
09:02	MA18459-ICSAB1	88.8	96.5	95.7	93.3	90.6	92.5	84.6
09:06	MA18459-CCV1	105.9	102.7	103.7	103.8	100.8	100.3	98.9
09:10	MA18459-CCV2	96	104.1	105.3	103.6	99.6	100.5	97.3
09:14	MA18459-CCB1	120.2	106.8	107.6	106.9	104.5	101.8	101.5
09:17	MP40297-MB1	112.7	106.9	105.9	105.4	102.8	101.4	100
09:21	MP40297-B1	105.8	103.3	102.6	102.3	98.8	99	94.8
09:25	FA91967-1R	106.3	107.7	102.1	99.2	96	97.8	93.1
09:29	MP40297-D1	97.4	108.7	103.6	100.1	96.4	98	93.1
09:33	MP40297-SD1	109.3	107	105.9	104.8	102.3	100.6	99.8
09:37	MP40297-S1	105.8	108.3	101.8	98.6	94.7	97.1	90.4
09:40	MP40297-S2	102.2	107.5	100.9	98.6	93.8	96.3	90
09:44	MP40297-PS1	98.7	108.6	102.9	98.7	95.3	97.6	92.4
09:48	ZZZZZZ	102	119.9	103.9	98.4	93.6	96.6	88.7
09:52	ZZZZZZ	100.5	102.1	103.6	97.8	94.9	97.4	92.3
09:56	MA18459-CCV3	101.8	101.9	102	101	99.2	98.7	96.8
09:59	MA18459-CCV4	96.4	100.5	102.5	101.6	98.7	98.5	94.3
10:03	MA18459-CCB2	99.7	104	104.3	103.8	102	99.3	98.6
10:07	ZZZZZZ	109.7	99.3	100.5	97.6	96.6	97.5	94.7
10:11	ZZZZZZ	98.7	97.2	99.3	97	95.6	96.2	95.3
10:15	MP40298-MB1	103	96	95.1	94.4	92.9	93.6	92.3

INTERNAL STANDARD SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18459
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:18	MP40298-B1	97.3	96.8	95.6	95.9	92	93.9	89.5
10:22	TD78320-1A	93.3	101.6	99.8	99.4	95.5	95.3	89
10:26	MP40298-D1	100.4	102.2	99.6	98.8	95.4	95.2	88.2
10:30	MP40298-SD1	107.1	102	101	101.2	98.8	97.2	94.2
10:34	MP40298-S1	96.4	101.7	99	99.3	96.3	95.4	89.4
10:37	MP40298-S2	99.3	100.4	98.8	98.6	94.9	95.5	88.7
10:41	MP40298-PS1	95.1	101.9	100.7	100	96.2	95.6	89.5
10:45	MA18459-CCV5	99.7	101.7	101.7	100.8	98.7	97.5	95.5
10:49	MA18459-CCV6	102.4	100.9	101.3	99.3	97.4	96.7	93
10:53	MA18459-CCB3	108.8	100.1	100	99.4	98	96.2	95.2
10:56	FA92962-1	103.6	95.8	94.1	93.1	91.3	92.6	89.6
11:00	ZZZZZZ	95.3	94.8	92.6	92.3	90.3	91.5	89.5
11:04	MA18459-CCV7	107.5	103.1	102.8	101.5	98.8	97.5	94.9
11:08	MA18459-CCV8	98.8	100.5	99.8	99.7	96.1	96.2	92.4
11:12	MA18459-CCB4	94.3	100.6	100.1	99.7	98.3	96	95

! = Outside limits.

LEGEND: Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18459 Units: ug/l

Time: / Sample ID:			08:51 ICB1		09:14 CCB1		10:03 CCB2		10:53 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0294	<1.0	0.0139	<1.0	0.0243	<1.0	0.0277	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1	anr							
Thallium	1.0	.1	anr							
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18459 Units: ug/l

Time:			11:12	
Sample ID:			CCB4	
Metal	RL	IDL	raw	final
Aluminum	100	4.4	anr	
Antimony	1.0	.1	anr	
Arsenic	1.0	.1	0.0118	<1.0
Barium	1.0	.1	anr	
Beryllium	1.0	.1	anr	
Cadmium	1.0	.1	anr	
Calcium	100	7.2	anr	
Chromium	1.0	.1	anr	
Cobalt	1.0	.1	anr	
Copper	1.0	.1	anr	
Iron	100	7.9	anr	
Lead	1.0	.1	anr	
Magnesium	100	5.2	anr	
Manganese	1.0	.1	anr	
Molybdenum	1.0	.1	anr	
Nickel	1.0	.1	anr	
Potassium	100	6.6	anr	
Selenium	1.0	.11	anr	
Silver	1.0	.1	anr	
Sodium	100	4.8	anr	
Strontium	1.0	.1	anr	
Thallium	1.0	.1	anr	
Tin	1.0	.1	anr	
Titanium	1.0	.3	anr	
Vanadium	1.0	.1	anr	
Zinc	2.0	.29	anr	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18459 Units: ug/l

Time:		08:47			09:06			09:10	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	102	102.0				100	97.5	97.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium	anr								
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18459 Units: ug/l

Time:		09:56			09:59			10:45	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	98.2	98.2			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18459 Units: ug/l

Time:		10:49			11:04			11:08	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	98.1	98.1				100	98.7	98.7
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium	anr								
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18459 Units: ug/l

Time:		08:39			08:43	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	194	97.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18459 Units: ug/l

Time:			08:55	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.995	99.5
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0	anr	
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0	anr	
Thallium	1.0	1.0	anr	
Tin	1.0	1.0	anr	
Titanium	1.0	1.0	anr	
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA021622M2.CSV Date Analyzed: 02/16/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18459 Units: ug/l

Time:			08:58		09:02	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	90900	90.9	89200	89.2
Antimony			0.0798		0.0678	
Arsenic		20	0.0950		19.1	95.5
Barium			0.318		0.312	
Beryllium			0.0230		0.000180	
Cadmium		20	0.393		18.8	94.0
Calcium	100000	100000	89700	89.7	88900	88.9
Chromium		20	2.00*(a)		21.2	106.0
Cobalt		20	0.122		19.3	96.5
Copper		20	-0.0922		18.2	91.0
Iron	100000	100000	95200	95.2	95900	95.9
Lead			0.126		0.124	
Magnesium	100000	100000	93600	93.6	93400	93.4
Manganese		20	0.913		20.0	100.0
Molybdenum	2000	2000	1950	97.5	1970	98.5
Nickel		20	0.155		18.5	92.5
Potassium	100000	100000	95800	95.8	96600	96.6
Selenium			0.262		0.241	
Silver		20	0.280		18.1	90.5
Sodium	100000	100000	94800	94.8	95600	95.6
Strontium			1.08		1.08	
Thallium			0.0209		0.00880	
Tin			0.0893		0.0630	
Titanium	2000	2000	1910	95.5	1910	95.5
Vanadium			0.0145		0.0218	
Zinc		20	1.09		19.1	95.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40298
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 02/15/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.11	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP40298: FA92962-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40298
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 02/15/22 02/15/22

Metal	TD78320-1A Original	DUP	RPD	QC Limits	TD78320-1A Original	MS	Spikelot MPICPMS1 % Rec	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	4.6	4.8	4.3	0-20	4.6	213	200	104.2	80-120
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium	anr							
Manganese	anr							
Molybdenum								
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Strontium								
Thallium	anr							
Tin								
Titanium								
Vanadium	anr							
Zinc	anr							

Associated samples MP40298: FA92962-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40298 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/15/22

Metal	TD78320-1A Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	4.6	212	200	103.7	0.5	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP40298: FA92962-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40298
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 02/15/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	197	200	98.5	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40298: FA92962-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA92962
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40298 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/15/22

Metal	TD78320-1A Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	4.64	4.85	4.4	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40298: FA92962-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA92962
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18459

Instrument Linear Ranges

Job Number: FA92962
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18459

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:04
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.070	ug/l	27.11	1,746.75	1.076E-02	Pulse	0.50	3
As			1	-0.001	ug/l	-211.66	25.00	1.539E-04	Pulse	1.00	3
Mo			1	0.106	ug/l	23.79	721.35	2.941E-03	Pulse	0.50	3
Pb			1	-0.006	ug/l	-26.24	709.35	1.763E-04	Pulse	1.00	3
Be			1	-0.006	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.002	ug/l	58.96	83.33	3.388E-04	Pulse	0.50	3
Ba			1	0.010	ug/l	70.57	49.33	3.227E-05	Pulse	0.50	3
Tl			1	0.009	ug/l	29.88	576.01	1.432E-04	Pulse	0.50	3
Sn			1	0.406	ug/l	59.20	2,385.77	1.561E-03	Pulse	0.30	3
Sr			1	0.009	ug/l	46.76	572.68	3.743E-04	Pulse	0.50	3
[Pb]			1	-0.007	ug/l	-22.05	324.67	8.068E-05	Pulse	0.50	3
Ca			1	-1.084	ug/l	-39.29	87.33	3.840E-04	Pulse	0.50	3
Ti			1	0.041	ug/l	57.63	12.00	5.291E-05	Pulse	0.50	3
Na			1	-0.651	ug/l	-15.89	7,383.37	3.247E-02	Pulse	1.00	3
Mg			1	4.226	ug/l	58.66	3,081.63	1.352E-02	Pulse	1.00	3
K			1	-0.702	ug/l	-45.07	18,941.72	8.328E-02	Pulse	1.00	3
V			1	0.012	ug/l	30.22	451.34	1.984E-03	Pulse	0.50	3
Mn			1	0.006	ug/l	157.71	201.33	1.241E-03	Pulse	0.50	3
Fe			1	17.676	ug/l	66.39	162,766.19	1.005E+00	Pulse	0.50	3
Co			1	0.002	ug/l	68.88	108.67	6.700E-04	Pulse	0.50	3
Ni			1	0.012	ug/l	24.47	206.67	1.273E-03	Pulse	0.50	3
Cu			1	0.168	ug/l	7.90	12,060.46	7.429E-02	Pulse	0.50	3
Zn			1	7.125	ug/l	58.67	15,713.91	6.412E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-309.74	4.00	1.629E-05	Pulse	0.50	3
Al			1	13.729	ug/l	28.93	3,102.93	1.363E-02	Pulse	1.00	3
Se			1	0.038	ug/l	53.65	10.34	4.211E-05	Pulse	3.00	3
Sb			1	0.011	ug/l	6.77	129.00	5.252E-04	Pulse	1.00	3
Se			1	0.090	ug/l	92.09	18.78	7.651E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,025,154.00	0.50	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		227,449.83	1.04	100.0	Pulse	0.30	3
1	Ge		162,360.47	0.66	100.0	Pulse	0.30	3
1	In		1,530,004.73	0.34	100.0	Pulse	0.30	3
1	Tb		5,191,110.17	0.57	100.0	Pulse	0.50	3
1	Lu		3,304,199.33	0.32	100.0	Pulse	0.50	3
1	Ge		245,611.14	0.97	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		718.91	12.24	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:08
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.001	ug/l	-121.92	952.03	5.795E-03	Pulse	0.50	3
As			1	0.002	ug/l	324.59	28.33	1.725E-04	Pulse	1.00	3
Mo			1	0.010	ug/l	24.75	114.67	4.672E-04	Pulse	0.50	3
Pb			1	-0.001	ug/l	-145.12	882.02	2.174E-04	Pulse	1.00	3
Be			1	0.012	ug/l	150.07	1.00	4.405E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	32.39	43.33	1.764E-04	Pulse	0.50	3
Ba			1	-0.003	ug/l	-94.44	20.00	1.299E-05	Pulse	0.50	3
Tl			1	0.001	ug/l	38.47	201.33	4.961E-05	Pulse	0.50	3
Sn			1	0.019	ug/l	55.08	293.34	1.902E-04	Pulse	0.30	3
Sr			1	0.010	ug/l	95.96	583.34	3.786E-04	Pulse	0.50	3
[Pb]			1	-0.002	ug/l	-61.91	404.01	9.960E-05	Pulse	0.50	3
Ca			1	0.053	ug/l	856.31	118.00	5.212E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	560761.90	2.67	1.181E-05	Pulse	0.50	3
Na			1	0.089	ug/l	156.69	8,418.77	3.718E-02	Pulse	1.00	3
Mg			1	-0.065	ug/l	-18.74	296.67	1.310E-03	Pulse	1.00	3
K			1	0.651	ug/l	96.03	19,560.34	8.638E-02	Pulse	1.00	3
V			1	0.002	ug/l	343.72	362.67	1.602E-03	Pulse	0.50	3
Mn			1	0.006	ug/l	121.19	200.00	1.217E-03	Pulse	0.50	3
Fe			1	0.393	ug/l	10.09	11,926.37	7.259E-02	Pulse	0.50	3
Co			1	0.001	ug/l	96.51	90.00	5.480E-04	Pulse	0.50	3
Ni			1	-0.006	ug/l	-13.33	115.33	7.019E-04	Pulse	0.50	3
Cu			1	0.065	ug/l	14.77	10,664.96	6.491E-02	Pulse	0.50	3
Zn			1	-0.004	ug/l	-605.71	865.02	3.524E-03	Pulse	1.00	3
Cd			1	0.001	ug/l	115.18	6.67	2.717E-05	Pulse	0.50	3
Al			1	0.216	ug/l	169.58	355.67	1.571E-03	Pulse	1.00	3
Se			1	-0.008	ug/l	-51.03	6.67	2.715E-05	Pulse	3.00	3
Sb			1	0.001	ug/l	144.79	60.67	2.471E-04	Pulse	1.00	3
Se			1	0.024	ug/l	286.40	16.22	6.611E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,056,846.17	0.80	100.0	Pulse	0.50	3
1	Sc		226,456.44	0.41	100.0	Pulse	0.30	3
1	Ge		164,307.26	0.54	100.0	Pulse	0.30	3
1	In		1,541,154.14	0.58	100.0	Pulse	0.30	3
1	Tb		5,213,473.83	0.11	100.0	Pulse	0.50	3
1	Lu		3,325,135.58	0.45	100.0	Pulse	0.50	3
1	Ge		245,551.55	0.59	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		796.69	2.21	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:12
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	960.69	5.882E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	26.33	1.612E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	50.67	2.061E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	901.69	2.228E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	1.477E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	34.67	1.410E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	26.00	1.716E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	156.67	3.871E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	185.56	1.225E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	519.34	3.427E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	434.01	1.072E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	116.67	5.147E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.67	1.180E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	8,297.72	3.661E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	339.00	1.495E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	19,237.67	8.489E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	347.33	1.532E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	169.33	1.037E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	8,397.18	5.141E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	66.00	4.044E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	144.67	8.857E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	9,638.44	5.901E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	875.35	3.556E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.67	1.895E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	312.67	1.379E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	7.33	2.983E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	---	57.00	2.316E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	15.33	6.234E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,047,271.58	0.17	100.0	Pulse	0.50	3
1	Sc		226,633.33	0.58	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		163,345.11	0.35	100.0	Pulse	0.30	3
1	In		1,515,199.00	0.08	100.0	Pulse	0.30	3
1	Tb		5,232,082.50	0.42	100.0	Pulse	0.50	3
1	Lu		3,318,918.50	0.38	100.0	Pulse	0.50	3
1	Ge		246,149.86	0.67	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		824.47	8.65	100.0	Pulse	0.30	3

Quantitation Report

File Name	004CALS.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:16
Sample Name	CALSTD-2
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.481	ug/l	3.05	6,520.44	3.949E-02	Pulse	0.50	3
As			1	0.478	ug/l	2.54	597.34	3.618E-03	Pulse	1.00	3
Mo			1	0.507	ug/l	2.80	3,266.96	1.325E-02	Pulse	0.50	3
Pb			1	0.475	ug/l	0.25	16,742.51	4.128E-03	Pulse	1.00	3
Be			1	0.580	ug/l	39.08	32.00	1.418E-04	Pulse	2.00	3
Ag			1	0.489	ug/l	1.14	11,036.65	4.478E-02	Pulse	0.50	3
Ba			1	0.499	ug/l	3.17	1,148.71	7.473E-04	Pulse	0.50	3
Tl			1	0.497	ug/l	0.84	23,796.51	5.867E-03	Pulse	0.50	3
Sn			1	0.460	ug/l	4.90	2,692.44	1.752E-03	Pulse	0.30	3
Sr			1	0.491	ug/l	4.52	3,166.94	2.061E-03	Pulse	0.50	3
[Pb]			1	0.470	ug/l	2.02	7,814.48	1.927E-03	Pulse	0.50	3
Ca			1	48.714	ug/l	4.84	1,442.73	6.389E-03	Pulse	0.50	3
Ti			1	0.481	ug/l	41.38	110.67	4.898E-04	Pulse	0.50	3
Na			1	49.006	ug/l	0.66	78,792.45	3.490E-01	Pulse	1.00	3
Mg			1	51.240	ug/l	0.68	33,259.18	1.473E-01	Pulse	1.00	3
K			1	49.891	ug/l	0.59	45,001.62	1.993E-01	Pulse	1.00	3
V			1	0.503	ug/l	1.70	4,545.21	2.013E-02	Pulse	0.50	3
Mn			1	0.506	ug/l	1.91	2,809.55	1.702E-02	Pulse	0.50	3
Fe			1	50.325	ug/l	0.89	456,587.66	2.766E+00	Pulse	0.50	3
Co			1	0.507	ug/l	1.92	9,878.54	5.985E-02	Pulse	0.50	3
Ni			1	0.486	ug/l	6.19	2,816.88	1.707E-02	Pulse	0.50	3
Cu			1	0.416	ug/l	4.74	15,973.29	9.677E-02	Pulse	0.50	3
Zn			1	0.346	ug/l	2.26	1,601.40	6.497E-03	Pulse	1.00	3
Cd			1	0.493	ug/l	2.55	1,466.73	5.951E-03	Pulse	0.50	3
Al			1	49.564	ug/l	1.47	10,297.66	4.561E-02	Pulse	1.00	3
Se			1	0.500	ug/l	8.54	46.89	1.903E-04	Pulse	3.00	3
Sb			1	0.476	ug/l	3.48	3,233.96	1.312E-02	Pulse	1.00	3
Se			1	0.515	ug/l	37.97	35.45	1.438E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,056,217.50	0.20	100.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		225,778.63	0.32	99.6	Pulse	0.30	3
1	Ge		165,079.44	0.98	101.1	Pulse	0.30	3
1	In		1,536,977.19	0.34	101.4	Pulse	0.30	3
1	Tb		5,232,408.17	0.50	100.0	Pulse	0.50	3
1	Lu		3,309,739.17	0.45	99.7	Pulse	0.50	3
1	Ge		246,489.09	0.52	100.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		856.69	1.78	103.9	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:20
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.005	ug/l	2.20	12,583.42	7.605E-02	Pulse	0.50	3
As			1	0.960	ug/l	7.74	1,175.70	7.107E-03	Pulse	1.00	3
Mo			1	0.994	ug/l	2.29	6,387.78	2.577E-02	Pulse	0.50	3
Pb			1	0.963	ug/l	0.40	33,201.36	8.132E-03	Pulse	1.00	3
Be			1	0.976	ug/l	14.97	54.33	2.375E-04	Pulse	2.00	3
Ag			1	1.005	ug/l	1.38	22,794.68	9.194E-02	Pulse	0.50	3
Ba			1	0.956	ug/l	4.13	2,201.48	1.415E-03	Pulse	0.50	3
Tl			1	0.991	ug/l	1.37	47,640.60	1.167E-02	Pulse	0.50	3
Sn			1	1.000	ug/l	5.16	5,709.81	3.669E-03	Pulse	0.30	3
Sr			1	0.960	ug/l	2.30	5,758.90	3.700E-03	Pulse	0.50	3
[Pb]			1	0.959	ug/l	1.26	15,577.11	3.815E-03	Pulse	0.50	3
Ca			1	102.271	ug/l	2.43	2,939.56	1.285E-02	Pulse	0.50	3
Ti			1	1.017	ug/l	10.10	234.00	1.023E-03	Pulse	0.50	3
Na			1	100.890	ug/l	0.36	155,519.78	6.797E-01	Pulse	1.00	3
Mg			1	103.391	ug/l	1.28	67,660.50	2.957E-01	Pulse	1.00	3
K			1	102.612	ug/l	0.77	73,272.27	3.202E-01	Pulse	1.00	3
V			1	0.976	ug/l	4.48	8,617.26	3.766E-02	Pulse	0.50	3
Mn			1	1.054	ug/l	3.60	5,677.51	3.432E-02	Pulse	0.50	3
Fe			1	103.204	ug/l	0.94	929,622.69	5.618E+00	Pulse	0.50	3
Co			1	1.024	ug/l	2.02	19,944.28	1.205E-01	Pulse	0.50	3
Ni			1	1.043	ug/l	1.68	5,892.91	3.561E-02	Pulse	0.50	3
Cu			1	0.934	ug/l	1.77	23,790.01	1.438E-01	Pulse	0.50	3
Zn			1	1.090	ug/l	2.69	3,179.27	1.282E-02	Pulse	1.00	3
Cd			1	1.010	ug/l	2.41	3,013.59	1.216E-02	Pulse	0.50	3
Al			1	100.381	ug/l	0.35	20,812.48	9.096E-02	Pulse	1.00	3
Se			1	0.996	ug/l	2.38	86.56	3.491E-04	Pulse	3.00	3
Sb			1	0.978	ug/l	1.73	6,622.86	2.672E-02	Pulse	1.00	3
Se			1	1.018	ug/l	18.86	55.33	2.232E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,082,807.75	0.87	100.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		228,804.06	0.31	101.0	Pulse	0.30	3
1	Ge		165,464.63	0.40	101.3	Pulse	0.30	3
1	In		1,556,352.06	0.20	102.7	Pulse	0.30	3
1	Tb		5,276,432.33	0.81	100.8	Pulse	0.50	3
1	Lu		3,341,932.83	0.34	100.7	Pulse	0.50	3
1	Ge		247,926.06	0.75	100.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		750.02	4.95	91.0	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:23
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.317	ug/l	2.22	119,296.43	7.263E-01	Pulse	0.50	3
As			1	10.258	ug/l	0.78	12,214.24	7.435E-02	Pulse	1.00	3
Mo			1	10.029	ug/l	3.04	63,744.91	2.581E-01	Pulse	0.50	3
Pb			1	10.042	ug/l	2.41	334,583.89	8.269E-02	Pulse	1.00	3
Be			1	10.190	ug/l	3.87	556.51	2.467E-03	Pulse	2.00	3
Ag			1	10.302	ug/l	2.45	232,466.34	9.412E-01	Pulse	0.50	3
Ba			1	10.206	ug/l	4.60	22,942.52	1.494E-02	Pulse	0.50	3
Tl			1	10.301	ug/l	2.51	489,121.93	1.209E-01	Pulse	0.50	3
Sn			1	10.139	ug/l	2.19	55,407.53	3.607E-02	Pulse	0.30	3
Sr			1	10.247	ug/l	2.57	55,590.79	3.619E-02	Pulse	0.50	3
[Pb]			1	10.008	ug/l	3.43	156,994.04	3.881E-02	Pulse	0.50	3
Ca			1	1030.128	ug/l	4.11	28,098.75	1.247E-01	Pulse	0.50	3
Ti			1	10.285	ug/l	5.61	2,305.48	1.024E-02	Pulse	0.50	3
Na			1	1043.329	ug/l	3.24	1,506,460.08	6.687E+00	Pulse	1.00	3
Mg			1	1064.597	ug/l	3.27	682,834.44	3.031E+00	Pulse	1.00	3
K			1	1051.630	ug/l	3.54	562,510.54	2.497E+00	Pulse	1.00	3
V			1	10.267	ug/l	3.19	85,928.42	3.814E-01	Pulse	0.50	3
Mn			1	10.380	ug/l	1.99	53,991.25	3.287E-01	Pulse	0.50	3
Fe			1	1041.472	ug/l	2.38	9,236,034.00	5.623E+01	Analog	0.50	3
Co			1	10.533	ug/l	2.30	203,036.16	1.236E+00	Pulse	0.50	3
Ni			1	10.681	ug/l	2.15	58,534.72	3.564E-01	Pulse	0.50	3
Cu			1	10.644	ug/l	2.23	168,404.93	1.025E+00	Pulse	0.50	3
Zn			1	10.643	ug/l	1.71	23,224.94	9.402E-02	Pulse	1.00	3
Cd			1	10.435	ug/l	2.10	30,991.88	1.255E-01	Pulse	0.50	3
Al			1	1046.148	ug/l	3.26	210,638.35	9.350E-01	Pulse	1.00	3
Se			1	10.514	ug/l	5.46	840.02	3.400E-03	Pulse	3.00	3
Sb			1	10.120	ug/l	2.24	67,750.04	2.743E-01	Pulse	1.00	3
Se			1	10.970	ug/l	4.10	443.78	1.796E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,047,622.58	2.50	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		225,421.69	2.85	99.5	Pulse	0.30	3
1	Ge		164,299.14	1.88	100.6	Pulse	0.30	3
1	In		1,536,465.63	1.84	101.4	Pulse	0.30	3
1	Tb		5,186,329.00	2.79	99.1	Pulse	0.50	3
1	Lu		3,305,000.83	2.94	99.6	Pulse	0.50	3
1	Ge		247,059.32	1.60	100.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		830.02	6.97	100.7	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:27
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.881	ug/l	0.26	569,978.50	3.489E+00	Pulse	0.50	3
As			1	49.629	ug/l	0.50	58,665.42	3.591E-01	Pulse	1.00	3
Mo			1	48.683	ug/l	0.20	306,477.16	1.252E+00	Pulse	0.50	3
Pb			1	49.173	ug/l	0.61	1,597,444.46	4.041E-01	Pulse	1.00	3
Be			1	49.036	ug/l	1.17	2,683.85	1.187E-02	Pulse	2.00	3
Ag			1	49.688	ug/l	0.60	1,110,962.29	4.539E+00	Pulse	0.50	3
Ba			1	49.464	ug/l	0.81	109,528.46	7.234E-02	Pulse	0.50	3
Tl			1	50.518	ug/l	0.79	2,343,220.67	5.927E-01	Pulse	0.50	3
Sn			1	50.093	ug/l	0.18	269,100.10	1.777E-01	Pulse	0.30	3
Sr			1	49.900	ug/l	0.68	264,828.99	1.749E-01	Pulse	0.50	3
[Pb]			1	49.356	ug/l	1.00	754,960.06	1.910E-01	Pulse	0.50	3
Ca			1	4955.519	ug/l	1.20	135,286.41	5.981E-01	Pulse	0.50	3
Ti			1	49.749	ug/l	0.60	11,189.22	4.947E-02	Pulse	0.50	3
Na			1	4952.512	ug/l	0.80	7,148,244.83	3.160E+01	Analog	1.00	3
Mg			1	5078.700	ug/l	0.57	3,269,161.42	1.445E+01	Pulse	1.00	3
K			1	5010.409	ug/l	0.63	2,618,474.33	1.158E+01	Pulse	1.00	3
V			1	48.850	ug/l	0.06	409,164.60	1.809E+00	Pulse	0.50	3
Mn			1	49.990	ug/l	0.49	257,969.62	1.579E+00	Pulse	0.50	3
Fe			1	4977.036	ug/l	0.15	43,870,488.00	2.685E+02	Analog	0.50	3
Co			1	50.165	ug/l	0.48	961,557.94	5.886E+00	Pulse	0.50	3
Ni			1	50.648	ug/l	0.60	275,533.09	1.687E+00	Pulse	0.50	3
Cu			1	51.129	ug/l	0.31	767,914.69	4.700E+00	Pulse	0.50	3
Zn			1	50.486	ug/l	0.30	105,911.58	4.327E-01	Pulse	1.00	3
Cd			1	50.134	ug/l	0.47	147,530.27	6.027E-01	Pulse	0.50	3
Al			1	4988.862	ug/l	0.34	1,007,309.71	4.454E+00	Pulse	1.00	3
Se			1	50.728	ug/l	0.72	3,987.53	1.629E-02	Pulse	3.00	3
Sb			1	49.139	ug/l	0.08	325,787.93	1.331E+00	Pulse	1.00	3
Se			1	51.105	ug/l	3.29	1,992.88	8.141E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,953,459.92	0.59	97.7	Pulse	0.50	3
1	Sc		226,182.05	0.45	99.8	Pulse	0.30	3
1	Ge		163,377.07	0.64	100.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,514,109.07	0.21	99.9	Pulse	0.30	3
1	Tb		5,192,842.33	0.70	99.3	Pulse	0.50	3
1	Lu		3,337,491.92	0.38	100.6	Pulse	0.50	3
1	Ge		244,777.38	0.28	99.4	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		764.46	1.10	92.7	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:31
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.691	ug/l	0.77	1,120,519.83	7.036E+00	Pulse	0.50	3
As			1	100.284	ug/l	0.47	115,520.67	7.254E-01	Pulse	1.00	3
Mo			1	100.068	ug/l	0.54	610,412.61	2.573E+00	Pulse	0.50	3
Pb			1	99.579	ug/l	0.20	3,139,748.50	8.180E-01	Pulse	1.00	3
Be			1	101.990	ug/l	1.02	5,430.06	2.468E-02	Pulse	2.00	3
Ag			1	100.126	ug/l	1.02	2,169,273.00	9.146E+00	Pulse	0.50	3
Ba			1	100.056	ug/l	0.59	214,257.22	1.463E-01	Pulse	0.50	3
Tl			1	101.966	ug/l	0.88	4,591,341.50	1.196E+00	Pulse	0.50	3
Sn			1	100.405	ug/l	0.45	521,484.13	3.561E-01	Pulse	0.30	3
Sr			1	100.219	ug/l	0.85	513,899.16	3.509E-01	Pulse	0.50	3
[Pb]			1	99.743	ug/l	0.70	1,480,797.71	3.858E-01	Pulse	0.50	3
Ca			1	9985.896	ug/l	0.93	265,088.70	1.205E+00	Pulse	0.50	3
Ti			1	101.635	ug/l	1.48	22,234.63	1.011E-01	Pulse	0.50	3
Na			1	10033.966	ug/l	0.35	14,081,434.33	6.399E+01	Analog	1.00	3
Mg			1	10046.624	ug/l	0.81	6,291,068.83	2.859E+01	Analog	1.00	3
K			1	10076.764	ug/l	0.40	5,104,425.33	2.320E+01	Mix	1.00	3
V			1	99.673	ug/l	0.27	811,844.73	3.690E+00	Pulse	0.50	3
Mn			1	101.354	ug/l	0.14	509,643.48	3.200E+00	Pulse	0.50	3
Fe			1	10008.004	ug/l	0.47	85,977,533.33	5.399E+02	Analog	0.50	3
Co			1	101.251	ug/l	0.63	1,891,674.08	1.188E+01	Pulse	0.50	3
Ni			1	101.252	ug/l	1.10	536,749.69	3.371E+00	Pulse	0.50	3
Cu			1	101.607	ug/l	0.74	1,478,167.71	9.282E+00	Pulse	0.50	3
Zn			1	101.704	ug/l	1.13	205,890.11	8.680E-01	Pulse	1.00	3
Cd			1	101.114	ug/l	0.93	288,326.62	1.216E+00	Pulse	0.50	3
Al			1	10063.558	ug/l	0.58	1,976,451.87	8.982E+00	Pulse	1.00	3
Se			1	102.528	ug/l	2.26	7,801.70	3.290E-02	Pulse	3.00	3
Sb			1	100.826	ug/l	1.02	647,690.08	2.731E+00	Pulse	1.00	3
Se			1	101.326	ug/l	0.59	3,814.16	1.608E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,838,140.75	0.31	94.8	Pulse	0.50	3
1	Sc		220,044.23	0.91	97.1	Pulse	0.30	3
1	Ge		159,246.89	0.39	97.5	Pulse	0.30	3
1	In		1,464,424.56	1.26	96.6	Pulse	0.30	3
1	Tb		5,085,788.17	1.05	97.2	Pulse	0.50	3
1	Lu		3,251,099.58	0.48	98.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,207.67	1.17	96.4	Pulse	0.30	3
1	Te		10.00	52.92		Pulse	0.50	3
1	Li		707.79	3.14	85.8	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:35
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.668	ug/l	0.32	2,154,589.50	1.395E+01	Pulse	0.50	3
As			1	199.938	ug/l	0.40	223,398.18	1.446E+00	Pulse	1.00	3
Mo			1	200.294	ug/l	0.50	1,191,086.92	5.151E+00	Pulse	0.50	3
Pb			1	200.415	ug/l	0.49	6,052,159.33	1.646E+00	Pulse	1.00	3
Be			1	199.236	ug/l	1.91	10,301.61	4.821E-02	Pulse	2.00	3
Ag			1	189.841	ug/l	1.28	4,010,013.42	1.734E+01	Pulse	0.50	3
Ba			1	200.096	ug/l	0.72	415,248.16	2.926E-01	Pulse	0.50	3
Tl			1	198.872	ug/l	0.70	8,577,600.33	2.333E+00	Analog	0.50	3
Sn			1	199.768	ug/l	0.32	1,005,401.49	7.084E-01	Pulse	0.30	3
Sr			1	199.904	ug/l	0.72	993,011.00	6.997E-01	Pulse	0.50	3
[Pb]			1	200.289	ug/l	1.18	2,847,841.08	7.746E-01	Pulse	0.50	3
Ca			1	20016.658	ug/l	0.12	516,003.26	2.414E+00	Pulse	0.50	3
Ti			1	199.231	ug/l	1.74	42,326.19	1.981E-01	Pulse	0.50	3
Na			1	19992.720	ug/l	0.92	27,240,846.67	1.275E+02	Analog	1.00	3
Mg			1	19953.763	ug/l	0.82	12,134,613.67	5.678E+01	Analog	1.00	3
K			1	19956.421	ug/l	0.91	9,800,022.00	4.586E+01	Analog	1.00	3
V			1	200.438	ug/l	1.26	1,585,146.84	7.418E+00	Pulse	0.50	3
Mn			1	199.306	ug/l	1.04	972,016.13	6.292E+00	Pulse	0.50	3
Fe			1	19999.649	ug/l	0.22	166,663,248.00	1.079E+03	Analog	0.50	3
Co			1	199.307	ug/l	0.56	3,612,114.33	2.338E+01	Pulse	0.50	3
Ni			1	199.178	ug/l	0.35	1,024,148.31	6.630E+00	Pulse	0.50	3
Cu			1	198.882	ug/l	0.59	2,798,053.58	1.811E+01	Pulse	0.50	3
Zn			1	198.994	ug/l	0.67	391,964.11	1.695E+00	Pulse	1.00	3
Cd			1	199.388	ug/l	0.84	554,287.40	2.397E+00	Pulse	0.50	3
Al			1	19968.697	ug/l	0.66	3,808,592.00	1.782E+01	Pulse	1.00	3
Se			1	198.529	ug/l	0.62	14,723.88	6.367E-02	Pulse	3.00	3
Sb			1	199.797	ug/l	0.46	1,251,238.04	5.411E+00	Pulse	1.00	3
Se			1	199.012	ug/l	1.40	7,289.28	3.152E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,676,516.83	0.35	90.8	Pulse	0.50	3
1	Sc		213,714.61	1.39	94.3	Pulse	0.30	3
1	Ge		154,479.59	0.39	94.6	Pulse	0.30	3
1	In		1,419,242.76	0.17	93.7	Pulse	0.30	3
1	Tb		4,962,187.83	0.95	94.8	Pulse	0.50	3
1	Lu		3,204,718.92	0.61	96.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		231,251.16	0.87	93.9	Pulse	0.30	3
1	Te		16.00	21.65		Pulse	0.50	3
1	Li		723.35	7.54	87.7	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:39
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.928	ug/l	1.69	1,075,874.17	6.913E+00	Pulse	0.50	3
As			1	97.876	ug/l	1.54	110,181.12	7.080E-01	Pulse	1.00	3
Mo			1	97.180	ug/l	0.30	586,587.48	2.499E+00	Pulse	0.50	3
Pb			1	97.556	ug/l	0.78	3,041,648.50	8.014E-01	Pulse	1.00	3
Be			1	98.400	ug/l	1.33	5,132.32	2.381E-02	Pulse	2.00	3
Ag			1	96.502	ug/l	0.38	2,068,935.83	8.815E+00	Pulse	0.50	3
Ba			1	97.990	ug/l	0.85	206,975.91	1.433E-01	Pulse	0.50	3
Tl			1	99.948	ug/l	0.12	4,450,196.83	1.173E+00	Pulse	0.50	3
Sn			1	98.807	ug/l	1.47	506,200.33	3.504E-01	Pulse	0.30	3
Sr			1	98.265	ug/l	0.77	497,047.62	3.441E-01	Pulse	0.50	3
[Pb]			1	97.195	ug/l	0.50	1,426,872.46	3.760E-01	Pulse	0.50	3
Ca			1	9840.435	ug/l	1.11	255,899.19	1.187E+00	Pulse	0.50	3
Ti			1	101.732	ug/l	0.91	21,802.83	1.012E-01	Pulse	0.50	3
Na			1	9859.419	ug/l	0.95	13,553,757.33	6.288E+01	Analog	1.00	3
Mg			1	9879.067	ug/l	1.14	6,059,778.50	2.811E+01	Analog	1.00	3
K			1	9830.339	ug/l	0.88	4,878,254.00	2.263E+01	Pulse	1.00	3
V			1	98.215	ug/l	1.43	783,595.88	3.636E+00	Pulse	0.50	3
Mn			1	99.473	ug/l	1.85	488,797.97	3.141E+00	Pulse	0.50	3
Fe			1	9908.668	ug/l	1.59	83,187,562.67	5.345E+02	Analog	0.50	3
Co			1	99.087	ug/l	1.26	1,809,189.54	1.163E+01	Pulse	0.50	3
Ni			1	99.777	ug/l	1.66	516,928.11	3.322E+00	Pulse	0.50	3
Cu			1	99.724	ug/l	1.65	1,417,956.21	9.112E+00	Pulse	0.50	3
Zn			1	98.568	ug/l	0.80	197,484.28	8.414E-01	Pulse	1.00	3
Cd			1	98.616	ug/l	0.69	278,279.10	1.186E+00	Pulse	0.50	3
Al			1	9788.793	ug/l	1.45	1,883,185.59	8.737E+00	Pulse	1.00	3
Se			1	100.091	ug/l	0.45	7,537.60	3.211E-02	Pulse	3.00	3
Sb			1	97.623	ug/l	0.73	620,565.39	2.644E+00	Pulse	1.00	3
Se			1	97.864	ug/l	1.93	3,645.90	1.553E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,795,221.50	0.68	93.8	Pulse	0.50	3
1	Sc		215,553.87	0.83	95.1	Pulse	0.30	3
1	Ge		155,636.53	0.89	95.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,444,470.92	0.28	95.3	Pulse	0.30	3
1	Tb		5,024,686.00	0.65	96.0	Pulse	0.50	3
1	Lu		3,194,086.92	0.54	96.2	Pulse	0.50	3
1	Ge		234,716.90	0.75	95.4	Pulse	0.30	3
1	Te		5.33	86.60		Pulse	0.50	3
1	Li		731.13	8.53	88.7	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:43
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	194.713	ug/l	1.70	2,101,614.08	1.360E+01	Pulse	0.50	3
As			1	193.729	ug/l	1.35	216,514.31	1.401E+00	Pulse	1.00	3
Mo			1	196.632	ug/l	1.38	1,167,357.29	5.057E+00	Pulse	0.50	3
Pb			1	196.813	ug/l	0.51	5,944,517.67	1.617E+00	Pulse	1.00	3
Be			1	196.119	ug/l	1.18	10,158.20	4.745E-02	Pulse	2.00	3
Ag			1	185.166	ug/l	0.81	3,904,839.33	1.691E+01	Pulse	0.50	3
Ba			1	197.084	ug/l	0.47	406,719.78	2.882E-01	Pulse	0.50	3
Tl			1	196.967	ug/l	0.28	8,496,991.33	2.311E+00	Analog	0.50	3
Sn			1	199.653	ug/l	0.51	999,237.04	7.080E-01	Pulse	0.30	3
Sr			1	198.813	ug/l	0.14	982,098.54	6.959E-01	Pulse	0.50	3
[Pb]			1	196.740	ug/l	0.22	2,797,932.17	7.609E-01	Pulse	0.50	3
Ca			1	19397.490	ug/l	1.18	500,864.30	2.340E+00	Pulse	0.50	3
Ti			1	198.607	ug/l	2.77	42,266.07	1.975E-01	Pulse	0.50	3
Na			1	19579.884	ug/l	1.28	26,724,320.67	1.248E+02	Analog	1.00	3
Mg			1	19519.662	ug/l	0.91	11,891,255.33	5.555E+01	Analog	1.00	3
K			1	19444.671	ug/l	1.56	9,565,325.33	4.468E+01	Analog	1.00	3
V			1	195.280	ug/l	0.79	1,547,097.75	7.227E+00	Pulse	0.50	3
Mn			1	195.471	ug/l	1.74	953,543.37	6.171E+00	Pulse	0.50	3
Fe			1	19533.556	ug/l	1.32	162,821,360.00	1.054E+03	Analog	0.50	3
Co			1	195.100	ug/l	1.47	3,536,778.75	2.289E+01	Pulse	0.50	3
Ni			1	195.134	ug/l	1.48	1,003,607.54	6.495E+00	Pulse	0.50	3
Cu			1	193.550	ug/l	1.40	2,723,936.75	1.763E+01	Pulse	0.50	3
Zn			1	193.810	ug/l	1.15	381,145.79	1.651E+00	Pulse	1.00	3
Cd			1	194.690	ug/l	1.30	540,343.00	2.341E+00	Pulse	0.50	3
Al			1	19325.130	ug/l	1.23	3,692,160.83	1.725E+01	Pulse	1.00	3
Se			1	193.727	ug/l	1.06	14,343.59	6.213E-02	Pulse	3.00	3
Sb			1	195.715	ug/l	1.46	1,223,636.04	5.300E+00	Pulse	1.00	3
Se			1	195.910	ug/l	0.33	7,164.57	3.103E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,677,169.17	0.47	90.9	Pulse	0.50	3
1	Sc		214,080.46	0.82	94.5	Pulse	0.30	3
1	Ge		154,536.81	1.28	94.6	Pulse	0.30	3
1	In		1,411,358.38	0.51	93.1	Pulse	0.30	3
1	Tb		4,955,731.17	0.17	94.7	Pulse	0.50	3
1	Lu		3,174,463.75	0.50	95.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		230,879.28	0.86	93.8	Pulse	0.30	3
1	Te		10.67	39.03		Pulse	0.50	3
1	Li		713.35	6.18	86.5	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:47
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.400	ug/l	1.08	1,094,587.37	7.086E+00	Pulse	0.50	3
As			1	102.049	ug/l	0.31	114,031.50	7.382E-01	Pulse	1.00	3
Mo			1	101.169	ug/l	1.31	604,317.00	2.602E+00	Pulse	0.50	3
Pb			1	100.800	ug/l	0.33	3,101,788.75	8.281E-01	Pulse	1.00	3
Be			1	104.144	ug/l	1.62	5,367.88	2.520E-02	Pulse	2.00	3
Ag			1	50.719	ug/l	0.61	1,076,113.71	4.633E+00	Pulse	0.50	3
Ba			1	103.275	ug/l	0.53	214,244.41	1.510E-01	Pulse	0.50	3
Tl			1	102.491	ug/l	0.54	4,504,046.33	1.202E+00	Pulse	0.50	3
Sn			1	102.955	ug/l	1.19	518,031.89	3.652E-01	Pulse	0.30	3
Sr			1	103.001	ug/l	0.58	511,676.52	3.607E-01	Pulse	0.50	3
[Pb]			1	100.866	ug/l	0.51	1,461,452.21	3.902E-01	Pulse	0.50	3
Ca			1	9874.477	ug/l	0.99	253,765.69	1.191E+00	Pulse	0.50	3
Ti			1	102.120	ug/l	0.38	21,629.30	1.015E-01	Pulse	0.50	3
Na			1	10237.266	ug/l	1.19	13,907,601.67	6.529E+01	Analog	1.00	3
Mg			1	10368.163	ug/l	0.76	6,285,235.33	2.951E+01	Analog	1.00	3
K			1	9915.609	ug/l	0.94	4,862,598.00	2.283E+01	Pulse	1.00	3
V			1	100.809	ug/l	0.98	794,856.87	3.732E+00	Pulse	0.50	3
Mn			1	102.633	ug/l	1.57	500,595.86	3.241E+00	Pulse	0.50	3
Fe			1	10049.429	ug/l	1.18	83,744,869.33	5.421E+02	Analog	0.50	3
Co			1	103.388	ug/l	1.33	1,873,698.63	1.213E+01	Pulse	0.50	3
Ni			1	102.469	ug/l	1.34	526,922.66	3.411E+00	Pulse	0.50	3
Cu			1	102.593	ug/l	0.90	1,447,714.71	9.372E+00	Pulse	0.50	3
Zn			1	104.744	ug/l	0.71	207,629.01	8.939E-01	Pulse	1.00	3
Cd			1	102.191	ug/l	0.83	285,361.53	1.229E+00	Pulse	0.50	3
Al			1	9940.341	ug/l	1.18	1,889,947.95	8.872E+00	Pulse	1.00	3
Se			1	99.710	ug/l	1.01	7,431.00	3.199E-02	Pulse	3.00	3
Sb			1	103.055	ug/l	0.91	648,289.50	2.791E+00	Pulse	1.00	3
Se			1	99.987	ug/l	0.48	3,685.91	1.587E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,745,790.75	0.58	92.6	Pulse	0.50	3
1	Sc		213,022.46	0.85	94.0	Pulse	0.30	3
1	Ge		154,478.11	0.52	94.6	Pulse	0.30	3
1	In		1,418,662.34	0.21	93.6	Pulse	0.30	3
1	Tb		5,012,289.00	0.47	95.8	Pulse	0.50	3
1	Lu		3,186,733.50	0.24	96.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		232,280.27	0.31	94.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		775.57	9.22	94.1	Pulse	0.30	3

Quantitation Report

File Name 013_ICB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:51
Sample Name ICB
Sample Type ICB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.014	ug/l	54.30	1,076.70	6.892E-03	Pulse	0.50	3
As			1	0.029	ug/l	32.12	58.33	3.735E-04	Pulse	1.00	3
Mo			1	0.170	ug/l	19.25	1,074.03	4.590E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	18.27	2,007.46	5.177E-04	Pulse	1.00	3
Be			1	0.026	ug/l	154.28	1.67	7.711E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	19.81	394.67	1.686E-03	Pulse	0.50	3
Ba			1	0.007	ug/l	94.47	39.33	2.695E-05	Pulse	0.50	3
Tl			1	0.036	ug/l	24.25	1,787.44	4.613E-04	Pulse	0.50	3
Sn			1	0.140	ug/l	12.96	901.14	6.177E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	67.60	532.01	3.648E-04	Pulse	0.50	3
[Pb]			1	0.041	ug/l	23.19	1,027.37	2.650E-04	Pulse	0.50	3
Ca			1	-1.222	ug/l	-7.93	79.33	3.673E-04	Pulse	0.50	3
Ti			1	0.001	ug/l	2689.77	2.67	1.233E-05	Pulse	0.50	3
Na			1	1.559	ug/l	38.91	10,054.88	4.655E-02	Pulse	1.00	3
Mg			1	1.194	ug/l	42.36	1,057.03	4.892E-03	Pulse	1.00	3
K			1	0.201	ug/l	413.75	18,433.25	8.535E-02	Pulse	1.00	3
V			1	0.006	ug/l	111.87	380.00	1.759E-03	Pulse	0.50	3
Mn			1	-0.001	ug/l	-334.18	156.67	1.003E-03	Pulse	0.50	3
Fe			1	1.514	ug/l	25.97	20,780.02	1.331E-01	Pulse	0.50	3
Co			1	0.013	ug/l	59.25	304.00	1.948E-03	Pulse	0.50	3
Ni			1	0.000	ug/l	6389.77	138.67	8.879E-04	Pulse	0.50	3
Cu			1	-0.102	ug/l	-5.99	7,776.93	4.978E-02	Pulse	0.50	3
Zn			1	-0.126	ug/l	-11.03	580.68	2.481E-03	Pulse	1.00	3
Cd			1	0.020	ug/l	54.88	62.00	2.647E-04	Pulse	0.50	3
Al			1	0.375	ug/l	185.89	370.34	1.714E-03	Pulse	1.00	3
Se			1	0.064	ug/l	48.39	11.78	5.034E-05	Pulse	3.00	3
Sb			1	0.036	ug/l	17.86	283.33	1.211E-03	Pulse	1.00	3
Se			1	0.038	ug/l	67.61	16.00	6.836E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,879,643.67	0.98	95.9	Pulse	0.50	3
1	Sc		215,977.42	0.27	95.3	Pulse	0.30	3

Quantitation Report

1	Ge		156,221.12	0.29	95.6	Pulse	0.30	3
1	In		1,458,433.69	0.63	96.3	Pulse	0.30	3
1	Tb		5,007,986.50	0.30	95.7	Pulse	0.50	3
1	Lu		3,165,531.58	0.61	95.4	Pulse	0.50	3
1	Ge		234,100.99	0.43	95.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		740.02	7.08	89.8	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 8:55
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.004	ug/l	1.90	11,995.71	7.600E-02	Pulse	0.50	3
As			1	0.995	ug/l	2.83	1,161.04	7.357E-03	Pulse	1.00	3
Mo			1	1.030	ug/l	2.20	6,287.08	2.670E-02	Pulse	0.50	3
Pb			1	0.990	ug/l	0.27	32,679.08	8.353E-03	Pulse	1.00	3
Be			1	0.987	ug/l	2.91	52.67	2.402E-04	Pulse	2.00	3
Ag			1	1.009	ug/l	1.01	21,734.05	9.229E-02	Pulse	0.50	3
Ba			1	0.970	ug/l	1.68	2,120.80	1.435E-03	Pulse	0.50	3
Tl			1	1.009	ug/l	0.99	46,460.79	1.188E-02	Pulse	0.50	3
Sn			1	1.058	ug/l	2.60	5,724.26	3.873E-03	Pulse	0.30	3
Sr			1	0.969	ug/l	3.59	5,517.49	3.733E-03	Pulse	0.50	3
[Pb]			1	0.984	ug/l	1.26	15,307.53	3.913E-03	Pulse	0.50	3
Ca			1	90.994	ug/l	2.40	2,518.84	1.149E-02	Pulse	0.50	3
Ti			1	1.104	ug/l	11.26	243.33	1.110E-03	Pulse	0.50	3
Na			1	101.168	ug/l	0.48	149,411.83	6.815E-01	Pulse	1.00	3
Mg			1	103.708	ug/l	0.52	65,032.97	2.966E-01	Pulse	1.00	3
K			1	99.643	ug/l	0.68	68,720.04	3.134E-01	Pulse	1.00	3
V			1	0.981	ug/l	2.51	8,293.13	3.783E-02	Pulse	0.50	3
Mn			1	1.001	ug/l	4.45	5,149.36	3.262E-02	Pulse	0.50	3
Fe			1	102.841	ug/l	0.27	883,734.02	5.599E+00	Pulse	0.50	3
Co			1	1.042	ug/l	1.15	19,365.69	1.227E-01	Pulse	0.50	3
Ni			1	1.025	ug/l	1.22	5,526.14	3.501E-02	Pulse	0.50	3
Cu			1	0.875	ug/l	1.51	21,845.04	1.384E-01	Pulse	0.50	3
Zn			1	0.897	ug/l	0.79	2,632.19	1.118E-02	Pulse	1.00	3
Cd			1	1.039	ug/l	2.02	2,945.58	1.251E-02	Pulse	0.50	3
Al			1	98.442	ug/l	1.30	19,563.90	8.923E-02	Pulse	1.00	3
Se			1	0.992	ug/l	8.80	81.89	3.479E-04	Pulse	3.00	3
Sb			1	0.989	ug/l	0.58	6,360.45	2.701E-02	Pulse	1.00	3
Se			1	1.157	ug/l	13.13	57.78	2.452E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,912,089.83	0.92	96.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		219,249.58	0.19	96.7	Pulse	0.30	3
1	Ge		157,839.89	0.96	96.6	Pulse	0.30	3
1	In		1,477,954.38	0.51	97.5	Pulse	0.30	3
1	Tb		5,045,807.67	0.55	96.4	Pulse	0.50	3
1	Lu		3,192,092.58	0.55	96.2	Pulse	0.50	3
1	Ge		235,500.08	0.75	95.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		755.57	11.17	91.6	Pulse	0.30	3

Quantitation Report

File Name	015ICSA.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 8:58
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.001	ug/l	1.96	22,098.53	1.456E-01	Pulse	0.50	3
As			1	0.095	ug/l	6.19	128.67	8.478E-04	Pulse	1.00	3
Mo			1	1948.326	ug/l	1.51	11,208,701.67	5.010E+01	Analog	0.50	3
Pb			1	0.126	ug/l	9.94	4,261.87	1.257E-03	Pulse	1.00	3
Be			1	0.023	ug/l	0.94	1.50	7.048E-06	Pulse	2.00	3
Ag			1	0.280	ug/l	5.60	5,745.58	2.568E-02	Pulse	0.50	3
Ba			1	0.318	ug/l	1.93	647.34	4.817E-04	Pulse	0.50	3
Tl			1	0.021	ug/l	9.40	960.03	2.836E-04	Pulse	0.50	3
Sn			1	0.089	ug/l	13.69	590.01	4.391E-04	Pulse	0.30	3
Sr			1	1.079	ug/l	1.13	5,534.17	4.118E-03	Pulse	0.50	3
[Pb]			1	0.133	ug/l	7.81	2,103.47	6.207E-04	Pulse	0.50	3
Ca			1	89737.865	ug/l	1.19	2,303,418.25	1.082E+01	Pulse	0.50	3
Ti			1	1909.805	ug/l	1.60	404,098.34	1.899E+00	Pulse	0.50	3
Na			1	94753.573	ug/l	0.96	128,556,792.00	6.040E+02	Analog	1.00	3
Mg			1	93639.777	ug/l	0.65	56,716,274.67	2.665E+02	Analog	1.00	3
K			1	95830.636	ug/l	0.83	46,800,721.33	2.199E+02	Analog	1.00	3
V			1	0.015	ug/l	13.78	440.68	2.070E-03	Pulse	0.50	3
Mn			1	0.913	ug/l	1.40	4,533.22	2.987E-02	Pulse	0.50	3
Fe			1	95243.343	ug/l	1.26	779,697,536.00	5.138E+03	Analog	0.50	3
Co			1	0.122	ug/l	6.74	2,236.81	1.474E-02	Pulse	0.50	3
Ni			1	0.155	ug/l	14.55	916.69	6.040E-03	Pulse	0.50	3
Cu			1	-0.092	ug/l	-42.39	7,684.89	5.064E-02	Pulse	0.50	3
Zn			1	1.091	ug/l	3.53	2,869.55	1.283E-02	Pulse	1.00	3
Cd			1	0.393	ug/l	10.63	1,060.03	4.739E-03	Pulse	0.50	3
Al			1	90882.443	ug/l	1.20	17,262,552.67	8.111E+01	Analog	1.00	3
Se			1	0.262	ug/l	20.28	25.44	1.137E-04	Pulse	3.00	3
Sb			1	0.080	ug/l	7.31	535.35	2.393E-03	Pulse	1.00	3
Se			1	0.212	ug/l	58.69	21.44	9.586E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,386,488.25	1.67	83.7	Pulse	0.50	3
1	Sc		212,848.16	0.74	93.9	Pulse	0.30	3
1	Ge		151,762.66	0.31	92.9	Pulse	0.30	3
1	In		1,343,953.84	0.51	88.7	Pulse	0.30	3
1	Tb		4,743,438.50	0.87	90.7	Pulse	0.50	3
1	Lu		3,064,246.00	0.65	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		223,731.81	0.45	90.9	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		691.13	4.56	83.8	Pulse	0.30	3

Quantitation Report

File Name 016ICSB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:02
Sample Name ICSAB
Sample Type ICSAB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.233	ug/l	0.66	232,692.83	1.488E+00	Pulse	0.50	3
As			1	19.053	ug/l	0.41	21,566.14	1.380E-01	Pulse	1.00	3
Mo			1	1969.709	ug/l	0.58	11,627,417.33	5.065E+01	Analog	0.50	3
Pb			1	0.124	ug/l	2.19	4,254.53	1.242E-03	Pulse	1.00	3
Be			1	0.000	ug/l	3080.69	0.33	1.519E-06	Pulse	2.00	3
Ag			1	18.107	ug/l	0.45	379,692.03	1.654E+00	Pulse	0.50	3
Ba			1	0.312	ug/l	10.62	650.68	4.740E-04	Pulse	0.50	3
Tl			1	0.009	ug/l	9.71	486.01	1.419E-04	Pulse	0.50	3
Sn			1	0.063	ug/l	20.18	474.46	3.457E-04	Pulse	0.30	3
Sr			1	1.083	ug/l	3.64	5,671.54	4.133E-03	Pulse	0.50	3
[Pb]			1	0.124	ug/l	2.28	2,004.79	5.854E-04	Pulse	0.50	3
Ca			1	88923.466	ug/l	0.53	2,344,905.50	1.072E+01	Pulse	0.50	3
Ti			1	1906.416	ug/l	1.12	414,426.26	1.895E+00	Pulse	0.50	3
Na			1	95636.015	ug/l	0.61	133,301,528.00	6.096E+02	Analog	1.00	3
Mg			1	93437.001	ug/l	1.06	58,136,958.67	2.659E+02	Analog	1.00	3
K			1	96633.016	ug/l	0.71	48,480,486.67	2.217E+02	Analog	1.00	3
V			1	0.022	ug/l	22.05	511.34	2.337E-03	Pulse	0.50	3
Mn			1	19.977	ug/l	0.99	98,739.54	6.316E-01	Pulse	0.50	3
Fe			1	95899.497	ug/l	0.46	808,682,112.00	5.173E+03	Analog	0.50	3
Co			1	19.314	ug/l	1.25	354,309.53	2.266E+00	Pulse	0.50	3
Ni			1	18.542	ug/l	1.17	96,611.90	6.180E-01	Pulse	0.50	3
Cu			1	18.163	ug/l	1.32	266,982.92	1.708E+00	Pulse	0.50	3
Zn			1	19.116	ug/l	0.71	38,117.84	1.660E-01	Pulse	1.00	3
Cd			1	18.813	ug/l	0.46	51,919.72	2.262E-01	Pulse	0.50	3
Al			1	89164.112	ug/l	0.81	17,398,257.33	7.957E+01	Analog	1.00	3
Se			1	0.241	ug/l	5.14	24.56	1.070E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	8.23	474.68	2.067E-03	Pulse	1.00	3
Se			1	0.181	ug/l	28.82	20.89	9.097E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,424,068.92	0.71	84.6	Pulse	0.50	3
1	Sc		218,652.57	1.48	96.5	Pulse	0.30	3
1	Ge		156,321.25	1.39	95.7	Pulse	0.30	3
1	In		1,372,271.26	0.42	90.6	Pulse	0.30	3
1	Tb		4,839,419.67	0.43	92.5	Pulse	0.50	3
1	Lu		3,072,662.75	0.72	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		229,556.07	1.08	93.3	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		732.24	11.28	88.8	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:06
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.202	ug/l	0.48	606,827.19	3.581E+00	Pulse	0.50	3
As			1	50.113	ug/l	1.22	61,440.46	3.626E-01	Pulse	1.00	3
Mo			1	50.982	ug/l	1.13	335,045.79	1.311E+00	Pulse	0.50	3
Pb			1	49.395	ug/l	0.68	1,624,131.79	4.059E-01	Pulse	1.00	3
Be			1	51.921	ug/l	0.88	2,924.55	1.256E-02	Pulse	2.00	3
Ag			1	50.214	ug/l	0.54	1,172,000.87	4.587E+00	Pulse	0.50	3
Ba			1	49.179	ug/l	1.39	109,811.76	7.192E-02	Pulse	0.50	3
Tl			1	50.907	ug/l	0.22	2,389,750.67	5.973E-01	Pulse	0.50	3
Sn			1	50.762	ug/l	0.80	274,981.70	1.801E-01	Pulse	0.30	3
Sr			1	50.026	ug/l	1.36	267,730.87	1.754E-01	Pulse	0.50	3
[Pb]			1	49.404	ug/l	0.29	764,854.69	1.912E-01	Pulse	0.50	3
Ca			1	4903.956	ug/l	0.08	137,776.23	5.919E-01	Pulse	0.50	3
Ti			1	50.858	ug/l	3.55	11,770.24	5.057E-02	Pulse	0.50	3
Na			1	5102.027	ug/l	0.07	7,578,298.17	3.256E+01	Analog	1.00	3
Mg			1	5033.178	ug/l	0.66	3,334,312.25	1.432E+01	Pulse	1.00	3
K			1	5053.346	ug/l	0.61	2,717,648.08	1.168E+01	Pulse	1.00	3
V			1	50.941	ug/l	0.92	439,097.90	1.886E+00	Pulse	0.50	3
Mn			1	49.793	ug/l	0.76	266,537.59	1.573E+00	Pulse	0.50	3
Fe			1	5106.837	ug/l	0.46	46,687,926.67	2.755E+02	Analog	0.50	3
Co			1	51.460	ug/l	0.20	1,023,107.56	6.038E+00	Pulse	0.50	3
Ni			1	51.681	ug/l	0.82	291,615.22	1.721E+00	Pulse	0.50	3
Cu			1	52.235	ug/l	0.55	813,496.77	4.801E+00	Pulse	0.50	3
Zn			1	50.508	ug/l	0.70	110,605.70	4.329E-01	Pulse	1.00	3
Cd			1	49.509	ug/l	0.80	152,086.15	5.952E-01	Pulse	0.50	3
Al			1	4764.015	ug/l	0.86	989,969.62	4.253E+00	Pulse	1.00	3
Se			1	49.154	ug/l	0.56	4,033.65	1.579E-02	Pulse	3.00	3
Sb			1	48.079	ug/l	0.18	332,752.79	1.302E+00	Pulse	1.00	3
Se			1	48.909	ug/l	1.56	1,991.33	7.794E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,001,240.75	0.62	98.9	Pulse	0.50	3
1	Sc		232,765.52	0.65	102.7	Pulse	0.30	3
1	Ge		169,458.92	1.47	103.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,526,787.89	0.34	100.8	Pulse	0.30	3
1	Tb		5,249,983.83	0.83	100.3	Pulse	0.50	3
1	Lu		3,247,591.08	0.68	97.9	Pulse	0.50	3
1	Ge		255,518.09	0.81	103.8	Pulse	0.30	3
1	Te		4.00	50.00		Pulse	0.50	3
1	Li		873.36	7.36	105.9	Pulse	0.30	3

Quantitation Report

File Name	018_CCV.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:10
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.067	ug/l	0.77	1,190,635.42	6.923E+00	Pulse	0.50	3
As			1	97.525	ug/l	0.10	121,328.88	7.055E-01	Pulse	1.00	3
Mo			1	98.609	ug/l	1.24	646,810.33	2.536E+00	Pulse	0.50	3
Pb			1	97.236	ug/l	0.71	3,146,359.00	7.988E-01	Pulse	1.00	3
Be			1	100.580	ug/l	2.00	5,738.65	2.434E-02	Pulse	2.00	3
Ag			1	96.438	ug/l	0.77	2,246,882.17	8.809E+00	Pulse	0.50	3
Ba			1	97.871	ug/l	0.38	215,954.18	1.431E-01	Pulse	0.50	3
Tl			1	100.772	ug/l	0.83	4,656,681.33	1.182E+00	Pulse	0.50	3
Sn			1	99.749	ug/l	1.04	533,847.04	3.538E-01	Pulse	0.30	3
Sr			1	99.111	ug/l	0.50	523,705.30	3.471E-01	Pulse	0.50	3
[Pb]			1	97.400	ug/l	0.45	1,483,975.41	3.768E-01	Pulse	0.50	3
Ca			1	9541.561	ug/l	1.10	271,461.90	1.151E+00	Pulse	0.50	3
Ti			1	96.897	ug/l	2.68	22,717.16	9.634E-02	Pulse	0.50	3
Na			1	9986.077	ug/l	0.88	15,018,853.00	6.369E+01	Analog	1.00	3
Mg			1	9768.251	ug/l	1.24	6,555,186.83	2.780E+01	Analog	1.00	3
K			1	9887.254	ug/l	1.15	5,367,686.83	2.276E+01	Analog	1.00	3
V			1	98.983	ug/l	2.19	863,924.02	3.664E+00	Pulse	0.50	3
Mn			1	96.762	ug/l	0.63	525,475.55	3.055E+00	Pulse	0.50	3
Fe			1	9874.565	ug/l	1.39	91,613,928.00	5.327E+02	Analog	0.50	3
Co			1	100.158	ug/l	0.94	2,020,905.21	1.175E+01	Pulse	0.50	3
Ni			1	99.431	ug/l	0.51	569,269.56	3.310E+00	Pulse	0.50	3
Cu			1	99.809	ug/l	0.93	1,568,333.83	9.119E+00	Pulse	0.50	3
Zn			1	98.689	ug/l	1.03	214,871.05	8.424E-01	Pulse	1.00	3
Cd			1	96.204	ug/l	1.26	294,999.31	1.157E+00	Pulse	0.50	3
Al			1	9250.094	ug/l	1.92	1,946,820.71	8.256E+00	Pulse	1.00	3
Se			1	96.100	ug/l	1.91	7,864.62	3.083E-02	Pulse	3.00	3
Sb			1	94.913	ug/l	1.09	655,659.37	2.571E+00	Pulse	1.00	3
Se			1	95.073	ug/l	2.03	3,849.39	1.509E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,938,842.33	0.15	97.3	Pulse	0.50	3
1	Sc		235,830.76	1.20	104.1	Pulse	0.30	3
1	Ge		171,984.05	0.32	105.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,508,949.11	0.21	99.6	Pulse	0.30	3
1	Tb		5,259,765.00	0.88	100.5	Pulse	0.50	3
1	Lu		3,252,385.42	0.63	98.0	Pulse	0.50	3
1	Ge		255,072.32	0.50	103.6	Pulse	0.30	3
1	Te		12.00	60.09		Pulse	0.50	3
1	Li		791.13	3.19	96.0	Pulse	0.30	3

Quantitation Report

File Name 019_CCB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:14
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	26572.53	1,034.03	5.883E-03	Pulse	0.50	3
As			1	0.014	ug/l	44.61	46.00	2.618E-04	Pulse	1.00	3
Mo			1	0.276	ug/l	21.33	1,923.44	7.310E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	19.30	1,784.43	4.345E-04	Pulse	1.00	3
Be			1	0.031	ug/l	32.28	2.17	8.959E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	21.63	470.68	1.789E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	872.01	28.67	1.814E-05	Pulse	0.50	3
Tl			1	0.014	ug/l	24.00	838.03	2.041E-04	Pulse	0.50	3
Sn			1	0.101	ug/l	26.81	763.36	4.818E-04	Pulse	0.30	3
Sr			1	-0.002	ug/l	-361.83	532.01	3.362E-04	Pulse	0.50	3
[Pb]			1	0.024	ug/l	8.97	823.36	2.005E-04	Pulse	0.50	3
Ca			1	1.990	ug/l	10.56	182.67	7.547E-04	Pulse	0.50	3
Ti			1	0.080	ug/l	9.78	22.00	9.087E-05	Pulse	0.50	3
Na			1	6.248	ug/l	13.34	18,495.20	7.644E-02	Pulse	1.00	3
Mg			1	3.387	ug/l	9.34	2,693.52	1.113E-02	Pulse	1.00	3
K			1	3.891	ug/l	13.27	22,703.01	9.381E-02	Pulse	1.00	3
V			1	-0.007	ug/l	-64.79	311.33	1.287E-03	Pulse	0.50	3
Mn			1	0.006	ug/l	137.11	214.00	1.217E-03	Pulse	0.50	3
Fe			1	3.899	ug/l	4.32	45,995.64	2.617E-01	Pulse	0.50	3
Co			1	0.008	ug/l	54.48	226.67	1.290E-03	Pulse	0.50	3
Ni			1	-0.007	ug/l	-75.77	113.33	6.446E-04	Pulse	0.50	3
Cu			1	-0.134	ug/l	-4.02	8,229.78	4.683E-02	Pulse	0.50	3
Zn			1	-0.071	ug/l	-21.55	776.02	2.949E-03	Pulse	1.00	3
Cd			1	0.013	ug/l	48.06	46.00	1.749E-04	Pulse	0.50	3
Al			1	2.232	ug/l	20.46	815.35	3.371E-03	Pulse	1.00	3
Se			1	0.072	ug/l	30.19	13.89	5.278E-05	Pulse	3.00	3
Sb			1	0.024	ug/l	19.96	234.00	8.894E-04	Pulse	1.00	3
Se			1	0.038	ug/l	198.36	18.00	6.840E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,107,264.00	0.45	101.5	Pulse	0.50	3
1	Sc		242,019.74	0.67	106.8	Pulse	0.30	3

Quantitation Report

1	Ge		175,755.00	0.22	107.6	Pulse	0.30	3
1	In		1,582,857.61	0.74	104.5	Pulse	0.30	3
1	Tb		5,324,703.00	0.72	101.8	Pulse	0.50	3
1	Lu		3,291,770.92	0.09	99.2	Pulse	0.50	3
1	Ge		263,110.06	0.12	106.9	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		991.14	1.97	120.2	Pulse	0.30	3

Quantitation Report

File Name 020_MB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:17
Sample Name MP40297-MB1
Sample Type MB
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.060	ug/l	0.90	3,575.67	2.068E-02	Pulse	0.50	3
As			1	0.144	ug/l	45.19	64.00	3.699E-04	Pulse	1.00	3
Mo			1	1.383	ug/l	5.77	1,899.44	7.321E-03	Pulse	0.50	3
Pb			1	0.175	ug/l	6.88	2,067.13	5.105E-04	Pulse	1.00	3
Be			1	0.069	ug/l	142.59	1.17	4.809E-06	Pulse	2.00	3
Ag			1	0.125	ug/l	14.92	628.68	2.424E-03	Pulse	0.50	3
Ba			1	0.089	ug/l	36.98	67.33	4.323E-05	Pulse	0.50	3
Tl			1	0.080	ug/l	27.94	912.70	2.255E-04	Pulse	0.50	3
Sn			1	24.567	ug/l	1.10	27,337.04	1.754E-02	Pulse	0.30	3
Sr			1	0.152	ug/l	16.66	700.02	4.493E-04	Pulse	0.50	3
[Pb]			1	0.164	ug/l	16.76	948.70	2.343E-04	Pulse	0.50	3
Ca			1	61.934	ug/l	19.69	486.68	2.009E-03	Pulse	0.50	3
Ti			1	0.855	ug/l	30.19	44.00	1.818E-04	Pulse	0.50	3
Na			1	55.567	ug/l	16.31	26,029.29	1.075E-01	Pulse	1.00	3
Mg			1	43.708	ug/l	28.35	6,384.74	2.637E-02	Pulse	1.00	3
K			1	43.879	ug/l	18.18	25,445.34	1.050E-01	Pulse	1.00	3
V			1	0.286	ug/l	9.73	884.02	3.648E-03	Pulse	0.50	3
Mn			1	2.111	ug/l	5.68	2,482.83	1.436E-02	Pulse	0.50	3
Fe			1	51.073	ug/l	25.44	104,095.59	6.024E-01	Pulse	0.50	3
Co			1	0.066	ug/l	29.73	338.00	1.954E-03	Pulse	0.50	3
Ni			1	0.260	ug/l	11.10	452.68	2.618E-03	Pulse	0.50	3
Cu			1	0.541	ug/l	13.55	11,902.36	6.884E-02	Pulse	0.50	3
Zn			1	2.750	ug/l	2.60	2,135.12	8.230E-03	Pulse	1.00	3
Cd			1	0.072	ug/l	49.23	50.00	1.929E-04	Pulse	0.50	3
Al			1	36.049	ug/l	31.98	1,891.76	7.813E-03	Pulse	1.00	3
Se			1	0.136	ug/l	110.99	10.00	3.854E-05	Pulse	3.00	3
Sb			1	0.214	ug/l	18.02	360.34	1.389E-03	Pulse	1.00	3
Se			1	0.047	ug/l	487.24	16.56	6.383E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,048,774.00	0.42	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		242,328.91	0.53	106.9	Pulse	0.30	3
1	Ge		172,906.50	0.77	105.9	Pulse	0.30	3
1	In		1,558,338.10	0.68	102.8	Pulse	0.30	3
1	Tb		5,306,450.33	1.24	101.4	Pulse	0.50	3
1	Lu		3,233,799.92	0.59	97.4	Pulse	0.50	3
1	Ge		259,404.80	0.72	105.4	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		928.92	10.30	112.7	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:21
Sample Name MP40297-B1
Sample Type BSP
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	503.370	ug/l	0.59	1,178,671.29	7.035E+00	Pulse	0.50	3
As			1	511.117	ug/l	0.34	123,887.57	7.394E-01	Pulse	1.00	3
Mo			1	493.278	ug/l	1.47	638,932.59	2.537E+00	Pulse	0.50	3
Pb			1	487.746	ug/l	0.86	3,074,472.42	8.014E-01	Pulse	1.00	3
Be			1	518.357	ug/l	0.42	5,872.02	2.509E-02	Pulse	2.00	3
Ag			1	229.531	ug/l	1.30	1,056,033.37	4.193E+00	Pulse	0.50	3
Ba			1	482.575	ug/l	0.50	211,220.76	1.411E-01	Pulse	0.50	3
Tl			1	480.633	ug/l	0.88	4,326,635.67	1.128E+00	Pulse	0.50	3
Sn			1	516.258	ug/l	0.41	548,064.28	3.662E-01	Pulse	0.30	3
Sr			1	495.083	ug/l	0.40	518,925.42	3.467E-01	Pulse	0.50	3
[Pb]			1	471.340	ug/l	0.61	1,398,967.29	3.646E-01	Pulse	0.50	3
Ca			1	47645.265	ug/l	0.82	269,122.87	1.150E+00	Pulse	0.50	3
Ti			1	481.006	ug/l	0.98	22,390.79	9.565E-02	Pulse	0.50	3
Na			1	49619.424	ug/l	0.69	14,815,501.33	6.329E+01	Analog	1.00	3
Mg			1	48413.355	ug/l	1.14	6,449,971.67	2.756E+01	Analog	1.00	3
K			1	48752.036	ug/l	0.31	5,254,972.00	2.245E+01	Analog	1.00	3
V			1	489.940	ug/l	0.75	849,028.90	3.627E+00	Pulse	0.50	3
Mn			1	492.224	ug/l	1.37	520,777.45	3.109E+00	Pulse	0.50	3
Fe			1	49466.042	ug/l	1.23	89,413,626.67	5.337E+02	Analog	0.50	3
Co			1	513.223	ug/l	1.41	2,017,497.54	1.204E+01	Pulse	0.50	3
Ni			1	502.783	ug/l	1.43	560,809.94	3.347E+00	Pulse	0.50	3
Cu			1	503.124	ug/l	0.94	1,540,187.58	9.193E+00	Pulse	0.50	3
Zn			1	468.580	ug/l	1.65	201,502.71	8.001E-01	Pulse	1.00	3
Cd			1	470.784	ug/l	1.36	285,070.63	1.132E+00	Pulse	0.50	3
Al			1	45086.767	ug/l	0.99	1,883,993.58	8.049E+00	Pulse	1.00	3
Se			1	453.386	ug/l	1.66	7,327.63	2.910E-02	Pulse	3.00	3
Sb			1	487.913	ug/l	1.74	665,544.17	2.643E+00	Pulse	1.00	3
Se			1	446.196	ug/l	1.35	3,568.44	1.417E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,836,584.50	0.32	94.8	Pulse	0.50	3
1	Sc		234,086.85	0.91	103.3	Pulse	0.30	3
1	Ge		167,541.70	0.67	102.6	Pulse	0.30	3
1	In		1,496,627.44	0.61	98.8	Pulse	0.30	3
1	Tb		5,178,329.67	0.50	99.0	Pulse	0.50	3
1	Lu		3,204,162.92	0.57	96.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,869.23	1.36	102.3	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		872.25	2.71	105.8	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:25
Sample Name FA91967-1R
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	144.685	ug/l	0.80	338,035.33	2.026E+00	Pulse	0.50	3
As			1	32.301	ug/l	2.41	7,820.94	4.688E-02	Pulse	1.00	3
Mo			1	5.425	ug/l	3.57	6,863.95	2.811E-02	Pulse	0.50	3
Pb			1	84.154	ug/l	0.26	521,683.52	1.385E-01	Pulse	1.00	3
Be			1	6.418	ug/l	14.62	76.17	3.120E-04	Pulse	2.00	3
Ag			1	0.256	ug/l	2.47	1,175.37	4.813E-03	Pulse	0.50	3
Ba			1	861.111	ug/l	0.23	366,353.48	2.518E-01	Pulse	0.50	3
Tl			1	1.361	ug/l	1.54	12,177.03	3.232E-03	Pulse	0.50	3
Sn			1	27.662	ug/l	2.88	28,716.93	1.974E-02	Pulse	0.30	3
Sr			1	586.895	ug/l	0.27	597,864.58	4.110E-01	Pulse	0.50	3
[Pb]			1	83.815	ug/l	1.04	244,653.99	6.493E-02	Pulse	0.50	3
Ca			1	78178.949	ug/l	0.77	460,548.64	1.886E+00	Pulse	0.50	3
Ti			1	5811.377	ug/l	0.75	282,161.03	1.156E+00	Pulse	0.50	3
Na			1	1437.924	ug/l	1.04	456,533.84	1.870E+00	Pulse	1.00	3
Mg			1	52455.475	ug/l	0.68	7,290,225.67	2.986E+01	Analog	1.00	3
K			1	31685.153	ug/l	0.66	3,569,839.08	1.462E+01	Pulse	1.00	3
V			1	418.315	ug/l	0.19	756,274.15	3.097E+00	Pulse	0.50	3
Mn			1	2645.846	ug/l	0.98	2,786,599.92	1.670E+01	Pulse	0.50	3
Fe			1	233281.397	ug/l	1.04	419,837,664.00	2.517E+03	Analog	0.50	3
Co			1	71.742	ug/l	0.99	280,874.95	1.684E+00	Pulse	0.50	3
Ni			1	95.745	ug/l	1.78	106,454.55	6.382E-01	Pulse	0.50	3
Cu			1	134.679	ug/l	1.74	417,711.86	2.504E+00	Pulse	0.50	3
Zn			1	383.448	ug/l	1.52	160,040.41	6.554E-01	Pulse	1.00	3
Cd			1	1.292	ug/l	4.50	763.35	3.125E-03	Pulse	0.50	3
Al			1	103621.284	ug/l	1.01	4,516,303.50	1.850E+01	Pulse	1.00	3
Se			1	34.514	ug/l	3.23	547.56	2.243E-03	Pulse	3.00	3
Sb			1	1.128	ug/l	1.61	1,548.73	6.342E-03	Pulse	1.00	3
Se			1	57.966	ug/l	4.64	462.67	1.895E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,767,995.42	0.61	93.1	Pulse	0.50	3
1	Sc		244,186.49	0.88	107.7	Pulse	0.30	3
1	Ge		166,824.24	0.77	102.1	Pulse	0.30	3
1	In		1,454,773.14	0.82	96.0	Pulse	0.30	3
1	Tb		5,117,225.67	0.85	97.8	Pulse	0.50	3
1	Lu		3,162,886.50	0.87	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,201.13	0.87	99.2	Pulse	0.30	3
1	Te		4.67	89.21		Pulse	0.50	3
1	Li		876.69	5.94	106.3	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:29
Sample Name	MP40297-D1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	164.469	ug/l	1.14	389,620.30	2.303E+00	Pulse	0.50	3
As			1	37.190	ug/l	1.24	9,129.52	5.395E-02	Pulse	1.00	3
Mo			1	7.791	ug/l	0.98	9,925.33	4.027E-02	Pulse	0.50	3
Pb			1	92.671	ug/l	0.60	574,575.40	1.524E-01	Pulse	1.00	3
Be			1	5.829	ug/l	2.87	69.83	2.835E-04	Pulse	2.00	3
Ag			1	0.255	ug/l	0.68	1,180.71	4.791E-03	Pulse	0.50	3
Ba			1	916.505	ug/l	0.43	391,320.31	2.680E-01	Pulse	0.50	3
Tl			1	1.330	ug/l	1.50	11,910.84	3.160E-03	Pulse	0.50	3
Sn			1	27.860	ug/l	1.26	29,021.81	1.988E-02	Pulse	0.30	3
Sr			1	570.573	ug/l	0.42	583,354.62	3.996E-01	Pulse	0.50	3
[Pb]			1	91.919	ug/l	0.74	268,353.62	7.120E-02	Pulse	0.50	3
Ca			1	66870.769	ug/l	0.72	397,349.50	1.613E+00	Pulse	0.50	3
Ti			1	6260.721	ug/l	1.01	306,588.23	1.245E+00	Pulse	0.50	3
Na			1	1535.087	ug/l	0.68	490,994.77	1.994E+00	Pulse	1.00	3
Mg			1	55073.235	ug/l	0.82	7,720,051.17	3.135E+01	Analog	1.00	3
K			1	33104.179	ug/l	0.57	3,761,002.33	1.527E+01	Pulse	1.00	3
V			1	497.463	ug/l	1.28	907,011.62	3.683E+00	Pulse	0.50	3
Mn			1	2681.572	ug/l	0.51	2,864,569.75	1.693E+01	Pulse	0.50	3
Fe			1	269549.022	ug/l	0.91	492,022,528.00	2.908E+03	Analog	0.50	3
Co			1	87.218	ug/l	0.50	346,329.70	2.047E+00	Pulse	0.50	3
Ni			1	105.394	ug/l	0.64	118,851.84	7.024E-01	Pulse	0.50	3
Cu			1	180.101	ug/l	0.83	563,212.40	3.329E+00	Pulse	0.50	3
Zn			1	360.231	ug/l	0.91	151,807.79	6.160E-01	Pulse	1.00	3
Cd			1	1.284	ug/l	5.53	765.35	3.106E-03	Pulse	0.50	3
Al			1	109769.684	ug/l	1.31	4,825,540.50	1.959E+01	Mix	1.00	3
Se			1	32.966	ug/l	0.92	528.23	2.143E-03	Pulse	3.00	3
Sb			1	1.358	ug/l	4.15	1,869.43	7.586E-03	Pulse	1.00	3
Se			1	55.770	ug/l	8.56	450.12	1.826E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,769,151.92	0.37	93.1	Pulse	0.50	3
1	Sc		246,294.33	0.78	108.7	Pulse	0.30	3
1	Ge		169,200.05	0.91	103.6	Pulse	0.30	3
1	In		1,460,013.48	0.30	96.4	Pulse	0.30	3
1	Tb		5,129,951.17	1.08	98.0	Pulse	0.50	3
1	Lu		3,163,426.17	1.01	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,464.00	0.72	100.1	Pulse	0.30	3
1	Te		8.67	93.26		Pulse	0.50	3
1	Li		803.35	11.23	97.4	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:33
Sample Name	MP40297-SD1
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	144.278	ug/l	1.30	70,754.95	4.088E-01	Pulse	0.50	3
As			1	32.068	ug/l	5.56	1,633.41	9.438E-03	Pulse	1.00	3
Mo			1	5.269	ug/l	2.41	1,450.73	5.626E-03	Pulse	0.50	3
Pb			1	82.951	ug/l	0.86	110,938.55	2.747E-02	Pulse	1.00	3
Be			1	5.171	ug/l	21.46	12.50	5.153E-05	Pulse	2.00	3
Ag			1	0.320	ug/l	11.19	338.01	1.311E-03	Pulse	0.50	3
Ba			1	852.294	ug/l	1.50	77,291.26	4.986E-02	Pulse	0.50	3
Tl			1	1.243	ug/l	2.95	2,511.53	6.219E-04	Pulse	0.50	3
Sn			1	25.659	ug/l	3.62	5,829.85	3.761E-03	Pulse	0.30	3
Sr			1	583.886	ug/l	1.05	127,178.53	8.205E-02	Pulse	0.50	3
[Pb]			1	81.340	ug/l	1.25	51,241.64	1.269E-02	Pulse	0.50	3
Ca			1	83047.585	ug/l	1.18	97,253.73	4.011E-01	Pulse	0.50	3
Ti			1	6049.391	ug/l	2.88	58,329.72	2.406E-01	Pulse	0.50	3
Na			1	1508.150	ug/l	0.29	102,110.03	4.211E-01	Pulse	1.00	3
Mg			1	55823.311	ug/l	1.05	1,540,991.42	6.356E+00	Pulse	1.00	3
K			1	33704.714	ug/l	0.84	770,325.21	3.177E+00	Pulse	1.00	3
V			1	438.844	ug/l	0.91	157,849.35	6.510E-01	Pulse	0.50	3
Mn			1	2692.255	ug/l	0.83	588,458.46	3.400E+00	Pulse	0.50	3
Fe			1	238449.016	ug/l	0.38	89,045,869.33	5.145E+02	Analog	0.50	3
Co			1	74.187	ug/l	1.06	60,318.72	3.485E-01	Pulse	0.50	3
Ni			1	99.115	ug/l	1.70	22,988.31	1.328E-01	Pulse	0.50	3
Cu			1	135.611	ug/l	1.07	95,427.36	5.514E-01	Pulse	0.50	3
Zn			1	392.735	ug/l	0.32	35,347.92	1.371E-01	Pulse	1.00	3
Cd			1	1.122	ug/l	4.48	144.00	5.584E-04	Pulse	0.50	3
Al			1	111275.255	ug/l	1.70	963,430.71	3.974E+00	Pulse	1.00	3
Se			1	33.890	ug/l	8.93	119.78	4.644E-04	Pulse	3.00	3
Sb			1	0.966	ug/l	6.81	329.67	1.278E-03	Pulse	1.00	3
Se			1	56.144	ug/l	14.34	107.56	4.174E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,038,135.33	0.59	99.8	Pulse	0.50	3
1	Sc		242,463.05	0.61	107.0	Pulse	0.30	3
1	Ge		173,055.42	0.49	105.9	Pulse	0.30	3
1	In		1,550,031.12	0.59	102.3	Pulse	0.30	3
1	Tb		5,264,393.00	1.05	100.6	Pulse	0.50	3
1	Lu		3,286,174.58	0.89	99.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		257,850.69	0.70	104.8	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		901.14	7.27	109.3	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:37
Sample Name MP40297-S1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	641.245	ug/l	0.97	1,489,921.71	8.961E+00	Pulse	0.50	3
As			1	550.433	ug/l	0.89	132,404.91	7.963E-01	Pulse	1.00	3
Mo			1	506.696	ug/l	0.57	632,662.94	2.606E+00	Pulse	0.50	3
Pb			1	610.515	ug/l	0.51	3,669,235.00	1.003E+00	Pulse	1.00	3
Be			1	487.788	ug/l	0.54	5,796.33	2.361E-02	Pulse	2.00	3
Ag			1	221.049	ug/l	0.68	980,342.71	4.038E+00	Pulse	0.50	3
Ba			1	1314.767	ug/l	0.54	551,956.58	3.845E-01	Pulse	0.50	3
Tl			1	493.428	ug/l	0.35	4,235,456.67	1.158E+00	Pulse	0.50	3
Sn			1	537.170	ug/l	0.85	546,997.62	3.810E-01	Pulse	0.30	3
Sr			1	1068.572	ug/l	0.83	1,073,770.88	7.480E-01	Pulse	0.50	3
[Pb]			1	587.202	ug/l	1.15	1,661,658.17	4.542E-01	Pulse	0.50	3
Ca			1	103185.396	ug/l	0.16	611,223.52	2.489E+00	Pulse	0.50	3
Ti			1	6579.446	ug/l	0.67	321,232.73	1.308E+00	Pulse	0.50	3
Na			1	47693.361	ug/l	0.39	14,938,351.33	6.084E+01	Analog	1.00	3
Mg			1	95448.687	ug/l	0.16	13,339,321.00	5.432E+01	Analog	1.00	3
K			1	75899.618	ug/l	0.46	8,570,119.33	3.490E+01	Analog	1.00	3
V			1	877.099	ug/l	0.24	1,594,124.00	6.492E+00	Pulse	0.50	3
Mn			1	2890.582	ug/l	0.57	3,034,480.67	1.825E+01	Pulse	0.50	3
Fe			1	279216.545	ug/l	0.74	500,874,282.67	3.012E+03	Analog	0.50	3
Co			1	577.821	ug/l	0.56	2,254,373.58	1.356E+01	Pulse	0.50	3
Ni			1	582.190	ug/l	1.26	644,474.79	3.876E+00	Pulse	0.50	3
Cu			1	995.018	ug/l	0.69	3,013,509.50	1.812E+01	Pulse	0.50	3
Zn			1	802.163	ug/l	1.13	331,902.05	1.367E+00	Pulse	1.00	3
Cd			1	489.956	ug/l	1.22	285,971.98	1.178E+00	Pulse	0.50	3
Al			1	154609.947	ug/l	0.46	6,776,362.83	2.760E+01	Analog	1.00	3
Se			1	484.767	ug/l	1.35	7,551.60	3.111E-02	Pulse	3.00	3
Sb			1	255.749	ug/l	1.20	336,307.26	1.385E+00	Pulse	1.00	3
Se			1	496.758	ug/l	0.69	3,827.83	1.577E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,658,225.58	0.78	90.4	Pulse	0.50	3
1	Sc		245,546.15	0.22	108.3	Pulse	0.30	3
1	Ge		166,274.86	0.30	101.8	Pulse	0.30	3
1	In		1,435,609.42	0.89	94.7	Pulse	0.30	3
1	Tb		5,081,964.83	0.84	97.1	Pulse	0.50	3
1	Lu		3,147,466.67	0.41	94.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,770.66	1.04	98.6	Pulse	0.30	3
1	Te		15.33	15.06		Pulse	0.50	3
1	Li		872.25	6.69	105.8	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:40
Sample Name	MP40297-S2
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	637.280	ug/l	0.32	1,467,227.75	8.905E+00	Pulse	0.50	3
As			1	524.946	ug/l	0.26	125,126.88	7.594E-01	Pulse	1.00	3
Mo			1	482.960	ug/l	0.55	602,817.96	2.484E+00	Pulse	0.50	3
Pb			1	597.226	ug/l	0.08	3,575,689.83	9.812E-01	Pulse	1.00	3
Be			1	481.670	ug/l	1.17	5,677.63	2.331E-02	Pulse	2.00	3
Ag			1	214.825	ug/l	1.03	952,362.54	3.925E+00	Pulse	0.50	3
Ba			1	1560.247	ug/l	0.33	648,447.13	4.563E-01	Pulse	0.50	3
Tl			1	486.465	ug/l	0.90	4,159,686.33	1.141E+00	Pulse	0.50	3
Sn			1	529.987	ug/l	0.36	534,293.52	3.759E-01	Pulse	0.30	3
Sr			1	1056.767	ug/l	0.10	1,051,297.77	7.397E-01	Pulse	0.50	3
[Pb]			1	576.157	ug/l	0.12	1,624,241.88	4.457E-01	Pulse	0.50	3
Ca			1	104057.209	ug/l	1.18	611,403.79	2.510E+00	Pulse	0.50	3
Ti			1	7634.899	ug/l	1.16	369,753.28	1.518E+00	Pulse	0.50	3
Na			1	46830.439	ug/l	0.94	14,549,979.67	5.974E+01	Analog	1.00	3
Mg			1	98487.196	ug/l	0.74	13,653,161.00	5.605E+01	Analog	1.00	3
K			1	76725.640	ug/l	1.52	8,592,869.67	3.528E+01	Analog	1.00	3
V			1	894.435	ug/l	0.99	1,612,517.42	6.620E+00	Pulse	0.50	3
Mn			1	3339.732	ug/l	0.12	3,474,057.33	2.109E+01	Pulse	0.50	3
Fe			1	280236.101	ug/l	0.43	498,126,208.00	3.023E+03	Analog	0.50	3
Co			1	573.779	ug/l	0.64	2,218,223.33	1.346E+01	Pulse	0.50	3
Ni			1	582.440	ug/l	0.22	638,904.27	3.878E+00	Pulse	0.50	3
Cu			1	629.684	ug/l	0.49	1,893,217.96	1.149E+01	Pulse	0.50	3
Zn			1	792.006	ug/l	1.06	327,594.63	1.350E+00	Pulse	1.00	3
Cd			1	465.269	ug/l	0.76	271,472.68	1.119E+00	Pulse	0.50	3
Al			1	147652.519	ug/l	0.92	6,419,190.00	2.636E+01	Analog	1.00	3
Se			1	474.438	ug/l	1.31	7,388.43	3.045E-02	Pulse	3.00	3
Sb			1	249.345	ug/l	1.09	327,770.80	1.351E+00	Pulse	1.00	3
Se			1	492.301	ug/l	1.24	3,792.05	1.563E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,644,205.00	0.65	90.0	Pulse	0.50	3
1	Sc		243,581.35	1.17	107.5	Pulse	0.30	3
1	Ge		164,762.67	0.96	100.9	Pulse	0.30	3
1	In		1,421,197.37	0.55	93.8	Pulse	0.30	3
1	Tb		5,040,775.33	0.80	96.3	Pulse	0.50	3
1	Lu		3,124,052.00	0.82	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,682.46	1.22	98.6	Pulse	0.30	3
1	Te		16.67	49.96		Pulse	0.50	3
1	Li		842.25	13.01	102.2	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:44
Sample Name	MP40297-PS1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	196.029	ug/l	1.95	460,980.12	2.743E+00	Pulse	0.50	3
As			1	85.526	ug/l	0.41	20,813.63	1.239E-01	Pulse	1.00	3
Mo			1	56.962	ug/l	0.28	71,250.35	2.932E-01	Pulse	0.50	3
Pb			1	136.108	ug/l	0.66	837,042.04	2.238E-01	Pulse	1.00	3
Be			1	56.935	ug/l	3.71	678.68	2.757E-03	Pulse	2.00	3
Ag			1	10.088	ug/l	0.87	44,824.54	1.844E-01	Pulse	0.50	3
Ba			1	927.156	ug/l	0.79	391,445.41	2.711E-01	Pulse	0.50	3
Tl			1	51.386	ug/l	1.67	451,097.71	1.206E-01	Pulse	0.50	3
Sn			1	77.886	ug/l	0.27	79,911.50	5.535E-02	Pulse	0.30	3
Sr			1	652.942	ug/l	0.41	660,061.59	4.572E-01	Pulse	0.50	3
[Pb]			1	133.223	ug/l	1.07	385,791.22	1.031E-01	Pulse	0.50	3
Ca			1	83580.215	ug/l	0.59	496,456.23	2.016E+00	Pulse	0.50	3
Ti			1	5928.961	ug/l	0.18	290,251.04	1.179E+00	Pulse	0.50	3
Na			1	6183.844	ug/l	0.18	1,949,944.46	7.920E+00	Pulse	1.00	3
Mg			1	57708.235	ug/l	0.38	8,086,767.50	3.285E+01	Analog	1.00	3
K			1	36446.986	ug/l	0.65	4,137,241.83	1.680E+01	Pulse	1.00	3
V			1	471.979	ug/l	0.68	860,317.42	3.494E+00	Pulse	0.50	3
Mn			1	2720.986	ug/l	0.14	2,886,599.67	1.718E+01	Pulse	0.50	3
Fe			1	242054.209	ug/l	0.68	438,793,472.00	2.611E+03	Analog	0.50	3
Co			1	123.788	ug/l	0.96	488,124.52	2.905E+00	Pulse	0.50	3
Ni			1	147.028	ug/l	0.24	164,591.22	9.795E-01	Pulse	0.50	3
Cu			1	187.512	ug/l	0.96	581,950.14	3.463E+00	Pulse	0.50	3
Zn			1	443.562	ug/l	0.58	184,133.53	7.576E-01	Pulse	1.00	3
Cd			1	50.548	ug/l	1.41	29,542.18	1.216E-01	Pulse	0.50	3
Al			1	109026.331	ug/l	0.43	4,791,455.67	1.946E+01	Pulse	1.00	3
Se			1	80.511	ug/l	1.57	1,261.82	5.191E-03	Pulse	3.00	3
Sb			1	49.137	ug/l	0.90	64,737.60	2.664E-01	Pulse	1.00	3
Se			1	107.671	ug/l	2.23	842.58	3.466E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,740,520.25	1.20	92.4	Pulse	0.50	3
1	Sc		246,206.43	0.45	108.6	Pulse	0.30	3
1	Ge		168,030.13	0.51	102.9	Pulse	0.30	3
1	In		1,443,726.57	1.05	95.3	Pulse	0.30	3
1	Tb		5,106,267.50	0.69	97.6	Pulse	0.50	3
1	Lu		3,144,309.25	1.21	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,042.42	0.65	98.7	Pulse	0.30	3
1	Te		10.00	34.64		Pulse	0.50	3
1	Li		813.36	10.60	98.7	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:48
Sample Name	FA91967-7R
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	278.599	ug/l	0.16	661,364.50	3.896E+00	Pulse	0.50	3
As			1	62.220	ug/l	0.44	15,303.12	9.016E-02	Pulse	1.00	3
Mo			1	9.926	ug/l	1.16	12,415.47	5.125E-02	Pulse	0.50	3
Pb			1	154.241	ug/l	0.76	910,613.85	2.536E-01	Pulse	1.00	3
Be			1	11.746	ug/l	9.86	154.83	5.699E-04	Pulse	2.00	3
Ag			1	0.622	ug/l	3.72	2,788.22	1.151E-02	Pulse	0.50	3
Ba			1	1738.268	ug/l	0.32	721,102.75	5.083E-01	Pulse	0.50	3
Tl			1	2.484	ug/l	1.93	21,068.31	5.867E-03	Pulse	0.50	3
Sn			1	33.681	ug/l	1.11	34,052.63	2.401E-02	Pulse	0.30	3
Sr			1	1202.029	ug/l	0.33	1,193,542.29	8.414E-01	Pulse	0.50	3
[Pb]			1	154.197	ug/l	0.16	428,685.29	1.194E-01	Pulse	0.50	3
Ca			1	178335.801	ug/l	0.25	1,168,761.79	4.302E+00	Pulse	0.50	3
Ti			1	6485.535	ug/l	0.35	350,359.16	1.290E+00	Pulse	0.50	3
Na			1	2220.883	ug/l	0.44	779,174.08	2.868E+00	Pulse	1.00	3
Mg			1	113764.974	ug/l	0.47	17,591,841.33	6.475E+01	Analog	1.00	3
K			1	69429.895	ug/l	0.28	8,676,320.33	3.193E+01	Analog	1.00	3
V			1	561.358	ug/l	0.58	1,129,052.42	4.156E+00	Pulse	0.50	3
Mn			1	5457.707	ug/l	1.06	5,848,283.17	3.446E+01	Analog	0.50	3
Fe			1	395576.620	ug/l	0.53	724,358,229.33	4.268E+03	Analog	0.50	3
Co			1	140.560	ug/l	0.60	559,845.79	3.298E+00	Pulse	0.50	3
Ni			1	218.891	ug/l	1.00	247,452.04	1.458E+00	Pulse	0.50	3
Cu			1	316.315	ug/l	0.68	984,751.77	5.802E+00	Pulse	0.50	3
Zn			1	716.618	ug/l	0.46	295,961.06	1.222E+00	Pulse	1.00	3
Cd			1	2.210	ug/l	9.23	1,291.38	5.332E-03	Pulse	0.50	3
Al			1	256334.918	ug/l	0.47	12,430,769.00	4.575E+01	Analog	1.00	3
Se			1	53.775	ug/l	3.59	842.24	3.477E-03	Pulse	3.00	3
Sb			1	1.937	ug/l	2.18	2,597.19	1.072E-02	Pulse	1.00	3
Se			1	89.693	ug/l	1.27	702.01	2.898E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,591,389.50	1.45	88.7	Pulse	0.50	3
1	Sc		271,690.80	0.11	119.9	Pulse	0.30	3
1	Ge		169,735.32	0.86	103.9	Pulse	0.30	3
1	In		1,418,575.54	0.81	93.6	Pulse	0.30	3
1	Tb		5,052,442.17	0.83	96.6	Pulse	0.50	3
1	Lu		3,121,730.33	1.42	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,228.11	0.65	98.4	Pulse	0.30	3
1	Te		11.33	36.74		Pulse	0.50	3
1	Li		841.13	5.17	102.0	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:52
Sample Name	FA92753-3A
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3852.545	ug/l	0.45	9,102,375.67	5.381E+01	Analog	0.50	3
As			1	1960.298	ug/l	0.23	479,701.34	2.836E+00	Pulse	1.00	3
Mo			1	1968.138	ug/l	0.71	2,436,469.25	1.012E+01	Pulse	0.50	3
Pb			1	4102.747	ug/l	0.23	25,184,815.33	6.739E+00	Analog	1.00	3
Be			1	1335.605	ug/l	0.55	14,949.48	6.463E-02	Pulse	2.00	3
Ag			1	735.113	ug/l	0.65	3,232,477.08	1.343E+01	Pulse	0.50	3
Ba			1	3081.508	ug/l	0.74	1,296,374.38	9.011E-01	Pulse	0.50	3
Tl			1	2285.403	ug/l	0.53	20,040,014.00	5.362E+00	Analog	0.50	3
Sn			1	2614.230	ug/l	0.30	2,667,110.73	1.854E+00	Pulse	0.30	3
Sr			1	3709.362	ug/l	0.96	3,734,441.00	2.596E+00	Pulse	0.50	3
[Pb]			1	4098.902	ug/l	0.92	11,846,739.67	3.170E+00	Analog	0.50	3
Ca			1	48502.635	ug/l	1.13	270,733.20	1.170E+00	Pulse	0.50	3
Ti			1	3355.416	ug/l	0.42	154,328.70	6.672E-01	Pulse	0.50	3
Na			1	16331.819	ug/l	0.54	4,824,362.50	2.086E+01	Analog	1.00	3
Mg			1	15725.416	ug/l	0.20	2,070,559.67	8.951E+00	Pulse	1.00	3
K			1	17728.603	ug/l	0.79	1,900,894.37	8.218E+00	Pulse	1.00	3
V			1	2068.910	ug/l	0.04	3,541,699.33	1.531E+01	Pulse	0.50	3
Mn			1	3687.245	ug/l	0.41	3,938,306.42	2.328E+01	Pulse	0.50	3
Fe			1	94068.932	ug/l	0.44	171,702,042.67	1.015E+03	Analog	0.50	3
Co			1	3389.306	ug/l	0.15	13,453,987.00	7.953E+01	Analog	0.50	3
Ni			1	4088.135	ug/l	0.32	4,603,605.00	2.721E+01	Pulse	0.50	3
Cu			1	1617.245	ug/l	0.86	4,976,840.67	2.942E+01	Pulse	0.50	3
Zn			1	5299.699	ug/l	0.33	2,169,485.25	9.013E+00	Pulse	1.00	3
Cd			1	3373.733	ug/l	0.60	1,952,480.92	8.112E+00	Pulse	0.50	3
Al			1	79190.304	ug/l	0.17	3,269,725.17	1.414E+01	Pulse	1.00	3
Se			1	2697.153	ug/l	0.88	41,630.02	1.729E-01	Pulse	3.00	3
Sb			1	1251.422	ug/l	0.52	1,631,507.62	6.778E+00	Pulse	1.00	3
Se			1	2733.296	ug/l	0.91	20,817.45	8.648E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,737,100.42	0.81	92.3	Pulse	0.50	3
1	Sc		231,306.67	1.22	102.1	Pulse	0.30	3
1	Ge		169,176.72	1.26	103.6	Pulse	0.30	3
1	In		1,438,650.12	0.91	94.9	Pulse	0.30	3
1	Tb		5,097,034.50	0.34	97.4	Pulse	0.50	3
1	Lu		3,076,451.33	0.79	92.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,710.09	1.08	97.8	Pulse	0.30	3
1	Te		10.67	28.64		Pulse	0.50	3
1	Li		828.91	5.75	100.5	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 9:56
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.043	ug/l	0.27	594,949.85	3.570E+00	Pulse	0.50	3
As			1	50.094	ug/l	0.68	60,399.12	3.624E-01	Pulse	1.00	3
Mo			1	50.328	ug/l	1.20	321,714.32	1.294E+00	Pulse	0.50	3
Pb			1	49.528	ug/l	0.42	1,593,815.04	4.070E-01	Pulse	1.00	3
Be			1	50.941	ug/l	2.95	2,845.70	1.233E-02	Pulse	2.00	3
Ag			1	49.960	ug/l	0.89	1,134,261.50	4.564E+00	Pulse	0.50	3
Ba			1	49.811	ug/l	0.63	109,441.53	7.285E-02	Pulse	0.50	3
Tl			1	50.745	ug/l	0.32	2,331,507.42	5.954E-01	Pulse	0.50	3
Sn			1	50.758	ug/l	1.25	270,575.15	1.801E-01	Pulse	0.30	3
Sr			1	50.640	ug/l	0.20	266,669.95	1.775E-01	Pulse	0.50	3
[Pb]			1	49.529	ug/l	0.22	750,462.44	1.916E-01	Pulse	0.50	3
Ca			1	4921.327	ug/l	0.77	137,148.57	5.940E-01	Pulse	0.50	3
Ti			1	50.800	ug/l	2.69	11,664.16	5.052E-02	Pulse	0.50	3
Na			1	5074.744	ug/l	0.25	7,476,849.00	3.238E+01	Analog	1.00	3
Mg			1	5018.530	ug/l	0.11	3,297,616.42	1.428E+01	Pulse	1.00	3
K			1	4996.650	ug/l	0.45	2,665,591.25	1.155E+01	Pulse	1.00	3
V			1	50.293	ug/l	0.77	430,003.13	1.862E+00	Pulse	0.50	3
Mn			1	49.871	ug/l	0.14	262,520.24	1.575E+00	Pulse	0.50	3
Fe			1	5151.884	ug/l	0.63	46,319,656.00	2.780E+02	Analog	0.50	3
Co			1	51.500	ug/l	0.24	1,006,994.87	6.042E+00	Pulse	0.50	3
Ni			1	52.088	ug/l	0.85	289,063.93	1.734E+00	Pulse	0.50	3
Cu			1	51.950	ug/l	0.12	795,743.91	4.775E+00	Pulse	0.50	3
Zn			1	51.230	ug/l	1.11	109,116.27	4.390E-01	Pulse	1.00	3
Cd			1	49.928	ug/l	1.60	149,192.57	6.002E-01	Pulse	0.50	3
Al			1	4802.290	ug/l	0.81	989,841.79	4.287E+00	Pulse	1.00	3
Se			1	49.815	ug/l	0.75	3,976.19	1.600E-02	Pulse	3.00	3
Sb			1	48.734	ug/l	1.50	328,077.65	1.320E+00	Pulse	1.00	3
Se			1	49.907	ug/l	2.13	1,976.33	7.952E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,916,099.67	0.67	96.8	Pulse	0.50	3
1	Sc		230,881.65	0.70	101.9	Pulse	0.30	3
1	Ge		166,653.83	1.45	102.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,502,351.64	0.90	99.2	Pulse	0.30	3
1	Tb		5,161,823.00	1.13	98.7	Pulse	0.50	3
1	Lu		3,248,590.83	0.99	97.9	Pulse	0.50	3
1	Ge		248,542.02	0.42	101.0	Pulse	0.30	3
1	Te		4.67	49.49		Pulse	0.50	3
1	Li		838.91	8.49	101.8	Pulse	0.30	3

Quantitation Report

File Name 031_CCV.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 9:59
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.978	ug/l	2.35	1,157,687.21	6.917E+00	Pulse	0.50	3
As			1	98.225	ug/l	2.14	118,925.40	7.105E-01	Pulse	1.00	3
Mo			1	97.839	ug/l	0.83	629,097.35	2.516E+00	Pulse	0.50	3
Pb			1	97.756	ug/l	0.22	3,066,495.67	8.031E-01	Pulse	1.00	3
Be			1	101.244	ug/l	2.52	5,577.77	2.450E-02	Pulse	2.00	3
Ag			1	96.226	ug/l	0.65	2,197,646.92	8.790E+00	Pulse	0.50	3
Ba			1	97.520	ug/l	0.29	213,329.94	1.426E-01	Pulse	0.50	3
Tl			1	100.956	ug/l	0.18	4,522,653.50	1.184E+00	Pulse	0.50	3
Sn			1	99.000	ug/l	0.64	525,291.14	3.511E-01	Pulse	0.30	3
Sr			1	99.703	ug/l	0.67	522,294.92	3.491E-01	Pulse	0.50	3
[Pb]			1	98.092	ug/l	0.10	1,448,833.37	3.794E-01	Pulse	0.50	3
Ca			1	9754.288	ug/l	1.74	267,951.97	1.177E+00	Pulse	0.50	3
Ti			1	99.442	ug/l	2.30	22,511.60	9.887E-02	Pulse	0.50	3
Na			1	10076.279	ug/l	1.44	14,632,728.00	6.426E+01	Analog	1.00	3
Mg			1	9955.068	ug/l	1.76	6,450,519.67	2.833E+01	Analog	1.00	3
K			1	10089.102	ug/l	1.03	5,288,664.83	2.323E+01	Analog	1.00	3
V			1	100.437	ug/l	1.71	846,491.46	3.718E+00	Pulse	0.50	3
Mn			1	98.031	ug/l	2.01	518,110.00	3.095E+00	Pulse	0.50	3
Fe			1	10082.942	ug/l	2.46	91,038,930.67	5.439E+02	Analog	0.50	3
Co			1	99.615	ug/l	2.18	1,956,124.79	1.169E+01	Pulse	0.50	3
Ni			1	99.618	ug/l	3.05	554,999.56	3.316E+00	Pulse	0.50	3
Cu			1	99.814	ug/l	2.33	1,526,366.75	9.120E+00	Pulse	0.50	3
Zn			1	98.569	ug/l	1.19	210,370.64	8.414E-01	Pulse	1.00	3
Cd			1	96.098	ug/l	0.96	288,853.19	1.155E+00	Pulse	0.50	3
Al			1	9497.918	ug/l	2.51	1,930,086.58	8.478E+00	Pulse	1.00	3
Se			1	97.224	ug/l	0.77	7,799.70	3.120E-02	Pulse	3.00	3
Sb			1	95.164	ug/l	0.84	644,409.40	2.577E+00	Pulse	1.00	3
Se			1	94.529	ug/l	1.28	3,751.82	1.501E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,818,458.83	0.36	94.3	Pulse	0.50	3
1	Sc		227,731.58	1.64	100.5	Pulse	0.30	3
1	Ge		167,421.45	1.93	102.5	Pulse	0.30	3
1	In		1,495,977.33	0.33	98.7	Pulse	0.30	3
1	Tb		5,152,567.67	0.19	98.5	Pulse	0.50	3
1	Lu		3,231,306.50	0.85	97.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,032.04	0.30	101.6	Pulse	0.30	3
1	Te		4.00	50.00		Pulse	0.50	3
1	Li		794.46	11.72	96.4	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 10:03
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.015	ug/l	87.79	1,180.71	6.932E-03	Pulse	0.50	3
As			1	0.024	ug/l	36.60	57.33	3.366E-04	Pulse	1.00	3
Mo			1	0.188	ug/l	19.93	1,288.72	5.039E-03	Pulse	0.50	3
Pb			1	0.067	ug/l	26.74	3,077.62	7.722E-04	Pulse	1.00	3
Be			1	0.011	ug/l	0.84	1.00	4.242E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	51.23	520.01	2.037E-03	Pulse	0.50	3
Ba			1	0.003	ug/l	180.91	32.67	2.115E-05	Pulse	0.50	3
Tl			1	0.026	ug/l	42.79	1,351.40	3.394E-04	Pulse	0.50	3
Sn			1	0.112	ug/l	6.70	804.47	5.203E-04	Pulse	0.30	3
Sr			1	0.018	ug/l	91.91	628.01	4.064E-04	Pulse	0.50	3
[Pb]			1	0.072	ug/l	21.07	1,534.08	3.848E-04	Pulse	0.50	3
Ca			1	0.445	ug/l	459.22	134.00	5.684E-04	Pulse	0.50	3
Ti			1	0.036	ug/l	128.79	11.33	4.803E-05	Pulse	0.50	3
Na			1	1.745	ug/l	82.13	11,253.08	4.774E-02	Pulse	1.00	3
Mg			1	1.447	ug/l	88.81	1,322.73	5.612E-03	Pulse	1.00	3
K			1	0.017	ug/l	6382.95	20,019.79	8.493E-02	Pulse	1.00	3
V			1	0.003	ug/l	377.53	391.34	1.660E-03	Pulse	0.50	3
Mn			1	0.013	ug/l	73.95	244.00	1.433E-03	Pulse	0.50	3
Fe			1	2.144	ug/l	55.17	28,440.48	1.671E-01	Pulse	0.50	3
Co			1	0.018	ug/l	69.16	432.01	2.539E-03	Pulse	0.50	3
Ni			1	0.000	ug/l	5566.15	152.00	8.932E-04	Pulse	0.50	3
Cu			1	-0.152	ug/l	-7.58	7,705.57	4.523E-02	Pulse	0.50	3
Zn			1	-0.025	ug/l	-116.19	854.69	3.345E-03	Pulse	1.00	3
Cd			1	0.016	ug/l	87.14	55.33	2.168E-04	Pulse	0.50	3
Al			1	0.620	ug/l	204.01	455.34	1.932E-03	Pulse	1.00	3
Se			1	0.075	ug/l	44.62	13.78	5.389E-05	Pulse	3.00	3
Sb			1	0.032	ug/l	34.44	282.33	1.105E-03	Pulse	1.00	3
Se			1	-0.012	ug/l	-114.91	15.44	6.044E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,988,791.75	0.85	98.6	Pulse	0.50	3
1	Sc		235,750.62	0.55	104.0	Pulse	0.30	3

Quantitation Report

1	Ge		170,378.16	0.38	104.3	Pulse	0.30	3
1	In		1,545,801.19	0.51	102.0	Pulse	0.30	3
1	Tb		5,193,408.67	0.93	99.3	Pulse	0.50	3
1	Lu		3,255,245.83	0.38	98.1	Pulse	0.50	3
1	Ge		255,556.31	0.68	103.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		822.24	14.16	99.7	Pulse	0.30	3

Quantitation Report

File Name 033SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:07
Sample Name FA92753-3A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3925.880	ug/l	1.53	4,501,922.33	2.742E+01	Pulse	0.50	3
As			1	2030.665	ug/l	1.08	241,182.88	1.469E+00	Pulse	1.00	3
Mo			1	1971.953	ug/l	0.91	1,217,894.58	5.071E+00	Pulse	0.50	3
Pb			1	4073.296	ug/l	0.96	12,825,440.67	3.346E+00	Analog	1.00	3
Be			1	1344.064	ug/l	1.56	7,316.32	3.252E-02	Pulse	2.00	3
Ag			1	743.265	ug/l	1.20	1,630,476.75	6.789E+00	Pulse	0.50	3
Ba			1	3101.492	ug/l	0.79	663,613.14	4.535E-01	Pulse	0.50	3
Tl			1	2274.576	ug/l	0.93	10,229,880.00	2.668E+00	Analog	0.50	3
Sn			1	2613.896	ug/l	1.47	1,356,240.29	9.269E-01	Pulse	0.30	3
Sr			1	3729.348	ug/l	0.68	1,909,699.04	1.305E+00	Pulse	0.50	3
[Pb]			1	4115.773	ug/l	1.54	6,101,541.17	1.592E+00	Pulse	0.50	3
Ca			1	50487.485	ug/l	1.20	137,098.06	6.094E-01	Pulse	0.50	3
Ti			1	3453.295	ug/l	1.28	77,246.04	3.433E-01	Pulse	0.50	3
Na			1	16623.164	ug/l	0.86	2,392,291.83	1.063E+01	Pulse	1.00	3
Mg			1	16361.272	ug/l	0.95	1,047,852.00	4.657E+00	Pulse	1.00	3
K			1	18524.617	ug/l	0.24	975,173.25	4.334E+00	Pulse	1.00	3
V			1	2120.272	ug/l	1.37	1,765,280.96	7.847E+00	Pulse	0.50	3
Mn			1	3842.686	ug/l	1.67	1,991,815.88	1.213E+01	Pulse	0.50	3
Fe			1	97859.052	ug/l	1.41	86,685,248.00	5.279E+02	Analog	0.50	3
Co			1	3549.513	ug/l	1.61	6,837,685.67	4.164E+01	Analog	0.50	3
Ni			1	4263.679	ug/l	1.70	2,330,033.92	1.419E+01	Pulse	0.50	3
Cu			1	1681.419	ug/l	2.06	2,515,629.58	1.532E+01	Pulse	0.50	3
Zn			1	5405.149	ug/l	0.70	1,104,288.21	4.598E+00	Pulse	1.00	3
Cd			1	3467.903	ug/l	1.12	1,001,234.21	4.169E+00	Pulse	0.50	3
Al			1	83775.250	ug/l	1.51	1,682,235.83	7.478E+00	Pulse	1.00	3
Se			1	2789.436	ug/l	1.05	21,482.93	8.945E-02	Pulse	3.00	3
Sb			1	1284.672	ug/l	0.58	835,612.48	3.479E+00	Pulse	1.00	3
Se			1	2824.179	ug/l	0.50	10,738.69	4.471E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,833,971.17	1.52	94.7	Pulse	0.50	3
1	Sc		225,009.87	1.95	99.3	Pulse	0.30	3
1	Ge		164,240.21	2.57	100.5	Pulse	0.30	3
1	In		1,463,483.62	1.95	96.6	Pulse	0.30	3
1	Tb		5,099,472.67	0.76	97.5	Pulse	0.50	3
1	Lu		3,138,250.83	1.55	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,188.66	1.70	97.6	Pulse	0.30	3
1	Te		9.33	24.74		Pulse	0.50	3
1	Li		904.47	9.70	109.7	Pulse	0.30	3

Quantitation Report

File Name 034SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:11
Sample Name FA92753-3A
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3961.229	ug/l	1.12	2,243,303.42	1.384E+01	Pulse	0.50	3
As			1	2037.507	ug/l	1.10	119,487.78	7.369E-01	Pulse	1.00	3
Mo			1	1958.573	ug/l	0.75	601,219.10	2.518E+00	Pulse	0.50	3
Pb			1	4043.064	ug/l	0.34	6,401,714.83	1.660E+00	Pulse	1.00	3
Be			1	1337.509	ug/l	1.13	3,564.48	1.618E-02	Pulse	2.00	3
Ag			1	743.207	ug/l	0.66	810,357.56	3.394E+00	Pulse	0.50	3
Ba			1	3083.912	ug/l	0.75	326,526.14	2.255E-01	Pulse	0.50	3
Tl			1	2232.854	ug/l	0.14	5,049,665.17	1.310E+00	Pulse	0.50	3
Sn			1	2633.044	ug/l	0.60	676,169.29	4.669E-01	Pulse	0.30	3
Sr			1	3745.762	ug/l	0.81	949,361.58	6.555E-01	Pulse	0.50	3
[Pb]			1	4111.363	ug/l	0.53	3,065,113.75	7.950E-01	Pulse	0.50	3
Ca			1	50780.947	ug/l	0.84	67,555.47	3.067E-01	Pulse	0.50	3
Ti			1	3485.486	ug/l	2.63	38,170.40	1.733E-01	Pulse	0.50	3
Na			1	16682.287	ug/l	0.39	1,179,150.88	5.353E+00	Pulse	1.00	3
Mg			1	16534.151	ug/l	0.35	518,510.73	2.354E+00	Pulse	1.00	3
K			1	18661.396	ug/l	0.41	490,091.72	2.225E+00	Pulse	1.00	3
V			1	2137.397	ug/l	0.23	871,315.63	3.956E+00	Pulse	0.50	3
Mn			1	3851.553	ug/l	0.87	985,829.35	6.080E+00	Pulse	0.50	3
Fe			1	98172.530	ug/l	0.68	42,942,364.00	2.648E+02	Analog	0.50	3
Co			1	3528.526	ug/l	0.94	3,356,143.83	2.070E+01	Pulse	0.50	3
Ni			1	4294.319	ug/l	0.77	1,158,823.04	7.147E+00	Pulse	0.50	3
Cu			1	1696.483	ug/l	0.80	1,258,125.25	7.759E+00	Pulse	0.50	3
Zn			1	5607.317	ug/l	0.81	569,770.56	2.387E+00	Pulse	1.00	3
Cd			1	3422.508	ug/l	0.13	491,133.97	2.057E+00	Pulse	0.50	3
Al			1	85036.211	ug/l	0.07	836,094.25	3.796E+00	Pulse	1.00	3
Se			1	2766.815	ug/l	0.57	10,593.82	4.438E-02	Pulse	3.00	3
Sb			1	1276.024	ug/l	0.45	412,530.77	1.728E+00	Pulse	1.00	3
Se			1	2831.739	ug/l	0.69	5,358.20	2.244E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,855,368.50	0.48	95.3	Pulse	0.50	3
1	Sc		220,266.62	0.75	97.2	Pulse	0.30	3
1	Ge		162,152.30	0.86	99.3	Pulse	0.30	3
1	In		1,448,240.74	0.58	95.6	Pulse	0.30	3
1	Tb		5,031,486.67	0.33	96.2	Pulse	0.50	3
1	Lu		3,112,523.75	0.19	93.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,733.38	0.37	97.0	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		813.35	5.42	98.7	Pulse	0.30	3

Quantitation Report

File Name 035_MB.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:15
Sample Name MP40295-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.593	ug/l	9.47	4,127.79	2.659E-02	Pulse	0.50	3
As			1	0.114	ug/l	36.18	89.00	5.738E-04	Pulse	1.00	3
Mo			1	0.762	ug/l	16.73	2,328.82	1.001E-02	Pulse	0.50	3
Pb			1	0.329	ug/l	23.98	5,870.37	1.574E-03	Pulse	1.00	3
Be			1	0.051	ug/l	21.51	1.67	7.663E-06	Pulse	2.00	3
Ag			1	0.043	ug/l	14.04	491.34	2.117E-03	Pulse	0.50	3
Ba			1	0.107	ug/l	13.71	134.00	9.531E-05	Pulse	0.50	3
Tl			1	0.166	ug/l	17.51	3,774.44	1.012E-03	Pulse	0.50	3
Sn			1	1.049	ug/l	4.94	2,790.23	1.982E-03	Pulse	0.30	3
Sr			1	0.136	ug/l	15.51	816.69	5.804E-04	Pulse	0.50	3
[Pb]			1	0.335	ug/l	19.62	2,820.25	7.558E-04	Pulse	0.50	3
Ca			1	47.611	ug/l	3.52	736.69	3.386E-03	Pulse	0.50	3
Ti			1	0.246	ug/l	46.23	29.33	1.343E-04	Pulse	0.50	3
Na			1	7.789	ug/l	7.17	13,359.44	6.144E-02	Pulse	1.00	3
Mg			1	29.867	ug/l	8.38	9,577.98	4.399E-02	Pulse	1.00	3
K			1	0.793	ug/l	132.64	18,659.80	8.580E-02	Pulse	1.00	3
V			1	0.211	ug/l	13.10	1,182.71	5.443E-03	Pulse	0.50	3
Mn			1	6.034	ug/l	0.45	14,952.45	9.627E-02	Pulse	0.50	3
Fe			1	9.481	ug/l	10.90	47,667.86	3.071E-01	Pulse	0.50	3
Co			1	0.100	ug/l	31.04	969.36	6.255E-03	Pulse	0.50	3
Ni			1	0.116	ug/l	41.05	436.67	2.818E-03	Pulse	0.50	3
Cu			1	0.242	ug/l	17.66	10,869.09	6.999E-02	Pulse	0.50	3
Zn			1	1.227	ug/l	10.05	2,036.78	8.773E-03	Pulse	1.00	3
Cd			1	0.083	ug/l	35.15	120.00	5.183E-04	Pulse	0.50	3
Al			1	8.279	ug/l	12.09	1,102.37	5.073E-03	Pulse	1.00	3
Se			1	0.208	ug/l	28.95	14.66	6.321E-05	Pulse	3.00	3
Sb			1	0.137	ug/l	6.65	484.01	2.085E-03	Pulse	1.00	3
Se			1	0.317	ug/l	106.36	20.33	8.741E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,736,113.42	1.25	92.3	Pulse	0.50	3
1	Sc		217,523.95	1.83	96.0	Pulse	0.30	3
1	Ge		155,322.13	1.22	95.1	Pulse	0.30	3
1	In		1,408,122.93	2.07	92.9	Pulse	0.30	3
1	Tb		4,896,631.67	1.69	93.6	Pulse	0.50	3
1	Lu		3,045,473.75	1.97	91.8	Pulse	0.50	3
1	Ge		232,317.35	1.56	94.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		848.91	1.94	103.0	Pulse	0.30	3

Quantitation Report

File Name	036_BSP.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 10:18
Sample Name	MP40295-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	200.151	ug/l	1.11	1,092,526.21	6.993E+00	Pulse	0.50	3
As			1	197.227	ug/l	0.43	111,444.78	7.133E-01	Pulse	1.00	3
Mo			1	196.856	ug/l	0.52	597,239.48	2.531E+00	Pulse	0.50	3
Pb			1	195.016	ug/l	0.31	2,901,290.00	8.010E-01	Pulse	1.00	3
Be			1	206.291	ug/l	1.95	5,476.24	2.496E-02	Pulse	2.00	3
Ag			1	94.725	ug/l	0.70	1,020,736.33	4.326E+00	Pulse	0.50	3
Ba			1	193.045	ug/l	1.16	196,635.43	1.411E-01	Pulse	0.50	3
Tl			1	192.808	ug/l	0.80	4,096,509.00	1.131E+00	Pulse	0.50	3
Sn			1	197.044	ug/l	0.41	486,879.32	3.494E-01	Pulse	0.30	3
Sr			1	197.397	ug/l	0.91	481,503.87	3.456E-01	Pulse	0.50	3
[Pb]			1	186.745	ug/l	0.47	1,308,172.67	3.612E-01	Pulse	0.50	3
Ca			1	18317.528	ug/l	0.64	242,473.63	1.105E+00	Pulse	0.50	3
Ti			1	193.253	ug/l	1.25	21,080.68	9.607E-02	Pulse	0.50	3
Na			1	19132.514	ug/l	0.82	13,387,935.67	6.101E+01	Analog	1.00	3
Mg			1	18904.333	ug/l	0.83	5,902,455.50	2.690E+01	Analog	1.00	3
K			1	18331.543	ug/l	0.45	4,631,822.17	2.111E+01	Pulse	1.00	3
V			1	194.691	ug/l	0.98	790,670.15	3.603E+00	Pulse	0.50	3
Mn			1	196.030	ug/l	0.87	483,515.51	3.095E+00	Pulse	0.50	3
Fe			1	19508.107	ug/l	0.98	82,204,738.67	5.262E+02	Analog	0.50	3
Co			1	202.992	ug/l	0.58	1,860,366.25	1.191E+01	Pulse	0.50	3
Ni			1	198.824	ug/l	0.53	517,026.69	3.309E+00	Pulse	0.50	3
Cu			1	199.426	ug/l	0.33	1,423,356.58	9.110E+00	Pulse	0.50	3
Zn			1	179.312	ug/l	1.09	180,648.98	7.656E-01	Pulse	1.00	3
Cd			1	184.294	ug/l	1.06	261,372.11	1.108E+00	Pulse	0.50	3
Al			1	17416.032	ug/l	0.53	1,705,579.71	7.773E+00	Pulse	1.00	3
Se			1	171.595	ug/l	0.26	6,495.99	2.753E-02	Pulse	3.00	3
Sb			1	191.326	ug/l	0.53	611,300.69	2.591E+00	Pulse	1.00	3
Se			1	168.399	ug/l	0.76	3,155.15	1.337E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,621,908.42	0.46	89.5	Pulse	0.50	3
1	Sc		219,441.50	1.29	96.8	Pulse	0.30	3
1	Ge		156,236.61	1.44	95.6	Pulse	0.30	3
1	In		1,393,271.16	1.54	92.0	Pulse	0.30	3
1	Tb		4,913,487.50	2.12	93.9	Pulse	0.50	3
1	Lu		3,064,205.92	2.23	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		235,943.29	0.81	95.9	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		802.24	6.24	97.3	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:22
Sample Name TD78320-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.140	ug/l	19.89	1,753.42	1.076E-02	Pulse	0.50	3
As			1	4.643	ug/l	4.51	2,762.20	1.695E-02	Pulse	1.00	3
Mo			1	7.336	ug/l	2.25	23,133.61	9.453E-02	Pulse	0.50	3
Pb			1	0.132	ug/l	8.44	2,759.23	7.663E-04	Pulse	1.00	3
Be			1	0.048	ug/l	114.59	1.67	7.257E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	0.99	320.00	1.307E-03	Pulse	0.50	3
Ba			1	119.556	ug/l	0.66	126,530.16	8.742E-02	Pulse	0.50	3
Tl			1	0.056	ug/l	24.52	1,320.06	3.668E-04	Pulse	0.50	3
Sn			1	1.099	ug/l	1.49	2,998.05	2.071E-03	Pulse	0.30	3
Sr			1	559.522	ug/l	0.26	1,417,043.54	9.790E-01	Pulse	0.50	3
[Pb]			1	0.132	ug/l	14.99	1,303.39	3.621E-04	Pulse	0.50	3
Ca			1	97067.812	ug/l	0.29	1,347,820.08	5.853E+00	Pulse	0.50	3
Ti			1	0.402	ug/l	32.17	48.67	2.117E-04	Pulse	0.50	3
Na			1	195802.689	ug/l	1.06	143,686,592.00	6.241E+02	Analog	1.00	3
Mg			1	33358.566	ug/l	0.37	10,929,040.67	4.747E+01	Analog	1.00	3
K			1	3020.139	ug/l	0.74	817,014.56	3.548E+00	Pulse	1.00	3
V			1	1.691	ug/l	2.26	7,556.82	3.282E-02	Pulse	0.50	3
Mn			1	166.839	ug/l	1.90	429,186.10	2.634E+00	Pulse	0.50	3
Fe			1	3.464	ug/l	30.34	23,617.46	1.448E-01	Pulse	0.50	3
Co			1	0.344	ug/l	5.22	3,356.96	2.060E-02	Pulse	0.50	3
Ni			1	1.774	ug/l	0.77	4,953.32	3.040E-02	Pulse	0.50	3
Cu			1	-0.375	ug/l	-7.55	6,839.90	4.197E-02	Pulse	0.50	3
Zn			1	3.384	ug/l	4.36	4,390.84	1.794E-02	Pulse	1.00	3
Cd			1	0.023	ug/l	67.68	38.67	1.586E-04	Pulse	0.50	3
Al			1	17.208	ug/l	5.95	2,084.78	9.057E-03	Pulse	1.00	3
Se			1	2.207	ug/l	9.72	93.89	3.836E-04	Pulse	3.00	3
Sb			1	0.868	ug/l	4.28	2,932.91	1.199E-02	Pulse	1.00	3
Se			1	3.743	ug/l	7.30	87.67	3.582E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,601,438.08	0.59	89.0	Pulse	0.50	3
1	Sc		230,256.08	1.09	101.6	Pulse	0.30	3
1	Ge		162,939.89	0.64	99.8	Pulse	0.30	3
1	In		1,447,376.33	0.84	95.5	Pulse	0.30	3
1	Tb		4,986,583.67	0.79	95.3	Pulse	0.50	3
1	Lu		3,140,870.83	0.48	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,755.59	1.09	99.4	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		768.91	1.00	93.3	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:26
Sample Name MP40295-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.145	ug/l	13.66	1,778.75	1.094E-02	Pulse	0.50	3
As			1	4.824	ug/l	2.31	2,864.22	1.760E-02	Pulse	1.00	3
Mo			1	7.381	ug/l	3.73	23,128.90	9.510E-02	Pulse	0.50	3
Pb			1	0.150	ug/l	5.13	3,000.27	8.403E-04	Pulse	1.00	3
Be			1	0.029	ug/l	34.84	1.17	5.035E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	8.89	217.33	8.937E-04	Pulse	0.50	3
Ba			1	123.074	ug/l	1.07	130,015.95	8.999E-02	Pulse	0.50	3
Tl			1	0.019	ug/l	17.83	538.68	1.509E-04	Pulse	0.50	3
Sn			1	0.789	ug/l	4.44	2,196.81	1.521E-03	Pulse	0.30	3
Sr			1	578.246	ug/l	1.10	1,461,705.79	1.012E+00	Pulse	0.50	3
[Pb]			1	0.146	ug/l	4.30	1,388.73	3.889E-04	Pulse	0.50	3
Ca			1	99301.786	ug/l	0.89	1,387,128.42	5.988E+00	Pulse	0.50	3
Ti			1	0.532	ug/l	22.37	64.00	2.761E-04	Pulse	0.50	3
Na			1	200574.405	ug/l	1.03	148,084,768.00	6.393E+02	Analog	1.00	3
Mg			1	34097.941	ug/l	1.12	11,238,833.00	4.852E+01	Analog	1.00	3
K			1	3095.012	ug/l	1.15	841,865.44	3.634E+00	Pulse	1.00	3
V			1	1.698	ug/l	0.38	7,632.19	3.295E-02	Pulse	0.50	3
Mn			1	170.550	ug/l	0.12	438,081.95	2.693E+00	Pulse	0.50	3
Fe			1	5.212	ug/l	1.33	31,233.72	1.920E-01	Pulse	0.50	3
Co			1	0.337	ug/l	2.74	3,280.96	2.017E-02	Pulse	0.50	3
Ni			1	1.766	ug/l	4.38	4,923.98	3.027E-02	Pulse	0.50	3
Cu			1	-0.339	ug/l	-2.48	7,098.66	4.364E-02	Pulse	0.50	3
Zn			1	3.529	ug/l	4.33	4,511.87	1.855E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	61.32	14.67	6.039E-05	Pulse	0.50	3
Al			1	18.716	ug/l	1.80	2,254.13	9.730E-03	Pulse	1.00	3
Se			1	2.129	ug/l	9.39	90.22	3.710E-04	Pulse	3.00	3
Sb			1	0.900	ug/l	3.62	3,018.92	1.241E-02	Pulse	1.00	3
Se			1	3.877	ug/l	13.55	89.67	3.688E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,570,772.33	0.64	88.2	Pulse	0.50	3
1	Sc		231,651.31	0.64	102.2	Pulse	0.30	3
1	Ge		162,685.57	0.51	99.6	Pulse	0.30	3
1	In		1,444,742.31	1.11	95.4	Pulse	0.30	3
1	Tb		4,981,087.83	0.33	95.2	Pulse	0.50	3
1	Lu		3,143,635.83	0.86	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,229.98	0.54	98.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		827.80	12.84	100.4	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:30
Sample Name MP40295-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.192	ug/l	20.00	1,191.38	7.224E-03	Pulse	0.50	3
As			1	4.849	ug/l	5.26	605.01	3.668E-03	Pulse	1.00	3
Mo			1	7.502	ug/l	3.05	4,854.64	1.950E-02	Pulse	0.50	3
Pb			1	1.027	ug/l	3.42	4,065.16	1.066E-03	Pulse	1.00	3
Be			1	0.088	ug/l	155.18	0.83	3.598E-06	Pulse	2.00	3
Ag			1	0.049	ug/l	12.54	146.67	5.894E-04	Pulse	0.50	3
Ba			1	135.494	ug/l	1.21	29,678.27	1.983E-02	Pulse	0.50	3
Tl			1	0.053	ug/l	20.08	382.67	1.004E-04	Pulse	0.50	3
Sn			1	0.582	ug/l	18.11	492.23	3.289E-04	Pulse	0.30	3
Sr			1	564.303	ug/l	0.78	295,994.60	1.978E-01	Pulse	0.50	3
[Pb]			1	0.967	ug/l	9.11	1,834.77	4.813E-04	Pulse	0.50	3
Ca			1	102170.302	ug/l	0.32	285,038.63	1.233E+00	Pulse	0.50	3
Ti			1	0.984	ug/l	13.87	25.33	1.096E-04	Pulse	0.50	3
Na			1	204620.890	ug/l	0.61	30,168,452.00	1.305E+02	Analog	1.00	3
Mg			1	35125.354	ug/l	0.51	2,311,716.25	9.997E+00	Pulse	1.00	3
K			1	3249.799	ug/l	1.16	191,990.45	8.303E-01	Pulse	1.00	3
V			1	1.852	ug/l	4.16	1,938.77	8.384E-03	Pulse	0.50	3
Mn			1	173.711	ug/l	0.42	90,601.62	5.494E-01	Pulse	0.50	3
Fe			1	65.731	ug/l	0.20	66,954.68	4.060E-01	Pulse	0.50	3
Co			1	0.417	ug/l	1.79	873.35	5.295E-03	Pulse	0.50	3
Ni			1	2.089	ug/l	5.07	1,292.72	7.837E-03	Pulse	0.50	3
Cu			1	0.060	ug/l	46.48	9,821.86	5.956E-02	Pulse	0.50	3
Zn			1	378.048	ug/l	1.71	80,901.60	3.249E-01	Pulse	1.00	3
Cd			1	0.042	ug/l	73.14	17.33	6.927E-05	Pulse	0.50	3
Al			1	34.982	ug/l	5.32	1,040.70	4.501E-03	Pulse	1.00	3
Se			1	2.127	ug/l	51.24	24.33	9.802E-05	Pulse	3.00	3
Sb			1	0.991	ug/l	1.82	725.69	2.914E-03	Pulse	1.00	3
Se			1	4.071	ug/l	8.95	31.56	1.267E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,813,085.67	0.55	94.2	Pulse	0.50	3
1	Sc		231,241.31	0.38	102.0	Pulse	0.30	3
1	Ge		164,922.25	0.51	101.0	Pulse	0.30	3
1	In		1,496,736.95	0.52	98.8	Pulse	0.30	3
1	Tb		5,083,624.17	0.44	97.2	Pulse	0.50	3
1	Lu		3,186,614.00	0.96	96.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,043.54	1.33	101.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		883.36	12.98	107.1	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:34
Sample Name MP40295-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	197.657	ug/l	1.55	1,116,274.04	6.906E+00	Pulse	0.50	3
As			1	212.742	ug/l	0.90	124,367.65	7.694E-01	Pulse	1.00	3
Mo			1	201.409	ug/l	1.13	633,060.71	2.590E+00	Pulse	0.50	3
Pb			1	193.420	ug/l	0.25	2,874,276.42	7.945E-01	Pulse	1.00	3
Be			1	187.084	ug/l	1.68	5,216.67	2.263E-02	Pulse	2.00	3
Ag			1	87.868	ug/l	1.39	980,972.63	4.013E+00	Pulse	0.50	3
Ba			1	310.648	ug/l	0.58	331,541.86	2.271E-01	Pulse	0.50	3
Tl			1	191.403	ug/l	0.61	4,062,000.17	1.123E+00	Pulse	0.50	3
Sn			1	199.405	ug/l	0.66	516,217.66	3.536E-01	Pulse	0.30	3
Sr			1	748.562	ug/l	0.43	1,911,857.38	1.310E+00	Pulse	0.50	3
[Pb]			1	186.717	ug/l	0.75	1,306,495.00	3.611E-01	Pulse	0.50	3
Ca			1	113469.547	ug/l	1.74	1,577,005.54	6.842E+00	Pulse	0.50	3
Ti			1	195.717	ug/l	1.66	22,425.50	9.730E-02	Pulse	0.50	3
Na			1	210169.933	ug/l	1.05	154,393,557.33	6.699E+02	Analog	1.00	3
Mg			1	50931.601	ug/l	1.39	16,702,760.33	7.247E+01	Analog	1.00	3
K			1	21925.758	ug/l	1.39	5,815,028.00	2.523E+01	Analog	1.00	3
V			1	195.731	ug/l	1.44	834,938.12	3.623E+00	Pulse	0.50	3
Mn			1	360.078	ug/l	1.34	918,722.83	5.684E+00	Pulse	0.50	3
Fe			1	19274.247	ug/l	0.95	84,032,445.33	5.199E+02	Analog	0.50	3
Co			1	197.114	ug/l	1.11	1,868,965.46	1.156E+01	Pulse	0.50	3
Ni			1	191.982	ug/l	0.88	516,510.83	3.196E+00	Pulse	0.50	3
Cu			1	187.739	ug/l	1.41	1,386,796.46	8.580E+00	Pulse	0.50	3
Zn			1	186.730	ug/l	1.88	194,853.87	7.972E-01	Pulse	1.00	3
Cd			1	184.541	ug/l	1.31	271,155.67	1.109E+00	Pulse	0.50	3
Al			1	17732.847	ug/l	1.55	1,823,996.92	7.914E+00	Pulse	1.00	3
Se			1	186.588	ug/l	1.16	7,317.73	2.994E-02	Pulse	3.00	3
Sb			1	202.229	ug/l	1.52	669,389.87	2.738E+00	Pulse	1.00	3
Se			1	189.159	ug/l	1.16	3,670.24	1.501E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,617,793.92	0.40	89.4	Pulse	0.50	3
1	Sc		230,499.07	0.96	101.7	Pulse	0.30	3
1	Ge		161,643.60	1.00	99.0	Pulse	0.30	3
1	In		1,459,782.06	0.42	96.3	Pulse	0.30	3
1	Tb		4,993,524.33	0.03	95.4	Pulse	0.50	3
1	Lu		3,177,283.50	0.17	95.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,460.08	0.88	99.3	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		794.47	10.40	96.4	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:37
Sample Name MP40295-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	195.335	ug/l	0.72	1,101,999.87	6.825E+00	Pulse	0.50	3
As			1	211.906	ug/l	0.42	123,742.51	7.664E-01	Pulse	1.00	3
Mo			1	200.793	ug/l	0.12	626,348.39	2.582E+00	Pulse	0.50	3
Pb			1	194.239	ug/l	0.76	2,863,396.33	7.978E-01	Pulse	1.00	3
Be			1	190.101	ug/l	0.81	5,232.01	2.300E-02	Pulse	2.00	3
Ag			1	90.226	ug/l	0.78	999,684.02	4.121E+00	Pulse	0.50	3
Ba			1	310.406	ug/l	0.50	326,287.99	2.269E-01	Pulse	0.50	3
Tl			1	192.035	ug/l	0.55	4,042,823.08	1.126E+00	Pulse	0.50	3
Sn			1	200.465	ug/l	1.21	511,120.53	3.555E-01	Pulse	0.30	3
Sr			1	743.307	ug/l	0.65	1,869,826.50	1.301E+00	Pulse	0.50	3
[Pb]			1	186.677	ug/l	0.93	1,295,799.58	3.610E-01	Pulse	0.50	3
Ca			1	113673.701	ug/l	0.98	1,559,298.08	6.855E+00	Pulse	0.50	3
Ti			1	195.072	ug/l	2.52	22,059.77	9.698E-02	Pulse	0.50	3
Na			1	210063.516	ug/l	0.07	152,303,765.33	6.695E+02	Analog	1.00	3
Mg			1	50956.715	ug/l	0.18	16,493,496.33	7.251E+01	Analog	1.00	3
K			1	21773.414	ug/l	0.70	5,699,593.17	2.506E+01	Analog	1.00	3
V			1	197.565	ug/l	0.18	831,792.13	3.657E+00	Pulse	0.50	3
Mn			1	355.249	ug/l	0.98	905,404.27	5.608E+00	Pulse	0.50	3
Fe			1	19003.287	ug/l	0.79	82,759,120.00	5.126E+02	Analog	0.50	3
Co			1	196.509	ug/l	0.66	1,861,162.21	1.153E+01	Pulse	0.50	3
Ni			1	189.686	ug/l	1.23	509,756.85	3.157E+00	Pulse	0.50	3
Cu			1	187.231	ug/l	0.65	1,381,575.46	8.557E+00	Pulse	0.50	3
Zn			1	185.007	ug/l	0.35	191,611.16	7.898E-01	Pulse	1.00	3
Cd			1	182.395	ug/l	1.01	265,971.81	1.096E+00	Pulse	0.50	3
Al			1	17678.768	ug/l	0.72	1,794,779.87	7.890E+00	Pulse	1.00	3
Se			1	185.627	ug/l	0.42	7,224.81	2.978E-02	Pulse	3.00	3
Sb			1	201.090	ug/l	0.88	660,593.15	2.723E+00	Pulse	1.00	3
Se			1	185.920	ug/l	0.14	3,580.11	1.476E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,588,925.83	0.45	88.7	Pulse	0.50	3
1	Sc		227,480.34	0.29	100.4	Pulse	0.30	3
1	Ge		161,457.61	0.57	98.8	Pulse	0.30	3
1	In		1,437,774.84	0.47	94.9	Pulse	0.30	3
1	Tb		4,996,313.33	0.82	95.5	Pulse	0.50	3
1	Lu		3,143,584.42	0.31	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,595.09	0.24	98.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		818.91	7.82	99.3	Pulse	0.30	3

Quantitation Report

File Name 042SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:41
Sample Name MP40295-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.037	ug/l	0.98	116,064.54	7.054E-01	Pulse	0.50	3
As			1	25.700	ug/l	1.38	15,317.13	9.309E-02	Pulse	1.00	3
Mo			1	27.387	ug/l	1.31	86,691.35	3.523E-01	Pulse	0.50	3
Pb			1	19.405	ug/l	0.36	289,445.16	7.991E-02	Pulse	1.00	3
Be			1	19.820	ug/l	3.22	554.18	2.399E-03	Pulse	2.00	3
Ag			1	3.602	ug/l	0.95	40,512.69	1.646E-01	Pulse	0.50	3
Ba			1	138.529	ug/l	0.73	147,646.71	1.013E-01	Pulse	0.50	3
Tl			1	19.534	ug/l	1.03	415,130.80	1.146E-01	Pulse	0.50	3
Sn			1	20.595	ug/l	2.26	53,397.23	3.663E-02	Pulse	0.30	3
Sr			1	580.980	ug/l	0.90	1,481,874.46	1.017E+00	Pulse	0.50	3
[Pb]			1	18.910	ug/l	1.51	132,822.29	3.667E-02	Pulse	0.50	3
Ca			1	99395.916	ug/l	0.34	1,384,732.33	5.994E+00	Pulse	0.50	3
Ti			1	20.815	ug/l	3.40	2,393.49	1.036E-02	Pulse	0.50	3
Na			1	198756.051	ug/l	0.35	146,350,005.33	6.335E+02	Analog	1.00	3
Mg			1	35398.906	ug/l	0.40	11,636,467.33	5.037E+01	Analog	1.00	3
K			1	4968.593	ug/l	0.12	1,336,049.25	5.783E+00	Pulse	1.00	3
V			1	21.838	ug/l	0.45	93,692.46	4.056E-01	Pulse	0.50	3
Mn			1	185.274	ug/l	0.80	481,308.41	2.925E+00	Pulse	0.50	3
Fe			1	1988.808	ug/l	0.58	8,834,560.00	5.369E+01	Analog	0.50	3
Co			1	19.979	ug/l	0.37	192,897.61	1.172E+00	Pulse	0.50	3
Ni			1	20.939	ug/l	1.94	57,472.18	3.493E-01	Pulse	0.50	3
Cu			1	18.788	ug/l	1.13	150,018.47	9.117E-01	Pulse	0.50	3
Zn			1	22.732	ug/l	0.29	24,649.03	1.002E-01	Pulse	1.00	3
Cd			1	19.026	ug/l	2.20	28,147.36	1.144E-01	Pulse	0.50	3
Al			1	1901.814	ug/l	0.76	196,382.41	8.500E-01	Pulse	1.00	3
Se			1	21.042	ug/l	1.37	837.13	3.402E-03	Pulse	3.00	3
Sb			1	19.480	ug/l	0.66	64,962.42	2.640E-01	Pulse	1.00	3
Se			1	21.666	ug/l	2.80	436.78	1.775E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,622,155.83	1.21	89.5	Pulse	0.50	3
1	Sc		231,028.38	1.03	101.9	Pulse	0.30	3
1	Ge		164,543.75	0.91	100.7	Pulse	0.30	3
1	In		1,457,646.89	0.83	96.2	Pulse	0.30	3
1	Tb		5,002,922.83	0.95	95.6	Pulse	0.50	3
1	Lu		3,165,986.33	1.72	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,074.09	1.12	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		784.46	9.43	95.1	Pulse	0.30	3

Quantitation Report

File Name	043CCVA.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 10:45
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.595	ug/l	1.09	587,717.52	3.539E+00	Pulse	0.50	3
As			1	50.015	ug/l	0.94	60,100.55	3.619E-01	Pulse	1.00	3
Mo			1	49.643	ug/l	0.41	316,905.25	1.277E+00	Pulse	0.50	3
Pb			1	49.424	ug/l	0.61	1,569,079.04	4.061E-01	Pulse	1.00	3
Be			1	50.761	ug/l	0.55	2,830.53	1.228E-02	Pulse	2.00	3
Ag			1	49.259	ug/l	0.62	1,116,825.67	4.500E+00	Pulse	0.50	3
Ba			1	49.526	ug/l	1.04	108,329.38	7.243E-02	Pulse	0.50	3
Tl			1	50.940	ug/l	0.35	2,308,948.17	5.976E-01	Pulse	0.50	3
Sn			1	51.204	ug/l	1.43	271,717.54	1.817E-01	Pulse	0.30	3
Sr			1	50.969	ug/l	0.83	267,199.95	1.786E-01	Pulse	0.50	3
[Pb]			1	49.608	ug/l	1.20	741,553.19	1.919E-01	Pulse	0.50	3
Ca			1	4961.530	ug/l	0.54	137,990.99	5.989E-01	Pulse	0.50	3
Ti			1	50.686	ug/l	3.65	11,616.15	5.040E-02	Pulse	0.50	3
Na			1	5160.100	ug/l	0.60	7,587,387.50	3.293E+01	Analog	1.00	3
Mg			1	5082.499	ug/l	0.54	3,333,125.67	1.446E+01	Pulse	1.00	3
K			1	5057.181	ug/l	0.59	2,692,375.58	1.168E+01	Pulse	1.00	3
V			1	50.008	ug/l	0.72	426,717.73	1.852E+00	Pulse	0.50	3
Mn			1	50.113	ug/l	0.55	262,893.97	1.583E+00	Pulse	0.50	3
Fe			1	5178.229	ug/l	0.86	46,400,377.33	2.794E+02	Analog	0.50	3
Co			1	50.867	ug/l	0.85	991,218.83	5.968E+00	Pulse	0.50	3
Ni			1	51.042	ug/l	1.17	282,288.64	1.700E+00	Pulse	0.50	3
Cu			1	51.103	ug/l	0.92	780,261.54	4.698E+00	Pulse	0.50	3
Zn			1	50.602	ug/l	0.69	107,644.49	4.337E-01	Pulse	1.00	3
Cd			1	49.774	ug/l	0.44	148,528.54	5.984E-01	Pulse	0.50	3
Al			1	4919.121	ug/l	0.62	1,011,890.02	4.391E+00	Pulse	1.00	3
Se			1	50.721	ug/l	2.03	4,042.76	1.629E-02	Pulse	3.00	3
Sb			1	48.639	ug/l	0.87	326,998.99	1.317E+00	Pulse	1.00	3
Se			1	50.234	ug/l	2.97	1,986.55	8.003E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,863,424.17	0.43	95.5	Pulse	0.50	3
1	Sc		230,430.51	0.75	101.7	Pulse	0.30	3
1	Ge		166,084.75	0.41	101.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,495,668.97	0.36	98.7	Pulse	0.30	3
1	Tb		5,099,796.67	0.56	97.5	Pulse	0.50	3
1	Lu		3,215,875.33	0.74	96.9	Pulse	0.50	3
1	Ge		248,210.17	0.48	100.8	Pulse	0.30	3
1	Te		4.67	24.74		Pulse	0.50	3
1	Li		822.24	10.47	99.7	Pulse	0.30	3

Quantitation Report

File Name	044_CCV.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 10:49
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.686	ug/l	0.38	1,141,696.25	6.896E+00	Pulse	0.50	3
As			1	98.110	ug/l	0.77	117,489.35	7.097E-01	Pulse	1.00	3
Mo			1	98.715	ug/l	0.62	620,651.71	2.539E+00	Pulse	0.50	3
Pb			1	97.632	ug/l	1.10	3,018,432.58	8.021E-01	Pulse	1.00	3
Be			1	100.739	ug/l	0.62	5,571.77	2.438E-02	Pulse	2.00	3
Ag			1	96.468	ug/l	0.74	2,154,289.58	8.812E+00	Pulse	0.50	3
Ba			1	97.584	ug/l	1.11	210,551.23	1.427E-01	Pulse	0.50	3
Tl			1	100.477	ug/l	0.57	4,436,253.33	1.179E+00	Pulse	0.50	3
Sn			1	98.967	ug/l	1.29	517,931.32	3.510E-01	Pulse	0.30	3
Sr			1	99.738	ug/l	0.76	515,345.61	3.493E-01	Pulse	0.50	3
[Pb]			1	97.682	ug/l	0.99	1,421,970.79	3.778E-01	Pulse	0.50	3
Ca			1	9755.194	ug/l	1.36	269,013.18	1.177E+00	Pulse	0.50	3
Ti			1	99.948	ug/l	2.81	22,713.17	9.938E-02	Pulse	0.50	3
Na			1	10135.128	ug/l	0.75	14,775,091.67	6.464E+01	Analog	1.00	3
Mg			1	10055.685	ug/l	1.16	6,541,002.67	2.862E+01	Analog	1.00	3
K			1	10109.320	ug/l	0.71	5,319,486.33	2.327E+01	Analog	1.00	3
V			1	98.909	ug/l	1.87	836,824.25	3.661E+00	Pulse	0.50	3
Mn			1	98.389	ug/l	0.77	514,320.56	3.107E+00	Pulse	0.50	3
Fe			1	10100.304	ug/l	0.39	90,204,226.67	5.449E+02	Analog	0.50	3
Co			1	99.492	ug/l	0.20	1,932,396.04	1.167E+01	Pulse	0.50	3
Ni			1	99.442	ug/l	0.65	548,035.23	3.310E+00	Pulse	0.50	3
Cu			1	98.922	ug/l	0.52	1,496,340.84	9.039E+00	Pulse	0.50	3
Zn			1	99.350	ug/l	0.47	207,330.56	8.480E-01	Pulse	1.00	3
Cd			1	97.345	ug/l	0.57	286,113.87	1.170E+00	Pulse	0.50	3
Al			1	9591.897	ug/l	1.40	1,956,882.58	8.561E+00	Pulse	1.00	3
Se			1	99.852	ug/l	0.20	7,832.71	3.204E-02	Pulse	3.00	3
Sb			1	96.291	ug/l	0.81	637,571.96	2.608E+00	Pulse	1.00	3
Se			1	97.148	ug/l	0.81	3,769.82	1.542E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,763,384.42	0.03	93.0	Pulse	0.50	3
1	Sc		228,585.03	0.76	100.9	Pulse	0.30	3
1	Ge		165,548.88	0.15	101.3	Pulse	0.30	3
1	In		1,475,560.46	0.47	97.4	Pulse	0.30	3
1	Tb		5,056,954.00	0.17	96.7	Pulse	0.50	3
1	Lu		3,176,912.08	0.02	95.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,486.57	0.43	99.3	Pulse	0.30	3
1	Te		3.33	34.64		Pulse	0.50	3
1	Li		844.47	3.31	102.4	Pulse	0.30	3

Quantitation Report

File Name	045_CCB.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 10:53
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.017	ug/l	91.50	1,156.04	7.080E-03	Pulse	0.50	3
As			1	0.028	ug/l	33.90	59.00	3.615E-04	Pulse	1.00	3
Mo			1	0.198	ug/l	16.91	1,294.72	5.291E-03	Pulse	0.50	3
Pb			1	0.042	ug/l	32.37	2,181.82	5.665E-04	Pulse	1.00	3
Be			1	0.024	ug/l	94.41	1.67	7.349E-06	Pulse	2.00	3
Ag			1	0.030	ug/l	33.10	703.35	2.875E-03	Pulse	0.50	3
Ba			1	0.014	ug/l	82.38	56.67	3.817E-05	Pulse	0.50	3
Tl			1	0.030	ug/l	45.37	1,497.42	3.891E-04	Pulse	0.50	3
Sn			1	0.123	ug/l	26.26	827.81	5.579E-04	Pulse	0.30	3
Sr			1	0.023	ug/l	90.14	627.35	4.225E-04	Pulse	0.50	3
[Pb]			1	0.043	ug/l	44.39	1,060.04	2.753E-04	Pulse	0.50	3
Ca			1	1.459	ug/l	103.91	156.67	6.906E-04	Pulse	0.50	3
Ti			1	0.053	ug/l	76.98	14.67	6.462E-05	Pulse	0.50	3
Na			1	6.482	ug/l	23.38	17,676.53	7.793E-02	Pulse	1.00	3
Mg			1	2.274	ug/l	65.80	1,807.77	7.967E-03	Pulse	1.00	3
K			1	2.450	ug/l	61.88	20,528.31	9.051E-02	Pulse	1.00	3
V			1	0.013	ug/l	156.54	456.67	2.013E-03	Pulse	0.50	3
Mn			1	0.010	ug/l	150.21	220.67	1.353E-03	Pulse	0.50	3
Fe			1	2.828	ug/l	45.37	33,276.78	2.040E-01	Pulse	0.50	3
Co			1	0.022	ug/l	63.37	484.68	2.973E-03	Pulse	0.50	3
Ni			1	0.013	ug/l	82.58	214.67	1.315E-03	Pulse	0.50	3
Cu			1	-0.139	ug/l	-10.88	7,580.18	4.640E-02	Pulse	0.50	3
Zn			1	-0.056	ug/l	-19.93	753.35	3.078E-03	Pulse	1.00	3
Cd			1	0.022	ug/l	70.27	68.67	2.807E-04	Pulse	0.50	3
Al			1	1.324	ug/l	98.49	581.01	2.561E-03	Pulse	1.00	3
Se			1	0.066	ug/l	74.37	12.44	5.084E-05	Pulse	3.00	3
Sb			1	0.038	ug/l	33.41	311.00	1.271E-03	Pulse	1.00	3
Se			1	0.071	ug/l	92.74	18.00	7.357E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,853,894.75	0.59	95.2	Pulse	0.50	3
1	Sc		226,810.72	0.18	100.1	Pulse	0.30	3

Quantitation Report

1	Ge		163,387.89	0.83	100.0	Pulse	0.30	3
1	In		1,484,174.56	0.36	98.0	Pulse	0.30	3
1	Tb		5,035,353.50	0.35	96.2	Pulse	0.50	3
1	Lu		3,146,700.00	0.90	94.8	Pulse	0.50	3
1	Ge		244,712.68	0.16	99.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		896.69	2.68	108.8	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 10:56
Sample Name FA92962-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.732	ug/l	3.76	4,827.95	3.143E-02	Pulse	0.50	3
As			1	8.785	ug/l	2.20	4,905.30	3.193E-02	Pulse	1.00	3
Mo			1	0.502	ug/l	13.93	1,528.07	6.661E-03	Pulse	0.50	3
Pb			1	0.208	ug/l	5.23	3,904.45	1.076E-03	Pulse	1.00	3
Be			1	0.026	ug/l	2.39	1.00	4.608E-06	Pulse	2.00	3
Ag			1	0.037	ug/l	3.61	415.34	1.812E-03	Pulse	0.50	3
Ba			1	14.805	ug/l	2.36	15,006.25	1.084E-02	Pulse	0.50	3
Tl			1	0.029	ug/l	12.43	767.35	2.115E-04	Pulse	0.50	3
Sn			1	0.819	ug/l	2.35	2,180.14	1.575E-03	Pulse	0.30	3
Sr			1	287.933	ug/l	0.63	697,533.54	5.040E-01	Pulse	0.50	3
[Pb]			1	0.201	ug/l	10.17	1,798.10	4.958E-04	Pulse	0.50	3
Ca			1	37947.671	ug/l	1.11	496,730.09	2.289E+00	Pulse	0.50	3
Ti			1	0.445	ug/l	12.17	50.67	2.332E-04	Pulse	0.50	3
Na			1	24488.988	ug/l	0.76	16,947,885.33	7.808E+01	Analog	1.00	3
Mg			1	5401.481	ug/l	0.82	1,668,400.71	7.687E+00	Pulse	1.00	3
K			1	7058.520	ug/l	0.71	1,775,386.83	8.180E+00	Pulse	1.00	3
V			1	0.207	ug/l	12.55	1,163.37	5.355E-03	Pulse	0.50	3
Mn			1	10.038	ug/l	1.71	24,505.44	1.595E-01	Pulse	0.50	3
Fe			1	285.431	ug/l	0.64	1,190,751.58	7.750E+00	Pulse	0.50	3
Co			1	0.300	ug/l	4.42	2,762.87	1.798E-02	Pulse	0.50	3
Ni			1	5.601	ug/l	3.09	14,456.08	9.409E-02	Pulse	0.50	3
Cu			1	47.569	ug/l	0.78	340,810.33	2.218E+00	Pulse	0.50	3
Zn			1	14.607	ug/l	0.80	15,043.86	6.563E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	56.31	14.00	6.123E-05	Pulse	0.50	3
Al			1	4.234	ug/l	3.03	709.34	3.268E-03	Pulse	1.00	3
Se			1	0.029	ug/l	202.08	7.89	3.441E-05	Pulse	3.00	3
Sb			1	0.122	ug/l	8.44	432.34	1.886E-03	Pulse	1.00	3
Se			1	0.328	ug/l	10.40	20.22	8.824E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,628,374.42	0.79	89.6	Pulse	0.50	3
1	Sc		217,061.81	1.62	95.8	Pulse	0.30	3
1	Ge		153,652.00	0.92	94.1	Pulse	0.30	3
1	In		1,384,016.47	1.10	91.3	Pulse	0.30	3
1	Tb		4,843,881.17	1.52	92.6	Pulse	0.50	3
1	Lu		3,008,537.92	2.02	90.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		229,209.90	1.03	93.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		854.47	8.90	103.6	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 11:00
Sample Name FA92762-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.161	ug/l	1.65	7,023.95	4.641E-02	Pulse	0.50	3
As			1	4.048	ug/l	1.68	2,239.13	1.480E-02	Pulse	1.00	3
Mo			1	0.167	ug/l	34.10	534.67	2.350E-03	Pulse	0.50	3
Pb			1	6.343	ug/l	0.77	95,104.36	2.627E-02	Pulse	1.00	3
Be			1	1.259	ug/l	7.64	33.00	1.537E-04	Pulse	2.00	3
Ag			1	0.024	ug/l	1.33	286.00	1.259E-03	Pulse	0.50	3
Ba			1	56.325	ug/l	0.55	56,388.05	4.119E-02	Pulse	0.50	3
Tl			1	0.067	ug/l	3.31	1,570.08	4.337E-04	Pulse	0.50	3
Sn			1	0.689	ug/l	7.43	1,838.99	1.343E-03	Pulse	0.30	3
Sr			1	18.458	ug/l	1.62	44,653.91	3.263E-02	Pulse	0.50	3
[Pb]			1	6.414	ug/l	1.46	45,285.67	1.251E-02	Pulse	0.50	3
Ca			1	1752.022	ug/l	1.84	22,793.88	1.062E-01	Pulse	0.50	3
Ti			1	0.451	ug/l	12.40	50.67	2.358E-04	Pulse	0.50	3
Na			1	2683.745	ug/l	1.10	1,844,549.96	8.590E+00	Pulse	1.00	3
Mg			1	1172.921	ug/l	1.14	358,683.38	1.670E+00	Pulse	1.00	3
K			1	1979.965	ug/l	1.04	505,826.81	2.356E+00	Pulse	1.00	3
V			1	0.334	ug/l	8.22	1,658.75	7.719E-03	Pulse	0.50	3
Mn			1	114.366	ug/l	1.29	273,257.29	1.806E+00	Pulse	0.50	3
Fe			1	79414.364	ug/l	1.42	324,073,738.67	2.142E+03	Analog	0.50	3
Co			1	5.811	ug/l	1.47	51,632.46	3.413E-01	Pulse	0.50	3
Ni			1	2.030	ug/l	4.61	5,242.07	3.466E-02	Pulse	0.50	3
Cu			1	84.067	ug/l	0.26	586,318.56	3.875E+00	Pulse	0.50	3
Zn			1	153.249	ug/l	0.60	148,825.91	6.549E-01	Pulse	1.00	3
Cd			1	0.028	ug/l	36.87	42.00	1.847E-04	Pulse	0.50	3
Al			1	48.791	ug/l	0.88	4,971.63	2.315E-02	Pulse	1.00	3
Se			1	0.668	ug/l	14.19	31.11	1.369E-04	Pulse	3.00	3
Sb			1	0.066	ug/l	5.04	254.33	1.119E-03	Pulse	1.00	3
Se			1	1.661	ug/l	6.80	44.00	1.936E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,620,543.83	1.90	89.5	Pulse	0.50	3
1	Sc		214,755.24	1.45	94.8	Pulse	0.30	3
1	Ge		151,322.41	1.68	92.6	Pulse	0.30	3
1	In		1,368,765.36	1.38	90.3	Pulse	0.30	3
1	Tb		4,789,301.17	2.14	91.5	Pulse	0.50	3
1	Lu		2,968,534.00	1.83	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		227,255.88	0.61	92.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		785.57	4.66	95.3	Pulse	0.30	3

Quantitation Report

File Name 048CCVA.d
File Path D:\2022\xa021622m1.b
Method File
Method Path
Acq Time 2/16/2022 11:04
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 2/16/2022 8:37
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.467	ug/l	0.84	592,992.81	3.530E+00	Pulse	0.50	3
As			1	49.490	ug/l	0.73	60,157.07	3.581E-01	Pulse	1.00	3
Mo			1	49.308	ug/l	1.12	316,951.65	1.268E+00	Pulse	0.50	3
Pb			1	49.487	ug/l	0.76	1,561,952.71	4.067E-01	Pulse	1.00	3
Be			1	51.426	ug/l	2.12	2,905.88	1.244E-02	Pulse	2.00	3
Ag			1	49.042	ug/l	0.36	1,119,654.75	4.480E+00	Pulse	0.50	3
Ba			1	49.542	ug/l	0.10	108,452.79	7.245E-02	Pulse	0.50	3
Tl			1	51.122	ug/l	0.19	2,303,665.25	5.998E-01	Pulse	0.50	3
Sn			1	50.604	ug/l	0.53	268,748.16	1.795E-01	Pulse	0.30	3
Sr			1	51.012	ug/l	0.15	267,634.87	1.788E-01	Pulse	0.50	3
[Pb]			1	49.794	ug/l	0.34	739,989.35	1.927E-01	Pulse	0.50	3
Ca			1	4954.130	ug/l	1.31	139,642.91	5.980E-01	Pulse	0.50	3
Ti			1	51.027	ug/l	1.94	11,848.94	5.074E-02	Pulse	0.50	3
Na			1	5122.997	ug/l	1.04	7,634,513.50	3.269E+01	Analog	1.00	3
Mg			1	5043.377	ug/l	1.38	3,351,916.42	1.435E+01	Pulse	1.00	3
K			1	5038.759	ug/l	1.19	2,718,776.50	1.164E+01	Pulse	1.00	3
V			1	49.968	ug/l	1.11	432,139.10	1.850E+00	Pulse	0.50	3
Mn			1	49.741	ug/l	1.05	263,952.86	1.571E+00	Pulse	0.50	3
Fe			1	5188.495	ug/l	0.56	47,027,794.67	2.799E+02	Analog	0.50	3
Co			1	51.127	ug/l	0.71	1,007,747.23	5.998E+00	Pulse	0.50	3
Ni			1	51.031	ug/l	1.25	285,471.72	1.699E+00	Pulse	0.50	3
Cu			1	50.960	ug/l	0.39	787,060.90	4.685E+00	Pulse	0.50	3
Zn			1	50.469	ug/l	0.37	108,111.13	4.325E-01	Pulse	1.00	3
Cd			1	49.277	ug/l	0.59	148,072.67	5.924E-01	Pulse	0.50	3
Al			1	4885.753	ug/l	1.71	1,018,571.42	4.362E+00	Pulse	1.00	3
Se			1	49.067	ug/l	2.48	3,938.63	1.576E-02	Pulse	3.00	3
Sb			1	48.416	ug/l	0.10	327,769.33	1.311E+00	Pulse	1.00	3
Se			1	49.327	ug/l	1.43	1,964.66	7.860E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,840,879.92	0.68	94.9	Pulse	0.50	3
1	Sc		233,551.42	1.18	103.1	Pulse	0.30	3
1	Ge		167,999.71	0.26	102.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,496,845.43	0.30	98.8	Pulse	0.30	3
1	Tb		5,098,803.17	0.16	97.5	Pulse	0.50	3
1	Lu		3,209,328.92	0.56	96.7	Pulse	0.50	3
1	Ge		249,943.08	0.64	101.5	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		886.69	5.68	107.5	Pulse	0.30	3

Quantitation Report

File Name	049_CCV.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 11:08
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.659	ug/l	1.81	1,146,997.13	7.034E+00	Pulse	0.50	3
As			1	98.726	ug/l	0.81	116,455.60	7.141E-01	Pulse	1.00	3
Mo			1	97.306	ug/l	1.05	614,408.92	2.502E+00	Pulse	0.50	3
Pb			1	98.037	ug/l	0.71	3,010,836.50	8.054E-01	Pulse	1.00	3
Be			1	101.003	ug/l	2.61	5,564.43	2.444E-02	Pulse	2.00	3
Ag			1	95.427	ug/l	1.30	2,140,142.25	8.717E+00	Pulse	0.50	3
Ba			1	98.208	ug/l	0.32	209,183.69	1.436E-01	Pulse	0.50	3
Tl			1	100.696	ug/l	0.91	4,416,472.33	1.181E+00	Pulse	0.50	3
Sn			1	99.616	ug/l	0.80	514,654.86	3.533E-01	Pulse	0.30	3
Sr			1	100.309	ug/l	0.66	511,650.75	3.513E-01	Pulse	0.50	3
[Pb]			1	97.273	ug/l	1.51	1,406,631.25	3.763E-01	Pulse	0.50	3
Ca			1	9745.348	ug/l	0.64	267,719.27	1.176E+00	Pulse	0.50	3
Ti			1	99.423	ug/l	1.20	22,510.96	9.886E-02	Pulse	0.50	3
Na			1	10125.142	ug/l	0.92	14,703,597.00	6.458E+01	Analog	1.00	3
Mg			1	10050.123	ug/l	0.85	6,512,345.83	2.860E+01	Analog	1.00	3
K			1	10133.967	ug/l	0.92	5,311,865.50	2.333E+01	Analog	1.00	3
V			1	99.067	ug/l	0.74	834,987.54	3.667E+00	Pulse	0.50	3
Mn			1	99.723	ug/l	1.10	513,469.60	3.149E+00	Pulse	0.50	3
Fe			1	10284.055	ug/l	0.81	90,469,413.33	5.548E+02	Analog	0.50	3
Co			1	100.210	ug/l	1.36	1,917,128.17	1.176E+01	Pulse	0.50	3
Ni			1	100.421	ug/l	1.14	545,126.75	3.343E+00	Pulse	0.50	3
Cu			1	99.824	ug/l	1.40	1,487,218.37	9.121E+00	Pulse	0.50	3
Zn			1	98.971	ug/l	0.61	207,428.77	8.448E-01	Pulse	1.00	3
Cd			1	95.683	ug/l	1.03	282,424.65	1.150E+00	Pulse	0.50	3
Al			1	9622.272	ug/l	0.79	1,955,592.41	8.589E+00	Pulse	1.00	3
Se			1	97.526	ug/l	0.65	7,683.21	3.129E-02	Pulse	3.00	3
Sb			1	95.077	ug/l	1.21	632,220.02	2.575E+00	Pulse	1.00	3
Se			1	97.155	ug/l	1.49	3,786.60	1.542E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,738,517.08	0.62	92.4	Pulse	0.50	3
1	Sc		227,709.40	1.02	100.5	Pulse	0.30	3
1	Ge		163,074.29	0.86	99.8	Pulse	0.30	3
1	In		1,456,613.62	0.39	96.1	Pulse	0.30	3
1	Tb		5,035,390.33	0.47	96.2	Pulse	0.50	3
1	Lu		3,164,610.83	0.78	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,532.15	0.83	99.7	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		814.47	13.45	98.8	Pulse	0.30	3

Quantitation Report

File Name	050_CCB.d
File Path	D:\2022\xa021622m1.b
Method File	
Method Path	
Acq Time	2/16/2022 11:12
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	2/16/2022 8:37
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	736.69	970.03	5.931E-03	Pulse	0.50	3
As			1	0.012	ug/l	85.86	40.33	2.463E-04	Pulse	1.00	3
Mo			1	0.168	ug/l	26.68	1,112.71	4.539E-03	Pulse	0.50	3
Pb			1	0.024	ug/l	26.69	1,611.08	4.194E-04	Pulse	1.00	3
Be			1	0.003	ug/l	304.12	0.50	2.206E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	12.19	368.67	1.501E-03	Pulse	0.50	3
Ba			1	-0.001	ug/l	-788.35	24.00	1.610E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	24.73	730.02	1.901E-04	Pulse	0.50	3
Sn			1	0.101	ug/l	23.82	715.57	4.804E-04	Pulse	0.30	3
Sr			1	0.013	ug/l	51.68	578.01	3.880E-04	Pulse	0.50	3
[Pb]			1	0.023	ug/l	27.28	760.02	1.978E-04	Pulse	0.50	3
Ca			1	-0.682	ug/l	-132.95	98.67	4.325E-04	Pulse	0.50	3
Ti			1	0.018	ug/l	125.90	6.67	2.924E-05	Pulse	0.50	3
Na			1	2.323	ug/l	12.96	11,724.10	5.142E-02	Pulse	1.00	3
Mg			1	0.488	ug/l	71.26	658.01	2.884E-03	Pulse	1.00	3
K			1	0.509	ug/l	109.52	19,619.72	8.606E-02	Pulse	1.00	3
V			1	-0.003	ug/l	-130.98	323.34	1.418E-03	Pulse	0.50	3
Mn			1	-0.006	ug/l	-75.40	140.00	8.560E-04	Pulse	0.50	3
Fe			1	1.197	ug/l	18.03	18,966.00	1.160E-01	Pulse	0.50	3
Co			1	0.005	ug/l	82.00	167.33	1.025E-03	Pulse	0.50	3
Ni			1	-0.011	ug/l	-48.22	85.33	5.211E-04	Pulse	0.50	3
Cu			1	-0.178	ug/l	-2.89	7,003.96	4.282E-02	Pulse	0.50	3
Zn			1	-0.044	ug/l	-31.79	781.69	3.185E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	53.97	24.00	9.752E-05	Pulse	0.50	3
Al			1	-0.390	ug/l	-74.51	235.33	1.031E-03	Pulse	1.00	3
Se			1	0.038	ug/l	37.80	10.33	4.208E-05	Pulse	3.00	3
Sb			1	0.016	ug/l	13.41	166.00	6.766E-04	Pulse	1.00	3
Se			1	-0.037	ug/l	-91.78	13.89	5.656E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,843,791.83	0.67	95.0	Pulse	0.50	3
1	Sc		227,993.09	0.95	100.6	Pulse	0.30	3

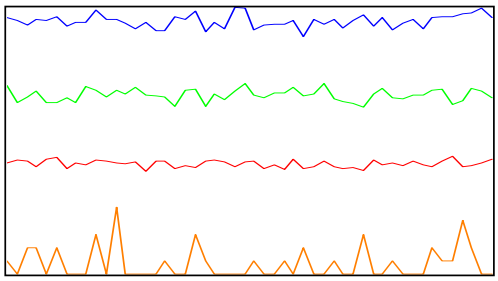
Quantitation Report

1	Ge		163,582.31	0.93	100.1	Pulse	0.30	3
1	In		1,489,870.91	0.20	98.3	Pulse	0.30	3
1	Tb		5,025,178.83	0.81	96.0	Pulse	0.50	3
1	Lu		3,137,403.67	0.76	94.5	Pulse	0.50	3
1	Ge		245,492.09	0.91	99.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		777.80	4.54	94.3	Pulse	0.30	3

Tune Report

Batch Folder	D:\2022\xa021622m1.b
Acq. Date-Time	2/16/2022 7:57
Report Comment	0216
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	2069	20689.96	5000.00	
89	2000	1342	13419.94	5000.00	
205	5000	4740	47398.44	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

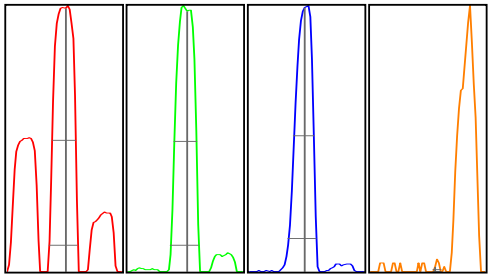
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.29	5.00	
89	3.39	5.00	
205	2.58	5.00	
78	153.87		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.20	2	
89	0.00	2	
205	0.20	2	
78	0.30	5	

Ratio	156/140	0.636 %	
Ratio	70/140	2.696 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2045.41	59.05	58.9 - 59.1		0.60	0.738	0.900	
89	1374.56	89.05	88.9 - 89.1		0.55	0.712	0.900	
205	4782.10	205.00	204.9 - 205.1		0.49	0.705	0.900	
78	1.00	78.20	-		0.16	0.193		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.90 L/min	Makeup/Dilution Gas	0.20 L/min
Option Gas	0.0 %		

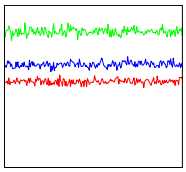
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-32 V
Extract 2	-185.0 V	Cell Exit	-70 V
Omega Bias	-100 V	Deflect	1.8 V
Omega Lens	7.5 V	Plate Bias	-60 V

Cell Parameters

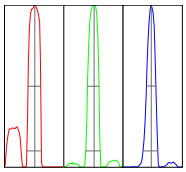
Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



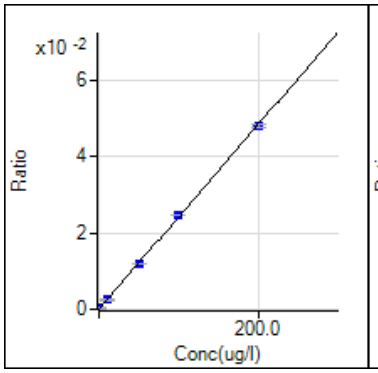
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2647.22	8375.53	6344.08
RSD%	2.8	2.4	2.6
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.16%	
Doubly Charged	70/140	4.17%	

Background			
Mass	7	89	205
Count	0.65	1.10	5.95

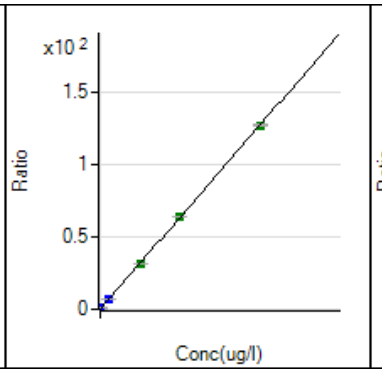


Resolution/Axis			
Mass	7	89	205
Height	2666	8249	6366
Axis	7.05	89.05	204.95
W-50%	0.63	0.57	0.47
W-10%	0.73	0.72	0.73
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

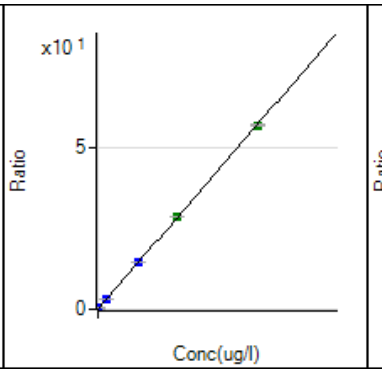
Calibration for D:\2022\xa021622m1.b\001CALB.d



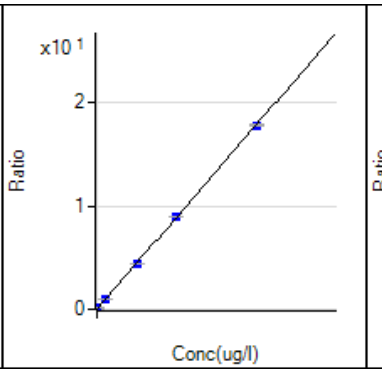
9 Be [2] / ISTD: 45 Sc
y = 2.420E-4 x + 1.477E-6
R 0.9999
DL 0.03171
BEC 0.006103



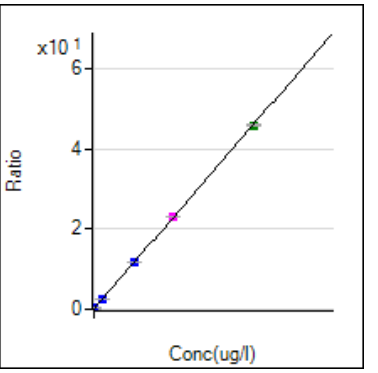
23 Na [2] / ISTD: 45 Sc
y = 6.374E-3 x + 3.661E-2
R 1.0000
DL 0.1834
BEC 5.744



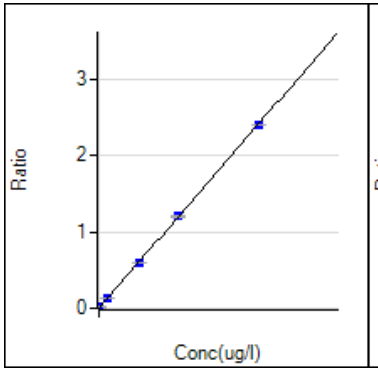
24 Mg [2] / ISTD: 45 Sc
y = 2.846E-3 x + 1.495E-3
R 1.0000
DL 0.1728
BEC 0.5254



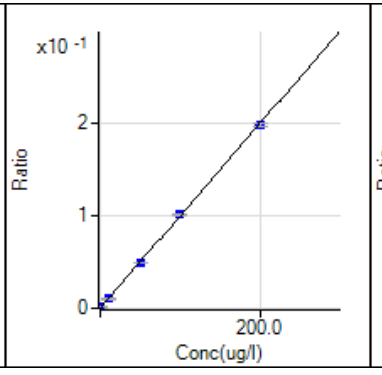
27 Al [2] / ISTD: 45 Sc
y = 8.924E-4 x + 1.379E-3
R 1.0000
DL 0.6879
BEC 1.545



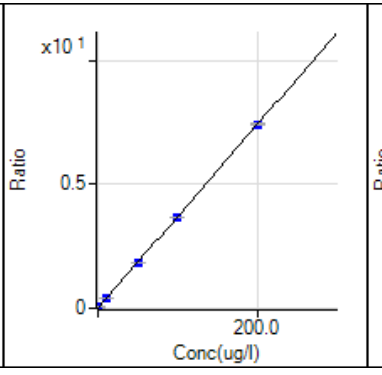
39 K [2] / ISTD: 45 Sc
y = 2.294E-3 x + 8.489E-2
R 1.0000
DL 0.9433
BEC 37.01



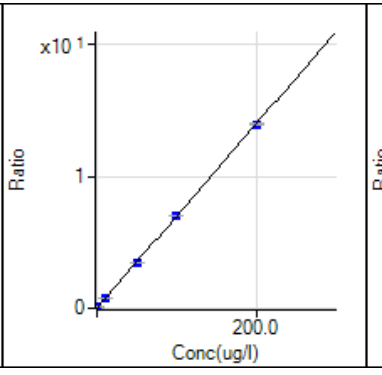
44 Ca [2] / ISTD: 45 Sc
y = 1.206E-4 x + 5.147E-4
R 1.0000
DL 2.195
BEC 4.268



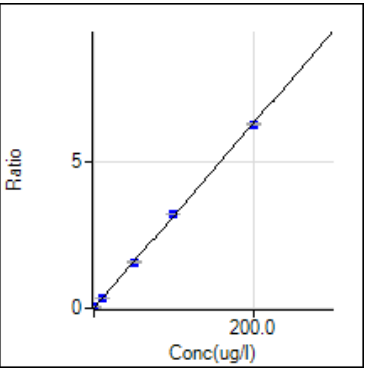
47 Ti [2] / ISTD: 45 Sc
y = 9.942E-4 x + 1.180E-5
R 1.0000
DL 0.04078
BEC 0.01187



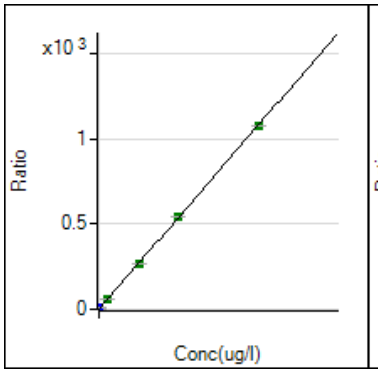
51 V [2] / ISTD: 45 Sc
y = 3.700E-2 x + 1.532E-3
R 1.0000
DL 0.005776
BEC 0.04141



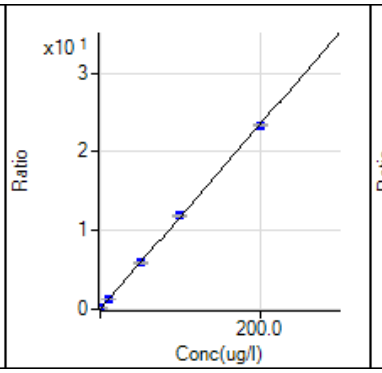
52 Cr [2] / ISTD: 72 Ge
y = 6.982E-2 x + 5.882E-3
R 1.0000
DL 0.02232
BEC 0.08424



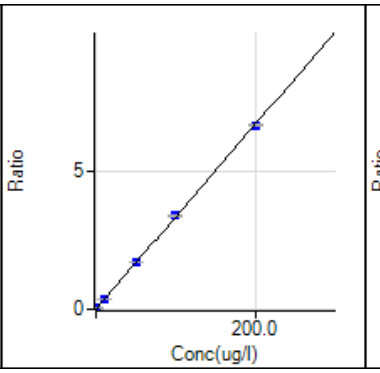
55 Mn [2] / ISTD: 72 Ge
y = 3.157E-2 x + 1.037E-3
R 1.0000
DL 0.007504
BEC 0.03284



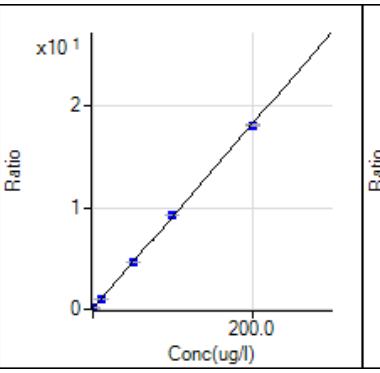
56 Fe [2] / ISTD: 72 Ge
y = 5.394E-2 x + 5.141E-2
R 1.0000
DL 0.04545
BEC 0.953



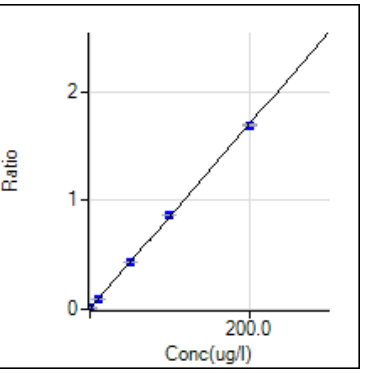
59 Co [2] / ISTD: 72 Ge
y = 1.173E-1 x + 4.044E-4
R 1.0000
DL 0.004133
BEC 0.003447



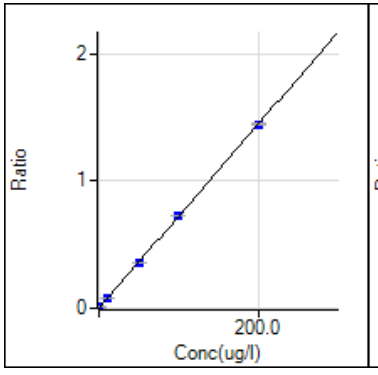
60 Ni [2] / ISTD: 72 Ge
y = 3.328E-2 x + 8.857E-4
R 1.0000
DL 0.0102
BEC 0.02661



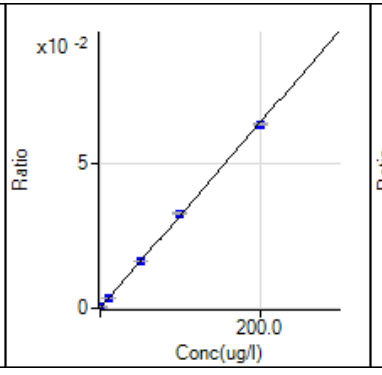
63 Cu [2] / ISTD: 72 Ge
y = 9.078E-2 x + 5.901E-2
R 0.9999
DL 0.07925
BEC 0.6501



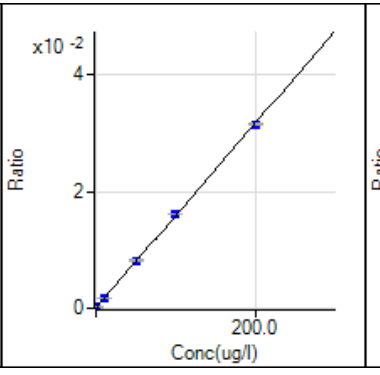
66 Zn [2] / ISTD: 74 Ge
y = 8.500E-3 x + 3.556E-3
R 0.9999
DL 0.05578
BEC 0.4183



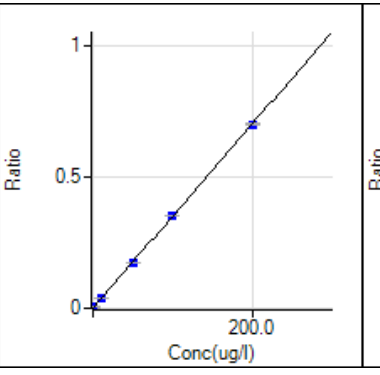
75 As [2] / ISTD: 72 Ge
y = 7.232E-3 x + 1.612E-4
R 1.0000
DL 0.02153
BEC 0.02228



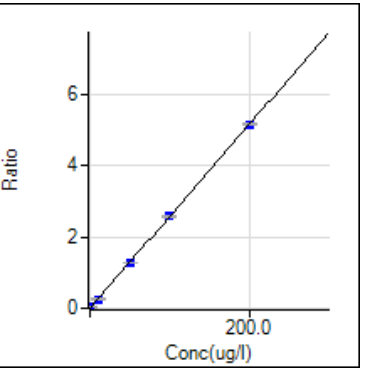
78 Se [2] / ISTD: 74 Ge
y = 3.206E-4 x + 2.983E-5
R 0.9999
DL 0.08508
BEC 0.09305



82 Se [2] / ISTD: 74 Ge
y = 1.581E-4 x + 6.234E-5
R 0.9999
DL 0.2594
BEC 0.3944

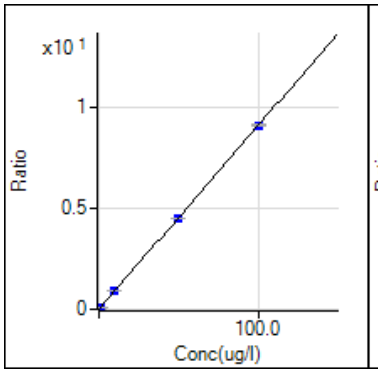


88 Sr [2] / ISTD: 115 In
y = 3.498E-3 x + 3.427E-4
R 1.0000
DL 0.01413
BEC 0.09797

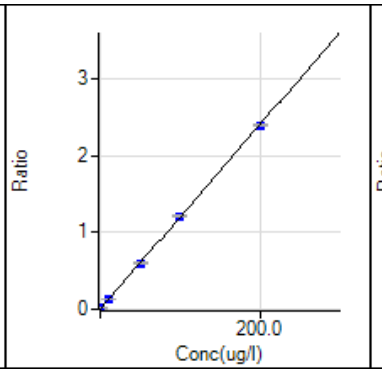


95 Mo [2] / ISTD: 74 Ge
y = 2.571E-2 x + 2.061E-4
R 1.0000
DL 0.008211
BEC 0.008014

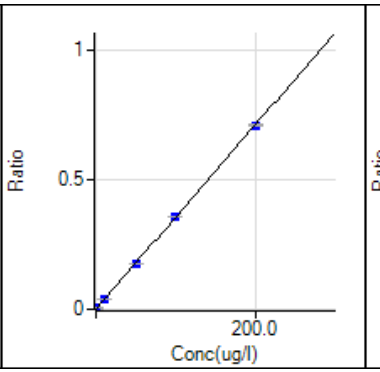
Calibration for D:\2022\xa021622m1.b\001CALB.d



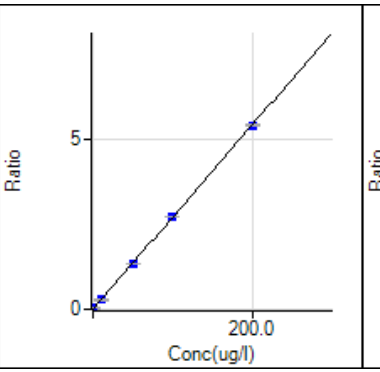
107 Ag [2] / ISTD: 74 Ge
y = 9.134E-2 x + 1.410E-4
R 1.0000
DL 0.00149
BEC 0.001544



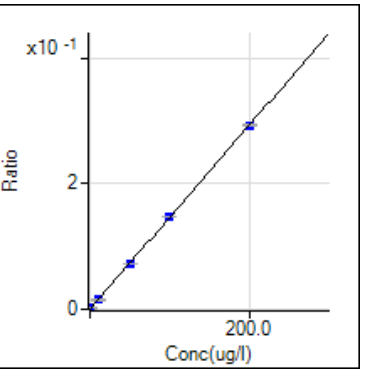
111 Cd [2] / ISTD: 74 Ge
y = 1.202E-2 x + 1.895E-5
R 1.0000
DL 0.001147
BEC 0.001576



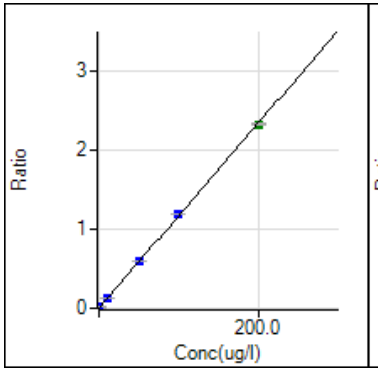
118 Sn [2] / ISTD: 115 In
y = 3.546E-3 x + 1.225E-4
R 1.0000
DL 0.02083
BEC 0.03454



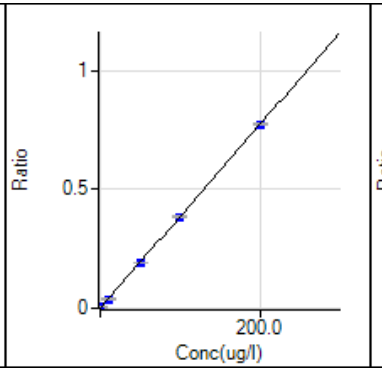
121 Sb [2] / ISTD: 74 Ge
y = 2.708E-2 x + 2.316E-4
R 1.0000
DL 0.002935
BEC 0.008551



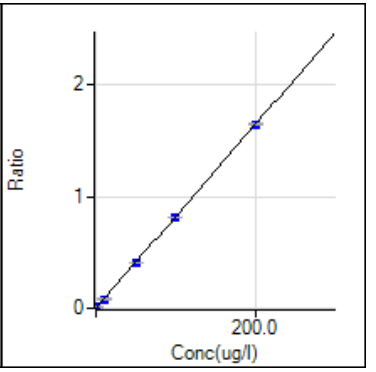
137 Ba [2] / ISTD: 115 In
y = 1.462E-3 x + 1.716E-5
R 1.0000
DL 0.01509
BEC 0.01174



205 Tl [2] / ISTD: 209 Bi
y = 1.173E-2 x + 3.871E-5
R 0.9999
DL 0.0007635
BEC 0.0033



206 [Pb] [2] / ISTD: 209 Bi
y = 3.867E-3 x + 1.072E-4
R 1.0000
DL 0.004592
BEC 0.02773



208 Pb [2] / ISTD: 209 Bi
y = 8.213E-3 x + 2.228E-4
R 1.0000
DL 0.00282
BEC 0.02713

SGS Orlando

Date:	02/15/22
Time [24hr]	13:17

Analysts Name:	Adam K
MP Batch ID:	40298
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	21480064	ACC1260	0.05	MU45274
Conc. HCl (B)	4121060	ACC1291	0.2	KU15244
NA	NA	MET7193	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	94	**Corr. Factor**	-2	**Corrected Observed Temp. C**	92
pH Paper Lot Number	212719			**Filter Lot Number**		0608Z20OV-P		**Digestion Tube Lot Number**	MP3520

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	1	Matrix Spike(MS)	50	50	Y	
	1	Matrix Spike Dup(MSD)	50	50	Y	
	1	Duplicate(DUP)	50	50	Y	
1(QC) C	1	TD78320-1A	50	50	Y	
2	1	FA92962-1	50	50	Y	
3	4	FA92762-1	50	50	Y	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J02

SGS Job Number: FA93641



Sampling Date: 03/04/22

Report to:

Sovereign Consulting

spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: 324

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA93641

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA93641-1	03/04/22	10:30	JR	03/05/22	AQ	Ground Water	EFFLUENT
FA93641-1A	03/04/22	10:30	JR	03/05/22	AQ	Ground Water	EFFLUENT
FA93641-2	03/04/22	09:20	JR	03/05/22	AQ	Ground Water	EW-01
FA93641-2A	03/04/22	09:20	JR	03/05/22	AQ	Ground Water	EW-01
FA93641-3	03/04/22	09:15	JR	03/05/22	AQ	Ground Water	EW-04
FA93641-3A	03/04/22	09:15	JR	03/05/22	AQ	Ground Water	EW-04

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA93641

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 3/15/2022 12:58:14 PM

On 03/05/2022, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA93641 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP40406

Sample(s) FA93582-2DUP, FA93582-2MS, FA93582-2MSD, FA93582-2PS, FA93582-2SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Iron, Barium are outside control limits for sample MP40406-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP40406-SD1 for Barium: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP40383

Sample(s) FA93314-21FADUP, FA93314-21FAMS, FA93314-21FAMSD, FA93314-21FASDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP40383-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP37489

Sample(s) FA93669-6MSD, FA93669-6MS were used as the QC samples for Chloride, Sulfate.

Matrix Spike Recovery(s) for Chloride, Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA93641
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 03/04/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA93641-1	**EFFLUENT**					
Arsenic		2.8	2.0	1.0	ug/l	SW846 6020B
FA93641-1A	**EFFLUENT**					
Barium		14.0 J	200	5.0	ug/l	SW846 6010D
Magnesium		5140	5000	100	ug/l	SW846 6010D
Manganese		4.5 J	15	2.0	ug/l	SW846 6010D
Chloride		41.3	2.0	1.0	mg/l	EPA 300/SW846 9056A
Sulfate		6.2	2.0	1.0	mg/l	EPA 300/SW846 9056A
FA93641-2	**EW-01**					
Arsenic		1420	2.0	1.0	ug/l	SW846 6020B
FA93641-2A	**EW-01**					
Iron		69100	300	50	ug/l	SW846 6010D
Manganese		2260	15	2.0	ug/l	SW846 6010D
FA93641-3	**EW-04**					
Arsenic		2800	2.0	1.0	ug/l	SW846 6020B
FA93641-3A	**EW-04**					
Iron		37000	300	50	ug/l	SW846 6010D
Manganese		2360	15	2.0	ug/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA93641-1	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2.8	2.0	1.0	0.21	ug/l	2	03/07/22	03/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18508
(2) Prep QC Batch: MP40383

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA93641-1A	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Barium	14.0 J	200	5.0	1.0	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]
Magnesium	5140	5000	100	35	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	4.5 J	15	2.0	1.0	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18521
(2) Prep QC Batch: MP40406

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA93641-1A	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Chloride	41.3	2.0	1.0	0.80	mg/l	1	03/08/22 15:23	JB	EPA 300/SW846 9056A
Sulfate	6.2	2.0	1.0	0.60	mg/l	1	03/08/22 15:23	JB	EPA 300/SW846 9056A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA93641-2	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1420	2.0	1.0	0.21	ug/l	2	03/07/22	03/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18508
(2) Prep QC Batch: MP40383

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA93641-2A	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	69100	300	50	17	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2260	15	2.0	1.0	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18521
(2) Prep QC Batch: MP40406

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA93641-3	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2800	2.0	1.0	0.21	ug/l	2	03/07/22	03/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18508
(2) Prep QC Batch: MP40383

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA93641-3A	**Date Sampled:**	03/04/22
Matrix:	AQ - Ground Water	**Date Received:**	03/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	37000	300	50	17	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2360	15	2.0	1.0	ug/l	1	03/10/22	03/11/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18521
(2) Prep QC Batch: MP40406

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

5

Subcontract Lab Data

Report of Analysis

SGS NORTH AMERICA- ORLANDO, FL

5

SHEPLEY'S HILL (SHL); DEVENS, MA.

SP1016

Ms. Leslie Dimond
207-874-2400

KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

5

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SAMPLE DATA PACKAGE

NARRATIVE
KATAHDIN ANALYTICAL SERVICES
SGS NORTH AMERICA, INC.
SHEPLEY'S HILL (SHL); DEVENS, MA
SP1016

Sample Receipt

The following sample was received on March 05, 2022 and was logged in under Katahdin Analytical Services work order number SP1016 for a hardcopy due date of March 26, 2022.

KATAHDIN	SGS NORTH AMERICA
Sample No.	Sample Identification
SP1016-1	EFFLUENT

The sample was logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAP standards unless otherwise noted in this narrative or in the Report of Analysis.

We certify that the test results provided in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation L2223.

Analytes which are reported but not listed on our ANAB scope of accreditation will be "^" flagged and the following language will be included in the case narrative for all DoD compliant work: "^" Indicates this analyte is not included on Katahdin Analytical Services DoD-ELAP Scope of Accreditation.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Heather Manz**.
This narrative is an integral part of the Report of Analysis.

Wet Chemistry Analysis

The sample of Work Order SP1016 was analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for nitrate and nitrite were performed according to "Methods for the Determination of Inorganic Substances in Environmental Samples", EPA 600/R-93/100, August 1993.

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are

flagged “U” and reported as “U LOD”, where “LOD” is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times, and all quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Quality Assurance Officer, or their designee, as verified by the following signature.

_____

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: SGS	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GV	Delivered By: FedEx
KAS Work Order#: SP1016	KIMS Review By: HHM	Received By: GV
	Labeled By: GV	
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 3.5.22/10:00

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.1°C; Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?					Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:				✓	
Aqueous: No bubble larger than a pea?				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

SGS North America Inc - Orlando

Chain of Custody

SP1016

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : ** PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: SGS North America
Address: 4405 Vineland Road, Suite C-15
City: Orlando State: FL Zip: 32811
Project Contact: Evita Martinez Email: Evita.Martinez@sgs.com
Phone #: 407.425.6700 x 14915 / Mobile #: 407.713.9841
Sampler(s) Name(s) (Printed)
Sampler 1: Sampler 2:

Project Information

Project Name: Shepley's Hill (SHL); Devens, MA
Street
City State
Project #
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Nitrate - 353.2	NO2 - SM4500NO2 B-11	NO2/NO3 - EPA353.2/SM4500NO2B	LAB USE ONLY
	Effluent	3/4/22	10:30	JWR	W	2		1				1				x	x	x	

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other STD TAT
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S - ADRSEDD1

Comments / Remarks

DOD State of Origin: MA

** Direct Sub to Katahdin ME from MA Service Center - Please contact Evita Martinez, SGS PM, for Orlando job number.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 Thelma Fleaty	3/4/22 1700	2 FedEx	3	3-5-22/1020	
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): CSA 30732

http://www.sgs.com/en/terms-and-conditions

SGSORLANDOCOC.XLS Rev 031318

Katahdin Analytical Services SP1016 Page 5 of 23

Login Chain of Custody (ln01)

Mar. 07, 2022
01:55 PM

Login Number: SP1016

Account: SGSORLANDOFL001
SGS North America- Orlando, Fl

Project:

Primary Report Address:
Evita Martinez
SGS North America
4405 Vineland Road
Suite C-15
Orlando, FL 32611

Evita.Martinez@sgs.com

Primary Invoice Address:
Evita Martinez
SGS North America
4405 Vineland Road
Suite C-15
Orlando,FL 32611

Evita.Martinez@sgs.com

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming:

Login Information

ANALYSIS INSTRUCTIONS	:	DOD, ND to LOD w/ J flag.
CHECK NO.	:	
CLIENT PO#	:	
CLIENT PROJECT MANAGE	:	Evita Martinez
CONTRACT	:	
COOLER TEMPERATURE	:	3.1
DELIVERY SERVICES	:	Fedex
EDD FORMAT	:	KAS089QC-XLS
ISM INSTRUCTIONS	:	
LOGIN INITIALS	:	GN
PM	:	HHM
PROJECT NAME	:	Shepley's Hill (SHL); Devens, MA.
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	Email report and invoice to evita.martinez@sgs.com.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	

Run Reports: Logindetail

Login Number: SP1016

Account: SGSORLANDOFL001
SGS North America- Orlando, Fl

Project:

Quote/Incoming:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Due Date	Verbal Due Date	Mailed
SP1016-1	EFFLUENT	04-MAR-22 10:30	05-MAR-22		26-MAR-22		

Sample Comments:

Matrix		Product	Hold Date (shortest)	Notes	Bottle Type
Aqueous	S	E353.2-NITRATE	06-MAR-22 SHORT		125mL Plastic
Aqueous	S	E353.2-NITRITE	06-MAR-22 SHORT		125mL Plastic
Aqueous	S	E353.2-NOX	01-APR-22		125mL Plastic+H2SO4
Service	S	REPORTING			
Service	S	WASTE-DISPOSAL			

Total Samples: 1 ***Total Analyses: 5***

Run Reports: Logindetail

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U — Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E — Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J — Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 — The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 — Please refer to cover letter or narrative for further information.

H_ — Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 — The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 — The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 — The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 — The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 — The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 — As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 — The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 — The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Report of Analytical Results

Lab Sample ID: SP1016-1
Client ID: EFFLUENT
SDG: SP1016
Report Date: 18-MAR-22

Matrix	Date Sampled	Date Received
AQ	04-MAR-22 10:30	05-MAR-22

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Nitrate As N	0.17 mg/L	0.050	0.015	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	
Nitrate+Nitrite As N	0.17 mg/L	0.050	0.015	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	
Nitrite As N	U0.025 mg/L	0.050	0.0032	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	

CONVENTIONAL AND PHYSICAL ANALYTICAL DATA

QC Summary Section

Quality Control Report

Blank Sample Summary Report

Nitrate As N

QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	Units	LOQ	MDL	LOD
WG314802	EPA 353.2	05-MAR-22	N/A	U0.025	mg/L	0.050	0.015	0.025

Nitrite As N

QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	Units	LOQ	MDL	LOD
WG314802	EPA 353.2	05-MAR-22	N/A	U0.025	mg/L	0.050	0.0032	0.025

Quality Control Report

Laboratory Control Sample Summary Report

Nitrate As N

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG314802-2	LCS	WG314802	05-MAR-22	N/A	mg/L	1	1.0	101	90-110	
WG314802-4	LCSD	WG314802	05-MAR-22	N/A	mg/L	1	1.0	102	90-110	1

Nitrite As N

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG314802-3	LCS	WG314802	05-MAR-22	N/A	mg/L	1	1.0	102	90-110	
WG314802-5	LCSD	WG314802	05-MAR-22	N/A	mg/L	1	1.0	101	90-110	1

Sample Data Section

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

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Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

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R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Report of Analytical Results

Lab Sample ID: SP1016-1
Client ID: EFFLUENT
SDG: SP1016
Report Date: 18-MAR-22

Matrix	Date Sampled	Date Received
AQ	04-MAR-22 10:30	05-MAR-22

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Nitrate As N	0.17 mg/L	0.050	0.015	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	
Nitrate+Nitrite As N	0.17 mg/L	0.050	0.015	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	
Nitrite As N	U0.025 mg/L	0.050	0.0032	0.025	EPA 353.2	WG314802	05-MAR-22 13:05	N/A	N/A	

Raw Data Section

WET CHEMISTRY BATCH REPORT
Mar 07 2022, 05:55 pm
Batch: WG314802 Run ID 1: R587115 Run ID 2: R587116

Parameter: Nitrate As N
Prep Date: N/A

Date Analyzed: 05-MAR-22
Prep Method: N/A

Analyst Initials: ZF
Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SP1016-1	SAMP	EPA 353.2	5.0000mL	5.0000mL	1	.172	0.17 mg/L	NA	.05	0.015	0.050		
WG314802-1	MBLANK	EPA 353.2	5.0000mL	5.0000mL	1	.0025	U0.025 mg/L	NA	.05	0.015	0.050		
WG314802-2	LCS	EPA 353.2	5.0000mL	5.0000mL	1	1.01	1.0 mg/L	NA	.05	0.015	0.050		101
WG314802-4	LCSD	EPA 353.2	5.0000mL	5.0000mL	1	1.02	1.0 mg/L	NA	.05	0.015	0.050	1	102

Comments:

WG314802-1	SP1016-1
WG314802-2	SP1016-1
WG314802-3	SP1016-1
WG314802-4	SP1016-1
WG314802-5	SP1016-1

Entered by: ZF Date: 3/7/22 Accepted by: JR Date: 3/8/22

WET CHEMISTRY BATCH REPORT
Mar 07 2022, 05:55 pm
Batch: WG314802 Run ID 1: R587115 Run ID 2: R587116

Parameter: Nitrite As N

Date Analyzed: 05-MAR-22

Analyst Initials: ZF

Prep Date: N/A

Prep Method: N/A

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SP1016-1	SAMP	EPA 353.2	5.0000mL	5.0000mL	1	-.0047	U0.025 mg/L	NA	.05	0.0032	0.050		
WG314802-1	MBLANK	EPA 353.2	5.0000mL	5.0000mL	1	-.00796	U0.025 mg/L	NA	.05	0.0032	0.050		
WG314802-3	LCS	EPA 353.2	5.0000mL	5.0000mL	1	1.02	1.0 mg/L	NA	.05	0.0032	0.050		102
WG314802-5	LCSD	EPA 353.2	5.0000mL	5.0000mL	1	1.01	1.0 mg/L	NA	.05	0.0032	0.050	1	101

Comments:

WG314802-1	SP1016-1
WG314802-2	SP1016-1
WG314802-3	SP1016-1
WG314802-4	SP1016-1
WG314802-5	SP1016-1

Entered by: ZF Date: 3/7/22 Accepted by: JVP Date: 3/8/22

KATAHDIN ANALYTICAL SERVICES, LLC.
Wet Chemistry Analysis Run Information Sheet

Analyte: NO3, NO2, and NO3+NO2	**Analyst:** ZF
Instrument: LACHAT	**Analysis Date:** 3/5/22

Were pHs of all samples adjusted to 5-9 prior to analysis?

Circle one: (Yes) No **pH Paper Lot ID:**

Were all samples checked for the presence of chlorine prior to analysis?

Circle one: (Yes) No **Chloride Paper Lot ID:**

Analytical Method (Check all that apply):

☑ EPA 353.2 ☐ SM 4500 F ☐ Other

WG314802

Reagent Information:

Reagent Name	Reagent ID	Expiration Date
Ammonium Chloride Buffer	**W20706**	**3/15/2022**
Sulfanilamide Color Reagent	**W20707**	**3/15/2022**
Carrier	**DI Water**	
Cadmium Reduction Column	**S/N: SWL4871**	

Standards Information:

Standard Name	Concentration (mg/L)	ID	Expiration Date
Nitrate CCV	0.5	W20710	3/16/22
Nitrite CCV	0.5	W20675	3/2/22
Nitrate ICV/LCS	1.0	W20698	3/10/22
Nitrite ICV/LCS	1.0	W20641	3/16/22
Standard #1	2.0	W20695	3/9/22
Standard #2	1.0	W20692	3/9/22
Standard #3	0.5	W20675	3/2/22
Standard #4	0.25	W20693	3/9/22
Standard# 5	0.05	W20642	3/16/22
Standard #6	0.0	DI water	N/A
Nitrate Standard	100.0	W20037	5/27/2022
Nitrite Standard	100.0	W20366	9/16/2022

Notes:

1. Matrix Spiking: To 5mL Sample Alliquot add 0.025 mL of Nitrate Standard and 0.025mL Nitrite Standard

Comments: Pipettes: W5, W3, W9, W8

MS: 200uL, 5mL 5x, 10x, & 20x Dilutions: 1mL, 5mL

2x, 4x Dilutions: 5mL 25x, 50x, 100x, 200x Dilutions: 200uL, 5mL

250x, 500x, 1000x, 2000x, 2500x Dilutions: 200uL, 1ml, 5mL

Author: wetchem

Date : 3/5/2022

Original Run Filename: OM_3-5-2022_12-48-07PM.OMN Created: 3/5/2022 12:48:07 PM
Original Run Author's Signature: [wetchem]
Current Run Filename: OM_3-5-2022_12-48-07PM.OMN Last Modified: 3/5/2022 1:19:48 PM
Current Run Author's Signature: [wetchem]
Description: Default New Run

Sample	Channel 1 NITRATE/NITRITE			Channel 2 NITRITE			Detection Time	MDF
	Conc. (mg/L)	Area (V.s)	Height (V)	Conc. (mg/L)	Area (V.s)	Height (V)		
STD 2.0	2.00	23.0	1.68	2.00	22.8	2.15	3/5/2022@12:49:10 PM	
STD 1.0	1.00	11.5	0.852	1.00	11.5	1.02	3/5/2022@12:50:20 PM	
STD .5	0.500	5.83	0.435	0.500	5.79	0.521	3/5/2022@12:51:30 PM	
STD .25	0.250	3.01	0.229	0.250	3.02	0.319	3/5/2022@12:52:40 PM	
STD.05	0.0500	0.613	0.0442	0.0500	0.592	0.0518	3/5/2022@12:53:51 PM	
STD 0.0	0.00	0.0337	2.50e-3	0.00	8.70e-4	7.95e-4	3/5/2022@12:55:04 PM	
1062 CCV NO3	0.527	6.12	0.464	-7.97e-3	-3.64e-3	-7.32e-4	3/5/2022@12:58:10 PM	
Known Conc:	0.500			0.500				
Calibration:	Table/Fig. : 1			Table/Fig. : 2				
1058 CCV NO2	0.507	5.89	0.443	0.512	5.90	0.528	3/5/2022@12:59:20 PM	
Known Conc:	0.500			0.500				
CCB	-4.01e-3	0.0284	2.28e-3	-8.72e-3	-0.0121	-6.16e-4	3/5/2022@1:00:32 PM	
Known Conc:	0.00			0.00				
BLANK	2.52e-3	0.103	7.52e-3	-7.96e-3	-3.48e-3	-6.23e-4	3/5/2022@1:01:42 PM	
Known Conc:	0.00			0.00				
NO3 LCS	1.01	11.7	0.893	-0.0171	-0.108	-0.0218	3/5/2022@1:02:51 PM	
Known Conc:	1.00			1.00				
NO2 LCS	0.0985	1.20	0.0970	0.745	8.55	0.936	3/5/2022@1:04:01 PM	
Known Conc:	1.00			1.00				
SP1016-1 EFFLUENT	0.172	2.04	0.157	-4.70e-3	0.0335	2.58e-3	3/5/2022@1:05:11 PM	
GW70	-0.0358	-0.337	-0.0196	-6.03e-3	0.0184	1.68e-3	3/5/2022@1:06:22 PM	
GW58	0.158	1.88	0.144	-9.57e-3	-0.0218	-1.14e-3	3/5/2022@1:07:34 PM	
RABBITTGW1	-0.0281	-0.248	-0.0139	-2.43e-3	0.0594	4.65e-3	3/5/2022@1:08:46 PM	
NO2 LCS	1.04	12.0	0.921	1.02	11.7	1.05	3/5/2022@1:09:55 PM	
Known Conc:	1.00			1.00				
NO3 LCS	1.02	11.8	0.899	-5.24e-3	0.0274	2.30e-3	3/5/2022@1:11:04 PM	
Known Conc:	1.00			1.00				
NO2 LCS	1.03	11.9	0.912	1.01	11.6	1.06	3/5/2022@1:12:15 PM	
Known Conc:	1.00			1.00				
1058 CCV NO3	0.526	6.10	0.470	-7.76e-3	-1.23e-3	-7.18e-4	3/5/2022@1:15:21 PM	
Known Conc:	0.500			0.500				
1058 CCV NO2	0.512	5.94	0.448	0.516	5.96	0.537	3/5/2022@1:16:32 PM	
Known Conc:	0.500			0.500				
CCB	-4.24e-3	0.0257	1.91e-3	-8.38e-3	-8.35e-3	-1.28e-3	3/5/2022@1:17:44 PM	
Known Conc:	0.00			0.00				

Table : 1 (NITRATE/NITRITE)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00	1	23.0	1.68	0.0	0.0	2.00	3/5/2022	12:49:10 PM
2	1.00	1	11.5	0.852	0.0	0.2	0.998	3/5/2022	12:50:20 PM
3	0.500	1	5.83	0.435	0.0	-0.5	0.502	3/5/2022	12:51:30 PM
4	0.250	1	3.01	0.229	0.0	-2.5	0.256	3/5/2022	12:52:40 PM
5	0.0500	1	0.613	0.0442	0.0	5.3	0.0470	3/5/2022	12:53:51 PM
6	0.00	1	0.0337	2.50e-3			-3.55e-3	3/5/2022	12:55:04 PM

Author: wetchem

Date : 3/5/2022

Figure : 1 (NITRATE/NITRITE)

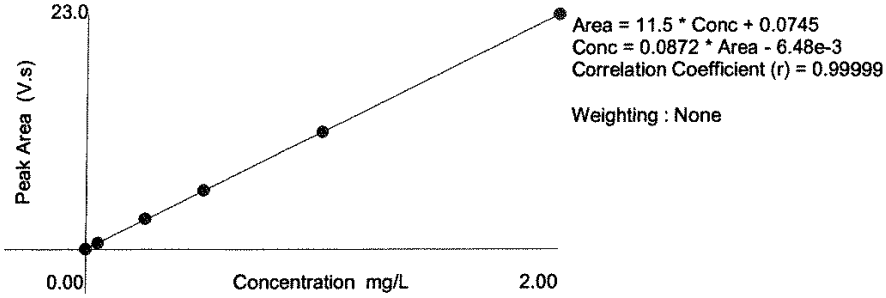
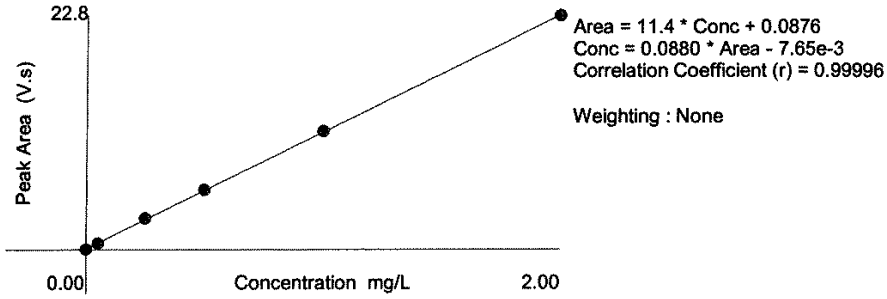


Table : 2 (NITRITE)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00	1	22.8	2.15	0.0	0.3	1.99	3/5/2022	12:49:12 PM
2	1.00	1	11.5	1.02	0.0	-0.8	1.01	3/5/2022	12:50:21 PM
3	0.500	1	5.79	0.521	0.0	-0.3	0.502	3/5/2022	12:51:31 PM
4	0.250	1	3.02	0.319	0.0	-3.1	0.258	3/5/2022	12:52:41 PM
5	0.0500	1	0.592	0.0518	0.0	9.8	0.0444	3/5/2022	12:53:53 PM
6	0.00	1	8.70e-3	7.95e-4			-6.88e-3	3/5/2022	12:55:05 PM

Figure : 2 (NITRITE)



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA93641
SGS - ORLANDO JOB # :

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SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MECH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
1	Effluent	3/4/22	1030	JWR	w	4		x			x	x				X	X	X	X	X		
2	EW-01	3/4/22	0920	JWR	w	1					x	x				X					X	
3	EW-04	3/4/22	0915	JWR	w	1					x	x				X					X	
												TF										
												3/4										

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

☐ COMMERCIAL "A" (RESULTS ONLY)
☐ COMMERCIAL "B" (RESULTS PLUS QC)
☐ REDT1 (EPA LEVEL 3)
☒ FULLT1 (EPA LEVEL 4)
☒ EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples
* 3/4/22 - Nitrate volume directly subbed to from MASC. to Katahdin TF
1x250ml HDPE-H2SO4 1x250ml HDPE-NP 3/4/22

SGS Service Center
Northborough, MA 3/4

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		3-4-22 1135	2	3	3/4/22 1700	4
	Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		3/5/22	6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 0.1 0.0 CSR

CS# 30733

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

FA93641: Chain of Custody
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SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.sgs.com

SUBCOC COPY FA93641

SGS - ORLANDO JOB # : ** PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: SGS North America
Address: 4405 Vineland Road, Suite C-15
City: Orlando State: FL Zip: 32811
Project Contact: Evita Martinez Email: Evita.Martinez@sgs.com
Phone #: 407.425.6700 x 14915 / Mobile #: 407.713.9841
Sampler(s) Name(s) (Printed)
Sampler 1: Sampler 2:

Project Information

Project Name: Shepley's Hill (SHL); Devens, MA
Street
City State
Project #
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION: TOTAL # OF BOTTLES	OTHER	NONE	HCl	HOAc	HNO3	H2SO4	ZnAcH+2NaOH	DI WATER	MEOH	Nitrate - 353.2	NO2 - SM4500NO2 B-11	NO2/NO3 - EPA353.2/SM4500NO2B	LAB USE ONLY
	Effluent	3/4/22	10:30	JWR	W	2		1				1				x	x	x	

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other STD TAT
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S - ADRSEDD1

Comments / Remarks

DOD State of Origin: MA

** Direct Sub to Katahdin ME from MA Service Center - Please contact Evita Martinez, SGS PM, for Orlando job number.

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Thelma Fiely	3/4/22 1700	2 Fed Ex	3		4
5	Relinquished by/Affiliation	Date Time: 3/5/22 1113	6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

SGSORLANDOCOC.XLS Rev 031318

6.1 6

FA93641: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: FA93641 **Client:** SOVEREIGN CONSULTINIG **Project:** SHEPLEY'S HILL (SHL0

Date / Time Received: 3/5/2022 9:15:00 AM **Delivery Method:** FX **Airbill #'s:** 930443717360

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.6);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑
	W	**or**	**S**	**N/A**
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 3/5/2022 9:15:00 AM Reviewer: _____ Date: _____

FA93641: Chain of Custody
Page 3 of 3

QC Evaluation: DOD QSM5.x Limits

Job Number: FA93641
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 03/04/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP40383	SW846 6020B						
MP40383-B1	7440-38-2	Arsenic	BSP	REC	105.5	%	84-116
MP40383-S1*	7440-38-2	Arsenic	MS	REC	104.8	%	84-116
MP40383-S2*	7440-38-2	Arsenic	MSD	REC	105.8	%	84-116
MP40383-S2*	7440-38-2	Arsenic	MSD	RPD	.9	%	20
MP40383-D1*	7440-38-2	Arsenic	DUP	RPD	2.4	%	20
MP40406	SW846 6010D						
MP40406-B1	7440-39-3	Barium	BSP	REC	101	%	88-113
MP40406-B1	7439-89-6	Iron	BSP	REC	100.4	%	87-115
MP40406-B1	7439-95-4	Magnesium	BSP	REC	98	%	85-113
MP40406-B1	7439-96-5	Manganese	BSP	REC	103.6	%	90-114
MP40406-S1*	7440-39-3	Barium	MS	REC	101	%	88-113
MP40406-S1*	7439-89-6	Iron	MS	REC	97.9	%	87-115
MP40406-S1*	7439-95-4	Magnesium	MS	REC	90.8	%	85-113
MP40406-S1*	7439-96-5	Manganese	MS	REC	101	%	90-114
MP40406-S2*	7440-39-3	Barium	MSD	REC	103	%	88-113
MP40406-S2*	7440-39-3	Barium	MSD	RPD	1.9	%	20
MP40406-S2*	7439-89-6	Iron	MSD	REC	100.3	%	87-115
MP40406-S2*	7439-89-6	Iron	MSD	RPD	2.3	%	20
MP40406-S2*	7439-95-4	Magnesium	MSD	REC	97.2	%	85-113
MP40406-S2*	7439-95-4	Magnesium	MSD	RPD	2.7	%	20
MP40406-S2*	7439-96-5	Manganese	MSD	REC	105.6	%	90-114
MP40406-S2*	7439-96-5	Manganese	MSD	RPD	4.3	%	20
MP40406-D1*	7440-39-3	Barium	DUP	RPD	1	%	20
MP40406-D1*	7439-89-6	Iron	DUP	RPD	6.1	%	20
MP40406-D1*	7439-95-4	Magnesium	DUP	RPD	.8	%	20
MP40406-D1*	7439-96-5	Manganese	DUP	RPD	4.1	%	20
GP37489	EPA 300/SW846 9056A						
GP37489-B1	16887-00-6	Chloride	BSP	REC	98.2	%	87-111
GP37489-B1	14808-79-8	Sulfate	BSP	REC	99	%	87-112
GP37489-S1*	16887-00-6	Chloride	MS	REC	-800 [a]	%	87-111
GP37489-S1*	14808-79-8	Sulfate	MS	REC	-1000 [a]	%	87-112
GP37489-S2*	16887-00-6	Chloride	MSD	RPD	1.4	%	15
GP37489-S2*	16887-00-6	Chloride	MSD	REC	-740 [a]	%	87-111
GP37489-S2*	14808-79-8	Sulfate	MSD	RPD	2.3	%	15
GP37489-S2*	14808-79-8	Sulfate	MSD	REC	-880 [a]	%	87-112

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

* Sample used for QC is not from job FA93641

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:26	MA18508-STD1	1		STDA
08:30	MA18508-STD2	1		STDB
08:34	MA18508-STD3	1		STDC
08:38	MA18508-STD4	1		STDD
08:42	MA18508-STD5	1		STDE
08:46	MA18508-STD6	1		STDF
08:50	MA18508-STD7	1		STDG
08:54	MA18508-HSTD1	1		
08:58	MA18508-HSTD2	1		
09:02	MA18508-ICV1	1		
09:05	MA18508-ICB1	1		
09:09	MA18508-CRIA1	1		
09:13	MA18508-ICSA1	1		
09:17	MA18508-ICSAB1	1		
09:21	MA18508-CCV1	1		
09:25	MA18508-CCV2	1		
09:28	MA18508-CCB1	1		
09:32	MP40382-MB1	2		
09:36	MP40382-B1	2		
09:40	FA93314-3FA	2		(sample used for QC only; not part of login FA93641)
09:44	MP40382-D1	2		
09:47	MP40382-SD1	10		
09:51	MP40382-S1	2		
09:55	MP40382-S2	2		
09:59	MP40382-PS1	2		
10:03	ZZZZZZ	2		
10:06	ZZZZZZ	2		
10:10	MA18508-CCV3	1		
10:14	MA18508-CCV4	1		
10:18	MA18508-CCB2	1		
10:22	ZZZZZZ	2		
10:25	ZZZZZZ	2		
10:29	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:33	ZZZZZZ	2		
10:37	ZZZZZZ	2		
10:40	ZZZZZZ	2		
10:44	ZZZZZZ	2		
10:48	ZZZZZZ	2		
10:52	ZZZZZZ	2		
10:56	ZZZZZZ	2		
10:59	MA18508-CCV5	1		
11:03	MA18508-CCV6	1		
11:07	MA18508-CCB3	1		
11:11	ZZZZZZ	2		
11:15	ZZZZZZ	2		
11:18	ZZZZZZ	2		
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:30	ZZZZZZ	2		
11:33	ZZZZZZ	2		
11:37	MP40383-MB1	2		
11:41	MP40383-B1	2		
11:45	FA93314-21FA	2		(sample used for QC only; not part of login FA93641)
11:49	MA18508-CCV7	1		
11:52	MA18508-CCV8	1		
11:56	MA18508-CCB4	1		
12:00	MP40383-D1	2		
12:04	MP40383-SD1	10		
12:08	MP40383-S1	2		
12:11	MP40383-S2	2		
12:15	MP40383-PS1	2		
12:19	ZZZZZZ	2		
12:23	ZZZZZZ	2		
12:30	ZZZZZZ	2		
12:34	FA93641-1	2		
12:38	MA18508-CCV9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:42	MA18508-CCV10	1		
12:46	MA18508-CCB5	1		
12:49	FA93641-2	2		
12:53	FA93641-3	2		
---------->	Last reportable sample/prep for job FA93641			
12:57	ZZZZZZ	2		
13:01	ZZZZZZ	2		
13:05	ZZZZZZ	2		
13:08	ZZZZZZ	2		
13:12	MA18508-CCV11	1		
13:16	MA18508-CCV12	1		
13:20	MA18508-CCB6	1		
---------->	Last reportable CCB for job FA93641			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:54	MA18508-HSTD1	1		
08:58	MA18508-HSTD2	1	X	
09:02	MA18508-ICV1	1	X	
09:05	MA18508-ICB1	1	X	
09:09	MA18508-CRIA1	1	X	
09:13	MA18508-ICSA1	1	X	
09:17	MA18508-ICSAB1	1	X	
09:21	MA18508-CCV1	1		
09:25	MA18508-CCV2	1	X	
09:28	MA18508-CCB1	1	X	
09:32	MP40382-MB1	2	X	
09:36	MP40382-B1	2	X	
09:40	FA93314-3FA	2	X	(a)
09:44	MP40382-D1	2	X	
09:47	MP40382-SD1	10	X	
09:51	MP40382-S1	2	X	
09:55	MP40382-S2	2	X	
09:59	MP40382-PS1	2		
10:03	ZZZZZZ	2		
10:06	ZZZZZZ	2		
10:10	MA18508-CCV3	1		
10:14	MA18508-CCV4	1	X	
10:18	MA18508-CCB2	1	X	
10:22	ZZZZZZ	2		
10:25	ZZZZZZ	2		
10:29	ZZZZZZ	2		
10:33	ZZZZZZ	2		
10:37	ZZZZZZ	2		
10:40	ZZZZZZ	2		
10:44	ZZZZZZ	2		
10:48	ZZZZZZ	2		
10:52	ZZZZZZ	2		
10:56	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Element: Dilution	As	
10:59	MA18508-CCV5	1		
11:03	MA18508-CCV6	1	X	
11:07	MA18508-CCB3	1	X	
11:11	ZZZZZZ	2		
11:15	ZZZZZZ	2		
11:18	ZZZZZZ	2		
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:30	ZZZZZZ	2		
11:33	ZZZZZZ	2		
11:37	MP40383-MB1	2	X	
11:41	MP40383-B1	2	X	
11:45	FA93314-21FA	2	X	(a)
11:49	MA18508-CCV7	1		
11:52	MA18508-CCV8	1	X	
11:56	MA18508-CCB4	1	X	
12:00	MP40383-D1	2	X	
12:04	MP40383-SD1	10	X	
12:08	MP40383-S1	2	X	
12:11	MP40383-S2	2	X	
12:15	MP40383-PS1	2		
12:19	ZZZZZZ	2		
12:23	ZZZZZZ	2		
12:30	ZZZZZZ	2		
12:34	FA93641-1	2	X	
12:38	MA18508-CCV9	1		
12:42	MA18508-CCV10	1	X	
12:46	MA18508-CCB5	1	X	
12:49	FA93641-2	2	X	
12:53	FA93641-3	2	X	
12:57	ZZZZZZ	2		
13:01	ZZZZZZ	2		
13:05	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Dilution	Element: As
13:08	ZZZZZZ	2	
13:12	MA18508-CCV11	1	
13:16	MA18508-CCV12	1	X
13:20	MA18508-CCB6	1	X

(a) Sample used for QC only; not part of login FA93641.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:26	MA18508-STD1	100	100	100	100	100	100	100
08:30	MA18508-STD2	104.1	100.7	101.6	99.7	100.1	99.8	99.9
08:34	MA18508-STD3	110.2	101.9	101.5	100.2	101.9	101.7	100.9
08:38	MA18508-STD4	107.2	102.6	102.6	101.4	102	101.7	102.3
08:42	MA18508-STD5	110.8	103.3	102.4	102	101.5	102	100.2
08:46	MA18508-STD6	101.9	101.1	100.7	100.1	98.7	100.2	97.5
08:50	MA18508-STD7	91	97.9	97.5	96.2	94.5	97.1	92.9
08:54	MA18508-HSTD1	102.7	98.5	97.5	96.4	95.6	98.1	95.2
08:58	MA18508-HSTD2	100.7	95.5	94.9	94.1	92.3	95.2	91.5
09:02	MA18508-ICV1	100.7	95.4	94.2	94.2	92.7	96	92.8
09:05	MA18508-ICB1	101.2	95.3	95.9	94.7	94.7	95.9	95.7
09:09	MA18508-CRIA1	104.6	94.8	94.4	93.1	93.7	93.9	94.4
09:13	MA18508-ICSA1	82.1	93.1	91	88	84.9	89.4	82
09:17	MA18508-ICSAB1	98.1	94.4	93.4	90.3	86.4	89.9	82.8
09:21	MA18508-CCV1	114.3	98.7	98.8	98	95.3	96.8	95.5
09:25	MA18508-CCV2	105	98.9	99.5	97.9	94.6	96.7	94.2
09:28	MA18508-CCB1	123.8	100.1	100.4	100.3	97.1	97.3	96.9
09:32	MP40382-MB1	118	99.8	98.3	97.4	94.8	95.6	95.1
09:36	MP40382-B1	112.7	97.9	95.1	95.5	91.5	94.3	90.1
09:40	FA93314-3FA	114.8	95.9	94.9	94.5	90.7	92.5	89.4
09:44	MP40382-D1	113.7	95.5	94	92.8	89.7	91.6	89
09:47	MP40382-SD1	112	98.3	98.9	96.9	94.8	94.6	94.2
09:51	MP40382-S1	108.3	94.2	92.6	91.8	87.8	91.3	86.6
09:55	MP40382-S2	108.1	93.7	91.7	90.8	86.2	90.1	85.6
09:59	MP40382-PS1	102.5	94.6	92.9	91.9	87.9	91.5	87.9
10:03	ZZZZZZ	117.1	95.5	93.3	92.5	88.7	90.7	89.5
10:06	ZZZZZZ	104.4	95.7	94	92.6	89.5	91.4	90.2
10:10	MA18508-CCV3	120.2	100	98.7	96.9	93.7	94.6	92.7
10:14	MA18508-CCV4	116.4	97.3	95.6	94.7	91.9	93.3	90.5
10:18	MA18508-CCB2	105.8	96.9	95.1	93.8	92.6	92.8	92.3
10:22	ZZZZZZ	118.2	94	90.9	90.9	87.1	89.2	86.4
10:25	ZZZZZZ	116.5	94.4	91.8	90.6	87.7	89.8	86.7
10:29	ZZZZZZ	118.6	94.6	92	91	87.8	89.2	85.8

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:33	ZZZZZZ	127.2	93.1	91.4	90.7	86.2	88.7	85.9
10:37	ZZZZZZ	117.1	92.9	90.9	90.1	86.3	88.4	85.7
10:40	ZZZZZZ	121.6	93.3	91	90	86.4	87.9	85.5
10:44	ZZZZZZ	113.4	92.3	89.4	89.7	85.4	87.3	85
10:48	ZZZZZZ	113.3	91.3	89.2	88.4	84.8	88.1	84.3
10:52	ZZZZZZ	102.4	91.4	89.2	89.2	84.5	87.3	84.9
10:56	ZZZZZZ	118.6	91.7	89.4	88.1	84.8	87.4	85
10:59	MA18508-CCV5	106.1	96.7	95	94.1	91.3	93.1	91.4
11:03	MA18508-CCV6	112.1	95.4	93.7	91.9	89.6	91.7	89.3
11:07	MA18508-CCB3	114.6	95.4	92.7	91.9	90.2	90.7	91
11:11	ZZZZZZ	99.9	90.2	87.7	87.3	83.6	86.8	84.6
11:15	ZZZZZZ	110.5	91.5	88.7	87.8	84.2	87.2	84.9
11:18	ZZZZZZ	113.9	91	89.2	88.2	84.7	88	85.1
11:22	ZZZZZZ	119.1	91	89.2	88.1	84.1	87.3	84.4
11:26	ZZZZZZ	118.2	91.2	88.8	87.6	84.1	87.1	84.4
11:30	ZZZZZZ	119.2	90.1	87.7	87.1	84.7	87.3	86.9
11:33	ZZZZZZ	113.7	91.4	87.3	86.9	84.5	87.2	86.5
11:37	MP40383-MB1	106.6	90.2	86.8	85.6	84.3	86.8	86.5
11:41	MP40383-B1	105.5	88.4	86.2	85.6	81.8	86.3	82.5
11:45	FA93314-21FA	106.8	88.4	86.3	85.6	82.4	86.2	83.3
11:49	MA18508-CCV7	105.3	94.6	92.2	92.1	89	91.5	90
11:52	MA18508-CCV8	100.3	93.6	90.2	89.5	87.6	90.4	88.2
11:56	MA18508-CCB4	108.1	92.2	90.7	90.1	88.4	89.5	89.7
12:00	MP40383-D1	103.5	87.7	85.8	85.4	81.9	85.4	83.5
12:04	MP40383-SD1	105	91.5	89.6	89.3	87	88.4	88.7
12:08	MP40383-S1	104.4	87.4	83.8	82.9	80	84.7	80.6
12:11	MP40383-S2	105.9	86.1	83.7	82.7	79.5	84.4	80
12:15	MP40383-PS1	109.7	86.2	83.4	83.1	79.9	84.4	81.5
12:19	ZZZZZZ	105.6	86.5	83.8	82.8	80.7	84.8	82.5
12:23	ZZZZZZ	138.7 !	86.6	81.9	80.9	77.7	82.3	76.9
12:30	ZZZZZZ	111.8	85.2	83	82.5	79.6	84.7	84.6
12:34	FA93641-1	110	85.6	83.1	82.5	80.5	84.7	82.8
12:38	MA18508-CCV9	103.1	89.7	88.8	88.1	86.5	89.5	88.7

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18508
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
12:42	MA18508-CCV10	106.5	91.5	88.9	87.8	86.3	88.9	87
12:46	MA18508-CCB5	105.5	90.7	87.8	87.3	86.2	88	88.3
12:49	FA93641-2	109.5	84	82.8	81.5	78	83.2	81.5
12:53	FA93641-3	102.2	85.4	83.4	81.8	79.8	84	83.7
12:57	ZZZZZZ	114.6	87.1	83.9	82.1	81.2	85.2	84.7
13:01	ZZZZZZ	101.8	86.2	83.4	83.6	80.7	85.1	84.1
13:05	ZZZZZZ	106.4	87	83.1	82.9	81.3	84.5	82.8
13:08	ZZZZZZ	94.5	86.1	82.4	81.8	80.1	84.3	84.4
13:12	MA18508-CCV11	113	92	90.3	88.8	86.6	89.1	87.9
13:16	MA18508-CCV12	100.6	90.6	88.3	88.5	85.4	88.6	86.3
13:20	MA18508-CCB6	111.7	90.5	88.1	86.9	85.6	87.4	88

! = Outside limits.

LEGEND: Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18508 Units: ug/l

Time: / Sample ID:			09:05 ICB1		09:28 CCB1		10:18 CCB2		11:07 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0352	<1.0	0.0242	<1.0	0.0341	<1.0	0.0163	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18508 Units: ug/l

Time: / Sample ID:			11:56 CCB4		12:46 CCB5		13:20 CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr					
Antimony	1.0	.1	anr					
Arsenic	1.0	.1	0.0237	<1.0	0.0195	<1.0	0.0248	<1.0
Barium	1.0	.1	anr					
Beryllium	1.0	.1	anr					
Cadmium	1.0	.1	anr					
Calcium	100	7.2	anr					
Chromium	1.0	.1	anr					
Cobalt	1.0	.1	anr					
Copper	1.0	.1	anr					
Iron	100	7.9	anr					
Lead	1.0	.1	anr					
Magnesium	100	5.2	anr					
Manganese	1.0	.1	anr					
Molybdenum	1.0	.1						
Nickel	1.0	.1	anr					
Potassium	100	6.6	anr					
Selenium	1.0	.11	anr					
Silver	1.0	.1	anr					
Sodium	100	4.8	anr					
Strontium	1.0	.1						
Thallium	1.0	.1	anr					
Tin	1.0	.1						
Titanium	1.0	.3						
Vanadium	1.0	.1	anr					
Zinc	2.0	.29	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		09:02			09:21			09:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	102	102.0				100	98.0	98.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		10:10			10:14			10:59	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	99.3	99.3			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		11:03			11:49			11:52	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	98.2	98.2				100	99.4	99.4
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		12:38			12:42			13:12	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	97.7	97.7			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		13:16	
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	100	98.5	98.5
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver			
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18508 Units: ug/l

Time:		08:54			08:58	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	197	98.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18508 Units: ug/l

Time:			09:09	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	1.00	100.0
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA030822M1.CSV Date Analyzed: 03/08/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18508 Units: ug/l

Time:			09:13		09:17	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	94000	94.0	92900	92.9
Antimony			0.0788		0.0690	
Arsenic		20	0.101		19.3	96.5
Barium			0.345		0.318	
Beryllium			0.0282		0.0208	
Cadmium		20	0.385		18.9	94.5
Calcium	100000	100000	91300	91.3	90700	90.7
Chromium		20	2.09		21.5	107.5
Cobalt		20	0.128		19.6	98.0
Copper		20	-0.0274		18.5	92.5
Iron	100000	100000	98100	98.1	97500	97.5
Lead			0.164		0.124	
Magnesium	100000	100000	96900	96.9	97100	97.1
Manganese		20	1.10		20.2	101.0
Molybdenum	2000	2000	2000	100.0	1990	99.5
Nickel		20	0.222		18.8	94.0
Potassium	100000	100000	97700	97.7	98800	98.8
Selenium			0.251		0.243	
Silver		20	0.321		18.4	92.0
Sodium	100000	100000	97900	97.9	99100	99.1
Strontium			1.12*		1.11*	
Thallium			0.0144		0.00791	
Tin			0.120		0.0301	
Titanium	2000	2000	1910	95.5	1920	96.0
Vanadium			0.0333		0.0256	
Zinc		20	3.37		20.3	101.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:00	MA18521-STD1	1		STDA
09:06	MA18521-STD2	1		STDB
09:12	MA18521-STD3	1		STDC
09:16	MA18521-STD4	1		STDD
09:20	MA18521-STD5	1		STDE
09:24	MA18521-STD6	1		STDF
09:28	MA18521-STD7	1		STDG
09:33	MA18521-HSTD1	1		
09:43	MA18521-ICV1	1		
09:53	MA18521-ICB1	1		
09:57	MA18521-CRIA1	1		
10:07	MA18521-ICSA1	1		
10:14	MA18521-ICSAB1	1		
10:20	MA18521-CCV1	1		
10:27	MA18521-CCB1	1		
10:35	MP40406-MB1	1		
10:40	MP40406-B1	1		
10:44	FA93582-2	1		(sample used for QC only; not part of login FA93641)
10:49	MP40406-D1	1		
10:54	MP40406-SD1	5		
10:59	MP40406-PS1	1		
11:04	MP40406-S1	1		
11:08	MP40406-S2	1		
11:13	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:23	MA18521-CCV2	1		
11:28	MA18521-CCB2	1		
11:33	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:43	FA93641-1A	1		
11:48	FA93641-2A	1		
11:52	FA93641-3A	1		
---------->	Last reportable sample/prep for job FA93641			
11:57	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	12:02	ZZZZZZ	1		
	12:07	ZZZZZZ	1		
	12:12	ZZZZZZ	1		
	12:17	ZZZZZZ	1		
	12:21	MA18521-CCV3	1		
	12:26	MA18521-CCB3	1		
---------->	Last reportable CCB for job FA93641				
	12:31	ZZZZZZ	5		
	12:36	ZZZZZZ	5		
	12:42	ZZZZZZ	5		
	12:47	ZZZZZZ	5		
	12:53	ZZZZZZ	20		
	12:58	ZZZZZZ	5		
	13:03	ZZZZZZ	5		
	13:08	ZZZZZZ	1		
	13:13	MP40403-MB1	1		
	13:18	MP40403-B1	1		
	13:23	MA18521-CCV4	1		
	13:27	MA18521-CCB4	1		
	14:15	MA18521-ICV2	1		
	14:24	MA18521-CCV5	1		
	14:34	MA18521-CCB5	1		
	14:40	FA93745-4	1		(sample used for QC only; not part of login FA93641)
	14:45	MP40403-D1	1		
	14:50	MP40403-SD1	5		
	14:54	MP40403-PS1	1		
	14:59	MP40403-S1	1		
	15:04	MP40403-S2	1		
	15:08	ZZZZZZ	1		
	15:13	ZZZZZZ	1		
	15:18	ZZZZZZ	1		
	15:23	ZZZZZZ	1		
	15:28	MA18521-CCV6	1		
	15:32	MA18521-CCB6	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:37	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:57	ZZZZZZ	1		
16:02	ZZZZZZ	1		
16:06	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:16	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:26	MA18521-CCV7	1		
16:30	MA18521-CCB7	1		
16:45	ZZZZZZ	50		
16:50	ZZZZZZ	50		
16:55	ZZZZZZ	100		
16:59	ZZZZZZ	100		
17:09	ZZZZZZ	20		
17:14	ZZZZZZ	2		
17:19	ZZZZZZ	4		
17:24	MA18521-CCV8	1		
17:29	MA18521-CCB8	1		
17:34	ZZZZZZ	100		
17:39	MP40395-S1	2		
17:43	MP40395-S2	2		
17:48	ZZZZZZ	20		
17:53	ZZZZZZ	100		
17:58	ZZZZZZ	100		
18:03	ZZZZZZ	100		
18:07	MA18521-CCV9	1		
18:12	MA18521-CCB9	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	Ba	Fe	Mg	Mn	
09:33	MA18521-HSTD1	1	X	X	X	X	
09:43	MA18521-ICV1	1	X	X	X	X	
09:53	MA18521-ICB1	1	X	X	X	X	
09:57	MA18521-CRIA1	1	X	X	X	X	
10:07	MA18521-ICSA1	1	X	X	X	X	
10:14	MA18521-ICSAB1	1	X	X	X	X	
10:20	MA18521-CCV1	1	X	X	X	X	
10:27	MA18521-CCB1	1	X	X	X	X	
10:35	MP40406-MB1	1	X	X	X	X	
10:40	MP40406-B1	1	X	X	X	X	
10:44	FA93582-2	1		X			(a)
10:49	MP40406-D1	1	X	X	X	X	
10:54	MP40406-SD1	5	X	X	X	X	
10:59	MP40406-PS1	1	X	X	X	X	
11:04	MP40406-S1	1	X	X	X	X	
11:08	MP40406-S2	1	X	X	X	X	
11:13	ZZZZZZ	1					
11:18	ZZZZZZ	1					
11:23	MA18521-CCV2	1	X	X	X	X	
11:28	MA18521-CCB2	1	X	X	X	X	
11:33	ZZZZZZ	1					
11:38	ZZZZZZ	1					
11:43	FA93641-1A	1	X		X	X	
11:48	FA93641-2A	1		X		X	
11:52	FA93641-3A	1		X		X	
11:57	ZZZZZZ	1					
12:02	ZZZZZZ	1					
12:07	ZZZZZZ	1					
12:12	ZZZZZZ	1					
12:17	ZZZZZZ	1					
12:21	MA18521-CCV3	1	X	X	X	X	
12:26	MA18521-CCB3	1	X	X	X	X	
12:31	ZZZZZZ	5					
		Element:	Ba	Fe	Mg	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution	Element: Ba	Fe	Mg	Mn	
12:36	ZZZZZZ	5					
12:42	ZZZZZZ	5					
12:47	ZZZZZZ	5					
12:53	ZZZZZZ	20					
12:58	ZZZZZZ	5					
13:03	ZZZZZZ	5					
13:08	ZZZZZZ	1					
13:13	MP40403-MB1	1	X				
13:18	MP40403-B1	1	X				
13:23	MA18521-CCV4	1	X	X	X	X	
13:27	MA18521-CCB4	1	X	X	X	X	
14:15	MA18521-ICV2	1	X	X	X	X	
14:24	MA18521-CCV5	1	X	X	X	X	
14:34	MA18521-CCB5	1	X	X	X	X	
14:40	FA93745-4	1					(a)
14:45	MP40403-D1	1	X				
14:50	MP40403-SD1	5	X				
14:54	MP40403-PS1	1	X				
14:59	MP40403-S1	1	X				
15:04	MP40403-S2	1	X				
15:08	ZZZZZZ	1					
15:13	ZZZZZZ	1					
15:18	ZZZZZZ	1					
15:23	ZZZZZZ	1					
15:28	MA18521-CCV6	1	X	X	X	X	
15:32	MA18521-CCB6	1	X	X	X	X	
15:37	ZZZZZZ	1					
15:42	ZZZZZZ	1					
15:52	ZZZZZZ	1					
15:57	ZZZZZZ	1					
16:02	ZZZZZZ	1					
16:06	ZZZZZZ	1					
16:11	ZZZZZZ	1					
		Element:	Ba	Fe	Mg	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n
16:16	ZZZZZZ	1				
16:21	ZZZZZZ	1				
16:26	MA18521-CCV7	1	X	X	X	X
16:30	MA18521-CCB7	1	X	X	X	X
16:45	ZZZZZZ	50				
16:50	ZZZZZZ	50				
16:55	ZZZZZZ	100				
16:59	ZZZZZZ	100				
17:09	ZZZZZZ	20				
17:14	ZZZZZZ	2				
17:19	ZZZZZZ	4				
17:24	MA18521-CCV8	1	X	X	X	X
17:29	MA18521-CCB8	1	X	X	X	X
17:34	ZZZZZZ	100				
17:39	MP40395-S1	2				
17:43	MP40395-S2	2				
17:48	ZZZZZZ	20				
17:53	ZZZZZZ	100				
17:58	ZZZZZZ	100				
18:03	ZZZZZZ	100				
18:07	MA18521-CCV9	1	X	X	X	X
18:12	MA18521-CCB9	1	X	X	X	X

(a) Sample used for QC only; not part of login FA93641.

Element:	B a	F e	M g	M n

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:00	MA18521-STD1	2191	33083	8429	945
09:06	MA18521-STD2	2168	32853	8377	936
09:12	MA18521-STD3	2203	33239	8466	948
09:16	MA18521-STD4	2169	32861	8493	926
09:20	MA18521-STD5	2176	33020	8531	920
09:24	MA18521-STD6	2124	32214	8444	872
09:28	MA18521-STD7	2055	31632	8288	816
09:33	MA18521-HSTD1	2051	31722	8310	816
09:43	MA18521-ICV1	2117	32388	8341	879
09:53	MA18521-ICB1	2164 R	32826 R	8439 R	936 R
09:57	MA18521-CRIA1	2143	32567	8422	930
10:07	MA18521-ICSA1	1899	29421	7895	820
10:14	MA18521-ICSAB1	1937	29559	7993	785
10:20	MA18521-CCV1	2101	32129	8300	870
10:27	MA18521-CCB1	2167	32922	8451	940
10:35	MP40406-MB1	2134	32724	8570	932
10:40	MP40406-B1	2060	31863	8361	891
10:44	FA93582-2	2000	31270	8211	875
10:49	MP40406-D1	2012	31395	8231	879
10:54	MP40406-SD1	2132	32713	8378	934
10:59	MP40406-PS1	2006	31303	8176	868
11:04	MP40406-S1	2008	31205	8284	851
11:08	MP40406-S2	2010	31248	8202	854
11:13	ZZZZZZ	1978	31052	8044	870
11:18	ZZZZZZ	1984	31113	8046	872
11:23	MA18521-CCV2	2081	32022	8174	870
11:28	MA18521-CCB2	2154	32871	8329	941
11:33	ZZZZZZ	1978	30961	7982	869
11:38	ZZZZZZ	1972	30931	7995	869
11:43	FA93641-1A	2045	31755	8190	904
11:48	FA93641-2A	2034	31616	8093	903
11:52	FA93641-3A	2077	32181	8274	920
11:57	ZZZZZZ	2045	31710	8123	908

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:02	ZZZZZZ	1997	30757	8012	853
12:07	ZZZZZZ	2048	31746	8138	907
12:12	ZZZZZZ	2042	31679	8062	903
12:17	ZZZZZZ	2034	31494	8044	896
12:21	MA18521-CCV3	2067	31934	8124	867
12:26	MA18521-CCB3	2145	32632	8262	934
12:31	ZZZZZZ	2010	31070	7933	871
12:36	ZZZZZZ	1974	30498	7818	842
12:42	ZZZZZZ	1959	30092	7784	830
12:47	ZZZZZZ	1935	29513	7670	803
12:53	ZZZZZZ	2173	32934	8382	1055
12:58	ZZZZZZ	1973	30434	7853	844
13:03	ZZZZZZ	1958	30387	7864	837
13:08	ZZZZZZ	2111	32784	8548	896
13:13	MP40403-MB1	2062	31897	8203	910
13:18	MP40403-B1	2036	31522	8090	885
13:23	MA18521-CCV4	2055	31906	8123	866
13:27	MA18521-CCB4	2135	32699	8286	932
14:15	MA18521-ICV2	2056	32017	8159	875
14:24	MA18521-CCV5	2034	31629	8029	862
14:34	MA18521-CCB5	2107	32481	8166	933
14:40	FA93745-4	2084	32544	8342	913
14:45	MP40403-D1	2086	32417	8344	910
14:50	MP40403-SD1	2104	32561	8261	931
14:54	MP40403-PS1	2080	32355	8271	899
14:59	MP40403-S1	2056	32103	8323	879
15:04	MP40403-S2	2059	32091	8220	876
15:08	ZZZZZZ	2076	32301	8172	913
15:13	ZZZZZZ	2075	32388	8202	914
15:18	ZZZZZZ	2052	32134	8188	887
15:23	ZZZZZZ	2038	31820	8005	911
15:28	MA18521-CCV6	2038	31765	8052	871
15:32	MA18521-CCB6	2115	32511	8190	940

INTERNAL STANDARD SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18521
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:37	ZZZZZZ	2061	32022	8161	909
15:42	ZZZZZZ	2048	31942	8163	908
15:52	ZZZZZZ	2049	31944	8077	909
15:57	ZZZZZZ	2142	33455	8491	908
16:02	ZZZZZZ	2050	31994	8047	913
16:06	ZZZZZZ	2036	31712	8010	915
16:11	ZZZZZZ	2052	32011	8123	913
16:16	ZZZZZZ	2045	31916	8085	913
16:21	ZZZZZZ	2005	31652	7958	913
16:26	MA18521-CCV7	1996	31523	7845	874
16:30	MA18521-CCB7	2075	32307	8090	945
16:45	ZZZZZZ	2060	32251	8080	942
16:50	ZZZZZZ	2047	32157	7970	939
16:55	ZZZZZZ	2077	32434	8072	946
16:59	ZZZZZZ	2076	32325	8147	943
17:09	ZZZZZZ	2058	32073	8054	928
17:14	ZZZZZZ	2013	31678	8164	898
17:19	ZZZZZZ	1989	31379	7960	894
17:24	MA18521-CCV8	2017	31509	7982	868
17:29	MA18521-CCB8	2130	32835	8183	947
17:34	ZZZZZZ	2106	32419	8124	944
17:39	MP40395-S1	2031	31756	8127	900
17:43	MP40395-S2	2031	31461	7941	897
17:48	ZZZZZZ	2056	31940	7884	924
17:53	ZZZZZZ	2094	32391	8080	943
17:58	ZZZZZZ	2086	32325	8169	939
18:03	ZZZZZZ	2089	32291	8127	937
18:07	MA18521-CCV9	2038	31656	7977	866
18:12	MA18521-CCB9	2122	32616	8159	938

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18521 Units: ug/l

Time: / Sample ID:			09:53 ICB1		10:27 CCB1		11:28 CCB2		12:26 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	-0.100	<200	0.00	<200	0.00	<200	0.100	<200
Beryllium	5.0	.1	anr							
Cadmium	4.0	.1	anr							
Calcium	5000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	-0.300	<300	2.50	<300	2.00	<300	5.20	<300
Lead	20	1	anr							
Magnesium	5000	35	2.80	<5000	-2.90	<5000	-8.70	<5000	1.00	<5000
Manganese	15	.25	0.00	<15	0.400	<15	0.500	<15	0.500	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100								
Selenium	20	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18521 Units: ug/l

Time:		09:43			10:20			11:23	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2030	101.5	2000	2040	102.0	2000	2070	103.5
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40600	101.5	40000	40600	101.5	40000	41000	102.5
Lead	anr								
Magnesium	40000	42700	106.8	40000	40300	100.8	40000	41000	102.5
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18521 Units: ug/l

Time:		12:21	
Sample ID:	CCV	CCV3	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	2080	104.0
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40900	102.3
Lead	anr		
Magnesium	40000	41200	103.0
Manganese	2000	2040	102.0
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA18521 Units: ug/l

Time:		09:33	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	4000	3920	98.0
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	80000	79300	99.1
Lead	anr		
Magnesium	80000	80100	100.1
Manganese	4000	3870	96.8
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA18521 Units: ug/l

Time:			09:57	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	400	200	anr	
Antimony	10	5.0	anr	
Arsenic	20	10	anr	
Barium	400	200	207	103.5
Beryllium	10	5.0	anr	
Cadmium	10	5.0	anr	
Calcium	2000	1000	anr	
Chromium	20	10	anr	
Cobalt	100	50	anr	
Copper	50	25	anr	
Iron	600	300	316	105.3
Lead	10	5.0	anr	
Magnesium	10000	5000	5160	103.2
Manganese	30	15	15.8	105.3
Molybdenum	100	50	anr	
Nickel	80	40	anr	
Potassium	20000	10000		
Selenium	20	10	anr	
Silver	20	10	anr	
Sodium	20000	10000	anr	
Strontium	20	10		
Thallium	20	10	anr	
Tin	100	50		
Titanium	20	10		
Vanadium	100	50	anr	
Zinc	40	20	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB031122M1.ICP Date Analyzed: 03/11/22 Methods: SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA18521 Units: ug/l

Time:			10:07		10:14	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	531000	106.2	526000	105.2
Antimony		1000	0.00		1040	104.0
Arsenic		1000	-1.50		1070	107.0
Barium		500	0.200		494	98.8
Beryllium		500	0.00		505	101.0
Cadmium		1000	0.200		967	96.7
Calcium	500000	500000	461000	92.2	458000	91.6
Chromium		500	0.400		487	97.4
Cobalt		500	-0.200		484	96.8
Copper		500	0.800		580	116.0
Iron	200000	200000	493000	98.6	184000	92.0
Lead		1000	0.00		950	95.0
Magnesium	500000	500000	545000	109.0	541000	108.2
Manganese		500	-0.200		513	102.6
Molybdenum		1000	0.100		948	94.8
Nickel		1000	-0.900		927	92.7
Potassium			-99.8		-60.2	
Selenium		1000	0.00		955	95.5
Silver		1000	-0.100		1020	102.0
Sodium			167		162	
Strontium		1000	0.00		991	99.1
Thallium		1000	-1.70		930	93.0
Tin		1000	-0.800		899	89.9
Titanium		1000	1.20		1020	102.0
Vanadium		500	0.00		510	102.0
Zinc		1000	0.300		927	92.7

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40383
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 03/07/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.042	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP40383: FA93641-1, FA93641-2, FA93641-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40383
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 03/07/22 03/07/22

Metal	FA93314-21FA Original	DUP	RPD	QC Limits	FA93314-21FA Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	0.42	0.41	2.4	0-20	0.42	210	200	104.8	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP40383: FA93641-1, FA93641-2, FA93641-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40383 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/07/22

Metal	FA93314-21FA Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.42	212	200	105.8	0.9	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP40383: FA93641-1, FA93641-2, FA93641-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40383
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 03/07/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	211	200	105.5	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40383: FA93641-1, FA93641-2, FA93641-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40383
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 03/07/22

Metal	FA93314-21FA Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.420	0.00	100.0(a)	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40383: FA93641-1, FA93641-2, FA93641-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/10/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	.5	1	-0.10	<200
Beryllium	4.0	.1	.2		
Cadmium	5.0	.1	.2		
Calcium	1000	50	50		
Chromium	10	.5	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	15	17	-0.40	<300
Lead	5.0	1	1.1		
Magnesium	5000	35	35	0.40	<5000
Manganese	15	.25	1	0.0	<15
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	100	200		
Selenium	10	2	2.9		
Silver	10	.5	.7		
Sodium	10000	250	500		
Strontium	10	.25	.5		
Thallium	10	1	1.4		
Tin	50	.5	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/10/22 03/10/22

Metal	FA93582-2 Original	DUP	RPD	QC Limits	FA93582-2 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony									
Arsenic	anr								
Barium	69.4	68.7	1.0	0-20	69.4	2090	2000	101.0	80-120
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper									
Iron	235	221	6.1	0-20	235	25700	26000	97.9	80-120
Lead	anr								
Magnesium	35600	35300	0.8	0-20	35600	58300	25000	90.8	80-120
Manganese	14.9	14.3	4.1	0-20	14.9	520	500	101.0	80-120
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/10/22

Metal	FA93582-2 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic	anr					
Barium	69.4	2130	2000	103.0	1.9	20
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt						
Copper						
Iron	235	26300	26000	100.3	2.3	20
Lead	anr					
Magnesium	35600	59900	25000	97.2	2.7	20
Manganese	14.9	543	500	105.6	4.3	20
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/10/22

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium	2020	2000	101.0	80-120
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	26100	26000	100.4	80-120
Lead	anr			
Magnesium	24500	25000	98.0	80-120
Manganese	518	500	103.6	80-120
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/10/22

Metal	FA93582-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium	69.4	60.9	12.2*(a)	0-10
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	235	211	10.1 (b)	0-10
Lead	anr			
Magnesium	35600	32700	8.2	0-10
Manganese	14.9	13.5	9.4	0-10
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40406
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/10/22

Metal	Sample ml	Final ml	FA93582-2 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium	9.8	10	69.4	68.012	331.7	0.2	12.5	250	105.5	80-120
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	234.6	229.908	3353	0.2	150	3000	104.1	80-120
Lead										
Magnesium	9.8	10	35640	34927.2	40390	0.2	250	5000	109.3	80-120
Manganese	9.8	10	14.9	14.602	67.7	0.2	2.5	50	106.2	80-120
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP40406: FA93641-1A, FA93641-2A, FA93641-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA93641
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18508

Instrument Detection Limits

Job Number: FA93641
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 01/30/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA18521

Instrument Linear Ranges

Job Number: FA93641
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18508

Instrument Linear Ranges

Job Number: FA93641
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 12/01/21

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA18521

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 8:18
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	195.87	850.69	5.744E-03	Pulse	0.50	3
As			1	0.004	ug/l	70.20	21.33	1.439E-04	Pulse	1.00	3
Mo			1	0.001	ug/l	227.23	43.33	1.931E-04	Pulse	0.50	3
Pb			1	0.001	ug/l	55.72	627.01	1.606E-04	Pulse	1.00	3
Be			1	0.007	ug/l	173.21	0.33	1.660E-06	Pulse	2.00	3
Ag			1	0.001	ug/l	38.40	50.00	2.229E-04	Pulse	0.50	3
Ba			1	-0.002	ug/l	-120.43	9.33	6.711E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	168.84	132.67	3.396E-05	Pulse	0.50	3
Sn			1	-0.001	ug/l	-245.77	274.45	1.980E-04	Pulse	0.30	3
Sr			1	0.010	ug/l	124.91	535.34	3.864E-04	Pulse	0.50	3
[Pb]			1	-0.002	ug/l	-102.71	290.67	7.445E-05	Pulse	0.50	3
Ca			1	0.264	ug/l	224.07	82.00	4.078E-04	Pulse	0.50	3
Ti			1	0.007	ug/l	263.44	2.00	9.899E-06	Pulse	0.50	3
Na			1	0.000	ug/l	133706.17	10,969.68	5.457E-02	Pulse	1.00	3
Mg			1	-0.040	ug/l	-14.54	264.00	1.313E-03	Pulse	1.00	3
K			1	-0.266	ug/l	-193.95	15,135.46	7.529E-02	Pulse	1.00	3
V			1	0.000	ug/l	-286287.84	277.33	1.379E-03	Pulse	0.50	3
Mn			1	-0.001	ug/l	-263.77	239.33	1.615E-03	Pulse	0.50	3
Fe			1	0.066	ug/l	28.51	6,297.04	4.251E-02	Pulse	0.50	3
Co			1	0.000	ug/l	883.31	79.33	5.350E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	63.86	192.67	1.302E-03	Pulse	0.50	3
Cu			1	0.028	ug/l	71.66	9,068.82	6.125E-02	Pulse	0.50	3
Zn			1	-0.022	ug/l	-131.41	900.69	4.014E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-69.23	1.33	5.962E-06	Pulse	0.50	3
Al			1	-0.065	ug/l	-345.50	227.67	1.132E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-434.08	6.11	2.725E-05	Pulse	3.00	3
Sb			1	0.002	ug/l	79.06	39.33	1.754E-04	Pulse	1.00	3
Se			1	-0.002	ug/l	-3545.58	11.33	5.051E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,905,484.00	1.11	100.0	Pulse	0.50	3
1	Sc		201,032.13	0.46	100.0	Pulse	0.30	3
1	Ge		148,089.57	1.26	100.0	Pulse	0.30	3
1	In		1,386,155.60	1.05	100.0	Pulse	0.30	3
1	Tb		4,976,077.17	0.32	100.0	Pulse	0.50	3
1	Lu		3,087,784.42	1.19	100.0	Pulse	0.50	3
1	Ge		224,423.08	0.63	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		771.13	7.35	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:22
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.001	ug/l	-257.09	845.35	5.629E-03	Pulse	0.50	3
As			1	0.004	ug/l	88.80	21.67	1.442E-04	Pulse	1.00	3
Mo			1	-0.001	ug/l	-111.80	34.00	1.502E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	427.68	620.01	1.571E-04	Pulse	1.00	3
Be			1	0.007	ug/l	173.21	0.33	1.656E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	59.58	35.33	1.563E-04	Pulse	0.50	3
Ba			1	-0.001	ug/l	-709.50	12.00	8.600E-06	Pulse	0.50	3
Tl			1	-0.001	ug/l	-67.92	90.00	2.279E-05	Pulse	0.50	3
Sn			1	-0.008	ug/l	-133.68	243.34	1.739E-04	Pulse	0.30	3
Sr			1	0.001	ug/l	571.53	500.01	3.576E-04	Pulse	0.50	3
[Pb]			1	-0.004	ug/l	-73.35	264.67	6.707E-05	Pulse	0.50	3
Ca			1	0.849	ug/l	90.98	96.67	4.765E-04	Pulse	0.50	3
Ti			1	0.020	ug/l	104.85	4.67	2.307E-05	Pulse	0.50	3
Na			1	-0.090	ug/l	-158.34	10,945.99	5.400E-02	Pulse	1.00	3
Mg			1	-0.021	ug/l	-408.57	277.33	1.368E-03	Pulse	1.00	3
K			1	-0.611	ug/l	-62.63	15,108.44	7.453E-02	Pulse	1.00	3
V			1	0.001	ug/l	994.69	284.00	1.401E-03	Pulse	0.50	3
Mn			1	-0.008	ug/l	-29.84	212.67	1.416E-03	Pulse	0.50	3
Fe			1	0.757	ug/l	167.87	12,081.85	8.015E-02	Pulse	0.50	3
Co			1	0.000	ug/l	-201.83	74.00	4.925E-04	Pulse	0.50	3
Ni			1	0.006	ug/l	46.72	206.00	1.372E-03	Pulse	0.50	3
Cu			1	0.005	ug/l	320.07	8,876.06	5.910E-02	Pulse	0.50	3
Zn			1	-0.029	ug/l	-67.24	895.02	3.957E-03	Pulse	1.00	3
Cd			1	-0.002	ug/l	0.00	0.00	0.000E+00	Pulse	0.50	3
Al			1	-0.172	ug/l	-75.92	211.00	1.041E-03	Pulse	1.00	3
Se			1	-0.031	ug/l	-40.67	4.22	1.869E-05	Pulse	3.00	3
Sb			1	0.002	ug/l	88.26	39.67	1.756E-04	Pulse	1.00	3
Se			1	0.008	ug/l	669.36	11.78	5.204E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,948,600.83	0.87	100.0	Pulse	0.50	3
1	Sc		202,720.52	0.64	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		150,197.77	0.66	100.0	Pulse	0.30	3
1	In		1,398,546.54	0.71	100.0	Pulse	0.30	3
1	Tb		5,016,374.50	0.92	100.0	Pulse	0.50	3
1	Lu		3,119,668.00	0.56	100.0	Pulse	0.50	3
1	Ge		226,224.98	1.04	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		787.80	4.07	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:26
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	840.69	5.682E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	17.33	1.168E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	38.67	1.732E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	598.68	1.534E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.00		Pulse	2.00	3
Ag			1	0.000	ug/l	---	30.67	1.365E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	13.33	9.671E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	114.00	2.923E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	280.01	2.014E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	489.34	3.530E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	318.00	8.153E-05	Pulse	0.50	3
Ca			1	0.000	ug/l	---	75.33	3.769E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	0.67	3.391E-06	Pulse	0.50	3
Na			1	0.000	ug/l	---	10,917.64	5.457E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	285.33	1.426E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	15,179.49	7.587E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	276.00	1.379E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	245.33	1.659E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	5,754.88	3.890E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	77.33	5.213E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	172.00	1.159E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	8,676.65	5.863E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	941.36	4.200E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.67	2.088E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	237.67	1.188E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	6.33	2.827E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	---	29.67	1.326E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	11.33	5.086E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,904,216.33	2.11	100.0	Pulse	0.50	3
1	Sc		200,118.34	1.52	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		148,082.53	2.50	100.0	Pulse	0.30	3
1	In		1,386,690.22	2.53	100.0	Pulse	0.30	3
1	Tb		4,950,406.33	2.40	100.0	Pulse	0.50	3
1	Lu		3,091,206.58	2.84	100.0	Pulse	0.50	3
1	Ge		224,113.72	2.14	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		752.24	15.49	100.0	Pulse	0.30	3

Quantitation Report

File Name	004CALS.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:30
Sample Name	CALSTD-2
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.504	ug/l	2.83	6,223.68	4.136E-02	Pulse	0.50	3
As			1	0.474	ug/l	8.09	527.01	3.504E-03	Pulse	1.00	3
Mo			1	0.482	ug/l	1.53	2,939.57	1.315E-02	Pulse	0.50	3
Pb			1	0.503	ug/l	1.67	16,771.55	4.300E-03	Pulse	1.00	3
Be			1	0.619	ug/l	7.52	31.67	1.572E-04	Pulse	2.00	3
Ag			1	0.514	ug/l	1.99	10,933.90	4.893E-02	Pulse	0.50	3
Ba			1	0.495	ug/l	3.46	1,020.70	7.351E-04	Pulse	0.50	3
Tl			1	0.499	ug/l	2.49	23,116.94	5.927E-03	Pulse	0.50	3
Sn			1	0.513	ug/l	0.33	2,841.35	2.046E-03	Pulse	0.30	3
Sr			1	0.479	ug/l	7.21	2,747.54	1.979E-03	Pulse	0.50	3
[Pb]			1	0.500	ug/l	0.88	7,862.50	2.016E-03	Pulse	0.50	3
Ca			1	53.418	ug/l	7.17	1,338.05	6.643E-03	Pulse	0.50	3
Ti			1	0.569	ug/l	24.12	115.33	5.720E-04	Pulse	0.50	3
Na			1	48.447	ug/l	1.13	72,601.88	3.604E-01	Pulse	1.00	3
Mg			1	51.978	ug/l	0.70	29,769.69	1.478E-01	Pulse	1.00	3
K			1	51.208	ug/l	1.52	37,832.03	1.878E-01	Pulse	1.00	3
V			1	0.495	ug/l	1.79	4,056.44	2.014E-02	Pulse	0.50	3
Mn			1	0.548	ug/l	10.33	2,803.55	1.864E-02	Pulse	0.50	3
Fe			1	51.277	ug/l	1.32	426,555.24	2.835E+00	Pulse	0.50	3
Co			1	0.502	ug/l	2.11	9,216.22	6.125E-02	Pulse	0.50	3
Ni			1	0.540	ug/l	5.14	2,966.90	1.972E-02	Pulse	0.50	3
Cu			1	0.493	ug/l	4.99	15,803.15	1.050E-01	Pulse	0.50	3
Zn			1	0.623	ug/l	2.11	2,124.79	9.509E-03	Pulse	1.00	3
Cd			1	0.518	ug/l	3.75	1,420.73	6.357E-03	Pulse	0.50	3
Al			1	49.161	ug/l	1.88	8,674.56	4.306E-02	Pulse	1.00	3
Se			1	0.504	ug/l	5.10	40.67	1.819E-04	Pulse	3.00	3
Sb			1	0.505	ug/l	3.31	3,077.26	1.377E-02	Pulse	1.00	3
Se			1	0.414	ug/l	23.83	25.33	1.133E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,900,916.92	0.63	99.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		201,467.31	0.62	100.7	Pulse	0.30	3
1	Ge		150,490.36	1.08	101.6	Pulse	0.30	3
1	In		1,388,614.98	0.28	100.1	Pulse	0.30	3
1	Tb		4,939,675.17	0.44	99.8	Pulse	0.50	3
1	Lu		3,079,003.67	0.47	99.6	Pulse	0.50	3
1	Ge		223,448.70	1.38	99.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		783.35	4.32	104.1	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 8:34
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.024	ug/l	1.32	11,763.57	7.823E-02	Pulse	0.50	3
As			1	1.003	ug/l	2.78	1,094.03	7.276E-03	Pulse	1.00	3
Mo			1	1.000	ug/l	1.84	6,090.35	2.713E-02	Pulse	0.50	3
Pb			1	1.000	ug/l	1.93	33,084.19	8.400E-03	Pulse	1.00	3
Be			1	0.885	ug/l	21.01	45.83	2.248E-04	Pulse	2.00	3
Ag			1	1.031	ug/l	1.78	21,990.37	9.798E-02	Pulse	0.50	3
Ba			1	0.995	ug/l	5.09	2,075.46	1.469E-03	Pulse	0.50	3
Tl			1	1.017	ug/l	2.04	47,487.52	1.206E-02	Pulse	0.50	3
Sn			1	1.007	ug/l	1.37	5,401.94	3.824E-03	Pulse	0.30	3
Sr			1	1.008	ug/l	3.82	5,334.11	3.777E-03	Pulse	0.50	3
[Pb]			1	0.993	ug/l	0.41	15,451.00	3.923E-03	Pulse	0.50	3
Ca			1	106.126	ug/l	6.19	2,616.85	1.283E-02	Pulse	0.50	3
Ti			1	0.916	ug/l	9.92	187.33	9.184E-04	Pulse	0.50	3
Na			1	99.585	ug/l	0.40	139,368.38	6.832E-01	Pulse	1.00	3
Mg			1	105.284	ug/l	0.38	60,761.92	2.979E-01	Pulse	1.00	3
K			1	102.496	ug/l	0.06	61,176.77	2.999E-01	Pulse	1.00	3
V			1	0.993	ug/l	2.04	7,959.65	3.902E-02	Pulse	0.50	3
Mn			1	0.997	ug/l	0.40	4,894.63	3.255E-02	Pulse	0.50	3
Fe			1	104.626	ug/l	0.91	863,650.69	5.743E+00	Pulse	0.50	3
Co			1	1.048	ug/l	1.29	19,146.81	1.273E-01	Pulse	0.50	3
Ni			1	1.072	ug/l	2.05	5,714.20	3.800E-02	Pulse	0.50	3
Cu			1	1.055	ug/l	0.87	23,751.93	1.580E-01	Pulse	0.50	3
Zn			1	1.149	ug/l	5.61	3,139.93	1.399E-02	Pulse	1.00	3
Cd			1	1.061	ug/l	2.13	2,918.91	1.300E-02	Pulse	0.50	3
Al			1	100.569	ug/l	0.55	17,715.84	8.684E-02	Pulse	1.00	3
Se			1	1.003	ug/l	18.46	74.89	3.339E-04	Pulse	3.00	3
Sb			1	1.024	ug/l	0.97	6,234.40	2.777E-02	Pulse	1.00	3
Se			1	1.079	ug/l	12.12	48.00	2.137E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,938,941.25	0.58	100.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		203,999.14	0.47	101.9	Pulse	0.30	3
1	Ge		150,375.01	0.24	101.5	Pulse	0.30	3
1	In		1,412,422.65	1.00	101.9	Pulse	0.30	3
1	Tb		5,034,101.33	0.21	101.7	Pulse	0.50	3
1	Lu		3,106,595.25	0.47	100.5	Pulse	0.50	3
1	Ge		224,468.52	1.24	100.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		828.91	14.23	110.2	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 8:38
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.054	ug/l	1.72	109,085.32	7.177E-01	Pulse	0.50	3
As			1	9.979	ug/l	2.37	10,844.08	7.135E-02	Pulse	1.00	3
Mo			1	9.699	ug/l	1.13	59,446.31	2.616E-01	Pulse	0.50	3
Pb			1	9.696	ug/l	0.49	319,917.55	8.009E-02	Pulse	1.00	3
Be			1	9.906	ug/l	7.23	516.34	2.516E-03	Pulse	2.00	3
Ag			1	10.071	ug/l	0.48	217,150.78	9.558E-01	Pulse	0.50	3
Ba			1	9.721	ug/l	0.88	20,185.28	1.427E-02	Pulse	0.50	3
Tl			1	9.896	ug/l	0.75	467,431.96	1.170E-01	Pulse	0.50	3
Sn			1	9.988	ug/l	2.21	51,124.08	3.614E-02	Pulse	0.30	3
Sr			1	9.942	ug/l	0.45	48,270.74	3.412E-02	Pulse	0.50	3
[Pb]			1	9.686	ug/l	0.34	149,945.79	3.754E-02	Pulse	0.50	3
Ca			1	1002.692	ug/l	0.17	24,223.61	1.180E-01	Pulse	0.50	3
Ti			1	9.781	ug/l	3.68	2,006.11	9.770E-03	Pulse	0.50	3
Na			1	999.082	ug/l	0.75	1,305,841.54	6.361E+00	Pulse	1.00	3
Mg			1	1028.001	ug/l	0.80	594,453.90	2.896E+00	Pulse	1.00	3
K			1	1010.995	ug/l	0.31	469,209.71	2.286E+00	Pulse	1.00	3
V			1	9.855	ug/l	0.80	76,949.34	3.748E-01	Pulse	0.50	3
Mn			1	10.095	ug/l	0.52	47,793.79	3.145E-01	Pulse	0.50	3
Fe			1	1010.521	ug/l	0.55	8,379,837.50	5.514E+01	Analog	0.50	3
Co			1	10.270	ug/l	0.55	188,921.47	1.243E+00	Pulse	0.50	3
Ni			1	10.350	ug/l	0.67	54,242.96	3.569E-01	Pulse	0.50	3
Cu			1	10.437	ug/l	0.85	158,279.83	1.041E+00	Pulse	0.50	3
Zn			1	10.453	ug/l	1.28	21,197.96	9.330E-02	Pulse	1.00	3
Cd			1	10.029	ug/l	1.20	27,893.64	1.228E-01	Pulse	0.50	3
Al			1	1004.538	ug/l	0.61	175,884.48	8.568E-01	Pulse	1.00	3
Se			1	10.028	ug/l	2.60	700.79	3.084E-03	Pulse	3.00	3
Sb			1	9.911	ug/l	0.27	60,813.99	2.677E-01	Pulse	1.00	3
Se			1	10.462	ug/l	2.74	370.34	1.630E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,994,666.33	0.47	102.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		205,296.82	0.99	102.6	Pulse	0.30	3
1	Ge		151,986.51	0.13	102.6	Pulse	0.30	3
1	In		1,414,647.34	0.79	102.0	Pulse	0.30	3
1	Tb		5,036,656.67	0.55	101.7	Pulse	0.50	3
1	Lu		3,129,925.17	0.74	101.3	Pulse	0.50	3
1	Ge		227,197.64	0.46	101.4	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		806.69	5.37	107.2	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:42
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.705	ug/l	1.67	545,134.27	3.597E+00	Pulse	0.50	3
As			1	50.399	ug/l	1.68	54,541.66	3.599E-01	Pulse	1.00	3
Mo			1	49.488	ug/l	0.78	305,134.45	1.334E+00	Pulse	0.50	3
Pb			1	49.651	ug/l	0.51	1,602,651.96	4.095E-01	Pulse	1.00	3
Be			1	50.087	ug/l	2.83	2,630.17	1.272E-02	Pulse	2.00	3
Ag			1	50.303	ug/l	0.13	1,091,629.96	4.773E+00	Pulse	0.50	3
Ba			1	49.574	ug/l	0.69	102,340.30	7.273E-02	Pulse	0.50	3
Tl			1	50.869	ug/l	0.31	2,353,686.92	6.014E-01	Pulse	0.50	3
Sn			1	49.864	ug/l	0.61	252,780.89	1.796E-01	Pulse	0.30	3
Sr			1	49.838	ug/l	0.67	238,702.18	1.696E-01	Pulse	0.50	3
[Pb]			1	49.570	ug/l	0.31	750,489.27	1.918E-01	Pulse	0.50	3
Ca			1	5046.054	ug/l	0.43	122,452.31	5.923E-01	Pulse	0.50	3
Ti			1	51.102	ug/l	3.51	10,550.21	5.103E-02	Pulse	0.50	3
Na			1	5001.374	ug/l	0.33	6,538,323.17	3.162E+01	Analog	1.00	3
Mg			1	5127.832	ug/l	0.28	2,985,167.17	1.444E+01	Pulse	1.00	3
K			1	5094.800	ug/l	0.51	2,317,915.00	1.121E+01	Pulse	1.00	3
V			1	49.702	ug/l	0.64	389,679.81	1.885E+00	Pulse	0.50	3
Mn			1	50.724	ug/l	1.20	238,465.32	1.573E+00	Pulse	0.50	3
Fe			1	5056.694	ug/l	1.10	41,794,194.67	2.757E+02	Analog	0.50	3
Co			1	51.365	ug/l	1.54	941,901.19	6.215E+00	Pulse	0.50	3
Ni			1	51.891	ug/l	1.19	270,506.72	1.785E+00	Pulse	0.50	3
Cu			1	51.953	ug/l	0.56	750,419.58	4.951E+00	Pulse	0.50	3
Zn			1	51.336	ug/l	0.60	101,025.05	4.418E-01	Pulse	1.00	3
Cd			1	50.512	ug/l	0.80	141,400.40	6.183E-01	Pulse	0.50	3
Al			1	5017.505	ug/l	0.12	883,783.13	4.275E+00	Pulse	1.00	3
Se			1	50.405	ug/l	0.28	3,519.32	1.539E-02	Pulse	3.00	3
Sb			1	49.999	ug/l	0.68	308,681.25	1.350E+00	Pulse	1.00	3
Se			1	50.777	ug/l	1.60	1,764.30	7.715E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,913,792.42	0.13	100.2	Pulse	0.50	3
1	Sc		206,749.22	0.46	103.3	Pulse	0.30	3
1	Ge		151,581.03	1.12	102.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,407,190.67	0.11	101.5	Pulse	0.30	3
1	Tb		5,051,166.17	0.28	102.0	Pulse	0.50	3
1	Lu		3,155,307.17	0.52	102.1	Pulse	0.50	3
1	Ge		228,690.91	0.60	102.0	Pulse	0.30	3
1	Te		6.00	120.19		Pulse	0.50	3
1	Li		833.35	13.26	110.8	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 8:46
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.573	ug/l	0.81	1,073,793.25	7.199E+00	Pulse	0.50	3
As			1	101.701	ug/l	0.19	108,292.42	7.261E-01	Pulse	1.00	3
Mo			1	100.000	ug/l	0.29	604,709.02	2.696E+00	Pulse	0.50	3
Pb			1	100.122	ug/l	0.37	3,142,963.42	8.256E-01	Pulse	1.00	3
Be			1	100.739	ug/l	1.37	5,177.33	2.559E-02	Pulse	2.00	3
Ag			1	99.841	ug/l	0.88	2,124,913.58	9.474E+00	Pulse	0.50	3
Ba			1	100.063	ug/l	0.50	200,901.21	1.468E-01	Pulse	0.50	3
Tl			1	102.879	ug/l	0.24	4,630,217.33	1.216E+00	Pulse	0.50	3
Sn			1	101.156	ug/l	0.69	498,486.14	3.642E-01	Pulse	0.30	3
Sr			1	100.472	ug/l	0.38	467,562.98	3.416E-01	Pulse	0.50	3
[Pb]			1	100.448	ug/l	0.65	1,478,967.75	3.885E-01	Pulse	0.50	3
Ca			1	10060.968	ug/l	0.64	238,865.12	1.181E+00	Pulse	0.50	3
Ti			1	99.388	ug/l	1.06	20,082.29	9.925E-02	Pulse	0.50	3
Na			1	10133.721	ug/l	0.44	12,954,194.00	6.402E+01	Analog	1.00	3
Mg			1	10130.832	ug/l	0.61	5,771,617.67	2.852E+01	Analog	1.00	3
K			1	10209.424	ug/l	0.54	4,530,441.17	2.239E+01	Pulse	1.00	3
V			1	100.905	ug/l	0.47	773,989.67	3.825E+00	Pulse	0.50	3
Mn			1	101.827	ug/l	0.07	470,835.87	3.157E+00	Pulse	0.50	3
Fe			1	10144.608	ug/l	0.52	82,502,405.33	5.532E+02	Analog	0.50	3
Co			1	102.041	ug/l	1.13	1,841,276.21	1.235E+01	Pulse	0.50	3
Ni			1	102.076	ug/l	0.41	523,468.80	3.510E+00	Pulse	0.50	3
Cu			1	102.501	ug/l	0.61	1,448,362.29	9.711E+00	Pulse	0.50	3
Zn			1	102.363	ug/l	0.56	196,636.47	8.767E-01	Pulse	1.00	3
Cd			1	101.291	ug/l	1.05	278,088.47	1.240E+00	Pulse	0.50	3
Al			1	10144.660	ug/l	0.71	1,748,522.38	8.642E+00	Pulse	1.00	3
Se			1	101.273	ug/l	0.30	6,928.92	3.089E-02	Pulse	3.00	3
Sb			1	100.861	ug/l	0.89	610,691.35	2.723E+00	Pulse	1.00	3
Se			1	101.723	ug/l	1.83	3,454.87	1.540E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,807,053.83	0.59	97.5	Pulse	0.50	3
1	Sc		202,342.35	0.45	101.1	Pulse	0.30	3
1	Ge		149,150.87	0.44	100.7	Pulse	0.30	3
1	In		1,368,699.56	0.44	98.7	Pulse	0.30	3
1	Tb		4,960,585.83	0.75	100.2	Pulse	0.50	3
1	Lu		3,104,169.33	0.19	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		224,299.45	0.90	100.1	Pulse	0.30	3
1	Te		3.33	91.65		Pulse	0.50	3
1	Li		766.68	0.87	101.9	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:50
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.034	ug/l	0.85	2,035,485.25	1.410E+01	Pulse	0.50	3
As			1	199.051	ug/l	0.05	205,107.48	1.421E+00	Pulse	1.00	3
Mo			1	200.143	ug/l	1.07	1,163,252.37	5.396E+00	Pulse	0.50	3
Pb			1	200.042	ug/l	0.75	5,980,820.33	1.649E+00	Pulse	1.00	3
Be			1	199.614	ug/l	1.51	9,932.09	5.070E-02	Pulse	2.00	3
Ag			1	168.482	ug/l	1.06	3,446,707.50	1.599E+01	Pulse	0.50	3
Ba			1	200.089	ug/l	0.41	384,515.65	2.935E-01	Pulse	0.50	3
Tl			1	198.349	ug/l	0.30	8,503,120.00	2.345E+00	Analog	0.50	3
Sn			1	199.457	ug/l	0.61	940,575.14	7.179E-01	Pulse	0.30	3
Sr			1	199.807	ug/l	0.91	889,557.38	6.790E-01	Pulse	0.50	3
[Pb]			1	199.899	ug/l	0.53	2,803,280.75	7.730E-01	Pulse	0.50	3
Ca			1	19957.829	ug/l	0.70	458,694.17	2.341E+00	Pulse	0.50	3
Ti			1	200.041	ug/l	0.48	39,134.31	1.998E-01	Pulse	0.50	3
Na			1	19932.848	ug/l	0.46	24,659,415.33	1.259E+02	Analog	1.00	3
Mg			1	19901.194	ug/l	0.69	10,976,927.00	5.603E+01	Analog	1.00	3
K			1	19871.023	ug/l	0.55	8,523,242.67	4.351E+01	Analog	1.00	3
V			1	199.629	ug/l	0.49	1,482,255.83	7.566E+00	Pulse	0.50	3
Mn			1	198.901	ug/l	0.36	889,815.56	6.165E+00	Pulse	0.50	3
Fe			1	19912.970	ug/l	0.63	156,720,362.67	1.086E+03	Analog	0.50	3
Co			1	198.624	ug/l	0.40	3,468,576.58	2.403E+01	Pulse	0.50	3
Ni			1	198.472	ug/l	0.56	984,832.88	6.823E+00	Pulse	0.50	3
Cu			1	198.239	ug/l	0.76	2,702,910.75	1.873E+01	Pulse	0.50	3
Zn			1	198.461	ug/l	1.48	365,583.42	1.696E+00	Pulse	1.00	3
Cd			1	199.225	ug/l	0.87	525,759.44	2.439E+00	Pulse	0.50	3
Al			1	19923.066	ug/l	0.82	3,324,474.58	1.697E+01	Pulse	1.00	3
Se			1	199.261	ug/l	0.86	13,098.03	6.075E-02	Pulse	3.00	3
Sb			1	199.574	ug/l	0.94	1,161,481.92	5.387E+00	Pulse	1.00	3
Se			1	198.921	ug/l	1.28	6,483.88	3.007E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,626,333.42	0.63	92.9	Pulse	0.50	3
1	Sc		195,906.51	0.89	97.9	Pulse	0.30	3
1	Ge		144,346.25	0.81	97.5	Pulse	0.30	3
1	In		1,310,094.95	0.64	94.5	Pulse	0.30	3
1	Tb		4,806,296.67	0.28	97.1	Pulse	0.50	3
1	Lu		3,004,045.92	0.26	97.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		215,608.52	1.42	96.2	Pulse	0.30	3
1	Te		14.67	20.83		Pulse	0.50	3
1	Li		684.46	4.97	91.0	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 8:54
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.449	ug/l	0.34	1,007,930.92	6.978E+00	Pulse	0.50	3
As			1	97.834	ug/l	0.84	100,885.05	6.985E-01	Pulse	1.00	3
Mo			1	97.796	ug/l	0.60	569,684.11	2.637E+00	Pulse	0.50	3
Pb			1	97.335	ug/l	0.33	2,984,234.00	8.026E-01	Pulse	1.00	3
Be			1	99.135	ug/l	1.80	4,963.11	2.518E-02	Pulse	2.00	3
Ag			1	98.599	ug/l	0.55	2,021,578.83	9.356E+00	Pulse	0.50	3
Ba			1	96.844	ug/l	1.01	188,306.43	1.421E-01	Pulse	0.50	3
Tl			1	99.764	ug/l	0.60	4,385,164.00	1.179E+00	Pulse	0.50	3
Sn			1	100.128	ug/l	0.87	477,851.35	3.605E-01	Pulse	0.30	3
Sr			1	99.218	ug/l	0.23	447,166.72	3.373E-01	Pulse	0.50	3
[Pb]			1	97.476	ug/l	0.28	1,401,751.46	3.770E-01	Pulse	0.50	3
Ca			1	9705.311	ug/l	0.54	224,466.54	1.139E+00	Pulse	0.50	3
Ti			1	99.357	ug/l	1.50	19,557.10	9.922E-02	Pulse	0.50	3
Na			1	9791.632	ug/l	0.59	12,193,387.00	6.186E+01	Analog	1.00	3
Mg			1	9796.651	ug/l	0.61	5,436,887.83	2.758E+01	Analog	1.00	3
K			1	9807.405	ug/l	0.26	4,240,142.33	2.151E+01	Pulse	1.00	3
V			1	96.790	ug/l	0.64	723,221.06	3.669E+00	Pulse	0.50	3
Mn			1	98.399	ug/l	0.14	440,616.68	3.051E+00	Pulse	0.50	3
Fe			1	9874.203	ug/l	0.06	77,767,698.67	5.384E+02	Analog	0.50	3
Co			1	98.994	ug/l	0.66	1,729,937.54	1.198E+01	Pulse	0.50	3
Ni			1	99.006	ug/l	0.69	491,692.91	3.404E+00	Pulse	0.50	3
Cu			1	99.768	ug/l	0.58	1,365,423.79	9.453E+00	Pulse	0.50	3
Zn			1	99.450	ug/l	0.82	184,060.24	8.519E-01	Pulse	1.00	3
Cd			1	99.111	ug/l	0.56	262,132.74	1.213E+00	Pulse	0.50	3
Al			1	9684.016	ug/l	0.95	1,625,959.59	8.249E+00	Pulse	1.00	3
Se			1	98.458	ug/l	0.48	6,489.32	3.003E-02	Pulse	3.00	3
Sb			1	98.456	ug/l	0.58	574,280.77	2.658E+00	Pulse	1.00	3
Se			1	98.002	ug/l	2.94	3,206.94	1.484E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,718,192.67	0.56	95.2	Pulse	0.50	3
1	Sc		197,109.69	0.52	98.5	Pulse	0.30	3
1	Ge		144,439.71	0.24	97.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,325,528.38	0.33	95.6	Pulse	0.30	3
1	Tb		4,856,839.17	0.53	98.1	Pulse	0.50	3
1	Lu		3,009,623.42	0.63	97.4	Pulse	0.50	3
1	Ge		216,070.60	0.39	96.4	Pulse	0.30	3
1	Te		7.33	41.66		Pulse	0.50	3
1	Li		772.24	15.65	102.7	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 8:58
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	197.700	ug/l	0.62	1,968,970.17	1.401E+01	Pulse	0.50	3
As			1	196.666	ug/l	1.03	197,335.75	1.404E+00	Pulse	1.00	3
Mo			1	197.438	ug/l	0.89	1,122,584.34	5.323E+00	Pulse	0.50	3
Pb			1	196.754	ug/l	0.52	5,796,246.17	1.622E+00	Pulse	1.00	3
Be			1	200.281	ug/l	1.55	9,722.15	5.087E-02	Pulse	2.00	3
Ag			1	163.363	ug/l	0.90	3,269,309.33	1.550E+01	Pulse	0.50	3
Ba			1	196.054	ug/l	0.62	368,215.95	2.876E-01	Pulse	0.50	3
Tl			1	197.411	ug/l	0.85	8,338,643.17	2.334E+00	Analog	0.50	3
Sn			1	199.790	ug/l	0.44	920,754.96	7.191E-01	Pulse	0.30	3
Sr			1	199.753	ug/l	0.26	869,139.21	6.788E-01	Pulse	0.50	3
[Pb]			1	197.089	ug/l	0.87	2,723,282.08	7.622E-01	Pulse	0.50	3
Ca			1	19749.011	ug/l	1.06	442,796.74	2.317E+00	Pulse	0.50	3
Ti			1	197.499	ug/l	0.72	37,694.84	1.972E-01	Pulse	0.50	3
Na			1	19912.290	ug/l	0.77	24,032,641.33	1.257E+02	Analog	1.00	3
Mg			1	19842.290	ug/l	0.91	10,677,077.67	5.587E+01	Analog	1.00	3
K			1	19816.711	ug/l	0.56	8,292,513.17	4.339E+01	Analog	1.00	3
V			1	196.512	ug/l	1.37	1,423,426.83	7.448E+00	Pulse	0.50	3
Mn			1	196.766	ug/l	0.55	857,247.33	6.098E+00	Pulse	0.50	3
Fe			1	19835.929	ug/l	0.78	152,026,752.00	1.082E+03	Analog	0.50	3
Co			1	197.786	ug/l	0.45	3,363,564.25	2.393E+01	Pulse	0.50	3
Ni			1	197.704	ug/l	0.83	955,347.65	6.797E+00	Pulse	0.50	3
Cu			1	197.889	ug/l	0.90	2,627,529.08	1.869E+01	Pulse	0.50	3
Zn			1	196.833	ug/l	1.24	354,701.05	1.682E+00	Pulse	1.00	3
Cd			1	196.476	ug/l	0.95	507,205.90	2.405E+00	Pulse	0.50	3
Al			1	19596.328	ug/l	1.25	3,189,961.42	1.669E+01	Pulse	1.00	3
Se			1	195.642	ug/l	1.58	12,579.69	5.965E-02	Pulse	3.00	3
Sb			1	196.804	ug/l	0.88	1,120,419.71	5.313E+00	Pulse	1.00	3
Se			1	198.556	ug/l	0.82	6,331.16	3.002E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,573,041.00	0.14	91.5	Pulse	0.50	3
1	Sc		191,130.43	1.22	95.5	Pulse	0.30	3
1	Ge		140,571.66	1.09	94.9	Pulse	0.30	3
1	In		1,280,381.20	0.49	92.3	Pulse	0.30	3
1	Tb		4,714,480.83	0.54	95.2	Pulse	0.50	3
1	Lu		2,949,784.00	0.95	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		210,908.02	0.95	94.1	Pulse	0.30	3
1	Te		7.33	87.67		Pulse	0.50	3
1	Li		757.80	8.69	100.7	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:02
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.967	ug/l	0.56	997,970.67	7.157E+00	Pulse	0.50	3
As			1	101.861	ug/l	0.32	101,407.83	7.272E-01	Pulse	1.00	3
Mo			1	98.991	ug/l	1.47	563,496.38	2.669E+00	Pulse	0.50	3
Pb			1	99.603	ug/l	0.61	2,974,834.83	8.213E-01	Pulse	1.00	3
Be			1	104.489	ug/l	1.75	5,066.30	2.654E-02	Pulse	2.00	3
Ag			1	50.654	ug/l	1.42	1,014,892.64	4.807E+00	Pulse	0.50	3
Ba			1	100.045	ug/l	1.25	188,628.27	1.468E-01	Pulse	0.50	3
Tl			1	101.645	ug/l	0.59	4,352,511.67	1.202E+00	Pulse	0.50	3
Sn			1	100.727	ug/l	1.15	466,126.47	3.627E-01	Pulse	0.30	3
Sr			1	99.876	ug/l	0.50	436,464.74	3.396E-01	Pulse	0.50	3
[Pb]			1	100.248	ug/l	0.45	1,404,355.17	3.877E-01	Pulse	0.50	3
Ca			1	9693.357	ug/l	1.15	217,114.74	1.137E+00	Pulse	0.50	3
Ti			1	99.693	ug/l	0.96	19,003.90	9.955E-02	Pulse	0.50	3
Na			1	10182.329	ug/l	0.09	12,279,593.00	6.433E+01	Analog	1.00	3
Mg			1	10264.013	ug/l	0.63	5,516,575.00	2.890E+01	Analog	1.00	3
K			1	9717.745	ug/l	0.15	4,068,918.58	2.132E+01	Pulse	1.00	3
V			1	98.960	ug/l	0.34	716,110.31	3.751E+00	Pulse	0.50	3
Mn			1	101.102	ug/l	0.36	437,072.94	3.134E+00	Pulse	0.50	3
Fe			1	10018.034	ug/l	0.81	76,173,400.00	5.463E+02	Analog	0.50	3
Co			1	102.832	ug/l	1.41	1,734,847.33	1.244E+01	Pulse	0.50	3
Ni			1	102.396	ug/l	0.99	490,944.77	3.521E+00	Pulse	0.50	3
Cu			1	102.588	ug/l	0.57	1,355,278.50	9.719E+00	Pulse	0.50	3
Zn			1	100.698	ug/l	1.04	182,115.04	8.625E-01	Pulse	1.00	3
Cd			1	101.612	ug/l	1.06	262,637.66	1.244E+00	Pulse	0.50	3
Al			1	9731.696	ug/l	0.43	1,582,432.04	8.290E+00	Pulse	1.00	3
Se			1	98.998	ug/l	1.19	6,376.07	3.020E-02	Pulse	3.00	3
Sb			1	101.825	ug/l	1.17	580,397.73	2.749E+00	Pulse	1.00	3
Se			1	99.028	ug/l	0.54	3,166.93	1.500E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,622,118.00	0.28	92.8	Pulse	0.50	3
1	Sc		190,889.56	0.18	95.4	Pulse	0.30	3
1	Ge		139,450.20	0.35	94.2	Pulse	0.30	3
1	In		1,285,302.17	0.20	92.7	Pulse	0.30	3
1	Tb		4,753,304.33	0.30	96.0	Pulse	0.50	3
1	Lu		2,957,947.83	0.40	95.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		211,166.79	1.47	94.2	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		757.80	12.51	100.7	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:05
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.027	ug/l	56.68	1,082.04	7.619E-03	Pulse	0.50	3
As			1	0.035	ug/l	18.65	52.33	3.684E-04	Pulse	1.00	3
Mo			1	0.172	ug/l	22.01	1,021.37	4.808E-03	Pulse	0.50	3
Pb			1	0.056	ug/l	13.84	2,305.50	6.173E-04	Pulse	1.00	3
Be			1	0.031	ug/l	115.24	1.50	7.844E-06	Pulse	2.00	3
Ag			1	0.072	ug/l	28.14	1,488.07	7.010E-03	Pulse	0.50	3
Ba			1	0.016	ug/l	28.43	42.67	3.251E-05	Pulse	0.50	3
Tl			1	0.035	ug/l	12.71	1,666.76	4.463E-04	Pulse	0.50	3
Sn			1	0.125	ug/l	14.04	854.47	6.506E-04	Pulse	0.30	3
Sr			1	0.009	ug/l	93.60	503.34	3.833E-04	Pulse	0.50	3
[Pb]			1	0.054	ug/l	9.67	1,082.71	2.899E-04	Pulse	0.50	3
Ca			1	0.570	ug/l	80.39	84.67	4.438E-04	Pulse	0.50	3
Ti			1	0.014	ug/l	114.01	3.33	1.738E-05	Pulse	0.50	3
Na			1	-0.179	ug/l	-417.97	10,195.61	5.344E-02	Pulse	1.00	3
Mg			1	1.566	ug/l	22.13	1,113.03	5.836E-03	Pulse	1.00	3
K			1	1.161	ug/l	46.33	14,957.99	7.840E-02	Pulse	1.00	3
V			1	0.004	ug/l	185.91	295.34	1.547E-03	Pulse	0.50	3
Mn			1	-0.021	ug/l	-38.40	141.33	9.947E-04	Pulse	0.50	3
Fe			1	2.136	ug/l	21.16	22,066.76	1.554E-01	Pulse	0.50	3
Co			1	0.019	ug/l	29.85	401.34	2.825E-03	Pulse	0.50	3
Ni			1	0.014	ug/l	55.76	234.00	1.647E-03	Pulse	0.50	3
Cu			1	0.028	ug/l	49.07	8,709.32	6.131E-02	Pulse	0.50	3
Zn			1	-0.150	ug/l	-8.45	620.68	2.924E-03	Pulse	1.00	3
Cd			1	0.023	ug/l	39.16	64.00	3.022E-04	Pulse	0.50	3
Al			1	1.128	ug/l	55.16	409.67	2.148E-03	Pulse	1.00	3
Se			1	0.009	ug/l	632.65	6.56	3.096E-05	Pulse	3.00	3
Sb			1	0.041	ug/l	4.80	262.67	1.238E-03	Pulse	1.00	3
Se			1	-0.032	ug/l	-203.66	9.78	4.609E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,734,498.75	0.28	95.7	Pulse	0.50	3
1	Sc		190,801.01	1.03	95.3	Pulse	0.30	3

Quantitation Report

1	Ge		142,055.51	0.43	95.9	Pulse	0.30	3
1	In		1,313,239.08	0.47	94.7	Pulse	0.30	3
1	Tb		4,745,216.17	0.82	95.9	Pulse	0.50	3
1	Lu		2,923,806.67	0.84	94.6	Pulse	0.50	3
1	Ge		212,218.36	1.51	94.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		761.13	5.72	101.2	Pulse	0.30	3

Quantitation Report

File Name	014LCCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:09
Sample Name	CRIA
Sample Type	CRIA
Comment	=std 2
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.031	ug/l	5.13	10,989.79	7.868E-02	Pulse	0.50	3
As			1	1.004	ug/l	4.35	1,019.03	7.284E-03	Pulse	1.00	3
Mo			1	1.048	ug/l	0.47	5,934.29	2.843E-02	Pulse	0.50	3
Pb			1	1.043	ug/l	3.60	32,229.88	8.754E-03	Pulse	1.00	3
Be			1	1.171	ug/l	13.19	56.33	2.975E-04	Pulse	2.00	3
Ag			1	1.101	ug/l	1.99	21,818.19	1.046E-01	Pulse	0.50	3
Ba			1	1.003	ug/l	3.47	1,922.11	1.480E-03	Pulse	0.50	3
Tl			1	1.044	ug/l	4.53	45,513.61	1.237E-02	Pulse	0.50	3
Sn			1	1.042	ug/l	3.57	5,127.41	3.949E-03	Pulse	0.30	3
Sr			1	1.002	ug/l	7.08	4,873.31	3.756E-03	Pulse	0.50	3
[Pb]			1	1.042	ug/l	3.15	15,140.71	4.112E-03	Pulse	0.50	3
Ca			1	99.805	ug/l	3.46	2,291.47	1.208E-02	Pulse	0.50	3
Ti			1	0.969	ug/l	7.19	184.00	9.708E-04	Pulse	0.50	3
Na			1	103.975	ug/l	3.70	134,803.49	7.109E-01	Pulse	1.00	3
Mg			1	107.802	ug/l	3.50	57,824.92	3.049E-01	Pulse	1.00	3
K			1	104.283	ug/l	4.39	57,609.10	3.038E-01	Pulse	1.00	3
V			1	1.020	ug/l	6.69	7,590.17	4.005E-02	Pulse	0.50	3
Mn			1	1.036	ug/l	5.73	4,715.92	3.377E-02	Pulse	0.50	3
Fe			1	106.542	ug/l	2.75	817,066.46	5.848E+00	Pulse	0.50	3
Co			1	1.075	ug/l	2.72	18,249.95	1.306E-01	Pulse	0.50	3
Ni			1	1.092	ug/l	2.51	5,406.77	3.870E-02	Pulse	0.50	3
Cu			1	1.117	ug/l	3.40	22,891.56	1.638E-01	Pulse	0.50	3
Zn			1	0.987	ug/l	5.12	2,633.18	1.261E-02	Pulse	1.00	3
Cd			1	1.063	ug/l	6.59	2,715.54	1.303E-02	Pulse	0.50	3
Al			1	102.825	ug/l	2.44	16,835.75	8.876E-02	Pulse	1.00	3
Se			1	1.012	ug/l	4.36	70.22	3.367E-04	Pulse	3.00	3
Sb			1	1.037	ug/l	2.31	5,865.61	2.812E-02	Pulse	1.00	3
Se			1	0.975	ug/l	10.10	41.33	1.980E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,685,109.33	3.93	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		189,760.44	3.08	94.8	Pulse	0.30	3
1	Ge		139,790.25	2.81	94.4	Pulse	0.30	3
1	In		1,299,232.83	4.04	93.7	Pulse	0.30	3
1	Tb		4,647,426.67	3.86	93.9	Pulse	0.50	3
1	Lu		2,889,890.25	3.80	93.5	Pulse	0.50	3
1	Ge		208,709.64	3.00	93.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		786.69	2.97	104.6	Pulse	0.30	3

Quantitation Report

File Name	015ICSA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:13
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.087	ug/l	1.29	20,684.97	1.535E-01	Pulse	0.50	3
As			1	0.101	ug/l	1.24	112.67	8.360E-04	Pulse	1.00	3
Mo			1	1997.212	ug/l	0.92	10,618,049.00	5.384E+01	Analog	0.50	3
Pb			1	0.164	ug/l	7.82	4,830.70	1.509E-03	Pulse	1.00	3
Be			1	0.028	ug/l	57.17	1.33	7.154E-06	Pulse	2.00	3
Ag			1	0.321	ug/l	1.40	6,032.34	3.058E-02	Pulse	0.50	3
Ba			1	0.345	ug/l	4.56	606.68	5.151E-04	Pulse	0.50	3
Tl			1	0.014	ug/l	5.43	638.68	1.996E-04	Pulse	0.50	3
Sn			1	0.120	ug/l	13.29	744.47	6.320E-04	Pulse	0.30	3
Sr			1	1.117	ug/l	6.15	4,879.99	4.146E-03	Pulse	0.50	3
[Pb]			1	0.159	ug/l	7.20	2,228.15	6.961E-04	Pulse	0.50	3
Ca			1	91288.294	ug/l	0.74	1,995,013.54	1.071E+01	Pulse	0.50	3
Ti			1	1909.821	ug/l	0.83	355,298.29	1.907E+00	Pulse	0.50	3
Na			1	97911.872	ug/l	0.05	115,155,509.33	6.181E+02	Analog	1.00	3
Mg			1	96852.410	ug/l	0.32	50,803,100.00	2.727E+02	Analog	1.00	3
K			1	97661.557	ug/l	0.29	39,781,797.33	2.135E+02	Analog	1.00	3
V			1	0.033	ug/l	9.92	492.01	2.641E-03	Pulse	0.50	3
Mn			1	1.098	ug/l	4.29	4,808.62	3.568E-02	Pulse	0.50	3
Fe			1	98122.852	ug/l	0.58	720,992,149.33	5.350E+03	Analog	0.50	3
Co			1	0.128	ug/l	2.99	2,158.80	1.602E-02	Pulse	0.50	3
Ni			1	0.222	ug/l	1.71	1,184.04	8.786E-03	Pulse	0.50	3
Cu			1	-0.027	ug/l	-51.81	7,554.17	5.605E-02	Pulse	0.50	3
Zn			1	3.369	ug/l	1.00	6,490.77	3.291E-02	Pulse	1.00	3
Cd			1	0.385	ug/l	6.48	932.69	4.729E-03	Pulse	0.50	3
Al			1	93995.071	ug/l	0.24	14,915,172.67	8.006E+01	Analog	1.00	3
Se			1	0.251	ug/l	30.97	20.67	1.048E-04	Pulse	3.00	3
Sb			1	0.079	ug/l	8.27	445.68	2.259E-03	Pulse	1.00	3
Se			1	0.167	ug/l	10.11	15.00	7.605E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,199,992.83	0.69	82.0	Pulse	0.50	3
1	Sc		186,304.89	0.20	93.1	Pulse	0.30	3
1	Ge		134,768.65	0.81	91.0	Pulse	0.30	3
1	In		1,177,372.28	0.98	84.9	Pulse	0.30	3
1	Tb		4,424,627.17	0.84	89.4	Pulse	0.50	3
1	Lu		2,774,214.58	0.28	89.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		197,222.53	1.49	88.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		617.79	12.43	82.1	Pulse	0.30	3

Quantitation Report

File Name 016ICSB.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:17
Sample Name ICSAB
Sample Type ICSAB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.513	ug/l	1.04	211,635.68	1.529E+00	Pulse	0.50	3
As			1	19.298	ug/l	1.99	19,079.50	1.379E-01	Pulse	1.00	3
Mo			1	1990.593	ug/l	0.72	10,856,122.00	5.366E+01	Analog	0.50	3
Pb			1	0.124	ug/l	2.34	3,803.10	1.177E-03	Pulse	1.00	3
Be			1	0.021	ug/l	49.67	1.00	5.284E-06	Pulse	2.00	3
Ag			1	18.396	ug/l	1.34	353,140.52	1.746E+00	Pulse	0.50	3
Ba			1	0.318	ug/l	9.36	570.68	4.762E-04	Pulse	0.50	3
Tl			1	0.008	ug/l	21.98	396.01	1.227E-04	Pulse	0.50	3
Sn			1	0.030	ug/l	19.45	371.12	3.096E-04	Pulse	0.30	3
Sr			1	1.110	ug/l	1.16	4,944.00	4.124E-03	Pulse	0.50	3
[Pb]			1	0.129	ug/l	6.49	1,872.78	5.797E-04	Pulse	0.50	3
Ca			1	90710.478	ug/l	0.67	2,010,924.05	1.064E+01	Pulse	0.50	3
Ti			1	1921.639	ug/l	1.42	362,652.27	1.919E+00	Pulse	0.50	3
Na			1	99139.004	ug/l	1.12	118,277,200.00	6.258E+02	Analog	1.00	3
Mg			1	97098.245	ug/l	1.47	51,664,348.00	2.734E+02	Analog	1.00	3
K			1	98758.966	ug/l	1.06	40,807,842.67	2.159E+02	Analog	1.00	3
V			1	0.026	ug/l	8.66	444.01	2.349E-03	Pulse	0.50	3
Mn			1	20.217	ug/l	0.10	86,911.39	6.281E-01	Pulse	0.50	3
Fe			1	97501.539	ug/l	0.20	735,629,589.33	5.316E+03	Analog	0.50	3
Co			1	19.593	ug/l	0.51	328,084.26	2.371E+00	Pulse	0.50	3
Ni			1	18.766	ug/l	1.15	89,426.37	6.462E-01	Pulse	0.50	3
Cu			1	18.468	ug/l	0.62	248,748.81	1.798E+00	Pulse	0.50	3
Zn			1	20.308	ug/l	0.76	35,870.90	1.773E-01	Pulse	1.00	3
Cd			1	18.935	ug/l	1.64	46,887.17	2.318E-01	Pulse	0.50	3
Al			1	92923.270	ug/l	1.24	14,957,288.00	7.915E+01	Analog	1.00	3
Se			1	0.243	ug/l	11.75	20.67	1.022E-04	Pulse	3.00	3
Sb			1	0.069	ug/l	8.31	404.01	1.995E-03	Pulse	1.00	3
Se			1	0.270	ug/l	20.97	18.55	9.162E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,231,824.75	1.19	82.8	Pulse	0.50	3
1	Sc		188,988.47	0.44	94.4	Pulse	0.30	3
1	Ge		138,377.82	1.29	93.4	Pulse	0.30	3
1	In		1,198,738.84	0.43	86.4	Pulse	0.30	3
1	Tb		4,448,991.50	0.33	89.9	Pulse	0.50	3
1	Lu		2,780,307.92	0.53	89.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		202,309.40	1.78	90.3	Pulse	0.30	3
1	Te		3.33	91.65		Pulse	0.50	3
1	Li		737.80	6.43	98.1	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:21
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.150	ug/l	0.86	520,537.24	3.557E+00	Pulse	0.50	3
As			1	49.386	ug/l	1.23	51,595.55	3.526E-01	Pulse	1.00	3
Mo			1	50.381	ug/l	0.58	298,368.68	1.358E+00	Pulse	0.50	3
Pb			1	49.018	ug/l	0.70	1,506,657.04	4.043E-01	Pulse	1.00	3
Be			1	52.007	ug/l	1.44	2,608.17	1.321E-02	Pulse	2.00	3
Ag			1	50.515	ug/l	0.83	1,052,861.15	4.794E+00	Pulse	0.50	3
Ba			1	48.077	ug/l	0.69	93,161.89	7.053E-02	Pulse	0.50	3
Tl			1	50.695	ug/l	0.61	2,233,629.58	5.993E-01	Pulse	0.50	3
Sn			1	49.857	ug/l	1.03	237,246.09	1.796E-01	Pulse	0.30	3
Sr			1	48.387	ug/l	0.90	217,548.68	1.647E-01	Pulse	0.50	3
[Pb]			1	49.144	ug/l	0.40	708,523.10	1.901E-01	Pulse	0.50	3
Ca			1	4828.322	ug/l	1.65	111,900.01	5.667E-01	Pulse	0.50	3
Ti			1	49.422	ug/l	3.32	9,744.45	4.936E-02	Pulse	0.50	3
Na			1	5098.033	ug/l	0.36	6,364,465.17	3.223E+01	Analog	1.00	3
Mg			1	5014.439	ug/l	0.71	2,787,772.25	1.412E+01	Pulse	1.00	3
K			1	4964.743	ug/l	0.46	2,157,446.92	1.093E+01	Pulse	1.00	3
V			1	49.682	ug/l	0.77	371,992.80	1.884E+00	Pulse	0.50	3
Mn			1	48.934	ug/l	0.69	222,096.95	1.518E+00	Pulse	0.50	3
Fe			1	5050.706	ug/l	0.37	40,299,189.33	2.754E+02	Analog	0.50	3
Co			1	51.088	ug/l	0.79	904,404.98	6.181E+00	Pulse	0.50	3
Ni			1	51.437	ug/l	1.06	258,859.11	1.769E+00	Pulse	0.50	3
Cu			1	51.899	ug/l	0.78	723,631.77	4.946E+00	Pulse	0.50	3
Zn			1	50.566	ug/l	0.55	95,591.64	4.352E-01	Pulse	1.00	3
Cd			1	49.252	ug/l	0.89	132,436.93	6.029E-01	Pulse	0.50	3
Al			1	4728.131	ug/l	0.88	795,338.63	4.028E+00	Pulse	1.00	3
Se			1	47.619	ug/l	1.27	3,193.71	1.454E-02	Pulse	3.00	3
Sb			1	47.966	ug/l	1.15	284,434.74	1.295E+00	Pulse	1.00	3
Se			1	48.556	ug/l	1.79	1,621.07	7.379E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,726,882.08	0.42	95.5	Pulse	0.50	3
1	Sc		197,440.39	0.31	98.7	Pulse	0.30	3
1	Ge		146,318.30	0.80	98.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,320,856.23	0.47	95.3	Pulse	0.30	3
1	Tb		4,790,848.50	0.66	96.8	Pulse	0.50	3
1	Lu		2,893,141.58	0.59	93.6	Pulse	0.50	3
1	Ge		219,652.99	1.07	98.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		860.02	4.47	114.3	Pulse	0.30	3

Quantitation Report

File Name	018_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:25
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.675	ug/l	1.43	1,040,452.94	7.065E+00	Pulse	0.50	3
As			1	98.050	ug/l	1.37	103,085.00	7.000E-01	Pulse	1.00	3
Mo			1	98.770	ug/l	0.84	584,469.85	2.663E+00	Pulse	0.50	3
Pb			1	98.291	ug/l	1.25	2,979,668.17	8.105E-01	Pulse	1.00	3
Be			1	103.845	ug/l	2.37	5,220.00	2.638E-02	Pulse	2.00	3
Ag			1	99.109	ug/l	0.59	2,064,237.04	9.405E+00	Pulse	0.50	3
Ba			1	96.487	ug/l	0.49	185,599.43	1.415E-01	Pulse	0.50	3
Tl			1	101.689	ug/l	0.55	4,419,786.00	1.202E+00	Pulse	0.50	3
Sn			1	100.503	ug/l	0.82	474,508.16	3.619E-01	Pulse	0.30	3
Sr			1	97.805	ug/l	0.39	436,073.37	3.325E-01	Pulse	0.50	3
[Pb]			1	98.686	ug/l	1.03	1,403,223.42	3.817E-01	Pulse	0.50	3
Ca			1	9711.719	ug/l	0.74	225,541.32	1.140E+00	Pulse	0.50	3
Ti			1	97.879	ug/l	2.12	19,344.22	9.774E-02	Pulse	0.50	3
Na			1	10171.644	ug/l	1.33	12,717,933.00	6.426E+01	Analog	1.00	3
Mg			1	9955.411	ug/l	1.14	5,547,654.83	2.803E+01	Analog	1.00	3
K			1	9912.362	ug/l	0.93	4,302,902.17	2.174E+01	Pulse	1.00	3
V			1	99.658	ug/l	0.31	747,752.42	3.778E+00	Pulse	0.50	3
Mn			1	96.646	ug/l	1.05	441,258.83	2.996E+00	Pulse	0.50	3
Fe			1	9947.799	ug/l	0.94	79,884,138.67	5.424E+02	Analog	0.50	3
Co			1	99.615	ug/l	1.38	1,774,839.42	1.205E+01	Pulse	0.50	3
Ni			1	100.530	ug/l	1.21	509,034.46	3.457E+00	Pulse	0.50	3
Cu			1	100.929	ug/l	1.23	1,408,273.54	9.563E+00	Pulse	0.50	3
Zn			1	99.840	ug/l	1.20	187,702.54	8.552E-01	Pulse	1.00	3
Cd			1	98.120	ug/l	0.41	263,625.89	1.201E+00	Pulse	0.50	3
Al			1	9414.567	ug/l	1.17	1,587,207.12	8.020E+00	Pulse	1.00	3
Se			1	96.154	ug/l	1.32	6,437.75	2.933E-02	Pulse	3.00	3
Sb			1	96.171	ug/l	0.83	569,832.10	2.596E+00	Pulse	1.00	3
Se			1	96.568	ug/l	0.74	3,210.38	1.463E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,676,568.67	0.45	94.2	Pulse	0.50	3
1	Sc		197,930.13	1.09	98.9	Pulse	0.30	3
1	Ge		147,283.46	1.38	99.5	Pulse	0.30	3
1	In		1,311,298.49	0.30	94.6	Pulse	0.30	3
1	Tb		4,785,691.33	0.30	96.7	Pulse	0.50	3
1	Lu		2,921,299.00	0.57	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		219,494.74	0.49	97.9	Pulse	0.30	3
1	Te		5.33	114.56		Pulse	0.50	3
1	Li		790.02	5.19	105.0	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:28
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.008	ug/l	111.35	928.69	6.250E-03	Pulse	0.50	3
As			1	0.024	ug/l	11.92	43.00	2.893E-04	Pulse	1.00	3
Mo			1	0.253	ug/l	27.48	1,566.74	6.982E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	16.04	1,698.76	4.489E-04	Pulse	1.00	3
Be			1	0.020	ug/l	86.60	1.00	4.996E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	17.92	387.34	1.722E-03	Pulse	0.50	3
Ba			1	0.004	ug/l	14.55	21.33	1.584E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	24.62	792.02	2.093E-04	Pulse	0.50	3
Sn			1	0.092	ug/l	21.32	718.91	5.336E-04	Pulse	0.30	3
Sr			1	0.021	ug/l	66.20	570.68	4.236E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	23.11	799.36	2.112E-04	Pulse	0.50	3
Ca			1	2.634	ug/l	52.66	137.33	6.858E-04	Pulse	0.50	3
Ti			1	0.050	ug/l	11.40	10.67	5.324E-05	Pulse	0.50	3
Na			1	4.481	ug/l	19.22	16,596.88	8.286E-02	Pulse	1.00	3
Mg			1	3.411	ug/l	12.52	2,209.46	1.103E-02	Pulse	1.00	3
K			1	3.477	ug/l	10.21	16,720.74	8.347E-02	Pulse	1.00	3
V			1	-0.001	ug/l	-1008.67	270.67	1.352E-03	Pulse	0.50	3
Mn			1	-0.018	ug/l	-30.71	166.00	1.115E-03	Pulse	0.50	3
Fe			1	3.860	ug/l	11.99	37,051.41	2.494E-01	Pulse	0.50	3
Co			1	0.012	ug/l	42.99	288.00	1.941E-03	Pulse	0.50	3
Ni			1	0.005	ug/l	266.15	197.33	1.331E-03	Pulse	0.50	3
Cu			1	-0.008	ug/l	-145.27	8,602.61	5.787E-02	Pulse	0.50	3
Zn			1	-0.076	ug/l	-11.86	799.02	3.557E-03	Pulse	1.00	3
Cd			1	0.009	ug/l	33.74	30.00	1.333E-04	Pulse	0.50	3
Al			1	2.375	ug/l	20.95	643.01	3.210E-03	Pulse	1.00	3
Se			1	0.029	ug/l	138.37	8.33	3.713E-05	Pulse	3.00	3
Sb			1	0.032	ug/l	14.87	223.00	9.919E-04	Pulse	1.00	3
Se			1	-0.075	ug/l	-44.15	8.89	3.958E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,783,479.33	0.43	96.9	Pulse	0.50	3
1	Sc		200,330.89	0.29	100.1	Pulse	0.30	3

Quantitation Report

1	Ge		148,676.44	1.13	100.4	Pulse	0.30	3
1	In		1,347,102.55	1.07	97.1	Pulse	0.30	3
1	Tb		4,816,511.33	1.05	97.3	Pulse	0.50	3
1	Lu		2,914,447.33	0.64	94.3	Pulse	0.50	3
1	Ge		224,678.44	0.88	100.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		931.14	2.69	123.8	Pulse	0.30	3

Quantitation Report

File Name 020_MB.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:32
Sample Name MP40382-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.772	ug/l	5.50	4,804.61	3.303E-02	Pulse	0.50	3
As			1	0.072	ug/l	12.10	54.33	3.736E-04	Pulse	1.00	3
Mo			1	0.639	ug/l	3.65	1,916.77	8.784E-03	Pulse	0.50	3
Pb			1	0.082	ug/l	7.63	1,831.44	4.934E-04	Pulse	1.00	3
Be			1	0.066	ug/l	16.70	1.67	8.343E-06	Pulse	2.00	3
Ag			1	0.043	ug/l	13.62	479.34	2.198E-03	Pulse	0.50	3
Ba			1	0.036	ug/l	31.03	47.33	3.596E-05	Pulse	0.50	3
Tl			1	0.028	ug/l	36.44	723.35	1.949E-04	Pulse	0.50	3
Sn			1	0.683	ug/l	7.92	1,881.22	1.431E-03	Pulse	0.30	3
Sr			1	0.049	ug/l	8.92	574.01	4.365E-04	Pulse	0.50	3
[Pb]			1	0.079	ug/l	21.34	868.03	2.338E-04	Pulse	0.50	3
Ca			1	36.496	ug/l	16.48	502.68	2.517E-03	Pulse	0.50	3
Ti			1	0.321	ug/l	63.31	32.67	1.638E-04	Pulse	0.50	3
Na			1	22.802	ug/l	24.96	25,256.39	1.265E-01	Pulse	1.00	3
Mg			1	17.110	ug/l	36.52	5,092.05	2.551E-02	Pulse	1.00	3
K			1	473.077	ug/l	1.05	118,348.83	5.929E-01	Pulse	1.00	3
V			1	0.209	ug/l	3.63	1,067.37	5.347E-03	Pulse	0.50	3
Mn			1	0.132	ug/l	22.32	538.01	3.699E-03	Pulse	0.50	3
Fe			1	23.997	ug/l	26.97	100,837.40	6.931E-01	Pulse	0.50	3
Co			1	0.019	ug/l	32.97	242.67	1.668E-03	Pulse	0.50	3
Ni			1	0.078	ug/l	14.68	363.34	2.498E-03	Pulse	0.50	3
Cu			1	0.438	ug/l	5.73	11,533.47	7.927E-02	Pulse	0.50	3
Zn			1	0.944	ug/l	2.28	1,794.76	8.225E-03	Pulse	1.00	3
Cd			1	0.029	ug/l	57.83	43.33	1.990E-04	Pulse	0.50	3
Al			1	14.848	ug/l	45.49	1,499.06	7.511E-03	Pulse	1.00	3
Se			1	0.082	ug/l	61.09	8.89	4.078E-05	Pulse	3.00	3
Sb			1	0.095	ug/l	9.59	309.33	1.418E-03	Pulse	1.00	3
Se			1	0.102	ug/l	95.53	12.78	5.859E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,712,322.25	0.47	95.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		199,630.57	0.60	99.8	Pulse	0.30	3
1	Ge		145,495.60	0.66	98.3	Pulse	0.30	3
1	In		1,315,078.42	0.78	94.8	Pulse	0.30	3
1	Tb		4,733,366.00	0.76	95.6	Pulse	0.50	3
1	Lu		2,855,756.67	0.86	92.4	Pulse	0.50	3
1	Ge		218,228.22	1.04	97.4	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		887.80	4.14	118.0	Pulse	0.30	3

Quantitation Report

File Name	021_BSP.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:36
Sample Name	MP40382-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.553	ug/l	0.78	1,046,023.19	7.426E+00	Pulse	0.50	3
As			1	209.961	ug/l	0.58	105,566.72	7.495E-01	Pulse	1.00	3
Mo			1	203.325	ug/l	0.48	586,548.94	2.741E+00	Pulse	0.50	3
Pb			1	203.486	ug/l	1.42	2,952,079.58	8.389E-01	Pulse	1.00	3
Be			1	217.936	ug/l	2.74	5,420.56	2.768E-02	Pulse	2.00	3
Ag			1	99.181	ug/l	0.72	1,007,033.71	4.706E+00	Pulse	0.50	3
Ba			1	198.156	ug/l	1.54	184,422.39	1.453E-01	Pulse	0.50	3
Tl			1	199.933	ug/l	0.88	4,158,584.67	1.182E+00	Pulse	0.50	3
Sn			1	202.127	ug/l	2.20	461,713.70	3.639E-01	Pulse	0.30	3
Sr			1	202.205	ug/l	1.19	436,202.32	3.437E-01	Pulse	0.50	3
[Pb]			1	195.395	ug/l	0.79	1,329,622.50	3.779E-01	Pulse	0.50	3
Ca			1	18611.714	ug/l	1.12	213,858.25	1.092E+00	Pulse	0.50	3
Ti			1	201.908	ug/l	1.47	19,747.29	1.008E-01	Pulse	0.50	3
Na			1	19511.633	ug/l	0.90	12,071,651.00	6.164E+01	Analog	1.00	3
Mg			1	19132.868	ug/l	1.34	5,275,248.17	2.694E+01	Analog	1.00	3
K			1	19274.574	ug/l	1.55	4,140,168.50	2.114E+01	Pulse	1.00	3
V			1	201.089	ug/l	1.07	746,484.81	3.811E+00	Pulse	0.50	3
Mn			1	203.529	ug/l	0.65	444,366.92	3.155E+00	Pulse	0.50	3
Fe			1	19727.345	ug/l	0.45	75,756,304.00	5.378E+02	Analog	0.50	3
Co			1	213.801	ug/l	0.47	1,821,699.17	1.293E+01	Pulse	0.50	3
Ni			1	208.707	ug/l	0.69	505,383.47	3.588E+00	Pulse	0.50	3
Cu			1	211.737	ug/l	0.76	1,412,443.92	1.003E+01	Pulse	0.50	3
Zn			1	194.149	ug/l	1.15	177,960.43	8.316E-01	Pulse	1.00	3
Cd			1	195.549	ug/l	0.11	256,129.52	1.197E+00	Pulse	0.50	3
Al			1	17833.237	ug/l	0.62	1,487,647.79	7.596E+00	Pulse	1.00	3
Se			1	183.232	ug/l	0.85	5,980.83	2.795E-02	Pulse	3.00	3
Sb			1	202.760	ug/l	0.56	585,671.06	2.737E+00	Pulse	1.00	3
Se			1	184.703	ug/l	1.34	2,993.68	1.399E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,518,931.67	0.39	90.1	Pulse	0.50	3
1	Sc		195,864.21	0.96	97.9	Pulse	0.30	3
1	Ge		140,855.62	0.35	95.1	Pulse	0.30	3
1	In		1,269,033.39	1.04	91.5	Pulse	0.30	3
1	Tb		4,667,058.50	1.03	94.3	Pulse	0.50	3
1	Lu		2,830,158.00	0.24	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		214,006.54	0.86	95.5	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		847.80	5.34	112.7	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:40
Sample Name FA93314-3FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.688	ug/l	2.01	4,224.47	3.006E-02	Pulse	0.50	3
As			1	0.317	ug/l	2.30	175.67	1.250E-03	Pulse	1.00	3
Mo			1	0.542	ug/l	5.27	1,583.41	7.478E-03	Pulse	0.50	3
Pb			1	0.144	ug/l	5.63	2,611.54	7.483E-04	Pulse	1.00	3
Be			1	0.123	ug/l	43.83	3.00	1.562E-05	Pulse	2.00	3
Ag			1	0.030	ug/l	18.58	328.00	1.549E-03	Pulse	0.50	3
Ba			1	27.514	ug/l	1.30	25,383.09	2.019E-02	Pulse	0.50	3
Tl			1	0.069	ug/l	6.71	1,517.41	4.348E-04	Pulse	0.50	3
Sn			1	0.540	ug/l	17.44	1,473.40	1.172E-03	Pulse	0.30	3
Sr			1	114.650	ug/l	0.13	245,253.33	1.951E-01	Pulse	0.50	3
[Pb]			1	0.132	ug/l	7.34	1,176.71	3.371E-04	Pulse	0.50	3
Ca			1	23441.890	ug/l	1.86	263,870.69	1.375E+00	Pulse	0.50	3
Ti			1	0.897	ug/l	27.35	86.67	4.515E-04	Pulse	0.50	3
Na			1	20852.316	ug/l	1.49	12,638,593.33	6.587E+01	Analog	1.00	3
Mg			1	6264.388	ug/l	1.42	1,692,393.62	8.820E+00	Pulse	1.00	3
K			1	2833.607	ug/l	2.04	608,712.92	3.173E+00	Pulse	1.00	3
V			1	0.600	ug/l	3.05	2,447.50	1.276E-02	Pulse	0.50	3
Mn			1	11.888	ug/l	1.11	26,116.87	1.858E-01	Pulse	0.50	3
Fe			1	64.660	ug/l	3.45	253,207.30	1.802E+00	Pulse	0.50	3
Co			1	0.293	ug/l	6.72	2,560.18	1.822E-02	Pulse	0.50	3
Ni			1	1.399	ug/l	4.91	3,541.67	2.521E-02	Pulse	0.50	3
Cu			1	1.978	ug/l	2.91	21,331.78	1.518E-01	Pulse	0.50	3
Zn			1	8.641	ug/l	1.96	8,687.30	4.102E-02	Pulse	1.00	3
Cd			1	0.024	ug/l	10.25	35.33	1.669E-04	Pulse	0.50	3
Al			1	28.811	ug/l	2.76	2,582.87	1.346E-02	Pulse	1.00	3
Se			1	0.228	ug/l	39.21	13.33	6.299E-05	Pulse	3.00	3
Sb			1	0.156	ug/l	8.02	472.68	2.233E-03	Pulse	1.00	3
Se			1	0.599	ug/l	32.04	20.33	9.606E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,490,673.42	0.78	89.4	Pulse	0.50	3
1	Sc		191,905.94	1.40	95.9	Pulse	0.30	3
1	Ge		140,545.93	0.86	94.9	Pulse	0.30	3
1	In		1,257,333.70	0.39	90.7	Pulse	0.30	3
1	Tb		4,579,859.50	0.52	92.5	Pulse	0.50	3
1	Lu		2,771,350.25	1.26	89.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		211,756.87	0.37	94.5	Pulse	0.30	3
1	Te		3.33	173.21		Pulse	0.50	3
1	Li		863.36	10.51	114.8	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:44
Sample Name	MP40382-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.727	ug/l	3.99	4,373.17	3.144E-02	Pulse	0.50	3
As			1	0.259	ug/l	2.82	145.00	1.042E-03	Pulse	1.00	3
Mo			1	0.499	ug/l	9.11	1,436.73	6.904E-03	Pulse	0.50	3
Pb			1	0.113	ug/l	1.36	2,145.47	6.177E-04	Pulse	1.00	3
Be			1	0.089	ug/l	57.87	2.17	1.134E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	9.78	201.33	9.676E-04	Pulse	0.50	3
Ba			1	28.577	ug/l	1.63	26,076.09	2.097E-02	Pulse	0.50	3
Tl			1	0.026	ug/l	6.58	634.02	1.825E-04	Pulse	0.50	3
Sn			1	0.456	ug/l	8.29	1,270.05	1.021E-03	Pulse	0.30	3
Sr			1	117.262	ug/l	0.13	248,074.53	1.995E-01	Pulse	0.50	3
[Pb]			1	0.110	ug/l	2.02	1,020.70	2.938E-04	Pulse	0.50	3
Ca			1	24282.817	ug/l	1.21	272,193.85	1.425E+00	Pulse	0.50	3
Ti			1	2.133	ug/l	43.77	204.02	1.068E-03	Pulse	0.50	3
Na			1	21646.348	ug/l	1.23	13,064,170.00	6.837E+01	Analog	1.00	3
Mg			1	6440.430	ug/l	1.45	1,732,594.37	9.068E+00	Pulse	1.00	3
K			1	2911.523	ug/l	1.36	622,440.38	3.258E+00	Pulse	1.00	3
V			1	0.632	ug/l	4.91	2,550.84	1.335E-02	Pulse	0.50	3
Mn			1	12.152	ug/l	1.55	26,421.94	1.899E-01	Pulse	0.50	3
Fe			1	64.329	ug/l	0.64	249,399.34	1.793E+00	Pulse	0.50	3
Co			1	0.279	ug/l	4.90	2,418.83	1.739E-02	Pulse	0.50	3
Ni			1	1.418	ug/l	1.10	3,552.34	2.553E-02	Pulse	0.50	3
Cu			1	1.961	ug/l	2.55	21,002.76	1.510E-01	Pulse	0.50	3
Zn			1	8.277	ug/l	3.90	8,213.42	3.947E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	45.68	20.00	9.604E-05	Pulse	0.50	3
Al			1	28.063	ug/l	4.47	2,510.53	1.314E-02	Pulse	1.00	3
Se			1	0.130	ug/l	85.36	10.00	4.808E-05	Pulse	3.00	3
Sb			1	0.125	ug/l	5.03	379.67	1.825E-03	Pulse	1.00	3
Se			1	0.500	ug/l	47.93	18.44	8.861E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,473,569.42	0.25	89.0	Pulse	0.50	3
1	Sc		191,077.22	0.49	95.5	Pulse	0.30	3
1	Ge		139,134.31	1.28	94.0	Pulse	0.30	3
1	In		1,243,513.67	0.58	89.7	Pulse	0.30	3
1	Tb		4,534,772.17	0.71	91.6	Pulse	0.50	3
1	Lu		2,732,623.92	0.73	88.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		208,049.12	0.39	92.8	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		855.58	9.50	113.7	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:47
Sample Name	MP40382-SD1
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.675	ug/l	2.34	1,532.73	1.047E-02	Pulse	0.50	3
As			1	0.247	ug/l	39.12	43.00	2.932E-04	Pulse	1.00	3
Mo			1	0.529	ug/l	17.86	347.34	1.599E-03	Pulse	0.50	3
Pb			1	0.179	ug/l	7.51	1,108.37	3.013E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.038	ug/l	11.35	107.33	4.946E-04	Pulse	0.50	3
Ba			1	27.070	ug/l	1.65	5,233.45	3.980E-03	Pulse	0.50	3
Tl			1	0.025	ug/l	29.36	214.67	5.839E-05	Pulse	0.50	3
Sn			1	0.105	ug/l	43.27	314.45	2.392E-04	Pulse	0.30	3
Sr			1	114.245	ug/l	1.71	51,483.83	3.916E-02	Pulse	0.50	3
[Pb]			1	0.163	ug/l	21.50	532.68	1.447E-04	Pulse	0.50	3
Ca			1	23946.777	ug/l	1.15	55,302.14	2.813E-01	Pulse	0.50	3
Ti			1	1.121	ug/l	53.56	22.67	1.154E-04	Pulse	0.50	3
Na			1	21046.518	ug/l	0.41	2,622,835.75	1.334E+01	Pulse	1.00	3
Mg			1	6401.023	ug/l	0.40	354,629.93	1.804E+00	Pulse	1.00	3
K			1	2889.164	ug/l	0.75	139,076.06	7.073E-01	Pulse	1.00	3
V			1	0.592	ug/l	6.92	712.02	3.621E-03	Pulse	0.50	3
Mn			1	11.540	ug/l	2.61	5,479.46	3.741E-02	Pulse	0.50	3
Fe			1	58.364	ug/l	2.20	52,300.34	3.571E-01	Pulse	0.50	3
Co			1	0.267	ug/l	14.16	550.01	3.753E-03	Pulse	0.50	3
Ni			1	1.259	ug/l	4.97	803.35	5.486E-03	Pulse	0.50	3
Cu			1	1.816	ug/l	7.01	11,089.21	7.573E-02	Pulse	0.50	3
Zn			1	7.960	ug/l	0.29	2,384.48	1.098E-02	Pulse	1.00	3
Cd			1	0.026	ug/l	44.32	11.33	5.216E-05	Pulse	0.50	3
Al			1	19.019	ug/l	8.28	552.01	2.808E-03	Pulse	1.00	3
Se			1	0.316	ug/l	136.34	8.22	3.791E-05	Pulse	3.00	3
Sb			1	0.171	ug/l	14.50	129.00	5.940E-04	Pulse	1.00	3
Se			1	-0.041	ug/l	-2924.23	10.89	5.024E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,679,023.42	0.76	94.2	Pulse	0.50	3
1	Sc		196,619.86	0.31	98.3	Pulse	0.30	3
1	Ge		146,447.28	1.04	98.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,314,810.57	0.18	94.8	Pulse	0.30	3
1	Tb		4,683,288.33	0.35	94.6	Pulse	0.50	3
1	Lu		2,849,876.58	0.59	92.2	Pulse	0.50	3
1	Ge		217,074.70	0.72	96.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		842.24	11.10	112.0	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:51
Sample Name MP40382-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.001	ug/l	2.45	1,029,879.00	7.513E+00	Pulse	0.50	3
As			1	211.933	ug/l	1.97	103,706.69	7.565E-01	Pulse	1.00	3
Mo			1	207.992	ug/l	1.23	577,049.77	2.804E+00	Pulse	0.50	3
Pb			1	207.924	ug/l	0.79	2,897,979.83	8.572E-01	Pulse	1.00	3
Be			1	227.658	ug/l	1.28	5,452.73	2.891E-02	Pulse	2.00	3
Ag			1	100.666	ug/l	1.59	982,973.54	4.776E+00	Pulse	0.50	3
Ba			1	229.989	ug/l	0.22	205,313.63	1.687E-01	Pulse	0.50	3
Tl			1	206.736	ug/l	0.29	4,131,148.75	1.222E+00	Pulse	0.50	3
Sn			1	206.758	ug/l	0.12	453,022.97	3.722E-01	Pulse	0.30	3
Sr			1	327.559	ug/l	0.51	677,483.39	5.566E-01	Pulse	0.50	3
[Pb]			1	200.257	ug/l	0.76	1,309,189.66	3.873E-01	Pulse	0.50	3
Ca			1	44261.236	ug/l	0.80	489,628.61	2.596E+00	Pulse	0.50	3
Ti			1	201.731	ug/l	1.03	18,995.89	1.007E-01	Pulse	0.50	3
Na			1	42241.757	ug/l	0.59	25,153,518.67	1.334E+02	Analog	1.00	3
Mg			1	26420.069	ug/l	0.47	7,014,512.17	3.719E+01	Analog	1.00	3
K			1	22574.030	ug/l	0.51	4,666,808.83	2.475E+01	Pulse	1.00	3
V			1	205.843	ug/l	0.91	735,793.10	3.902E+00	Pulse	0.50	3
Mn			1	217.577	ug/l	2.50	462,272.65	3.372E+00	Pulse	0.50	3
Fe			1	20267.045	ug/l	2.42	75,740,632.00	5.525E+02	Analog	0.50	3
Co			1	215.412	ug/l	2.30	1,786,236.13	1.303E+01	Pulse	0.50	3
Ni			1	210.870	ug/l	1.69	496,975.67	3.625E+00	Pulse	0.50	3
Cu			1	213.346	ug/l	1.89	1,385,059.54	1.010E+01	Pulse	0.50	3
Zn			1	203.531	ug/l	1.56	179,378.90	8.716E-01	Pulse	1.00	3
Cd			1	198.473	ug/l	1.16	250,013.37	1.215E+00	Pulse	0.50	3
Al			1	18618.960	ug/l	0.32	1,495,575.96	7.930E+00	Pulse	1.00	3
Se			1	188.105	ug/l	1.32	5,904.91	2.869E-02	Pulse	3.00	3
Sb			1	207.359	ug/l	1.39	576,026.66	2.799E+00	Pulse	1.00	3
Se			1	187.448	ug/l	1.26	2,921.89	1.420E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,380,616.08	0.47	86.6	Pulse	0.50	3
1	Sc		188,595.00	0.66	94.2	Pulse	0.30	3
1	Ge		137,127.90	2.42	92.6	Pulse	0.30	3
1	In		1,217,140.54	0.74	87.8	Pulse	0.30	3
1	Tb		4,519,824.00	1.16	91.3	Pulse	0.50	3
1	Lu		2,744,092.75	0.85	88.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		205,841.03	1.76	91.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		814.47	5.45	108.3	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 9:55
Sample Name MP40382-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	216.718	ug/l	0.66	1,042,594.31	7.680E+00	Pulse	0.50	3
As			1	216.793	ug/l	0.77	105,048.55	7.738E-01	Pulse	1.00	3
Mo			1	212.838	ug/l	1.31	584,011.73	2.869E+00	Pulse	0.50	3
Pb			1	213.745	ug/l	0.32	2,944,784.67	8.812E-01	Pulse	1.00	3
Be			1	230.233	ug/l	0.70	5,482.41	2.924E-02	Pulse	2.00	3
Ag			1	102.334	ug/l	1.17	988,350.06	4.855E+00	Pulse	0.50	3
Ba			1	236.599	ug/l	0.64	207,538.85	1.735E-01	Pulse	0.50	3
Tl			1	210.887	ug/l	0.35	4,165,497.58	1.247E+00	Pulse	0.50	3
Sn			1	211.484	ug/l	0.61	455,303.89	3.807E-01	Pulse	0.30	3
Sr			1	332.737	ug/l	0.67	676,211.04	5.654E-01	Pulse	0.50	3
[Pb]			1	204.464	ug/l	0.32	1,321,272.04	3.954E-01	Pulse	0.50	3
Ca			1	44047.401	ug/l	0.26	484,432.26	2.584E+00	Pulse	0.50	3
Ti			1	204.201	ug/l	0.52	19,116.02	1.020E-01	Pulse	0.50	3
Na			1	42556.291	ug/l	0.45	25,192,322.00	1.344E+02	Analog	1.00	3
Mg			1	26638.933	ug/l	0.70	7,031,095.33	3.750E+01	Analog	1.00	3
K			1	22746.262	ug/l	0.78	4,674,675.83	2.493E+01	Pulse	1.00	3
V			1	209.608	ug/l	0.35	744,875.27	3.973E+00	Pulse	0.50	3
Mn			1	223.301	ug/l	0.20	469,855.53	3.461E+00	Pulse	0.50	3
Fe			1	20527.453	ug/l	0.66	75,972,666.67	5.596E+02	Analog	0.50	3
Co			1	219.340	ug/l	0.67	1,801,196.54	1.327E+01	Pulse	0.50	3
Ni			1	213.964	ug/l	0.78	499,330.64	3.678E+00	Pulse	0.50	3
Cu			1	217.488	ug/l	0.55	1,398,025.46	1.030E+01	Pulse	0.50	3
Zn			1	207.529	ug/l	0.79	180,900.83	8.886E-01	Pulse	1.00	3
Cd			1	203.297	ug/l	1.91	253,258.32	1.244E+00	Pulse	0.50	3
Al			1	18812.117	ug/l	0.57	1,502,235.04	8.012E+00	Pulse	1.00	3
Se			1	191.011	ug/l	2.11	5,929.81	2.913E-02	Pulse	3.00	3
Sb			1	211.296	ug/l	1.16	580,544.73	2.852E+00	Pulse	1.00	3
Se			1	192.522	ug/l	1.34	2,967.79	1.458E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,341,663.42	0.64	85.6	Pulse	0.50	3
1	Sc		187,490.84	0.71	93.7	Pulse	0.30	3
1	Ge		135,752.66	0.74	91.7	Pulse	0.30	3
1	In		1,195,934.92	0.28	86.2	Pulse	0.30	3
1	Tb		4,460,010.33	0.97	90.1	Pulse	0.50	3
1	Lu		2,714,389.17	1.01	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		203,584.50	1.68	90.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		813.35	2.49	108.1	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 9:59
Sample Name	MP40382-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.512	ug/l	0.44	110,397.37	8.029E-01	Pulse	0.50	3
As			1	21.919	ug/l	1.46	10,772.71	7.834E-02	Pulse	1.00	3
Mo			1	21.740	ug/l	1.08	60,381.26	2.932E-01	Pulse	0.50	3
Pb			1	21.005	ug/l	0.52	297,797.88	8.674E-02	Pulse	1.00	3
Be			1	22.835	ug/l	4.72	549.01	2.900E-03	Pulse	2.00	3
Ag			1	4.078	ug/l	1.84	39,868.60	1.936E-01	Pulse	0.50	3
Ba			1	48.247	ug/l	1.31	43,151.16	3.540E-02	Pulse	0.50	3
Tl			1	21.011	ug/l	0.68	426,480.20	1.242E-01	Pulse	0.50	3
Sn			1	21.179	ug/l	0.95	46,702.44	3.831E-02	Pulse	0.30	3
Sr			1	136.884	ug/l	0.99	283,847.40	2.328E-01	Pulse	0.50	3
[Pb]			1	20.271	ug/l	0.52	134,834.41	3.927E-02	Pulse	0.50	3
Ca			1	25804.901	ug/l	0.77	286,513.63	1.514E+00	Pulse	0.50	3
Ti			1	20.746	ug/l	7.88	1,960.77	1.036E-02	Pulse	0.50	3
Na			1	23473.070	ug/l	1.25	14,031,351.00	7.414E+01	Analog	1.00	3
Mg			1	8531.149	ug/l	1.44	2,273,141.25	1.201E+01	Pulse	1.00	3
K			1	4923.990	ug/l	1.28	1,032,765.40	5.457E+00	Pulse	1.00	3
V			1	21.833	ug/l	1.43	78,560.36	4.151E-01	Pulse	0.50	3
Mn			1	33.294	ug/l	0.43	71,152.75	5.175E-01	Pulse	0.50	3
Fe			1	2228.571	ug/l	0.20	8,359,463.00	6.079E+01	Analog	0.50	3
Co			1	22.376	ug/l	0.85	186,191.34	1.354E+00	Pulse	0.50	3
Ni			1	23.324	ug/l	1.01	55,275.84	4.020E-01	Pulse	0.50	3
Cu			1	24.370	ug/l	0.98	165,843.30	1.206E+00	Pulse	0.50	3
Zn			1	29.736	ug/l	0.62	26,962.79	1.309E-01	Pulse	1.00	3
Cd			1	20.375	ug/l	1.75	25,683.81	1.247E-01	Pulse	0.50	3
Al			1	2023.396	ug/l	1.56	163,300.83	8.629E-01	Pulse	1.00	3
Se			1	19.349	ug/l	1.65	613.01	2.977E-03	Pulse	3.00	3
Sb			1	19.873	ug/l	1.11	55,261.94	2.684E-01	Pulse	1.00	3
Se			1	18.696	ug/l	3.05	301.01	1.462E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,433,327.08	0.98	87.9	Pulse	0.50	3
1	Sc		189,278.57	1.39	94.6	Pulse	0.30	3
1	Ge		137,507.43	0.76	92.9	Pulse	0.30	3
1	In		1,219,292.24	1.56	87.9	Pulse	0.30	3
1	Tb		4,531,796.50	1.46	91.5	Pulse	0.50	3
1	Lu		2,728,584.83	1.07	88.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		205,935.06	0.54	91.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		771.13	5.44	102.5	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:03
Sample Name	FA93314-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.626	ug/l	8.64	3,844.40	2.784E-02	Pulse	0.50	3
As			1	0.051	ug/l	30.38	41.33	2.995E-04	Pulse	1.00	3
Mo			1	0.065	ug/l	48.55	216.67	1.045E-03	Pulse	0.50	3
Pb			1	0.049	ug/l	8.69	1,236.38	3.540E-04	Pulse	1.00	3
Be			1	0.089	ug/l	35.83	2.17	1.136E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	11.95	185.33	8.939E-04	Pulse	0.50	3
Ba			1	0.086	ug/l	31.60	89.33	7.255E-05	Pulse	0.50	3
Tl			1	0.031	ug/l	7.64	749.35	2.145E-04	Pulse	0.50	3
Sn			1	0.404	ug/l	2.97	1,142.27	9.282E-04	Pulse	0.30	3
Sr			1	0.184	ug/l	7.70	818.02	6.648E-04	Pulse	0.50	3
[Pb]			1	0.049	ug/l	12.47	614.01	1.758E-04	Pulse	0.50	3
Ca			1	63.350	ug/l	11.65	781.35	4.092E-03	Pulse	0.50	3
Ti			1	0.112	ug/l	107.02	11.33	5.929E-05	Pulse	0.50	3
Na			1	43.466	ug/l	2.78	36,622.62	1.918E-01	Pulse	1.00	3
Mg			1	11.999	ug/l	5.57	3,499.31	1.832E-02	Pulse	1.00	3
K			1	95.272	ug/l	3.06	34,376.10	1.800E-01	Pulse	1.00	3
V			1	0.240	ug/l	2.13	1,132.04	5.925E-03	Pulse	0.50	3
Mn			1	0.049	ug/l	18.51	334.67	2.424E-03	Pulse	0.50	3
Fe			1	7.232	ug/l	4.26	32,610.00	2.361E-01	Pulse	0.50	3
Co			1	0.019	ug/l	25.50	233.33	1.690E-03	Pulse	0.50	3
Ni			1	0.050	ug/l	14.19	278.67	2.018E-03	Pulse	0.50	3
Cu			1	0.075	ug/l	53.42	8,583.26	6.214E-02	Pulse	0.50	3
Zn			1	3.929	ug/l	3.55	4,341.83	2.094E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	33.29	20.00	9.641E-05	Pulse	0.50	3
Al			1	4.700	ug/l	18.19	609.01	3.189E-03	Pulse	1.00	3
Se			1	-0.013	ug/l	-409.96	5.45	2.628E-05	Pulse	3.00	3
Sb			1	0.096	ug/l	6.60	297.00	1.433E-03	Pulse	1.00	3
Se			1	0.228	ug/l	28.99	14.11	6.806E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,493,123.42	0.70	89.5	Pulse	0.50	3
1	Sc		191,026.26	1.53	95.5	Pulse	0.30	3
1	Ge		138,134.12	0.84	93.3	Pulse	0.30	3
1	In		1,230,514.15	0.67	88.7	Pulse	0.30	3
1	Tb		4,489,124.67	1.14	90.7	Pulse	0.50	3
1	Lu		2,707,651.17	0.75	87.6	Pulse	0.50	3
1	Ge		207,309.65	0.44	92.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		881.14	7.00	117.1	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:06
Sample Name	FA93314-2FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.701	ug/l	2.80	4,246.47	3.051E-02	Pulse	0.50	3
As			1	0.063	ug/l	10.06	47.67	3.424E-04	Pulse	1.00	3
Mo			1	0.046	ug/l	53.61	163.33	7.866E-04	Pulse	0.50	3
Pb			1	0.028	ug/l	9.60	950.70	2.699E-04	Pulse	1.00	3
Be			1	0.027	ug/l	44.14	0.67	3.487E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	33.59	139.33	6.718E-04	Pulse	0.50	3
Ba			1	0.043	ug/l	58.03	51.33	4.125E-05	Pulse	0.50	3
Tl			1	0.014	ug/l	13.41	402.01	1.141E-04	Pulse	0.50	3
Sn			1	0.393	ug/l	12.51	1,127.83	9.087E-04	Pulse	0.30	3
Sr			1	0.078	ug/l	36.90	602.68	4.854E-04	Pulse	0.50	3
[Pb]			1	0.021	ug/l	33.92	430.01	1.221E-04	Pulse	0.50	3
Ca			1	27.224	ug/l	5.89	378.00	1.974E-03	Pulse	0.50	3
Ti			1	0.125	ug/l	66.11	12.67	6.584E-05	Pulse	0.50	3
Na			1	67.460	ug/l	1.00	51,243.76	2.675E-01	Pulse	1.00	3
Mg			1	4.545	ug/l	7.69	1,498.73	7.825E-03	Pulse	1.00	3
K			1	94.458	ug/l	2.13	34,310.00	1.791E-01	Pulse	1.00	3
V			1	0.242	ug/l	12.13	1,141.37	5.958E-03	Pulse	0.50	3
Mn			1	0.023	ug/l	45.31	281.33	2.020E-03	Pulse	0.50	3
Fe			1	3.253	ug/l	5.09	17,770.16	1.276E-01	Pulse	0.50	3
Co			1	0.011	ug/l	12.53	161.33	1.159E-03	Pulse	0.50	3
Ni			1	0.066	ug/l	21.54	318.67	2.287E-03	Pulse	0.50	3
Cu			1	0.114	ug/l	43.12	8,905.41	6.398E-02	Pulse	0.50	3
Zn			1	4.051	ug/l	2.44	4,454.19	2.146E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	109.55	14.00	6.731E-05	Pulse	0.50	3
Al			1	1.249	ug/l	49.58	329.33	1.720E-03	Pulse	1.00	3
Se			1	0.085	ug/l	131.24	8.56	4.126E-05	Pulse	3.00	3
Sb			1	0.054	ug/l	28.56	177.67	8.556E-04	Pulse	1.00	3
Se			1	0.227	ug/l	30.93	14.11	6.802E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,521,962.83	0.19	90.2	Pulse	0.50	3
1	Sc		191,587.78	1.05	95.7	Pulse	0.30	3
1	Ge		139,231.91	1.38	94.0	Pulse	0.30	3
1	In		1,241,663.00	1.31	89.5	Pulse	0.30	3
1	Tb		4,522,774.83	1.38	91.4	Pulse	0.50	3
1	Lu		2,712,156.00	1.31	87.7	Pulse	0.50	3
1	Ge		207,513.60	0.61	92.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		785.58	6.14	104.4	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:10
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.475	ug/l	0.82	523,134.15	3.580E+00	Pulse	0.50	3
As			1	48.875	ug/l	0.64	50,989.61	3.490E-01	Pulse	1.00	3
Mo			1	49.049	ug/l	0.22	287,068.38	1.322E+00	Pulse	0.50	3
Pb			1	49.125	ug/l	0.28	1,466,921.58	4.051E-01	Pulse	1.00	3
Be			1	53.296	ug/l	1.16	2,707.68	1.354E-02	Pulse	2.00	3
Ag			1	49.816	ug/l	0.78	1,026,075.02	4.727E+00	Pulse	0.50	3
Ba			1	48.132	ug/l	1.23	91,737.95	7.061E-02	Pulse	0.50	3
Tl			1	50.801	ug/l	0.72	2,174,532.92	6.006E-01	Pulse	0.50	3
Sn			1	49.866	ug/l	1.08	233,384.38	1.796E-01	Pulse	0.30	3
Sr			1	49.590	ug/l	0.54	219,289.03	1.688E-01	Pulse	0.50	3
[Pb]			1	49.384	ug/l	0.53	691,694.04	1.910E-01	Pulse	0.50	3
Ca			1	4809.058	ug/l	1.25	112,901.19	5.645E-01	Pulse	0.50	3
Ti			1	49.256	ug/l	2.11	9,839.15	4.919E-02	Pulse	0.50	3
Na			1	5184.328	ug/l	0.74	6,556,502.17	3.278E+01	Analog	1.00	3
Mg			1	5084.700	ug/l	1.06	2,863,637.83	1.432E+01	Pulse	1.00	3
K			1	5019.422	ug/l	1.00	2,209,481.00	1.105E+01	Pulse	1.00	3
V			1	48.918	ug/l	0.86	371,053.19	1.855E+00	Pulse	0.50	3
Mn			1	49.399	ug/l	0.70	223,873.80	1.532E+00	Pulse	0.50	3
Fe			1	5120.149	ug/l	1.32	40,791,948.00	2.792E+02	Analog	0.50	3
Co			1	50.821	ug/l	1.35	898,336.94	6.149E+00	Pulse	0.50	3
Ni			1	51.389	ug/l	1.25	258,234.66	1.767E+00	Pulse	0.50	3
Cu			1	51.340	ug/l	1.08	714,884.00	4.893E+00	Pulse	0.50	3
Zn			1	50.641	ug/l	1.12	94,602.09	4.358E-01	Pulse	1.00	3
Cd			1	49.541	ug/l	0.42	131,635.08	6.064E-01	Pulse	0.50	3
Al			1	4839.637	ug/l	1.00	824,717.48	4.123E+00	Pulse	1.00	3
Se			1	49.018	ug/l	1.17	3,248.95	1.497E-02	Pulse	3.00	3
Sb			1	47.615	ug/l	0.42	279,035.40	1.285E+00	Pulse	1.00	3
Se			1	48.908	ug/l	1.25	1,613.40	7.433E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,620,683.00	0.35	92.7	Pulse	0.50	3
1	Sc		200,030.99	1.29	100.0	Pulse	0.30	3
1	Ge		146,112.61	1.03	98.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,299,219.57	0.47	93.7	Pulse	0.30	3
1	Tb		4,683,164.50	0.32	94.6	Pulse	0.50	3
1	Lu		2,851,371.83	0.28	92.2	Pulse	0.50	3
1	Ge		217,072.27	1.02	96.9	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		904.47	8.44	120.2	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:14
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.793	ug/l	1.50	1,021,479.73	7.215E+00	Pulse	0.50	3
As			1	99.327	ug/l	1.44	100,395.13	7.091E-01	Pulse	1.00	3
Mo			1	98.522	ug/l	0.66	563,926.02	2.656E+00	Pulse	0.50	3
Pb			1	98.933	ug/l	1.07	2,881,568.25	8.158E-01	Pulse	1.00	3
Be			1	107.077	ug/l	2.25	5,293.19	2.720E-02	Pulse	2.00	3
Ag			1	99.082	ug/l	0.67	1,996,118.88	9.402E+00	Pulse	0.50	3
Ba			1	96.401	ug/l	0.93	180,206.64	1.414E-01	Pulse	0.50	3
Tl			1	102.145	ug/l	0.80	4,265,492.67	1.208E+00	Pulse	0.50	3
Sn			1	99.524	ug/l	0.59	456,651.20	3.583E-01	Pulse	0.30	3
Sr			1	98.345	ug/l	0.22	426,131.54	3.344E-01	Pulse	0.50	3
[Pb]			1	99.375	ug/l	1.65	1,357,587.37	3.843E-01	Pulse	0.50	3
Ca			1	9790.608	ug/l	0.82	223,595.71	1.149E+00	Pulse	0.50	3
Ti			1	98.828	ug/l	1.84	19,206.09	9.869E-02	Pulse	0.50	3
Na			1	10419.477	ug/l	0.74	12,811,448.00	6.583E+01	Analog	1.00	3
Mg			1	10211.174	ug/l	1.29	5,595,517.67	2.875E+01	Analog	1.00	3
K			1	10026.255	ug/l	0.67	4,279,874.17	2.199E+01	Pulse	1.00	3
V			1	98.760	ug/l	1.21	728,641.10	3.744E+00	Pulse	0.50	3
Mn			1	99.403	ug/l	0.51	436,326.50	3.082E+00	Pulse	0.50	3
Fe			1	10272.329	ug/l	1.22	79,302,202.67	5.601E+02	Analog	0.50	3
Co			1	101.464	ug/l	1.62	1,737,907.21	1.228E+01	Pulse	0.50	3
Ni			1	101.646	ug/l	1.68	494,800.46	3.495E+00	Pulse	0.50	3
Cu			1	102.294	ug/l	1.23	1,372,093.67	9.691E+00	Pulse	0.50	3
Zn			1	100.557	ug/l	0.53	182,861.12	8.613E-01	Pulse	1.00	3
Cd			1	98.265	ug/l	0.94	255,379.84	1.203E+00	Pulse	0.50	3
Al			1	9670.202	ug/l	1.39	1,603,148.38	8.237E+00	Pulse	1.00	3
Se			1	97.150	ug/l	1.44	6,291.81	2.963E-02	Pulse	3.00	3
Sb			1	96.384	ug/l	0.78	552,412.50	2.602E+00	Pulse	1.00	3
Se			1	98.615	ug/l	2.63	3,170.71	1.494E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,532,457.75	0.58	90.5	Pulse	0.50	3
1	Sc		194,640.26	1.30	97.3	Pulse	0.30	3
1	Ge		141,594.59	1.28	95.6	Pulse	0.30	3
1	In		1,274,381.41	0.89	91.9	Pulse	0.30	3
1	Tb		4,617,002.33	0.49	93.3	Pulse	0.50	3
1	Lu		2,835,776.42	0.61	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		212,310.03	0.35	94.7	Pulse	0.30	3
1	Te		8.00	25.00		Pulse	0.50	3
1	Li		875.58	11.95	116.4	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:18
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.012	ug/l	63.55	920.02	6.537E-03	Pulse	0.50	3
As			1	0.034	ug/l	9.92	50.67	3.600E-04	Pulse	1.00	3
Mo			1	0.135	ug/l	23.93	803.35	3.815E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	24.10	1,616.08	4.487E-04	Pulse	1.00	3
Be			1	0.057	ug/l	53.43	2.83	1.456E-05	Pulse	2.00	3
Ag			1	0.022	ug/l	27.12	473.34	2.253E-03	Pulse	0.50	3
Ba			1	0.011	ug/l	56.04	34.00	2.645E-05	Pulse	0.50	3
Tl			1	0.026	ug/l	30.69	1,212.72	3.368E-04	Pulse	0.50	3
Sn			1	0.088	ug/l	31.94	665.57	5.181E-04	Pulse	0.30	3
Sr			1	0.020	ug/l	45.31	540.01	4.204E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	31.35	762.02	2.116E-04	Pulse	0.50	3
Ca			1	0.495	ug/l	282.38	84.00	4.350E-04	Pulse	0.50	3
Ti			1	0.024	ug/l	51.47	5.33	2.763E-05	Pulse	0.50	3
Na			1	0.852	ug/l	110.26	11,613.40	5.994E-02	Pulse	1.00	3
Mg			1	1.594	ug/l	38.09	1,143.37	5.915E-03	Pulse	1.00	3
K			1	2.873	ug/l	33.17	15,928.08	8.215E-02	Pulse	1.00	3
V			1	0.004	ug/l	319.77	296.67	1.535E-03	Pulse	0.50	3
Mn			1	-0.020	ug/l	-14.19	144.67	1.028E-03	Pulse	0.50	3
Fe			1	1.772	ug/l	30.52	19,058.46	1.355E-01	Pulse	0.50	3
Co			1	0.016	ug/l	59.45	338.67	2.410E-03	Pulse	0.50	3
Ni			1	0.004	ug/l	258.24	180.00	1.280E-03	Pulse	0.50	3
Cu			1	-0.004	ug/l	-447.05	8,202.45	5.826E-02	Pulse	0.50	3
Zn			1	-0.070	ug/l	-10.76	758.35	3.606E-03	Pulse	1.00	3
Cd			1	0.009	ug/l	106.56	28.00	1.338E-04	Pulse	0.50	3
Al			1	0.713	ug/l	116.19	346.67	1.795E-03	Pulse	1.00	3
Se			1	0.025	ug/l	73.43	7.56	3.594E-05	Pulse	3.00	3
Sb			1	0.031	ug/l	15.33	205.00	9.755E-04	Pulse	1.00	3
Se			1	-0.019	ug/l	-417.19	10.11	4.805E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,602,591.50	0.36	92.3	Pulse	0.50	3
1	Sc		193,957.48	1.72	96.9	Pulse	0.30	3

Quantitation Report

1	Ge		140,787.49	0.66	95.1	Pulse	0.30	3
1	In		1,284,737.03	0.47	92.6	Pulse	0.30	3
1	Tb		4,593,844.50	0.27	92.8	Pulse	0.50	3
1	Lu		2,788,030.50	0.37	90.2	Pulse	0.50	3
1	Ge		210,299.61	0.83	93.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		795.58	6.55	105.8	Pulse	0.30	3

Quantitation Report

File Name 033SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:22
Sample Name FA93314-4FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.828	ug/l	1.78	4,710.59	3.501E-02	Pulse	0.50	3
As			1	0.312	ug/l	3.93	165.33	1.229E-03	Pulse	1.00	3
Mo			1	0.584	ug/l	7.84	1,639.41	8.048E-03	Pulse	0.50	3
Pb			1	0.145	ug/l	6.75	2,529.86	7.505E-04	Pulse	1.00	3
Be			1	0.070	ug/l	125.54	1.67	8.919E-06	Pulse	2.00	3
Ag			1	0.043	ug/l	23.50	446.01	2.191E-03	Pulse	0.50	3
Ba			1	28.400	ug/l	1.95	25,179.51	2.084E-02	Pulse	0.50	3
Tl			1	0.034	ug/l	26.16	780.69	2.317E-04	Pulse	0.50	3
Sn			1	0.520	ug/l	8.90	1,372.28	1.136E-03	Pulse	0.30	3
Sr			1	121.973	ug/l	0.79	250,679.74	2.075E-01	Pulse	0.50	3
[Pb]			1	0.135	ug/l	12.19	1,154.71	3.426E-04	Pulse	0.50	3
Ca			1	25620.351	ug/l	0.11	282,694.15	1.503E+00	Pulse	0.50	3
Ti			1	0.975	ug/l	38.98	92.00	4.903E-04	Pulse	0.50	3
Na			1	23079.771	ug/l	0.48	13,710,614.00	7.290E+01	Analog	1.00	3
Mg			1	6817.630	ug/l	0.51	1,805,370.08	9.599E+00	Pulse	1.00	3
K			1	2941.424	ug/l	0.62	618,885.86	3.290E+00	Pulse	1.00	3
V			1	0.719	ug/l	4.07	2,821.55	1.500E-02	Pulse	0.50	3
Mn			1	9.877	ug/l	0.46	20,815.16	1.547E-01	Pulse	0.50	3
Fe			1	87.534	ug/l	1.43	326,308.98	2.425E+00	Pulse	0.50	3
Co			1	0.333	ug/l	9.74	2,776.88	2.065E-02	Pulse	0.50	3
Ni			1	1.473	ug/l	3.45	3,561.68	2.647E-02	Pulse	0.50	3
Cu			1	1.700	ug/l	6.81	18,653.02	1.387E-01	Pulse	0.50	3
Zn			1	4.557	ug/l	0.89	4,810.94	2.362E-02	Pulse	1.00	3
Cd			1	0.046	ug/l	18.32	61.33	3.013E-04	Pulse	0.50	3
Al			1	37.489	ug/l	5.99	3,225.95	1.715E-02	Pulse	1.00	3
Se			1	0.173	ug/l	42.09	11.11	5.458E-05	Pulse	3.00	3
Sb			1	0.153	ug/l	3.60	448.34	2.201E-03	Pulse	1.00	3
Se			1	0.403	ug/l	63.25	16.56	8.130E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,372,002.42	0.95	86.4	Pulse	0.50	3
1	Sc		188,085.67	0.93	94.0	Pulse	0.30	3
1	Ge		134,561.99	1.39	90.9	Pulse	0.30	3
1	In		1,208,130.54	1.21	87.1	Pulse	0.30	3
1	Tb		4,416,202.00	1.63	89.2	Pulse	0.50	3
1	Lu		2,680,292.83	1.40	86.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		203,669.55	0.34	90.9	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		888.91	7.26	118.2	Pulse	0.30	3

Quantitation Report

File Name 034SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:25
Sample Name FA93314-5FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.858	ug/l	4.90	4,901.97	3.607E-02	Pulse	0.50	3
As			1	0.352	ug/l	5.28	186.67	1.374E-03	Pulse	1.00	3
Mo			1	0.481	ug/l	5.44	1,351.39	6.654E-03	Pulse	0.50	3
Pb			1	0.205	ug/l	1.22	3,373.00	9.969E-04	Pulse	1.00	3
Be			1	0.021	ug/l	0.94	0.50	2.646E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	4.75	230.67	1.136E-03	Pulse	0.50	3
Ba			1	27.288	ug/l	1.82	24,337.68	2.002E-02	Pulse	0.50	3
Tl			1	0.009	ug/l	20.52	278.67	8.234E-05	Pulse	0.50	3
Sn			1	0.352	ug/l	9.51	1,014.48	8.344E-04	Pulse	0.30	3
Sr			1	122.465	ug/l	0.21	253,241.97	2.083E-01	Pulse	0.50	3
[Pb]			1	0.202	ug/l	3.26	1,596.08	4.718E-04	Pulse	0.50	3
Ca			1	25710.003	ug/l	0.51	285,049.77	1.508E+00	Pulse	0.50	3
Ti			1	1.755	ug/l	26.25	166.00	8.798E-04	Pulse	0.50	3
Na			1	23993.865	ug/l	0.73	14,321,596.00	7.578E+01	Analog	1.00	3
Mg			1	6931.308	ug/l	0.68	1,844,274.96	9.759E+00	Pulse	1.00	3
K			1	3000.619	ug/l	0.40	634,056.59	3.355E+00	Pulse	1.00	3
V			1	0.849	ug/l	2.85	3,298.96	1.746E-02	Pulse	0.50	3
Mn			1	8.850	ug/l	0.97	18,857.15	1.388E-01	Pulse	0.50	3
Fe			1	163.604	ug/l	2.30	611,365.84	4.499E+00	Pulse	0.50	3
Co			1	0.207	ug/l	2.35	1,768.75	1.302E-02	Pulse	0.50	3
Ni			1	1.289	ug/l	6.77	3,166.94	2.331E-02	Pulse	0.50	3
Cu			1	1.608	ug/l	3.06	18,257.31	1.344E-01	Pulse	0.50	3
Zn			1	4.851	ug/l	1.64	5,051.00	2.487E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	40.39	18.67	9.200E-05	Pulse	0.50	3
Al			1	76.328	ug/l	4.37	6,368.88	3.369E-02	Pulse	1.00	3
Se			1	0.119	ug/l	121.13	9.45	4.644E-05	Pulse	3.00	3
Sb			1	0.110	ug/l	2.64	329.67	1.623E-03	Pulse	1.00	3
Se			1	0.399	ug/l	61.38	16.44	8.096E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,383,373.67	1.42	86.7	Pulse	0.50	3
1	Sc		188,991.09	0.94	94.4	Pulse	0.30	3
1	Ge		135,903.76	1.09	91.8	Pulse	0.30	3
1	In		1,215,593.70	1.10	87.7	Pulse	0.30	3
1	Tb		4,447,651.00	0.80	89.8	Pulse	0.50	3
1	Lu		2,681,609.33	0.72	86.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		203,072.24	0.85	90.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		876.69	6.12	116.5	Pulse	0.30	3

Quantitation Report

File Name	035SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:29
Sample Name	FA93314-6FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.825	ug/l	2.01	4,755.26	3.491E-02	Pulse	0.50	3
As			1	0.293	ug/l	4.66	158.33	1.163E-03	Pulse	1.00	3
Mo			1	0.450	ug/l	6.23	1,270.71	6.233E-03	Pulse	0.50	3
Pb			1	0.202	ug/l	0.78	3,307.67	9.879E-04	Pulse	1.00	3
Be			1	0.104	ug/l	53.70	2.50	1.324E-05	Pulse	2.00	3
Ag			1	0.014	ug/l	7.46	165.33	8.108E-04	Pulse	0.50	3
Ba			1	27.087	ug/l	1.03	24,208.84	1.988E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	31.18	228.00	6.804E-05	Pulse	0.50	3
Sn			1	0.308	ug/l	14.46	920.03	7.553E-04	Pulse	0.30	3
Sr			1	122.582	ug/l	0.83	253,990.03	2.085E-01	Pulse	0.50	3
[Pb]			1	0.185	ug/l	5.64	1,468.07	4.385E-04	Pulse	0.50	3
Ca			1	25886.952	ug/l	0.38	287,375.37	1.519E+00	Pulse	0.50	3
Ti			1	1.999	ug/l	22.24	189.33	1.001E-03	Pulse	0.50	3
Na			1	24357.712	ug/l	0.60	14,557,402.33	7.693E+01	Analog	1.00	3
Mg			1	6926.022	ug/l	0.88	1,845,197.87	9.751E+00	Pulse	1.00	3
K			1	2954.466	ug/l	0.41	625,327.04	3.305E+00	Pulse	1.00	3
V			1	0.846	ug/l	1.63	3,295.63	1.741E-02	Pulse	0.50	3
Mn			1	8.896	ug/l	1.56	18,998.63	1.395E-01	Pulse	0.50	3
Fe			1	173.086	ug/l	1.99	647,980.92	4.757E+00	Pulse	0.50	3
Co			1	0.209	ug/l	5.97	1,795.42	1.318E-02	Pulse	0.50	3
Ni			1	1.156	ug/l	0.65	2,864.89	2.103E-02	Pulse	0.50	3
Cu			1	1.525	ug/l	2.84	17,764.84	1.304E-01	Pulse	0.50	3
Zn			1	5.030	ug/l	2.00	5,226.71	2.564E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	35.72	14.00	6.868E-05	Pulse	0.50	3
Al			1	92.109	ug/l	1.32	7,646.92	4.041E-02	Pulse	1.00	3
Se			1	0.126	ug/l	60.66	9.67	4.745E-05	Pulse	3.00	3
Sb			1	0.106	ug/l	10.38	319.00	1.565E-03	Pulse	1.00	3
Se			1	0.367	ug/l	52.60	16.00	7.855E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,348,376.08	0.66	85.8	Pulse	0.50	3
1	Sc		189,234.52	1.05	94.6	Pulse	0.30	3
1	Ge		136,203.44	0.58	92.0	Pulse	0.30	3
1	In		1,217,995.05	0.15	87.8	Pulse	0.30	3
1	Tb		4,414,262.67	0.94	89.2	Pulse	0.50	3
1	Lu		2,685,785.92	0.81	86.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		203,885.66	0.73	91.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		892.25	4.12	118.6	Pulse	0.30	3

Quantitation Report

File Name 036SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:33
Sample Name FA93314-7FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.917	ug/l	0.85	5,166.71	3.817E-02	Pulse	0.50	3
As			1	0.348	ug/l	9.42	183.67	1.357E-03	Pulse	1.00	3
Mo			1	0.462	ug/l	5.31	1,300.72	6.401E-03	Pulse	0.50	3
Pb			1	0.256	ug/l	2.23	4,047.15	1.207E-03	Pulse	1.00	3
Be			1	0.084	ug/l	24.73	2.00	1.073E-05	Pulse	2.00	3
Ag			1	0.013	ug/l	5.50	149.33	7.350E-04	Pulse	0.50	3
Ba			1	28.042	ug/l	0.83	24,593.35	2.058E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	22.81	198.00	5.900E-05	Pulse	0.50	3
Sn			1	0.314	ug/l	8.90	915.59	7.659E-04	Pulse	0.30	3
Sr			1	129.081	ug/l	0.29	262,425.56	2.196E-01	Pulse	0.50	3
[Pb]			1	0.256	ug/l	0.39	1,933.45	5.765E-04	Pulse	0.50	3
Ca			1	26727.624	ug/l	0.22	292,192.81	1.568E+00	Pulse	0.50	3
Ti			1	2.866	ug/l	17.75	267.33	1.434E-03	Pulse	0.50	3
Na			1	25394.144	ug/l	0.32	14,945,935.67	8.020E+01	Analog	1.00	3
Mg			1	7209.761	ug/l	0.63	1,891,673.00	1.015E+01	Pulse	1.00	3
K			1	3069.708	ug/l	0.44	639,299.44	3.431E+00	Pulse	1.00	3
V			1	1.129	ug/l	3.51	4,241.82	2.276E-02	Pulse	0.50	3
Mn			1	15.347	ug/l	1.25	32,406.27	2.394E-01	Pulse	0.50	3
Fe			1	233.946	ug/l	0.59	868,494.52	6.417E+00	Pulse	0.50	3
Co			1	0.310	ug/l	1.33	2,609.52	1.928E-02	Pulse	0.50	3
Ni			1	1.368	ug/l	3.96	3,337.63	2.466E-02	Pulse	0.50	3
Cu			1	2.842	ug/l	0.65	26,047.55	1.924E-01	Pulse	0.50	3
Zn			1	5.860	ug/l	2.95	5,928.25	2.917E-02	Pulse	1.00	3
Cd			1	0.016	ug/l	53.53	24.00	1.181E-04	Pulse	0.50	3
Al			1	125.124	ug/l	0.65	10,151.31	5.447E-02	Pulse	1.00	3
Se			1	0.177	ug/l	29.45	11.22	5.525E-05	Pulse	3.00	3
Sb			1	0.114	ug/l	3.53	340.00	1.673E-03	Pulse	1.00	3
Se			1	0.413	ug/l	13.10	16.67	8.202E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,353,943.75	0.84	85.9	Pulse	0.50	3
1	Sc		186,354.01	0.28	93.1	Pulse	0.30	3
1	Ge		135,353.21	0.43	91.4	Pulse	0.30	3
1	In		1,195,203.91	0.58	86.2	Pulse	0.30	3
1	Tb		4,388,703.00	1.59	88.7	Pulse	0.50	3
1	Lu		2,643,057.00	0.92	85.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		203,188.77	0.50	90.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		956.70	6.97	127.2	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:37
Sample Name FA93314-8FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.158	ug/l	4.70	6,284.37	4.669E-02	Pulse	0.50	3
As			1	0.417	ug/l	18.12	216.00	1.605E-03	Pulse	1.00	3
Mo			1	0.465	ug/l	3.97	1,300.05	6.439E-03	Pulse	0.50	3
Pb			1	0.345	ug/l	4.81	5,268.49	1.575E-03	Pulse	1.00	3
Be			1	0.127	ug/l	32.96	3.00	1.613E-05	Pulse	2.00	3
Ag			1	0.013	ug/l	7.82	148.00	7.328E-04	Pulse	0.50	3
Ba			1	27.693	ug/l	1.04	24,328.33	2.032E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	29.16	190.00	5.680E-05	Pulse	0.50	3
Sn			1	0.250	ug/l	20.25	780.03	6.515E-04	Pulse	0.30	3
Sr			1	126.265	ug/l	0.84	257,145.36	2.148E-01	Pulse	0.50	3
[Pb]			1	0.342	ug/l	3.75	2,486.19	7.432E-04	Pulse	0.50	3
Ca			1	26509.853	ug/l	0.36	289,148.53	1.555E+00	Pulse	0.50	3
Ti			1	5.723	ug/l	38.71	532.75	2.861E-03	Pulse	0.50	3
Na			1	26139.148	ug/l	0.55	15,348,869.00	8.255E+01	Analog	1.00	3
Mg			1	7249.374	ug/l	0.63	1,897,669.38	1.021E+01	Pulse	1.00	3
K			1	3092.496	ug/l	0.83	642,447.06	3.455E+00	Pulse	1.00	3
V			1	1.311	ug/l	3.69	4,874.63	2.621E-02	Pulse	0.50	3
Mn			1	38.251	ug/l	0.54	80,004.81	5.943E-01	Pulse	0.50	3
Fe			1	342.775	ug/l	0.69	1,263,317.92	9.383E+00	Pulse	0.50	3
Co			1	0.549	ug/l	1.33	4,541.21	3.373E-02	Pulse	0.50	3
Ni			1	1.666	ug/l	1.91	4,009.77	2.979E-02	Pulse	0.50	3
Cu			1	12.278	ug/l	0.74	85,716.29	6.367E-01	Pulse	0.50	3
Zn			1	6.975	ug/l	1.08	6,851.22	3.393E-02	Pulse	1.00	3
Cd			1	0.020	ug/l	39.98	29.33	1.453E-04	Pulse	0.50	3
Al			1	174.299	ug/l	2.78	14,020.06	7.541E-02	Pulse	1.00	3
Se			1	0.078	ug/l	66.54	8.11	4.018E-05	Pulse	3.00	3
Sb			1	0.105	ug/l	11.76	314.33	1.556E-03	Pulse	1.00	3
Se			1	0.493	ug/l	32.66	17.78	8.807E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,345,059.08	0.15	85.7	Pulse	0.50	3
1	Sc		185,929.87	0.69	92.9	Pulse	0.30	3
1	Ge		134,629.07	0.55	90.9	Pulse	0.30	3
1	In		1,197,236.10	0.35	86.3	Pulse	0.30	3
1	Tb		4,376,210.67	0.96	88.4	Pulse	0.50	3
1	Lu		2,652,597.08	0.49	85.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		201,941.63	0.53	90.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		881.13	2.08	117.1	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:40
Sample Name FA93314-9FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.128	ug/l	0.52	6,145.66	4.562E-02	Pulse	0.50	3
As			1	0.400	ug/l	10.28	208.00	1.544E-03	Pulse	1.00	3
Mo			1	0.457	ug/l	3.18	1,279.38	6.339E-03	Pulse	0.50	3
Pb			1	0.466	ug/l	0.93	6,922.74	2.074E-03	Pulse	1.00	3
Be			1	0.070	ug/l	17.12	1.67	8.922E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	21.05	156.00	7.736E-04	Pulse	0.50	3
Ba			1	29.292	ug/l	0.78	25,764.97	2.149E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	3.83	239.33	7.170E-05	Pulse	0.50	3
Sn			1	0.202	ug/l	6.17	677.79	5.653E-04	Pulse	0.30	3
Sr			1	128.346	ug/l	0.62	261,721.54	2.183E-01	Pulse	0.50	3
[Pb]			1	0.479	ug/l	2.32	3,364.35	1.008E-03	Pulse	0.50	3
Ca			1	26766.008	ug/l	1.15	293,264.38	1.570E+00	Pulse	0.50	3
Ti			1	5.999	ug/l	13.12	560.02	2.999E-03	Pulse	0.50	3
Na			1	26778.463	ug/l	0.32	15,795,237.67	8.457E+01	Analog	1.00	3
Mg			1	7387.044	ug/l	0.79	1,942,475.46	1.040E+01	Pulse	1.00	3
K			1	3179.531	ug/l	0.26	663,136.35	3.551E+00	Pulse	1.00	3
V			1	1.505	ug/l	2.75	5,582.81	2.989E-02	Pulse	0.50	3
Mn			1	29.421	ug/l	1.17	61,618.42	4.575E-01	Pulse	0.50	3
Fe			1	457.602	ug/l	1.10	1,685,602.50	1.251E+01	Pulse	0.50	3
Co			1	0.447	ug/l	1.82	3,710.37	2.755E-02	Pulse	0.50	3
Ni			1	1.721	ug/l	4.86	4,139.79	3.074E-02	Pulse	0.50	3
Cu			1	3.248	ug/l	1.40	28,494.33	2.115E-01	Pulse	0.50	3
Zn			1	6.762	ug/l	1.59	6,662.83	3.302E-02	Pulse	1.00	3
Cd			1	0.019	ug/l	30.41	28.00	1.388E-04	Pulse	0.50	3
Al			1	246.121	ug/l	3.37	19,797.87	1.060E-01	Pulse	1.00	3
Se			1	0.122	ug/l	43.15	9.44	4.679E-05	Pulse	3.00	3
Sb			1	0.115	ug/l	5.69	339.33	1.682E-03	Pulse	1.00	3
Se			1	0.406	ug/l	27.20	16.44	8.148E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,338,378.33	0.58	85.5	Pulse	0.50	3
1	Sc		186,769.19	0.20	93.3	Pulse	0.30	3
1	Ge		134,700.83	0.46	91.0	Pulse	0.30	3
1	In		1,198,793.29	0.52	86.4	Pulse	0.30	3
1	Tb		4,352,202.50	0.84	87.9	Pulse	0.50	3
1	Lu		2,663,037.92	1.30	86.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		201,800.56	0.74	90.0	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		914.47	2.95	121.6	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:44
Sample Name FA93314-10FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.778	ug/l	1.78	4,399.18	3.324E-02	Pulse	0.50	3
As			1	0.380	ug/l	12.60	195.00	1.474E-03	Pulse	1.00	3
Mo			1	0.503	ug/l	5.28	1,396.06	6.948E-03	Pulse	0.50	3
Pb			1	0.138	ug/l	4.64	2,390.50	7.202E-04	Pulse	1.00	3
Be			1	0.036	ug/l	92.37	0.83	4.534E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	26.46	144.00	7.184E-04	Pulse	0.50	3
Ba			1	25.646	ug/l	0.82	22,275.02	1.882E-02	Pulse	0.50	3
Tl			1	0.003	ug/l	29.47	162.00	4.878E-05	Pulse	0.50	3
Sn			1	0.266	ug/l	11.67	804.47	6.799E-04	Pulse	0.30	3
Sr			1	130.251	ug/l	0.64	262,232.78	2.216E-01	Pulse	0.50	3
[Pb]			1	0.133	ug/l	8.00	1,121.38	3.379E-04	Pulse	0.50	3
Ca			1	27094.528	ug/l	1.42	293,659.23	1.589E+00	Pulse	0.50	3
Ti			1	1.061	ug/l	24.91	98.67	5.329E-04	Pulse	0.50	3
Na			1	29063.327	ug/l	1.09	16,957,294.67	9.178E+01	Analog	1.00	3
Mg			1	7535.425	ug/l	1.14	1,960,124.42	1.061E+01	Pulse	1.00	3
K			1	3235.021	ug/l	1.07	667,191.79	3.611E+00	Pulse	1.00	3
V			1	1.101	ug/l	3.63	4,109.11	2.224E-02	Pulse	0.50	3
Mn			1	13.346	ug/l	2.13	27,588.89	2.084E-01	Pulse	0.50	3
Fe			1	117.378	ug/l	0.93	428,673.53	3.239E+00	Pulse	0.50	3
Co			1	0.223	ug/l	6.14	1,850.10	1.398E-02	Pulse	0.50	3
Ni			1	1.218	ug/l	5.29	2,922.90	2.209E-02	Pulse	0.50	3
Cu			1	2.519	ug/l	0.99	23,455.56	1.772E-01	Pulse	0.50	3
Zn			1	4.971	ug/l	1.58	5,103.35	2.539E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	35.53	16.67	8.277E-05	Pulse	0.50	3
Al			1	61.670	ug/l	2.92	5,071.38	2.745E-02	Pulse	1.00	3
Se			1	0.105	ug/l	57.42	8.89	4.432E-05	Pulse	3.00	3
Sb			1	0.117	ug/l	6.56	343.00	1.707E-03	Pulse	1.00	3
Se			1	0.265	ug/l	40.03	14.22	7.084E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,319,454.67	0.60	85.0	Pulse	0.50	3
1	Sc		184,775.30	1.53	92.3	Pulse	0.30	3
1	Ge		132,362.51	0.93	89.4	Pulse	0.30	3
1	In		1,183,649.85	0.89	85.4	Pulse	0.30	3
1	Tb		4,322,035.00	1.26	87.3	Pulse	0.50	3
1	Lu		2,622,887.33	0.95	84.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		201,010.88	2.00	89.7	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		853.36	2.95	113.4	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:48
Sample Name FA93314-11FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.079	ug/l	2.68	5,798.88	4.389E-02	Pulse	0.50	3
As			1	0.400	ug/l	11.05	203.67	1.543E-03	Pulse	1.00	3
Mo			1	0.476	ug/l	4.61	1,304.72	6.585E-03	Pulse	0.50	3
Pb			1	0.426	ug/l	2.64	6,282.52	1.908E-03	Pulse	1.00	3
Be			1	0.007	ug/l	173.21	0.17	9.108E-07	Pulse	2.00	3
Ag			1	0.014	ug/l	15.98	162.00	8.177E-04	Pulse	0.50	3
Ba			1	27.865	ug/l	1.20	24,029.94	2.045E-02	Pulse	0.50	3
Tl			1	0.009	ug/l	13.77	266.00	8.078E-05	Pulse	0.50	3
Sn			1	0.214	ug/l	8.34	690.02	5.872E-04	Pulse	0.30	3
Sr			1	130.930	ug/l	0.97	261,721.84	2.227E-01	Pulse	0.50	3
[Pb]			1	0.417	ug/l	2.83	2,923.60	8.879E-04	Pulse	0.50	3
Ca			1	27119.477	ug/l	0.93	290,566.02	1.591E+00	Pulse	0.50	3
Ti			1	5.199	ug/l	4.09	474.68	2.599E-03	Pulse	0.50	3
Na			1	30359.849	ug/l	0.64	17,510,780.67	9.587E+01	Analog	1.00	3
Mg			1	7798.331	ug/l	0.51	2,005,364.29	1.098E+01	Pulse	1.00	3
K			1	3300.346	ug/l	0.61	672,598.04	3.683E+00	Pulse	1.00	3
V			1	1.472	ug/l	5.80	5,346.75	2.926E-02	Pulse	0.50	3
Mn			1	44.604	ug/l	0.47	91,532.64	6.927E-01	Pulse	0.50	3
Fe			1	473.480	ug/l	0.88	1,710,640.79	1.295E+01	Pulse	0.50	3
Co			1	0.713	ug/l	5.49	5,770.21	4.367E-02	Pulse	0.50	3
Ni			1	1.836	ug/l	1.99	4,321.16	3.271E-02	Pulse	0.50	3
Cu			1	3.296	ug/l	2.58	28,248.62	2.138E-01	Pulse	0.50	3
Zn			1	6.643	ug/l	1.54	6,442.42	3.251E-02	Pulse	1.00	3
Cd			1	0.015	ug/l	44.29	22.67	1.143E-04	Pulse	0.50	3
Al			1	211.103	ug/l	1.17	16,635.98	9.109E-02	Pulse	1.00	3
Se			1	0.186	ug/l	45.46	11.22	5.661E-05	Pulse	3.00	3
Sb			1	0.108	ug/l	1.75	314.67	1.588E-03	Pulse	1.00	3
Se			1	0.396	ug/l	40.42	16.00	8.078E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,293,178.42	0.96	84.3	Pulse	0.50	3
1	Sc		182,648.68	0.87	91.3	Pulse	0.30	3
1	Ge		132,141.86	1.54	89.2	Pulse	0.30	3
1	In		1,175,260.09	0.95	84.8	Pulse	0.30	3
1	Tb		4,361,658.00	1.06	88.1	Pulse	0.50	3
1	Lu		2,629,973.50	0.96	85.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		198,158.14	0.51	88.4	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		852.24	1.26	113.3	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 10:52
Sample Name FA93314-12FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.049	ug/l	1.84	5,654.17	4.282E-02	Pulse	0.50	3
As			1	0.429	ug/l	6.81	217.67	1.649E-03	Pulse	1.00	3
Mo			1	0.494	ug/l	1.40	1,364.72	6.828E-03	Pulse	0.50	3
Pb			1	0.408	ug/l	2.02	6,082.43	1.836E-03	Pulse	1.00	3
Be			1	0.064	ug/l	32.76	1.50	8.190E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	18.82	138.00	6.897E-04	Pulse	0.50	3
Ba			1	27.697	ug/l	0.98	23,814.35	2.032E-02	Pulse	0.50	3
Tl			1	0.008	ug/l	28.83	252.00	7.608E-05	Pulse	0.50	3
Sn			1	0.215	ug/l	22.03	688.90	5.885E-04	Pulse	0.30	3
Sr			1	130.991	ug/l	0.33	261,090.28	2.228E-01	Pulse	0.50	3
[Pb]			1	0.419	ug/l	3.03	2,952.27	8.911E-04	Pulse	0.50	3
Ca			1	26914.362	ug/l	0.65	288,741.60	1.579E+00	Pulse	0.50	3
Ti			1	4.488	ug/l	16.29	410.67	2.244E-03	Pulse	0.50	3
Na			1	30399.227	ug/l	0.65	17,555,779.33	9.600E+01	Analog	1.00	3
Mg			1	7758.693	ug/l	0.47	1,997,674.41	1.092E+01	Pulse	1.00	3
K			1	3283.306	ug/l	0.36	670,063.94	3.664E+00	Pulse	1.00	3
V			1	1.454	ug/l	3.29	5,290.74	2.893E-02	Pulse	0.50	3
Mn			1	36.511	ug/l	0.55	74,920.71	5.673E-01	Pulse	0.50	3
Fe			1	443.523	ug/l	0.76	1,601,877.67	1.213E+01	Pulse	0.50	3
Co			1	0.584	ug/l	1.69	4,731.93	3.582E-02	Pulse	0.50	3
Ni			1	1.714	ug/l	4.32	4,041.11	3.061E-02	Pulse	0.50	3
Cu			1	3.332	ug/l	1.87	28,461.60	2.155E-01	Pulse	0.50	3
Zn			1	6.554	ug/l	3.51	6,422.41	3.213E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	48.79	25.33	1.271E-04	Pulse	0.50	3
Al			1	200.098	ug/l	1.05	15,800.32	8.640E-02	Pulse	1.00	3
Se			1	0.311	ug/l	9.97	15.11	7.563E-05	Pulse	3.00	3
Sb			1	0.106	ug/l	7.99	313.00	1.565E-03	Pulse	1.00	3
Se			1	0.232	ug/l	120.79	13.67	6.837E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,312,874.75	0.58	84.9	Pulse	0.50	3
1	Sc		182,880.48	0.70	91.4	Pulse	0.30	3
1	Ge		132,068.52	1.40	89.2	Pulse	0.30	3
1	In		1,171,845.23	1.39	84.5	Pulse	0.30	3
1	Tb		4,323,651.00	0.71	87.3	Pulse	0.50	3
1	Lu		2,611,002.25	0.98	84.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		199,886.06	1.15	89.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		770.02	8.63	102.4	Pulse	0.30	3

Quantitation Report

File Name	042SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:56
Sample Name	FA93314-13FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.754	ug/l	1.48	4,287.15	3.240E-02	Pulse	0.50	3
As			1	0.409	ug/l	14.25	208.67	1.576E-03	Pulse	1.00	3
Mo			1	0.499	ug/l	5.07	1,361.39	6.893E-03	Pulse	0.50	3
Pb			1	0.045	ug/l	12.16	1,120.04	3.376E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.008	ug/l	29.40	100.67	5.103E-04	Pulse	0.50	3
Ba			1	27.005	ug/l	0.64	23,309.00	1.982E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	35.65	187.33	5.651E-05	Pulse	0.50	3
Sn			1	0.230	ug/l	17.11	723.35	6.147E-04	Pulse	0.30	3
Sr			1	137.059	ug/l	0.01	274,204.33	2.331E-01	Pulse	0.50	3
[Pb]			1	0.044	ug/l	13.10	550.01	1.658E-04	Pulse	0.50	3
Ca			1	27613.111	ug/l	1.13	297,307.43	1.620E+00	Pulse	0.50	3
Ti			1	0.394	ug/l	39.06	36.67	1.999E-04	Pulse	0.50	3
Na			1	31798.162	ug/l	0.77	18,430,367.33	1.004E+02	Analog	1.00	3
Mg			1	8089.889	ug/l	0.24	2,090,551.13	1.139E+01	Pulse	1.00	3
K			1	3443.803	ug/l	0.99	704,669.59	3.839E+00	Pulse	1.00	3
V			1	1.001	ug/l	7.08	3,736.37	2.035E-02	Pulse	0.50	3
Mn			1	28.022	ug/l	0.94	57,672.52	4.358E-01	Pulse	0.50	3
Fe			1	36.896	ug/l	1.82	138,254.50	1.045E+00	Pulse	0.50	3
Co			1	0.266	ug/l	0.56	2,202.13	1.664E-02	Pulse	0.50	3
Ni			1	1.266	ug/l	2.14	3,032.91	2.292E-02	Pulse	0.50	3
Cu			1	2.196	ug/l	0.84	21,440.55	1.620E-01	Pulse	0.50	3
Zn			1	4.257	ug/l	0.70	4,411.52	2.234E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	123.73	13.33	6.749E-05	Pulse	0.50	3
Al			1	10.665	ug/l	1.88	1,051.70	5.730E-03	Pulse	1.00	3
Se			1	0.136	ug/l	31.60	9.67	4.894E-05	Pulse	3.00	3
Sb			1	0.111	ug/l	11.10	322.67	1.633E-03	Pulse	1.00	3
Se			1	0.288	ug/l	97.03	14.33	7.258E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,319,003.67	0.97	85.0	Pulse	0.50	3
1	Sc		183,546.74	0.78	91.7	Pulse	0.30	3
1	Ge		132,338.98	0.62	89.4	Pulse	0.30	3
1	In		1,176,259.67	0.54	84.8	Pulse	0.30	3
1	Tb		4,325,952.50	1.38	87.4	Pulse	0.50	3
1	Lu		2,611,234.58	1.37	84.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		197,452.65	0.70	88.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		892.25	5.72	118.6	Pulse	0.30	3

Quantitation Report

File Name	043CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 10:59
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.577	ug/l	0.34	504,602.09	3.588E+00	Pulse	0.50	3
As			1	49.149	ug/l	0.87	49,359.33	3.509E-01	Pulse	1.00	3
Mo			1	49.135	ug/l	1.14	279,329.47	1.325E+00	Pulse	0.50	3
Pb			1	49.262	ug/l	0.86	1,449,715.04	4.063E-01	Pulse	1.00	3
Be			1	54.975	ug/l	2.09	2,702.52	1.396E-02	Pulse	2.00	3
Ag			1	49.998	ug/l	0.84	1,000,370.67	4.744E+00	Pulse	0.50	3
Ba			1	48.429	ug/l	0.89	89,994.09	7.105E-02	Pulse	0.50	3
Tl			1	50.839	ug/l	0.37	2,144,672.33	6.010E-01	Pulse	0.50	3
Sn			1	49.872	ug/l	1.16	227,583.03	1.797E-01	Pulse	0.30	3
Sr			1	49.396	ug/l	0.19	212,971.14	1.681E-01	Pulse	0.50	3
[Pb]			1	49.603	ug/l	0.66	684,706.33	1.919E-01	Pulse	0.50	3
Ca			1	4862.856	ug/l	1.37	110,469.39	5.708E-01	Pulse	0.50	3
Ti			1	48.908	ug/l	3.06	9,453.65	4.884E-02	Pulse	0.50	3
Na			1	5251.957	ug/l	0.34	6,426,912.00	3.321E+01	Analog	1.00	3
Mg			1	5171.342	ug/l	1.09	2,818,183.67	1.456E+01	Pulse	1.00	3
K			1	5049.604	ug/l	0.63	2,150,768.42	1.111E+01	Pulse	1.00	3
V			1	48.703	ug/l	0.93	357,465.29	1.847E+00	Pulse	0.50	3
Mn			1	49.764	ug/l	0.76	217,103.68	1.544E+00	Pulse	0.50	3
Fe			1	5161.594	ug/l	0.60	39,587,153.33	2.815E+02	Analog	0.50	3
Co			1	50.804	ug/l	0.43	864,509.15	6.147E+00	Pulse	0.50	3
Ni			1	51.243	ug/l	0.55	247,883.67	1.762E+00	Pulse	0.50	3
Cu			1	51.428	ug/l	0.67	689,357.67	4.901E+00	Pulse	0.50	3
Zn			1	50.563	ug/l	0.88	91,757.41	4.352E-01	Pulse	1.00	3
Cd			1	49.069	ug/l	0.94	126,650.31	6.007E-01	Pulse	0.50	3
Al			1	4926.237	ug/l	0.92	812,279.73	4.197E+00	Pulse	1.00	3
Se			1	48.617	ug/l	2.01	3,129.92	1.484E-02	Pulse	3.00	3
Sb			1	48.151	ug/l	0.76	274,087.44	1.300E+00	Pulse	1.00	3
Se			1	49.180	ug/l	0.64	1,575.84	7.474E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,568,274.00	0.41	91.4	Pulse	0.50	3
1	Sc		193,545.45	0.36	96.7	Pulse	0.30	3
1	Ge		140,645.08	0.53	95.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,266,723.53	0.83	91.3	Pulse	0.30	3
1	Tb		4,609,636.50	0.69	93.1	Pulse	0.50	3
1	Lu		2,824,273.25	0.34	91.4	Pulse	0.50	3
1	Ge		210,848.68	0.26	94.1	Pulse	0.30	3
1	Te		7.33	41.66		Pulse	0.50	3
1	Li		797.80	5.94	106.1	Pulse	0.30	3

Quantitation Report

File Name	044_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:03
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.585	ug/l	1.04	998,600.75	7.200E+00	Pulse	0.50	3
As			1	98.222	ug/l	1.08	97,254.84	7.012E-01	Pulse	1.00	3
Mo			1	99.789	ug/l	0.95	554,070.44	2.690E+00	Pulse	0.50	3
Pb			1	99.093	ug/l	0.40	2,848,839.00	8.171E-01	Pulse	1.00	3
Be			1	109.231	ug/l	1.50	5,295.03	2.774E-02	Pulse	2.00	3
Ag			1	99.785	ug/l	0.31	1,950,059.21	9.469E+00	Pulse	0.50	3
Ba			1	97.100	ug/l	0.82	177,052.21	1.424E-01	Pulse	0.50	3
Tl			1	102.118	ug/l	0.71	4,209,151.75	1.207E+00	Pulse	0.50	3
Sn			1	100.364	ug/l	0.58	449,168.35	3.614E-01	Pulse	0.30	3
Sr			1	99.563	ug/l	1.08	420,780.47	3.385E-01	Pulse	0.50	3
[Pb]			1	99.385	ug/l	0.53	1,340,168.46	3.844E-01	Pulse	0.50	3
Ca			1	9861.032	ug/l	0.86	220,821.32	1.157E+00	Pulse	0.50	3
Ti			1	98.554	ug/l	1.63	18,781.68	9.842E-02	Pulse	0.50	3
Na			1	10499.372	ug/l	0.50	12,658,906.00	6.633E+01	Analog	1.00	3
Mg			1	10353.420	ug/l	1.03	5,563,318.33	2.915E+01	Analog	1.00	3
K			1	10088.119	ug/l	0.88	4,222,520.83	2.213E+01	Pulse	1.00	3
V			1	98.795	ug/l	1.11	714,741.27	3.745E+00	Pulse	0.50	3
Mn			1	99.839	ug/l	1.43	429,255.57	3.095E+00	Pulse	0.50	3
Fe			1	10279.624	ug/l	1.22	77,736,474.67	5.605E+02	Analog	0.50	3
Co			1	100.549	ug/l	1.00	1,687,153.46	1.216E+01	Pulse	0.50	3
Ni			1	100.945	ug/l	1.51	481,349.70	3.471E+00	Pulse	0.50	3
Cu			1	101.462	ug/l	0.96	1,333,195.00	9.613E+00	Pulse	0.50	3
Zn			1	101.642	ug/l	0.70	179,287.79	8.706E-01	Pulse	1.00	3
Cd			1	99.415	ug/l	0.79	250,623.79	1.217E+00	Pulse	0.50	3
Al			1	9803.997	ug/l	1.01	1,593,806.54	8.351E+00	Pulse	1.00	3
Se			1	97.609	ug/l	0.52	6,131.87	2.977E-02	Pulse	3.00	3
Sb			1	97.344	ug/l	0.77	541,196.56	2.628E+00	Pulse	1.00	3
Se			1	97.906	ug/l	1.75	3,053.69	1.483E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,486,538.75	0.44	89.3	Pulse	0.50	3
1	Sc		190,852.22	0.70	95.4	Pulse	0.30	3
1	Ge		138,695.62	0.72	93.7	Pulse	0.30	3
1	In		1,243,006.96	0.34	89.6	Pulse	0.30	3
1	Tb		4,539,001.50	0.45	91.7	Pulse	0.50	3
1	Lu		2,801,428.50	0.30	90.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		205,946.13	0.30	91.9	Pulse	0.30	3
1	Te		4.67	65.47		Pulse	0.50	3
1	Li		843.36	9.71	112.1	Pulse	0.30	3

Quantitation Report

File Name	045_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:07
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.021	ug/l	28.69	979.36	7.140E-03	Pulse	0.50	3
As			1	0.016	ug/l	45.66	32.00	2.334E-04	Pulse	1.00	3
Mo			1	0.127	ug/l	24.41	740.68	3.599E-03	Pulse	0.50	3
Pb			1	0.033	ug/l	25.71	1,514.07	4.266E-04	Pulse	1.00	3
Be			1	0.027	ug/l	77.66	1.33	6.965E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	18.13	416.67	2.021E-03	Pulse	0.50	3
Ba			1	0.012	ug/l	40.27	34.00	2.719E-05	Pulse	0.50	3
Tl			1	0.023	ug/l	19.11	1,054.04	2.970E-04	Pulse	0.50	3
Sn			1	0.068	ug/l	39.31	556.68	4.450E-04	Pulse	0.30	3
Sr			1	0.015	ug/l	98.82	504.68	4.034E-04	Pulse	0.50	3
[Pb]			1	0.031	ug/l	13.45	720.02	2.028E-04	Pulse	0.50	3
Ca			1	1.999	ug/l	65.16	116.67	6.113E-04	Pulse	0.50	3
Ti			1	0.032	ug/l	77.52	6.67	3.504E-05	Pulse	0.50	3
Na			1	1.197	ug/l	67.32	11,853.52	6.213E-02	Pulse	1.00	3
Mg			1	1.504	ug/l	21.62	1,079.70	5.660E-03	Pulse	1.00	3
K			1	2.928	ug/l	29.46	15,700.23	8.227E-02	Pulse	1.00	3
V			1	0.009	ug/l	45.97	326.67	1.712E-03	Pulse	0.50	3
Mn			1	-0.020	ug/l	-58.03	141.33	1.033E-03	Pulse	0.50	3
Fe			1	1.753	ug/l	18.56	18,438.88	1.345E-01	Pulse	0.50	3
Co			1	0.013	ug/l	56.63	288.00	2.106E-03	Pulse	0.50	3
Ni			1	-0.008	ug/l	-9.15	122.67	8.941E-04	Pulse	0.50	3
Cu			1	0.064	ug/l	18.43	8,872.73	6.467E-02	Pulse	0.50	3
Zn			1	-0.055	ug/l	-51.28	768.02	3.729E-03	Pulse	1.00	3
Cd			1	0.018	ug/l	26.12	50.00	2.426E-04	Pulse	0.50	3
Al			1	0.726	ug/l	81.01	344.34	1.806E-03	Pulse	1.00	3
Se			1	0.036	ug/l	69.80	8.11	3.935E-05	Pulse	3.00	3
Sb			1	0.027	ug/l	9.70	175.67	8.525E-04	Pulse	1.00	3
Se			1	0.049	ug/l	100.51	12.00	5.830E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,551,162.75	0.53	91.0	Pulse	0.50	3
1	Sc		190,865.08	0.69	95.4	Pulse	0.30	3

Quantitation Report

1	Ge		137,223.14	1.14	92.7	Pulse	0.30	3
1	In		1,251,240.51	0.28	90.2	Pulse	0.30	3
1	Tb		4,490,407.83	0.67	90.7	Pulse	0.50	3
1	Lu		2,737,717.08	0.59	88.6	Pulse	0.50	3
1	Ge		205,981.36	1.40	91.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		862.25	3.75	114.6	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:11
Sample Name FA93314-14FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.356	ug/l	29.95	6,969.99	5.372E-02	Pulse	0.50	3
As			1	0.371	ug/l	5.88	187.00	1.441E-03	Pulse	1.00	3
Mo			1	0.690	ug/l	4.24	1,853.43	9.471E-03	Pulse	0.50	3
Pb			1	0.122	ug/l	7.00	2,166.14	6.562E-04	Pulse	1.00	3
Be			1	0.094	ug/l	47.68	2.17	1.197E-05	Pulse	2.00	3
Ag			1	0.044	ug/l	25.28	433.34	2.215E-03	Pulse	0.50	3
Ba			1	26.586	ug/l	1.27	22,615.47	1.951E-02	Pulse	0.50	3
Tl			1	0.034	ug/l	42.25	752.69	2.284E-04	Pulse	0.50	3
Sn			1	0.489	ug/l	8.61	1,254.50	1.082E-03	Pulse	0.30	3
Sr			1	132.686	ug/l	0.34	261,629.93	2.257E-01	Pulse	0.50	3
[Pb]			1	0.114	ug/l	2.35	994.70	3.013E-04	Pulse	0.50	3
Ca			1	27463.495	ug/l	0.09	290,843.42	1.611E+00	Pulse	0.50	3
Ti			1	0.444	ug/l	29.08	40.67	2.252E-04	Pulse	0.50	3
Na			1	31802.491	ug/l	0.57	18,129,451.33	1.004E+02	Analog	1.00	3
Mg			1	7744.197	ug/l	0.57	1,968,331.54	1.090E+01	Pulse	1.00	3
K			1	3278.624	ug/l	0.62	660,491.77	3.659E+00	Pulse	1.00	3
V			1	0.908	ug/l	3.06	3,355.63	1.859E-02	Pulse	0.50	3
Mn			1	19.193	ug/l	2.99	38,801.27	2.990E-01	Pulse	0.50	3
Fe			1	49.675	ug/l	7.63	180,807.48	1.393E+00	Pulse	0.50	3
Co			1	0.225	ug/l	5.41	1,836.76	1.415E-02	Pulse	0.50	3
Ni			1	1.510	ug/l	2.59	3,518.33	2.711E-02	Pulse	0.50	3
Cu			1	2.410	ug/l	4.73	22,333.58	1.721E-01	Pulse	0.50	3
Zn			1	7.629	ug/l	5.57	7,185.35	3.671E-02	Pulse	1.00	3
Cd			1	0.041	ug/l	39.34	52.67	2.693E-04	Pulse	0.50	3
Al			1	15.169	ug/l	3.46	1,380.72	7.648E-03	Pulse	1.00	3
Se			1	0.153	ug/l	92.02	10.11	5.165E-05	Pulse	3.00	3
Sb			1	0.149	ug/l	5.20	418.34	2.138E-03	Pulse	1.00	3
Se			1	0.327	ug/l	27.85	14.78	7.551E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,301,850.67	0.96	84.6	Pulse	0.50	3
1	Sc		180,525.65	0.94	90.2	Pulse	0.30	3
1	Ge		129,806.41	1.65	87.7	Pulse	0.30	3
1	In		1,159,250.06	1.01	83.6	Pulse	0.30	3
1	Tb		4,296,889.33	1.47	86.8	Pulse	0.50	3
1	Lu		2,604,327.58	1.37	84.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		195,693.98	0.21	87.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		751.13	6.12	99.9	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:15
Sample Name FA93314-15FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.745	ug/l	2.20	4,211.81	3.208E-02	Pulse	0.50	3
As			1	0.380	ug/l	7.56	193.33	1.473E-03	Pulse	1.00	3
Mo			1	0.532	ug/l	3.98	1,444.06	7.338E-03	Pulse	0.50	3
Pb			1	0.151	ug/l	4.49	2,565.53	7.738E-04	Pulse	1.00	3
Be			1	0.029	ug/l	43.14	0.67	3.640E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	0.31	162.67	8.264E-04	Pulse	0.50	3
Ba			1	25.374	ug/l	1.30	21,745.75	1.862E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	29.86	234.00	7.048E-05	Pulse	0.50	3
Sn			1	0.288	ug/l	5.60	841.14	7.202E-04	Pulse	0.30	3
Sr			1	128.032	ug/l	0.28	254,356.15	2.178E-01	Pulse	0.50	3
[Pb]			1	0.144	ug/l	3.93	1,195.38	3.604E-04	Pulse	0.50	3
Ca			1	26506.252	ug/l	0.83	284,667.65	1.555E+00	Pulse	0.50	3
Ti			1	0.897	ug/l	27.71	82.67	4.511E-04	Pulse	0.50	3
Na			1	30927.050	ug/l	0.60	17,879,760.00	9.766E+01	Analog	1.00	3
Mg			1	7484.681	ug/l	0.47	1,929,213.42	1.054E+01	Pulse	1.00	3
K			1	3214.759	ug/l	0.53	657,063.73	3.589E+00	Pulse	1.00	3
V			1	1.071	ug/l	2.67	3,967.08	2.167E-02	Pulse	0.50	3
Mn			1	18.732	ug/l	0.99	38,318.99	2.919E-01	Pulse	0.50	3
Fe			1	110.888	ug/l	0.60	401,988.56	3.062E+00	Pulse	0.50	3
Co			1	0.194	ug/l	8.15	1,611.40	1.227E-02	Pulse	0.50	3
Ni			1	1.259	ug/l	2.60	2,993.58	2.280E-02	Pulse	0.50	3
Cu			1	2.269	ug/l	4.18	21,720.22	1.655E-01	Pulse	0.50	3
Zn			1	5.473	ug/l	2.82	5,418.10	2.753E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	55.32	14.67	7.465E-05	Pulse	0.50	3
Al			1	35.763	ug/l	0.92	3,005.58	1.642E-02	Pulse	1.00	3
Se			1	0.151	ug/l	131.20	10.11	5.123E-05	Pulse	3.00	3
Sb			1	0.132	ug/l	6.99	376.67	1.913E-03	Pulse	1.00	3
Se			1	0.381	ug/l	37.69	15.67	7.964E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,316,401.00	1.09	84.9	Pulse	0.50	3
1	Sc		183,076.64	0.58	91.5	Pulse	0.30	3
1	Ge		131,293.06	1.23	88.7	Pulse	0.30	3
1	In		1,167,932.42	0.44	84.2	Pulse	0.30	3
1	Tb		4,318,536.00	0.17	87.2	Pulse	0.50	3
1	Lu		2,639,037.00	0.80	85.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		196,840.80	0.76	87.8	Pulse	0.30	3
1	Te		2.00	173.21		Pulse	0.50	3
1	Li		831.13	12.65	110.5	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:18
Sample Name FA93314-16FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.915	ug/l	3.46	5,034.00	3.810E-02	Pulse	0.50	3
As			1	0.369	ug/l	13.29	189.67	1.435E-03	Pulse	1.00	3
Mo			1	0.513	ug/l	4.30	1,402.06	7.094E-03	Pulse	0.50	3
Pb			1	0.273	ug/l	1.13	4,246.20	1.278E-03	Pulse	1.00	3
Be			1	0.043	ug/l	86.63	1.00	5.492E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	20.04	166.67	8.438E-04	Pulse	0.50	3
Ba			1	27.494	ug/l	2.06	23,711.54	2.017E-02	Pulse	0.50	3
Tl			1	0.009	ug/l	27.37	268.00	8.071E-05	Pulse	0.50	3
Sn			1	0.332	ug/l	19.14	938.92	7.982E-04	Pulse	0.30	3
Sr			1	127.225	ug/l	0.83	254,328.71	2.164E-01	Pulse	0.50	3
[Pb]			1	0.265	ug/l	3.41	1,972.12	5.935E-04	Pulse	0.50	3
Ca			1	26539.378	ug/l	0.45	283,604.80	1.557E+00	Pulse	0.50	3
Ti			1	3.430	ug/l	21.27	312.01	1.716E-03	Pulse	0.50	3
Na			1	31286.984	ug/l	0.91	17,996,834.67	9.880E+01	Analog	1.00	3
Mg			1	7533.765	ug/l	1.14	1,932,041.54	1.061E+01	Pulse	1.00	3
K			1	3245.299	ug/l	1.26	659,817.79	3.622E+00	Pulse	1.00	3
V			1	1.218	ug/l	1.53	4,455.20	2.446E-02	Pulse	0.50	3
Mn			1	16.571	ug/l	0.66	34,143.94	2.584E-01	Pulse	0.50	3
Fe			1	246.542	ug/l	1.54	893,314.08	6.760E+00	Pulse	0.50	3
Co			1	0.276	ug/l	4.61	2,274.81	1.721E-02	Pulse	0.50	3
Ni			1	1.361	ug/l	2.58	3,244.28	2.455E-02	Pulse	0.50	3
Cu			1	2.386	ug/l	0.36	22,593.89	1.710E-01	Pulse	0.50	3
Zn			1	5.516	ug/l	3.82	5,476.79	2.771E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	76.89	20.00	1.014E-04	Pulse	0.50	3
Al			1	124.518	ug/l	4.02	9,876.51	5.421E-02	Pulse	1.00	3
Se			1	0.180	ug/l	35.00	11.00	5.567E-05	Pulse	3.00	3
Sb			1	0.113	ug/l	2.42	327.67	1.658E-03	Pulse	1.00	3
Se			1	0.167	ug/l	99.06	12.55	6.347E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,322,887.75	0.68	85.1	Pulse	0.50	3
1	Sc		182,167.12	1.42	91.0	Pulse	0.30	3
1	Ge		132,146.78	0.41	89.2	Pulse	0.30	3
1	In		1,175,210.44	0.95	84.7	Pulse	0.30	3
1	Tb		4,355,718.33	0.84	88.0	Pulse	0.50	3
1	Lu		2,641,279.00	1.23	85.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		197,679.33	0.80	88.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		856.69	3.75	113.9	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:22
Sample Name FA93314-17FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.259	ug/l	2.69	6,639.15	5.025E-02	Pulse	0.50	3
As			1	0.526	ug/l	6.50	263.33	1.993E-03	Pulse	1.00	3
Mo			1	0.569	ug/l	4.15	1,548.07	7.843E-03	Pulse	0.50	3
Pb			1	0.430	ug/l	1.88	6,342.19	1.925E-03	Pulse	1.00	3
Be			1	0.058	ug/l	57.05	1.33	7.318E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	10.44	156.67	7.940E-04	Pulse	0.50	3
Ba			1	30.165	ug/l	1.01	25,804.35	2.213E-02	Pulse	0.50	3
Tl			1	0.009	ug/l	41.67	270.67	8.219E-05	Pulse	0.50	3
Sn			1	0.260	ug/l	14.45	781.13	6.700E-04	Pulse	0.30	3
Sr			1	131.186	ug/l	0.30	260,148.78	2.231E-01	Pulse	0.50	3
[Pb]			1	0.431	ug/l	1.65	3,014.95	9.152E-04	Pulse	0.50	3
Ca			1	27066.051	ug/l	0.07	289,111.85	1.588E+00	Pulse	0.50	3
Ti			1	6.308	ug/l	5.70	574.01	3.153E-03	Pulse	0.50	3
Na			1	31600.753	ug/l	0.42	18,170,430.00	9.979E+01	Analog	1.00	3
Mg			1	7846.700	ug/l	0.47	2,011,611.67	1.105E+01	Pulse	1.00	3
K			1	3361.521	ug/l	0.52	682,705.08	3.749E+00	Pulse	1.00	3
V			1	1.736	ug/l	1.75	6,239.69	3.427E-02	Pulse	0.50	3
Mn			1	70.105	ug/l	1.14	143,707.73	1.088E+00	Pulse	0.50	3
Fe			1	529.576	ug/l	0.39	1,912,628.79	1.448E+01	Pulse	0.50	3
Co			1	0.570	ug/l	5.35	4,627.24	3.501E-02	Pulse	0.50	3
Ni			1	1.717	ug/l	5.42	4,051.10	3.067E-02	Pulse	0.50	3
Cu			1	2.788	ug/l	2.11	25,092.30	1.899E-01	Pulse	0.50	3
Zn			1	6.917	ug/l	0.55	6,647.82	3.368E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	101.87	13.33	6.742E-05	Pulse	0.50	3
Al			1	273.624	ug/l	1.80	21,434.85	1.177E-01	Pulse	1.00	3
Se			1	0.284	ug/l	31.99	14.11	7.150E-05	Pulse	3.00	3
Sb			1	0.132	ug/l	3.78	377.67	1.913E-03	Pulse	1.00	3
Se			1	0.551	ug/l	67.24	18.22	9.246E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,293,850.42	1.11	84.4	Pulse	0.50	3
1	Sc		182,084.30	0.53	91.0	Pulse	0.30	3
1	Ge		132,125.43	1.28	89.2	Pulse	0.30	3
1	In		1,165,845.02	0.28	84.1	Pulse	0.30	3
1	Tb		4,323,093.67	1.30	87.3	Pulse	0.50	3
1	Lu		2,624,848.50	1.08	84.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		197,391.05	0.79	88.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		895.58	7.48	119.1	Pulse	0.30	3

Quantitation Report

File Name	050SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:26
Sample Name	FA93314-18FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.396	ug/l	1.67	7,251.37	5.513E-02	Pulse	0.50	3
As			1	0.542	ug/l	3.39	269.67	2.050E-03	Pulse	1.00	3
Mo			1	0.554	ug/l	6.84	1,500.73	7.645E-03	Pulse	0.50	3
Pb			1	0.604	ug/l	0.19	8,704.89	2.643E-03	Pulse	1.00	3
Be			1	0.065	ug/l	67.03	1.50	8.248E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	14.16	133.33	6.790E-04	Pulse	0.50	3
Ba			1	31.486	ug/l	0.93	26,933.33	2.310E-02	Pulse	0.50	3
Tl			1	0.012	ug/l	23.89	332.00	1.008E-04	Pulse	0.50	3
Sn			1	0.238	ug/l	16.75	733.36	6.291E-04	Pulse	0.30	3
Sr			1	131.504	ug/l	0.57	260,782.49	2.237E-01	Pulse	0.50	3
[Pb]			1	0.589	ug/l	2.05	4,017.82	1.220E-03	Pulse	0.50	3
Ca			1	27024.197	ug/l	0.60	289,186.24	1.585E+00	Pulse	0.50	3
Ti			1	9.138	ug/l	4.78	832.69	4.566E-03	Pulse	0.50	3
Na			1	31660.456	ug/l	0.65	18,236,878.67	9.998E+01	Analog	1.00	3
Mg			1	7852.104	ug/l	0.46	2,016,571.75	1.106E+01	Pulse	1.00	3
K			1	3371.962	ug/l	0.05	686,022.87	3.761E+00	Pulse	1.00	3
V			1	2.060	ug/l	2.65	7,369.41	4.040E-02	Pulse	0.50	3
Mn			1	75.455	ug/l	0.69	153,984.16	1.171E+00	Pulse	0.50	3
Fe			1	733.881	ug/l	0.47	2,636,704.67	2.005E+01	Pulse	0.50	3
Co			1	0.668	ug/l	2.73	5,388.10	4.096E-02	Pulse	0.50	3
Ni			1	1.865	ug/l	2.23	4,369.84	3.322E-02	Pulse	0.50	3
Cu			1	3.075	ug/l	2.04	26,755.18	2.034E-01	Pulse	0.50	3
Zn			1	8.336	ug/l	2.61	7,794.58	3.972E-02	Pulse	1.00	3
Cd			1	0.026	ug/l	39.68	35.33	1.797E-04	Pulse	0.50	3
Al			1	370.451	ug/l	2.26	28,995.46	1.589E-01	Pulse	1.00	3
Se			1	0.317	ug/l	52.75	15.00	7.661E-05	Pulse	3.00	3
Sb			1	0.127	ug/l	13.28	363.00	1.850E-03	Pulse	1.00	3
Se			1	0.690	ug/l	50.09	20.22	1.029E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,293,656.75	0.50	84.4	Pulse	0.50	3
1	Sc		182,411.84	0.72	91.2	Pulse	0.30	3
1	Ge		131,539.11	1.03	88.8	Pulse	0.30	3
1	In		1,165,908.60	0.89	84.1	Pulse	0.30	3
1	Tb		4,312,294.00	0.64	87.1	Pulse	0.50	3
1	Lu		2,625,562.33	0.96	84.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		196,248.72	1.09	87.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		888.91	0.78	118.2	Pulse	0.30	3

Quantitation Report

File Name 051SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:30
Sample Name FA93314-19A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.775	ug/l	6.23	4,302.50	3.314E-02	Pulse	0.50	3
As			1	0.044	ug/l	11.91	35.67	2.746E-04	Pulse	1.00	3
Mo			1	0.023	ug/l	26.01	94.00	4.820E-04	Pulse	0.50	3
Pb			1	0.018	ug/l	13.50	765.69	2.258E-04	Pulse	1.00	3
Be			1	0.022	ug/l	99.96	0.50	2.754E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	27.15	108.67	5.575E-04	Pulse	0.50	3
Ba			1	0.099	ug/l	38.24	96.67	8.248E-05	Pulse	0.50	3
Tl			1	-0.002	ug/l	-39.90	66.67	1.965E-05	Pulse	0.50	3
Sn			1	0.216	ug/l	7.97	693.35	5.903E-04	Pulse	0.30	3
Sr			1	0.317	ug/l	12.11	1,046.70	8.911E-04	Pulse	0.50	3
[Pb]			1	0.012	ug/l	23.92	356.68	1.052E-04	Pulse	0.50	3
Ca			1	90.223	ug/l	10.88	1,022.03	5.668E-03	Pulse	0.50	3
Ti			1	0.119	ug/l	20.82	11.33	6.280E-05	Pulse	0.50	3
Na			1	62.536	ug/l	2.23	45,422.49	2.519E-01	Pulse	1.00	3
Mg			1	16.058	ug/l	1.95	4,333.81	2.403E-02	Pulse	1.00	3
K			1	113.000	ug/l	0.80	35,945.89	1.994E-01	Pulse	1.00	3
V			1	0.308	ug/l	10.77	1,301.38	7.222E-03	Pulse	0.50	3
Mn			1	0.222	ug/l	15.37	661.35	5.091E-03	Pulse	0.50	3
Fe			1	5.646	ug/l	3.38	25,035.45	1.928E-01	Pulse	0.50	3
Co			1	0.012	ug/l	9.29	158.67	1.222E-03	Pulse	0.50	3
Ni			1	0.086	ug/l	14.09	341.34	2.630E-03	Pulse	0.50	3
Cu			1	0.021	ug/l	302.40	7,738.24	5.960E-02	Pulse	0.50	3
Zn			1	4.462	ug/l	2.94	4,530.54	2.321E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-403.32	3.33	1.700E-05	Pulse	0.50	3
Al			1	4.632	ug/l	8.96	570.01	3.160E-03	Pulse	1.00	3
Se			1	0.012	ug/l	212.53	5.89	3.014E-05	Pulse	3.00	3
Sb			1	0.038	ug/l	20.76	127.33	6.517E-04	Pulse	1.00	3
Se			1	0.324	ug/l	85.97	14.67	7.529E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,391,831.42	0.63	86.9	Pulse	0.50	3
1	Sc		180,315.13	1.17	90.1	Pulse	0.30	3
1	Ge		129,837.62	1.21	87.7	Pulse	0.30	3
1	In		1,174,758.32	1.03	84.7	Pulse	0.30	3
1	Tb		4,320,597.83	0.66	87.3	Pulse	0.50	3
1	Lu		2,622,046.50	1.03	84.8	Pulse	0.50	3
1	Ge		195,194.23	1.12	87.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		896.69	2.60	119.2	Pulse	0.30	3

Quantitation Report

File Name	052SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:33
Sample Name	FA93314-20FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.729	ug/l	2.56	4,069.77	3.148E-02	Pulse	0.50	3
As			1	0.032	ug/l	60.09	30.00	2.318E-04	Pulse	1.00	3
Mo			1	0.015	ug/l	29.28	74.00	3.797E-04	Pulse	0.50	3
Pb			1	0.006	ug/l	37.06	596.01	1.764E-04	Pulse	1.00	3
Be			1	0.007	ug/l	173.21	0.17	9.036E-07	Pulse	2.00	3
Ag			1	0.007	ug/l	28.03	89.33	4.594E-04	Pulse	0.50	3
Ba			1	0.047	ug/l	17.57	51.33	4.384E-05	Pulse	0.50	3
Tl			1	-0.002	ug/l	-62.60	63.33	1.877E-05	Pulse	0.50	3
Sn			1	0.210	ug/l	16.01	677.80	5.785E-04	Pulse	0.30	3
Sr			1	0.080	ug/l	26.17	572.68	4.890E-04	Pulse	0.50	3
[Pb]			1	-0.004	ug/l	-123.40	246.67	7.298E-05	Pulse	0.50	3
Ca			1	19.019	ug/l	21.36	273.33	1.492E-03	Pulse	0.50	3
Ti			1	0.161	ug/l	50.61	15.33	8.360E-05	Pulse	0.50	3
Na			1	16.596	ug/l	3.58	19,562.86	1.069E-01	Pulse	1.00	3
Mg			1	4.385	ug/l	14.01	1,391.38	7.600E-03	Pulse	1.00	3
K			1	91.797	ug/l	3.03	32,226.50	1.762E-01	Pulse	1.00	3
V			1	0.263	ug/l	6.42	1,162.71	6.358E-03	Pulse	0.50	3
Mn			1	0.030	ug/l	23.50	274.00	2.120E-03	Pulse	0.50	3
Fe			1	6.954	ug/l	2.05	29,529.73	2.285E-01	Pulse	0.50	3
Co			1	0.004	ug/l	34.32	95.33	7.372E-04	Pulse	0.50	3
Ni			1	0.053	ug/l	27.58	266.67	2.063E-03	Pulse	0.50	3
Cu			1	0.021	ug/l	148.39	7,706.22	5.963E-02	Pulse	0.50	3
Zn			1	3.401	ug/l	0.38	3,642.02	1.870E-02	Pulse	1.00	3
Cd			1	-0.002	ug/l	-42.42	1.33	6.863E-06	Pulse	0.50	3
Al			1	1.022	ug/l	25.92	297.00	1.623E-03	Pulse	1.00	3
Se			1	-0.025	ug/l	-427.23	4.78	2.451E-05	Pulse	3.00	3
Sb			1	0.030	ug/l	1.66	106.00	5.442E-04	Pulse	1.00	3
Se			1	0.159	ug/l	79.81	12.22	6.282E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,377,951.50	0.70	86.5	Pulse	0.50	3
1	Sc		182,934.65	1.12	91.4	Pulse	0.30	3
1	Ge		129,252.69	0.76	87.3	Pulse	0.30	3
1	In		1,171,112.04	0.85	84.5	Pulse	0.30	3
1	Tb		4,319,183.50	0.73	87.2	Pulse	0.50	3
1	Lu		2,617,606.92	1.05	84.7	Pulse	0.50	3
1	Ge		194,791.68	1.41	86.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		855.58	6.43	113.7	Pulse	0.30	3

Quantitation Report

File Name 053_MB.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:37
Sample Name MP40383-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.968	ug/l	4.05	5,135.37	3.997E-02	Pulse	0.50	3
As			1	0.042	ug/l	14.36	34.33	2.674E-04	Pulse	1.00	3
Mo			1	0.006	ug/l	137.85	48.67	2.539E-04	Pulse	0.50	3
Pb			1	0.024	ug/l	15.89	845.02	2.503E-04	Pulse	1.00	3
Be			1	0.058	ug/l	22.31	1.33	7.398E-06	Pulse	2.00	3
Ag			1	0.007	ug/l	42.62	90.67	4.724E-04	Pulse	0.50	3
Ba			1	0.127	ug/l	10.26	120.00	1.026E-04	Pulse	0.50	3
Tl			1	-0.002	ug/l	-20.22	62.00	1.837E-05	Pulse	0.50	3
Sn			1	0.174	ug/l	34.40	600.02	5.136E-04	Pulse	0.30	3
Sr			1	0.093	ug/l	8.01	596.68	5.103E-04	Pulse	0.50	3
[Pb]			1	0.018	ug/l	13.75	392.01	1.161E-04	Pulse	0.50	3
Ca			1	37.432	ug/l	11.60	464.01	2.572E-03	Pulse	0.50	3
Ti			1	0.082	ug/l	96.87	8.00	4.415E-05	Pulse	0.50	3
Na			1	6.533	ug/l	8.00	13,565.59	7.519E-02	Pulse	1.00	3
Mg			1	3.698	ug/l	2.27	1,196.71	6.632E-03	Pulse	1.00	3
K			1	313.093	ug/l	1.70	75,421.60	4.180E-01	Pulse	1.00	3
V			1	0.270	ug/l	6.90	1,173.37	6.504E-03	Pulse	0.50	3
Mn			1	0.045	ug/l	17.41	302.67	2.356E-03	Pulse	0.50	3
Fe			1	7.959	ug/l	1.34	32,881.10	2.559E-01	Pulse	0.50	3
Co			1	0.001	ug/l	382.89	72.00	5.609E-04	Pulse	0.50	3
Ni			1	0.500	ug/l	7.84	1,252.71	9.754E-03	Pulse	0.50	3
Cu			1	1.083	ug/l	3.02	14,083.83	1.096E-01	Pulse	0.50	3
Zn			1	1.422	ug/l	3.87	1,967.77	1.026E-02	Pulse	1.00	3
Cd			1	-0.002	ug/l	-171.82	2.00	1.040E-05	Pulse	0.50	3
Al			1	2.840	ug/l	14.33	432.67	2.397E-03	Pulse	1.00	3
Se			1	-0.030	ug/l	-79.02	4.55	2.375E-05	Pulse	3.00	3
Sb			1	0.031	ug/l	31.36	106.33	5.543E-04	Pulse	1.00	3
Se			1	0.132	ug/l	30.89	11.67	6.083E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,375,884.75	0.54	86.5	Pulse	0.50	3
1	Sc		180,437.24	0.79	90.2	Pulse	0.30	3
1	Ge		128,505.63	1.32	86.8	Pulse	0.30	3
1	In		1,169,110.75	1.17	84.3	Pulse	0.30	3
1	Tb		4,298,839.67	0.46	86.8	Pulse	0.50	3
1	Lu		2,606,101.75	0.74	84.3	Pulse	0.50	3
1	Ge		191,801.67	0.36	85.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		802.24	5.88	106.6	Pulse	0.30	3

Quantitation Report

File Name	054_BSP.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:41
Sample Name	MP40383-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	214.379	ug/l	0.59	969,572.71	7.597E+00	Pulse	0.50	3
As			1	211.146	ug/l	0.22	96,187.39	7.537E-01	Pulse	1.00	3
Mo			1	209.246	ug/l	0.89	541,048.54	2.821E+00	Pulse	0.50	3
Pb			1	210.526	ug/l	1.02	2,796,562.75	8.680E-01	Pulse	1.00	3
Be			1	241.960	ug/l	0.50	5,434.73	3.073E-02	Pulse	2.00	3
Ag			1	102.950	ug/l	0.84	936,954.48	4.885E+00	Pulse	0.50	3
Ba			1	203.522	ug/l	0.83	169,414.08	1.493E-01	Pulse	0.50	3
Tl			1	208.775	ug/l	1.16	3,976,185.67	1.234E+00	Pulse	0.50	3
Sn			1	206.950	ug/l	0.24	422,819.52	3.726E-01	Pulse	0.30	3
Sr			1	206.087	ug/l	1.01	397,608.05	3.503E-01	Pulse	0.50	3
[Pb]			1	203.241	ug/l	0.48	1,266,342.46	3.930E-01	Pulse	0.50	3
Ca			1	19551.285	ug/l	0.39	202,862.73	1.147E+00	Pulse	0.50	3
Ti			1	201.492	ug/l	1.26	17,793.44	1.006E-01	Pulse	0.50	3
Na			1	21577.174	ug/l	0.63	12,053,690.33	6.816E+01	Analog	1.00	3
Mg			1	21096.608	ug/l	0.74	5,252,637.50	2.970E+01	Analog	1.00	3
K			1	20383.331	ug/l	0.40	3,953,002.83	2.235E+01	Pulse	1.00	3
V			1	204.941	ug/l	0.93	687,001.27	3.884E+00	Pulse	0.50	3
Mn			1	208.468	ug/l	1.17	412,387.98	3.231E+00	Pulse	0.50	3
Fe			1	20970.591	ug/l	1.21	72,964,634.67	5.717E+02	Analog	0.50	3
Co			1	215.171	ug/l	0.36	1,661,130.25	1.302E+01	Pulse	0.50	3
Ni			1	211.158	ug/l	0.82	463,276.24	3.630E+00	Pulse	0.50	3
Cu			1	214.666	ug/l	1.00	1,297,370.92	1.017E+01	Pulse	0.50	3
Zn			1	200.675	ug/l	0.70	164,858.50	8.594E-01	Pulse	1.00	3
Cd			1	201.355	ug/l	0.05	236,414.17	1.232E+00	Pulse	0.50	3
Al			1	19440.702	ug/l	0.90	1,464,387.88	8.280E+00	Pulse	1.00	3
Se			1	187.188	ug/l	1.52	5,476.12	2.855E-02	Pulse	3.00	3
Sb			1	207.268	ug/l	0.88	536,632.50	2.798E+00	Pulse	1.00	3
Se			1	184.330	ug/l	1.07	2,678.63	1.396E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,222,048.00	0.55	82.5	Pulse	0.50	3
1	Sc		176,857.88	0.42	88.4	Pulse	0.30	3
1	Ge		127,620.86	0.23	86.2	Pulse	0.30	3
1	In		1,134,946.69	0.91	81.8	Pulse	0.30	3
1	Tb		4,273,622.83	1.15	86.3	Pulse	0.50	3
1	Lu		2,595,367.00	1.59	84.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		191,835.24	1.67	85.6	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		793.35	13.70	105.5	Pulse	0.30	3

Quantitation Report

File Name 055SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 11:45
Sample Name FA93314-21FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.883	ug/l	3.73	4,723.92	3.695E-02	Pulse	0.50	3
As			1	0.420	ug/l	6.88	206.33	1.615E-03	Pulse	1.00	3
Mo			1	0.552	ug/l	5.44	1,461.40	7.612E-03	Pulse	0.50	3
Pb			1	0.382	ug/l	1.23	5,624.60	1.729E-03	Pulse	1.00	3
Be			1	0.045	ug/l	100.15	1.00	5.657E-06	Pulse	2.00	3
Ag			1	0.023	ug/l	9.98	238.67	1.243E-03	Pulse	0.50	3
Ba			1	45.998	ug/l	0.93	38,574.28	3.375E-02	Pulse	0.50	3
Tl			1	0.082	ug/l	6.80	1,674.76	5.151E-04	Pulse	0.50	3
Sn			1	0.376	ug/l	8.49	1,004.48	8.787E-04	Pulse	0.30	3
Sr			1	96.123	ug/l	0.22	187,012.04	1.636E-01	Pulse	0.50	3
[Pb]			1	0.368	ug/l	3.96	2,578.87	7.927E-04	Pulse	0.50	3
Ca			1	19437.595	ug/l	0.71	201,739.61	1.140E+00	Pulse	0.50	3
Ti			1	2.952	ug/l	21.63	261.34	1.478E-03	Pulse	0.50	3
Na			1	31088.259	ug/l	0.41	17,367,334.67	9.817E+01	Analog	1.00	3
Mg			1	6249.288	ug/l	0.58	1,556,542.04	8.799E+00	Pulse	1.00	3
K			1	3247.357	ug/l	0.47	641,222.39	3.625E+00	Pulse	1.00	3
V			1	0.867	ug/l	4.39	3,150.94	1.781E-02	Pulse	0.50	3
Mn			1	238.991	ug/l	0.84	473,572.96	3.704E+00	Pulse	0.50	3
Fe			1	333.271	ug/l	1.21	1,166,499.21	9.124E+00	Pulse	0.50	3
Co			1	0.809	ug/l	2.25	6,322.38	4.946E-02	Pulse	0.50	3
Ni			1	1.585	ug/l	3.30	3,629.02	2.839E-02	Pulse	0.50	3
Cu			1	2.075	ug/l	3.37	19,981.00	1.563E-01	Pulse	0.50	3
Zn			1	12.572	ug/l	1.08	11,090.86	5.778E-02	Pulse	1.00	3
Cd			1	0.042	ug/l	34.49	53.33	2.780E-04	Pulse	0.50	3
Al			1	109.921	ug/l	3.38	8,490.85	4.800E-02	Pulse	1.00	3
Se			1	0.214	ug/l	28.34	11.67	6.080E-05	Pulse	3.00	3
Sb			1	0.175	ug/l	1.09	478.68	2.494E-03	Pulse	1.00	3
Se			1	0.492	ug/l	23.60	16.89	8.800E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,252,565.50	0.78	83.3	Pulse	0.50	3
1	Sc		176,905.39	0.22	88.4	Pulse	0.30	3
1	Ge		127,855.54	1.49	86.3	Pulse	0.30	3
1	In		1,143,133.71	0.61	82.4	Pulse	0.30	3
1	Tb		4,265,039.17	1.01	86.2	Pulse	0.50	3
1	Lu		2,573,168.17	0.98	83.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		191,944.14	0.89	85.6	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		803.36	5.76	106.8	Pulse	0.30	3

Quantitation Report

File Name	056CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:49
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.691	ug/l	0.59	491,047.34	3.596E+00	Pulse	0.50	3
As			1	49.094	ug/l	1.55	47,871.52	3.505E-01	Pulse	1.00	3
Mo			1	48.649	ug/l	0.55	270,778.53	1.312E+00	Pulse	0.50	3
Pb			1	49.305	ug/l	0.97	1,428,876.50	4.066E-01	Pulse	1.00	3
Be			1	54.916	ug/l	0.85	2,640.67	1.395E-02	Pulse	2.00	3
Ag			1	49.515	ug/l	1.29	969,916.35	4.699E+00	Pulse	0.50	3
Ba			1	48.523	ug/l	0.56	87,843.45	7.118E-02	Pulse	0.50	3
Tl			1	50.511	ug/l	0.61	2,098,330.42	5.972E-01	Pulse	0.50	3
Sn			1	49.943	ug/l	0.62	222,017.73	1.799E-01	Pulse	0.30	3
Sr			1	49.419	ug/l	0.41	207,566.91	1.682E-01	Pulse	0.50	3
[Pb]			1	49.034	ug/l	0.64	666,542.46	1.897E-01	Pulse	0.50	3
Ca			1	4859.236	ug/l	0.73	107,975.21	5.704E-01	Pulse	0.50	3
Ti			1	49.256	ug/l	2.50	9,311.56	4.919E-02	Pulse	0.50	3
Na			1	5276.363	ug/l	0.43	6,315,551.83	3.336E+01	Analog	1.00	3
Mg			1	5193.076	ug/l	0.75	2,768,191.75	1.462E+01	Pulse	1.00	3
K			1	5030.578	ug/l	0.46	2,095,906.83	1.107E+01	Pulse	1.00	3
V			1	48.971	ug/l	0.47	351,580.55	1.857E+00	Pulse	0.50	3
Mn			1	50.171	ug/l	0.89	212,511.82	1.556E+00	Pulse	0.50	3
Fe			1	5208.252	ug/l	1.16	38,783,953.33	2.840E+02	Analog	0.50	3
Co			1	51.239	ug/l	1.24	846,585.71	6.199E+00	Pulse	0.50	3
Ni			1	51.278	ug/l	0.63	240,847.13	1.764E+00	Pulse	0.50	3
Cu			1	51.183	ug/l	1.25	666,171.91	4.878E+00	Pulse	0.50	3
Zn			1	49.945	ug/l	0.92	88,749.79	4.299E-01	Pulse	1.00	3
Cd			1	49.191	ug/l	0.89	124,303.60	6.022E-01	Pulse	0.50	3
Al			1	4957.309	ug/l	0.74	799,543.73	4.223E+00	Pulse	1.00	3
Se			1	48.375	ug/l	1.48	3,049.13	1.477E-02	Pulse	3.00	3
Sb			1	47.974	ug/l	0.92	267,367.11	1.295E+00	Pulse	1.00	3
Se			1	47.422	ug/l	2.52	1,488.06	7.208E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,513,909.50	0.34	90.0	Pulse	0.50	3
1	Sc		189,312.93	0.31	94.6	Pulse	0.30	3
1	Ge		136,562.94	0.57	92.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,233,996.76	0.62	89.0	Pulse	0.30	3
1	Tb		4,528,377.33	0.33	91.5	Pulse	0.50	3
1	Lu		2,772,680.50	0.23	89.7	Pulse	0.50	3
1	Ge		206,442.59	1.03	92.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		792.24	6.71	105.3	Pulse	0.30	3

Quantitation Report

File Name	057_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:52
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.259	ug/l	0.32	968,644.02	7.248E+00	Pulse	0.50	3
As			1	99.417	ug/l	0.52	94,851.77	7.098E-01	Pulse	1.00	3
Mo			1	99.746	ug/l	1.28	539,452.56	2.689E+00	Pulse	0.50	3
Pb			1	98.268	ug/l	0.81	2,790,695.92	8.103E-01	Pulse	1.00	3
Be			1	107.391	ug/l	2.69	5,108.81	2.728E-02	Pulse	2.00	3
Ag			1	99.429	ug/l	0.20	1,892,681.67	9.435E+00	Pulse	0.50	3
Ba			1	97.803	ug/l	1.30	174,211.98	1.435E-01	Pulse	0.50	3
Tl			1	101.519	ug/l	1.39	4,133,359.17	1.200E+00	Pulse	0.50	3
Sn			1	100.358	ug/l	0.61	438,758.39	3.613E-01	Pulse	0.30	3
Sr			1	99.850	ug/l	0.68	412,238.05	3.395E-01	Pulse	0.50	3
[Pb]			1	99.019	ug/l	1.01	1,318,954.87	3.830E-01	Pulse	0.50	3
Ca			1	9742.181	ug/l	1.28	214,101.03	1.143E+00	Pulse	0.50	3
Ti			1	97.814	ug/l	2.13	18,294.58	9.768E-02	Pulse	0.50	3
Na			1	10542.727	ug/l	0.33	12,474,752.67	6.660E+01	Analog	1.00	3
Mg			1	10416.722	ug/l	0.74	5,493,307.33	2.933E+01	Analog	1.00	3
K			1	10058.111	ug/l	0.32	4,131,723.58	2.206E+01	Pulse	1.00	3
V			1	98.113	ug/l	1.17	696,617.75	3.719E+00	Pulse	0.50	3
Mn			1	100.833	ug/l	0.30	417,762.92	3.126E+00	Pulse	0.50	3
Fe			1	10507.260	ug/l	0.33	76,567,624.00	5.729E+02	Analog	0.50	3
Co			1	102.054	ug/l	0.23	1,650,059.13	1.235E+01	Pulse	0.50	3
Ni			1	102.121	ug/l	0.38	469,240.27	3.511E+00	Pulse	0.50	3
Cu			1	102.189	ug/l	0.26	1,293,845.00	9.681E+00	Pulse	0.50	3
Zn			1	101.392	ug/l	1.05	174,206.39	8.684E-01	Pulse	1.00	3
Cd			1	99.251	ug/l	0.64	243,717.15	1.215E+00	Pulse	0.50	3
Al			1	9877.561	ug/l	0.82	1,575,920.00	8.414E+00	Pulse	1.00	3
Se			1	97.470	ug/l	1.75	5,964.27	2.973E-02	Pulse	3.00	3
Sb			1	97.904	ug/l	1.03	530,176.48	2.643E+00	Pulse	1.00	3
Se			1	98.683	ug/l	0.55	2,998.13	1.495E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,444,126.58	0.33	88.2	Pulse	0.50	3
1	Sc		187,300.24	0.38	93.6	Pulse	0.30	3
1	Ge		133,642.56	0.53	90.2	Pulse	0.30	3
1	In		1,214,277.38	0.74	87.6	Pulse	0.30	3
1	Tb		4,474,217.83	0.49	90.4	Pulse	0.50	3
1	Lu		2,755,880.75	0.48	89.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		200,603.41	0.26	89.5	Pulse	0.30	3
1	Te		8.67	53.29		Pulse	0.50	3
1	Li		754.47	1.79	100.3	Pulse	0.30	3

Quantitation Report

File Name	058_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 11:56
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.017	ug/l	39.53	920.69	6.854E-03	Pulse	0.50	3
As			1	0.024	ug/l	62.41	38.33	2.859E-04	Pulse	1.00	3
Mo			1	0.132	ug/l	18.48	753.35	3.733E-03	Pulse	0.50	3
Pb			1	0.041	ug/l	26.83	1,710.43	4.887E-04	Pulse	1.00	3
Be			1	0.018	ug/l	34.38	0.83	4.512E-06	Pulse	2.00	3
Ag			1	0.028	ug/l	21.46	571.35	2.828E-03	Pulse	0.50	3
Ba			1	0.014	ug/l	19.76	36.67	2.989E-05	Pulse	0.50	3
Tl			1	0.031	ug/l	22.69	1,379.40	3.942E-04	Pulse	0.50	3
Sn			1	0.095	ug/l	33.61	664.46	5.421E-04	Pulse	0.30	3
Sr			1	0.022	ug/l	45.96	526.01	4.288E-04	Pulse	0.50	3
[Pb]			1	0.038	ug/l	9.16	798.02	2.279E-04	Pulse	0.50	3
Ca			1	2.022	ug/l	1.73	113.33	6.141E-04	Pulse	0.50	3
Ti			1	0.055	ug/l	100.39	10.67	5.794E-05	Pulse	0.50	3
Na			1	1.509	ug/l	54.71	11,825.50	6.409E-02	Pulse	1.00	3
Mg			1	2.019	ug/l	33.17	1,311.72	7.112E-03	Pulse	1.00	3
K			1	4.106	ug/l	13.30	15,656.20	8.484E-02	Pulse	1.00	3
V			1	0.007	ug/l	39.24	306.67	1.661E-03	Pulse	0.50	3
Mn			1	-0.010	ug/l	-102.84	181.33	1.351E-03	Pulse	0.50	3
Fe			1	2.290	ug/l	22.96	21,980.97	1.638E-01	Pulse	0.50	3
Co			1	0.019	ug/l	33.67	370.67	2.763E-03	Pulse	0.50	3
Ni			1	0.008	ug/l	185.22	194.00	1.447E-03	Pulse	0.50	3
Cu			1	0.043	ug/l	3.96	8,422.53	6.269E-02	Pulse	0.50	3
Zn			1	-0.062	ug/l	-89.80	742.35	3.676E-03	Pulse	1.00	3
Cd			1	0.022	ug/l	21.36	59.33	2.937E-04	Pulse	0.50	3
Al			1	1.454	ug/l	67.58	447.34	2.426E-03	Pulse	1.00	3
Se			1	0.035	ug/l	59.00	7.89	3.908E-05	Pulse	3.00	3
Sb			1	0.035	ug/l	5.49	218.33	1.081E-03	Pulse	1.00	3
Se			1	-0.100	ug/l	-68.91	7.22	3.573E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,502,565.92	0.68	89.7	Pulse	0.50	3
1	Sc		184,544.48	0.39	92.2	Pulse	0.30	3

Quantitation Report

1	Ge		134,355.17	0.84	90.7	Pulse	0.30	3
1	In		1,226,488.42	0.47	88.4	Pulse	0.30	3
1	Tb		4,429,977.33	0.77	89.5	Pulse	0.50	3
1	Lu		2,707,451.58	0.23	87.6	Pulse	0.50	3
1	Ge		201,922.82	0.47	90.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		813.36	8.76	108.1	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:00
Sample Name MP40383-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.901	ug/l	1.23	4,777.27	3.760E-02	Pulse	0.50	3
As			1	0.413	ug/l	17.73	202.00	1.591E-03	Pulse	1.00	3
Mo			1	0.538	ug/l	8.01	1,420.06	7.422E-03	Pulse	0.50	3
Pb			1	0.376	ug/l	4.72	5,547.91	1.703E-03	Pulse	1.00	3
Be			1	0.082	ug/l	103.16	1.83	1.044E-05	Pulse	2.00	3
Ag			1	0.036	ug/l	32.48	355.34	1.859E-03	Pulse	0.50	3
Ba			1	45.952	ug/l	0.66	38,279.67	3.371E-02	Pulse	0.50	3
Tl			1	0.038	ug/l	40.93	828.69	2.547E-04	Pulse	0.50	3
Sn			1	0.434	ug/l	4.99	1,115.60	9.825E-04	Pulse	0.30	3
Sr			1	94.833	ug/l	0.53	183,274.26	1.614E-01	Pulse	0.50	3
[Pb]			1	0.386	ug/l	5.88	2,696.22	8.276E-04	Pulse	0.50	3
Ca			1	19285.321	ug/l	0.39	198,564.52	1.131E+00	Pulse	0.50	3
Ti			1	3.904	ug/l	10.88	342.69	1.952E-03	Pulse	0.50	3
Na			1	30636.915	ug/l	0.74	16,978,902.00	9.675E+01	Analog	1.00	3
Mg			1	6255.118	ug/l	0.67	1,545,579.50	8.807E+00	Pulse	1.00	3
K			1	3247.283	ug/l	0.19	636,098.94	3.625E+00	Pulse	1.00	3
V			1	0.848	ug/l	4.99	3,060.25	1.744E-02	Pulse	0.50	3
Mn			1	237.196	ug/l	1.61	467,126.94	3.676E+00	Pulse	0.50	3
Fe			1	331.133	ug/l	0.43	1,152,025.21	9.066E+00	Pulse	0.50	3
Co			1	0.758	ug/l	4.11	5,894.25	4.640E-02	Pulse	0.50	3
Ni			1	1.568	ug/l	3.28	3,569.67	2.810E-02	Pulse	0.50	3
Cu			1	2.780	ug/l	5.84	24,073.01	1.895E-01	Pulse	0.50	3
Zn			1	11.079	ug/l	1.34	9,837.52	5.142E-02	Pulse	1.00	3
Cd			1	0.041	ug/l	18.49	52.00	2.719E-04	Pulse	0.50	3
Al			1	114.056	ug/l	3.52	8,732.38	4.976E-02	Pulse	1.00	3
Se			1	0.180	ug/l	55.10	10.67	5.574E-05	Pulse	3.00	3
Sb			1	0.163	ug/l	7.15	446.68	2.335E-03	Pulse	1.00	3
Se			1	0.527	ug/l	44.69	17.33	9.061E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,258,710.17	0.68	83.5	Pulse	0.50	3
1	Sc		175,495.06	0.16	87.7	Pulse	0.30	3
1	Ge		127,070.17	1.15	85.8	Pulse	0.30	3
1	In		1,135,485.41	0.31	81.9	Pulse	0.30	3
1	Tb		4,227,666.00	0.57	85.4	Pulse	0.50	3
1	Lu		2,570,231.00	0.21	83.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		191,315.12	0.62	85.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		778.91	3.46	103.5	Pulse	0.30	3

Quantitation Report

File Name 060SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:04
Sample Name MP40383-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.957	ug/l	7.03	1,652.74	1.246E-02	Pulse	0.50	3
As			1	0.379	ug/l	30.60	51.33	3.872E-04	Pulse	1.00	3
Mo			1	0.527	ug/l	19.92	319.34	1.594E-03	Pulse	0.50	3
Pb			1	0.386	ug/l	7.43	1,633.08	4.717E-04	Pulse	1.00	3
Be			1	0.215	ug/l	99.03	1.00	5.465E-06	Pulse	2.00	3
Ag			1	0.044	ug/l	20.13	110.67	5.527E-04	Pulse	0.50	3
Ba			1	46.143	ug/l	2.69	8,175.87	6.778E-03	Pulse	0.50	3
Tl			1	0.020	ug/l	46.27	184.67	5.335E-05	Pulse	0.50	3
Sn			1	0.095	ug/l	108.71	284.45	2.358E-04	Pulse	0.30	3
Sr			1	96.695	ug/l	1.33	40,042.99	3.320E-02	Pulse	0.50	3
[Pb]			1	0.395	ug/l	3.17	811.35	2.344E-04	Pulse	0.50	3
Ca			1	19704.836	ug/l	2.68	42,392.23	2.315E-01	Pulse	0.50	3
Ti			1	8.987	ug/l	108.75	166.05	9.008E-04	Pulse	0.50	3
Na			1	30637.367	ug/l	1.60	3,551,551.25	1.939E+01	Pulse	1.00	3
Mg			1	6375.778	ug/l	2.29	328,967.98	1.797E+00	Pulse	1.00	3
K			1	3303.822	ug/l	2.38	146,123.39	7.980E-01	Pulse	1.00	3
V			1	0.819	ug/l	13.34	820.69	4.483E-03	Pulse	0.50	3
Mn			1	244.799	ug/l	1.92	100,821.43	7.602E-01	Pulse	0.50	3
Fe			1	336.463	ug/l	1.09	248,484.97	1.873E+00	Pulse	0.50	3
Co			1	0.748	ug/l	2.87	1,269.38	9.570E-03	Pulse	0.50	3
Ni			1	1.280	ug/l	3.52	737.35	5.560E-03	Pulse	0.50	3
Cu			1	1.808	ug/l	5.97	10,035.29	7.566E-02	Pulse	0.50	3
Zn			1	13.755	ug/l	2.01	3,186.60	1.592E-02	Pulse	1.00	3
Cd			1	0.016	ug/l	227.88	8.00	4.033E-05	Pulse	0.50	3
Al			1	110.717	ug/l	7.05	1,943.44	1.062E-02	Pulse	1.00	3
Se			1	0.021	ug/l	1091.20	5.78	2.891E-05	Pulse	3.00	3
Sb			1	0.161	ug/l	2.85	113.33	5.663E-04	Pulse	1.00	3
Se			1	-0.831	ug/l	-86.87	7.67	3.832E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,461,500.33	0.30	88.7	Pulse	0.50	3
1	Sc		183,162.92	1.76	91.5	Pulse	0.30	3
1	Ge		132,638.88	0.52	89.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,206,326.65	0.50	87.0	Pulse	0.30	3
1	Tb		4,377,377.17	0.53	88.4	Pulse	0.50	3
1	Lu		2,675,466.50	0.97	86.6	Pulse	0.50	3
1	Ge		200,099.11	1.17	89.3	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		790.02	4.87	105.0	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:08
Sample Name MP40383-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.241	ug/l	0.96	933,222.44	7.522E+00	Pulse	0.50	3
As			1	210.500	ug/l	1.16	93,225.87	7.514E-01	Pulse	1.00	3
Mo			1	210.079	ug/l	0.26	526,189.96	2.832E+00	Pulse	0.50	3
Pb			1	208.541	ug/l	0.47	2,705,343.25	8.598E-01	Pulse	1.00	3
Be			1	236.456	ug/l	0.81	5,250.85	3.003E-02	Pulse	2.00	3
Ag			1	100.105	ug/l	0.64	882,531.17	4.750E+00	Pulse	0.50	3
Ba			1	247.657	ug/l	0.30	201,435.82	1.816E-01	Pulse	0.50	3
Tl			1	205.115	ug/l	0.44	3,815,019.25	1.212E+00	Pulse	0.50	3
Sn			1	205.325	ug/l	0.99	409,874.49	3.696E-01	Pulse	0.30	3
Sr			1	299.358	ug/l	0.07	564,152.04	5.087E-01	Pulse	0.50	3
[Pb]			1	199.932	ug/l	0.70	1,216,576.75	3.866E-01	Pulse	0.50	3
Ca			1	37749.672	ug/l	0.16	387,188.08	2.214E+00	Pulse	0.50	3
Ti			1	200.311	ug/l	2.19	17,486.54	1.000E-01	Pulse	0.50	3
Na			1	50579.281	ug/l	0.84	27,920,768.00	1.597E+02	Analog	1.00	3
Mg			1	26407.833	ug/l	0.88	6,500,206.67	3.718E+01	Analog	1.00	3
K			1	22468.272	ug/l	0.51	4,306,447.33	2.463E+01	Pulse	1.00	3
V			1	201.548	ug/l	0.66	667,940.75	3.820E+00	Pulse	0.50	3
Mn			1	443.567	ug/l	1.25	852,804.64	6.874E+00	Pulse	0.50	3
Fe			1	20961.577	ug/l	1.66	70,900,861.33	5.715E+02	Analog	0.50	3
Co			1	214.073	ug/l	0.68	1,606,784.21	1.295E+01	Pulse	0.50	3
Ni			1	209.215	ug/l	0.46	446,282.30	3.597E+00	Pulse	0.50	3
Cu			1	212.146	ug/l	0.92	1,246,578.67	1.005E+01	Pulse	0.50	3
Zn			1	208.947	ug/l	0.91	166,234.89	8.947E-01	Pulse	1.00	3
Cd			1	199.745	ug/l	0.44	227,163.04	1.223E+00	Pulse	0.50	3
Al			1	19031.701	ug/l	0.81	1,417,284.75	8.106E+00	Pulse	1.00	3
Se			1	186.990	ug/l	0.53	5,299.62	2.852E-02	Pulse	3.00	3
Sb			1	208.571	ug/l	0.62	523,080.63	2.815E+00	Pulse	1.00	3
Se			1	187.079	ug/l	3.27	2,632.41	1.417E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,146,512.17	0.96	80.6	Pulse	0.50	3
1	Sc		174,851.59	0.95	87.4	Pulse	0.30	3
1	Ge		124,086.62	1.66	83.8	Pulse	0.30	3
1	In		1,108,924.43	1.23	80.0	Pulse	0.30	3
1	Tb		4,191,060.00	0.83	84.7	Pulse	0.50	3
1	Lu		2,559,276.25	1.47	82.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,811.52	0.82	82.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		785.57	10.92	104.4	Pulse	0.30	3

Quantitation Report

File Name	062SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:11
Sample Name	MP40383-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.048	ug/l	0.73	931,802.58	7.515E+00	Pulse	0.50	3
As			1	212.230	ug/l	1.00	93,934.60	7.576E-01	Pulse	1.00	3
Mo			1	210.619	ug/l	0.33	525,942.82	2.839E+00	Pulse	0.50	3
Pb			1	211.271	ug/l	0.03	2,721,836.83	8.710E-01	Pulse	1.00	3
Be			1	241.977	ug/l	1.04	5,294.36	3.073E-02	Pulse	2.00	3
Ag			1	101.073	ug/l	0.40	888,363.35	4.796E+00	Pulse	0.50	3
Ba			1	248.862	ug/l	0.50	201,281.95	1.825E-01	Pulse	0.50	3
Tl			1	208.962	ug/l	0.65	3,859,609.33	1.235E+00	Pulse	0.50	3
Sn			1	207.361	ug/l	0.39	411,642.64	3.733E-01	Pulse	0.30	3
Sr			1	301.033	ug/l	0.57	564,131.12	5.116E-01	Pulse	0.50	3
[Pb]			1	202.907	ug/l	0.37	1,226,098.42	3.924E-01	Pulse	0.50	3
Ca			1	38107.672	ug/l	1.65	385,088.86	2.235E+00	Pulse	0.50	3
Ti			1	208.952	ug/l	0.96	17,974.92	1.043E-01	Pulse	0.50	3
Na			1	51059.760	ug/l	0.81	27,772,711.33	1.612E+02	Analog	1.00	3
Mg			1	26607.952	ug/l	1.36	6,453,108.67	3.746E+01	Analog	1.00	3
K			1	22615.634	ug/l	0.95	4,270,946.17	2.479E+01	Pulse	1.00	3
V			1	204.778	ug/l	0.89	668,687.62	3.881E+00	Pulse	0.50	3
Mn			1	442.881	ug/l	1.49	850,933.39	6.863E+00	Pulse	0.50	3
Fe			1	20855.885	ug/l	0.88	70,503,944.00	5.686E+02	Analog	0.50	3
Co			1	214.410	ug/l	0.98	1,608,216.71	1.297E+01	Pulse	0.50	3
Ni			1	209.903	ug/l	0.75	447,442.25	3.608E+00	Pulse	0.50	3
Cu			1	213.133	ug/l	0.85	1,251,577.25	1.009E+01	Pulse	0.50	3
Zn			1	211.473	ug/l	0.62	167,728.62	9.054E-01	Pulse	1.00	3
Cd			1	201.509	ug/l	0.37	228,466.69	1.233E+00	Pulse	0.50	3
Al			1	19123.477	ug/l	0.96	1,403,216.37	8.145E+00	Pulse	1.00	3
Se			1	187.688	ug/l	0.58	5,303.18	2.863E-02	Pulse	3.00	3
Sb			1	209.112	ug/l	0.55	522,855.33	2.823E+00	Pulse	1.00	3
Se			1	190.013	ug/l	2.08	2,665.52	1.439E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,124,859.83	1.00	80.0	Pulse	0.50	3
1	Sc		172,289.25	1.00	86.1	Pulse	0.30	3
1	Ge		124,005.97	1.43	83.7	Pulse	0.30	3
1	In		1,102,729.33	0.43	79.5	Pulse	0.30	3
1	Tb		4,179,620.50	0.82	84.4	Pulse	0.50	3
1	Lu		2,556,219.50	0.80	82.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,249.64	0.86	82.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		796.69	7.26	105.9	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:15
Sample Name	MP40383-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.393	ug/l	0.66	98,647.77	7.987E-01	Pulse	0.50	3
As			1	21.479	ug/l	1.26	9,482.36	7.678E-02	Pulse	1.00	3
Mo			1	21.072	ug/l	1.07	52,956.37	2.842E-01	Pulse	0.50	3
Pb			1	20.816	ug/l	0.31	273,456.85	8.596E-02	Pulse	1.00	3
Be			1	24.567	ug/l	5.00	538.18	3.120E-03	Pulse	2.00	3
Ag			1	3.970	ug/l	1.21	35,118.44	1.885E-01	Pulse	0.50	3
Ba			1	67.032	ug/l	1.43	54,497.69	4.917E-02	Pulse	0.50	3
Tl			1	20.557	ug/l	0.41	386,649.11	1.215E-01	Pulse	0.50	3
Sn			1	20.682	ug/l	1.53	41,464.40	3.741E-02	Pulse	0.30	3
Sr			1	116.686	ug/l	1.33	220,000.43	1.985E-01	Pulse	0.50	3
[Pb]			1	19.995	ug/l	1.29	123,234.41	3.874E-02	Pulse	0.50	3
Ca			1	21463.854	ug/l	1.13	217,220.35	1.259E+00	Pulse	0.50	3
Ti			1	23.796	ug/l	3.35	2,050.12	1.188E-02	Pulse	0.50	3
Na			1	33343.135	ug/l	1.24	18,162,705.33	1.053E+02	Analog	1.00	3
Mg			1	8465.319	ug/l	1.43	2,055,934.83	1.192E+01	Pulse	1.00	3
K			1	5247.833	ug/l	1.36	1,002,383.67	5.811E+00	Pulse	1.00	3
V			1	21.494	ug/l	0.41	70,490.54	4.086E-01	Pulse	0.50	3
Mn			1	265.024	ug/l	0.31	507,335.91	4.108E+00	Pulse	0.50	3
Fe			1	2523.850	ug/l	0.71	8,502,804.00	6.884E+01	Analog	0.50	3
Co			1	22.457	ug/l	0.73	167,844.34	1.359E+00	Pulse	0.50	3
Ni			1	23.051	ug/l	1.50	49,075.29	3.973E-01	Pulse	0.50	3
Cu			1	23.900	ug/l	1.32	146,223.10	1.184E+00	Pulse	0.50	3
Zn			1	32.971	ug/l	0.76	26,965.47	1.447E-01	Pulse	1.00	3
Cd			1	20.147	ug/l	0.69	22,979.60	1.233E-01	Pulse	0.50	3
Al			1	2089.794	ug/l	0.83	153,723.99	8.911E-01	Pulse	1.00	3
Se			1	19.010	ug/l	0.66	545.01	2.925E-03	Pulse	3.00	3
Sb			1	19.456	ug/l	0.30	48,953.85	2.627E-01	Pulse	1.00	3
Se			1	18.323	ug/l	5.10	267.11	1.434E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,181,301.67	1.19	81.5	Pulse	0.50	3
1	Sc		172,505.31	0.31	86.2	Pulse	0.30	3
1	Ge		123,512.75	0.63	83.4	Pulse	0.30	3
1	In		1,108,281.66	0.69	79.9	Pulse	0.30	3
1	Tb		4,177,040.08	1.27	84.4	Pulse	0.50	3
1	Lu		2,530,398.83	1.28	81.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,330.77	0.47	83.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		825.58	10.27	109.7	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:19
Sample Name FA93314-22FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.031	ug/l	2.23	5,233.39	4.220E-02	Pulse	0.50	3
As			1	0.360	ug/l	14.31	173.67	1.401E-03	Pulse	1.00	3
Mo			1	0.303	ug/l	8.98	790.02	4.259E-03	Pulse	0.50	3
Pb			1	0.507	ug/l	1.32	7,222.87	2.241E-03	Pulse	1.00	3
Be			1	0.045	ug/l	132.23	1.00	5.774E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	18.93	176.67	9.525E-04	Pulse	0.50	3
Ba			1	48.129	ug/l	1.06	39,519.66	3.531E-02	Pulse	0.50	3
Tl			1	0.037	ug/l	4.86	792.02	2.458E-04	Pulse	0.50	3
Sn			1	0.299	ug/l	4.75	827.80	7.396E-04	Pulse	0.30	3
Sr			1	69.013	ug/l	0.93	131,576.88	1.176E-01	Pulse	0.50	3
[Pb]			1	0.517	ug/l	2.69	3,485.70	1.082E-03	Pulse	0.50	3
Ca			1	13552.176	ug/l	0.53	137,623.66	7.952E-01	Pulse	0.50	3
Ti			1	3.874	ug/l	6.11	335.34	1.938E-03	Pulse	0.50	3
Na			1	27249.412	ug/l	0.37	14,893,704.67	8.606E+01	Analog	1.00	3
Mg			1	5005.414	ug/l	0.37	1,219,730.75	7.048E+00	Pulse	1.00	3
K			1	2899.813	ug/l	0.71	561,581.40	3.245E+00	Pulse	1.00	3
V			1	0.891	ug/l	5.13	3,159.60	1.826E-02	Pulse	0.50	3
Mn			1	337.826	ug/l	0.37	649,388.02	5.235E+00	Pulse	0.50	3
Fe			1	509.804	ug/l	0.91	1,728,634.71	1.394E+01	Pulse	0.50	3
Co			1	0.943	ug/l	1.24	7,142.00	5.757E-02	Pulse	0.50	3
Ni			1	1.497	ug/l	0.82	3,334.30	2.688E-02	Pulse	0.50	3
Cu			1	2.272	ug/l	2.41	20,538.91	1.656E-01	Pulse	0.50	3
Zn			1	18.646	ug/l	2.16	15,523.90	8.366E-02	Pulse	1.00	3
Cd			1	0.030	ug/l	31.15	38.00	2.043E-04	Pulse	0.50	3
Al			1	177.295	ug/l	1.46	13,272.51	7.669E-02	Pulse	1.00	3
Se			1	0.110	ug/l	42.01	8.33	4.496E-05	Pulse	3.00	3
Sb			1	0.168	ug/l	5.60	444.01	2.394E-03	Pulse	1.00	3
Se			1	0.268	ug/l	119.94	13.22	7.106E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,222,669.00	0.63	82.5	Pulse	0.50	3
1	Sc		173,066.74	0.10	86.5	Pulse	0.30	3
1	Ge		124,039.55	1.09	83.8	Pulse	0.30	3
1	In		1,119,349.30	1.06	80.7	Pulse	0.30	3
1	Tb		4,197,426.75	0.97	84.8	Pulse	0.50	3
1	Lu		2,541,552.25	0.72	82.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,583.58	1.34	82.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		794.46	10.94	105.6	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:23
Sample Name FA93418-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.035	ug/l	1.83	5,137.36	4.235E-02	Pulse	0.50	3
As			1	6.128	ug/l	3.63	2,667.86	2.199E-02	Pulse	1.00	3
Mo			1	9.440	ug/l	2.74	23,092.20	1.274E-01	Pulse	0.50	3
Pb			1	9.053	ug/l	0.99	112,572.63	3.747E-02	Pulse	1.00	3
Be			1	0.008	ug/l	173.21	0.17	9.756E-07	Pulse	2.00	3
Ag			1	0.021	ug/l	18.23	204.67	1.130E-03	Pulse	0.50	3
Ba			1	65.410	ug/l	1.82	51,730.90	4.798E-02	Pulse	0.50	3
Tl			1	0.016	ug/l	10.88	380.68	1.267E-04	Pulse	0.50	3
Sn			1	0.232	ug/l	1.91	666.69	6.185E-04	Pulse	0.30	3
Sr			1	302.798	ug/l	0.26	554,714.08	5.146E-01	Pulse	0.50	3
[Pb]			1	8.780	ug/l	1.35	51,242.39	1.706E-02	Pulse	0.50	3
Ca			1	135035.643	ug/l	0.54	1,372,506.21	7.920E+00	Pulse	0.50	3
Ti			1	0.409	ug/l	1.27	36.00	2.078E-04	Pulse	0.50	3
Na			1	237069.868	ug/l	0.21	129,674,805.33	7.483E+02	Analog	1.00	3
Mg			1	24523.191	ug/l	0.77	5,982,566.33	3.452E+01	Analog	1.00	3
K			1	167317.419	ug/l	0.73	31,699,491.33	1.829E+02	Analog	1.00	3
V			1	1.677	ug/l	1.84	5,746.20	3.316E-02	Pulse	0.50	3
Mn			1	1081.137	ug/l	0.40	2,032,089.33	1.675E+01	Pulse	0.50	3
Fe			1	16.353	ug/l	0.83	58,803.94	4.847E-01	Pulse	0.50	3
Co			1	0.272	ug/l	4.89	2,056.79	1.696E-02	Pulse	0.50	3
Ni			1	2.980	ug/l	1.67	6,354.40	5.238E-02	Pulse	0.50	3
Cu			1	3.890	ug/l	1.85	29,334.25	2.418E-01	Pulse	0.50	3
Zn			1	14.174	ug/l	3.39	11,704.55	6.461E-02	Pulse	1.00	3
Cd			1	0.016	ug/l	54.49	21.33	1.180E-04	Pulse	0.50	3
Al			1	6.622	ug/l	4.76	694.34	4.008E-03	Pulse	1.00	3
Se			1	0.217	ug/l	15.64	11.11	6.128E-05	Pulse	3.00	3
Sb			1	0.331	ug/l	6.06	834.35	4.606E-03	Pulse	1.00	3
Se			1	0.700	ug/l	22.10	18.78	1.037E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,004,224.50	1.01	76.9	Pulse	0.50	3
1	Sc		173,299.93	1.24	86.6	Pulse	0.30	3
1	Ge		121,312.26	0.94	81.9	Pulse	0.30	3
1	In		1,077,999.85	1.13	77.7	Pulse	0.30	3
1	Tb		4,072,466.83	1.66	82.3	Pulse	0.50	3
1	Lu		2,503,771.67	1.95	81.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		181,206.97	1.24	80.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,043.37	7.75	138.7	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:27
Sample Name TD79321-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.753	ug/l	2.35	3,911.74	3.233E-02	Pulse	0.50	3
As			1	1.461	ug/l	5.73	645.01	5.332E-03	Pulse	1.00	3
Mo			1	0.665	ug/l	4.04	1,668.75	9.130E-03	Pulse	0.50	3
Pb			1	0.042	ug/l	27.18	998.37	3.278E-04	Pulse	1.00	3
Be			1	0.015	ug/l	86.61	0.33	1.929E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	8.69	175.33	9.593E-04	Pulse	0.50	3
Ba			1	120.407	ug/l	0.66	95,698.27	8.832E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	20.87	194.67	6.387E-05	Pulse	0.50	3
Sn			1	1.728	ug/l	7.86	3,585.93	3.311E-03	Pulse	0.30	3
Sr			1	522.903	ug/l	0.92	962,585.67	8.884E-01	Pulse	0.50	3
[Pb]			1	0.034	ug/l	49.82	450.68	1.481E-04	Pulse	0.50	3
Ca			1	110159.357	ug/l	0.77	1,113,910.37	6.461E+00	Pulse	0.50	3
Ti			1	0.358	ug/l	42.86	31.33	1.821E-04	Pulse	0.50	3
Na			1	179300.247	ug/l	0.70	97,570,490.67	5.660E+02	Analog	1.00	3
Mg			1	35332.396	ug/l	0.90	8,575,234.33	4.974E+01	Analog	1.00	3
K			1	1422.912	ug/l	3.68	281,145.92	1.631E+00	Pulse	1.00	3
V			1	1.724	ug/l	3.01	5,869.57	3.404E-02	Pulse	0.50	3
Mn			1	126.233	ug/l	0.77	236,801.53	1.957E+00	Pulse	0.50	3
Fe			1	27.279	ug/l	2.32	94,672.41	7.826E-01	Pulse	0.50	3
Co			1	0.371	ug/l	4.88	2,774.88	2.294E-02	Pulse	0.50	3
Ni			1	1.757	ug/l	2.61	3,794.39	3.136E-02	Pulse	0.50	3
Cu			1	-0.194	ug/l	-4.22	5,985.62	4.947E-02	Pulse	0.50	3
Zn			1	4.078	ug/l	2.17	3,944.08	2.158E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	85.83	16.67	9.130E-05	Pulse	0.50	3
Al			1	24.473	ug/l	16.47	2,001.78	1.161E-02	Pulse	1.00	3
Se			1	1.733	ug/l	15.08	53.45	2.923E-04	Pulse	3.00	3
Sb			1	0.236	ug/l	5.42	605.34	3.312E-03	Pulse	1.00	3
Se			1	2.508	ug/l	11.49	43.89	2.401E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,048,693.92	1.13	78.1	Pulse	0.50	3
1	Sc		172,406.72	0.90	86.2	Pulse	0.30	3
1	Ge		120,985.91	0.47	81.7	Pulse	0.30	3
1	In		1,083,549.19	1.06	78.1	Pulse	0.30	3
1	Tb		4,116,232.58	1.40	83.1	Pulse	0.50	3
1	Lu		2,517,723.50	1.14	81.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		182,764.91	0.38	81.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		754.46	2.43	100.3	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:30
Sample Name FA93485-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.936	ug/l	1.75	4,771.94	3.884E-02	Pulse	0.50	3
As			1	0.938	ug/l	3.53	425.68	3.464E-03	Pulse	1.00	3
Mo			1	0.074	ug/l	4.76	216.00	1.168E-03	Pulse	0.50	3
Pb			1	1.739	ug/l	0.67	24,173.38	7.323E-03	Pulse	1.00	3
Be			1	0.146	ug/l	80.59	3.17	1.855E-05	Pulse	2.00	3
Ag			1	0.017	ug/l	32.90	177.33	9.592E-04	Pulse	0.50	3
Ba			1	40.620	ug/l	0.93	32,898.47	2.980E-02	Pulse	0.50	3
Tl			1	0.034	ug/l	3.54	768.02	2.326E-04	Pulse	0.50	3
Sn			1	0.258	ug/l	7.17	734.46	6.655E-04	Pulse	0.30	3
Sr			1	20.313	ug/l	1.11	38,471.04	3.485E-02	Pulse	0.50	3
[Pb]			1	1.733	ug/l	2.28	11,331.80	3.433E-03	Pulse	0.50	3
Ca			1	2524.835	ug/l	1.07	25,316.97	1.485E-01	Pulse	0.50	3
Ti			1	0.643	ug/l	10.60	55.33	3.243E-04	Pulse	0.50	3
Na			1	3002.489	ug/l	2.07	1,625,207.88	9.531E+00	Pulse	1.00	3
Mg			1	1215.214	ug/l	0.90	291,968.34	1.712E+00	Pulse	1.00	3
K			1	2158.747	ug/l	0.67	415,246.35	2.435E+00	Pulse	1.00	3
V			1	0.403	ug/l	13.78	1,538.07	9.024E-03	Pulse	0.50	3
Mn			1	96.854	ug/l	0.67	184,570.95	1.502E+00	Pulse	0.50	3
Fe			1	11123.919	ug/l	1.26	37,265,148.00	3.033E+02	Analog	0.50	3
Co			1	4.218	ug/l	2.04	31,416.08	2.557E-01	Pulse	0.50	3
Ni			1	2.175	ug/l	2.99	4,735.93	3.855E-02	Pulse	0.50	3
Cu			1	12.122	ug/l	1.21	77,329.27	6.294E-01	Pulse	0.50	3
Zn			1	63.529	ug/l	0.57	50,849.67	2.749E-01	Pulse	1.00	3
Cd			1	0.012	ug/l	43.72	17.33	9.386E-05	Pulse	0.50	3
Al			1	29.379	ug/l	12.42	2,337.18	1.370E-02	Pulse	1.00	3
Se			1	0.071	ug/l	81.01	7.22	3.902E-05	Pulse	3.00	3
Sb			1	0.300	ug/l	0.90	774.35	4.187E-03	Pulse	1.00	3
Se			1	0.521	ug/l	33.29	16.66	9.017E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,301,242.67	1.07	84.6	Pulse	0.50	3
1	Sc		170,536.36	0.67	85.2	Pulse	0.30	3
1	Ge		122,871.25	0.34	83.0	Pulse	0.30	3
1	In		1,103,930.37	0.70	79.6	Pulse	0.30	3
1	Tb		4,193,962.50	0.64	84.7	Pulse	0.50	3
1	Lu		2,550,056.17	0.94	82.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		184,939.25	0.74	82.5	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		841.13	2.29	111.8	Pulse	0.30	3

Quantitation Report

File Name 068SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:34
Sample Name FA93641-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.839	ug/l	0.67	4,356.50	3.540E-02	Pulse	0.50	3
As			1	2.832	ug/l	2.63	1,258.38	1.023E-02	Pulse	1.00	3
Mo			1	0.180	ug/l	12.68	479.34	2.593E-03	Pulse	0.50	3
Pb			1	0.090	ug/l	5.24	1,698.76	5.257E-04	Pulse	1.00	3
Be			1	0.077	ug/l	125.40	1.67	9.722E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	26.51	118.00	6.382E-04	Pulse	0.50	3
Ba			1	13.336	ug/l	1.27	10,927.32	9.791E-03	Pulse	0.50	3
Tl			1	0.002	ug/l	24.43	139.33	4.313E-05	Pulse	0.50	3
Sn			1	0.190	ug/l	10.54	605.57	5.427E-04	Pulse	0.30	3
Sr			1	268.154	ug/l	1.06	508,665.93	4.557E-01	Pulse	0.50	3
[Pb]			1	0.077	ug/l	6.93	746.02	2.309E-04	Pulse	0.50	3
Ca			1	35967.950	ug/l	0.67	361,388.94	2.110E+00	Pulse	0.50	3
Ti			1	0.328	ug/l	31.98	28.67	1.672E-04	Pulse	0.50	3
Na			1	27281.719	ug/l	1.07	14,757,303.33	8.616E+01	Analog	1.00	3
Mg			1	5414.751	ug/l	0.87	1,305,846.00	7.624E+00	Pulse	1.00	3
K			1	6994.372	ug/l	1.02	1,322,200.46	7.720E+00	Pulse	1.00	3
V			1	0.245	ug/l	3.39	1,030.03	6.012E-03	Pulse	0.50	3
Mn			1	4.435	ug/l	4.12	8,659.28	7.036E-02	Pulse	0.50	3
Fe			1	77.551	ug/l	1.19	264,977.62	2.153E+00	Pulse	0.50	3
Co			1	0.265	ug/l	2.54	2,038.78	1.657E-02	Pulse	0.50	3
Ni			1	5.228	ug/l	1.73	11,201.92	9.101E-02	Pulse	0.50	3
Cu			1	20.802	ug/l	0.80	127,749.54	1.038E+00	Pulse	0.50	3
Zn			1	3.659	ug/l	2.01	3,659.69	1.979E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-791.68	3.33	1.803E-05	Pulse	0.50	3
Al			1	1.150	ug/l	14.65	287.33	1.678E-03	Pulse	1.00	3
Se			1	-0.004	ug/l	-1326.41	5.11	2.761E-05	Pulse	3.00	3
Sb			1	0.068	ug/l	15.44	195.33	1.057E-03	Pulse	1.00	3
Se			1	0.329	ug/l	17.79	14.00	7.571E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,231,491.33	0.55	82.8	Pulse	0.50	3
1	Sc		171,292.91	1.16	85.6	Pulse	0.30	3
1	Ge		123,071.25	0.65	83.1	Pulse	0.30	3
1	In		1,116,142.77	0.55	80.5	Pulse	0.30	3
1	Tb		4,193,138.75	1.05	84.7	Pulse	0.50	3
1	Lu		2,542,773.25	0.26	82.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		184,881.71	0.57	82.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		827.80	6.24	110.0	Pulse	0.30	3

Quantitation Report

File Name	069CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:38
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.343	ug/l	1.00	469,371.09	3.571E+00	Pulse	0.50	3
As			1	48.915	ug/l	1.01	45,907.81	3.493E-01	Pulse	1.00	3
Mo			1	49.236	ug/l	1.78	262,011.55	1.328E+00	Pulse	0.50	3
Pb			1	49.064	ug/l	0.87	1,400,642.75	4.046E-01	Pulse	1.00	3
Be			1	56.494	ug/l	1.90	2,575.50	1.435E-02	Pulse	2.00	3
Ag			1	50.179	ug/l	2.16	939,755.67	4.762E+00	Pulse	0.50	3
Ba			1	48.420	ug/l	1.12	85,178.91	7.103E-02	Pulse	0.50	3
Tl			1	50.346	ug/l	0.74	2,060,223.38	5.952E-01	Pulse	0.50	3
Sn			1	50.231	ug/l	1.22	216,988.44	1.810E-01	Pulse	0.30	3
Sr			1	48.834	ug/l	0.12	199,305.14	1.662E-01	Pulse	0.50	3
[Pb]			1	48.988	ug/l	0.37	655,954.85	1.895E-01	Pulse	0.50	3
Ca			1	4940.007	ug/l	1.91	104,064.75	5.798E-01	Pulse	0.50	3
Ti			1	49.719	ug/l	1.72	8,911.39	4.965E-02	Pulse	0.50	3
Na			1	5395.911	ug/l	1.30	6,122,884.67	3.412E+01	Analog	1.00	3
Mg			1	5300.343	ug/l	1.34	2,678,627.50	1.492E+01	Pulse	1.00	3
K			1	5068.564	ug/l	1.27	2,001,906.42	1.115E+01	Pulse	1.00	3
V			1	49.477	ug/l	1.44	336,755.69	1.876E+00	Pulse	0.50	3
Mn			1	50.031	ug/l	0.74	203,971.08	1.552E+00	Pulse	0.50	3
Fe			1	5220.225	ug/l	0.98	37,414,433.33	2.847E+02	Analog	0.50	3
Co			1	50.706	ug/l	0.95	806,353.71	6.135E+00	Pulse	0.50	3
Ni			1	50.717	ug/l	0.79	229,280.69	1.744E+00	Pulse	0.50	3
Cu			1	51.378	ug/l	0.95	643,603.23	4.897E+00	Pulse	0.50	3
Zn			1	50.615	ug/l	2.22	85,972.98	4.356E-01	Pulse	1.00	3
Cd			1	50.062	ug/l	2.04	120,947.26	6.128E-01	Pulse	0.50	3
Al			1	5054.748	ug/l	1.73	772,901.69	4.306E+00	Pulse	1.00	3
Se			1	49.077	ug/l	1.60	2,957.57	1.498E-02	Pulse	3.00	3
Sb			1	48.683	ug/l	1.76	259,403.71	1.314E+00	Pulse	1.00	3
Se			1	48.882	ug/l	0.29	1,466.39	7.429E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,461,375.00	0.27	88.7	Pulse	0.50	3
1	Sc		179,492.79	1.00	89.7	Pulse	0.30	3
1	Ge		131,442.91	1.13	88.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,199,055.30	0.75	86.5	Pulse	0.30	3
1	Tb		4,430,839.83	0.89	89.5	Pulse	0.50	3
1	Lu		2,719,896.83	0.76	88.0	Pulse	0.50	3
1	Ge		197,398.23	1.39	88.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		775.57	4.39	103.1	Pulse	0.30	3

Quantitation Report

File Name	070_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:42
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.746	ug/l	0.77	939,528.52	7.141E+00	Pulse	0.50	3
As			1	97.659	ug/l	0.64	91,735.06	6.972E-01	Pulse	1.00	3
Mo			1	99.423	ug/l	0.83	527,354.25	2.680E+00	Pulse	0.50	3
Pb			1	99.076	ug/l	1.09	2,774,354.33	8.170E-01	Pulse	1.00	3
Be			1	108.879	ug/l	1.55	5,063.97	2.766E-02	Pulse	2.00	3
Ag			1	98.610	ug/l	0.73	1,840,945.92	9.357E+00	Pulse	0.50	3
Ba			1	97.160	ug/l	1.15	170,538.03	1.425E-01	Pulse	0.50	3
Tl			1	101.395	ug/l	0.42	4,070,751.75	1.199E+00	Pulse	0.50	3
Sn			1	99.612	ug/l	1.39	429,138.47	3.587E-01	Pulse	0.30	3
Sr			1	98.125	ug/l	1.12	399,184.54	3.336E-01	Pulse	0.50	3
[Pb]			1	98.440	ug/l	1.03	1,292,945.66	3.807E-01	Pulse	0.50	3
Ca			1	9681.637	ug/l	0.98	208,016.54	1.136E+00	Pulse	0.50	3
Ti			1	96.567	ug/l	1.06	17,657.31	9.643E-02	Pulse	0.50	3
Na			1	10518.450	ug/l	0.41	12,167,636.00	6.645E+01	Analog	1.00	3
Mg			1	10397.822	ug/l	0.17	5,360,800.83	2.928E+01	Analog	1.00	3
K			1	9951.177	ug/l	0.22	3,996,580.92	2.183E+01	Pulse	1.00	3
V			1	97.526	ug/l	0.94	676,966.23	3.697E+00	Pulse	0.50	3
Mn			1	100.013	ug/l	1.44	407,923.48	3.101E+00	Pulse	0.50	3
Fe			1	10327.673	ug/l	0.49	74,093,181.33	5.631E+02	Analog	0.50	3
Co			1	100.407	ug/l	0.68	1,598,318.08	1.215E+01	Pulse	0.50	3
Ni			1	100.500	ug/l	1.07	454,635.83	3.455E+00	Pulse	0.50	3
Cu			1	100.489	ug/l	1.08	1,252,732.34	9.521E+00	Pulse	0.50	3
Zn			1	100.614	ug/l	0.58	169,553.36	8.618E-01	Pulse	1.00	3
Cd			1	99.082	ug/l	0.28	238,628.76	1.213E+00	Pulse	0.50	3
Al			1	9775.375	ug/l	0.70	1,524,756.17	8.327E+00	Pulse	1.00	3
Se			1	96.892	ug/l	0.30	5,815.00	2.956E-02	Pulse	3.00	3
Sb			1	98.017	ug/l	0.96	520,583.69	2.646E+00	Pulse	1.00	3
Se			1	98.352	ug/l	0.58	2,930.67	1.490E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,396,000.17	0.28	87.0	Pulse	0.50	3
1	Sc		183,111.80	0.44	91.5	Pulse	0.30	3
1	Ge		131,576.12	1.00	88.9	Pulse	0.30	3
1	In		1,196,517.87	0.61	86.3	Pulse	0.30	3
1	Tb		4,403,087.33	0.41	88.9	Pulse	0.50	3
1	Lu		2,719,147.75	0.63	88.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		196,750.45	1.20	87.8	Pulse	0.30	3
1	Te		3.33	124.90		Pulse	0.50	3
1	Li		801.13	9.28	106.5	Pulse	0.30	3

Quantitation Report

File Name	071_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:46
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.019	ug/l	35.59	917.36	7.055E-03	Pulse	0.50	3
As			1	0.020	ug/l	28.07	33.33	2.563E-04	Pulse	1.00	3
Mo			1	0.132	ug/l	19.15	730.02	3.730E-03	Pulse	0.50	3
Pb			1	0.037	ug/l	28.32	1,593.08	4.623E-04	Pulse	1.00	3
Be			1	0.022	ug/l	132.17	1.00	5.517E-06	Pulse	2.00	3
Ag			1	0.025	ug/l	45.82	492.01	2.517E-03	Pulse	0.50	3
Ba			1	0.017	ug/l	45.07	41.33	3.459E-05	Pulse	0.50	3
Tl			1	0.025	ug/l	34.16	1,114.71	3.237E-04	Pulse	0.50	3
Sn			1	0.085	ug/l	21.80	606.68	5.073E-04	Pulse	0.30	3
Sr			1	0.013	ug/l	102.93	474.01	3.965E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	25.99	735.35	2.134E-04	Pulse	0.50	3
Ca			1	1.301	ug/l	101.47	96.00	5.295E-04	Pulse	0.50	3
Ti			1	0.026	ug/l	129.80	5.33	2.946E-05	Pulse	0.50	3
Na			1	2.500	ug/l	33.40	12,759.74	7.035E-02	Pulse	1.00	3
Mg			1	1.734	ug/l	41.62	1,143.37	6.308E-03	Pulse	1.00	3
K			1	3.113	ug/l	29.83	14,996.35	8.267E-02	Pulse	1.00	3
V			1	0.009	ug/l	73.70	314.67	1.735E-03	Pulse	0.50	3
Mn			1	-0.017	ug/l	-53.42	146.67	1.128E-03	Pulse	0.50	3
Fe			1	2.209	ug/l	27.48	20,712.84	1.593E-01	Pulse	0.50	3
Co			1	0.016	ug/l	39.18	316.00	2.431E-03	Pulse	0.50	3
Ni			1	0.003	ug/l	356.92	164.00	1.262E-03	Pulse	0.50	3
Cu			1	-0.016	ug/l	-80.18	7,432.12	5.715E-02	Pulse	0.50	3
Zn			1	-0.056	ug/l	-29.35	727.68	3.719E-03	Pulse	1.00	3
Cd			1	0.014	ug/l	77.36	38.67	1.978E-04	Pulse	0.50	3
Al			1	1.173	ug/l	71.50	396.34	2.187E-03	Pulse	1.00	3
Se			1	0.038	ug/l	32.37	7.78	3.977E-05	Pulse	3.00	3
Sb			1	0.034	ug/l	14.81	205.33	1.050E-03	Pulse	1.00	3
Se			1	0.005	ug/l	1723.63	10.11	5.166E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,448,285.08	0.59	88.3	Pulse	0.50	3
1	Sc		181,409.88	0.40	90.7	Pulse	0.30	3

Quantitation Report

1	Ge		130,052.23	0.35	87.8	Pulse	0.30	3
1	In		1,195,681.97	0.26	86.2	Pulse	0.30	3
1	Tb		4,354,634.17	0.48	88.0	Pulse	0.50	3
1	Lu		2,663,639.17	0.17	86.2	Pulse	0.50	3
1	Ge		195,639.90	0.46	87.3	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		793.35	12.88	105.5	Pulse	0.30	3

Quantitation Report

File Name	072SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:49
Sample Name	FA93641-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.106	ug/l	1.24	5,497.46	4.483E-02	Pulse	0.50	3
As			1	1424.124	ug/l	0.58	623,238.96	5.083E+00	Pulse	1.00	3
Mo			1	1.434	ug/l	4.17	3,560.35	1.950E-02	Pulse	0.50	3
Pb			1	0.059	ug/l	22.55	1,258.38	3.956E-04	Pulse	1.00	3
Be			1	0.094	ug/l	66.24	2.00	1.191E-05	Pulse	2.00	3
Ag			1	0.034	ug/l	30.74	318.67	1.748E-03	Pulse	0.50	3
Ba			1	48.474	ug/l	0.47	38,461.41	3.556E-02	Pulse	0.50	3
Tl			1	0.031	ug/l	45.57	678.68	2.135E-04	Pulse	0.50	3
Sn			1	0.560	ug/l	6.79	1,307.83	1.209E-03	Pulse	0.30	3
Sr			1	371.500	ug/l	0.21	682,726.65	6.313E-01	Pulse	0.50	3
[Pb]			1	0.052	ug/l	18.31	576.68	1.813E-04	Pulse	0.50	3
Ca			1	46396.469	ug/l	0.58	457,427.16	2.722E+00	Pulse	0.50	3
Ti			1	0.406	ug/l	30.15	34.67	2.063E-04	Pulse	0.50	3
Na			1	14100.086	ug/l	0.59	7,488,986.33	4.456E+01	Analog	1.00	3
Mg			1	7097.739	ug/l	0.69	1,679,634.79	9.993E+00	Pulse	1.00	3
K			1	8619.816	ug/l	0.34	1,596,045.00	9.496E+00	Pulse	1.00	3
V			1	0.565	ug/l	5.94	2,030.11	1.208E-02	Pulse	0.50	3
Mn			1	2089.968	ug/l	0.68	3,970,375.92	3.238E+01	Pulse	0.50	3
Fe			1	68286.663	ug/l	0.43	228,271,616.00	1.862E+03	Analog	0.50	3
Co			1	17.627	ug/l	1.21	130,805.73	1.067E+00	Pulse	0.50	3
Ni			1	6.558	ug/l	1.70	13,962.40	1.139E-01	Pulse	0.50	3
Cu			1	1.646	ug/l	2.00	16,691.89	1.361E-01	Pulse	0.50	3
Zn			1	2.813	ug/l	2.91	2,955.90	1.619E-02	Pulse	1.00	3
Cd			1	0.020	ug/l	36.35	26.67	1.463E-04	Pulse	0.50	3
Al			1	17.754	ug/l	24.32	1,470.73	8.748E-03	Pulse	1.00	3
Se			1	0.054	ug/l	83.79	6.67	3.645E-05	Pulse	3.00	3
Sb			1	0.130	ug/l	9.60	345.34	1.892E-03	Pulse	1.00	3
Se			1	0.417	ug/l	64.96	15.00	8.231E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,182,287.33	0.88	81.5	Pulse	0.50	3
1	Sc		168,077.55	0.17	84.0	Pulse	0.30	3
1	Ge		122,618.23	0.71	82.8	Pulse	0.30	3
1	In		1,081,547.74	0.97	78.0	Pulse	0.30	3
1	Tb		4,120,897.67	0.87	83.2	Pulse	0.50	3
1	Lu		2,516,999.00	1.13	81.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		182,593.80	1.30	81.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		823.35	14.69	109.5	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 12:53
Sample Name FA93641-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.923	ug/l	5.58	4,737.92	3.835E-02	Pulse	0.50	3
As			1	2799.520	ug/l	1.40	1,233,837.29	9.992E+00	Pulse	1.00	3
Mo			1	2.142	ug/l	3.96	5,324.78	2.905E-02	Pulse	0.50	3
Pb			1	0.072	ug/l	2.57	1,470.07	4.498E-04	Pulse	1.00	3
Be			1	0.046	ug/l	49.53	1.00	5.849E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	39.90	132.67	7.259E-04	Pulse	0.50	3
Ba			1	12.459	ug/l	2.44	10,122.19	9.148E-03	Pulse	0.50	3
Tl			1	0.010	ug/l	7.86	283.33	8.674E-05	Pulse	0.50	3
Sn			1	0.274	ug/l	17.01	768.91	6.950E-04	Pulse	0.30	3
Sr			1	158.133	ug/l	0.39	297,495.81	2.689E-01	Pulse	0.50	3
[Pb]			1	0.062	ug/l	23.42	657.35	2.014E-04	Pulse	0.50	3
Ca			1	22071.594	ug/l	0.41	221,311.43	1.295E+00	Pulse	0.50	3
Ti			1	0.469	ug/l	42.91	40.67	2.377E-04	Pulse	0.50	3
Na			1	5840.852	ug/l	0.62	3,160,022.00	1.849E+01	Pulse	1.00	3
Mg			1	2881.658	ug/l	0.52	693,609.62	4.058E+00	Pulse	1.00	3
K			1	3421.756	ug/l	0.55	652,078.33	3.815E+00	Pulse	1.00	3
V			1	0.223	ug/l	1.77	958.03	5.605E-03	Pulse	0.50	3
Mn			1	2285.049	ug/l	0.92	4,371,859.83	3.540E+01	Pulse	0.50	3
Fe			1	38435.336	ug/l	1.12	129,401,805.33	1.048E+03	Analog	0.50	3
Co			1	13.162	ug/l	1.60	98,386.57	7.967E-01	Pulse	0.50	3
Ni			1	5.814	ug/l	2.84	12,481.39	1.011E-01	Pulse	0.50	3
Cu			1	0.619	ug/l	7.45	10,837.08	8.776E-02	Pulse	0.50	3
Zn			1	1.492	ug/l	3.54	1,935.43	1.056E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	112.13	14.67	8.012E-05	Pulse	0.50	3
Al			1	6.455	ug/l	3.55	673.01	3.937E-03	Pulse	1.00	3
Se			1	0.086	ug/l	75.50	7.56	4.131E-05	Pulse	3.00	3
Sb			1	0.172	ug/l	5.74	449.68	2.452E-03	Pulse	1.00	3
Se			1	0.162	ug/l	62.63	11.56	6.305E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,267,984.00	1.30	83.7	Pulse	0.50	3
1	Sc		170,920.66	1.28	85.4	Pulse	0.30	3
1	Ge		123,497.15	1.17	83.4	Pulse	0.30	3
1	In		1,106,355.75	1.04	79.8	Pulse	0.30	3
1	Tb		4,156,757.67	0.94	84.0	Pulse	0.50	3
1	Lu		2,533,726.08	1.66	82.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		183,292.49	1.37	81.8	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		768.91	6.44	102.2	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 12:57
Sample Name	FA92740-1R
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.483	ug/l	1.31	7,232.03	5.820E-02	Pulse	0.50	3
As			1	0.810	ug/l	3.37	373.67	3.007E-03	Pulse	1.00	3
Mo			1	0.325	ug/l	9.85	838.69	4.556E-03	Pulse	0.50	3
Pb			1	0.152	ug/l	2.02	2,580.20	7.802E-04	Pulse	1.00	3
Be			1	0.030	ug/l	114.25	0.67	3.805E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	20.18	152.00	8.263E-04	Pulse	0.50	3
Ba			1	18.352	ug/l	0.33	15,172.38	1.347E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	34.47	121.33	3.668E-05	Pulse	0.50	3
Sn			1	0.325	ug/l	8.51	884.47	7.855E-04	Pulse	0.30	3
Sr			1	87.966	ug/l	1.01	168,661.49	1.497E-01	Pulse	0.50	3
[Pb]			1	0.150	ug/l	8.32	1,226.05	3.709E-04	Pulse	0.50	3
Ca			1	16457.436	ug/l	0.75	168,383.79	9.656E-01	Pulse	0.50	3
Ti			1	2.320	ug/l	15.32	202.67	1.162E-03	Pulse	0.50	3
Na			1	12339.050	ug/l	0.52	6,800,649.67	3.900E+01	Analog	1.00	3
Mg			1	1094.757	ug/l	0.60	268,991.37	1.543E+00	Pulse	1.00	3
K			1	2703.739	ug/l	0.63	528,474.29	3.031E+00	Pulse	1.00	3
V			1	0.972	ug/l	2.77	3,453.65	1.980E-02	Pulse	0.50	3
Mn			1	8.110	ug/l	2.78	15,819.13	1.273E-01	Pulse	0.50	3
Fe			1	191.263	ug/l	0.53	652,834.60	5.253E+00	Pulse	0.50	3
Co			1	0.151	ug/l	7.49	1,198.04	9.637E-03	Pulse	0.50	3
Ni			1	0.757	ug/l	5.10	1,759.42	1.416E-02	Pulse	0.50	3
Cu			1	0.170	ug/l	24.90	8,281.14	6.664E-02	Pulse	0.50	3
Zn			1	53.948	ug/l	0.42	43,092.25	2.341E-01	Pulse	1.00	3
Cd			1	0.021	ug/l	7.93	28.00	1.521E-04	Pulse	0.50	3
Al			1	279.886	ug/l	0.42	20,992.35	1.204E-01	Pulse	1.00	3
Se			1	0.267	ug/l	51.40	12.67	6.894E-05	Pulse	3.00	3
Sb			1	0.078	ug/l	11.83	218.67	1.187E-03	Pulse	1.00	3
Se			1	0.325	ug/l	20.07	13.89	7.542E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,306,952.67	0.97	84.7	Pulse	0.50	3
1	Sc		174,382.73	0.61	87.1	Pulse	0.30	3
1	Ge		124,277.75	0.79	83.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,126,444.37	1.48	81.2	Pulse	0.30	3
1	Tb		4,215,855.58	1.69	85.2	Pulse	0.50	3
1	Lu		2,554,411.42	1.36	82.6	Pulse	0.50	3
1	Ge		184,059.39	1.24	82.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		862.25	3.65	114.6	Pulse	0.30	3

Quantitation Report

File Name	075SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 13:01
Sample Name	FA92740-2R
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.378	ug/l	3.19	6,727.19	5.447E-02	Pulse	0.50	3
As			1	0.449	ug/l	15.73	212.67	1.720E-03	Pulse	1.00	3
Mo			1	0.377	ug/l	3.56	985.36	5.255E-03	Pulse	0.50	3
Pb			1	0.462	ug/l	2.16	6,757.01	2.057E-03	Pulse	1.00	3
Be			1	0.023	ug/l	100.60	0.50	2.913E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	10.66	141.33	7.547E-04	Pulse	0.50	3
Ba			1	18.031	ug/l	2.33	14,816.09	1.323E-02	Pulse	0.50	3
Tl			1	0.000	ug/l	-830.10	94.00	2.863E-05	Pulse	0.50	3
Sn			1	0.298	ug/l	5.93	825.58	7.373E-04	Pulse	0.30	3
Sr			1	86.701	ug/l	0.62	165,217.55	1.476E-01	Pulse	0.50	3
[Pb]			1	0.475	ug/l	2.25	3,285.00	9.999E-04	Pulse	0.50	3
Ca			1	16389.990	ug/l	0.93	165,861.43	9.616E-01	Pulse	0.50	3
Ti			1	2.533	ug/l	3.11	218.67	1.268E-03	Pulse	0.50	3
Na			1	12378.190	ug/l	0.33	6,747,625.17	3.912E+01	Analog	1.00	3
Mg			1	1090.163	ug/l	0.93	264,948.99	1.536E+00	Pulse	1.00	3
K			1	2829.064	ug/l	0.12	546,317.15	3.168E+00	Pulse	1.00	3
V			1	0.978	ug/l	1.85	3,435.65	1.992E-02	Pulse	0.50	3
Mn			1	7.579	ug/l	0.94	14,708.93	1.191E-01	Pulse	0.50	3
Fe			1	212.746	ug/l	0.93	721,199.84	5.839E+00	Pulse	0.50	3
Co			1	0.150	ug/l	4.58	1,182.04	9.572E-03	Pulse	0.50	3
Ni			1	0.677	ug/l	3.56	1,580.74	1.280E-02	Pulse	0.50	3
Cu			1	0.201	ug/l	15.31	8,412.53	6.811E-02	Pulse	0.50	3
Zn			1	45.538	ug/l	0.64	37,167.99	1.983E-01	Pulse	1.00	3
Cd			1	0.018	ug/l	71.65	24.00	1.288E-04	Pulse	0.50	3
Al			1	306.601	ug/l	5.90	22,731.95	1.318E-01	Pulse	1.00	3
Se			1	0.300	ug/l	27.85	13.89	7.396E-05	Pulse	3.00	3
Sb			1	0.083	ug/l	20.29	236.00	1.257E-03	Pulse	1.00	3
Se			1	0.513	ug/l	24.40	16.78	8.960E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,285,083.25	0.52	84.1	Pulse	0.50	3
1	Sc		172,473.45	0.95	86.2	Pulse	0.30	3
1	Ge		123,521.77	1.03	83.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,119,437.32	0.82	80.7	Pulse	0.30	3
1	Tb		4,213,398.92	1.57	85.1	Pulse	0.50	3
1	Lu		2,564,366.83	1.04	83.0	Pulse	0.50	3
1	Ge		187,451.06	1.60	83.6	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		765.58	6.34	101.8	Pulse	0.30	3

Quantitation Report

File Name 076SMPL.d
File Path D:\2022\xa030822m2.b
Method File
Method Path
Acq Time 3/8/2022 13:05
Sample Name FA92740-4R
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 3/8/2022 10:19
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.570	ug/l	1.60	7,538.15	6.127E-02	Pulse	0.50	3
As			1	0.385	ug/l	22.75	183.33	1.491E-03	Pulse	1.00	3
Mo			1	0.284	ug/l	5.40	743.35	3.999E-03	Pulse	0.50	3
Pb			1	0.112	ug/l	11.51	1,989.79	6.154E-04	Pulse	1.00	3
Be			1	0.023	ug/l	100.70	0.50	2.884E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	41.29	101.33	5.464E-04	Pulse	0.50	3
Ba			1	77.409	ug/l	0.66	63,996.44	5.678E-02	Pulse	0.50	3
Tl			1	0.000	ug/l	414.56	101.33	3.137E-05	Pulse	0.50	3
Sn			1	0.205	ug/l	20.31	643.35	5.703E-04	Pulse	0.30	3
Sr			1	132.641	ug/l	0.45	254,276.78	2.256E-01	Pulse	0.50	3
[Pb]			1	0.113	ug/l	8.38	971.37	3.003E-04	Pulse	0.50	3
Ca			1	28315.313	ug/l	0.12	289,199.68	1.661E+00	Pulse	0.50	3
Ti			1	8.815	ug/l	9.67	767.36	4.405E-03	Pulse	0.50	3
Na			1	15546.592	ug/l	1.06	8,551,879.33	4.912E+01	Analog	1.00	3
Mg			1	141.498	ug/l	0.40	34,928.31	2.006E-01	Pulse	1.00	3
K			1	1409.276	ug/l	0.74	281,338.34	1.616E+00	Pulse	1.00	3
V			1	1.267	ug/l	2.47	4,419.18	2.538E-02	Pulse	0.50	3
Mn			1	0.886	ug/l	9.02	1,892.10	1.538E-02	Pulse	0.50	3
Fe			1	108.280	ug/l	1.87	367,987.45	2.991E+00	Pulse	0.50	3
Co			1	0.061	ug/l	6.04	516.68	4.199E-03	Pulse	0.50	3
Ni			1	0.851	ug/l	2.51	1,942.10	1.579E-02	Pulse	0.50	3
Cu			1	7.032	ug/l	18.33	47,982.50	3.897E-01	Pulse	0.50	3
Zn			1	3.628	ug/l	2.00	3,653.69	1.966E-02	Pulse	1.00	3
Cd			1	0.006	ug/l	34.59	10.67	5.744E-05	Pulse	0.50	3
Al			1	430.146	ug/l	1.52	32,097.03	1.844E-01	Pulse	1.00	3
Se			1	0.125	ug/l	77.68	8.78	4.731E-05	Pulse	3.00	3
Sb			1	0.061	ug/l	5.21	178.67	9.612E-04	Pulse	1.00	3
Se			1	0.323	ug/l	56.52	14.00	7.527E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,234,401.83	0.74	82.8	Pulse	0.50	3
1	Sc		174,107.41	1.05	87.0	Pulse	0.30	3
1	Ge		123,031.25	0.65	83.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,127,089.36	1.08	81.3	Pulse	0.30	3
1	Tb		4,181,464.42	0.55	84.5	Pulse	0.50	3
1	Lu		2,542,960.33	1.22	82.3	Pulse	0.50	3
1	Ge		185,819.53	0.99	82.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		800.02	6.50	106.4	Pulse	0.30	3

Quantitation Report

File Name	077SMPL.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 13:08
Sample Name	FA92740-5R
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.873	ug/l	0.33	8,786.66	7.201E-02	Pulse	0.50	3
As			1	0.594	ug/l	7.11	273.33	2.238E-03	Pulse	1.00	3
Mo			1	0.149	ug/l	9.13	400.01	2.181E-03	Pulse	0.50	3
Pb			1	0.153	ug/l	4.00	2,577.54	7.826E-04	Pulse	1.00	3
Be			1	0.016	ug/l	173.21	0.33	1.983E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	12.10	115.33	6.298E-04	Pulse	0.50	3
Ba			1	4.976	ug/l	3.91	4,064.47	3.659E-03	Pulse	0.50	3
Tl			1	0.000	ug/l	622.23	98.67	3.000E-05	Pulse	0.50	3
Sn			1	0.275	ug/l	24.71	773.36	6.958E-04	Pulse	0.30	3
Sr			1	2.492	ug/l	1.03	5,094.04	4.586E-03	Pulse	0.50	3
[Pb]			1	0.147	ug/l	6.45	1,203.39	3.652E-04	Pulse	0.50	3
Ca			1	361.666	ug/l	1.73	3,717.03	2.159E-02	Pulse	0.50	3
Ti			1	8.718	ug/l	3.77	750.02	4.356E-03	Pulse	0.50	3
Na			1	10401.129	ug/l	1.35	5,662,739.50	3.288E+01	Analog	1.00	3
Mg			1	252.208	ug/l	2.35	61,394.60	3.565E-01	Pulse	1.00	3
K			1	1964.592	ug/l	1.48	382,773.05	2.223E+00	Pulse	1.00	3
V			1	1.540	ug/l	4.46	5,266.73	3.056E-02	Pulse	0.50	3
Mn			1	2.379	ug/l	0.32	4,699.25	3.852E-02	Pulse	0.50	3
Fe			1	489.146	ug/l	0.78	1,631,772.04	1.337E+01	Pulse	0.50	3
Co			1	0.074	ug/l	2.02	612.68	5.020E-03	Pulse	0.50	3
Ni			1	0.668	ug/l	9.96	1,543.40	1.263E-02	Pulse	0.50	3
Cu			1	0.288	ug/l	6.84	8,808.70	7.219E-02	Pulse	0.50	3
Zn			1	16.181	ug/l	0.35	13,406.99	7.316E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	117.74	9.33	5.142E-05	Pulse	0.50	3
Al			1	647.316	ug/l	1.54	47,674.36	2.769E-01	Pulse	1.00	3
Se			1	0.258	ug/l	58.59	12.44	6.753E-05	Pulse	3.00	3
Sb			1	0.054	ug/l	28.75	159.00	8.653E-04	Pulse	1.00	3
Se			1	0.891	ug/l	30.17	21.67	1.181E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,293,979.83	3.07	84.4	Pulse	0.50	3
1	Sc		172,218.74	2.35	86.1	Pulse	0.30	3
1	Ge		122,005.58	2.66	82.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,110,682.97	2.84	80.1	Pulse	0.30	3
1	Tb		4,174,955.08	3.13	84.3	Pulse	0.50	3
1	Lu		2,528,508.50	3.28	81.8	Pulse	0.50	3
1	Ge		183,248.99	2.72	81.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		711.13	3.39	94.5	Pulse	0.30	3

Quantitation Report

File Name	078CCVA.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 13:12
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.216	ug/l	0.86	476,105.30	3.562E+00	Pulse	0.50	3
As			1	48.531	ug/l	0.12	46,315.46	3.465E-01	Pulse	1.00	3
Mo			1	49.165	ug/l	0.98	263,771.00	1.326E+00	Pulse	0.50	3
Pb			1	49.125	ug/l	1.39	1,390,666.46	4.051E-01	Pulse	1.00	3
Be			1	55.547	ug/l	1.14	2,598.67	1.411E-02	Pulse	2.00	3
Ag			1	49.898	ug/l	0.15	942,154.44	4.735E+00	Pulse	0.50	3
Ba			1	47.735	ug/l	0.64	84,073.07	7.003E-02	Pulse	0.50	3
Tl			1	50.761	ug/l	0.87	2,059,888.12	6.001E-01	Pulse	0.50	3
Sn			1	49.659	ug/l	0.36	214,773.98	1.789E-01	Pulse	0.30	3
Sr			1	49.221	ug/l	0.42	201,130.95	1.675E-01	Pulse	0.50	3
[Pb]			1	49.187	ug/l	0.49	653,128.04	1.903E-01	Pulse	0.50	3
Ca			1	4848.419	ug/l	0.70	104,807.97	5.691E-01	Pulse	0.50	3
Ti			1	48.941	ug/l	2.54	9,000.76	4.887E-02	Pulse	0.50	3
Na			1	5332.723	ug/l	0.33	6,209,536.33	3.372E+01	Analog	1.00	3
Mg			1	5213.652	ug/l	1.39	2,703,612.33	1.468E+01	Pulse	1.00	3
K			1	5008.292	ug/l	0.33	2,029,992.42	1.102E+01	Pulse	1.00	3
V			1	48.853	ug/l	1.05	341,202.05	1.853E+00	Pulse	0.50	3
Mn			1	49.608	ug/l	0.84	205,656.02	1.539E+00	Pulse	0.50	3
Fe			1	5190.413	ug/l	1.11	37,828,346.67	2.830E+02	Analog	0.50	3
Co			1	50.455	ug/l	1.21	815,896.92	6.105E+00	Pulse	0.50	3
Ni			1	50.305	ug/l	0.67	231,245.04	1.730E+00	Pulse	0.50	3
Cu			1	50.629	ug/l	0.90	645,019.50	4.826E+00	Pulse	0.50	3
Zn			1	50.597	ug/l	1.19	86,648.70	4.355E-01	Pulse	1.00	3
Cd			1	49.634	ug/l	1.21	120,896.07	6.076E-01	Pulse	0.50	3
Al			1	4970.770	ug/l	1.28	779,925.29	4.235E+00	Pulse	1.00	3
Se			1	48.704	ug/l	1.13	2,958.89	1.487E-02	Pulse	3.00	3
Sb			1	48.428	ug/l	0.28	260,145.96	1.307E+00	Pulse	1.00	3
Se			1	48.886	ug/l	1.64	1,478.28	7.429E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,432,534.42	0.41	87.9	Pulse	0.50	3
1	Sc		184,173.55	0.75	92.0	Pulse	0.30	3
1	Ge		133,654.71	0.65	90.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,200,545.33	0.46	86.6	Pulse	0.30	3
1	Tb		4,408,393.17	0.22	89.1	Pulse	0.50	3
1	Lu		2,720,267.83	0.38	88.0	Pulse	0.50	3
1	Ge		198,980.30	0.42	88.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		850.02	11.65	113.0	Pulse	0.30	3

Quantitation Report

File Name	079_CCV.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 13:16
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.953	ug/l	0.56	935,859.75	7.156E+00	Pulse	0.50	3
As			1	98.455	ug/l	0.33	91,926.94	7.029E-01	Pulse	1.00	3
Mo			1	97.676	ug/l	0.96	522,154.96	2.633E+00	Pulse	0.50	3
Pb			1	98.470	ug/l	0.80	2,736,421.50	8.120E-01	Pulse	1.00	3
Be			1	109.114	ug/l	1.47	5,025.46	2.772E-02	Pulse	2.00	3
Ag			1	97.880	ug/l	0.81	1,841,670.67	9.288E+00	Pulse	0.50	3
Ba			1	98.125	ug/l	0.86	170,451.82	1.439E-01	Pulse	0.50	3
Tl			1	101.501	ug/l	0.95	4,043,969.08	1.200E+00	Pulse	0.50	3
Sn			1	99.824	ug/l	1.05	425,607.13	3.594E-01	Pulse	0.30	3
Sr			1	98.980	ug/l	0.90	398,519.60	3.365E-01	Pulse	0.50	3
[Pb]			1	98.565	ug/l	1.17	1,284,741.00	3.812E-01	Pulse	0.50	3
Ca			1	9840.241	ug/l	1.26	209,364.28	1.155E+00	Pulse	0.50	3
Ti			1	99.111	ug/l	2.28	17,945.57	9.897E-02	Pulse	0.50	3
Na			1	10652.187	ug/l	1.10	12,202,278.00	6.729E+01	Analog	1.00	3
Mg			1	10537.059	ug/l	1.32	5,379,608.33	2.967E+01	Analog	1.00	3
K			1	10033.434	ug/l	0.70	3,990,295.75	2.201E+01	Pulse	1.00	3
V			1	98.070	ug/l	1.10	674,125.96	3.718E+00	Pulse	0.50	3
Mn			1	99.826	ug/l	0.67	404,755.32	3.095E+00	Pulse	0.50	3
Fe			1	10460.291	ug/l	0.30	74,595,784.00	5.704E+02	Analog	0.50	3
Co			1	100.406	ug/l	0.43	1,588,734.13	1.215E+01	Pulse	0.50	3
Ni			1	100.574	ug/l	0.14	452,264.44	3.458E+00	Pulse	0.50	3
Cu			1	100.698	ug/l	0.15	1,247,804.42	9.541E+00	Pulse	0.50	3
Zn			1	99.608	ug/l	0.86	169,181.02	8.532E-01	Pulse	1.00	3
Cd			1	97.458	ug/l	0.96	236,552.09	1.193E+00	Pulse	0.50	3
Al			1	9914.083	ug/l	1.55	1,531,301.58	8.445E+00	Pulse	1.00	3
Se			1	97.410	ug/l	1.83	5,891.80	2.971E-02	Pulse	3.00	3
Sb			1	96.134	ug/l	1.40	514,572.81	2.595E+00	Pulse	1.00	3
Se			1	96.696	ug/l	1.91	2,904.11	1.465E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,370,145.25	0.39	86.3	Pulse	0.50	3
1	Sc		181,337.42	0.76	90.6	Pulse	0.30	3
1	Ge		130,786.25	0.46	88.3	Pulse	0.30	3
1	In		1,184,183.71	0.26	85.4	Pulse	0.30	3
1	Tb		4,386,107.67	0.42	88.6	Pulse	0.50	3
1	Lu		2,713,319.58	0.57	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		198,291.00	0.61	88.5	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		756.69	5.29	100.6	Pulse	0.30	3

Quantitation Report

File Name	080_CCB.d
File Path	D:\2022\xa030822m2.b
Method File	
Method Path	
Acq Time	3/8/2022 13:20
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	3/8/2022 10:19
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.007	ug/l	61.04	810.02	6.207E-03	Pulse	0.50	3
As			1	0.025	ug/l	25.11	38.33	2.937E-04	Pulse	1.00	3
Mo			1	0.117	ug/l	18.51	650.02	3.337E-03	Pulse	0.50	3
Pb			1	0.029	ug/l	24.05	1,343.39	3.913E-04	Pulse	1.00	3
Be			1	0.018	ug/l	91.55	0.83	4.578E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	17.58	294.00	1.508E-03	Pulse	0.50	3
Ba			1	0.002	ug/l	254.35	14.67	1.238E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	15.21	631.35	1.839E-04	Pulse	0.50	3
Sn			1	0.086	ug/l	11.83	604.46	5.091E-04	Pulse	0.30	3
Sr			1	0.004	ug/l	73.83	435.34	3.667E-04	Pulse	0.50	3
[Pb]			1	0.026	ug/l	27.24	620.01	1.806E-04	Pulse	0.50	3
Ca			1	-0.043	ug/l	-1745.41	67.33	3.718E-04	Pulse	0.50	3
Ti			1	0.008	ug/l	248.85	2.00	1.115E-05	Pulse	0.50	3
Na			1	-0.028	ug/l	-1697.54	9,845.76	5.439E-02	Pulse	1.00	3
Mg			1	0.779	ug/l	66.54	654.35	3.621E-03	Pulse	1.00	3
K			1	1.656	ug/l	32.97	14,390.90	7.949E-02	Pulse	1.00	3
V			1	0.004	ug/l	194.43	275.33	1.522E-03	Pulse	0.50	3
Mn			1	-0.022	ug/l	-17.91	127.33	9.755E-04	Pulse	0.50	3
Fe			1	1.361	ug/l	31.59	14,759.80	1.131E-01	Pulse	0.50	3
Co			1	0.007	ug/l	73.67	185.33	1.420E-03	Pulse	0.50	3
Ni			1	-0.005	ug/l	-131.76	126.67	9.706E-04	Pulse	0.50	3
Cu			1	-0.003	ug/l	-574.13	7,618.19	5.837E-02	Pulse	0.50	3
Zn			1	-0.059	ug/l	-61.63	719.68	3.695E-03	Pulse	1.00	3
Cd			1	0.012	ug/l	14.65	32.67	1.677E-04	Pulse	0.50	3
Al			1	0.336	ug/l	233.26	266.33	1.474E-03	Pulse	1.00	3
Se			1	0.019	ug/l	250.22	6.67	3.420E-05	Pulse	3.00	3
Sb			1	0.024	ug/l	29.12	150.33	7.711E-04	Pulse	1.00	3
Se			1	0.018	ug/l	521.20	10.45	5.359E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,435,061.50	0.70	88.0	Pulse	0.50	3
1	Sc		181,059.23	0.87	90.5	Pulse	0.30	3

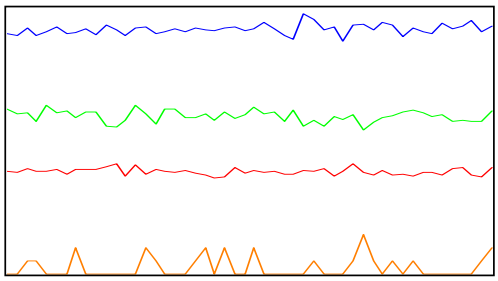
Quantitation Report

1	Ge		130,513.13	0.28	88.1	Pulse	0.30	3
1	In		1,186,998.74	0.44	85.6	Pulse	0.30	3
1	Tb		4,324,984.67	1.16	87.4	Pulse	0.50	3
1	Lu		2,654,537.17	0.51	85.9	Pulse	0.50	3
1	Ge		194,837.82	0.40	86.9	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		840.02	6.78	111.7	Pulse	0.30	3

Tune Report

Batch Folder D:\2022\xa030822m1.b
Acq. Date-Time 3/8/2022 7:50
Report Comment 0308
Instrument Name G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	1920	19196.44	5000.00	
89	2000	1183	11827.88	5000.00	
205	5000	4585	45850.45	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

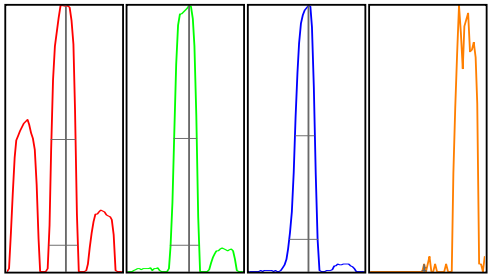
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.30	5.00	
89	3.70	5.00	
205	2.09	5.00	
78	157.79		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.00	2	
89	0.30	2	
205	0.50	2	
78	0.00	5	

Ratio 156/140 0.537 %
Ratio 70/140 2.613 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1912.76	59.05	58.9 - 59.1		0.61	0.750	0.900	
89	1168.67	89.10	88.9 - 89.1		0.57	0.725	0.900	
205	4671.07	205.05	204.9 - 205.1		0.49	0.724	0.900	
78	1.00	77.95	-		0.05	0.090		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.90 L/min	Makeup/Dilution Gas	0.20 L/min
Option Gas	0.0 %		

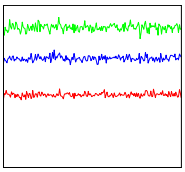
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-32 V
Extract 2	-180.0 V	Cell Exit	-70 V
Omega Bias	-100 V	Deflect	2.0 V
Omega Lens	8.4 V	Plate Bias	-60 V

Cell Parameters

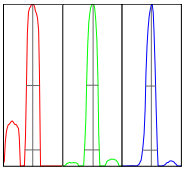
Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance

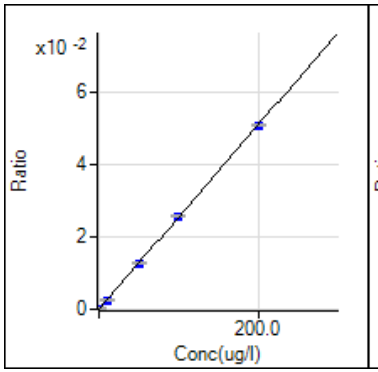


Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2239.56	8627.32	6724.51
RSD%	2.8	2.4	2.3
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.12%	
Doubly Charged	70/140	4.44%	

Background			
Mass	7	89	205
Count	0.15	1.75	4.90



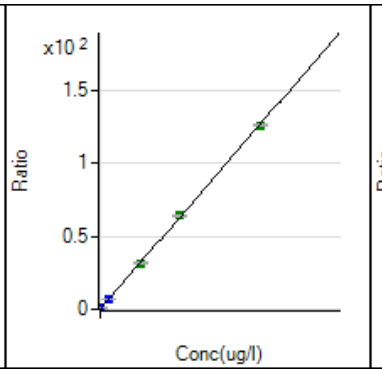
Resolution/Axis			
Mass	7	89	205
Height	2215	8745	6734
Axis	7.00	89.05	205.00
W-50%	0.66	0.56	0.49
W-10%	0.76	0.74	0.74
Integration Time	0.100 sec		
Acquisition Time	00:00:23		



9 Be [2] / ISTD: 45 Sc

y = 2.540E-4 x

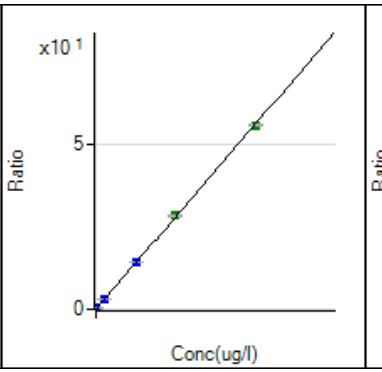
R	1.0000
DL	0
BEC	0



23 Na [2] / ISTD: 45 Sc

y = 6.312E-3 x + 5.457E-2

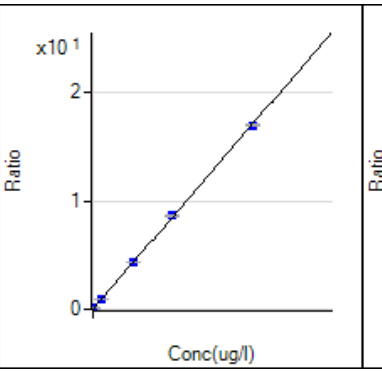
R	1.0000
DL	0.5933
BEC	8.645



24 Mg [2] / ISTD: 45 Sc

y = 2.815E-3 x + 1.426E-3

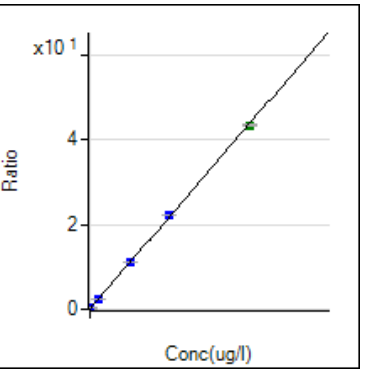
R	0.9999
DL	0.1066
BEC	0.5066



27 Al [2] / ISTD: 45 Sc

y = 8.517E-4 x + 1.188E-3

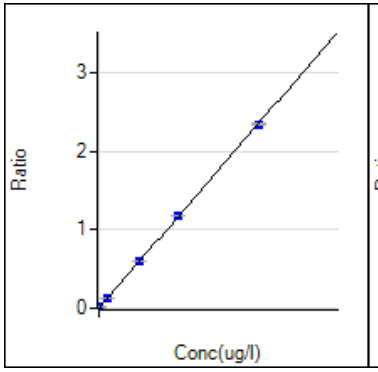
R	1.0000
DL	0.207
BEC	1.395



39 K [2] / ISTD: 45 Sc

y = 2.186E-3 x + 7.587E-2

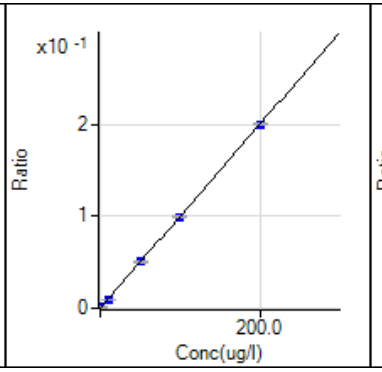
R	0.9999
DL	2.035
BEC	34.71



44 Ca [2] / ISTD: 45 Sc

y = 1.173E-4 x + 3.769E-4

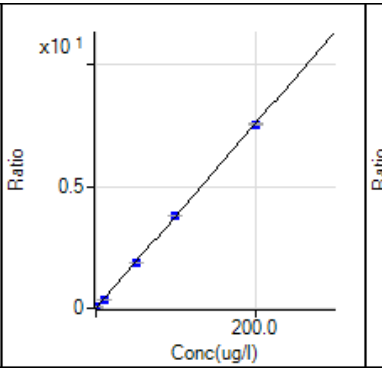
R	1.0000
DL	1.603
BEC	3.213



47 Ti [2] / ISTD: 45 Sc

y = 9.986E-4 x + 3.391E-6

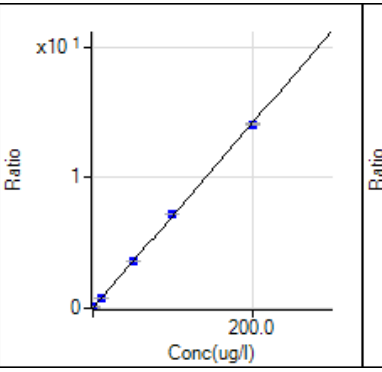
R	1.0000
DL	0.01764
BEC	0.003396



51 V [2] / ISTD: 45 Sc

y = 3.789E-2 x + 1.379E-3

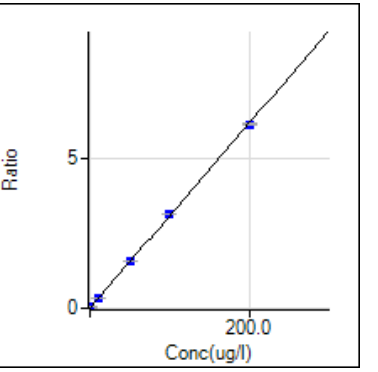
R	1.0000
DL	0.007611
BEC	0.0364



52 Cr [2] / ISTD: 72 Ge

y = 7.082E-2 x + 5.682E-3

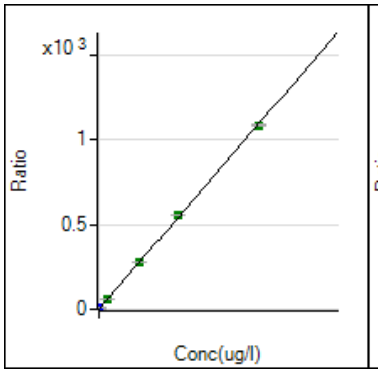
R	0.9999
DL	0.0135
BEC	0.08023



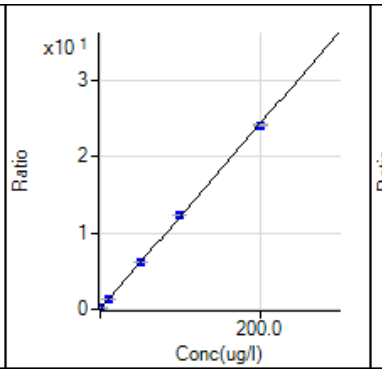
55 Mn [2] / ISTD: 72 Ge

y = 3.098E-2 x + 1.659E-3

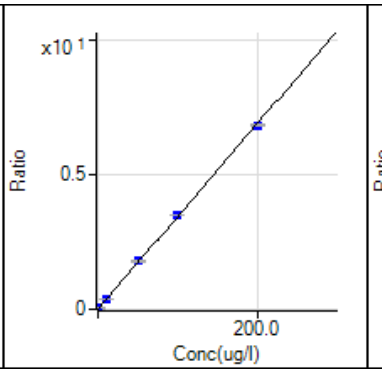
R	0.9999
DL	0.01403
BEC	0.05353



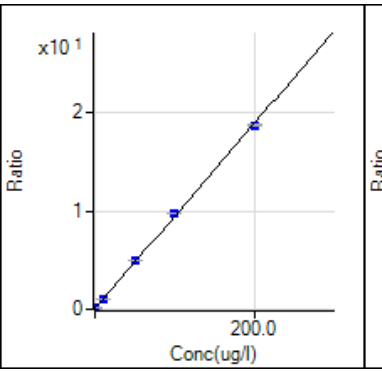
56 Fe [2] / ISTD: 72 Ge
y = 5.452E-2 x + 3.890E-2
R 1.0000
DL 0.1307
BEC 0.7135



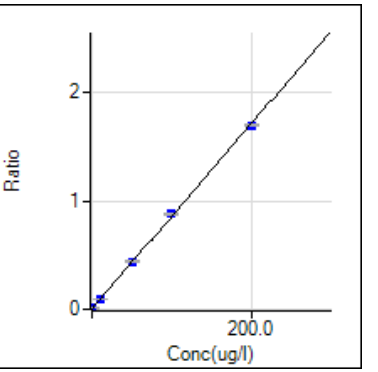
59 Co [2] / ISTD: 72 Ge
y = 1.210E-1 x + 5.213E-4
R 0.9999
DL 0.001433
BEC 0.004309



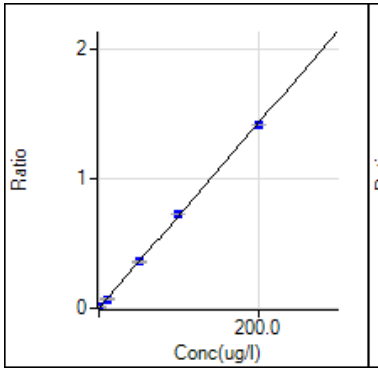
60 Ni [2] / ISTD: 72 Ge
y = 3.437E-2 x + 1.159E-3
R 0.9999
DL 0.01809
BEC 0.03373



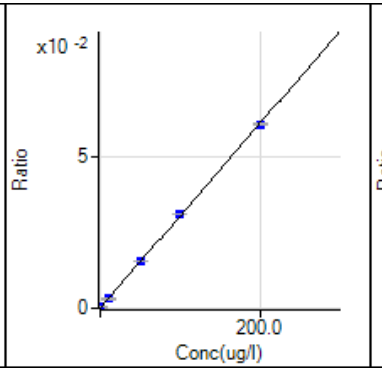
63 Cu [2] / ISTD: 72 Ge
y = 9.417E-2 x + 5.863E-2
R 0.9998
DL 0.07543
BEC 0.6226



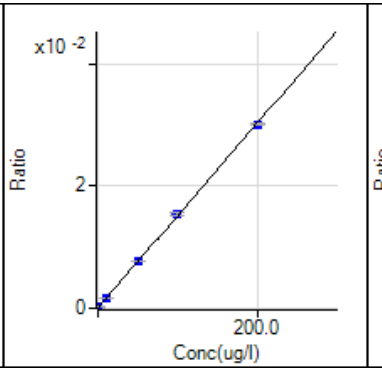
66 Zn [2] / ISTD: 74 Ge
y = 8.524E-3 x + 4.200E-3
R 0.9999
DL 0.05066
BEC 0.4928



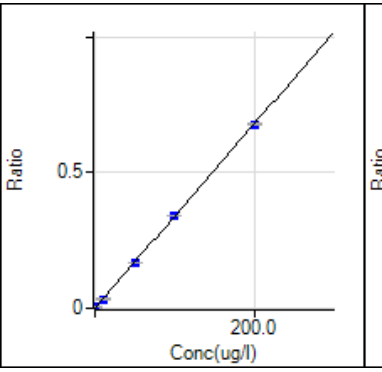
75 As [2] / ISTD: 72 Ge
y = 7.138E-3 x + 1.168E-4
R 0.9999
DL 0.02143
BEC 0.01637



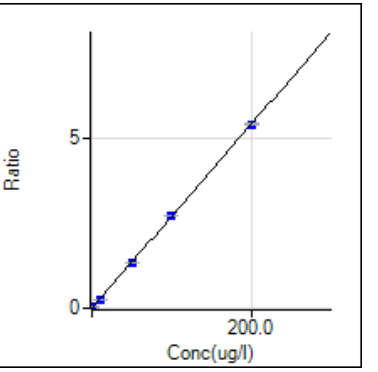
78 Se [2] / ISTD: 74 Ge
y = 3.047E-4 x + 2.827E-5
R 1.0000
DL 0.1396
BEC 0.09277



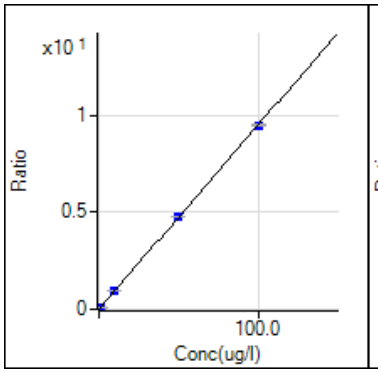
82 Se [2] / ISTD: 74 Ge
y = 1.509E-4 x + 5.086E-5
R 0.9999
DL 0.4079
BEC 0.337



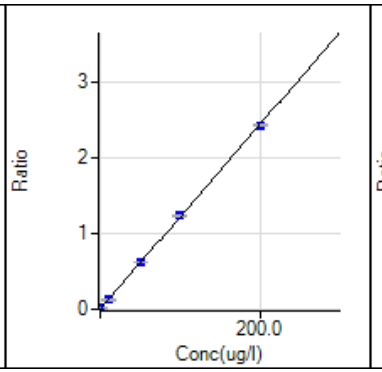
88 Sr [2] / ISTD: 115 In
y = 3.397E-3 x + 3.530E-4
R 1.0000
DL 0.01635
BEC 0.1039



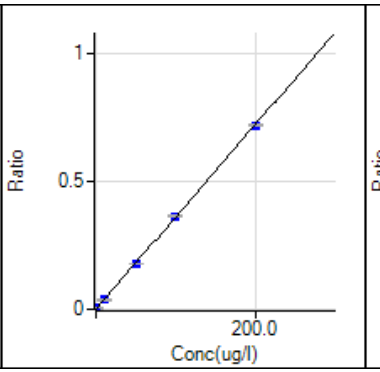
95 Mo [2] / ISTD: 74 Ge
y = 2.696E-2 x + 1.732E-4
R 1.0000
DL 0.005537
BEC 0.006426



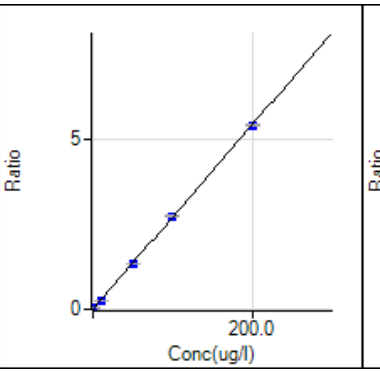
107 Ag [2] / ISTD: 74 Ge
y = 9.489E-2 x + 1.365E-4
R 1.0000
DL 0.0007415
BEC 0.001439



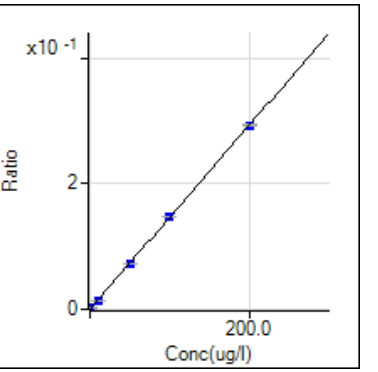
111 Cd [2] / ISTD: 74 Ge
y = 1.224E-2 x + 2.088E-5
R 1.0000
DL 0.003343
BEC 0.001706



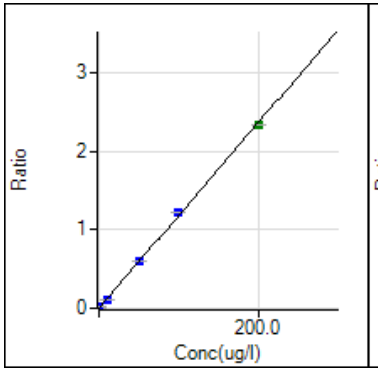
118 Sn [2] / ISTD: 115 In
y = 3.598E-3 x + 2.014E-4
R 1.0000
DL 0.02398
BEC 0.05598



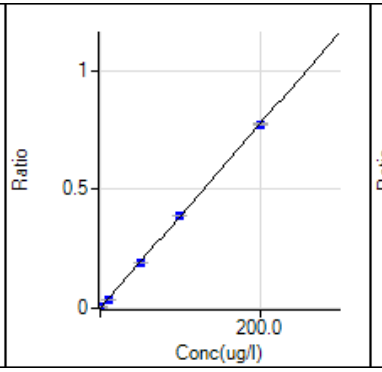
121 Sb [2] / ISTD: 74 Ge
y = 2.699E-2 x + 1.326E-4
R 1.0000
DL 0.003193
BEC 0.004914



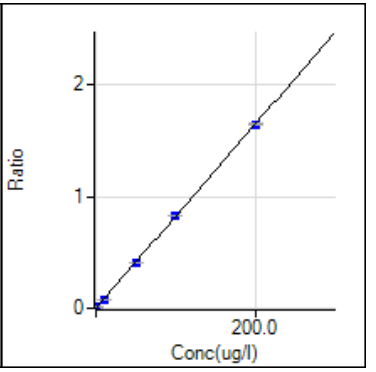
137 Ba [2] / ISTD: 115 In
y = 1.467E-3 x + 9.671E-6
R 1.0000
DL 0.007883
BEC 0.006593



205 Tl [2] / ISTD: 209 Bi
y = 1.182E-2 x + 2.923E-5
R 0.9998
DL 0.0008778
BEC 0.002473



206 [Pb] [2] / ISTD: 209 Bi
y = 3.867E-3 x + 8.153E-5
R 1.0000
DL 0.004557
BEC 0.02108



208 Pb [2] / ISTD: 209 Bi
y = 8.244E-3 x + 1.534E-4
R 1.0000
DL 0.000567
BEC 0.0186

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 3/11/2022 9:00:55 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0001**	**-.0050**	**-.0006**	**.0122**	**.0005**	**.0045**	**-.0014**	**-.0010**	**.0000**
Stddev	.0001	.0005	.0001	.0008	.0004	.0005	.0002	.0004	.000
%RSD	47.31	9.853	14.30	6.822	84.45	12.21	16.58	41.42	8683.
#1	-.0002	-.0045	-.0005	.0115	.0008	.0042	-.0017	-.0005	.0000
#2	-.0002	-.0054	-.0006	.0120	.0006	.0041	-.0014	-.0011	-.0001
#3	-.0001	-.0050	-.0006	.0131	.0000	.0051	-.0012	-.0014	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0124**	**.0005**	**-.0043**	**.0017**	**.0001**	**.0003**	**.0007**	**.0049**	**-.0013**
Stddev	.0001	.0001	.0022	.0010	.0005	.0000	.0001	.0007	.0002
%RSD	.9299	27.14	51.03	60.96	662.8	15.41	13.76	14.22	16.01
#1	.0124	.0006	-.0034	.0024	-.0004	.0003	.0006	.0053	-.0011
#2	.0125	.0007	-.0026	.0005	.0005	.0003	.0008	.0041	-.0015
#3	.0123	.0004	-.0068	.0022	.0001	.0003	.0007	.0053	-.0012

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0005**	**.0006**	**.0011**	**.0060**	**-.0002**	**.0007**	**.0005**	**-.0014**	**-.0008**
Stddev	.0007	.0001	.0001	.0004	.0003	.0010	.0001	.0004	.0001
%RSD	148.0	24.93	5.951	6.494	118.5	148.2	18.77	28.44	12.86
#1	-.0001	.0007	.0011	.0064	.0001	.0017	.0006	-.0014	-.0007
#2	-.0014	.0005	.0011	.0057	-.0002	.0006	.0004	-.0010	-.0008
#3	-.0001	.0005	.0010	.0058	-.0004	-.0003	.0005	-.0018	-.0010

Elem	Zn2062
Units	Cts/S
Avg	**.0009**
Stddev	.0001
%RSD	13.81
#1	.0009
#2	.0011
#3	.0008

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 3/11/2022 9:00:55 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**945.35**	**2190.7**	**33083.**	**8428.8**
Stddev	.90	2.3	85.	76.3
%RSD	.09534	.10391	.25823	.90550
#1	944.83	2192.9	33144.	8341.2
#2	944.82	2188.3	33119.	8464.2
#3	946.39	2191.0	32985.	8481.0

Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 3/11/2022 9:06:34 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0037**	**.0206**	**.0011**	**2.585**	**.0562**	**.3523**	**.0224**	**.1351**	**.0039**
Stddev	.0001	.0007	.0001	.007	.0003	.0006	.0002	.0005	.0001
%RSD	3.545	3.400	10.79	.2777	.5025	.1676	.7196	.3708	2.721
#1	.0038	.0208	.0010	2.582	.0562	.3520	.0225	.1348	.0040
#2	.0036	.0211	.0012	2.579	.0560	.3519	.0222	.1349	.0038
#3	.0038	.0198	.0012	2.593	.0565	.3530	.0225	.1357	.0039

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0316**	**.0540**	**1.177**	**.0301**	**.1438**	**.0319**	**.0435**	**4.414**	**.0681**
Stddev	.0001	.0004	.007	.0012	.0009	.0000	.0001	.012	.0000
%RSD	.3700	.7066	.5987	3.952	.6570	.0824	.2633	.2770	.0299
#1	.0315	.0538	1.173	.0314	.1440	.0318	.0433	4.411	.0681
#2	.0317	.0537	1.173	.0299	.1427	.0319	.0435	4.403	.0681
#3	.0317	.0544	1.186	.0291	.1446	.0318	.0435	4.427	.0680

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0046**	**.0015**	**.0021**	**.0194**	**.1767**	**.0151**	**.0010**	**.0302**	**.0471**
Stddev	.0008	.0002	.0001	.0001	.0007	.0001	.0006	.0002	.0002
%RSD	18.55	10.81	6.778	.5997	.3726	.7869	62.31	.6764	.4158
#1	.0036	.0016	.0021	.0193	.1770	.0150	.0007	.0302	.0472
#2	.0050	.0016	.0023	.0195	.1759	.0152	.0017	.0304	.0469
#3	.0051	.0013	.0020	.0195	.1771	.0152	.0006	.0300	.0473

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**936.31**	**2168.2**	**32853.**	**8376.8**
Stddev	1.12	4.2	113.	48.7
%RSD	.11950	.19174	.34519	.58108
#1	936.92	2169.6	32874.	8409.0
#2	937.00	2171.4	32731.	8400.7
#3	935.02	2163.5	32955.	8320.8

Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 3/11/2022 9:12:52 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0151**	**.6249**	**.0432**	**3.261**	**2.816**	**1.789**	**1.232**	**.6875**	**.0994**
Stddev	.0001	.0025	.0004	.009	.003	.002	.003	.0014	.0004
%RSD	.5192	.3973	.8305	.2595	.0930	.0836	.2708	.1994	.3822
#1	.0150	.6236	.0431	3.254	2.814	1.789	1.235	.6889	.0998
#2	.0151	.6233	.0429	3.260	2.816	1.790	1.229	.6861	.0990
#3	.0152	.6277	.0436	3.270	2.819	1.787	1.230	.6873	.0994

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1971**	**.9104**	**.5937**	**.7139**	**.1473**	**.5425**	**.2202**	**2.446**	**.4285**
Stddev	.0003	.0030	.0010	.0015	.0010	.0016	.0004	.008	.0012
%RSD	.1689	.3245	.1668	.2137	.6786	.2966	.1692	.3406	.2739
#1	.1968	.9103	.5943	.7124	.1474	.5443	.2198	2.437	.4298
#2	.1975	.9075	.5926	.7138	.1482	.5412	.2202	2.448	.4274
#3	.1971	.9134	.5943	.7155	.1462	.5419	.2205	2.453	.4284

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2408**	**.0631**	**.0336**	**.1400**	**.1011**	**4.484**	**.3669**	**.0753**	**.1559**
Stddev	.0005	.0004	.0003	.0004	.0003	.013	.0007	.0002	.0006
%RSD	.2021	.5750	.7611	.2503	.2579	.2930	.1889	.2842	.4149
#1	.2413	.0628	.0339	.1403	.1008	4.472	.3676	.0751	.1563
#2	.2407	.0631	.0334	.1396	.1013	4.482	.3662	.0753	.1561
#3	.2403	.0635	.0336	.1400	.1011	4.498	.3668	.0755	.1551

Elem	Zn2062
Units	Cts/S
Avg	**.5656**
Stddev	.0021
%RSD	.3725
#1	.5679
#2	.5637
#3	.5654

Zoom In Zoom Out

Sample Name: STDC Acquired: 3/11/2022 9:12:52 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**948.47**	**2203.4**	**33239.**	**8465.8**
Stddev	1.83	2.2	69.	20.5
%RSD	.19313	.09881	.20655	.24255
#1	949.80	2203.5	33176.	8483.4
#2	949.23	2205.5	33312.	8443.2
#3	946.38	2201.2	33228.	8470.7

Zoom In Zoom Out

Sample Name: STDD Acquired: 3/11/2022 9:16:36 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0300**	**1.247**	**.0860**	**6.439**	**5.530**	**3.468**	**2.430**	**1.364**	**.1968**
Stddev	.0002	.003	.0005	.006	.016	.016	.007	.003	.0001
%RSD	.5530	.2039	.5444	.0872	.2866	.4649	.2919	.2414	.0491
#1	.0299	1.250	.0865	6.438	5.520	3.451	2.438	1.368	.1967
#2	.0302	1.248	.0857	6.434	5.523	3.469	2.423	1.361	.1969
#3	.0300	1.245	.0857	6.445	5.549	3.484	2.429	1.364	.1967

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3823**	**1.787**	**1.176**	**1.400**	**.2854**	**1.071**	**.4408**	**4.782**	**.8494**
Stddev	.0005	.006	.005	.004	.0018	.000	.0018	.021	.0030
%RSD	.1355	.3469	.3880	.2588	.6232	.0361	.4111	.4279	.3567
#1	.3825	1.791	1.176	1.396	.2835	1.072	.4423	4.760	.8518
#2	.3817	1.780	1.171	1.401	.2855	1.071	.4388	4.787	.8460
#3	.3826	1.791	1.180	1.403	.2870	1.071	.4413	4.800	.8505

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4846**	**.1255**	**.0646**	**.2741**	**.2011**	**8.826**	**.7321**	**.1517**	**.3100**
Stddev	.0007	.0002	.0005	.0004	.0003	.033	.0018	.0005	.0004
%RSD	.1526	.1485	.7245	.1428	.1566	.3703	.2420	.2969	.1239
#1	.4853	.1257	.0646	.2743	.2014	8.804	.7341	.1520	.3098
#2	.4846	.1254	.0650	.2737	.2008	8.811	.7307	.1518	.3105
#3	.4839	.1254	.0641	.2743	.2011	8.864	.7316	.1511	.3098

Elem	Zn2062
Units	Cts/S
Avg	**1.108**
Stddev	.002
%RSD	.1462
#1	1.110
#2	1.107
#3	1.107

Zoom In Zoom Out

Sample Name: STDD Acquired: 3/11/2022 9:16:36 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**925.58**	**2168.6**	**32861.**	**8492.8**
Stddev	1.60	7.4	144.	25.3
%RSD	.17320	.33941	.43851	.29770
#1	923.74	2162.3	32808.	8515.5
#2	926.66	2176.7	32751.	8497.3
#3	926.35	2166.9	33024.	8465.6

Zoom In Zoom Out

Sample Name: STDE Acquired: 3/11/2022 9:20:11 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0605**	**2.478**	**.1750**	**12.95**	**11.05**	**6.783**	**4.863**	**2.723**	**.3923**
Stddev	.0004	.012	.0002	.05	.06	.054	.007	.001	.0005
%RSD	.6589	.4985	.1303	.3559	.5322	.7964	.1354	.0361	.1304
#1	.0608	2.492	.1747	13.00	11.12	6.845	4.862	2.722	.3926
#2	.0600	2.469	.1752	12.91	11.01	6.743	4.858	2.722	.3926
#3	.0606	2.472	.1750	12.93	11.02	6.762	4.871	2.724	.3917

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.7632**	**3.484**	**2.346**	**2.812**	**.5630**	**2.135**	**.8683**	**9.427**	**1.696**
Stddev	.0025	.013	.011	.014	.0060	.000	.0021	.043	.002
%RSD	.3324	.3664	.4472	.5114	1.073	.0167	.2447	.4531	.1442
#1	.7626	3.498	2.357	2.828	.5700	2.136	.8673	9.476	1.694
#2	.7610	3.473	2.342	2.801	.5588	2.135	.8668	9.398	1.694
#3	.7660	3.480	2.337	2.806	.5604	2.135	.8707	9.406	1.699

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9837**	**.2523**	**.1330**	**.4567**	**.4002**	**17.70**	**1.466**	**.3129**	**.6140**
Stddev	.0010	.0007	.0004	.0013	.0003	.08	.003	.0016	.0009
%RSD	.1043	.2619	.2676	.2876	.0719	.4415	.1833	.5203	.1540
#1	.9828	.2526	.1326	.4563	.4001	17.79	1.466	.3116	.6149
#2	.9848	.2516	.1330	.4555	.3999	17.65	1.463	.3147	.6141
#3	.9835	.2528	.1333	.4581	.4005	17.66	1.469	.3124	.6130

Elem	Zn2062
Units	Cts/S
Avg	**2.224**
Stddev	.005
%RSD	.2245
#1	2.224
#2	2.219
#3	2.229

Zoom In Zoom Out

Sample Name: STDE Acquired: 3/11/2022 9:20:11 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**919.91**	**2175.7**	**33020.**	**8531.4**
Stddev	2.31	3.7	78.	67.9
%RSD	.25138	.17073	.23557	.79633
#1	922.09	2178.2	32976.	8453.1
#2	917.48	2177.4	33110.	8574.6
#3	920.15	2171.4	32974.	8566.4

Zoom In Zoom Out

Sample Name: STDF Acquired: 3/11/2022 9:24:55 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1213**	**5.045**	**.3476**	**25.81**	**21.91**	**13.37**	**9.545**	**5.396**	**.7757**
Stddev	.0004	.004	.0005	.03	.03	.03	.004	.004	.0027
%RSD	.3213	.0844	.1568	.1319	.1593	.2370	.0456	.0682	.3439
#1	.1217	5.040	.3473	25.79	21.88	13.36	9.550	5.398	.7788
#2	.1210	5.048	.3483	25.85	21.90	13.34	9.544	5.397	.7747
#3	.1212	5.046	.3473	25.79	21.94	13.40	9.542	5.391	.7737

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.513**	**6.849**	**4.683**	**5.682**	**1.112**	**4.197**	**1.717**	**18.93**	**3.317**
Stddev	.002	.015	.007	.016	.004	.007	.002	.03	.002
%RSD	.1591	.2142	.1463	.2828	.3372	.1780	.1301	.1487	.0614
#1	1.516	6.840	4.678	5.671	1.109	4.206	1.716	18.91	3.315
#2	1.511	6.840	4.691	5.700	1.111	4.193	1.720	18.96	3.319
#3	1.512	6.866	4.680	5.674	1.116	4.192	1.716	18.93	3.317

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.001**	**.4991**	**.2546**	**.9178**	**.7889**	**34.61**	**2.918**	**.6307**	**1.223**
Stddev	.006	.0006	.0012	.0021	.0010	.37	.004	.0026	.002
%RSD	.3232	.1174	.4729	.2296	.1223	1.066	.1258	.4121	.1851
#1	2.008	.4984	.2550	.9178	.7878	34.79	2.922	.6279	1.225
#2	1.995	.4993	.2555	.9198	.7892	34.19	2.916	.6331	1.222
#3	2.001	.4995	.2532	.9156	.7897	34.87	2.915	.6311	1.221

Elem	Zn2062
Units	Cts/S
Avg	**4.322**
Stddev	.005
%RSD	.1198
#1	4.327
#2	4.317
#3	4.321

Zoom In Zoom Out

Sample Name: STDF Acquired: 3/11/2022 9:24:55 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**871.65**	**2124.1**	**32214.**	**8444.2**
Stddev	1.47	3.7	93.	17.5
%RSD	.16839	.17512	.28777	.20736
#1	870.09	2123.5	32109.	8432.2
#2	873.01	2120.8	32248.	8464.3
#3	871.84	2128.2	32285.	8436.1

Zoom In Zoom Out

Sample Name: STDG Acquired: 3/11/2022 9:28:25 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2490**	**10.30**	**.6922**	**51.01**	**42.37**	**26.77**	**18.60**	**10.60**	**1.507**
Stddev	.0005	.01	.0015	.42	.27	.11	.02	.02	.004
%RSD	.2108	.0988	.2213	.8237	.6291	.3939	.1186	.1622	.2449
#1	.2485	10.29	.6916	50.70	42.17	26.66	18.59	10.58	1.504
#2	.2490	10.30	.6940	51.49	42.67	26.88	18.63	10.62	1.506
#3	.2495	10.31	.6912	50.84	42.27	26.76	18.59	10.59	1.511

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.004**	**13.58**	**9.558**	**11.56**	**2.253**	**8.021**	**3.437**	**38.02**	**6.492**
Stddev	.002	.05	.039	.05	.013	.013	.011	.06	.015
%RSD	.0709	.3363	.4076	.4021	.5966	.1625	.3316	.1647	.2275
#1	3.002	13.54	9.519	11.52	2.242	8.006	3.435	37.97	6.490
#2	3.003	13.63	9.596	11.61	2.268	8.027	3.449	38.09	6.508
#3	3.006	13.55	9.558	11.56	2.250	8.031	3.426	38.00	6.479

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.056**	**.9939**	**.5039**	**1.547**	**1.573**	**69.00**	**5.782**	**1.272**	**2.420**
Stddev	.020	.0046	.0026	.007	.003	1.10	.006	.005	.005
%RSD	.4944	.4653	.5072	.4509	.1779	1.593	.1048	.3697	.1982
#1	4.054	.9911	.5028	1.545	1.572	68.27	5.776	1.275	2.415
#2	4.037	.9992	.5068	1.554	1.576	70.26	5.788	1.266	2.422
#3	4.077	.9912	.5021	1.541	1.571	68.46	5.780	1.273	2.424

Elem	Zn2062
Units	Cts/S
Avg	**8.378**
Stddev	.019
%RSD	.2292
#1	8.378
#2	8.358
#3	8.397

Zoom In Zoom Out

Sample Name: STDG Acquired: 3/11/2022 9:28:25 Type: Cal
Method: 60102007_COMBO_09222021(v387) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**816.34**	**2055.4**	**31632.**	**8288.3**
Stddev	1.53	8.6	31.	50.1
%RSD	.18792	.41880	.09781	.60432
#1	816.96	2058.7	31667.	8343.7
#2	817.46	2045.6	31615.	8246.2
#3	814.59	2061.8	31613.	8274.8

Zoom In Zoom Out

Sample Name: HSTD Acquired: 3/11/2022 9:33:22 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5068**	**81.20**	**3.999**	**3.924**	**3.937**	**79.56**	**3.937**	**3.962**	**3.921**
Stddev	.0007	.16	.010	.033	.029	.29	.006	.007	.003
%RSD	.1420	.2020	.2501	.8473	.7380	.3675	.1644	.1762	.0749
#1	.5074	81.37	4.003	3.960	3.905	79.86	3.944	3.970	3.922
#2	.5060	81.05	3.988	3.895	3.944	79.28	3.931	3.958	3.918
#3	.5069	81.18	4.007	3.916	3.962	79.54	3.935	3.958	3.923
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.998**	**79.26**	**80.81**	**4.036**	**80.05**	**3.870**	**4.011**	**80.35**	**3.953**
Stddev	.005	.28	.20	.015	.44	.005	.006	1.06	.004
%RSD	.1327	.3584	.2470	.3725	.5492	.1427	.1578	1.314	.0924
#1	4.004	79.45	81.05	4.044	80.42	3.872	4.011	81.56	3.957
#2	3.995	78.94	80.69	4.046	79.56	3.863	4.004	79.66	3.949
#3	3.995	79.40	80.70	4.019	80.18	3.874	4.017	79.82	3.954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.039**	**4.011**	**3.960**	**3.613**	**3.988**	**3.964**	**3.978**	**4.049**	**3.961**
Stddev	.012	.007	.017	.004	.006	.046	.003	.002	.003
%RSD	.2894	.1640	.4194	.1091	.1588	1.170	.0731	.0542	.0857
#1	4.053	4.006	3.978	3.616	3.996	3.959	3.981	4.052	3.963
#2	4.032	4.009	3.945	3.609	3.984	3.921	3.975	4.049	3.958
#3	4.034	4.019	3.957	3.615	3.985	4.013	3.979	4.047	3.964
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 3/11/2022 9:33:22 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**3.916**
Stddev	.006
%RSD	.1464
#1	3.921
#2	3.916
#3	3.909
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**816.07**	**2051.3**	**31722.**	**8309.5**
Stddev	2.57	3.2	53.	35.2
%RSD	.31514	.15409	.16707	.42336
#1	814.39	2049.4	31714.	8276.1
#2	819.03	2054.9	31779.	8346.2
#3	814.79	2049.4	31674.	8306.0

Zoom In Zoom Out

Sample Name: ICV Acquired: 3/11/2022 9:43:07 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2412**	**40.75**	**2.129**	**2.031**	**2.096**	**40.46**	**2.039**	**2.044**	**2.038**
Stddev	.0004	.19	.001	.010	.014	.32	.002	.002	.007
%RSD	.1827	.4595	.0313	.4837	.6426	.8021	.1089	.1058	.3540
#1	.2409	40.81	2.129	2.041	2.111	40.80	2.039	2.045	2.035
#2	.2417	40.53	2.128	2.021	2.084	40.16	2.040	2.047	2.046
#3	.2410	40.89	2.129	2.031	2.095	40.43	2.036	2.042	2.033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.035**	**40.64**	**40.77**	**2.022**	**42.72**	**2.063**	**1.990**	**38.26**	**2.041**
Stddev	.007	.25	.23	.011	.30	.007	.003	.20	.002
%RSD	.3236	.6267	.5697	.5644	.6910	.3230	.1335	.5272	.0819
#1	2.043	40.83	40.98	2.035	43.03	2.064	1.987	38.49	2.041
#2	2.032	40.35	40.52	2.020	42.44	2.069	1.991	38.13	2.043
#3	2.030	40.74	40.82	2.013	42.71	2.056	1.992	38.15	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.992**	**2.060**	**2.106**	**.0916**	**1.966**	**2.030**	**2.025**	**2.081**	**2.007**
Stddev	.004	.002	.005	.0002	.004	.016	.005	.007	.005
%RSD	.1970	.0873	.2504	.2520	.2145	.7758	.2505	.3452	.2719
#1	1.993	2.060	2.103	.0915	1.969	2.025	2.029	2.073	2.008
#2	1.994	2.062	2.104	.0919	1.968	2.016	2.027	2.085	2.012
#3	1.987	2.059	2.112	.0914	1.961	2.047	2.019	2.085	2.001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 3/11/2022 9:43:07 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.050**
Stddev	.004
%RSD	.2005
#1	2.053
#2	2.052
#3	2.045
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**878.59**	**2117.1**	**32388.**	**8341.4**
Stddev	.92	2.5	194.	79.1
%RSD	.10443	.11600	.59776	.94779
#1	878.67	2115.6	32399.	8269.9
#2	877.63	2115.7	32190.	8426.3
#3	879.46	2119.9	32576.	8328.1

Zoom In Zoom Out

Sample Name: ICB Acquired: 3/11/2022 9:53:19 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0036**	**-.0009**	**-.0001**	**.0000**	**-.0020**	**.0000**	**.0000**	**-.0001**
Stddev	.0003	.0042	.0010	.0001	.000	.0006	.000	.0000	.0003
%RSD	334.4	115.5	116.1	83.31	33.36	28.32	110.9	153.9	222.4
#1	-.0002	.0013	.0003	.0000	.0000	-.0024	-.0001	.0000	-.0004
#2	.0002	.0084	-.0014	-.0001	.0000	-.0014	.0000	.0001	-.0001
#3	.0002	.0011	-.0014	-.0002	.0000	-.0022	.0000	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0003**	**-.0169**	**-.0001**	**.0028**	**.0000**	**.0001**	**-.0015**	**.0001**
Stddev	.0001	.0015	.0147	.0006	.0111	.000	.0000	.0044	.0002
%RSD	63.52	420.3	86.78	790.5	395.0	445.1	49.29	295.0	194.9
#1	.0001	-.0020	-.0079	.0003	.0062	.0000	.0000	.0011	.0003
#2	.0002	.0009	-.0090	-.0008	-.0096	.0000	.0001	.0010	.0000
#3	.0001	.0001	-.0339	.0002	.0119	.0000	.0001	-.0066	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0006**	**-.0017**	**.0003**	**-.0001**	**.0000**	**-.0001**	**.0001**	**.0001**
Stddev	.0009	.0005	.0018	.0004	.0002	.000	.0001	.0015	.0001
%RSD	232.8	80.40	100.7	163.2	304.9	62.47	99.20	2023.	115.1
#1	.0014	-.0012	-.0036	.0003	.0001	-.0001	-.0003	.0019	.0002
#2	.0000	-.0002	-.0001	.0006	.0000	-.0001	-.0001	-.0007	.0000
#3	-.0002	-.0006	-.0015	-.0002	-.0003	.0000	.0000	-.0010	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB Acquired: 3/11/2022 9:53:19 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0000**
Stddev	.0001
%RSD	478.5
#1	.0000
#2	.0001
#3	.0000
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**936.25**	**2163.5**	**32826.**	**8438.8**
Stddev	2.18	1.0	114.	37.2
%RSD	.23255	.04668	.34846	.44132
#1	937.00	2162.6	32944.	8411.9
#2	933.80	2163.2	32818.	8481.3
#3	937.95	2164.6	32716.	8423.2

Zoom In Zoom Out

Sample Name: CRIA Acquired: 3/11/2022 9:57:18 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081**	**.2026**	**.0102**	**.2074**	**.0053**	**1.052**	**.0053**	**.0528**	**.0102**
Stddev	.0001	.0038	.0004	.0007	.0000	.003	.0001	.0001	.0001
%RSD	1.379	1.860	3.539	.3427	.3699	.3040	1.879	.2622	.6828
#1	.0081	.2000	.0105	.2069	.0053	1.054	.0052	.0529	.0101
#2	.0082	.2053	.0100	.2079	.0053	1.049	.0054	.0527	.0102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0267**	**.3159**	**10.27**	**.0108**	**5.158**	**.0158**	**.0516**	**9.566**	**.0436**
Stddev	.0001	.0006	.02	.0006	.012	.0000	.0000	.019	.0002
%RSD	.3874	.1988	.1508	5.957	.2358	.2474	.0514	.2033	.3458
#1	.0266	.3163	10.28	.0113	5.167	.0158	.0517	9.552	.0434
#2	.0268	.3155	10.26	.0104	5.150	.0159	.0516	9.580	.0437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**.0054**	**.0086**	**.0273**	**.0514**	**.0104**	**.0104**	**.0099**	**.0517**
Stddev	.0001	.0004	.0007	.0006	.0004	.0000	.0001	.0001	.0002
%RSD	2.564	7.472	8.506	2.248	.7459	.1811	.7126	1.400	.3958
#1	.0050	.0051	.0091	.0269	.0516	.0104	.0104	.0099	.0518
#2	.0052	.0057	.0081	.0277	.0511	.0104	.0105	.0098	.0515
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRIA Acquired: 3/11/2022 9:57:18 Type: QC
Method: 60102007_COMBO_09222021(v387) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0219**
Stddev	.0002
%RSD	.7805
#1	.0220
#2	.0218
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.76**	**2143.1**	**32567.**	**8421.6**
Stddev	1.41	5.2	69.	19.9
%RSD	.15203	.24299	.21300	.23656
#1	930.75	2139.4	32518.	8407.5
#2	928.76	2146.8	32616.	8435.7

Zoom In Zoom Out

Sample Name: ICSA Acquired: 3/11/2022 10:07:00 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**530.8**	**-.0015**	**.0002**	**.0000**	**461.2**	**.0002**	**-.0002**	**.0004**
Stddev	.0002	4.6	.0021	.0002	.0000	2.8	.0002	.0002	.0004
%RSD	192.6	.8651	139.3	141.4	305.2	.5966	101.2	87.59	101.1
#1	.0001	527.4	-.0032	.0003	.0000	463.5	.0000	-.0003	.0008
#2	-.0002	536.0	.0008	-.0001	.0000	462.0	.0005	.0000	.0003
#3	-.0001	528.9	-.0020	.0003	.0000	458.2	.0002	-.0004	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**F 493.1**	**-.0998**	**-.0006**	**545.4**	**-.0002**	**.0001**	**.1672**	**-.0009**
Stddev	.0006	2.5	.0074	.0010	2.3	.0001	.0001	.0008	.0004
%RSD	72.41	.5149	7.453	167.5	.4183	38.53	104.5	.5006	38.36
#1	.0011	495.4	-.0942	-.0011	547.5	-.0002	.0001	.1680	-.0005
#2	.0001	490.4	-.1083	-.0013	545.6	-.0003	.0000	.1663	-.0011
#3	.0012	493.4	-.0970	.0006	543.0	-.0001	.0002	.1673	-.0012
Check ?	Chk Pass	Chk Fail	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit		240.0							
Low Limit		160.0							

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0000**	**.0171**	**-.0008**	**.0000**	**.0012**	**-.0017**	**.0000**
Stddev	.0016	.0027	.0079	.0005	.0010	.000	.0001	.0024	.000
%RSD	7689.	8446.	30270.	2.814	121.9	118.2	6.627	143.0	14810.
#1	.0017	-.0030	-.0091	.0166	-.0013	.0000	.0013	-.0030	-.0002
#2	-.0013	.0020	.0051	.0176	.0003	-.0001	.0011	.0011	.0000
#3	-.0004	.0012	.0041	.0171	-.0015	.0000	.0012	-.0031	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 3/11/2022 10:07:00 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0003**
Stddev	.0003
%RSD	92.63
#1	.0005
#2	.0000
#3	.0003
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**820.02**	**1899.2**	**29421.**	**7895.0**
Stddev	2.92	2.3	77.	34.9
%RSD	.35573	.12211	.26324	.44236
#1	820.82	1896.6	29420.	7863.2
#2	816.78	1899.9	29344.	7889.4
#3	822.45	1901.1	29499.	7932.4

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 3/11/2022 10:14:01 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.022**	**525.8**	**1.073**	**.4940**	**.5048**	**458.1**	**.9666**	**.4836**	**.4874**
Stddev	.001	9.5	.002	.0008	.0010	2.4	.0009	.0005	.0013
%RSD	.1143	1.811	.1647	.1577	.1943	.5284	.0941	.1094	.2729
#1	1.021	534.5	1.074	.4939	.5059	460.4	.9656	.4841	.4877
#2	1.023	515.6	1.072	.4933	.5039	455.6	.9672	.4837	.4886
#3	1.021	527.4	1.071	.4948	.5046	458.5	.9671	.4831	.4860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5796**	**184.2**	**-.0602**	**1.047**	**540.7**	**.5126**	**.9484**	**.1618**	**.9265**
Stddev	.0009	.9	.0124	.005	2.8	.0019	.0001	.0029	.0008
%RSD	.1636	.5048	20.65	.4844	.5191	.3638	.0061	1.783	.0904
#1	.5807	185.3	-.0608	1.052	543.9	.5138	.9485	.1616	.9256
#2	.5791	183.6	-.0723	1.042	538.9	.5135	.9484	.1648	.9266
#3	.5791	183.8	-.0475	1.046	539.2	.5104	.9485	.1590	.9273
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9500**	**1.042**	**.9549**	**.1329**	**.8986**	**.9911**	**1.022**	**.9303**	**.5103**
Stddev	.0077	.004	.0079	.0012	.0014	.0031	.003	.0087	.0006
%RSD	.8123	.4227	.8264	.8749	.1505	.3157	.2898	.9378	.1268
#1	.9421	1.041	.9604	.1316	.8970	.9946	1.024	.9288	.5104
#2	.9576	1.046	.9459	.1335	.8992	.9900	1.023	.9224	.5110
#3	.9502	1.038	.9585	.1337	.8995	.9886	1.018	.9397	.5097
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 3/11/2022 10:14:01 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.9272**
Stddev	.0011
%RSD	.1140
#1	.9265
#2	.9284
#3	.9267
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**784.93**	**1936.7**	**29559.**	**7993.3**
Stddev	.43	2.5	82.	27.1
%RSD	.05429	.12728	.27760	.33958
#1	785.20	1934.3	29547.	7964.2
#2	784.44	1939.3	29483.	8018.0
#3	785.16	1936.6	29646.	7997.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 10:20:43 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2485**	**39.85**	**2.029**	**2.036**	**2.076**	**40.24**	**2.029**	**2.029**	**2.031**
Stddev	.0001	.07	.004	.005	.006	.08	.002	.002	.003
%RSD	.0561	.1745	.1874	.2462	.3143	.2063	.0757	.0975	.1277
#1	.2483	39.90	2.028	2.042	2.078	40.24	2.031	2.031	2.031
#2	.2486	39.87	2.026	2.035	2.082	40.32	2.028	2.027	2.029
#3	.2485	39.77	2.033	2.032	2.069	40.15	2.029	2.029	2.034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.025**	**40.57**	**40.22**	**2.020**	**40.26**	**2.055**	**2.034**	**40.47**	**2.047**
Stddev	.001	.14	.09	.009	.12	.005	.003	.09	.002
%RSD	.0368	.3369	.2354	.4289	.2900	.2504	.1477	.2273	.0842
#1	2.024	40.53	40.31	2.030	40.18	2.058	2.030	40.57	2.049
#2	2.024	40.72	40.24	2.015	40.39	2.049	2.036	40.40	2.046
#3	2.025	40.45	40.12	2.015	40.20	2.059	2.035	40.43	2.046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.987**	**2.033**	**2.029**	**2.174**	**2.021**	**2.019**	**2.029**	**2.018**	**2.019**
Stddev	.007	.004	.004	.003	.006	.002	.005	.007	.001
%RSD	.3727	.2028	.2011	.1287	.3039	.1195	.2318	.3351	.0422
#1	1.992	2.028	2.034	2.171	2.021	2.017	2.033	2.025	2.019
#2	1.979	2.034	2.027	2.177	2.015	2.022	2.024	2.015	2.019
#3	1.991	2.036	2.026	2.174	2.027	2.019	2.031	2.012	2.020
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 10:20:43 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.025**
Stddev	.007
%RSD	.3462
#1	2.033
#2	2.019
#3	2.024
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**869.58**	**2100.9**	**32129.**	**8299.5**
Stddev	2.21	1.9	38.	29.4
%RSD	.25405	.09145	.11800	.35390
#1	868.12	2102.8	32097.	8330.2
#2	872.12	2100.9	32171.	8271.6
#3	868.50	2099.0	32119.	8296.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 3/11/2022 10:27:31 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0119**	**-.0013**	**.0000**	**.0001**	**.0036**	**.0001**	**.0001**	**.0005**
Stddev	.0001	.0036	.0003	.0001	.0000	.0007	.0000	.0001	.0001
%RSD	71.26	30.26	22.10	185.4	51.34	19.77	25.06	194.2	20.35
#1	.0004	.0156	-.0014	.0000	.0000	.0028	.0001	-.0001	.0005
#2	.0002	.0085	-.0010	.0001	.0001	.0042	.0001	.0002	.0006
#3	.0001	.0114	-.0016	.0000	.0001	.0038	.0001	.0001	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0025**	**.0179**	**.0003**	**-.0029**	**.0004**	**.0001**	**.0137**	**.0000**
Stddev	.0002	.0004	.0187	.0006	.0187	.0000	.0002	.0066	.000
%RSD	356.8	15.23	104.4	174.4	654.2	7.197	345.2	48.66	886.4
#1	.0003	.0025	.0219	.0001	-.0225	.0004	.0000	.0197	.0000
#2	-.0002	.0029	.0343	-.0001	-.0007	.0004	.0002	.0065	-.0001
#3	.0001	.0022	-.0025	.0010	.0146	.0004	-.0001	.0147	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0014**	**.0000**	**.0003**	**.0003**	**.0001**	**.0001**	**.0003**	**.0002**
Stddev	.0012	.0008	.0037	.0008	.0003	.0000	.0000	.0013	.0002
%RSD	548.4	56.09	46980.	326.5	100.7	8.010	80.00	440.6	108.8
#1	-.0012	.0016	.0042	.0012	.0004	.0001	.0000	-.0010	.0003
#2	-.0005	.0020	-.0025	-.0004	.0000	.0001	.0000	.0016	.0004
#3	.0011	.0005	-.0017	.0000	.0004	.0001	.0001	.0003	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 3/11/2022 10:27:31 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0004**
Stddev	.0001
%RSD	23.93
#1	.0003
#2	.0003
#3	.0004
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**940.42**	**2167.0**	**32922.**	**8450.5**
Stddev	3.15	8.8	23.	104.0
%RSD	.33489	.40548	.07017	1.2307
#1	936.96	2160.4	32905.	8375.4
#2	943.12	2177.0	32912.	8407.0
#3	941.19	2163.8	32948.	8569.2

Zoom In Zoom Out

Sample Name: MP40406-MB1 Acquired: 3/11/2022 10:35:08 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0052**	**-.0003**	**-.0001**	**.0000**	**.0057**	**-.0001**	**.0000**	**-.0001**
Stddev	.0003	.0032	.0007	.0001	.000	.0008	.0000	.000	.0002
%RSD	101.2	61.41	221.0	57.37	404.4	14.15	18.33	440.0	228.8
#1	.0000	.0047	.0004	-.0001	.0000	.0066	-.0001	.0000	-.0003
#2	-.0005	.0023	-.0010	-.0002	.0000	.0051	-.0001	-.0001	-.0002
#3	-.0002	.0086	-.0003	-.0001	-.0001	.0053	-.0001	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0004**	**-.0165**	**-.0005**	**.0004**	**.0000**	**-.0003**	**-.0061**	**.0001**
Stddev	.0001	.0011	.0131	.0004	.0059	.0000	.0002	.0015	.0002
%RSD	19.65	263.0	79.22	82.31	1602.	84.44	75.96	25.36	327.2
#1	-.0005	.0005	-.0156	-.0010	-.0023	.0000	-.0003	-.0070	.0001
#2	-.0005	-.0001	-.0039	-.0001	-.0037	.0000	-.0001	-.0069	-.0002
#3	-.0003	-.0017	-.0301	-.0005	.0071	.0000	-.0005	-.0043	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0005**	**-.0020**	**.0009**	**.0006**	**.0000**	**-.0002**	**-.0035**	**.0000**
Stddev	.0007	.0004	.0010	.0007	.0001	.000	.0001	.0007	.000
%RSD	241.1	85.77	51.68	77.07	21.65	69.16	44.86	19.76	353.4
#1	.0004	.0000	-.0032	.0016	.0005	.0000	-.0001	-.0027	-.0002
#2	-.0002	.0006	-.0015	.0007	.0007	.0000	-.0002	-.0040	.0000
#3	-.0010	.0008	-.0013	.0003	.0007	-.0001	-.0003	-.0038	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP40406-MB1 Acquired: 3/11/2022 10:35:08 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0003**
Stddev	.0001
%RSD	26.75
#1	.0003
#2	.0002
#3	.0004
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**931.81**	**2134.1**	**32724.**	**8570.0**
Stddev	.87	2.2	54.	25.3
%RSD	.09352	.10347	.16571	.29470
#1	931.57	2136.6	32787.	8586.0
#2	932.78	2133.4	32689.	8583.2
#3	931.09	2132.4	32696.	8540.9

Zoom In Zoom Out

Sample Name: MP40406-B1 Acquired: 3/11/2022 10:40:02 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0407**	**26.51**	**2.077**	**2.023**	**.0512**	**24.85**	**.0499**	**.5047**	**.2033**
Stddev	.0001	.03	.003	.002	.0001	.09	.0002	.0013	.0004
%RSD	.2278	.1104	.1419	.1141	.2503	.3462	.3297	.2480	.1917
#1	.0408	26.53	2.074	2.021	.0512	24.83	.0501	.5047	.2037
#2	.0407	26.51	2.076	2.025	.0514	24.94	.0497	.5034	.2034
#3	.0407	26.47	2.080	2.024	.0511	24.77	.0499	.5059	.2029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2568**	**26.11**	**25.20**	F **.0001**	**24.45**	**.5183**	**.4908**	**23.11**	**.5177**
Stddev	.0008	.04	.09	.0005	.11	.0012	.0023	.08	.0015
%RSD	.3284	.1596	.3438	504.7	.4613	.2281	.4754	.3566	.2829
#1	.2578	26.12	25.18	.0003	24.49	.5195	.4915	23.06	.5182
#2	.2561	26.15	25.30	-.0005	24.54	.5183	.4882	23.21	.5161
#3	.2566	26.07	25.14	.0005	24.32	.5171	.4928	23.07	.5189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4627**	**.5064**	**1.952**	**.6207**	**.4913**	**.5015**	**.4928**	**1.935**	**.4981**
Stddev	.0027	.0026	.009	.0021	.0009	.0018	.0015	.005	.0011
%RSD	.5754	.5096	.4409	.3342	.1918	.3582	.2993	.2584	.2161
#1	.4597	.5083	1.954	.6214	.4921	.5000	.4945	1.939	.4991
#2	.4639	.5035	1.943	.6184	.4903	.5035	.4922	1.930	.4983
#3	.4646	.5075	1.960	.6224	.4916	.5009	.4918	1.937	.4970
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP40406-B1 Acquired: 3/11/2022 10:40:02 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.4990**
Stddev	.0003
%RSD	.0535
#1	.4992
#2	.4991
#3	.4987

Check ? Chk Pass
Value
Range

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**891.13**	**2059.6**	**31863.**	**8360.9**
Stddev	3.12	6.0	122.	32.3
%RSD	.35015	.29230	.38395	.38635
#1	893.27	2057.3	31767.	8354.6
#2	892.57	2066.5	31822.	8332.1
#3	887.55	2055.2	32001.	8395.8

Zoom In Zoom Out

Sample Name: FA93582-2 Acquired: 3/11/2022 10:44:35 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0005**	**-.0003**	**.0694**	**.0000**	**148.6**	**-.0001**	**-.0001**	**.0003**
Stddev	.000	.0058	.0014	.0004	.0000	.3	.0000	.0002	.0002
%RSD	1532.	1248.	444.8	.5513	76.03	.1936	34.59	282.6	52.87
#1	.0001	.0046	-.0007	.0689	.0000	148.3	-.0001	-.0002	.0005
#2	-.0001	.0029	-.0015	.0694	.0000	148.9	-.0001	.0002	.0001
#3	.0000	-.0061	.0012	.0697	.0000	148.6	-.0001	-.0002	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.2346**	**.2862**	**.0051**	**35.64**	**.0149**	**-.0006**	**9.086**	**.0009**
Stddev	.0001	.0048	.0166	.0005	.09	.0000	.0001	.020	.0001
%RSD	52.29	2.028	5.806	9.616	.2436	.3012	12.68	.2242	11.12
#1	.0001	.2325	.2800	.0046	35.54	.0149	-.0007	9.063	.0009
#2	.0003	.2401	.3051	.0055	35.70	.0149	-.0005	9.102	.0008
#3	.0003	.2313	.2736	.0053	35.67	.0148	-.0005	9.094	.0010

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.0018**	**-.0002**	**4.058**	**.0001**	**.1179**	**.0025**	**.0041**	**.0018**
Stddev	.0007	.0005	.0004	.010	.0004	.0004	.0001	.0013	.0003
%RSD	23.98	29.22	163.1	.2364	325.9	.3726	5.331	31.91	17.14
#1	.0032	.0012	-.0001	4.047	.0006	.1174	.0025	.0029	.0014
#2	.0035	.0023	-.0007	4.061	-.0001	.1182	.0023	.0055	.0018
#3	.0022	.0018	.0001	4.065	-.0001	.1180	.0026	.0039	.0020

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0008**
Stddev	.0001
%RSD	12.61
#1	.0008
#2	.0007
#3	.0008

Zoom In Zoom Out

Sample Name: FA93582-2 Acquired: 3/11/2022 10:44:35 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**875.11**	**1999.9**	**31270.**	**8210.5**
Stddev	1.39	3.8	48.	41.5
%RSD	.15940	.18980	.15378	.50602
#1	875.64	2001.4	31272.	8258.1
#2	873.53	2002.7	31317.	8181.4
#3	876.16	1995.6	31221.	8192.1

Zoom In Zoom Out

Sample Name: MP40406-D1 Acquired: 3/11/2022 10:49:33 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0068**	**-.0026**	**.0687**	**.0000**	**147.4**	**-.0001**	**.0000**	**.0001**
Stddev	.0004	.0040	.0011	.0003	.000	.2	.0001	.000	.0002
%RSD	469.8	58.04	42.37	.3800	740.2	.1087	93.42	335.1	173.9
#1	-.0001	.0099	-.0015	.0684	-.0001	147.4	.0000	.0000	.0004
#2	-.0005	.0024	-.0037	.0690	.0000	147.3	-.0002	-.0001	-.0001
#3	.0003	.0082	-.0027	.0686	.0000	147.6	-.0001	.0001	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.2206**	**.3035**	**.0056**	**35.28**	**.0143**	**-.0008**	**8.992**	**.0013**
Stddev	.0003	.0014	.0052	.0003	.18	.0001	.0000	.002	.0002
%RSD	215.2	.6562	1.715	6.108	.5131	.8949	2.605	.0169	19.46
#1	-.0001	.2201	.3018	.0052	35.07	.0142	-.0008	8.992	.0010
#2	.0000	.2223	.2994	.0057	35.38	.0144	-.0008	8.993	.0013
#3	.0005	.2196	.3093	.0059	35.39	.0145	-.0009	8.990	.0015

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0016**	**-.0010**	**4.014**	**.0002**	**.1164**	**.0023**	**.0026**	**.0015**
Stddev	.0005	.0014	.0023	.004	.0004	.0001	.0001	.0009	.0002
%RSD	18.79	87.97	223.9	.0895	196.8	.0901	5.737	33.85	15.00
#1	.0023	.0011	-.0020	4.015	.0004	.1164	.0025	.0035	.0013
#2	.0021	.0005	-.0026	4.010	.0004	.1163	.0023	.0027	.0016
#3	.0030	.0031	.0016	4.016	-.0003	.1165	.0022	.0017	.0017

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0010**
Stddev	.0000
%RSD	1.334
#1	.0010
#2	.0010
#3	.0010

Zoom In Zoom Out

Sample Name: MP40406-D1 Acquired: 3/11/2022 10:49:33 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**878.76**	**2011.5**	**31395.**	**8230.6**
Stddev	.61	1.4	69.	20.4
%RSD	.06946	.06819	.22037	.24814
#1	878.38	2010.0	31457.	8253.0
#2	879.47	2012.7	31408.	8213.0
#3	878.44	2011.8	31320.	8225.7

Zoom In Zoom Out

Sample Name: MP40406-SD1 Acquired: 3/11/2022 10:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0186**	**-.0105**	**.0609**	**-.0001**	**138.0**	**-.0001**	**-.0005**	**.0007**
Stddev	.0008	.0092	.0044	.0008	.0003	.3	.0006	.0002	.0011
%RSD	187.8	49.38	41.57	1.372	352.4	.2478	1082.	49.87	157.8
#1	-.0005	.0274	-.0055	.0614	-.0003	138.4	-.0006	-.0002	.0019
#2	.0007	.0090	-.0138	.0613	-.0002	137.8	-.0001	-.0006	.0002
#3	.0010	.0195	-.0122	.0599	.0003	137.8	.0005	-.0006	.0000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.2110**	**.1659**	**.0030**	**32.71**	**.0135**	**-.0037**	**8.030**	**.0019**
Stddev	.0009	.0057	.0682	.0019	.19	.0001	.0004	.026	.0016
%RSD	162.3	2.690	41.11	64.36	.5855	.9814	10.25	.3268	82.63
#1	-.0004	.2084	.2266	.0009	32.84	.0136	-.0033	8.017	.0005
#2	.0002	.2175	.1789	.0034	32.49	.0136	-.0039	8.060	.0017
#3	-.0015	.2071	.0921	.0047	32.80	.0133	-.0040	8.013	.0036

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0112**	**-.0005**	**.0014**	**3.532**	**.0017**	**.1065**	**.0085**	**.0115**	**.0021**
Stddev	.0035	.0022	.0065	.019	.0017	.0005	.0003	.0097	.0003
%RSD	31.42	462.9	450.3	.5406	98.63	.4491	4.010	83.78	12.06
#1	.0123	-.0012	.0089	3.510	.0029	.1070	.0089	.0068	.0024
#2	.0073	-.0022	-.0017	3.539	-.0002	.1064	.0082	.0052	.0019
#3	.0141	.0020	-.0029	3.546	.0024	.1061	.0086	.0227	.0022

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0007**
Stddev	.0004
%RSD	52.41
#1	.0007
#2	.0012
#3	.0004

Zoom In Zoom Out

Sample Name: MP40406-SD1 Acquired: 3/11/2022 10:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**934.04**	**2131.6**	**32713.**	**8377.5**
Stddev	1.79	3.1	42.	34.1
%RSD	.19154	.14656	.12881	.40722
#1	935.46	2134.1	32675.	8341.5
#2	934.64	2132.6	32758.	8409.3
#3	932.03	2128.1	32704.	8381.8

Zoom In Zoom Out

Sample Name: MP40406-PS1 Acquired: 3/11/2022 10:59:23 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0493**	**2.580**	**.1110**	**.3317**	**.0543**	**151.1**	**.0529**	**.0530**	**.0530**
Stddev	.0003	.017	.0019	.0013	.0001	1.4	.0002	.0002	.0001
%RSD	.5635	.6715	1.749	.3875	.2616	.9440	.3324	.3323	.1075
#1	.0491	2.576	.1132	.3319	.0542	149.7	.0528	.0531	.0530
#2	.0496	2.565	.1103	.3304	.0543	150.9	.0529	.0528	.0531
#3	.0493	2.599	.1095	.3329	.0544	152.6	.0531	.0530	.0530

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1077**	**3.353**	**10.72**	**.0053**	**40.39**	**.0677**	**.1029**	**18.87**	**.1081**
Stddev	.0002	.002	.05	.0011	.22	.0000	.0009	.14	.0001
%RSD	.1990	.0587	.4778	21.07	.5368	.0645	.9073	.7541	.0651
#1	.1077	3.350	10.73	.0045	40.18	.0678	.1021	18.79	.1081
#2	.1080	3.353	10.66	.0047	40.39	.0678	.1028	18.78	.1082
#3	.1075	3.354	10.76	.0065	40.61	.0677	.1039	19.03	.1081

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0518**	**.1095**	**.0979**	**3.995**	**.0522**	**.1702**	**.1057**	**.1001**	**.0542**
Stddev	.0007	.0016	.0003	.006	.0004	.0005	.0002	.0028	.0003
%RSD	1.323	1.501	.3335	.1546	.7871	.2863	.1488	2.835	.6118
#1	.0511	.1080	.0976	3.994	.0524	.1701	.1058	.0969	.0544
#2	.0517	.1112	.0981	3.989	.0517	.1698	.1058	.1009	.0543
#3	.0525	.1092	.0982	4.001	.0525	.1707	.1055	.1024	.0538

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2571**
Stddev	.0014
%RSD	.5363
#1	.2559
#2	.2569
#3	.2586

Zoom In Zoom Out

Sample Name: MP40406-PS1 Acquired: 3/11/2022 10:59:23 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**867.64**	**2006.0**	**31303.**	**8175.5**
Stddev	1.83	3.4	67.	51.5
%RSD	.21090	.16710	.21432	.63009
#1	868.46	2004.9	31293.	8214.4
#2	868.92	2009.7	31242.	8194.9
#3	865.54	2003.3	31375.	8117.1

Zoom In Zoom Out

Sample Name: MP40406-S1 Acquired: 3/11/2022 11:04:14 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0411**	**26.64**	**2.091**	**2.085**	**.0515**	**163.9**	**.0494**	**.4981**	**.2000**
Stddev	.0002	.05	.003	.002	.0002	1.4	.0000	.0010	.0003
%RSD	.5002	.1809	.1560	.1009	.4211	.8249	.0325	.1976	.1267
#1	.0411	26.69	2.090	2.083	.0515	165.0	.0494	.4978	.2003
#2	.0408	26.60	2.089	2.087	.0512	162.4	.0494	.4974	.1998
#3	.0412	26.64	2.095	2.087	.0517	164.2	.0494	.4992	.2000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2608**	**25.69**	**25.63**	**.0056**	**58.30**	**.5202**	**.4874**	**32.35**	**.5071**
Stddev	.0008	.09	.03	.0006	.59	.0009	.0023	.09	.0012
%RSD	.2885	.3481	.1053	10.14	1.008	.1759	.4659	.2905	.2429
#1	.2601	25.71	25.63	.0061	58.70	.5202	.4855	32.36	.5064
#2	.2616	25.59	25.60	.0050	57.62	.5193	.4869	32.25	.5065
#3	.2609	25.77	25.65	.0056	58.57	.5211	.4899	32.44	.5086

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4714**	**.5104**	**1.964**	**4.528**	**.4857**	**.6139**	**.4889**	**1.940**	**.4986**
Stddev	.0001	.0026	.006	.006	.0011	.0009	.0001	.009	.0015
%RSD	.0215	.5163	.2975	.1404	.2166	.1502	.0239	.4536	.2957
#1	.4714	.5086	1.968	4.524	.4854	.6133	.4888	1.941	.5003
#2	.4715	.5092	1.965	4.525	.4848	.6134	.4890	1.931	.4975
#3	.4713	.5134	1.957	4.536	.4868	.6150	.4890	1.948	.4980

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4876**
Stddev	.0011
%RSD	.2177
#1	.4885
#2	.4864
#3	.4879

Zoom In Zoom Out

Sample Name: MP40406-S1 Acquired: 3/11/2022 11:04:14 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**851.26**	**2008.4**	**31205.**	**8283.6**
Stddev	2.24	2.0	68.	81.4
%RSD	.26260	.10107	.21699	.98212
#1	850.67	2010.4	31207.	8221.8
#2	853.73	2008.5	31271.	8375.8
#3	849.38	2006.3	31136.	8253.3

Zoom In Zoom Out

Sample Name: MP40406-S2 Acquired: 3/11/2022 11:08:57 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0417**	**27.07**	**2.128**	**2.129**	**.0529**	**169.2**	**.0499**	**.5052**	**.2029**
Stddev	.0004	.08	.005	.007	.0003	1.7	.0000	.0015	.0003
%RSD	.9662	.2954	.2183	.3289	.5795	1.026	.0730	.3059	.1627
#1	.0421	27.09	2.129	2.134	.0531	170.9	.0499	.5069	.2029
#2	.0415	26.98	2.132	2.121	.0525	167.5	.0499	.5038	.2032
#3	.0414	27.14	2.123	2.133	.0531	169.3	.0499	.5051	.2026

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2651**	**26.29**	**26.15**	**.0055**	**59.94**	**.5431**	**.4960**	**33.00**	**.5158**
Stddev	.0007	.10	.11	.0006	.33	.0009	.0011	.13	.0011
%RSD	.2772	.3957	.4085	10.21	.5506	.1702	.2267	.3788	.2144
#1	.2660	26.37	26.23	.0061	60.30	.5441	.4972	33.07	.5171
#2	.2645	26.17	26.03	.0054	59.65	.5423	.4956	32.86	.5154
#3	.2649	26.32	26.18	.0050	59.86	.5430	.4950	33.07	.5150

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4760**	**.5217**	**1.998**	**4.617**	**.4935**	**.6296**	**.4984**	**1.974**	**.5076**
Stddev	.0015	.0015	.002	.009	.0009	.0023	.0015	.001	.0004
%RSD	.3116	.2823	.1168	.1908	.1755	.3581	.3038	.0661	.0801
#1	.4777	.5209	2.000	4.627	.4932	.6306	.5002	1.975	.5072
#2	.4750	.5234	1.999	4.610	.4928	.6271	.4973	1.975	.5080
#3	.4753	.5207	1.995	4.615	.4945	.6313	.4979	1.973	.5075

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4917**
Stddev	.0015
%RSD	.3022
#1	.4929
#2	.4900
#3	.4921

Zoom In Zoom Out

Sample Name: MP40406-S2 Acquired: 3/11/2022 11:08:57 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**853.64**	**2010.4**	**31248.**	**8201.9**
Stddev	2.34	3.7	74.	56.1
%RSD	.27449	.18604	.23758	.68403
#1	852.89	2006.1	31164.	8141.4
#2	851.75	2012.6	31274.	8252.3
#3	856.26	2012.5	31305.	8212.0

Zoom In Zoom Out

Sample Name: FA93582-6 Acquired: 3/11/2022 11:13:39 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0017**	**-.0005**	**.0790**	**.0000**	**202.8**	**-.0001**	**-.0003**	**.0000**
Stddev	.000	.0064	.0010	.0001	.000	1.2	.0001	.0002	.000
%RSD	1003.	372.9	206.5	.1537	420.0	.6150	134.3	88.03	1099.
#1	-.0002	-.0010	-.0016	.0790	.0000	201.4	-.0002	-.0003	.0001
#2	.0003	-.0029	.0005	.0789	.0000	203.7	.0000	-.0005	.0002
#3	-.0002	.0090	-.0005	.0791	.0000	203.3	.0000	.0000	-.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0090**	**.2473**	**.0071**	**34.74**	**.0011**	**-.0002**	**8.120**	**.0009**
Stddev	.0001	.0013	.0237	.0005	.28	.0000	.0002	.011	.0003
%RSD	16.57	14.02	9.588	7.145	.8064	3.058	100.9	.1388	29.62
#1	.0006	.0083	.2323	.0074	34.42	.0011	.0000	8.107	.0008
#2	.0007	.0105	.2746	.0066	34.87	.0010	-.0001	8.124	.0007
#3	.0009	.0083	.2349	.0075	34.93	.0011	-.0003	8.128	.0012

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.0008**	**.0012**	**3.695**	**.0001**	**.1812**	**.0022**	**.0029**	**.0034**
Stddev	.0004	.0009	.0029	.006	.0004	.0002	.0000	.0007	.0002
%RSD	12.32	117.7	238.9	.1508	326.9	.1267	1.218	26.27	4.768
#1	.0028	-.0001	.0014	3.701	.0005	.1814	.0021	.0021	.0035
#2	.0028	.0017	-.0018	3.691	-.0003	.1809	.0022	.0029	.0032
#3	.0035	.0007	.0040	3.693	.0002	.1811	.0021	.0036	.0033

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0021**
Stddev	.0001
%RSD	3.721
#1	.0022
#2	.0021
#3	.0021

Zoom In Zoom Out

Sample Name: FA93582-6 Acquired: 3/11/2022 11:13:39 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**870.36**	**1978.1**	**31052.**	**8043.5**
Stddev	1.32	2.0	12.	60.1
%RSD	.15111	.10248	.04007	.74724
#1	869.18	1975.9	31044.	8110.4
#2	870.12	1978.4	31046.	8026.0
#3	871.78	1979.9	31066.	7994.1

Zoom In Zoom Out

Sample Name: FA93582-3F Acquired: 3/11/2022 11:18:38 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0020**	**-.0015**	**.0949**	**.0000**	**180.9**	**-.0001**	**-.0002**	**.0001**
Stddev	.0002	.0048	.0010	.0004	.0000	1.1	.0000	.0001	.0001
%RSD	367.2	238.5	64.93	.3782	2495.	.5969	38.57	44.60	49.48
#1	.0003	-.0036	-.0009	.0944	.0000	179.7	-.0001	-.0001	.0001
#2	.0000	.0048	-.0027	.0951	.0000	181.2	-.0001	-.0002	.0002
#3	-.0001	.0048	-.0010	.0951	.0000	181.8	-.0001	-.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0037**	**.2738**	**.0059**	**35.39**	**.0008**	**-.0003**	**8.933**	**.0015**
Stddev	.0003	.0012	.0077	.0006	.16	.0001	.0002	.018	.0003
%RSD	22.74	30.90	2.820	10.11	.4612	8.785	57.54	.1956	17.99
#1	.0013	.0031	.2747	.0066	35.20	.0008	-.0002	8.919	.0013
#2	.0013	.0051	.2657	.0059	35.47	.0007	-.0002	8.929	.0015
#3	.0008	.0030	.2811	.0054	35.49	.0008	-.0005	8.953	.0018

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0006**	**.0020**	**4.782**	**.0000**	**.2189**	**.0021**	**.0041**	**.0053**
Stddev	.0008	.0020	.0033	.008	.000	.0006	.0001	.0011	.0001
%RSD	30.28	337.7	163.4	.1583	491.1	.2792	3.424	26.13	2.495
#1	.0034	-.0010	.0021	4.789	-.0003	.2183	.0022	.0051	.0052
#2	.0023	.0029	.0053	4.782	.0002	.2189	.0022	.0041	.0054
#3	.0019	-.0001	-.0013	4.774	.0000	.2195	.0021	.0030	.0053

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0027**
Stddev	.0001
%RSD	4.975
#1	.0027
#2	.0026
#3	.0029

Zoom In Zoom Out

Sample Name: FA93582-3F Acquired: 3/11/2022 11:18:38 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**871.57**	**1983.5**	**31113.**	**8045.7**
Stddev	1.90	.8	25.	26.5
%RSD	.21833	.04273	.07881	.32958
#1	873.51	1982.6	31099.	8075.8
#2	871.48	1983.7	31141.	8025.8
#3	869.71	1984.3	31098.	8035.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 11:23:36 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2486**	**39.81**	**2.044**	**2.066**	**2.128**	**41.05**	**2.038**	**2.043**	**2.032**
Stddev	.0008	.01	.002	.005	.014	.34	.003	.002	.003
%RSD	.3222	.0365	.0754	.2461	.6385	.8391	.1206	.0949	.1260
#1	.2494	39.79	2.046	2.071	2.144	41.44	2.037	2.044	2.032
#2	.2486	39.81	2.043	2.061	2.119	40.88	2.037	2.041	2.034
#3	.2478	39.82	2.043	2.067	2.121	40.82	2.041	2.045	2.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.059**	**40.98**	**40.87**	**2.094**	**41.01**	**2.050**	**2.058**	**41.57**	**2.065**
Stddev	.004	.20	.22	.009	.43	.005	.004	.17	.003
%RSD	.1953	.4872	.5461	.4493	1.060	.2344	.2082	.4075	.1419
#1	2.061	41.21	41.13	2.104	41.50	2.051	2.058	41.77	2.065
#2	2.061	40.93	40.76	2.086	40.89	2.055	2.054	41.45	2.062
#3	2.054	40.82	40.73	2.091	40.65	2.045	2.062	41.51	2.068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.975**	**2.060**	**2.052**	**2.211**	**2.034**	**2.104**	**2.032**	**2.030**	**2.030**
Stddev	.006	.008	.006	.008	.005	.011	.004	.009	.003
%RSD	.3259	.3782	.3052	.3514	.2562	.5421	.1954	.4577	.1392
#1	1.968	2.064	2.056	2.215	2.031	2.097	2.035	2.029	2.029
#2	1.977	2.051	2.045	2.202	2.031	2.099	2.033	2.022	2.033
#3	1.980	2.064	2.055	2.215	2.040	2.118	2.027	2.040	2.027
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 11:23:36 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.030**
Stddev	.004
%RSD	.1883
#1	2.027
#2	2.028
#3	2.034
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**869.74**	**2081.0**	**32022.**	**8174.1**
Stddev	2.09	3.3	25.	63.5
%RSD	.24049	.16045	.07927	.77719
#1	871.29	2081.7	32049.	8103.1
#2	870.57	2084.0	32019.	8193.8
#3	867.36	2077.4	31998.	8225.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 3/11/2022 11:28:17 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0100**	**-.0003**	**.0000**	**.0001**	**.0049**	**.0001**	**.0003**	**.0002**
Stddev	.000	.0059	.0017	.0001	.0000	.0027	.0001	.0001	.0003
%RSD	2531.	58.39	505.8	23730.	9.858	55.93	68.55	41.28	181.2
#1	.0000	.0081	-.0017	.0001	.0001	.0019	.0000	.0003	-.0001
#2	.0003	.0054	.0015	-.0001	.0001	.0055	.0001	.0002	.0002
#3	-.0002	.0166	-.0007	.0000	.0001	.0073	.0001	.0004	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0020**	**.0267**	**.0002**	**-.0087**	**.0005**	**.0004**	**.0164**	**.0003**
Stddev	.000	.0006	.0070	.0008	.0039	.0001	.0003	.0026	.0001
%RSD	7991.	28.76	26.24	395.4	44.36	11.07	73.74	15.98	41.47
#1	-.0001	.0023	.0348	-.0006	-.0076	.0004	.0006	.0140	.0002
#2	-.0002	.0014	.0222	.0010	-.0130	.0005	.0001	.0192	.0004
#3	.0003	.0025	.0232	.0002	-.0055	.0005	.0003	.0161	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**-.0004**	**.0008**	**.0007**	**.0001**	**.0001**	**.0012**	**.0002**
Stddev	.0003	.0012	.0033	.0002	.0002	.0000	.0000	.0004	.0001
%RSD	426.6	1749.	844.3	20.36	23.72	35.15	24.49	30.95	70.19
#1	.0000	-.0006	-.0033	.0008	.0008	.0001	.0001	.0008	.0002
#2	.0002	.0013	.0032	.0006	.0005	.0001	.0001	.0015	.0000
#3	-.0004	-.0009	-.0010	.0009	.0008	.0000	.0001	.0015	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 3/11/2022 11:28:17 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0005**
Stddev	.0000
%RSD	5.377
#1	.0005
#2	.0005
#3	.0004

Check ? Chk Pass
High Limit
Low Limit

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.47**	**2153.5**	**32871.**	**8328.6**
Stddev	.62	4.5	146.	46.6
%RSD	.06587	.20931	.44334	.55999
#1	941.25	2157.7	33007.	8317.4
#2	942.17	2148.7	32889.	8379.9
#3	940.99	2154.1	32717.	8288.6

Zoom In Zoom Out

Sample Name: FA93582-4F Acquired: 3/11/2022 11:33:11 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0011**	**-.0022**	**.0904**	**.0000**	**177.5**	**.0000**	**-.0002**	**.0003**
Stddev	.0004	.0014	.0005	.0005	.000	.9	.000	.0002	.0001
%RSD	461.7	127.0	20.62	.5330	170.4	.5348	127.1	76.06	51.26
#1	.0004	.0014	-.0022	.0906	.0000	177.2	.0000	-.0002	.0003
#2	.0001	-.0004	-.0027	.0899	.0000	178.5	.0000	-.0004	.0001
#3	-.0003	.0023	-.0018	.0908	-.0001	176.7	-.0001	.0000	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0756**	**.2522**	**.0066**	**39.68**	**.0006**	**.0002**	**19.14**	**.0008**
Stddev	.0003	.0021	.0142	.0002	.15	.0001	.0001	.06	.0002
%RSD	20.31	2.778	5.629	3.041	.3687	9.796	59.57	.3034	19.19
#1	.0018	.0764	.2675	.0065	39.58	.0005	.0004	19.18	.0009
#2	.0018	.0732	.2394	.0068	39.62	.0006	.0001	19.08	.0009
#3	.0012	.0771	.2496	.0064	39.85	.0006	.0002	19.18	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.0018**	**-.0003**	**4.502**	**-.0001**	**.1776**	**.0022**	**.0030**	**.0022**
Stddev	.0006	.0007	.0024	.019	.0003	.0004	.0001	.0009	.0002
%RSD	21.21	38.20	861.4	.4268	273.9	.2441	2.261	29.49	7.590
#1	.0024	.0014	-.0025	4.502	-.0001	.1779	.0022	.0021	.0021
#2	.0035	.0014	.0024	4.483	.0002	.1771	.0023	.0029	.0024
#3	.0025	.0026	-.0007	4.522	-.0004	.1779	.0022	.0039	.0021

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0010**
Stddev	.0000
%RSD	4.647
#1	.0010
#2	.0010
#3	.0010

Zoom In Zoom Out

Sample Name: FA93582-4F Acquired: 3/11/2022 11:33:11 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**868.60**	**1977.7**	**30961.**	**7982.1**
Stddev	1.56	6.9	44.	22.7
%RSD	.17923	.35035	.14123	.28410
#1	867.11	1977.9	30919.	7993.7
#2	870.22	1984.5	31006.	7996.7
#3	868.48	1970.6	30960.	7956.0

Zoom In Zoom Out

Sample Name: FA93582-5F Acquired: 3/11/2022 11:38:11 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0014**	**-.0024**	**.0769**	**.0000**	**197.1**	**.0000**	**-.0002**	**.0002**
Stddev	.0002	.0054	.0012	.0003	.000	2.5	.000	.0000	.0002
%RSD	67.73	373.0	50.79	.3832	227.4	1.263	94.80	9.046	71.93
#1	.0005	-.0048	-.0031	.0768	.0000	197.9	.0000	-.0002	.0002
#2	.0001	.0044	-.0010	.0773	.0000	194.3	-.0001	-.0002	.0004
#3	.0004	.0047	-.0032	.0768	.0000	199.0	.0000	-.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0076**	**.2739**	**.0067**	**34.18**	**.0005**	**-.0002**	**8.251**	**.0004**
Stddev	.0002	.0006	.0198	.0002	.23	.0000	.0003	.022	.0001
%RSD	24.75	7.659	7.216	3.249	.6638	7.642	122.6	.2653	41.73
#1	.0010	.0070	.2602	.0066	34.18	.0004	-.0004	8.245	.0002
#2	.0007	.0080	.2966	.0069	33.95	.0004	.0001	8.232	.0005
#3	.0012	.0079	.2650	.0066	34.40	.0005	-.0003	8.275	.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**.0001**	**-.0013**	**3.605**	**.0004**	**.1784**	**.0020**	**.0029**	**.0035**
Stddev	.0017	.0011	.0020	.005	.0004	.0001	.0000	.0017	.0001
%RSD	48.42	1491.	154.8	.1283	102.7	.0809	2.170	57.00	1.619
#1	.0053	.0011	-.0021	3.610	.0003	.1782	.0020	.0046	.0034
#2	.0031	-.0010	.0010	3.605	.0001	.1785	.0020	.0029	.0035
#3	.0020	.0002	-.0028	3.601	.0009	.1784	.0020	.0013	.0035

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0043**
Stddev	.0001
%RSD	3.500
#1	.0045
#2	.0042
#3	.0042

Zoom In Zoom Out

Sample Name: FA93582-5F Acquired: 3/11/2022 11:38:11 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**868.67**	**1972.1**	**30931.**	**7995.2**
Stddev	.92	3.0	109.	57.4
%RSD	.10602	.15070	.35185	.71806
#1	869.59	1969.0	31039.	7980.9
#2	868.65	1972.4	30821.	8058.4
#3	867.75	1974.9	30934.	7946.3

Zoom In Zoom Out

Sample Name: FA93641-1A Acquired: 3/11/2022 11:43:10 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0131**	**.0010**	**.0140**	**.0000**	**39.08**	**-.0001**	**.0000**	**.0006**
Stddev	.0004	.0100	.0016	.0000	.000	.10	.0001	.0000	.0002
%RSD	108.4	75.74	160.8	.1177	194.1	.2628	64.40	75.51	29.95
#1	.0008	.0017	.0010	.0139	-.0001	39.19	.0000	.0000	.0004
#2	.0004	.0176	.0026	.0140	.0000	39.04	-.0001	.0001	.0007
#3	-.0001	.0201	-.0006	.0140	.0000	39.00	-.0001	.0001	.0008

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0213**	**.0731**	**7.197**	**.0020**	**5.143**	**.0045**	**-.0007**	**24.49**	**.0052**
Stddev	.0003	.0017	.032	.0002	.013	.0001	.0002	.03	.0002
%RSD	1.282	2.276	.4477	9.907	.2450	1.114	28.90	.1304	3.253
#1	.0210	.0715	7.227	.0020	5.149	.0045	-.0005	24.50	.0052
#2	.0214	.0731	7.202	.0018	5.151	.0045	-.0008	24.52	.0053
#3	.0215	.0748	7.163	.0021	5.128	.0046	-.0008	24.46	.0050

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0009**	**-.0009**	**5.508**	**.0000**	**.3003**	**.0019**	**.0008**	**-.0002**
Stddev	.0010	.0004	.0017	.013	.0002	.0006	.0002	.0030	.0002
%RSD	33.89	43.49	179.0	.2292	459.8	.1997	8.092	387.0	95.02
#1	.0028	.0013	-.0020	5.495	.0000	.2996	.0017	-.0024	.0000
#2	.0020	.0010	-.0017	5.508	.0003	.3008	.0019	.0035	-.0003
#3	.0039	.0005	.0010	5.520	-.0001	.3004	.0020	.0013	-.0003

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0041**
Stddev	.0001
%RSD	2.598
#1	.0040
#2	.0040
#3	.0042

Zoom In Zoom Out

Sample Name: FA93641-1A Acquired: 3/11/2022 11:43:10 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.44**	**2044.9**	**31755.**	**8190.1**
Stddev	.94	3.5	52.	36.1
%RSD	.10370	.17018	.16405	.44034
#1	903.80	2047.2	31712.	8159.3
#2	904.01	2046.6	31813.	8181.2
#3	905.52	2040.9	31740.	8229.8

Zoom In Zoom Out

Sample Name: FA93641-2A Acquired: 3/11/2022 11:48:01 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0114**	**1.642**	**.0556**	**.0000**	**51.13**	**-.0013**	**.0177**	**.0011**
Stddev	.0002	.0056	.002	.0001	.000	.11	.0000	.0001	.0004
%RSD	16.46	49.20	.1321	.2049	312.8	.2187	2.884	.7653	39.29
#1	.0012	.0086	1.641	.0558	.0000	51.14	-.0013	.0175	.0006
#2	.0014	.0078	1.640	.0555	.0000	51.24	-.0013	.0177	.0014
#3	.0016	.0179	1.644	.0556	.0000	51.02	-.0014	.0178	.0012

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**69.06**	**9.015**	**.0006**	**6.897**	**2.255**	**.0004**	**12.93**	**.0047**
Stddev	.0002	.12	.052	.0008	.037	.005	.0001	.03	.0002
%RSD	20.73	.1792	.5757	143.1	.5397	.2057	29.49	.2489	4.045
#1	.0008	69.12	9.068	.0014	6.910	2.250	.0004	12.95	.0049
#2	.0010	69.14	8.964	-.0001	6.926	2.254	.0002	12.89	.0048
#3	.0012	68.92	9.014	.0003	6.855	2.260	.0004	12.95	.0045

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**-.0018**	**-.0007**	**6.844**	**.0001**	**.4198**	**.0021**	**.0036**	**.0012**
Stddev	.0006	.0007	.0010	.012	.0002	.0017	.0001	.0009	.0002
%RSD	16.95	36.87	130.7	.1696	346.2	.4081	5.204	26.17	17.57
#1	.0045	-.0011	.0003	6.838	.0000	.4209	.0022	.0047	.0010
#2	.0036	-.0019	-.0016	6.837	-.0001	.4179	.0021	.0031	.0014
#3	.0033	-.0024	-.0009	6.857	.0003	.4207	.0020	.0030	.0011

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0017**
Stddev	.0001
%RSD	4.120
#1	.0017
#2	.0017
#3	.0018

Zoom In Zoom Out

Sample Name: FA93641-2A Acquired: 3/11/2022 11:48:01 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**902.70**	**2033.8**	**31616.**	**8093.3**
Stddev	1.40	.5	67.	33.9
%RSD	.15541	.02561	.21195	.41900
#1	904.32	2033.5	31692.	8091.4
#2	901.89	2034.4	31589.	8060.4
#3	901.88	2033.5	31567.	8128.1

Zoom In Zoom Out

Sample Name: FA93641-3A Acquired: 3/11/2022 11:52:49 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0105**	**3.067**	**.0143**	**.0000**	**23.81**	**-.0009**	**.0125**	**.0005**
Stddev	.0003	.0081	.004	.0000	.0000	.07	.0001	.0002	.0001
%RSD	28.16	76.92	.1154	.2555	182.0	.2954	7.202	1.305	14.76
#1	.0014	.0029	3.063	.0143	.0000	23.79	-.0008	.0123	.0006
#2	.0013	.0190	3.069	.0143	.0000	23.75	-.0009	.0126	.0006
#3	.0008	.0097	3.069	.0143	.0000	23.89	-.0009	.0125	.0005

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**36.96**	**3.323**	**.0001**	**2.662**	**2.361**	**.0014**	**5.240**	**.0042**
Stddev	.0001	.04	.016	.0002	.004	.006	.0002	.016	.0002
%RSD	17.32	.1148	.4700	277.4	.1569	.2384	10.87	.3031	5.600
#1	.0005	36.96	3.323	.0000	2.658	2.356	.0016	5.245	.0040
#2	.0007	37.01	3.307	-.0001	2.666	2.361	.0013	5.222	.0045
#3	.0007	36.92	3.339	.0003	2.662	2.367	.0014	5.253	.0041

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0000**	**.0010**	**5.204**	**.0000**	**.1730**	**.0016**	**.0019**	**.0007**
Stddev	.0007	.001	.0011	.006	.0004	.0004	.0001	.0010	.0002
%RSD	36.69	9809.	108.3	.1214	920.2	.2550	3.995	49.36	33.66
#1	.0022	-.0009	.0000	5.200	.0005	.1733	.0016	.0026	.0007
#2	.0025	.0007	.0008	5.212	.0000	.1725	.0017	.0024	.0004
#3	.0011	.0002	.0022	5.201	-.0004	.1733	.0017	.0008	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**-.0011**
Stddev	.0001
%RSD	7.678
#1	-.0011
#2	-.0010
#3	-.0012

Zoom In Zoom Out

Sample Name: FA93641-3A Acquired: 3/11/2022 11:52:49 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**919.87**	**2076.7**	**32181.**	**8273.5**
Stddev	1.47	1.9	101.	29.0
%RSD	.16015	.08920	.31375	.35101
#1	921.53	2078.6	32252.	8268.4
#2	919.35	2074.9	32227.	8304.7
#3	918.73	2076.5	32066.	8247.3

Zoom In Zoom Out

Sample Name: FA93656-1 Acquired: 3/11/2022 11:57:38 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.1147**	**-.0013**	**.0114**	**.0000**	**53.47**	**-.0001**	**-.0002**	**.0006**
Stddev	.0004	.0042	.0012	.0001	.0000	.20	.0000	.0001	.0000
%RSD	188.8	3.703	97.91	1.240	206.1	.3788	32.21	78.79	7.154
#1	.0000	.1100	.0001	.0113	.0000	53.34	-.0001	-.0003	.0007
#2	.0000	.1181	-.0016	.0114	.0000	53.70	-.0002	-.0001	.0006
#3	.0006	.1162	-.0023	.0116	.0001	53.37	-.0002	-.0001	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.1523**	**.8784**	**.0008**	**4.668**	**.0444**	**-.0007**	**1.614**	**-.0002**
Stddev	.0001	.0026	.0120	.0009	.036	.0002	.0001	.005	.0002
%RSD	146.2	1.714	1.368	120.0	.7719	.5286	10.91	.3328	87.42
#1	-.0002	.1546	.8864	.0013	4.671	.0446	-.0007	1.611	-.0004
#2	.0001	.1529	.8646	-.0003	4.703	.0444	-.0008	1.620	-.0003
#3	-.0002	.1495	.8843	.0013	4.631	.0442	-.0006	1.611	.0000

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**.0007**	**-.0038**	**2.643**	**.0001**	**.1409**	**.0045**	**.0020**	**.0005**
Stddev	.0001	.0014	.0023	.007	.0002	.0005	.0001	.0012	.0002
%RSD	2.285	197.9	60.80	.2777	131.4	.3739	2.412	61.64	31.62
#1	.0032	-.0005	-.0032	2.638	.0001	.1404	.0046	.0008	.0007
#2	.0030	.0004	-.0063	2.639	.0003	.1409	.0044	.0019	.0005
#3	.0032	.0022	-.0018	2.651	.0000	.1414	.0046	.0033	.0004

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0107**
Stddev	.0001
%RSD	1.062
#1	.0109
#2	.0107
#3	.0107

Zoom In Zoom Out

Sample Name: FA93656-1 Acquired: 3/11/2022 11:57:38 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.56**	**2044.7**	**31710.**	**8122.8**
Stddev	2.86	4.5	94.	50.8
%RSD	.31482	.22113	.29489	.62548
#1	905.72	2045.5	31604.	8133.1
#2	910.85	2048.7	31746.	8067.6
#3	906.11	2039.8	31781.	8167.6

Zoom In Zoom Out

Sample Name: FA93656-2 Acquired: 3/11/2022 12:02:29 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.3549**	**.0001**	**.0102**	**.0000**	**58.95**	**-.0001**	**.0004**	**.0007**
Stddev	.0001	.0102	.0021	.0001	.0000	.23	.0001	.0001	.0002
%RSD	26.56	2.882	1393.	.5751	63.41	.3928	63.52	21.39	32.75
#1	-.0002	.3639	.0025	.0103	.0001	58.68	.0000	.0004	.0009
#2	-.0004	.3438	-.0011	.0102	.0000	59.12	-.0001	.0004	.0005
#3	-.0003	.3572	-.0010	.0102	.0001	59.03	-.0001	.0003	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**.5317**	**77.90**	**.0024**	**5.122**	**.6247**	**-.0001**	F **265.8**	**.0011**
Stddev	.0001	.0039	.06	.0003	.027	.0028	.0002	2.4	.0003
%RSD	3.636	.7295	.0720	13.48	.5265	.4435	238.6	.9090	30.21
#1	.0033	.5352	77.88	.0021	5.093	.6252	-.0001	263.6	.0007
#2	.0036	.5275	77.87	.0027	5.125	.6218	.0001	268.4	.0012
#3	.0034	.5323	77.97	.0025	5.147	.6273	-.0002	265.5	.0013

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**.0008**	**.0010**	**2.258**	**.0002**	**.1241**	**.0083**	**.0038**	**.0013**
Stddev	.0009	.0012	.0023	.003	.0005	.0002	.0002	.0002	.0002
%RSD	18.91	152.9	236.8	.1412	216.0	.1682	2.373	6.607	13.84
#1	.0038	.0003	.0021	2.257	-.0001	.1242	.0084	.0035	.0015
#2	.0055	-.0001	-.0017	2.256	.0000	.1238	.0080	.0038	.0011
#3	.0050	.0021	.0025	2.262	.0008	.1241	.0083	.0040	.0014

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0147**
Stddev	.0001
%RSD	.4644
#1	.0146
#2	.0147
#3	.0148

Zoom In Zoom Out

Sample Name: FA93656-2 Acquired: 3/11/2022 12:02:29 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**853.25**	**1996.7**	**30757.**	**8011.8**
Stddev	1.12	1.8	58.	49.9
%RSD	.13077	.09110	.18879	.62296
#1	852.52	1996.0	30752.	8067.6
#2	854.53	1998.8	30818.	7971.5
#3	852.69	1995.4	30702.	7996.4

Zoom In Zoom Out

Sample Name: FA93656-3 Acquired: 3/11/2022 12:07:27 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0999**	**-.0017**	**.0113**	**.0000**	**51.73**	**-.0001**	**-.0002**	**.0003**
Stddev	.0001	.0009	.0014	.0001	.000	.24	.0000	.0001	.0002
%RSD	63.00	.8761	80.40	.8636	303.4	.4587	58.50	91.27	70.24
#1	.0002	.1004	-.0012	.0114	.0001	51.89	-.0001	-.0001	.0001
#2	.0001	.0989	-.0033	.0112	.0000	51.46	.0000	-.0001	.0005
#3	.0003	.1004	-.0007	.0113	-.0001	51.85	.0000	-.0003	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1279**	**.8728**	**.0011**	**4.543**	**.0355**	**-.0008**	**1.593**	**-.0002**
Stddev	.0001	.0021	.0086	.0005	.044	.0001	.0003	.003	.0002
%RSD	291.5	1.653	.9832	44.88	.9683	.2802	35.69	.1548	99.87
#1	.0001	.1283	.8723	.0009	4.584	.0356	-.0005	1.594	-.0003
#2	-.0001	.1256	.8815	.0017	4.496	.0354	-.0007	1.590	-.0003
#3	.0001	.1297	.8644	.0007	4.549	.0356	-.0011	1.595	.0000

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0006**	**-.0009**	**2.572**	**.0001**	**.1376**	**.0042**	**.0019**	**.0005**
Stddev	.0008	.0009	.0027	.003	.0002	.0001	.0000	.0015	.0002
%RSD	25.81	151.7	311.9	.1199	245.5	.0596	.8861	81.55	32.70
#1	.0028	.0002	-.0037	2.574	.0000	.1376	.0042	.0025	.0003
#2	.0023	.0000	.0016	2.575	-.0001	.1375	.0043	.0030	.0005
#3	.0038	.0017	-.0004	2.569	.0004	.1376	.0042	.0001	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0124**
Stddev	.0001
%RSD	.7760
#1	.0123
#2	.0125
#3	.0124

Zoom In Zoom Out

Sample Name: FA93656-3 Acquired: 3/11/2022 12:07:27 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.49**	**2047.6**	**31746.**	**8138.0**
Stddev	1.20	2.1	45.	57.6
%RSD	.13172	.10367	.14124	.70826
#1	908.26	2045.3	31795.	8093.9
#2	906.11	2048.1	31733.	8203.2
#3	908.10	2049.4	31709.	8116.8

Zoom In Zoom Out

Sample Name: FA93656-4 Acquired: 3/11/2022 12:12:17 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.1554**	**-.0014**	**.0093**	**.0000**	**46.75**	**-.0001**	**-.0002**	**.0007**
Stddev	.0004	.0053	.0010	.0000	.000	.11	.0001	.0001	.0001
%RSD	280.7	3.441	70.87	.0903	368.5	.2436	49.98	38.99	10.75
#1	.0003	.1557	-.0015	.0093	.0000	46.81	-.0002	-.0001	.0007
#2	-.0006	.1499	-.0004	.0093	.0000	46.62	-.0001	-.0001	.0008
#3	-.0002	.1606	-.0023	.0093	.0000	46.82	-.0002	-.0002	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.1897**	**4.955**	**.0009**	**4.049**	**.0970**	**-.0006**	**16.46**	**.0001**
Stddev	.0003	.0014	.022	.0003	.022	.0002	.0001	.08	.0004
%RSD	73.75	.7607	.4430	33.07	.5559	.2566	16.36	.5115	407.5
#1	.0006	.1894	4.979	.0006	4.049	.0969	-.0007	16.55	.0005
#2	.0007	.1884	4.938	.0012	4.026	.0973	-.0005	16.38	-.0003
#3	.0001	.1913	4.946	.0010	4.071	.0968	-.0007	16.46	.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0009**	**-.0004**	**1.958**	**.0002**	**.1127**	**.0052**	**.0020**	**.0005**
Stddev	.0004	.0003	.0018	.008	.0002	.0008	.0002	.0008	.0001
%RSD	13.30	30.55	409.7	.3946	119.9	.6722	3.032	41.49	24.19
#1	.0032	.0008	-.0021	1.967	.0000	.1136	.0051	.0029	.0005
#2	.0029	.0012	-.0006	1.954	.0004	.1123	.0051	.0019	.0004
#3	.0037	.0007	.0014	1.953	.0002	.1123	.0054	.0012	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0136**
Stddev	.0001
%RSD	.9632
#1	.0137
#2	.0135
#3	.0137

Zoom In Zoom Out

Sample Name: FA93656-4 Acquired: 3/11/2022 12:12:17 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**902.82**	**2041.6**	**31679.**	**8062.2**
Stddev	3.39	7.1	113.	22.5
%RSD	.37520	.34793	.35519	.27950
#1	900.63	2033.4	31768.	8067.8
#2	901.10	2045.8	31553.	8081.4
#3	906.72	2045.6	31717.	8037.4

Zoom In Zoom Out

Sample Name: FA93656-5 Acquired: 3/11/2022 12:17:07 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1177**	**-.0022**	**.0103**	**.0000**	**52.86**	**-.0001**	**-.0002**	**.0006**
Stddev	.0003	.0073	.0006	.0001	.000	.30	.0001	.0002	.0002
%RSD	631.6	6.182	29.16	.6663	524.6	.5684	60.89	86.99	26.92
#1	.0002	.1232	-.0029	.0104	.0000	52.97	-.0001	-.0002	.0004
#2	.0003	.1095	-.0018	.0102	.0000	52.52	-.0001	.0000	.0007
#3	-.0003	.1205	-.0018	.0102	.0000	53.09	.0000	-.0004	.0007

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.1711**	**10.35**	**.0007**	**4.519**	**.1274**	**-.0003**	**35.57**	**.0000**
Stddev	.0001	.0008	.01	.0002	.038	.0003	.0000	.01	.0002
%RSD	18.15	.4907	.0767	29.48	.8316	.2595	10.26	.0314	2102.
#1	.0007	.1712	10.35	.0005	4.537	.1273	-.0004	35.56	.0002
#2	.0005	.1720	10.34	.0009	4.476	.1271	-.0003	35.57	-.0001
#3	.0008	.1703	10.36	.0006	4.544	.1278	-.0003	35.58	-.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**.0004**	**.0005**	**2.404**	**.0000**	**.1311**	**.0044**	**.0023**	**.0004**
Stddev	.0003	.0002	.0019	.002	.0002	.0002	.0001	.0008	.0002
%RSD	8.354	38.79	361.1	.0880	748.0	.1783	1.152	32.33	58.84
#1	.0040	.0002	-.0010	2.406	.0002	.1313	.0044	.0021	.0001
#2	.0045	.0005	.0027	2.402	-.0001	.1311	.0045	.0017	.0005
#3	.0038	.0005	-.0001	2.404	-.0001	.1309	.0044	.0032	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0110**
Stddev	.0002
%RSD	1.657
#1	.0111
#2	.0110
#3	.0108

Zoom In Zoom Out

Sample Name: FA93656-5 Acquired: 3/11/2022 12:17:07 Type: Unk
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**895.57**	**2034.1**	**31494.**	**8043.6**
Stddev	2.21	1.5	63.	62.7
%RSD	.24629	.07238	.19933	.77894
#1	893.59	2033.0	31566.	8009.1
#2	897.95	2033.4	31467.	8115.9
#3	895.18	2035.8	31450.	8005.8

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 12:21:58 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2473**	**39.93**	**2.055**	**2.080**	**2.139**	**41.32**	**2.048**	**2.056**	**2.040**
Stddev	.0004	.14	.005	.005	.008	.20	.002	.003	.004
%RSD	.1515	.3497	.2450	.2217	.3726	.4961	.1172	.1464	.1851
#1	.2475	39.82	2.061	2.076	2.141	41.42	2.048	2.056	2.038
#2	.2475	40.09	2.053	2.085	2.146	41.46	2.051	2.059	2.038
#3	.2469	39.88	2.052	2.078	2.131	41.09	2.046	2.053	2.045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.062**	**40.88**	**41.14**	**2.114**	**41.18**	**2.042**	**2.067**	**41.98**	**2.073**
Stddev	.002	.16	.10	.004	.30	.003	.002	.08	.000
%RSD	.0720	.4006	.2405	.1808	.7167	.1687	.1003	.1840	.0194
#1	2.061	40.92	41.13	2.111	41.41	2.040	2.065	41.97	2.074
#2	2.064	41.03	41.24	2.118	41.28	2.039	2.069	42.06	2.073
#3	2.062	40.71	41.05	2.112	40.85	2.045	2.068	41.91	2.073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.978**	**2.067**	**2.056**	**2.226**	**2.043**	**2.133**	**2.024**	**2.026**	**2.032**
Stddev	.006	.009	.004	.004	.003	.022	.001	.006	.004
%RSD	.2890	.4119	.2018	.1942	.1645	1.015	.0630	.2995	.1763
#1	1.978	2.076	2.053	2.226	2.040	2.158	2.024	2.023	2.028
#2	1.972	2.059	2.056	2.231	2.041	2.124	2.026	2.023	2.032
#3	1.983	2.064	2.061	2.222	2.047	2.118	2.024	2.033	2.036
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 3/11/2022 12:21:58 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.036**
Stddev	.002
%RSD	.0906
#1	2.036
#2	2.037
#3	2.034
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**866.70**	**2067.2**	**31934.**	**8124.4**
Stddev	1.00	2.8	47.	56.5
%RSD	.11548	.13313	.14577	.69511
#1	867.68	2069.3	31980.	8099.3
#2	866.74	2064.1	31935.	8084.7
#3	865.68	2068.3	31887.	8189.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 3/11/2022 12:26:39 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0087**	**-.0001**	**.0001**	**.0001**	**.0039**	**.0001**	**.0001**
Stddev	.0004	.0059	.0007	.0001	.0001	.0009	.0000	.0000
%RSD	118.6	67.53	772.7	103.6	44.34	23.67	39.14	39.04
#1	.0004	.0023	-.0004	.0000	.0001	.0039	.0001	.0001
#2	.0006	.0138	.0007	.0001	.0002	.0049	.0002	.0001
#3	-.0001	.0100	-.0006	.0002	.0002	.0030	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0003**	**.0052**	**.0415**	**.0003**	**.0010**	**.0005**	**.0004**
Stddev	.0003	.0001	.0009	.0138	.0007	.0023	.0000	.0002
%RSD	65.77	43.02	16.53	33.14	210.7	228.1	4.858	41.90
#1	.0002	.0004	.0046	.0460	.0011	.0037	.0005	.0004
#2	.0004	.0002	.0062	.0261	-.0002	.0000	.0005	.0006
#3	.0008	.0003	.0048	.0524	.0001	-.0006	.0005	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0264**	**.0003**	**.0005**	**.0005**	F **-.0022**	**.0007**	**.0005**	**.0001**
Stddev	.0056	.0003	.0004	.0010	.0017	.0003	.0002	.0001
%RSD	21.17	88.40	88.92	210.8	75.90	51.12	52.04	50.79
#1	.0325	.0003	.0001	.0005	-.0037	.0005	.0002	.0000
#2	.0214	.0001	.0009	-.0005	-.0004	.0011	.0007	.0001
#3	.0254	.0006	.0003	.0015	-.0023	.0005	.0005	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None	Chk Pass	Chk Pass
High Limit					.0020			
Low Limit					-.0020			

8.2

8

Inst QC: MA18521

Zoom In
Zoom Out

Sample Name: CCB Acquired: 3/11/2022 12:26:39 Type: QC
Method: 60102007_COMBO_09222021(v388) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0003**	**.0001**	**.0004**
Stddev	.0000	.0009	.0001	.0001
%RSD	15.34	275.3	75.24	20.91
#1	.0001	-.0008	.0000	.0003
#2	.0002	-.0008	.0002	.0004
#3	.0002	.0007	.0002	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**933.80**	**2145.1**	**32632.**	**8261.5**
Stddev	.40	5.2	16.	22.8
%RSD	.04298	.24267	.04785	.27622
#1	934.25	2150.9	32645.	8239.0
#2	933.68	2143.6	32635.	8261.1
#3	933.48	2140.8	32615.	8284.6

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000103	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000028	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000037	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000625	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000080	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000004	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000015	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	-0.000098	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000032	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	0.000001	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	-0.000006	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000031	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No
Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No
			Fe	0.000042	0.000000	No
			Mo	-0.002189	0.000000	No
			Cu	0.000467	0.000000	No
			Ti	0.000036	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Si	0.000108	0.000000	No
			Ca	0.000012	0.000000	No
			Cr	-0.000260	0.000000	No
			Mg	0.000002	0.000000	No
Sb 206.833 {463}	☒	11	Fe	0.000046	0.000000	No
			Cr	0.011486	0.000000	No
			Mo	-0.002538	0.000000	No
			V	-0.000441	0.000000	No
			Sn	-0.008695	0.000000	No
			Ti	0.000278	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000818	0.000000	No
			Al	0.000005	0.000000	No
			Mn	-0.000133	0.000000	No
			Mg	-0.000002	0.000000	No
Se 196.090 {472}	☒	12	Fe	-0.000016	0.000000	No
			Ca	0.000006	0.000000	No
			Mn	0.000331	0.000000	No
			Mo	0.000111	0.000000	No
			Al	0.000001	0.000000	No
			V	0.000000	0.000000	No
			Zn	0.000000	0.000000	No
			Sr	-0.000111	0.000000	No
			As	0.000125	0.000000	No
			Cd	-0.000250	0.000000	No
			Mg	0.000002	0.000000	No
			Cr	-0.000326	0.000000	No
Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000006	0.000000	No
Sr 407.771 { 83}	☒	2	Ca	0.000005	0.000000	No
			Al	0.000012	0.000000	No
Ti 334.941 {101}	☒	1	Ca	-0.000008	0.000000	No
Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
			Fe	-0.000038	0.000000	No
			Al	0.000000	0.000000	No
			Ba	-0.000051	0.000000	No
			Ti	-0.000648	0.000000	No
			Sb	0.000167	0.000000	No
			Ca	0.000001	0.000000	No
			Cr	0.000340	0.000000	No
			Mg	-0.000002	0.000000	No
			V	0.000015	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000007	0.000000	No
			Cr	-0.003634	0.000000	No
			Mo	-0.009536	0.000000	No
			Ti	0.000303	0.000000	No
			Mn	-0.000333	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
			Al	0.000014	0.000000	No
			Ca	0.000003	0.000000	No
			Fe	-0.000012	0.000000	No
			As	0.001105	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000127	0.523621	0.000000	1.000000
Al 396.152 { 85}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.004964	0.126947	0.000000	1.000000
As 189.042 {478}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000565	0.173909	0.000000	1.000000
Ba 455.403 { 74}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.012255	12.821766	0.000000	1.000000
Be 313.042 {108}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000487	10.792385	0.000000	1.000000
Ca 317.933 {106}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.004510	0.336540	0.000000	1.000000
Cd 226.502 {449}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.001422	4.725082	0.000000	1.000000
Co 228.616 {447}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.001007	2.677674	0.000000	1.000000
Cr 267.716 {126}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000001	0.383568	0.000000	1.000000
Cu 324.754 {104}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.012398	0.749965	0.000000	1.000000
Fe 259.940 {130}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000552	0.171647	0.000000	1.000000
In 230.606 {446}*	3/11/2022 10:13:26	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.004287	0.118540	0.000000	1.000000
Li 670.784 { 50}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.001721	2.858499	0.000000	1.000000
Mg 279.079 {121}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000079	0.028153	0.000000	1.000000
Mn 257.610 {131}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000289	2.060136	0.000000	1.000000
Mo 202.030 {467}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000740	0.862050	0.000000	1.000000
Na 589.592 { 57}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.004872	0.472669	0.000000	1.000000
Ni 231.604 {445}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.001256	1.650197	0.000000	1.000000
Pb 220.353 {453}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000500	1.000065	0.000000	1.000000
Sb 206.833 {463}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000563	0.249123	0.000000	1.000000
Se 196.090 {472}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.001063	0.127017	0.000000	1.000000
Si 212.412 {459}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.006049	0.426468	0.000000	1.000000
Sn 189.989 {477}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000214	0.395438	0.000000	1.000000
Sr 407.771 { 83}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000682	17.364484	0.000000	1.000000
Ti 334.941 {101}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000505	1.453336	0.000000	1.000000
Tl 190.856 {477}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.001423	0.314956	0.000000	1.000000
V 292.402 {115}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	-0.000842	0.618106	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	3/11/2022 10:13:26	3/11/2022 9:32:13	Linear	1/Conc	0.000919	2.141637	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999592	0.000052	0.000402	0.001340	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999907	0.000362	0.007306	0.024353	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999987	0.000009	0.001331	0.004435	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999979	0.003884	0.000104	0.000346	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999797	0.001602	0.000041	0.000136	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999891	0.002316	0.001567	0.005222	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999811	0.000678	0.000074	0.000247	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999919	0.000797	0.000145	0.000484	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999827	0.000074	0.000326	0.001088	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999990	0.000055	0.000255	0.000848	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999838	0.000789	0.001496	0.004988	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999961	0.001129	0.017385	0.057951	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.999923	0.000350	0.000745	0.002483	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999935	0.000339	0.011942	0.039808	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999592	0.000751	0.000053	0.000177	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999972	0.000150	0.000260	0.000868	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999835	0.009209	0.004189	0.013965	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999812	0.000668	0.000240	0.000799	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999888	0.000110	0.000957	0.003190	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999985	0.000010	0.001429	0.004762	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999848	0.000023	0.002551	0.008505	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.993621	0.002606	0.000609	0.002030	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999961	0.000081	0.000497	0.001658	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999937	0.002025	0.000048	0.000161	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999983	0.000088	0.000133	0.000444	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999902	0.000046	0.001835	0.006118	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999955	0.000135	0.000272	0.000905	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999677	0.000802	0.000120	0.000401	OK.	1.000000	0.000000	1	0

SGS Orlando

Date:	03/07/22
Time	16:23

[24hr]

Analysts Name:	Adam K
MP Batch ID:	40383
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	21480064	ACC1260	0.05	MU45274
Conc. HCl (B)	4121060	ACC1291	0.2	KU15244
NA	NA	MET7193	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	Therm ID	Mercury	Temp. C	94	Corr. Factor	-2	Corrected Observed Temp. C	92
pH Paper Lot Number	212719			Filter Lot Number		0608Z20OV-P		Digestion Tube Lot Number	MP3520

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	2	Matrix Spike(MS)	50	50	Y	
	2	Matrix Spike Dup(MSD)	50	50	Y	
	2	Duplicate(DUP)	50	50	Y	
1(QC) C	2	FA93314-21FA	50	50	Y	
2	2	FA93314-22FA	50	50	Y	
3	5	FA93418-1A	50	50	Y	
4	4	TD79321-1	50	50	Y	
5	4	FA93485-1	50	50	Y	
6	1	FA93641-1	50	50	Y	
7	1	FA93641-2	50	50	Y	
8	1	FA93641-3	50	50	Y	
9	9	FA92740-1R	50	50	Y	
10	9	FA92740-2R	50	50	Y	
11	9	FA92740-4R	50	50	Y	
12	9	FA92740-5R	50	50	Y	
13						
14						
15						
16						
17						
18						
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

SGS Orlando

Date:	03/10/22
[24hr] Time	16:25

Analysts Name:	Adam K
MP Batch ID:	40406
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	21480064	ACC1301	0.5	KU15244
Conc. HCl (B)	4121060	ACC1291	0.25	KU15244
NA	NA	MET7192	0.25	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	Therm ID	Mercury	Temp. C	94	Corr. Factor	-2	Corrected Observed Temp. C	92
pH Paper Lot Number	212719			Filter Lot Number		0608Z20OV-P		Digestion Tube Lot Number	MP3520

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	22	Matrix Spike(MS)	50	50	Y	
	22	Matrix Spike Dup(MSD)	50	50	Y	
	22	Duplicate(DUP)	50	50	Y	
1(QC) C	22	FA93582-2	50	50	Y	
2	10	FA93582-6	50	50	Y	
3	11	FA93582-3F	50	50	Y	
4	10	FA93582-4F	50	50	Y	
5	10	FA93582-5F	50	50	Y	
6	1	FA93641-1A	50	50	Y	
7	1	FA93641-2A	50	50	Y	
8	1	FA93641-3A	50	50	Y	
9	5	FA93656-1	50	50	Y	
10	5	FA93656-2	50	50	Y	
11	5	FA93656-3	50	50	Y	
12	5	FA93656-4	50	50	Y	
13	5	FA93656-5	50	50	Y	
14	3	FA93669-1	50	50	Y	
15	3	FA93669-2	50	50	Y	
16	3	FA93669-3	50	50	Y	
17	3	FA93669-4	50	50	Y	
18	3	FA93669-5	50	50	Y	
19	3	FA93669-6	50	50	Y	
20	1	FA93684-2	50	50	Y	
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP37489/GN90770	0.50	0.0	mg/l	10	9.59	95.9	90-110%
Chloride	GP37489/GN90770	2.0	0.0	mg/l	50	49.1	98.2	90-110%
Fluoride	GP37489/GN90770	0.20	0.0	mg/l	2.5	2.37	94.8	90-110%
Nitrogen, Nitrate	GP37489/GN90770	0.10	0.0	mg/l	2.5	2.43	97.2	90-110%
Sulfate	GP37489/GN90770	2.0	0.0	mg/l	50	49.5	99.0	90-110%

Associated Samples:
Batch GP37489: FA93641-1A
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP37489/GN90770	FA93669-6	mg/l	13.4	10	19.6	62.0N(a)	90-110%
Chloride	GP37489/GN90770	FA93669-6	mg/l	2530	50	2130	-800.0(b)	90-110%
Fluoride	GP37489/GN90770	FA93669-6	mg/l	0.0	2.5	6.9	276.0N(a)	90-110%
Nitrogen, Nitrate	GP37489/GN90770	FA93669-6	mg/l	0.0	2.5	6.4	256.0N(a)	90-110%
Sulfate	GP37489/GN90770	FA93669-6	mg/l	3060	50	2560	-1000.0(b)	90-110%

Associated Samples:
Batch GP37489: FA93641-1A
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP37489/GN90770	FA93669-6	mg/l	13.4	10	19.7	0.5	15%
Chloride	GP37489/GN90770	FA93669-6	mg/l	2530	50	2160	1.4	15%
Fluoride	GP37489/GN90770	FA93669-6	mg/l	0.0	2.5	6.9	0.0	15%
Nitrogen, Nitrate	GP37489/GN90770	FA93669-6	mg/l	0.0	2.5	6.4	0.0	15%
Sulfate	GP37489/GN90770	FA93669-6	mg/l	3060	50	2620	2.3	15%

Associated Samples:
Batch GP37489: FA93641-1A
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022030801.CSV Date Analyzed: 03/06/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN90770
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:34	GN90770-STD1	1		STDA
21:57	GN90770-STD2	1		STDB
22:19	GN90770-STD3	1		STDC
22:42	GN90770-STD4	1		STDD
23:05	GN90770-STD5	1		STDE
23:28	GN90770-STD6	1		STDF
23:50	GN90770-STD7	1		STDG
00:13	GN90770-STD8	1		STDH
00:36	GN90770-STD9	1		STDI
00:59	GN90770-STD10	1		STDJ
01:21	GN90770-STD11	1		STDK
01:44	GN90770-ICV1	1		
02:07	GN90770-ICB1	1		
02:30	GN90770-CRI1	1		
02:53	GN90770-CCV1	1		
03:16	GN90770-CCB1	1		
09:36	GN90770-CCV2	1		
10:03	GP37489-MB1	1		
10:25	GP37489-B1	1		
10:54	ZZZZZZ	50		
11:21	ZZZZZZ	100		
11:43	ZZZZZZ	100		
12:05	ZZZZZZ	100		
12:26	ZZZZZZ	100		
12:48	FA93669-6	100		(sample used for QC only; not part of login FA93641)
13:10	GP37489-S1	100		
13:32	GP37489-S2	100		
13:57	GN90770-CCV3	1		
14:19	GN90770-CCB2	1		
14:55	ZZZZZZ	10		
15:23	FA93641-1A	1		
15:45	ZZZZZZ	10		
16:07	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022030801.CSV Date Analyzed: 03/06/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN90770
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:29	FA93658-4	10		(sample used for QC only; not part of login FA93641)
16:50	GP37489-S3	10		
17:12	GP37489-S4	10		
17:34	ZZZZZZ	10		
17:56	GN90770-CCV4	1		
18:18	GN90770-CCB3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA93641
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022030801.CSV Date Analyzed: 03/06/22 Methods: EPA 300/SW846 9056A
Run ID: GN90770 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN90770-ICV1	Chloride	51.7	2.0	0.80	50	103.4	90-110
GN90770-ICV1	Sulfate	51.5	2.0	0.60	50	103.0	90-110
GN90770-ICB1	Chloride	0.80 U	2.0	0.80			
GN90770-ICB1	Sulfate	0.60 U	2.0	0.60			
GN90770-CRI1	Chloride	1.20	2.0	0.80	1	120.0	50-150
GN90770-CRI1	Sulfate	1.34	2.0	0.60	1	134.0	50-150
GN90770-CCV1	Chloride	50.2	2.0	0.80	50	100.4	90-110
GN90770-CCV1	Sulfate	51.0	2.0	0.60	50	102.0	90-110
GN90770-CCB1	Chloride	0.80 U	2.0	0.80			
GN90770-CCB1	Sulfate	0.60 U	2.0	0.60			
GN90770-CCV2	Chloride	51.7	2.0	0.80	50	103.4	90-110
GN90770-CCV2	Sulfate	52.1	2.0	0.60	50	104.2	90-110
GN90770-CCV3	Chloride	51.9	2.0	0.80	50	103.8	90-110
GN90770-CCV3	Sulfate	52.3	2.0	0.60	50	104.6	90-110
GN90770-CCB2	Chloride	0.80 U	2.0	0.80			
GN90770-CCB2	Sulfate	0.60 U	2.0	0.60			
GN90770-CCV4	Chloride	51.9	2.0	0.80	50	103.8	90-110
GN90770-CCV4	Sulfate	51.7	2.0	0.60	50	103.4	90-110
GN90770-CCB3	Chloride	0.80 U	2.0	0.80			
GN90770-CCB3	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

General Chemistry

Raw Data

IC STANDARDS PREP LOG

STANDARD NAME	ANALYTES	STOCK MFG. #	STOCK LOT #	STOCK EXP. DATE	STOCK CONC. (mg/l)	VOLUME ADDED (ml)	TOTAL VOLUME (ml)	STANDARD CONC. (mg/l)	PREP DATE	INITIALS	STD LOT #	EXP. DATE
Bl	Br	WH32988	Ref	4-9-22	1000	0.5	50	10	3-5-22	JE	IC013509	3-5-22
Std 10	NO_2/NO_3	IC013506/7	Ref	3-5-22	100	5	50	10			IC013510	
	SO_4	WC1884	LGC	12-1-22	1000			100				
	Cl	lele	Fisher	7-1-23								
	F	48	LGC	8-25-22		0.5		10				
	PO_4	62	Inorganic	10-6-22								
	Br	55	SpectroPure	7-1-22		1	0	20				
1° NO_2	NO_2	WC1874	Absolute	7-31-23	1000	25	25	100	3-7-22	AE	IC013511	3-7-22
1° NO_3	NO_3	42	Fisher	11-1-22							2	
2° NO_2	NO_2	77	Absolute	11-10-23							3	
2° NO_3	NO_3	WC1731									4	
CCV	NO_2/NO_3	IC013511/2	Ref	3-7-22	100	5	200	2.5			5	
	SO_4	WC1884	LGC	12-1-22	1000	10		50				
	Cl	lele	Fisher	7-1-23		1		1				
	F	48	LGC	8-25-22		0.5		2.5				
	Br	55	Spectro Pure	7-1-22		2		10				
Bl	NO_2/NO_3	IC013513/4	Ref	3-7-22	100	1.25	50	2.5			6	
	SO_4	GN329B6		4-9-22	1000	2.5		50				
	Cl	7				1		1				
	F	IC013427				1.25		2.5				
	Br	GN329B8		4-9-22		0.5		10				

JE 3-5-22

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

Date:	3/8/22 @ 9:08
Analyst:	JR
Instrument:	4
Inst. File Name:	42022030801.csv

Prep Batchs:	37489
Analytical Batch:	90770
Calibration Date:	3/5/22
Pump pressure:	7.82MPa

Vial lot#	~~673~~ 676879-E23456 JR 3/8/22
Cap lot#	—
Syringe lot#	—
Filter lot#	—

Standards	
ICAL:	—
ICV:	—
CCV:	1C013515
QC:	↓ 6

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed F	Cl	NO2	Br	NO3	SO4	Results OK or Dilution Needed ① F	Cl	NO2	Br	NO3	SO4	Comments
Rinsu																		
CW	-	AQ	-	1	N													① Ok unless marked
MB1	-		-															
B1	-		-															
FA93669-1	2		②	50														
-2				100														② Dilution made from historical results.
-3																		
-4																		
-5																		
-6																		
-6S1																		
-6S2																		
CW	-		-	1														
CUB	-		-															
FA93656-2	3		②	10														
FA93641-1A	2		339 µ	1														
FA93647-1	3		1622 µ	10														
FA93658-1	8		3 µ	1														
-4	9		1638 µ	10														
-4S3																		
-4S4																		
-5			1243 µ															
CW	-		-															
CUB	-		-															

JR 3/9/22

Rev 0116 LM

SGS Accutest - Orlando

MagIC Net

2022-03-08 9:32:49

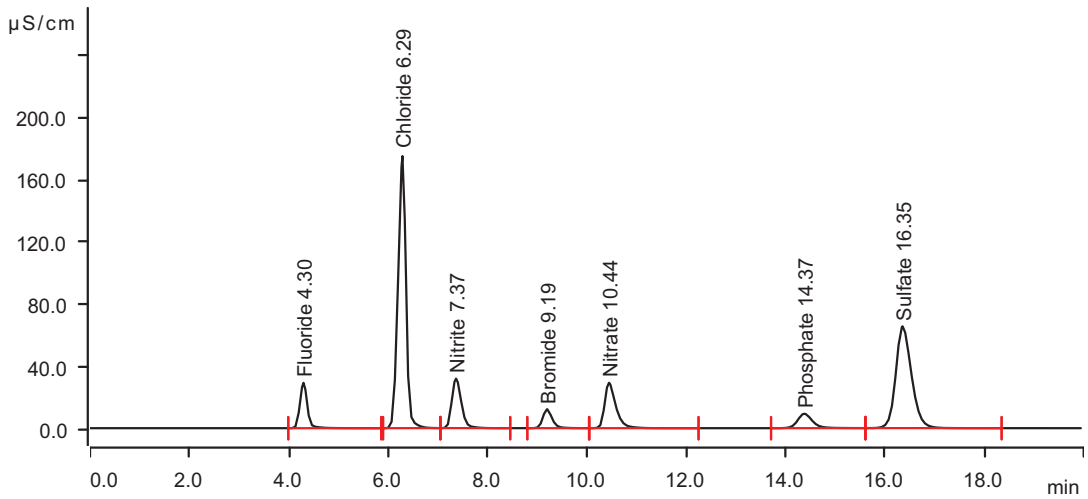
Sample data

Ident	STDK
Sample type	Standard 10
Determination start	2022-03-06 01:21:47 UTC-5
Method	SGS In-Vial Anions191003A
Operator	JR

Anions

Data source	Conductivity detector 1 (930 Compact IC Flex 1)	
Channel	Conductivity	
Recording time	20.0	min
Integration	Automatically	
Column type	Metrosep A Supp 5 - 150/4.0	
Eluent composition	not defined	
Flow	0.700	mL/min
Maximum flow monitored	yes	
Pressure	7.87	MPa
Maximum pressure monitored	yes	
Temperature	30.0	°C

Anions

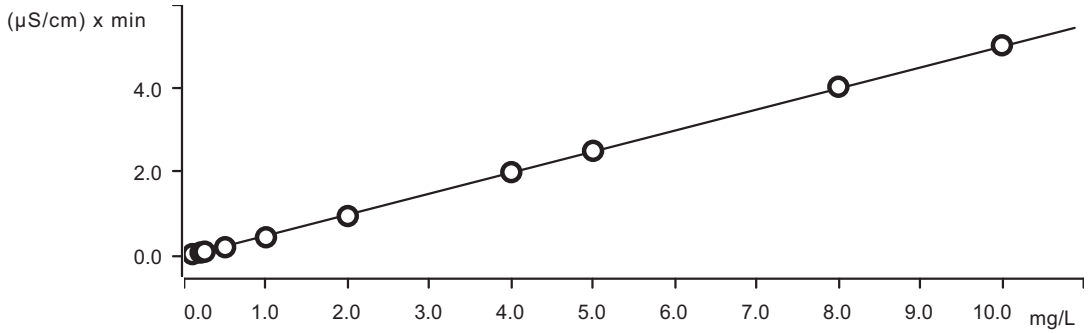


Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration mg/L	Component name
1	4.297	5.0362	29.061	10.062	Fluoride
2	6.287	32.0361	174.170	101.204	Chloride
3	7.365	7.0464	31.674	10.052	Nitrite
4	9.193	2.6530	12.116	20.930	Bromide
5	10.442	7.5447	29.082	10.741	Nitrate
6	14.372	3.2070	9.232	10.833	Phosphate
7	16.348	23.8690	65.174	101.399	Sulfate

MagIC Net

2022-03-08 9:32:49

Fluoride (Anions)



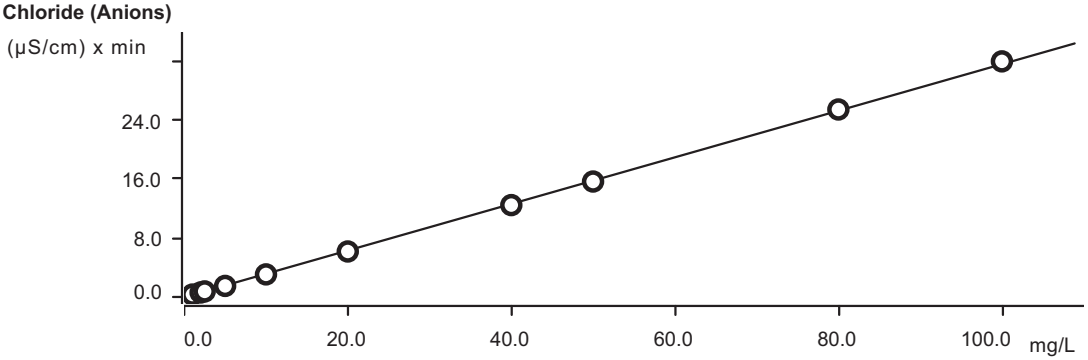
Function: . . . . . *A = - 0.0262873 + 0.0251577× Q*

Relative standard deviation . . . . . *1.902321 %*

Correlation coefficient *0.999884*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0349	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.0727	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.0929	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.2001	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.4386	STDF	2022-03-05 23:28:02 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	0.9466	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	1.9983	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	2.5086	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	4.0436	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	5.0362	STDK	2022-03-06 01:21:47 UTC-5

Chloride (Anions)



MagIC Net

2022-03-08 9:32:49

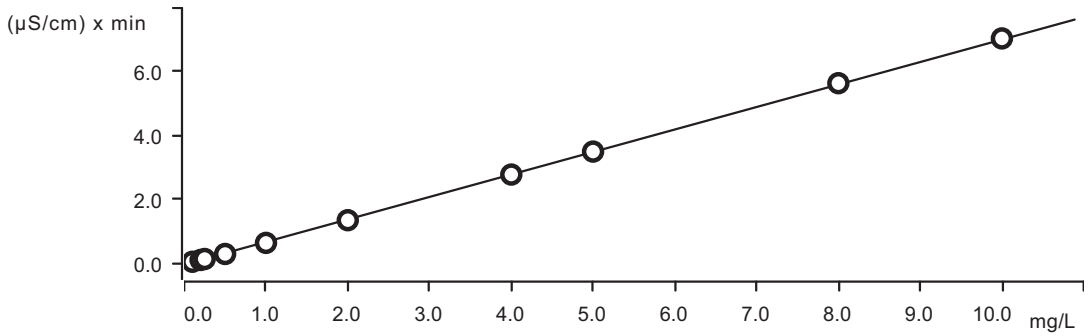
Function: . . . . . A = - 0.100798 + 0.0158772× Q

Relative standard deviation . . . . . 1.791479 %

Correlation coefficient 0.999896

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	1.000	20.0	1.0	1.0	0.2473	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	2.000	20.0	1.0	1.0	0.5299	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	2.500	20.0	1.0	1.0	0.6772	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	5.000	20.0	1.0	1.0	1.4259	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	10.000	20.0	1.0	1.0	2.9960	STDF	2022-03-05 23:28:02 UTC-5
Standard 6	1	20.000	20.0	1.0	1.0	6.1191	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	40.000	20.0	1.0	1.0	12.4439	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	50.000	20.0	1.0	1.0	15.6560	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	80.000	20.0	1.0	1.0	25.4785	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	100.000	20.0	1.0	1.0	32.0361	STDK	2022-03-06 01:21:47 UTC-5

Nitrite (Anions)



Function: . . . . . A = - 0.0302469 + 0.0351992× Q

Relative standard deviation . . . . . 1.242673 %

Correlation coefficient 0.999950

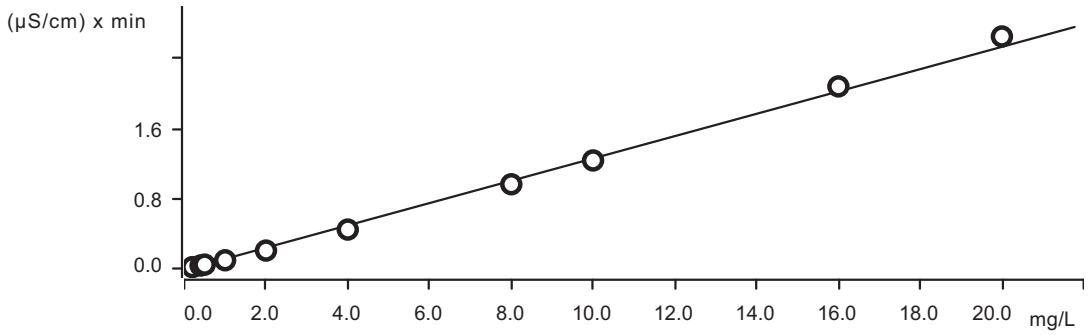
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0515	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.1079	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.1382	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.2951	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.6428	STDF	2022-03-05 23:28:02 UTC-5

MagIC Net

2022-03-08 9:32:49

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	2.000	20.0	1.0	1.0	1.3534	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	2.7828	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	3.5022	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	5.6437	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	7.0464	STDK	2022-03-06 01:21:47 UTC-5

Bromide (Anions)



Function: . . . . . *A = - 0.0148850 + 6.37342E-3× Q*

Relative standard deviation . . . . . *6.907889 %*

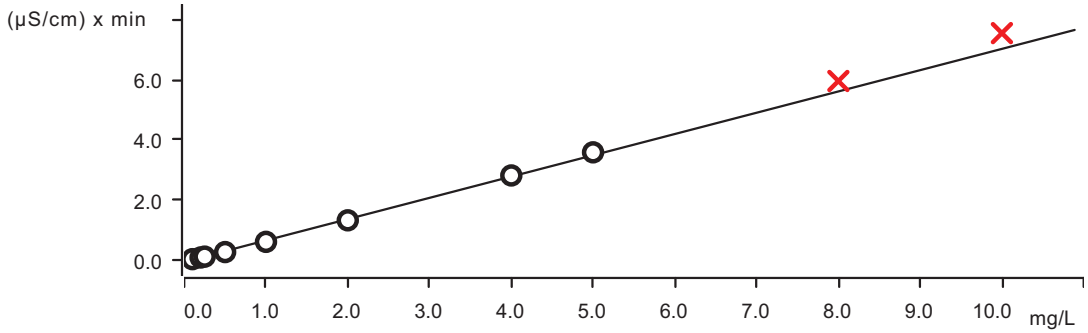
Correlation coefficient *0.998554*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	0.200	20.0	1.0	1.0	0.0184	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	0.400	20.0	1.0	1.0	0.0372	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	0.500	20.0	1.0	1.0	0.0470	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	1.000	20.0	1.0	1.0	0.0967	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	2.000	20.0	1.0	1.0	0.2075	STDF	2022-03-05 23:28:02 UTC-5
Standard 6	1	4.000	20.0	1.0	1.0	0.4476	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	8.000	20.0	1.0	1.0	0.9650	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	10.000	20.0	1.0	1.0	1.2369	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	16.000	20.0	1.0	1.0	2.0829	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	20.000	20.0	1.0	1.0	2.6530	STDK	2022-03-06 01:21:47 UTC-5

MagIC Net

2022-03-08 9:32:49

Nitrate (Anions)



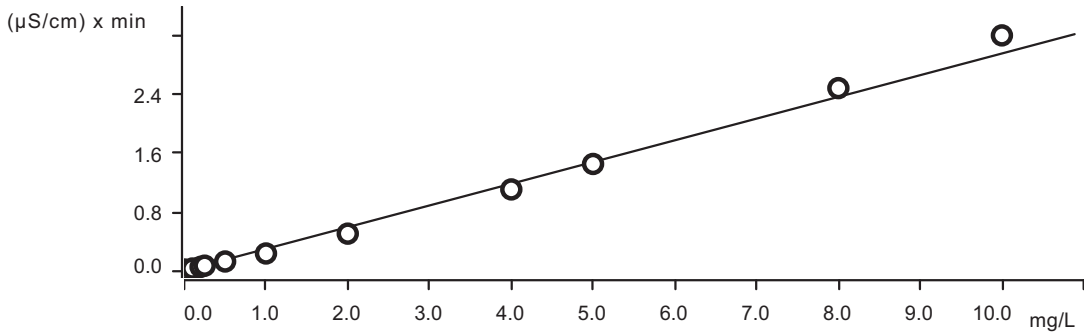
Function: . . . . . *A = - 0.0348667 + 0.0352837× Q*

Relative standard deviation . . . . . *4.640681 %*

Correlation coefficient *0.999386*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0490	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.1039	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.1331	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.2838	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.6232	STDF	2022-03-05 23:28:02 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	1.3372	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	2.8247	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	3.5913	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	5.9567	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	7.5447	STDK	2022-03-06 01:21:47 UTC-5

Phosphate (Anions)



MagIC Net

2022-03-08 9:32:49

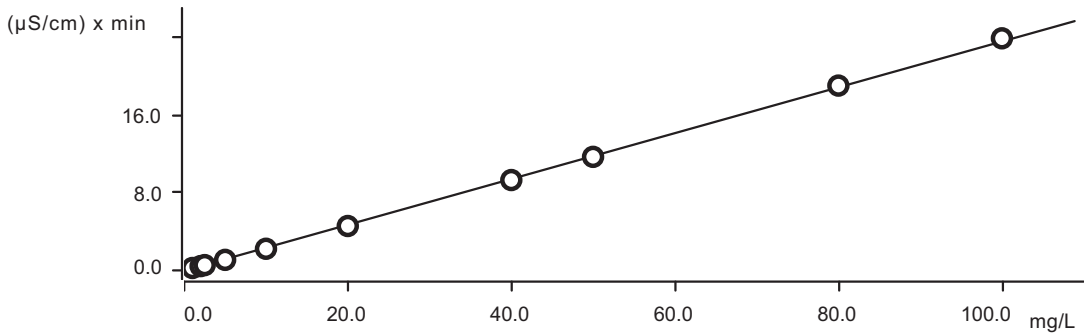
Function: . . . . . *A = 8.91209E-4 + 0.0147973× Q*

Relative standard deviation . . . . . *12.148618 %*

Correlation coefficient *0.996152*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0157	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0286	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.0514	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.0674	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.1249	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.2339	STDF	2022-03-05 23:28:02 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	0.5041	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	1.1073	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	1.4543	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	2.4882	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	3.2070	STDK	2022-03-06 01:21:47 UTC-5

Sulfate (Anions)



Function: . . . . . *A = - 0.0989182 + 0.0118186× Q*

Relative standard deviation . . . . . *2.147046 %*

Correlation coefficient *0.999852*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-03-05 21:34:02 UTC-5
Standard 1	1	1.000	20.0	1.0	1.0	0.1724	STDB	2022-03-05 21:57:01 UTC-5
Standard 2	1	2.000	20.0	1.0	1.0	0.3675	STDC	2022-03-05 22:19:45 UTC-5
Standard 3	1	2.500	20.0	1.0	1.0	0.4712	STDD	2022-03-05 22:42:30 UTC-5
Standard 4	1	5.000	20.0	1.0	1.0	1.0132	STDE	2022-03-05 23:05:16 UTC-5
Standard 5	1	10.000	20.0	1.0	1.0	2.1574	STDF	2022-03-05 23:28:02 UTC-5

MagIC Net

2022-03-08 9:32:49

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	20.000	20.0	1.0	1.0	4.5046	STDG	2022-03-05 23:50:46 UTC-5
Standard 7	1	40.000	20.0	1.0	1.0	9.2475	STDH	2022-03-06 00:13:30 UTC-5
Standard 8	1	50.000	20.0	1.0	1.0	11.6400	STDI	2022-03-06 00:36:14 UTC-5
Standard 9	1	80.000	20.0	1.0	1.0	18.9912	STDJ	2022-03-06 00:59:02 UTC-5
Standard 10	1	100.000	20.0	1.0	1.0	23.8690	STDK	2022-03-06 01:21:47 UTC-5

MagIC Net

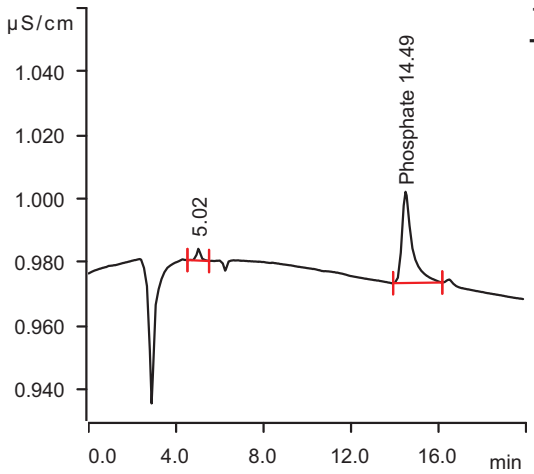
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDA
Sample type . . . . . Standard 100
Determination start 2022-03-05 21:34:02
Dilution factor 1.00

Anions

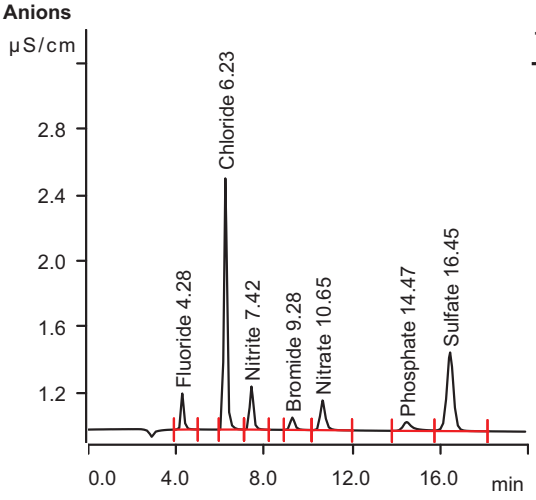


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
14.49	Phosphate	0.0157	0.050	0.050

Sample data

Ident . . . . . STDB
Sample type . . . . . Standard 1
Determination start 2022-03-05 21:57:01
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0349	0.122	0.122
6.23	Chloride	0.2473	1.096	1.096
7.42	Nitrite	0.0515	0.116	0.116
9.28	Bromide	0.0184	0.261	0.261
10.65	Nitrate	0.0490	0.119	0.119
14.47	Phosphate	0.0286	0.094	0.094
16.45	Sulfate	0.1724	1.148	1.148

MagIC Net

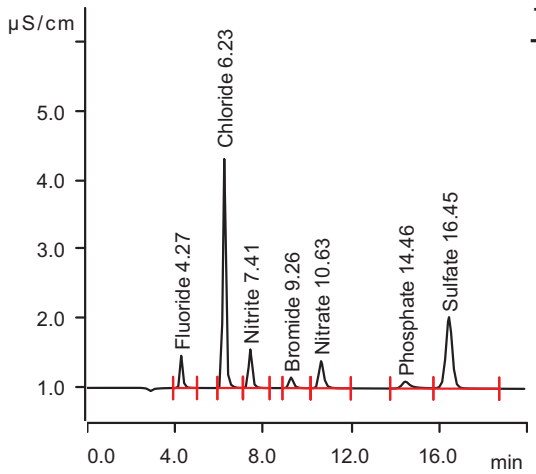
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDC
Sample type . . . . . Standard 2
Determination start 2022-03-05 22:19:45
Dilution factor 1.00

Anions

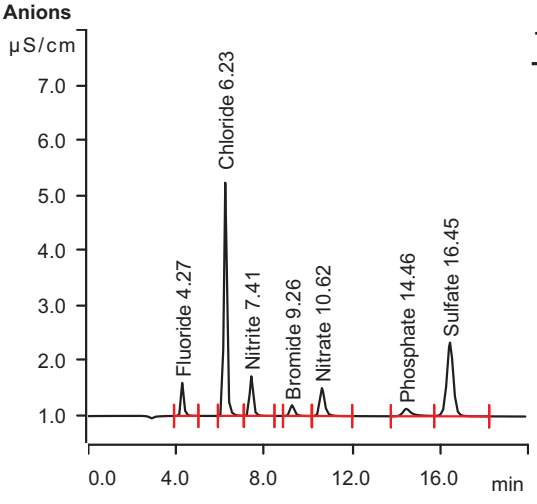


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0727	0.197	0.197
6.23	Chloride	0.5299	1.986	1.986
7.41	Nitrite	0.1079	0.196	0.196
9.26	Bromide	0.0372	0.408	0.408
10.63	Nitrate	0.1039	0.197	0.197
14.46	Phosphate	0.0514	0.171	0.171
16.45	Sulfate	0.3675	1.973	1.973

Sample data

Ident . . . . . STDD
Sample type . . . . . Standard 3
Determination start 2022-03-05 22:42:30
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0929	0.237	0.237
6.23	Chloride	0.6772	2.450	2.450
7.41	Nitrite	0.1382	0.239	0.239
9.26	Bromide	0.0470	0.486	0.486
10.62	Nitrate	0.1331	0.238	0.238
14.46	Phosphate	0.0674	0.225	0.225
16.45	Sulfate	0.4712	2.412	2.412

MagIC Net

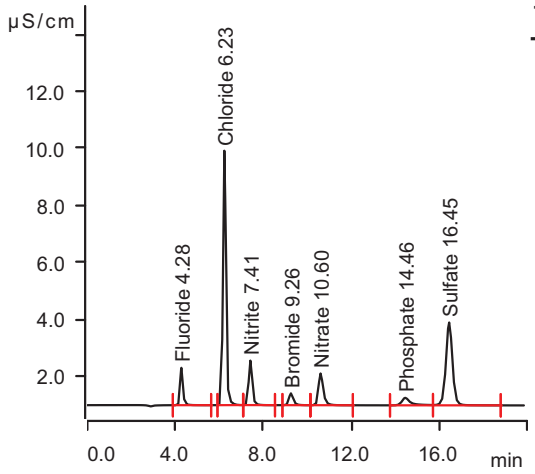
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDE
Sample type . . . . . Standard 4
Determination start 2022-03-05 23:05:16
Dilution factor 1.00

Anions

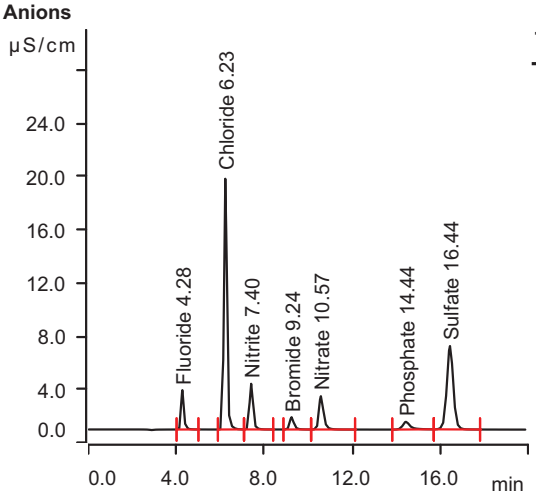


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.2001	0.450	0.450
6.23	Chloride	1.4259	4.808	4.808
7.41	Nitrite	0.2951	0.462	0.462
9.26	Bromide	0.0967	0.875	0.875
10.60	Nitrate	0.2838	0.452	0.452
14.46	Phosphate	0.1249	0.419	0.419
16.45	Sulfate	1.0132	4.705	4.705

Sample data

Ident . . . . . STDF
Sample type . . . . . Standard 5
Determination start 2022-03-05 23:28:02
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.4386	0.924	0.924
6.23	Chloride	2.9960	9.752	9.752
7.40	Nitrite	0.6428	0.956	0.956
9.24	Bromide	0.2075	1.744	1.744
10.57	Nitrate	0.6232	0.933	0.933
14.44	Phosphate	0.2339	0.787	0.787
16.44	Sulfate	2.1574	9.546	9.546

MagIC Net

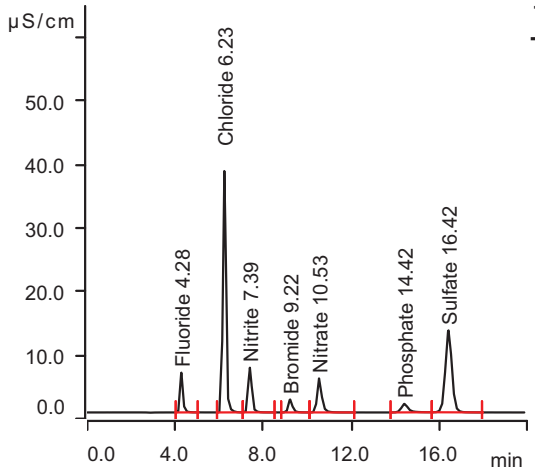
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDG
Sample type . . . . . Standard 6
Determination start 2022-03-05 23:50:46
Dilution factor 1.00

Anions

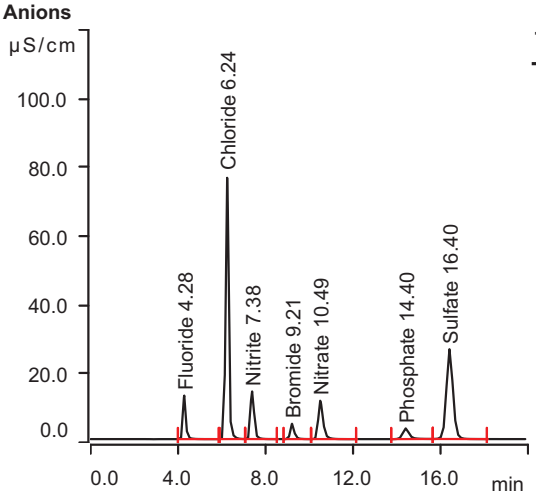


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.9466	1.934	1.934
6.23	Chloride	6.1191	19.587	19.587
7.39	Nitrite	1.3534	1.965	1.965
9.22	Bromide	0.4476	3.628	3.628
10.53	Nitrate	1.3372	1.944	1.944
14.42	Phosphate	0.5041	1.700	1.700
16.42	Sulfate	4.5046	19.476	19.476

Sample data

Ident . . . . . STDH
Sample type . . . . . Standard 7
Determination start 2022-03-06 00:13:30
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	1.9983	4.024	4.024
6.24	Chloride	12.4439	39.505	39.505
7.38	Nitrite	2.7828	3.996	3.996
9.21	Bromide	0.9650	7.687	7.687
10.49	Nitrate	2.8247	4.052	4.052
14.40	Phosphate	1.1073	3.739	3.739
16.40	Sulfate	9.2475	39.541	39.541

MagIC Net

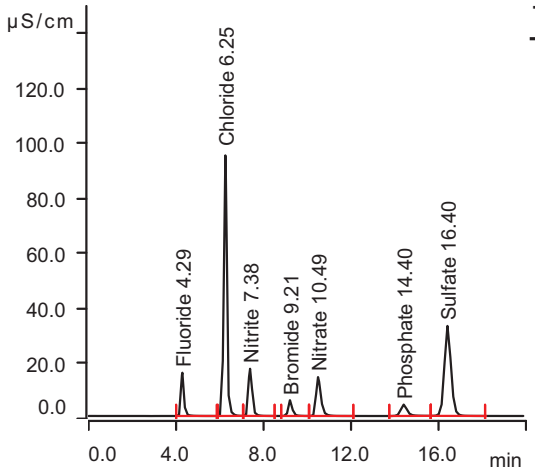
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDI
Sample type . . . . . Standard 8
Determination start 2022-03-06 00:36:14
Dilution factor 1.00

Anions

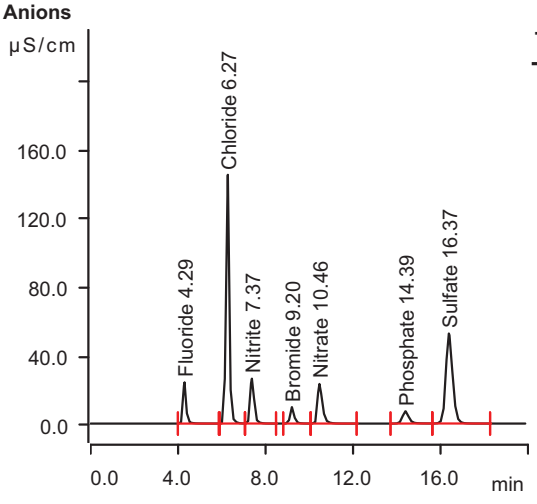


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.29	Fluoride	2.5086	5.038	5.038
6.25	Chloride	15.6560	49.621	49.621
7.38	Nitrite	3.5022	5.018	5.018
9.21	Bromide	1.2369	9.820	9.820
10.49	Nitrate	3.5913	5.139	5.139
14.40	Phosphate	1.4543	4.911	4.911
16.40	Sulfate	11.6400	49.663	49.663

Sample data

Ident . . . . . STDJ
Sample type . . . . . Standard 9
Determination start 2022-03-06 00:59:02
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.29	Fluoride	4.0436	8.089	8.089
6.27	Chloride	25.4785	80.553	80.553
7.37	Nitrite	5.6437	8.060	8.060
9.20	Bromide	2.0829	16.457	16.457
10.46	Nitrate	5.9567	8.491	8.491
14.39	Phosphate	2.4882	8.405	8.405
16.37	Sulfate	18.9912	80.763	80.763

MagIC Net

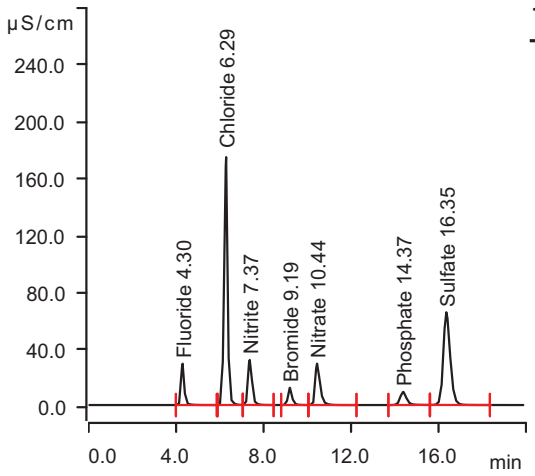
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDK
Sample type . . . . . Standard 10
Determination start 2022-03-06 01:21:47
Dilution factor 1.00

Anions

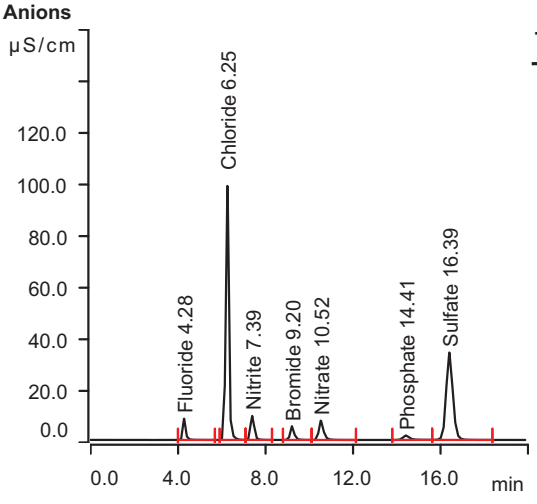


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.30	Fluoride	5.0362	10.062	10.062
6.29	Chloride	32.0361	101.204	101.204
7.37	Nitrite	7.0464	10.052	10.052
9.19	Bromide	2.6530	20.930	20.930
10.44	Nitrate	7.5447	10.741	10.741
14.37	Phosphate	3.2070	10.833	10.833
16.35	Sulfate	23.8690	101.399	101.399

Sample data

Ident ICV
Sample type . . . . . Sample
Determination start 2022-03-06 01:44:46
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	1.2865	2.609	2.609
6.25	Chloride	16.3005	51.650	51.650
7.39	Nitrite	1.7991	2.599	2.599
9.20	Bromide	1.1551	9.179	9.179
10.52	Nitrate	1.8774	2.710	2.710
14.41	Phosphate	0.6296	2.124	2.124
16.39	Sulfate	12.0816	51.531	51.531

MagIC Net

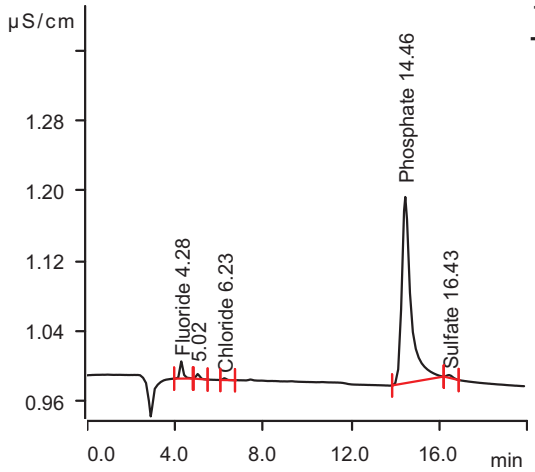
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . ICB
Sample type . . . . . Sample
Determination start 2022-03-06 02:07:45
Dilution factor 1.00

Anions

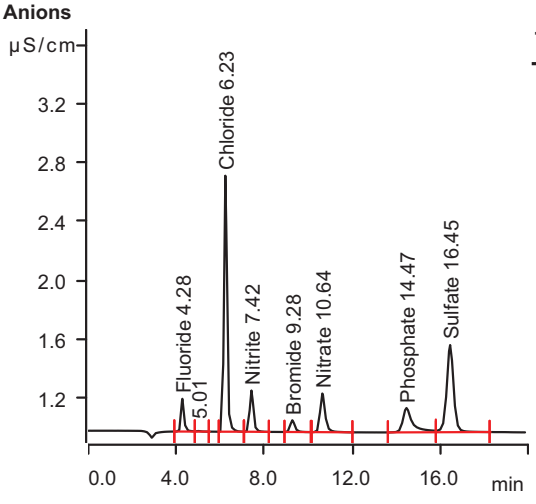


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0034	0.059	0.059
6.23	Chloride	0.0004	0.319	0.319
14.46	Phosphate	0.1035	0.347	0.347
16.43	Sulfate	0.0010	0.423	0.423

Sample data

Ident . . . . . CRI
Sample type . . . . . Sample
Determination start 2022-03-06 02:30:44
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0364	0.125	0.125
6.23	Chloride	0.2815	1.204	1.204
7.42	Nitrite	0.0552	0.121	0.121
9.28	Bromide	0.0195	0.270	0.270
10.64	Nitrate	0.0713	0.150	0.150
14.47	Phosphate	0.0870	0.291	0.291
16.45	Sulfate	0.2172	1.337	1.337

MagIC Net

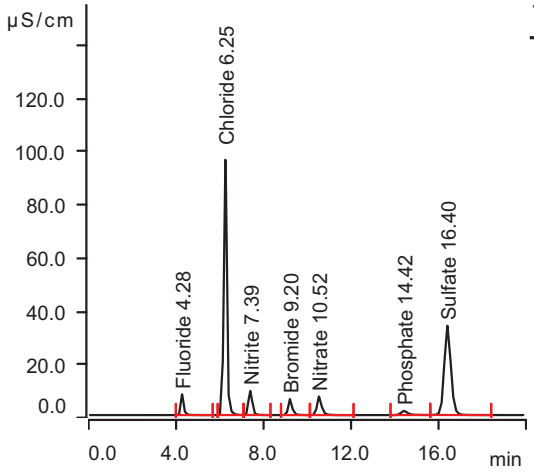
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-03-06 02:53:45
Dilution factor 1.00

Anions

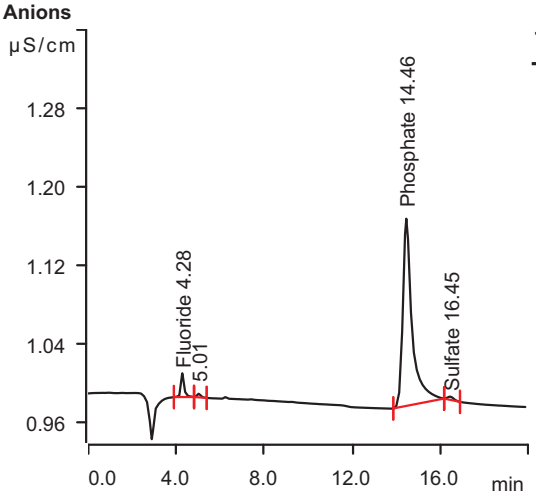


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	1.2130	2.463	2.463
6.25	Chloride	15.8353	50.186	50.186
7.39	Nitrite	1.7513	2.531	2.531
9.20	Bromide	1.3016	10.328	10.328
10.52	Nitrate	1.7464	2.524	2.524
14.42	Phosphate	0.5778	1.950	1.950
16.40	Sulfate	11.9501	50.975	50.975

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-03-06 03:16:49
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0042	0.061	0.061
14.46	Phosphate	0.0938	0.314	0.314
16.45	Sulfate	0.0010	0.423	0.423

MagIC Net

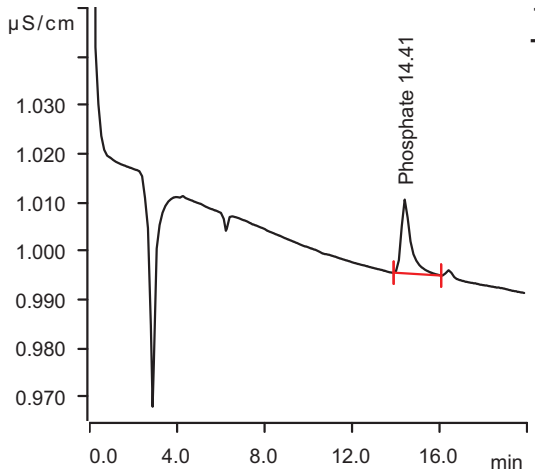
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident . . . . . Rinse
Sample type . . . . . Sample
Determination start 2022-03-08 09:08:18
Dilution factor 1.00

Anions

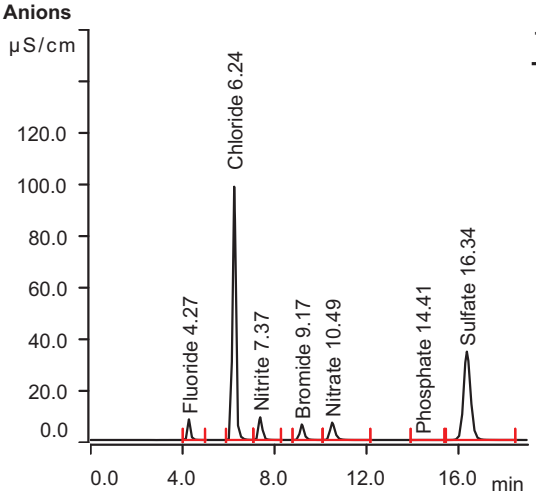


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
14.41	Phosphate	0.0079	0.024	0.024

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-03-08 09:36:19
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	1.2198	2.477	2.477
6.24	Chloride	16.3077	51.673	51.673
7.37	Nitrite	1.6913	2.445	2.445
9.17	Bromide	1.3121	10.410	10.410
10.49	Nitrate	1.6881	2.442	2.442
14.41	Phosphate	0.0050	0.014	0.014
16.34	Sulfate	12.2095	52.072	52.072

MagIC Net

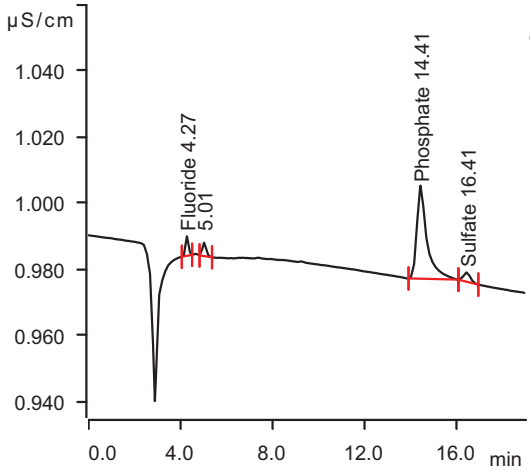
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-03-08 10:03:02
Dilution factor 1.00

Anions

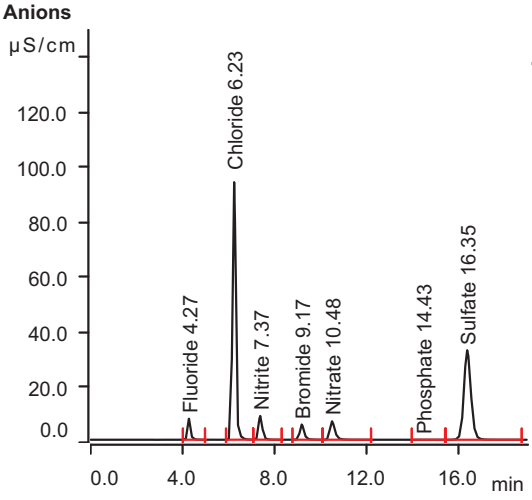


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0009	0.054	0.054
14.41	Phosphate	0.0145	0.046	0.046
16.41	Sulfate	0.0010	0.423	0.423

Sample data

Ident B1
Sample type . . . . . Sample
Determination start 2022-03-08 10:25:05
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	1.1658	2.369	2.369
6.23	Chloride	15.4986	49.125	49.125
7.37	Nitrite	1.6647	2.408	2.408
9.17	Bromide	1.2077	9.591	9.591
10.48	Nitrate	1.6816	2.432	2.432
14.43	Phosphate	0.0042	0.011	0.011
16.35	Sulfate	11.6025	49.504	49.504

MagIC Net

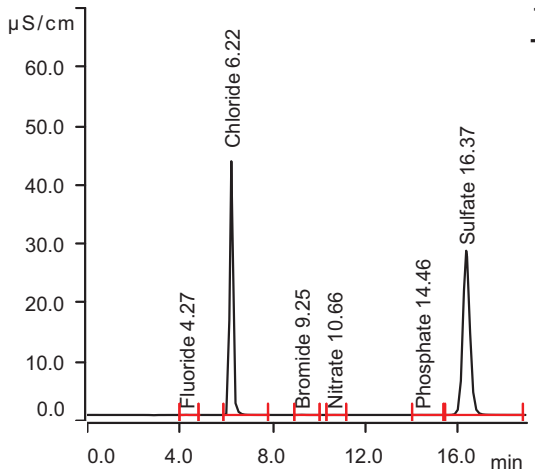
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93669-1
Sample type . . . . . Sample
Determination start 2022-03-08 10:54:20
Dilution factor 50.00

Anions

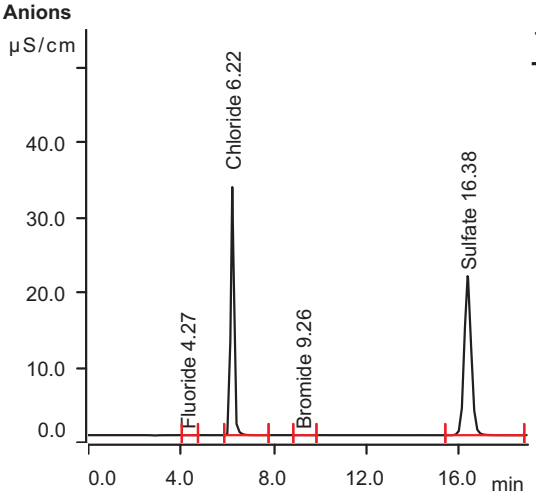


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0028	0.058	2.893
6.22	Chloride	6.9476	22.197	1109.826
9.25	Bromide	0.0060	0.164	8.184
10.66	Nitrate	0.0009	0.051	2.533
14.46	Phosphate	0.0020	0.004	0.190
16.37	Sulfate	9.8668	42.161	2108.066

Sample data

Ident FA93669-2
Sample type . . . . . Sample
Determination start 2022-03-08 11:21:43
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0010	0.054	5.418
6.22	Chloride	5.2947	16.991	1699.146
9.26	Bromide	0.0024	0.136	13.598
16.38	Sulfate	7.4572	31.967	3196.724

MagIC Net

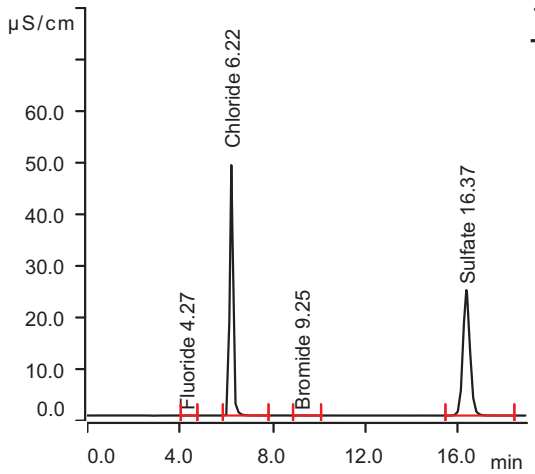
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93669-3
Sample type . . . . . Sample
Determination start 2022-03-08 11:43:28
Dilution factor 100.00

Anions

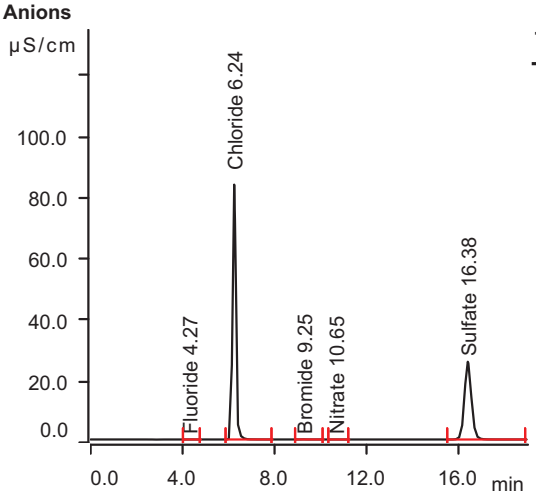


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0011	0.054	5.447
6.22	Chloride	7.8625	25.078	2507.772
9.25	Bromide	0.0040	0.148	14.782
16.37	Sulfate	8.5989	36.797	3679.722

Sample data

Ident FA93669-4
Sample type . . . . . Sample
Determination start 2022-03-08 12:05:13
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0011	0.055	5.452
6.24	Chloride	13.7082	43.487	4348.683
9.25	Bromide	0.0071	0.173	17.276
10.65	Nitrate	0.0009	0.051	5.068
16.38	Sulfate	9.0004	38.496	3849.581

MagIC Net

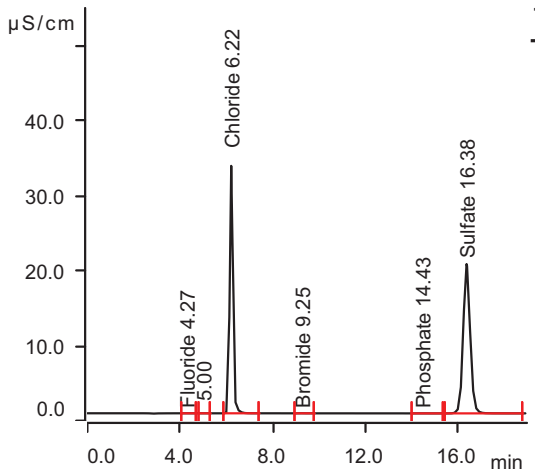
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93669-5
Sample type . . . . . Sample
Determination start 2022-03-08 12:26:58
Dilution factor 100.00

Anions

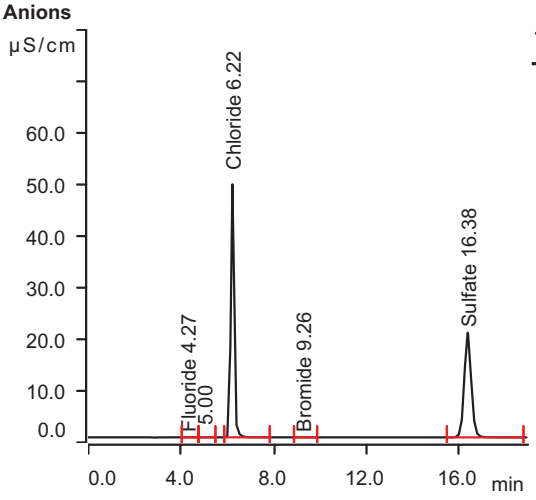


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0004	0.053	5.306
6.22	Chloride	5.2827	16.953	1695.349
9.25	Bromide	0.0020	0.132	13.208
14.43	Phosphate	0.0013	0.001	0.147
16.38	Sulfate	6.9920	29.999	2999.924

Sample data

Ident FA93669-6
Sample type . . . . . Sample
Determination start 2022-03-08 12:48:45
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0018	0.056	5.592
6.22	Chloride	7.9319	25.296	2529.645
9.26	Bromide	0.0022	0.134	13.394
16.38	Sulfate	7.1388	30.620	3062.020

MagIC Net

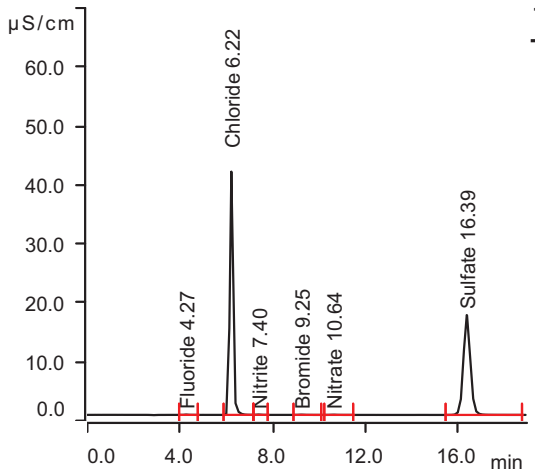
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93669-6S1
Sample type . . . . . Sample
Determination start 2022-03-08 13:10:34
Dilution factor 100.00

Anions

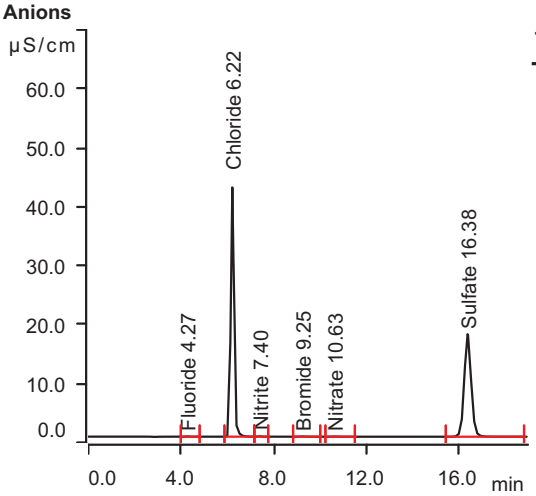


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0083	0.069	6.871
6.22	Chloride	6.6496	21.258	2125.829
7.40	Nitrite	0.0106	0.058	5.808
9.25	Bromide	0.0101	0.196	19.580
10.64	Nitrate	0.0100	0.064	6.359
16.39	Sulfate	5.9411	25.553	2555.319

Sample data

Ident FA93669-6S2
Sample type . . . . . Sample
Determination start 2022-03-08 13:32:19
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0086	0.069	6.924
6.22	Chloride	6.7700	21.637	2163.740
7.40	Nitrite	0.0109	0.058	5.842
9.25	Bromide	0.0103	0.197	19.722
10.63	Nitrate	0.0102	0.064	6.393
16.38	Sulfate	6.0896	26.181	2618.117

MagIC Net

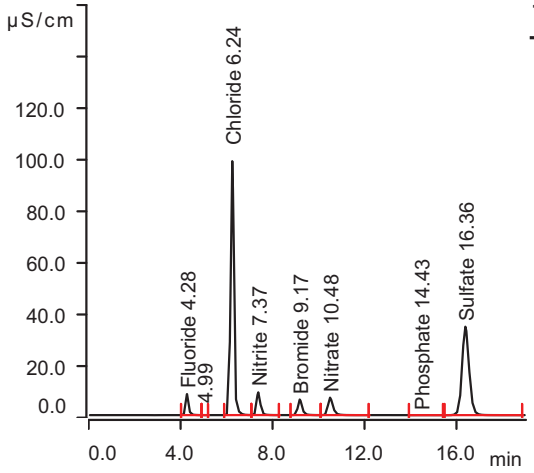
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-03-08 13:57:32
Dilution factor 1.00

Anions

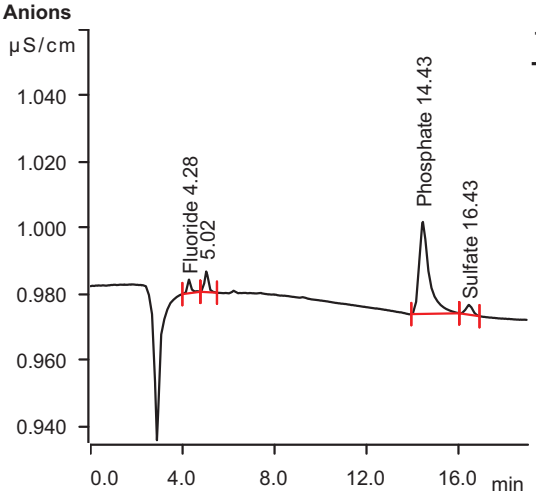


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	1.2419	2.521	2.521
6.24	Chloride	16.3673	51.861	51.861
7.37	Nitrite	1.7007	2.459	2.459
9.17	Bromide	1.3223	10.491	10.491
10.48	Nitrate	1.7006	2.459	2.459
14.43	Phosphate	0.0048	0.013	0.013
16.36	Sulfate	12.2540	52.261	52.261

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-03-08 14:19:42
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0008	0.054	0.054
14.43	Phosphate	0.0142	0.045	0.045
16.43	Sulfate	0.0010	0.423	0.423

MagIC Net

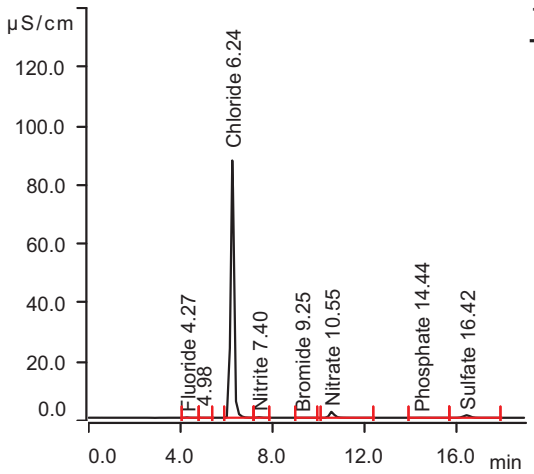
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93656-2
Sample type . . . . . Sample
Determination start 2022-03-08 14:55:34
Dilution factor 10.00

Anions

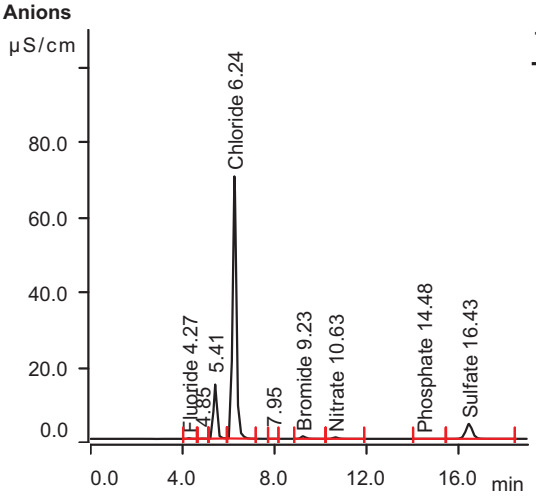


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0215	0.095	0.950
6.24	Chloride	14.3976	45.658	456.580
7.40	Nitrite	0.0315	0.088	0.878
9.25	Bromide	0.0017	0.130	1.303
10.55	Nitrate	0.5009	0.759	7.593
14.44	Phosphate	0.0119	0.037	0.370
16.42	Sulfate	0.2960	1.671	16.709

Sample data

Ident FA93641-1A
Sample type . . . . . Sample
Determination start 2022-03-08 15:23:20
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.27	Fluoride	0.0266	0.105	0.105
6.24	Chloride	13.0252	41.336	41.336
9.23	Bromide	0.1604	1.375	1.375
10.63	Nitrate	0.1016	0.193	0.193
14.48	Phosphate	0.0046	0.013	0.013
16.43	Sulfate	1.3557	6.154	6.154

MagIC Net

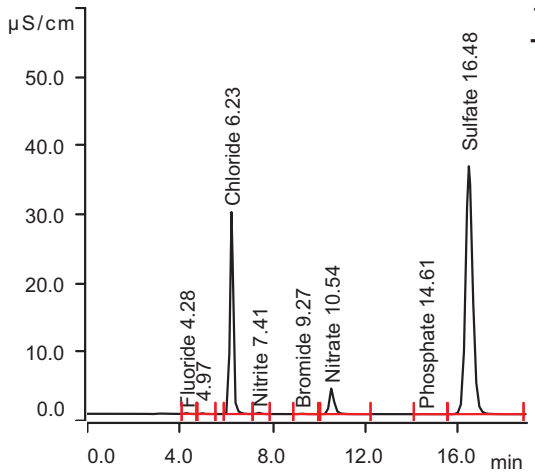
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93647-1
Sample type . . . . . Sample
Determination start 2022-03-08 15:45:22
Dilution factor 10.00

Anions

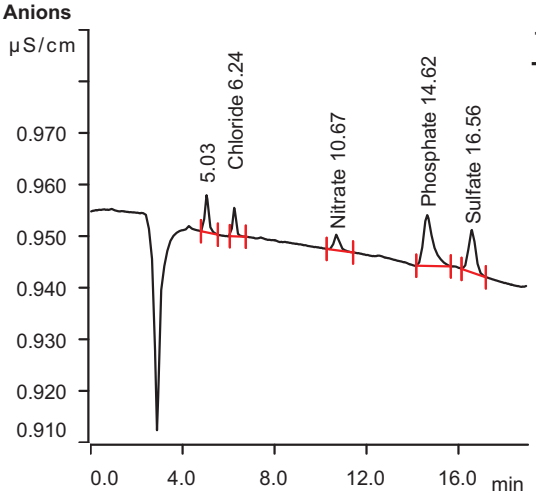


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0181	0.088	0.883
6.23	Chloride	4.7243	15.195	151.952
7.41	Nitrite	0.0329	0.090	0.897
9.27	Bromide	0.0101	0.196	1.963
10.54	Nitrate	0.9161	1.348	13.476
14.61	Phosphate	0.0053	0.015	0.148
16.48	Sulfate	12.8963	54.978	549.778

Sample data

Ident FA93658-1
Sample type . . . . . Sample
Determination start 2022-03-08 16:07:09
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.24	Chloride	0.0010	0.320	0.320
10.67	Nitrate	0.0009	0.051	0.051
14.62	Phosphate	0.0048	0.013	0.013
16.56	Sulfate	0.0030	0.431	0.431

MagIC Net

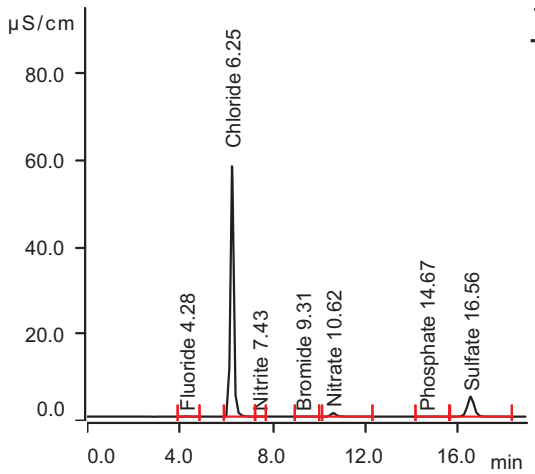
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93658-4
Sample type . . . . . Sample
Determination start 2022-03-08 16:29:13
Dilution factor 10.00

Anions

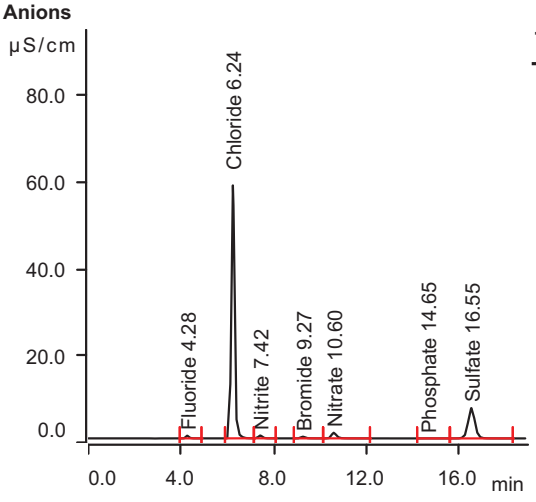


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0116	0.075	0.753
6.25	Chloride	9.4710	30.143	301.433
7.43	Nitrite	0.0039	0.048	0.485
9.31	Bromide	0.0050	0.156	1.557
10.62	Nitrate	0.2110	0.348	3.485
14.67	Phosphate	0.0019	0.004	0.035
16.56	Sulfate	1.5800	7.103	71.029

Sample data

Ident FA93658-4S3
Sample type . . . . . Sample
Determination start 2022-03-08 16:50:58
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0956	0.242	2.422
6.24	Chloride	9.4835	30.183	301.826
7.42	Nitrite	0.1305	0.228	2.284
9.27	Bromide	0.0887	0.813	8.128
10.60	Nitrate	0.3247	0.510	5.095
14.65	Phosphate	0.0020	0.004	0.036
16.55	Sulfate	2.4081	10.606	106.064

MagIC Net

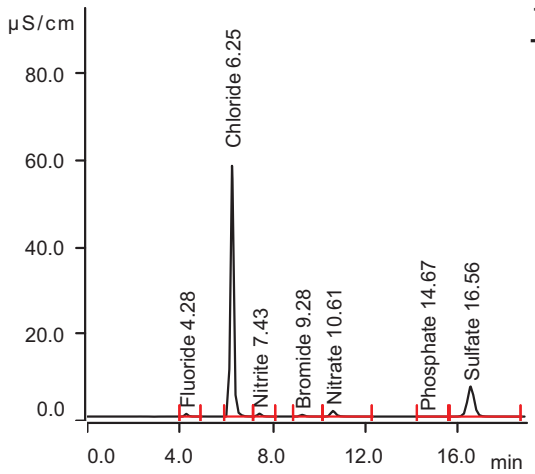
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident FA93658-4S4
Sample type . . . . . Sample
Determination start 2022-03-08 17:12:43
Dilution factor 10.00

Anions

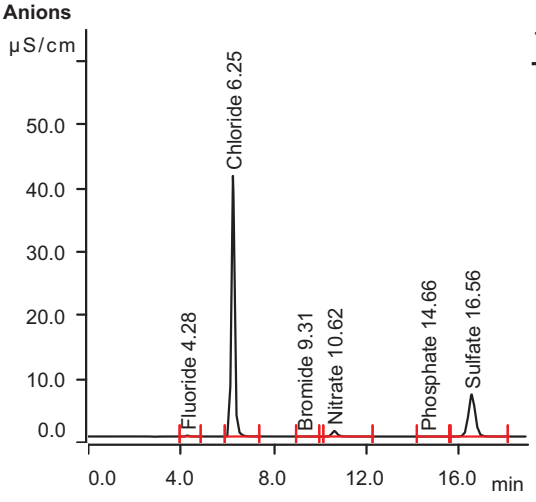


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0957	0.242	2.424
6.25	Chloride	9.4557	30.095	300.949
7.43	Nitrite	0.1306	0.228	2.285
9.28	Bromide	0.0888	0.813	8.134
10.61	Nitrate	0.3247	0.510	5.096
14.67	Phosphate	0.0019	0.004	0.035
16.56	Sulfate	2.3973	10.560	105.604

Sample data

Ident FA93658-5
Sample type . . . . . Sample
Determination start 2022-03-08 17:34:28
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	0.0236	0.099	0.991
6.25	Chloride	6.6668	21.312	213.124
9.31	Bromide	0.0013	0.127	1.270
10.62	Nitrate	0.2251	0.368	3.684
14.66	Phosphate	0.0020	0.004	0.036
16.56	Sulfate	2.2935	10.122	101.216

MagIC Net

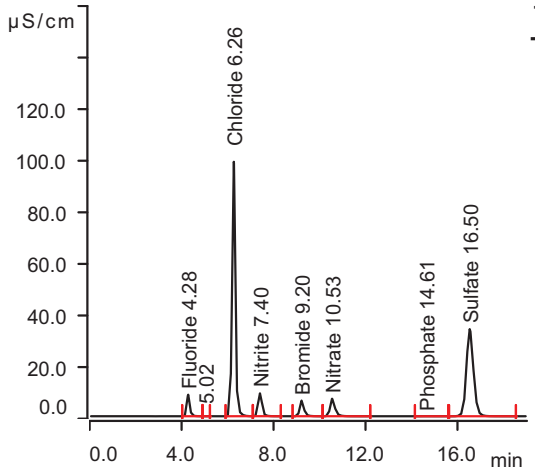
Summary Report

2022-03-09 9:35:58
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-03-08 17:56:13
Dilution factor 1.00

Anions

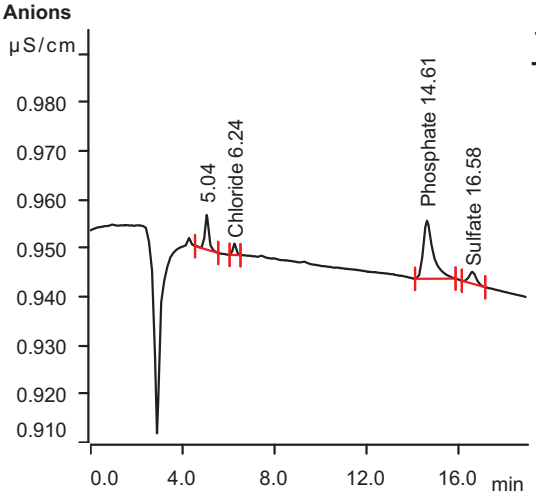


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.28	Fluoride	1.2578	2.552	2.552
6.26	Chloride	16.3747	51.884	51.884
7.40	Nitrite	1.6983	2.455	2.455
9.20	Bromide	1.3168	10.447	10.447
10.53	Nitrate	1.6959	2.453	2.453
14.61	Phosphate	0.0066	0.019	0.019
16.50	Sulfate	12.1166	51.679	51.679

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-03-08 18:18:22
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.24	Chloride	0.0004	0.319	0.319
14.61	Phosphate	0.0060	0.017	0.017
16.58	Sulfate	0.0009	0.422	0.422

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J02

SGS Job Number: FA94728

Sampling Date: 04/08/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **132**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA94728

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA94728-1	04/08/22	10:50	LP	04/09/22	AQ	Ground Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA94728

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 4/13/2022 2:42:34 PM

On 04/09/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 5 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA94728 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP40550

Sample(s) FA94728-1DUP, FA94728-1MS, FA94728-1MSD, FA94728-1SDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA94728
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 04/08/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA94728-1	**EFFLUENT**					
Arsenic		26.3	2.0	1.0	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA94728-1	**Date Sampled:**	04/08/22
Matrix:	AQ - Ground Water	**Date Received:**	04/09/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	26.3	2.0	1.0	0.21	ug/l	2	04/12/22	04/13/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18597
(2) Prep QC Batch: MP40550

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA94728

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed) LOUIS A. PESCETTA
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
1	Effluent	4/7/22	10:50	~~LAP~~ JWR	W	1						x				X						

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

INITIAL ASSESSMENT
LABEL VERIFICATION

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

SGS Service Center
Northborough, MA 4/8

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
Louis A. Pescetta	4/7/22	2 [signature]	3 [signature]	4/7/22 18:00	4 FedEx
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6 [signature] 4/8/22 930	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 4.6 CIR1 C.S. 02253 http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Monthly AS Only Revised 04-07-22.xlsx Rev 031318

5.1
5

FA94728: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: FA94728 **Client:** SOVEREIGN CONSULTING, INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 4/9/2022 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4371 8252

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.6);

Cooler Temps (Corrected) °C: Cooler 1: (5.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 4/9/2022 9:30:00 AM Reviewer: _____ Date: _____

Job Change Order: FA94728

Requested Date:	4/11/2022	**Received Date:**	4/9/2022
Account Name:	Sovereign Consulting	**Due Date:**	4/15/2022
Project Description:	Shepley's Hill (SHL); Devens, MA	**Deliverable:**	FULT1
CSR:	EM	**TAT (Days):**	7

==========

Sample #: FA94728-1

Dept:

TAT: 7

EFFLUENT

Change:
Per client, the sample was collected on Friday, April 8th

==========

Above Changes Per: Steve Pssafaro **Date/Time:** 4/11/2022 4:25:56 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

QC Evaluation: DOD QSM5.x Limits

Job Number: FA94728
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 04/08/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP40550	SW846 6020B						
MP40550-B1	7440-38-2	Arsenic	BSP	REC	105.5	%	84-116
MP40550-S1	7440-38-2	Arsenic	MS	REC	103.9	%	84-116
MP40550-S2	7440-38-2	Arsenic	MSD	REC	102.4	%	84-116
MP40550-S2	7440-38-2	Arsenic	MSD	RPD	1.3	%	20
MP40550-D1	7440-38-2	Arsenic	DUP	RPD	3	%	20

* Sample used for QC is not from job FA94728

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:13	MA18597-STD1	1		STDA
08:17	MA18597-STD2	1		STDB
08:21	MA18597-STD3	1		STDC
08:25	MA18597-STD4	1		STDD
08:29	MA18597-STD5	1		STDE
08:33	MA18597-STD6	1		STDF
08:37	MA18597-STD7	1		STDG
08:41	MA18597-HSTD1	1		
08:45	MA18597-HSTD2	1		
08:48	MA18597-ICV1	1		
08:52	MA18597-ICB1	1		
08:56	MA18597-CRIA1	1		
09:00	MA18597-ICSA1	1		
09:04	MA18597-ICSAB1	1		
09:07	MA18597-CCV1	1		
09:11	MA18597-CCV2	1		
09:15	MA18597-CCB1	1		
09:19	MP40550-MB1	2		
09:23	MP40550-B1	2		
09:49	FA94728-1	2		
09:53	MP40550-D1	2		
09:57	MA18597-CCV3	1		
10:00	MA18597-CCV4	1		
10:04	MA18597-CCB2	1		
10:08	MP40550-SD1	10		
10:12	MP40550-S1	2		
10:15	MP40550-S2	2		
10:19	MP40550-PS1	2		
---------->	Last reportable sample/prep for job FA94728			
10:27	ZZZZZZ	2		
10:31	MP40546-MB1	5		
10:34	MP40546-B1	5		
10:38	FA94440-1	20		(sample used for QC only; not part of login FA94728)
10:42	MP40546-D1	20		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:46	MA18597-CCV5	1		
10:50	MA18597-CCV6	1		
10:53	MA18597-CCB3	1		
---------->	Last reportable CCB for job FA94728			
10:57	MP40546-D2	20		
11:01	MP40546-SD1	100		
11:05	MP40546-S1	20		
11:08	MP40546-S2	20		
11:12	MP40546-PS1	20		
11:16	ZZZZZZ	20		
11:20	ZZZZZZ	20		
11:24	ZZZZZZ	20		
11:27	ZZZZZZ	20		
11:31	ZZZZZZ	20		
11:31	MA18597-CCV7	1		
11:35	MA18597-CCV8	1		
11:35	MA18597-CCB4	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:41	MA18597-HSTD1	1		
08:45	MA18597-HSTD2	1	X	
08:48	MA18597-ICV1	1	X	
08:52	MA18597-ICB1	1	X	
08:56	MA18597-CRIA1	1	X	
09:00	MA18597-ICSA1	1	X	
09:04	MA18597-ICSAB1	1	X	
09:07	MA18597-CCV1	1		
09:11	MA18597-CCV2	1	X	
09:15	MA18597-CCB1	1	X	
09:19	MP40550-MB1	2	X	
09:23	MP40550-B1	2	X	
09:49	FA94728-1	2	X	
09:53	MP40550-D1	2	X	
09:57	MA18597-CCV3	1		
10:00	MA18597-CCV4	1	X	
10:04	MA18597-CCB2	1	X	
10:08	MP40550-SD1	10	X	
10:12	MP40550-S1	2	X	
10:15	MP40550-S2	2	X	
10:19	MP40550-PS1	2		
10:27	ZZZZZZ	2		
10:31	MP40546-MB1	5	X	
10:34	MP40546-B1	5	X	
10:38	FA94440-1	20	X	(a)
10:42	MP40546-D1	20	X	
10:46	MA18597-CCV5	1		
10:50	MA18597-CCV6	1	X	
10:53	MA18597-CCB3	1	X	
10:57	MP40546-D2	20	X	
11:01	MP40546-SD1	100	X	
11:05	MP40546-S1	20	X	
11:08	MP40546-S2	20	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Element: Dilution	As
11:12	MP40546-PS1	20	X
11:16	ZZZZZZ	20	
11:20	ZZZZZZ	20	
11:24	ZZZZZZ	20	
11:27	ZZZZZZ	20	
11:31	ZZZZZZ	20	
11:31	MA18597-CCV7	1	X
11:35	MA18597-CCV8	1	
11:35	MA18597-CCB4	1	X

(a) Sample used for QC only; not part of login FA94728.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:13	MA18597-STD1	100	100	100	100	100	100	100
08:17	MA18597-STD2	91.9	99.7	99.5	99.6	99.9	99.8	99.8
08:21	MA18597-STD3	99.4	99.8	98.2	98.8	99.5	99.5	98.9
08:25	MA18597-STD4	94.2	99.4	98	98.9	99.4	99.6	99.4
08:29	MA18597-STD5	94.5	98.5	97.1	97.9	97.7	98.7	97.2
08:33	MA18597-STD6	90.1	97.2	95.5	95.7	94.9	96.9	94.2
08:37	MA18597-STD7	95.4	93.7	92.8	92.4	91.6	94.5	90
08:41	MA18597-HSTD1	81	93.1	91.9	92.7	92.4	94.9	91.6
08:45	MA18597-HSTD2	83.7	91.5	90.4	90.7	90.3	93	88.4
08:48	MA18597-ICV1	93.6	91.3	90.3	90.3	90.3	93.2	90.2
08:52	MA18597-ICB1	94.5	91.5	91	90.7	91.2	92.4	92.3
08:56	MA18597-CRIA1	81.3	91.5	91	90.9	92	92.2	92.4
09:00	MA18597-ICSA1	77.8	90	86.8	85.6	83.3	87.3	79.8
09:04	MA18597-ICSAB1	83.7	89.7	87.1	85.6	83.8	88	80.4
09:07	MA18597-CCV1	92.7	92.5	93	93	91.9	94.7	93.1
09:11	MA18597-CCV2	95.1	93.3	93.1	92.9	91.5	94.6	91.1
09:15	MA18597-CCB1	102.3	95.4	94.9	94.9	94.5	94.8	94.6
09:19	MP40550-MB1	103.3	91.9	90.8	91.1	90.9	92.3	92.3
09:23	MP40550-B1	97.7	92.1	89.6	90.6	87.4	91.8	87.6
09:49	FA94728-1	102.4	92.5	88.8	89.7	87.5	90.3	87.6
09:53	MP40550-D1	103.3	91.3	87.8	88.2	86.3	89.4	86.9
09:57	MA18597-CCV3	114.1	98.2	96.3	96.1	93.6	94.5	92.7
10:00	MA18597-CCV4	110.5	98.1	95.6	96.5	92.9	94.4	91.2
10:04	MA18597-CCB2	104.7	97.6	95.6	96.5	93.8	93.7	93.6
10:08	MP40550-SD1	100.6	96.2	94	93.5	92.8	92.6	92.3
10:12	MP40550-S1	101.8	88.7	86.4	86.5	82.4	87.9	82.9
10:15	MP40550-S2	92.6	89.3	86	86.8	83.6	87.7	82.8
10:19	MP40550-PS1	103.8	90.1	86.8	87	84.1	88.1	84.6
10:27	ZZZZZZ	103	90.3	87.5	88.9	85.2	89.4	87.5
10:31	MP40546-MB1	118.7	92.9	89.8	90.4	87.8	90	90
10:34	MP40546-B1	110.9	90.1	86.4	87	83.9	88.6	85.1
10:38	FA94440-1	105	97.9	92.2	92.9	90.8	91.9	91.2
10:42	MP40546-D1	103.3	99.5	94.2	93.6	90.9	92.1	91.4

INTERNAL STANDARD SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18597
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:46	MA18597-CCV5	102.4	98.8	95	96.6	93.4	93.9	91.4
10:50	MA18597-CCV6	110.9	98.8	94.7	95.8	92.4	93.6	89.8
10:53	MA18597-CCB3	110.2	98.6	94.9	96.7	93.6	93.4	91.9
10:57	MP40546-D2	107.6	101.1	95.6	95.7	92.4	93.1	91.7
11:01	MP40546-SD1	104.9	99.6	96	96	93.3	93.4	93.6
11:05	MP40546-S1	106.2	99.6	95.2	94.8	92.1	92.7	90.4
11:08	MP40546-S2	105.9	99.8	94.3	93.6	90.9	92.2	90.1
11:12	MP40546-PS1	102	99.2	94.7	93	91.6	92.2	90.9
11:16	ZZZZZZ	112.5	100.8	94.5	93.4	91.4	92.1	90.5
11:20	ZZZZZZ	107.1	100.1	93.9	93.8	91.1	91.9	90.4
11:24	ZZZZZZ	116.9	97.4	92.4	92.2	90.8	91.1	90.3
11:27	ZZZZZZ	96.7	98.8	94.8	94.3	91.5	91.5	90.7
11:31	ZZZZZZ	112.5	99.5	94.1	94	92.1	92.4	91.3
11:31	MA18597-CCV7	95.9	98.2	94.5	95.8	91.4	92.6	88.4
11:35	MA18597-CCV8	95.7	97.9	94.7	95.2	92.6	92.6	89.7
11:35	MA18597-CCB4	98.8	99.1	96.2	96.4	93.7	92.3	91.7

! = Outside limits.

LEGEND: Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18597 Units: ug/l

Time: / Sample ID:			08:52 ICB1		09:15 CCB1		10:04 CCB2		10:53 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0236	<1.0	0.00115	<1.0	0.00720	<1.0	0.0148	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18597 Units: ug/l

Time:		08:48			09:07			09:11	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	107	107.0				100	99.1	99.1
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18597 Units: ug/l

Time:		09:57			10:00			10:46	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	99.0	99.0			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18597 Units: ug/l

Time:		10:50	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	100	99.4	99.4
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver			
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18597 Units: ug/l

Time:		08:41			08:45	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	199	99.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18597 Units: ug/l

Time:			08:56	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.962	96.2
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA041322M2.CSV Date Analyzed: 04/13/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18597 Units: ug/l

Time:			09:00		09:04	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	93200	93.2	91900	91.9
Antimony			0.0579		0.0558	
Arsenic		20	0.0819		19.4	97.0
Barium			0.357		0.322	
Beryllium			0.0323		0.0442	
Cadmium		20	0.453		19.4	97.0
Calcium	100000	100000	91900	91.9	91000	91.0
Chromium		20	2.04*(a)		21.6	108.0
Cobalt		20	0.122		19.5	97.5
Copper		20	0.0424		18.6	93.0
Iron	100000	100000	97400	97.4	97700	97.7
Lead			0.160		0.119	
Magnesium	100000	100000	95800	95.8	95100	95.1
Manganese		20	0.931		20.5	102.5
Molybdenum	2000	2000	2000	100.0	2010	100.5
Nickel		20	0.174		19.0	95.0
Potassium	100000	100000	97700	97.7	97300	97.3
Selenium			0.274		0.201	
Silver		20	0.288		18.4	92.0
Sodium	100000	100000	97100	97.1	97400	97.4
Strontium			1.10*		1.04*	
Thallium			0.0119		0.00638	
Tin			0.0878		0.0422	
Titanium	2000	2000	192	9.6*	191	9.6*
Vanadium			0.0229		0.0171	
Zinc		20	1.11		19.6	98.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 04/12/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.044	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 04/12/22 04/12/22

Metal	FA94728-1 Original	DUP	RPD	QC Limits	FA94728-1 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	26.3	27.1	3.0	0-20	26.3	234	200	103.9	80-120
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/12/22

Metal	FA94728-1 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	26.3	231	200	102.4	1.3	20
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 04/12/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	211	200	105.5	80-120
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 04/12/22

Metal	FA94728-1 Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	26.3	26.9	2.0	0-10
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA94728
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40550
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 04/12/22

Metal	Sample ml	Final ml	Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP40550: FA94728-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA94728
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18597

Instrument Linear Ranges

Job Number: FA94728
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18597

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:05
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.016	ug/l	94.16	918.03	6.424E-03	Pulse	0.50	3
As			1	0.001	ug/l	806.31	27.33	1.910E-04	Pulse	1.00	3
Mo			1	0.068	ug/l	27.27	407.34	1.899E-03	Pulse	0.50	3
Pb			1	0.002	ug/l	29.70	546.68	1.505E-04	Pulse	1.00	3
Be			1	0.025	ug/l	126.91	1.50	7.778E-06	Pulse	2.00	3
Ag			1	0.001	ug/l	95.06	41.33	1.930E-04	Pulse	0.50	3
Ba			1	0.016	ug/l	47.73	39.33	2.996E-05	Pulse	0.50	3
Tl			1	0.005	ug/l	20.67	312.67	8.595E-05	Pulse	0.50	3
Sn			1	0.171	ug/l	55.39	1,036.71	7.912E-04	Pulse	0.30	3
Sr			1	0.023	ug/l	35.41	530.68	4.052E-04	Pulse	0.50	3
[Pb]			1	0.005	ug/l	39.14	288.67	7.952E-05	Pulse	0.50	3
Ca			1	2.482	ug/l	62.26	112.00	5.796E-04	Pulse	0.50	3
Ti			1	-0.001	ug/l	0.00	0.00	0.000E+00	Pulse	0.50	3
Na			1	1.113	ug/l	37.26	8,864.64	4.577E-02	Pulse	1.00	3
Mg			1	1.163	ug/l	88.23	983.70	5.051E-03	Pulse	1.00	3
K			1	0.364	ug/l	356.76	25,254.75	1.304E-01	Pulse	1.00	3
V			1	0.009	ug/l	62.43	394.68	2.036E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	187.12	335.34	2.349E-03	Pulse	0.50	3
Fe			1	12.054	ug/l	83.52	92,537.81	6.469E-01	Pulse	0.50	3
Co			1	-0.001	ug/l	-92.68	39.33	2.747E-04	Pulse	0.50	3
Ni			1	0.001	ug/l	811.17	251.33	1.758E-03	Pulse	0.50	3
Cu			1	0.028	ug/l	81.96	7,914.99	5.541E-02	Pulse	0.50	3
Zn			1	1.412	ug/l	100.59	3,337.42	1.555E-02	Pulse	1.00	3
Cd			1	-0.002	ug/l	0.00	0.00	0.000E+00	Pulse	0.50	3
Al			1	1.787	ug/l	30.06	456.67	2.354E-03	Pulse	1.00	3
Se			1	0.042	ug/l	73.56	6.89	3.201E-05	Pulse	3.00	3
Sb			1	0.004	ug/l	106.20	95.33	4.444E-04	Pulse	1.00	3
Se			1	-0.108	ug/l	-53.93	8.11	3.782E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,632,690.92	2.41	100.0	Pulse	0.50	3
1	Sc		193,703.46	2.26	100.0	Pulse	0.30	3
1	Ge		142,887.09	1.48	100.0	Pulse	0.30	3
1	In		1,309,280.71	1.40	100.0	Pulse	0.30	3
1	Tb		4,581,509.67	1.80	100.0	Pulse	0.50	3
1	Lu		2,897,232.25	1.95	100.0	Pulse	0.50	3
1	Ge		214,812.72	1.21	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		726.68	16.69	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 8:09
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.005	ug/l	-195.65	723.35	5.062E-03	Pulse	0.50	3
As			1	0.001	ug/l	1781.19	26.67	1.869E-04	Pulse	1.00	3
Mo			1	0.002	ug/l	192.90	58.00	2.700E-04	Pulse	0.50	3
Pb			1	0.001	ug/l	172.40	517.01	1.422E-04	Pulse	1.00	3
Be			1	-0.007	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.000	ug/l	215.23	28.67	1.333E-04	Pulse	0.50	3
Ba			1	0.001	ug/l	524.55	12.00	9.196E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	1723.79	82.00	2.255E-05	Pulse	0.50	3
Sn			1	0.011	ug/l	160.26	293.34	2.250E-04	Pulse	0.30	3
Sr			1	-0.001	ug/l	-95.47	422.68	3.242E-04	Pulse	0.50	3
[Pb]			1	0.001	ug/l	218.33	235.33	6.473E-05	Pulse	0.50	3
Ca			1	0.884	ug/l	107.70	78.00	4.000E-04	Pulse	0.50	3
Ti			1	-0.001	ug/l	0.00	0.00	0.000E+00	Pulse	0.50	3
Na			1	-0.029	ug/l	-203.41	7,563.10	3.879E-02	Pulse	1.00	3
Mg			1	0.023	ug/l	7.25	367.33	1.884E-03	Pulse	1.00	3
K			1	0.323	ug/l	286.95	25,409.94	1.303E-01	Pulse	1.00	3
V			1	-0.001	ug/l	-789.98	322.67	1.656E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	88.53	337.34	2.361E-03	Pulse	0.50	3
Fe			1	0.174	ug/l	5.17	5,968.27	4.177E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-118.78	43.33	3.036E-04	Pulse	0.50	3
Ni			1	-0.004	ug/l	-264.69	231.33	1.619E-03	Pulse	0.50	3
Cu			1	0.006	ug/l	224.06	7,645.54	5.351E-02	Pulse	0.50	3
Zn			1	-0.037	ug/l	-23.89	868.02	4.039E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-170.90	2.67	1.238E-05	Pulse	0.50	3
Al			1	0.174	ug/l	22.36	193.67	9.932E-04	Pulse	1.00	3
Se			1	0.025	ug/l	106.85	5.89	2.737E-05	Pulse	3.00	3
Sb			1	-0.002	ug/l	-64.36	59.00	2.744E-04	Pulse	1.00	3
Se			1	-0.153	ug/l	-57.52	6.78	3.150E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,634,283.75	0.61	100.0	Pulse	0.50	3
1	Sc		194,968.70	0.47	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		142,883.11	0.59	100.0	Pulse	0.30	3
1	In		1,303,781.13	0.40	100.0	Pulse	0.30	3
1	Tb		4,621,362.17	0.34	100.0	Pulse	0.50	3
1	Lu		2,902,042.50	0.24	100.0	Pulse	0.50	3
1	Ge		214,925.65	0.51	100.0	Pulse	0.30	3
1	Te		1.33	173.21	100.0	Pulse	0.50	3
1	Li		687.79	8.34	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:13
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	771.35	5.367E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	26.33	1.831E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	46.00	2.140E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	496.01	1.380E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	1.713E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	24.00	1.116E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	10.67	8.146E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	80.00	2.227E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	241.11	1.842E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	430.01	3.288E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	218.67	6.082E-05	Pulse	0.50	3
Ca			1	0.000	ug/l	---	58.67	3.006E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	1.33	6.784E-06	Pulse	0.50	3
Na			1	0.000	ug/l	---	7,607.78	3.897E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	355.33	1.821E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	25,310.83	1.297E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	333.34	1.707E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	317.34	2.208E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	4,731.26	3.292E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	54.67	3.808E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	249.33	1.737E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	7,620.87	5.303E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	931.36	4.337E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.00	1.866E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	165.33	8.466E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	4.33	2.021E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	---	72.00	3.352E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	11.33	5.286E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,594,800.58	0.49	100.0	Pulse	0.50	3
1	Sc		195,221.00	0.58	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		143,713.72	0.76	100.0	Pulse	0.30	3
1	In		1,308,575.71	0.85	100.0	Pulse	0.30	3
1	Tb		4,609,442.67	0.14	100.0	Pulse	0.50	3
1	Lu		2,912,482.33	0.49	100.0	Pulse	0.50	3
1	Ge		214,746.28	0.61	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		731.13	15.93	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:17
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.502	ug/l	2.55	5,494.79	3.843E-02	Pulse	0.50	3
As			1	0.464	ug/l	7.34	464.84	3.251E-03	Pulse	1.00	3
Mo			1	0.484	ug/l	1.05	2,614.86	1.222E-02	Pulse	0.50	3
Pb			1	0.489	ug/l	1.84	14,266.28	3.975E-03	Pulse	1.00	3
Be			1	0.494	ug/l	22.44	23.50	1.207E-04	Pulse	2.00	3
Ag			1	0.496	ug/l	2.91	9,383.07	4.386E-02	Pulse	0.50	3
Ba			1	0.478	ug/l	6.26	889.36	6.803E-04	Pulse	0.50	3
Tl			1	0.480	ug/l	0.40	20,057.08	5.588E-03	Pulse	0.50	3
Sn			1	0.559	ug/l	10.37	2,836.91	2.171E-03	Pulse	0.30	3
Sr			1	0.470	ug/l	3.44	2,475.51	1.894E-03	Pulse	0.50	3
[Pb]			1	0.474	ug/l	0.10	6,517.26	1.816E-03	Pulse	0.50	3
Ca			1	54.278	ug/l	3.22	1,246.05	6.401E-03	Pulse	0.50	3
Ti			1	0.482	ug/l	13.00	878.69	4.516E-03	Pulse	0.50	3
Na			1	50.331	ug/l	1.13	67,420.95	3.464E-01	Pulse	1.00	3
Mg			1	51.168	ug/l	1.31	28,008.50	1.439E-01	Pulse	1.00	3
K			1	51.071	ug/l	1.31	46,172.33	2.372E-01	Pulse	1.00	3
V			1	0.489	ug/l	3.79	3,679.70	1.891E-02	Pulse	0.50	3
Mn			1	0.504	ug/l	2.86	2,453.50	1.716E-02	Pulse	0.50	3
Fe			1	50.879	ug/l	0.83	375,198.83	2.625E+00	Pulse	0.50	3
Co			1	0.508	ug/l	4.04	8,175.75	5.720E-02	Pulse	0.50	3
Ni			1	0.527	ug/l	2.66	2,584.18	1.808E-02	Pulse	0.50	3
Cu			1	0.534	ug/l	4.67	14,051.82	9.830E-02	Pulse	0.50	3
Zn			1	0.540	ug/l	6.55	1,845.76	8.627E-03	Pulse	1.00	3
Cd			1	0.464	ug/l	5.32	1,150.71	5.379E-03	Pulse	0.50	3
Al			1	51.668	ug/l	1.20	8,650.54	4.444E-02	Pulse	1.00	3
Se			1	0.487	ug/l	6.42	33.67	1.574E-04	Pulse	3.00	3
Sb			1	0.482	ug/l	3.43	2,853.23	1.334E-02	Pulse	1.00	3
Se			1	0.299	ug/l	58.07	20.22	9.452E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,589,074.08	0.22	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		194,655.23	0.60	99.7	Pulse	0.30	3
1	Ge		142,959.37	0.75	99.5	Pulse	0.30	3
1	In		1,307,024.43	0.48	99.9	Pulse	0.30	3
1	Tb		4,600,223.67	0.31	99.8	Pulse	0.50	3
1	Lu		2,906,412.25	0.47	99.8	Pulse	0.50	3
1	Ge		213,951.10	0.31	99.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		672.24	12.56	91.9	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:21
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.006	ug/l	2.35	10,109.32	7.166E-02	Pulse	0.50	3
As			1	1.007	ug/l	5.74	965.03	6.843E-03	Pulse	1.00	3
Mo			1	0.930	ug/l	2.96	4,941.34	2.329E-02	Pulse	0.50	3
Pb			1	0.971	ug/l	0.73	27,557.11	7.748E-03	Pulse	1.00	3
Be			1	0.905	ug/l	21.84	42.83	2.196E-04	Pulse	2.00	3
Ag			1	0.999	ug/l	1.14	18,727.45	8.829E-02	Pulse	0.50	3
Ba			1	0.975	ug/l	10.04	1,796.77	1.380E-03	Pulse	0.50	3
Tl			1	0.962	ug/l	0.55	39,719.90	1.117E-02	Pulse	0.50	3
Sn			1	0.989	ug/l	2.06	4,817.33	3.699E-03	Pulse	0.30	3
Sr			1	0.967	ug/l	1.29	4,624.58	3.551E-03	Pulse	0.50	3
[Pb]			1	0.968	ug/l	3.54	12,966.95	3.646E-03	Pulse	0.50	3
Ca			1	105.276	ug/l	2.93	2,363.48	1.213E-02	Pulse	0.50	3
Ti			1	0.934	ug/l	2.85	1,704.08	8.749E-03	Pulse	0.50	3
Na			1	99.149	ug/l	0.70	125,549.91	6.445E-01	Pulse	1.00	3
Mg			1	101.037	ug/l	1.39	55,000.40	2.824E-01	Pulse	1.00	3
K			1	99.766	ug/l	1.41	66,180.43	3.397E-01	Pulse	1.00	3
V			1	0.957	ug/l	1.25	6,885.90	3.535E-02	Pulse	0.50	3
Mn			1	1.029	ug/l	1.73	4,615.23	3.271E-02	Pulse	0.50	3
Fe			1	101.651	ug/l	1.57	735,108.39	5.211E+00	Pulse	0.50	3
Co			1	1.028	ug/l	2.50	16,258.18	1.153E-01	Pulse	0.50	3
Ni			1	1.074	ug/l	3.75	4,943.32	3.505E-02	Pulse	0.50	3
Cu			1	1.063	ug/l	2.55	20,207.93	1.432E-01	Pulse	0.50	3
Zn			1	1.164	ug/l	4.16	2,880.89	1.358E-02	Pulse	1.00	3
Cd			1	0.997	ug/l	3.59	2,445.50	1.153E-02	Pulse	0.50	3
Al			1	100.584	ug/l	0.83	16,697.30	8.572E-02	Pulse	1.00	3
Se			1	1.062	ug/l	7.36	67.78	3.196E-04	Pulse	3.00	3
Sb			1	0.952	ug/l	1.34	5,512.17	2.598E-02	Pulse	1.00	3
Se			1	1.000	ug/l	14.65	40.78	1.922E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,556,448.75	0.27	98.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		194,807.04	1.02	99.8	Pulse	0.30	3
1	Ge		141,094.03	1.49	98.2	Pulse	0.30	3
1	In		1,302,264.15	0.67	99.5	Pulse	0.30	3
1	Tb		4,587,015.00	0.41	99.5	Pulse	0.50	3
1	Lu		2,889,716.92	0.53	99.2	Pulse	0.50	3
1	Ge		212,127.38	0.60	98.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		726.69	10.25	99.4	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:25
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.125	ug/l	1.21	94,687.43	6.723E-01	Pulse	0.50	3
As			1	9.969	ug/l	1.61	9,307.94	6.609E-02	Pulse	1.00	3
Mo			1	9.775	ug/l	0.80	51,565.12	2.429E-01	Pulse	0.50	3
Pb			1	9.816	ug/l	0.43	275,427.87	7.708E-02	Pulse	1.00	3
Be			1	10.605	ug/l	1.83	495.68	2.555E-03	Pulse	2.00	3
Ag			1	10.259	ug/l	0.69	192,213.50	9.055E-01	Pulse	0.50	3
Ba			1	9.779	ug/l	1.87	17,918.91	1.377E-02	Pulse	0.50	3
Tl			1	9.742	ug/l	0.20	403,587.63	1.130E-01	Pulse	0.50	3
Sn			1	9.727	ug/l	0.79	45,242.16	3.477E-02	Pulse	0.30	3
Sr			1	9.768	ug/l	0.79	42,790.27	3.288E-02	Pulse	0.50	3
[Pb]			1	9.776	ug/l	1.11	129,558.19	3.626E-02	Pulse	0.50	3
Ca			1	1003.579	ug/l	0.92	21,942.93	1.131E-01	Pulse	0.50	3
Ti			1	9.769	ug/l	2.38	17,742.05	9.145E-02	Pulse	0.50	3
Na			1	1019.415	ug/l	0.87	1,215,391.29	6.265E+00	Pulse	1.00	3
Mg			1	1024.606	ug/l	0.21	552,277.33	2.847E+00	Pulse	1.00	3
K			1	1020.612	ug/l	0.93	442,091.76	2.279E+00	Pulse	1.00	3
V			1	9.942	ug/l	1.28	68,124.15	3.511E-01	Pulse	0.50	3
Mn			1	10.224	ug/l	1.74	43,013.36	3.054E-01	Pulse	0.50	3
Fe			1	1021.169	ug/l	1.13	7,330,604.67	5.205E+01	Analog	0.50	3
Co			1	10.362	ug/l	0.83	163,202.83	1.159E+00	Pulse	0.50	3
Ni			1	10.461	ug/l	1.97	45,936.93	3.262E-01	Pulse	0.50	3
Cu			1	10.508	ug/l	0.45	133,004.69	9.443E-01	Pulse	0.50	3
Zn			1	10.429	ug/l	1.39	18,505.21	8.717E-02	Pulse	1.00	3
Cd			1	10.100	ug/l	1.44	24,762.54	1.167E-01	Pulse	0.50	3
Al			1	1005.284	ug/l	0.72	164,720.36	8.491E-01	Pulse	1.00	3
Se			1	10.461	ug/l	2.34	630.23	2.968E-03	Pulse	3.00	3
Sb			1	9.904	ug/l	0.87	56,731.69	2.673E-01	Pulse	1.00	3
Se			1	10.168	ug/l	4.90	312.11	1.470E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,573,079.17	0.44	99.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		194,005.39	0.66	99.4	Pulse	0.30	3
1	Ge		140,849.27	0.98	98.0	Pulse	0.30	3
1	In		1,301,299.67	0.27	99.4	Pulse	0.30	3
1	Tb		4,591,947.83	0.29	99.6	Pulse	0.50	3
1	Lu		2,906,020.42	0.35	99.8	Pulse	0.50	3
1	Ge		212,287.44	0.72	98.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		688.90	11.19	94.2	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:29
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.807	ug/l	0.77	476,675.80	3.418E+00	Pulse	0.50	3
As			1	51.653	ug/l	0.87	47,654.73	3.417E-01	Pulse	1.00	3
Mo			1	50.442	ug/l	1.02	263,224.11	1.253E+00	Pulse	0.50	3
Pb			1	50.627	ug/l	0.38	1,386,643.46	3.970E-01	Pulse	1.00	3
Be			1	52.333	ug/l	1.31	2,422.15	1.260E-02	Pulse	2.00	3
Ag			1	51.394	ug/l	0.35	953,219.94	4.536E+00	Pulse	0.50	3
Ba			1	50.640	ug/l	0.55	91,150.34	7.127E-02	Pulse	0.50	3
Tl			1	50.574	ug/l	0.23	2,047,734.42	5.863E-01	Pulse	0.50	3
Sn			1	49.667	ug/l	0.33	226,070.75	1.768E-01	Pulse	0.30	3
Sr			1	49.573	ug/l	0.47	211,701.31	1.655E-01	Pulse	0.50	3
[Pb]			1	50.661	ug/l	0.42	655,427.83	1.877E-01	Pulse	0.50	3
Ca			1	5155.990	ug/l	0.84	111,444.17	5.798E-01	Pulse	0.50	3
Ti			1	50.221	ug/l	0.09	90,364.19	4.701E-01	Pulse	0.50	3
Na			1	5169.775	ug/l	0.30	6,076,157.33	3.161E+01	Analog	1.00	3
Mg			1	5229.303	ug/l	0.43	2,791,092.42	1.452E+01	Pulse	1.00	3
K			1	5224.483	ug/l	0.39	2,139,490.83	1.113E+01	Pulse	1.00	3
V			1	51.151	ug/l	0.42	345,889.31	1.800E+00	Pulse	0.50	3
Mn			1	52.040	ug/l	0.98	215,555.53	1.546E+00	Pulse	0.50	3
Fe			1	5197.862	ug/l	0.89	36,931,549.33	2.648E+02	Analog	0.50	3
Co			1	52.425	ug/l	0.54	817,427.06	5.861E+00	Pulse	0.50	3
Ni			1	52.440	ug/l	0.80	227,067.87	1.628E+00	Pulse	0.50	3
Cu			1	53.013	ug/l	0.85	634,522.60	4.550E+00	Pulse	0.50	3
Zn			1	52.177	ug/l	0.94	88,006.01	4.188E-01	Pulse	1.00	3
Cd			1	51.747	ug/l	0.86	125,582.90	5.976E-01	Pulse	0.50	3
Al			1	5172.563	ug/l	0.12	839,033.96	4.365E+00	Pulse	1.00	3
Se			1	51.606	ug/l	2.36	3,060.47	1.456E-02	Pulse	3.00	3
Sb			1	51.221	ug/l	0.71	290,173.26	1.381E+00	Pulse	1.00	3
Se			1	52.386	ug/l	4.53	1,545.95	7.354E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,492,706.50	0.20	97.2	Pulse	0.50	3
1	Sc		192,204.66	0.07	98.5	Pulse	0.30	3
1	Ge		139,475.58	0.94	97.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,278,909.46	0.50	97.7	Pulse	0.30	3
1	Tb		4,548,936.83	0.36	98.7	Pulse	0.50	3
1	Lu		2,887,810.75	0.89	99.2	Pulse	0.50	3
1	Ge		210,164.44	1.07	97.9	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		691.13	14.79	94.5	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 8:33
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.668	ug/l	1.32	901,896.67	6.570E+00	Pulse	0.50	3
As			1	100.024	ug/l	1.35	90,798.97	6.615E-01	Pulse	1.00	3
Mo			1	98.285	ug/l	1.75	501,644.36	2.440E+00	Pulse	0.50	3
Pb			1	98.430	ug/l	0.33	2,614,093.00	7.718E-01	Pulse	1.00	3
Be			1	98.119	ug/l	1.68	4,484.83	2.363E-02	Pulse	2.00	3
Ag			1	99.277	ug/l	1.01	1,801,126.58	8.762E+00	Pulse	0.50	3
Ba			1	98.735	ug/l	0.94	172,647.12	1.390E-01	Pulse	0.50	3
Tl			1	98.401	ug/l	0.21	3,863,809.67	1.141E+00	Pulse	0.50	3
Sn			1	100.671	ug/l	0.21	444,941.28	3.581E-01	Pulse	0.30	3
Sr			1	100.154	ug/l	0.45	415,111.21	3.341E-01	Pulse	0.50	3
[Pb]			1	98.346	ug/l	0.13	1,233,723.09	3.642E-01	Pulse	0.50	3
Ca			1	9872.182	ug/l	0.64	210,705.74	1.110E+00	Pulse	0.50	3
Ti			1	99.811	ug/l	0.71	177,381.91	9.344E-01	Pulse	0.50	3
Na			1	9858.705	ug/l	0.59	11,438,189.33	6.025E+01	Analog	1.00	3
Mg			1	9888.112	ug/l	0.49	5,212,501.50	2.746E+01	Mix	1.00	3
K			1	9928.350	ug/l	0.35	3,993,669.33	2.104E+01	Pulse	1.00	3
V			1	98.484	ug/l	0.72	657,478.88	3.463E+00	Pulse	0.50	3
Mn			1	99.528	ug/l	1.23	405,478.78	2.954E+00	Pulse	0.50	3
Fe			1	9955.536	ug/l	1.22	69,615,685.33	5.072E+02	Analog	0.50	3
Co			1	99.920	ug/l	0.27	1,533,377.83	1.117E+01	Pulse	0.50	3
Ni			1	100.203	ug/l	0.37	426,840.32	3.109E+00	Pulse	0.50	3
Cu			1	100.791	ug/l	0.52	1,180,835.67	8.602E+00	Pulse	0.50	3
Zn			1	100.037	ug/l	0.60	164,239.63	7.989E-01	Pulse	1.00	3
Cd			1	99.768	ug/l	1.40	236,834.47	1.152E+00	Pulse	0.50	3
Al			1	10127.320	ug/l	0.54	1,622,383.21	8.546E+00	Pulse	1.00	3
Se			1	100.078	ug/l	1.68	5,802.22	2.823E-02	Pulse	3.00	3
Sb			1	98.734	ug/l	0.99	547,074.96	2.661E+00	Pulse	1.00	3
Se			1	100.204	ug/l	0.90	2,881.66	1.402E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,387,212.67	0.41	94.2	Pulse	0.50	3
1	Sc		189,846.57	0.79	97.2	Pulse	0.30	3
1	Ge		137,275.83	0.68	95.5	Pulse	0.30	3
1	In		1,242,468.32	0.26	94.9	Pulse	0.30	3
1	Tb		4,466,481.83	0.81	96.9	Pulse	0.50	3
1	Lu		2,839,572.08	0.58	97.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		205,585.46	1.05	95.7	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		658.90	3.37	90.1	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 8:37
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.708	ug/l	0.86	1,754,999.71	1.316E+01	Pulse	0.50	3
As			1	199.577	ug/l	1.45	175,984.29	1.320E+00	Pulse	1.00	3
Mo			1	200.759	ug/l	2.05	989,383.69	4.985E+00	Pulse	0.50	3
Pb			1	200.638	ug/l	0.82	5,089,159.83	1.573E+00	Pulse	1.00	3
Be			1	200.327	ug/l	1.51	8,825.91	4.823E-02	Pulse	2.00	3
Ag			1	165.089	ug/l	2.96	2,891,813.50	1.457E+01	Pulse	0.50	3
Ba			1	200.484	ug/l	0.85	338,278.21	2.821E-01	Pulse	0.50	3
Tl			1	200.669	ug/l	0.91	7,526,048.67	2.326E+00	Pulse	0.50	3
Sn			1	199.762	ug/l	0.65	851,766.23	7.104E-01	Pulse	0.30	3
Sr			1	200.041	ug/l	0.64	799,693.37	6.670E-01	Pulse	0.50	3
[Pb]			1	200.673	ug/l	0.50	2,404,325.42	7.431E-01	Pulse	0.50	3
Ca			1	20024.696	ug/l	0.88	411,918.89	2.251E+00	Pulse	0.50	3
Ti			1	200.051	ug/l	1.07	342,689.22	1.873E+00	Pulse	0.50	3
Na			1	20027.236	ug/l	0.85	22,389,060.67	1.224E+02	Analog	1.00	3
Mg			1	19997.380	ug/l	0.50	10,160,852.00	5.553E+01	Analog	1.00	3
K			1	19978.673	ug/l	0.50	7,722,333.83	4.220E+01	Analog	1.00	3
V			1	200.473	ug/l	0.69	1,289,721.29	7.048E+00	Pulse	0.50	3
Mn			1	199.715	ug/l	1.16	790,188.75	5.925E+00	Pulse	0.50	3
Fe			1	19971.698	ug/l	0.83	135,675,530.67	1.017E+03	Analog	0.50	3
Co			1	199.416	ug/l	0.47	2,972,999.42	2.229E+01	Pulse	0.50	3
Ni			1	199.265	ug/l	0.58	824,405.94	6.182E+00	Pulse	0.50	3
Cu			1	198.825	ug/l	1.25	2,256,062.33	1.692E+01	Pulse	0.50	3
Zn			1	199.415	ug/l	1.61	315,277.89	1.588E+00	Pulse	1.00	3
Cd			1	199.674	ug/l	1.93	457,687.01	2.306E+00	Pulse	0.50	3
Al			1	19892.928	ug/l	0.83	3,071,632.58	1.679E+01	Pulse	1.00	3
Se			1	199.536	ug/l	1.75	11,167.15	5.626E-02	Pulse	3.00	3
Sb			1	200.333	ug/l	1.61	1,071,771.71	5.399E+00	Pulse	1.00	3
Se			1	199.294	ug/l	0.68	5,524.24	2.783E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,235,429.17	0.63	90.0	Pulse	0.50	3
1	Sc		182,998.10	1.16	93.7	Pulse	0.30	3
1	Ge		133,364.95	0.56	92.8	Pulse	0.30	3
1	In		1,198,996.83	0.80	91.6	Pulse	0.30	3
1	Tb		4,353,684.00	0.20	94.5	Pulse	0.50	3
1	Lu		2,763,416.33	0.58	94.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		198,532.18	1.53	92.4	Pulse	0.30	3
1	Te		19.33	63.21		Pulse	0.50	3
1	Li		697.79	2.88	95.4	Pulse	0.30	3

Quantitation Report

File Name 010HSAG.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:41
Sample Name HSTD (Ag)
Sample Type HSTD _Ag
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.280	ug/l	2.03	864,477.50	6.545E+00	Pulse	0.50	3
As			1	98.406	ug/l	1.40	85,962.04	6.508E-01	Pulse	1.00	3
Mo			1	98.476	ug/l	0.68	486,660.69	2.445E+00	Pulse	0.50	3
Pb			1	98.137	ug/l	0.90	2,533,775.58	7.695E-01	Pulse	1.00	3
Be			1	100.499	ug/l	0.72	4,398.81	2.420E-02	Pulse	2.00	3
Ag			1	99.369	ug/l	0.09	1,745,462.37	8.770E+00	Pulse	0.50	3
Ba			1	97.979	ug/l	1.00	166,670.65	1.379E-01	Pulse	0.50	3
Tl			1	99.048	ug/l	0.74	3,780,969.58	1.148E+00	Pulse	0.50	3
Sn			1	98.892	ug/l	0.18	425,216.36	3.518E-01	Pulse	0.30	3
Sr			1	98.480	ug/l	1.15	397,073.74	3.285E-01	Pulse	0.50	3
[Pb]			1	97.864	ug/l	0.31	1,193,499.75	3.624E-01	Pulse	0.50	3
Ca			1	9859.889	ug/l	0.79	201,506.19	1.109E+00	Pulse	0.50	3
Ti			1	99.638	ug/l	1.62	169,548.66	9.327E-01	Pulse	0.50	3
Na			1	9920.192	ug/l	0.52	11,020,531.67	6.063E+01	Analog	1.00	3
Mg			1	9930.967	ug/l	0.72	5,012,752.50	2.758E+01	Pulse	1.00	3
K			1	9969.095	ug/l	0.44	3,839,647.42	2.112E+01	Pulse	1.00	3
V			1	98.345	ug/l	0.73	628,679.00	3.458E+00	Pulse	0.50	3
Mn			1	98.699	ug/l	1.31	386,940.68	2.929E+00	Pulse	0.50	3
Fe			1	9938.599	ug/l	1.99	66,873,789.33	5.063E+02	Analog	0.50	3
Co			1	99.488	ug/l	1.69	1,469,084.54	1.112E+01	Pulse	0.50	3
Ni			1	100.395	ug/l	2.12	411,494.30	3.115E+00	Pulse	0.50	3
Cu			1	100.390	ug/l	2.02	1,131,724.83	8.568E+00	Pulse	0.50	3
Zn			1	99.020	ug/l	0.61	157,403.77	7.908E-01	Pulse	1.00	3
Cd			1	98.805	ug/l	0.38	227,096.74	1.141E+00	Pulse	0.50	3
Al			1	9944.475	ug/l	0.81	1,525,451.92	8.392E+00	Pulse	1.00	3
Se			1	97.649	ug/l	0.43	5,481.68	2.754E-02	Pulse	3.00	3
Sb			1	98.353	ug/l	0.29	527,634.65	2.651E+00	Pulse	1.00	3
Se			1	97.535	ug/l	1.78	2,715.97	1.365E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,292,922.50	0.19	91.6	Pulse	0.50	3
1	Sc		181,783.27	0.58	93.1	Pulse	0.30	3
1	Ge		132,104.53	1.04	91.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,208,742.90	0.90	92.4	Pulse	0.30	3
1	Tb		4,372,098.67	0.05	94.9	Pulse	0.50	3
1	Lu		2,764,379.33	0.36	94.9	Pulse	0.50	3
1	Ge		199,034.51	0.10	92.7	Pulse	0.30	3
1	Te		5.33	86.60		Pulse	0.50	3
1	Li		592.24	7.04	81.0	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:45
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.981	ug/l	1.63	1,703,415.75	1.311E+01	Pulse	0.50	3
As			1	198.880	ug/l	0.22	170,847.18	1.315E+00	Pulse	1.00	3
Mo			1	198.914	ug/l	1.87	961,726.11	4.939E+00	Pulse	0.50	3
Pb			1	198.436	ug/l	0.68	4,943,490.67	1.556E+00	Pulse	1.00	3
Be			1	200.565	ug/l	0.81	8,624.83	4.829E-02	Pulse	2.00	3
Ag			1	169.386	ug/l	2.56	2,911,046.08	1.495E+01	Pulse	0.50	3
Ba			1	196.648	ug/l	1.36	327,058.41	2.767E-01	Pulse	0.50	3
Tl			1	198.704	ug/l	0.55	7,319,450.17	2.303E+00	Pulse	0.50	3
Sn			1	197.879	ug/l	1.19	831,669.27	7.037E-01	Pulse	0.30	3
Sr			1	197.435	ug/l	1.09	777,962.00	6.583E-01	Pulse	0.50	3
[Pb]			1	198.124	ug/l	1.16	2,331,394.67	7.337E-01	Pulse	0.50	3
Ca			1	19928.693	ug/l	0.43	400,116.61	2.240E+00	Pulse	0.50	3
Ti			1	200.482	ug/l	1.22	335,193.64	1.877E+00	Pulse	0.50	3
Na			1	19850.457	ug/l	0.81	21,659,701.33	1.213E+02	Analog	1.00	3
Mg			1	19911.915	ug/l	0.76	9,874,710.67	5.529E+01	Analog	1.00	3
K			1	19899.587	ug/l	0.18	7,507,519.83	4.203E+01	Analog	1.00	3
V			1	198.786	ug/l	0.95	1,248,209.83	6.989E+00	Pulse	0.50	3
Mn			1	198.034	ug/l	0.89	763,300.87	5.875E+00	Pulse	0.50	3
Fe			1	19837.862	ug/l	0.97	131,285,330.67	1.011E+03	Analog	0.50	3
Co			1	197.789	ug/l	0.82	2,872,555.67	2.211E+01	Pulse	0.50	3
Ni			1	197.902	ug/l	1.22	797,602.31	6.139E+00	Pulse	0.50	3
Cu			1	197.053	ug/l	0.79	2,178,302.83	1.677E+01	Pulse	0.50	3
Zn			1	195.550	ug/l	1.23	303,320.19	1.558E+00	Pulse	1.00	3
Cd			1	197.894	ug/l	1.80	445,007.25	2.285E+00	Pulse	0.50	3
Al			1	19743.043	ug/l	1.06	2,975,385.08	1.666E+01	Pulse	1.00	3
Se			1	197.578	ug/l	1.09	10,848.52	5.571E-02	Pulse	3.00	3
Sb			1	197.733	ug/l	1.83	1,037,774.94	5.329E+00	Pulse	1.00	3
Se			1	196.189	ug/l	2.42	5,334.53	2.739E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,177,615.75	0.29	88.4	Pulse	0.50	3
1	Sc		178,605.94	0.52	91.5	Pulse	0.30	3
1	Ge		129,919.19	0.41	90.4	Pulse	0.30	3
1	In		1,181,825.44	0.66	90.3	Pulse	0.30	3
1	Tb		4,288,513.00	0.02	93.0	Pulse	0.50	3
1	Lu		2,711,122.58	0.59	93.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		194,756.26	1.12	90.7	Pulse	0.30	3
1	Te		12.67	59.78		Pulse	0.50	3
1	Li		612.24	6.02	83.7	Pulse	0.30	3

Quantitation Report

File Name	012_ICV.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 8:48
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	105.235	ug/l	0.72	900,595.98	6.937E+00	Pulse	0.50	3
As			1	106.735	ug/l	0.88	91,632.54	7.058E-01	Pulse	1.00	3
Mo			1	105.551	ug/l	0.38	508,445.48	2.621E+00	Pulse	0.50	3
Pb			1	105.393	ug/l	0.78	2,678,247.00	8.263E-01	Pulse	1.00	3
Be			1	106.814	ug/l	0.78	4,583.69	2.572E-02	Pulse	2.00	3
Ag			1	52.507	ug/l	0.96	899,007.65	4.634E+00	Pulse	0.50	3
Ba			1	105.879	ug/l	1.21	176,032.36	1.490E-01	Pulse	0.50	3
Tl			1	104.209	ug/l	0.47	3,915,408.00	1.208E+00	Pulse	0.50	3
Sn			1	103.698	ug/l	0.56	435,774.53	3.689E-01	Pulse	0.30	3
Sr			1	103.067	ug/l	0.65	406,165.75	3.438E-01	Pulse	0.50	3
[Pb]			1	105.003	ug/l	0.53	1,260,396.29	3.889E-01	Pulse	0.50	3
Ca			1	10282.977	ug/l	0.48	206,044.54	1.156E+00	Pulse	0.50	3
Ti			1	10.548	ug/l	0.73	17,599.24	9.875E-02	Pulse	0.50	3
Na			1	10596.767	ug/l	0.88	11,541,222.00	6.476E+01	Analog	1.00	3
Mg			1	10676.892	ug/l	0.38	5,283,821.50	2.965E+01	Analog	1.00	3
K			1	10207.001	ug/l	0.72	3,853,779.08	2.162E+01	Pulse	1.00	3
V			1	104.912	ug/l	0.28	657,516.42	3.689E+00	Pulse	0.50	3
Mn			1	105.468	ug/l	1.57	406,343.48	3.130E+00	Pulse	0.50	3
Fe			1	10370.473	ug/l	0.45	68,584,274.67	5.283E+02	Analog	0.50	3
Co			1	106.116	ug/l	0.63	1,540,067.38	1.186E+01	Pulse	0.50	3
Ni			1	107.143	ug/l	0.74	431,625.61	3.325E+00	Pulse	0.50	3
Cu			1	106.754	ug/l	0.29	1,182,404.83	9.108E+00	Pulse	0.50	3
Zn			1	105.944	ug/l	0.69	164,096.22	8.458E-01	Pulse	1.00	3
Cd			1	106.493	ug/l	1.27	238,577.29	1.230E+00	Pulse	0.50	3
Al			1	10153.129	ug/l	0.64	1,527,003.21	8.568E+00	Pulse	1.00	3
Se			1	106.813	ug/l	1.64	5,844.23	3.012E-02	Pulse	3.00	3
Sb			1	104.183	ug/l	1.15	544,776.10	2.808E+00	Pulse	1.00	3
Se			1	106.830	ug/l	2.32	2,898.67	1.494E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,241,115.25	0.30	90.2	Pulse	0.50	3
1	Sc		178,224.51	0.39	91.3	Pulse	0.30	3
1	Ge		129,824.04	0.44	90.3	Pulse	0.30	3
1	In		1,181,373.60	0.39	90.3	Pulse	0.30	3
1	Tb		4,296,099.67	0.59	93.2	Pulse	0.50	3
1	Lu		2,705,451.42	0.45	92.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		194,008.18	0.44	90.3	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		684.46	9.61	93.6	Pulse	0.30	3

Quantitation Report

File Name 013_ICB.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:52
Sample Name ICB
Sample Type ICB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.021	ug/l	16.22	879.36	6.725E-03	Pulse	0.50	3
As			1	0.024	ug/l	36.73	44.33	3.389E-04	Pulse	1.00	3
Mo			1	0.162	ug/l	19.78	826.69	4.237E-03	Pulse	0.50	3
Pb			1	0.058	ug/l	9.56	1,970.45	5.943E-04	Pulse	1.00	3
Be			1	0.032	ug/l	56.34	1.67	9.334E-06	Pulse	2.00	3
Ag			1	0.046	ug/l	23.45	814.69	4.175E-03	Pulse	0.50	3
Ba			1	0.015	ug/l	117.60	34.67	2.915E-05	Pulse	0.50	3
Tl			1	0.038	ug/l	13.74	1,546.74	4.667E-04	Pulse	0.50	3
Sn			1	0.155	ug/l	17.44	878.92	7.359E-04	Pulse	0.30	3
Sr			1	0.027	ug/l	73.34	498.01	4.175E-04	Pulse	0.50	3
[Pb]			1	0.056	ug/l	12.60	886.03	2.673E-04	Pulse	0.50	3
Ca			1	9.023	ug/l	19.32	234.67	1.315E-03	Pulse	0.50	3
Ti			1	0.006	ug/l	92.97	12.00	6.717E-05	Pulse	0.50	3
Na			1	3.805	ug/l	11.43	11,109.08	6.221E-02	Pulse	1.00	3
Mg			1	1.767	ug/l	23.66	1,201.37	6.728E-03	Pulse	1.00	3
K			1	2.309	ug/l	56.21	24,020.21	1.345E-01	Pulse	1.00	3
V			1	0.006	ug/l	220.08	341.34	1.912E-03	Pulse	0.50	3
Mn			1	-0.011	ug/l	-38.02	244.67	1.872E-03	Pulse	0.50	3
Fe			1	2.313	ug/l	8.94	19,700.69	1.508E-01	Pulse	0.50	3
Co			1	0.018	ug/l	22.96	312.00	2.389E-03	Pulse	0.50	3
Ni			1	0.006	ug/l	198.12	250.00	1.914E-03	Pulse	0.50	3
Cu			1	0.017	ug/l	81.64	7,125.34	5.451E-02	Pulse	0.50	3
Zn			1	0.429	ug/l	3.84	1,508.39	7.741E-03	Pulse	1.00	3
Cd			1	0.015	ug/l	13.14	36.67	1.881E-04	Pulse	0.50	3
Al			1	1.599	ug/l	23.92	392.34	2.196E-03	Pulse	1.00	3
Se			1	0.110	ug/l	27.68	10.00	5.134E-05	Pulse	3.00	3
Sb			1	0.036	ug/l	4.24	252.67	1.297E-03	Pulse	1.00	3
Se			1	0.002	ug/l	2376.99	10.33	5.307E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,316,407.25	0.78	92.3	Pulse	0.50	3
1	Sc		178,580.90	0.61	91.5	Pulse	0.30	3

Quantitation Report

1	Ge		130,732.72	0.94	91.0	Pulse	0.30	3
1	In		1,193,756.31	0.69	91.2	Pulse	0.30	3
1	Tb		4,259,393.33	0.50	92.4	Pulse	0.50	3
1	Lu		2,675,413.17	0.37	91.9	Pulse	0.50	3
1	Ge		194,831.94	1.16	90.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		691.13	4.56	94.5	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 8:56
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.016	ug/l	3.08	9,450.98	7.227E-02	Pulse	0.50	3
As			1	0.962	ug/l	4.60	855.69	6.546E-03	Pulse	1.00	3
Mo			1	1.043	ug/l	3.46	5,096.05	2.611E-02	Pulse	0.50	3
Pb			1	1.012	ug/l	1.05	26,814.95	8.069E-03	Pulse	1.00	3
Be			1	0.925	ug/l	13.50	40.17	2.244E-04	Pulse	2.00	3
Ag			1	1.039	ug/l	1.74	17,921.34	9.182E-02	Pulse	0.50	3
Ba			1	0.966	ug/l	5.68	1,645.41	1.367E-03	Pulse	0.50	3
Tl			1	0.984	ug/l	0.96	37,981.32	1.143E-02	Pulse	0.50	3
Sn			1	1.044	ug/l	2.43	4,691.74	3.897E-03	Pulse	0.30	3
Sr			1	0.987	ug/l	0.72	4,355.85	3.618E-03	Pulse	0.50	3
[Pb]			1	1.003	ug/l	1.73	12,541.28	3.774E-03	Pulse	0.50	3
Ca			1	100.446	ug/l	2.64	2,071.45	1.159E-02	Pulse	0.50	3
Ti			1	1.008	ug/l	1.60	1,687.42	9.442E-03	Pulse	0.50	3
Na			1	104.057	ug/l	1.36	120,517.80	6.745E-01	Pulse	1.00	3
Mg			1	104.285	ug/l	1.76	52,062.92	2.914E-01	Pulse	1.00	3
K			1	102.231	ug/l	1.38	61,635.84	3.449E-01	Pulse	1.00	3
V			1	0.985	ug/l	1.08	6,494.43	3.635E-02	Pulse	0.50	3
Mn			1	0.971	ug/l	2.23	4,051.77	3.099E-02	Pulse	0.50	3
Fe			1	102.560	ug/l	1.50	687,392.46	5.257E+00	Pulse	0.50	3
Co			1	1.009	ug/l	2.25	14,799.68	1.132E-01	Pulse	0.50	3
Ni			1	1.032	ug/l	3.32	4,411.18	3.374E-02	Pulse	0.50	3
Cu			1	1.040	ug/l	0.51	18,472.85	1.413E-01	Pulse	0.50	3
Zn			1	0.996	ug/l	4.80	2,390.15	1.225E-02	Pulse	1.00	3
Cd			1	0.979	ug/l	4.92	2,209.48	1.132E-02	Pulse	0.50	3
Al			1	103.510	ug/l	0.67	15,758.25	8.819E-02	Pulse	1.00	3
Se			1	0.944	ug/l	17.21	55.89	2.862E-04	Pulse	3.00	3
Sb			1	0.977	ug/l	1.52	5,203.08	2.666E-02	Pulse	1.00	3
Se			1	1.005	ug/l	11.59	37.67	1.930E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,323,112.42	0.99	92.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		178,705.30	1.71	91.5	Pulse	0.30	3
1	Ge		130,760.55	1.08	91.0	Pulse	0.30	3
1	In		1,203,840.44	0.86	92.0	Pulse	0.30	3
1	Tb		4,251,032.33	0.90	92.2	Pulse	0.50	3
1	Lu		2,675,713.42	1.18	91.9	Pulse	0.50	3
1	Ge		195,187.00	0.51	90.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		594.46	5.21	81.3	Pulse	0.30	3

Quantitation Report

File Name	015ICSA.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 9:00
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.038	ug/l	1.26	17,415.13	1.396E-01	Pulse	0.50	3
As			1	0.082	ug/l	17.63	90.33	7.247E-04	Pulse	1.00	3
Mo			1	1996.837	ug/l	0.77	9,117,614.33	4.958E+01	Analog	0.50	3
Pb			1	0.160	ug/l	3.71	3,985.14	1.390E-03	Pulse	1.00	3
Be			1	0.032	ug/l	111.74	1.67	9.491E-06	Pulse	2.00	3
Ag			1	0.288	ug/l	3.65	4,695.28	2.553E-02	Pulse	0.50	3
Ba			1	0.357	ug/l	8.05	556.68	5.106E-04	Pulse	0.50	3
Tl			1	0.012	ug/l	32.62	458.68	1.601E-04	Pulse	0.50	3
Sn			1	0.088	ug/l	11.46	541.12	4.962E-04	Pulse	0.30	3
Sr			1	1.099	ug/l	2.73	4,349.85	3.990E-03	Pulse	0.50	3
[Pb]			1	0.154	ug/l	12.30	1,808.77	6.306E-04	Pulse	0.50	3
Ca			1	91929.832	ug/l	0.40	1,815,411.00	1.033E+01	Pulse	0.50	3
Ti			1	191.792	ug/l	0.57	315,440.43	1.795E+00	Pulse	0.50	3
Na			1	97119.131	ug/l	0.56	104,218,029.33	5.932E+02	Analog	1.00	3
Mg			1	95816.772	ug/l	0.90	46,741,413.33	2.660E+02	Analog	1.00	3
K			1	97659.326	ug/l	0.86	36,153,677.33	2.058E+02	Analog	1.00	3
V			1	0.023	ug/l	28.75	441.34	2.512E-03	Pulse	0.50	3
Mn			1	0.931	ug/l	1.73	3,719.70	2.981E-02	Pulse	0.50	3
Fe			1	97415.397	ug/l	1.31	619,027,690.67	4.962E+03	Analog	0.50	3
Co			1	0.122	ug/l	5.20	1,748.09	1.401E-02	Pulse	0.50	3
Ni			1	0.174	ug/l	6.22	890.69	7.142E-03	Pulse	0.50	3
Cu			1	0.042	ug/l	54.16	7,061.98	5.662E-02	Pulse	0.50	3
Zn			1	1.106	ug/l	5.81	2,414.16	1.313E-02	Pulse	1.00	3
Cd			1	0.453	ug/l	8.03	965.37	5.247E-03	Pulse	0.50	3
Al			1	93200.161	ug/l	1.14	13,816,336.67	7.864E+01	Analog	1.00	3
Se			1	0.274	ug/l	39.10	17.89	9.734E-05	Pulse	3.00	3
Sb			1	0.058	ug/l	13.49	348.67	1.896E-03	Pulse	1.00	3
Se			1	0.219	ug/l	11.38	15.33	8.337E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,867,479.42	0.49	79.8	Pulse	0.50	3
1	Sc		175,691.19	0.22	90.0	Pulse	0.30	3
1	Ge		124,763.15	1.46	86.8	Pulse	0.30	3
1	In		1,090,279.96	0.62	83.3	Pulse	0.30	3
1	Tb		4,024,119.00	0.33	87.3	Pulse	0.50	3
1	Lu		2,560,358.00	0.19	87.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		183,915.18	0.56	85.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		568.90	9.98	77.8	Pulse	0.30	3

Quantitation Report

File Name 016ICSB.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:04
Sample Name ICSAB
Sample Type ICSAB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.648	ug/l	0.51	179,059.23	1.431E+00	Pulse	0.50	3
As			1	19.445	ug/l	0.76	16,105.44	1.287E-01	Pulse	1.00	3
Mo			1	2007.948	ug/l	1.13	9,167,957.00	4.985E+01	Analog	0.50	3
Pb			1	0.119	ug/l	4.93	3,104.29	1.074E-03	Pulse	1.00	3
Be			1	0.044	ug/l	40.28	2.17	1.237E-05	Pulse	2.00	3
Ag			1	18.401	ug/l	0.99	298,672.06	1.624E+00	Pulse	0.50	3
Ba			1	0.322	ug/l	1.03	506.01	4.612E-04	Pulse	0.50	3
Tl			1	0.006	ug/l	22.89	278.00	9.621E-05	Pulse	0.50	3
Sn			1	0.042	ug/l	13.48	366.67	3.341E-04	Pulse	0.30	3
Sr			1	1.042	ug/l	5.40	4,171.81	3.802E-03	Pulse	0.50	3
[Pb]			1	0.127	ug/l	6.21	1,530.74	5.297E-04	Pulse	0.50	3
Ca			1	90960.814	ug/l	1.38	1,789,336.92	1.022E+01	Pulse	0.50	3
Ti			1	190.624	ug/l	1.43	312,307.77	1.785E+00	Pulse	0.50	3
Na			1	97398.512	ug/l	1.05	104,114,477.33	5.949E+02	Analog	1.00	3
Mg			1	95128.147	ug/l	1.32	46,226,698.67	2.641E+02	Analog	1.00	3
K			1	97295.489	ug/l	0.65	35,881,109.33	2.050E+02	Analog	1.00	3
V			1	0.017	ug/l	49.15	404.01	2.307E-03	Pulse	0.50	3
Mn			1	20.514	ug/l	1.62	76,387.18	6.106E-01	Pulse	0.50	3
Fe			1	97695.928	ug/l	0.67	622,570,282.67	4.976E+03	Analog	0.50	3
Co			1	19.546	ug/l	0.46	273,405.31	2.185E+00	Pulse	0.50	3
Ni			1	19.044	ug/l	0.46	74,106.19	5.924E-01	Pulse	0.50	3
Cu			1	18.606	ug/l	1.14	204,063.88	1.631E+00	Pulse	0.50	3
Zn			1	19.605	ug/l	0.36	29,435.72	1.601E-01	Pulse	1.00	3
Cd			1	19.425	ug/l	1.39	41,256.47	2.243E-01	Pulse	0.50	3
Al			1	91892.971	ug/l	1.32	13,570,006.33	7.754E+01	Analog	1.00	3
Se			1	0.201	ug/l	28.32	14.11	7.678E-05	Pulse	3.00	3
Sb			1	0.056	ug/l	8.03	338.34	1.839E-03	Pulse	1.00	3
Se			1	0.363	ug/l	60.95	19.00	1.034E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,890,015.83	0.15	80.4	Pulse	0.50	3
1	Sc		175,020.95	0.59	89.7	Pulse	0.30	3
1	Ge		125,102.88	0.39	87.1	Pulse	0.30	3
1	In		1,097,124.85	0.65	83.8	Pulse	0.30	3
1	Tb		4,056,133.00	0.53	88.0	Pulse	0.50	3
1	Lu		2,577,458.75	0.29	88.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		183,908.63	0.62	85.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		612.24	26.11	83.7	Pulse	0.30	3

Quantitation Report

File Name 017CCVA.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:07
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.566	ug/l	1.15	445,974.51	3.336E+00	Pulse	0.50	3
As			1	50.001	ug/l	1.08	44,213.84	3.308E-01	Pulse	1.00	3
Mo			1	51.924	ug/l	1.03	257,392.11	1.289E+00	Pulse	0.50	3
Pb			1	50.001	ug/l	0.97	1,311,681.42	3.921E-01	Pulse	1.00	3
Be			1	52.374	ug/l	0.98	2,277.96	1.261E-02	Pulse	2.00	3
Ag			1	51.783	ug/l	0.38	912,320.98	4.570E+00	Pulse	0.50	3
Ba			1	49.414	ug/l	0.86	83,606.40	6.955E-02	Pulse	0.50	3
Tl			1	50.212	ug/l	0.95	1,947,223.92	5.821E-01	Pulse	0.50	3
Sn			1	50.146	ug/l	0.16	214,544.56	1.785E-01	Pulse	0.30	3
Sr			1	48.813	ug/l	0.48	195,948.94	1.630E-01	Pulse	0.50	3
[Pb]			1	49.868	ug/l	0.58	617,918.58	1.847E-01	Pulse	0.50	3
Ca			1	5061.659	ug/l	0.83	102,815.58	5.692E-01	Pulse	0.50	3
Ti			1	49.927	ug/l	1.25	84,431.34	4.674E-01	Pulse	0.50	3
Na			1	5178.919	ug/l	0.28	5,720,345.50	3.167E+01	Analog	1.00	3
Mg			1	5086.727	ug/l	0.55	2,551,530.75	1.413E+01	Pulse	1.00	3
K			1	5095.821	ug/l	0.47	1,961,768.92	1.086E+01	Pulse	1.00	3
V			1	51.102	ug/l	1.19	324,775.64	1.798E+00	Pulse	0.50	3
Mn			1	49.919	ug/l	0.40	198,199.33	1.483E+00	Pulse	0.50	3
Fe			1	5163.922	ug/l	0.33	35,166,660.00	2.631E+02	Analog	0.50	3
Co			1	51.437	ug/l	0.56	768,697.71	5.750E+00	Pulse	0.50	3
Ni			1	51.915	ug/l	0.74	215,463.80	1.612E+00	Pulse	0.50	3
Cu			1	52.431	ug/l	0.84	601,587.46	4.500E+00	Pulse	0.50	3
Zn			1	51.441	ug/l	1.24	82,431.01	4.129E-01	Pulse	1.00	3
Cd			1	50.652	ug/l	1.65	116,779.26	5.849E-01	Pulse	0.50	3
Al			1	4904.896	ug/l	0.41	747,736.31	4.139E+00	Pulse	1.00	3
Se			1	49.834	ug/l	1.44	2,807.88	1.407E-02	Pulse	3.00	3
Sb			1	49.366	ug/l	1.32	265,659.56	1.331E+00	Pulse	1.00	3
Se			1	48.612	ug/l	2.39	1,363.16	6.828E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,345,160.17	0.16	93.1	Pulse	0.50	3
1	Sc		180,633.02	0.84	92.5	Pulse	0.30	3
1	Ge		133,678.45	0.92	93.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,202,096.10	0.75	91.9	Pulse	0.30	3
1	Tb		4,363,928.83	0.76	94.7	Pulse	0.50	3
1	Lu		2,712,389.17	0.95	93.1	Pulse	0.50	3
1	Ge		199,631.27	0.71	93.0	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		677.79	8.55	92.7	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:11
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.955	ug/l	0.76	881,742.19	6.589E+00	Pulse	0.50	3
As			1	99.140	ug/l	0.97	87,732.15	6.556E-01	Pulse	1.00	3
Mo			1	100.792	ug/l	0.80	499,446.43	2.503E+00	Pulse	0.50	3
Pb			1	98.912	ug/l	0.41	2,538,390.92	7.755E-01	Pulse	1.00	3
Be			1	101.354	ug/l	1.24	4,446.49	2.440E-02	Pulse	2.00	3
Ag			1	100.519	ug/l	0.82	1,770,401.88	8.871E+00	Pulse	0.50	3
Ba			1	98.736	ug/l	0.26	166,384.38	1.390E-01	Pulse	0.50	3
Tl			1	99.326	ug/l	1.10	3,768,608.33	1.151E+00	Pulse	0.50	3
Sn			1	99.353	ug/l	0.74	423,181.47	3.534E-01	Pulse	0.30	3
Sr			1	99.246	ug/l	0.24	396,423.01	3.311E-01	Pulse	0.50	3
[Pb]			1	99.276	ug/l	0.49	1,203,430.46	3.677E-01	Pulse	0.50	3
Ca			1	9925.097	ug/l	0.86	203,313.71	1.116E+00	Pulse	0.50	3
Ti			1	100.781	ug/l	0.88	171,899.80	9.435E-01	Pulse	0.50	3
Na			1	10073.295	ug/l	0.73	11,216,579.00	6.156E+01	Analog	1.00	3
Mg			1	9902.204	ug/l	0.83	5,009,871.00	2.750E+01	Pulse	1.00	3
K			1	9999.684	ug/l	0.44	3,860,377.08	2.119E+01	Pulse	1.00	3
V			1	100.437	ug/l	0.89	643,528.65	3.532E+00	Pulse	0.50	3
Mn			1	97.895	ug/l	0.38	388,804.35	2.905E+00	Pulse	0.50	3
Fe			1	10054.511	ug/l	0.24	68,541,184.00	5.122E+02	Analog	0.50	3
Co			1	100.486	ug/l	0.32	1,503,251.04	1.123E+01	Pulse	0.50	3
Ni			1	101.033	ug/l	0.45	419,541.05	3.135E+00	Pulse	0.50	3
Cu			1	101.934	ug/l	0.88	1,164,056.25	8.699E+00	Pulse	0.50	3
Zn			1	100.119	ug/l	1.01	159,569.07	7.996E-01	Pulse	1.00	3
Cd			1	100.317	ug/l	1.11	231,201.07	1.158E+00	Pulse	0.50	3
Al			1	9716.260	ug/l	0.46	1,493,943.08	8.199E+00	Pulse	1.00	3
Se			1	97.682	ug/l	0.17	5,498.57	2.755E-02	Pulse	3.00	3
Sb			1	97.709	ug/l	0.85	525,589.45	2.634E+00	Pulse	1.00	3
Se			1	97.305	ug/l	1.34	2,717.19	1.361E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,273,177.50	0.86	91.1	Pulse	0.50	3
1	Sc		182,210.46	0.86	93.3	Pulse	0.30	3
1	Ge		133,820.16	0.76	93.1	Pulse	0.30	3
1	In		1,197,374.46	0.47	91.5	Pulse	0.30	3
1	Tb		4,360,864.00	0.25	94.6	Pulse	0.50	3
1	Lu		2,714,905.58	0.41	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		199,578.24	0.82	92.9	Pulse	0.30	3
1	Te		3.33	124.90		Pulse	0.50	3
1	Li		695.57	1.94	95.1	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 9:15
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.015	ug/l	63.81	867.36	6.364E-03	Pulse	0.50	3
As			1	0.001	ug/l	510.91	26.00	1.907E-04	Pulse	1.00	3
Mo			1	0.208	ug/l	28.89	1,095.37	5.371E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	25.53	1,417.06	4.172E-04	Pulse	1.00	3
Be			1	0.030	ug/l	113.12	1.67	8.931E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	23.17	344.67	1.693E-03	Pulse	0.50	3
Ba			1	0.009	ug/l	34.01	25.33	2.049E-05	Pulse	0.50	3
Tl			1	0.016	ug/l	20.47	700.68	2.063E-04	Pulse	0.50	3
Sn			1	0.088	ug/l	23.75	613.35	4.954E-04	Pulse	0.30	3
Sr			1	0.018	ug/l	87.65	480.01	3.881E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	8.94	635.35	1.869E-04	Pulse	0.50	3
Ca			1	4.466	ug/l	42.84	149.33	8.026E-04	Pulse	0.50	3
Ti			1	0.019	ug/l	2.89	34.67	1.862E-04	Pulse	0.50	3
Na			1	6.808	ug/l	8.89	14,996.28	8.055E-02	Pulse	1.00	3
Mg			1	1.773	ug/l	26.40	1,255.04	6.744E-03	Pulse	1.00	3
K			1	1.970	ug/l	16.67	24,913.66	1.338E-01	Pulse	1.00	3
V			1	0.002	ug/l	380.82	332.00	1.784E-03	Pulse	0.50	3
Mn			1	-0.017	ug/l	-49.36	232.00	1.703E-03	Pulse	0.50	3
Fe			1	2.231	ug/l	13.45	19,969.67	1.465E-01	Pulse	0.50	3
Co			1	0.012	ug/l	41.65	228.00	1.675E-03	Pulse	0.50	3
Ni			1	0.009	ug/l	70.56	272.67	2.001E-03	Pulse	0.50	3
Cu			1	0.045	ug/l	31.67	7,751.59	5.686E-02	Pulse	0.50	3
Zn			1	0.222	ug/l	14.05	1,243.04	6.100E-03	Pulse	1.00	3
Cd			1	0.016	ug/l	14.31	42.00	2.062E-04	Pulse	0.50	3
Al			1	1.582	ug/l	32.12	406.00	2.182E-03	Pulse	1.00	3
Se			1	0.070	ug/l	56.41	8.11	3.985E-05	Pulse	3.00	3
Sb			1	0.022	ug/l	19.81	191.00	9.371E-04	Pulse	1.00	3
Se			1	-0.125	ug/l	-59.97	7.22	3.541E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,400,147.58	1.02	94.6	Pulse	0.50	3
1	Sc		186,201.21	0.54	95.4	Pulse	0.30	3

Quantitation Report

1	Ge		136,333.36	0.63	94.9	Pulse	0.30	3
1	In		1,237,223.80	0.70	94.5	Pulse	0.30	3
1	Tb		4,371,482.50	0.54	94.8	Pulse	0.50	3
1	Lu		2,720,486.58	0.65	93.4	Pulse	0.50	3
1	Ge		203,764.28	0.53	94.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		747.80	9.25	102.3	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 9:19
Sample Name	MP40548-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.489	ug/l	5.03	2,802.88	2.147E-02	Pulse	0.50	3
As			1	0.044	ug/l	62.96	43.00	3.293E-04	Pulse	1.00	3
Mo			1	0.284	ug/l	38.89	733.35	3.742E-03	Pulse	0.50	3
Pb			1	0.076	ug/l	12.24	1,449.07	4.370E-04	Pulse	1.00	3
Be			1	0.048	ug/l	147.83	1.33	7.434E-06	Pulse	2.00	3
Ag			1	0.036	ug/l	18.60	331.34	1.694E-03	Pulse	0.50	3
Ba			1	0.029	ug/l	62.80	34.00	2.863E-05	Pulse	0.50	3
Tl			1	0.026	ug/l	40.17	565.35	1.706E-04	Pulse	0.50	3
Sn			1	0.435	ug/l	10.67	1,140.04	9.583E-04	Pulse	0.30	3
Sr			1	0.029	ug/l	21.21	448.01	3.767E-04	Pulse	0.50	3
[Pb]			1	0.073	ug/l	12.55	648.02	1.954E-04	Pulse	0.50	3
Ca			1	14.764	ug/l	15.74	202.67	1.130E-03	Pulse	0.50	3
Ti			1	0.038	ug/l	6.15	33.33	1.856E-04	Pulse	0.50	3
Na			1	24.708	ug/l	1.06	20,538.49	1.144E-01	Pulse	1.00	3
Mg			1	2.939	ug/l	8.92	1,058.70	5.902E-03	Pulse	1.00	3
K			1	24.183	ug/l	11.80	27,838.20	1.551E-01	Pulse	1.00	3
V			1	0.216	ug/l	10.64	987.36	5.504E-03	Pulse	0.50	3
Mn			1	0.421	ug/l	8.74	1,103.37	8.455E-03	Pulse	0.50	3
Fe			1	5.982	ug/l	7.60	24,181.77	1.853E-01	Pulse	0.50	3
Co			1	0.016	ug/l	17.93	168.67	1.291E-03	Pulse	0.50	3
Ni			1	-0.011	ug/l	-90.23	204.00	1.563E-03	Pulse	0.50	3
Cu			1	0.355	ug/l	12.72	8,888.07	6.810E-02	Pulse	0.50	3
Zn			1	1.028	ug/l	12.84	1,647.74	8.419E-03	Pulse	1.00	3
Cd			1	0.012	ug/l	48.10	16.67	8.543E-05	Pulse	0.50	3
Al			1	7.851	ug/l	15.32	747.35	4.159E-03	Pulse	1.00	3
Se			1	0.058	ug/l	39.19	5.55	2.837E-05	Pulse	3.00	3
Sb			1	0.080	ug/l	11.87	275.33	1.408E-03	Pulse	1.00	3
Se			1	0.268	ug/l	28.99	14.00	7.151E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,316,470.58	0.37	92.3	Pulse	0.50	3
1	Sc		179,502.79	1.51	91.9	Pulse	0.30	3
1	Ge		130,541.14	0.87	90.8	Pulse	0.30	3
1	In		1,189,219.95	0.67	90.9	Pulse	0.30	3
1	Tb		4,256,553.33	0.41	92.3	Pulse	0.50	3
1	Lu		2,623,472.17	0.88	90.1	Pulse	0.50	3
1	Ge		195,671.01	1.18	91.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		755.58	8.96	103.3	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:23
Sample Name MP40548-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.144	ug/l	0.60	900,204.83	6.992E+00	Pulse	0.50	3
As			1	211.345	ug/l	0.21	89,968.04	6.988E-01	Pulse	1.00	3
Mo			1	207.657	ug/l	0.61	501,516.03	2.578E+00	Pulse	0.50	3
Pb			1	207.546	ug/l	1.32	2,561,353.83	8.136E-01	Pulse	1.00	3
Be			1	218.506	ug/l	2.19	4,726.88	2.631E-02	Pulse	2.00	3
Ag			1	101.776	ug/l	0.52	873,690.73	4.491E+00	Pulse	0.50	3
Ba			1	203.002	ug/l	0.87	163,382.26	1.428E-01	Pulse	0.50	3
Tl			1	199.524	ug/l	1.36	3,640,743.25	1.156E+00	Pulse	0.50	3
Sn			1	201.646	ug/l	0.16	410,218.28	3.587E-01	Pulse	0.30	3
Sr			1	201.270	ug/l	0.47	383,965.35	3.357E-01	Pulse	0.50	3
[Pb]			1	197.955	ug/l	1.37	1,154,011.92	3.666E-01	Pulse	0.50	3
Ca			1	19972.123	ug/l	0.55	201,765.24	1.123E+00	Pulse	0.50	3
Ti			1	19.845	ug/l	1.50	16,692.47	9.289E-02	Pulse	0.50	3
Na			1	20764.352	ug/l	1.24	11,401,517.33	6.345E+01	Analog	1.00	3
Mg			1	20175.125	ug/l	1.42	5,033,502.67	2.801E+01	Pulse	1.00	3
K			1	20261.907	ug/l	0.82	3,857,130.33	2.146E+01	Pulse	1.00	3
V			1	205.069	ug/l	1.12	647,948.84	3.606E+00	Pulse	0.50	3
Mn			1	204.797	ug/l	0.72	391,257.13	3.039E+00	Pulse	0.50	3
Fe			1	20963.546	ug/l	0.18	68,743,946.67	5.340E+02	Analog	0.50	3
Co			1	213.249	ug/l	0.52	1,534,596.75	1.192E+01	Pulse	0.50	3
Ni			1	211.417	ug/l	0.91	422,304.48	3.280E+00	Pulse	0.50	3
Cu			1	214.398	ug/l	0.25	1,177,441.21	9.146E+00	Pulse	0.50	3
Zn			1	198.923	ug/l	0.93	154,528.93	7.943E-01	Pulse	1.00	3
Cd			1	198.720	ug/l	0.88	223,211.49	1.147E+00	Pulse	0.50	3
Al			1	19085.619	ug/l	1.07	1,447,123.96	8.053E+00	Pulse	1.00	3
Se			1	188.374	ug/l	0.99	5,168.14	2.657E-02	Pulse	3.00	3
Sb			1	198.201	ug/l	1.02	519,629.27	2.671E+00	Pulse	1.00	3
Se			1	188.794	ug/l	3.38	2,569.40	1.321E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,148,098.75	0.48	87.6	Pulse	0.50	3
1	Sc		179,719.40	1.27	92.1	Pulse	0.30	3
1	Ge		128,744.61	0.21	89.6	Pulse	0.30	3
1	In		1,143,774.54	0.58	87.4	Pulse	0.30	3
1	Tb		4,233,457.67	1.30	91.8	Pulse	0.50	3
1	Lu		2,603,767.25	0.91	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		194,539.68	0.46	90.6	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		714.46	6.73	97.7	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:26
Sample Name TD80541-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.644	ug/l	2.94	3,338.97	2.658E-02	Pulse	0.50	3
As			1	1.368	ug/l	1.79	591.34	4.707E-03	Pulse	1.00	3
Mo			1	1.111	ug/l	4.66	2,639.53	1.400E-02	Pulse	0.50	3
Pb			1	0.131	ug/l	2.87	1,938.45	6.525E-04	Pulse	1.00	3
Be			1	0.126	ug/l	17.49	3.00	1.688E-05	Pulse	2.00	3
Ag			1	0.030	ug/l	3.54	267.33	1.418E-03	Pulse	0.50	3
Ba			1	140.461	ug/l	0.27	109,627.17	9.884E-02	Pulse	0.50	3
Tl			1	0.062	ug/l	7.51	1,131.38	3.811E-04	Pulse	0.50	3
Sn			1	1.331	ug/l	4.49	2,828.02	2.551E-03	Pulse	0.30	3
Sr			1	541.686	ug/l	0.49	1,001,452.00	9.029E-01	Pulse	0.50	3
[Pb]			1	0.127	ug/l	3.57	878.03	2.956E-04	Pulse	0.50	3
Ca			1	103713.334	ug/l	1.13	1,034,650.63	5.829E+00	Pulse	0.50	3
Ti			1	0.035	ug/l	48.28	30.67	1.720E-04	Pulse	0.50	3
Na			1	173755.813	ug/l	0.98	94,191,384.00	5.306E+02	Analog	1.00	3
Mg			1	35074.451	ug/l	0.65	8,643,642.67	4.870E+01	Analog	1.00	3
K			1	1169.845	ug/l	1.06	241,653.56	1.361E+00	Pulse	1.00	3
V			1	1.753	ug/l	3.10	5,772.87	3.252E-02	Pulse	0.50	3
Mn			1	118.303	ug/l	1.74	220,677.69	1.756E+00	Pulse	0.50	3
Fe			1	12.404	ug/l	6.68	43,877.59	3.488E-01	Pulse	0.50	3
Co			1	0.616	ug/l	1.77	4,371.84	3.480E-02	Pulse	0.50	3
Ni			1	2.881	ug/l	2.81	5,829.57	4.641E-02	Pulse	0.50	3
Cu			1	-0.209	ug/l	-28.73	5,546.14	4.418E-02	Pulse	0.50	3
Zn			1	8.362	ug/l	1.01	7,075.30	3.755E-02	Pulse	1.00	3
Cd			1	0.016	ug/l	37.23	21.33	1.135E-04	Pulse	0.50	3
Al			1	17.615	ug/l	3.03	1,469.06	8.278E-03	Pulse	1.00	3
Se			1	1.946	ug/l	10.73	55.44	2.944E-04	Pulse	3.00	3
Sb			1	0.393	ug/l	1.44	1,059.70	5.625E-03	Pulse	1.00	3
Se			1	3.195	ug/l	17.23	52.00	2.755E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,971,383.42	1.83	82.7	Pulse	0.50	3
1	Sc		177,502.86	1.47	90.9	Pulse	0.30	3
1	Ge		125,670.46	3.02	87.4	Pulse	0.30	3
1	In		1,109,124.85	1.75	84.8	Pulse	0.30	3
1	Tb		4,099,767.83	2.18	88.9	Pulse	0.50	3
1	Lu		2,530,128.75	1.97	86.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		188,433.88	1.93	87.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		790.02	11.61	108.1	Pulse	0.30	3

Quantitation Report

File Name 023SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:30
Sample Name MP40548-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.634	ug/l	4.51	3,345.63	2.624E-02	Pulse	0.50	3
As			1	1.427	ug/l	8.05	624.68	4.900E-03	Pulse	1.00	3
Mo			1	0.988	ug/l	3.26	2,398.16	1.248E-02	Pulse	0.50	3
Pb			1	0.076	ug/l	6.95	1,307.39	4.354E-04	Pulse	1.00	3
Be			1	0.070	ug/l	49.53	1.83	1.011E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	26.20	194.00	1.008E-03	Pulse	0.50	3
Ba			1	139.515	ug/l	0.89	110,131.66	9.818E-02	Pulse	0.50	3
Tl			1	0.016	ug/l	14.53	347.34	1.157E-04	Pulse	0.50	3
Sn			1	1.236	ug/l	2.53	2,671.32	2.381E-03	Pulse	0.30	3
Sr			1	541.935	ug/l	0.16	1,013,292.98	9.034E-01	Pulse	0.50	3
[Pb]			1	0.076	ug/l	9.59	606.01	2.019E-04	Pulse	0.50	3
Ca			1	103019.687	ug/l	0.52	1,049,581.96	5.790E+00	Pulse	0.50	3
Ti			1	0.049	ug/l	35.38	42.67	2.356E-04	Pulse	0.50	3
Na			1	173166.884	ug/l	0.16	95,870,184.00	5.288E+02	Analog	1.00	3
Mg			1	34712.307	ug/l	0.36	8,736,221.33	4.819E+01	Analog	1.00	3
K			1	1163.055	ug/l	0.67	245,482.87	1.354E+00	Pulse	1.00	3
V			1	1.817	ug/l	3.57	6,101.64	3.364E-02	Pulse	0.50	3
Mn			1	115.824	ug/l	1.15	219,286.40	1.720E+00	Pulse	0.50	3
Fe			1	6.100	ug/l	3.98	24,012.86	1.883E-01	Pulse	0.50	3
Co			1	0.578	ug/l	3.99	4,171.14	3.271E-02	Pulse	0.50	3
Ni			1	2.747	ug/l	4.24	5,654.18	4.433E-02	Pulse	0.50	3
Cu			1	-0.308	ug/l	-12.94	5,095.36	3.995E-02	Pulse	0.50	3
Zn			1	7.972	ug/l	0.72	6,917.58	3.600E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	85.79	6.00	3.132E-05	Pulse	0.50	3
Al			1	14.598	ug/l	1.60	1,270.04	7.005E-03	Pulse	1.00	3
Se			1	1.706	ug/l	14.13	50.11	2.606E-04	Pulse	3.00	3
Sb			1	0.362	ug/l	6.20	1,002.36	5.214E-03	Pulse	1.00	3
Se			1	2.878	ug/l	22.39	48.78	2.534E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,002,456.83	1.03	83.5	Pulse	0.50	3
1	Sc		181,283.93	1.79	92.9	Pulse	0.30	3
1	Ge		127,518.76	1.02	88.7	Pulse	0.30	3
1	In		1,121,690.40	1.31	85.7	Pulse	0.30	3
1	Tb		4,124,832.25	1.61	89.5	Pulse	0.50	3
1	Lu		2,538,113.58	1.48	87.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		192,167.81	1.43	89.5	Pulse	0.30	3
1	Te		4.67	107.85		Pulse	0.50	3
1	Li		714.46	3.53	97.7	Pulse	0.30	3

Quantitation Report

File Name 024SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:34
Sample Name MP40548-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.755	ug/l	5.83	1,428.72	1.034E-02	Pulse	0.50	3
As			1	1.154	ug/l	5.02	130.67	9.458E-04	Pulse	1.00	3
Mo			1	1.017	ug/l	8.21	569.34	2.739E-03	Pulse	0.50	3
Pb			1	0.281	ug/l	3.42	1,186.04	3.582E-04	Pulse	1.00	3
Be			1	0.324	ug/l	83.35	1.83	9.514E-06	Pulse	2.00	3
Ag			1	0.041	ug/l	19.83	98.67	4.746E-04	Pulse	0.50	3
Ba			1	141.571	ug/l	1.19	24,673.45	1.993E-02	Pulse	0.50	3
Tl			1	0.025	ug/l	22.91	170.67	5.154E-05	Pulse	0.50	3
Sn			1	1.178	ug/l	10.04	746.69	6.031E-04	Pulse	0.30	3
Sr			1	549.340	ug/l	0.46	227,032.74	1.834E-01	Pulse	0.50	3
[Pb]			1	0.296	ug/l	4.69	564.01	1.704E-04	Pulse	0.50	3
Ca			1	107071.282	ug/l	1.02	232,110.97	1.204E+00	Pulse	0.50	3
Ti			1	0.056	ug/l	31.35	11.33	5.886E-05	Pulse	0.50	3
Na			1	180921.382	ug/l	0.70	21,314,139.33	1.105E+02	Analog	1.00	3
Mg			1	36339.875	ug/l	1.42	1,945,907.21	1.009E+01	Pulse	1.00	3
K			1	1300.657	ug/l	1.51	77,812.47	4.035E-01	Pulse	1.00	3
V			1	2.296	ug/l	3.88	1,885.43	9.776E-03	Pulse	0.50	3
Mn			1	121.583	ug/l	0.80	50,108.24	3.628E-01	Pulse	0.50	3
Fe			1	10.610	ug/l	2.36	12,011.73	8.697E-02	Pulse	0.50	3
Co			1	0.606	ug/l	4.11	988.70	7.160E-03	Pulse	0.50	3
Ni			1	3.147	ug/l	5.93	1,587.40	1.150E-02	Pulse	0.50	3
Cu			1	0.171	ug/l	55.99	7,525.49	5.448E-02	Pulse	0.50	3
Zn			1	14.245	ug/l	3.02	3,254.28	1.565E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	211.43	8.00	3.839E-05	Pulse	0.50	3
Al			1	24.443	ug/l	10.30	560.68	2.909E-03	Pulse	1.00	3
Se			1	2.185	ug/l	20.98	17.00	8.178E-05	Pulse	3.00	3
Sb			1	0.377	ug/l	16.86	280.67	1.350E-03	Pulse	1.00	3
Se			1	2.457	ug/l	39.77	18.11	8.710E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,310,988.42	0.27	92.1	Pulse	0.50	3
1	Sc		192,835.45	1.02	98.8	Pulse	0.30	3
1	Ge		138,123.64	1.09	96.1	Pulse	0.30	3
1	In		1,237,894.22	0.37	94.6	Pulse	0.30	3
1	Tb		4,371,816.00	0.26	94.8	Pulse	0.50	3
1	Lu		2,696,773.58	0.47	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		207,932.72	0.43	96.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		806.69	8.48	110.3	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:38
Sample Name MP40548-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.463	ug/l	0.44	873,706.39	6.904E+00	Pulse	0.50	3
As			1	213.605	ug/l	0.60	89,383.02	7.063E-01	Pulse	1.00	3
Mo			1	209.576	ug/l	1.10	492,441.99	2.602E+00	Pulse	0.50	3
Pb			1	209.470	ug/l	0.43	2,426,981.17	8.212E-01	Pulse	1.00	3
Be			1	220.505	ug/l	0.20	4,694.21	2.655E-02	Pulse	2.00	3
Ag			1	97.015	ug/l	0.77	810,303.27	4.281E+00	Pulse	0.50	3
Ba			1	331.132	ug/l	1.17	257,341.91	2.330E-01	Pulse	0.50	3
Tl			1	201.949	ug/l	0.38	3,459,397.17	1.171E+00	Pulse	0.50	3
Sn			1	203.269	ug/l	0.40	399,318.69	3.615E-01	Pulse	0.30	3
Sr			1	700.895	ug/l	1.20	1,290,214.92	1.168E+00	Pulse	0.50	3
[Pb]			1	200.631	ug/l	0.24	1,098,013.87	3.715E-01	Pulse	0.50	3
Ca			1	114698.380	ug/l	0.96	1,139,812.00	6.446E+00	Pulse	0.50	3
Ti			1	20.065	ug/l	1.26	16,607.07	9.392E-02	Pulse	0.50	3
Na			1	181013.036	ug/l	1.06	97,745,541.33	5.528E+02	Analog	1.00	3
Mg			1	52045.694	ug/l	1.28	12,776,088.00	7.226E+01	Analog	1.00	3
K			1	20894.854	ug/l	0.81	3,913,059.00	2.213E+01	Pulse	1.00	3
V			1	207.818	ug/l	0.84	646,107.69	3.654E+00	Pulse	0.50	3
Mn			1	306.695	ug/l	0.47	575,825.13	4.550E+00	Pulse	0.50	3
Fe			1	20251.194	ug/l	0.44	65,276,458.67	5.158E+02	Analog	0.50	3
Co			1	207.802	ug/l	0.37	1,469,934.25	1.162E+01	Pulse	0.50	3
Ni			1	204.952	ug/l	0.29	402,426.50	3.180E+00	Pulse	0.50	3
Cu			1	202.301	ug/l	0.96	1,092,501.46	8.633E+00	Pulse	0.50	3
Zn			1	199.578	ug/l	1.00	150,841.38	7.969E-01	Pulse	1.00	3
Cd			1	194.442	ug/l	0.59	212,503.52	1.123E+00	Pulse	0.50	3
Al			1	18721.852	ug/l	1.00	1,396,764.25	7.899E+00	Pulse	1.00	3
Se			1	191.204	ug/l	1.10	5,103.57	2.696E-02	Pulse	3.00	3
Sb			1	199.493	ug/l	0.85	508,866.13	2.689E+00	Pulse	1.00	3
Se			1	191.532	ug/l	1.90	2,535.84	1.340E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,955,439.50	0.88	82.2	Pulse	0.50	3
1	Sc		176,830.08	1.01	90.6	Pulse	0.30	3
1	Ge		126,551.46	0.66	88.1	Pulse	0.30	3
1	In		1,104,535.34	1.37	84.4	Pulse	0.30	3
1	Tb		4,110,305.83	0.95	89.2	Pulse	0.50	3
1	Lu		2,544,312.42	1.17	87.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		189,290.58	1.62	88.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		701.13	1.20	95.9	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 9:41
Sample Name	MP40548-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	225.033	ug/l	1.17	935,290.77	7.417E+00	Pulse	0.50	3
As			1	227.416	ug/l	1.08	94,826.26	7.519E-01	Pulse	1.00	3
Mo			1	226.495	ug/l	0.71	529,806.92	2.812E+00	Pulse	0.50	3
Pb			1	221.217	ug/l	0.21	2,568,712.75	8.672E-01	Pulse	1.00	3
Be			1	235.680	ug/l	1.58	5,013.95	2.837E-02	Pulse	2.00	3
Ag			1	103.795	ug/l	0.28	863,002.56	4.580E+00	Pulse	0.50	3
Ba			1	348.771	ug/l	1.56	270,930.27	2.454E-01	Pulse	0.50	3
Tl			1	214.492	ug/l	0.35	3,682,398.58	1.243E+00	Pulse	0.50	3
Sn			1	215.684	ug/l	1.14	423,507.14	3.836E-01	Pulse	0.30	3
Sr			1	735.573	ug/l	1.44	1,353,474.50	1.226E+00	Pulse	0.50	3
[Pb]			1	212.112	ug/l	0.89	1,163,403.92	3.928E-01	Pulse	0.50	3
Ca			1	120898.117	ug/l	0.44	1,200,600.25	6.795E+00	Pulse	0.50	3
Ti			1	21.455	ug/l	1.25	17,746.06	1.004E-01	Pulse	0.50	3
Na			1	192688.144	ug/l	0.27	103,981,581.33	5.885E+02	Analog	1.00	3
Mg			1	55237.225	ug/l	0.41	13,550,524.00	7.669E+01	Analog	1.00	3
K			1	22368.727	ug/l	0.54	4,184,456.92	2.368E+01	Pulse	1.00	3
V			1	221.918	ug/l	0.63	689,457.96	3.902E+00	Pulse	0.50	3
Mn			1	326.348	ug/l	1.12	610,546.46	4.841E+00	Pulse	0.50	3
Fe			1	21786.089	ug/l	0.68	69,977,882.67	5.549E+02	Analog	0.50	3
Co			1	221.321	ug/l	0.73	1,560,057.63	1.237E+01	Pulse	0.50	3
Ni			1	219.154	ug/l	0.63	428,785.80	3.400E+00	Pulse	0.50	3
Cu			1	216.254	ug/l	0.81	1,163,247.13	9.224E+00	Pulse	0.50	3
Zn			1	212.592	ug/l	0.77	159,897.35	8.486E-01	Pulse	1.00	3
Cd			1	206.028	ug/l	0.91	224,141.81	1.190E+00	Pulse	0.50	3
Al			1	19946.845	ug/l	0.52	1,487,133.21	8.416E+00	Pulse	1.00	3
Se			1	205.310	ug/l	1.65	5,454.89	2.895E-02	Pulse	3.00	3
Sb			1	212.403	ug/l	0.64	539,350.65	2.862E+00	Pulse	1.00	3
Se			1	203.415	ug/l	0.11	2,680.75	1.423E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,961,956.00	0.92	82.4	Pulse	0.50	3
1	Sc		176,701.17	0.72	90.5	Pulse	0.30	3
1	Ge		126,108.69	0.28	87.7	Pulse	0.30	3
1	In		1,104,118.60	1.54	84.4	Pulse	0.30	3
1	Tb		4,086,239.58	0.80	88.6	Pulse	0.50	3
1	Lu		2,533,770.50	1.48	87.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		188,424.58	0.77	87.7	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		730.02	1.65	99.8	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 9:45
Sample Name	MP40548-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	24.072	ug/l	0.05	101,262.95	7.981E-01	Pulse	0.50	3
As			1	25.656	ug/l	0.89	10,783.71	8.499E-02	Pulse	1.00	3
Mo			1	23.856	ug/l	0.21	57,194.02	2.964E-01	Pulse	0.50	3
Pb			1	22.448	ug/l	0.90	263,205.26	8.813E-02	Pulse	1.00	3
Be			1	25.285	ug/l	3.22	555.34	3.046E-03	Pulse	2.00	3
Ag			1	4.341	ug/l	0.83	36,990.73	1.917E-01	Pulse	0.50	3
Ba			1	165.275	ug/l	0.89	130,193.86	1.163E-01	Pulse	0.50	3
Tl			1	21.979	ug/l	0.89	380,550.30	1.274E-01	Pulse	0.50	3
Sn			1	23.361	ug/l	0.41	46,694.71	4.171E-02	Pulse	0.30	3
Sr			1	579.993	ug/l	0.52	1,082,228.75	9.668E-01	Pulse	0.50	3
[Pb]			1	21.446	ug/l	0.57	118,777.27	3.977E-02	Pulse	0.50	3
Ca			1	107099.275	ug/l	0.77	1,097,122.00	6.019E+00	Pulse	0.50	3
Ti			1	2.150	ug/l	4.22	1,835.43	1.007E-02	Pulse	0.50	3
Na			1	181353.371	ug/l	1.20	100,944,909.33	5.538E+02	Analog	1.00	3
Mg			1	38076.045	ug/l	1.11	9,635,025.67	5.286E+01	Analog	1.00	3
K			1	3362.891	ug/l	1.16	668,990.60	3.670E+00	Pulse	1.00	3
V			1	24.822	ug/l	1.68	79,818.77	4.379E-01	Pulse	0.50	3
Mn			1	145.688	ug/l	0.89	274,365.88	2.163E+00	Pulse	0.50	3
Fe			1	2301.544	ug/l	0.58	7,440,949.67	5.865E+01	Analog	0.50	3
Co			1	23.581	ug/l	1.42	167,257.83	1.318E+00	Pulse	0.50	3
Ni			1	25.991	ug/l	0.91	51,352.55	4.048E-01	Pulse	0.50	3
Cu			1	22.692	ug/l	1.18	128,818.66	1.015E+00	Pulse	0.50	3
Zn			1	30.957	ug/l	1.45	24,564.60	1.273E-01	Pulse	1.00	3
Cd			1	21.088	ug/l	0.33	23,502.25	1.218E-01	Pulse	0.50	3
Al			1	2081.805	ug/l	1.52	160,228.13	8.791E-01	Pulse	1.00	3
Se			1	22.842	ug/l	0.74	625.12	3.239E-03	Pulse	3.00	3
Sb			1	20.510	ug/l	0.46	53,403.20	2.767E-01	Pulse	1.00	3
Se			1	23.730	ug/l	1.11	329.34	1.706E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,986,688.00	0.56	83.1	Pulse	0.50	3
1	Sc		182,286.56	1.59	93.4	Pulse	0.30	3
1	Ge		126,872.42	1.09	88.3	Pulse	0.30	3
1	In		1,119,459.71	1.11	85.5	Pulse	0.30	3
1	Tb		4,118,623.08	1.34	89.4	Pulse	0.50	3
1	Lu		2,525,832.25	1.54	86.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		192,995.07	0.51	89.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		716.68	3.97	98.0	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:49
Sample Name FA94728-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.779	ug/l	4.87	3,960.42	3.104E-02	Pulse	0.50	3
As			1	26.349	ug/l	0.98	11,139.92	8.728E-02	Pulse	1.00	3
Mo			1	0.285	ug/l	1.65	722.02	3.746E-03	Pulse	0.50	3
Pb			1	0.211	ug/l	6.35	3,039.61	9.653E-04	Pulse	1.00	3
Be			1	0.040	ug/l	147.93	1.17	6.494E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	17.76	170.00	8.821E-04	Pulse	0.50	3
Ba			1	17.246	ug/l	2.18	13,910.71	1.214E-02	Pulse	0.50	3
Tl			1	0.031	ug/l	21.50	635.35	2.019E-04	Pulse	0.50	3
Sn			1	0.386	ug/l	15.34	996.70	8.701E-04	Pulse	0.30	3
Sr			1	289.385	ug/l	1.23	552,789.98	4.825E-01	Pulse	0.50	3
[Pb]			1	0.209	ug/l	6.43	1,410.06	4.479E-04	Pulse	0.50	3
Ca			1	38633.261	ug/l	1.19	391,945.19	2.171E+00	Pulse	0.50	3
Ti			1	0.042	ug/l	62.50	36.67	2.040E-04	Pulse	0.50	3
Na			1	27249.899	ug/l	1.37	15,026,699.33	8.325E+01	Analog	1.00	3
Mg			1	5539.230	ug/l	1.35	1,388,370.88	7.692E+00	Pulse	1.00	3
K			1	7473.769	ug/l	0.83	1,443,822.67	7.999E+00	Pulse	1.00	3
V			1	0.383	ug/l	10.35	1,522.73	8.437E-03	Pulse	0.50	3
Mn			1	177.387	ug/l	1.20	335,977.40	2.633E+00	Pulse	0.50	3
Fe			1	749.741	ug/l	1.01	2,441,217.92	1.913E+01	Pulse	0.50	3
Co			1	3.800	ug/l	0.63	27,153.66	2.128E-01	Pulse	0.50	3
Ni			1	5.745	ug/l	0.29	11,591.49	9.082E-02	Pulse	0.50	3
Cu			1	32.736	ug/l	0.74	183,960.92	1.441E+00	Pulse	0.50	3
Zn			1	9.430	ug/l	2.60	8,053.69	4.179E-02	Pulse	1.00	3
Cd			1	0.021	ug/l	17.98	26.67	1.384E-04	Pulse	0.50	3
Al			1	5.306	ug/l	12.67	556.68	3.085E-03	Pulse	1.00	3
Se			1	0.049	ug/l	87.84	5.22	2.709E-05	Pulse	3.00	3
Sb			1	0.135	ug/l	6.95	414.68	2.151E-03	Pulse	1.00	3
Se			1	0.086	ug/l	306.89	11.34	5.882E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,149,155.83	0.73	87.6	Pulse	0.50	3
1	Sc		180,520.00	1.46	92.5	Pulse	0.30	3
1	Ge		127,628.32	0.59	88.8	Pulse	0.30	3
1	In		1,145,648.46	0.70	87.5	Pulse	0.30	3
1	Tb		4,160,501.50	1.07	90.3	Pulse	0.50	3
1	Lu		2,543,986.17	1.29	87.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		192,728.96	0.14	89.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		748.91	12.51	102.4	Pulse	0.30	3

Quantitation Report

File Name 029SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:53
Sample Name MP40550-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.791	ug/l	1.64	3,961.75	3.141E-02	Pulse	0.50	3
As			1	27.108	ug/l	0.89	11,323.36	8.979E-02	Pulse	1.00	3
Mo			1	0.270	ug/l	12.74	674.68	3.560E-03	Pulse	0.50	3
Pb			1	0.187	ug/l	2.95	2,714.22	8.693E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1950.98	0.33	1.880E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	23.17	134.67	7.105E-04	Pulse	0.50	3
Ba			1	17.512	ug/l	0.20	13,931.39	1.233E-02	Pulse	0.50	3
Tl			1	0.010	ug/l	2.86	256.00	8.198E-05	Pulse	0.50	3
Sn			1	0.327	ug/l	14.04	865.58	7.659E-04	Pulse	0.30	3
Sr			1	294.111	ug/l	0.83	554,072.89	4.904E-01	Pulse	0.50	3
[Pb]			1	0.196	ug/l	1.40	1,321.39	4.232E-04	Pulse	0.50	3
Ca			1	39619.766	ug/l	0.55	396,703.08	2.227E+00	Pulse	0.50	3
Ti			1	0.038	ug/l	51.99	33.33	1.869E-04	Pulse	0.50	3
Na			1	27967.841	ug/l	0.39	15,221,602.67	8.544E+01	Analog	1.00	3
Mg			1	5693.581	ug/l	0.56	1,408,463.37	7.906E+00	Pulse	1.00	3
K			1	7656.629	ug/l	0.18	1,459,220.96	8.191E+00	Pulse	1.00	3
V			1	0.402	ug/l	2.32	1,564.07	8.780E-03	Pulse	0.50	3
Mn			1	182.339	ug/l	1.28	341,241.73	2.706E+00	Pulse	0.50	3
Fe			1	768.779	ug/l	1.06	2,473,343.58	1.961E+01	Pulse	0.50	3
Co			1	3.800	ug/l	1.68	26,830.57	2.128E-01	Pulse	0.50	3
Ni			1	6.024	ug/l	1.76	12,001.07	9.516E-02	Pulse	0.50	3
Cu			1	33.728	ug/l	1.45	187,070.45	1.483E+00	Pulse	0.50	3
Zn			1	9.864	ug/l	1.66	8,240.77	4.351E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	556.81	4.67	2.481E-05	Pulse	0.50	3
Al			1	3.125	ug/l	1.78	385.67	2.165E-03	Pulse	1.00	3
Se			1	0.036	ug/l	126.28	4.78	2.526E-05	Pulse	3.00	3
Sb			1	0.069	ug/l	13.04	240.33	1.269E-03	Pulse	1.00	3
Se			1	0.109	ug/l	258.18	11.45	6.047E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,122,919.75	1.20	86.9	Pulse	0.50	3
1	Sc		178,144.04	0.42	91.3	Pulse	0.30	3
1	Ge		126,110.91	0.71	87.8	Pulse	0.30	3
1	In		1,129,833.22	0.82	86.3	Pulse	0.30	3
1	Tb		4,121,560.83	0.93	89.4	Pulse	0.50	3
1	Lu		2,522,296.58	0.53	86.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		189,382.37	0.80	88.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		755.57	4.72	103.3	Pulse	0.30	3

Quantitation Report

File Name 030CCVA.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 9:57
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.448	ug/l	0.90	469,737.36	3.394E+00	Pulse	0.50	3
As			1	50.150	ug/l	1.30	45,910.82	3.317E-01	Pulse	1.00	3
Mo			1	50.350	ug/l	1.18	257,948.18	1.250E+00	Pulse	0.50	3
Pb			1	50.024	ug/l	0.09	1,307,237.63	3.923E-01	Pulse	1.00	3
Be			1	54.069	ug/l	2.72	2,495.15	1.302E-02	Pulse	2.00	3
Ag			1	50.904	ug/l	0.88	926,869.25	4.492E+00	Pulse	0.50	3
Ba			1	48.902	ug/l	0.72	84,343.76	6.883E-02	Pulse	0.50	3
Tl			1	50.560	ug/l	0.53	1,953,217.75	5.861E-01	Pulse	0.50	3
Sn			1	49.875	ug/l	0.51	217,540.06	1.775E-01	Pulse	0.30	3
Sr			1	49.363	ug/l	0.59	202,000.05	1.648E-01	Pulse	0.50	3
[Pb]			1	50.133	ug/l	1.16	618,837.63	1.857E-01	Pulse	0.50	3
Ca			1	4983.752	ug/l	0.70	107,420.07	5.605E-01	Pulse	0.50	3
Ti			1	50.167	ug/l	0.25	90,012.59	4.696E-01	Pulse	0.50	3
Na			1	5319.563	ug/l	0.79	6,234,369.33	3.253E+01	Analog	1.00	3
Mg			1	5176.925	ug/l	0.73	2,755,337.33	1.438E+01	Pulse	1.00	3
K			1	5156.766	ug/l	0.31	2,106,159.00	1.099E+01	Pulse	1.00	3
V			1	50.098	ug/l	0.26	337,829.14	1.763E+00	Pulse	0.50	3
Mn			1	50.233	ug/l	1.20	206,480.33	1.492E+00	Pulse	0.50	3
Fe			1	5224.355	ug/l	0.51	36,834,541.33	2.662E+02	Analog	0.50	3
Co			1	51.496	ug/l	0.81	796,754.58	5.757E+00	Pulse	0.50	3
Ni			1	52.147	ug/l	0.87	224,065.93	1.619E+00	Pulse	0.50	3
Cu			1	52.694	ug/l	0.69	625,899.44	4.523E+00	Pulse	0.50	3
Zn			1	51.236	ug/l	1.48	84,856.75	4.113E-01	Pulse	1.00	3
Cd			1	50.465	ug/l	1.53	120,235.93	5.828E-01	Pulse	0.50	3
Al			1	4951.679	ug/l	0.35	800,965.21	4.179E+00	Pulse	1.00	3
Se			1	49.067	ug/l	1.25	2,857.33	1.385E-02	Pulse	3.00	3
Sb			1	48.803	ug/l	0.82	271,424.80	1.316E+00	Pulse	1.00	3
Se			1	47.989	ug/l	4.33	1,390.72	6.741E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,332,338.17	0.62	92.7	Pulse	0.50	3
1	Sc		191,667.32	0.62	98.2	Pulse	0.30	3
1	Ge		138,397.07	0.37	96.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,225,480.89	0.96	93.6	Pulse	0.30	3
1	Tb		4,354,368.17	0.78	94.5	Pulse	0.50	3
1	Lu		2,696,786.67	0.59	92.6	Pulse	0.50	3
1	Ge		206,317.94	0.17	96.1	Pulse	0.30	3
1	Te		4.67	49.49		Pulse	0.50	3
1	Li		834.46	12.25	114.1	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:00
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.954	ug/l	1.55	913,835.27	6.655E+00	Pulse	0.50	3
As			1	99.046	ug/l	1.42	89,945.28	6.550E-01	Pulse	1.00	3
Mo			1	97.763	ug/l	0.49	503,136.58	2.427E+00	Pulse	0.50	3
Pb			1	98.527	ug/l	0.82	2,531,371.83	7.725E-01	Pulse	1.00	3
Be			1	105.063	ug/l	2.90	4,843.42	2.530E-02	Pulse	2.00	3
Ag			1	96.919	ug/l	0.47	1,772,822.12	8.553E+00	Pulse	0.50	3
Ba			1	97.159	ug/l	1.09	166,302.69	1.367E-01	Pulse	0.50	3
Tl			1	98.657	ug/l	0.05	3,747,580.42	1.144E+00	Pulse	0.50	3
Sn			1	99.495	ug/l	1.07	430,454.00	3.539E-01	Pulse	0.30	3
Sr			1	99.837	ug/l	0.67	405,040.08	3.330E-01	Pulse	0.50	3
[Pb]			1	98.330	ug/l	0.64	1,193,333.58	3.642E-01	Pulse	0.50	3
Ca			1	9826.191	ug/l	0.31	211,508.30	1.105E+00	Pulse	0.50	3
Ti			1	99.304	ug/l	1.02	177,978.55	9.296E-01	Pulse	0.50	3
Na			1	10381.025	ug/l	0.10	12,146,085.33	6.344E+01	Analog	1.00	3
Mg			1	10221.984	ug/l	0.13	5,434,314.17	2.838E+01	Analog	1.00	3
K			1	10087.474	ug/l	0.53	4,091,704.33	2.137E+01	Pulse	1.00	3
V			1	99.065	ug/l	0.72	666,969.65	3.484E+00	Pulse	0.50	3
Mn			1	98.998	ug/l	1.64	403,453.69	2.938E+00	Pulse	0.50	3
Fe			1	10201.733	ug/l	1.12	71,362,685.33	5.197E+02	Analog	0.50	3
Co			1	100.113	ug/l	1.38	1,536,798.46	1.119E+01	Pulse	0.50	3
Ni			1	100.422	ug/l	0.96	427,908.75	3.116E+00	Pulse	0.50	3
Cu			1	100.843	ug/l	1.10	1,181,808.04	8.606E+00	Pulse	0.50	3
Zn			1	98.208	ug/l	0.31	162,577.68	7.844E-01	Pulse	1.00	3
Cd			1	96.702	ug/l	0.73	231,459.42	1.117E+00	Pulse	0.50	3
Al			1	9723.712	ug/l	1.17	1,570,973.54	8.205E+00	Pulse	1.00	3
Se			1	96.786	ug/l	1.66	5,657.73	2.730E-02	Pulse	3.00	3
Sb			1	94.829	ug/l	0.71	529,779.16	2.556E+00	Pulse	1.00	3
Se			1	96.505	ug/l	0.72	2,798.65	1.350E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,276,777.17	0.48	91.2	Pulse	0.50	3
1	Sc		191,456.63	0.43	98.1	Pulse	0.30	3
1	Ge		137,322.63	0.72	95.6	Pulse	0.30	3
1	In		1,216,161.41	0.56	92.9	Pulse	0.30	3
1	Tb		4,349,197.50	0.54	94.4	Pulse	0.50	3
1	Lu		2,714,128.08	0.13	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		207,266.98	0.81	96.5	Pulse	0.30	3
1	Te		8.00	25.00		Pulse	0.50	3
1	Li		807.80	7.27	110.5	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:04
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.016	ug/l	68.97	881.36	6.417E-03	Pulse	0.50	3
As			1	0.007	ug/l	88.03	31.67	2.307E-04	Pulse	1.00	3
Mo			1	0.111	ug/l	25.42	614.68	2.961E-03	Pulse	0.50	3
Pb			1	0.030	ug/l	25.10	1,253.72	3.728E-04	Pulse	1.00	3
Be			1	0.011	ug/l	205.09	0.83	4.371E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	26.24	352.67	1.704E-03	Pulse	0.50	3
Ba			1	0.007	ug/l	61.08	21.33	1.736E-05	Pulse	0.50	3
Tl			1	0.017	ug/l	28.99	750.69	2.233E-04	Pulse	0.50	3
Sn			1	0.083	ug/l	18.56	588.90	4.797E-04	Pulse	0.30	3
Sr			1	0.030	ug/l	61.97	526.68	4.295E-04	Pulse	0.50	3
[Pb]			1	0.035	ug/l	16.66	638.01	1.897E-04	Pulse	0.50	3
Ca			1	4.114	ug/l	24.32	145.33	7.630E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	25.80	32.00	1.679E-04	Pulse	0.50	3
Na			1	6.531	ug/l	9.18	15,025.30	7.886E-02	Pulse	1.00	3
Mg			1	1.782	ug/l	18.20	1,289.71	6.768E-03	Pulse	1.00	3
K			1	4.804	ug/l	13.09	26,629.21	1.398E-01	Pulse	1.00	3
V			1	0.009	ug/l	30.26	388.68	2.040E-03	Pulse	0.50	3
Mn			1	-0.019	ug/l	-57.34	226.67	1.650E-03	Pulse	0.50	3
Fe			1	1.858	ug/l	18.64	17,523.35	1.276E-01	Pulse	0.50	3
Co			1	0.013	ug/l	32.89	258.00	1.880E-03	Pulse	0.50	3
Ni			1	-0.001	ug/l	-848.77	234.67	1.710E-03	Pulse	0.50	3
Cu			1	0.033	ug/l	66.96	7,666.88	5.582E-02	Pulse	0.50	3
Zn			1	0.199	ug/l	5.91	1,226.71	5.920E-03	Pulse	1.00	3
Cd			1	0.010	ug/l	22.60	27.33	1.321E-04	Pulse	0.50	3
Al			1	1.412	ug/l	28.36	388.34	2.038E-03	Pulse	1.00	3
Se			1	0.054	ug/l	68.19	7.33	3.533E-05	Pulse	3.00	3
Sb			1	0.020	ug/l	15.18	178.33	8.610E-04	Pulse	1.00	3
Se			1	-0.045	ug/l	-139.33	9.67	4.661E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,365,171.25	0.68	93.6	Pulse	0.50	3
1	Sc		190,522.85	0.33	97.6	Pulse	0.30	3

Quantitation Report

1	Ge		137,375.23	1.19	95.6	Pulse	0.30	3
1	In		1,227,052.31	0.72	93.8	Pulse	0.30	3
1	Tb		4,321,338.33	0.59	93.7	Pulse	0.50	3
1	Lu		2,679,101.75	0.23	92.0	Pulse	0.50	3
1	Ge		207,244.80	1.07	96.5	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		765.57	12.32	104.7	Pulse	0.30	3

Quantitation Report

File Name 033SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:08
Sample Name MP40550-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.991	ug/l	5.50	1,606.74	1.189E-02	Pulse	0.50	3
As			1	26.867	ug/l	3.59	2,424.82	1.795E-02	Pulse	1.00	3
Mo			1	0.541	ug/l	10.91	312.67	1.558E-03	Pulse	0.50	3
Pb			1	0.314	ug/l	9.11	1,273.72	3.840E-04	Pulse	1.00	3
Be			1	0.151	ug/l	74.70	1.00	5.338E-06	Pulse	2.00	3
Ag			1	0.084	ug/l	29.99	170.67	8.498E-04	Pulse	0.50	3
Ba			1	18.033	ug/l	2.70	3,090.94	2.546E-03	Pulse	0.50	3
Tl			1	0.069	ug/l	13.44	340.00	1.025E-04	Pulse	0.50	3
Sn			1	0.504	ug/l	35.56	441.12	3.633E-04	Pulse	0.30	3
Sr			1	297.138	ug/l	0.43	120,628.51	9.935E-02	Pulse	0.50	3
[Pb]			1	0.299	ug/l	3.79	568.68	1.714E-04	Pulse	0.50	3
Ca			1	40876.993	ug/l	0.18	86,308.98	4.597E-01	Pulse	0.50	3
Ti			1	0.053	ug/l	67.64	10.67	5.669E-05	Pulse	0.50	3
Na			1	28040.030	ug/l	1.10	3,222,043.00	1.716E+01	Pulse	1.00	3
Mg			1	5840.235	ug/l	0.90	304,749.59	1.623E+00	Pulse	1.00	3
K			1	7956.154	ug/l	0.38	338,856.90	1.805E+00	Pulse	1.00	3
V			1	0.273	ug/l	16.08	500.68	2.666E-03	Pulse	0.50	3
Mn			1	182.937	ug/l	1.18	73,602.46	5.447E-01	Pulse	0.50	3
Fe			1	769.760	ug/l	0.81	534,252.73	3.954E+00	Pulse	0.50	3
Co			1	3.877	ug/l	1.50	5,907.58	4.372E-02	Pulse	0.50	3
Ni			1	5.918	ug/l	8.71	2,713.53	2.009E-02	Pulse	0.50	3
Cu			1	34.247	ug/l	0.79	46,414.22	3.435E-01	Pulse	0.50	3
Zn			1	9.097	ug/l	8.56	2,320.48	1.156E-02	Pulse	1.00	3
Cd			1	0.050	ug/l	52.05	15.33	7.631E-05	Pulse	0.50	3
Al			1	6.060	ug/l	17.35	255.00	1.358E-03	Pulse	1.00	3
Se			1	0.635	ug/l	63.20	7.67	3.812E-05	Pulse	3.00	3
Sb			1	0.123	ug/l	33.89	133.67	6.663E-04	Pulse	1.00	3
Se			1	0.260	ug/l	174.58	11.33	5.648E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,317,670.08	0.73	92.3	Pulse	0.50	3
1	Sc		187,730.70	0.92	96.2	Pulse	0.30	3
1	Ge		135,121.51	0.74	94.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,214,149.46	0.41	92.8	Pulse	0.30	3
1	Tb		4,269,494.00	0.91	92.6	Pulse	0.50	3
1	Lu		2,644,421.17	0.80	90.8	Pulse	0.50	3
1	Ge		200,764.93	0.94	93.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		735.57	10.75	100.6	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:12
Sample Name	MP40550-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.803	ug/l	0.91	870,680.92	7.014E+00	Pulse	0.50	3
As			1	234.485	ug/l	0.53	96,246.68	7.753E-01	Pulse	1.00	3
Mo			1	210.603	ug/l	0.20	485,438.29	2.615E+00	Pulse	0.50	3
Pb			1	212.778	ug/l	0.34	2,486,976.17	8.341E-01	Pulse	1.00	3
Be			1	233.287	ug/l	2.53	4,861.75	2.809E-02	Pulse	2.00	3
Ag			1	100.755	ug/l	0.47	825,488.46	4.446E+00	Pulse	0.50	3
Ba			1	221.574	ug/l	0.57	168,203.62	1.559E-01	Pulse	0.50	3
Tl			1	202.567	ug/l	0.18	3,500,752.42	1.174E+00	Pulse	0.50	3
Sn			1	203.233	ug/l	0.73	389,965.54	3.615E-01	Pulse	0.30	3
Sr			1	477.859	ug/l	0.33	859,368.62	7.966E-01	Pulse	0.50	3
[Pb]			1	203.360	ug/l	0.47	1,122,768.29	3.766E-01	Pulse	0.50	3
Ca			1	56383.933	ug/l	1.37	548,590.50	3.169E+00	Pulse	0.50	3
Ti			1	20.289	ug/l	2.98	16,438.92	9.497E-02	Pulse	0.50	3
Na			1	46423.631	ug/l	1.37	24,547,818.67	1.418E+02	Analog	1.00	3
Mg			1	25736.638	ug/l	1.18	6,185,713.67	3.573E+01	Analog	1.00	3
K			1	26929.077	ug/l	1.73	4,930,590.00	2.848E+01	Pulse	1.00	3
V			1	206.929	ug/l	1.45	629,835.94	3.638E+00	Pulse	0.50	3
Mn			1	368.491	ug/l	1.18	678,580.17	5.466E+00	Pulse	0.50	3
Fe			1	21436.851	ug/l	0.64	67,782,048.00	5.460E+02	Analog	0.50	3
Co			1	214.554	ug/l	0.39	1,488,775.62	1.199E+01	Pulse	0.50	3
Ni			1	213.993	ug/l	0.52	412,157.37	3.320E+00	Pulse	0.50	3
Cu			1	237.914	ug/l	0.10	1,259,169.42	1.014E+01	Pulse	0.50	3
Zn			1	207.723	ug/l	0.27	153,971.44	8.293E-01	Pulse	1.00	3
Cd			1	197.484	ug/l	0.41	211,705.71	1.140E+00	Pulse	0.50	3
Al			1	18825.299	ug/l	1.86	1,374,961.58	7.943E+00	Pulse	1.00	3
Se			1	189.920	ug/l	0.95	4,972.65	2.678E-02	Pulse	3.00	3
Sb			1	199.685	ug/l	0.26	499,649.41	2.691E+00	Pulse	1.00	3
Se			1	190.001	ug/l	2.10	2,468.05	1.329E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,981,537.08	1.22	82.9	Pulse	0.50	3
1	Sc		173,130.96	1.28	88.7	Pulse	0.30	3
1	Ge		124,143.55	0.84	86.4	Pulse	0.30	3
1	In		1,078,834.02	0.93	82.4	Pulse	0.30	3
1	Tb		4,052,079.83	1.70	87.9	Pulse	0.50	3
1	Lu		2,472,413.08	1.63	84.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,666.07	0.66	86.5	Pulse	0.30	3
1	Te		3.33	34.64		Pulse	0.50	3
1	Li		744.46	9.67	101.8	Pulse	0.30	3

Quantitation Report

File Name 035SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:15
Sample Name MP40550-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	203.805	ug/l	1.17	830,042.89	6.718E+00	Pulse	0.50	3
As			1	230.604	ug/l	0.92	94,211.97	7.625E-01	Pulse	1.00	3
Mo			1	200.795	ug/l	1.29	464,750.82	2.493E+00	Pulse	0.50	3
Pb			1	201.490	ug/l	0.63	2,350,208.50	7.899E-01	Pulse	1.00	3
Be			1	222.571	ug/l	0.57	4,673.21	2.680E-02	Pulse	2.00	3
Ag			1	104.914	ug/l	0.67	863,128.04	4.630E+00	Pulse	0.50	3
Ba			1	209.295	ug/l	0.41	161,069.56	1.473E-01	Pulse	0.50	3
Tl			1	193.890	ug/l	0.98	3,343,739.58	1.124E+00	Pulse	0.50	3
Sn			1	193.149	ug/l	0.55	375,726.29	3.435E-01	Pulse	0.30	3
Sr			1	481.092	ug/l	0.97	877,025.63	8.020E-01	Pulse	0.50	3
[Pb]			1	192.913	ug/l	0.98	1,062,883.79	3.572E-01	Pulse	0.50	3
Ca			1	59209.435	ug/l	0.55	580,324.60	3.328E+00	Pulse	0.50	3
Ti			1	19.216	ug/l	1.40	15,688.31	8.995E-02	Pulse	0.50	3
Na			1	49037.512	ug/l	0.47	26,121,182.00	1.498E+02	Analog	1.00	3
Mg			1	26907.970	ug/l	0.57	6,514,700.00	3.736E+01	Analog	1.00	3
K			1	28116.070	ug/l	0.71	5,184,928.17	2.973E+01	Pulse	1.00	3
V			1	196.461	ug/l	0.88	602,394.27	3.454E+00	Pulse	0.50	3
Mn			1	373.870	ug/l	0.50	685,294.02	5.546E+00	Pulse	0.50	3
Fe			1	22541.448	ug/l	0.64	70,943,146.67	5.741E+02	Analog	0.50	3
Co			1	206.657	ug/l	0.85	1,427,273.50	1.155E+01	Pulse	0.50	3
Ni			1	205.760	ug/l	0.93	394,469.01	3.192E+00	Pulse	0.50	3
Cu			1	233.630	ug/l	1.26	1,230,834.38	9.961E+00	Pulse	0.50	3
Zn			1	197.437	ug/l	0.72	146,997.00	7.884E-01	Pulse	1.00	3
Cd			1	189.660	ug/l	1.46	204,166.16	1.095E+00	Pulse	0.50	3
Al			1	19549.410	ug/l	0.71	1,438,393.04	8.248E+00	Pulse	1.00	3
Se			1	179.580	ug/l	1.08	4,721.59	2.533E-02	Pulse	3.00	3
Sb			1	189.510	ug/l	0.44	476,156.91	2.554E+00	Pulse	1.00	3
Se			1	178.748	ug/l	1.90	2,331.92	1.251E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,975,232.50	0.72	82.8	Pulse	0.50	3
1	Sc		174,394.06	1.44	89.3	Pulse	0.30	3
1	Ge		123,561.18	0.42	86.0	Pulse	0.30	3
1	In		1,093,647.04	1.04	83.6	Pulse	0.30	3
1	Tb		4,041,982.83	1.69	87.7	Pulse	0.50	3
1	Lu		2,488,911.67	1.40	85.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,437.69	0.83	86.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		676.68	1.48	92.6	Pulse	0.30	3

Quantitation Report

File Name 036SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:19
Sample Name MP40550-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	29.774	ug/l	0.55	123,024.72	9.860E-01	Pulse	0.50	3
As			1	50.108	ug/l	1.37	20,689.83	1.658E-01	Pulse	1.00	3
Mo			1	23.156	ug/l	1.99	53,713.83	2.877E-01	Pulse	0.50	3
Pb			1	24.020	ug/l	0.71	286,686.44	9.429E-02	Pulse	1.00	3
Be			1	24.996	ug/l	4.70	529.34	3.011E-03	Pulse	2.00	3
Ag			1	4.519	ug/l	0.61	37,254.60	1.995E-01	Pulse	0.50	3
Ba			1	45.108	ug/l	0.78	34,934.90	3.175E-02	Pulse	0.50	3
Tl			1	21.889	ug/l	1.45	385,855.14	1.269E-01	Pulse	0.50	3
Sn			1	22.134	ug/l	1.32	43,504.64	3.953E-02	Pulse	0.30	3
Sr			1	319.425	ug/l	0.44	586,078.23	5.326E-01	Pulse	0.50	3
[Pb]			1	22.998	ug/l	1.74	129,662.85	4.264E-02	Pulse	0.50	3
Ca			1	41850.257	ug/l	0.87	413,534.98	2.352E+00	Pulse	0.50	3
Ti			1	2.381	ug/l	3.54	1,960.10	1.115E-02	Pulse	0.50	3
Na			1	30360.463	ug/l	0.78	16,306,034.00	9.275E+01	Analog	1.00	3
Mg			1	7950.338	ug/l	0.93	1,940,761.38	1.104E+01	Pulse	1.00	3
K			1	9842.374	ug/l	0.41	1,844,648.38	1.049E+01	Pulse	1.00	3
V			1	23.185	ug/l	0.90	71,935.03	4.092E-01	Pulse	0.50	3
Mn			1	205.789	ug/l	1.65	380,997.93	3.054E+00	Pulse	0.50	3
Fe			1	3140.098	ug/l	1.43	9,982,220.33	8.001E+01	Analog	0.50	3
Co			1	27.165	ug/l	2.05	189,474.52	1.519E+00	Pulse	0.50	3
Ni			1	29.513	ug/l	1.01	57,317.02	4.594E-01	Pulse	0.50	3
Cu			1	57.440	ug/l	1.56	310,547.29	2.489E+00	Pulse	0.50	3
Zn			1	34.892	ug/l	0.60	26,683.72	1.429E-01	Pulse	1.00	3
Cd			1	21.904	ug/l	1.17	23,617.07	1.265E-01	Pulse	0.50	3
Al			1	2089.501	ug/l	0.78	155,126.67	8.824E-01	Pulse	1.00	3
Se			1	20.692	ug/l	1.28	548.23	2.936E-03	Pulse	3.00	3
Sb			1	20.658	ug/l	1.32	52,040.93	2.787E-01	Pulse	1.00	3
Se			1	20.740	ug/l	5.67	279.67	1.498E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,040,661.67	1.32	84.6	Pulse	0.50	3
1	Sc		175,803.37	0.19	90.1	Pulse	0.30	3
1	Ge		124,774.37	0.87	86.8	Pulse	0.30	3
1	In		1,100,461.45	1.42	84.1	Pulse	0.30	3
1	Tb		4,061,726.33	1.22	88.1	Pulse	0.50	3
1	Lu		2,475,483.50	1.81	85.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,722.08	0.59	87.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		758.91	6.36	103.8	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:23
Sample Name FA94414-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	8.869	ug/l	0.73	36,987.63	2.975E-01	Pulse	0.50	3
As			1	1.020	ug/l	5.04	442.01	3.555E-03	Pulse	1.00	3
Mo			1	11.506	ug/l	2.35	26,748.37	1.431E-01	Pulse	0.50	3
Pb			1	1.363	ug/l	0.92	16,557.67	5.480E-03	Pulse	1.00	3
Be			1	0.096	ug/l	28.18	2.33	1.327E-05	Pulse	2.00	3
Ag			1	0.024	ug/l	11.10	217.33	1.163E-03	Pulse	0.50	3
Ba			1	69.178	ug/l	0.42	53,423.04	4.868E-02	Pulse	0.50	3
Tl			1	0.041	ug/l	12.14	794.02	2.625E-04	Pulse	0.50	3
Sn			1	0.589	ug/l	5.79	1,351.17	1.231E-03	Pulse	0.30	3
Sr			1	267.789	ug/l	0.33	489,996.43	4.465E-01	Pulse	0.50	3
[Pb]			1	1.366	ug/l	1.10	7,827.81	2.591E-03	Pulse	0.50	3
Ca			1	59535.059	ug/l	0.87	588,017.39	3.346E+00	Pulse	0.50	3
Ti			1	5.818	ug/l	1.69	4,787.95	2.724E-02	Pulse	0.50	3
Na			1	72151.776	ug/l	0.71	38,725,733.33	2.204E+02	Analog	1.00	3
Mg			1	5711.692	ug/l	0.58	1,393,811.29	7.931E+00	Pulse	1.00	3
K			1	4530.916	ug/l	1.10	861,093.77	4.900E+00	Pulse	1.00	3
V			1	6.916	ug/l	1.51	21,660.05	1.233E-01	Pulse	0.50	3
Mn			1	64.765	ug/l	0.78	119,690.59	9.626E-01	Pulse	0.50	3
Fe			1	2146.890	ug/l	0.59	6,802,894.17	5.471E+01	Analog	0.50	3
Co			1	1.399	ug/l	1.27	9,767.82	7.855E-02	Pulse	0.50	3
Ni			1	6.267	ug/l	1.53	12,300.61	9.892E-02	Pulse	0.50	3
Cu			1	6.843	ug/l	0.52	42,676.98	3.432E-01	Pulse	0.50	3
Zn			1	14.299	ug/l	0.84	11,427.39	6.112E-02	Pulse	1.00	3
Cd			1	0.074	ug/l	3.01	83.33	4.458E-04	Pulse	0.50	3
Al			1	1276.501	ug/l	0.46	94,788.89	5.394E-01	Pulse	1.00	3
Se			1	1.131	ug/l	12.84	33.56	1.796E-04	Pulse	3.00	3
Sb			1	0.632	ug/l	3.96	1,656.41	8.858E-03	Pulse	1.00	3
Se			1	1.544	ug/l	4.59	30.00	1.604E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,021,506.67	1.37	84.1	Pulse	0.50	3
1	Sc		175,741.88	1.34	90.0	Pulse	0.30	3
1	Ge		124,342.68	0.91	86.5	Pulse	0.30	3
1	In		1,097,320.20	0.97	83.9	Pulse	0.30	3
1	Tb		4,058,880.33	1.55	88.1	Pulse	0.50	3
1	Lu		2,487,843.17	1.98	85.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,960.38	0.97	87.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		666.68	8.79	91.2	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:27
Sample Name FA94480-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.944	ug/l	2.15	4,583.89	3.647E-02	Pulse	0.50	3
As			1	0.502	ug/l	3.09	231.67	1.844E-03	Pulse	1.00	3
Mo			1	0.459	ug/l	8.48	1,129.37	5.915E-03	Pulse	0.50	3
Pb			1	0.175	ug/l	5.07	2,595.87	8.251E-04	Pulse	1.00	3
Be			1	0.072	ug/l	93.45	1.83	1.036E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	12.85	186.00	9.741E-04	Pulse	0.50	3
Ba			1	12.337	ug/l	4.01	9,690.62	8.689E-03	Pulse	0.50	3
Tl			1	0.015	ug/l	3.86	346.01	1.100E-04	Pulse	0.50	3
Sn			1	0.390	ug/l	8.65	978.92	8.772E-04	Pulse	0.30	3
Sr			1	50.622	ug/l	0.54	94,459.70	8.468E-02	Pulse	0.50	3
[Pb]			1	0.172	ug/l	6.97	1,195.38	3.800E-04	Pulse	0.50	3
Ca			1	23314.080	ug/l	1.79	231,033.62	1.311E+00	Pulse	0.50	3
Ti			1	0.163	ug/l	54.54	136.67	7.720E-04	Pulse	0.50	3
Na			1	4424.012	ug/l	1.76	2,388,501.92	1.355E+01	Pulse	1.00	3
Mg			1	7062.924	ug/l	1.56	1,728,968.29	9.807E+00	Pulse	1.00	3
K			1	382.845	ug/l	3.19	93,910.84	5.327E-01	Pulse	1.00	3
V			1	1.183	ug/l	2.29	3,965.76	2.250E-02	Pulse	0.50	3
Mn			1	1.836	ug/l	5.46	3,701.70	2.944E-02	Pulse	0.50	3
Fe			1	82.180	ug/l	1.30	267,204.90	2.126E+00	Pulse	0.50	3
Co			1	0.077	ug/l	1.01	588.01	4.678E-03	Pulse	0.50	3
Ni			1	0.270	ug/l	11.79	744.68	5.922E-03	Pulse	0.50	3
Cu			1	5.305	ug/l	2.37	34,942.82	2.780E-01	Pulse	0.50	3
Zn			1	17.271	ug/l	3.32	13,925.03	7.293E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	46.23	18.67	9.771E-05	Pulse	0.50	3
Al			1	56.114	ug/l	2.21	4,322.48	2.452E-02	Pulse	1.00	3
Se			1	0.274	ug/l	20.97	11.22	5.876E-05	Pulse	3.00	3
Sb			1	7.957	ug/l	1.86	20,538.13	1.076E-01	Pulse	1.00	3
Se			1	0.177	ug/l	102.21	12.45	6.516E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,146,164.83	0.87	87.5	Pulse	0.50	3
1	Sc		176,328.62	1.86	90.3	Pulse	0.30	3
1	Ge		125,705.88	1.86	87.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,115,438.60	1.14	85.2	Pulse	0.30	3
1	Tb		4,121,063.67	1.42	89.4	Pulse	0.50	3
1	Lu		2,514,859.17	1.54	86.3	Pulse	0.50	3
1	Ge		190,952.55	0.27	88.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		753.35	5.54	103.0	Pulse	0.30	3

Quantitation Report

File Name 039_MB.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:31
Sample Name MP40546-MB1
Sample Type MB
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.242	ug/l	8.99	4,505.20	3.490E-02	Pulse	0.50	3
As			1	0.029	ug/l	109.31	28.67	2.221E-04	Pulse	1.00	3
Mo			1	0.567	ug/l	5.57	588.01	3.030E-03	Pulse	0.50	3
Pb			1	0.150	ug/l	6.52	1,206.38	3.728E-04	Pulse	1.00	3
Be			1	0.308	ug/l	31.75	3.00	1.654E-05	Pulse	2.00	3
Ag			1	0.028	ug/l	18.29	117.33	6.044E-04	Pulse	0.50	3
Ba			1	0.212	ug/l	29.79	78.00	6.780E-05	Pulse	0.50	3
Tl			1	0.089	ug/l	7.60	738.02	2.282E-04	Pulse	0.50	3
Sn			1	24.397	ug/l	2.00	20,152.22	1.753E-02	Pulse	0.30	3
Sr			1	0.539	ug/l	8.16	790.69	6.880E-04	Pulse	0.50	3
[Pb]			1	0.158	ug/l	8.39	575.34	1.778E-04	Pulse	0.50	3
Ca			1	71.119	ug/l	25.35	344.00	1.899E-03	Pulse	0.50	3
Ti			1	0.075	ug/l	24.63	26.67	1.472E-04	Pulse	0.50	3
Na			1	56.681	ug/l	5.34	19,617.59	1.082E-01	Pulse	1.00	3
Mg			1	10.444	ug/l	20.59	1,381.39	7.621E-03	Pulse	1.00	3
K			1	135.533	ug/l	3.28	33,853.53	1.867E-01	Pulse	1.00	3
V			1	0.687	ug/l	3.64	1,184.71	6.534E-03	Pulse	0.50	3
Mn			1	1.140	ug/l	8.28	1,158.04	8.972E-03	Pulse	0.50	3
Fe			1	37.049	ug/l	3.14	52,969.98	4.104E-01	Pulse	0.50	3
Co			1	0.062	ug/l	5.84	226.67	1.756E-03	Pulse	0.50	3
Ni			1	0.335	ug/l	14.94	492.68	3.816E-03	Pulse	0.50	3
Cu			1	0.323	ug/l	18.31	7,552.84	5.851E-02	Pulse	0.50	3
Zn			1	1.643	ug/l	4.21	1,348.38	6.947E-03	Pulse	1.00	3
Cd			1	0.068	ug/l	79.70	34.00	1.753E-04	Pulse	0.50	3
Al			1	8.710	ug/l	12.12	420.01	2.316E-03	Pulse	1.00	3
Se			1	0.241	ug/l	5.98	6.56	3.378E-05	Pulse	3.00	3
Sb			1	0.021	ug/l	11.92	87.33	4.500E-04	Pulse	1.00	3
Se			1	-0.211	ug/l	-154.17	9.11	4.698E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,234,827.67	1.40	90.0	Pulse	0.50	3
1	Sc		181,301.63	0.75	92.9	Pulse	0.30	3
1	Ge		129,072.56	0.42	89.8	Pulse	0.30	3
1	In		1,149,350.65	0.56	87.8	Pulse	0.30	3
1	Tb		4,150,203.58	0.95	90.0	Pulse	0.50	3
1	Lu		2,523,614.25	0.86	86.6	Pulse	0.50	3
1	Ge		194,077.03	0.55	90.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		867.80	11.14	118.7	Pulse	0.30	3

Quantitation Report

File Name	040_BSP.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:34
Sample Name	MP40546-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	530.638	ug/l	1.67	868,702.06	6.996E+00	Pulse	0.50	3
As			1	530.956	ug/l	0.99	87,202.69	7.022E-01	Pulse	1.00	3
Mo			1	515.732	ug/l	0.51	478,710.65	2.561E+00	Pulse	0.50	3
Pb			1	514.007	ug/l	0.39	2,467,156.50	8.060E-01	Pulse	1.00	3
Be			1	574.065	ug/l	0.75	4,864.75	2.764E-02	Pulse	2.00	3
Ag			1	245.832	ug/l	0.47	811,084.21	4.339E+00	Pulse	0.50	3
Ba			1	502.098	ug/l	1.04	155,193.08	1.413E-01	Pulse	0.50	3
Tl			1	496.378	ug/l	0.60	3,522,732.08	1.151E+00	Pulse	0.50	3
Sn			1	523.471	ug/l	0.30	408,938.93	3.724E-01	Pulse	0.30	3
Sr			1	497.436	ug/l	0.26	364,423.82	3.319E-01	Pulse	0.50	3
[Pb]			1	491.323	ug/l	1.05	1,113,980.25	3.639E-01	Pulse	0.50	3
Ca			1	49206.007	ug/l	0.81	194,695.65	1.106E+00	Pulse	0.50	3
Ti			1	49.384	ug/l	1.72	16,271.43	9.247E-02	Pulse	0.50	3
Na			1	52920.390	ug/l	0.68	11,381,832.33	6.468E+01	Analog	1.00	3
Mg			1	50701.092	ug/l	0.26	4,954,818.33	2.816E+01	Pulse	1.00	3
K			1	50072.304	ug/l	0.46	3,733,729.08	2.122E+01	Pulse	1.00	3
V			1	503.743	ug/l	0.17	623,449.81	3.543E+00	Pulse	0.50	3
Mn			1	510.217	ug/l	1.07	376,076.28	3.029E+00	Pulse	0.50	3
Fe			1	52491.248	ug/l	0.94	66,410,832.00	5.348E+02	Analog	0.50	3
Co			1	534.048	ug/l	0.84	1,482,770.79	1.194E+01	Pulse	0.50	3
Ni			1	527.218	ug/l	1.29	406,306.80	3.272E+00	Pulse	0.50	3
Cu			1	534.020	ug/l	1.31	1,131,503.25	9.112E+00	Pulse	0.50	3
Zn			1	509.334	ug/l	0.49	152,049.95	8.135E-01	Pulse	1.00	3
Cd			1	498.011	ug/l	0.53	214,996.01	1.150E+00	Pulse	0.50	3
Al			1	47083.114	ug/l	0.27	1,398,317.25	7.946E+00	Pulse	1.00	3
Se			1	476.035	ug/l	0.78	5,019.22	2.685E-02	Pulse	3.00	3
Sb			1	492.839	ug/l	0.28	496,606.26	2.657E+00	Pulse	1.00	3
Se			1	468.781	ug/l	2.57	2,451.94	1.312E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,060,899.42	0.80	85.1	Pulse	0.50	3
1	Sc		175,971.36	0.42	90.1	Pulse	0.30	3
1	Ge		124,182.57	0.66	86.4	Pulse	0.30	3
1	In		1,098,065.37	0.73	83.9	Pulse	0.30	3
1	Tb		4,085,305.67	1.40	88.6	Pulse	0.50	3
1	Lu		2,518,706.08	1.56	86.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,926.53	1.38	87.0	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		811.13	2.11	110.9	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:38
Sample Name FA94440-1
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	316.905	ug/l	1.36	139,005.74	1.049E+00	Pulse	0.50	3
As			1	79.844	ug/l	5.14	3,521.00	2.658E-02	Pulse	1.00	3
Mo			1	22.619	ug/l	2.63	5,642.20	2.829E-02	Pulse	0.50	3
Pb			1	390.086	ug/l	1.46	501,771.48	1.530E-01	Pulse	1.00	3
Be			1	9.143	ug/l	13.24	21.33	1.118E-04	Pulse	2.00	3
Ag			1	0.914	ug/l	10.92	826.69	4.146E-03	Pulse	0.50	3
Ba			1	938.178	ug/l	1.42	78,438.63	6.602E-02	Pulse	0.50	3
Tl			1	4.702	ug/l	4.75	9,007.73	2.747E-03	Pulse	0.50	3
Sn			1	68.813	ug/l	1.60	14,752.66	1.242E-02	Pulse	0.30	3
Sr			1	67.980	ug/l	1.33	13,848.44	1.166E-02	Pulse	0.50	3
[Pb]			1	390.782	ug/l	1.23	237,424.41	7.241E-02	Pulse	0.50	3
Ca			1	14579.646	ug/l	2.21	15,708.32	8.224E-02	Pulse	0.50	3
Ti			1	280.941	ug/l	2.87	25,116.95	1.315E-01	Pulse	0.50	3
Na			1	473.034	ug/l	3.37	35,039.83	1.834E-01	Pulse	1.00	3
Mg			1	15181.988	ug/l	1.87	402,948.39	2.110E+00	Pulse	1.00	3
K			1	7832.137	ug/l	1.38	182,294.46	9.543E-01	Pulse	1.00	3
V			1	606.884	ug/l	1.86	204,053.15	1.068E+00	Pulse	0.50	3
Mn			1	1224.386	ug/l	0.81	240,871.34	1.818E+00	Pulse	0.50	3
Fe			1	316341.886	ug/l	1.05	106,764,949.33	8.057E+02	Analog	0.50	3
Co			1	80.710	ug/l	2.17	59,825.91	4.515E-01	Pulse	0.50	3
Ni			1	121.403	ug/l	1.36	25,175.04	1.900E-01	Pulse	0.50	3
Cu			1	1059.215	ug/l	1.30	602,249.36	4.545E+00	Pulse	0.50	3
Zn			1	858.013	ug/l	0.52	68,815.40	3.451E-01	Pulse	1.00	3
Cd			1	1.016	ug/l	33.64	120.67	6.056E-04	Pulse	0.50	3
Al			1	313223.331	ug/l	2.06	2,524,251.83	1.322E+01	Pulse	1.00	3
Se			1	48.075	ug/l	8.80	139.11	6.977E-04	Pulse	3.00	3
Sb			1	35.132	ug/l	1.56	9,507.47	4.768E-02	Pulse	1.00	3
Se			1	54.211	ug/l	11.55	85.89	4.306E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,278,757.58	0.26	91.2	Pulse	0.50	3
1	Sc		191,046.66	1.42	97.9	Pulse	0.30	3
1	Ge		132,511.14	0.59	92.2	Pulse	0.30	3
1	In		1,188,067.28	0.13	90.8	Pulse	0.30	3
1	Tb		4,237,069.17	0.76	91.9	Pulse	0.50	3
1	Lu		2,604,869.17	0.44	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		199,412.04	0.37	92.9	Pulse	0.30	3
1	Te		2.00	173.21		Pulse	0.50	3
1	Li		767.80	9.60	105.0	Pulse	0.30	3

Quantitation Report

File Name	042SMPL.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:42
Sample Name	MP40546-D1
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	291.016	ug/l	1.18	130,444.46	9.638E-01	Pulse	0.50	3
As			1	74.819	ug/l	4.49	3,372.64	2.492E-02	Pulse	1.00	3
Mo			1	19.155	ug/l	3.51	4,823.98	2.399E-02	Pulse	0.50	3
Pb			1	362.720	ug/l	0.14	467,573.04	1.423E-01	Pulse	1.00	3
Be			1	7.203	ug/l	9.45	17.17	8.842E-05	Pulse	2.00	3
Ag			1	0.735	ug/l	7.87	674.68	3.356E-03	Pulse	0.50	3
Ba			1	860.916	ug/l	0.66	72,035.03	6.059E-02	Pulse	0.50	3
Tl			1	3.955	ug/l	2.81	7,605.72	2.315E-03	Pulse	0.50	3
Sn			1	64.937	ug/l	2.21	13,943.13	1.173E-02	Pulse	0.30	3
Sr			1	64.789	ug/l	1.42	13,225.99	1.112E-02	Pulse	0.50	3
[Pb]			1	365.983	ug/l	0.54	222,835.67	6.782E-02	Pulse	0.50	3
Ca			1	13132.507	ug/l	1.55	14,390.63	7.410E-02	Pulse	0.50	3
Ti			1	278.007	ug/l	0.34	25,270.30	1.301E-01	Pulse	0.50	3
Na			1	402.494	ug/l	1.78	31,433.88	1.619E-01	Pulse	1.00	3
Mg			1	14281.583	ug/l	0.86	385,378.88	1.985E+00	Pulse	1.00	3
K			1	7559.829	ug/l	0.41	179,743.34	9.256E-01	Pulse	1.00	3
V			1	560.073	ug/l	0.82	191,470.76	9.860E-01	Pulse	0.50	3
Mn			1	1126.179	ug/l	0.81	226,320.27	1.672E+00	Pulse	0.50	3
Fe			1	285586.066	ug/l	1.00	98,449,394.67	7.274E+02	Analog	0.50	3
Co			1	73.134	ug/l	0.71	55,378.01	4.092E-01	Pulse	0.50	3
Ni			1	113.839	ug/l	0.68	24,127.69	1.783E-01	Pulse	0.50	3
Cu			1	156.481	ug/l	1.30	96,995.78	7.167E-01	Pulse	0.50	3
Zn			1	458.239	ug/l	1.42	37,455.22	1.863E-01	Pulse	1.00	3
Cd			1	0.686	ug/l	30.14	83.33	4.146E-04	Pulse	0.50	3
Al			1	292808.565	ug/l	0.67	2,399,041.75	1.235E+01	Pulse	1.00	3
Se			1	45.847	ug/l	10.20	134.00	6.663E-04	Pulse	3.00	3
Sb			1	30.053	ug/l	0.17	8,208.51	4.083E-02	Pulse	1.00	3
Se			1	45.146	ug/l	10.18	73.89	3.674E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,285,556.50	0.90	91.4	Pulse	0.50	3
1	Sc		194,187.59	0.40	99.5	Pulse	0.30	3
1	Ge		135,347.47	0.39	94.2	Pulse	0.30	3
1	In		1,188,948.70	0.54	90.9	Pulse	0.30	3
1	Tb		4,245,336.67	1.02	92.1	Pulse	0.50	3
1	Lu		2,602,572.83	0.55	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		201,028.88	0.67	93.6	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		755.57	11.44	103.3	Pulse	0.30	3

Quantitation Report

File Name 043CCVA.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:46
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	52.312	ug/l	0.56	471,238.87	3.451E+00	Pulse	0.50	3
As			1	50.807	ug/l	0.58	45,889.42	3.361E-01	Pulse	1.00	3
Mo			1	49.867	ug/l	1.52	256,926.69	1.238E+00	Pulse	0.50	3
Pb			1	50.278	ug/l	0.58	1,294,953.21	3.943E-01	Pulse	1.00	3
Be			1	54.325	ug/l	1.29	2,524.16	1.308E-02	Pulse	2.00	3
Ag			1	50.331	ug/l	1.09	921,640.52	4.442E+00	Pulse	0.50	3
Ba			1	49.178	ug/l	1.05	84,582.24	6.922E-02	Pulse	0.50	3
Tl			1	50.160	ug/l	0.71	1,909,816.38	5.815E-01	Pulse	0.50	3
Sn			1	49.989	ug/l	1.95	217,420.44	1.779E-01	Pulse	0.30	3
Sr			1	49.658	ug/l	0.52	202,632.84	1.658E-01	Pulse	0.50	3
[Pb]			1	50.204	ug/l	0.56	610,771.88	1.860E-01	Pulse	0.50	3
Ca			1	4992.367	ug/l	1.34	108,337.77	5.614E-01	Pulse	0.50	3
Ti			1	49.965	ug/l	0.45	90,256.46	4.677E-01	Pulse	0.50	3
Na			1	5346.321	ug/l	0.30	6,308,071.50	3.269E+01	Analog	1.00	3
Mg			1	5166.777	ug/l	0.56	2,768,594.75	1.435E+01	Pulse	1.00	3
K			1	5167.271	ug/l	0.12	2,124,639.25	1.101E+01	Pulse	1.00	3
V			1	50.281	ug/l	0.69	341,353.99	1.769E+00	Pulse	0.50	3
Mn			1	51.261	ug/l	0.30	207,888.71	1.522E+00	Pulse	0.50	3
Fe			1	5320.917	ug/l	0.75	37,014,821.33	2.711E+02	Analog	0.50	3
Co			1	52.181	ug/l	0.63	796,570.02	5.834E+00	Pulse	0.50	3
Ni			1	53.010	ug/l	0.90	224,731.60	1.646E+00	Pulse	0.50	3
Cu			1	52.700	ug/l	0.89	617,617.48	4.523E+00	Pulse	0.50	3
Zn			1	50.930	ug/l	1.52	84,836.97	4.089E-01	Pulse	1.00	3
Cd			1	49.647	ug/l	1.77	118,959.01	5.733E-01	Pulse	0.50	3
Al			1	4971.108	ug/l	0.63	809,532.50	4.195E+00	Pulse	1.00	3
Se			1	49.292	ug/l	0.18	2,886.78	1.391E-02	Pulse	3.00	3
Sb			1	48.116	ug/l	1.14	269,126.18	1.297E+00	Pulse	1.00	3
Se			1	50.240	ug/l	1.33	1,463.72	7.055E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,284,326.17	0.43	91.4	Pulse	0.50	3
1	Sc		192,958.92	0.61	98.8	Pulse	0.30	3
1	Ge		136,545.17	0.73	95.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,221,997.59	0.20	93.4	Pulse	0.30	3
1	Tb		4,326,165.33	0.78	93.9	Pulse	0.50	3
1	Lu		2,678,574.75	0.14	92.0	Pulse	0.50	3
1	Ge		207,492.92	0.42	96.6	Pulse	0.30	3
1	Te		7.33	103.25		Pulse	0.50	3
1	Li		748.91	1.80	102.4	Pulse	0.30	3

Quantitation Report

File Name 044_CCV.d
File Path D:\2022\xa041322m1.b
Method File
Method Path
Acq Time 4/13/2022 10:50
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 4/13/2022 8:39
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.742	ug/l	0.30	913,250.77	6.707E+00	Pulse	0.50	3
As			1	99.441	ug/l	0.83	89,541.38	6.576E-01	Pulse	1.00	3
Mo			1	98.336	ug/l	0.97	502,123.66	2.442E+00	Pulse	0.50	3
Pb			1	98.295	ug/l	0.24	2,488,891.67	7.707E-01	Pulse	1.00	3
Be			1	103.495	ug/l	1.99	4,808.07	2.492E-02	Pulse	2.00	3
Ag			1	97.256	ug/l	1.23	1,765,091.41	8.583E+00	Pulse	0.50	3
Ba			1	97.152	ug/l	0.87	165,242.40	1.367E-01	Pulse	0.50	3
Tl			1	98.680	ug/l	0.71	3,694,236.33	1.144E+00	Pulse	0.50	3
Sn			1	99.698	ug/l	1.32	428,618.76	3.547E-01	Pulse	0.30	3
Sr			1	99.216	ug/l	0.30	399,999.98	3.310E-01	Pulse	0.50	3
[Pb]			1	98.441	ug/l	0.14	1,177,351.29	3.646E-01	Pulse	0.50	3
Ca			1	9813.564	ug/l	0.74	212,878.98	1.103E+00	Pulse	0.50	3
Ti			1	99.310	ug/l	0.97	179,374.61	9.297E-01	Pulse	0.50	3
Na			1	10317.844	ug/l	0.18	12,165,974.00	6.305E+01	Analog	1.00	3
Mg			1	10203.549	ug/l	0.57	5,466,661.33	2.833E+01	Analog	1.00	3
K			1	10032.286	ug/l	0.05	4,101,129.83	2.126E+01	Pulse	1.00	3
V			1	98.444	ug/l	0.70	667,949.73	3.462E+00	Pulse	0.50	3
Mn			1	100.726	ug/l	0.38	407,059.49	2.989E+00	Pulse	0.50	3
Fe			1	10343.626	ug/l	0.25	71,749,077.33	5.269E+02	Analog	0.50	3
Co			1	100.999	ug/l	0.08	1,537,444.95	1.129E+01	Pulse	0.50	3
Ni			1	101.678	ug/l	0.22	429,625.77	3.155E+00	Pulse	0.50	3
Cu			1	101.564	ug/l	0.31	1,180,238.04	8.668E+00	Pulse	0.50	3
Zn			1	98.729	ug/l	1.28	162,159.05	7.885E-01	Pulse	1.00	3
Cd			1	96.418	ug/l	1.05	228,974.74	1.113E+00	Pulse	0.50	3
Al			1	9696.820	ug/l	0.79	1,578,807.33	8.183E+00	Pulse	1.00	3
Se			1	96.821	ug/l	1.81	5,616.27	2.731E-02	Pulse	3.00	3
Sb			1	94.912	ug/l	1.48	526,090.79	2.558E+00	Pulse	1.00	3
Se			1	96.414	ug/l	1.54	2,774.09	1.349E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,229,359.33	0.74	89.8	Pulse	0.50	3
1	Sc		192,943.98	0.12	98.8	Pulse	0.30	3
1	Ge		136,167.79	0.90	94.7	Pulse	0.30	3
1	In		1,208,541.69	0.33	92.4	Pulse	0.30	3
1	Tb		4,313,211.83	0.25	93.6	Pulse	0.50	3
1	Lu		2,670,280.17	0.30	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		205,654.28	0.43	95.8	Pulse	0.30	3
1	Te		5.33	21.65		Pulse	0.50	3
1	Li		811.13	0.63	110.9	Pulse	0.30	3

Quantitation Report

File Name	045_CCB.d
File Path	D:\2022\xa041322m1.b
Method File	
Method Path	
Acq Time	4/13/2022 10:53
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	4/13/2022 8:39
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.021	ug/l	20.12	916.69	6.718E-03	Pulse	0.50	3
As			1	0.015	ug/l	44.02	38.33	2.810E-04	Pulse	1.00	3
Mo			1	0.127	ug/l	18.17	698.68	3.362E-03	Pulse	0.50	3
Pb			1	0.030	ug/l	23.41	1,244.05	3.770E-04	Pulse	1.00	3
Be			1	0.032	ug/l	37.50	1.83	9.508E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	28.98	309.34	1.492E-03	Pulse	0.50	3
Ba			1	0.007	ug/l	72.49	22.00	1.796E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	18.80	649.35	1.967E-04	Pulse	0.50	3
Sn			1	0.077	ug/l	14.91	561.13	4.582E-04	Pulse	0.30	3
Sr			1	0.015	ug/l	38.45	463.34	3.783E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	33.29	612.68	1.857E-04	Pulse	0.50	3
Ca			1	3.523	ug/l	49.23	134.00	6.966E-04	Pulse	0.50	3
Ti			1	0.014	ug/l	48.04	26.00	1.349E-04	Pulse	0.50	3
Na			1	3.733	ug/l	10.67	11,895.20	6.177E-02	Pulse	1.00	3
Mg			1	1.489	ug/l	25.31	1,147.70	5.957E-03	Pulse	1.00	3
K			1	3.648	ug/l	3.23	26,443.64	1.373E-01	Pulse	1.00	3
V			1	0.007	ug/l	65.40	375.34	1.949E-03	Pulse	0.50	3
Mn			1	-0.024	ug/l	-18.95	204.67	1.500E-03	Pulse	0.50	3
Fe			1	2.154	ug/l	17.66	19,463.20	1.426E-01	Pulse	0.50	3
Co			1	0.011	ug/l	37.73	224.67	1.646E-03	Pulse	0.50	3
Ni			1	0.000	ug/l	-2914.69	236.00	1.730E-03	Pulse	0.50	3
Cu			1	0.023	ug/l	70.56	7,503.48	5.500E-02	Pulse	0.50	3
Zn			1	0.203	ug/l	23.06	1,235.38	5.949E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	68.30	30.67	1.481E-04	Pulse	0.50	3
Al			1	1.633	ug/l	34.49	428.67	2.224E-03	Pulse	1.00	3
Se			1	0.060	ug/l	132.74	7.67	3.703E-05	Pulse	3.00	3
Sb			1	0.016	ug/l	8.71	158.67	7.643E-04	Pulse	1.00	3
Se			1	0.024	ug/l	549.48	11.66	5.614E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,302,472.33	0.93	91.9	Pulse	0.50	3
1	Sc		192,548.07	0.72	98.6	Pulse	0.30	3

Quantitation Report

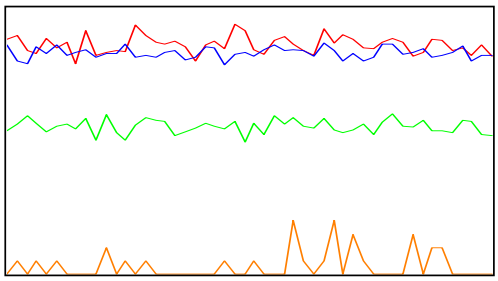
1	Ge		136,443.04	0.22	94.9	Pulse	0.30	3
1	In		1,224,846.27	0.16	93.6	Pulse	0.30	3
1	Tb		4,304,726.17	0.71	93.4	Pulse	0.50	3
1	Lu		2,633,428.00	0.54	90.4	Pulse	0.50	3
1	Ge		207,643.19	0.85	96.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		805.57	7.04	110.2	Pulse	0.30	3

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Tune Report

Batch Folder	D:\2022\xa041322m1.b
Acq. Date-Time	4/13/2022 7:57
Report Comment	0413
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1719	17192.78	5000.00	
89	2000	1107	11066.83	5000.00	
205	5000	4144	41443.33	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

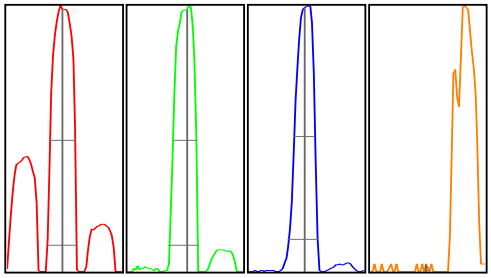
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.87	5.00	
89	4.67	5.00	
205	2.49	5.00	
78	174.96		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.00	2	
89	0.00	2	
205	0.60	2	
78	0.40	5	

Ratio	156/140	0.651 %
Ratio	70/140	2.831 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1762.38	59.00	58.9 - 59.1		0.64	0.751	0.900	
89	1129.88	89.05	88.9 - 89.1		0.59	0.720	0.900	
205	4097.33	205.00	204.9 - 205.1		0.52	0.731	0.900	
78	1.00	78.00	-		0.05	0.090		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.90 L/min	Makeup/Dilution Gas	0.20 L/min
Option Gas	0.0 %		

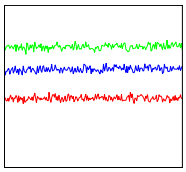
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-30 V
Extract 2	-180.0 V	Cell Exit	-70 V
Omega Bias	-95 V	Deflect	1.6 V
Omega Lens	8.1 V	Plate Bias	-60 V

Cell Parameters

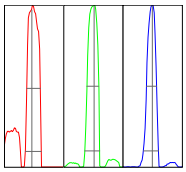
Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance

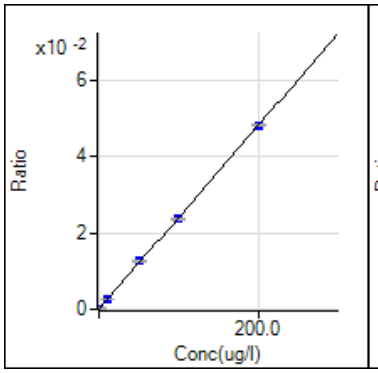


Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2131.86	7442.99	6050.98
RSD%	3.4	2.1	2.6
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.20%	
Doubly Charged	70/140	5.27%	

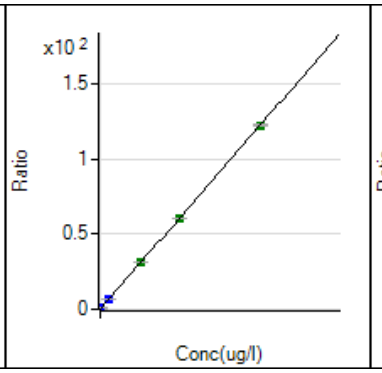
Background			
Mass	7	89	205
Count	0.25	1.75	4.20



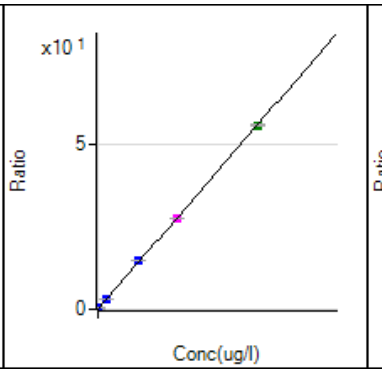
Resolution/Axis			
Mass	7	89	205
Height	2119	7381	6025
Axis	6.90	89.05	205.00
W-50%	0.68	0.59	0.50
W-10%	0.79	0.74	0.75
Integration Time	0.100 sec		
Acquisition Time	00:00:23		



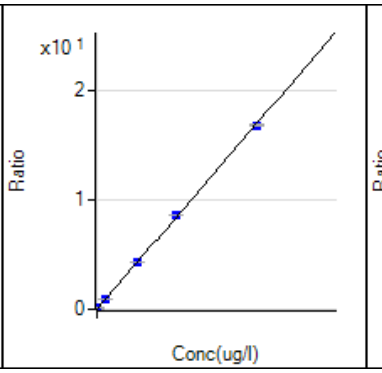
9 Be [2] / ISTD: 45 Sc
y = 2.408E-4 x + 1.713E-6
R 0.9999
DL 0.01849
BEC 0.007116



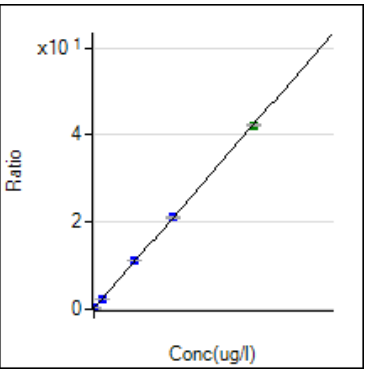
23 Na [2] / ISTD: 45 Sc
y = 6.107E-3 x + 3.897E-2
R 0.9999
DL 0.3562
BEC 6.381



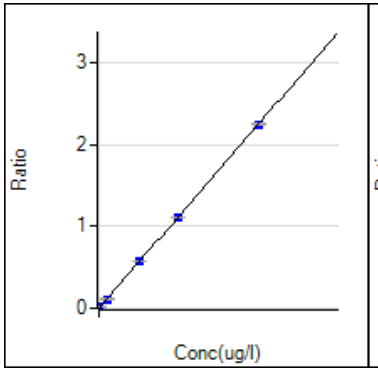
24 Mg [2] / ISTD: 45 Sc
y = 2.777E-3 x + 1.821E-3
R 0.9999
DL 0.2805
BEC 0.6558



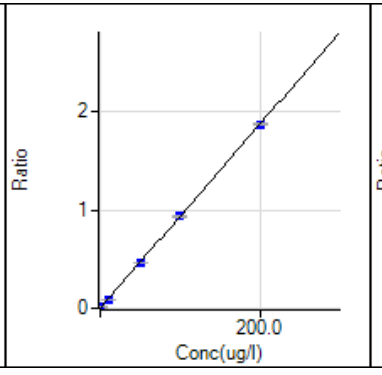
27 Al [2] / ISTD: 45 Sc
y = 8.438E-4 x + 8.466E-4
R 0.9999
DL 0.3264
BEC 1.003



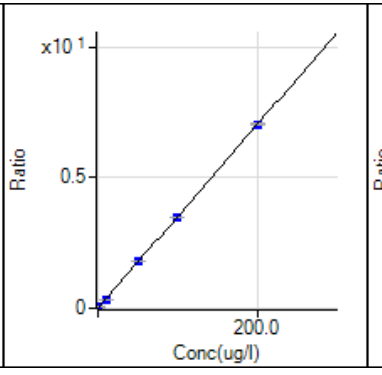
39 K [2] / ISTD: 45 Sc
y = 2.106E-3 x + 1.297E-1
R 0.9999
DL 0.8481
BEC 61.57



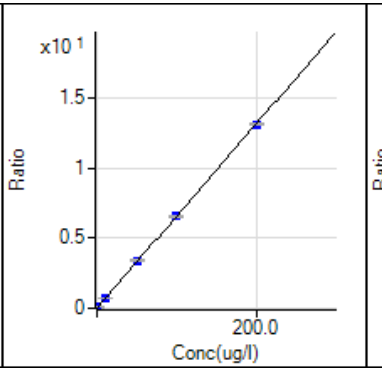
44 Ca [2] / ISTD: 45 Sc
y = 1.124E-4 x + 3.006E-4
R 0.9999
DL 0.9969
BEC 2.675



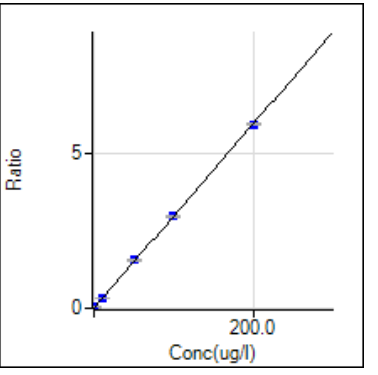
47 Ti [2] / ISTD: 45 Sc
y = 9.361E-3 x + 6.784E-6
R 1.0000
DL 0.003766
BEC 0.0007247



51 V [2] / ISTD: 45 Sc
y = 3.515E-2 x + 1.707E-3
R 0.9999
DL 0.006716
BEC 0.04857

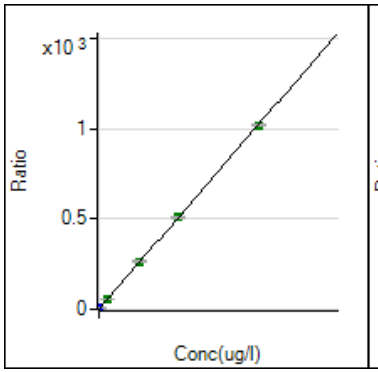


52 Cr [2] / ISTD: 72 Ge
y = 6.587E-2 x + 5.367E-3
R 1.0000
DL 0.02018
BEC 0.08148

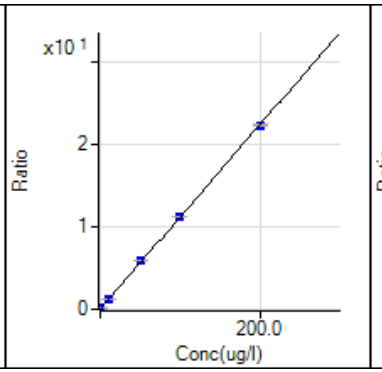


55 Mn [2] / ISTD: 72 Ge
y = 2.966E-2 x + 2.208E-3
R 0.9999
DL 0.02314
BEC 0.07445

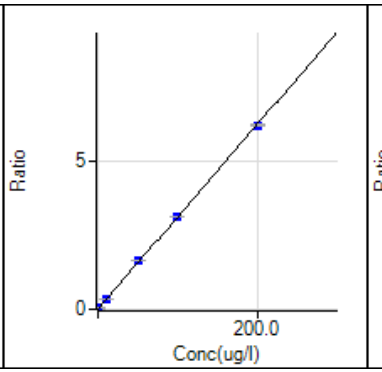
Calibration for D:\2022\xa041322m1.b\009CALS.d



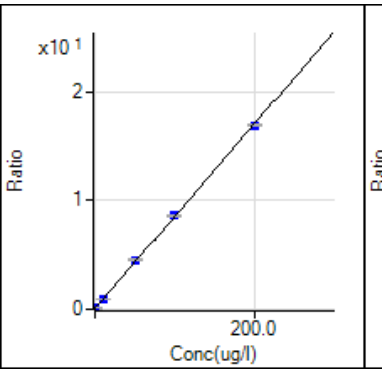
56 Fe [2] / ISTD: 72 Ge
y = 5.094E-2 x + 3.292E-2
R 0.9999
DL 0.04051
BEC 0.6463



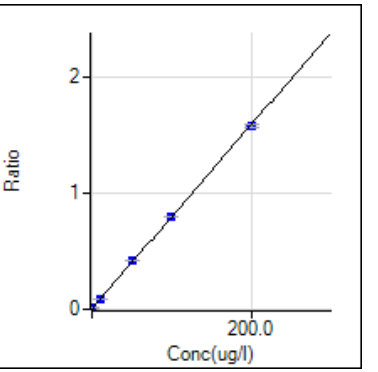
59 Co [2] / ISTD: 72 Ge
y = 1.118E-1 x + 3.808E-4
R 0.9999
DL 0.002324
BEC 0.003406



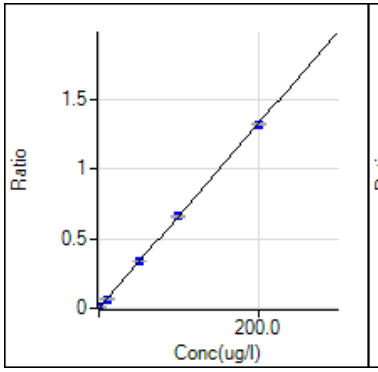
60 Ni [2] / ISTD: 72 Ge
y = 3.101E-2 x + 1.737E-3
R 0.9999
DL 0.03714
BEC 0.05599



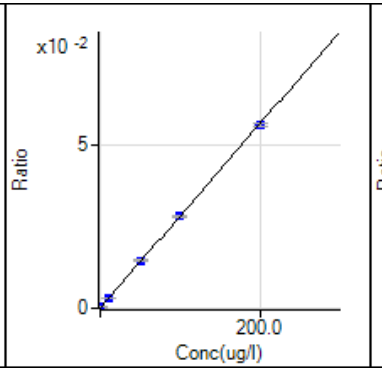
63 Cu [2] / ISTD: 72 Ge
y = 8.482E-2 x + 5.303E-2
R 0.9999
DL 0.005617
BEC 0.6252



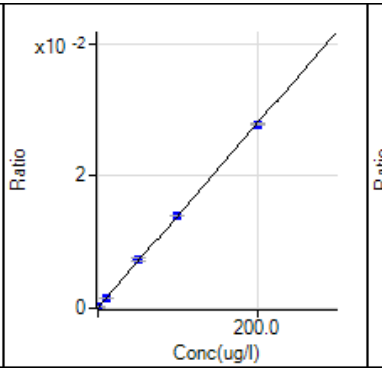
66 Zn [2] / ISTD: 74 Ge
y = 7.943E-3 x + 4.337E-3
R 0.9999
DL 0.04485
BEC 0.546



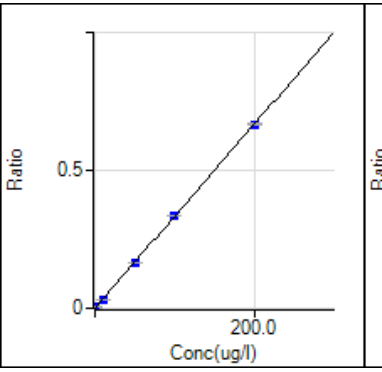
75 As [2] / ISTD: 72 Ge
y = 6.611E-3 x + 1.831E-4
R 1.0000
DL 0.02112
BEC 0.0277



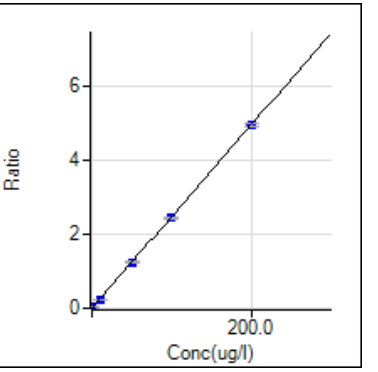
78 Se [2] / ISTD: 74 Ge
y = 2.818E-4 x + 2.021E-5
R 1.0000
DL 0.0736
BEC 0.0717



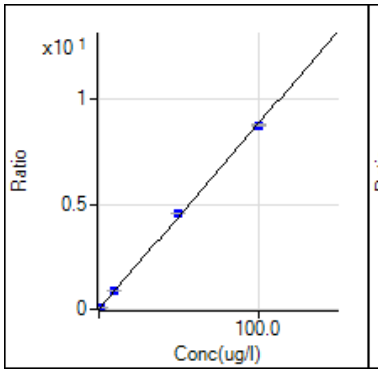
82 Se [2] / ISTD: 74 Ge
y = 1.394E-4 x + 5.286E-5
R 0.9999
DL 0.4787
BEC 0.3793



88 Sr [2] / ISTD: 115 In
y = 3.333E-3 x + 3.288E-4
R 1.0000
DL 0.02867
BEC 0.09866

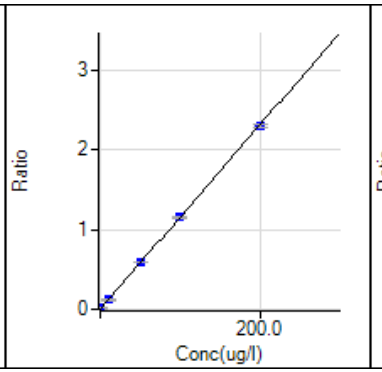


95 Mo [2] / ISTD: 74 Ge
y = 2.483E-2 x + 2.140E-4
R 0.9999
DL 0.007752
BEC 0.008619



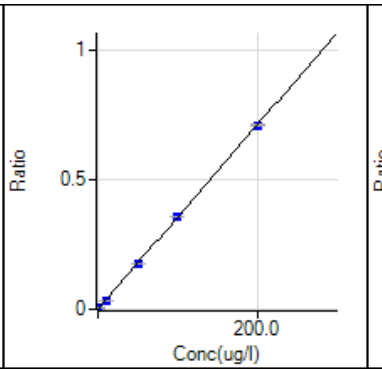
107 Ag [2] / ISTD: 74 Ge
y = 8.825E-2 x + 1.116E-4

R	0.9999
DL	0.001961
BEC	0.001265



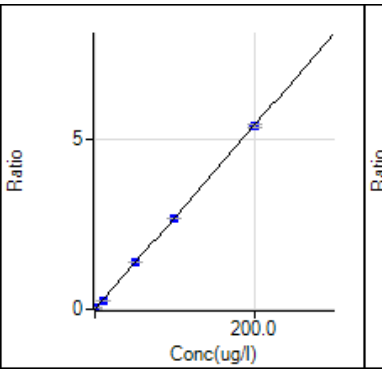
111 Cd [2] / ISTD: 74 Ge
y = 1.155E-2 x + 1.866E-5

R	1.0000
DL	0.00245
BEC	0.001616



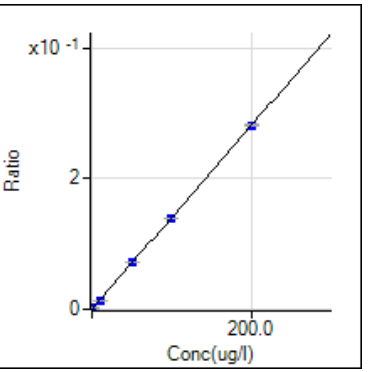
118 Sn [2] / ISTD: 115 In
y = 3.555E-3 x + 1.842E-4

R	1.0000
DL	0.02723
BEC	0.0518



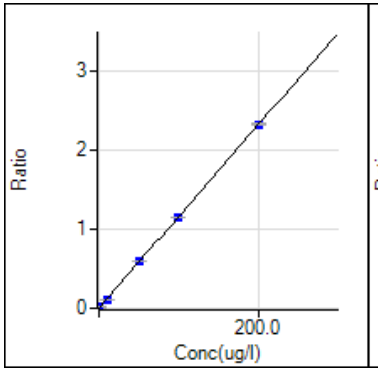
121 Sb [2] / ISTD: 74 Ge
y = 2.695E-2 x + 3.352E-4

R	1.0000
DL	0.005749
BEC	0.01244



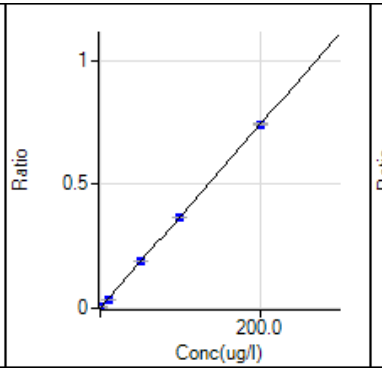
137 Ba [2] / ISTD: 115 In
y = 1.407E-3 x + 8.146E-6

R	1.0000
DL	0.01046
BEC	0.005789



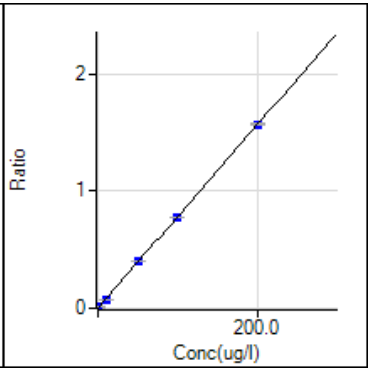
205 Tl [2] / ISTD: 209 Bi
y = 1.159E-2 x + 2.227E-5

R	1.0000
DL	0.00205
BEC	0.001921



206 [Pb] [2] / ISTD: 209 Bi
y = 3.703E-3 x + 6.082E-5

R	0.9999
DL	0.005626
BEC	0.01642



208 Pb [2] / ISTD: 209 Bi
y = 7.839E-3 x + 1.380E-4

R	1.0000
DL	0.002869
BEC	0.0176

SGS Orlando

Date:	04/12/22
Time	16:53

[24hr]

Analysts Name:	Adam K
MP Batch ID:	40550
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	282671	ACC1321	0.05	MU45274
Conc. HCl (B)	4121070	ACC1291	0.2	KU15244
NA	NA	MET7215	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	94	**Corr. Factor**	-2	**Corrected Observed Temp. C**	92
pH Paper Lot Number	212719			**Filter Lot Number**		0608Z20OV-P		**Digestion Tube Lot Number**	2111109

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	5	Matrix Spike(MS)	50	50	Y	
	5	Matrix Spike Dup(MSD)	50	50	Y	
	5	Duplicate(DUP)	50	50	Y	
1(QC) C	5	TD80541-1	50	50	Y	
2		Matrix Spike(MS)-3	50	50	Y	
3		Matrix Spike Dup-4	50	50	Y	
4		Duplicate(DUP)-2	50	50	Y	
5	1	FA94728-1	50	50	Y	
6	2	FA94414-1	50	50	Y	
7	1	FA94480-1	50	50	Y	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J02

SGS Job Number: FA95548

Sampling Date: 05/09/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **170**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA95548

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA95548-1	05/09/22	10:45	JR	05/10/22	AQ	Ground Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA95548

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 5/18/2022 12:11:18 PM

On 05/10/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA95548 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP40693

Sample(s) FA95314-1FDUP, FA95314-1FMS, FA95314-1FMSD, FA95314-1FPS, FA95314-1FSDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA95548
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 05/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA95548-1	**EFFLUENT**					
Arsenic		20.0	2.0	1.0	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA95548-1	**Date Sampled:**	05/09/22
Matrix:	AQ - Ground Water	**Date Received:**	05/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	20.0	2.0	1.0	0.21	ug/l	2	05/14/22	05/17/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18675
(2) Prep QC Batch: MP40693

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA95548

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	Total Arsenic - 6020A	LAB USE ONLY
1	Effluent	5/9/22	10:45	JWR	W	1					1					X	

Turnaround Time (Business days)

10 Day (Business)
7 Day
X 5 Day- Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Approved By: / Date:
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples
INITIAL ASSESSMENT
LABEL VERIFIED
SGS Service Center
Northborough, MA 5/9

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	SOVCON	5-9-22 1310	2 TheQuestGuy	3 TheQuestGuy	5/9/22 1700	4 FedEx
	Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5			6 5/10/22 930	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 4.2 CM 03#02312

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

5.1 5

FA95548: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA95548 **Client:** SOVEREIGN CONSULTING, INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 5/10/2022 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4371 9443

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 5/10/2022 9:30:00 AM Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA95548
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 05/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP40693	SW846 6020B						
MP40693-B1	7440-38-2	Arsenic	BSP	REC	111	%	84-116
MP40693-S1*	7440-38-2	Arsenic	MS	REC	109	%	84-116
MP40693-S2*	7440-38-2	Arsenic	MSD	REC	107	%	84-116
MP40693-S2*	7440-38-2	Arsenic	MSD	RPD	1.9	%	20
MP40693-D1*	7440-38-2	Arsenic	DUP	RPD	0	%	20

* Sample used for QC is not from job FA95548

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:15	MA18675-STD1	1		STDA
10:19	MA18675-STD2	1		STDB
10:23	MA18675-STD3	1		STDC
10:27	MA18675-STD4	1		STDD
10:31	MA18675-STD5	1		STDE
10:35	MA18675-STD6	1		STDF
10:39	MA18675-STD7	1		STDG
10:43	MA18675-HSTD1	1		
10:47	MA18675-HSTD2	1		
10:51	MA18675-ICV1	1		
10:54	MA18675-ICB1	1		
10:58	MA18675-CRIA1	1		
11:02	MA18675-ICSA1	1		
11:06	MA18675-ICSAB1	1		
11:10	MA18675-CCV1	1		
11:14	MA18675-CCV2	1		
11:17	MA18675-CCB1	1		
11:21	MP40693-MB1	2		
11:25	MP40693-B1	2		
11:29	FA95314-1F	2		(sample used for QC only; not part of login FA95548)
11:32	MP40693-D1	2		
11:36	MP40693-SD1	10		
11:40	MP40693-S1	2		
11:44	MP40693-S2	2		
11:48	MP40693-PS1	2		
11:51	ZZZZZZ	2		
11:55	ZZZZZZ	2		
11:59	MA18675-CCV3	1		
12:03	MA18675-CCV4	1		
12:07	MA18675-CCB2	1		
12:10	ZZZZZZ	2		
12:14	ZZZZZZ	2		
12:18	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:22	ZZZZZZ	2		
12:25	ZZZZZZ	2		
12:29	ZZZZZZ	2		
12:33	ZZZZZZ	2		
12:37	ZZZZZZ	2		
12:41	ZZZZZZ	2		
12:44	ZZZZZZ	2		
12:48	MA18675-CCV5	1		
12:52	MA18675-CCV6	1		
12:56	MA18675-CCB3	1		
13:03	ZZZZZZ	2		
13:07	ZZZZZZ	2		
13:11	ZZZZZZ	2		
13:15	ZZZZZZ	2		
13:18	FA95548-1	2		
---------->	Last reportable sample/prep for job FA95548			
13:37	MA18675-CCV7	1		
13:41	MA18675-CCV8	1		
13:45	MA18675-CCB4	1		
---------->	Last reportable CCB for job FA95548			
14:08	MP40698-MB1	2		
14:11	MP40698-B1	2		
14:15	FA95314-1	2		(sample used for QC only; not part of login FA95548)
14:19	MP40698-D1	2		
14:23	MP40698-SD1	10		
14:27	MA18675-CCV9	1		
14:30	MA18675-CCV10	1		
14:34	MA18675-CCB5	1		
14:38	MP40698-S1	2		
14:42	MP40698-S2	2		
14:45	MP40698-PS1	2		
14:53	ZZZZZZ	2		
14:57	ZZZZZZ	2		
15:01	ZZZZZZ	2		
15:04	MA18675-CCV11	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:08	MA18675-CCV12	1		
15:12	MA18675-CCB6	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Element: Dilution	As	
10:43	MA18675-HSTD1	1		
10:47	MA18675-HSTD2	1	X	
10:51	MA18675-ICV1	1	X	
10:54	MA18675-ICB1	1	X	
10:58	MA18675-CRIA1	1	X	
11:02	MA18675-ICSA1	1	X	
11:06	MA18675-ICSAB1	1	X	
11:10	MA18675-CCV1	1		
11:14	MA18675-CCV2	1	X	
11:17	MA18675-CCB1	1	X	
11:21	MP40693-MB1	2	X	
11:25	MP40693-B1	2	X	
11:29	FA95314-1F	2	X	(a)
11:32	MP40693-D1	2	X	
11:36	MP40693-SD1	10	X	
11:40	MP40693-S1	2	X	
11:44	MP40693-S2	2	X	
11:48	MP40693-PS1	2	X	
11:51	ZZZZZZ	2		
11:55	ZZZZZZ	2		
11:59	MA18675-CCV3	1		
12:03	MA18675-CCV4	1	X	
12:07	MA18675-CCB2	1	X	
12:10	ZZZZZZ	2		
12:14	ZZZZZZ	2		
12:18	ZZZZZZ	2		
12:22	ZZZZZZ	2		
12:25	ZZZZZZ	2		
12:29	ZZZZZZ	2		
12:33	ZZZZZZ	2		
12:37	ZZZZZZ	2		
12:41	ZZZZZZ	2		
12:44	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Element: Dilution	As
12:48	MA18675-CCV5	1	
12:52	MA18675-CCV6	1	X
12:56	MA18675-CCB3	1	X
13:03	ZZZZZZ	2	
13:07	ZZZZZZ	2	
13:11	ZZZZZZ	2	
13:15	ZZZZZZ	2	
13:18	FA95548-1	2	X
13:37	MA18675-CCV7	1	
13:41	MA18675-CCV8	1	X
13:45	MA18675-CCB4	1	X
14:08	MP40698-MB1	2	X
14:11	MP40698-B1	2	X
14:15	FA95314-1	2	X (a)
14:19	MP40698-D1	2	X
14:23	MP40698-SD1	10	X
14:27	MA18675-CCV9	1	
14:30	MA18675-CCV10	1	X
14:34	MA18675-CCB5	1	X
14:38	MP40698-S1	2	X
14:42	MP40698-S2	2	X
14:45	MP40698-PS1	2	X
14:53	ZZZZZZ	2	
14:57	ZZZZZZ	2	
15:01	ZZZZZZ	2	
15:04	MA18675-CCV11	1	
15:08	MA18675-CCV12	1	X
15:12	MA18675-CCB6	1	X

(a) Sample used for QC only; not part of login FA95548.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:15	MA18675-STD1	100	100	100	100	100	100	100
10:19	MA18675-STD2	85.2	101.9	100.2	99.5	101.6	100.6	100.7
10:23	MA18675-STD3	94	101.6	100.7	100.1	100.7	100.4	100.6
10:27	MA18675-STD4	86.5	101.6	100	100.1	100.8	100.5	101.2
10:31	MA18675-STD5	93.1	102.1	100.2	100.3	99.7	101.3	99
10:35	MA18675-STD6	83	100.5	98.9	98.5	98.1	99.5	97.2
10:39	MA18675-STD7	74.8	95.7	94.8	93.9	94	96.7	92.1
10:43	MA18675-HSTD1	87.8	97.1	95.1	95.6	94.7	97.3	94.7
10:47	MA18675-HSTD2	86.5	94.3	92.8	92.6	92.1	95.3	90.9
10:51	MA18675-ICV1	98.7	95.4	94	93.1	93.5	96.3	93.3
10:54	MA18675-ICB1	86.1	95.6	95.3	94.4	95.2	95.9	96.4
10:58	MA18675-CRIA1	95.1	97.4	96.5	95.3	96.9	97.4	97.3
11:02	MA18675-ICSA1	85.6	91.8	89.6	87.6	86.1	90.2	82.6
11:06	MA18675-ICSAB1	87.8	90.9	90.2	87.4	86.4	90.7	82.7
11:10	MA18675-CCV1	94	92.4	93.5	93.7	93.2	96.7	95.9
11:14	MA18675-CCV2	75.7	92.7	93.4	92.7	92.7	96.4	93.4
11:17	MA18675-CCB1	92.7	94	93.7	94.1	94.3	96.1	96.7
11:21	MP40693-MB1	95.4	91.4	90.7	91.1	90.4	93.6	94.3
11:25	MP40693-B1	88.7	90.8	89.1	89.1	87.8	92.6	89.6
11:29	FA95314-1F	105.8	89	89.3	88.5	86.5	90.6	89.8
11:32	MP40693-D1	100.7	89.7	88.6	88.7	86.5	91.3	89.7
11:36	MP40693-SD1	97.6	94.9	93.2	94.5	92.4	94.7	95
11:40	MP40693-S1	94.5	89.3	87.6	87.4	84.5	91	87.1
11:44	MP40693-S2	100.7	88.1	86.7	86.3	83.9	89.9	86.3
11:48	MP40693-PS1	110.2	88.4	87.3	87.3	84.3	90.1	88.3
11:51	ZZZZZZ	94.5	90.6	88.9	88.8	86.4	90.5	89.6
11:55	ZZZZZZ	108.6	91.1	90.1	89.6	86.7	91.1	90.1
11:59	MA18675-CCV3	99.1	99.7	98.9	97.7	95.2	97.7	96.3
12:03	MA18675-CCV4	99.8	98.1	96.3	95.3	92.3	95.9	93.3
12:07	MA18675-CCB2	93.4	96.1	94.3	94.6	93.2	94.3	94.7
12:10	ZZZZZZ	105.5	90.5	89	88.5	86.2	90.6	90.6
12:14	ZZZZZZ	109.1	92.5	91.1	89.3	86.6	89.9	89.3
12:18	ZZZZZZ	106.4	89.5	88.3	88.6	85.1	89.7	88.5

INTERNAL STANDARD SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
12:22	ZZZZZZ	87.4	89.2	86.5	88.1	84.3	89.3	87.1
12:25	ZZZZZZ	101.8	88.2	86.5	87.5	83.4	88.5	87.1
12:29	ZZZZZZ	97.8	86.5	84.8	85.7	83.2	87.5	89.1
12:33	ZZZZZZ	106	87.4	86.4	84.9	83.3	87.4	89.1
12:37	ZZZZZZ	116.1	89	87.2	86.9	84.7	88	89.3
12:41	ZZZZZZ	109.1	89.9	88.3	87.6	84.9	88.3	89.8
12:44	ZZZZZZ	109.1	90.2	89.2	88.2	86.3	88.8	90.6
12:48	MA18675-CCV5	86.7	100.2	96.9	96	93.3	95	93.8
12:52	MA18675-CCV6	92.9	98.2	94.5	93.7	91.1	94.2	91.8
12:56	MA18675-CCB3	105.1	96.9	95	94.5	93.1	93.7	94
13:03	ZZZZZZ	101.5	87.4	86	84.9	82.6	86.7	86.9
13:07	ZZZZZZ	99.6	85.6	83.3	83.2	80.2	85.2	85.3
13:11	ZZZZZZ	99.8	85.1	82.9	82.9	79.7	85	84.8
13:15	ZZZZZZ	106.4	85.7	83.1	83.1	79.8	85.2	85.4
13:18	FA95548-1	102.7	84.5	82.3	81.4	78.5	84.2	82.5
13:37	MA18675-CCV7	92.5	91.3	90	88.8	87.7	90.5	89.5
13:41	MA18675-CCV8	78.3	88.6	85.3	85	83.7	86.1	84.2
13:45	MA18675-CCB4	96.2	89	86.9	87.3	86.2	88.2	88.6
14:08	MP40698-MB1	96.2	82.7	79.4	80.1	79.2	83.2	83.5
14:11	MP40698-B1	90.7	81	78.5	77.9	75.5	81.9	79.7
14:15	FA95314-1	101.8	81.7	80	80	77	81.6	80.9
14:19	MP40698-D1	104.9	82.8	80.6	80.9	78.2	82.7	81.6
14:23	MP40698-SD1	105.1	88.9	86.7	86.5	84.7	87	87.2
14:27	MA18675-CCV9	98	89.8	86.2	86.9	84.7	87.8	86.7
14:30	MA18675-CCV10	88.9	89.2	85.5	85.5	83.9	87.5	85.3
14:34	MA18675-CCB5	83.6	87.9	84.7	85.5	83.3	85.5	86.7
14:38	MP40698-S1	93.8	78.2	77.7	77.6	74	80.1	77.7
14:42	MP40698-S2	105.8	79.5	77.5	77.6	74.4	80.9	78.1
14:45	MP40698-PS1	94.9	80.4	78.5	78.3	74.3	80.5	79.2
14:53	ZZZZZZ	No results reported for the elements associated with this internal standard.						
14:57	ZZZZZZ	No results reported for the elements associated with this internal standard.						
15:01	ZZZZZZ	88.5	80.3	76.6	77.2	74.9	79.5	81
15:04	MA18675-CCV11	93.1	88	85.4	84.6	82.4	85.5	85.1

INTERNAL STANDARD SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18675
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
15:08	MA18675-CCV12	90.5	87.4	83.8	83.3	82.7	85.3	83.4
15:12	MA18675-CCB6	86.5	85.9	83.1	83.8	81.7	84.1	85.2

! = Outside limits.

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18675 Units: ug/l

Time: / Sample ID:			10:54 ICB1		11:17 CCB1		12:07 CCB2		12:56 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0340	<1.0	0.0197	<1.0	0.0217	<1.0	0.0205	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1								
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1	anr							
Thallium	1.0	.1	anr							
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	anr							
Zinc	2.0	.29								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18675 Units: ug/l

Time:			13:45	
Sample ID:			CCB4	
Metal	RL	IDL	raw	final
Aluminum	100	4.4	anr	
Antimony	1.0	.1	anr	
Arsenic	1.0	.1	0.0137	<1.0
Barium	1.0	.1	anr	
Beryllium	1.0	.1	anr	
Cadmium	1.0	.1	anr	
Calcium	100	7.2	anr	
Chromium	1.0	.1	anr	
Cobalt	1.0	.1	anr	
Copper	1.0	.1		
Iron	100	7.9	anr	
Lead	1.0	.1	anr	
Magnesium	100	5.2	anr	
Manganese	1.0	.1	anr	
Molybdenum	1.0	.1	anr	
Nickel	1.0	.1	anr	
Potassium	100	6.6	anr	
Selenium	1.0	.11	anr	
Silver	1.0	.1	anr	
Sodium	100	4.8	anr	
Strontium	1.0	.1	anr	
Thallium	1.0	.1	anr	
Tin	1.0	.1	anr	
Titanium	1.0	.3	anr	
Vanadium	1.0	.1	anr	
Zinc	2.0	.29		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18675 Units: ug/l

Time:		10:51			11:10			11:14	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	104	104.0				100	104	104.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium	anr								
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18675 Units: ug/l

Time:		11:59			12:03			12:48	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	102	102.0			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18675 Units: ug/l

Time:		12:52			13:37			13:41	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	103	103.0				100	103	103.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium	anr								
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18675 Units: ug/l

Time:		10:43			10:47	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	198	99.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18675 Units: ug/l

Time:			10:58	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	1.01	101.0
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0	anr	
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0	anr	
Thallium	1.0	1.0	anr	
Tin	1.0	1.0	anr	
Titanium	1.0	1.0	anr	
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA051722M1.CSV Date Analyzed: 05/17/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18675 Units: ug/l

Time:			11:02		11:06	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	99000	99.0	96600	96.6
Antimony			0.0827		0.0640	
Arsenic		20	0.107		20.2	101.0
Barium			0.373		0.435	
Beryllium			0.0302		0.0259	
Cadmium		20	0.400		20.0	100.0
Calcium	100000	100000	98400	98.4	96200	96.2
Chromium		20	2.19*		22.4	112.0
Cobalt		20	0.124		20.2	101.0
Copper		20	-0.977		18.4	92.0
Iron	100000	100000	103000	103.0	101000	101.0
Lead			0.0788		0.0729	
Magnesium	100000	100000	101000	101.0	100000	100.0
Manganese		20	1.15*		21.1	105.5
Molybdenum	2000	2000	2130	106.5	2110	105.5
Nickel		20	0.278		19.8	99.0
Potassium	100000	100000	104000	104.0	103000	103.0
Selenium			0.300		0.204	
Silver		20	0.299		19.4	97.0
Sodium	100000	100000	103000	103.0	102000	102.0
Strontium			1.18*		1.14*	
Thallium			0.0122		0.00672	
Tin			0.130		0.0711	
Titanium	2000	2000	2010	100.5	1970	98.5
Vanadium			0.0222		0.0156	
Zinc		20	2.33*		20.5	102.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 05/14/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.067	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 05/14/22 05/14/22

Metal	FA95314-1F Original	DUP	RPD	QC Limits	FA95314-1F Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	0.0	0.0	NC	0-20	0.0	218	200	109.0	80-120
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/14/22

Metal	FA95314-1F Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.0	214	200	107.0	1.9	20
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 05/14/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	222	200	111.0	80-120
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 05/14/22

Metal	FA95314-1F Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA95548
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40693
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 05/14/22

Metal	Sample ml	Final ml	FA95314-1F Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10			21.59883	0.4	0.5	20	108.0	80-120
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP40693: FA95548-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA95548
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18675

Instrument Linear Ranges

Job Number: FA95548
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18675

Metals Analysis

Raw Data

Quantitation Report

File Name	001CALB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 10:07
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	117.03	578.01	6.350E-03	Pulse	0.50	3
As			1	0.000	ug/l	-2423.75	14.00	1.540E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	-309.23	24.00	1.723E-04	Pulse	0.50	3
Pb			1	-0.005	ug/l	-28.02	2,512.52	9.540E-04	Pulse	1.00	3
Be			1	0.009	ug/l	229.24	0.83	7.004E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	57.08	20.67	1.484E-04	Pulse	0.50	3
Ba			1	-0.003	ug/l	-43.11	2.67	3.085E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	85.39	101.33	3.849E-05	Pulse	0.50	3
Sn			1	-0.009	ug/l	-53.08	145.56	1.688E-04	Pulse	0.30	3
Sr			1	-0.011	ug/l	-70.76	266.67	3.092E-04	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-475.70	1,176.05	4.465E-04	Pulse	0.50	3
Ca			1	-0.311	ug/l	-91.53	39.33	3.323E-04	Pulse	0.50	3
Ti			1	-0.004	ug/l	-564.43	2.00	1.711E-05	Pulse	0.50	3
Na			1	-0.360	ug/l	-28.77	6,609.43	5.588E-02	Pulse	1.00	3
Mg			1	0.128	ug/l	9.42	618.34	5.228E-03	Pulse	1.00	3
K			1	-0.201	ug/l	-313.89	13,413.56	1.134E-01	Pulse	1.00	3
V			1	-0.005	ug/l	-70.81	269.33	2.277E-03	Pulse	0.50	3
Mn			1	-0.015	ug/l	-34.45	80.00	8.791E-04	Pulse	0.50	3
Fe			1	-0.072	ug/l	-43.50	7,244.71	7.958E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-55.76	48.00	5.273E-04	Pulse	0.50	3
Ni			1	-0.005	ug/l	-262.52	272.67	2.995E-03	Pulse	0.50	3
Cu			1	0.061	ug/l	13.02	18,064.48	1.984E-01	Pulse	0.50	3
Zn			1	-0.006	ug/l	-802.69	1,948.44	1.398E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	268.50	6.00	4.298E-05	Pulse	0.50	3
Al			1	0.024	ug/l	151.83	74.67	6.314E-04	Pulse	1.00	3
Se			1	0.008	ug/l	830.71	5.45	3.904E-05	Pulse	3.00	3
Sb			1	0.001	ug/l	18.10	27.67	1.986E-04	Pulse	1.00	3
Se			1	-0.029	ug/l	-214.82	15.67	1.124E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,633,689.50	0.46	100.0	Pulse	0.50	3
1	Sc		118,280.52	1.00	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		91,052.78	1.16	100.0	Pulse	0.30	3
1	In		862,584.70	0.41	100.0	Pulse	0.30	3
1	Tb		3,269,363.42	0.41	100.0	Pulse	0.50	3
1	Lu		2,031,488.54	0.89	100.0	Pulse	0.50	3
1	Ge		139,328.69	0.24	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		441.12	7.26	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 10:11
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	159.48	586.01	6.398E-03	Pulse	0.50	3
As			1	-0.002	ug/l	-323.55	12.67	1.385E-04	Pulse	1.00	3
Mo			1	-0.003	ug/l	-39.65	12.00	8.577E-05	Pulse	0.50	3
Pb			1	-0.004	ug/l	-114.18	2,539.53	9.623E-04	Pulse	1.00	3
Be			1	-0.013	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.000	ug/l	195.84	18.00	1.289E-04	Pulse	0.50	3
Ba			1	-0.003	ug/l	-50.49	4.00	4.656E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	-45.80	73.33	2.779E-05	Pulse	0.50	3
Sn			1	-0.004	ug/l	-49.63	163.34	1.899E-04	Pulse	0.30	3
Sr			1	0.001	ug/l	246.37	308.00	3.582E-04	Pulse	0.50	3
[Pb]			1	0.001	ug/l	786.62	1,209.38	4.583E-04	Pulse	0.50	3
Ca			1	0.756	ug/l	81.50	57.33	4.809E-04	Pulse	0.50	3
Ti			1	0.014	ug/l	251.07	4.67	3.921E-05	Pulse	0.50	3
Na			1	-0.268	ug/l	-37.17	6,748.47	5.658E-02	Pulse	1.00	3
Mg			1	0.006	ug/l	1954.48	573.01	4.805E-03	Pulse	1.00	3
K			1	-0.376	ug/l	-75.03	13,474.93	1.130E-01	Pulse	1.00	3
V			1	-0.005	ug/l	-94.40	269.33	2.259E-03	Pulse	0.50	3
Mn			1	-0.008	ug/l	-95.93	105.33	1.149E-03	Pulse	0.50	3
Fe			1	0.027	ug/l	161.55	7,855.61	8.577E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-49.03	57.33	6.260E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	165.56	307.33	3.353E-03	Pulse	0.50	3
Cu			1	0.005	ug/l	134.15	17,613.38	1.923E-01	Pulse	0.50	3
Zn			1	0.020	ug/l	295.67	1,990.77	1.425E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	198.08	6.00	4.290E-05	Pulse	0.50	3
Al			1	-0.097	ug/l	-49.23	60.33	5.058E-04	Pulse	1.00	3
Se			1	-0.011	ug/l	-476.41	4.55	3.260E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	400.54	26.00	1.861E-04	Pulse	1.00	3
Se			1	-0.079	ug/l	-135.74	14.56	1.041E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,638,963.58	0.06	100.0	Pulse	0.50	3
1	Sc		119,275.23	0.31	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		91,604.44	0.83	100.0	Pulse	0.30	3
1	In		859,931.34	0.40	100.0	Pulse	0.30	3
1	Tb		3,263,821.92	0.30	100.0	Pulse	0.50	3
1	Lu		2,022,740.46	0.70	100.0	Pulse	0.50	3
1	Ge		139,760.81	0.75	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		458.90	2.34	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:15
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	566.01	6.128E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	14.33	1.558E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	25.33	1.804E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	2,629.54	9.983E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.50	4.205E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	15.33	1.093E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	8.00	9.283E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	83.33	3.164E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	180.00	2.090E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	303.34	3.524E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	1,191.38	4.524E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	44.67	3.755E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.67	2.235E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	6,985.62	5.860E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	570.34	4.784E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	13,579.66	1.139E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	297.33	2.496E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	133.33	1.444E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	7,764.24	8.409E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	64.67	7.004E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	293.33	3.177E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	17,701.46	1.917E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	1,970.77	1.404E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	3.33	2.376E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	72.33	6.064E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	5.11	3.644E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	---	24.33	1.735E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	16.44	1.173E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,634,231.58	0.76	100.0	Pulse	0.50	3
1	Sc		119,207.12	0.85	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		92,337.80	1.22	100.0	Pulse	0.30	3
1	In		861,031.01	0.54	100.0	Pulse	0.30	3
1	Tb		3,269,113.08	0.44	100.0	Pulse	0.50	3
1	Lu		2,018,219.08	0.09	100.0	Pulse	0.50	3
1	Ge		140,317.30	0.39	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		502.23	2.13	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:19
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.530	ug/l	0.33	4,571.89	4.941E-02	Pulse	0.50	3
As			1	0.527	ug/l	4.44	422.01	4.560E-03	Pulse	1.00	3
Mo			1	0.516	ug/l	4.81	2,355.49	1.688E-02	Pulse	0.50	3
Pb			1	0.416	ug/l	1.77	13,485.99	5.086E-03	Pulse	1.00	3
Be			1	0.549	ug/l	6.08	21.33	1.757E-04	Pulse	2.00	3
Ag			1	0.538	ug/l	1.52	8,688.72	6.226E-02	Pulse	0.50	3
Ba			1	0.529	ug/l	4.87	832.69	9.519E-04	Pulse	0.50	3
Tl			1	0.508	ug/l	0.68	19,128.04	7.214E-03	Pulse	0.50	3
Sn			1	0.495	ug/l	11.64	2,137.91	2.444E-03	Pulse	0.30	3
Sr			1	0.508	ug/l	1.47	2,092.79	2.392E-03	Pulse	0.50	3
[Pb]			1	0.427	ug/l	2.92	6,429.22	2.425E-03	Pulse	0.50	3
Ca			1	55.534	ug/l	7.35	984.70	8.111E-03	Pulse	0.50	3
Ti			1	0.408	ug/l	19.69	61.33	5.053E-04	Pulse	0.50	3
Na			1	51.398	ug/l	0.45	54,302.74	4.472E-01	Pulse	1.00	3
Mg			1	52.665	ug/l	0.22	22,692.15	1.869E-01	Pulse	1.00	3
K			1	54.844	ug/l	1.59	30,598.60	2.520E-01	Pulse	1.00	3
V			1	0.497	ug/l	1.63	3,065.59	2.525E-02	Pulse	0.50	3
Mn			1	0.541	ug/l	5.12	1,960.11	2.118E-02	Pulse	0.50	3
Fe			1	53.293	ug/l	0.61	318,654.92	3.444E+00	Pulse	0.50	3
Co			1	0.535	ug/l	2.08	7,105.33	7.679E-02	Pulse	0.50	3
Ni			1	0.539	ug/l	7.29	2,260.14	2.442E-02	Pulse	0.50	3
Cu			1	-0.612	ug/l	-3.01	11,590.18	1.253E-01	Pulse	0.50	3
Zn			1	-0.169	ug/l	-42.03	1,721.41	1.233E-02	Pulse	1.00	3
Cd			1	0.532	ug/l	5.89	1,122.71	8.047E-03	Pulse	0.50	3
Al			1	54.410	ug/l	0.74	6,901.54	5.684E-02	Pulse	1.00	3
Se			1	0.505	ug/l	3.86	29.22	2.094E-04	Pulse	3.00	3
Sb			1	0.523	ug/l	4.38	2,559.85	1.834E-02	Pulse	1.00	3
Se			1	0.449	ug/l	42.91	26.89	1.927E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,651,466.00	0.22	100.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		121,417.12	0.27	101.9	Pulse	0.30	3
1	Ge		92,530.02	0.86	100.2	Pulse	0.30	3
1	In		874,872.90	0.36	101.6	Pulse	0.30	3
1	Tb		3,288,897.75	0.75	100.6	Pulse	0.50	3
1	Lu		2,033,365.54	0.57	100.8	Pulse	0.50	3
1	Ge		139,557.46	0.67	99.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		427.78	4.00	85.2	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:23
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.022	ug/l	4.07	8,325.13	8.950E-02	Pulse	0.50	3
As			1	1.039	ug/l	5.67	821.69	8.834E-03	Pulse	1.00	3
Mo			1	0.997	ug/l	2.84	4,555.90	3.244E-02	Pulse	0.50	3
Pb			1	0.928	ug/l	0.33	26,843.33	1.013E-02	Pulse	1.00	3
Be			1	0.920	ug/l	21.24	35.33	2.917E-04	Pulse	2.00	3
Ag			1	1.043	ug/l	0.91	16,949.77	1.207E-01	Pulse	0.50	3
Ba			1	1.233	ug/l	2.67	1,911.44	2.205E-03	Pulse	0.50	3
Tl			1	1.031	ug/l	0.65	38,746.31	1.462E-02	Pulse	0.50	3
Sn			1	0.966	ug/l	3.83	3,959.34	4.568E-03	Pulse	0.30	3
Sr			1	0.976	ug/l	4.82	3,701.04	4.271E-03	Pulse	0.50	3
[Pb]			1	0.940	ug/l	2.58	12,693.41	4.789E-03	Pulse	0.50	3
Ca			1	116.694	ug/l	5.97	2,015.45	1.663E-02	Pulse	0.50	3
Ti			1	1.024	ug/l	11.39	149.33	1.233E-03	Pulse	0.50	3
Na			1	106.383	ug/l	0.48	104,568.81	8.630E-01	Pulse	1.00	3
Mg			1	106.926	ug/l	0.32	45,380.79	3.745E-01	Pulse	1.00	3
K			1	109.499	ug/l	1.49	47,210.09	3.896E-01	Pulse	1.00	3
V			1	1.020	ug/l	0.11	5,958.27	4.917E-02	Pulse	0.50	3
Mn			1	1.142	ug/l	1.15	4,005.76	4.306E-02	Pulse	0.50	3
Fe			1	108.076	ug/l	0.31	641,584.98	6.898E+00	Pulse	0.50	3
Co			1	1.086	ug/l	1.06	14,442.73	1.553E-01	Pulse	0.50	3
Ni			1	1.095	ug/l	0.53	4,309.16	4.633E-02	Pulse	0.50	3
Cu			1	-0.035	ug/l	-108.70	17,477.95	1.879E-01	Pulse	0.50	3
Zn			1	1.075	ug/l	2.04	3,499.32	2.492E-02	Pulse	1.00	3
Cd			1	1.019	ug/l	6.42	2,163.47	1.540E-02	Pulse	0.50	3
Al			1	106.246	ug/l	1.33	13,378.48	1.104E-01	Pulse	1.00	3
Se			1	0.980	ug/l	4.31	52.22	3.719E-04	Pulse	3.00	3
Sb			1	1.011	ug/l	3.68	4,958.34	3.531E-02	Pulse	1.00	3
Se			1	0.813	ug/l	16.11	35.66	2.539E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,650,382.58	0.21	100.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		121,170.32	0.55	101.6	Pulse	0.30	3
1	Ge		93,015.72	0.48	100.7	Pulse	0.30	3
1	In		866,840.61	1.41	100.7	Pulse	0.30	3
1	Tb		3,283,724.00	0.76	100.4	Pulse	0.50	3
1	Lu		2,029,088.83	0.53	100.5	Pulse	0.50	3
1	Ge		140,444.79	0.38	100.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		472.23	11.86	94.0	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:27
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.222	ug/l	0.98	77,562.53	8.403E-01	Pulse	0.50	3
As			1	9.920	ug/l	2.08	7,660.54	8.300E-02	Pulse	1.00	3
Mo			1	9.726	ug/l	0.98	44,197.14	3.147E-01	Pulse	0.50	3
Pb			1	9.758	ug/l	1.23	258,558.27	9.699E-02	Pulse	1.00	3
Be			1	9.957	ug/l	3.07	377.33	3.116E-03	Pulse	2.00	3
Ag			1	10.328	ug/l	1.06	167,649.27	1.194E+00	Pulse	0.50	3
Ba			1	9.753	ug/l	0.78	15,083.64	1.738E-02	Pulse	0.50	3
Tl			1	9.926	ug/l	0.92	374,557.25	1.405E-01	Pulse	0.50	3
Sn			1	9.887	ug/l	0.36	38,904.43	4.484E-02	Pulse	0.30	3
Sr			1	9.865	ug/l	0.72	34,683.78	3.997E-02	Pulse	0.50	3
[Pb]			1	9.729	ug/l	0.29	120,918.00	4.536E-02	Pulse	0.50	3
Ca			1	1021.759	ug/l	2.90	17,277.62	1.427E-01	Pulse	0.50	3
Ti			1	10.047	ug/l	2.96	1,441.39	1.190E-02	Pulse	0.50	3
Na			1	1021.967	ug/l	0.85	942,729.27	7.786E+00	Pulse	1.00	3
Mg			1	1026.098	ug/l	0.51	430,190.77	3.553E+00	Pulse	1.00	3
K			1	1029.796	ug/l	0.78	327,742.22	2.707E+00	Pulse	1.00	3
V			1	9.936	ug/l	0.49	55,379.42	4.574E-01	Pulse	0.50	3
Mn			1	10.253	ug/l	2.67	34,634.77	3.753E-01	Pulse	0.50	3
Fe			1	1019.837	ug/l	1.52	5,942,288.67	6.438E+01	Analog	0.50	3
Co			1	10.285	ug/l	0.79	135,162.39	1.464E+00	Pulse	0.50	3
Ni			1	10.619	ug/l	0.24	38,913.61	4.215E-01	Pulse	0.50	3
Cu			1	11.080	ug/l	1.97	128,779.46	1.395E+00	Pulse	0.50	3
Zn			1	13.041	ug/l	1.06	20,495.20	1.460E-01	Pulse	1.00	3
Cd			1	10.113	ug/l	1.05	21,434.42	1.526E-01	Pulse	0.50	3
Al			1	1023.726	ug/l	0.21	128,184.76	1.059E+00	Pulse	1.00	3
Se			1	9.763	ug/l	3.14	474.23	3.377E-03	Pulse	3.00	3
Sb			1	9.889	ug/l	1.42	48,295.12	3.439E-01	Pulse	1.00	3
Se			1	9.761	ug/l	2.51	246.67	1.757E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,666,041.17	1.05	101.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		121,082.60	0.60	101.6	Pulse	0.30	3
1	Ge		92,313.36	1.15	100.0	Pulse	0.30	3
1	In		867,681.46	0.81	100.8	Pulse	0.30	3
1	Tb		3,286,222.33	0.02	100.5	Pulse	0.50	3
1	Lu		2,045,884.41	0.54	101.4	Pulse	0.50	3
1	Ge		140,427.82	0.34	100.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		434.45	14.65	86.5	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 10:31
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.726	ug/l	1.17	383,669.40	4.146E+00	Pulse	0.50	3
As			1	50.799	ug/l	0.86	39,274.78	4.244E-01	Pulse	1.00	3
Mo			1	49.338	ug/l	0.56	224,645.51	1.596E+00	Pulse	0.50	3
Pb			1	49.867	ug/l	0.54	1,282,203.71	4.915E-01	Pulse	1.00	3
Be			1	49.894	ug/l	2.33	1,899.09	1.560E-02	Pulse	2.00	3
Ag			1	50.984	ug/l	1.17	829,532.04	5.893E+00	Pulse	0.50	3
Ba			1	50.244	ug/l	0.77	76,862.68	8.951E-02	Pulse	0.50	3
Tl			1	51.360	ug/l	0.33	1,896,078.46	7.268E-01	Pulse	0.50	3
Sn			1	50.344	ug/l	0.68	195,320.15	2.275E-01	Pulse	0.30	3
Sr			1	50.336	ug/l	0.79	173,907.41	2.025E-01	Pulse	0.50	3
[Pb]			1	50.351	ug/l	0.27	607,399.29	2.328E-01	Pulse	0.50	3
Ca			1	5061.432	ug/l	0.81	85,877.02	7.054E-01	Pulse	0.50	3
Ti			1	50.642	ug/l	2.46	7,293.38	5.991E-02	Pulse	0.50	3
Na			1	5022.270	ug/l	1.08	4,630,463.67	3.803E+01	Analog	1.00	3
Mg			1	5053.643	ug/l	0.74	2,128,129.33	1.748E+01	Pulse	1.00	3
K			1	5119.685	ug/l	0.60	1,583,303.58	1.300E+01	Pulse	1.00	3
V			1	49.872	ug/l	0.41	278,288.92	2.286E+00	Pulse	0.50	3
Mn			1	50.912	ug/l	0.88	171,933.47	1.858E+00	Pulse	0.50	3
Fe			1	5063.180	ug/l	0.87	29,549,776.67	3.193E+02	Analog	0.50	3
Co			1	51.228	ug/l	0.71	674,744.44	7.291E+00	Pulse	0.50	3
Ni			1	51.117	ug/l	1.04	186,674.76	2.017E+00	Pulse	0.50	3
Cu			1	52.196	ug/l	1.04	542,425.33	5.861E+00	Pulse	0.50	3
Zn			1	52.361	ug/l	1.46	76,526.49	5.437E-01	Pulse	1.00	3
Cd			1	50.083	ug/l	1.56	106,385.25	7.558E-01	Pulse	0.50	3
Al			1	5020.988	ug/l	0.63	631,871.46	5.190E+00	Pulse	1.00	3
Se			1	51.007	ug/l	2.43	2,461.94	1.749E-02	Pulse	3.00	3
Sb			1	49.894	ug/l	0.91	244,169.04	1.735E+00	Pulse	1.00	3
Se			1	51.022	ug/l	2.27	1,222.82	8.686E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,608,662.58	0.38	99.0	Pulse	0.50	3
1	Sc		121,751.34	0.66	102.1	Pulse	0.30	3
1	Ge		92,554.48	0.91	100.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		858,728.11	0.38	99.7	Pulse	0.30	3
1	Tb		3,311,305.67	0.71	101.3	Pulse	0.50	3
1	Lu		2,066,073.08	0.31	102.4	Pulse	0.50	3
1	Ge		140,776.35	1.17	100.3	Pulse	0.30	3
1	Te		4.67	107.85		Pulse	0.50	3
1	Li		467.79	6.47	93.1	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:35
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.878	ug/l	0.77	737,193.65	8.075E+00	Pulse	0.50	3
As			1	98.407	ug/l	0.33	75,037.57	8.219E-01	Pulse	1.00	3
Mo			1	97.589	ug/l	1.26	436,050.01	3.156E+00	Pulse	0.50	3
Pb			1	97.850	ug/l	0.75	2,467,766.50	9.635E-01	Pulse	1.00	3
Be			1	98.325	ug/l	0.45	3,681.17	3.074E-02	Pulse	2.00	3
Ag			1	99.475	ug/l	0.49	1,588,488.13	1.150E+01	Pulse	0.50	3
Ba			1	97.989	ug/l	0.56	147,439.50	1.746E-01	Pulse	0.50	3
Tl			1	100.590	ug/l	0.48	3,646,021.17	1.424E+00	Pulse	0.50	3
Sn			1	98.223	ug/l	0.55	374,670.85	4.436E-01	Pulse	0.30	3
Sr			1	98.475	ug/l	1.34	334,354.99	3.959E-01	Pulse	0.50	3
[Pb]			1	97.992	ug/l	0.42	1,159,565.29	4.527E-01	Pulse	0.50	3
Ca			1	9891.609	ug/l	0.70	165,049.50	1.378E+00	Pulse	0.50	3
Ti			1	99.138	ug/l	0.74	14,042.40	1.173E-01	Pulse	0.50	3
Na			1	9824.933	ug/l	0.67	8,904,052.00	7.435E+01	Analog	1.00	3
Mg			1	9816.036	ug/l	0.27	4,065,617.25	3.395E+01	Pulse	1.00	3
K			1	9989.388	ug/l	0.61	3,025,895.58	2.527E+01	Pulse	1.00	3
V			1	98.247	ug/l	0.25	538,973.90	4.500E+00	Pulse	0.50	3
Mn			1	99.029	ug/l	0.27	329,767.61	3.612E+00	Pulse	0.50	3
Fe			1	9869.867	ug/l	0.26	56,814,645.33	6.223E+02	Analog	0.50	3
Co			1	99.456	ug/l	0.67	1,292,126.79	1.415E+01	Pulse	0.50	3
Ni			1	99.523	ug/l	1.03	358,247.98	3.924E+00	Pulse	0.50	3
Cu			1	98.887	ug/l	0.44	998,060.90	1.093E+01	Pulse	0.50	3
Zn			1	97.635	ug/l	0.60	138,375.13	1.002E+00	Pulse	1.00	3
Cd			1	98.763	ug/l	0.83	205,908.30	1.490E+00	Pulse	0.50	3
Al			1	9822.952	ug/l	0.53	1,215,929.87	1.015E+01	Pulse	1.00	3
Se			1	99.203	ug/l	1.56	4,695.13	3.398E-02	Pulse	3.00	3
Sb			1	98.400	ug/l	0.98	472,570.82	3.421E+00	Pulse	1.00	3
Se			1	99.240	ug/l	2.06	2,318.59	1.678E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,561,305.25	0.35	97.2	Pulse	0.50	3
1	Sc		119,760.78	0.06	100.5	Pulse	0.30	3
1	Ge		91,295.10	0.32	98.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		844,662.05	0.46	98.1	Pulse	0.30	3
1	Tb		3,252,300.83	0.84	99.5	Pulse	0.50	3
1	Lu		2,034,962.59	0.14	100.8	Pulse	0.50	3
1	Ge		138,160.35	1.00	98.5	Pulse	0.30	3
1	Te		4.67	89.21		Pulse	0.50	3
1	Li		416.67	13.88	83.0	Pulse	0.30	3

Quantitation Report

File Name 009CALS.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:39
Sample Name CALSTD-7
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	200.368	ug/l	0.84	1,432,362.62	1.636E+01	Pulse	0.50	3
As			1	200.601	ug/l	0.91	146,700.45	1.675E+00	Pulse	1.00	3
Mo			1	201.385	ug/l	1.40	858,248.29	6.513E+00	Pulse	0.50	3
Pb			1	201.121	ug/l	0.33	4,800,338.50	1.979E+00	Pulse	1.00	3
Be			1	200.866	ug/l	0.74	7,163.10	6.279E-02	Pulse	2.00	3
Ag			1	148.191	ug/l	1.42	2,257,023.00	1.713E+01	Pulse	0.50	3
Ba			1	200.955	ug/l	0.79	289,868.95	3.580E-01	Pulse	0.50	3
Tl			1	199.368	ug/l	0.53	6,842,545.00	2.821E+00	Analog	0.50	3
Sn			1	200.808	ug/l	0.48	734,148.91	9.066E-01	Pulse	0.30	3
Sr			1	200.685	ug/l	0.28	652,970.46	8.064E-01	Pulse	0.50	3
[Pb]			1	200.930	ug/l	0.63	2,250,203.92	9.278E-01	Pulse	0.50	3
Ca			1	20037.652	ug/l	1.02	318,456.92	2.791E+00	Pulse	0.50	3
Ti			1	200.268	ug/l	2.61	27,015.93	2.368E-01	Pulse	0.50	3
Na			1	20080.832	ug/l	0.62	17,328,906.67	1.519E+02	Analog	1.00	3
Mg			1	20077.225	ug/l	0.94	7,920,647.33	6.943E+01	Analog	1.00	3
K			1	19973.835	ug/l	0.98	5,750,492.50	5.041E+01	Analog	1.00	3
V			1	200.912	ug/l	1.02	1,049,597.65	9.201E+00	Pulse	0.50	3
Mn			1	200.244	ug/l	1.10	639,434.31	7.302E+00	Pulse	0.50	3
Fe			1	20048.231	ug/l	1.08	110,681,330.67	1.264E+03	Analog	0.50	3
Co			1	199.951	ug/l	1.32	2,491,529.50	2.845E+01	Pulse	0.50	3
Ni			1	199.928	ug/l	0.98	690,008.41	7.880E+00	Pulse	0.50	3
Cu			1	199.958	ug/l	1.34	1,918,492.96	2.191E+01	Pulse	0.50	3
Zn			1	200.442	ug/l	0.97	269,011.54	2.041E+00	Pulse	1.00	3
Cd			1	200.592	ug/l	0.98	398,895.78	3.027E+00	Pulse	0.50	3
Al			1	20082.048	ug/l	0.68	2,367,938.50	2.076E+01	Pulse	1.00	3
Se			1	200.158	ug/l	1.20	9,030.80	6.853E-02	Pulse	3.00	3
Sb			1	200.832	ug/l	1.09	919,959.52	6.981E+00	Pulse	1.00	3
Se			1	200.137	ug/l	2.69	4,444.19	3.373E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,425,263.50	0.26	92.1	Pulse	0.50	3
1	Sc		114,089.27	1.33	95.7	Pulse	0.30	3
1	Ge		87,574.57	1.62	94.8	Pulse	0.30	3
1	In		809,773.11	0.89	94.0	Pulse	0.30	3
1	Tb		3,160,634.17	0.79	96.7	Pulse	0.50	3
1	Lu		1,966,936.71	0.50	97.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		131,787.24	1.48	93.9	Pulse	0.30	3
1	Te		12.67	50.76		Pulse	0.50	3
1	Li		375.56	18.82	74.8	Pulse	0.30	3

Quantitation Report

File Name 010HSAG.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:43
Sample Name HSTD (Ag)
Sample Type HSTD _Ag
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.844	ug/l	0.88	730,478.81	8.317E+00	Pulse	0.50	3
As			1	101.585	ug/l	0.39	74,521.82	8.485E-01	Pulse	1.00	3
Mo			1	100.683	ug/l	0.99	436,866.16	3.256E+00	Pulse	0.50	3
Pb			1	100.941	ug/l	0.82	2,479,270.25	9.939E-01	Pulse	1.00	3
Be			1	102.322	ug/l	0.98	3,700.51	3.199E-02	Pulse	2.00	3
Ag			1	102.614	ug/l	0.54	1,591,166.21	1.186E+01	Pulse	0.50	3
Ba			1	101.527	ug/l	1.33	147,447.31	1.809E-01	Pulse	0.50	3
Tl			1	104.123	ug/l	0.97	3,675,531.08	1.474E+00	Pulse	0.50	3
Sn			1	100.889	ug/l	0.50	371,449.79	4.556E-01	Pulse	0.30	3
Sr			1	99.598	ug/l	0.46	326,412.25	4.004E-01	Pulse	0.50	3
[Pb]			1	101.585	ug/l	1.39	1,170,637.67	4.693E-01	Pulse	0.50	3
Ca			1	10135.207	ug/l	1.15	163,360.44	1.412E+00	Pulse	0.50	3
Ti			1	101.284	ug/l	3.51	13,856.27	1.198E-01	Pulse	0.50	3
Na			1	10100.199	ug/l	1.03	8,842,035.00	7.643E+01	Analog	1.00	3
Mg			1	10086.804	ug/l	1.30	4,035,593.92	3.488E+01	Pulse	1.00	3
K			1	10196.701	ug/l	1.02	2,983,385.17	2.579E+01	Pulse	1.00	3
V			1	101.208	ug/l	1.27	536,318.36	4.636E+00	Pulse	0.50	3
Mn			1	101.633	ug/l	0.49	325,588.53	3.707E+00	Pulse	0.50	3
Fe			1	10228.929	ug/l	0.96	56,645,344.00	6.450E+02	Analog	0.50	3
Co			1	102.185	ug/l	1.02	1,277,248.62	1.454E+01	Pulse	0.50	3
Ni			1	102.940	ug/l	0.59	356,471.93	4.059E+00	Pulse	0.50	3
Cu			1	102.223	ug/l	1.21	991,985.04	1.129E+01	Pulse	0.50	3
Zn			1	99.652	ug/l	1.04	137,100.46	1.022E+00	Pulse	1.00	3
Cd			1	101.118	ug/l	1.39	204,715.16	1.526E+00	Pulse	0.50	3
Al			1	10055.861	ug/l	1.45	1,202,393.16	1.039E+01	Pulse	1.00	3
Se			1	99.768	ug/l	0.61	4,584.99	3.418E-02	Pulse	3.00	3
Sb			1	100.805	ug/l	1.29	470,106.75	3.504E+00	Pulse	1.00	3
Se			1	101.614	ug/l	1.36	2,305.03	1.718E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,494,488.17	0.55	94.7	Pulse	0.50	3
1	Sc		115,697.29	1.16	97.1	Pulse	0.30	3
1	Ge		87,832.44	1.02	95.1	Pulse	0.30	3
1	In		815,266.41	0.72	94.7	Pulse	0.30	3
1	Tb		3,180,218.58	0.67	97.3	Pulse	0.50	3
1	Lu		1,991,636.54	0.52	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		134,155.62	0.73	95.6	Pulse	0.30	3
1	Te		4.67	24.74		Pulse	0.50	3
1	Li		441.12	7.02	87.8	Pulse	0.30	3

Quantitation Report

File Name	011HSTD.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 10:47
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.228	ug/l	0.78	1,387,348.37	1.618E+01	Pulse	0.50	3
As			1	198.364	ug/l	0.39	142,028.33	1.657E+00	Pulse	1.00	3
Mo			1	198.272	ug/l	1.25	833,167.17	6.413E+00	Pulse	0.50	3
Pb			1	198.952	ug/l	0.40	4,690,874.33	1.958E+00	Pulse	1.00	3
Be			1	198.705	ug/l	1.83	6,979.86	6.211E-02	Pulse	2.00	3
Ag			1	145.159	ug/l	1.48	2,179,889.00	1.678E+01	Pulse	0.50	3
Ba			1	198.955	ug/l	1.83	281,075.94	3.544E-01	Pulse	0.50	3
Tl			1	199.208	ug/l	1.07	6,753,396.33	2.819E+00	Analog	0.50	3
Sn			1	200.074	ug/l	1.58	716,409.76	9.033E-01	Pulse	0.30	3
Sr			1	199.162	ug/l	1.26	634,683.23	8.003E-01	Pulse	0.50	3
[Pb]			1	199.243	ug/l	1.29	2,204,115.25	9.200E-01	Pulse	0.50	3
Ca			1	19814.350	ug/l	0.76	310,198.91	2.760E+00	Pulse	0.50	3
Ti			1	198.198	ug/l	0.75	26,342.34	2.344E-01	Pulse	0.50	3
Na			1	19877.837	ug/l	0.64	16,897,640.67	1.504E+02	Analog	1.00	3
Mg			1	19829.751	ug/l	1.15	7,706,072.00	6.857E+01	Analog	1.00	3
K			1	19779.461	ug/l	0.62	5,609,572.00	4.992E+01	Analog	1.00	3
V			1	198.929	ug/l	0.56	1,023,755.67	9.110E+00	Pulse	0.50	3
Mn			1	199.109	ug/l	0.62	622,510.08	7.261E+00	Pulse	0.50	3
Fe			1	20007.583	ug/l	0.89	108,143,597.33	1.261E+03	Analog	0.50	3
Co			1	200.116	ug/l	0.67	2,441,448.92	2.848E+01	Pulse	0.50	3
Ni			1	198.744	ug/l	0.52	671,550.62	7.833E+00	Pulse	0.50	3
Cu			1	197.580	ug/l	0.91	1,856,223.25	2.165E+01	Pulse	0.50	3
Zn			1	195.191	ug/l	1.22	258,339.79	1.988E+00	Pulse	1.00	3
Cd			1	198.065	ug/l	1.11	388,346.37	2.989E+00	Pulse	0.50	3
Al			1	19775.955	ug/l	0.89	2,296,975.33	2.044E+01	Pulse	1.00	3
Se			1	196.413	ug/l	1.80	8,737.22	6.725E-02	Pulse	3.00	3
Sb			1	198.853	ug/l	0.97	898,169.32	6.913E+00	Pulse	1.00	3
Se			1	198.283	ug/l	1.34	4,341.83	3.342E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,395,750.92	0.93	90.9	Pulse	0.50	3
1	Sc		112,382.86	0.87	94.3	Pulse	0.30	3
1	Ge		85,735.29	0.94	92.8	Pulse	0.30	3
1	In		793,144.79	0.82	92.1	Pulse	0.30	3
1	Tb		3,116,677.17	0.36	95.3	Pulse	0.50	3
1	Lu		1,948,553.83	0.36	96.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,938.01	1.13	92.6	Pulse	0.30	3
1	Te		14.67	62.98		Pulse	0.50	3
1	Li		434.45	10.64	86.5	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:51
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.522	ug/l	1.38	726,925.87	8.372E+00	Pulse	0.50	3
As			1	103.967	ug/l	1.00	75,395.65	8.684E-01	Pulse	1.00	3
Mo			1	103.536	ug/l	0.79	437,354.42	3.349E+00	Pulse	0.50	3
Pb			1	103.595	ug/l	0.80	2,507,220.58	1.020E+00	Pulse	1.00	3
Be			1	105.124	ug/l	2.18	3,737.01	3.286E-02	Pulse	2.00	3
Ag			1	52.316	ug/l	0.95	789,748.65	6.047E+00	Pulse	0.50	3
Ba			1	103.745	ug/l	0.70	148,752.23	1.848E-01	Pulse	0.50	3
Tl			1	105.338	ug/l	0.75	3,664,162.50	1.491E+00	Pulse	0.50	3
Sn			1	102.436	ug/l	0.35	372,348.28	4.626E-01	Pulse	0.30	3
Sr			1	101.866	ug/l	0.22	329,592.87	4.095E-01	Pulse	0.50	3
[Pb]			1	103.415	ug/l	0.71	1,174,303.58	4.777E-01	Pulse	0.50	3
Ca			1	9938.699	ug/l	1.08	157,467.83	1.385E+00	Pulse	0.50	3
Ti			1	102.690	ug/l	1.68	13,812.90	1.215E-01	Pulse	0.50	3
Na			1	10260.297	ug/l	0.94	8,829,280.00	7.764E+01	Analog	1.00	3
Mg			1	10267.017	ug/l	0.81	4,037,916.75	3.551E+01	Pulse	1.00	3
K			1	9963.412	ug/l	0.52	2,865,928.17	2.520E+01	Pulse	1.00	3
V			1	102.020	ug/l	0.74	531,439.96	4.673E+00	Pulse	0.50	3
Mn			1	102.547	ug/l	1.84	324,740.93	3.740E+00	Pulse	0.50	3
Fe			1	10086.657	ug/l	2.08	55,215,828.00	6.360E+02	Analog	0.50	3
Co			1	103.644	ug/l	1.98	1,280,586.87	1.475E+01	Pulse	0.50	3
Ni			1	104.061	ug/l	1.52	356,230.88	4.103E+00	Pulse	0.50	3
Cu			1	102.769	ug/l	1.80	985,759.31	1.135E+01	Pulse	0.50	3
Zn			1	101.776	ug/l	0.40	136,281.11	1.043E+00	Pulse	1.00	3
Cd			1	103.855	ug/l	0.99	204,685.23	1.567E+00	Pulse	0.50	3
Al			1	9831.202	ug/l	0.46	1,155,629.46	1.016E+01	Pulse	1.00	3
Se			1	105.016	ug/l	1.18	4,698.36	3.597E-02	Pulse	3.00	3
Sb			1	102.910	ug/l	0.80	467,227.05	3.577E+00	Pulse	1.00	3
Se			1	106.173	ug/l	0.43	2,344.15	1.795E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,458,030.58	0.76	93.3	Pulse	0.50	3
1	Sc		113,728.34	1.22	95.4	Pulse	0.30	3
1	Ge		86,832.42	1.12	94.0	Pulse	0.30	3
1	In		804,907.19	0.42	93.5	Pulse	0.30	3
1	Tb		3,147,164.58	1.16	96.3	Pulse	0.50	3
1	Lu		1,961,049.00	0.42	97.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		130,603.42	0.38	93.1	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		495.56	5.64	98.7	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 10:54
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.073	ug/l	12.16	1,064.03	1.209E-02	Pulse	0.50	3
As			1	0.034	ug/l	8.78	38.67	4.393E-04	Pulse	1.00	3
Mo			1	0.183	ug/l	21.07	810.02	6.113E-03	Pulse	0.50	3
Pb			1	0.080	ug/l	14.07	4,526.27	1.783E-03	Pulse	1.00	3
Be			1	0.071	ug/l	53.00	3.00	2.641E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	12.20	313.33	2.364E-03	Pulse	0.50	3
Ba			1	0.095	ug/l	47.40	146.00	1.786E-04	Pulse	0.50	3
Tl			1	0.051	ug/l	16.15	1,901.45	7.493E-04	Pulse	0.50	3
Sn			1	0.224	ug/l	21.30	1,000.04	1.219E-03	Pulse	0.30	3
Sr			1	0.043	ug/l	25.63	429.34	5.237E-04	Pulse	0.50	3
[Pb]			1	0.080	ug/l	15.25	2,083.47	8.207E-04	Pulse	0.50	3
Ca			1	17.155	ug/l	19.09	315.33	2.765E-03	Pulse	0.50	3
Ti			1	0.066	ug/l	73.52	11.33	9.984E-05	Pulse	0.50	3
Na			1	7.099	ug/l	12.34	12,784.42	1.123E-01	Pulse	1.00	3
Mg			1	4.412	ug/l	12.53	2,281.13	2.004E-02	Pulse	1.00	3
K			1	12.915	ug/l	11.12	16,680.03	1.464E-01	Pulse	1.00	3
V			1	0.007	ug/l	114.72	318.67	2.800E-03	Pulse	0.50	3
Mn			1	0.188	ug/l	4.69	730.69	8.300E-03	Pulse	0.50	3
Fe			1	4.493	ug/l	6.41	32,339.56	3.673E-01	Pulse	0.50	3
Co			1	0.032	ug/l	4.49	464.68	5.277E-03	Pulse	0.50	3
Ni			1	0.392	ug/l	7.45	1,637.41	1.860E-02	Pulse	0.50	3
Cu			1	0.707	ug/l	2.89	23,638.46	2.685E-01	Pulse	0.50	3
Zn			1	2.152	ug/l	1.61	4,744.59	3.581E-02	Pulse	1.00	3
Cd			1	0.027	ug/l	30.03	57.33	4.330E-04	Pulse	0.50	3
Al			1	7.246	ug/l	7.26	921.69	8.095E-03	Pulse	1.00	3
Se			1	0.063	ug/l	45.95	7.67	5.783E-05	Pulse	3.00	3
Sb			1	0.054	ug/l	5.70	274.00	2.067E-03	Pulse	1.00	3
Se			1	-0.194	ug/l	-18.75	11.22	8.468E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,538,464.50	0.74	96.4	Pulse	0.50	3
1	Sc		113,915.96	1.22	95.6	Pulse	0.30	3
1	Ge		88,028.83	1.05	95.3	Pulse	0.30	3
1	In		819,755.42	1.02	95.2	Pulse	0.30	3
1	Tb		3,135,647.33	0.54	95.9	Pulse	0.50	3
1	Lu		1,934,177.04	0.24	95.8	Pulse	0.50	3
1	Ge		132,509.97	0.41	94.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		432.23	7.88	86.1	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 10:58
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.078	ug/l	4.25	8,383.16	9.410E-02	Pulse	0.50	3
As			1	1.007	ug/l	6.47	763.69	8.566E-03	Pulse	1.00	3
Mo			1	1.099	ug/l	1.28	4,777.96	3.571E-02	Pulse	0.50	3
Pb			1	1.041	ug/l	0.42	28,798.50	1.124E-02	Pulse	1.00	3
Be			1	1.113	ug/l	15.11	40.83	3.522E-04	Pulse	2.00	3
Ag			1	1.079	ug/l	1.37	16,698.17	1.248E-01	Pulse	0.50	3
Ba			1	1.033	ug/l	7.33	1,542.74	1.849E-03	Pulse	0.50	3
Tl			1	1.065	ug/l	0.37	38,679.51	1.510E-02	Pulse	0.50	3
Sn			1	1.020	ug/l	0.95	4,016.03	4.813E-03	Pulse	0.30	3
Sr			1	1.013	ug/l	0.61	3,687.71	4.420E-03	Pulse	0.50	3
[Pb]			1	1.053	ug/l	0.48	13,604.10	5.310E-03	Pulse	0.50	3
Ca			1	114.267	ug/l	2.94	1,892.10	1.629E-02	Pulse	0.50	3
Ti			1	1.005	ug/l	8.55	140.67	1.211E-03	Pulse	0.50	3
Na			1	111.555	ug/l	2.35	104,719.99	9.021E-01	Pulse	1.00	3
Mg			1	109.375	ug/l	2.50	44,458.06	3.830E-01	Pulse	1.00	3
K			1	111.734	ug/l	3.25	45,883.99	3.953E-01	Pulse	1.00	3
V			1	1.023	ug/l	4.78	5,725.53	4.933E-02	Pulse	0.50	3
Mn			1	1.160	ug/l	1.58	3,897.74	4.374E-02	Pulse	0.50	3
Fe			1	108.747	ug/l	2.61	618,364.42	6.940E+00	Pulse	0.50	3
Co			1	1.071	ug/l	0.41	13,646.17	1.531E-01	Pulse	0.50	3
Ni			1	1.288	ug/l	2.48	4,805.95	5.393E-02	Pulse	0.50	3
Cu			1	1.576	ug/l	3.26	32,339.02	3.629E-01	Pulse	0.50	3
Zn			1	3.719	ug/l	1.82	6,910.25	5.166E-02	Pulse	1.00	3
Cd			1	1.088	ug/l	4.31	2,200.81	1.645E-02	Pulse	0.50	3
Al			1	108.845	ug/l	2.17	13,129.98	1.131E-01	Pulse	1.00	3
Se			1	1.140	ug/l	20.04	57.00	4.264E-04	Pulse	3.00	3
Sb			1	1.072	ug/l	2.96	5,010.36	3.745E-02	Pulse	1.00	3
Se			1	0.871	ug/l	23.81	35.22	2.636E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,561,926.25	0.93	97.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		116,108.47	1.47	97.4	Pulse	0.30	3
1	Ge		89,130.53	1.94	96.5	Pulse	0.30	3
1	In		834,363.98	0.62	96.9	Pulse	0.30	3
1	Tb		3,182,731.33	0.93	97.4	Pulse	0.50	3
1	Lu		1,975,593.96	1.05	97.9	Pulse	0.50	3
1	Ge		133,782.83	1.46	95.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		477.79	20.70	95.1	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:02
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.191	ug/l	3.56	15,302.68	1.849E-01	Pulse	0.50	3
As			1	0.107	ug/l	6.88	86.67	1.047E-03	Pulse	1.00	3
Mo			1	2126.930	ug/l	0.97	8,451,798.00	6.879E+01	Analog	0.50	3
Pb			1	0.079	ug/l	21.54	3,858.78	1.773E-03	Pulse	1.00	3
Be			1	0.030	ug/l	126.74	1.50	1.365E-05	Pulse	2.00	3
Ag			1	0.299	ug/l	3.74	4,259.17	3.466E-02	Pulse	0.50	3
Ba			1	0.373	ug/l	6.53	499.34	6.734E-04	Pulse	0.50	3
Tl			1	0.012	ug/l	6.25	443.34	2.038E-04	Pulse	0.50	3
Sn			1	0.130	ug/l	9.80	591.12	7.973E-04	Pulse	0.30	3
Sr			1	1.182	ug/l	1.45	3,781.73	5.098E-03	Pulse	0.50	3
[Pb]			1	0.086	ug/l	22.11	1,853.44	8.516E-04	Pulse	0.50	3
Ca			1	98421.200	ug/l	0.52	1,500,509.67	1.371E+01	Pulse	0.50	3
Ti			1	2008.196	ug/l	1.08	259,909.88	2.375E+00	Pulse	0.50	3
Na			1	103255.278	ug/l	0.20	85,462,920.00	7.808E+02	Analog	1.00	3
Mg			1	101328.793	ug/l	0.38	38,351,352.00	3.504E+02	Analog	1.00	3
K			1	104299.520	ug/l	0.07	28,756,974.67	2.627E+02	Analog	1.00	3
V			1	0.022	ug/l	19.31	384.67	3.514E-03	Pulse	0.50	3
Mn			1	1.151	ug/l	1.17	3,591.02	4.339E-02	Pulse	0.50	3
Fe			1	103499.898	ug/l	0.28	539,962,560.00	6.525E+03	Analog	0.50	3
Co			1	0.124	ug/l	0.75	1,512.73	1.828E-02	Pulse	0.50	3
Ni			1	0.278	ug/l	6.22	1,170.04	1.414E-02	Pulse	0.50	3
Cu			1	-0.977	ug/l	-1.00	7,088.66	8.567E-02	Pulse	0.50	3
Zn			1	2.328	ug/l	2.15	4,619.22	3.760E-02	Pulse	1.00	3
Cd			1	0.400	ug/l	8.17	745.35	6.066E-03	Pulse	0.50	3
Al			1	98985.457	ug/l	0.10	11,197,861.33	1.023E+02	Analog	1.00	3
Se			1	0.300	ug/l	36.34	17.11	1.393E-04	Pulse	3.00	3
Sb			1	0.083	ug/l	7.08	374.67	3.049E-03	Pulse	1.00	3
Se			1	0.222	ug/l	47.43	19.00	1.546E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,175,660.25	0.55	82.6	Pulse	0.50	3
1	Sc		109,455.38	0.87	91.8	Pulse	0.30	3
1	Ge		82,751.21	0.69	89.6	Pulse	0.30	3
1	In		741,772.31	0.92	86.1	Pulse	0.30	3
1	Tb		2,949,959.92	0.56	90.2	Pulse	0.50	3
1	Lu		1,850,120.17	0.52	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		122,867.08	0.15	87.6	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		430.01	3.88	85.6	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 11:06
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.400	ug/l	0.07	152,792.84	1.834E+00	Pulse	0.50	3
As			1	20.235	ug/l	1.18	14,090.19	1.691E-01	Pulse	1.00	3
Mo			1	2112.462	ug/l	1.41	8,374,518.67	6.832E+01	Analog	0.50	3
Pb			1	0.073	ug/l	3.63	3,736.08	1.715E-03	Pulse	1.00	3
Be			1	0.026	ug/l	65.88	1.33	1.231E-05	Pulse	2.00	3
Ag			1	19.401	ug/l	1.14	274,899.27	2.243E+00	Pulse	0.50	3
Ba			1	0.435	ug/l	0.57	583.34	7.842E-04	Pulse	0.50	3
Tl			1	0.007	ug/l	6.67	276.00	1.267E-04	Pulse	0.50	3
Sn			1	0.071	ug/l	29.00	394.45	5.301E-04	Pulse	0.30	3
Sr			1	1.143	ug/l	3.84	3,675.71	4.941E-03	Pulse	0.50	3
[Pb]			1	0.078	ug/l	12.19	1,773.44	8.140E-04	Pulse	0.50	3
Ca			1	96218.558	ug/l	0.73	1,452,113.91	1.340E+01	Pulse	0.50	3
Ti			1	1971.794	ug/l	0.87	252,632.38	2.332E+00	Pulse	0.50	3
Na			1	101732.914	ug/l	0.74	83,350,192.00	7.693E+02	Analog	1.00	3
Mg			1	99957.223	ug/l	0.63	37,449,676.00	3.456E+02	Analog	1.00	3
K			1	102689.140	ug/l	0.08	28,026,842.00	2.587E+02	Analog	1.00	3
V			1	0.016	ug/l	36.19	348.00	3.212E-03	Pulse	0.50	3
Mn			1	21.126	ug/l	0.38	64,288.95	7.717E-01	Pulse	0.50	3
Fe			1	100776.004	ug/l	0.56	529,266,581.33	6.353E+03	Analog	0.50	3
Co			1	20.153	ug/l	0.51	238,976.27	2.869E+00	Pulse	0.50	3
Ni			1	19.758	ug/l	0.30	65,110.17	7.816E-01	Pulse	0.50	3
Cu			1	18.397	ug/l	0.58	182,429.80	2.190E+00	Pulse	0.50	3
Zn			1	20.462	ug/l	1.85	27,089.63	2.210E-01	Pulse	1.00	3
Cd			1	20.048	ug/l	1.14	37,088.38	3.026E-01	Pulse	0.50	3
Al			1	96557.837	ug/l	0.55	10,812,678.67	9.980E+01	Analog	1.00	3
Se			1	0.204	ug/l	8.38	13.00	1.061E-04	Pulse	3.00	3
Sb			1	0.064	ug/l	3.12	294.00	2.398E-03	Pulse	1.00	3
Se			1	0.187	ug/l	69.08	18.22	1.486E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,178,314.67	0.62	82.7	Pulse	0.50	3
1	Sc		108,348.31	0.50	90.9	Pulse	0.30	3
1	Ge		83,306.71	0.74	90.2	Pulse	0.30	3
1	In		743,843.43	0.40	86.4	Pulse	0.30	3
1	Tb		2,965,917.42	0.14	90.7	Pulse	0.50	3
1	Lu		1,847,283.00	0.43	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		122,586.45	1.13	87.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		441.12	5.57	87.8	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 11:10
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.423	ug/l	0.69	355,651.72	4.121E+00	Pulse	0.50	3
As			1	50.026	ug/l	0.42	36,067.52	4.179E-01	Pulse	1.00	3
Mo			1	51.598	ug/l	0.83	219,348.54	1.669E+00	Pulse	0.50	3
Pb			1	50.052	ug/l	0.60	1,246,283.83	4.933E-01	Pulse	1.00	3
Be			1	51.647	ug/l	2.96	1,779.41	1.615E-02	Pulse	2.00	3
Ag			1	52.601	ug/l	0.87	799,086.42	6.080E+00	Pulse	0.50	3
Ba			1	50.437	ug/l	1.17	72,115.34	8.985E-02	Pulse	0.50	3
Tl			1	51.209	ug/l	1.00	1,830,806.58	7.247E-01	Pulse	0.50	3
Sn			1	50.731	ug/l	0.68	183,954.76	2.292E-01	Pulse	0.30	3
Sr			1	49.416	ug/l	1.02	159,575.35	1.988E-01	Pulse	0.50	3
[Pb]			1	50.017	ug/l	0.94	584,325.63	2.313E-01	Pulse	0.50	3
Ca			1	5030.678	ug/l	0.40	77,261.55	7.011E-01	Pulse	0.50	3
Ti			1	50.554	ug/l	2.15	6,591.13	5.980E-02	Pulse	0.50	3
Na			1	5115.501	ug/l	0.51	4,269,054.33	3.874E+01	Pulse	1.00	3
Mg			1	5046.717	ug/l	0.32	1,923,656.38	1.746E+01	Pulse	1.00	3
K			1	5090.899	ug/l	0.34	1,425,157.79	1.293E+01	Pulse	1.00	3
V			1	50.784	ug/l	0.43	256,493.79	2.327E+00	Pulse	0.50	3
Mn			1	49.646	ug/l	0.89	156,348.26	1.812E+00	Pulse	0.50	3
Fe			1	5133.119	ug/l	1.24	27,936,577.33	3.237E+02	Analog	0.50	3
Co			1	51.594	ug/l	1.30	633,709.35	7.343E+00	Pulse	0.50	3
Ni			1	51.867	ug/l	0.83	176,629.93	2.047E+00	Pulse	0.50	3
Cu			1	53.100	ug/l	1.59	514,303.13	5.959E+00	Pulse	0.50	3
Zn			1	52.041	ug/l	0.95	71,028.96	5.404E-01	Pulse	1.00	3
Cd			1	51.258	ug/l	1.48	101,667.65	7.735E-01	Pulse	0.50	3
Al			1	4915.472	ug/l	0.58	559,935.65	5.081E+00	Pulse	1.00	3
Se			1	48.585	ug/l	1.71	2,189.79	1.666E-02	Pulse	3.00	3
Sb			1	50.033	ug/l	0.51	228,605.49	1.739E+00	Pulse	1.00	3
Se			1	49.917	ug/l	3.27	1,117.26	8.501E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,526,258.67	0.69	95.9	Pulse	0.50	3
1	Sc		110,202.65	0.88	92.4	Pulse	0.30	3
1	Ge		86,305.46	0.31	93.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		802,580.56	0.24	93.2	Pulse	0.30	3
1	Tb		3,161,813.42	1.17	96.7	Pulse	0.50	3
1	Lu		1,936,313.66	0.65	95.9	Pulse	0.50	3
1	Ge		131,428.99	0.59	93.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		472.23	4.70	94.0	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:14
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	103.274	ug/l	1.24	727,471.65	8.434E+00	Pulse	0.50	3
As			1	103.731	ug/l	0.88	74,732.70	8.664E-01	Pulse	1.00	3
Mo			1	105.735	ug/l	0.45	444,853.30	3.420E+00	Pulse	0.50	3
Pb			1	103.841	ug/l	0.79	2,515,551.33	1.022E+00	Pulse	1.00	3
Be			1	105.266	ug/l	1.38	3,637.49	3.291E-02	Pulse	2.00	3
Ag			1	107.499	ug/l	0.33	1,616,310.46	1.243E+01	Pulse	0.50	3
Ba			1	103.131	ug/l	1.40	146,619.03	1.837E-01	Pulse	0.50	3
Tl			1	106.461	ug/l	0.45	3,706,813.75	1.507E+00	Pulse	0.50	3
Sn			1	101.184	ug/l	1.47	364,677.44	4.569E-01	Pulse	0.30	3
Sr			1	98.990	ug/l	1.14	317,581.82	3.979E-01	Pulse	0.50	3
[Pb]			1	103.937	ug/l	0.35	1,181,378.38	4.802E-01	Pulse	0.50	3
Ca			1	10332.289	ug/l	0.67	159,113.20	1.440E+00	Pulse	0.50	3
Ti			1	101.755	ug/l	2.06	13,301.87	1.203E-01	Pulse	0.50	3
Na			1	10431.372	ug/l	0.69	8,724,527.33	7.893E+01	Analog	1.00	3
Mg			1	10206.398	ug/l	0.89	3,901,413.08	3.530E+01	Pulse	1.00	3
K			1	10399.012	ug/l	0.39	2,906,684.67	2.630E+01	Pulse	1.00	3
V			1	104.669	ug/l	1.07	529,924.69	4.794E+00	Pulse	0.50	3
Mn			1	101.872	ug/l	1.41	320,500.77	3.716E+00	Pulse	0.50	3
Fe			1	10407.623	ug/l	1.35	56,602,360.00	6.562E+02	Analog	0.50	3
Co			1	104.468	ug/l	1.23	1,282,346.08	1.487E+01	Pulse	0.50	3
Ni			1	104.436	ug/l	1.51	355,175.71	4.118E+00	Pulse	0.50	3
Cu			1	104.280	ug/l	0.98	993,515.73	1.152E+01	Pulse	0.50	3
Zn			1	103.887	ug/l	0.17	138,517.01	1.065E+00	Pulse	1.00	3
Cd			1	105.128	ug/l	0.91	206,366.56	1.586E+00	Pulse	0.50	3
Al			1	9922.533	ug/l	1.19	1,133,559.13	1.026E+01	Pulse	1.00	3
Se			1	102.960	ug/l	0.32	4,588.11	3.527E-02	Pulse	3.00	3
Sb			1	103.430	ug/l	0.16	467,717.99	3.596E+00	Pulse	1.00	3
Se			1	103.425	ug/l	1.58	2,274.81	1.749E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,460,423.58	0.45	93.4	Pulse	0.50	3
1	Sc		110,532.47	0.63	92.7	Pulse	0.30	3
1	Ge		86,263.01	1.05	93.4	Pulse	0.30	3
1	In		798,101.83	0.35	92.7	Pulse	0.30	3
1	Tb		3,151,914.08	0.50	96.4	Pulse	0.50	3
1	Lu		1,932,899.29	0.80	95.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		130,083.32	0.60	92.7	Pulse	0.30	3
1	Te		5.33	43.30		Pulse	0.50	3
1	Li		380.01	4.39	75.7	Pulse	0.30	3

Quantitation Report

File Name 019_CCB.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:17
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.046	ug/l	8.84	852.69	9.860E-03	Pulse	0.50	3
As			1	0.020	ug/l	29.08	27.67	3.200E-04	Pulse	1.00	3
Mo			1	0.223	ug/l	26.49	976.03	7.388E-03	Pulse	0.50	3
Pb			1	0.029	ug/l	31.80	3,269.65	1.284E-03	Pulse	1.00	3
Be			1	0.029	ug/l	48.47	1.50	1.338E-05	Pulse	2.00	3
Ag			1	0.032	ug/l	17.37	506.68	3.840E-03	Pulse	0.50	3
Ba			1	0.027	ug/l	21.60	46.67	5.738E-05	Pulse	0.50	3
Tl			1	0.031	ug/l	15.79	1,204.71	4.732E-04	Pulse	0.50	3
Sn			1	0.132	ug/l	9.94	652.24	8.027E-04	Pulse	0.30	3
Sr			1	0.031	ug/l	19.95	386.01	4.753E-04	Pulse	0.50	3
[Pb]			1	0.033	ug/l	27.83	1,538.74	6.039E-04	Pulse	0.50	3
Ca			1	9.602	ug/l	9.22	192.00	1.713E-03	Pulse	0.50	3
Ti			1	0.092	ug/l	50.34	14.67	1.309E-04	Pulse	0.50	3
Na			1	8.978	ug/l	10.03	14,175.68	1.265E-01	Pulse	1.00	3
Mg			1	3.723	ug/l	13.73	1,978.77	1.766E-02	Pulse	1.00	3
K			1	5.277	ug/l	15.43	14,257.48	1.272E-01	Pulse	1.00	3
V			1	0.006	ug/l	246.48	310.67	2.772E-03	Pulse	0.50	3
Mn			1	0.041	ug/l	21.57	254.67	2.947E-03	Pulse	0.50	3
Fe			1	4.543	ug/l	11.09	32,031.09	3.705E-01	Pulse	0.50	3
Co			1	0.020	ug/l	8.93	300.67	3.477E-03	Pulse	0.50	3
Ni			1	0.031	ug/l	39.64	381.34	4.405E-03	Pulse	0.50	3
Cu			1	0.655	ug/l	10.16	22,740.07	2.629E-01	Pulse	0.50	3
Zn			1	1.316	ug/l	3.20	3,611.34	2.735E-02	Pulse	1.00	3
Cd			1	0.018	ug/l	18.61	38.67	2.930E-04	Pulse	0.50	3
Al			1	6.678	ug/l	10.66	841.35	7.508E-03	Pulse	1.00	3
Se			1	0.004	ug/l	1178.84	5.00	3.795E-05	Pulse	3.00	3
Sb			1	0.049	ug/l	3.06	247.33	1.873E-03	Pulse	1.00	3
Se			1	-0.097	ug/l	-97.34	13.33	1.010E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,547,940.83	0.87	96.7	Pulse	0.50	3
1	Sc		112,083.17	0.28	94.0	Pulse	0.30	3

Quantitation Report

1	Ge		86,513.07	1.58	93.7	Pulse	0.30	3
1	In		812,141.91	1.37	94.3	Pulse	0.30	3
1	Tb		3,141,366.17	0.70	96.1	Pulse	0.50	3
1	Lu		1,922,942.96	1.30	95.3	Pulse	0.50	3
1	Ge		132,035.53	0.73	94.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		465.56	4.60	92.7	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 11:21
Sample Name	MP40693-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.464	ug/l	7.47	2,098.12	2.506E-02	Pulse	0.50	3
As			1	0.067	ug/l	3.45	36.33	4.338E-04	Pulse	1.00	3
Mo			1	0.373	ug/l	26.46	796.69	6.211E-03	Pulse	0.50	3
Pb			1	0.024	ug/l	73.83	2,771.90	1.116E-03	Pulse	1.00	3
Be			1	-0.007	ug/l	-234.82	0.33	3.072E-06	Pulse	2.00	3
Ag			1	0.040	ug/l	0.76	307.33	2.403E-03	Pulse	0.50	3
Ba			1	0.013	ug/l	46.58	16.00	2.056E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	29.01	588.68	2.373E-04	Pulse	0.50	3
Sn			1	0.715	ug/l	6.94	1,418.95	1.822E-03	Pulse	0.30	3
Sr			1	0.018	ug/l	155.12	302.00	3.878E-04	Pulse	0.50	3
[Pb]			1	0.026	ug/l	84.04	1,273.39	5.127E-04	Pulse	0.50	3
Ca			1	14.002	ug/l	27.81	147.33	1.351E-03	Pulse	0.50	3
Ti			1	0.200	ug/l	9.76	15.33	1.408E-04	Pulse	0.50	3
Na			1	20.061	ug/l	6.13	14,641.34	1.344E-01	Pulse	1.00	3
Mg			1	2.562	ug/l	32.80	1,002.36	9.214E-03	Pulse	1.00	3
K			1	23.242	ug/l	9.69	15,593.81	1.432E-01	Pulse	1.00	3
V			1	0.207	ug/l	1.51	788.02	7.234E-03	Pulse	0.50	3
Mn			1	0.195	ug/l	22.47	418.67	5.002E-03	Pulse	0.50	3
Fe			1	8.627	ug/l	7.27	29,804.85	3.560E-01	Pulse	0.50	3
Co			1	0.013	ug/l	59.13	135.33	1.622E-03	Pulse	0.50	3
Ni			1	0.010	ug/l	184.53	283.33	3.379E-03	Pulse	0.50	3
Cu			1	1.871	ug/l	9.16	24,562.97	2.933E-01	Pulse	0.50	3
Zn			1	2.739	ug/l	3.24	3,567.00	2.790E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	91.77	15.33	1.210E-04	Pulse	0.50	3
Al			1	3.866	ug/l	23.05	283.33	2.604E-03	Pulse	1.00	3
Se			1	0.107	ug/l	75.56	7.00	5.480E-05	Pulse	3.00	3
Sb			1	0.093	ug/l	31.03	228.00	1.789E-03	Pulse	1.00	3
Se			1	-0.002	ug/l	-12604.29	15.00	1.171E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,485,074.75	0.92	94.3	Pulse	0.50	3
1	Sc		108,925.72	1.19	91.4	Pulse	0.30	3
1	Ge		83,770.19	1.90	90.7	Pulse	0.30	3
1	In		778,672.40	0.80	90.4	Pulse	0.30	3
1	Tb		3,061,414.67	1.23	93.6	Pulse	0.50	3
1	Lu		1,856,284.46	0.96	92.0	Pulse	0.50	3
1	Ge		127,887.63	1.84	91.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		478.90	8.25	95.4	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:25
Sample Name MP40693-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	221.115	ug/l	0.49	742,835.00	9.028E+00	Pulse	0.50	3
As			1	222.409	ug/l	0.58	76,420.61	9.288E-01	Pulse	1.00	3
Mo			1	222.087	ug/l	0.91	449,190.64	3.591E+00	Pulse	0.50	3
Pb			1	218.722	ug/l	0.24	2,542,103.33	1.077E+00	Pulse	1.00	3
Be			1	231.627	ug/l	1.78	3,916.38	3.620E-02	Pulse	2.00	3
Ag			1	106.534	ug/l	0.61	770,047.83	6.157E+00	Pulse	0.50	3
Ba			1	214.166	ug/l	1.29	144,183.97	1.908E-01	Pulse	0.50	3
Tl			1	216.379	ug/l	0.36	3,614,775.42	1.531E+00	Pulse	0.50	3
Sn			1	212.720	ug/l	0.86	363,040.40	4.803E-01	Pulse	0.30	3
Sr			1	209.756	ug/l	0.90	318,650.88	4.216E-01	Pulse	0.50	3
[Pb]			1	210.457	ug/l	0.37	1,147,705.33	4.861E-01	Pulse	0.50	3
Ca			1	19874.833	ug/l	1.24	149,771.36	1.385E+00	Pulse	0.50	3
Ti			1	206.749	ug/l	0.99	13,226.49	1.223E-01	Pulse	0.50	3
Na			1	20557.658	ug/l	1.08	8,414,023.50	7.778E+01	Analog	1.00	3
Mg			1	19812.555	ug/l	1.21	3,706,054.58	3.426E+01	Pulse	1.00	3
K			1	19896.765	ug/l	1.65	2,721,847.83	2.516E+01	Pulse	1.00	3
V			1	216.527	ug/l	1.48	536,426.65	4.959E+00	Pulse	0.50	3
Mn			1	212.701	ug/l	0.59	319,167.94	3.879E+00	Pulse	0.50	3
Fe			1	20580.323	ug/l	0.46	53,384,300.00	6.488E+02	Analog	0.50	3
Co			1	223.290	ug/l	0.68	1,307,279.29	1.589E+01	Pulse	0.50	3
Ni			1	221.770	ug/l	0.98	359,706.93	4.372E+00	Pulse	0.50	3
Cu			1	225.446	ug/l	0.54	1,023,157.92	1.244E+01	Pulse	0.50	3
Zn			1	206.205	ug/l	0.85	132,186.21	1.057E+00	Pulse	1.00	3
Cd			1	211.450	ug/l	0.41	199,543.84	1.595E+00	Pulse	0.50	3
Al			1	18580.087	ug/l	1.92	1,038,631.19	9.602E+00	Pulse	1.00	3
Se			1	196.852	ug/l	1.59	4,217.13	3.372E-02	Pulse	3.00	3
Sb			1	211.562	ug/l	0.63	459,915.45	3.677E+00	Pulse	1.00	3
Se			1	201.073	ug/l	2.56	2,126.34	1.700E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,360,939.58	0.66	89.6	Pulse	0.50	3
1	Sc		108,189.41	1.71	90.8	Pulse	0.30	3
1	Ge		82,280.24	0.27	89.1	Pulse	0.30	3
1	In		755,860.39	0.35	87.8	Pulse	0.30	3
1	Tb		3,027,792.50	0.51	92.6	Pulse	0.50	3
1	Lu		1,850,536.04	0.60	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		125,069.21	0.23	89.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		445.56	6.36	88.7	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:29
Sample Name FA95314-1F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.779	ug/l	5.42	3,125.59	3.792E-02	Pulse	0.50	3
As			1	0.190	ug/l	8.21	78.33	9.489E-04	Pulse	1.00	3
Mo			1	0.265	ug/l	18.10	554.01	4.462E-03	Pulse	0.50	3
Pb			1	0.170	ug/l	3.79	4,342.56	1.836E-03	Pulse	1.00	3
Be			1	0.134	ug/l	52.54	2.67	2.516E-05	Pulse	2.00	3
Ag			1	0.039	ug/l	10.62	292.00	2.352E-03	Pulse	0.50	3
Ba			1	14.183	ug/l	3.11	9,416.48	1.264E-02	Pulse	0.50	3
Tl			1	0.098	ug/l	2.66	1,719.43	7.269E-04	Pulse	0.50	3
Sn			1	0.614	ug/l	5.20	1,187.82	1.594E-03	Pulse	0.30	3
Sr			1	114.503	ug/l	1.17	171,562.60	2.303E-01	Pulse	0.50	3
[Pb]			1	0.184	ug/l	8.65	2,074.14	8.769E-04	Pulse	0.50	3
Ca			1	15952.899	ug/l	1.01	117,919.68	1.111E+00	Pulse	0.50	3
Ti			1	0.299	ug/l	139.42	21.33	1.994E-04	Pulse	0.50	3
Na			1	13026.146	ug/l	0.83	5,231,457.67	4.931E+01	Analog	1.00	3
Mg			1	4347.234	ug/l	1.00	797,972.58	7.521E+00	Pulse	1.00	3
K			1	1369.414	ug/l	1.73	194,997.71	1.838E+00	Pulse	1.00	3
V			1	0.312	ug/l	11.41	1,022.70	9.641E-03	Pulse	0.50	3
Mn			1	56.484	ug/l	2.09	85,033.23	1.031E+00	Pulse	0.50	3
Fe			1	56.760	ug/l	3.42	154,450.65	1.873E+00	Pulse	0.50	3
Co			1	0.281	ug/l	2.06	1,706.08	2.069E-02	Pulse	0.50	3
Ni			1	0.265	ug/l	1.05	692.68	8.397E-03	Pulse	0.50	3
Cu			1	1.471	ug/l	8.67	22,397.65	2.716E-01	Pulse	0.50	3
Zn			1	163.329	ug/l	16.02	104,310.37	8.401E-01	Pulse	1.00	3
Cd			1	0.165	ug/l	24.55	157.33	1.267E-03	Pulse	0.50	3
Al			1	9.120	ug/l	16.00	564.01	5.320E-03	Pulse	1.00	3
Se			1	0.640	ug/l	10.95	18.11	1.459E-04	Pulse	3.00	3
Sb			1	0.164	ug/l	9.09	376.34	3.032E-03	Pulse	1.00	3
Se			1	0.426	ug/l	40.78	19.00	1.530E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,365,497.00	0.75	89.8	Pulse	0.50	3
1	Sc		106,107.14	1.04	89.0	Pulse	0.30	3
1	Ge		82,483.29	1.92	89.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		745,009.74	0.75	86.5	Pulse	0.30	3
1	Tb		2,961,316.25	0.85	90.6	Pulse	0.50	3
1	Lu		1,796,064.00	0.76	89.0	Pulse	0.50	3
1	Ge		124,153.31	0.24	88.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		531.12	9.32	105.8	Pulse	0.30	3

Quantitation Report

File Name 023SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:32
Sample Name MP40693-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.656	ug/l	6.87	2,692.87	3.289E-02	Pulse	0.50	3
As			1	0.160	ug/l	32.55	67.33	8.253E-04	Pulse	1.00	3
Mo			1	0.165	ug/l	9.72	355.34	2.854E-03	Pulse	0.50	3
Pb			1	0.047	ug/l	15.33	2,903.25	1.229E-03	Pulse	1.00	3
Be			1	0.033	ug/l	89.61	1.00	9.333E-06	Pulse	2.00	3
Ag			1	0.023	ug/l	10.53	176.00	1.415E-03	Pulse	0.50	3
Ba			1	13.916	ug/l	0.84	9,241.72	1.240E-02	Pulse	0.50	3
Tl			1	0.036	ug/l	8.51	680.68	2.879E-04	Pulse	0.50	3
Sn			1	0.402	ug/l	6.27	831.14	1.115E-03	Pulse	0.30	3
Sr			1	109.701	ug/l	1.45	164,368.90	2.207E-01	Pulse	0.50	3
[Pb]			1	0.052	ug/l	35.36	1,351.39	5.720E-04	Pulse	0.50	3
Ca			1	15366.324	ug/l	1.14	114,474.87	1.071E+00	Pulse	0.50	3
Ti			1	0.236	ug/l	62.09	17.33	1.616E-04	Pulse	0.50	3
Na			1	12693.594	ug/l	0.22	5,137,881.50	4.805E+01	Analog	1.00	3
Mg			1	4209.363	ug/l	0.33	778,743.48	7.283E+00	Pulse	1.00	3
K			1	1328.287	ug/l	0.81	190,986.71	1.786E+00	Pulse	1.00	3
V			1	0.322	ug/l	1.15	1,055.36	9.870E-03	Pulse	0.50	3
Mn			1	55.440	ug/l	1.94	82,802.36	1.012E+00	Pulse	0.50	3
Fe			1	39.444	ug/l	2.49	108,603.74	1.327E+00	Pulse	0.50	3
Co			1	0.247	ug/l	8.45	1,497.40	1.830E-02	Pulse	0.50	3
Ni			1	0.230	ug/l	20.83	631.35	7.715E-03	Pulse	0.50	3
Cu			1	1.522	ug/l	4.87	22,449.71	2.744E-01	Pulse	0.50	3
Zn			1	26.472	ug/l	2.11	18,411.11	1.479E-01	Pulse	1.00	3
Cd			1	0.132	ug/l	1.77	127.33	1.023E-03	Pulse	0.50	3
Al			1	4.344	ug/l	11.62	305.00	2.851E-03	Pulse	1.00	3
Se			1	0.517	ug/l	24.50	15.56	1.249E-04	Pulse	3.00	3
Sb			1	0.126	ug/l	9.89	295.00	2.372E-03	Pulse	1.00	3
Se			1	0.263	ug/l	101.03	17.33	1.394E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,363,395.25	0.80	89.7	Pulse	0.50	3
1	Sc		106,930.52	1.07	89.7	Pulse	0.30	3
1	Ge		81,829.48	1.86	88.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		745,021.81	1.55	86.5	Pulse	0.30	3
1	Tb		2,984,879.00	1.41	91.3	Pulse	0.50	3
1	Lu		1,782,673.92	1.17	88.3	Pulse	0.50	3
1	Ge		124,489.98	1.64	88.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		505.57	5.49	100.7	Pulse	0.30	3

Quantitation Report

File Name 024SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:36
Sample Name MP40693-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.701	ug/l	17.28	1,020.03	1.185E-02	Pulse	0.50	3
As			1	0.184	ug/l	42.21	26.67	3.099E-04	Pulse	1.00	3
Mo			1	0.199	ug/l	38.84	109.33	8.233E-04	Pulse	0.50	3
Pb			1	0.501	ug/l	4.27	3,734.08	1.491E-03	Pulse	1.00	3
Be			1	0.147	ug/l	190.37	1.00	8.807E-06	Pulse	2.00	3
Ag			1	0.046	ug/l	35.87	84.67	6.381E-04	Pulse	0.50	3
Ba			1	14.077	ug/l	1.97	2,001.45	2.517E-03	Pulse	0.50	3
Tl			1	0.043	ug/l	23.60	230.67	9.217E-05	Pulse	0.50	3
Sn			1	0.203	ug/l	17.41	238.89	3.005E-04	Pulse	0.30	3
Sr			1	113.012	ug/l	1.26	36,373.59	4.574E-02	Pulse	0.50	3
[Pb]			1	0.534	ug/l	9.77	1,750.10	6.991E-04	Pulse	0.50	3
Ca			1	15875.649	ug/l	0.50	25,047.29	2.215E-01	Pulse	0.50	3
Ti			1	0.459	ug/l	49.98	8.67	7.665E-05	Pulse	0.50	3
Na			1	12956.677	ug/l	0.84	1,114,380.75	9.856E+00	Pulse	1.00	3
Mg			1	4387.567	ug/l	0.49	172,094.36	1.522E+00	Pulse	1.00	3
K			1	1384.342	ug/l	1.05	52,293.46	4.625E-01	Pulse	1.00	3
V			1	0.287	ug/l	13.65	430.68	3.808E-03	Pulse	0.50	3
Mn			1	56.880	ug/l	2.38	17,981.01	2.088E-01	Pulse	0.50	3
Fe			1	56.537	ug/l	1.03	37,927.56	4.405E-01	Pulse	0.50	3
Co			1	0.249	ug/l	14.98	364.67	4.237E-03	Pulse	0.50	3
Ni			1	0.212	ug/l	69.16	345.34	4.011E-03	Pulse	0.50	3
Cu			1	15.685	ug/l	1.01	31,174.44	3.621E-01	Pulse	0.50	3
Zn			1	44.647	ug/l	0.99	7,849.61	5.920E-02	Pulse	1.00	3
Cd			1	0.137	ug/l	72.35	30.67	2.306E-04	Pulse	0.50	3
Al			1	13.429	ug/l	17.39	225.67	1.994E-03	Pulse	1.00	3
Se			1	0.379	ug/l	60.20	6.55	4.941E-05	Pulse	3.00	3
Sb			1	0.170	ug/l	19.46	101.33	7.637E-04	Pulse	1.00	3
Se			1	-1.247	ug/l	-43.00	12.78	9.634E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,503,644.50	0.45	95.0	Pulse	0.50	3
1	Sc		113,075.67	0.84	94.9	Pulse	0.30	3
1	Ge		86,096.87	0.44	93.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		795,217.00	0.41	92.4	Pulse	0.30	3
1	Tb		3,095,950.67	0.45	94.7	Pulse	0.50	3
1	Lu		1,864,840.67	0.45	92.4	Pulse	0.50	3
1	Ge		132,592.55	0.84	94.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		490.01	12.41	97.6	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:40
Sample Name MP40693-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	218.064	ug/l	1.10	719,981.27	8.904E+00	Pulse	0.50	3
As			1	217.522	ug/l	0.22	73,448.81	9.084E-01	Pulse	1.00	3
Mo			1	216.049	ug/l	0.81	428,480.57	3.494E+00	Pulse	0.50	3
Pb			1	214.490	ug/l	1.60	2,423,148.25	1.056E+00	Pulse	1.00	3
Be			1	238.075	ug/l	3.07	3,959.72	3.721E-02	Pulse	2.00	3
Ag			1	104.598	ug/l	1.24	741,362.09	6.045E+00	Pulse	0.50	3
Ba			1	222.609	ug/l	0.57	144,232.22	1.983E-01	Pulse	0.50	3
Tl			1	211.049	ug/l	1.72	3,427,034.83	1.493E+00	Pulse	0.50	3
Sn			1	209.672	ug/l	1.42	344,412.82	4.734E-01	Pulse	0.30	3
Sr			1	319.924	ug/l	0.66	467,601.39	6.428E-01	Pulse	0.50	3
[Pb]			1	204.941	ug/l	1.09	1,086,354.38	4.734E-01	Pulse	0.50	3
Ca			1	35373.923	ug/l	1.13	262,134.55	2.464E+00	Pulse	0.50	3
Ti			1	203.774	ug/l	0.80	12,820.90	1.205E-01	Pulse	0.50	3
Na			1	33642.499	ug/l	1.16	13,538,756.67	1.273E+02	Analog	1.00	3
Mg			1	23993.253	ug/l	0.80	4,414,104.17	4.149E+01	Pulse	1.00	3
K			1	21136.552	ug/l	0.91	2,843,101.17	2.672E+01	Pulse	1.00	3
V			1	213.157	ug/l	0.91	519,403.28	4.882E+00	Pulse	0.50	3
Mn			1	262.698	ug/l	0.57	387,359.97	4.791E+00	Pulse	0.50	3
Fe			1	20510.319	ug/l	0.56	52,284,776.00	6.466E+02	Analog	0.50	3
Co			1	218.422	ug/l	0.59	1,256,708.04	1.554E+01	Pulse	0.50	3
Ni			1	215.648	ug/l	0.80	343,748.19	4.251E+00	Pulse	0.50	3
Cu			1	219.362	ug/l	1.00	978,811.54	1.210E+01	Pulse	0.50	3
Zn			1	234.850	ug/l	1.56	147,395.19	1.202E+00	Pulse	1.00	3
Cd			1	202.482	ug/l	1.58	187,371.99	1.528E+00	Pulse	0.50	3
Al			1	18441.138	ug/l	0.52	1,013,997.46	9.530E+00	Pulse	1.00	3
Se			1	191.964	ug/l	2.91	4,031.76	3.288E-02	Pulse	3.00	3
Sb			1	204.589	ug/l	0.69	436,106.15	3.556E+00	Pulse	1.00	3
Se			1	192.252	ug/l	0.81	1,994.22	1.626E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,294,793.00	0.56	87.1	Pulse	0.50	3
1	Sc		106,396.36	1.78	89.3	Pulse	0.30	3
1	Ge		80,856.41	1.26	87.6	Pulse	0.30	3
1	In		727,449.12	1.40	84.5	Pulse	0.30	3
1	Tb		2,976,266.92	1.94	91.0	Pulse	0.50	3
1	Lu		1,793,629.58	1.13	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		122,636.95	1.26	87.4	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		474.45	5.08	94.5	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:44
Sample Name MP40693-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	215.246	ug/l	0.96	703,665.96	8.789E+00	Pulse	0.50	3
As			1	213.747	ug/l	0.42	71,466.58	8.926E-01	Pulse	1.00	3
Mo			1	216.014	ug/l	0.24	422,896.94	3.493E+00	Pulse	0.50	3
Pb			1	212.058	ug/l	0.97	2,373,657.58	1.044E+00	Pulse	1.00	3
Be			1	242.093	ug/l	1.32	3,973.06	3.784E-02	Pulse	2.00	3
Ag			1	103.252	ug/l	0.43	722,397.54	5.967E+00	Pulse	0.50	3
Ba			1	220.273	ug/l	0.96	141,682.76	1.962E-01	Pulse	0.50	3
Tl			1	210.160	ug/l	1.05	3,381,150.25	1.487E+00	Pulse	0.50	3
Sn			1	205.842	ug/l	0.43	335,645.29	4.648E-01	Pulse	0.30	3
Sr			1	313.065	ug/l	0.35	454,261.37	6.290E-01	Pulse	0.50	3
[Pb]			1	204.155	ug/l	0.54	1,072,224.13	4.716E-01	Pulse	0.50	3
Ca			1	34648.568	ug/l	0.25	253,403.40	2.413E+00	Pulse	0.50	3
Ti			1	198.706	ug/l	2.40	12,337.91	1.175E-01	Pulse	0.50	3
Na			1	33396.721	ug/l	0.24	13,263,325.33	1.263E+02	Analog	1.00	3
Mg			1	23806.376	ug/l	0.74	4,322,208.17	4.116E+01	Pulse	1.00	3
K			1	20818.982	ug/l	0.18	2,763,920.42	2.632E+01	Pulse	1.00	3
V			1	210.098	ug/l	0.30	505,227.41	4.812E+00	Pulse	0.50	3
Mn			1	257.702	ug/l	0.77	376,262.19	4.699E+00	Pulse	0.50	3
Fe			1	20022.486	ug/l	0.40	50,539,318.67	6.312E+02	Analog	0.50	3
Co			1	215.976	ug/l	0.22	1,230,409.96	1.537E+01	Pulse	0.50	3
Ni			1	212.076	ug/l	0.35	334,730.01	4.181E+00	Pulse	0.50	3
Cu			1	216.464	ug/l	1.01	956,575.84	1.195E+01	Pulse	0.50	3
Zn			1	222.615	ug/l	0.82	137,993.76	1.140E+00	Pulse	1.00	3
Cd			1	202.056	ug/l	0.65	184,565.77	1.525E+00	Pulse	0.50	3
Al			1	18008.591	ug/l	0.45	977,192.13	9.307E+00	Pulse	1.00	3
Se			1	189.167	ug/l	0.79	3,922.74	3.240E-02	Pulse	3.00	3
Sb			1	202.869	ug/l	0.48	426,874.73	3.526E+00	Pulse	1.00	3
Se			1	188.479	ug/l	3.42	1,930.32	1.594E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,273,685.17	0.36	86.3	Pulse	0.50	3
1	Sc		104,996.76	0.11	88.1	Pulse	0.30	3
1	Ge		80,064.13	0.46	86.7	Pulse	0.30	3
1	In		722,153.79	0.31	83.9	Pulse	0.30	3
1	Tb		2,937,315.00	0.76	89.9	Pulse	0.50	3
1	Lu		1,771,257.12	0.25	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		121,060.11	0.25	86.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		505.56	5.53	100.7	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:48
Sample Name MP40693-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.673	ug/l	1.92	75,032.09	9.312E-01	Pulse	0.50	3
As			1	21.599	ug/l	2.07	7,278.06	9.034E-02	Pulse	1.00	3
Mo			1	21.714	ug/l	0.86	43,013.12	3.513E-01	Pulse	0.50	3
Pb			1	21.378	ug/l	0.38	246,974.03	1.061E-01	Pulse	1.00	3
Be			1	24.078	ug/l	5.16	397.17	3.767E-03	Pulse	2.00	3
Ag			1	4.369	ug/l	0.33	30,929.70	2.526E-01	Pulse	0.50	3
Ba			1	35.493	ug/l	1.37	22,946.54	3.162E-02	Pulse	0.50	3
Tl			1	21.241	ug/l	1.23	349,771.88	1.503E-01	Pulse	0.50	3
Sn			1	20.950	ug/l	2.10	34,461.18	4.749E-02	Pulse	0.30	3
Sr			1	135.819	ug/l	0.44	198,198.28	2.731E-01	Pulse	0.50	3
[Pb]			1	20.610	ug/l	0.69	111,717.05	4.801E-02	Pulse	0.50	3
Ca			1	18054.523	ug/l	0.40	132,548.42	1.258E+00	Pulse	0.50	3
Ti			1	19.088	ug/l	8.38	1,190.71	1.131E-02	Pulse	0.50	3
Na			1	15519.629	ug/l	0.43	6,189,149.00	5.873E+01	Analog	1.00	3
Mg			1	6527.257	ug/l	0.51	1,189,724.29	1.129E+01	Pulse	1.00	3
K			1	3431.143	ug/l	0.48	467,188.47	4.434E+00	Pulse	1.00	3
V			1	22.037	ug/l	0.34	53,421.36	5.069E-01	Pulse	0.50	3
Mn			1	78.350	ug/l	1.62	115,197.27	1.430E+00	Pulse	0.50	3
Fe			1	2192.414	ug/l	0.37	5,574,735.83	6.919E+01	Analog	0.50	3
Co			1	22.383	ug/l	1.24	128,374.06	1.593E+00	Pulse	0.50	3
Ni			1	22.304	ug/l	0.97	35,653.41	4.425E-01	Pulse	0.50	3
Cu			1	24.306	ug/l	0.61	121,790.85	1.512E+00	Pulse	0.50	3
Zn			1	49.348	ug/l	2.26	32,275.58	2.636E-01	Pulse	1.00	3
Cd			1	20.597	ug/l	1.33	19,030.48	1.554E-01	Pulse	0.50	3
Al			1	1938.274	ug/l	0.21	105,614.32	1.002E+00	Pulse	1.00	3
Se			1	19.427	ug/l	1.67	411.45	3.360E-03	Pulse	3.00	3
Sb			1	19.249	ug/l	0.87	40,982.47	3.347E-01	Pulse	1.00	3
Se			1	20.132	ug/l	0.93	221.33	1.808E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,326,777.67	0.87	88.3	Pulse	0.50	3
1	Sc		105,379.90	1.49	88.4	Pulse	0.30	3
1	Ge		80,566.34	0.81	87.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		725,724.71	1.14	84.3	Pulse	0.30	3
1	Tb		2,944,177.08	1.70	90.1	Pulse	0.50	3
1	Lu		1,768,557.29	1.44	87.6	Pulse	0.50	3
1	Ge		122,433.30	0.48	87.3	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		553.34	10.96	110.2	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:51
Sample Name FA95275-1F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.781	ug/l	4.33	3,121.59	3.800E-02	Pulse	0.50	3
As			1	1.324	ug/l	5.24	466.68	5.683E-03	Pulse	1.00	3
Mo			1	0.284	ug/l	8.02	594.01	4.770E-03	Pulse	0.50	3
Pb			1	0.177	ug/l	4.77	4,414.24	1.870E-03	Pulse	1.00	3
Be			1	0.023	ug/l	273.06	0.83	7.732E-06	Pulse	2.00	3
Ag			1	0.023	ug/l	18.91	177.33	1.423E-03	Pulse	0.50	3
Ba			1	15.180	ug/l	2.39	10,067.51	1.353E-02	Pulse	0.50	3
Tl			1	0.060	ug/l	1.43	1,082.04	4.584E-04	Pulse	0.50	3
Sn			1	0.423	ug/l	10.26	864.47	1.163E-03	Pulse	0.30	3
Sr			1	75.957	ug/l	1.95	113,724.16	1.529E-01	Pulse	0.50	3
[Pb]			1	0.173	ug/l	4.72	2,012.79	8.527E-04	Pulse	0.50	3
Ca			1	9574.547	ug/l	1.04	72,090.78	6.672E-01	Pulse	0.50	3
Ti			1	0.650	ug/l	13.30	44.00	4.068E-04	Pulse	0.50	3
Na			1	14947.383	ug/l	0.78	6,112,731.33	5.657E+01	Analog	1.00	3
Mg			1	6981.686	ug/l	0.91	1,304,831.62	1.208E+01	Pulse	1.00	3
K			1	1842.289	ug/l	1.14	262,919.10	2.433E+00	Pulse	1.00	3
V			1	1.417	ug/l	5.18	3,776.38	3.494E-02	Pulse	0.50	3
Mn			1	134.889	ug/l	0.57	202,067.33	2.461E+00	Pulse	0.50	3
Fe			1	39.249	ug/l	1.65	108,519.99	1.321E+00	Pulse	0.50	3
Co			1	4.696	ug/l	1.85	27,502.17	3.349E-01	Pulse	0.50	3
Ni			1	2.561	ug/l	6.23	4,404.52	5.362E-02	Pulse	0.50	3
Cu			1	1.346	ug/l	2.02	21,750.93	2.648E-01	Pulse	0.50	3
Zn			1	14.422	ug/l	2.06	10,834.06	8.698E-02	Pulse	1.00	3
Cd			1	1.704	ug/l	4.19	1,604.74	1.288E-02	Pulse	0.50	3
Al			1	19.976	ug/l	4.19	1,181.37	1.093E-02	Pulse	1.00	3
Se			1	0.763	ug/l	19.84	20.78	1.669E-04	Pulse	3.00	3
Sb			1	0.144	ug/l	14.85	332.67	2.670E-03	Pulse	1.00	3
Se			1	1.206	ug/l	0.47	27.22	2.186E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,360,611.92	0.74	89.6	Pulse	0.50	3
1	Sc		108,059.94	1.08	90.6	Pulse	0.30	3
1	Ge		82,126.10	0.79	88.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		744,019.83	2.02	86.4	Pulse	0.30	3
1	Tb		2,958,477.33	1.60	90.5	Pulse	0.50	3
1	Lu		1,769,839.88	1.93	87.7	Pulse	0.50	3
1	Ge		124,555.74	0.58	88.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		474.45	7.18	94.5	Pulse	0.30	3

Quantitation Report

File Name 029SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 11:55
Sample Name FA95275-2F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.724	ug/l	3.28	2,970.90	3.569E-02	Pulse	0.50	3
As			1	1.267	ug/l	6.04	453.34	5.448E-03	Pulse	1.00	3
Mo			1	0.232	ug/l	5.36	494.68	3.934E-03	Pulse	0.50	3
Pb			1	0.135	ug/l	5.65	3,944.13	1.662E-03	Pulse	1.00	3
Be			1	0.052	ug/l	66.24	1.33	1.228E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	17.98	141.33	1.123E-03	Pulse	0.50	3
Ba			1	15.442	ug/l	2.15	10,280.28	1.376E-02	Pulse	0.50	3
Tl			1	0.039	ug/l	8.35	728.69	3.070E-04	Pulse	0.50	3
Sn			1	0.386	ug/l	9.26	806.69	1.079E-03	Pulse	0.30	3
Sr			1	75.599	ug/l	0.57	113,657.90	1.522E-01	Pulse	0.50	3
[Pb]			1	0.154	ug/l	9.56	1,915.45	8.074E-04	Pulse	0.50	3
Ca			1	8977.682	ug/l	0.65	67,956.79	6.256E-01	Pulse	0.50	3
Ti			1	0.561	ug/l	78.86	38.67	3.541E-04	Pulse	0.50	3
Na			1	15216.346	ug/l	1.44	6,254,716.17	5.759E+01	Analog	1.00	3
Mg			1	7111.867	ug/l	1.04	1,336,108.42	1.230E+01	Pulse	1.00	3
K			1	1800.884	ug/l	1.41	258,626.37	2.381E+00	Pulse	1.00	3
V			1	1.572	ug/l	4.23	4,180.46	3.849E-02	Pulse	0.50	3
Mn			1	165.616	ug/l	1.91	251,363.44	3.021E+00	Pulse	0.50	3
Fe			1	32.579	ug/l	1.23	92,465.72	1.111E+00	Pulse	0.50	3
Co			1	5.589	ug/l	0.87	33,156.99	3.984E-01	Pulse	0.50	3
Ni			1	2.636	ug/l	1.53	4,585.23	5.510E-02	Pulse	0.50	3
Cu			1	1.190	ug/l	4.49	21,334.46	2.563E-01	Pulse	0.50	3
Zn			1	18.946	ug/l	4.33	13,811.95	1.099E-01	Pulse	1.00	3
Cd			1	1.852	ug/l	3.96	1,760.76	1.400E-02	Pulse	0.50	3
Al			1	17.194	ug/l	1.51	1,031.03	9.492E-03	Pulse	1.00	3
Se			1	0.556	ug/l	17.71	16.56	1.316E-04	Pulse	3.00	3
Sb			1	0.090	ug/l	12.26	219.33	1.745E-03	Pulse	1.00	3
Se			1	0.474	ug/l	69.31	19.78	1.571E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,372,798.58	1.02	90.1	Pulse	0.50	3
1	Sc		108,625.23	1.26	91.1	Pulse	0.30	3
1	Ge		83,238.71	2.31	90.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		746,911.95	1.09	86.7	Pulse	0.30	3
1	Tb		2,979,106.17	1.16	91.1	Pulse	0.50	3
1	Lu		1,785,501.71	0.86	88.5	Pulse	0.50	3
1	Ge		125,760.52	1.17	89.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		545.56	3.73	108.6	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 11:59
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.215	ug/l	1.37	382,035.28	4.185E+00	Pulse	0.50	3
As			1	49.520	ug/l	2.34	37,755.10	4.137E-01	Pulse	1.00	3
Mo			1	50.086	ug/l	0.67	222,198.81	1.620E+00	Pulse	0.50	3
Pb			1	49.868	ug/l	0.92	1,246,604.88	4.915E-01	Pulse	1.00	3
Be			1	55.322	ug/l	3.21	2,054.44	1.730E-02	Pulse	2.00	3
Ag			1	51.729	ug/l	0.77	820,056.98	5.979E+00	Pulse	0.50	3
Ba			1	49.544	ug/l	1.22	72,355.65	8.826E-02	Pulse	0.50	3
Tl			1	51.353	ug/l	0.80	1,843,205.88	7.267E-01	Pulse	0.50	3
Sn			1	50.170	ug/l	0.33	185,822.96	2.267E-01	Pulse	0.30	3
Sr			1	49.366	ug/l	0.59	162,828.14	1.986E-01	Pulse	0.50	3
[Pb]			1	50.347	ug/l	0.70	590,502.79	2.328E-01	Pulse	0.50	3
Ca			1	4973.309	ug/l	1.41	82,338.14	6.931E-01	Pulse	0.50	3
Ti			1	50.446	ug/l	3.41	7,087.97	5.968E-02	Pulse	0.50	3
Na			1	5263.030	ug/l	1.01	4,734,766.50	3.985E+01	Analog	1.00	3
Mg			1	5068.051	ug/l	1.71	2,082,415.62	1.753E+01	Pulse	1.00	3
K			1	5098.365	ug/l	1.08	1,538,603.08	1.295E+01	Pulse	1.00	3
V			1	50.530	ug/l	1.38	275,120.97	2.316E+00	Pulse	0.50	3
Mn			1	49.770	ug/l	1.20	165,766.64	1.816E+00	Pulse	0.50	3
Fe			1	5144.533	ug/l	1.19	29,611,240.67	3.244E+02	Analog	0.50	3
Co			1	51.757	ug/l	1.43	672,318.31	7.366E+00	Pulse	0.50	3
Ni			1	51.974	ug/l	1.43	187,187.19	2.051E+00	Pulse	0.50	3
Cu			1	52.620	ug/l	1.13	539,192.23	5.907E+00	Pulse	0.50	3
Zn			1	52.133	ug/l	0.39	74,250.40	5.413E-01	Pulse	1.00	3
Cd			1	49.959	ug/l	0.55	103,402.67	7.539E-01	Pulse	0.50	3
Al			1	4811.940	ug/l	2.24	590,840.52	4.974E+00	Pulse	1.00	3
Se			1	48.635	ug/l	1.66	2,287.58	1.668E-02	Pulse	3.00	3
Sb			1	48.463	ug/l	0.78	231,079.39	1.685E+00	Pulse	1.00	3
Se			1	48.866	ug/l	2.63	1,141.81	8.324E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,536,287.75	0.74	96.3	Pulse	0.50	3
1	Sc		118,813.50	1.46	99.7	Pulse	0.30	3
1	Ge		91,286.27	1.43	98.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		819,781.89	0.16	95.2	Pulse	0.30	3
1	Tb		3,195,187.92	0.41	97.7	Pulse	0.50	3
1	Lu		1,940,298.96	0.44	96.1	Pulse	0.50	3
1	Ge		137,156.66	0.77	97.7	Pulse	0.30	3
1	Te		5.33	94.37		Pulse	0.50	3
1	Li		497.79	7.99	99.1	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 12:03
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	104.419	ug/l	0.97	758,314.73	8.527E+00	Pulse	0.50	3
As			1	102.332	ug/l	1.26	76,009.35	8.547E-01	Pulse	1.00	3
Mo			1	103.754	ug/l	0.70	448,785.11	3.356E+00	Pulse	0.50	3
Pb			1	103.231	ug/l	0.72	2,498,250.50	1.016E+00	Pulse	1.00	3
Be			1	108.758	ug/l	1.36	3,974.06	3.400E-02	Pulse	2.00	3
Ag			1	105.392	ug/l	1.13	1,629,106.25	1.218E+01	Pulse	0.50	3
Ba			1	102.785	ug/l	0.23	145,487.50	1.831E-01	Pulse	0.50	3
Tl			1	106.174	ug/l	0.24	3,693,077.17	1.503E+00	Pulse	0.50	3
Sn			1	100.833	ug/l	0.49	361,815.92	4.554E-01	Pulse	0.30	3
Sr			1	99.606	ug/l	0.10	318,156.68	4.004E-01	Pulse	0.50	3
[Pb]			1	102.960	ug/l	0.31	1,169,093.50	4.756E-01	Pulse	0.50	3
Ca			1	10090.911	ug/l	1.41	164,336.48	1.406E+00	Pulse	0.50	3
Ti			1	98.644	ug/l	2.86	13,636.10	1.167E-01	Pulse	0.50	3
Na			1	10587.061	ug/l	0.95	9,364,435.67	8.011E+01	Analog	1.00	3
Mg			1	10205.692	ug/l	0.95	4,125,769.00	3.530E+01	Pulse	1.00	3
K			1	10302.281	ug/l	0.92	3,045,551.17	2.605E+01	Pulse	1.00	3
V			1	102.874	ug/l	1.98	550,790.31	4.712E+00	Pulse	0.50	3
Mn			1	101.919	ug/l	2.17	330,565.82	3.717E+00	Pulse	0.50	3
Fe			1	10475.602	ug/l	1.43	58,736,266.67	6.605E+02	Analog	0.50	3
Co			1	104.325	ug/l	1.49	1,320,212.00	1.485E+01	Pulse	0.50	3
Ni			1	105.079	ug/l	1.87	368,406.82	4.143E+00	Pulse	0.50	3
Cu			1	103.601	ug/l	1.61	1,017,675.85	1.144E+01	Pulse	0.50	3
Zn			1	103.335	ug/l	0.86	141,658.23	1.059E+00	Pulse	1.00	3
Cd			1	101.920	ug/l	1.59	205,686.18	1.538E+00	Pulse	0.50	3
Al			1	9799.550	ug/l	1.48	1,183,930.21	1.013E+01	Pulse	1.00	3
Se			1	100.121	ug/l	1.68	4,586.78	3.430E-02	Pulse	3.00	3
Sb			1	100.076	ug/l	0.94	465,254.58	3.479E+00	Pulse	1.00	3
Se			1	100.658	ug/l	2.13	2,276.36	1.702E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,457,904.83	0.25	93.3	Pulse	0.50	3
1	Sc		116,899.11	1.01	98.1	Pulse	0.30	3
1	Ge		88,936.30	1.31	96.3	Pulse	0.30	3
1	In		794,582.30	0.27	92.3	Pulse	0.30	3
1	Tb		3,136,364.17	0.30	95.9	Pulse	0.50	3
1	Lu		1,906,685.67	0.71	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		133,739.31	0.63	95.3	Pulse	0.30	3
1	Te		11.33	71.32		Pulse	0.50	3
1	Li		501.12	11.32	99.8	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 12:07
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.017	ug/l	57.75	652.68	7.495E-03	Pulse	0.50	3
As			1	0.022	ug/l	34.08	29.33	3.368E-04	Pulse	1.00	3
Mo			1	0.126	ug/l	25.30	565.35	4.255E-03	Pulse	0.50	3
Pb			1	0.066	ug/l	9.20	4,104.50	1.646E-03	Pulse	1.00	3
Be			1	0.084	ug/l	49.59	3.50	3.052E-05	Pulse	2.00	3
Ag			1	0.022	ug/l	15.84	358.67	2.700E-03	Pulse	0.50	3
Ba			1	0.014	ug/l	40.09	28.00	3.496E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	13.99	1,094.71	4.393E-04	Pulse	0.50	3
Sn			1	0.094	ug/l	32.37	508.90	6.337E-04	Pulse	0.30	3
Sr			1	0.013	ug/l	144.98	325.34	4.059E-04	Pulse	0.50	3
[Pb]			1	0.071	ug/l	6.09	1,942.79	7.791E-04	Pulse	0.50	3
Ca			1	1.149	ug/l	102.57	61.33	5.356E-04	Pulse	0.50	3
Ti			1	0.011	ug/l	239.87	4.00	3.499E-05	Pulse	0.50	3
Na			1	3.901	ug/l	9.58	10,097.22	8.810E-02	Pulse	1.00	3
Mg			1	1.917	ug/l	16.95	1,308.05	1.141E-02	Pulse	1.00	3
K			1	3.039	ug/l	3.59	13,933.91	1.216E-01	Pulse	1.00	3
V			1	-0.006	ug/l	-125.43	256.67	2.240E-03	Pulse	0.50	3
Mn			1	-0.005	ug/l	-57.70	110.67	1.272E-03	Pulse	0.50	3
Fe			1	1.942	ug/l	8.07	17,980.36	2.065E-01	Pulse	0.50	3
Co			1	0.018	ug/l	15.28	288.00	3.307E-03	Pulse	0.50	3
Ni			1	-0.005	ug/l	-112.63	258.00	2.963E-03	Pulse	0.50	3
Cu			1	1.610	ug/l	3.29	31,909.01	3.666E-01	Pulse	0.50	3
Zn			1	1.923	ug/l	1.08	4,447.52	3.349E-02	Pulse	1.00	3
Cd			1	0.022	ug/l	29.21	48.00	3.614E-04	Pulse	0.50	3
Al			1	1.518	ug/l	26.19	249.33	2.176E-03	Pulse	1.00	3
Se			1	0.055	ug/l	128.08	7.33	5.524E-05	Pulse	3.00	3
Sb			1	0.038	ug/l	19.45	199.33	1.501E-03	Pulse	1.00	3
Se			1	-0.036	ug/l	-123.89	14.78	1.113E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,493,944.08	1.01	94.7	Pulse	0.50	3
1	Sc		114,612.27	0.48	96.1	Pulse	0.30	3

Quantitation Report

1	Ge		87,042.21	0.67	94.3	Pulse	0.30	3
1	In		802,410.87	0.91	93.2	Pulse	0.30	3
1	Tb		3,084,232.17	1.07	94.3	Pulse	0.50	3
1	Lu		1,873,465.67	1.13	92.8	Pulse	0.50	3
1	Ge		132,800.70	0.54	94.6	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		468.90	2.29	93.4	Pulse	0.30	3

Quantitation Report

File Name 033SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:10
Sample Name FA95275-3F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.495	ug/l	2.64	5,515.46	6.712E-02	Pulse	0.50	3
As			1	1.097	ug/l	6.74	389.01	4.734E-03	Pulse	1.00	3
Mo			1	0.710	ug/l	4.78	1,448.73	1.166E-02	Pulse	0.50	3
Pb			1	0.542	ug/l	3.14	8,743.91	3.663E-03	Pulse	1.00	3
Be			1	0.161	ug/l	58.47	3.17	2.932E-05	Pulse	2.00	3
Ag			1	0.035	ug/l	34.96	264.67	2.136E-03	Pulse	0.50	3
Ba			1	14.984	ug/l	1.30	9,911.40	1.335E-02	Pulse	0.50	3
Tl			1	0.025	ug/l	38.45	496.01	2.082E-04	Pulse	0.50	3
Sn			1	0.597	ug/l	8.01	1,155.60	1.557E-03	Pulse	0.30	3
Sr			1	79.047	ug/l	0.54	118,081.55	1.591E-01	Pulse	0.50	3
[Pb]			1	0.556	ug/l	5.95	4,140.51	1.735E-03	Pulse	0.50	3
Ca			1	9814.494	ug/l	0.72	73,741.49	6.839E-01	Pulse	0.50	3
Ti			1	4.374	ug/l	2.93	281.33	2.609E-03	Pulse	0.50	3
Na			1	13568.824	ug/l	0.33	5,537,679.33	5.136E+01	Analog	1.00	3
Mg			1	2062.208	ug/l	0.62	384,969.12	3.570E+00	Pulse	1.00	3
K			1	2529.345	ug/l	0.30	355,630.41	3.298E+00	Pulse	1.00	3
V			1	1.878	ug/l	2.23	4,905.30	4.549E-02	Pulse	0.50	3
Mn			1	23.910	ug/l	2.25	35,938.44	4.373E-01	Pulse	0.50	3
Fe			1	1628.799	ug/l	0.36	4,227,177.08	5.143E+01	Pulse	0.50	3
Co			1	0.145	ug/l	1.87	908.02	1.105E-02	Pulse	0.50	3
Ni			1	2.585	ug/l	1.84	4,446.53	5.410E-02	Pulse	0.50	3
Cu			1	1.853	ug/l	2.52	24,030.29	2.924E-01	Pulse	0.50	3
Zn			1	11.179	ug/l	1.15	8,769.00	7.058E-02	Pulse	1.00	3
Cd			1	0.386	ug/l	8.82	364.67	2.934E-03	Pulse	0.50	3
Al			1	82.242	ug/l	1.17	4,647.55	4.311E-02	Pulse	1.00	3
Se			1	0.242	ug/l	51.05	9.67	7.778E-05	Pulse	3.00	3
Sb			1	0.145	ug/l	9.96	334.67	2.696E-03	Pulse	1.00	3
Se			1	0.403	ug/l	80.26	18.78	1.511E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,387,457.33	1.14	90.6	Pulse	0.50	3
1	Sc		107,824.16	1.23	90.5	Pulse	0.30	3
1	Ge		82,195.43	1.48	89.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		742,230.46	1.31	86.2	Pulse	0.30	3
1	Tb		2,961,172.17	1.91	90.6	Pulse	0.50	3
1	Lu		1,781,444.63	1.54	88.3	Pulse	0.50	3
1	Ge		124,242.77	1.31	88.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		530.01	13.65	105.5	Pulse	0.30	3

Quantitation Report

File Name 034SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:14
Sample Name FA95275-4F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.565	ug/l	0.21	2,452.83	2.916E-02	Pulse	0.50	3
As			1	0.362	ug/l	6.30	140.33	1.669E-03	Pulse	1.00	3
Mo			1	0.198	ug/l	5.01	424.68	3.389E-03	Pulse	0.50	3
Pb			1	0.146	ug/l	3.38	4,040.15	1.717E-03	Pulse	1.00	3
Be			1	0.118	ug/l	43.69	2.50	2.272E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	8.24	143.33	1.144E-03	Pulse	0.50	3
Ba			1	15.533	ug/l	1.67	10,326.97	1.384E-02	Pulse	0.50	3
Tl			1	0.046	ug/l	2.90	838.02	3.562E-04	Pulse	0.50	3
Sn			1	0.410	ug/l	5.29	846.69	1.135E-03	Pulse	0.30	3
Sr			1	115.016	ug/l	0.33	172,564.86	2.313E-01	Pulse	0.50	3
[Pb]			1	0.153	ug/l	4.76	1,896.78	8.061E-04	Pulse	0.50	3
Ca			1	13856.226	ug/l	1.28	106,446.06	9.654E-01	Pulse	0.50	3
Ti			1	0.504	ug/l	13.60	35.33	3.203E-04	Pulse	0.50	3
Na			1	29564.422	ug/l	1.03	12,330,519.67	1.118E+02	Analog	1.00	3
Mg			1	4182.776	ug/l	1.31	797,886.41	7.237E+00	Pulse	1.00	3
K			1	1597.587	ug/l	1.26	234,318.54	2.125E+00	Pulse	1.00	3
V			1	0.769	ug/l	4.83	2,216.13	2.009E-02	Pulse	0.50	3
Mn			1	37.191	ug/l	0.80	57,141.55	6.794E-01	Pulse	0.50	3
Fe			1	101.437	ug/l	0.69	275,988.94	3.282E+00	Pulse	0.50	3
Co			1	0.988	ug/l	4.00	5,968.94	7.099E-02	Pulse	0.50	3
Ni			1	1.426	ug/l	0.26	2,629.52	3.126E-02	Pulse	0.50	3
Cu			1	1.099	ug/l	2.30	21,142.91	2.514E-01	Pulse	0.50	3
Zn			1	19.967	ug/l	3.53	14,418.06	1.150E-01	Pulse	1.00	3
Cd			1	1.521	ug/l	2.29	1,441.39	1.150E-02	Pulse	0.50	3
Al			1	36.745	ug/l	3.15	2,160.12	1.960E-02	Pulse	1.00	3
Se			1	0.005	ug/l	1394.83	4.67	3.730E-05	Pulse	3.00	3
Sb			1	0.042	ug/l	19.80	112.33	8.971E-04	Pulse	1.00	3
Se			1	-0.342	ug/l	-73.92	11.11	8.858E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,352,851.17	0.86	89.3	Pulse	0.50	3
1	Sc		110,268.82	1.42	92.5	Pulse	0.30	3
1	Ge		84,103.75	0.93	91.1	Pulse	0.30	3
1	In		745,993.44	0.69	86.6	Pulse	0.30	3
1	Tb		2,938,445.33	0.83	89.9	Pulse	0.50	3
1	Lu		1,774,908.33	1.00	87.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		125,359.85	1.09	89.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		547.79	4.05	109.1	Pulse	0.30	3

Quantitation Report

File Name 035SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:18
Sample Name FA95275-5F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.509	ug/l	1.10	5,517.47	6.769E-02	Pulse	0.50	3
As			1	2.446	ug/l	5.58	845.35	1.037E-02	Pulse	1.00	3
Mo			1	0.441	ug/l	5.58	908.03	7.309E-03	Pulse	0.50	3
Pb			1	0.850	ug/l	2.11	12,070.93	5.178E-03	Pulse	1.00	3
Be			1	0.113	ug/l	39.97	2.33	2.184E-05	Pulse	2.00	3
Ag			1	0.017	ug/l	6.29	136.67	1.100E-03	Pulse	0.50	3
Ba			1	10.978	ug/l	3.27	7,171.44	9.787E-03	Pulse	0.50	3
Tl			1	0.008	ug/l	25.86	206.00	8.836E-05	Pulse	0.50	3
Sn			1	0.456	ug/l	2.49	907.81	1.239E-03	Pulse	0.30	3
Sr			1	75.507	ug/l	0.40	111,379.83	1.520E-01	Pulse	0.50	3
[Pb]			1	0.864	ug/l	3.11	5,702.97	2.447E-03	Pulse	0.50	3
Ca			1	13655.798	ug/l	0.46	101,508.76	9.514E-01	Pulse	0.50	3
Ti			1	4.442	ug/l	14.38	282.67	2.649E-03	Pulse	0.50	3
Na			1	11645.992	ug/l	0.35	4,703,892.67	4.409E+01	Analog	1.00	3
Mg			1	2313.060	ug/l	0.54	427,188.80	4.004E+00	Pulse	1.00	3
K			1	2186.902	ug/l	0.86	305,893.71	2.867E+00	Pulse	1.00	3
V			1	2.368	ug/l	0.78	6,049.63	5.670E-02	Pulse	0.50	3
Mn			1	35.983	ug/l	0.39	53,591.50	6.574E-01	Pulse	0.50	3
Fe			1	1335.884	ug/l	0.48	3,439,582.17	4.219E+01	Pulse	0.50	3
Co			1	1.342	ug/l	2.97	7,840.28	9.617E-02	Pulse	0.50	3
Ni			1	1.925	ug/l	0.53	3,349.64	4.109E-02	Pulse	0.50	3
Cu			1	2.519	ug/l	2.29	26,780.57	3.285E-01	Pulse	0.50	3
Zn			1	10.425	ug/l	1.75	8,297.12	6.677E-02	Pulse	1.00	3
Cd			1	0.410	ug/l	5.28	387.34	3.118E-03	Pulse	0.50	3
Al			1	136.845	ug/l	6.75	7,611.46	7.132E-02	Pulse	1.00	3
Se			1	0.294	ug/l	38.52	10.78	8.671E-05	Pulse	3.00	3
Sb			1	0.179	ug/l	11.48	408.67	3.289E-03	Pulse	1.00	3
Se			1	0.115	ug/l	132.40	15.78	1.270E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,330,924.50	0.35	88.5	Pulse	0.50	3
1	Sc		106,693.64	0.56	89.5	Pulse	0.30	3
1	Ge		81,519.07	0.86	88.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		732,859.87	0.88	85.1	Pulse	0.30	3
1	Tb		2,932,690.00	1.17	89.7	Pulse	0.50	3
1	Lu		1,751,234.54	0.75	86.8	Pulse	0.50	3
1	Ge		124,279.54	1.03	88.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		534.45	4.15	106.4	Pulse	0.30	3

Quantitation Report

File Name 036SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:22
Sample Name FA95275-6F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.836	ug/l	4.48	3,215.62	4.023E-02	Pulse	0.50	3
As			1	0.092	ug/l	29.47	43.00	5.389E-04	Pulse	1.00	3
Mo			1	0.031	ug/l	24.99	83.33	6.746E-04	Pulse	0.50	3
Pb			1	0.011	ug/l	28.86	2,418.17	1.054E-03	Pulse	1.00	3
Be			1	0.073	ug/l	23.01	1.67	1.567E-05	Pulse	2.00	3
Ag			1	0.009	ug/l	33.80	81.33	6.579E-04	Pulse	0.50	3
Ba			1	13.903	ug/l	1.83	8,997.60	1.239E-02	Pulse	0.50	3
Tl			1	0.021	ug/l	6.47	415.34	1.811E-04	Pulse	0.50	3
Sn			1	0.293	ug/l	9.80	631.13	8.694E-04	Pulse	0.30	3
Sr			1	113.541	ug/l	0.98	165,825.36	2.284E-01	Pulse	0.50	3
[Pb]			1	0.020	ug/l	63.34	1,146.71	4.997E-04	Pulse	0.50	3
Ca			1	20521.398	ug/l	1.08	151,944.01	1.430E+00	Pulse	0.50	3
Ti			1	0.473	ug/l	35.29	32.00	3.020E-04	Pulse	0.50	3
Na			1	22396.168	ug/l	0.66	9,005,977.33	8.473E+01	Analog	1.00	3
Mg			1	6998.549	ug/l	0.77	1,286,615.96	1.210E+01	Pulse	1.00	3
K			1	1631.204	ug/l	1.25	230,378.04	2.168E+00	Pulse	1.00	3
V			1	0.342	ug/l	2.96	1,097.37	1.032E-02	Pulse	0.50	3
Mn			1	83.743	ug/l	0.78	122,118.10	1.528E+00	Pulse	0.50	3
Fe			1	693.742	ug/l	1.09	1,754,286.75	2.195E+01	Pulse	0.50	3
Co			1	2.240	ug/l	1.18	12,794.93	1.601E-01	Pulse	0.50	3
Ni			1	0.211	ug/l	9.13	585.34	7.324E-03	Pulse	0.50	3
Cu			1	0.762	ug/l	7.64	18,631.00	2.331E-01	Pulse	0.50	3
Zn			1	2.251	ug/l	9.66	3,141.26	2.543E-02	Pulse	1.00	3
Cd			1	0.042	ug/l	34.25	42.00	3.404E-04	Pulse	0.50	3
Al			1	19.952	ug/l	3.85	1,160.37	1.092E-02	Pulse	1.00	3
Se			1	1.447	ug/l	12.96	35.11	2.841E-04	Pulse	3.00	3
Sb			1	0.040	ug/l	27.94	107.00	8.652E-04	Pulse	1.00	3
Se			1	1.314	ug/l	18.58	28.11	2.276E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,294,268.75	0.76	87.1	Pulse	0.50	3
1	Sc		106,294.79	1.50	89.2	Pulse	0.30	3
1	Ge		79,917.99	1.15	86.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		726,205.01	1.24	84.3	Pulse	0.30	3
1	Tb		2,919,409.08	0.85	89.3	Pulse	0.50	3
1	Lu		1,742,167.87	1.78	86.3	Pulse	0.50	3
1	Ge		123,553.99	0.74	88.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		438.90	10.20	87.4	Pulse	0.30	3

Quantitation Report

File Name	037SMPL.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 12:25
Sample Name	FA95275-7F
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.834	ug/l	5.06	3,207.61	4.016E-02	Pulse	0.50	3
As			1	0.379	ug/l	9.05	138.67	1.737E-03	Pulse	1.00	3
Mo			1	0.129	ug/l	5.22	277.33	2.259E-03	Pulse	0.50	3
Pb			1	0.279	ug/l	6.00	5,436.87	2.369E-03	Pulse	1.00	3
Be			1	0.075	ug/l	85.73	1.67	1.591E-05	Pulse	2.00	3
Ag			1	0.011	ug/l	13.90	93.33	7.604E-04	Pulse	0.50	3
Ba			1	29.601	ug/l	0.97	18,929.24	2.637E-02	Pulse	0.50	3
Tl			1	0.125	ug/l	0.34	2,100.14	9.149E-04	Pulse	0.50	3
Sn			1	0.364	ug/l	13.39	740.02	1.031E-03	Pulse	0.30	3
Sr			1	104.098	ug/l	0.96	150,292.77	2.094E-01	Pulse	0.50	3
[Pb]			1	0.292	ug/l	7.83	2,584.87	1.126E-03	Pulse	0.50	3
Ca			1	11000.325	ug/l	1.15	80,549.33	7.665E-01	Pulse	0.50	3
Ti			1	0.981	ug/l	11.35	63.33	6.026E-04	Pulse	0.50	3
Na			1	26949.155	ug/l	1.07	10,713,093.00	1.019E+02	Analog	1.00	3
Mg			1	6010.935	ug/l	0.86	1,092,664.84	1.040E+01	Pulse	1.00	3
K			1	1655.985	ug/l	1.35	231,055.55	2.199E+00	Pulse	1.00	3
V			1	0.438	ug/l	7.29	1,315.38	1.252E-02	Pulse	0.50	3
Mn			1	827.573	ug/l	0.37	1,205,077.83	1.509E+01	Pulse	0.50	3
Fe			1	2213.840	ug/l	0.39	5,580,109.50	6.987E+01	Analog	0.50	3
Co			1	9.323	ug/l	1.69	53,036.89	6.640E-01	Pulse	0.50	3
Ni			1	1.567	ug/l	4.00	2,718.20	3.404E-02	Pulse	0.50	3
Cu			1	4.141	ug/l	0.86	33,275.93	4.166E-01	Pulse	0.50	3
Zn			1	431.239	ug/l	0.40	269,433.23	2.195E+00	Pulse	1.00	3
Cd			1	1.382	ug/l	4.67	1,282.05	1.045E-02	Pulse	0.50	3
Al			1	14.625	ug/l	1.70	858.02	8.164E-03	Pulse	1.00	3
Se			1	0.029	ug/l	535.34	5.11	4.147E-05	Pulse	3.00	3
Sb			1	0.037	ug/l	26.80	100.00	8.136E-04	Pulse	1.00	3
Se			1	-0.016	ug/l	-1932.64	14.22	1.160E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,295,499.67	0.70	87.1	Pulse	0.50	3
1	Sc		105,096.01	1.32	88.2	Pulse	0.30	3
1	Ge		79,866.76	0.70	86.5	Pulse	0.30	3
1	In		717,766.32	0.77	83.4	Pulse	0.30	3
1	Tb		2,894,239.17	1.12	88.5	Pulse	0.50	3
1	Lu		1,721,445.29	1.50	85.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		122,751.02	1.03	87.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		511.12	5.27	101.8	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:29
Sample Name FA95332-1FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.862	ug/l	2.36	3,231.61	4.129E-02	Pulse	0.50	3
As			1	0.268	ug/l	12.61	99.67	1.273E-03	Pulse	1.00	3
Mo			1	0.086	ug/l	13.92	188.67	1.569E-03	Pulse	0.50	3
Pb			1	0.035	ug/l	2.89	2,748.23	1.170E-03	Pulse	1.00	3
Be			1	0.025	ug/l	260.38	0.83	8.056E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	22.29	112.00	9.315E-04	Pulse	0.50	3
Ba			1	4.782	ug/l	1.78	3,056.94	4.269E-03	Pulse	0.50	3
Tl			1	0.011	ug/l	16.13	258.00	1.100E-04	Pulse	0.50	3
Sn			1	0.280	ug/l	20.22	603.35	8.419E-04	Pulse	0.30	3
Sr			1	32.709	ug/l	0.60	47,292.28	6.604E-02	Pulse	0.50	3
[Pb]			1	0.040	ug/l	18.07	1,278.72	5.447E-04	Pulse	0.50	3
Ca			1	8702.924	ug/l	1.53	62,500.19	6.065E-01	Pulse	0.50	3
Ti			1	0.181	ug/l	55.49	13.33	1.295E-04	Pulse	0.50	3
Na			1	3006.094	ug/l	0.69	1,177,333.75	1.142E+01	Pulse	1.00	3
Mg			1	893.839	ug/l	0.38	159,761.63	1.550E+00	Pulse	1.00	3
K			1	471.883	ug/l	0.60	72,964.81	7.080E-01	Pulse	1.00	3
V			1	0.368	ug/l	5.79	1,125.37	1.092E-02	Pulse	0.50	3
Mn			1	6.525	ug/l	2.02	9,421.63	1.204E-01	Pulse	0.50	3
Fe			1	12.434	ug/l	2.96	37,255.64	4.760E-01	Pulse	0.50	3
Co			1	0.068	ug/l	4.63	435.34	5.564E-03	Pulse	0.50	3
Ni			1	0.463	ug/l	2.38	962.70	1.230E-02	Pulse	0.50	3
Cu			1	1.142	ug/l	7.01	19,857.56	2.537E-01	Pulse	0.50	3
Zn			1	3.539	ug/l	2.31	3,840.73	3.194E-02	Pulse	1.00	3
Cd			1	0.026	ug/l	9.48	26.67	2.218E-04	Pulse	0.50	3
Al			1	11.191	ug/l	18.46	658.68	6.390E-03	Pulse	1.00	3
Se			1	0.192	ug/l	74.04	8.33	6.936E-05	Pulse	3.00	3
Sb			1	0.088	ug/l	5.90	204.33	1.700E-03	Pulse	1.00	3
Se			1	-0.066	ug/l	-344.75	13.45	1.118E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,348,149.92	1.27	89.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		103,059.93	0.62	86.5	Pulse	0.30	3
1	Ge		78,264.63	0.82	84.8	Pulse	0.30	3
1	In		716,146.14	0.78	83.2	Pulse	0.30	3
1	Tb		2,860,615.00	0.89	87.5	Pulse	0.50	3
1	Lu		1,709,607.92	0.63	84.7	Pulse	0.50	3
1	Ge		120,228.57	0.50	85.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		491.12	8.04	97.8	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:33
Sample Name FA95332-2FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.584	ug/l	5.95	2,388.82	2.996E-02	Pulse	0.50	3
As			1	0.245	ug/l	22.86	94.00	1.180E-03	Pulse	1.00	3
Mo			1	0.022	ug/l	17.15	64.00	5.375E-04	Pulse	0.50	3
Pb			1	-0.038	ug/l	-5.55	1,898.44	8.091E-04	Pulse	1.00	3
Be			1	0.024	ug/l	192.10	0.83	7.998E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	16.66	73.33	6.159E-04	Pulse	0.50	3
Ba			1	1.619	ug/l	2.03	1,041.37	1.451E-03	Pulse	0.50	3
Tl			1	0.005	ug/l	12.11	162.00	6.908E-05	Pulse	0.50	3
Sn			1	0.222	ug/l	16.48	510.01	7.108E-04	Pulse	0.30	3
Sr			1	23.611	ug/l	0.58	34,274.35	4.777E-02	Pulse	0.50	3
[Pb]			1	-0.029	ug/l	-41.81	905.36	3.859E-04	Pulse	0.50	3
Ca			1	3411.018	ug/l	0.92	24,791.63	2.379E-01	Pulse	0.50	3
Ti			1	0.156	ug/l	53.72	12.00	1.147E-04	Pulse	0.50	3
Na			1	2006.746	ug/l	0.98	796,684.58	7.645E+00	Pulse	1.00	3
Mg			1	331.496	ug/l	0.75	60,224.31	5.779E-01	Pulse	1.00	3
K			1	741.167	ug/l	0.83	109,094.82	1.047E+00	Pulse	1.00	3
V			1	0.441	ug/l	2.67	1,312.05	1.259E-02	Pulse	0.50	3
Mn			1	1.212	ug/l	2.61	1,876.76	2.353E-02	Pulse	0.50	3
Fe			1	3.981	ug/l	2.53	16,710.53	2.096E-01	Pulse	0.50	3
Co			1	0.045	ug/l	2.45	311.33	3.904E-03	Pulse	0.50	3
Ni			1	0.001	ug/l	3224.27	255.33	3.203E-03	Pulse	0.50	3
Cu			1	2.413	ug/l	3.89	25,731.12	3.228E-01	Pulse	0.50	3
Zn			1	1.972	ug/l	2.86	2,860.55	2.402E-02	Pulse	1.00	3
Cd			1	0.112	ug/l	10.25	103.33	8.682E-04	Pulse	0.50	3
Al			1	19.769	ug/l	11.37	1,128.70	1.082E-02	Pulse	1.00	3
Se			1	0.016	ug/l	211.12	4.67	3.921E-05	Pulse	3.00	3
Sb			1	0.045	ug/l	12.71	113.00	9.484E-04	Pulse	1.00	3
Se			1	-0.363	ug/l	-89.53	10.34	8.682E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,346,323.50	1.16	89.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		104,201.55	1.26	87.4	Pulse	0.30	3
1	Ge		79,739.50	2.28	86.4	Pulse	0.30	3
1	In		717,539.83	1.53	83.3	Pulse	0.30	3
1	Tb		2,856,669.50	1.45	87.4	Pulse	0.50	3
1	Lu		1,700,270.58	1.43	84.2	Pulse	0.50	3
1	Ge		119,089.23	0.92	84.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		532.23	7.65	106.0	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:37
Sample Name FA95332-3FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.749	ug/l	2.07	2,953.57	3.669E-02	Pulse	0.50	3
As			1	0.279	ug/l	21.88	106.33	1.320E-03	Pulse	1.00	3
Mo			1	0.035	ug/l	35.83	91.33	7.493E-04	Pulse	0.50	3
Pb			1	0.104	ug/l	13.06	3,553.04	1.511E-03	Pulse	1.00	3
Be			1	0.013	ug/l	135.02	0.67	6.313E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	7.57	85.33	6.994E-04	Pulse	0.50	3
Ba			1	6.572	ug/l	4.31	4,274.53	5.863E-03	Pulse	0.50	3
Tl			1	0.008	ug/l	14.58	208.67	8.875E-05	Pulse	0.50	3
Sn			1	0.252	ug/l	5.06	566.68	7.770E-04	Pulse	0.30	3
Sr			1	30.081	ug/l	0.15	44,314.44	6.076E-02	Pulse	0.50	3
[Pb]			1	0.102	ug/l	8.38	1,618.08	6.879E-04	Pulse	0.50	3
Ca			1	3046.200	ug/l	1.67	22,545.61	2.125E-01	Pulse	0.50	3
Ti			1	0.312	ug/l	45.58	22.00	2.069E-04	Pulse	0.50	3
Na			1	1619.680	ug/l	0.96	655,889.19	6.182E+00	Pulse	1.00	3
Mg			1	288.115	ug/l	1.65	53,352.60	5.029E-01	Pulse	1.00	3
K			1	757.638	ug/l	1.66	113,275.01	1.068E+00	Pulse	1.00	3
V			1	0.509	ug/l	2.93	1,500.73	1.414E-02	Pulse	0.50	3
Mn			1	2.533	ug/l	0.66	3,833.06	4.762E-02	Pulse	0.50	3
Fe			1	5.178	ug/l	0.55	19,906.87	2.473E-01	Pulse	0.50	3
Co			1	0.029	ug/l	32.20	222.67	2.766E-03	Pulse	0.50	3
Ni			1	6.928	ug/l	1.66	11,239.96	1.396E-01	Pulse	0.50	3
Cu			1	1.968	ug/l	1.25	24,038.28	2.986E-01	Pulse	0.50	3
Zn			1	9.092	ug/l	2.59	7,321.07	6.003E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	14.26	16.00	1.311E-04	Pulse	0.50	3
Al			1	9.068	ug/l	2.19	561.68	5.292E-03	Pulse	1.00	3
Se			1	-0.006	ug/l	-1261.67	4.34	3.547E-05	Pulse	3.00	3
Sb			1	0.103	ug/l	18.67	239.67	1.967E-03	Pulse	1.00	3
Se			1	-0.419	ug/l	-40.65	10.00	8.206E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,352,019.75	0.75	89.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		106,108.38	2.03	89.0	Pulse	0.30	3
1	Ge		80,495.08	1.01	87.2	Pulse	0.30	3
1	In		729,351.97	1.18	84.7	Pulse	0.30	3
1	Tb		2,876,094.75	1.44	88.0	Pulse	0.50	3
1	Lu		1,707,747.63	1.17	84.6	Pulse	0.50	3
1	Ge		121,973.96	0.87	86.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		583.34	5.45	116.1	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:41
Sample Name FA95332-4FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.723	ug/l	2.41	2,902.23	3.561E-02	Pulse	0.50	3
As			1	0.306	ug/l	19.27	117.00	1.435E-03	Pulse	1.00	3
Mo			1	0.026	ug/l	38.57	74.67	6.064E-04	Pulse	0.50	3
Pb			1	-0.043	ug/l	-12.63	1,859.77	7.863E-04	Pulse	1.00	3
Be			1	0.082	ug/l	109.81	1.83	1.699E-05	Pulse	2.00	3
Ag			1	0.008	ug/l	31.54	72.00	5.846E-04	Pulse	0.50	3
Ba			1	4.698	ug/l	1.21	3,064.27	4.194E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	13.31	140.67	5.950E-05	Pulse	0.50	3
Sn			1	0.204	ug/l	5.48	488.90	6.692E-04	Pulse	0.30	3
Sr			1	15.759	ug/l	1.93	23,381.17	3.200E-02	Pulse	0.50	3
[Pb]			1	-0.041	ug/l	-6.30	848.02	3.585E-04	Pulse	0.50	3
Ca			1	2602.632	ug/l	0.37	19,461.65	1.816E-01	Pulse	0.50	3
Ti			1	0.351	ug/l	43.12	24.67	2.296E-04	Pulse	0.50	3
Na			1	1759.449	ug/l	0.63	719,014.04	6.711E+00	Pulse	1.00	3
Mg			1	340.541	ug/l	0.37	63,599.00	5.936E-01	Pulse	1.00	3
K			1	438.152	ug/l	1.55	71,303.77	6.655E-01	Pulse	1.00	3
V			1	0.542	ug/l	4.21	1,598.07	1.491E-02	Pulse	0.50	3
Mn			1	1.255	ug/l	2.05	1,983.44	2.433E-02	Pulse	0.50	3
Fe			1	3.496	ug/l	1.39	15,838.46	1.943E-01	Pulse	0.50	3
Co			1	0.011	ug/l	37.58	123.33	1.510E-03	Pulse	0.50	3
Ni			1	0.078	ug/l	33.62	385.34	4.722E-03	Pulse	0.50	3
Cu			1	0.647	ug/l	13.76	18,489.54	2.268E-01	Pulse	0.50	3
Zn			1	2.361	ug/l	5.08	3,195.61	2.598E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	79.51	8.00	6.512E-05	Pulse	0.50	3
Al			1	6.774	ug/l	7.93	440.34	4.107E-03	Pulse	1.00	3
Se			1	0.030	ug/l	56.20	5.11	4.155E-05	Pulse	3.00	3
Sb			1	0.042	ug/l	10.48	111.33	9.057E-04	Pulse	1.00	3
Se			1	-0.051	ug/l	-447.38	13.89	1.130E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,365,194.33	1.26	89.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		107,151.49	1.48	89.9	Pulse	0.30	3
1	Ge		81,522.64	1.67	88.3	Pulse	0.30	3
1	In		730,734.20	1.01	84.9	Pulse	0.30	3
1	Tb		2,885,720.33	1.52	88.3	Pulse	0.50	3
1	Lu		1,718,905.46	1.82	85.2	Pulse	0.50	3
1	Ge		122,984.79	0.85	87.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		547.79	7.75	109.1	Pulse	0.30	3

Quantitation Report

File Name 042SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:44
Sample Name FA95332-5FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.686	ug/l	2.07	2,812.22	3.413E-02	Pulse	0.50	3
As			1	0.275	ug/l	18.62	107.33	1.302E-03	Pulse	1.00	3
Mo			1	0.033	ug/l	38.94	89.33	7.215E-04	Pulse	0.50	3
Pb			1	-0.041	ug/l	-12.00	1,900.44	7.964E-04	Pulse	1.00	3
Be			1	0.032	ug/l	241.35	1.00	9.275E-06	Pulse	2.00	3
Ag			1	0.007	ug/l	55.95	64.00	5.169E-04	Pulse	0.50	3
Ba			1	4.464	ug/l	3.12	2,962.26	3.985E-03	Pulse	0.50	3
Tl			1	0.002	ug/l	47.91	108.00	4.524E-05	Pulse	0.50	3
Sn			1	0.310	ug/l	14.87	674.46	9.075E-04	Pulse	0.30	3
Sr			1	15.010	ug/l	1.76	22,662.26	3.049E-02	Pulse	0.50	3
[Pb]			1	-0.043	ug/l	-17.70	840.69	3.523E-04	Pulse	0.50	3
Ca			1	2509.044	ug/l	0.63	18,819.72	1.751E-01	Pulse	0.50	3
Ti			1	0.319	ug/l	24.93	22.67	2.110E-04	Pulse	0.50	3
Na			1	1691.303	ug/l	0.27	693,493.33	6.453E+00	Pulse	1.00	3
Mg			1	332.120	ug/l	0.60	62,227.05	5.790E-01	Pulse	1.00	3
K			1	404.982	ug/l	0.45	67,037.65	6.238E-01	Pulse	1.00	3
V			1	0.555	ug/l	3.98	1,634.07	1.521E-02	Pulse	0.50	3
Mn			1	1.372	ug/l	6.39	2,179.46	2.645E-02	Pulse	0.50	3
Fe			1	5.392	ug/l	6.88	20,938.00	2.540E-01	Pulse	0.50	3
Co			1	0.010	ug/l	31.12	118.67	1.440E-03	Pulse	0.50	3
Ni			1	0.087	ug/l	12.55	403.34	4.894E-03	Pulse	0.50	3
Cu			1	0.608	ug/l	4.14	18,522.25	2.248E-01	Pulse	0.50	3
Zn			1	2.763	ug/l	7.79	3,468.65	2.802E-02	Pulse	1.00	3
Cd			1	0.015	ug/l	29.02	17.33	1.400E-04	Pulse	0.50	3
Al			1	7.045	ug/l	18.48	456.67	4.247E-03	Pulse	1.00	3
Se			1	0.018	ug/l	49.96	4.89	3.949E-05	Pulse	3.00	3
Sb			1	0.056	ug/l	5.64	143.00	1.155E-03	Pulse	1.00	3
Se			1	-0.242	ug/l	-23.41	12.00	9.693E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,386,899.17	1.08	90.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		107,470.03	0.56	90.2	Pulse	0.30	3
1	Ge		82,407.27	0.96	89.2	Pulse	0.30	3
1	In		743,235.96	1.01	86.3	Pulse	0.30	3
1	Tb		2,901,906.17	1.25	88.8	Pulse	0.50	3
1	Lu		1,728,459.79	1.04	85.6	Pulse	0.50	3
1	Ge		123,807.59	0.18	88.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		547.79	5.78	109.1	Pulse	0.30	3

Quantitation Report

File Name	043CCVA.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 12:48
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.633	ug/l	1.06	377,464.61	4.220E+00	Pulse	0.50	3
As			1	49.967	ug/l	1.51	37,338.60	4.174E-01	Pulse	1.00	3
Mo			1	50.049	ug/l	1.21	218,148.45	1.619E+00	Pulse	0.50	3
Pb			1	50.199	ug/l	0.85	1,222,892.21	4.948E-01	Pulse	1.00	3
Be			1	54.587	ug/l	3.14	2,038.60	1.707E-02	Pulse	2.00	3
Ag			1	51.605	ug/l	1.33	803,775.19	5.965E+00	Pulse	0.50	3
Ba			1	49.083	ug/l	1.12	70,262.07	8.744E-02	Pulse	0.50	3
Tl			1	51.244	ug/l	0.98	1,792,340.92	7.252E-01	Pulse	0.50	3
Sn			1	50.211	ug/l	0.40	182,283.67	2.269E-01	Pulse	0.30	3
Sr			1	49.303	ug/l	0.87	159,395.96	1.984E-01	Pulse	0.50	3
[Pb]			1	50.046	ug/l	1.25	571,978.71	2.314E-01	Pulse	0.50	3
Ca			1	4919.270	ug/l	2.03	81,890.19	6.856E-01	Pulse	0.50	3
Ti			1	50.025	ug/l	2.04	7,068.63	5.918E-02	Pulse	0.50	3
Na			1	5251.379	ug/l	0.65	4,750,040.00	3.977E+01	Analog	1.00	3
Mg			1	5054.943	ug/l	0.71	2,088,492.42	1.748E+01	Pulse	1.00	3
K			1	5050.823	ug/l	0.23	1,532,698.38	1.283E+01	Pulse	1.00	3
V			1	49.937	ug/l	1.12	273,383.25	2.289E+00	Pulse	0.50	3
Mn			1	50.124	ug/l	0.87	163,614.09	1.829E+00	Pulse	0.50	3
Fe			1	5197.625	ug/l	0.67	29,319,959.33	3.278E+02	Analog	0.50	3
Co			1	51.951	ug/l	0.62	661,384.77	7.393E+00	Pulse	0.50	3
Ni			1	52.193	ug/l	1.35	184,222.03	2.059E+00	Pulse	0.50	3
Cu			1	53.139	ug/l	1.47	533,437.89	5.963E+00	Pulse	0.50	3
Zn			1	52.558	ug/l	2.05	73,525.58	5.457E-01	Pulse	1.00	3
Cd			1	49.851	ug/l	1.43	101,374.86	7.523E-01	Pulse	0.50	3
Al			1	4800.456	ug/l	1.38	592,714.15	4.962E+00	Pulse	1.00	3
Se			1	49.173	ug/l	1.94	2,272.36	1.686E-02	Pulse	3.00	3
Sb			1	48.224	ug/l	0.98	225,915.42	1.676E+00	Pulse	1.00	3
Se			1	49.464	ug/l	4.25	1,135.26	8.425E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,471,647.17	1.00	93.8	Pulse	0.50	3
1	Sc		119,449.70	0.12	100.2	Pulse	0.30	3
1	Ge		89,457.67	0.66	96.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		803,521.36	0.35	93.3	Pulse	0.30	3
1	Tb		3,105,602.50	0.49	95.0	Pulse	0.50	3
1	Lu		1,883,837.38	0.42	93.3	Pulse	0.50	3
1	Ge		134,760.98	0.71	96.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		435.56	5.21	86.7	Pulse	0.30	3

Quantitation Report

File Name	044_CCV.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 12:52
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	106.019	ug/l	1.23	755,565.98	8.658E+00	Pulse	0.50	3
As			1	102.518	ug/l	1.35	74,725.00	8.563E-01	Pulse	1.00	3
Mo			1	104.418	ug/l	1.17	443,775.65	3.377E+00	Pulse	0.50	3
Pb			1	103.252	ug/l	0.50	2,457,464.08	1.017E+00	Pulse	1.00	3
Be			1	109.270	ug/l	1.06	3,997.56	3.416E-02	Pulse	2.00	3
Ag			1	105.114	ug/l	1.46	1,596,468.09	1.215E+01	Pulse	0.50	3
Ba			1	102.201	ug/l	0.60	142,764.79	1.821E-01	Pulse	0.50	3
Tl			1	106.596	ug/l	0.30	3,646,476.33	1.509E+00	Pulse	0.50	3
Sn			1	101.280	ug/l	0.80	358,656.04	4.574E-01	Pulse	0.30	3
Sr			1	100.302	ug/l	0.88	316,173.34	4.032E-01	Pulse	0.50	3
[Pb]			1	103.738	ug/l	0.25	1,158,452.04	4.792E-01	Pulse	0.50	3
Ca			1	10136.468	ug/l	1.31	165,266.89	1.412E+00	Pulse	0.50	3
Ti			1	98.540	ug/l	1.08	13,638.78	1.165E-01	Pulse	0.50	3
Na			1	10705.737	ug/l	0.64	9,480,342.00	8.101E+01	Analog	1.00	3
Mg			1	10347.369	ug/l	1.29	4,187,678.42	3.579E+01	Pulse	1.00	3
K			1	10409.151	ug/l	0.70	3,080,541.33	2.632E+01	Pulse	1.00	3
V			1	102.769	ug/l	1.28	550,879.13	4.707E+00	Pulse	0.50	3
Mn			1	103.327	ug/l	1.63	328,893.08	3.769E+00	Pulse	0.50	3
Fe			1	10651.943	ug/l	1.53	58,611,162.67	6.716E+02	Analog	0.50	3
Co			1	105.657	ug/l	1.08	1,312,222.83	1.504E+01	Pulse	0.50	3
Ni			1	106.290	ug/l	1.42	365,714.80	4.191E+00	Pulse	0.50	3
Cu			1	105.707	ug/l	1.53	1,018,688.56	1.167E+01	Pulse	0.50	3
Zn			1	104.499	ug/l	0.74	140,736.62	1.071E+00	Pulse	1.00	3
Cd			1	102.541	ug/l	1.54	203,332.14	1.547E+00	Pulse	0.50	3
Al			1	9901.380	ug/l	1.78	1,197,571.96	1.023E+01	Pulse	1.00	3
Se			1	99.182	ug/l	0.21	4,464.86	3.398E-02	Pulse	3.00	3
Sb			1	100.849	ug/l	0.83	460,681.31	3.506E+00	Pulse	1.00	3
Se			1	102.833	ug/l	2.61	2,285.03	1.739E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,417,269.83	0.28	91.8	Pulse	0.50	3
1	Sc		117,034.09	1.12	98.2	Pulse	0.30	3
1	Ge		87,281.06	1.48	94.5	Pulse	0.30	3
1	In		784,182.09	0.52	91.1	Pulse	0.30	3
1	Tb		3,079,284.08	0.77	94.2	Pulse	0.50	3
1	Lu		1,891,947.50	0.92	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		131,408.90	0.68	93.7	Pulse	0.30	3
1	Te		6.00	88.19		Pulse	0.50	3
1	Li		466.68	3.98	92.9	Pulse	0.30	3

Quantitation Report

File Name 045_CCB.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 12:56
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.020	ug/l	32.10	680.01	7.751E-03	Pulse	0.50	3
As			1	0.020	ug/l	45.63	28.67	3.266E-04	Pulse	1.00	3
Mo			1	0.131	ug/l	19.14	586.01	4.413E-03	Pulse	0.50	3
Pb			1	0.067	ug/l	9.27	4,108.17	1.660E-03	Pulse	1.00	3
Be			1	0.019	ug/l	113.44	1.17	1.012E-05	Pulse	2.00	3
Ag			1	0.024	ug/l	11.06	382.01	2.883E-03	Pulse	0.50	3
Ba			1	0.015	ug/l	66.43	28.67	3.574E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	10.87	1,106.71	4.472E-04	Pulse	0.50	3
Sn			1	0.084	ug/l	14.53	472.23	5.889E-04	Pulse	0.30	3
Sr			1	0.026	ug/l	54.39	364.67	4.551E-04	Pulse	0.50	3
[Pb]			1	0.068	ug/l	19.00	1,900.11	7.678E-04	Pulse	0.50	3
Ca			1	1.996	ug/l	67.38	75.33	6.535E-04	Pulse	0.50	3
Ti			1	-0.004	ug/l	-331.67	2.00	1.721E-05	Pulse	0.50	3
Na			1	3.194	ug/l	10.35	9,559.62	8.275E-02	Pulse	1.00	3
Mg			1	1.782	ug/l	11.59	1,264.04	1.094E-02	Pulse	1.00	3
K			1	3.486	ug/l	8.05	14,177.09	1.227E-01	Pulse	1.00	3
V			1	0.010	ug/l	86.19	342.67	2.962E-03	Pulse	0.50	3
Mn			1	-0.005	ug/l	-205.48	111.33	1.269E-03	Pulse	0.50	3
Fe			1	2.126	ug/l	2.84	19,130.11	2.181E-01	Pulse	0.50	3
Co			1	0.020	ug/l	20.63	312.67	3.563E-03	Pulse	0.50	3
Ni			1	-0.018	ug/l	-32.75	216.00	2.463E-03	Pulse	0.50	3
Cu			1	1.599	ug/l	3.50	32,042.54	3.654E-01	Pulse	0.50	3
Zn			1	1.898	ug/l	3.46	4,407.18	3.324E-02	Pulse	1.00	3
Cd			1	0.019	ug/l	37.67	40.67	3.075E-04	Pulse	0.50	3
Al			1	1.584	ug/l	21.16	259.00	2.244E-03	Pulse	1.00	3
Se			1	0.011	ug/l	368.59	5.33	4.014E-05	Pulse	3.00	3
Sb			1	0.036	ug/l	6.71	189.00	1.425E-03	Pulse	1.00	3
Se			1	-0.070	ug/l	-87.01	14.00	1.055E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,475,396.67	0.58	94.0	Pulse	0.50	3
1	Sc		115,547.54	1.25	96.9	Pulse	0.30	3

Quantitation Report

1	Ge		87,696.10	0.91	95.0	Pulse	0.30	3
1	In		801,779.41	0.83	93.1	Pulse	0.30	3
1	Tb		3,063,785.58	0.82	93.7	Pulse	0.50	3
1	Lu		1,858,456.25	0.49	92.1	Pulse	0.50	3
1	Ge		132,590.45	1.19	94.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		527.79	8.57	105.1	Pulse	0.30	3

Quantitation Report

File Name	046SMPL.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:00
Sample Name	FA95332-6A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.696	ug/l	4.68	2,829.55	3.452E-02	Pulse	0.50	3
As			1	0.030	ug/l	70.51	23.00	2.812E-04	Pulse	1.00	3
Mo			1	0.150	ug/l	19.73	325.34	2.604E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	48.42	2,672.55	1.125E-03	Pulse	1.00	3
Be			1	0.023	ug/l	273.26	0.83	7.725E-06	Pulse	2.00	3
Ag			1	0.027	ug/l	20.35	210.00	1.681E-03	Pulse	0.50	3
Ba			1	0.133	ug/l	22.80	94.67	1.273E-04	Pulse	0.50	3
Tl			1	0.018	ug/l	44.69	370.67	1.563E-04	Pulse	0.50	3
Sn			1	0.556	ug/l	3.44	1,087.82	1.464E-03	Pulse	0.30	3
Sr			1	0.147	ug/l	36.56	480.68	6.474E-04	Pulse	0.50	3
[Pb]			1	0.027	ug/l	119.53	1,223.38	5.152E-04	Pulse	0.50	3
Ca			1	52.849	ug/l	5.34	436.68	4.056E-03	Pulse	0.50	3
Ti			1	0.276	ug/l	10.76	20.00	1.857E-04	Pulse	0.50	3
Na			1	225.833	ug/l	0.55	98,239.11	9.124E-01	Pulse	1.00	3
Mg			1	6.514	ug/l	12.19	1,727.08	1.605E-02	Pulse	1.00	3
K			1	35.732	ug/l	2.94	17,109.06	1.589E-01	Pulse	1.00	3
V			1	0.277	ug/l	11.58	952.03	8.845E-03	Pulse	0.50	3
Mn			1	0.536	ug/l	4.98	919.36	1.122E-02	Pulse	0.50	3
Fe			1	9.558	ug/l	6.26	31,568.28	3.854E-01	Pulse	0.50	3
Co			1	0.019	ug/l	54.97	167.33	2.047E-03	Pulse	0.50	3
Ni			1	0.189	ug/l	15.78	565.34	6.898E-03	Pulse	0.50	3
Cu			1	0.893	ug/l	6.12	19,682.03	2.402E-01	Pulse	0.50	3
Zn			1	15.082	ug/l	1.87	11,282.98	9.032E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	105.80	12.67	1.015E-04	Pulse	0.50	3
Al			1	7.741	ug/l	18.16	495.68	4.607E-03	Pulse	1.00	3
Se			1	-0.005	ug/l	-1476.34	4.44	3.555E-05	Pulse	3.00	3
Sb			1	0.046	ug/l	12.73	122.33	9.793E-04	Pulse	1.00	3
Se			1	-0.464	ug/l	-42.45	9.78	7.831E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,376,312.75	0.96	90.2	Pulse	0.50	3
1	Sc		107,670.12	0.60	90.3	Pulse	0.30	3
1	Ge		81,943.23	1.15	88.7	Pulse	0.30	3
1	In		742,992.35	0.59	86.3	Pulse	0.30	3
1	Tb		2,944,720.75	0.78	90.1	Pulse	0.50	3
1	Lu		1,768,368.17	0.99	87.6	Pulse	0.50	3
1	Ge		124,920.25	0.31	89.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		525.57	24.60	104.6	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:03
Sample Name FA95350-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.216	ug/l	2.82	4,426.52	5.573E-02	Pulse	0.50	3
As			1	0.201	ug/l	6.95	79.00	9.947E-04	Pulse	1.00	3
Mo			1	0.210	ug/l	13.86	426.01	3.575E-03	Pulse	0.50	3
Pb			1	0.043	ug/l	13.83	2,773.90	1.212E-03	Pulse	1.00	3
Be			1	0.117	ug/l	66.69	2.33	2.245E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	20.66	120.67	1.013E-03	Pulse	0.50	3
Ba			1	20.470	ug/l	1.43	12,965.33	1.824E-02	Pulse	0.50	3
Tl			1	0.004	ug/l	12.05	140.00	6.117E-05	Pulse	0.50	3
Sn			1	0.292	ug/l	14.24	616.68	8.684E-04	Pulse	0.30	3
Sr			1	79.309	ug/l	1.24	113,458.53	1.596E-01	Pulse	0.50	3
[Pb]			1	0.056	ug/l	16.86	1,329.39	5.810E-04	Pulse	0.50	3
Ca			1	15108.500	ug/l	1.79	109,641.50	1.053E+00	Pulse	0.50	3
Ti			1	2.172	ug/l	24.85	136.00	1.306E-03	Pulse	0.50	3
Na			1	12050.935	ug/l	0.97	4,752,003.17	4.562E+01	Analog	1.00	3
Mg			1	1028.298	ug/l	0.89	185,693.00	1.783E+00	Pulse	1.00	3
K			1	2472.894	ug/l	0.86	336,165.11	3.227E+00	Pulse	1.00	3
V			1	1.213	ug/l	2.04	3,153.60	3.027E-02	Pulse	0.50	3
Mn			1	8.049	ug/l	2.14	11,768.92	1.482E-01	Pulse	0.50	3
Fe			1	153.754	ug/l	1.27	391,611.51	4.931E+00	Pulse	0.50	3
Co			1	0.150	ug/l	3.59	904.03	1.138E-02	Pulse	0.50	3
Ni			1	0.752	ug/l	3.20	1,429.39	1.800E-02	Pulse	0.50	3
Cu			1	1.645	ug/l	2.44	22,322.23	2.810E-01	Pulse	0.50	3
Zn			1	2.790	ug/l	3.33	3,355.30	2.815E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	47.45	9.33	7.836E-05	Pulse	0.50	3
Al			1	278.425	ug/l	2.13	15,049.69	1.445E-01	Pulse	1.00	3
Se			1	0.224	ug/l	50.01	8.89	7.469E-05	Pulse	3.00	3
Sb			1	0.060	ug/l	22.65	145.33	1.220E-03	Pulse	1.00	3
Se			1	0.023	ug/l	948.09	14.22	1.192E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,288,666.42	0.75	86.9	Pulse	0.50	3
1	Sc		104,171.14	0.85	87.4	Pulse	0.30	3
1	Ge		79,424.89	0.24	86.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		710,825.46	1.41	82.6	Pulse	0.30	3
1	Tb		2,835,279.75	0.60	86.7	Pulse	0.50	3
1	Lu		1,704,567.67	1.20	84.5	Pulse	0.50	3
1	Ge		119,170.81	0.91	84.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		510.01	5.23	101.5	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:07
Sample Name FA95350-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.160	ug/l	5.33	4,113.79	5.347E-02	Pulse	0.50	3
As			1	0.225	ug/l	10.44	84.33	1.097E-03	Pulse	1.00	3
Mo			1	0.192	ug/l	4.47	384.01	3.288E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	14.44	2,639.21	1.175E-03	Pulse	1.00	3
Be			1	0.067	ug/l	46.91	1.50	1.472E-05	Pulse	2.00	3
Ag			1	0.013	ug/l	19.63	101.33	8.672E-04	Pulse	0.50	3
Ba			1	20.732	ug/l	3.40	12,754.54	1.847E-02	Pulse	0.50	3
Tl			1	0.002	ug/l	19.49	110.67	4.922E-05	Pulse	0.50	3
Sn			1	0.315	ug/l	12.21	635.57	9.199E-04	Pulse	0.30	3
Sr			1	79.156	ug/l	1.68	109,984.30	1.593E-01	Pulse	0.50	3
[Pb]			1	0.047	ug/l	36.51	1,259.39	5.604E-04	Pulse	0.50	3
Ca			1	15077.646	ug/l	0.61	107,128.48	1.050E+00	Pulse	0.50	3
Ti			1	1.973	ug/l	10.16	121.33	1.189E-03	Pulse	0.50	3
Na			1	12181.542	ug/l	2.02	4,702,463.83	4.611E+01	Analog	1.00	3
Mg			1	1026.356	ug/l	1.88	181,448.23	1.779E+00	Pulse	1.00	3
K			1	2497.684	ug/l	1.51	332,285.46	3.258E+00	Pulse	1.00	3
V			1	1.208	ug/l	3.67	3,073.59	3.014E-02	Pulse	0.50	3
Mn			1	8.300	ug/l	0.75	11,752.25	1.528E-01	Pulse	0.50	3
Fe			1	158.277	ug/l	2.29	390,279.23	5.073E+00	Pulse	0.50	3
Co			1	0.160	ug/l	3.62	927.36	1.205E-02	Pulse	0.50	3
Ni			1	0.785	ug/l	5.65	1,433.39	1.863E-02	Pulse	0.50	3
Cu			1	1.925	ug/l	2.16	22,793.46	2.963E-01	Pulse	0.50	3
Zn			1	2.823	ug/l	0.80	3,306.96	2.832E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	53.45	11.33	9.690E-05	Pulse	0.50	3
Al			1	297.544	ug/l	4.03	15,740.21	1.544E-01	Pulse	1.00	3
Se			1	0.137	ug/l	121.71	7.00	5.980E-05	Pulse	3.00	3
Sb			1	0.052	ug/l	12.21	126.67	1.084E-03	Pulse	1.00	3
Se			1	0.008	ug/l	3313.62	13.78	1.180E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,247,153.58	1.18	85.3	Pulse	0.50	3
1	Sc		101,986.44	0.76	85.6	Pulse	0.30	3
1	Ge		76,934.64	0.59	83.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		690,454.42	1.14	80.2	Pulse	0.30	3
1	Tb		2,786,298.92	0.50	85.2	Pulse	0.50	3
1	Lu		1,664,794.00	0.83	82.5	Pulse	0.50	3
1	Ge		116,768.21	0.81	83.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		500.01	23.06	99.6	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:11
Sample Name FA95350-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.182	ug/l	2.38	4,160.45	5.435E-02	Pulse	0.50	3
As			1	0.213	ug/l	26.69	80.00	1.045E-03	Pulse	1.00	3
Mo			1	0.173	ug/l	8.07	345.34	2.971E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	21.65	2,624.21	1.175E-03	Pulse	1.00	3
Be			1	-0.006	ug/l	-312.94	0.33	3.293E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	29.21	88.00	7.580E-04	Pulse	0.50	3
Ba			1	39.964	ug/l	2.07	24,421.12	3.560E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	42.98	82.00	3.671E-05	Pulse	0.50	3
Sn			1	0.410	ug/l	16.61	778.91	1.135E-03	Pulse	0.30	3
Sr			1	59.628	ug/l	0.68	82,370.98	1.201E-01	Pulse	0.50	3
[Pb]			1	0.035	ug/l	40.68	1,191.38	5.334E-04	Pulse	0.50	3
Ca			1	16939.261	ug/l	1.53	119,668.64	1.180E+00	Pulse	0.50	3
Ti			1	2.045	ug/l	15.85	124.67	1.231E-03	Pulse	0.50	3
Na			1	15188.662	ug/l	0.97	5,829,415.33	5.748E+01	Analog	1.00	3
Mg			1	149.416	ug/l	0.72	26,687.05	2.631E-01	Pulse	1.00	3
K			1	1499.022	ug/l	1.55	202,925.49	2.001E+00	Pulse	1.00	3
V			1	1.466	ug/l	3.95	3,654.35	3.605E-02	Pulse	0.50	3
Mn			1	1.153	ug/l	1.39	1,719.42	2.246E-02	Pulse	0.50	3
Fe			1	153.586	ug/l	1.16	377,058.94	4.925E+00	Pulse	0.50	3
Co			1	0.058	ug/l	26.68	369.34	4.824E-03	Pulse	0.50	3
Ni			1	0.648	ug/l	6.44	1,220.05	1.594E-02	Pulse	0.50	3
Cu			1	1.928	ug/l	3.13	22,695.33	2.965E-01	Pulse	0.50	3
Zn			1	3.993	ug/l	4.16	3,980.42	3.424E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	24.82	7.33	6.305E-05	Pulse	0.50	3
Al			1	396.177	ug/l	2.92	20,818.82	2.053E-01	Pulse	1.00	3
Se			1	0.123	ug/l	50.14	6.66	5.741E-05	Pulse	3.00	3
Sb			1	0.066	ug/l	7.44	153.67	1.321E-03	Pulse	1.00	3
Se			1	-0.292	ug/l	-50.46	10.78	9.275E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,233,287.42	0.60	84.8	Pulse	0.50	3
1	Sc		101,424.75	1.86	85.1	Pulse	0.30	3
1	Ge		76,553.39	0.30	82.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		685,886.24	0.42	79.7	Pulse	0.30	3
1	Tb		2,778,688.08	0.97	85.0	Pulse	0.50	3
1	Lu		1,653,834.58	0.60	81.9	Pulse	0.50	3
1	Ge		116,282.04	1.16	82.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		501.12	6.00	99.8	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:15
Sample Name FA95350-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.629	ug/l	2.15	5,571.48	7.260E-02	Pulse	0.50	3
As			1	0.572	ug/l	23.20	195.33	2.546E-03	Pulse	1.00	3
Mo			1	0.152	ug/l	19.79	307.34	2.632E-03	Pulse	0.50	3
Pb			1	0.100	ug/l	5.94	3,349.00	1.488E-03	Pulse	1.00	3
Be			1	0.099	ug/l	55.91	2.00	1.963E-05	Pulse	2.00	3
Ag			1	0.013	ug/l	17.38	100.00	8.563E-04	Pulse	0.50	3
Ba			1	5.557	ug/l	2.07	3,408.33	4.958E-03	Pulse	0.50	3
Tl			1	0.002	ug/l	31.92	104.00	4.622E-05	Pulse	0.50	3
Sn			1	0.285	ug/l	20.78	586.68	8.530E-04	Pulse	0.30	3
Sr			1	3.486	ug/l	2.87	5,054.69	7.354E-03	Pulse	0.50	3
[Pb]			1	0.119	ug/l	18.37	1,638.09	7.275E-04	Pulse	0.50	3
Ca			1	558.227	ug/l	3.31	4,009.76	3.925E-02	Pulse	0.50	3
Ti			1	3.682	ug/l	6.52	224.67	2.199E-03	Pulse	0.50	3
Na			1	13113.199	ug/l	1.17	5,071,306.50	4.964E+01	Analog	1.00	3
Mg			1	332.878	ug/l	1.68	59,288.51	5.803E-01	Pulse	1.00	3
K			1	2202.947	ug/l	1.24	294,992.63	2.887E+00	Pulse	1.00	3
V			1	1.652	ug/l	3.56	4,119.12	4.032E-02	Pulse	0.50	3
Mn			1	2.432	ug/l	0.71	3,513.00	4.578E-02	Pulse	0.50	3
Fe			1	519.891	ug/l	0.73	1,264,207.04	1.647E+01	Pulse	0.50	3
Co			1	0.107	ug/l	5.42	640.01	8.336E-03	Pulse	0.50	3
Ni			1	0.611	ug/l	6.57	1,167.38	1.522E-02	Pulse	0.50	3
Cu			1	2.056	ug/l	3.75	23,287.38	3.034E-01	Pulse	0.50	3
Zn			1	3.567	ug/l	3.06	3,742.37	3.208E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	48.65	14.00	1.204E-04	Pulse	0.50	3
Al			1	521.683	ug/l	2.96	27,604.36	2.702E-01	Pulse	1.00	3
Se			1	0.237	ug/l	118.04	9.00	7.691E-05	Pulse	3.00	3
Sb			1	0.054	ug/l	4.00	129.67	1.111E-03	Pulse	1.00	3
Se			1	-0.023	ug/l	-1115.62	13.44	1.153E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,250,909.33	0.64	85.4	Pulse	0.50	3
1	Sc		102,174.16	1.03	85.7	Pulse	0.30	3
1	Ge		76,746.31	1.05	83.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		687,474.40	0.75	79.8	Pulse	0.30	3
1	Tb		2,784,888.83	0.92	85.2	Pulse	0.50	3
1	Lu		1,665,325.79	0.99	82.5	Pulse	0.50	3
1	Ge		116,636.49	1.30	83.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		534.45	7.23	106.4	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:18
Sample Name	FA95548-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.659	ug/l	4.59	2,508.17	3.300E-02	Pulse	0.50	3
As			1	20.049	ug/l	1.35	6,375.08	8.387E-02	Pulse	1.00	3
Mo			1	0.230	ug/l	9.94	446.01	3.905E-03	Pulse	0.50	3
Pb			1	0.074	ug/l	12.97	2,963.93	1.364E-03	Pulse	1.00	3
Be			1	0.057	ug/l	157.81	1.33	1.312E-05	Pulse	2.00	3
Ag			1	0.008	ug/l	29.17	66.67	5.831E-04	Pulse	0.50	3
Ba			1	15.086	ug/l	1.87	9,086.30	1.345E-02	Pulse	0.50	3
Tl			1	-0.001	ug/l	-88.55	57.33	2.640E-05	Pulse	0.50	3
Sn			1	0.238	ug/l	11.22	504.45	7.462E-04	Pulse	0.30	3
Sr			1	287.320	ug/l	0.34	390,179.60	5.773E-01	Pulse	0.50	3
[Pb]			1	0.079	ug/l	10.04	1,381.40	6.356E-04	Pulse	0.50	3
Ca			1	38514.435	ug/l	0.92	270,307.72	2.683E+00	Pulse	0.50	3
Ti			1	0.230	ug/l	23.66	16.00	1.585E-04	Pulse	0.50	3
Na			1	26418.257	ug/l	0.51	10,070,199.00	9.994E+01	Analog	1.00	3
Mg			1	5602.626	ug/l	0.95	976,524.71	9.691E+00	Pulse	1.00	3
K			1	7215.332	ug/l	1.09	926,739.42	9.198E+00	Pulse	1.00	3
V			1	0.347	ug/l	5.57	1,051.37	1.043E-02	Pulse	0.50	3
Mn			1	22.785	ug/l	0.58	31,685.11	4.168E-01	Pulse	0.50	3
Fe			1	587.752	ug/l	1.13	1,414,723.96	1.861E+01	Pulse	0.50	3
Co			1	0.449	ug/l	2.42	2,482.17	3.266E-02	Pulse	0.50	3
Ni			1	5.800	ug/l	1.53	8,926.75	1.174E-01	Pulse	0.50	3
Cu			1	21.938	ug/l	2.10	105,132.52	1.383E+00	Pulse	0.50	3
Zn			1	13.999	ug/l	2.46	9,692.77	8.484E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	312.04	4.00	3.490E-05	Pulse	0.50	3
Al			1	5.182	ug/l	6.02	331.00	3.285E-03	Pulse	1.00	3
Se			1	-0.054	ug/l	-65.54	3.11	2.722E-05	Pulse	3.00	3
Sb			1	0.065	ug/l	10.65	148.00	1.296E-03	Pulse	1.00	3
Se			1	-0.411	ug/l	-130.44	9.44	8.277E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,173,158.33	1.08	82.5	Pulse	0.50	3
1	Sc		100,767.09	1.22	84.5	Pulse	0.30	3
1	Ge		76,015.60	0.96	82.3	Pulse	0.30	3
1	In		675,815.11	0.53	78.5	Pulse	0.30	3
1	Tb		2,753,790.08	1.56	84.2	Pulse	0.50	3
1	Lu		1,642,519.63	1.41	81.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		114,248.21	0.56	81.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		515.56	12.34	102.7	Pulse	0.30	3

Quantitation Report

File Name	052_MB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:22
Sample Name	MP40694-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.124	ug/l	21.77	911.36	1.118E-02	Pulse	0.50	3
As			1	0.006	ug/l	123.86	14.67	1.796E-04	Pulse	1.00	3
Mo			1	0.008	ug/l	87.62	39.33	3.165E-04	Pulse	0.50	3
Pb			1	-0.012	ug/l	-16.84	2,237.82	9.370E-04	Pulse	1.00	3
Be			1	0.022	ug/l	202.54	0.83	7.649E-06	Pulse	2.00	3
Ag			1	0.004	ug/l	44.11	39.33	3.163E-04	Pulse	0.50	3
Ba			1	0.020	ug/l	110.46	20.00	2.676E-05	Pulse	0.50	3
Tl			1	-0.001	ug/l	-91.43	52.67	2.203E-05	Pulse	0.50	3
Sn			1	-0.009	ug/l	-45.06	141.11	1.887E-04	Pulse	0.30	3
Sr			1	0.054	ug/l	38.94	344.00	4.601E-04	Pulse	0.50	3
[Pb]			1	-0.002	ug/l	-504.71	1,070.71	4.484E-04	Pulse	0.50	3
Ca			1	20.297	ug/l	17.99	196.00	1.789E-03	Pulse	0.50	3
Ti			1	0.076	ug/l	24.12	7.33	6.702E-05	Pulse	0.50	3
Na			1	13.898	ug/l	16.47	12,157.70	1.111E-01	Pulse	1.00	3
Mg			1	2.378	ug/l	11.72	973.36	8.895E-03	Pulse	1.00	3
K			1	-1.389	ug/l	-149.72	12,275.82	1.122E-01	Pulse	1.00	3
V			1	0.066	ug/l	16.12	438.68	4.005E-03	Pulse	0.50	3
Mn			1	0.112	ug/l	19.53	285.33	3.494E-03	Pulse	0.50	3
Fe			1	0.733	ug/l	4.49	8,744.66	1.072E-01	Pulse	0.50	3
Co			1	-0.004	ug/l	-1.59	32.00	3.923E-04	Pulse	0.50	3
Ni			1	-0.025	ug/l	-93.95	218.67	2.681E-03	Pulse	0.50	3
Cu			1	2.169	ug/l	1.72	25,250.51	3.095E-01	Pulse	0.50	3
Zn			1	2.889	ug/l	1.69	3,568.34	2.865E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-206.59	2.00	1.604E-05	Pulse	0.50	3
Al			1	1.002	ug/l	13.97	123.00	1.124E-03	Pulse	1.00	3
Se			1	-0.114	ug/l	-35.33	2.11	1.698E-05	Pulse	3.00	3
Sb			1	0.010	ug/l	46.73	44.00	3.534E-04	Pulse	1.00	3
Se			1	-0.366	ug/l	-16.24	10.78	8.652E-05	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,388,198.58	0.49	90.7	Pulse	0.50	3
1	Sc		109,460.87	1.49	91.8	Pulse	0.30	3
1	Ge		81,588.37	1.25	88.4	Pulse	0.30	3
1	In		747,709.15	0.11	86.8	Pulse	0.30	3
1	Tb		2,915,438.50	0.50	89.2	Pulse	0.50	3
1	Lu		1,755,906.33	0.14	87.0	Pulse	0.50	3
1	Ge		124,531.00	0.83	88.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		507.79	14.46	101.1	Pulse	0.30	3

Quantitation Report

File Name 053_BSP.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:26
Sample Name MP40694-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	208.762	ug/l	1.17	702,205.54	8.524E+00	Pulse	0.50	3
As			1	212.747	ug/l	2.38	73,183.39	8.884E-01	Pulse	1.00	3
Mo			1	205.068	ug/l	1.89	412,884.68	3.316E+00	Pulse	0.50	3
Pb			1	207.821	ug/l	0.37	2,353,940.92	1.023E+00	Pulse	1.00	3
Be			1	227.040	ug/l	1.33	3,873.04	3.549E-02	Pulse	2.00	3
Ag			1	99.776	ug/l	1.52	717,975.06	5.766E+00	Pulse	0.50	3
Ba			1	201.501	ug/l	0.56	134,219.53	1.795E-01	Pulse	0.50	3
Tl			1	205.747	ug/l	1.13	3,349,474.00	1.456E+00	Pulse	0.50	3
Sn			1	203.092	ug/l	0.85	342,946.46	4.586E-01	Pulse	0.30	3
Sr			1	199.634	ug/l	0.44	300,072.59	4.013E-01	Pulse	0.50	3
[Pb]			1	199.416	ug/l	1.41	1,059,804.13	4.606E-01	Pulse	0.50	3
Ca			1	19318.762	ug/l	0.58	146,874.63	1.346E+00	Pulse	0.50	3
Ti			1	202.059	ug/l	2.28	13,041.70	1.195E-01	Pulse	0.50	3
Na			1	20657.322	ug/l	0.40	8,529,366.00	7.816E+01	Analog	1.00	3
Mg			1	19881.055	ug/l	0.51	3,751,727.17	3.438E+01	Pulse	1.00	3
K			1	19693.578	ug/l	0.09	2,718,170.25	2.491E+01	Pulse	1.00	3
V			1	204.333	ug/l	0.55	510,717.88	4.680E+00	Pulse	0.50	3
Mn			1	201.999	ug/l	2.12	303,461.69	3.684E+00	Pulse	0.50	3
Fe			1	20133.663	ug/l	2.03	52,285,813.33	6.347E+02	Analog	0.50	3
Co			1	212.508	ug/l	1.92	1,245,584.04	1.512E+01	Pulse	0.50	3
Ni			1	210.435	ug/l	2.14	341,720.55	4.148E+00	Pulse	0.50	3
Cu			1	215.201	ug/l	1.55	978,537.31	1.188E+01	Pulse	0.50	3
Zn			1	206.146	ug/l	1.67	131,555.04	1.057E+00	Pulse	1.00	3
Cd			1	202.266	ug/l	2.09	190,008.73	1.526E+00	Pulse	0.50	3
Al			1	18933.902	ug/l	0.83	1,067,835.79	9.785E+00	Pulse	1.00	3
Se			1	199.030	ug/l	4.21	4,243.25	3.409E-02	Pulse	3.00	3
Sb			1	202.033	ug/l	1.82	437,214.02	3.512E+00	Pulse	1.00	3
Se			1	203.457	ug/l	3.81	2,141.23	1.720E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,300,785.08	0.46	87.3	Pulse	0.50	3
1	Sc		109,132.46	0.77	91.5	Pulse	0.30	3
1	Ge		82,385.96	1.05	89.2	Pulse	0.30	3
1	In		747,848.88	0.42	86.9	Pulse	0.30	3
1	Tb		2,935,946.50	0.22	89.8	Pulse	0.50	3
1	Lu		1,793,980.96	0.65	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		124,532.47	1.93	88.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		425.56	9.18	84.7	Pulse	0.30	3

Quantitation Report

File Name	054SMPL.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:30
Sample Name	TD81565-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.261	ug/l	6.01	1,364.72	1.678E-02	Pulse	0.50	3
As			1	1.538	ug/l	5.73	535.01	6.578E-03	Pulse	1.00	3
Mo			1	1.830	ug/l	2.91	3,670.37	2.977E-02	Pulse	0.50	3
Pb			1	0.045	ug/l	28.49	2,680.22	1.222E-03	Pulse	1.00	3
Be			1	0.041	ug/l	179.51	1.17	1.069E-05	Pulse	2.00	3
Ag			1	0.026	ug/l	20.35	200.67	1.629E-03	Pulse	0.50	3
Ba			1	164.423	ug/l	1.46	107,326.99	1.465E-01	Pulse	0.50	3
Tl			1	0.059	ug/l	26.59	988.04	4.509E-04	Pulse	0.50	3
Sn			1	0.867	ug/l	9.35	1,587.86	2.167E-03	Pulse	0.30	3
Sr			1	538.115	ug/l	0.39	792,164.40	1.081E+00	Pulse	0.50	3
[Pb]			1	0.041	ug/l	38.57	1,202.05	5.481E-04	Pulse	0.50	3
Ca			1	92385.575	ug/l	0.14	708,952.37	6.434E+00	Pulse	0.50	3
Ti			1	0.373	ug/l	52.19	26.67	2.432E-04	Pulse	0.50	3
Na			1	199398.905	ug/l	0.53	83,063,120.00	7.539E+02	Analog	1.00	3
Mg			1	36203.002	ug/l	0.23	6,897,230.67	6.260E+01	Analog	1.00	3
K			1	1530.971	ug/l	0.28	224,908.24	2.041E+00	Pulse	1.00	3
V			1	1.717	ug/l	3.42	4,605.23	4.179E-02	Pulse	0.50	3
Mn			1	107.763	ug/l	0.59	159,836.58	1.966E+00	Pulse	0.50	3
Fe			1	10.860	ug/l	6.36	34,658.90	4.264E-01	Pulse	0.50	3
Co			1	0.620	ug/l	1.74	3,643.69	4.483E-02	Pulse	0.50	3
Ni			1	2.971	ug/l	3.19	5,016.67	6.170E-02	Pulse	0.50	3
Cu			1	0.521	ug/l	12.43	17,888.31	2.200E-01	Pulse	0.50	3
Zn			1	9.998	ug/l	1.81	7,963.32	6.461E-02	Pulse	1.00	3
Cd			1	0.049	ug/l	36.67	48.67	3.959E-04	Pulse	0.50	3
Al			1	24.028	ug/l	1.47	1,435.05	1.302E-02	Pulse	1.00	3
Se			1	1.306	ug/l	22.41	32.00	2.598E-04	Pulse	3.00	3
Sb			1	0.737	ug/l	3.23	1,600.41	1.298E-02	Pulse	1.00	3
Se			1	3.548	ug/l	17.82	51.22	4.152E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,193,732.42	0.76	83.3	Pulse	0.50	3
1	Sc		110,180.15	1.51	92.4	Pulse	0.30	3
1	Ge		81,297.07	1.25	88.0	Pulse	0.30	3
1	In		732,805.80	0.72	85.1	Pulse	0.30	3
1	Tb		2,899,454.92	0.72	88.7	Pulse	0.50	3
1	Lu		1,763,620.91	0.52	87.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		123,263.15	1.22	87.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		425.57	16.55	84.7	Pulse	0.30	3

Quantitation Report

File Name 055SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:34
Sample Name MP40694-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.234	ug/l	16.51	1,284.72	1.569E-02	Pulse	0.50	3
As			1	1.506	ug/l	0.68	527.68	6.443E-03	Pulse	1.00	3
Mo			1	1.540	ug/l	3.77	3,118.94	2.509E-02	Pulse	0.50	3
Pb			1	-0.013	ug/l	-57.64	2,065.46	9.351E-04	Pulse	1.00	3
Be			1	0.098	ug/l	89.34	2.17	1.949E-05	Pulse	2.00	3
Ag			1	0.009	ug/l	5.87	78.00	6.275E-04	Pulse	0.50	3
Ba			1	162.462	ug/l	0.39	106,691.12	1.447E-01	Pulse	0.50	3
Tl			1	0.007	ug/l	31.81	178.67	8.096E-05	Pulse	0.50	3
Sn			1	0.729	ug/l	6.37	1,367.84	1.855E-03	Pulse	0.30	3
Sr			1	531.555	ug/l	0.77	787,283.27	1.068E+00	Pulse	0.50	3
[Pb]			1	-0.008	ug/l	-150.56	956.03	4.328E-04	Pulse	0.50	3
Ca			1	91320.131	ug/l	0.39	705,077.48	6.360E+00	Pulse	0.50	3
Ti			1	0.532	ug/l	15.14	37.33	3.370E-04	Pulse	0.50	3
Na			1	197090.561	ug/l	0.12	82,610,896.00	7.452E+02	Analog	1.00	3
Mg			1	35793.741	ug/l	0.52	6,861,020.17	6.189E+01	Analog	1.00	3
K			1	1503.591	ug/l	0.71	222,471.29	2.007E+00	Pulse	1.00	3
V			1	1.673	ug/l	1.24	4,522.54	4.079E-02	Pulse	0.50	3
Mn			1	107.795	ug/l	0.26	161,066.31	1.967E+00	Pulse	0.50	3
Fe			1	5.933	ug/l	2.78	22,205.37	2.711E-01	Pulse	0.50	3
Co			1	0.556	ug/l	3.80	3,298.29	4.027E-02	Pulse	0.50	3
Ni			1	2.872	ug/l	3.69	4,893.97	5.975E-02	Pulse	0.50	3
Cu			1	0.488	ug/l	12.38	17,874.94	2.183E-01	Pulse	0.50	3
Zn			1	9.868	ug/l	2.96	7,949.99	6.395E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	122.96	12.00	9.666E-05	Pulse	0.50	3
Al			1	20.197	ug/l	1.33	1,224.37	1.104E-02	Pulse	1.00	3
Se			1	1.344	ug/l	15.12	33.11	2.664E-04	Pulse	3.00	3
Sb			1	0.612	ug/l	10.00	1,345.05	1.082E-02	Pulse	1.00	3
Se			1	2.712	ug/l	8.15	42.89	3.450E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,209,436.42	0.94	83.9	Pulse	0.50	3
1	Sc		110,858.57	0.78	93.0	Pulse	0.30	3
1	Ge		81,901.93	0.51	88.7	Pulse	0.30	3
1	In		737,281.83	0.76	85.6	Pulse	0.30	3
1	Tb		2,896,588.42	0.39	88.6	Pulse	0.50	3
1	Lu		1,769,523.67	0.58	87.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		124,321.97	0.48	88.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		461.12	17.13	91.8	Pulse	0.30	3

Quantitation Report

File Name	056CCVA.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:37
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.766	ug/l	1.62	344,590.28	4.149E+00	Pulse	0.50	3
As			1	48.927	ug/l	2.07	33,946.33	4.087E-01	Pulse	1.00	3
Mo			1	50.523	ug/l	0.76	203,704.14	1.634E+00	Pulse	0.50	3
Pb			1	50.232	ug/l	0.64	1,167,489.58	4.951E-01	Pulse	1.00	3
Be			1	55.974	ug/l	2.93	1,905.43	1.750E-02	Pulse	2.00	3
Ag			1	52.060	ug/l	1.12	750,063.46	6.017E+00	Pulse	0.50	3
Ba			1	49.724	ug/l	0.46	66,907.45	8.858E-02	Pulse	0.50	3
Tl			1	51.255	ug/l	1.32	1,710,411.50	7.254E-01	Pulse	0.50	3
Sn			1	50.853	ug/l	0.79	173,537.02	2.298E-01	Pulse	0.30	3
Sr			1	49.357	ug/l	0.18	149,994.45	1.986E-01	Pulse	0.50	3
[Pb]			1	50.076	ug/l	0.68	546,058.60	2.316E-01	Pulse	0.50	3
Ca			1	5038.798	ug/l	0.61	76,454.43	7.022E-01	Pulse	0.50	3
Ti			1	49.969	ug/l	1.67	6,435.74	5.911E-02	Pulse	0.50	3
Na			1	5428.818	ug/l	0.73	4,475,617.67	4.111E+01	Analog	1.00	3
Mg			1	5231.260	ug/l	0.95	1,969,959.96	1.809E+01	Pulse	1.00	3
K			1	5146.911	ug/l	0.95	1,423,333.17	1.307E+01	Pulse	1.00	3
V			1	50.184	ug/l	0.88	250,410.20	2.300E+00	Pulse	0.50	3
Mn			1	50.191	ug/l	1.97	152,105.58	1.831E+00	Pulse	0.50	3
Fe			1	5252.685	ug/l	2.18	27,509,104.67	3.312E+02	Analog	0.50	3
Co			1	51.615	ug/l	2.30	610,057.46	7.346E+00	Pulse	0.50	3
Ni			1	51.798	ug/l	2.95	169,732.58	2.044E+00	Pulse	0.50	3
Cu			1	52.296	ug/l	2.18	487,674.84	5.872E+00	Pulse	0.50	3
Zn			1	52.656	ug/l	1.20	68,138.30	5.466E-01	Pulse	1.00	3
Cd			1	50.397	ug/l	0.10	94,808.27	7.605E-01	Pulse	0.50	3
Al			1	5052.043	ug/l	0.98	568,546.13	5.222E+00	Pulse	1.00	3
Se			1	49.561	ug/l	2.20	2,118.45	1.700E-02	Pulse	3.00	3
Sb			1	48.909	ug/l	1.06	211,952.25	1.700E+00	Pulse	1.00	3
Se			1	51.467	ug/l	0.54	1,092.14	8.761E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,358,122.08	0.54	89.5	Pulse	0.50	3
1	Sc		108,878.91	0.81	91.3	Pulse	0.30	3
1	Ge		83,070.23	1.64	90.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		755,305.20	0.49	87.7	Pulse	0.30	3
1	Tb		2,958,895.67	1.03	90.5	Pulse	0.50	3
1	Lu		1,792,720.88	0.79	88.8	Pulse	0.50	3
1	Ge		124,658.34	1.09	88.8	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		464.45	6.10	92.5	Pulse	0.30	3

Quantitation Report

File Name 057_CCV.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:41
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	105.954	ug/l	2.06	681,331.92	8.652E+00	Pulse	0.50	3
As			1	103.380	ug/l	0.90	67,985.82	8.634E-01	Pulse	1.00	3
Mo			1	104.080	ug/l	0.68	401,386.01	3.366E+00	Pulse	0.50	3
Pb			1	103.779	ug/l	1.22	2,266,181.42	1.022E+00	Pulse	1.00	3
Be			1	109.291	ug/l	1.68	3,610.16	3.417E-02	Pulse	2.00	3
Ag			1	105.529	ug/l	0.41	1,454,622.00	1.220E+01	Pulse	0.50	3
Ba			1	101.809	ug/l	1.15	130,692.75	1.814E-01	Pulse	0.50	3
Tl			1	106.631	ug/l	0.91	3,347,027.92	1.509E+00	Pulse	0.50	3
Sn			1	100.549	ug/l	0.83	327,215.75	4.541E-01	Pulse	0.30	3
Sr			1	99.280	ug/l	0.83	287,576.04	3.991E-01	Pulse	0.50	3
[Pb]			1	103.643	ug/l	0.76	1,062,119.15	4.788E-01	Pulse	0.50	3
Ca			1	10308.312	ug/l	1.83	151,768.36	1.436E+00	Pulse	0.50	3
Ti			1	99.701	ug/l	3.04	12,468.66	1.179E-01	Pulse	0.50	3
Na			1	10950.713	ug/l	0.96	8,753,388.50	8.286E+01	Analog	1.00	3
Mg			1	10571.367	ug/l	1.16	3,861,731.25	3.656E+01	Pulse	1.00	3
K			1	10502.474	ug/l	1.31	2,805,934.42	2.656E+01	Pulse	1.00	3
V			1	102.845	ug/l	1.06	497,668.17	4.711E+00	Pulse	0.50	3
Mn			1	104.263	ug/l	1.83	299,474.59	3.803E+00	Pulse	0.50	3
Fe			1	10763.727	ug/l	1.46	53,440,344.00	6.787E+02	Analog	0.50	3
Co			1	106.118	ug/l	1.59	1,188,979.25	1.510E+01	Pulse	0.50	3
Ni			1	106.663	ug/l	1.78	331,195.98	4.205E+00	Pulse	0.50	3
Cu			1	105.718	ug/l	1.58	919,263.90	1.167E+01	Pulse	0.50	3
Zn			1	105.319	ug/l	1.50	128,664.18	1.079E+00	Pulse	1.00	3
Cd			1	102.859	ug/l	0.72	185,096.32	1.552E+00	Pulse	0.50	3
Al			1	10213.379	ug/l	1.29	1,115,201.63	1.056E+01	Pulse	1.00	3
Se			1	101.248	ug/l	0.69	4,135.78	3.468E-02	Pulse	3.00	3
Sb			1	101.527	ug/l	0.83	420,825.77	3.529E+00	Pulse	1.00	3
Se			1	102.535	ug/l	3.20	2,067.11	1.734E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,218,384.42	5.65	84.2	Pulse	0.50	3
1	Sc		105,628.47	5.34	88.6	Pulse	0.30	3
1	Ge		78,741.45	5.01	85.3	Pulse	0.30	3
1	In		720,798.46	6.04	83.7	Pulse	0.30	3
1	Tb		2,813,462.33	5.95	86.1	Pulse	0.50	3
1	Lu		1,721,190.37	5.78	85.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		119,269.04	5.84	85.0	Pulse	0.30	3
1	Te		7.33	128.89		Pulse	0.50	3
1	Li		393.34	5.93	78.3	Pulse	0.30	3

Quantitation Report

File Name	058_CCB.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 13:45
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.005	ug/l	128.37	524.01	6.530E-03	Pulse	0.50	3
As			1	0.014	ug/l	43.11	21.67	2.700E-04	Pulse	1.00	3
Mo			1	0.127	ug/l	15.97	525.34	4.285E-03	Pulse	0.50	3
Pb			1	0.049	ug/l	14.46	3,460.35	1.484E-03	Pulse	1.00	3
Be			1	0.042	ug/l	90.60	1.83	1.724E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	13.83	242.00	1.978E-03	Pulse	0.50	3
Ba			1	0.013	ug/l	69.06	24.67	3.327E-05	Pulse	0.50	3
Tl			1	0.017	ug/l	17.17	634.01	2.720E-04	Pulse	0.50	3
Sn			1	0.074	ug/l	14.90	402.23	5.420E-04	Pulse	0.30	3
Sr			1	-0.005	ug/l	-418.31	247.33	3.336E-04	Pulse	0.50	3
[Pb]			1	0.059	ug/l	10.01	1,686.09	7.228E-04	Pulse	0.50	3
Ca			1	0.771	ug/l	244.19	51.33	4.829E-04	Pulse	0.50	3
Ti			1	0.013	ug/l	212.74	4.00	3.765E-05	Pulse	0.50	3
Na			1	6.818	ug/l	6.67	11,691.41	1.102E-01	Pulse	1.00	3
Mg			1	0.827	ug/l	32.78	811.35	7.644E-03	Pulse	1.00	3
K			1	3.239	ug/l	29.92	12,955.91	1.221E-01	Pulse	1.00	3
V			1	-0.004	ug/l	-124.82	244.00	2.300E-03	Pulse	0.50	3
Mn			1	-0.013	ug/l	-12.00	77.33	9.643E-04	Pulse	0.50	3
Fe			1	0.944	ug/l	17.70	11,514.78	1.436E-01	Pulse	0.50	3
Co			1	0.007	ug/l	31.86	138.67	1.730E-03	Pulse	0.50	3
Ni			1	-0.028	ug/l	-30.19	167.33	2.087E-03	Pulse	0.50	3
Cu			1	1.596	ug/l	0.87	29,286.82	3.651E-01	Pulse	0.50	3
Zn			1	2.026	ug/l	3.70	4,227.80	3.454E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	53.19	22.00	1.800E-04	Pulse	0.50	3
Al			1	0.583	ug/l	60.42	128.33	1.209E-03	Pulse	1.00	3
Se			1	0.029	ug/l	218.68	5.67	4.642E-05	Pulse	3.00	3
Sb			1	0.030	ug/l	8.32	147.33	1.203E-03	Pulse	1.00	3
Se			1	-0.176	ug/l	-123.53	10.78	8.778E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,332,867.92	0.97	88.6	Pulse	0.50	3
1	Sc		106,134.07	0.47	89.0	Pulse	0.30	3

Quantitation Report

1	Ge		80,216.86	0.69	86.9	Pulse	0.30	3
1	In		741,894.09	0.44	86.2	Pulse	0.30	3
1	Tb		2,884,894.58	0.20	88.2	Pulse	0.50	3
1	Lu		1,747,709.63	0.72	86.6	Pulse	0.50	3
1	Ge		122,439.93	1.20	87.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		483.34	7.77	96.2	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:49
Sample Name MP40694-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.381	ug/l	18.76	747.35	9.233E-03	Pulse	0.50	3
As			1	1.405	ug/l	11.65	107.67	1.329E-03	Pulse	1.00	3
Mo			1	1.901	ug/l	11.40	785.02	6.329E-03	Pulse	0.50	3
Pb			1	0.287	ug/l	3.57	2,941.26	1.280E-03	Pulse	1.00	3
Be			1	0.014	ug/l	13.61	0.50	4.649E-06	Pulse	2.00	3
Ag			1	0.081	ug/l	9.91	130.00	1.049E-03	Pulse	0.50	3
Ba			1	167.952	ug/l	1.19	22,287.06	2.993E-02	Pulse	0.50	3
Tl			1	0.058	ug/l	11.02	260.00	1.132E-04	Pulse	0.50	3
Sn			1	1.000	ug/l	10.22	492.23	6.605E-04	Pulse	0.30	3
Sr			1	549.313	ug/l	1.64	164,538.30	2.210E-01	Pulse	0.50	3
[Pb]			1	0.314	ug/l	27.80	1,371.39	5.973E-04	Pulse	0.50	3
Ca			1	97088.475	ug/l	1.49	145,493.23	1.353E+00	Pulse	0.50	3
Ti			1	0.751	ug/l	61.25	12.00	1.111E-04	Pulse	0.50	3
Na			1	212351.140	ug/l	0.94	17,274,564.67	1.606E+02	Analog	1.00	3
Mg			1	38020.077	ug/l	0.90	1,414,449.58	1.315E+01	Pulse	1.00	3
K			1	1646.668	ug/l	1.78	56,841.23	5.285E-01	Pulse	1.00	3
V			1	1.747	ug/l	2.63	1,128.71	1.049E-02	Pulse	0.50	3
Mn			1	113.396	ug/l	1.77	33,596.94	4.149E-01	Pulse	0.50	3
Fe			1	10.729	ug/l	6.83	12,282.59	1.517E-01	Pulse	0.50	3
Co			1	0.646	ug/l	4.73	801.35	9.896E-03	Pulse	0.50	3
Ni			1	2.944	ug/l	4.35	1,196.04	1.478E-02	Pulse	0.50	3
Cu			1	13.033	ug/l	1.51	26,984.19	3.333E-01	Pulse	0.50	3
Zn			1	26.260	ug/l	1.14	5,034.00	4.061E-02	Pulse	1.00	3
Cd			1	0.070	ug/l	40.67	16.00	1.291E-04	Pulse	0.50	3
Al			1	25.968	ug/l	15.73	354.00	3.290E-03	Pulse	1.00	3
Se			1	1.242	ug/l	23.74	9.78	7.892E-05	Pulse	3.00	3
Sb			1	0.726	ug/l	7.78	334.67	2.698E-03	Pulse	1.00	3
Se			1	0.002	ug/l	54769.38	14.56	1.173E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,297,328.75	1.48	87.2	Pulse	0.50	3
1	Sc		107,551.59	1.30	90.2	Pulse	0.30	3
1	Ge		80,966.88	1.42	87.7	Pulse	0.30	3
1	In		744,620.89	1.81	86.5	Pulse	0.30	3
1	Tb		2,884,848.42	1.55	88.2	Pulse	0.50	3
1	Lu		1,756,336.33	1.83	87.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		123,974.28	0.81	88.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		457.78	6.77	91.1	Pulse	0.30	3

Quantitation Report

File Name 060SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:52
Sample Name MP40694-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	205.701	ug/l	2.02	659,830.52	8.399E+00	Pulse	0.50	3
As			1	215.997	ug/l	1.73	70,863.08	9.020E-01	Pulse	1.00	3
Mo			1	204.461	ug/l	1.00	395,587.27	3.306E+00	Pulse	0.50	3
Pb			1	204.448	ug/l	0.47	2,162,252.25	1.007E+00	Pulse	1.00	3
Be			1	212.556	ug/l	1.70	3,543.31	3.322E-02	Pulse	2.00	3
Ag			1	92.841	ug/l	0.85	641,946.75	5.366E+00	Pulse	0.50	3
Ba			1	363.549	ug/l	0.76	230,639.85	3.238E-01	Pulse	0.50	3
Tl			1	202.381	ug/l	0.37	3,076,274.25	1.432E+00	Pulse	0.50	3
Sn			1	203.244	ug/l	1.44	326,877.57	4.589E-01	Pulse	0.30	3
Sr			1	729.861	ug/l	0.90	1,044,226.87	1.466E+00	Pulse	0.50	3
[Pb]			1	196.458	ug/l	0.80	974,915.79	4.538E-01	Pulse	0.50	3
Ca			1	109696.980	ug/l	1.50	814,834.75	7.640E+00	Pulse	0.50	3
Ti			1	197.173	ug/l	2.96	12,435.30	1.166E-01	Pulse	0.50	3
Na			1	214081.558	ug/l	0.98	86,329,762.67	8.094E+02	Analog	1.00	3
Mg			1	55064.272	ug/l	1.23	10,154,304.00	9.521E+01	Analog	1.00	3
K			1	20607.607	ug/l	1.06	2,779,170.17	2.606E+01	Pulse	1.00	3
V			1	201.893	ug/l	1.58	493,159.38	4.624E+00	Pulse	0.50	3
Mn			1	306.803	ug/l	1.62	439,514.73	5.595E+00	Pulse	0.50	3
Fe			1	19857.412	ug/l	1.76	49,180,956.00	6.260E+02	Analog	0.50	3
Co			1	203.358	ug/l	1.50	1,136,790.46	1.447E+01	Pulse	0.50	3
Ni			1	200.638	ug/l	1.95	310,737.63	3.955E+00	Pulse	0.50	3
Cu			1	198.758	ug/l	2.43	863,005.79	1.099E+01	Pulse	0.50	3
Zn			1	201.278	ug/l	1.09	123,464.73	1.032E+00	Pulse	1.00	3
Cd			1	191.969	ug/l	0.95	173,296.11	1.448E+00	Pulse	0.50	3
Al			1	18653.906	ug/l	1.51	1,028,163.05	9.640E+00	Pulse	1.00	3
Se			1	195.939	ug/l	2.45	4,015.64	3.356E-02	Pulse	3.00	3
Sb			1	201.848	ug/l	1.03	419,744.28	3.508E+00	Pulse	1.00	3
Se			1	198.141	ug/l	2.84	2,004.66	1.676E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,148,215.50	0.54	81.5	Pulse	0.50	3
1	Sc		106,658.78	0.63	89.5	Pulse	0.30	3
1	Ge		78,569.18	0.96	85.1	Pulse	0.30	3
1	In		712,280.20	0.17	82.7	Pulse	0.30	3
1	Tb		2,820,180.00	0.16	86.3	Pulse	0.50	3
1	Lu		1,738,595.25	0.53	86.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		119,640.12	0.43	85.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		430.01	5.08	85.6	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 13:56
Sample Name MP40694-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	210.616	ug/l	1.62	681,015.37	8.600E+00	Pulse	0.50	3
As			1	220.500	ug/l	2.17	72,915.11	9.208E-01	Pulse	1.00	3
Mo			1	211.947	ug/l	0.87	408,589.16	3.428E+00	Pulse	0.50	3
Pb			1	211.866	ug/l	0.46	2,240,480.58	1.043E+00	Pulse	1.00	3
Be			1	219.554	ug/l	0.83	3,659.83	3.432E-02	Pulse	2.00	3
Ag			1	96.806	ug/l	0.87	666,951.96	5.595E+00	Pulse	0.50	3
Ba			1	373.687	ug/l	0.96	236,537.20	3.328E-01	Pulse	0.50	3
Tl			1	208.603	ug/l	0.44	3,170,674.67	1.476E+00	Pulse	0.50	3
Sn			1	209.131	ug/l	1.28	335,598.66	4.722E-01	Pulse	0.30	3
Sr			1	746.522	ug/l	0.95	1,065,659.75	1.499E+00	Pulse	0.50	3
[Pb]			1	203.414	ug/l	0.59	1,009,317.02	4.699E-01	Pulse	0.50	3
Ca			1	110904.544	ug/l	1.00	823,748.04	7.724E+00	Pulse	0.50	3
Ti			1	200.480	ug/l	0.82	12,643.44	1.186E-01	Pulse	0.50	3
Na			1	217048.760	ug/l	0.45	87,519,437.33	8.207E+02	Analog	1.00	3
Mg			1	55777.315	ug/l	0.97	10,284,915.67	9.644E+01	Analog	1.00	3
K			1	21181.491	ug/l	0.89	2,855,981.25	2.678E+01	Pulse	1.00	3
V			1	208.324	ug/l	1.26	508,819.19	4.771E+00	Pulse	0.50	3
Mn			1	311.662	ug/l	1.06	450,059.04	5.683E+00	Pulse	0.50	3
Fe			1	20377.089	ug/l	1.44	50,873,077.33	6.424E+02	Analog	0.50	3
Co			1	208.563	ug/l	1.47	1,175,184.33	1.484E+01	Pulse	0.50	3
Ni			1	205.996	ug/l	1.68	321,585.25	4.061E+00	Pulse	0.50	3
Cu			1	203.343	ug/l	1.34	889,714.79	1.123E+01	Pulse	0.50	3
Zn			1	207.864	ug/l	1.01	126,990.27	1.065E+00	Pulse	1.00	3
Cd			1	199.793	ug/l	0.56	179,710.62	1.508E+00	Pulse	0.50	3
Al			1	19241.698	ug/l	1.41	1,060,465.42	9.944E+00	Pulse	1.00	3
Se			1	202.501	ug/l	0.98	4,134.89	3.469E-02	Pulse	3.00	3
Sb			1	209.630	ug/l	0.94	434,366.93	3.644E+00	Pulse	1.00	3
Se			1	205.555	ug/l	2.27	2,071.45	1.738E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,148,088.25	0.33	81.5	Pulse	0.50	3
1	Sc		106,647.88	0.52	89.5	Pulse	0.30	3
1	Ge		79,198.41	1.33	85.8	Pulse	0.30	3
1	In		710,690.77	0.54	82.5	Pulse	0.30	3
1	Tb		2,814,060.83	0.60	86.1	Pulse	0.50	3
1	Lu		1,723,605.29	0.33	85.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		119,211.97	0.79	85.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		467.78	19.47	93.1	Pulse	0.30	3

Quantitation Report

File Name	062SMPL.d
File Path	D:\2022\xa051722m2.b
Method File	
Method Path	
Acq Time	5/17/2022 14:00
Sample Name	MP40694-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	5/17/2022 13:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.726	ug/l	2.35	69,064.22	8.518E-01	Pulse	0.50	3
As			1	23.019	ug/l	4.09	7,804.60	9.627E-02	Pulse	1.00	3
Mo			1	22.172	ug/l	0.70	43,825.65	3.587E-01	Pulse	0.50	3
Pb			1	20.155	ug/l	0.32	217,970.89	1.001E-01	Pulse	1.00	3
Be			1	21.071	ug/l	8.79	361.17	3.297E-03	Pulse	2.00	3
Ag			1	3.832	ug/l	0.64	27,067.71	2.216E-01	Pulse	0.50	3
Ba			1	186.067	ug/l	0.63	120,665.44	1.657E-01	Pulse	0.50	3
Tl			1	20.281	ug/l	0.65	312,483.48	1.435E-01	Pulse	0.50	3
Sn			1	20.525	ug/l	0.25	33,878.95	4.653E-02	Pulse	0.30	3
Sr			1	564.847	ug/l	0.99	826,136.00	1.135E+00	Pulse	0.50	3
[Pb]			1	19.395	ug/l	1.93	98,431.02	4.521E-02	Pulse	0.50	3
Ca			1	94683.461	ug/l	1.95	722,652.02	6.595E+00	Pulse	0.50	3
Ti			1	21.377	ug/l	2.36	1,387.39	1.266E-02	Pulse	0.50	3
Na			1	201295.921	ug/l	1.14	83,406,090.67	7.611E+02	Analog	1.00	3
Mg			1	38436.203	ug/l	1.49	7,283,151.50	6.646E+01	Analog	1.00	3
K			1	3484.740	ug/l	1.35	493,249.72	4.501E+00	Pulse	1.00	3
V			1	22.045	ug/l	1.86	55,573.47	5.071E-01	Pulse	0.50	3
Mn			1	129.100	ug/l	2.30	190,946.71	2.355E+00	Pulse	0.50	3
Fe			1	1994.582	ug/l	2.68	5,104,478.67	6.296E+01	Pulse	0.50	3
Co			1	20.495	ug/l	2.12	118,292.71	1.459E+00	Pulse	0.50	3
Ni			1	22.527	ug/l	2.66	36,238.48	4.469E-01	Pulse	0.50	3
Cu			1	20.351	ug/l	2.66	105,162.08	1.297E+00	Pulse	0.50	3
Zn			1	30.737	ug/l	0.91	20,707.10	1.695E-01	Pulse	1.00	3
Cd			1	19.357	ug/l	2.34	17,845.95	1.461E-01	Pulse	0.50	3
Al			1	1942.852	ug/l	1.67	110,091.57	1.005E+00	Pulse	1.00	3
Se			1	21.129	ug/l	4.58	446.12	3.652E-03	Pulse	3.00	3
Sb			1	19.149	ug/l	1.09	40,681.80	3.330E-01	Pulse	1.00	3
Se			1	22.440	ug/l	3.69	244.56	2.002E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,176,995.25	0.82	82.6	Pulse	0.50	3
1	Sc		109,594.19	1.08	91.9	Pulse	0.30	3
1	Ge		81,097.37	1.32	87.8	Pulse	0.30	3
1	In		728,072.03	0.43	84.6	Pulse	0.30	3
1	Tb		2,861,661.08	0.18	87.5	Pulse	0.50	3
1	Lu		1,760,450.08	0.67	87.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		122,173.86	0.26	87.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		472.23	8.83	94.0	Pulse	0.30	3

Quantitation Report

File Name 063SMPL.d
File Path D:\2022\xa051722m2.b
Method File
Method Path
Acq Time 5/17/2022 14:04
Sample Name FA95468-1A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 5/17/2022 13:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	174.833	ug/l	1.46	116,982.55	1.433E+00	Pulse	0.50	3
As			1	30.249	ug/l	3.22	2,075.45	2.542E-02	Pulse	1.00	3
Mo			1	4.567	ug/l	6.75	1,849.43	1.495E-02	Pulse	0.50	3
Pb			1	13.526	ug/l	0.77	31,385.67	1.430E-02	Pulse	1.00	3
Be			1	0.439	ug/l	1.21	2.00	1.794E-05	Pulse	2.00	3
Ag			1	0.249	ug/l	5.96	369.34	2.988E-03	Pulse	0.50	3
Ba			1	325.401	ug/l	0.94	42,464.90	5.797E-02	Pulse	0.50	3
Tl			1	0.102	ug/l	30.67	384.67	1.755E-04	Pulse	0.50	3
Sn			1	187.903	ug/l	1.12	62,280.47	8.503E-02	Pulse	0.30	3
Sr			1	576.331	ug/l	1.11	169,804.97	2.318E-01	Pulse	0.50	3
[Pb]			1	13.387	ug/l	1.63	14,550.22	6.631E-03	Pulse	0.50	3
Ca			1	115759.471	ug/l	0.17	179,792.64	1.613E+00	Pulse	0.50	3
Ti			1	131.862	ug/l	8.64	1,741.42	1.562E-02	Pulse	0.50	3
Na			1	1517124.901	ug/l	1.01	127,885,845.33	1.147E+03	Analog	1.00	3
Mg			1	100196.388	ug/l	0.47	3,862,973.83	3.465E+01	Pulse	1.00	3
K			1	338057.658	ug/l	0.93	9,501,460.33	8.523E+01	Analog	1.00	3
V			1	53.519	ug/l	0.90	27,592.16	2.475E-01	Pulse	0.50	3
Mn			1	3647.072	ug/l	0.97	1,085,810.04	1.330E+01	Pulse	0.50	3
Fe			1	9861.939	ug/l	1.01	5,083,142.17	6.226E+01	Pulse	0.50	3
Co			1	75.128	ug/l	1.81	87,343.48	1.070E+00	Pulse	0.50	3
Ni			1	209.170	ug/l	1.25	67,540.39	8.272E-01	Pulse	0.50	3
Cu			1	28.128	ug/l	1.32	40,598.52	4.972E-01	Pulse	0.50	3
Zn			1	303.478	ug/l	0.23	39,694.33	3.210E-01	Pulse	1.00	3
Cd			1	1.242	ug/l	9.48	234.67	1.899E-03	Pulse	0.50	3
Al			1	1683.440	ug/l	1.28	19,462.79	1.746E-01	Pulse	1.00	3
Se			1	2.036	ug/l	27.27	13.11	1.061E-04	Pulse	3.00	3
Sb			1	3.771	ug/l	7.69	1,643.08	1.328E-02	Pulse	1.00	3
Se			1	12.226	ug/l	15.39	39.89	3.226E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,194,409.50	0.59	83.3	Pulse	0.50	3
1	Sc		111,481.98	0.92	93.5	Pulse	0.30	3
1	Ge		81,653.01	1.25	88.4	Pulse	0.30	3
1	In		732,551.90	1.73	85.1	Pulse	0.30	3
1	Tb		2,888,053.33	0.69	88.3	Pulse	0.50	3
1	Lu		1,767,328.09	1.21	87.6	Pulse	0.50	3

Quantitation Report

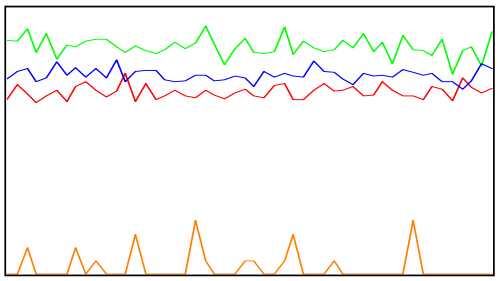
Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		123,658.88	0.81	88.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		485.56	13.63	96.7	Pulse	0.30	3

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Tune Report

Batch Folder	D:\xa051722m1.b
Acq. Date-Time	5/17/2022 9:43
Report Comment	0517
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1365	13650.38	5000.00	
89	1000	853	8525.11	5000.00	
205	5000	3729	37288.68	5000.00	
78	20	0			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

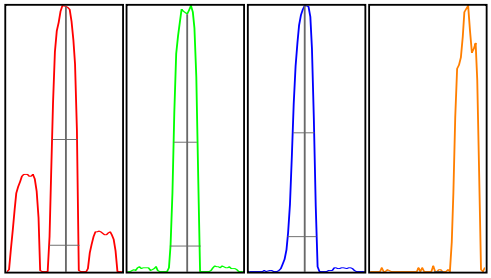
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.67	5.00	
89	4.28	5.00	
205	3.16	5.00	
78	215.60		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.30	2	
89	0.00	2	
205	0.20	2	
78	0.00	5	

Ratio	156/140	0.639	%
Ratio	70/140	2.208	%

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1376.80	59.05	58.9 - 59.1		0.63	0.753	0.900	
89	833.72	89.05	88.9 - 89.1		0.60	0.739	0.900	
205	3763.54	205.00	204.9 - 205.1		0.54	0.737	0.900	
78	0.00	78.25	-		0.18	0.175		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.90 L/min	Makeup/Dilution Gas	0.20 L/min
Option Gas	0.0 %		

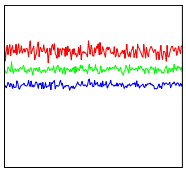
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-38 V
Extract 2	-175.0 V	Cell Exit	-70 V
Omega Bias	-90 V	Deflect	2.0 V
Omega Lens	8.2 V	Plate Bias	-60 V

Cell Parameters

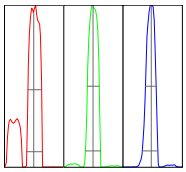
Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance

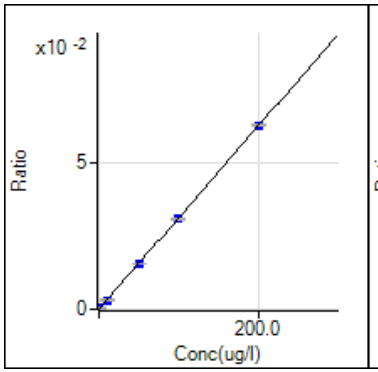


Sensitivity			
Mass	7	89	205
Range	2000	1.0E4	1.0E4
Count	1433.61	6038.66	5081.15
RSD%	3.8	2.3	2.6
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.28%	
Doubly Charged	70/140	4.40%	

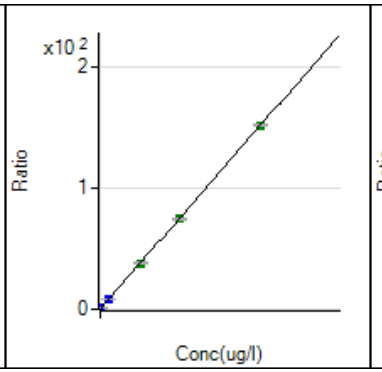
Background			
Mass	7	89	205
Count	0.35	0.70	5.25



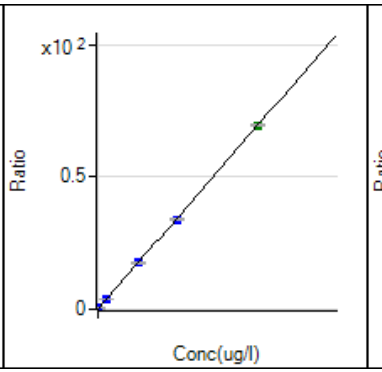
Resolution/Axis			
Mass	7	89	205
Height	1398	6098	4949
Axis	7.00	89.00	204.95
W-50%	0.68	0.59	0.54
W-10%	0.78	0.75	0.77
Integration Time	0.100 sec		
Acquisition Time	00:00:23		



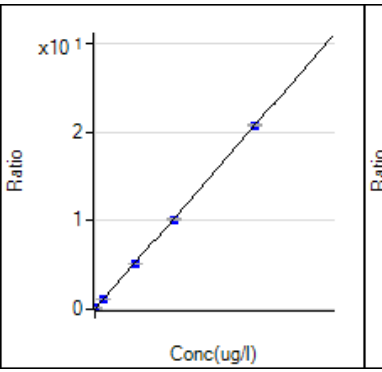
9 Be [2] / ISTD: 45 Sc
y = 3.126E-4 x + 4.205E-6
R 1.0000
DL 0.04023
BEC 0.01345



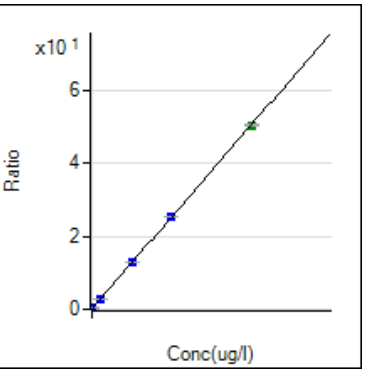
23 Na [2] / ISTD: 45 Sc
y = 7.561E-3 x + 5.860E-2
R 0.9999
DL 1.138
BEC 7.75



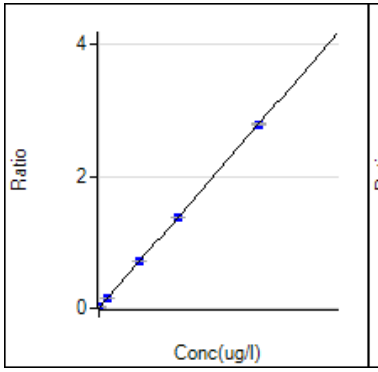
24 Mg [2] / ISTD: 45 Sc
y = 3.458E-3 x + 4.784E-3
R 0.9999
DL 0.1372
BEC 1.383



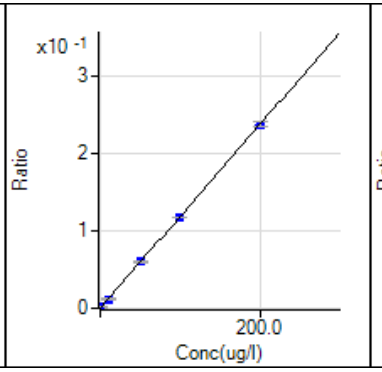
27 Al [2] / ISTD: 45 Sc
y = 1.034E-3 x + 6.064E-4
R 0.9999
DL 0.2335
BEC 0.5868



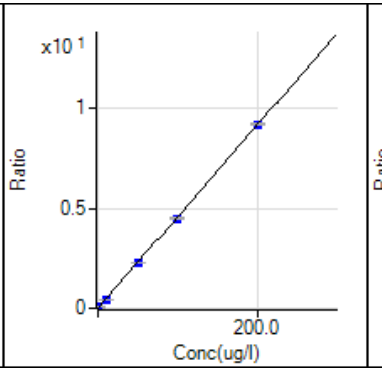
39 K [2] / ISTD: 45 Sc
y = 2.518E-3 x + 1.139E-1
R 1.0000
DL 1.25
BEC 45.25



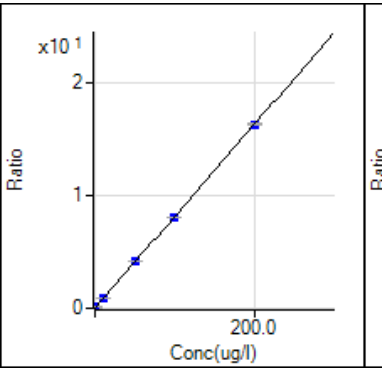
44 Ca [2] / ISTD: 45 Sc
y = 1.393E-4 x + 3.755E-4
R 1.0000
DL 3.435
BEC 2.696



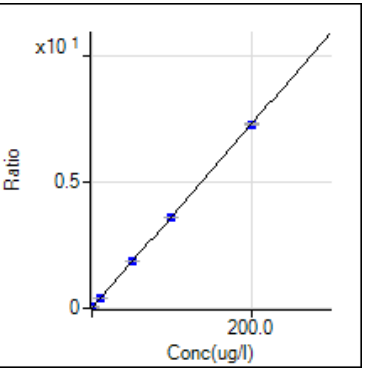
47 Ti [2] / ISTD: 45 Sc
y = 1.183E-3 x + 2.235E-5
R 1.0000
DL 0.09823
BEC 0.0189



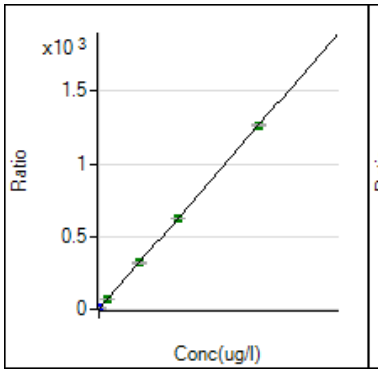
51 V [2] / ISTD: 45 Sc
y = 4.578E-2 x + 2.496E-3
R 0.9999
DL 0.0245
BEC 0.05453



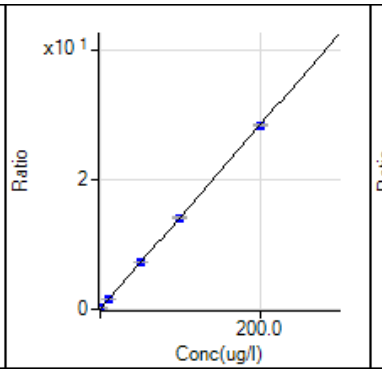
52 Cr [2] / ISTD: 72 Ge
y = 8.160E-2 x + 6.128E-3
R 1.0000
DL 0.01218
BEC 0.07509



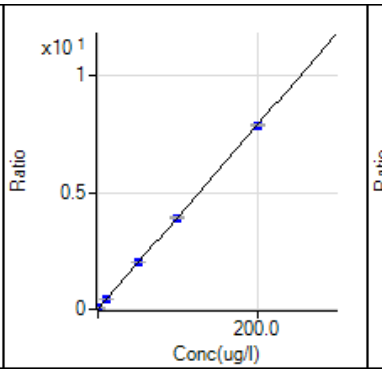
55 Mn [2] / ISTD: 72 Ge
y = 3.646E-2 x + 1.444E-3
R 1.0000
DL 0.003912
BEC 0.0396



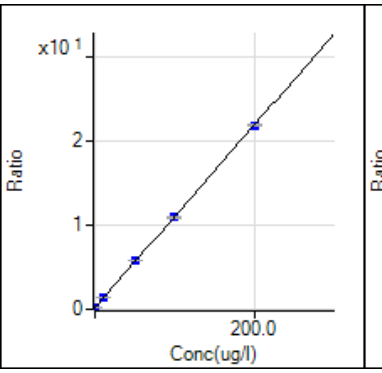
56 Fe [2] / ISTD: 72 Ge
y = 6.304E-2 x + 8.409E-2
R 1.0000
DL 0.1835
BEC 1.334



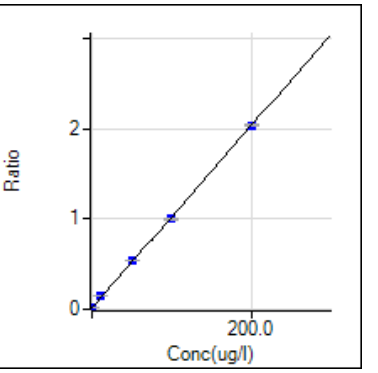
59 Co [2] / ISTD: 72 Ge
y = 1.423E-1 x + 7.004E-4
R 1.0000
DL 0.003837
BEC 0.004922



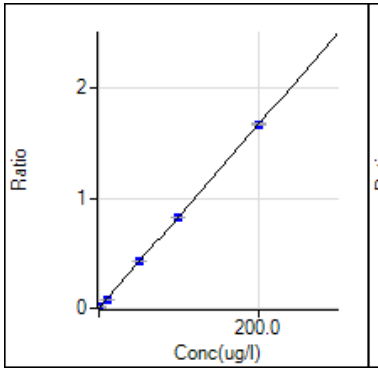
60 Ni [2] / ISTD: 72 Ge
y = 3.940E-2 x + 3.177E-3
R 1.0000
DL 0.003634
BEC 0.08063



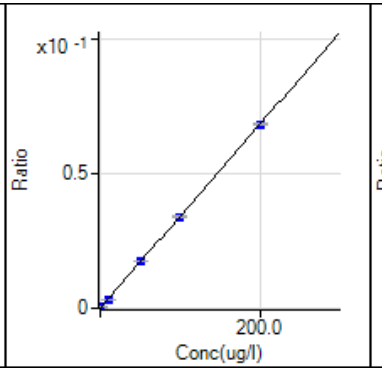
63 Cu [2] / ISTD: 72 Ge
y = 1.086E-1 x + 1.917E-1
R 0.9999
DL 0.1121
BEC 1.765



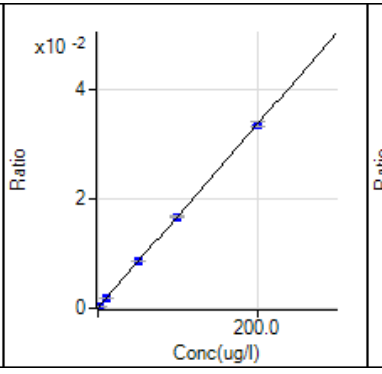
66 Zn [2] / ISTD: 74 Ge
y = 1.011E-2 x + 1.404E-2
R 0.9997
DL 0.09042
BEC 1.389



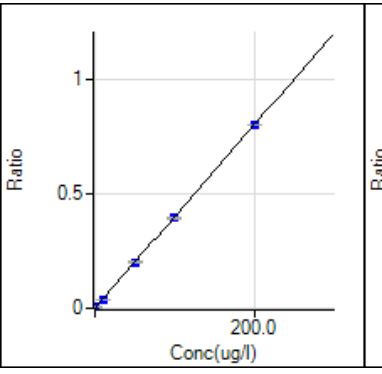
75 As [2] / ISTD: 72 Ge
y = 8.351E-3 x + 1.558E-4
R 0.9999
DL 0.03021
BEC 0.01866



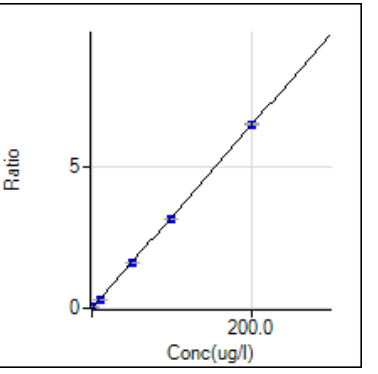
78 Se [2] / ISTD: 74 Ge
y = 3.422E-4 x + 3.644E-5
R 1.0000
DL 0.03132
BEC 0.1065



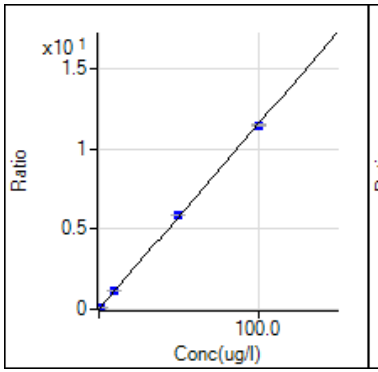
82 Se [2] / ISTD: 74 Ge
y = 1.679E-4 x + 1.173E-4
R 1.0000
DL 0.6161
BEC 0.6983



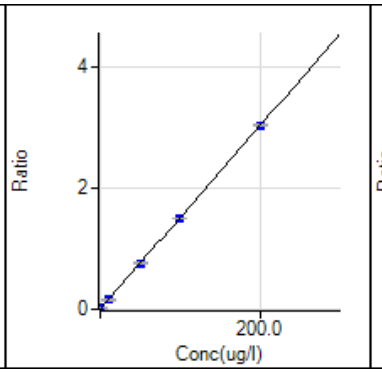
88 Sr [2] / ISTD: 115 In
y = 4.016E-3 x + 3.524E-4
R 1.0000
DL 0.03783
BEC 0.08774



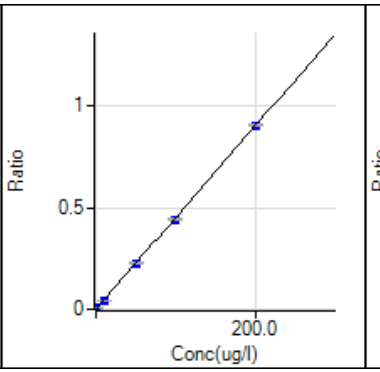
95 Mo [2] / ISTD: 74 Ge
y = 3.234E-2 x + 1.804E-4
R 0.9999
DL 0.004198
BEC 0.005579



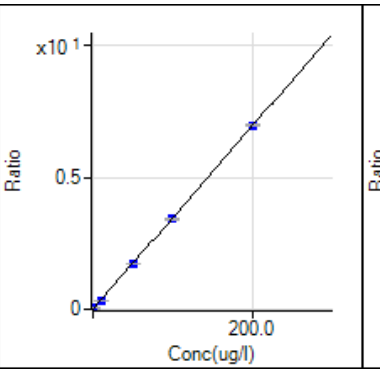
107 Ag [2] / ISTD: 74 Ge
y = 1.156E-1 x + 1.093E-4
R 0.9999
DL 0.0008575
BEC 0.0009457



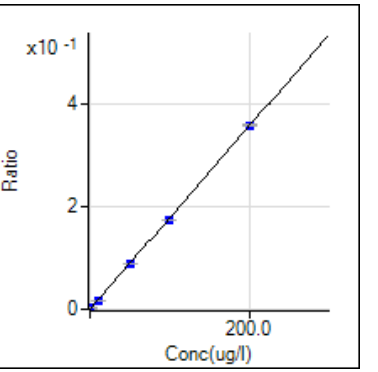
111 Cd [2] / ISTD: 74 Ge
y = 1.509E-2 x + 2.376E-5
R 1.0000
DL 0.00432
BEC 0.001574



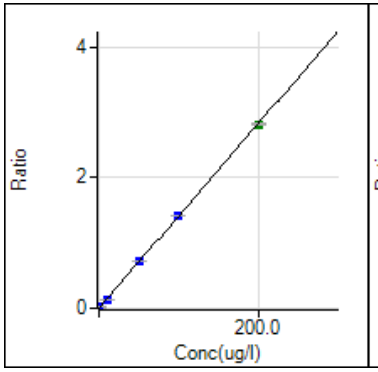
118 Sn [2] / ISTD: 115 In
y = 4.514E-3 x + 2.090E-4
R 0.9999
DL 0.02648
BEC 0.0463



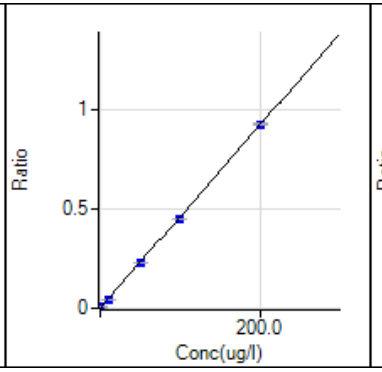
121 Sb [2] / ISTD: 74 Ge
y = 3.476E-2 x + 1.735E-4
R 1.0000
DL 0.003411
BEC 0.00499



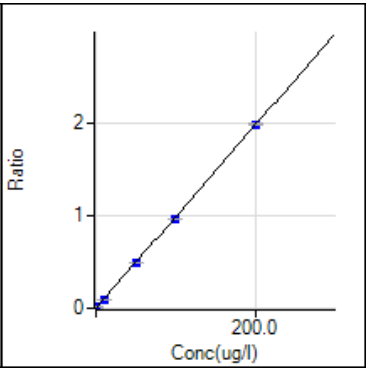
137 Ba [2] / ISTD: 115 In
y = 1.781E-3 x + 9.283E-6
R 0.9999
DL 0.006739
BEC 0.005211



205 Tl [2] / ISTD: 209 Bi
y = 1.415E-2 x + 3.164E-5
R 1.0000
DL 0.00174
BEC 0.002236



206 [Pb] [2] / ISTD: 209 Bi
y = 4.615E-3 x + 4.524E-4
R 0.9999
DL 0.01979
BEC 0.09802



208 Pb [2] / ISTD: 209 Bi
y = 9.836E-3 x + 9.983E-4
R 0.9999
DL 0.01107
BEC 0.1015

SGS Orlando

Date:	05/14/22
Time	15:41

[24hr]

Analysts Name:	Adam K
MP Batch ID:	40693
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	1121041	ACC1321	0.05	MU45274
Conc. HCl (B)	4121100	ACC1291	0.2	KU15244
NA	NA	MET7215	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	95	**Corr. Factor**	-2	**Corrected Observed Temp. C**	93
pH Paper Lot Number	212719			**Filter Lot Number**	280632432			**Digestion Tube Lot Number**	2202231

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	43	Matrix Spike(MS)	50	50	Y	
	43	Matrix Spike Dup(MSD)	50	50	Y	
	43	Duplicate(DUP)	50	50	Y	
1(QC) C	43	FA95314-1F	50	50	Y	MB2A-5/9-MP40669
2	13	FA95275-1F	50	50	Y	MB2A-5/6-MP40665
3	4	FA95275-2F	50	50	Y	MB2A-5/6-MP40665
4	13	FA95275-3F	50	50	Y	MB2A-5/6-MP40665
5	13	FA95275-4F	50	50	Y	MB2A-5/6-MP40665
6	13	FA95275-5F	50	50	Y	MB2A-5/6-MP40665
7	13	FA95275-6F	50	50	Y	MB2A-5/6-MP40665
8	13	FA95275-7F	50	50	Y	MB2A-5/6-MP40665
9	3	FA95332-1FA	50	50	Y	
10	7	FA95332-2FA	50	50	Y	
11	3	FA95332-3FA	50	50	Y	
12	3	FA95332-4FA	50	50	Y	
13	3	FA95332-5FA	50	50	Y	
14	9	FA95350-1	50	50	Y	
15	9	FA95350-2	50	50	Y	
16	6	FA95350-3	50	50	Y	
17	6	FA95350-4	50	50	Y	
18	1	FA95548-1	50	50	Y	
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA96171



Sampling Date: 06/03/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: 445

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA96171

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA96171-1	06/03/22	11:45	JR	06/03/22	AQ	Water	EFFLUENT
FA96171-1A	06/03/22	11:45	JR	06/03/22	AQ	Water	EFFLUENT
FA96171-1B	06/03/22	11:45	JR	06/03/22	AQ	Water	EFFLUENT
FA96171-2	06/03/22	12:05	JR	06/03/22	AQ	Water	INFLUENT EW-01
FA96171-2A	06/03/22	12:05	JR	06/03/22	AQ	Water	INFLUENT EW-01
FA96171-2B	06/03/22	12:05	JR	06/03/22	AQ	Water	INFLUENT EW-01
FA96171-3	06/03/22	12:00	JR	06/03/22	AQ	Water	INFLUENT EW-04
FA96171-3A	06/03/22	12:00	JR	06/03/22	AQ	Water	INFLUENT EW-04
FA96171-3B	06/03/22	12:00	JR	06/03/22	AQ	Water	INFLUENT EW-04

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA96171

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 6/13/2022 2:19:19 PM

On 06/03/2022, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA96171 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP40826

Sample(s) FA96082-5DUP, FA96082-5MS, FA96082-5MSD, FA96082-5PS, FA96082-5SDL were used as the QC samples.

Matrix Spike Recovery(s) for Magnesium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MP40826-PS1 for Magnesium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP40804

Sample(s) FA95838-1ADUP, FA95838-1AMS, FA95838-1AMSD, FA95838-1APS, FA95838-1ASDL were used as the QC samples for metals.

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP37782

Sample(s) FA96206-1MS, FA96206-1MSD were used as the QC samples for Chloride, Sulfate.

Matrix: AQ **Batch ID:** R56847

FA96171-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** N:GP40542

FA96171-1 for Nitrogen, Nitrate + Nitrite: Analysis performed at SGS Dayton, NJ.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** N: R197731

FA96171-1 Analysis performed at SGS Dayton, NJ.

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** N:GN29949

FA96171-1 for Nitrogen, Nitrite: Analysis performed at SGS Dayton, NJ.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	SGS Orlando, FL	**Job No:**	FA96171
Site:	SCMAW: Shepley's Hill (SHL); Devens, MA	**Report Date**	6/8/2022 8:55:35 AM

On 06/03/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA96171 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** GP40542

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD46125-3DUP, JD46125-3MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.
- Matrix Spike Recovery(s) for Nitrogen, Nitrate + Nitrite are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** R197731

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- FA96171-1 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** GN29949

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) FA96171-1MS, FA96171-1MSD were used as the QC samples for Nitrogen, Nitrite.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: FA96171
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 06/03/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA96171-1	**EFFLUENT**					
No hits reported in this sample.						
FA96171-1A	**EFFLUENT**					
Arsenic		4.5	2.0	1.0	ug/l	SW846 6020B
FA96171-1B	**EFFLUENT**					
Barium		15.3 J	200	5.0	ug/l	SW846 6010D
Magnesium		4890 J	5000	100	ug/l	SW846 6010D
Manganese		6.0 J	15	2.0	ug/l	SW846 6010D
Chloride		37.9	2.0	1.0	mg/l	EPA 300/SW846 9056A
Sulfate		5.1	2.0	1.0	mg/l	EPA 300/SW846 9056A
FA96171-2A	**INFLUENT EW-01**					
Arsenic		1480	20	10	ug/l	SW846 6020B
FA96171-2B	**INFLUENT EW-01**					
Iron		64700	300	50	ug/l	SW846 6010D
Manganese		2210	15	2.0	ug/l	SW846 6010D
FA96171-3A	**INFLUENT EW-04**					
Arsenic		2730	20	10	ug/l	SW846 6020B
FA96171-3B	**INFLUENT EW-04**					
Iron		36900	300	50	ug/l	SW846 6010D
Manganese		2440	15	2.0	ug/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA96171-1	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate [a]	0.10 U	0.11	0.10	0.093	mg/l	1	06/07/22 15:18	ANJ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite [b]	0.095 U	0.10	0.095	0.090	mg/l	1	06/07/22 15:18	ANJ	EPA 353.2/LACHAT
Nitrogen, Nitrate + Nitrite [c]	0.11 U	0.12	0.11	0.096	mg/l	1	06/07/22 15:18	ANJ	EPA 300/SW846 9056A
Nitrogen, Nitrite [b]	0.0050 U	0.010	0.0050	0.0030	mg/l	1	06/04/22 15:00	ANJ	SM4500NO2 B-11

(a) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite) Analysis performed at SGS Dayton, NJ.
(b) Analysis performed at SGS Dayton, NJ.
(c) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA96171-1A	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.5	2.0	1.0	0.21	ug/l	2	06/07/22	06/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18730
(2) Prep QC Batch: MP40804

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA96171-1B	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Barium	15.3 J	200	5.0	1.0	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]
Magnesium	4890 J	5000	100	35	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	6.0 J	15	2.0	1.0	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18739
(2) Prep QC Batch: MP40826

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA96171-1B	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Chloride	37.9	2.0	1.0	0.80	mg/l	1	06/07/22 18:17	JB	EPA 300/SW846 9056A
Sulfate	5.1	2.0	1.0	0.60	mg/l	1	06/07/22 18:17	JB	EPA 300/SW846 9056A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-01		
Lab Sample ID:	FA96171-2A	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1480	20	10	2.1	ug/l	20	06/07/22	06/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18730
(2) Prep QC Batch: MP40804

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID: INFLUENT EW-01
Lab Sample ID: FA96171-2B
Matrix: AQ - Water
Project: Shepley's Hill (SHL); Devens, MA

Date Sampled: 06/03/22
Date Received: 06/03/22
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	64700	300	50	17	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2210	15	2.0	1.0	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18739
(2) Prep QC Batch: MP40826

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-04		
Lab Sample ID:	FA96171-3A	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2730	20	10	2.1	ug/l	20	06/07/22	06/08/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18730
(2) Prep QC Batch: MP40804

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-04		
Lab Sample ID:	FA96171-3B	**Date Sampled:**	06/03/22
Matrix:	AQ - Water	**Date Received:**	06/03/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	36900	300	50	17	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2440	15	2.0	1.0	ug/l	1	06/10/22	06/10/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18739
(2) Prep QC Batch: MP40826

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA96171

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNA	DI WATER	MEOH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
1	Effluent	6/3/22	11:45	JWR	w	4					x	x				X	X	X	X	X		
2	Influent EW-01	6/3/22	12:05	JWR	w	1					x					X					X	
3	Influent EW-04	6/3/22	12:00	JWR	w	1					x					X					X	

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

INITIAL ASSESSMENT SM

LABEL VERIFICATION TM

SGS Service Center
Northborough, MA 6/3

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [X] FULLT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

* Direct sub NO2 to Dayton from MASC TF/6/3
(1) 250-NP / (1) 250 (H2SO4)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 [signature] 1410	6-3-22	2 Thelma Fkeley	3 Thelma Fkeley	6/3/22 1700	4 Fed Ex
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6 [signature] 6/4/22 1030	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.2 CSH CS# 07786

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

5.1
5

FA96171: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA96171 **Client:** SOVEREIGN CONSULTING, INC. **Project:** SHEPLEY'S HILL (SHL)

Date / Time Received: 6/4/2022 10:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 0068

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 6/4/2022 10:30:00 AM Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA96171
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 06/03/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP40804	SW846 6020B						
MP40804-B1	7440-38-2	Arsenic	BSP	REC	104.5	%	84-116
MP40804-S1*	7440-38-2	Arsenic	MS	REC	109.8	%	84-116
MP40804-S2*	7440-38-2	Arsenic	MSD	REC	101.8	%	84-116
MP40804-S2*	7440-38-2	Arsenic	MSD	RPD	7.1	%	20
MP40804-D1*	7440-38-2	Arsenic	DUP	RPD	5.5	%	20
MP40826	SW846 6010D						
MP40826-B1	7440-39-3	Barium	BSP	REC	99.5	%	88-113
MP40826-B1	7439-89-6	Iron	BSP	REC	98.1	%	87-115
MP40826-B1	7439-95-4	Magnesium	BSP	REC	97.2	%	85-113
MP40826-B1	7439-96-5	Manganese	BSP	REC	102.2	%	90-114
MP40826-S1*	7440-39-3	Barium	MS	REC	97.5	%	88-113
MP40826-S1*	7439-89-6	Iron	MS	REC	97.2	%	87-115
MP40826-S1*	7439-95-4	Magnesium	MS	REC	-20 [a]	%	85-113
MP40826-S1*	7439-96-5	Manganese	MS	REC	91	%	90-114
MP40826-S2*	7440-39-3	Barium	MSD	REC	103.5	%	88-113
MP40826-S2*	7440-39-3	Barium	MSD	RPD	6	%	20
MP40826-S2*	7439-89-6	Iron	MSD	REC	101.8	%	87-115
MP40826-S2*	7439-89-6	Iron	MSD	RPD	4.4	%	20
MP40826-S2*	7439-95-4	Magnesium	MSD	REC	80	%	85-113
MP40826-S2*	7439-95-4	Magnesium	MSD	RPD	5.2	%	20
MP40826-S2*	7439-96-5	Manganese	MSD	REC	103	%	90-114
MP40826-S2*	7439-96-5	Manganese	MSD	RPD	4.1	%	20
MP40826-D1*	7440-39-3	Barium	DUP	RPD	0	%	20
MP40826-D1*	7439-89-6	Iron	DUP	RPD	3	%	20
MP40826-D1*	7439-95-4	Magnesium	DUP	RPD	3.7	%	20
MP40826-D1*	7439-96-5	Manganese	DUP	RPD	2.4	%	20
GP37782	EPA 300/SW846 9056A						
GP37782-B1	16887-00-6	Chloride	BSP	REC	102.8	%	87-111
GP37782-B1	14808-79-8	Sulfate	BSP	REC	103	%	87-112
GP37782-S1*	16887-00-6	Chloride	MS	REC	104.6	%	87-111
GP37782-S1*	14808-79-8	Sulfate	MS	REC	100.2	%	87-112
GP37782-S2*	16887-00-6	Chloride	MSD	RPD	0	%	15
GP37782-S2*	16887-00-6	Chloride	MSD	REC	104.6	%	87-111
GP37782-S2*	14808-79-8	Sulfate	MSD	RPD	0	%	15
GP37782-S2*	14808-79-8	Sulfate	MSD	REC	100.2	%	87-112

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

* Sample used for QC is not from job FA96171

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:29	MA18730-STD1	1		STDA
08:33	MA18730-STD2	1		STDB
08:37	MA18730-STD3	1		STDC
08:41	MA18730-STD4	1		STDD
08:45	MA18730-STD5	1		STDE
08:49	MA18730-STD6	1		STDF
08:53	MA18730-STD7	1		STDG
08:57	MA18730-HSTD1	1		
09:00	MA18730-HSTD2	1		
09:04	MA18730-ICV1	1		
09:08	MA18730-ICB1	1		
09:12	MA18730-CRIA1	1		
09:16	MA18730-ICSA1	1		
09:19	MA18730-ICSAB1	1		
09:23	MA18730-CCV1	1		
09:27	MA18730-CCV2	1		
09:31	MA18730-CCB1	1		
09:35	MA18730-CRIA2	1		
10:13	MA18730-CCV3	1		
10:16	MA18730-CCV4	1		
10:20	MA18730-CCB2	1		
10:35	MP40806-B1	2		
10:39	FA96193-12	2		(sample used for QC only; not part of login FA96171)
10:43	MP40806-D1	2		
10:47	MP40806-SD1	10		
10:51	MP40806-S1	2		
10:54	MP40806-S2	2		
10:58	MP40806-PS1	2		
11:02	MA18730-CCV5	1		
11:06	MA18730-CCV6	1		
11:09	MA18730-CCB3	1		
11:13	ZZZZZZ	2		
11:17	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:21	ZZZZZZ	2		
11:25	ZZZZZZ	2		
11:28	ZZZZZZ	2		
11:32	ZZZZZZ	2		
11:36	ZZZZZZ	2		
11:40	ZZZZZZ	2		
11:44	ZZZZZZ	2		
11:47	MP40804-MB1	2		
11:51	MA18730-CCV7	1		
11:55	MA18730-CCV8	1		
11:59	MA18730-CCB4	1		
12:03	MP40804-B1	2		
12:06	FA95838-1A	2		(sample used for QC only; not part of login FA96171)
12:10	MP40804-D1	2		
12:14	MP40804-SD1	10		
12:18	MP40804-S1	2		
12:22	MP40804-S2	2		
12:25	MP40804-PS1	2		
12:29	ZZZZZZ	2		
12:33	ZZZZZZ	2		
12:37	ZZZZZZ	2		
12:41	MA18730-CCV9	1		
12:44	MA18730-CCV10	1		
12:48	MA18730-CCB5	1		
12:52	ZZZZZZ	2		
12:56	ZZZZZZ	2		
13:00	ZZZZZZ	2		
13:03	ZZZZZZ	2		
13:07	FA96171-1A	2		
13:11	FA96171-2A	2		
13:15	FA96171-3A	2		
13:19	ZZZZZZ	2		
13:22	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:26	ZZZZZZ	2		
13:30	MA18730-CCV11	1		
13:34	MA18730-CCV12	1		
13:38	MA18730-CCB6	1		
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:49	ZZZZZZ	2		
13:53	ZZZZZZ	2		
13:57	ZZZZZZ	2		
14:00	ZZZZZZ	2		
14:08	MP40806-MB1	2		
14:12	FA96171-2A	20		
14:15	FA96171-3A	20		
---------->	Last reportable sample/prep for job FA96171			
14:19	MA18730-CCV13	1		
14:23	MA18730-CCV14	1		
14:27	MA18730-CCB7	1		
---------->	Last reportable CCB for job FA96171			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:57	MA18730-HSTD1	1		
09:00	MA18730-HSTD2	1	X	
09:04	MA18730-ICV1	1	X	
09:08	MA18730-ICB1	1	X	
09:12	MA18730-CRIA1	1	X	
09:16	MA18730-ICSA1	1	X	
09:19	MA18730-ICSAB1	1	X	
09:23	MA18730-CCV1	1		
09:27	MA18730-CCV2	1	X	
09:31	MA18730-CCB1	1	X	
09:35	MA18730-CRIA2	1		
10:13	MA18730-CCV3	1		
10:16	MA18730-CCV4	1	X	
10:20	MA18730-CCB2	1	X	
10:35	MP40806-B1	2	X	
10:39	FA96193-12	2	X	(a)
10:43	MP40806-D1	2	X	
10:47	MP40806-SD1	10	X	
10:51	MP40806-S1	2	X	
10:54	MP40806-S2	2	X	
10:58	MP40806-PS1	2	X	
11:02	MA18730-CCV5	1		
11:06	MA18730-CCV6	1	X	
11:09	MA18730-CCB3	1	X	
11:13	ZZZZZZ	2		
11:17	ZZZZZZ	2		
11:21	ZZZZZZ	2		
11:25	ZZZZZZ	2		
11:28	ZZZZZZ	2		
11:32	ZZZZZZ	2		
11:36	ZZZZZZ	2		
11:40	ZZZZZZ	2		
11:44	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Element: Dilution	As	
11:47	MP40804-MB1	2	X	
11:51	MA18730-CCV7	1		
11:55	MA18730-CCV8	1	X	
11:59	MA18730-CCB4	1	X	
12:03	MP40804-B1	2	X	
12:06	FA95838-1A	2		(a)
12:10	MP40804-D1	2	X	
12:14	MP40804-SD1	10	X	
12:18	MP40804-S1	2	X	
12:22	MP40804-S2	2	X	
12:25	MP40804-PS1	2	X	
12:29	ZZZZZZ	2		
12:33	ZZZZZZ	2		
12:37	ZZZZZZ	2		
12:41	MA18730-CCV9	1		
12:44	MA18730-CCV10	1	X	
12:48	MA18730-CCB5	1	X	
12:52	ZZZZZZ	2		
12:56	ZZZZZZ	2		
13:00	ZZZZZZ	2		
13:03	ZZZZZZ	2		
13:07	FA96171-1A	2	X	
13:11	FA96171-2A	2		
13:15	FA96171-3A	2		
13:19	ZZZZZZ	2		
13:22	ZZZZZZ	2		
13:26	ZZZZZZ	2		
13:30	MA18730-CCV11	1		
13:34	MA18730-CCV12	1	X	
13:38	MA18730-CCB6	1	X	
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:49	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Element: Dilution	As
13:53	ZZZZZZ	2	
13:57	ZZZZZZ	2	
14:00	ZZZZZZ	2	
14:08	MP40806-MB1	2	X
14:12	FA96171-2A	20	X
14:15	FA96171-3A	20	X
14:19	MA18730-CCV13	1	
14:23	MA18730-CCV14	1	X
14:27	MA18730-CCB7	1	X

(a) Sample used for QC only; not part of login FA96171.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:29	MA18730-STD1	100	100	100	100	100	100	100
08:33	MA18730-STD2	112.5	99.6	99.1	98.7	100.5	99.7	100.9
08:37	MA18730-STD3	103.5	100.5	99.9	99.7	101.2	100.1	100.8
08:41	MA18730-STD4	105.7	100.2	99.7	99	101.2	99.8	100.5
08:45	MA18730-STD5	100.4	98.4	98.3	98.9	99.4	99.3	98.9
08:49	MA18730-STD6	91.4	95.9	96.1	96	96.3	97.2	95.5
08:53	MA18730-STD7	96.7	92	91.8	92.1	91.8	93.6	90.6
08:57	MA18730-HSTD1	94.1	91	91.3	91.2	91.6	93.7	92
09:00	MA18730-HSTD2	84.6	90.4	90.5	90.1	90.8	92.6	89.1
09:04	MA18730-ICV1	98.9	91.3	90.8	90.9	91.3	93.5	92.1
09:08	MA18730-ICB1	107.3	92	91.8	92.9	92.8	94.3	95.1
09:12	MA18730-CRIA1	100	94	93.3	93.1	94.6	95	96.4
09:16	MA18730-ICSA1	87.2	89.9	88.8	86.2	84.8	87.9	81.4
09:19	MA18730-ICSAB1	92.3	89.1	88.9	86.5	84.8	88.7	82.3
09:23	MA18730-CCV1	96.3	91.4	92.3	92.3	92.5	95.2	95.6
09:27	MA18730-CCV2	101.7	91.9	93.1	92.7	92.2	95.3	93.9
09:31	MA18730-CCB1	100.7	94.4	95.5	94.8	95	95.1	96.1
09:35	MA18730-CRIA2	97.8	97.5	97.4	97.1	97.8	97.5	98.2
10:13	MA18730-CCV3	100.9	98.1	98.2	97.9	97.1	97.6	96.4
10:16	MA18730-CCV4	100	97.7	97.2	96.5	96	96.6	94
10:20	MA18730-CCB2	107.9	98.5	98.6	97.8	97.2	96.3	96.6
10:35	MP40806-B1	111.4	86.8	87.1	85.7	86	91.2	87.8
10:39	FA96193-12	109.5	90.5	90.1	89.1	89	91.6	89.3
10:43	MP40806-D1	114.7	94.1	92.6	92.5	91.3	93.8	91.5
10:47	MP40806-SD1	117.2	102.7	101.2	100.1	100.7	99.6	99.3
10:51	MP40806-S1	112.7	92	90.7	90.6	88.6	93	88.6
10:54	MP40806-S2	107.3	91.9	89.5	90.3	88.3	92.7	87.9
10:58	MP40806-PS1	114.1	95.4	91.8	92.3	90.2	93.7	90.3
11:02	MA18730-CCV5	113.9	104.6	102.2	102.4	100.9	101.1	99
11:06	MA18730-CCV6	107.7	101.9	100.1	100.3	98.5	98.9	96.3
11:09	MA18730-CCB3	116.1	100.4	99.3	98.3	97.6	97.5	97.4
11:13	ZZZZZZ	114.5	92.9	92.1	91.4	90.8	92.9	92.3
11:17	ZZZZZZ	107.2	94.4	91.3	91.9	89.9	92.8	90

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
11:21	ZZZZZZ	118.5	95.9	92.9	91.8	90.7	93.2	90.5
11:25	ZZZZZZ	120.9	91.5	89.1	89.2	87.3	89.9	87.7
11:28	ZZZZZZ	109	93.1	90.7	90.5	89	92.3	89.6
11:32	ZZZZZZ	114.7	93.8	91.9	91.1	89.9	92.5	90.9
11:36	ZZZZZZ	113.2	93.2	91.3	91	88.6	91.7	90.7
11:40	ZZZZZZ	117.4	91.6	89.4	89	87.9	91.5	90.2
11:44	ZZZZZZ	124.8	91	89.7	89.4	87.1	90.3	88.8
11:47	MP40804-MB1	122	91.5	88	87.7	87.8	90.1	91.2
11:51	MA18730-CCV7	106.8	95.5	94.2	93.6	92.1	94.3	94.2
11:55	MA18730-CCV8	109	95	93.1	93	92.2	93.8	92
11:59	MA18730-CCB4	124	94.2	92	91.8	92.2	92.8	94.2
12:03	MP40804-B1	105.7	85.2	83.6	83	82.5	87.5	85.4
12:06	FA95838-1A	97.8	86.1	80.9	80.4	78.8	84.3	79.1
12:10	MP40804-D1	106.8	85.6	80.4	80.3	77.9	83.7	78.6
12:14	MP40804-SD1	111	90.1	88.1	89	87.3	90.8	90.1
12:18	MP40804-S1	107.3	83.9	78.7	79.1	77.1	82.8	77.1
12:22	MP40804-S2	113.9	84.7	80	80.3	77.6	82.6	78.3
12:25	MP40804-PS1	121.8	85	81.3	80.4	77.7	83.1	78.4
12:29	ZZZZZZ	124.8	84.4	83.6	83.2	82.2	86.6	89.3
12:33	ZZZZZZ	121.8	84.2	84	82.8	82.4	86.6	89.3
12:37	ZZZZZZ	117.6	83.6	82.7	83.2	81.7	86.6	89.4
12:41	MA18730-CCV9	106.4	90.6	90.4	90	88.4	91.3	91.7
12:44	MA18730-CCV10	112.3	92.6	91.5	91.3	88.8	91.6	91
12:48	MA18730-CCB5	111.4	92.9	91.1	91.8	90.1	91.1	93
12:52	ZZZZZZ	110.6	84.7	84.3	84.7	83.9	87.4	89.5
12:56	ZZZZZZ	101.5	83.2	82.8	82.4	82.5	86.7	89
13:00	ZZZZZZ	115.8	83.2	80.9	81.1	81.1	85.3	87.8
13:03	ZZZZZZ	113.4	80.9	80.7	79.7	79.2	83.5	86.1
13:07	FA96171-1A	107	80.7	79.5	80.3	78.3	83.3	83.6
13:11	FA96171-2A	104.4	79.5	78.7	77.8	76.8	83.1	82.6
13:15	FA96171-3A	105.7	81.1	80.9	81.1	79.1	84.7	85.5
13:19	ZZZZZZ	113.9	82	80.8	81.6	80	84.7	86.1
13:22	ZZZZZZ	118.9	82.8	79.6	80.1	78.8	83.7	85

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18730
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
13:26	ZZZZZZ	112.3	83.5	82.1	82.2	81	85.4	86.2
13:30	MA18730-CCV11	98.9	92.5	91	91	89	91.2	91.3
13:34	MA18730-CCV12	103.5	92.4	90.6	90.8	89	91.1	89.7
13:38	MA18730-CCB6	114.1	91.7	90.1	89.4	88.5	89.9	91.3
13:41	ZZZZZZ	107.3	84.6	82.9	82.8	82	85.6	85.3
13:45	ZZZZZZ	116.3	83.7	82.6	82	81	85.3	84.4
13:49	ZZZZZZ	110.1	83.9	82.7	82.6	81	85	83.9
13:53	ZZZZZZ	109	82.3	81.1	82.7	79.8	84.4	83.8
13:57	ZZZZZZ	104.6	83.5	82.7	82.2	80.4	85	84.3
14:00	ZZZZZZ	117.2	82.3	82.4	81.9	80.2	84.1	83.9
14:08	MP40806-MB1	114.9	91.2	89.1	89.9	89.1	89.5	91.5
14:12	FA96171-2A	104	89.1	87.5	87	86	87.6	89.8
14:15	FA96171-3A	111	88.8	87.3	86.5	86.8	87.4	89.8
14:19	MA18730-CCV13	109.4	89.5	87.5	87.3	86.2	88.2	88.8
14:23	MA18730-CCV14	100.9	89.9	88.7	88.2	86.6	89.6	88
14:27	MA18730-CCB7	111.6	89.7	88	87.4	87	88.3	89.9

! = Outside limits.

LEGEND:			CCV/CCB
Istd#	Parameter	Limits	Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18730 Units: ug/l

Time: / Sample ID:			09:08 ICB1		09:31 CCB1		10:20 CCB2		11:09 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0176	<1.0	0.0104	<1.0	0.0332	<1.0	0.0448	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18730 Units: ug/l

Time: / Sample ID:			11:59 CCB4		12:48 CCB5		13:38 CCB6		14:27 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0254	<1.0	0.0303	<1.0	0.0416	<1.0	0.0356	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		09:04			09:23			09:27	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	106	106.0				100	96.5	96.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		10:13			10:16			11:02	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	95.7	95.7			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		11:06			11:51			11:55	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	97.0	97.0				100	95.6	95.6
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		12:41			12:44			13:30	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	95.6	95.6			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		13:34			14:19			14:23	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	95.4	95.4				100	93.9	93.9
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18730 Units: ug/l

Time:		08:57			09:00	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	196	98.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18730 Units: ug/l

Time:			09:12		09:35	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100	100	anr			
Antimony	1.0	1.0	anr			
Arsenic	1.0	1.0	0.953	95.3		
Barium	1.0	1.0	anr			
Beryllium	1.0	1.0	anr			
Cadmium	1.0	1.0	anr			
Calcium	100	100	anr			
Chromium	1.0	1.0	anr			
Cobalt	1.0	1.0	anr			
Copper	1.0	1.0				
Iron	100	100	anr			
Lead	1.0	1.0	anr			
Magnesium	100	100	anr			
Manganese	1.0	1.0	anr			
Molybdenum	1.0	1.0				
Nickel	1.0	1.0	anr			
Potassium	100	100	anr			
Selenium	1.0	1.0	anr			
Silver	1.0	1.0	anr			
Sodium	100	100	anr			
Strontium	1.0	1.0				
Thallium	1.0	1.0	anr			
Tin	1.0	1.0				
Titanium	1.0	1.0				
Vanadium	1.0	1.0	anr			
Zinc	1.0	1.0	anr			

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA060822M2.CSV Date Analyzed: 06/08/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18730 Units: ug/l

Time:			09:16		09:19	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	93400	93.4	91200	91.2
Antimony			0.0750		0.0649	
Arsenic		20	0.102		19.2	96.0
Barium			0.381		0.359	
Beryllium			0.0173		0.00720	
Cadmium		20	0.440		19.1	95.5
Calcium	100000	100000	93300	93.3	91700	91.7
Chromium		20	2.08*(a)		21.1	105.5
Cobalt		20	0.123		19.1	95.5
Copper		20	-1.52		16.7	83.5
Iron	100000	100000	98100	98.1	96400	96.4
Lead			0.0821		0.0304	
Magnesium	100000	100000	97900	97.9	95900	95.9
Manganese		20	1.17*(a)		20.1	100.5
Molybdenum	2000	2000	2050	102.5	2030	101.5
Nickel		20	0.210		18.6	93.0
Potassium	100000	100000	99800	99.8	98100	98.1
Selenium			0.321		0.279	
Silver		20	0.323		19.0	95.0
Sodium	100000	100000	99400	99.4	98000	98.0
Strontium			1.18*		1.10*	
Thallium			0.0127		0.00732	
Tin			0.154		0.0821	
Titanium	2000	2000	1980	99.0	1950	97.5
Vanadium			0.0390		0.0261	
Zinc		20	2.18*(a)		19.1	95.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:40	MA18739-STD1	1		STDA
09:45	MA18739-STD2	1		STDB
09:50	MA18739-STD3	1		STDC
09:53	MA18739-STD4	1		STDD
09:58	MA18739-STD5	1		STDE
10:01	MA18739-STD6	1		STDF
10:05	MA18739-STD7	1		STDG
10:11	MA18739-HSTD1	1		
10:17	MA18739-ICV1	1		
10:25	MA18739-ICB1	1		
10:29	MA18739-CRIA1	1		
10:34	MA18739-CRIA2	1		
10:42	MA18739-ICSA1	1		
10:49	MA18739-ICSAB1	1		
10:57	MA18739-CCV1	1		
11:03	MA18739-CCB1	1		
11:09	MP40821-MB1	1		
11:13	MP40821-B1	1		
11:18	FA95959-3	1		(sample used for QC only; not part of login FA96171)
11:23	MP40821-D1	1		
11:28	MP40821-SD1	5		
11:33	MP40821-PS1	1		
11:37	MP40821-S1	1		
11:42	MP40821-S2	1		
11:47	ZZZZZZ	1		
11:51	ZZZZZZ	1		
11:56	MA18739-CCV2	1		
12:01	MA18739-CCB2	1		
12:06	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:25	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:30	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:45	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:54	MA18739-CCV3	1		
12:59	MA18739-CCB3	1		
13:04	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:38	MP40824-MB1	1		
13:43	MP40824-B1	1		
13:48	FA96011-1	1		(sample used for QC only; not part of login FA96171)
13:53	MA18739-CCV4	1		
13:57	MA18739-CCB4	1		
14:02	MP40824-D1	1		
14:07	MP40824-SD1	5		
14:12	MP40824-PS1	1		
14:17	MP40824-S1	1		
14:22	MP40824-S2	1		
14:26	ZZZZZZ	1		
14:31	ZZZZZZ	1		
14:36	ZZZZZZ	1		
14:41	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:51	MA18739-CCV5	1		
14:56	MA18739-CCB5	1		
15:01	ZZZZZZ	1		
15:06	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:15	ZZZZZZ	1		
15:20	ZZZZZZ	5		
15:25	ZZZZZZ	4		
15:30	ZZZZZZ	2		
15:34	ZZZZZZ	5		
15:44	ZZZZZZ	1		
15:49	MA18739-CCV6	1		
15:54	MA18739-CCB6	1		
16:04	ZZZZZZ	2		
16:09	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:19	ZZZZZZ	2		
16:24	ZZZZZZ	100		
16:29	ZZZZZZ	100		
16:34	ZZZZZZ	100		
16:39	ZZZZZZ	100		
16:44	ZZZZZZ	100		
16:48	MA18739-CCV7	1		
16:53	MA18739-CCB7	1		
16:58	ZZZZZZ	5		
17:03	MP40826-MB1	1		
17:08	MP40826-B1	1		
17:13	FA96082-5	5		(sample used for QC only; not part of login FA96171)
17:18	MP40826-D1	5		
17:23	MP40826-SD1	25		
17:27	MP40826-PS1	5		
17:32	MP40826-S1	5		
17:37	MP40826-S2	5		
17:42	ZZZZZZ	5		
17:48	MA18739-CCV8	1		
17:52	MA18739-CCB8	1		
17:57	ZZZZZZ	5		
18:02	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:07	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:18	ZZZZZZ	1		
18:23	ZZZZZZ	1		
18:47	MA18739-CCV9	1		
18:52	MA18739-CCB9	1		
19:06	ZZZZZZ	1		
19:11	ZZZZZZ	1		
19:16	FA96171-1B	1		
19:21	FA96171-2B	1		
19:26	FA96171-3B	1		
19:31	ZZZZZZ	1		
19:36	ZZZZZZ	100		
19:41	ZZZZZZ	100		
19:45	MA18739-CCV10	1		
19:50	MA18739-CCB10	1		
19:55	FA96082-5	100		(sample used for QC only; not part of login FA96171)
20:00	MP40826-D1	100		
20:05	MP40826-S1	100		
20:10	MP40826-S2	100		
20:15	MP40826-PS1	100		
20:20	MP40826-SD1	500		
---------->	Last reportable sample/prep for job FA96171			
20:25	MP40827-MB1	1		
20:29	MP40827-B1	1		
20:34	FA96176-1	1		(sample used for QC only; not part of login FA96171)
20:39	MP40827-D1	1		
20:44	MA18739-CCV11	1		
20:49	MA18739-CCB11	1		
---------->	Last reportable CCB for job FA96171			
20:54	MP40827-SD1	5		
20:59	MP40827-PS1	1		
21:03	MP40827-S1	1		
21:08	MP40827-S2	1		
21:13	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:18	ZZZZZZ	1		
21:23	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:33	ZZZZZZ	1		
21:38	ZZZZZZ	1		
21:42	MA18739-CCV12	1		
21:47	MA18739-CCB12	1		
21:52	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:07	ZZZZZZ	5		
22:12	ZZZZZZ	5		
22:17	ZZZZZZ	5		
22:22	ZZZZZZ	5		
22:28	ZZZZZZ	1		
22:32	ZZZZZZ	1		
22:37	ZZZZZZ	1		
22:42	MA18739-CCV13	1		
22:47	MA18739-CCB13	1		
22:52	ZZZZZZ	1		
22:57	ZZZZZZ	1		
23:02	ZZZZZZ	1		
23:07	MP40827-MB2A	1		
23:12	MA18739-CCV14	1		
23:16	MA18739-CCB14	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
10:11	MA18739-HSTD1	1	X	X	X	X	
10:17	MA18739-ICV1	1	X	X	X	X	
10:25	MA18739-ICB1	1	X	X	X	X	
10:29	MA18739-CRIA1	1	X	X	X	X	
10:34	MA18739-CRIA2	1					
10:42	MA18739-ICSA1	1	X	X	X	X	
10:49	MA18739-ICSAB1	1	X	X	X	X	
10:57	MA18739-CCV1	1	X	X	X	X	
11:03	MA18739-CCB1	1	X	X	X	X	
11:09	MP40821-MB1	1		X	X	X	
11:13	MP40821-B1	1		X	X	X	
11:18	FA95959-3	1		X	X	X	(a)
11:23	MP40821-D1	1		X	X	X	
11:28	MP40821-SD1	5		X	X	X	
11:33	MP40821-PS1	1		X	X	X	
11:37	MP40821-S1	1		X	X	X	
11:42	MP40821-S2	1		X	X	X	
11:47	ZZZZZZ	1					
11:51	ZZZZZZ	1					
11:56	MA18739-CCV2	1	X	X	X	X	
12:01	MA18739-CCB2	1	X	X	X	X	
12:06	ZZZZZZ	1					
12:11	ZZZZZZ	1					
12:16	ZZZZZZ	1					
12:20	ZZZZZZ	1					
12:25	ZZZZZZ	1					
12:30	ZZZZZZ	1					
12:35	ZZZZZZ	1					
12:40	ZZZZZZ	1					
12:45	ZZZZZZ	1					
12:50	ZZZZZZ	1					
12:54	MA18739-CCV3	1	X	X	X	X	
12:59	MA18739-CCB3	1	X	X	X	X	
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution	Element: Ba	Fe	Mg	Mn	
13:04	ZZZZZZ	1					
13:09	ZZZZZZ	1					
13:14	ZZZZZZ	1					
13:19	ZZZZZZ	1					
13:23	ZZZZZZ	1					
13:28	ZZZZZZ	1					
13:33	ZZZZZZ	1					
13:38	MP40824-MB1	1		X	X	X	
13:43	MP40824-B1	1		X	X	X	
13:48	FA96011-1	1		X			(a)
13:53	MA18739-CCV4	1	X	X	X	X	
13:57	MA18739-CCB4	1	X	X	X	X	
14:02	MP40824-D1	1		X	X	X	
14:07	MP40824-SD1	5		X	X	X	
14:12	MP40824-PS1	1		X	X	X	
14:17	MP40824-S1	1		X	X	X	
14:22	MP40824-S2	1		X	X	X	
14:26	ZZZZZZ	1					
14:31	ZZZZZZ	1					
14:36	ZZZZZZ	1					
14:41	ZZZZZZ	1					
14:46	ZZZZZZ	1					
14:51	MA18739-CCV5	1	X	X	X	X	
14:56	MA18739-CCB5	1	X	X	X	X	
15:01	ZZZZZZ	1					
15:06	ZZZZZZ	1					
15:15	ZZZZZZ	1					
15:20	ZZZZZZ	5					
15:25	ZZZZZZ	4					
15:30	ZZZZZZ	2					
15:34	ZZZZZZ	5					
15:44	ZZZZZZ	1					
15:49	MA18739-CCV6	1	X	X	X	X	
		Element:	Ba	Fe	Mg	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
15:54	MA18739-CCB6	1	X	X	X	X	
16:04	ZZZZZZ	2					
16:09	ZZZZZZ	1					
16:14	ZZZZZZ	1					
16:19	ZZZZZZ	2					
16:24	ZZZZZZ	100					
16:29	ZZZZZZ	100					
16:34	ZZZZZZ	100					
16:39	ZZZZZZ	100					
16:44	ZZZZZZ	100					
16:48	MA18739-CCV7	1	X	X	X	X	
16:53	MA18739-CCB7	1	X	X	X	X	
16:58	ZZZZZZ	5					
17:03	MP40826-MB1	1	X	X	X	X	
17:08	MP40826-B1	1	X	X	X	X	
17:13	FA96082-5	5	X		X	X	(a)
17:18	MP40826-D1	5	X	X	X	X	
17:23	MP40826-SD1	25	X	X	X	X	
17:27	MP40826-PS1	5	X	X	X	X	
17:32	MP40826-S1	5	X	X	X	X	
17:37	MP40826-S2	5	X	X	X	X	
17:42	ZZZZZZ	5					
17:48	MA18739-CCV8	1	X	X	X	X	
17:52	MA18739-CCB8	1	X	X	X	X	
17:57	ZZZZZZ	5					
18:02	ZZZZZZ	1					
18:07	ZZZZZZ	1					
18:13	ZZZZZZ	1					
18:18	ZZZZZZ	1					
18:23	ZZZZZZ	1					
18:47	MA18739-CCV9	1	X	X	X	X	
18:52	MA18739-CCB9	1	X	X	X	X	
19:06	ZZZZZZ	1					
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	Ba	Fe	Mg	Mn	
19:11	ZZZZZZ	1					
19:16	FA96171-1B	1	X		X	X	
19:21	FA96171-2B	1		X		X	
19:26	FA96171-3B	1		X		X	
19:31	ZZZZZZ	1					
19:36	ZZZZZZ	100					
19:41	ZZZZZZ	100					
19:45	MA18739-CCV10	1	X	X	X	X	
19:50	MA18739-CCB10	1	X	X	X	X	
19:55	FA96082-5	100					(a)
20:00	MP40826-D1	100					
20:05	MP40826-S1	100					
20:10	MP40826-S2	100					
20:15	MP40826-PS1	100					
20:20	MP40826-SD1	500					
20:25	MP40827-MB1	1	X	X	X	X	
20:29	MP40827-B1	1	X	X	X	X	
20:34	FA96176-1	1	X				(a)
20:39	MP40827-D1	1	X	X	X	X	
20:44	MA18739-CCV11	1	X	X	X	X	
20:49	MA18739-CCB11	1	X	X	X	X	
20:54	MP40827-SD1	5	X	X	X	X	
20:59	MP40827-PS1	1	X	X	X	X	
21:03	MP40827-S1	1	X	X	X	X	
21:08	MP40827-S2	1	X	X	X	X	
21:13	ZZZZZZ	1					
21:18	ZZZZZZ	1					
21:23	ZZZZZZ	1					
21:28	ZZZZZZ	1					
21:33	ZZZZZZ	1					
21:38	ZZZZZZ	1					
21:42	MA18739-CCV12	1	X	X	X	X	
21:47	MA18739-CCB12	1	X	X	X	X	
		Element:	Ba	Fe	Mg	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n
21:52	ZZZZZZ	1				
21:57	ZZZZZZ	1				
22:07	ZZZZZZ	5				
22:12	ZZZZZZ	5				
22:17	ZZZZZZ	5				
22:22	ZZZZZZ	5				
22:28	ZZZZZZ	1				
22:32	ZZZZZZ	1				
22:37	ZZZZZZ	1				
22:42	MA18739-CCV13	1	X	X	X	X
22:47	MA18739-CCB13	1	X	X	X	X
22:52	ZZZZZZ	1				
22:57	ZZZZZZ	1				
23:02	ZZZZZZ	1				
23:07	MP40827-MB2A	1	X			X
23:12	MA18739-CCV14	1	X	X	X	X
23:16	MA18739-CCB14	1	X	X	X	X

(a) Sample used for QC only; not part of login FA96171.

Element:	B a	F e	M g	M n

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:40	MA18739-STD1	2141	25625	8823	953
09:45	MA18739-STD2	2068	24495	8669	878
09:50	MA18739-STD3	2111	25117	8797	889
09:53	MA18739-STD4	2078	24826	8740	850
09:58	MA18739-STD5	2047	24413	8768	817
10:01	MA18739-STD6	1971	23520	8664	762
10:05	MA18739-STD7	1909	22884	8535	713
10:11	MA18739-HSTD1	1909	22919	8538	710
10:17	MA18739-ICV1	1985	23775	8660	769
10:25	MA18739-ICB1	2105 R	25316 R	8866 R	944 R
10:29	MA18739-CRIA1	2056	24425	8791	878
10:34	MA18739-CRIA2		25326		
10:42	MA18739-ICSA1	1730	20766	8315	660
10:49	MA18739-ICSAB1	1785	20939	8374	642
10:57	MA18739-CCV1	1987	23744	8771	769
11:03	MA18739-CCB1	2123	25607	8847	949
11:09	MP40821-MB1	2080	25625	9046	939
11:13	MP40821-B1	2002	24131	8948	807
11:18	FA95959-3	2078	25427	9005	897
11:23	MP40821-D1	2068	25181	9096	897
11:28	MP40821-SD1	2110	25498	8893	932
11:33	MP40821-PS1	2053	24793	8991	861
11:37	MP40821-S1	1993	24062	8885	800
11:42	MP40821-S2	1988	23793	9003	800
11:47	ZZZZZZ	1938	23420	8777	796
11:51	ZZZZZZ	1920	23325	8741	797
11:56	MA18739-CCV2	1986	23531	8657	768
12:01	MA18739-CCB2	2100	25283	8756	941
12:06	ZZZZZZ	1906	23226	8698	790
12:11	ZZZZZZ	1890	22941	8648	777
12:16	ZZZZZZ	1915	23436	8642	794
12:20	ZZZZZZ	1910	23217	8580	781
12:25	ZZZZZZ	2018	24556	8691	849

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:30	ZZZZZZ	2000	24412	8755	846
12:35	ZZZZZZ	1963	23754	8617	802
12:40	ZZZZZZ	1978	23981	8676	829
12:45	ZZZZZZ	2135	25775	9381	866
12:50	ZZZZZZ	2132	25743	9348	869
12:54	MA18739-CCV3	2001	23566	8694	773
12:59	MA18739-CCB3	2118	25272	8919	952
13:04	ZZZZZZ	1989	23736	8923	851
13:09	ZZZZZZ	2049	24546	8948	884
13:14	ZZZZZZ	2068	24898	9007	912
13:19	ZZZZZZ	2055	24619	8937	884
13:23	ZZZZZZ	2146	25862	9306	880
13:28	ZZZZZZ	2080	25127	9027	908
13:33	ZZZZZZ	2009	24224	8985	867
13:38	MP40824-MB1	2097	25307	8993	948
13:43	MP40824-B1	2010	23960	8907	809
13:48	FA96011-1	1883	22634	8643	763
13:53	MA18739-CCV4	2002	23585	8726	772
13:57	MA18739-CCB4	2120	25339	8856	949
14:02	MP40824-D1	1876	22679	8595	761
14:07	MP40824-SD1	2067	24760	8726	873
14:12	MP40824-PS1	1885	22800	8509	750
14:17	MP40824-S1	1919	23146	8568	728
14:22	MP40824-S2	1925	23191	8651	732
14:26	ZZZZZZ	1926	23386	8579	782
14:31	ZZZZZZ	1940	23603	8677	799
14:36	ZZZZZZ	1919	23400	8715	795
14:41	ZZZZZZ	1915	23207	8569	779
14:46	ZZZZZZ	2003	24380	8903	847
14:51	MA18739-CCV5	1975	23511	8798	768
14:56	MA18739-CCB5	2100	25166	8874	945
15:01	ZZZZZZ	1986	23951	8936	846
15:06	ZZZZZZ	2031	24651	9067	894

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:15	ZZZZZZ	2122	25532	9305	902
15:20	ZZZZZZ	2003	23662	8825	840
15:25	ZZZZZZ	1994	23471	8787	839
15:30	ZZZZZZ	1931	22567	8698	792
15:34	ZZZZZZ	1994	23463	8801	842
15:44	ZZZZZZ	1908	22552	8731	782
15:49	MA18739-CCV6	1977	22957	8760	770
15:54	MA18739-CCB6	2097	24672	8924	949
16:04	ZZZZZZ	1915	22648	8774	780
16:09	ZZZZZZ	1918	22861	8769	790
16:14	ZZZZZZ	1892	22591	8696	765
16:19	ZZZZZZ	1895	22476	8645	769
16:24	ZZZZZZ	2078	24427	8840	895
16:29	ZZZZZZ	2091	24392	8886	893
16:34	ZZZZZZ	2090	24362	8751	898
16:39	ZZZZZZ	2085	24342	8743	892
16:44	ZZZZZZ	2082	24374	8742	894
16:48	MA18739-CCV7	2018	23499	8588	777
16:53	MA18739-CCB7	2145	25369	8704	957
16:58	ZZZZZZ	2459	28800	10051	924
17:03	MP40826-MB1	2120	25563	8829	948
17:08	MP40826-B1	2033	24127	8761	815
17:13	FA96082-5	1856	21568	8205	716
17:18	MP40826-D1	1857	21550	8289	717
17:23	MP40826-SD1	2019	23747	8652	830
17:27	MP40826-PS1	1845	21598	8450	715
17:32	MP40826-S1	1858	21852	8491	710
17:37	MP40826-S2	1838	21839	8521	706
17:42	ZZZZZZ	1837	21571	8663	714
17:48	MA18739-CCV8	2022	23950	8855	782
17:52	MA18739-CCB8	2137	25581	8930	960
17:57	ZZZZZZ	1906	22206	8664	751
18:02	ZZZZZZ	1635	19136	8159	604

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:07	ZZZZZZ	1885	23078	8964	773
18:13	ZZZZZZ	1877	22480	8986	745
18:18	ZZZZZZ	1827	21512	8805	686
18:23	ZZZZZZ	2040	24970	9253	841
18:47	MA18739-CCV9	2008	24118	8954	778
18:52	MA18739-CCB9	2121	25813	9132	960
19:06	ZZZZZZ	1703	20127	8448	650
19:11	ZZZZZZ	1702	20304	8387	647
19:16	FA96171-1B	1972	24141	9008	840
19:21	FA96171-2B	1985	24256	9038	835
19:26	FA96171-3B	2022	24695	9155	873
19:31	ZZZZZZ	2034	24819	9212	874
19:36	ZZZZZZ	2093	24917	9130	907
19:41	ZZZZZZ	2092	25018	9052	912
19:45	MA18739-CCV10	1990	23720	8858	776
19:50	MA18739-CCB10	2144	25785	9065	966
19:55	FA96082-5	2080	25045	9007	902
20:00	MP40826-D1	2084	24944	9038	901
20:05	MP40826-S1	2082	24888	9041	902
20:10	MP40826-S2	2082	24780	9101	900
20:15	MP40826-PS1	2082	24821	9062	903
20:20	MP40826-SD1	2121	25445	9093	947
20:25	MP40827-MB1	2088	25629	9231	951
20:29	MP40827-B1	2020	24206	9201	822
20:34	FA96176-1	1942	23631	8951	801
20:39	MP40827-D1	1958	23691	8968	805
20:44	MA18739-CCV11	2027	24079	8900	786
20:49	MA18739-CCB11	2174	26184	9057	976
20:54	MP40827-SD1	2081	24938	9010	894
20:59	MP40827-PS1	1942	23638	8890	780
21:03	MP40827-S1	1968	23464	8907	758
21:08	MP40827-S2	1975	23683	8967	762
21:13	ZZZZZZ	2042	24693	8980	866

INTERNAL STANDARD SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18739
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:18	ZZZZZZ	1951	23859	8940	812
21:23	ZZZZZZ	1983	24020	8888	818
21:28	ZZZZZZ	1825	21661	8549	705
21:33	ZZZZZZ	2013	24455	8996	865
21:38	ZZZZZZ	1994	24173	8870	836
21:42	MA18739-CCV12	1987	23776	8910	774
21:47	MA18739-CCB12	2083	24998	9220	948
21:52	ZZZZZZ	1927	23176	9434	851
21:57	ZZZZZZ	1898	22730	9555	839
22:07	ZZZZZZ	1821	21497	9286	765
22:12	ZZZZZZ	1759	20518	9382	720
22:17	ZZZZZZ	1730	20003	9061	691
22:22	ZZZZZZ	1690	19640	8858	660
22:28	ZZZZZZ	1930	23187	9559	832
22:32	ZZZZZZ	2004	24428	9450	887
22:37	ZZZZZZ	1924	23422	9477	847
22:42	MA18739-CCV13	1912	22323	9452	771
22:47	MA18739-CCB13	2097	24750	9506	968
22:52	ZZZZZZ	1921	23305	9480	842
22:57	ZZZZZZ	2027	24643	9722	947
23:02	ZZZZZZ	2036	25103	9487	946
23:07	MP40827-MB2A	1999	24615	9651	937
23:12	MA18739-CCV14	1969	23176	9316	782
23:16	MA18739-CCB14	2066	25033	9400	956

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18739 Units: ug/l

Time: / Sample ID:			10:25 ICB1		11:03 CCB1		12:01 CCB2		12:59 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	-0.100	<200	0.00	<200	0.00	<200	0.00	<200
Beryllium	4.0	.1	anr							
Cadmium	5.0	.1	anr							
Calcium	1000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	-1.60	<300	3.80	<300	3.40	<300	3.80	<300
Lead	5.0	1	anr							
Magnesium	5000	35	-6.70	<5000	-1.10	<5000	-12.5	<5000	-3.10	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.100	<15	0.100	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100	anr							
Selenium	10	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18739 Units: ug/l

Time: / Sample ID:			13:57 CCB4		14:56 CCB5		15:54 CCB6		16:53 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	0.00	<200	0.00	<200	0.00	<200	0.00	<200
Beryllium	4.0	.1	anr							
Cadmium	5.0	.1	anr							
Calcium	1000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	3.40	<300	3.60	<300	2.90	<300	-0.200	<300
Lead	5.0	1	anr							
Magnesium	5000	35	-1.30	<5000	-12.0	<5000	-12.4	<5000	-7.60	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.00	<15	0.00	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100	anr							
Selenium	10	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18739 Units: ug/l

Time: / Sample ID:			17:52 CCB8		18:52 CCB9		19:50 CCB10		20:49 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	0.00	<200	0.00	<200	-0.100	<200	0.00	<200
Beryllium	4.0	.1	anr							
Cadmium	5.0	.1	anr							
Calcium	1000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	0.00	<300	0.600	<300	0.100	<300	-0.500	<300
Lead	5.0	1	anr							
Magnesium	5000	35	-13.5	<5000	-0.900	<5000	-9.70	<5000	-8.20	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.00	<15	0.00	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100	anr							
Selenium	10	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18739 Units: ug/l

Time:		10:17			10:57			11:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2050	102.5	2000	1970	98.5	2000	1980	99.0
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39300	98.3	40000	39400	98.5	40000	39700	99.3
Lead	anr								
Magnesium	40000	41000	102.5	40000	39100	97.8	40000	39600	99.0
Manganese	2000	2060	103.0	2000	1980	99.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18739 Units: ug/l

Time:		12:54			13:53			14:51	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	1940	97.0	2000	1960	98.0	2000	1970	98.5
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39000	97.5	40000	39300	98.3	40000	39100	97.8
Lead	anr								
Magnesium	40000	39300	98.3	40000	39300	98.3	40000	39100	97.8
Manganese	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18739 Units: ug/l

Time:		15:49			16:48			17:48	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	1920	96.0	2000	1950	97.5	2000	1970	98.5
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38400	96.0	40000	39200	98.0	40000	38700	96.8
Lead	anr								
Magnesium	40000	39200	98.0	40000	39700	99.3	40000	38800	97.0
Manganese	2000	2050	102.5	2000	2040	102.0	2000	2000	100.0
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18739 Units: ug/l

Time:		18:47			19:45			20:44	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38600	96.5	40000	38700	96.8	40000	38800	97.0
Lead	anr								
Magnesium	40000	38400	96.0	40000	38700	96.8	40000	38800	97.0
Manganese	2000	1970	98.5	2000	2000	100.0	2000	2000	100.0
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA18739 Units: ug/l

Time:		10:11	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	4000	3940	98.5
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	80000	78100	97.6
Lead	anr		
Magnesium	80000	79600	99.5
Manganese	4000	3920	98.0
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA18739 Units: ug/l

Time:			10:29		10:34	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	anr			
Barium	400	200	195	97.5		
Beryllium	10	5.0	anr			
Cadmium	10	5.0	anr			
Calcium	2000	1000	anr			
Chromium	20	10	anr			
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	300	100.0		
Lead	10	5.0	anr			
Magnesium	10000	5000	4830	96.6		
Manganese	30	15	15.1	100.7		
Molybdenum	100	50	anr			
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	anr			
Silver	20	10				
Sodium	20000	10000	anr			
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50				
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB061022M1.ICP Date Analyzed: 06/10/22 Methods: SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA18739 Units: ug/l

Time:			10:42		10:49	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	499000	99.8	498000	99.6
Antimony		1000	-0.400		992	99.2
Arsenic		1000	1.00		997	99.7
Barium		500	0.400		485	97.0
Beryllium		500	-0.100		487	97.4
Cadmium		1000	0.00		930	93.0
Calcium	500000	500000	447000	89.4	455000	91.0
Chromium		500	0.900		483	96.6
Cobalt		500	0.600		457	91.4
Copper		500	-0.200		566	113.2
Iron	200000	200000	457000	91.4	174000	87.0
Lead		1000	0.00		936	93.6
Magnesium	500000	500000	525000	105.0	534000	106.8
Manganese		500	0.200		498	99.6
Molybdenum		1000	0.700		892	89.2
Nickel		1000	0.900		878	87.8
Potassium			-9.10		616	
Selenium		1000	0.00		930	93.0
Silver		1000	0.300		1080	108.0
Sodium			216		209	
Strontium		1000	0.100		938	93.8
Thallium		1000	-0.600		871	87.1
Tin		1000	-0.800		825	82.5
Titanium		1000	0.500		978	97.8
Vanadium		500	0.600		507	101.4
Zinc		1000	2.60		911	91.1

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 06/07/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.044	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	5.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 06/07/22 06/07/22

Metal	FA95838-1A Original	DUP	RPD	QC Limits	FA95838-1A Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	12.4	13.1	5.5	0-20	12.4	232	200	109.8	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/22

Metal	FA95838-1A Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	12.4	216	200	101.8	7.1	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 06/07/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	209	200	104.5	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/22

Metal	FA95838-1A Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	12.4	12.2	1.9	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40804 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/22

Metal	Sample ml	Final ml	FA95838-1A Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	12.3984	12.15043	32.79482	0.4	0.5	20	103.2	80-120
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP40804: FA96171-1A, FA96171-2A, FA96171-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	.5	1	-0.10	<200
Beryllium	4.0	.1	.2		
Cadmium	5.0	.1	.2		
Calcium	1000	50	50		
Chromium	10	.5	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	15	17	1.5	<300
Lead	5.0	1	1.1		
Magnesium	5000	35	35	-13	<5000
Manganese	15	.25	1	0.10	<15
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	100	200		
Selenium	10	2	2.9		
Silver	10	.5	.7		
Sodium	10000	250	500		
Strontium	10	.25	.5		
Thallium	10	1	1.4		
Tin	50	.5	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:			06/10/22				06/10/22	
Metal	FA96082-5 Original	DUP	RPD	QC Limits	FA96082-5 Original	MS	Spikelot MPFLICP2 % Rec	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	anr							
Barium	0.0	0.0 (a)	NC	0-20	0.0	1950 (a)	2000 97.5	80-120
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	1340	1300 (a)	3.0	0-20	1340	26600(a)	26000 97.2	80-120
Lead	anr							
Magnesium	469000	452000(a	3.7	0-20	469000	464000(a	25000 -20.0(b)	80-120
Manganese	975	952 (a)	2.4	0-20	975	1430 (a)	500 91.0	80-120
Molybdenum	anr							
Nickel	anr							
Potassium								
Selenium	anr							
Silver	anr							
Sodium	anr							
Strontium								
Thallium	anr							
Tin								
Titanium								
Vanadium	anr							
Zinc	anr							

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Sample dilution required due to difficult matrix.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/22

Metal	FA96082-5 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	0.0	2070 (a)	2000	103.5	6.0	20
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	1340	27800(a)	26000	101.8	4.4	20
Lead	anr					
Magnesium	469000	489000(a	25000	80.0	5.2	20
Manganese	975	1490 (a)	500	103.0	4.1	20
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Sample dilution required due to difficult matrix.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/10/22

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	1990	2000	99.5	80-120
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	25500	26000	98.1	80-120
Lead	anr			
Magnesium	24300	25000	97.2	80-120
Manganese	511	500	102.2	80-120
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/22

Metal	FA96082-5 Original	SDL 5:25	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	0.00	0.00	NC	0-10
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	1340	1220	8.7	0-10
Lead	anr			
Magnesium	469000	428000	8.8	0-10
Manganese	975	940	3.6	0-10
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP40826 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/22

Metal	Sample ml	Final ml	FA96082-5 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium	9.8	10			241.9	0.2	12.5	250	96.8	80-120
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	1337	1310.26	4233	0.2	150	3000	97.4	80-120
Lead										
Magnesium	9.8	10	469100	459718	453600	0.2	250	5000	-122.4*a	80-120
Manganese	9.8	10	974.9	955.402	996.6	0.2	2.5	50	82.4	80-120
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP40826: FA96171-1B, FA96171-2B, FA96171-3B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Instrument Detection Limits

Job Number: FA96171
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18730

Instrument Detection Limits

Job Number: FA96171
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 01/30/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA18739

Instrument Linear Ranges

Job Number: FA96171
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18730

Instrument Linear Ranges

Job Number: FA96171
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 12/01/21

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA18739

Metals Analysis

Raw Data

Quantitation Report

File Name	001CALB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 8:21
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.006	ug/l	73.26	706.02	6.614E-03	Pulse	0.50	3
As			1	0.003	ug/l	74.24	18.00	1.685E-04	Pulse	1.00	3
Mo			1	0.039	ug/l	26.60	216.00	1.342E-03	Pulse	0.50	3
Pb			1	0.000	ug/l	9145.25	2,649.21	9.795E-04	Pulse	1.00	3
Be			1	-0.003	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.001	ug/l	56.39	37.33	1.079E-05	Pulse	0.50	3
Ba			1	0.002	ug/l	277.68	12.67	1.301E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	50.85	143.33	5.299E-05	Pulse	0.50	3
Sn			1	0.048	ug/l	6.71	273.34	2.802E-04	Pulse	0.30	3
Sr			1	0.024	ug/l	75.88	444.68	4.558E-04	Pulse	0.50	3
[Pb]			1	0.011	ug/l	24.67	1,326.06	4.903E-04	Pulse	0.50	3
Ca			1	1.201	ug/l	228.24	127.33	8.844E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	18099.82	1.33	9.283E-06	Pulse	0.50	3
Na			1	0.262	ug/l	56.60	9,155.43	6.359E-02	Pulse	1.00	3
Mg			1	0.327	ug/l	55.46	369.00	2.563E-03	Pulse	1.00	3
K			1	0.612	ug/l	15.40	18,945.72	1.316E-01	Pulse	1.00	3
V			1	0.004	ug/l	113.42	258.67	1.796E-03	Pulse	0.50	3
Mn			1	0.007	ug/l	50.56	174.00	1.632E-03	Pulse	0.50	3
Fe			1	9.355	ug/l	67.21	96,545.85	9.024E-01	Pulse	0.50	3
Co			1	0.001	ug/l	75.59	87.33	8.179E-04	Pulse	0.50	3
Ni			1	-0.004	ug/l	-110.36	93.33	8.770E-04	Pulse	0.50	3
Cu			1	0.014	ug/l	614.42	28,687.94	2.690E-01	Pulse	0.50	3
Zn			1	0.432	ug/l	92.12	2,966.91	1.843E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-1993.85	10.67	6.655E-05	Pulse	0.50	3
Al			1	0.921	ug/l	41.68	372.34	2.585E-03	Pulse	1.00	3
Se			1	0.016	ug/l	266.16	4.11	2.557E-05	Pulse	3.00	3
Sb			1	0.010	ug/l	17.55	71.00	4.407E-04	Pulse	1.00	3
Se			1	-0.147	ug/l	-67.00	18.89	1.173E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,704,496.67	0.42	100.0	Pulse	0.50	3
1	Sc		143,962.31	0.54	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		106,691.91	1.79	100.0	Pulse	0.30	3
1	In		975,786.94	0.52	100.0	Pulse	0.30	3
1	Tb		3,455,905.08	0.63	100.0	Pulse	0.50	3
1	Lu		2,158,329.00	0.57	100.0	Pulse	0.50	3
1	Ge		161,150.94	0.86	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		614.46	15.73	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 8:25
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	130.02	662.68	6.236E-03	Pulse	0.50	3
As			1	-0.003	ug/l	-150.26	12.67	1.190E-04	Pulse	1.00	3
Mo			1	0.004	ug/l	45.19	45.33	2.815E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	646.94	2,647.55	9.812E-04	Pulse	1.00	3
Be			1	0.000	ug/l	-29356.64	0.17	1.155E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	126.53	26.67	7.782E-06	Pulse	0.50	3
Ba			1	0.000	ug/l	676.57	10.00	1.027E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	22.60	42.00	1.557E-05	Pulse	0.50	3
Sn			1	-0.002	ug/l	-145.64	65.56	6.726E-05	Pulse	0.30	3
Sr			1	0.006	ug/l	66.04	376.01	3.860E-04	Pulse	0.50	3
[Pb]			1	0.009	ug/l	37.57	1,288.72	4.776E-04	Pulse	0.50	3
Ca			1	3.722	ug/l	50.53	178.67	1.244E-03	Pulse	0.50	3
Ti			1	0.008	ug/l	85.58	2.67	1.853E-05	Pulse	0.50	3
Na			1	0.943	ug/l	16.84	9,922.13	6.902E-02	Pulse	1.00	3
Mg			1	0.083	ug/l	47.00	239.67	1.668E-03	Pulse	1.00	3
K			1	1.621	ug/l	9.76	19,304.07	1.343E-01	Pulse	1.00	3
V			1	0.006	ug/l	90.92	270.67	1.884E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	18.09	188.67	1.776E-03	Pulse	0.50	3
Fe			1	0.581	ug/l	16.66	35,648.60	3.355E-01	Pulse	0.50	3
Co			1	0.000	ug/l	327.94	76.67	7.218E-04	Pulse	0.50	3
Ni			1	-0.005	ug/l	-35.19	88.67	8.345E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	3749.77	28,430.24	2.675E-01	Pulse	0.50	3
Zn			1	0.093	ug/l	25.94	2,409.49	1.495E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-388.69	9.33	5.806E-05	Pulse	0.50	3
Al			1	0.287	ug/l	18.11	270.00	1.878E-03	Pulse	1.00	3
Se			1	0.028	ug/l	86.45	4.78	2.966E-05	Pulse	3.00	3
Sb			1	0.001	ug/l	139.43	25.00	1.551E-04	Pulse	1.00	3
Se			1	-0.257	ug/l	-42.19	15.89	9.866E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,698,297.92	0.60	100.0	Pulse	0.50	3
1	Sc		143,764.52	0.74	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		106,272.70	0.54	100.0	Pulse	0.30	3
1	In		974,141.77	0.40	100.0	Pulse	0.30	3
1	Tb		3,427,763.42	0.14	100.0	Pulse	0.50	3
1	Lu		2,156,031.67	1.00	100.0	Pulse	0.50	3
1	Ge		161,137.33	0.43	100.0	Pulse	0.30	3
1	Te		1.33	173.21	100.0	Pulse	0.50	3
1	Li		670.02	1.72	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:29
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	650.68	6.101E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	15.67	1.469E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	24.00	1.488E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	2,611.20	9.791E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.17	1.161E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	19.33	5.597E-06	Pulse	0.50	3
Ba			1	0.000	ug/l	---	9.33	9.663E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	32.67	1.225E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	73.33	7.595E-05	Pulse	0.30	3
Sr			1	0.000	ug/l	---	348.00	3.604E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	1,170.05	4.388E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	102.67	7.130E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	1.33	9.239E-06	Pulse	0.50	3
Na			1	0.000	ug/l	---	8,857.30	6.151E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	196.33	1.363E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	18,717.52	1.300E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	234.67	1.630E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	145.33	1.365E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	31,763.92	2.979E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	73.33	6.881E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	111.33	1.046E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	28,518.38	2.675E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,256.80	1.400E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	11.33	7.024E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	224.33	1.558E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	3.22	1.997E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	---	20.33	1.261E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	22.89	1.420E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,666,718.50	0.99	100.0	Pulse	0.50	3
1	Sc		144,000.41	0.31	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		106,629.26	1.50	100.0	Pulse	0.30	3
1	In		965,679.33	0.47	100.0	Pulse	0.30	3
1	Tb		3,456,290.33	0.43	100.0	Pulse	0.50	3
1	Lu		2,139,749.33	0.95	100.0	Pulse	0.50	3
1	Ge		161,189.58	0.46	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		605.57	7.27	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:33
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.510	ug/l	4.58	5,148.03	4.872E-02	Pulse	0.50	3
As			1	0.468	ug/l	5.67	438.34	4.148E-03	Pulse	1.00	3
Mo			1	0.477	ug/l	5.88	2,355.49	1.480E-02	Pulse	0.50	3
Pb			1	0.404	ug/l	0.77	12,998.61	4.832E-03	Pulse	1.00	3
Be			1	0.491	ug/l	12.35	27.00	1.881E-04	Pulse	2.00	3
Ag			1	0.520	ug/l	1.13	8,766.76	2.543E-03	Pulse	0.50	3
Ba			1	0.501	ug/l	6.37	830.02	8.553E-04	Pulse	0.50	3
Tl			1	0.477	ug/l	1.61	17,744.55	6.597E-03	Pulse	0.50	3
Sn			1	0.532	ug/l	8.43	2,257.94	2.327E-03	Pulse	0.30	3
Sr			1	0.532	ug/l	5.04	2,398.16	2.471E-03	Pulse	0.50	3
[Pb]			1	0.406	ug/l	2.80	6,107.12	2.270E-03	Pulse	0.50	3
Ca			1	60.057	ug/l	3.62	1,331.38	9.281E-03	Pulse	0.50	3
Ti			1	0.457	ug/l	23.03	79.33	5.523E-04	Pulse	0.50	3
Na			1	50.604	ug/l	0.79	66,674.10	4.647E-01	Pulse	1.00	3
Mg			1	49.977	ug/l	1.18	26,521.49	1.849E-01	Pulse	1.00	3
K			1	48.324	ug/l	0.55	37,022.51	2.580E-01	Pulse	1.00	3
V			1	0.475	ug/l	1.62	3,299.62	2.300E-02	Pulse	0.50	3
Mn			1	0.606	ug/l	3.30	2,519.51	2.383E-02	Pulse	0.50	3
Fe			1	50.393	ug/l	0.84	375,605.48	3.554E+00	Pulse	0.50	3
Co			1	0.506	ug/l	4.10	7,726.24	7.312E-02	Pulse	0.50	3
Ni			1	0.530	ug/l	5.76	2,367.49	2.241E-02	Pulse	0.50	3
Cu			1	-1.157	ug/l	-2.35	14,846.40	1.405E-01	Pulse	0.50	3
Zn			1	0.617	ug/l	6.40	3,233.94	2.033E-02	Pulse	1.00	3
Cd			1	0.494	ug/l	0.28	1,136.04	7.140E-03	Pulse	0.50	3
Al			1	50.971	ug/l	0.47	8,382.10	5.842E-02	Pulse	1.00	3
Se			1	0.612	ug/l	3.10	36.56	2.297E-04	Pulse	3.00	3
Sb			1	0.465	ug/l	3.26	2,434.83	1.531E-02	Pulse	1.00	3
Se			1	0.343	ug/l	24.82	31.78	1.998E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,689,984.25	1.12	100.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		143,473.34	0.74	99.6	Pulse	0.30	3
1	Ge		105,690.64	1.07	99.1	Pulse	0.30	3
1	In		970,315.76	0.41	100.5	Pulse	0.30	3
1	Tb		3,447,199.83	0.46	99.7	Pulse	0.50	3
1	Lu		2,139,465.17	0.60	100.0	Pulse	0.50	3
1	Ge		159,103.78	1.89	98.7	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		681.13	3.44	112.5	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:37
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.043	ug/l	1.03	9,928.54	9.316E-02	Pulse	0.50	3
As			1	0.995	ug/l	3.38	922.36	8.654E-03	Pulse	1.00	3
Mo			1	0.982	ug/l	2.82	4,865.32	3.028E-02	Pulse	0.50	3
Pb			1	0.913	ug/l	0.45	26,045.09	9.688E-03	Pulse	1.00	3
Be			1	0.926	ug/l	6.52	51.17	3.537E-04	Pulse	2.00	3
Ag			1	1.072	ug/l	1.80	18,120.20	5.236E-03	Pulse	0.50	3
Ba			1	1.041	ug/l	2.79	1,727.42	1.767E-03	Pulse	0.50	3
Tl			1	0.982	ug/l	0.87	36,494.12	1.358E-02	Pulse	0.50	3
Sn			1	1.042	ug/l	2.92	4,383.88	4.485E-03	Pulse	0.30	3
Sr			1	0.974	ug/l	3.15	4,131.13	4.227E-03	Pulse	0.50	3
[Pb]			1	0.927	ug/l	1.06	12,421.21	4.620E-03	Pulse	0.50	3
Ca			1	120.603	ug/l	2.93	2,592.19	1.792E-02	Pulse	0.50	3
Ti			1	1.097	ug/l	12.24	190.00	1.313E-03	Pulse	0.50	3
Na			1	102.910	ug/l	0.51	127,521.95	8.815E-01	Pulse	1.00	3
Mg			1	103.266	ug/l	0.36	55,047.19	3.805E-01	Pulse	1.00	3
K			1	101.647	ug/l	1.72	57,772.26	3.994E-01	Pulse	1.00	3
V			1	1.031	ug/l	3.10	6,937.26	4.795E-02	Pulse	0.50	3
Mn			1	1.185	ug/l	1.99	4,829.95	4.532E-02	Pulse	0.50	3
Fe			1	104.128	ug/l	1.14	748,788.48	7.026E+00	Pulse	0.50	3
Co			1	1.035	ug/l	0.83	15,848.51	1.487E-01	Pulse	0.50	3
Ni			1	1.084	ug/l	5.70	4,768.60	4.475E-02	Pulse	0.50	3
Cu			1	-0.602	ug/l	-8.37	21,463.94	2.014E-01	Pulse	0.50	3
Zn			1	1.833	ug/l	5.06	5,270.40	3.281E-02	Pulse	1.00	3
Cd			1	1.019	ug/l	3.33	2,354.16	1.466E-02	Pulse	0.50	3
Al			1	101.832	ug/l	1.07	16,660.61	1.152E-01	Pulse	1.00	3
Se			1	1.105	ug/l	6.54	64.11	3.991E-04	Pulse	3.00	3
Sb			1	0.986	ug/l	1.21	5,190.08	3.231E-02	Pulse	1.00	3
Se			1	0.817	ug/l	6.73	44.89	2.795E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,688,322.58	0.32	100.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		144,662.94	0.02	100.5	Pulse	0.30	3
1	Ge		106,574.58	0.52	99.9	Pulse	0.30	3
1	In		977,486.84	0.33	101.2	Pulse	0.30	3
1	Tb		3,460,725.67	0.82	100.1	Pulse	0.50	3
1	Lu		2,148,813.58	0.53	100.4	Pulse	0.50	3
1	Ge		160,636.09	0.73	99.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		626.68	11.99	103.5	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:41
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.121	ug/l	1.11	90,460.39	8.512E-01	Pulse	0.50	3
As			1	10.132	ug/l	1.65	9,221.57	8.678E-02	Pulse	1.00	3
Mo			1	9.955	ug/l	1.56	48,793.88	3.057E-01	Pulse	0.50	3
Pb			1	9.852	ug/l	0.20	254,598.22	9.496E-02	Pulse	1.00	3
Be			1	10.009	ug/l	1.04	550.18	3.813E-03	Pulse	2.00	3
Ag			1	10.820	ug/l	0.93	182,073.65	5.281E-02	Pulse	0.50	3
Ba			1	9.688	ug/l	1.24	15,987.09	1.636E-02	Pulse	0.50	3
Tl			1	9.897	ug/l	0.58	366,363.39	1.366E-01	Pulse	0.50	3
Sn			1	9.873	ug/l	0.88	40,894.25	4.186E-02	Pulse	0.30	3
Sr			1	10.038	ug/l	0.49	39,299.44	4.022E-02	Pulse	0.50	3
[Pb]			1	9.840	ug/l	0.56	120,138.77	4.481E-02	Pulse	0.50	3
Ca			1	1011.248	ug/l	1.57	20,922.48	1.450E-01	Pulse	0.50	3
Ti			1	10.400	ug/l	2.37	1,784.75	1.237E-02	Pulse	0.50	3
Na			1	1016.844	ug/l	1.66	1,177,846.33	8.164E+00	Pulse	1.00	3
Mg			1	1027.671	ug/l	1.29	544,597.48	3.775E+00	Pulse	1.00	3
K			1	1016.784	ug/l	0.87	407,544.32	2.825E+00	Pulse	1.00	3
V			1	9.947	ug/l	1.82	64,727.35	4.486E-01	Pulse	0.50	3
Mn			1	10.318	ug/l	0.74	40,830.68	3.842E-01	Pulse	0.50	3
Fe			1	1016.193	ug/l	0.92	7,009,640.00	6.596E+01	Analog	0.50	3
Co			1	10.292	ug/l	0.63	156,548.81	1.473E+00	Pulse	0.50	3
Ni			1	10.407	ug/l	1.45	44,682.03	4.205E-01	Pulse	0.50	3
Cu			1	10.340	ug/l	0.34	149,050.12	1.402E+00	Pulse	0.50	3
Zn			1	11.340	ug/l	1.44	20,811.87	1.304E-01	Pulse	1.00	3
Cd			1	10.275	ug/l	0.57	23,491.59	1.472E-01	Pulse	0.50	3
Al			1	1016.779	ug/l	1.29	163,893.67	1.136E+00	Pulse	1.00	3
Se			1	10.232	ug/l	1.96	563.45	3.530E-03	Pulse	3.00	3
Sb			1	10.020	ug/l	0.48	52,218.42	3.271E-01	Pulse	1.00	3
Se			1	10.088	ug/l	6.91	293.78	1.840E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,681,146.42	0.35	100.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		144,293.36	1.15	100.2	Pulse	0.30	3
1	Ge		106,277.19	1.04	99.7	Pulse	0.30	3
1	In		977,037.36	0.12	101.2	Pulse	0.30	3
1	Tb		3,447,960.92	0.14	99.8	Pulse	0.50	3
1	Lu		2,150,451.17	0.71	100.5	Pulse	0.50	3
1	Ge		159,625.82	0.33	99.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		640.01	10.88	105.7	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:45
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	47.206	ug/l	1.22	413,589.69	3.948E+00	Pulse	0.50	3
As			1	47.169	ug/l	1.84	42,265.81	4.035E-01	Pulse	1.00	3
Mo			1	46.331	ug/l	0.90	226,774.78	1.422E+00	Pulse	0.50	3
Pb			1	46.037	ug/l	0.42	1,161,232.75	4.401E-01	Pulse	1.00	3
Be			1	46.947	ug/l	1.89	2,533.49	1.788E-02	Pulse	2.00	3
Ag			1	49.651	ug/l	0.61	831,386.94	2.423E-01	Pulse	0.50	3
Ba			1	46.578	ug/l	1.79	75,481.60	7.863E-02	Pulse	0.50	3
Tl			1	47.032	ug/l	0.77	1,713,143.29	6.493E-01	Pulse	0.50	3
Sn			1	48.076	ug/l	0.73	195,374.05	2.035E-01	Pulse	0.30	3
Sr			1	48.505	ug/l	0.48	185,273.78	1.930E-01	Pulse	0.50	3
[Pb]			1	45.932	ug/l	0.30	547,560.17	2.075E-01	Pulse	0.50	3
Ca			1	4728.822	ug/l	0.27	95,700.07	6.753E-01	Pulse	0.50	3
Ti			1	48.652	ug/l	1.75	8,195.75	5.784E-02	Pulse	0.50	3
Na			1	4746.966	ug/l	0.37	5,368,570.00	3.789E+01	Analog	1.00	3
Mg			1	4800.938	ug/l	0.22	2,498,062.08	1.763E+01	Pulse	1.00	3
K			1	4784.163	ug/l	0.61	1,815,056.75	1.281E+01	Pulse	1.00	3
V			1	46.911	ug/l	0.08	298,969.90	2.110E+00	Pulse	0.50	3
Mn			1	47.889	ug/l	0.57	186,288.46	1.778E+00	Pulse	0.50	3
Fe			1	4739.133	ug/l	0.80	32,111,607.33	3.065E+02	Analog	0.50	3
Co			1	47.976	ug/l	0.86	719,129.36	6.864E+00	Pulse	0.50	3
Ni			1	48.125	ug/l	0.86	203,289.39	1.940E+00	Pulse	0.50	3
Cu			1	47.017	ug/l	0.70	568,715.81	5.429E+00	Pulse	0.50	3
Zn			1	47.751	ug/l	0.86	80,380.07	5.040E-01	Pulse	1.00	3
Cd			1	47.338	ug/l	2.44	108,059.39	6.777E-01	Pulse	0.50	3
Al			1	4853.075	ug/l	0.20	767,468.27	5.416E+00	Pulse	1.00	3
Se			1	47.032	ug/l	0.82	2,576.06	1.615E-02	Pulse	3.00	3
Sb			1	46.503	ug/l	1.69	242,006.31	1.518E+00	Pulse	1.00	3
Se			1	46.903	ug/l	0.67	1,281.82	8.038E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,638,316.08	0.71	98.9	Pulse	0.50	3
1	Sc		141,704.07	0.33	98.4	Pulse	0.30	3
1	Ge		104,766.81	0.92	98.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		960,042.56	0.66	99.4	Pulse	0.30	3
1	Tb		3,431,242.08	0.49	99.3	Pulse	0.50	3
1	Lu		2,134,764.25	0.36	99.8	Pulse	0.50	3
1	Ge		159,477.96	1.39	98.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		607.79	2.08	100.4	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 8:49
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.557	ug/l	1.42	817,829.63	7.985E+00	Pulse	0.50	3
As			1	96.183	ug/l	2.17	84,238.22	8.226E-01	Pulse	1.00	3
Mo			1	95.516	ug/l	1.19	453,390.81	2.932E+00	Pulse	0.50	3
Pb			1	94.833	ug/l	0.19	2,306,977.33	9.056E-01	Pulse	1.00	3
Be			1	96.714	ug/l	1.93	5,085.97	3.683E-02	Pulse	2.00	3
Ag			1	100.092	ug/l	0.45	1,641,137.67	4.885E-01	Pulse	0.50	3
Ba			1	95.048	ug/l	0.92	149,225.53	1.604E-01	Pulse	0.50	3
Tl			1	96.551	ug/l	0.43	3,395,661.33	1.333E+00	Pulse	0.50	3
Sn			1	96.491	ug/l	0.87	379,827.38	4.084E-01	Pulse	0.30	3
Sr			1	96.828	ug/l	1.59	357,975.18	3.849E-01	Pulse	0.50	3
[Pb]			1	94.503	ug/l	0.66	1,086,572.00	4.265E-01	Pulse	0.50	3
Ca			1	9620.009	ug/l	1.50	189,625.08	1.373E+00	Pulse	0.50	3
Ti			1	97.030	ug/l	1.66	15,927.16	1.153E-01	Pulse	0.50	3
Na			1	9629.481	ug/l	1.18	10,604,853.67	7.679E+01	Analog	1.00	3
Mg			1	9650.050	ug/l	1.22	4,893,264.67	3.543E+01	Analog	1.00	3
K			1	9677.101	ug/l	1.57	3,559,532.75	2.578E+01	Pulse	1.00	3
V			1	96.090	ug/l	1.30	596,582.94	4.320E+00	Pulse	0.50	3
Mn			1	95.813	ug/l	1.61	364,224.29	3.556E+00	Pulse	0.50	3
Fe			1	9568.633	ug/l	1.41	63,352,201.33	6.186E+02	Analog	0.50	3
Co			1	95.965	ug/l	1.69	1,406,112.96	1.373E+01	Pulse	0.50	3
Ni			1	96.437	ug/l	1.39	398,147.92	3.888E+00	Pulse	0.50	3
Cu			1	95.679	ug/l	1.17	1,103,074.50	1.077E+01	Pulse	0.50	3
Zn			1	96.402	ug/l	0.75	155,173.16	1.003E+00	Pulse	1.00	3
Cd			1	96.467	ug/l	1.71	213,574.07	1.381E+00	Pulse	0.50	3
Al			1	9579.858	ug/l	1.39	1,476,214.45	1.069E+01	Pulse	1.00	3
Se			1	97.304	ug/l	1.17	5,164.92	3.340E-02	Pulse	3.00	3
Sb			1	95.546	ug/l	0.52	482,269.89	3.118E+00	Pulse	1.00	3
Se			1	96.848	ug/l	0.53	2,543.73	1.645E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,547,379.08	0.23	95.5	Pulse	0.50	3
1	Sc		138,114.39	1.49	95.9	Pulse	0.30	3
1	Ge		102,435.42	2.08	96.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		930,114.65	0.71	96.3	Pulse	0.30	3
1	Tb		3,359,922.83	0.73	97.2	Pulse	0.50	3
1	Lu		2,102,261.67	0.62	98.2	Pulse	0.50	3
1	Ge		154,669.90	1.36	96.0	Pulse	0.30	3
1	Te		5.33	21.65		Pulse	0.50	3
1	Li		553.34	9.04	91.4	Pulse	0.30	3

Quantitation Report

File Name 009CALS.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:53
Sample Name CALSTD-7
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.914	ug/l	1.77	1,658,102.25	1.695E+01	Pulse	0.50	3
As			1	202.610	ug/l	1.42	169,492.99	1.733E+00	Pulse	1.00	3
Mo			1	203.162	ug/l	0.95	925,596.77	6.235E+00	Pulse	0.50	3
Pb			1	203.582	ug/l	0.92	4,692,902.83	1.943E+00	Pulse	1.00	3
Be			1	202.406	ug/l	2.02	10,212.39	7.707E-02	Pulse	2.00	3
Ag			1	180.858	ug/l	0.63	2,855,683.67	8.826E-01	Pulse	0.50	3
Ba			1	203.347	ug/l	1.09	304,173.63	3.432E-01	Pulse	0.50	3
Tl			1	202.472	ug/l	3.24	6,750,974.17	2.795E+00	Mix	0.50	3
Sn			1	202.241	ug/l	0.96	758,459.94	8.559E-01	Pulse	0.30	3
Sr			1	201.958	ug/l	0.63	711,096.58	8.024E-01	Pulse	0.50	3
[Pb]			1	203.774	ug/l	0.80	2,220,255.83	9.192E-01	Pulse	0.50	3
Ca			1	20257.099	ug/l	1.37	383,053.68	2.891E+00	Pulse	0.50	3
Ti			1	201.801	ug/l	0.80	31,783.74	2.399E-01	Pulse	0.50	3
Na			1	20247.660	ug/l	1.29	21,385,936.67	1.614E+02	Analog	1.00	3
Mg			1	20223.341	ug/l	1.34	9,839,163.67	7.425E+01	Analog	1.00	3
K			1	20214.566	ug/l	1.10	7,115,972.83	5.370E+01	Analog	1.00	3
V			1	202.730	ug/l	1.07	1,207,418.08	9.112E+00	Pulse	0.50	3
Mn			1	202.604	ug/l	1.44	735,492.04	7.518E+00	Pulse	0.50	3
Fe			1	20280.069	ug/l	1.46	128,217,586.67	1.311E+03	Analog	0.50	3
Co			1	202.509	ug/l	0.69	2,834,404.25	2.897E+01	Pulse	0.50	3
Ni			1	202.230	ug/l	1.58	797,359.69	8.151E+00	Pulse	0.50	3
Cu			1	202.889	ug/l	1.43	2,204,819.33	2.254E+01	Pulse	0.50	3
Zn			1	202.290	ug/l	1.15	310,235.39	2.090E+00	Pulse	1.00	3
Cd			1	202.418	ug/l	0.98	430,157.69	2.898E+00	Pulse	0.50	3
Al			1	20245.952	ug/l	1.09	2,993,234.58	2.259E+01	Pulse	1.00	3
Se			1	202.078	ug/l	1.71	10,292.21	6.934E-02	Pulse	3.00	3
Sb			1	203.100	ug/l	1.07	983,891.11	6.628E+00	Pulse	1.00	3
Se			1	202.347	ug/l	0.44	5,077.79	3.421E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,415,328.25	0.51	90.6	Pulse	0.50	3
1	Sc		132,514.65	1.11	92.0	Pulse	0.30	3
1	Ge		97,832.75	0.92	91.8	Pulse	0.30	3
1	In		886,243.72	1.08	91.8	Pulse	0.30	3
1	Tb		3,235,525.08	0.20	93.6	Pulse	0.50	3
1	Lu		2,041,922.13	0.33	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		148,448.08	0.72	92.1	Pulse	0.30	3
1	Te		12.67	9.12		Pulse	0.50	3
1	Li		585.57	2.57	96.7	Pulse	0.30	3

Quantitation Report

File Name 010HSAG.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 8:57
Sample Name HSTD (Ag)
Sample Type HSTD _Ag
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.350	ug/l	0.91	808,575.84	8.302E+00	Pulse	0.50	3
As			1	99.246	ug/l	0.48	82,660.73	8.488E-01	Pulse	1.00	3
Mo			1	100.318	ug/l	0.35	452,456.26	3.079E+00	Pulse	0.50	3
Pb			1	98.794	ug/l	1.33	2,314,881.08	9.434E-01	Pulse	1.00	3
Be			1	100.452	ug/l	0.33	5,013.96	3.825E-02	Pulse	2.00	3
Ag			1	103.671	ug/l	0.10	1,639,007.42	5.059E-01	Pulse	0.50	3
Ba			1	99.481	ug/l	1.10	148,578.57	1.679E-01	Pulse	0.50	3
Tl			1	100.983	ug/l	0.51	3,421,092.75	1.394E+00	Pulse	0.50	3
Sn			1	99.965	ug/l	1.38	374,327.28	4.231E-01	Pulse	0.30	3
Sr			1	99.491	ug/l	1.38	349,900.51	3.955E-01	Pulse	0.50	3
[Pb]			1	98.944	ug/l	1.15	1,095,787.00	4.466E-01	Pulse	0.50	3
Ca			1	9904.940	ug/l	0.61	185,319.83	1.414E+00	Pulse	0.50	3
Ti			1	100.299	ug/l	0.64	15,627.59	1.192E-01	Pulse	0.50	3
Na			1	10036.318	ug/l	0.25	10,490,360.00	8.003E+01	Analog	1.00	3
Mg			1	10016.299	ug/l	0.55	4,820,698.50	3.678E+01	Analog	1.00	3
K			1	9968.328	ug/l	0.48	3,479,702.00	2.655E+01	Pulse	1.00	3
V			1	99.829	ug/l	0.54	588,254.37	4.488E+00	Pulse	0.50	3
Mn			1	99.234	ug/l	0.22	358,710.79	3.683E+00	Pulse	0.50	3
Fe			1	9980.656	ug/l	0.36	62,836,662.67	6.452E+02	Analog	0.50	3
Co			1	100.157	ug/l	1.13	1,395,573.37	1.433E+01	Pulse	0.50	3
Ni			1	100.248	ug/l	0.74	393,569.30	4.041E+00	Pulse	0.50	3
Cu			1	101.740	ug/l	0.63	1,113,697.08	1.144E+01	Pulse	0.50	3
Zn			1	102.974	ug/l	1.36	157,335.32	1.071E+00	Pulse	1.00	3
Cd			1	100.235	ug/l	1.19	210,854.31	1.435E+00	Pulse	0.50	3
Al			1	9920.280	ug/l	0.94	1,450,905.25	1.107E+01	Pulse	1.00	3
Se			1	100.444	ug/l	1.46	5,065.56	3.447E-02	Pulse	3.00	3
Sb			1	99.815	ug/l	0.90	478,665.58	3.258E+00	Pulse	1.00	3
Se			1	100.523	ug/l	1.89	2,507.50	1.706E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,453,789.00	0.64	92.0	Pulse	0.50	3
1	Sc		131,077.64	0.60	91.0	Pulse	0.30	3
1	Ge		97,391.48	0.57	91.3	Pulse	0.30	3
1	In		884,800.03	0.50	91.6	Pulse	0.30	3
1	Tb		3,239,654.08	0.18	93.7	Pulse	0.50	3
1	Lu		2,020,814.92	0.33	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		146,947.46	0.72	91.2	Pulse	0.30	3
1	Te		4.00	132.29		Pulse	0.50	3
1	Li		570.01	13.83	94.1	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:00
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	195.646	ug/l	1.65	1,577,297.79	1.634E+01	Pulse	0.50	3
As			1	196.355	ug/l	1.30	162,052.67	1.679E+00	Pulse	1.00	3
Mo			1	198.164	ug/l	1.55	883,119.60	6.082E+00	Pulse	0.50	3
Pb			1	198.262	ug/l	1.03	4,494,759.17	1.892E+00	Pulse	1.00	3
Be			1	196.717	ug/l	1.36	9,748.17	7.491E-02	Pulse	2.00	3
Ag			1	177.772	ug/l	2.53	2,777,467.42	8.675E-01	Pulse	0.50	3
Ba			1	196.872	ug/l	1.99	291,401.63	3.323E-01	Pulse	0.50	3
Tl			1	201.811	ug/l	0.93	6,618,221.00	2.786E+00	Pulse	0.50	3
Sn			1	195.484	ug/l	1.48	725,433.22	8.273E-01	Pulse	0.30	3
Sr			1	195.856	ug/l	0.95	682,384.92	7.782E-01	Pulse	0.50	3
[Pb]			1	198.662	ug/l	1.01	2,128,750.67	8.962E-01	Pulse	0.50	3
Ca			1	19636.365	ug/l	1.23	364,662.48	2.802E+00	Pulse	0.50	3
Ti			1	197.841	ug/l	1.57	30,603.17	2.352E-01	Pulse	0.50	3
Na			1	19676.825	ug/l	0.92	20,412,538.67	1.568E+02	Analog	1.00	3
Mg			1	19675.295	ug/l	1.72	9,401,015.00	7.224E+01	Analog	1.00	3
K			1	19614.143	ug/l	0.63	6,781,802.33	5.211E+01	Analog	1.00	3
V			1	196.700	ug/l	2.00	1,150,504.59	8.841E+00	Pulse	0.50	3
Mn			1	195.313	ug/l	1.76	699,502.16	7.248E+00	Pulse	0.50	3
Fe			1	19613.492	ug/l	1.08	122,341,669.33	1.268E+03	Analog	0.50	3
Co			1	194.413	ug/l	1.61	2,684,448.08	2.781E+01	Pulse	0.50	3
Ni			1	194.219	ug/l	0.91	755,526.88	7.828E+00	Pulse	0.50	3
Cu			1	195.307	ug/l	1.27	2,094,917.83	2.171E+01	Pulse	0.50	3
Zn			1	197.182	ug/l	1.14	295,858.19	2.038E+00	Pulse	1.00	3
Cd			1	196.574	ug/l	1.44	408,615.01	2.814E+00	Pulse	0.50	3
Al			1	19523.087	ug/l	1.94	2,834,582.67	2.178E+01	Pulse	1.00	3
Se			1	198.299	ug/l	0.17	9,879.88	6.804E-02	Pulse	3.00	3
Sb			1	197.705	ug/l	0.92	936,872.23	6.452E+00	Pulse	1.00	3
Se			1	197.801	ug/l	0.50	4,856.06	3.344E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,375,334.17	0.08	89.1	Pulse	0.50	3
1	Sc		130,150.61	1.28	90.4	Pulse	0.30	3
1	Ge		96,517.18	0.66	90.5	Pulse	0.30	3
1	In		876,928.23	0.39	90.8	Pulse	0.30	3
1	Tb		3,202,132.33	1.18	92.6	Pulse	0.50	3
1	Lu		2,018,661.29	0.69	94.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		145,209.80	0.71	90.1	Pulse	0.30	3
1	Te		10.00	20.00		Pulse	0.50	3
1	Li		512.23	3.34	84.6	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:04
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	104.683	ug/l	1.18	846,977.58	8.748E+00	Pulse	0.50	3
As			1	105.656	ug/l	1.30	87,484.60	9.036E-01	Pulse	1.00	3
Mo			1	104.748	ug/l	0.76	471,183.23	3.215E+00	Pulse	0.50	3
Pb			1	104.372	ug/l	0.79	2,449,086.08	9.966E-01	Pulse	1.00	3
Be			1	104.060	ug/l	1.52	5,210.50	3.963E-02	Pulse	2.00	3
Ag			1	54.241	ug/l	0.82	855,022.02	2.647E-01	Pulse	0.50	3
Ba			1	105.824	ug/l	2.26	157,515.02	1.786E-01	Pulse	0.50	3
Tl			1	105.766	ug/l	0.28	3,588,256.92	1.460E+00	Pulse	0.50	3
Sn			1	105.067	ug/l	1.63	392,106.18	4.447E-01	Pulse	0.30	3
Sr			1	104.866	ug/l	0.98	367,556.37	4.168E-01	Pulse	0.50	3
[Pb]			1	104.652	ug/l	0.63	1,160,647.37	4.723E-01	Pulse	0.50	3
Ca			1	10079.922	ug/l	0.28	189,205.32	1.439E+00	Pulse	0.50	3
Ti			1	101.372	ug/l	1.15	15,845.10	1.205E-01	Pulse	0.50	3
Na			1	10424.855	ug/l	0.84	10,931,287.33	8.313E+01	Analog	1.00	3
Mg			1	10503.482	ug/l	0.57	5,071,657.50	3.857E+01	Analog	1.00	3
K			1	10049.133	ug/l	0.71	3,519,134.17	2.676E+01	Pulse	1.00	3
V			1	103.898	ug/l	0.60	614,218.50	4.671E+00	Pulse	0.50	3
Mn			1	104.676	ug/l	0.88	376,174.81	3.885E+00	Pulse	0.50	3
Fe			1	10248.252	ug/l	1.11	64,145,702.67	6.625E+02	Analog	0.50	3
Co			1	105.322	ug/l	1.24	1,458,999.00	1.507E+01	Pulse	0.50	3
Ni			1	105.803	ug/l	1.43	412,954.92	4.265E+00	Pulse	0.50	3
Cu			1	105.572	ug/l	1.00	1,147,958.95	1.186E+01	Pulse	0.50	3
Zn			1	106.304	ug/l	1.12	161,939.00	1.105E+00	Pulse	1.00	3
Cd			1	105.756	ug/l	0.82	221,889.76	1.514E+00	Pulse	0.50	3
Al			1	10002.414	ug/l	0.61	1,467,729.29	1.116E+01	Pulse	1.00	3
Se			1	106.459	ug/l	0.59	5,354.64	3.654E-02	Pulse	3.00	3
Sb			1	104.252	ug/l	0.78	498,643.46	3.402E+00	Pulse	1.00	3
Se			1	107.097	ug/l	1.38	2,663.07	1.817E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,457,341.08	0.56	92.1	Pulse	0.50	3
1	Sc		131,504.81	0.83	91.3	Pulse	0.30	3
1	Ge		96,828.67	0.89	90.8	Pulse	0.30	3
1	In		881,828.27	0.36	91.3	Pulse	0.30	3
1	Tb		3,230,235.08	0.64	93.5	Pulse	0.50	3
1	Lu		2,018,994.29	0.54	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		146,556.68	0.41	90.9	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		598.90	12.96	98.9	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:08
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.032	ug/l	29.87	858.69	8.776E-03	Pulse	0.50	3
As			1	0.018	ug/l	90.95	29.00	2.969E-04	Pulse	1.00	3
Mo			1	0.158	ug/l	23.72	749.35	5.000E-03	Pulse	0.50	3
Pb			1	-0.012	ug/l	-89.05	2,202.81	8.689E-04	Pulse	1.00	3
Be			1	0.050	ug/l	83.34	2.67	2.019E-05	Pulse	2.00	3
Ag			1	0.011	ug/l	11.83	186.67	5.730E-05	Pulse	0.50	3
Ba			1	0.023	ug/l	38.24	44.00	4.921E-05	Pulse	0.50	3
Tl			1	0.027	ug/l	21.40	982.70	3.878E-04	Pulse	0.50	3
Sn			1	0.179	ug/l	19.48	745.57	8.314E-04	Pulse	0.30	3
Sr			1	0.025	ug/l	35.70	413.34	4.612E-04	Pulse	0.50	3
[Pb]			1	-0.009	ug/l	-74.10	1,004.70	3.962E-04	Pulse	0.50	3
Ca			1	11.527	ug/l	26.31	312.00	2.358E-03	Pulse	0.50	3
Ti			1	0.064	ug/l	89.57	11.33	8.575E-05	Pulse	0.50	3
Na			1	2.810	ug/l	24.76	11,107.76	8.390E-02	Pulse	1.00	3
Mg			1	2.223	ug/l	20.51	1,260.71	9.526E-03	Pulse	1.00	3
K			1	2.377	ug/l	27.28	18,045.90	1.363E-01	Pulse	1.00	3
V			1	0.006	ug/l	79.23	254.00	1.919E-03	Pulse	0.50	3
Mn			1	0.100	ug/l	16.41	497.34	5.085E-03	Pulse	0.50	3
Fe			1	-0.272	ug/l	-144.76	27,420.09	2.803E-01	Pulse	0.50	3
Co			1	0.012	ug/l	39.94	230.00	2.354E-03	Pulse	0.50	3
Ni			1	0.022	ug/l	27.51	187.33	1.915E-03	Pulse	0.50	3
Cu			1	-1.774	ug/l	-1.05	7,118.00	7.273E-02	Pulse	0.50	3
Zn			1	0.016	ug/l	335.92	2,121.45	1.416E-02	Pulse	1.00	3
Cd			1	0.011	ug/l	114.49	33.33	2.228E-04	Pulse	0.50	3
Al			1	6.396	ug/l	7.17	1,151.04	8.693E-03	Pulse	1.00	3
Se			1	0.069	ug/l	88.86	6.56	4.374E-05	Pulse	3.00	3
Sb			1	0.038	ug/l	3.84	203.67	1.360E-03	Pulse	1.00	3
Se			1	-0.200	ug/l	-62.63	16.22	1.084E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,536,009.58	0.81	95.1	Pulse	0.50	3
1	Sc		132,423.56	0.52	92.0	Pulse	0.30	3
1	Ge		97,882.76	1.00	91.8	Pulse	0.30	3
1	In		895,825.21	0.90	92.8	Pulse	0.30	3
1	Tb		3,259,262.67	1.01	94.3	Pulse	0.50	3
1	Lu		2,012,723.04	1.16	94.1	Pulse	0.50	3
1	Ge		149,792.76	0.46	92.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		650.01	10.01	107.3	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:12
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.039	ug/l	4.59	9,233.55	9.283E-02	Pulse	0.50	3
As			1	0.953	ug/l	6.37	824.69	8.292E-03	Pulse	1.00	3
Mo			1	1.025	ug/l	2.60	4,742.62	3.160E-02	Pulse	0.50	3
Pb			1	0.929	ug/l	1.69	25,306.66	9.843E-03	Pulse	1.00	3
Be			1	1.012	ug/l	7.12	52.33	3.866E-04	Pulse	2.00	3
Ag			1	1.052	ug/l	3.50	16,883.69	5.141E-03	Pulse	0.50	3
Ba			1	1.000	ug/l	1.34	1,550.74	1.697E-03	Pulse	0.50	3
Tl			1	0.988	ug/l	1.24	35,114.55	1.366E-02	Pulse	0.50	3
Sn			1	1.117	ug/l	4.18	4,388.33	4.801E-03	Pulse	0.30	3
Sr			1	0.977	ug/l	2.92	3,876.42	4.241E-03	Pulse	0.50	3
[Pb]			1	0.933	ug/l	2.32	11,947.54	4.646E-03	Pulse	0.50	3
Ca			1	114.266	ug/l	4.77	2,302.82	1.701E-02	Pulse	0.50	3
Ti			1	1.000	ug/l	14.73	162.00	1.198E-03	Pulse	0.50	3
Na			1	101.411	ug/l	1.66	117,712.34	8.696E-01	Pulse	1.00	3
Mg			1	102.450	ug/l	2.08	51,102.83	3.775E-01	Pulse	1.00	3
K			1	98.339	ug/l	2.00	52,874.68	3.906E-01	Pulse	1.00	3
V			1	1.004	ug/l	3.25	6,329.05	4.676E-02	Pulse	0.50	3
Mn			1	1.073	ug/l	2.50	4,096.45	4.118E-02	Pulse	0.50	3
Fe			1	102.267	ug/l	2.10	686,937.29	6.906E+00	Pulse	0.50	3
Co			1	1.017	ug/l	0.69	14,537.48	1.461E-01	Pulse	0.50	3
Ni			1	1.082	ug/l	5.79	4,443.86	4.467E-02	Pulse	0.50	3
Cu			1	-0.645	ug/l	-2.48	19,566.58	1.967E-01	Pulse	0.50	3
Zn			1	1.188	ug/l	9.42	3,929.41	2.619E-02	Pulse	1.00	3
Cd			1	1.015	ug/l	3.53	2,192.14	1.461E-02	Pulse	0.50	3
Al			1	100.089	ug/l	2.96	15,325.54	1.132E-01	Pulse	1.00	3
Se			1	1.086	ug/l	14.77	58.89	3.926E-04	Pulse	3.00	3
Sb			1	1.002	ug/l	2.93	4,923.67	3.282E-02	Pulse	1.00	3
Se			1	0.890	ug/l	29.23	43.78	2.918E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,571,229.33	0.93	96.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		135,381.31	0.94	94.0	Pulse	0.30	3
1	Ge		99,478.91	0.57	93.3	Pulse	0.30	3
1	In		913,885.69	0.35	94.6	Pulse	0.30	3
1	Tb		3,284,135.25	0.52	95.0	Pulse	0.50	3
1	Lu		2,047,105.29	0.78	95.7	Pulse	0.50	3
1	Ge		150,040.28	1.14	93.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		605.57	6.79	100.0	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:16
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.082	ug/l	0.79	17,036.80	1.799E-01	Pulse	0.50	3
As			1	0.102	ug/l	8.43	96.67	1.021E-03	Pulse	1.00	3
Mo			1	2054.295	ug/l	1.00	8,764,137.00	6.305E+01	Analog	0.50	3
Pb			1	0.082	ug/l	12.79	3,825.77	1.762E-03	Pulse	1.00	3
Be			1	0.017	ug/l	59.44	1.00	7.744E-06	Pulse	2.00	3
Ag			1	0.323	ug/l	5.14	4,813.98	1.584E-03	Pulse	0.50	3
Ba			1	0.381	ug/l	3.27	534.01	6.520E-04	Pulse	0.50	3
Tl			1	0.013	ug/l	13.22	408.01	1.878E-04	Pulse	0.50	3
Sn			1	0.154	ug/l	9.94	595.57	7.271E-04	Pulse	0.30	3
Sr			1	1.180	ug/l	1.21	4,132.47	5.045E-03	Pulse	0.50	3
[Pb]			1	0.090	ug/l	8.44	1,838.11	8.465E-04	Pulse	0.50	3
Ca			1	93341.746	ug/l	0.35	1,723,384.25	1.332E+01	Pulse	0.50	3
Ti			1	1977.230	ug/l	0.63	304,120.36	2.350E+00	Pulse	0.50	3
Na			1	99382.324	ug/l	0.61	102,487,968.00	7.920E+02	Analog	1.00	3
Mg			1	97876.488	ug/l	0.73	46,505,182.67	3.594E+02	Analog	1.00	3
K			1	99843.075	ug/l	0.61	34,258,677.33	2.647E+02	Analog	1.00	3
V			1	0.039	ug/l	22.06	438.01	3.384E-03	Pulse	0.50	3
Mn			1	1.169	ug/l	3.56	4,235.14	4.473E-02	Pulse	0.50	3
Fe			1	98066.709	ug/l	1.30	600,019,818.67	6.337E+03	Analog	0.50	3
Co			1	0.123	ug/l	2.42	1,736.08	1.833E-02	Pulse	0.50	3
Ni			1	0.210	ug/l	11.82	900.69	9.513E-03	Pulse	0.50	3
Cu			1	-1.518	ug/l	-0.75	9,550.39	1.009E-01	Pulse	0.50	3
Zn			1	2.180	ug/l	1.40	5,055.67	3.637E-02	Pulse	1.00	3
Cd			1	0.440	ug/l	7.88	885.36	6.369E-03	Pulse	0.50	3
Al			1	93390.265	ug/l	0.98	13,483,498.00	1.042E+02	Analog	1.00	3
Se			1	0.321	ug/l	39.06	18.11	1.302E-04	Pulse	3.00	3
Sb			1	0.075	ug/l	12.23	357.67	2.573E-03	Pulse	1.00	3
Se			1	0.097	ug/l	62.14	22.00	1.583E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,170,959.17	1.07	81.4	Pulse	0.50	3
1	Sc		129,410.92	0.65	89.9	Pulse	0.30	3
1	Ge		94,688.12	0.21	88.8	Pulse	0.30	3
1	In		819,128.02	0.36	84.8	Pulse	0.30	3
1	Tb		3,038,118.92	0.69	87.9	Pulse	0.50	3
1	Lu		1,930,328.09	0.36	90.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		139,007.31	0.23	86.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		527.79	10.07	87.2	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:19
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.110	ug/l	2.26	167,730.36	1.769E+00	Pulse	0.50	3
As			1	19.237	ug/l	2.72	15,612.04	1.646E-01	Pulse	1.00	3
Mo			1	2032.868	ug/l	1.11	8,701,401.00	6.239E+01	Analog	0.50	3
Pb			1	0.030	ug/l	12.19	2,786.57	1.269E-03	Pulse	1.00	3
Be			1	0.007	ug/l	143.17	0.50	3.905E-06	Pulse	2.00	3
Ag			1	18.984	ug/l	0.27	283,956.61	9.265E-02	Pulse	0.50	3
Ba			1	0.359	ug/l	12.64	504.68	6.159E-04	Pulse	0.50	3
Tl			1	0.007	ug/l	7.62	248.67	1.133E-04	Pulse	0.50	3
Sn			1	0.082	ug/l	8.56	346.67	4.234E-04	Pulse	0.30	3
Sr			1	1.102	ug/l	1.35	3,879.08	4.737E-03	Pulse	0.50	3
[Pb]			1	0.041	ug/l	15.87	1,372.06	6.248E-04	Pulse	0.50	3
Ca			1	91686.209	ug/l	0.77	1,679,088.21	1.308E+01	Pulse	0.50	3
Ti			1	1946.107	ug/l	0.45	296,903.17	2.313E+00	Pulse	0.50	3
Na			1	97968.235	ug/l	0.37	100,207,018.67	7.807E+02	Analog	1.00	3
Mg			1	95946.546	ug/l	0.84	45,218,813.33	3.523E+02	Analog	1.00	3
K			1	98103.076	ug/l	0.47	33,387,648.00	2.601E+02	Analog	1.00	3
V			1	0.026	ug/l	29.74	359.34	2.801E-03	Pulse	0.50	3
Mn			1	20.091	ug/l	0.97	70,819.56	7.468E-01	Pulse	0.50	3
Fe			1	96405.167	ug/l	1.60	590,752,106.67	6.230E+03	Analog	0.50	3
Co			1	19.080	ug/l	1.83	258,935.41	2.730E+00	Pulse	0.50	3
Ni			1	18.563	ug/l	1.60	71,039.53	7.491E-01	Pulse	0.50	3
Cu			1	16.715	ug/l	1.99	199,358.79	2.102E+00	Pulse	0.50	3
Zn			1	19.136	ug/l	1.69	29,340.25	2.104E-01	Pulse	1.00	3
Cd			1	19.149	ug/l	1.19	38,240.04	2.742E-01	Pulse	0.50	3
Al			1	91169.540	ug/l	0.39	13,056,370.00	1.017E+02	Analog	1.00	3
Se			1	0.279	ug/l	10.47	16.11	1.155E-04	Pulse	3.00	3
Sb			1	0.065	ug/l	4.76	313.00	2.245E-03	Pulse	1.00	3
Se			1	0.179	ug/l	70.20	24.00	1.721E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,195,869.33	0.61	82.3	Pulse	0.50	3
1	Sc		128,358.82	0.87	89.1	Pulse	0.30	3
1	Ge		94,838.80	1.27	88.9	Pulse	0.30	3
1	In		818,983.49	0.61	84.8	Pulse	0.30	3
1	Tb		3,064,881.83	0.74	88.7	Pulse	0.50	3
1	Lu		1,921,198.83	0.13	89.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		139,463.15	0.31	86.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		558.90	8.44	92.3	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:23
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.654	ug/l	1.85	383,910.01	3.902E+00	Pulse	0.50	3
As			1	46.313	ug/l	1.79	38,977.17	3.962E-01	Pulse	1.00	3
Mo			1	47.751	ug/l	1.36	217,978.44	1.466E+00	Pulse	0.50	3
Pb			1	45.699	ug/l	1.05	1,113,571.08	4.369E-01	Pulse	1.00	3
Be			1	47.706	ug/l	2.22	2,390.48	1.817E-02	Pulse	2.00	3
Ag			1	49.638	ug/l	0.21	796,731.38	2.422E-01	Pulse	0.50	3
Ba			1	46.162	ug/l	1.52	69,637.80	7.793E-02	Pulse	0.50	3
Tl			1	46.753	ug/l	0.10	1,645,113.46	6.455E-01	Pulse	0.50	3
Sn			1	48.222	ug/l	1.37	182,415.87	2.041E-01	Pulse	0.30	3
Sr			1	46.891	ug/l	1.61	166,734.63	1.866E-01	Pulse	0.50	3
[Pb]			1	45.655	ug/l	0.27	525,763.61	2.063E-01	Pulse	0.50	3
Ca			1	4563.847	ug/l	1.04	85,771.41	6.518E-01	Pulse	0.50	3
Ti			1	47.683	ug/l	3.65	7,459.45	5.668E-02	Pulse	0.50	3
Na			1	4679.183	ug/l	0.90	4,914,318.00	3.735E+01	Analog	1.00	3
Mg			1	4614.787	ug/l	1.26	2,229,796.00	1.695E+01	Pulse	1.00	3
K			1	4603.628	ug/l	1.01	1,622,514.88	1.233E+01	Pulse	1.00	3
V			1	46.406	ug/l	0.86	274,639.78	2.087E+00	Pulse	0.50	3
Mn			1	46.144	ug/l	0.97	168,582.65	1.713E+00	Pulse	0.50	3
Fe			1	4711.217	ug/l	1.08	29,980,819.33	3.047E+02	Analog	0.50	3
Co			1	47.503	ug/l	2.06	668,737.46	6.797E+00	Pulse	0.50	3
Ni			1	47.962	ug/l	0.99	190,281.94	1.934E+00	Pulse	0.50	3
Cu			1	46.677	ug/l	1.60	530,442.74	5.391E+00	Pulse	0.50	3
Zn			1	46.696	ug/l	0.92	73,350.31	4.932E-01	Pulse	1.00	3
Cd			1	47.549	ug/l	0.82	101,241.55	6.808E-01	Pulse	0.50	3
Al			1	4502.429	ug/l	2.03	661,196.63	5.025E+00	Pulse	1.00	3
Se			1	45.472	ug/l	0.31	2,322.58	1.562E-02	Pulse	3.00	3
Sb			1	46.073	ug/l	1.17	223,628.08	1.504E+00	Pulse	1.00	3
Se			1	45.164	ug/l	0.31	1,151.81	7.745E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,548,609.33	0.58	95.6	Pulse	0.50	3
1	Sc		131,589.81	0.31	91.4	Pulse	0.30	3
1	Ge		98,391.17	0.25	92.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		893,584.96	0.57	92.5	Pulse	0.30	3
1	Tb		3,289,029.50	0.29	95.2	Pulse	0.50	3
1	Lu		2,028,279.96	0.42	94.8	Pulse	0.50	3
1	Ge		148,715.44	0.55	92.3	Pulse	0.30	3
1	Te		5.33	94.37		Pulse	0.50	3
1	Li		583.34	10.58	96.3	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:27
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.982	ug/l	1.81	804,304.87	8.104E+00	Pulse	0.50	3
As			1	96.511	ug/l	1.91	81,910.84	8.254E-01	Pulse	1.00	3
Mo			1	98.277	ug/l	0.43	450,522.99	3.016E+00	Pulse	0.50	3
Pb			1	96.131	ug/l	0.21	2,298,319.33	9.180E-01	Pulse	1.00	3
Be			1	99.132	ug/l	0.88	4,996.62	3.775E-02	Pulse	2.00	3
Ag			1	102.475	ug/l	1.27	1,647,299.00	5.001E-01	Pulse	0.50	3
Ba			1	97.088	ug/l	0.96	145,957.24	1.639E-01	Pulse	0.50	3
Tl			1	98.440	ug/l	0.70	3,402,575.08	1.359E+00	Pulse	0.50	3
Sn			1	96.306	ug/l	1.29	363,000.70	4.076E-01	Pulse	0.30	3
Sr			1	95.194	ug/l	0.48	337,016.15	3.784E-01	Pulse	0.50	3
[Pb]			1	95.946	ug/l	1.64	1,084,184.08	4.331E-01	Pulse	0.50	3
Ca			1	9572.602	ug/l	0.66	180,856.54	1.366E+00	Pulse	0.50	3
Ti			1	96.363	ug/l	2.32	15,160.57	1.145E-01	Pulse	0.50	3
Na			1	9806.541	ug/l	0.54	10,350,848.00	7.820E+01	Analog	1.00	3
Mg			1	9731.290	ug/l	0.83	4,729,417.17	3.573E+01	Analog	1.00	3
K			1	9695.837	ug/l	0.46	3,418,287.42	2.583E+01	Pulse	1.00	3
V			1	97.965	ug/l	0.36	582,943.19	4.404E+00	Pulse	0.50	3
Mn			1	95.665	ug/l	1.58	352,389.55	3.551E+00	Pulse	0.50	3
Fe			1	9786.609	ug/l	1.70	62,786,940.00	6.327E+02	Analog	0.50	3
Co			1	98.037	ug/l	1.60	1,392,043.58	1.403E+01	Pulse	0.50	3
Ni			1	98.072	ug/l	0.84	392,368.92	3.953E+00	Pulse	0.50	3
Cu			1	97.585	ug/l	1.70	1,089,620.63	1.098E+01	Pulse	0.50	3
Zn			1	97.288	ug/l	1.18	151,204.05	1.012E+00	Pulse	1.00	3
Cd			1	98.006	ug/l	1.56	209,547.78	1.403E+00	Pulse	0.50	3
Al			1	9245.334	ug/l	1.04	1,365,468.46	1.032E+01	Pulse	1.00	3
Se			1	96.512	ug/l	1.94	4,947.31	3.313E-02	Pulse	3.00	3
Sb			1	96.831	ug/l	0.82	471,985.43	3.160E+00	Pulse	1.00	3
Se			1	96.025	ug/l	2.36	2,435.38	1.631E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,503,591.17	0.38	93.9	Pulse	0.50	3
1	Sc		132,362.18	0.22	91.9	Pulse	0.30	3
1	Ge		99,254.37	1.04	93.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		890,621.87	0.48	92.2	Pulse	0.30	3
1	Tb		3,294,161.42	0.48	95.3	Pulse	0.50	3
1	Lu		2,030,955.79	0.55	94.9	Pulse	0.50	3
1	Ge		149,361.44	0.85	92.7	Pulse	0.30	3
1	Te		4.67	107.85		Pulse	0.50	3
1	Li		615.57	3.99	101.7	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:31
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.015	ug/l	52.14	750.02	7.368E-03	Pulse	0.50	3
As			1	0.010	ug/l	118.79	24.00	2.354E-04	Pulse	1.00	3
Mo			1	0.222	ug/l	17.04	1,066.03	6.970E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	43.56	2,900.59	1.132E-03	Pulse	1.00	3
Be			1	0.032	ug/l	62.99	1.83	1.353E-05	Pulse	2.00	3
Ag			1	0.022	ug/l	14.23	374.67	1.140E-04	Pulse	0.50	3
Ba			1	0.021	ug/l	58.75	42.00	4.584E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	41.09	546.68	2.138E-04	Pulse	0.50	3
Sn			1	0.113	ug/l	16.95	507.79	5.533E-04	Pulse	0.30	3
Sr			1	0.038	ug/l	12.14	469.34	5.117E-04	Pulse	0.50	3
[Pb]			1	0.014	ug/l	63.25	1,280.05	4.998E-04	Pulse	0.50	3
Ca			1	10.167	ug/l	8.46	294.00	2.163E-03	Pulse	0.50	3
Ti			1	0.087	ug/l	64.68	15.33	1.131E-04	Pulse	0.50	3
Na			1	8.893	ug/l	7.41	17,983.05	1.324E-01	Pulse	1.00	3
Mg			1	4.519	ug/l	11.94	2,438.49	1.796E-02	Pulse	1.00	3
K			1	4.506	ug/l	34.85	19,281.72	1.419E-01	Pulse	1.00	3
V			1	0.008	ug/l	40.54	267.33	1.968E-03	Pulse	0.50	3
Mn			1	0.076	ug/l	19.59	428.01	4.202E-03	Pulse	0.50	3
Fe			1	3.275	ug/l	12.71	51,869.78	5.095E-01	Pulse	0.50	3
Co			1	0.013	ug/l	58.77	257.34	2.527E-03	Pulse	0.50	3
Ni			1	0.019	ug/l	46.00	184.00	1.806E-03	Pulse	0.50	3
Cu			1	-0.300	ug/l	-6.44	23,874.09	2.345E-01	Pulse	0.50	3
Zn			1	0.825	ug/l	8.44	3,435.65	2.247E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	89.16	33.33	2.183E-04	Pulse	0.50	3
Al			1	3.852	ug/l	14.42	795.35	5.856E-03	Pulse	1.00	3
Se			1	0.003	ug/l	779.86	3.22	2.112E-05	Pulse	3.00	3
Sb			1	0.032	ug/l	12.38	177.67	1.162E-03	Pulse	1.00	3
Se			1	0.011	ug/l	483.96	22.00	1.439E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,562,406.58	0.85	96.1	Pulse	0.50	3
1	Sc		135,878.01	0.78	94.4	Pulse	0.30	3
1	Ge		101,803.41	0.71	95.5	Pulse	0.30	3
1	In		917,305.87	0.45	95.0	Pulse	0.30	3
1	Tb		3,288,018.25	0.30	95.1	Pulse	0.50	3
1	Lu		2,021,747.96	0.21	94.5	Pulse	0.50	3
1	Ge		152,867.77	0.64	94.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		610.01	2.73	100.7	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:35
Sample Name CRIA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.837	ug/l	0.68	42,594.41	4.100E-01	Pulse	0.50	3
As			1	4.778	ug/l	2.97	4,260.15	4.101E-02	Pulse	1.00	3
Mo			1	4.899	ug/l	0.40	23,544.10	1.505E-01	Pulse	0.50	3
Pb			1	4.770	ug/l	0.15	121,718.25	4.648E-02	Pulse	1.00	3
Be			1	4.713	ug/l	0.82	252.17	1.796E-03	Pulse	2.00	3
Ag			1	5.201	ug/l	0.49	85,590.61	2.539E-02	Pulse	0.50	3
Ba			1	4.673	ug/l	1.64	7,457.56	7.898E-03	Pulse	0.50	3
Tl			1	4.749	ug/l	1.35	171,729.63	6.558E-02	Pulse	0.50	3
Sn			1	4.806	ug/l	1.51	19,276.83	2.041E-02	Pulse	0.30	3
Sr			1	4.779	ug/l	1.51	18,266.18	1.934E-02	Pulse	0.50	3
[Pb]			1	4.754	ug/l	1.35	57,279.40	2.187E-02	Pulse	0.50	3
Ca			1	478.811	ug/l	1.61	9,691.09	6.902E-02	Pulse	0.50	3
Ti			1	4.616	ug/l	12.86	771.35	5.495E-03	Pulse	0.50	3
Na			1	489.673	ug/l	1.02	556,479.19	3.963E+00	Pulse	1.00	3
Mg			1	484.745	ug/l	1.13	250,090.16	1.781E+00	Pulse	1.00	3
K			1	484.042	ug/l	0.90	198,363.71	1.413E+00	Pulse	1.00	3
V			1	4.715	ug/l	1.93	29,980.29	2.135E-01	Pulse	0.50	3
Mn			1	4.911	ug/l	1.11	19,067.35	1.836E-01	Pulse	0.50	3
Fe			1	498.696	ug/l	0.55	3,378,208.75	3.252E+01	Pulse	0.50	3
Co			1	4.922	ug/l	0.56	73,212.16	7.049E-01	Pulse	0.50	3
Ni			1	5.030	ug/l	0.97	21,165.57	2.037E-01	Pulse	0.50	3
Cu			1	5.282	ug/l	0.66	88,011.16	8.473E-01	Pulse	0.50	3
Zn			1	5.782	ug/l	1.39	11,473.42	7.334E-02	Pulse	1.00	3
Cd			1	4.866	ug/l	0.36	10,909.24	6.973E-02	Pulse	0.50	3
Al			1	471.615	ug/l	2.56	74,093.18	5.277E-01	Pulse	1.00	3
Se			1	4.736	ug/l	3.44	257.23	1.645E-03	Pulse	3.00	3
Sb			1	4.713	ug/l	0.79	24,078.73	1.539E-01	Pulse	1.00	3
Se			1	4.668	ug/l	4.77	145.22	9.278E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,618,793.50	0.71	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		140,411.24	0.44	97.5	Pulse	0.30	3
1	Ge		103,874.10	1.33	97.4	Pulse	0.30	3
1	In		944,324.48	0.93	97.8	Pulse	0.30	3
1	Tb		3,371,496.42	0.86	97.5	Pulse	0.50	3
1	Lu		2,084,338.75	0.80	97.4	Pulse	0.50	3
1	Ge		156,447.49	1.73	97.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		592.23	12.54	97.8	Pulse	0.30	3

Quantitation Report

File Name	021_MB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:38
Sample Name	MP40805-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.015	ug/l	86.72	720.68	6.727E-03	Pulse	0.50	3
As			1	0.013	ug/l	145.51	21.67	2.024E-04	Pulse	1.00	3
Mo			1	0.141	ug/l	21.68	376.01	2.306E-03	Pulse	0.50	3
Pb			1	-0.044	ug/l	-10.82	2,037.79	7.690E-04	Pulse	1.00	3
Be			1	0.018	ug/l	115.82	0.67	4.605E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	24.51	161.33	4.746E-05	Pulse	0.50	3
Ba			1	0.046	ug/l	20.60	46.67	4.815E-05	Pulse	0.50	3
Tl			1	0.007	ug/l	10.25	160.67	6.065E-05	Pulse	0.50	3
Sn			1	0.053	ug/l	31.00	183.33	1.890E-04	Pulse	0.30	3
Sr			1	0.061	ug/l	31.42	466.01	4.806E-04	Pulse	0.50	3
[Pb]			1	-0.029	ug/l	-18.13	992.70	3.746E-04	Pulse	0.50	3
Ca			1	13.452	ug/l	10.18	242.00	1.673E-03	Pulse	0.50	3
Ti			1	0.124	ug/l	56.44	12.00	8.303E-05	Pulse	0.50	3
Na			1	7.902	ug/l	4.37	13,454.51	9.299E-02	Pulse	1.00	3
Mg			1	4.679	ug/l	8.31	1,440.39	9.954E-03	Pulse	1.00	3
K			1	-0.222	ug/l	-284.58	18,764.90	1.297E-01	Pulse	1.00	3
V			1	-0.017	ug/l	-34.67	179.33	1.240E-03	Pulse	0.50	3
Mn			1	0.130	ug/l	9.12	404.68	3.777E-03	Pulse	0.50	3
Fe			1	3.432	ug/l	4.26	43,791.13	4.088E-01	Pulse	0.50	3
Co			1	-0.002	ug/l	-48.14	57.33	5.348E-04	Pulse	0.50	3
Ni			1	0.102	ug/l	24.43	332.67	3.108E-03	Pulse	0.50	3
Cu			1	-0.639	ug/l	-15.45	24,900.72	2.324E-01	Pulse	0.50	3
Zn			1	0.533	ug/l	10.55	2,729.86	1.673E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-382.36	10.67	6.536E-05	Pulse	0.50	3
Al			1	3.369	ug/l	12.51	497.34	3.437E-03	Pulse	1.00	3
Se			1	0.050	ug/l	131.43	4.67	2.858E-05	Pulse	3.00	3
Sb			1	0.012	ug/l	14.95	52.00	3.188E-04	Pulse	1.00	3
Se			1	-0.214	ug/l	-54.43	20.22	1.239E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,650,112.17	0.69	99.4	Pulse	0.50	3
1	Sc		144,691.13	0.49	100.5	Pulse	0.30	3
1	Ge		107,130.83	0.79	100.5	Pulse	0.30	3
1	In		969,534.79	0.53	100.4	Pulse	0.30	3
1	Tb		3,395,407.17	0.84	98.2	Pulse	0.50	3
1	Lu		2,098,658.17	0.30	98.1	Pulse	0.50	3
1	Ge		163,138.22	0.56	101.2	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		650.01	9.90	107.3	Pulse	0.30	3

Quantitation Report

File Name	022_BSP.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:42
Sample Name	MP40805-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	194.971	ug/l	1.13	828,281.68	8.147E+00	Pulse	0.50	3
As			1	204.270	ug/l	0.72	88,808.67	8.735E-01	Pulse	1.00	3
Mo			1	192.772	ug/l	1.85	456,055.25	2.958E+00	Pulse	0.50	3
Pb			1	195.084	ug/l	0.58	2,322,031.92	9.315E-01	Pulse	1.00	3
Be			1	193.322	ug/l	0.68	5,094.81	3.681E-02	Pulse	2.00	3
Ag			1	100.562	ug/l	1.08	818,660.52	2.454E-01	Pulse	0.50	3
Ba			1	192.724	ug/l	0.66	149,837.18	1.627E-01	Pulse	0.50	3
Tl			1	191.280	ug/l	0.23	3,291,689.92	1.320E+00	Pulse	0.50	3
Sn			1	200.757	ug/l	1.53	391,309.01	4.248E-01	Pulse	0.30	3
Sr			1	189.455	ug/l	0.85	346,858.66	3.766E-01	Pulse	0.50	3
[Pb]			1	188.029	ug/l	0.86	1,057,836.67	4.243E-01	Pulse	0.50	3
Ca			1	18423.602	ug/l	0.60	181,995.38	1.315E+00	Pulse	0.50	3
Ti			1	191.881	ug/l	2.26	15,783.05	1.140E-01	Pulse	0.50	3
Na			1	18839.779	ug/l	0.57	10,397,188.33	7.512E+01	Analog	1.00	3
Mg			1	18648.309	ug/l	0.70	4,738,500.33	3.424E+01	Analog	1.00	3
K			1	18636.583	ug/l	0.24	3,436,068.58	2.482E+01	Pulse	1.00	3
V			1	193.943	ug/l	0.57	603,387.56	4.360E+00	Pulse	0.50	3
Mn			1	193.264	ug/l	1.07	364,663.05	3.587E+00	Pulse	0.50	3
Fe			1	18873.306	ug/l	0.85	62,025,712.00	6.100E+02	Analog	0.50	3
Co			1	198.380	ug/l	1.23	1,442,853.79	1.419E+01	Pulse	0.50	3
Ni			1	195.203	ug/l	0.87	400,028.54	3.934E+00	Pulse	0.50	3
Cu			1	198.491	ug/l	1.39	1,134,800.87	1.116E+01	Pulse	0.50	3
Zn			1	196.056	ug/l	1.58	157,256.73	1.020E+00	Pulse	1.00	3
Cd			1	193.313	ug/l	2.36	213,309.38	1.384E+00	Pulse	0.50	3
Al			1	17978.649	ug/l	1.02	1,388,274.83	1.003E+01	Pulse	1.00	3
Se			1	196.277	ug/l	0.66	5,193.37	3.368E-02	Pulse	3.00	3
Sb			1	197.726	ug/l	1.71	497,400.20	3.226E+00	Pulse	1.00	3
Se			1	196.830	ug/l	1.28	2,576.28	1.671E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,492,903.08	0.47	93.5	Pulse	0.50	3
1	Sc		138,411.50	1.00	96.1	Pulse	0.30	3
1	Ge		101,680.20	1.16	95.4	Pulse	0.30	3
1	In		921,204.37	1.37	95.4	Pulse	0.30	3
1	Tb		3,336,595.08	1.17	96.5	Pulse	0.50	3
1	Lu		2,065,278.13	0.84	96.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		154,198.49	2.08	95.7	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		623.35	14.48	102.9	Pulse	0.30	3

Quantitation Report

File Name 023SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:46
Sample Name FA96132-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.155	ug/l	26.67	1,286.71	1.258E-02	Pulse	0.50	3
As			1	0.155	ug/l	22.34	83.00	8.112E-04	Pulse	1.00	3
Mo			1	0.655	ug/l	6.73	1,578.08	1.019E-02	Pulse	0.50	3
Pb			1	0.543	ug/l	4.23	9,079.75	3.568E-03	Pulse	1.00	3
Be			1	0.170	ug/l	15.88	4.67	3.361E-05	Pulse	2.00	3
Ag			1	0.037	ug/l	13.48	313.33	9.499E-05	Pulse	0.50	3
Ba			1	1.552	ug/l	4.74	1,228.05	1.320E-03	Pulse	0.50	3
Tl			1	0.095	ug/l	21.69	1,694.10	6.659E-04	Pulse	0.50	3
Sn			1	0.334	ug/l	25.72	728.91	7.823E-04	Pulse	0.30	3
Sr			1	33.623	ug/l	1.34	62,476.72	6.712E-02	Pulse	0.50	3
[Pb]			1	0.545	ug/l	4.22	4,243.88	1.668E-03	Pulse	0.50	3
Ca			1	6997.675	ug/l	1.35	69,339.05	4.999E-01	Pulse	0.50	3
Ti			1	0.398	ug/l	35.07	34.00	2.457E-04	Pulse	0.50	3
Na			1	9547.811	ug/l	0.98	5,284,704.00	3.810E+01	Analog	1.00	3
Mg			1	5651.061	ug/l	1.37	1,439,133.63	1.038E+01	Pulse	1.00	3
K			1	1542.201	ug/l	0.36	301,491.56	2.173E+00	Pulse	1.00	3
V			1	0.332	ug/l	3.26	1,262.04	9.097E-03	Pulse	0.50	3
Mn			1	5.447	ug/l	0.95	10,472.17	1.024E-01	Pulse	0.50	3
Fe			1	5.986	ug/l	30.56	50,257.50	4.913E-01	Pulse	0.50	3
Co			1	0.087	ug/l	21.97	708.01	6.919E-03	Pulse	0.50	3
Ni			1	1.852	ug/l	1.99	3,922.41	3.836E-02	Pulse	0.50	3
Cu			1	2.730	ug/l	0.55	42,669.66	4.173E-01	Pulse	0.50	3
Zn			1	51.646	ug/l	2.13	43,204.16	2.790E-01	Pulse	1.00	3
Cd			1	0.095	ug/l	17.13	116.67	7.525E-04	Pulse	0.50	3
Al			1	8.090	ug/l	29.03	843.35	6.071E-03	Pulse	1.00	3
Se			1	0.130	ug/l	50.88	6.56	4.225E-05	Pulse	3.00	3
Sb			1	0.174	ug/l	5.70	459.68	2.968E-03	Pulse	1.00	3
Se			1	-0.018	ug/l	-1673.82	21.78	1.405E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,544,762.92	0.34	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		138,712.64	1.03	96.3	Pulse	0.30	3
1	Ge		102,248.75	0.63	95.9	Pulse	0.30	3
1	In		930,815.93	0.73	96.4	Pulse	0.30	3
1	Tb		3,298,745.42	0.94	95.4	Pulse	0.50	3
1	Lu		2,043,674.67	0.22	95.5	Pulse	0.50	3
1	Ge		154,871.23	1.08	96.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		624.46	11.60	103.1	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 9:50
Sample Name	MP40805-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.157	ug/l	13.15	1,308.72	1.267E-02	Pulse	0.50	3
As			1	0.117	ug/l	8.57	66.67	6.455E-04	Pulse	1.00	3
Mo			1	0.419	ug/l	10.82	1,024.03	6.583E-03	Pulse	0.50	3
Pb			1	0.486	ug/l	1.04	8,414.74	3.295E-03	Pulse	1.00	3
Be			1	0.083	ug/l	35.32	2.33	1.689E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	13.30	140.00	4.225E-05	Pulse	0.50	3
Ba			1	1.409	ug/l	7.76	1,119.37	1.199E-03	Pulse	0.50	3
Tl			1	0.056	ug/l	5.27	1,025.37	4.016E-04	Pulse	0.50	3
Sn			1	0.190	ug/l	12.22	446.68	4.781E-04	Pulse	0.30	3
Sr			1	31.618	ug/l	0.92	58,952.17	6.314E-02	Pulse	0.50	3
[Pb]			1	0.477	ug/l	0.84	3,869.12	1.515E-03	Pulse	0.50	3
Ca			1	6788.312	ug/l	0.55	67,029.68	4.849E-01	Pulse	0.50	3
Ti			1	0.447	ug/l	58.46	38.00	2.746E-04	Pulse	0.50	3
Na			1	9104.731	ug/l	0.71	5,022,379.33	3.634E+01	Analog	1.00	3
Mg			1	5391.674	ug/l	1.61	1,368,297.71	9.900E+00	Pulse	1.00	3
K			1	1477.612	ug/l	1.36	288,590.76	2.088E+00	Pulse	1.00	3
V			1	0.316	ug/l	5.88	1,208.04	8.741E-03	Pulse	0.50	3
Mn			1	5.206	ug/l	2.61	10,117.32	9.794E-02	Pulse	0.50	3
Fe			1	2.556	ug/l	21.11	39,298.30	3.805E-01	Pulse	0.50	3
Co			1	0.063	ug/l	10.49	539.34	5.221E-03	Pulse	0.50	3
Ni			1	1.754	ug/l	4.63	3,759.71	3.640E-02	Pulse	0.50	3
Cu			1	2.601	ug/l	0.82	42,376.97	4.102E-01	Pulse	0.50	3
Zn			1	48.037	ug/l	1.50	40,502.69	2.605E-01	Pulse	1.00	3
Cd			1	0.048	ug/l	20.85	64.67	4.161E-04	Pulse	0.50	3
Al			1	4.842	ug/l	6.69	588.68	4.259E-03	Pulse	1.00	3
Se			1	0.113	ug/l	42.89	6.11	3.933E-05	Pulse	3.00	3
Sb			1	0.084	ug/l	5.59	233.00	1.499E-03	Pulse	1.00	3
Se			1	-0.285	ug/l	-65.09	18.33	1.179E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,553,684.50	0.72	95.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		138,226.08	0.59	96.0	Pulse	0.30	3
1	Ge		103,296.52	0.38	96.9	Pulse	0.30	3
1	In		933,608.96	0.98	96.7	Pulse	0.30	3
1	Tb		3,314,710.67	0.61	95.9	Pulse	0.50	3
1	Lu		2,060,261.34	0.74	96.3	Pulse	0.50	3
1	Ge		155,477.71	0.78	96.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		627.79	10.78	103.7	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:54
Sample Name MP40805-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.146	ug/l	46.09	756.02	7.320E-03	Pulse	0.50	3
As			1	0.092	ug/l	102.01	23.33	2.257E-04	Pulse	1.00	3
Mo			1	0.543	ug/l	22.52	283.33	1.815E-03	Pulse	0.50	3
Pb			1	0.525	ug/l	1.33	3,808.43	1.480E-03	Pulse	1.00	3
Be			1	0.095	ug/l	150.27	0.67	4.783E-06	Pulse	2.00	3
Ag			1	0.050	ug/l	17.76	100.00	3.008E-05	Pulse	0.50	3
Ba			1	1.547	ug/l	16.98	254.00	2.707E-04	Pulse	0.50	3
Tl			1	0.052	ug/l	14.63	217.33	8.453E-05	Pulse	0.50	3
Sn			1	0.257	ug/l	22.79	173.33	1.846E-04	Pulse	0.30	3
Sr			1	33.198	ug/l	0.72	12,716.33	1.354E-02	Pulse	0.50	3
[Pb]			1	0.683	ug/l	8.99	1,921.45	7.468E-04	Pulse	0.50	3
Ca			1	7235.382	ug/l	1.80	14,419.99	1.039E-01	Pulse	0.50	3
Ti			1	0.731	ug/l	9.79	13.33	9.611E-05	Pulse	0.50	3
Na			1	9645.854	ug/l	1.08	1,074,854.54	7.747E+00	Pulse	1.00	3
Mg			1	5728.020	ug/l	0.69	291,977.73	2.104E+00	Pulse	1.00	3
K			1	1551.294	ug/l	0.64	75,072.70	5.411E-01	Pulse	1.00	3
V			1	0.591	ug/l	5.85	594.68	4.287E-03	Pulse	0.50	3
Mn			1	5.345	ug/l	3.18	2,189.47	2.120E-02	Pulse	0.50	3
Fe			1	-2.504	ug/l	-55.23	29,098.44	2.817E-01	Pulse	0.50	3
Co			1	0.037	ug/l	40.59	125.33	1.213E-03	Pulse	0.50	3
Ni			1	1.667	ug/l	5.50	802.02	7.765E-03	Pulse	0.50	3
Cu			1	3.316	ug/l	16.59	31,390.80	3.039E-01	Pulse	0.50	3
Zn			1	52.782	ug/l	1.85	10,637.28	6.817E-02	Pulse	1.00	3
Cd			1	0.064	ug/l	112.50	25.33	1.620E-04	Pulse	0.50	3
Al			1	4.484	ug/l	26.69	285.67	2.058E-03	Pulse	1.00	3
Se			1	0.167	ug/l	320.65	4.00	2.571E-05	Pulse	3.00	3
Sb			1	0.137	ug/l	24.47	89.33	5.720E-04	Pulse	1.00	3
Se			1	-1.741	ug/l	-122.85	17.56	1.127E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,573,408.25	1.03	96.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		138,746.53	1.07	96.4	Pulse	0.30	3
1	Ge		103,305.72	0.79	96.9	Pulse	0.30	3
1	In		938,830.52	0.63	97.2	Pulse	0.30	3
1	Tb		3,325,337.33	1.00	96.2	Pulse	0.50	3
1	Lu		2,053,462.79	1.16	96.0	Pulse	0.50	3
1	Ge		156,035.84	0.66	96.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		617.79	14.44	102.0	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 9:57
Sample Name MP40805-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	190.615	ug/l	0.59	817,433.00	7.965E+00	Pulse	0.50	3
As			1	198.775	ug/l	0.55	87,233.47	8.500E-01	Pulse	1.00	3
Mo			1	191.076	ug/l	2.50	451,942.10	2.932E+00	Pulse	0.50	3
Pb			1	191.209	ug/l	1.39	2,276,364.42	9.130E-01	Pulse	1.00	3
Be			1	186.300	ug/l	2.03	4,936.27	3.547E-02	Pulse	2.00	3
Ag			1	97.785	ug/l	1.06	795,513.38	2.386E-01	Pulse	0.50	3
Ba			1	191.907	ug/l	1.26	148,519.20	1.620E-01	Pulse	0.50	3
Tl			1	186.099	ug/l	0.53	3,203,151.42	1.285E+00	Pulse	0.50	3
Sn			1	197.420	ug/l	1.39	383,079.10	4.178E-01	Pulse	0.30	3
Sr			1	219.773	ug/l	1.38	400,497.52	4.368E-01	Pulse	0.50	3
[Pb]			1	184.241	ug/l	0.98	1,036,751.83	4.158E-01	Pulse	0.50	3
Ca			1	24520.255	ug/l	0.97	243,525.19	1.750E+00	Pulse	0.50	3
Ti			1	187.198	ug/l	2.90	15,482.15	1.113E-01	Pulse	0.50	3
Na			1	27119.412	ug/l	0.67	15,046,244.33	1.081E+02	Analog	1.00	3
Mg			1	23411.146	ug/l	0.63	5,981,876.33	4.298E+01	Analog	1.00	3
K			1	19608.771	ug/l	0.16	3,634,470.17	2.611E+01	Pulse	1.00	3
V			1	189.963	ug/l	1.37	594,249.48	4.270E+00	Pulse	0.50	3
Mn			1	194.875	ug/l	0.79	371,172.26	3.617E+00	Pulse	0.50	3
Fe			1	18285.574	ug/l	0.47	60,661,758.67	5.911E+02	Analog	0.50	3
Co			1	191.498	ug/l	0.56	1,405,983.38	1.370E+01	Pulse	0.50	3
Ni			1	191.240	ug/l	0.29	395,606.85	3.855E+00	Pulse	0.50	3
Cu			1	194.823	ug/l	0.39	1,124,884.50	1.096E+01	Pulse	0.50	3
Zn			1	235.977	ug/l	2.26	188,786.47	1.225E+00	Pulse	1.00	3
Cd			1	190.181	ug/l	2.73	209,806.63	1.361E+00	Pulse	0.50	3
Al			1	17542.518	ug/l	0.70	1,362,173.50	9.787E+00	Pulse	1.00	3
Se			1	191.194	ug/l	2.32	5,057.45	3.281E-02	Pulse	3.00	3
Sb			1	194.346	ug/l	2.50	488,776.96	3.171E+00	Pulse	1.00	3
Se			1	194.231	ug/l	3.67	2,541.62	1.649E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,493,411.25	0.50	93.5	Pulse	0.50	3
1	Sc		139,184.96	1.49	96.7	Pulse	0.30	3
1	Ge		102,631.98	0.29	96.3	Pulse	0.30	3
1	In		917,016.98	0.95	95.0	Pulse	0.30	3
1	Tb		3,334,373.50	1.42	96.5	Pulse	0.50	3
1	Lu		2,060,983.17	0.14	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		154,180.56	2.22	95.7	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		588.90	7.54	97.2	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:01
Sample Name MP40805-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	186.508	ug/l	1.32	787,379.98	7.793E+00	Pulse	0.50	3
As			1	196.338	ug/l	1.79	84,822.74	8.395E-01	Pulse	1.00	3
Mo			1	187.553	ug/l	1.43	438,160.49	2.878E+00	Pulse	0.50	3
Pb			1	188.780	ug/l	0.71	2,221,863.67	9.014E-01	Pulse	1.00	3
Be			1	185.646	ug/l	3.54	4,853.75	3.535E-02	Pulse	2.00	3
Ag			1	97.042	ug/l	0.86	778,794.06	2.368E-01	Pulse	0.50	3
Ba			1	188.424	ug/l	0.86	143,715.10	1.590E-01	Pulse	0.50	3
Tl			1	184.780	ug/l	0.95	3,144,116.75	1.276E+00	Pulse	0.50	3
Sn			1	196.348	ug/l	1.20	375,481.41	4.155E-01	Pulse	0.30	3
Sr			1	216.605	ug/l	0.61	389,007.67	4.305E-01	Pulse	0.50	3
[Pb]			1	180.904	ug/l	1.10	1,006,375.92	4.083E-01	Pulse	0.50	3
Ca			1	24323.830	ug/l	1.45	238,403.73	1.736E+00	Pulse	0.50	3
Ti			1	188.248	ug/l	1.22	15,366.73	1.119E-01	Pulse	0.50	3
Na			1	26804.702	ug/l	0.77	14,676,811.67	1.069E+02	Analog	1.00	3
Mg			1	23134.626	ug/l	1.80	5,833,209.17	4.247E+01	Analog	1.00	3
K			1	19388.798	ug/l	1.28	3,546,524.83	2.582E+01	Pulse	1.00	3
V			1	187.569	ug/l	1.31	579,097.08	4.216E+00	Pulse	0.50	3
Mn			1	191.335	ug/l	2.14	358,735.77	3.551E+00	Pulse	0.50	3
Fe			1	18220.173	ug/l	1.57	59,503,317.33	5.889E+02	Analog	0.50	3
Co			1	189.588	ug/l	1.67	1,370,247.54	1.356E+01	Pulse	0.50	3
Ni			1	187.515	ug/l	1.73	381,864.33	3.780E+00	Pulse	0.50	3
Cu			1	190.748	ug/l	1.66	1,084,750.88	1.074E+01	Pulse	0.50	3
Zn			1	233.314	ug/l	1.80	184,373.33	1.211E+00	Pulse	1.00	3
Cd			1	187.820	ug/l	2.17	204,653.66	1.344E+00	Pulse	0.50	3
Al			1	17498.531	ug/l	2.07	1,340,800.25	9.763E+00	Pulse	1.00	3
Se			1	186.889	ug/l	0.86	4,882.74	3.207E-02	Pulse	3.00	3
Sb			1	187.661	ug/l	1.34	466,174.98	3.062E+00	Pulse	1.00	3
Se			1	187.669	ug/l	0.92	2,426.49	1.594E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,464,883.50	0.15	92.4	Pulse	0.50	3
1	Sc		137,364.61	1.44	95.4	Pulse	0.30	3
1	Ge		101,045.76	1.24	94.8	Pulse	0.30	3
1	In		903,680.52	0.19	93.6	Pulse	0.30	3
1	Tb		3,288,987.25	0.22	95.2	Pulse	0.50	3
1	Lu		2,044,911.12	0.38	95.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		152,252.42	1.46	94.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		617.79	3.59	102.0	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:05
Sample Name MP40805-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	19.935	ug/l	1.09	84,349.23	8.384E-01	Pulse	0.50	3
As			1	20.797	ug/l	1.54	8,960.11	8.906E-02	Pulse	1.00	3
Mo			1	20.338	ug/l	0.51	47,426.41	3.122E-01	Pulse	0.50	3
Pb			1	19.974	ug/l	0.96	242,313.98	9.625E-02	Pulse	1.00	3
Be			1	19.190	ug/l	6.49	500.34	3.655E-03	Pulse	2.00	3
Ag			1	5.349	ug/l	1.35	43,050.33	1.306E-02	Pulse	0.50	3
Ba			1	21.021	ug/l	2.24	16,019.12	1.775E-02	Pulse	0.50	3
Tl			1	19.326	ug/l	1.05	335,895.55	1.334E-01	Pulse	0.50	3
Sn			1	19.854	ug/l	1.13	37,976.97	4.208E-02	Pulse	0.30	3
Sr			1	54.001	ug/l	1.19	97,094.26	1.076E-01	Pulse	0.50	3
[Pb]			1	19.149	ug/l	1.06	109,788.57	4.361E-02	Pulse	0.50	3
Ca			1	9113.302	ug/l	1.76	89,110.69	6.508E-01	Pulse	0.50	3
Ti			1	19.657	ug/l	3.07	1,600.74	1.169E-02	Pulse	0.50	3
Na			1	11659.687	ug/l	1.33	6,369,139.33	4.651E+01	Analog	1.00	3
Mg			1	7707.935	ug/l	1.00	1,937,793.92	1.415E+01	Pulse	1.00	3
K			1	3472.744	ug/l	1.03	647,893.13	4.732E+00	Pulse	1.00	3
V			1	20.408	ug/l	1.47	63,012.44	4.602E-01	Pulse	0.50	3
Mn			1	25.168	ug/l	0.85	47,110.83	4.683E-01	Pulse	0.50	3
Fe			1	1960.600	ug/l	1.06	6,402,518.33	6.364E+01	Analog	0.50	3
Co			1	20.158	ug/l	0.84	145,136.48	1.443E+00	Pulse	0.50	3
Ni			1	21.928	ug/l	1.32	44,558.38	4.429E-01	Pulse	0.50	3
Cu			1	23.549	ug/l	2.06	156,939.00	1.560E+00	Pulse	0.50	3
Zn			1	72.527	ug/l	1.05	58,653.01	3.862E-01	Pulse	1.00	3
Cd			1	19.740	ug/l	3.14	21,473.80	1.414E-01	Pulse	0.50	3
Al			1	1879.551	ug/l	2.39	143,774.21	1.050E+00	Pulse	1.00	3
Se			1	20.383	ug/l	1.43	534.01	3.516E-03	Pulse	3.00	3
Sb			1	18.929	ug/l	1.12	46,932.30	3.090E-01	Pulse	1.00	3
Se			1	19.369	ug/l	8.26	269.23	1.772E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,517,527.58	1.01	94.4	Pulse	0.50	3
1	Sc		136,933.71	0.52	95.1	Pulse	0.30	3
1	Ge		100,604.61	0.43	94.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		902,440.14	0.35	93.5	Pulse	0.30	3
1	Tb		3,296,911.00	0.78	95.4	Pulse	0.50	3
1	Lu		2,045,973.96	1.03	95.6	Pulse	0.50	3
1	Ge		151,884.49	0.71	94.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		685.57	9.24	113.2	Pulse	0.30	3

Quantitation Report

File Name 029SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:09
Sample Name FA96132-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.232	ug/l	2.39	18,546.82	1.828E-01	Pulse	0.50	3
As			1	0.638	ug/l	2.47	291.67	2.874E-03	Pulse	1.00	3
Mo			1	0.687	ug/l	8.07	1,652.08	1.069E-02	Pulse	0.50	3
Pb			1	11.551	ug/l	0.36	142,885.78	5.607E-02	Pulse	1.00	3
Be			1	0.153	ug/l	19.30	4.17	3.036E-05	Pulse	2.00	3
Ag			1	0.056	ug/l	2.81	469.34	1.417E-04	Pulse	0.50	3
Ba			1	18.861	ug/l	1.17	14,615.27	1.593E-02	Pulse	0.50	3
Tl			1	0.047	ug/l	16.89	856.69	3.365E-04	Pulse	0.50	3
Sn			1	0.874	ug/l	3.63	1,766.76	1.925E-03	Pulse	0.30	3
Sr			1	35.562	ug/l	1.07	65,127.02	7.098E-02	Pulse	0.50	3
[Pb]			1	11.329	ug/l	1.39	66,207.27	2.598E-02	Pulse	0.50	3
Ca			1	5935.481	ug/l	1.46	58,232.50	4.241E-01	Pulse	0.50	3
Ti			1	5.769	ug/l	10.68	472.01	3.438E-03	Pulse	0.50	3
Na			1	9361.176	ug/l	0.54	5,129,566.50	3.736E+01	Analog	1.00	3
Mg			1	5449.006	ug/l	0.25	1,373,803.04	1.000E+01	Pulse	1.00	3
K			1	1254.568	ug/l	0.24	246,114.11	1.792E+00	Pulse	1.00	3
V			1	1.375	ug/l	7.00	4,467.19	3.253E-02	Pulse	0.50	3
Mn			1	159.648	ug/l	1.76	300,644.56	2.963E+00	Pulse	0.50	3
Fe			1	2140.470	ug/l	0.84	7,046,673.00	6.945E+01	Analog	0.50	3
Co			1	3.749	ug/l	1.72	27,281.89	2.689E-01	Pulse	0.50	3
Ni			1	3.129	ug/l	0.56	6,504.45	6.410E-02	Pulse	0.50	3
Cu			1	68.663	ug/l	1.64	409,502.74	4.036E+00	Pulse	0.50	3
Zn			1	102.356	ug/l	2.38	83,383.34	5.392E-01	Pulse	1.00	3
Cd			1	0.131	ug/l	1.92	156.00	1.009E-03	Pulse	0.50	3
Al			1	2240.138	ug/l	0.54	171,810.14	1.251E+00	Pulse	1.00	3
Se			1	0.391	ug/l	5.80	13.44	8.695E-05	Pulse	3.00	3
Sb			1	0.366	ug/l	10.99	942.69	6.098E-03	Pulse	1.00	3
Se			1	0.131	ug/l	92.38	23.67	1.530E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,548,178.17	0.81	95.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		137,314.11	0.87	95.4	Pulse	0.30	3
1	Ge		101,464.60	0.86	95.2	Pulse	0.30	3
1	In		917,565.73	0.63	95.0	Pulse	0.30	3
1	Tb		3,312,125.92	0.21	95.8	Pulse	0.50	3
1	Lu		2,032,306.83	0.65	95.0	Pulse	0.50	3
1	Ge		154,652.78	0.67	95.9	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		607.79	5.21	100.4	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:13
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.521	ug/l	0.53	407,250.34	3.891E+00	Pulse	0.50	3
As			1	45.825	ug/l	1.35	41,028.46	3.920E-01	Pulse	1.00	3
Mo			1	46.005	ug/l	0.60	222,828.88	1.412E+00	Pulse	0.50	3
Pb			1	45.529	ug/l	1.14	1,118,737.21	4.353E-01	Pulse	1.00	3
Be			1	46.264	ug/l	1.63	2,488.49	1.762E-02	Pulse	2.00	3
Ag			1	49.867	ug/l	0.43	820,734.27	2.434E-01	Pulse	0.50	3
Ba			1	46.057	ug/l	0.87	72,930.67	7.775E-02	Pulse	0.50	3
Tl			1	46.361	ug/l	1.11	1,645,031.84	6.401E-01	Pulse	0.50	3
Sn			1	47.781	ug/l	1.86	189,731.73	2.023E-01	Pulse	0.30	3
Sr			1	47.732	ug/l	0.44	178,145.47	1.899E-01	Pulse	0.50	3
[Pb]			1	45.451	ug/l	1.45	527,836.94	2.054E-01	Pulse	0.50	3
Ca			1	4634.772	ug/l	0.88	93,494.18	6.619E-01	Pulse	0.50	3
Ti			1	46.143	ug/l	4.24	7,748.23	5.485E-02	Pulse	0.50	3
Na			1	4715.026	ug/l	0.37	5,315,146.00	3.763E+01	Analog	1.00	3
Mg			1	4663.426	ug/l	1.02	2,418,647.25	1.712E+01	Pulse	1.00	3
K			1	4719.114	ug/l	0.39	1,784,759.46	1.264E+01	Pulse	1.00	3
V			1	46.427	ug/l	1.07	294,926.51	2.088E+00	Pulse	0.50	3
Mn			1	46.483	ug/l	1.14	180,659.75	1.726E+00	Pulse	0.50	3
Fe			1	4698.477	ug/l	0.61	31,808,318.00	3.039E+02	Analog	0.50	3
Co			1	47.046	ug/l	0.87	704,560.54	6.731E+00	Pulse	0.50	3
Ni			1	47.180	ug/l	0.94	199,138.10	1.902E+00	Pulse	0.50	3
Cu			1	45.793	ug/l	1.19	554,183.10	5.294E+00	Pulse	0.50	3
Zn			1	46.577	ug/l	0.75	77,636.28	4.920E-01	Pulse	1.00	3
Cd			1	46.132	ug/l	0.58	104,221.85	6.605E-01	Pulse	0.50	3
Al			1	4622.626	ug/l	1.02	728,658.08	5.159E+00	Pulse	1.00	3
Se			1	46.754	ug/l	1.86	2,533.95	1.606E-02	Pulse	3.00	3
Sb			1	45.571	ug/l	1.12	234,699.15	1.487E+00	Pulse	1.00	3
Se			1	46.906	ug/l	3.84	1,268.60	8.038E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,570,051.42	0.24	96.4	Pulse	0.50	3
1	Sc		141,240.50	0.52	98.1	Pulse	0.30	3
1	Ge		104,673.03	1.19	98.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		937,996.74	0.63	97.1	Pulse	0.30	3
1	Tb		3,372,590.42	0.64	97.6	Pulse	0.50	3
1	Lu		2,090,610.37	0.42	97.7	Pulse	0.50	3
1	Ge		157,794.29	0.80	97.9	Pulse	0.30	3
1	Te		6.67	86.60		Pulse	0.50	3
1	Li		611.13	6.91	100.9	Pulse	0.30	3

Quantitation Report

File Name 031_CCV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:16
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.373	ug/l	0.55	843,081.52	8.137E+00	Pulse	0.50	3
As			1	95.700	ug/l	1.48	84,795.99	8.184E-01	Pulse	1.00	3
Mo			1	96.478	ug/l	1.02	460,685.39	2.961E+00	Pulse	0.50	3
Pb			1	96.418	ug/l	1.21	2,308,985.42	9.207E-01	Pulse	1.00	3
Be			1	94.959	ug/l	2.47	5,086.81	3.616E-02	Pulse	2.00	3
Ag			1	102.626	ug/l	0.46	1,672,504.58	5.008E-01	Pulse	0.50	3
Ba			1	96.736	ug/l	0.19	151,416.12	1.633E-01	Pulse	0.50	3
Tl			1	98.784	ug/l	0.32	3,420,122.50	1.364E+00	Pulse	0.50	3
Sn			1	95.149	ug/l	0.76	373,415.64	4.027E-01	Pulse	0.30	3
Sr			1	95.498	ug/l	0.20	352,004.35	3.796E-01	Pulse	0.50	3
[Pb]			1	96.457	ug/l	0.76	1,091,763.37	4.354E-01	Pulse	0.50	3
Ca			1	9551.827	ug/l	0.87	191,799.40	1.363E+00	Pulse	0.50	3
Ti			1	94.209	ug/l	3.25	15,752.38	1.120E-01	Pulse	0.50	3
Na			1	9755.255	ug/l	0.78	10,943,720.33	7.779E+01	Analog	1.00	3
Mg			1	9696.827	ug/l	1.28	5,008,654.17	3.560E+01	Analog	1.00	3
K			1	9754.163	ug/l	0.25	3,654,864.33	2.598E+01	Pulse	1.00	3
V			1	96.516	ug/l	0.98	610,391.29	4.339E+00	Pulse	0.50	3
Mn			1	97.213	ug/l	0.59	373,840.01	3.608E+00	Pulse	0.50	3
Fe			1	9759.847	ug/l	0.89	65,369,177.33	6.309E+02	Analog	0.50	3
Co			1	97.123	ug/l	0.84	1,439,714.54	1.390E+01	Pulse	0.50	3
Ni			1	97.237	ug/l	0.39	406,122.62	3.920E+00	Pulse	0.50	3
Cu			1	96.396	ug/l	0.82	1,124,020.08	1.085E+01	Pulse	0.50	3
Zn			1	96.681	ug/l	1.19	156,535.99	1.006E+00	Pulse	1.00	3
Cd			1	96.165	ug/l	1.84	214,174.34	1.377E+00	Pulse	0.50	3
Al			1	9265.971	ug/l	0.92	1,454,480.25	1.034E+01	Pulse	1.00	3
Se			1	97.476	ug/l	0.38	5,205.27	3.346E-02	Pulse	3.00	3
Sb			1	95.572	ug/l	1.06	485,247.49	3.119E+00	Pulse	1.00	3
Se			1	96.506	ug/l	2.11	2,549.84	1.639E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,507,715.50	0.32	94.0	Pulse	0.50	3
1	Sc		140,681.15	0.72	97.7	Pulse	0.30	3
1	Ge		103,609.38	0.31	97.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		927,264.86	0.40	96.0	Pulse	0.30	3
1	Tb		3,339,554.58	0.48	96.6	Pulse	0.50	3
1	Lu		2,068,806.41	0.16	96.7	Pulse	0.50	3
1	Ge		155,585.11	0.94	96.5	Pulse	0.30	3
1	Te		4.67	89.21		Pulse	0.50	3
1	Li		605.57	2.29	100.0	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:20
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.046	ug/l	38.76	1,048.70	9.970E-03	Pulse	0.50	3
As			1	0.033	ug/l	50.66	45.33	4.307E-04	Pulse	1.00	3
Mo			1	0.147	ug/l	13.43	734.02	4.658E-03	Pulse	0.50	3
Pb			1	0.039	ug/l	28.29	3,478.03	1.350E-03	Pulse	1.00	3
Be			1	0.053	ug/l	81.50	3.00	2.128E-05	Pulse	2.00	3
Ag			1	0.044	ug/l	33.80	738.02	2.219E-04	Pulse	0.50	3
Ba			1	0.023	ug/l	10.68	46.00	4.898E-05	Pulse	0.50	3
Tl			1	0.032	ug/l	32.34	1,179.38	4.582E-04	Pulse	0.50	3
Sn			1	0.132	ug/l	17.42	594.46	6.331E-04	Pulse	0.30	3
Sr			1	0.053	ug/l	17.93	534.68	5.694E-04	Pulse	0.50	3
[Pb]			1	0.046	ug/l	35.27	1,662.09	6.453E-04	Pulse	0.50	3
Ca			1	7.761	ug/l	30.79	258.00	1.820E-03	Pulse	0.50	3
Ti			1	0.048	ug/l	63.43	9.33	6.609E-05	Pulse	0.50	3
Na			1	7.229	ug/l	21.72	16,891.30	1.191E-01	Pulse	1.00	3
Mg			1	4.266	ug/l	34.26	2,413.82	1.703E-02	Pulse	1.00	3
K			1	4.053	ug/l	45.19	19,956.73	1.407E-01	Pulse	1.00	3
V			1	0.029	ug/l	53.05	416.67	2.939E-03	Pulse	0.50	3
Mn			1	0.086	ug/l	16.50	478.68	4.551E-03	Pulse	0.50	3
Fe			1	3.440	ug/l	36.09	54,712.01	5.202E-01	Pulse	0.50	3
Co			1	0.032	ug/l	39.42	561.35	5.334E-03	Pulse	0.50	3
Ni			1	0.038	ug/l	34.24	270.67	2.573E-03	Pulse	0.50	3
Cu			1	-0.231	ug/l	-2.15	25,458.08	2.421E-01	Pulse	0.50	3
Zn			1	0.831	ug/l	9.30	3,550.33	2.253E-02	Pulse	1.00	3
Cd			1	0.027	ug/l	34.22	71.33	4.529E-04	Pulse	0.50	3
Al			1	4.609	ug/l	27.65	949.36	6.700E-03	Pulse	1.00	3
Se			1	0.094	ug/l	15.10	8.22	5.218E-05	Pulse	3.00	3
Sb			1	0.070	ug/l	6.96	382.34	2.426E-03	Pulse	1.00	3
Se			1	-0.089	ug/l	-150.37	20.00	1.270E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,576,278.08	0.51	96.6	Pulse	0.50	3
1	Sc		141,840.53	1.39	98.5	Pulse	0.30	3

Quantitation Report

1	Ge		105,142.34	0.48	98.6	Pulse	0.30	3
1	In		939,047.88	0.32	97.2	Pulse	0.30	3
1	Tb		3,329,917.83	0.66	96.3	Pulse	0.50	3
1	Lu		2,057,625.54	0.40	96.2	Pulse	0.50	3
1	Ge		157,569.01	0.40	97.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		653.35	6.37	107.9	Pulse	0.30	3

Quantitation Report

File Name	033SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:24
Sample Name	TD82064-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	6.985	ug/l	0.82	30,535.18	2.978E-01	Pulse	0.50	3
As			1	3.909	ug/l	2.04	1,729.08	1.686E-02	Pulse	1.00	3
Mo			1	96.556	ug/l	0.94	229,698.93	1.482E+00	Pulse	0.50	3
Pb			1	0.656	ug/l	0.98	10,023.28	4.110E-03	Pulse	1.00	3
Be			1	0.067	ug/l	109.63	2.00	1.395E-05	Pulse	2.00	3
Ag			1	0.053	ug/l	27.06	448.67	1.358E-04	Pulse	0.50	3
Ba			1	133.934	ug/l	0.74	103,185.07	1.130E-01	Pulse	0.50	3
Tl			1	0.014	ug/l	8.93	268.00	1.099E-04	Pulse	0.50	3
Sn			1	0.313	ug/l	27.68	673.35	7.374E-04	Pulse	0.30	3
Sr			1	3839.467	ug/l	0.96	6,959,252.83	7.624E+00	Analog	0.50	3
[Pb]			1	0.688	ug/l	4.33	4,852.04	1.989E-03	Pulse	0.50	3
Ca			1	196967.037	ug/l	0.76	2,012,952.54	1.405E+01	Pulse	0.50	3
Ti			1	9.657	ug/l	11.10	824.02	5.748E-03	Pulse	0.50	3
Na			1	169858.831	ug/l	1.20	96,953,773.33	6.768E+02	Analog	1.00	3
Mg			1	61824.190	ug/l	1.14	16,259,542.33	1.135E+02	Analog	1.00	3
K			1	23339.816	ug/l	1.16	4,449,034.50	3.106E+01	Pulse	1.00	3
V			1	20.489	ug/l	2.02	66,184.85	4.620E-01	Pulse	0.50	3
Mn			1	26.455	ug/l	2.01	50,468.55	4.921E-01	Pulse	0.50	3
Fe			1	624.969	ug/l	1.44	2,101,123.08	2.049E+01	Pulse	0.50	3
Co			1	0.417	ug/l	2.83	3,130.27	3.053E-02	Pulse	0.50	3
Ni			1	2.713	ug/l	4.22	5,712.19	5.571E-02	Pulse	0.50	3
Cu			1	6.949	ug/l	3.75	66,536.63	6.489E-01	Pulse	0.50	3
Zn			1	18.920	ug/l	2.12	17,218.68	1.111E-01	Pulse	1.00	3
Cd			1	0.104	ug/l	12.54	126.00	8.132E-04	Pulse	0.50	3
Al			1	477.927	ug/l	1.38	38,416.76	2.682E-01	Pulse	1.00	3
Se			1	10.493	ug/l	5.24	282.00	1.820E-03	Pulse	3.00	3
Sb			1	2.419	ug/l	1.83	6,136.70	3.959E-02	Pulse	1.00	3
Se			1	10.150	ug/l	2.41	154.45	9.963E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,438,945.75	0.63	91.5	Pulse	0.50	3
1	Sc		143,264.88	0.93	99.5	Pulse	0.30	3
1	Ge		102,553.84	0.84	96.2	Pulse	0.30	3
1	In		912,764.38	0.35	94.5	Pulse	0.30	3
1	Tb		3,302,853.67	0.41	95.6	Pulse	0.50	3
1	Lu		2,061,539.96	0.85	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		155,004.67	0.45	96.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		607.79	13.14	100.4	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:28
Sample Name	FA95947-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	5648.578	ug/l	7.62	22,528,884.00	2.358E+02	Analog	0.50	3
As			1	1.861	ug/l	9.61	774.35	8.104E-03	Pulse	1.00	3
Mo			1	418.078	ug/l	5.00	924,359.04	6.416E+00	Pulse	0.50	3
Pb			1	2.028	ug/l	0.30	26,863.68	1.065E-02	Pulse	1.00	3
Be			1	0.008	ug/l	152.50	0.33	2.688E-06	Pulse	2.00	3
Ag			1	5.613	ug/l	0.67	43,893.62	1.370E-02	Pulse	0.50	3
Ba			1	2.730	ug/l	5.93	2,005.45	2.313E-03	Pulse	0.50	3
Tl			1	0.005	ug/l	24.85	125.33	4.964E-05	Pulse	0.50	3
Sn			1	11.085	ug/l	4.25	20,406.99	2.353E-02	Pulse	0.30	3
Sr			1	16.259	ug/l	2.20	28,307.84	3.265E-02	Pulse	0.50	3
[Pb]			1	2.018	ug/l	2.02	12,577.33	4.987E-03	Pulse	0.50	3
Ca			1	583.838	ug/l	4.20	5,336.07	4.236E-02	Pulse	0.50	3
Ti			1	73.702	ug/l	4.71	5,524.14	4.381E-02	Pulse	0.50	3
Na			1	6446.628	ug/l	1.34	3,244,486.08	2.575E+01	Pulse	1.00	3
Mg			1	226.977	ug/l	1.81	52,688.99	4.181E-01	Pulse	1.00	3
K			1	120.429	ug/l	3.56	36,498.95	2.896E-01	Pulse	1.00	3
V			1	14.987	ug/l	5.66	42,678.09	3.384E-01	Pulse	0.50	3
Mn			1	1901.097	ug/l	0.89	3,364,593.00	3.527E+01	Pulse	0.50	3
Fe			1	28456.418	ug/l	0.70	87,726,922.67	9.197E+02	Analog	0.50	3
Co			1	317.319	ug/l	0.25	2,165,460.17	2.270E+01	Pulse	0.50	3
Ni			1	17754.173	ug/l	0.22	34,128,882.67	3.578E+02	Analog	0.50	3
Cu			1	895.554	ug/l	1.29	4,713,652.00	4.942E+01	Pulse	0.50	3
Zn			1	118.508	ug/l	2.03	89,501.64	6.221E-01	Pulse	1.00	3
Cd			1	0.126	ug/l	5.15	140.00	9.736E-04	Pulse	0.50	3
Al			1	12205.329	ug/l	1.01	858,140.67	6.810E+00	Pulse	1.00	3
Se			1	0.564	ug/l	13.05	16.78	1.167E-04	Pulse	3.00	3
Sb			1	0.768	ug/l	2.73	1,822.76	1.266E-02	Pulse	1.00	3
Se			1	-0.470	ug/l	-87.65	14.78	1.024E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,521,601.00	1.09	94.6	Pulse	0.50	3
1	Sc		126,007.23	2.74	87.5	Pulse	0.30	3
1	Ge		95,399.59	2.59	89.5	Pulse	0.30	3
1	In		866,980.26	1.41	89.8	Pulse	0.30	3
1	Tb		3,203,390.25	1.52	92.7	Pulse	0.50	3
1	Lu		1,986,439.71	1.32	92.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		143,930.58	3.35	89.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		615.57	2.56	101.7	Pulse	0.30	3

Quantitation Report

File Name 035_MB.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:32
Sample Name MP40806-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	71.046	ug/l	7.09	272,329.08	2.972E+00	Pulse	0.50	3
As			1	0.056	ug/l	10.36	35.33	3.856E-04	Pulse	1.00	3
Mo			1	4.432	ug/l	3.76	9,321.68	6.816E-02	Pulse	0.50	3
Pb			1	-0.058	ug/l	-4.74	1,695.75	7.041E-04	Pulse	1.00	3
Be			1	0.058	ug/l	36.12	1.50	1.220E-05	Pulse	2.00	3
Ag			1	0.052	ug/l	14.35	409.34	1.319E-04	Pulse	0.50	3
Ba			1	0.047	ug/l	10.69	41.33	4.943E-05	Pulse	0.50	3
Tl			1	0.004	ug/l	20.09	94.67	3.932E-05	Pulse	0.50	3
Sn			1	0.440	ug/l	5.09	842.25	1.006E-03	Pulse	0.30	3
Sr			1	0.786	ug/l	35.93	1,602.75	1.920E-03	Pulse	0.50	3
[Pb]			1	-0.052	ug/l	-10.39	775.35	3.219E-04	Pulse	0.50	3
Ca			1	44.129	ug/l	36.58	473.34	3.861E-03	Pulse	0.50	3
Ti			1	1.157	ug/l	43.27	86.00	6.966E-04	Pulse	0.50	3
Na			1	43.498	ug/l	25.11	28,811.13	2.348E-01	Pulse	1.00	3
Mg			1	12.410	ug/l	39.50	2,959.25	2.415E-02	Pulse	1.00	3
K			1	24.341	ug/l	4.04	19,937.37	1.622E-01	Pulse	1.00	3
V			1	0.317	ug/l	14.51	1,074.03	8.752E-03	Pulse	0.50	3
Mn			1	0.474	ug/l	36.06	929.36	1.016E-02	Pulse	0.50	3
Fe			1	23.470	ug/l	12.81	96,741.00	1.056E+00	Pulse	0.50	3
Co			1	0.048	ug/l	55.75	378.00	4.137E-03	Pulse	0.50	3
Ni			1	3.282	ug/l	43.04	6,139.79	6.718E-02	Pulse	0.50	3
Cu			1	-0.309	ug/l	-32.32	22,959.65	2.505E-01	Pulse	0.50	3
Zn			1	1.142	ug/l	9.49	2,715.86	1.986E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	62.89	16.00	1.171E-04	Pulse	0.50	3
Al			1	4.365	ug/l	28.15	490.01	3.993E-03	Pulse	1.00	3
Se			1	0.115	ug/l	48.95	5.44	3.973E-05	Pulse	3.00	3
Sb			1	0.123	ug/l	11.03	291.33	2.129E-03	Pulse	1.00	3
Se			1	-0.606	ug/l	-13.45	12.45	9.094E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,408,127.50	0.98	90.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		122,898.56	1.92	85.3	Pulse	0.30	3
1	Ge		91,658.21	1.11	86.0	Pulse	0.30	3
1	In		836,826.49	1.61	86.7	Pulse	0.30	3
1	Tb		3,100,186.83	1.24	89.7	Pulse	0.50	3
1	Lu		1,894,153.79	1.57	88.5	Pulse	0.50	3
1	Ge		136,774.95	1.34	84.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		608.90	23.62	100.6	Pulse	0.30	3

Quantitation Report

File Name	036_BSP.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:35
Sample Name	MP40806-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	215.270	ug/l	3.16	834,745.50	8.994E+00	Pulse	0.50	3
As			1	203.573	ug/l	1.09	80,802.15	8.705E-01	Pulse	1.00	3
Mo			1	209.757	ug/l	1.32	444,408.58	3.219E+00	Pulse	0.50	3
Pb			1	202.436	ug/l	0.77	2,262,845.58	9.665E-01	Pulse	1.00	3
Be			1	214.545	ug/l	2.25	5,106.14	4.085E-02	Pulse	2.00	3
Ag			1	102.109	ug/l	0.11	784,948.36	2.492E-01	Pulse	0.50	3
Ba			1	200.207	ug/l	1.33	140,355.43	1.690E-01	Pulse	0.50	3
Tl			1	199.327	ug/l	0.38	3,221,409.00	1.376E+00	Pulse	0.50	3
Sn			1	206.476	ug/l	1.22	362,927.80	4.369E-01	Pulse	0.30	3
Sr			1	193.711	ug/l	0.64	319,822.64	3.850E-01	Pulse	0.50	3
[Pb]			1	194.270	ug/l	0.11	1,026,409.14	4.384E-01	Pulse	0.50	3
Ca			1	18830.844	ug/l	1.40	168,009.47	1.344E+00	Pulse	0.50	3
Ti			1	195.896	ug/l	1.41	14,555.44	1.164E-01	Pulse	0.50	3
Na			1	19627.215	ug/l	0.85	9,783,539.67	7.826E+01	Analog	1.00	3
Mg			1	19169.073	ug/l	1.22	4,399,620.00	3.519E+01	Pulse	1.00	3
K			1	19090.096	ug/l	1.44	3,178,451.75	2.543E+01	Pulse	1.00	3
V			1	200.966	ug/l	0.72	564,743.85	4.517E+00	Pulse	0.50	3
Mn			1	198.821	ug/l	1.78	342,485.74	3.690E+00	Pulse	0.50	3
Fe			1	19593.011	ug/l	1.27	58,784,384.00	6.333E+02	Analog	0.50	3
Co			1	205.189	ug/l	1.69	1,362,517.91	1.468E+01	Pulse	0.50	3
Ni			1	201.985	ug/l	2.05	377,877.56	4.071E+00	Pulse	0.50	3
Cu			1	204.916	ug/l	2.14	1,068,754.42	1.151E+01	Pulse	0.50	3
Zn			1	196.870	ug/l	0.99	141,403.93	1.024E+00	Pulse	1.00	3
Cd			1	200.166	ug/l	1.45	197,813.29	1.433E+00	Pulse	0.50	3
Al			1	18177.987	ug/l	1.30	1,267,866.67	1.014E+01	Pulse	1.00	3
Se			1	192.900	ug/l	1.06	4,570.77	3.310E-02	Pulse	3.00	3
Sb			1	203.956	ug/l	1.33	459,478.52	3.328E+00	Pulse	1.00	3
Se			1	191.496	ug/l	1.20	2,245.24	1.626E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,341,187.25	1.60	87.8	Pulse	0.50	3
1	Sc		125,025.34	1.32	86.8	Pulse	0.30	3
1	Ge		92,832.72	1.31	87.1	Pulse	0.30	3
1	In		830,745.30	1.75	86.0	Pulse	0.30	3
1	Tb		3,150,449.92	1.07	91.2	Pulse	0.50	3
1	Lu		1,925,231.04	1.97	90.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		138,072.10	1.20	85.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		674.46	13.74	111.4	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:39
Sample Name FA96193-12
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	7.265	ug/l	30.53	29,791.00	3.094E-01	Pulse	0.50	3
As			1	3.080	ug/l	3.45	1,278.38	1.332E-02	Pulse	1.00	3
Mo			1	6.820	ug/l	3.19	15,054.74	1.048E-01	Pulse	0.50	3
Pb			1	0.080	ug/l	16.20	3,241.31	1.362E-03	Pulse	1.00	3
Be			1	0.035	ug/l	101.83	1.00	7.808E-06	Pulse	2.00	3
Ag			1	0.050	ug/l	6.83	402.68	1.272E-04	Pulse	0.50	3
Ba			1	2.226	ug/l	1.45	1,622.75	1.888E-03	Pulse	0.50	3
Tl			1	0.109	ug/l	2.26	1,825.44	7.665E-04	Pulse	0.50	3
Sn			1	0.338	ug/l	6.09	680.02	7.917E-04	Pulse	0.30	3
Sr			1	542.630	ug/l	0.33	926,113.69	1.078E+00	Pulse	0.50	3
[Pb]			1	0.078	ug/l	9.68	1,461.40	6.137E-04	Pulse	0.50	3
Ca			1	77077.347	ug/l	1.00	716,241.52	5.499E+00	Pulse	0.50	3
Ti			1	0.391	ug/l	18.17	31.33	2.414E-04	Pulse	0.50	3
Na			1	20881.058	ug/l	1.85	10,841,448.67	8.325E+01	Analog	1.00	3
Mg			1	2785.235	ug/l	1.51	666,102.29	5.115E+00	Pulse	1.00	3
K			1	2235.283	ug/l	1.63	402,663.84	3.092E+00	Pulse	1.00	3
V			1	2.271	ug/l	1.62	6,859.22	5.265E-02	Pulse	0.50	3
Mn			1	18.968	ug/l	3.53	33,929.56	3.532E-01	Pulse	0.50	3
Fe			1	147.635	ug/l	2.51	486,655.62	5.068E+00	Pulse	0.50	3
Co			1	0.229	ug/l	5.34	1,636.07	1.704E-02	Pulse	0.50	3
Ni			1	0.817	ug/l	10.19	1,681.41	1.751E-02	Pulse	0.50	3
Cu			1	-0.759	ug/l	-4.61	21,687.50	2.258E-01	Pulse	0.50	3
Zn			1	3.015	ug/l	3.00	4,230.47	2.947E-02	Pulse	1.00	3
Cd			1	0.029	ug/l	30.91	40.00	2.793E-04	Pulse	0.50	3
Al			1	16.951	ug/l	10.31	1,432.72	1.101E-02	Pulse	1.00	3
Se			1	0.896	ug/l	14.01	24.89	1.737E-04	Pulse	3.00	3
Sb			1	0.468	ug/l	7.91	1,115.04	7.759E-03	Pulse	1.00	3
Se			1	0.703	ug/l	24.87	28.89	2.012E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,381,928.75	1.79	89.3	Pulse	0.50	3
1	Sc		130,281.93	3.71	90.5	Pulse	0.30	3
1	Ge		96,032.60	1.44	90.1	Pulse	0.30	3
1	In		859,251.88	2.36	89.0	Pulse	0.30	3
1	Tb		3,165,870.50	2.63	91.6	Pulse	0.50	3
1	Lu		1,939,699.00	2.01	90.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		143,571.65	2.13	89.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		663.35	10.87	109.5	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:43
Sample Name MP40806-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.684	ug/l	25.76	19,930.71	2.017E-01	Pulse	0.50	3
As			1	3.229	ug/l	4.19	1,378.05	1.395E-02	Pulse	1.00	3
Mo			1	6.619	ug/l	1.69	15,176.17	1.017E-01	Pulse	0.50	3
Pb			1	0.041	ug/l	13.31	2,868.58	1.175E-03	Pulse	1.00	3
Be			1	0.026	ug/l	42.65	0.83	6.147E-06	Pulse	2.00	3
Ag			1	0.030	ug/l	23.72	258.00	7.937E-05	Pulse	0.50	3
Ba			1	2.249	ug/l	4.76	1,682.09	1.908E-03	Pulse	0.50	3
Tl			1	0.066	ug/l	1.88	1,136.71	4.657E-04	Pulse	0.50	3
Sn			1	0.230	ug/l	15.28	497.79	5.635E-04	Pulse	0.30	3
Sr			1	560.092	ug/l	1.49	980,836.37	1.113E+00	Pulse	0.50	3
[Pb]			1	0.045	ug/l	3.29	1,320.72	5.411E-04	Pulse	0.50	3
Ca			1	78639.446	ug/l	0.93	760,341.56	5.610E+00	Pulse	0.50	3
Ti			1	0.645	ug/l	20.88	53.33	3.925E-04	Pulse	0.50	3
Na			1	21359.664	ug/l	0.88	11,541,620.33	8.516E+01	Analog	1.00	3
Mg			1	2839.464	ug/l	0.72	706,693.79	5.214E+00	Pulse	1.00	3
K			1	2289.475	ug/l	0.72	428,779.87	3.164E+00	Pulse	1.00	3
V			1	2.365	ug/l	2.29	7,420.76	5.476E-02	Pulse	0.50	3
Mn			1	19.204	ug/l	1.08	35,312.61	3.576E-01	Pulse	0.50	3
Fe			1	146.261	ug/l	1.53	496,052.66	5.023E+00	Pulse	0.50	3
Co			1	0.218	ug/l	1.61	1,609.41	1.630E-02	Pulse	0.50	3
Ni			1	0.759	ug/l	0.18	1,614.07	1.635E-02	Pulse	0.50	3
Cu			1	-0.713	ug/l	-9.39	22,547.82	2.283E-01	Pulse	0.50	3
Zn			1	2.845	ug/l	0.97	4,266.48	2.860E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	47.40	24.00	1.614E-04	Pulse	0.50	3
Al			1	14.721	ug/l	7.01	1,324.71	9.770E-03	Pulse	1.00	3
Se			1	0.578	ug/l	27.22	17.78	1.190E-04	Pulse	3.00	3
Sb			1	0.428	ug/l	2.80	1,061.03	7.115E-03	Pulse	1.00	3
Se			1	0.599	ug/l	49.76	28.67	1.924E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,440,664.67	1.62	91.5	Pulse	0.50	3
1	Sc		135,544.30	2.01	94.1	Pulse	0.30	3
1	Ge		98,747.31	0.87	92.6	Pulse	0.30	3
1	In		881,803.92	2.05	91.3	Pulse	0.30	3
1	Tb		3,240,586.00	2.53	93.8	Pulse	0.50	3
1	Lu		1,994,311.16	1.66	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		149,173.81	1.89	92.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		694.46	2.64	114.7	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:47
Sample Name MP40806-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.089	ug/l	10.29	1,640.08	1.519E-02	Pulse	0.50	3
As			1	2.883	ug/l	2.83	282.00	2.612E-03	Pulse	1.00	3
Mo			1	6.011	ug/l	2.09	3,001.59	1.860E-02	Pulse	0.50	3
Pb			1	0.048	ug/l	18.66	2,713.89	1.025E-03	Pulse	1.00	3
Be			1	0.088	ug/l	116.72	0.67	4.502E-06	Pulse	2.00	3
Ag			1	0.047	ug/l	40.01	98.00	2.843E-05	Pulse	0.50	3
Ba			1	2.051	ug/l	3.44	346.00	3.558E-04	Pulse	0.50	3
Tl			1	0.074	ug/l	13.12	303.34	1.145E-04	Pulse	0.50	3
Sn			1	0.137	ug/l	55.28	130.00	1.338E-04	Pulse	0.30	3
Sr			1	515.678	ug/l	0.81	199,529.90	2.052E-01	Pulse	0.50	3
[Pb]			1	0.060	ug/l	69.54	1,234.05	4.660E-04	Pulse	0.50	3
Ca			1	73913.123	ug/l	0.61	155,976.50	1.055E+00	Pulse	0.50	3
Ti			1	0.832	ug/l	47.14	16.00	1.081E-04	Pulse	0.50	3
Na			1	19738.503	ug/l	0.34	2,333,977.33	1.579E+01	Pulse	1.00	3
Mg			1	2639.890	ug/l	1.05	143,475.91	9.706E-01	Pulse	1.00	3
K			1	2149.737	ug/l	0.95	103,425.83	6.997E-01	Pulse	1.00	3
V			1	2.277	ug/l	5.02	1,753.42	1.186E-02	Pulse	0.50	3
Mn			1	17.919	ug/l	1.81	7,324.07	6.785E-02	Pulse	0.50	3
Fe			1	130.359	ug/l	0.77	123,090.59	1.140E+00	Pulse	0.50	3
Co			1	0.207	ug/l	6.74	394.01	3.649E-03	Pulse	0.50	3
Ni			1	0.732	ug/l	7.41	431.34	3.996E-03	Pulse	0.50	3
Cu			1	0.225	ug/l	154.41	29,144.66	2.700E-01	Pulse	0.50	3
Zn			1	2.789	ug/l	8.00	2,721.86	1.686E-02	Pulse	1.00	3
Cd			1	-0.006	ug/l	-525.07	10.00	6.180E-05	Pulse	0.50	3
Al			1	15.401	ug/l	6.57	484.34	3.276E-03	Pulse	1.00	3
Se			1	0.883	ug/l	3.24	8.11	5.025E-05	Pulse	3.00	3
Sb			1	0.400	ug/l	6.54	231.33	1.433E-03	Pulse	1.00	3
Se			1	-0.051	ug/l	-755.46	22.78	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,648,554.33	0.71	99.3	Pulse	0.50	3
1	Sc		147,820.75	0.60	102.7	Pulse	0.30	3
1	Ge		107,955.46	0.72	101.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		972,562.67	0.44	100.7	Pulse	0.30	3
1	Tb		3,443,828.83	0.63	99.6	Pulse	0.50	3
1	Lu		2,118,207.25	0.56	99.0	Pulse	0.50	3
1	Ge		161,413.18	0.55	100.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		710.02	6.10	117.2	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:51
Sample Name MP40806-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	207.785	ug/l	1.86	839,982.29	8.681E+00	Pulse	0.50	3
As			1	209.195	ug/l	0.18	86,550.79	8.945E-01	Pulse	1.00	3
Mo			1	211.064	ug/l	1.72	473,000.32	3.239E+00	Pulse	0.50	3
Pb			1	202.743	ug/l	0.47	2,287,549.92	9.680E-01	Pulse	1.00	3
Be			1	212.784	ug/l	0.95	5,367.71	4.051E-02	Pulse	2.00	3
Ag			1	100.815	ug/l	0.10	790,547.48	2.460E-01	Pulse	0.50	3
Ba			1	202.389	ug/l	0.49	146,179.92	1.708E-01	Pulse	0.50	3
Tl			1	198.426	ug/l	0.69	3,237,027.67	1.370E+00	Pulse	0.50	3
Sn			1	210.028	ug/l	0.25	380,338.20	4.444E-01	Pulse	0.30	3
Sr			1	730.880	ug/l	0.67	1,242,252.08	1.452E+00	Pulse	0.50	3
[Pb]			1	193.904	ug/l	1.03	1,034,116.71	4.376E-01	Pulse	0.50	3
Ca			1	94233.483	ug/l	0.41	890,623.96	6.723E+00	Pulse	0.50	3
Ti			1	197.959	ug/l	2.00	15,585.56	1.177E-01	Pulse	0.50	3
Na			1	40158.737	ug/l	0.42	21,204,798.00	1.601E+02	Analog	1.00	3
Mg			1	22013.968	ug/l	0.06	5,354,419.00	4.042E+01	Analog	1.00	3
K			1	21437.056	ug/l	0.50	3,780,422.83	2.854E+01	Pulse	1.00	3
V			1	203.580	ug/l	0.30	606,262.18	4.576E+00	Pulse	0.50	3
Mn			1	218.635	ug/l	1.10	392,571.51	4.057E+00	Pulse	0.50	3
Fe			1	19769.577	ug/l	0.95	61,825,280.00	6.390E+02	Analog	0.50	3
Co			1	204.053	ug/l	1.33	1,412,391.25	1.460E+01	Pulse	0.50	3
Ni			1	201.358	ug/l	1.42	392,685.92	4.058E+00	Pulse	0.50	3
Cu			1	200.372	ug/l	1.37	1,089,957.37	1.126E+01	Pulse	0.50	3
Zn			1	194.171	ug/l	0.73	147,552.42	1.010E+00	Pulse	1.00	3
Cd			1	195.260	ug/l	1.55	204,125.33	1.398E+00	Pulse	0.50	3
Al			1	18164.215	ug/l	0.35	1,342,627.67	1.013E+01	Pulse	1.00	3
Se			1	191.569	ug/l	1.89	4,800.49	3.288E-02	Pulse	3.00	3
Sb			1	199.789	ug/l	0.94	476,100.34	3.260E+00	Pulse	1.00	3
Se			1	190.699	ug/l	1.89	2,365.04	1.619E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,363,121.75	0.84	88.6	Pulse	0.50	3
1	Sc		132,485.90	1.04	92.0	Pulse	0.30	3
1	Ge		96,757.10	0.91	90.7	Pulse	0.30	3
1	In		855,772.08	1.14	88.6	Pulse	0.30	3
1	Tb		3,213,674.00	0.90	93.0	Pulse	0.50	3
1	Lu		1,980,062.13	1.33	92.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		146,047.42	1.51	90.6	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		682.24	10.07	112.7	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 10:54
Sample Name MP40806-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	225.510	ug/l	1.06	899,380.42	9.422E+00	Pulse	0.50	3
As			1	227.494	ug/l	0.79	92,854.16	9.727E-01	Pulse	1.00	3
Mo			1	228.030	ug/l	1.99	509,483.54	3.499E+00	Pulse	0.50	3
Pb			1	218.286	ug/l	1.16	2,443,229.58	1.042E+00	Pulse	1.00	3
Be			1	228.880	ug/l	1.07	5,770.32	4.358E-02	Pulse	2.00	3
Ag			1	109.068	ug/l	0.15	852,857.73	2.661E-01	Pulse	0.50	3
Ba			1	218.063	ug/l	1.12	156,981.01	1.840E-01	Pulse	0.50	3
Tl			1	214.149	ug/l	1.53	3,466,015.17	1.478E+00	Pulse	0.50	3
Sn			1	226.992	ug/l	0.89	409,698.34	4.803E-01	Pulse	0.30	3
Sr			1	780.601	ug/l	0.94	1,322,371.95	1.550E+00	Pulse	0.50	3
[Pb]			1	210.594	ug/l	1.32	1,114,166.75	4.752E-01	Pulse	0.50	3
Ca			1	100189.165	ug/l	0.84	946,371.42	7.147E+00	Pulse	0.50	3
Ti			1	211.841	ug/l	1.07	16,671.12	1.259E-01	Pulse	0.50	3
Na			1	42640.611	ug/l	0.42	22,501,987.33	1.699E+02	Analog	1.00	3
Mg			1	23587.624	ug/l	0.74	5,734,033.83	4.330E+01	Analog	1.00	3
K			1	22784.181	ug/l	0.79	4,014,732.08	3.032E+01	Pulse	1.00	3
V			1	218.191	ug/l	0.97	649,417.81	4.904E+00	Pulse	0.50	3
Mn			1	237.089	ug/l	0.46	419,938.61	4.400E+00	Pulse	0.50	3
Fe			1	21561.711	ug/l	0.52	66,519,256.00	6.969E+02	Analog	0.50	3
Co			1	223.523	ug/l	0.38	1,526,275.04	1.599E+01	Pulse	0.50	3
Ni			1	219.404	ug/l	1.19	422,123.38	4.422E+00	Pulse	0.50	3
Cu			1	217.696	ug/l	0.67	1,166,083.59	1.222E+01	Pulse	0.50	3
Zn			1	206.485	ug/l	2.06	156,293.19	1.074E+00	Pulse	1.00	3
Cd			1	209.408	ug/l	2.04	218,234.59	1.499E+00	Pulse	0.50	3
Al			1	19563.341	ug/l	0.36	1,445,193.17	1.091E+01	Pulse	1.00	3
Se			1	202.177	ug/l	1.51	5,051.11	3.469E-02	Pulse	3.00	3
Sb			1	215.172	ug/l	1.32	511,182.77	3.511E+00	Pulse	1.00	3
Se			1	206.456	ug/l	0.84	2,550.73	1.752E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,344,467.58	0.98	87.9	Pulse	0.50	3
1	Sc		132,406.39	1.33	91.9	Pulse	0.30	3
1	Ge		95,450.77	1.71	89.5	Pulse	0.30	3
1	In		852,873.46	1.26	88.3	Pulse	0.30	3
1	Tb		3,204,587.00	1.60	92.7	Pulse	0.50	3
1	Lu		1,971,258.21	1.79	92.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		145,586.98	0.32	90.3	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		650.02	12.06	107.3	Pulse	0.30	3

Quantitation Report

File Name	042SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 10:58
Sample Name	MP40806-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.765	ug/l	2.77	89,572.94	9.148E-01	Pulse	0.50	3
As			1	23.290	ug/l	1.59	9,763.50	9.972E-02	Pulse	1.00	3
Mo			1	26.358	ug/l	1.53	60,194.65	4.046E-01	Pulse	0.50	3
Pb			1	19.684	ug/l	0.09	228,390.71	9.487E-02	Pulse	1.00	3
Be			1	21.570	ug/l	0.76	564.34	4.108E-03	Pulse	2.00	3
Ag			1	5.793	ug/l	1.32	45,795.66	1.414E-02	Pulse	0.50	3
Ba			1	21.880	ug/l	0.98	16,091.16	1.848E-02	Pulse	0.50	3
Tl			1	19.636	ug/l	0.70	326,368.76	1.356E-01	Pulse	0.50	3
Sn			1	19.600	ug/l	0.96	36,185.55	4.154E-02	Pulse	0.30	3
Sr			1	561.712	ug/l	0.43	971,750.11	1.116E+00	Pulse	0.50	3
[Pb]			1	19.002	ug/l	0.61	104,196.10	4.328E-02	Pulse	0.50	3
Ca			1	76721.530	ug/l	1.32	751,937.98	5.473E+00	Pulse	0.50	3
Ti			1	19.476	ug/l	5.69	1,591.40	1.158E-02	Pulse	0.50	3
Na			1	22410.245	ug/l	0.71	12,274,575.67	8.935E+01	Analog	1.00	3
Mg			1	4662.466	ug/l	1.18	1,176,130.75	8.561E+00	Pulse	1.00	3
K			1	4055.376	ug/l	1.08	756,090.87	5.504E+00	Pulse	1.00	3
V			1	21.952	ug/l	2.15	67,994.41	4.949E-01	Pulse	0.50	3
Mn			1	38.425	ug/l	1.41	69,924.98	7.142E-01	Pulse	0.50	3
Fe			1	2121.351	ug/l	0.70	6,739,416.33	6.883E+01	Analog	0.50	3
Co			1	20.564	ug/l	0.55	144,095.86	1.472E+00	Pulse	0.50	3
Ni			1	21.118	ug/l	0.41	41,766.20	4.266E-01	Pulse	0.50	3
Cu			1	19.821	ug/l	1.84	132,704.72	1.355E+00	Pulse	0.50	3
Zn			1	22.391	ug/l	2.03	19,174.19	1.289E-01	Pulse	1.00	3
Cd			1	19.044	ug/l	2.26	20,288.46	1.364E-01	Pulse	0.50	3
Al			1	1801.283	ug/l	1.01	138,260.57	1.006E+00	Pulse	1.00	3
Se			1	18.624	ug/l	4.12	478.12	3.214E-03	Pulse	3.00	3
Sb			1	18.351	ug/l	0.87	44,566.44	2.996E-01	Pulse	1.00	3
Se			1	18.901	ug/l	10.63	257.78	1.733E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,407,537.83	1.26	90.3	Pulse	0.50	3
1	Sc		137,383.50	0.46	95.4	Pulse	0.30	3
1	Ge		97,908.52	0.16	91.8	Pulse	0.30	3
1	In		870,985.29	1.61	90.2	Pulse	0.30	3
1	Tb		3,238,250.75	2.06	93.7	Pulse	0.50	3
1	Lu		1,982,837.71	1.42	92.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		148,772.75	0.53	92.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		691.13	7.00	114.1	Pulse	0.30	3

Quantitation Report

File Name	043CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:02
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.933	ug/l	1.12	427,689.69	3.925E+00	Pulse	0.50	3
As			1	46.066	ug/l	1.35	42,932.93	3.940E-01	Pulse	1.00	3
Mo			1	45.086	ug/l	1.31	228,425.11	1.384E+00	Pulse	0.50	3
Pb			1	45.653	ug/l	0.87	1,152,068.75	4.365E-01	Pulse	1.00	3
Be			1	46.431	ug/l	0.36	2,664.34	1.768E-02	Pulse	2.00	3
Ag			1	49.558	ug/l	0.41	844,826.69	2.419E-01	Pulse	0.50	3
Ba			1	45.900	ug/l	0.60	75,473.57	7.749E-02	Pulse	0.50	3
Tl			1	46.790	ug/l	0.71	1,705,091.17	6.460E-01	Pulse	0.50	3
Sn			1	47.762	ug/l	1.04	196,926.70	2.022E-01	Pulse	0.30	3
Sr			1	47.745	ug/l	0.43	185,042.65	1.900E-01	Pulse	0.50	3
[Pb]			1	45.691	ug/l	1.29	544,914.40	2.065E-01	Pulse	0.50	3
Ca			1	4573.330	ug/l	1.72	98,417.42	6.532E-01	Pulse	0.50	3
Ti			1	46.434	ug/l	3.45	8,317.79	5.520E-02	Pulse	0.50	3
Na			1	4726.724	ug/l	0.52	5,684,583.17	3.772E+01	Analog	1.00	3
Mg			1	4651.536	ug/l	1.21	2,573,649.25	1.708E+01	Pulse	1.00	3
K			1	4694.905	ug/l	0.71	1,894,441.91	1.257E+01	Pulse	1.00	3
V			1	45.878	ug/l	1.57	310,906.46	2.063E+00	Pulse	0.50	3
Mn			1	46.890	ug/l	1.23	189,703.94	1.741E+00	Pulse	0.50	3
Fe			1	4739.418	ug/l	1.12	33,400,200.00	3.065E+02	Analog	0.50	3
Co			1	47.218	ug/l	0.92	736,139.60	6.756E+00	Pulse	0.50	3
Ni			1	46.986	ug/l	0.26	206,451.69	1.895E+00	Pulse	0.50	3
Cu			1	46.025	ug/l	0.90	579,628.02	5.320E+00	Pulse	0.50	3
Zn			1	45.919	ug/l	1.20	80,093.93	4.852E-01	Pulse	1.00	3
Cd			1	45.630	ug/l	1.69	107,828.76	6.533E-01	Pulse	0.50	3
Al			1	4549.853	ug/l	1.45	765,100.08	5.078E+00	Pulse	1.00	3
Se			1	45.113	ug/l	0.76	2,557.73	1.549E-02	Pulse	3.00	3
Sb			1	44.938	ug/l	1.37	242,082.89	1.467E+00	Pulse	1.00	3
Se			1	44.810	ug/l	1.45	1,268.60	7.686E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,639,537.67	0.65	99.0	Pulse	0.50	3
1	Sc		150,687.84	0.61	104.6	Pulse	0.30	3
1	Ge		108,969.21	1.52	102.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		974,059.86	0.75	100.9	Pulse	0.30	3
1	Tb		3,493,175.00	0.14	101.1	Pulse	0.50	3
1	Lu		2,147,307.25	0.10	100.4	Pulse	0.50	3
1	Ge		165,071.32	0.90	102.4	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		690.02	9.98	113.9	Pulse	0.30	3

Quantitation Report

File Name	044_CCV.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:06
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.575	ug/l	3.81	888,181.62	8.321E+00	Pulse	0.50	3
As			1	96.997	ug/l	0.95	88,553.94	8.295E-01	Pulse	1.00	3
Mo			1	95.673	ug/l	0.72	474,516.08	2.936E+00	Pulse	0.50	3
Pb			1	95.972	ug/l	0.94	2,353,463.00	9.165E-01	Pulse	1.00	3
Be			1	95.883	ug/l	1.81	5,357.54	3.651E-02	Pulse	2.00	3
Ag			1	102.415	ug/l	0.45	1,708,078.08	4.998E-01	Pulse	0.50	3
Ba			1	96.596	ug/l	1.41	155,031.93	1.631E-01	Pulse	0.50	3
Tl			1	98.300	ug/l	0.34	3,485,046.25	1.357E+00	Pulse	0.50	3
Sn			1	95.556	ug/l	1.95	384,518.22	4.044E-01	Pulse	0.30	3
Sr			1	96.343	ug/l	0.84	364,131.39	3.830E-01	Pulse	0.50	3
[Pb]			1	95.890	ug/l	0.90	1,111,394.46	4.328E-01	Pulse	0.50	3
Ca			1	9656.809	ug/l	1.28	202,262.22	1.378E+00	Pulse	0.50	3
Ti			1	95.119	ug/l	1.41	16,592.37	1.131E-01	Pulse	0.50	3
Na			1	9875.222	ug/l	0.75	11,555,829.00	7.875E+01	Analog	1.00	3
Mg			1	9794.015	ug/l	1.04	5,277,051.17	3.596E+01	Analog	1.00	3
K			1	9829.209	ug/l	0.99	3,841,423.25	2.618E+01	Pulse	1.00	3
V			1	96.831	ug/l	1.08	638,784.87	4.353E+00	Pulse	0.50	3
Mn			1	97.510	ug/l	0.31	386,370.55	3.619E+00	Pulse	0.50	3
Fe			1	9879.493	ug/l	0.80	68,180,112.00	6.387E+02	Analog	0.50	3
Co			1	97.441	ug/l	1.37	1,488,242.54	1.394E+01	Pulse	0.50	3
Ni			1	96.931	ug/l	1.15	417,130.70	3.907E+00	Pulse	0.50	3
Cu			1	96.312	ug/l	1.02	1,157,179.08	1.084E+01	Pulse	0.50	3
Zn			1	95.916	ug/l	0.92	161,323.60	9.983E-01	Pulse	1.00	3
Cd			1	94.999	ug/l	0.55	219,770.86	1.360E+00	Pulse	0.50	3
Al			1	9328.463	ug/l	1.44	1,527,394.12	1.041E+01	Pulse	1.00	3
Se			1	95.434	ug/l	1.07	5,293.07	3.275E-02	Pulse	3.00	3
Sb			1	94.785	ug/l	0.98	499,869.73	3.093E+00	Pulse	1.00	3
Se			1	94.620	ug/l	1.05	2,596.96	1.607E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,567,907.50	0.08	96.3	Pulse	0.50	3
1	Sc		146,750.49	1.24	101.9	Pulse	0.30	3
1	Ge		106,756.38	0.71	100.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		950,818.50	0.44	98.5	Pulse	0.30	3
1	Tb		3,417,570.83	0.55	98.9	Pulse	0.50	3
1	Lu		2,126,036.67	0.69	99.4	Pulse	0.50	3
1	Ge		161,593.81	0.34	100.3	Pulse	0.30	3
1	Te		6.00	57.74		Pulse	0.50	3
1	Li		652.23	1.06	107.7	Pulse	0.30	3

Quantitation Report

File Name	045_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:09
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.050	ug/l	58.79	1,084.04	1.027E-02	Pulse	0.50	3
As			1	0.045	ug/l	16.29	56.00	5.296E-04	Pulse	1.00	3
Mo			1	0.194	ug/l	16.26	970.03	6.114E-03	Pulse	0.50	3
Pb			1	0.034	ug/l	53.57	3,389.01	1.304E-03	Pulse	1.00	3
Be			1	0.045	ug/l	81.10	2.67	1.846E-05	Pulse	2.00	3
Ag			1	0.046	ug/l	35.22	773.35	2.297E-04	Pulse	0.50	3
Ba			1	0.045	ug/l	39.75	81.33	8.636E-05	Pulse	0.50	3
Tl			1	0.031	ug/l	41.50	1,158.72	4.460E-04	Pulse	0.50	3
Sn			1	0.153	ug/l	8.78	681.13	7.229E-04	Pulse	0.30	3
Sr			1	0.043	ug/l	55.04	498.68	5.294E-04	Pulse	0.50	3
[Pb]			1	0.032	ug/l	63.78	1,516.08	5.835E-04	Pulse	0.50	3
Ca			1	7.826	ug/l	17.25	264.67	1.830E-03	Pulse	0.50	3
Ti			1	0.039	ug/l	28.67	8.00	5.523E-05	Pulse	0.50	3
Na			1	7.357	ug/l	18.70	17,381.24	1.201E-01	Pulse	1.00	3
Mg			1	4.363	ug/l	38.20	2,520.18	1.738E-02	Pulse	1.00	3
K			1	5.925	ug/l	19.43	21,066.87	1.457E-01	Pulse	1.00	3
V			1	0.032	ug/l	61.58	444.01	3.064E-03	Pulse	0.50	3
Mn			1	0.090	ug/l	20.39	496.68	4.700E-03	Pulse	0.50	3
Fe			1	3.520	ug/l	49.62	55,469.61	5.254E-01	Pulse	0.50	3
Co			1	0.035	ug/l	57.14	606.01	5.761E-03	Pulse	0.50	3
Ni			1	0.042	ug/l	48.17	290.00	2.750E-03	Pulse	0.50	3
Cu			1	-0.194	ug/l	-30.29	26,062.28	2.462E-01	Pulse	0.50	3
Zn			1	0.822	ug/l	14.33	3,554.67	2.244E-02	Pulse	1.00	3
Cd			1	0.035	ug/l	47.52	89.33	5.649E-04	Pulse	0.50	3
Al			1	4.458	ug/l	35.47	946.36	6.532E-03	Pulse	1.00	3
Se			1	0.451	ug/l	9.19	27.67	1.745E-04	Pulse	3.00	3
Sb			1	0.061	ug/l	23.14	333.67	2.107E-03	Pulse	1.00	3
Se			1	0.189	ug/l	35.15	27.55	1.738E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,598,502.83	0.55	97.4	Pulse	0.50	3
1	Sc		144,585.00	1.17	100.4	Pulse	0.30	3

Quantitation Report

1	Ge		105,891.77	2.18	99.3	Pulse	0.30	3
1	In		942,393.40	0.44	97.6	Pulse	0.30	3
1	Tb		3,369,902.25	0.54	97.5	Pulse	0.50	3
1	Lu		2,073,963.42	0.42	96.9	Pulse	0.50	3
1	Ge		158,495.61	1.10	98.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		703.35	8.22	116.1	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:13
Sample Name FA96193-11
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.212	ug/l	13.94	5,575.49	5.669E-02	Pulse	0.50	3
As			1	3.627	ug/l	2.63	1,537.07	1.566E-02	Pulse	1.00	3
Mo			1	0.479	ug/l	10.03	1,106.71	7.500E-03	Pulse	0.50	3
Pb			1	-0.053	ug/l	-11.01	1,781.10	7.241E-04	Pulse	1.00	3
Be			1	0.020	ug/l	150.05	0.67	5.053E-06	Pulse	2.00	3
Ag			1	0.055	ug/l	20.01	450.01	1.405E-04	Pulse	0.50	3
Ba			1	4.724	ug/l	4.95	3,505.68	3.997E-03	Pulse	0.50	3
Tl			1	0.008	ug/l	34.82	168.00	6.834E-05	Pulse	0.50	3
Sn			1	0.375	ug/l	15.00	763.35	8.696E-04	Pulse	0.30	3
Sr			1	157.205	ug/l	0.91	274,022.72	3.125E-01	Pulse	0.50	3
[Pb]			1	-0.049	ug/l	-12.69	809.35	3.290E-04	Pulse	0.50	3
Ca			1	30952.893	ug/l	0.65	295,540.17	2.209E+00	Pulse	0.50	3
Ti			1	0.177	ug/l	27.90	15.33	1.143E-04	Pulse	0.50	3
Na			1	4091.864	ug/l	0.88	2,189,460.83	1.636E+01	Pulse	1.00	3
Mg			1	1009.077	ug/l	0.83	248,055.78	1.854E+00	Pulse	1.00	3
K			1	697.427	ug/l	1.30	141,041.65	1.054E+00	Pulse	1.00	3
V			1	1.169	ug/l	1.37	3,731.70	2.789E-02	Pulse	0.50	3
Mn			1	10.270	ug/l	1.64	18,839.13	1.919E-01	Pulse	0.50	3
Fe			1	722.650	ug/l	0.44	2,321,547.83	2.364E+01	Pulse	0.50	3
Co			1	0.021	ug/l	12.54	214.00	2.179E-03	Pulse	0.50	3
Ni			1	0.128	ug/l	7.19	356.01	3.628E-03	Pulse	0.50	3
Cu			1	-1.379	ug/l	-9.68	18,821.86	1.918E-01	Pulse	0.50	3
Zn			1	0.179	ug/l	36.66	2,199.46	1.492E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-460.64	9.33	6.340E-05	Pulse	0.50	3
Al			1	12.269	ug/l	7.45	1,124.03	8.402E-03	Pulse	1.00	3
Se			1	0.550	ug/l	22.47	16.89	1.143E-04	Pulse	3.00	3
Sb			1	0.156	ug/l	1.44	393.01	2.666E-03	Pulse	1.00	3
Se			1	0.616	ug/l	65.66	28.55	1.939E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,460,816.33	1.89	92.3	Pulse	0.50	3
1	Sc		133,805.17	1.82	92.9	Pulse	0.30	3
1	Ge		98,185.64	2.16	92.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		876,779.04	1.35	90.8	Pulse	0.30	3
1	Tb		3,209,964.92	1.88	92.9	Pulse	0.50	3
1	Lu		1,977,146.42	1.73	92.4	Pulse	0.50	3
1	Ge		147,390.87	1.88	91.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		693.35	12.98	114.5	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:17
Sample Name FA96193-13
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.460	ug/l	13.65	6,525.13	6.708E-02	Pulse	0.50	3
As			1	5.129	ug/l	1.04	2,148.12	2.208E-02	Pulse	1.00	3
Mo			1	2.245	ug/l	3.80	5,127.39	3.460E-02	Pulse	0.50	3
Pb			1	-0.033	ug/l	-21.05	1,974.12	8.225E-04	Pulse	1.00	3
Be			1	0.013	ug/l	255.77	0.50	3.598E-06	Pulse	2.00	3
Ag			1	0.031	ug/l	18.26	258.00	8.029E-05	Pulse	0.50	3
Ba			1	5.166	ug/l	3.48	3,792.41	4.369E-03	Pulse	0.50	3
Tl			1	0.006	ug/l	16.92	129.33	5.383E-05	Pulse	0.50	3
Sn			1	0.204	ug/l	17.20	440.01	5.065E-04	Pulse	0.30	3
Sr			1	711.864	ug/l	0.67	1,227,500.50	1.414E+00	Pulse	0.50	3
[Pb]			1	-0.016	ug/l	-53.35	966.70	4.028E-04	Pulse	0.50	3
Ca			1	86352.067	ug/l	2.13	836,804.59	6.160E+00	Pulse	0.50	3
Ti			1	0.339	ug/l	26.94	28.67	2.108E-04	Pulse	0.50	3
Na			1	26334.255	ug/l	2.12	14,260,019.67	1.050E+02	Analog	1.00	3
Mg			1	4631.868	ug/l	2.00	1,155,251.42	8.505E+00	Pulse	1.00	3
K			1	2389.924	ug/l	2.12	447,817.37	3.297E+00	Pulse	1.00	3
V			1	1.381	ug/l	2.14	4,436.52	3.266E-02	Pulse	0.50	3
Mn			1	15.416	ug/l	1.12	27,959.39	2.874E-01	Pulse	0.50	3
Fe			1	578.608	ug/l	1.16	1,847,909.13	1.899E+01	Pulse	0.50	3
Co			1	0.055	ug/l	10.96	446.68	4.591E-03	Pulse	0.50	3
Ni			1	0.201	ug/l	4.75	496.01	5.097E-03	Pulse	0.50	3
Cu			1	-1.588	ug/l	-3.24	17,545.32	1.803E-01	Pulse	0.50	3
Zn			1	1.646	ug/l	8.64	3,325.63	2.245E-02	Pulse	1.00	3
Cd			1	0.015	ug/l	71.11	26.67	1.797E-04	Pulse	0.50	3
Al			1	5.760	ug/l	2.56	648.34	4.771E-03	Pulse	1.00	3
Se			1	1.085	ug/l	19.27	30.56	2.061E-04	Pulse	3.00	3
Sb			1	0.134	ug/l	13.60	344.00	2.320E-03	Pulse	1.00	3
Se			1	0.902	ug/l	94.88	32.22	2.179E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,401,328.75	1.73	90.0	Pulse	0.50	3
1	Sc		135,871.26	2.03	94.4	Pulse	0.30	3
1	Ge		97,305.47	0.72	91.3	Pulse	0.30	3
1	In		868,193.09	1.32	89.9	Pulse	0.30	3
1	Tb		3,208,790.33	1.78	92.8	Pulse	0.50	3
1	Lu		1,960,965.75	1.02	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		148,140.29	0.93	91.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		648.90	10.10	107.2	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:21
Sample Name FA96193-14
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.399	ug/l	10.59	6,390.41	6.452E-02	Pulse	0.50	3
As			1	6.183	ug/l	3.09	2,632.19	2.658E-02	Pulse	1.00	3
Mo			1	2.135	ug/l	3.46	4,869.99	3.292E-02	Pulse	0.50	3
Pb			1	-0.015	ug/l	-15.83	2,190.48	9.075E-04	Pulse	1.00	3
Be			1	0.044	ug/l	64.43	1.33	9.609E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	7.85	220.67	6.846E-05	Pulse	0.50	3
Ba			1	4.659	ug/l	4.77	3,452.35	3.942E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	15.92	95.33	3.948E-05	Pulse	0.50	3
Sn			1	0.204	ug/l	24.85	445.56	5.074E-04	Pulse	0.30	3
Sr			1	700.788	ug/l	0.80	1,219,138.37	1.392E+00	Pulse	0.50	3
[Pb]			1	-0.012	ug/l	-77.26	996.04	4.128E-04	Pulse	0.50	3
Ca			1	80777.617	ug/l	0.82	795,489.81	5.763E+00	Pulse	0.50	3
Ti			1	0.464	ug/l	50.10	39.33	2.850E-04	Pulse	0.50	3
Na			1	24636.145	ug/l	0.73	13,557,427.67	9.821E+01	Analog	1.00	3
Mg			1	4297.676	ug/l	0.50	1,089,306.67	7.891E+00	Pulse	1.00	3
K			1	2470.100	ug/l	1.08	469,739.90	3.403E+00	Pulse	1.00	3
V			1	1.495	ug/l	1.34	4,860.62	3.521E-02	Pulse	0.50	3
Mn			1	17.287	ug/l	2.82	31,895.43	3.221E-01	Pulse	0.50	3
Fe			1	581.450	ug/l	2.51	1,889,938.79	1.908E+01	Pulse	0.50	3
Co			1	0.047	ug/l	8.95	398.67	4.026E-03	Pulse	0.50	3
Ni			1	0.441	ug/l	4.14	984.70	9.942E-03	Pulse	0.50	3
Cu			1	-1.633	ug/l	-4.92	17,613.38	1.779E-01	Pulse	0.50	3
Zn			1	2.366	ug/l	11.75	3,866.73	2.614E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	31.40	28.00	1.895E-04	Pulse	0.50	3
Al			1	7.835	ug/l	5.76	818.69	5.928E-03	Pulse	1.00	3
Se			1	0.580	ug/l	31.40	17.67	1.194E-04	Pulse	3.00	3
Sb			1	0.122	ug/l	16.57	314.00	2.120E-03	Pulse	1.00	3
Se			1	0.927	ug/l	3.97	32.56	2.200E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,413,696.92	1.28	90.5	Pulse	0.50	3
1	Sc		138,048.19	1.55	95.9	Pulse	0.30	3
1	Ge		99,043.35	0.77	92.9	Pulse	0.30	3
1	In		875,974.90	1.99	90.7	Pulse	0.30	3
1	Tb		3,221,739.08	1.05	93.2	Pulse	0.50	3
1	Lu		1,981,426.50	1.35	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		147,960.70	0.98	91.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		717.80	12.84	118.5	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:25
Sample Name FA96193-15
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.647	ug/l	34.02	7,026.88	7.485E-02	Pulse	0.50	3
As			1	25.046	ug/l	5.51	10,170.04	1.072E-01	Pulse	1.00	3
Mo			1	1.213	ug/l	13.87	2,685.54	1.877E-02	Pulse	0.50	3
Pb			1	-0.061	ug/l	-25.36	1,603.08	6.882E-04	Pulse	1.00	3
Be			1	0.013	ug/l	252.23	0.50	3.707E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	8.85	166.00	5.355E-05	Pulse	0.50	3
Ba			1	4.121	ug/l	2.93	2,938.25	3.487E-03	Pulse	0.50	3
Tl			1	0.002	ug/l	13.27	55.33	2.366E-05	Pulse	0.50	3
Sn			1	0.156	ug/l	22.51	343.34	4.057E-04	Pulse	0.30	3
Sr			1	679.241	ug/l	6.23	1,135,585.83	1.349E+00	Pulse	0.50	3
[Pb]			1	-0.054	ug/l	-27.40	738.69	3.170E-04	Pulse	0.50	3
Ca			1	70375.126	ug/l	5.54	660,728.25	5.021E+00	Pulse	0.50	3
Ti			1	0.537	ug/l	15.72	43.33	3.283E-04	Pulse	0.50	3
Na			1	20195.725	ug/l	5.71	10,595,877.00	8.052E+01	Analog	1.00	3
Mg			1	3656.038	ug/l	6.01	883,284.21	6.713E+00	Pulse	1.00	3
K			1	1650.128	ug/l	5.55	304,868.08	2.317E+00	Pulse	1.00	3
V			1	1.694	ug/l	6.07	5,224.06	3.970E-02	Pulse	0.50	3
Mn			1	22.548	ug/l	6.64	39,787.29	4.197E-01	Pulse	0.50	3
Fe			1	552.874	ug/l	7.88	1,720,719.33	1.816E+01	Pulse	0.50	3
Co			1	0.033	ug/l	25.90	288.00	3.048E-03	Pulse	0.50	3
Ni			1	0.387	ug/l	12.12	837.35	8.845E-03	Pulse	0.50	3
Cu			1	-1.643	ug/l	-10.92	16,815.36	1.773E-01	Pulse	0.50	3
Zn			1	-0.240	ug/l	-42.19	1,833.09	1.277E-02	Pulse	1.00	3
Cd			1	-0.003	ug/l	-72.85	6.67	4.669E-05	Pulse	0.50	3
Al			1	6.373	ug/l	9.05	672.68	5.113E-03	Pulse	1.00	3
Se			1	0.218	ug/l	41.01	8.33	5.738E-05	Pulse	3.00	3
Sb			1	0.061	ug/l	39.71	162.00	1.129E-03	Pulse	1.00	3
Se			1	0.289	ug/l	185.63	23.66	1.663E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,337,657.67	5.17	87.7	Pulse	0.50	3
1	Sc		131,826.24	4.98	91.5	Pulse	0.30	3
1	Ge		95,047.55	6.13	89.1	Pulse	0.30	3
1	In		843,403.96	5.30	87.3	Pulse	0.30	3
1	Tb		3,106,885.83	5.16	89.9	Pulse	0.50	3
1	Lu		1,905,319.21	5.80	89.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		143,789.30	5.73	89.2	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		732.24	3.48	120.9	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:28
Sample Name FA96193-16
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.611	ug/l	7.90	7,091.98	7.336E-02	Pulse	0.50	3
As			1	14.295	ug/l	1.08	5,923.59	6.126E-02	Pulse	1.00	3
Mo			1	4.028	ug/l	0.97	9,033.54	6.196E-02	Pulse	0.50	3
Pb			1	0.067	ug/l	4.82	3,109.95	1.301E-03	Pulse	1.00	3
Be			1	0.052	ug/l	193.44	1.50	1.110E-05	Pulse	2.00	3
Ag			1	0.017	ug/l	10.64	148.67	4.666E-05	Pulse	0.50	3
Ba			1	5.554	ug/l	0.61	4,035.80	4.697E-03	Pulse	0.50	3
Tl			1	0.005	ug/l	12.69	116.67	4.881E-05	Pulse	0.50	3
Sn			1	0.151	ug/l	12.57	340.00	3.957E-04	Pulse	0.30	3
Sr			1	609.788	ug/l	1.07	1,040,665.33	1.211E+00	Pulse	0.50	3
[Pb]			1	0.079	ug/l	19.88	1,473.40	6.161E-04	Pulse	0.50	3
Ca			1	113540.802	ug/l	0.33	1,085,950.67	8.100E+00	Pulse	0.50	3
Ti			1	0.511	ug/l	14.22	42.00	3.131E-04	Pulse	0.50	3
Na			1	40085.897	ug/l	0.37	21,419,279.33	1.598E+02	Analog	1.00	3
Mg			1	5369.508	ug/l	0.30	1,321,776.63	9.859E+00	Pulse	1.00	3
K			1	6765.494	ug/l	0.10	1,219,317.75	9.095E+00	Pulse	1.00	3
V			1	2.706	ug/l	0.88	8,371.15	6.244E-02	Pulse	0.50	3
Mn			1	6.011	ug/l	2.14	10,912.42	1.129E-01	Pulse	0.50	3
Fe			1	700.660	ug/l	0.81	2,217,558.75	2.293E+01	Pulse	0.50	3
Co			1	0.084	ug/l	4.94	644.01	6.662E-03	Pulse	0.50	3
Ni			1	0.489	ug/l	5.21	1,054.03	1.091E-02	Pulse	0.50	3
Cu			1	-1.476	ug/l	-5.38	18,029.11	1.865E-01	Pulse	0.50	3
Zn			1	0.522	ug/l	4.56	2,432.16	1.668E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	57.96	24.67	1.692E-04	Pulse	0.50	3
Al			1	6.573	ug/l	10.14	700.35	5.225E-03	Pulse	1.00	3
Se			1	0.750	ug/l	23.47	21.67	1.487E-04	Pulse	3.00	3
Sb			1	0.767	ug/l	5.54	1,842.43	1.264E-02	Pulse	1.00	3
Se			1	0.514	ug/l	42.25	27.00	1.852E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,390,445.83	1.23	89.6	Pulse	0.50	3
1	Sc		134,068.69	0.87	93.1	Pulse	0.30	3
1	Ge		96,695.78	1.80	90.7	Pulse	0.30	3
1	In		859,198.46	0.14	89.0	Pulse	0.30	3
1	Tb		3,188,722.50	1.15	92.3	Pulse	0.50	3
1	Lu		1,962,273.67	1.12	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		145,802.50	0.43	90.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		660.02	6.62	109.0	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:32
Sample Name	FA96113-9FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.874	ug/l	9.28	4,175.13	4.260E-02	Pulse	0.50	3
As			1	1.048	ug/l	5.95	453.68	4.629E-03	Pulse	1.00	3
Mo			1	0.725	ug/l	5.47	1,656.08	1.128E-02	Pulse	0.50	3
Pb			1	0.012	ug/l	26.55	2,515.53	1.038E-03	Pulse	1.00	3
Be			1	0.020	ug/l	113.32	0.67	4.928E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	5.62	149.33	4.673E-05	Pulse	0.50	3
Ba			1	18.925	ug/l	0.62	13,877.36	1.598E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	7.68	152.00	6.274E-05	Pulse	0.50	3
Sn			1	0.167	ug/l	13.60	373.34	4.298E-04	Pulse	0.30	3
Sr			1	101.807	ug/l	1.52	175,857.24	2.025E-01	Pulse	0.50	3
[Pb]			1	0.026	ug/l	84.70	1,205.38	4.973E-04	Pulse	0.50	3
Ca			1	20023.572	ug/l	1.50	193,018.28	1.429E+00	Pulse	0.50	3
Ti			1	0.567	ug/l	42.30	46.67	3.460E-04	Pulse	0.50	3
Na			1	11686.912	ug/l	2.15	6,297,145.83	4.662E+01	Analog	1.00	3
Mg			1	5154.915	ug/l	1.76	1,278,402.42	9.465E+00	Pulse	1.00	3
K			1	1623.740	ug/l	2.06	308,155.60	2.282E+00	Pulse	1.00	3
V			1	3.730	ug/l	3.12	11,540.78	8.545E-02	Pulse	0.50	3
Mn			1	13.464	ug/l	1.67	24,610.89	2.511E-01	Pulse	0.50	3
Fe			1	103.067	ug/l	1.94	355,487.47	3.628E+00	Pulse	0.50	3
Co			1	0.241	ug/l	0.19	1,758.75	1.795E-02	Pulse	0.50	3
Ni			1	1.280	ug/l	3.19	2,629.52	2.683E-02	Pulse	0.50	3
Cu			1	1.192	ug/l	7.68	32,623.50	3.329E-01	Pulse	0.50	3
Zn			1	0.730	ug/l	2.16	2,604.51	1.774E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-707.81	9.33	6.351E-05	Pulse	0.50	3
Al			1	43.169	ug/l	2.10	3,463.64	2.564E-02	Pulse	1.00	3
Se			1	0.338	ug/l	18.70	11.44	7.794E-05	Pulse	3.00	3
Sb			1	0.144	ug/l	3.54	364.00	2.480E-03	Pulse	1.00	3
Se			1	0.121	ug/l	123.28	22.33	1.522E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,423,302.50	0.54	90.9	Pulse	0.50	3
1	Sc		135,075.92	0.96	93.8	Pulse	0.30	3
1	Ge		97,990.46	0.96	91.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		868,319.79	0.74	89.9	Pulse	0.30	3
1	Tb		3,196,586.08	1.63	92.5	Pulse	0.50	3
1	Lu		1,969,170.42	1.68	92.0	Pulse	0.50	3
1	Ge		146,778.28	0.51	91.1	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		694.46	11.62	114.7	Pulse	0.30	3

Quantitation Report

File Name 052SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:36
Sample Name FA96113-10FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.983	ug/l	7.36	4,591.90	4.715E-02	Pulse	0.50	3
As			1	1.153	ug/l	4.43	494.34	5.076E-03	Pulse	1.00	3
Mo			1	0.762	ug/l	8.40	1,736.75	1.185E-02	Pulse	0.50	3
Pb			1	0.257	ug/l	25.76	5,331.85	2.203E-03	Pulse	1.00	3
Be			1	0.033	ug/l	102.51	1.00	7.492E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	22.12	127.33	4.026E-05	Pulse	0.50	3
Ba			1	17.696	ug/l	3.01	12,787.88	1.494E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	47.97	128.00	5.297E-05	Pulse	0.50	3
Sn			1	0.174	ug/l	27.69	381.12	4.451E-04	Pulse	0.30	3
Sr			1	100.347	ug/l	0.18	170,804.91	1.996E-01	Pulse	0.50	3
[Pb]			1	0.272	ug/l	24.94	2,544.87	1.052E-03	Pulse	0.50	3
Ca			1	19411.722	ug/l	0.85	185,953.38	1.385E+00	Pulse	0.50	3
Ti			1	0.352	ug/l	14.71	29.33	2.185E-04	Pulse	0.50	3
Na			1	11685.160	ug/l	0.73	6,257,078.00	4.662E+01	Analog	1.00	3
Mg			1	5075.879	ug/l	0.66	1,250,965.46	9.320E+00	Pulse	1.00	3
K			1	1581.597	ug/l	1.54	298,726.06	2.226E+00	Pulse	1.00	3
V			1	4.067	ug/l	0.41	12,485.37	9.301E-02	Pulse	0.50	3
Mn			1	14.332	ug/l	0.61	26,025.40	2.672E-01	Pulse	0.50	3
Fe			1	92.505	ug/l	1.74	320,057.23	3.287E+00	Pulse	0.50	3
Co			1	0.237	ug/l	1.35	1,717.42	1.764E-02	Pulse	0.50	3
Ni			1	1.471	ug/l	3.07	2,987.57	3.068E-02	Pulse	0.50	3
Cu			1	5.090	ug/l	28.76	53,255.60	5.469E-01	Pulse	0.50	3
Zn			1	2.816	ug/l	36.24	4,167.80	2.845E-02	Pulse	1.00	3
Cd			1	-0.003	ug/l	-141.12	7.33	5.006E-05	Pulse	0.50	3
Al			1	22.501	ug/l	3.53	1,893.76	1.411E-02	Pulse	1.00	3
Se			1	0.392	ug/l	31.71	12.78	8.724E-05	Pulse	3.00	3
Sb			1	0.154	ug/l	11.11	387.01	2.640E-03	Pulse	1.00	3
Se			1	-0.012	ug/l	-1147.09	20.67	1.409E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,418,235.83	0.92	90.7	Pulse	0.50	3
1	Sc		134,234.66	1.40	93.2	Pulse	0.30	3
1	Ge		97,383.87	0.19	91.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		855,661.51	0.41	88.6	Pulse	0.30	3
1	Tb		3,168,004.00	1.60	91.7	Pulse	0.50	3
1	Lu		1,944,843.04	0.62	90.9	Pulse	0.50	3
1	Ge		146,652.24	0.82	91.0	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		685.57	8.37	113.2	Pulse	0.30	3

Quantitation Report

File Name	053SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:40
Sample Name	FA96113-11FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.846	ug/l	7.43	3,949.75	4.141E-02	Pulse	0.50	3
As			1	1.276	ug/l	3.08	534.01	5.601E-03	Pulse	1.00	3
Mo			1	0.762	ug/l	6.95	1,699.42	1.184E-02	Pulse	0.50	3
Pb			1	0.000	ug/l	-1524.71	2,350.17	9.774E-04	Pulse	1.00	3
Be			1	0.060	ug/l	115.31	1.67	1.266E-05	Pulse	2.00	3
Ag			1	0.012	ug/l	30.17	108.00	3.419E-05	Pulse	0.50	3
Ba			1	17.058	ug/l	0.44	12,225.49	1.441E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	22.66	138.00	5.741E-05	Pulse	0.50	3
Sn			1	0.121	ug/l	10.60	282.23	3.324E-04	Pulse	0.30	3
Sr			1	98.240	ug/l	1.13	165,858.27	1.954E-01	Pulse	0.50	3
[Pb]			1	0.010	ug/l	116.13	1,109.37	4.616E-04	Pulse	0.50	3
Ca			1	19110.689	ug/l	0.57	179,979.09	1.364E+00	Pulse	0.50	3
Ti			1	0.435	ug/l	10.96	35.33	2.675E-04	Pulse	0.50	3
Na			1	11947.009	ug/l	0.72	6,288,633.17	4.766E+01	Analog	1.00	3
Mg			1	4982.720	ug/l	0.40	1,207,220.54	9.149E+00	Pulse	1.00	3
K			1	1624.276	ug/l	1.13	301,134.90	2.282E+00	Pulse	1.00	3
V			1	4.718	ug/l	1.57	14,205.19	1.076E-01	Pulse	0.50	3
Mn			1	16.877	ug/l	1.16	29,987.73	3.145E-01	Pulse	0.50	3
Fe			1	129.569	ug/l	1.44	427,560.82	4.484E+00	Pulse	0.50	3
Co			1	0.358	ug/l	3.25	2,508.84	2.630E-02	Pulse	0.50	3
Ni			1	1.628	ug/l	2.37	3,226.95	3.385E-02	Pulse	0.50	3
Cu			1	0.998	ug/l	7.90	30,729.73	3.223E-01	Pulse	0.50	3
Zn			1	-0.068	ug/l	-66.82	1,958.11	1.365E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	69.21	14.67	1.024E-04	Pulse	0.50	3
Al			1	35.405	ug/l	0.43	2,811.87	2.131E-02	Pulse	1.00	3
Se			1	0.295	ug/l	41.04	10.11	7.059E-05	Pulse	3.00	3
Sb			1	0.155	ug/l	4.07	380.00	2.650E-03	Pulse	1.00	3
Se			1	0.441	ug/l	91.80	25.67	1.791E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,404,208.92	0.97	90.2	Pulse	0.50	3
1	Sc		131,957.87	1.34	91.6	Pulse	0.30	3
1	Ge		95,359.14	1.01	89.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		848,621.08	0.86	87.9	Pulse	0.30	3
1	Tb		3,162,888.33	1.07	91.5	Pulse	0.50	3
1	Lu		1,929,840.34	1.04	90.2	Pulse	0.50	3
1	Ge		143,431.01	1.11	89.0	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		711.13	4.74	117.4	Pulse	0.30	3

Quantitation Report

File Name	054SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:44
Sample Name	FA96113-12FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.838	ug/l	6.68	3,930.41	4.107E-02	Pulse	0.50	3
As			1	0.531	ug/l	2.02	231.33	2.418E-03	Pulse	1.00	3
Mo			1	0.642	ug/l	8.12	1,440.73	9.999E-03	Pulse	0.50	3
Pb			1	0.000	ug/l	1624.78	2,321.83	9.809E-04	Pulse	1.00	3
Be			1	0.027	ug/l	85.13	0.83	6.371E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	17.09	93.33	2.994E-05	Pulse	0.50	3
Ba			1	30.339	ug/l	0.81	21,535.50	2.561E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	18.06	138.00	5.824E-05	Pulse	0.50	3
Sn			1	0.130	ug/l	8.21	294.45	3.502E-04	Pulse	0.30	3
Sr			1	122.727	ug/l	0.17	205,174.82	2.441E-01	Pulse	0.50	3
[Pb]			1	0.018	ug/l	32.38	1,134.71	4.795E-04	Pulse	0.50	3
Ca			1	24701.515	ug/l	0.69	230,891.51	1.763E+00	Pulse	0.50	3
Ti			1	1.047	ug/l	17.62	82.67	6.314E-04	Pulse	0.50	3
Na			1	12085.791	ug/l	0.37	6,315,074.33	4.821E+01	Analog	1.00	3
Mg			1	6623.675	ug/l	0.49	1,592,952.42	1.216E+01	Pulse	1.00	3
K			1	2496.687	ug/l	0.86	450,356.05	3.438E+00	Pulse	1.00	3
V			1	1.713	ug/l	1.80	5,256.72	4.013E-02	Pulse	0.50	3
Mn			1	10.809	ug/l	2.48	19,310.96	2.019E-01	Pulse	0.50	3
Fe			1	89.144	ug/l	1.96	303,991.13	3.178E+00	Pulse	0.50	3
Co			1	0.265	ug/l	3.05	1,880.77	1.966E-02	Pulse	0.50	3
Ni			1	1.302	ug/l	3.51	2,608.86	2.728E-02	Pulse	0.50	3
Cu			1	-0.382	ug/l	-17.61	23,582.37	2.465E-01	Pulse	0.50	3
Zn			1	2.944	ug/l	5.62	4,193.13	2.911E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	53.73	14.00	9.724E-05	Pulse	0.50	3
Al			1	50.805	ug/l	1.34	3,916.41	2.990E-02	Pulse	1.00	3
Se			1	0.230	ug/l	19.67	8.56	5.935E-05	Pulse	3.00	3
Sb			1	0.118	ug/l	6.49	294.67	2.045E-03	Pulse	1.00	3
Se			1	-0.084	ug/l	-126.68	19.44	1.349E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,366,908.58	1.17	88.8	Pulse	0.50	3
1	Sc		130,986.13	0.38	91.0	Pulse	0.30	3
1	Ge		95,667.26	0.90	89.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		840,699.59	1.10	87.1	Pulse	0.30	3
1	Tb		3,119,916.08	0.97	90.3	Pulse	0.50	3
1	Lu		1,909,551.29	1.49	89.2	Pulse	0.50	3
1	Ge		144,066.80	0.66	89.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		755.58	16.71	124.8	Pulse	0.30	3

Quantitation Report

File Name	055_MB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:47
Sample Name	MP40904-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.604	ug/l	5.14	2,939.57	3.134E-02	Pulse	0.50	3
As			1	0.044	ug/l	8.20	31.33	3.340E-04	Pulse	1.00	3
Mo			1	0.039	ug/l	41.84	105.33	7.435E-04	Pulse	0.50	3
Pb			1	-0.070	ug/l	-2.87	1,567.41	6.448E-04	Pulse	1.00	3
Be			1	0.054	ug/l	35.94	1.50	1.136E-05	Pulse	2.00	3
Ag			1	0.005	ug/l	40.10	58.67	1.889E-05	Pulse	0.50	3
Ba			1	0.046	ug/l	22.37	41.33	4.875E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	216.66	37.33	1.541E-05	Pulse	0.50	3
Sn			1	0.087	ug/l	20.10	220.00	2.595E-04	Pulse	0.30	3
Sr			1	0.101	ug/l	16.52	475.34	5.609E-04	Pulse	0.50	3
[Pb]			1	-0.062	ug/l	-15.90	726.02	2.985E-04	Pulse	0.50	3
Ca			1	16.366	ug/l	9.81	248.00	1.880E-03	Pulse	0.50	3
Ti			1	0.044	ug/l	88.77	4.67	3.535E-05	Pulse	0.50	3
Na			1	12.769	ug/l	2.99	14,810.80	1.124E-01	Pulse	1.00	3
Mg			1	2.836	ug/l	6.46	865.69	6.569E-03	Pulse	1.00	3
K			1	22.564	ug/l	4.50	21,069.87	1.599E-01	Pulse	1.00	3
V			1	0.337	ug/l	2.20	1,213.37	9.207E-03	Pulse	0.50	3
Mn			1	0.106	ug/l	7.09	312.67	3.333E-03	Pulse	0.50	3
Fe			1	3.017	ug/l	13.63	37,088.64	3.954E-01	Pulse	0.50	3
Co			1	-0.004	ug/l	-88.28	40.00	4.277E-04	Pulse	0.50	3
Ni			1	0.035	ug/l	46.50	165.33	1.761E-03	Pulse	0.50	3
Cu			1	-1.052	ug/l	-2.45	19,674.03	2.097E-01	Pulse	0.50	3
Zn			1	0.912	ug/l	10.51	2,642.19	1.868E-02	Pulse	1.00	3
Cd			1	-0.005	ug/l	-21.78	4.67	3.299E-05	Pulse	0.50	3
Al			1	1.736	ug/l	21.77	332.67	2.526E-03	Pulse	1.00	3
Se			1	0.053	ug/l	89.74	4.11	2.905E-05	Pulse	3.00	3
Sb			1	0.015	ug/l	40.59	52.33	3.701E-04	Pulse	1.00	3
Se			1	0.013	ug/l	3660.13	20.22	1.431E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,430,842.92	1.47	91.2	Pulse	0.50	3
1	Sc		131,796.89	1.64	91.5	Pulse	0.30	3
1	Ge		93,804.92	0.85	88.0	Pulse	0.30	3
1	In		847,571.09	0.98	87.8	Pulse	0.30	3
1	Tb		3,114,587.33	1.63	90.1	Pulse	0.50	3
1	Lu		1,908,102.54	0.88	89.2	Pulse	0.50	3
1	Ge		141,437.46	0.81	87.7	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		738.91	5.29	122.0	Pulse	0.30	3

Quantitation Report

File Name 056CCVA.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:51
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.968	ug/l	0.41	394,743.25	3.928E+00	Pulse	0.50	3
As			1	45.757	ug/l	1.56	39,331.24	3.914E-01	Pulse	1.00	3
Mo			1	45.826	ug/l	0.42	212,307.71	1.407E+00	Pulse	0.50	3
Pb			1	45.920	ug/l	1.14	1,102,529.13	4.390E-01	Pulse	1.00	3
Be			1	50.407	ug/l	1.15	2,638.34	1.920E-02	Pulse	2.00	3
Ag			1	49.311	ug/l	0.84	784,201.17	2.406E-01	Pulse	0.50	3
Ba			1	46.558	ug/l	1.27	69,886.67	7.860E-02	Pulse	0.50	3
Tl			1	47.052	ug/l	0.68	1,631,380.46	6.496E-01	Pulse	0.50	3
Sn			1	48.268	ug/l	0.63	181,679.22	2.043E-01	Pulse	0.30	3
Sr			1	47.893	ug/l	0.67	169,443.40	1.906E-01	Pulse	0.50	3
[Pb]			1	46.062	ug/l	0.88	522,681.00	2.081E-01	Pulse	0.50	3
Ca			1	4638.189	ug/l	1.92	91,052.27	6.624E-01	Pulse	0.50	3
Ti			1	47.387	ug/l	2.81	7,742.22	5.633E-02	Pulse	0.50	3
Na			1	4926.230	ug/l	0.62	5,403,755.50	3.931E+01	Analog	1.00	3
Mg			1	4844.044	ug/l	1.09	2,444,754.67	1.779E+01	Pulse	1.00	3
K			1	4752.420	ug/l	0.68	1,749,026.63	1.272E+01	Pulse	1.00	3
V			1	46.084	ug/l	1.14	284,874.69	2.073E+00	Pulse	0.50	3
Mn			1	46.676	ug/l	0.67	174,170.55	1.733E+00	Pulse	0.50	3
Fe			1	4755.988	ug/l	0.52	30,912,182.00	3.076E+02	Analog	0.50	3
Co			1	47.169	ug/l	1.13	678,214.00	6.749E+00	Pulse	0.50	3
Ni			1	47.026	ug/l	1.34	190,549.27	1.896E+00	Pulse	0.50	3
Cu			1	45.605	ug/l	1.30	529,941.31	5.274E+00	Pulse	0.50	3
Zn			1	46.487	ug/l	0.12	74,120.85	4.911E-01	Pulse	1.00	3
Cd			1	46.296	ug/l	0.63	100,046.35	6.628E-01	Pulse	0.50	3
Al			1	4734.001	ug/l	1.29	726,141.65	5.283E+00	Pulse	1.00	3
Se			1	45.077	ug/l	2.76	2,336.70	1.548E-02	Pulse	3.00	3
Sb			1	45.718	ug/l	0.35	225,214.78	1.492E+00	Pulse	1.00	3
Se			1	45.390	ug/l	1.22	1,174.81	7.783E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,511,318.75	0.71	94.2	Pulse	0.50	3
1	Sc		137,454.08	0.80	95.5	Pulse	0.30	3
1	Ge		100,494.27	0.58	94.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		889,186.07	0.10	92.1	Pulse	0.30	3
1	Tb		3,258,815.83	0.44	94.3	Pulse	0.50	3
1	Lu		2,021,310.13	0.86	94.5	Pulse	0.50	3
1	Ge		150,938.34	0.49	93.6	Pulse	0.30	3
1	Te		4.00	86.60		Pulse	0.50	3
1	Li		646.68	8.18	106.8	Pulse	0.30	3

Quantitation Report

File Name 057_CCV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 11:55
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.979	ug/l	2.66	812,668.83	8.188E+00	Pulse	0.50	3
As			1	95.562	ug/l	2.70	81,116.22	8.173E-01	Pulse	1.00	3
Mo			1	96.201	ug/l	1.59	442,717.75	2.953E+00	Pulse	0.50	3
Pb			1	97.294	ug/l	0.73	2,280,453.67	9.291E-01	Pulse	1.00	3
Be			1	100.899	ug/l	1.74	5,257.68	3.842E-02	Pulse	2.00	3
Ag			1	101.985	ug/l	1.11	1,614,197.42	4.977E-01	Pulse	0.50	3
Ba			1	96.523	ug/l	0.41	145,018.06	1.629E-01	Pulse	0.50	3
Tl			1	99.401	ug/l	0.58	3,368,365.83	1.372E+00	Pulse	0.50	3
Sn			1	96.284	ug/l	1.94	362,708.64	4.075E-01	Pulse	0.30	3
Sr			1	95.875	ug/l	0.49	339,212.90	3.811E-01	Pulse	0.50	3
[Pb]			1	97.304	ug/l	0.45	1,077,922.83	4.392E-01	Pulse	0.50	3
Ca			1	9665.075	ug/l	0.76	188,789.52	1.380E+00	Pulse	0.50	3
Ti			1	95.386	ug/l	1.63	15,515.51	1.134E-01	Pulse	0.50	3
Na			1	10177.752	ug/l	0.55	11,106,413.33	8.116E+01	Analog	1.00	3
Mg			1	10054.247	ug/l	1.25	5,051,844.33	3.692E+01	Analog	1.00	3
K			1	9845.806	ug/l	0.91	3,588,447.92	2.622E+01	Pulse	1.00	3
V			1	95.800	ug/l	0.57	589,382.25	4.307E+00	Pulse	0.50	3
Mn			1	97.699	ug/l	2.70	359,923.45	3.626E+00	Pulse	0.50	3
Fe			1	9925.499	ug/l	2.14	63,688,932.00	6.416E+02	Analog	0.50	3
Co			1	97.221	ug/l	2.48	1,380,647.71	1.391E+01	Pulse	0.50	3
Ni			1	97.116	ug/l	2.00	388,600.66	3.915E+00	Pulse	0.50	3
Cu			1	96.028	ug/l	2.42	1,072,827.13	1.081E+01	Pulse	0.50	3
Zn			1	97.285	ug/l	1.81	151,792.85	1.012E+00	Pulse	1.00	3
Cd			1	97.203	ug/l	1.72	208,647.85	1.392E+00	Pulse	0.50	3
Al			1	9533.171	ug/l	1.51	1,455,641.63	1.064E+01	Pulse	1.00	3
Se			1	93.810	ug/l	1.49	4,827.72	3.220E-02	Pulse	3.00	3
Sb			1	95.931	ug/l	1.71	469,414.76	3.131E+00	Pulse	1.00	3
Se			1	94.372	ug/l	2.80	2,403.26	1.603E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,454,438.75	0.53	92.0	Pulse	0.50	3
1	Sc		136,849.75	0.58	95.0	Pulse	0.30	3
1	Ge		99,283.59	1.62	93.1	Pulse	0.30	3
1	In		890,056.94	0.72	92.2	Pulse	0.30	3
1	Tb		3,243,353.50	0.25	93.8	Pulse	0.50	3
1	Lu		2,005,336.50	1.25	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		149,949.45	0.75	93.0	Pulse	0.30	3
1	Te		5.33	21.65		Pulse	0.50	3
1	Li		660.02	4.87	109.0	Pulse	0.30	3

Quantitation Report

File Name	058_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 11:59
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.027	ug/l	18.44	816.69	8.328E-03	Pulse	0.50	3
As			1	0.025	ug/l	17.10	35.67	3.638E-04	Pulse	1.00	3
Mo			1	0.185	ug/l	21.22	862.69	5.831E-03	Pulse	0.50	3
Pb			1	0.013	ug/l	44.92	2,763.90	1.101E-03	Pulse	1.00	3
Be			1	0.052	ug/l	28.34	2.83	2.087E-05	Pulse	2.00	3
Ag			1	0.023	ug/l	32.61	370.67	1.154E-04	Pulse	0.50	3
Ba			1	0.020	ug/l	10.59	38.67	4.345E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	24.41	554.68	2.210E-04	Pulse	0.50	3
Sn			1	0.135	ug/l	13.36	574.46	6.453E-04	Pulse	0.30	3
Sr			1	0.027	ug/l	14.53	414.68	4.659E-04	Pulse	0.50	3
[Pb]			1	0.020	ug/l	21.77	1,327.39	5.287E-04	Pulse	0.50	3
Ca			1	7.774	ug/l	14.63	247.33	1.822E-03	Pulse	0.50	3
Ti			1	0.030	ug/l	183.32	6.00	4.443E-05	Pulse	0.50	3
Na			1	5.485	ug/l	7.01	14,279.42	1.052E-01	Pulse	1.00	3
Mg			1	2.058	ug/l	21.66	1,211.71	8.919E-03	Pulse	1.00	3
K			1	5.559	ug/l	20.39	19,633.41	1.447E-01	Pulse	1.00	3
V			1	0.007	ug/l	93.88	263.33	1.939E-03	Pulse	0.50	3
Mn			1	0.051	ug/l	17.64	319.33	3.257E-03	Pulse	0.50	3
Fe			1	1.154	ug/l	28.66	36,524.93	3.725E-01	Pulse	0.50	3
Co			1	0.010	ug/l	35.41	209.33	2.135E-03	Pulse	0.50	3
Ni			1	0.016	ug/l	48.17	166.00	1.692E-03	Pulse	0.50	3
Cu			1	-0.217	ug/l	-13.43	23,899.47	2.437E-01	Pulse	0.50	3
Zn			1	0.823	ug/l	1.36	3,323.29	2.245E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	46.04	30.00	2.024E-04	Pulse	0.50	3
Al			1	2.386	ug/l	14.37	573.01	4.220E-03	Pulse	1.00	3
Se			1	0.369	ug/l	34.52	21.66	1.464E-04	Pulse	3.00	3
Sb			1	0.038	ug/l	3.75	200.00	1.351E-03	Pulse	1.00	3
Se			1	0.089	ug/l	172.52	23.22	1.570E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,510,775.00	0.32	94.2	Pulse	0.50	3
1	Sc		135,686.38	1.10	94.2	Pulse	0.30	3

Quantitation Report

1	Ge		98,071.84	0.60	92.0	Pulse	0.30	3
1	In		890,155.10	0.54	92.2	Pulse	0.30	3
1	Tb		3,209,083.17	0.33	92.8	Pulse	0.50	3
1	Lu		1,968,332.04	0.26	92.0	Pulse	0.50	3
1	Ge		148,035.76	0.75	91.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		751.13	4.19	124.0	Pulse	0.30	3

Quantitation Report

File Name 059_BSP.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:03
Sample Name MP40904-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	212.906	ug/l	2.63	793,324.06	8.895E+00	Pulse	0.50	3
As			1	209.061	ug/l	2.49	79,724.06	8.939E-01	Pulse	1.00	3
Mo			1	212.569	ug/l	1.70	436,256.36	3.262E+00	Pulse	0.50	3
Pb			1	208.274	ug/l	1.55	2,263,758.50	9.944E-01	Pulse	1.00	3
Be			1	235.144	ug/l	1.18	5,494.41	4.477E-02	Pulse	2.00	3
Ag			1	105.251	ug/l	1.11	776,699.62	2.568E-01	Pulse	0.50	3
Ba			1	204.336	ug/l	1.01	137,410.72	1.725E-01	Pulse	0.50	3
Tl			1	204.457	ug/l	1.14	3,213,100.67	1.411E+00	Pulse	0.50	3
Sn			1	214.467	ug/l	0.70	361,587.80	4.538E-01	Pulse	0.30	3
Sr			1	198.708	ug/l	0.58	314,641.82	3.949E-01	Pulse	0.50	3
[Pb]			1	199.920	ug/l	1.81	1,027,077.56	4.512E-01	Pulse	0.50	3
Ca			1	19626.241	ug/l	1.23	171,897.37	1.401E+00	Pulse	0.50	3
Ti			1	200.765	ug/l	1.62	14,643.50	1.193E-01	Pulse	0.50	3
Na			1	21241.710	ug/l	1.06	10,393,429.67	8.469E+01	Analog	1.00	3
Mg			1	20845.121	ug/l	1.56	4,696,729.00	3.827E+01	Mix	1.00	3
K			1	20059.351	ug/l	0.83	3,277,877.50	2.671E+01	Pulse	1.00	3
V			1	205.734	ug/l	1.02	567,540.48	4.624E+00	Pulse	0.50	3
Mn			1	209.094	ug/l	1.76	346,071.61	3.880E+00	Pulse	0.50	3
Fe			1	20760.612	ug/l	2.22	59,844,078.67	6.710E+02	Analog	0.50	3
Co			1	212.510	ug/l	2.31	1,355,787.88	1.520E+01	Pulse	0.50	3
Ni			1	208.795	ug/l	2.59	375,312.34	4.208E+00	Pulse	0.50	3
Cu			1	210.890	ug/l	2.43	1,056,124.34	1.184E+01	Pulse	0.50	3
Zn			1	202.964	ug/l	1.75	141,156.75	1.055E+00	Pulse	1.00	3
Cd			1	205.027	ug/l	1.17	196,271.17	1.468E+00	Pulse	0.50	3
Al			1	19503.610	ug/l	0.80	1,335,391.87	1.088E+01	Pulse	1.00	3
Se			1	195.953	ug/l	0.21	4,497.20	3.363E-02	Pulse	3.00	3
Sb			1	207.622	ug/l	1.22	453,087.46	3.388E+00	Pulse	1.00	3
Se			1	199.028	ug/l	3.52	2,259.47	1.689E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,276,489.83	0.36	85.4	Pulse	0.50	3
1	Sc		122,719.97	0.76	85.2	Pulse	0.30	3
1	Ge		89,188.78	0.53	83.6	Pulse	0.30	3
1	In		796,708.65	1.11	82.5	Pulse	0.30	3
1	Tb		3,024,507.25	1.65	87.5	Pulse	0.50	3
1	Lu		1,857,117.79	0.83	86.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		133,734.92	1.10	83.0	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		640.01	9.65	105.7	Pulse	0.30	3

Quantitation Report

File Name 060SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:06
Sample Name FA95838-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	16.666	ug/l	2.17	60,546.17	7.019E-01	Pulse	0.50	3
As			1	12.398	ug/l	3.60	4,585.22	5.315E-02	Pulse	1.00	3
Mo			1	21.185	ug/l	1.54	42,175.85	3.252E-01	Pulse	0.50	3
Pb			1	4.545	ug/l	1.13	47,796.76	2.266E-02	Pulse	1.00	3
Be			1	0.551	ug/l	12.03	13.17	1.061E-04	Pulse	2.00	3
Ag			1	0.149	ug/l	10.85	1,074.04	3.687E-04	Pulse	0.50	3
Ba			1	64.439	ug/l	1.03	41,378.42	5.439E-02	Pulse	0.50	3
Tl			1	0.151	ug/l	5.47	2,224.82	1.054E-03	Pulse	0.50	3
Sn			1	1.022	ug/l	4.54	1,702.31	2.239E-03	Pulse	0.30	3
Sr			1	2512.109	ug/l	0.64	3,794,852.08	4.989E+00	Pulse	0.50	3
[Pb]			1	4.580	ug/l	1.99	22,708.41	1.076E-02	Pulse	0.50	3
Ca			1	353280.545	ug/l	1.22	3,125,815.50	2.520E+01	Pulse	0.50	3
Ti			1	95.732	ug/l	0.31	7,058.65	5.690E-02	Pulse	0.50	3
Na			1	269126.520	ug/l	0.86	133,004,856.00	1.072E+03	Analog	1.00	3
Mg			1	26385.408	ug/l	0.73	6,008,569.83	4.844E+01	Analog	1.00	3
K			1	13484.506	ug/l	1.54	2,232,276.25	1.800E+01	Pulse	1.00	3
V			1	22.938	ug/l	0.91	64,135.42	5.171E-01	Pulse	0.50	3
Mn			1	132.600	ug/l	0.42	212,310.39	2.461E+00	Pulse	0.50	3
Fe			1	8094.058	ug/l	1.41	22,581,966.00	2.618E+02	Analog	0.50	3
Co			1	4.629	ug/l	0.74	28,621.10	3.318E-01	Pulse	0.50	3
Ni			1	17.076	ug/l	3.43	29,771.55	3.451E-01	Pulse	0.50	3
Cu			1	13.200	ug/l	1.66	85,570.26	9.920E-01	Pulse	0.50	3
Zn			1	42.061	ug/l	0.95	29,802.29	2.298E-01	Pulse	1.00	3
Cd			1	0.573	ug/l	5.33	541.34	4.175E-03	Pulse	0.50	3
Al			1	10571.229	ug/l	1.31	731,628.25	5.899E+00	Pulse	1.00	3
Se			1	6.104	ug/l	8.11	138.33	1.067E-03	Pulse	3.00	3
Sb			1	1.730	ug/l	1.50	3,677.38	2.836E-02	Pulse	1.00	3
Se			1	7.159	ug/l	1.55	96.55	7.446E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,109,317.29	1.04	79.1	Pulse	0.50	3
1	Sc		124,050.25	1.59	86.1	Pulse	0.30	3
1	Ge		86,260.92	0.67	80.9	Pulse	0.30	3
1	In		760,746.78	1.29	78.8	Pulse	0.30	3
1	Tb		2,915,318.42	1.64	84.3	Pulse	0.50	3
1	Lu		1,795,686.42	1.72	83.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,676.41	0.18	80.4	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		592.23	8.35	97.8	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:10
Sample Name MP40904-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	18.294	ug/l	3.71	65,984.34	7.699E-01	Pulse	0.50	3
As			1	13.127	ug/l	1.65	4,822.95	5.627E-02	Pulse	1.00	3
Mo			1	22.386	ug/l	1.84	44,495.84	3.437E-01	Pulse	0.50	3
Pb			1	4.939	ug/l	1.52	51,448.50	2.453E-02	Pulse	1.00	3
Be			1	0.520	ug/l	18.95	12.33	1.001E-04	Pulse	2.00	3
Ag			1	0.097	ug/l	5.90	701.35	2.426E-04	Pulse	0.50	3
Ba			1	70.793	ug/l	0.39	44,932.14	5.976E-02	Pulse	0.50	3
Tl			1	0.113	ug/l	8.01	1,660.09	7.914E-04	Pulse	0.50	3
Sn			1	0.956	ug/l	4.06	1,577.86	2.099E-03	Pulse	0.30	3
Sr			1	2668.685	ug/l	0.38	3,984,735.75	5.300E+00	Pulse	0.50	3
[Pb]			1	4.986	ug/l	1.47	24,490.17	1.168E-02	Pulse	0.50	3
Ca			1	377414.019	ug/l	1.02	3,317,467.58	2.692E+01	Pulse	0.50	3
Ti			1	114.515	ug/l	6.49	8,386.88	6.806E-02	Pulse	0.50	3
Na			1	288314.612	ug/l	0.89	141,549,717.33	1.149E+03	Analog	1.00	3
Mg			1	28335.845	ug/l	0.89	6,410,178.33	5.202E+01	Analog	1.00	3
K			1	14602.608	ug/l	0.33	2,400,307.67	1.948E+01	Pulse	1.00	3
V			1	25.412	ug/l	1.77	70,562.69	5.726E-01	Pulse	0.50	3
Mn			1	143.993	ug/l	2.11	229,071.72	2.673E+00	Pulse	0.50	3
Fe			1	9042.354	ug/l	1.48	25,066,016.67	2.924E+02	Analog	0.50	3
Co			1	4.959	ug/l	2.33	30,465.25	3.554E-01	Pulse	0.50	3
Ni			1	15.131	ug/l	1.52	26,225.06	3.059E-01	Pulse	0.50	3
Cu			1	14.195	ug/l	2.60	89,711.57	1.047E+00	Pulse	0.50	3
Zn			1	44.776	ug/l	1.43	31,558.07	2.438E-01	Pulse	1.00	3
Cd			1	0.533	ug/l	4.65	502.68	3.883E-03	Pulse	0.50	3
Al			1	11658.296	ug/l	0.92	801,558.13	6.505E+00	Pulse	1.00	3
Se			1	6.544	ug/l	8.09	147.89	1.142E-03	Pulse	3.00	3
Sb			1	1.743	ug/l	1.63	3,698.71	2.857E-02	Pulse	1.00	3
Se			1	6.796	ug/l	7.52	92.45	7.140E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,096,842.58	0.75	78.6	Pulse	0.50	3
1	Sc		123,222.78	0.01	85.6	Pulse	0.30	3
1	Ge		85,721.80	0.92	80.4	Pulse	0.30	3
1	In		751,911.93	0.79	77.9	Pulse	0.30	3
1	Tb		2,891,258.25	0.86	83.7	Pulse	0.50	3
1	Lu		1,786,320.33	1.41	83.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,473.68	0.87	80.3	Pulse	0.30	3
1	Te		5.33	78.06		Pulse	0.50	3
1	Li		646.68	10.30	106.8	Pulse	0.30	3

Quantitation Report

File Name 062SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:14
Sample Name MP40904-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	15.942	ug/l	1.77	13,081.07	1.392E-01	Pulse	0.50	3
As			1	12.166	ug/l	2.82	991.36	1.055E-02	Pulse	1.00	3
Mo			1	20.095	ug/l	1.48	8,863.46	6.182E-02	Pulse	0.50	3
Pb			1	4.398	ug/l	1.61	12,428.18	5.174E-03	Pulse	1.00	3
Be			1	0.608	ug/l	66.75	3.17	2.432E-05	Pulse	2.00	3
Ag			1	0.078	ug/l	1.03	136.67	4.354E-05	Pulse	0.50	3
Ba			1	64.493	ug/l	1.07	9,183.02	1.090E-02	Pulse	0.50	3
Tl			1	0.119	ug/l	9.66	424.01	1.766E-04	Pulse	0.50	3
Sn			1	0.717	ug/l	15.15	320.01	3.795E-04	Pulse	0.30	3
Sr			1	2437.698	ug/l	0.36	816,235.82	9.685E-01	Pulse	0.50	3
[Pb]			1	4.451	ug/l	5.16	5,872.36	2.446E-03	Pulse	0.50	3
Ca			1	362952.613	ug/l	0.89	671,811.29	5.179E+00	Pulse	0.50	3
Ti			1	94.067	ug/l	2.45	1,451.39	1.119E-02	Pulse	0.50	3
Na			1	279258.485	ug/l	0.95	28,873,768.00	2.226E+02	Analog	1.00	3
Mg			1	27562.317	ug/l	0.74	1,313,026.59	1.012E+01	Pulse	1.00	3
K			1	13996.302	ug/l	1.03	498,031.62	3.839E+00	Pulse	1.00	3
V			1	23.477	ug/l	0.82	13,898.32	1.071E-01	Pulse	0.50	3
Mn			1	132.766	ug/l	0.36	46,409.14	4.940E-01	Pulse	0.50	3
Fe			1	8066.374	ug/l	0.73	4,925,210.67	5.242E+01	Pulse	0.50	3
Co			1	4.599	ug/l	1.70	6,246.36	6.649E-02	Pulse	0.50	3
Ni			1	14.432	ug/l	1.41	5,563.49	5.921E-02	Pulse	0.50	3
Cu			1	14.657	ug/l	3.16	40,247.09	4.284E-01	Pulse	0.50	3
Zn			1	42.599	ug/l	2.45	8,275.79	5.772E-02	Pulse	1.00	3
Cd			1	0.542	ug/l	21.15	121.33	8.456E-04	Pulse	0.50	3
Al			1	11094.893	ug/l	0.83	160,782.03	1.239E+00	Pulse	1.00	3
Se			1	5.857	ug/l	0.91	31.67	2.209E-04	Pulse	3.00	3
Sb			1	1.669	ug/l	3.45	799.02	5.573E-03	Pulse	1.00	3
Se			1	4.633	ug/l	29.30	31.55	2.200E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,401,803.67	1.09	90.1	Pulse	0.50	3
1	Sc		129,733.45	1.20	90.1	Pulse	0.30	3
1	Ge		93,955.57	1.10	88.1	Pulse	0.30	3
1	In		842,819.76	0.87	87.3	Pulse	0.30	3
1	Tb		3,139,121.25	0.70	90.8	Pulse	0.50	3
1	Lu		1,915,723.17	0.50	89.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		143,378.40	0.83	89.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		672.24	1.51	111.0	Pulse	0.30	3

Quantitation Report

File Name 063SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:18
Sample Name MP40904-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	231.469	ug/l	1.71	811,172.71	9.670E+00	Pulse	0.50	3
As			1	232.282	ug/l	1.67	83,315.58	9.932E-01	Pulse	1.00	3
Mo			1	236.077	ug/l	1.76	462,087.91	3.623E+00	Pulse	0.50	3
Pb			1	219.182	ug/l	1.62	2,152,496.63	1.046E+00	Pulse	1.00	3
Be			1	224.866	ug/l	3.61	5,167.32	4.281E-02	Pulse	2.00	3
Ag			1	100.145	ug/l	1.21	699,586.36	2.444E-01	Pulse	0.50	3
Ba			1	274.372	ug/l	0.57	172,445.27	2.316E-01	Pulse	0.50	3
Tl			1	210.910	ug/l	1.28	2,994,854.00	1.456E+00	Pulse	0.50	3
Sn			1	216.613	ug/l	0.92	341,342.59	4.584E-01	Pulse	0.30	3
Sr			1	2674.351	ug/l	0.82	3,954,885.50	5.311E+00	Pulse	0.50	3
[Pb]			1	209.800	ug/l	0.84	973,807.42	4.734E-01	Pulse	0.50	3
Ca			1	372823.295	ug/l	3.34	3,209,607.17	2.660E+01	Pulse	0.50	3
Ti			1	293.753	ug/l	2.33	21,075.65	1.746E-01	Pulse	0.50	3
Na			1	290545.016	ug/l	2.86	139,727,104.00	1.158E+03	Analog	1.00	3
Mg			1	46210.652	ug/l	3.16	10,239,315.67	8.484E+01	Analog	1.00	3
K			1	33393.392	ug/l	2.97	5,356,232.67	4.438E+01	Analog	1.00	3
V			1	227.265	ug/l	3.02	616,601.42	5.108E+00	Pulse	0.50	3
Mn			1	344.513	ug/l	1.59	536,194.42	6.392E+00	Pulse	0.50	3
Fe			1	28867.527	ug/l	2.02	78,257,008.00	9.329E+02	Analog	0.50	3
Co			1	216.581	ug/l	2.13	1,299,675.67	1.549E+01	Pulse	0.50	3
Ni			1	218.358	ug/l	1.71	369,182.51	4.401E+00	Pulse	0.50	3
Cu			1	217.419	ug/l	1.41	1,023,414.63	1.220E+01	Pulse	0.50	3
Zn			1	234.552	ug/l	2.03	155,299.45	1.218E+00	Pulse	1.00	3
Cd			1	201.508	ug/l	2.57	183,983.03	1.442E+00	Pulse	0.50	3
Al			1	29575.605	ug/l	2.64	1,991,570.08	1.650E+01	Pulse	1.00	3
Se			1	207.541	ug/l	1.23	4,542.43	3.561E-02	Pulse	3.00	3
Sb			1	187.525	ug/l	1.68	390,308.11	3.060E+00	Pulse	1.00	3
Se			1	206.301	ug/l	1.92	2,232.80	1.751E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,056,832.75	1.03	77.1	Pulse	0.50	3
1	Sc		120,749.10	2.61	83.9	Pulse	0.30	3
1	Ge		83,883.97	0.80	78.7	Pulse	0.30	3
1	In		744,672.30	1.22	77.1	Pulse	0.30	3
1	Tb		2,862,798.33	1.50	82.8	Pulse	0.50	3
1	Lu		1,758,251.38	1.89	82.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		127,549.94	0.85	79.1	Pulse	0.30	3
1	Te		6.00	57.74		Pulse	0.50	3
1	Li		650.01	16.88	107.3	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:22
Sample Name MP40904-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	216.382	ug/l	0.47	771,239.48	9.040E+00	Pulse	0.50	3
As			1	215.904	ug/l	0.64	78,757.35	9.232E-01	Pulse	1.00	3
Mo			1	221.984	ug/l	1.25	441,138.20	3.407E+00	Pulse	0.50	3
Pb			1	205.154	ug/l	0.45	2,044,391.71	9.795E-01	Pulse	1.00	3
Be			1	212.880	ug/l	2.34	4,943.61	4.053E-02	Pulse	2.00	3
Ag			1	95.627	ug/l	0.15	666,267.19	2.333E-01	Pulse	0.50	3
Ba			1	262.540	ug/l	0.54	165,978.92	2.216E-01	Pulse	0.50	3
Tl			1	195.846	ug/l	0.76	2,821,819.83	1.352E+00	Pulse	0.50	3
Sn			1	203.016	ug/l	0.40	321,799.02	4.296E-01	Pulse	0.30	3
Sr			1	2642.891	ug/l	0.77	3,931,022.67	5.248E+00	Pulse	0.50	3
[Pb]			1	196.312	ug/l	0.80	924,681.81	4.430E-01	Pulse	0.50	3
Ca			1	363994.100	ug/l	0.42	3,166,633.83	2.597E+01	Pulse	0.50	3
Ti			1	273.151	ug/l	1.50	19,797.41	1.623E-01	Pulse	0.50	3
Na			1	286356.655	ug/l	0.86	139,143,653.33	1.141E+03	Analog	1.00	3
Mg			1	44658.304	ug/l	0.85	9,998,536.00	8.199E+01	Analog	1.00	3
K			1	31822.294	ug/l	0.76	5,158,238.50	4.230E+01	Analog	1.00	3
V			1	214.858	ug/l	0.33	589,005.08	4.829E+00	Pulse	0.50	3
Mn			1	324.622	ug/l	0.93	513,835.10	6.023E+00	Pulse	0.50	3
Fe			1	27144.312	ug/l	0.59	74,837,410.67	8.773E+02	Analog	0.50	3
Co			1	202.675	ug/l	0.52	1,236,863.54	1.450E+01	Pulse	0.50	3
Ni			1	204.933	ug/l	1.06	352,350.20	4.131E+00	Pulse	0.50	3
Cu			1	203.554	ug/l	1.49	975,821.79	1.144E+01	Pulse	0.50	3
Zn			1	221.046	ug/l	1.21	148,684.33	1.148E+00	Pulse	1.00	3
Cd			1	186.710	ug/l	1.22	173,073.42	1.336E+00	Pulse	0.50	3
Al			1	27891.081	ug/l	0.53	1,897,644.04	1.556E+01	Pulse	1.00	3
Se			1	195.147	ug/l	2.69	4,335.72	3.349E-02	Pulse	3.00	3
Sb			1	173.012	ug/l	1.43	365,569.10	2.823E+00	Pulse	1.00	3
Se			1	193.482	ug/l	1.73	2,127.12	1.643E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,087,150.96	0.71	78.3	Pulse	0.50	3
1	Sc		121,958.41	0.89	84.7	Pulse	0.30	3
1	Ge		85,312.23	1.33	80.0	Pulse	0.30	3
1	In		749,038.53	0.80	77.6	Pulse	0.30	3
1	Tb		2,855,386.00	1.54	82.6	Pulse	0.50	3
1	Lu		1,749,728.09	1.28	81.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,509.79	1.91	80.3	Pulse	0.30	3
1	Te		3.33	69.28		Pulse	0.50	3
1	Li		690.02	8.55	113.9	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:25
Sample Name MP40904-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	35.851	ug/l	1.19	130,248.61	1.503E+00	Pulse	0.50	3
As			1	32.795	ug/l	1.57	12,162.86	1.404E-01	Pulse	1.00	3
Mo			1	40.910	ug/l	1.10	81,422.85	6.279E-01	Pulse	0.50	3
Pb			1	24.357	ug/l	0.08	244,906.17	1.172E-01	Pulse	1.00	3
Be			1	22.859	ug/l	7.85	532.68	4.353E-03	Pulse	2.00	3
Ag			1	4.697	ug/l	1.42	32,940.48	1.147E-02	Pulse	0.50	3
Ba			1	84.607	ug/l	0.80	53,553.42	7.141E-02	Pulse	0.50	3
Tl			1	19.892	ug/l	1.30	287,034.10	1.373E-01	Pulse	0.50	3
Sn			1	20.456	ug/l	1.72	32,510.94	4.336E-02	Pulse	0.30	3
Sr			1	2454.038	ug/l	0.37	3,654,477.17	4.873E+00	Pulse	0.50	3
[Pb]			1	23.713	ug/l	0.76	112,668.63	5.390E-02	Pulse	0.50	3
Ca			1	348441.176	ug/l	0.20	3,041,628.33	2.486E+01	Pulse	0.50	3
Ti			1	119.618	ug/l	4.58	8,698.70	7.110E-02	Pulse	0.50	3
Na			1	270182.720	ug/l	0.99	131,729,165.33	1.076E+03	Analog	1.00	3
Mg			1	28049.290	ug/l	0.53	6,301,521.00	5.149E+01	Analog	1.00	3
K			1	15210.923	ug/l	0.49	2,482,329.58	2.029E+01	Pulse	1.00	3
V			1	42.982	ug/l	1.21	118,385.33	9.674E-01	Pulse	0.50	3
Mn			1	148.390	ug/l	0.79	238,682.75	2.754E+00	Pulse	0.50	3
Fe			1	9891.295	ug/l	1.49	27,718,905.33	3.199E+02	Analog	0.50	3
Co			1	24.158	ug/l	1.22	149,815.51	1.729E+00	Pulse	0.50	3
Ni			1	32.788	ug/l	2.61	57,345.17	6.617E-01	Pulse	0.50	3
Cu			1	32.169	ug/l	1.63	176,188.85	2.033E+00	Pulse	0.50	3
Zn			1	60.573	ug/l	1.54	42,117.78	3.248E-01	Pulse	1.00	3
Cd			1	19.267	ug/l	1.59	17,890.65	1.380E-01	Pulse	0.50	3
Al			1	12049.683	ug/l	0.66	822,728.40	6.723E+00	Pulse	1.00	3
Se			1	24.993	ug/l	4.90	558.34	4.306E-03	Pulse	3.00	3
Sb			1	19.793	ug/l	0.26	41,892.19	3.231E-01	Pulse	1.00	3
Se			1	24.986	ug/l	1.79	291.12	2.245E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,090,418.12	1.67	78.4	Pulse	0.50	3
1	Sc		122,371.90	0.56	85.0	Pulse	0.30	3
1	Ge		86,666.06	0.85	81.3	Pulse	0.30	3
1	In		749,909.12	0.58	77.7	Pulse	0.30	3
1	Tb		2,872,531.17	1.48	83.1	Pulse	0.50	3
1	Lu		1,756,523.04	1.50	82.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,661.79	0.55	80.4	Pulse	0.30	3
1	Te		4.00	50.00		Pulse	0.50	3
1	Li		737.80	8.40	121.8	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:29
Sample Name FA95973-9F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.673	ug/l	2.69	3,049.58	3.419E-02	Pulse	0.50	3
As			1	0.101	ug/l	15.99	51.67	5.797E-04	Pulse	1.00	3
Mo			1	0.094	ug/l	25.61	214.00	1.598E-03	Pulse	0.50	3
Pb			1	-0.021	ug/l	-42.68	2,094.46	8.795E-04	Pulse	1.00	3
Be			1	0.368	ug/l	35.24	8.67	7.117E-05	Pulse	2.00	3
Ag			1	0.035	ug/l	48.35	269.34	9.038E-05	Pulse	0.50	3
Ba			1	40.398	ug/l	0.73	27,084.24	3.410E-02	Pulse	0.50	3
Tl			1	0.048	ug/l	2.16	810.69	3.402E-04	Pulse	0.50	3
Sn			1	0.263	ug/l	5.01	502.23	6.323E-04	Pulse	0.30	3
Sr			1	15.557	ug/l	1.55	24,819.64	3.125E-02	Pulse	0.50	3
[Pb]			1	-0.008	ug/l	-235.84	1,003.37	4.214E-04	Pulse	0.50	3
Ca			1	1717.694	ug/l	1.44	14,980.41	1.232E-01	Pulse	0.50	3
Ti			1	0.650	ug/l	20.44	48.00	3.953E-04	Pulse	0.50	3
Na			1	7151.521	ug/l	1.42	3,470,667.50	2.855E+01	Pulse	1.00	3
Mg			1	585.503	ug/l	0.70	130,827.81	1.076E+00	Pulse	1.00	3
K			1	1922.181	ug/l	0.75	325,407.17	2.677E+00	Pulse	1.00	3
V			1	0.279	ug/l	10.17	960.69	7.900E-03	Pulse	0.50	3
Mn			1	85.257	ug/l	0.99	141,187.22	1.583E+00	Pulse	0.50	3
Fe			1	19.407	ug/l	2.82	82,487.26	9.249E-01	Pulse	0.50	3
Co			1	4.975	ug/l	1.00	31,803.39	3.566E-01	Pulse	0.50	3
Ni			1	3.273	ug/l	0.83	5,975.61	6.699E-02	Pulse	0.50	3
Cu			1	1.106	ug/l	6.18	29,273.44	3.282E-01	Pulse	0.50	3
Zn			1	19.354	ug/l	2.20	15,200.66	1.133E-01	Pulse	1.00	3
Cd			1	0.017	ug/l	116.15	25.33	1.900E-04	Pulse	0.50	3
Al			1	34.060	ug/l	2.11	2,499.16	2.056E-02	Pulse	1.00	3
Se			1	0.227	ug/l	38.43	7.89	5.892E-05	Pulse	3.00	3
Sb			1	0.070	ug/l	4.70	171.00	1.275E-03	Pulse	1.00	3
Se			1	-0.139	ug/l	-346.18	17.44	1.303E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,382,317.08	1.31	89.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		121,564.82	1.41	84.4	Pulse	0.30	3
1	Ge		89,193.13	0.90	83.6	Pulse	0.30	3
1	In		794,178.41	1.18	82.2	Pulse	0.30	3
1	Tb		2,994,726.58	1.72	86.6	Pulse	0.50	3
1	Lu		1,802,009.63	2.12	84.2	Pulse	0.50	3
1	Ge		134,169.08	1.35	83.2	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		755.58	20.52	124.8	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:33
Sample Name FA95973-10F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.614	ug/l	2.49	2,840.22	3.173E-02	Pulse	0.50	3
As			1	0.111	ug/l	24.19	55.67	6.215E-04	Pulse	1.00	3
Mo			1	0.060	ug/l	35.94	142.00	1.063E-03	Pulse	0.50	3
Pb			1	-0.027	ug/l	-38.52	2,028.79	8.524E-04	Pulse	1.00	3
Be			1	0.501	ug/l	48.56	11.67	9.646E-05	Pulse	2.00	3
Ag			1	0.031	ug/l	28.90	243.33	8.143E-05	Pulse	0.50	3
Ba			1	47.426	ug/l	1.07	31,839.94	4.004E-02	Pulse	0.50	3
Tl			1	0.051	ug/l	4.90	874.69	3.673E-04	Pulse	0.50	3
Sn			1	0.211	ug/l	19.76	415.56	5.229E-04	Pulse	0.30	3
Sr			1	10.353	ug/l	2.62	16,638.03	2.092E-02	Pulse	0.50	3
[Pb]			1	-0.026	ug/l	-12.96	904.03	3.796E-04	Pulse	0.50	3
Ca			1	924.034	ug/l	2.33	8,081.02	6.663E-02	Pulse	0.50	3
Ti			1	0.585	ug/l	9.18	43.33	3.571E-04	Pulse	0.50	3
Na			1	6559.426	ug/l	0.98	3,177,377.83	2.619E+01	Pulse	1.00	3
Mg			1	422.732	ug/l	1.01	94,302.36	7.774E-01	Pulse	1.00	3
K			1	1933.435	ug/l	1.43	326,517.29	2.692E+00	Pulse	1.00	3
V			1	0.281	ug/l	12.34	965.36	7.953E-03	Pulse	0.50	3
Mn			1	195.496	ug/l	0.70	324,801.70	3.628E+00	Pulse	0.50	3
Fe			1	226.222	ug/l	0.33	680,981.25	7.607E+00	Pulse	0.50	3
Co			1	12.398	ug/l	1.05	79,461.92	8.876E-01	Pulse	0.50	3
Ni			1	22.512	ug/l	0.37	40,704.67	4.547E-01	Pulse	0.50	3
Cu			1	0.679	ug/l	15.47	27,284.58	3.048E-01	Pulse	0.50	3
Zn			1	22.885	ug/l	0.45	17,541.63	1.314E-01	Pulse	1.00	3
Cd			1	0.021	ug/l	34.88	29.33	2.197E-04	Pulse	0.50	3
Al			1	18.405	ug/l	6.37	1,434.05	1.182E-02	Pulse	1.00	3
Se			1	0.175	ug/l	28.77	6.67	4.991E-05	Pulse	3.00	3
Sb			1	0.043	ug/l	17.30	109.67	8.216E-04	Pulse	1.00	3
Se			1	-0.391	ug/l	-10.46	14.56	1.091E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,381,041.67	1.19	89.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		121,305.44	0.93	84.2	Pulse	0.30	3
1	Ge		89,524.74	0.45	84.0	Pulse	0.30	3
1	In		795,279.07	1.02	82.4	Pulse	0.30	3
1	Tb		2,993,288.42	1.12	86.6	Pulse	0.50	3
1	Lu		1,800,413.00	1.50	84.1	Pulse	0.50	3
1	Ge		133,466.60	0.88	82.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		737.80	8.14	121.8	Pulse	0.30	3

Quantitation Report

File Name 068SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:37
Sample Name FA96013-1F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.607	ug/l	5.91	2,772.87	3.145E-02	Pulse	0.50	3
As			1	0.087	ug/l	12.19	45.67	5.179E-04	Pulse	1.00	3
Mo			1	0.066	ug/l	49.67	156.67	1.168E-03	Pulse	0.50	3
Pb			1	0.044	ug/l	11.27	2,837.24	1.191E-03	Pulse	1.00	3
Be			1	0.227	ug/l	23.00	5.33	4.438E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	38.05	136.00	4.554E-05	Pulse	0.50	3
Ba			1	23.040	ug/l	0.78	15,349.87	1.945E-02	Pulse	0.50	3
Tl			1	0.014	ug/l	17.26	255.33	1.072E-04	Pulse	0.50	3
Sn			1	0.175	ug/l	4.87	352.23	4.465E-04	Pulse	0.30	3
Sr			1	5.751	ug/l	0.99	9,294.30	1.178E-02	Pulse	0.50	3
[Pb]			1	0.057	ug/l	31.82	1,354.06	5.681E-04	Pulse	0.50	3
Ca			1	312.373	ug/l	1.09	2,766.87	2.300E-02	Pulse	0.50	3
Ti			1	0.766	ug/l	34.95	56.00	4.645E-04	Pulse	0.50	3
Na			1	4487.133	ug/l	0.46	2,158,464.58	1.794E+01	Pulse	1.00	3
Mg			1	173.296	ug/l	0.67	38,445.71	3.195E-01	Pulse	1.00	3
K			1	1888.967	ug/l	0.57	316,812.20	2.633E+00	Pulse	1.00	3
V			1	0.369	ug/l	4.45	1,194.04	9.922E-03	Pulse	0.50	3
Mn			1	4.224	ug/l	2.67	7,029.29	7.973E-02	Pulse	0.50	3
Fe			1	23.201	ug/l	1.81	92,351.40	1.047E+00	Pulse	0.50	3
Co			1	1.290	ug/l	3.99	8,194.43	9.294E-02	Pulse	0.50	3
Ni			1	2.139	ug/l	2.17	3,892.41	4.415E-02	Pulse	0.50	3
Cu			1	0.334	ug/l	4.57	25,201.80	2.858E-01	Pulse	0.50	3
Zn			1	16.729	ug/l	1.20	13,386.98	9.984E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	109.64	16.00	1.194E-04	Pulse	0.50	3
Al			1	58.156	ug/l	1.29	4,090.76	3.400E-02	Pulse	1.00	3
Se			1	0.125	ug/l	37.37	5.55	4.144E-05	Pulse	3.00	3
Sb			1	0.040	ug/l	12.54	104.67	7.806E-04	Pulse	1.00	3
Se			1	-0.003	ug/l	-10288.44	19.00	1.417E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,382,905.83	0.84	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		120,328.15	0.91	83.6	Pulse	0.30	3
1	Ge		88,166.19	0.13	82.7	Pulse	0.30	3
1	In		788,995.52	0.72	81.7	Pulse	0.30	3
1	Tb		2,993,075.08	1.24	86.6	Pulse	0.50	3
1	Lu		1,801,536.88	1.18	84.2	Pulse	0.50	3
1	Ge		134,082.99	0.08	83.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		712.24	12.31	117.6	Pulse	0.30	3

Quantitation Report

File Name	069CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 12:41
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.395	ug/l	0.49	374,223.57	3.880E+00	Pulse	0.50	3
As			1	45.162	ug/l	1.47	37,257.14	3.863E-01	Pulse	1.00	3
Mo			1	45.896	ug/l	0.65	204,444.24	1.409E+00	Pulse	0.50	3
Pb			1	46.028	ug/l	0.56	1,076,706.79	4.401E-01	Pulse	1.00	3
Be			1	51.208	ug/l	1.15	2,544.66	1.950E-02	Pulse	2.00	3
Ag			1	49.153	ug/l	0.33	757,101.27	2.399E-01	Pulse	0.50	3
Ba			1	46.216	ug/l	1.95	66,620.56	7.802E-02	Pulse	0.50	3
Tl			1	47.177	ug/l	0.30	1,593,658.25	6.513E-01	Pulse	0.50	3
Sn			1	48.301	ug/l	1.04	174,591.64	2.045E-01	Pulse	0.30	3
Sr			1	47.420	ug/l	1.15	161,111.83	1.887E-01	Pulse	0.50	3
[Pb]			1	46.096	ug/l	0.48	509,607.09	2.083E-01	Pulse	0.50	3
Ca			1	4553.016	ug/l	2.04	84,849.30	6.503E-01	Pulse	0.50	3
Ti			1	46.067	ug/l	0.25	7,146.00	5.476E-02	Pulse	0.50	3
Na			1	4988.696	ug/l	0.68	5,195,054.50	3.981E+01	Analog	1.00	3
Mg			1	4839.259	ug/l	1.30	2,318,683.75	1.777E+01	Pulse	1.00	3
K			1	4737.587	ug/l	0.97	1,655,270.25	1.269E+01	Pulse	1.00	3
V			1	46.511	ug/l	0.85	272,960.07	2.092E+00	Pulse	0.50	3
Mn			1	46.447	ug/l	0.34	166,332.40	1.725E+00	Pulse	0.50	3
Fe			1	4722.452	ug/l	0.68	29,458,036.00	3.054E+02	Analog	0.50	3
Co			1	46.534	ug/l	1.94	642,150.71	6.658E+00	Pulse	0.50	3
Ni			1	46.551	ug/l	0.95	181,034.32	1.877E+00	Pulse	0.50	3
Cu			1	45.126	ug/l	1.90	503,519.88	5.221E+00	Pulse	0.50	3
Zn			1	46.405	ug/l	1.25	71,145.79	4.902E-01	Pulse	1.00	3
Cd			1	46.383	ug/l	0.93	96,377.89	6.641E-01	Pulse	0.50	3
Al			1	4692.326	ug/l	1.80	683,309.02	5.237E+00	Pulse	1.00	3
Se			1	44.524	ug/l	0.99	2,219.35	1.529E-02	Pulse	3.00	3
Sb			1	45.902	ug/l	0.98	217,421.27	1.498E+00	Pulse	1.00	3
Se			1	44.556	ug/l	0.75	1,109.15	7.643E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,446,691.33	0.92	91.7	Pulse	0.50	3
1	Sc		130,490.36	0.38	90.6	Pulse	0.30	3
1	Ge		96,445.69	1.08	90.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		853,877.93	0.43	88.4	Pulse	0.30	3
1	Tb		3,156,239.00	0.23	91.3	Pulse	0.50	3
1	Lu		1,939,594.16	0.25	90.6	Pulse	0.50	3
1	Ge		145,125.83	0.73	90.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		644.46	5.18	106.4	Pulse	0.30	3

Quantitation Report

File Name 070_CCV.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:44
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.617	ug/l	0.88	795,985.42	8.158E+00	Pulse	0.50	3
As			1	95.553	ug/l	0.82	79,738.42	8.172E-01	Pulse	1.00	3
Mo			1	96.026	ug/l	1.13	433,676.54	2.947E+00	Pulse	0.50	3
Pb			1	97.181	ug/l	1.06	2,251,914.75	9.280E-01	Pulse	1.00	3
Be			1	104.861	ug/l	0.77	5,327.20	3.993E-02	Pulse	2.00	3
Ag			1	101.734	ug/l	0.68	1,571,852.58	4.965E-01	Pulse	0.50	3
Ba			1	97.512	ug/l	1.48	141,120.28	1.646E-01	Pulse	0.50	3
Tl			1	98.918	ug/l	0.63	3,313,883.25	1.366E+00	Pulse	0.50	3
Sn			1	97.396	ug/l	2.54	353,394.16	4.122E-01	Pulse	0.30	3
Sr			1	95.813	ug/l	1.26	326,536.05	3.809E-01	Pulse	0.50	3
[Pb]			1	96.942	ug/l	0.82	1,061,722.71	4.375E-01	Pulse	0.50	3
Ca			1	9551.580	ug/l	2.03	181,878.03	1.363E+00	Pulse	0.50	3
Ti			1	93.728	ug/l	0.88	14,864.35	1.114E-01	Pulse	0.50	3
Na			1	10249.707	ug/l	0.96	10,903,935.33	8.173E+01	Analog	1.00	3
Mg			1	10057.607	ug/l	1.16	4,926,678.17	3.693E+01	Analog	1.00	3
K			1	9818.709	ug/l	0.84	3,488,798.50	2.615E+01	Pulse	1.00	3
V			1	96.338	ug/l	0.98	577,802.94	4.331E+00	Pulse	0.50	3
Mn			1	96.867	ug/l	1.41	350,820.79	3.595E+00	Pulse	0.50	3
Fe			1	9823.558	ug/l	1.17	61,965,450.67	6.350E+02	Analog	0.50	3
Co			1	96.900	ug/l	1.29	1,352,776.12	1.386E+01	Pulse	0.50	3
Ni			1	95.575	ug/l	1.36	375,938.23	3.853E+00	Pulse	0.50	3
Cu			1	95.062	ug/l	1.45	1,044,295.31	1.070E+01	Pulse	0.50	3
Zn			1	96.156	ug/l	0.41	147,261.89	1.001E+00	Pulse	1.00	3
Cd			1	96.418	ug/l	1.12	203,107.58	1.380E+00	Pulse	0.50	3
Al			1	9416.964	ug/l	1.31	1,401,809.33	1.051E+01	Pulse	1.00	3
Se			1	94.683	ug/l	1.19	4,781.82	3.250E-02	Pulse	3.00	3
Sb			1	96.005	ug/l	1.42	461,026.58	3.133E+00	Pulse	1.00	3
Se			1	94.195	ug/l	0.55	2,354.26	1.600E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,426,484.92	0.58	91.0	Pulse	0.50	3
1	Sc		133,416.34	0.80	92.6	Pulse	0.30	3
1	Ge		97,579.13	0.38	91.5	Pulse	0.30	3
1	In		857,378.79	0.46	88.8	Pulse	0.30	3
1	Tb		3,166,140.42	0.77	91.6	Pulse	0.50	3
1	Lu		1,957,704.88	0.99	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		147,146.86	0.28	91.3	Pulse	0.30	3
1	Te		7.33	56.77		Pulse	0.50	3
1	Li		680.02	10.33	112.3	Pulse	0.30	3

Quantitation Report

File Name	071_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 12:48
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.025	ug/l	19.98	798.02	8.217E-03	Pulse	0.50	3
As			1	0.030	ug/l	80.66	39.67	4.062E-04	Pulse	1.00	3
Mo			1	0.173	ug/l	29.91	807.35	5.447E-03	Pulse	0.50	3
Pb			1	0.008	ug/l	77.05	2,613.54	1.054E-03	Pulse	1.00	3
Be			1	0.026	ug/l	74.60	1.50	1.123E-05	Pulse	2.00	3
Ag			1	0.022	ug/l	30.12	362.01	1.152E-04	Pulse	0.50	3
Ba			1	0.025	ug/l	39.60	44.67	5.137E-05	Pulse	0.50	3
Tl			1	0.017	ug/l	32.71	607.35	2.451E-04	Pulse	0.50	3
Sn			1	0.130	ug/l	21.14	544.46	6.253E-04	Pulse	0.30	3
Sr			1	0.015	ug/l	78.92	365.34	4.198E-04	Pulse	0.50	3
[Pb]			1	0.019	ug/l	42.52	1,302.05	5.251E-04	Pulse	0.50	3
Ca			1	7.435	ug/l	16.26	237.33	1.774E-03	Pulse	0.50	3
Ti			1	0.042	ug/l	29.01	8.00	5.974E-05	Pulse	0.50	3
Na			1	18.510	ug/l	4.52	27,963.76	2.090E-01	Pulse	1.00	3
Mg			1	2.091	ug/l	32.89	1,209.04	9.042E-03	Pulse	1.00	3
K			1	7.281	ug/l	15.11	19,972.74	1.493E-01	Pulse	1.00	3
V			1	0.012	ug/l	63.07	289.33	2.163E-03	Pulse	0.50	3
Mn			1	0.066	ug/l	14.19	370.67	3.815E-03	Pulse	0.50	3
Fe			1	1.122	ug/l	60.02	35,962.85	3.704E-01	Pulse	0.50	3
Co			1	0.010	ug/l	86.31	202.67	2.092E-03	Pulse	0.50	3
Ni			1	0.019	ug/l	5.44	174.67	1.798E-03	Pulse	0.50	3
Cu			1	-0.249	ug/l	-7.70	23,336.77	2.402E-01	Pulse	0.50	3
Zn			1	0.753	ug/l	4.66	3,214.94	2.173E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	38.17	30.00	2.030E-04	Pulse	0.50	3
Al			1	2.665	ug/l	16.10	606.01	4.531E-03	Pulse	1.00	3
Se			1	0.256	ug/l	64.03	16.00	1.078E-04	Pulse	3.00	3
Sb			1	0.033	ug/l	7.32	180.33	1.219E-03	Pulse	1.00	3
Se			1	-0.041	ug/l	-272.87	20.00	1.351E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,479,895.92	0.44	93.0	Pulse	0.50	3
1	Sc		133,806.88	0.53	92.9	Pulse	0.30	3
1	Ge		97,159.24	1.57	91.1	Pulse	0.30	3
1	In		870,195.76	0.45	90.1	Pulse	0.30	3
1	Tb		3,149,691.67	1.44	91.1	Pulse	0.50	3
1	Lu		1,931,082.83	1.31	90.2	Pulse	0.50	3
1	Ge		147,968.33	0.87	91.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		674.46	9.40	111.4	Pulse	0.30	3

Quantitation Report

File Name 072SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:52
Sample Name FA96013-2F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.646	ug/l	3.17	2,970.91	3.306E-02	Pulse	0.50	3
As			1	0.099	ug/l	5.73	51.33	5.713E-04	Pulse	1.00	3
Mo			1	0.210	ug/l	23.79	459.34	3.366E-03	Pulse	0.50	3
Pb			1	0.019	ug/l	41.58	2,555.19	1.071E-03	Pulse	1.00	3
Be			1	0.317	ug/l	12.18	7.50	6.148E-05	Pulse	2.00	3
Ag			1	0.050	ug/l	27.91	383.34	1.272E-04	Pulse	0.50	3
Ba			1	36.670	ug/l	0.29	25,073.33	3.096E-02	Pulse	0.50	3
Tl			1	0.049	ug/l	12.96	828.02	3.473E-04	Pulse	0.50	3
Sn			1	0.373	ug/l	4.11	700.02	8.642E-04	Pulse	0.30	3
Sr			1	11.879	ug/l	2.44	19,398.00	2.395E-02	Pulse	0.50	3
[Pb]			1	0.028	ug/l	38.17	1,196.05	5.010E-04	Pulse	0.50	3
Ca			1	998.039	ug/l	3.56	8,773.32	7.191E-02	Pulse	0.50	3
Ti			1	0.656	ug/l	29.79	48.67	3.990E-04	Pulse	0.50	3
Na			1	5036.412	ug/l	0.74	2,455,921.00	2.013E+01	Pulse	1.00	3
Mg			1	402.727	ug/l	1.14	90,380.08	7.407E-01	Pulse	1.00	3
K			1	1982.152	ug/l	1.24	336,343.07	2.756E+00	Pulse	1.00	3
V			1	0.278	ug/l	11.73	962.03	7.886E-03	Pulse	0.50	3
Mn			1	45.536	ug/l	1.10	76,035.69	8.461E-01	Pulse	0.50	3
Fe			1	7.910	ug/l	3.05	49,737.45	5.535E-01	Pulse	0.50	3
Co			1	2.557	ug/l	1.20	16,500.38	1.836E-01	Pulse	0.50	3
Ni			1	2.353	ug/l	4.02	4,355.17	4.847E-02	Pulse	0.50	3
Cu			1	0.339	ug/l	9.00	25,712.44	2.861E-01	Pulse	0.50	3
Zn			1	16.186	ug/l	2.14	13,245.55	9.705E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	36.12	23.33	1.709E-04	Pulse	0.50	3
Al			1	27.825	ug/l	1.42	2,084.11	1.708E-02	Pulse	1.00	3
Se			1	0.415	ug/l	19.32	12.44	9.121E-05	Pulse	3.00	3
Sb			1	0.071	ug/l	16.35	175.33	1.285E-03	Pulse	1.00	3
Se			1	0.364	ug/l	127.50	23.56	1.726E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,386,440.33	1.28	89.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		122,024.32	0.48	84.7	Pulse	0.30	3
1	Ge		89,862.92	0.48	84.3	Pulse	0.30	3
1	In		809,909.03	1.07	83.9	Pulse	0.30	3
1	Tb		3,021,655.00	1.46	87.4	Pulse	0.50	3
1	Lu		1,835,091.54	2.13	85.8	Pulse	0.50	3
1	Ge		136,478.79	0.35	84.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		670.01	9.32	110.6	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 12:56
Sample Name FA96013-3F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.522	ug/l	65.03	6,124.88	6.965E-02	Pulse	0.50	3
As			1	0.336	ug/l	6.49	139.67	1.581E-03	Pulse	1.00	3
Mo			1	0.176	ug/l	33.62	378.69	2.855E-03	Pulse	0.50	3
Pb			1	0.162	ug/l	3.76	4,162.51	1.753E-03	Pulse	1.00	3
Be			1	0.220	ug/l	37.31	5.17	4.309E-05	Pulse	2.00	3
Ag			1	0.022	ug/l	21.68	179.33	5.994E-05	Pulse	0.50	3
Ba			1	23.868	ug/l	1.97	16,065.80	2.015E-02	Pulse	0.50	3
Tl			1	0.021	ug/l	0.33	366.68	1.544E-04	Pulse	0.50	3
Sn			1	0.283	ug/l	12.32	537.79	6.744E-04	Pulse	0.30	3
Sr			1	3.171	ug/l	3.35	5,305.43	6.656E-03	Pulse	0.50	3
[Pb]			1	0.155	ug/l	17.98	1,872.11	7.881E-04	Pulse	0.50	3
Ca			1	246.064	ug/l	4.42	2,186.80	1.827E-02	Pulse	0.50	3
Ti			1	0.480	ug/l	23.68	35.33	2.948E-04	Pulse	0.50	3
Na			1	7352.093	ug/l	0.38	3,514,760.33	2.935E+01	Pulse	1.00	3
Mg			1	129.168	ug/l	0.69	28,557.95	2.385E-01	Pulse	1.00	3
K			1	532.857	ug/l	1.08	100,106.29	8.361E-01	Pulse	1.00	3
V			1	0.743	ug/l	4.14	2,194.80	1.833E-02	Pulse	0.50	3
Mn			1	6.862	ug/l	1.52	11,366.69	1.287E-01	Pulse	0.50	3
Fe			1	809.603	ug/l	0.61	2,336,706.17	2.645E+01	Pulse	0.50	3
Co			1	1.048	ug/l	1.88	6,682.51	7.565E-02	Pulse	0.50	3
Ni			1	1.631	ug/l	3.73	2,995.58	3.392E-02	Pulse	0.50	3
Cu			1	-0.358	ug/l	-18.69	21,889.76	2.478E-01	Pulse	0.50	3
Zn			1	14.731	ug/l	0.99	11,898.68	8.959E-02	Pulse	1.00	3
Cd			1	-0.006	ug/l	-37.18	4.00	3.006E-05	Pulse	0.50	3
Al			1	47.475	ug/l	4.05	3,357.96	2.804E-02	Pulse	1.00	3
Se			1	0.342	ug/l	27.95	10.44	7.868E-05	Pulse	3.00	3
Sb			1	0.052	ug/l	11.57	130.33	9.810E-04	Pulse	1.00	3
Se			1	0.210	ug/l	182.16	21.22	1.597E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,374,609.25	0.81	89.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		119,742.58	0.77	83.2	Pulse	0.30	3
1	Ge		88,332.80	1.65	82.8	Pulse	0.30	3
1	In		797,103.49	0.59	82.5	Pulse	0.30	3
1	Tb		2,995,296.25	0.89	86.7	Pulse	0.50	3
1	Lu		1,812,214.96	1.50	84.7	Pulse	0.50	3
1	Ge		132,817.50	0.67	82.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		614.46	8.43	101.5	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:00
Sample Name	FA96013-4F
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.696	ug/l	11.34	3,030.91	3.514E-02	Pulse	0.50	3
As			1	0.104	ug/l	25.61	51.00	5.914E-04	Pulse	1.00	3
Mo			1	0.183	ug/l	12.80	387.34	2.962E-03	Pulse	0.50	3
Pb			1	0.059	ug/l	5.55	2,955.93	1.262E-03	Pulse	1.00	3
Be			1	0.184	ug/l	19.48	4.33	3.624E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	21.67	149.33	5.068E-05	Pulse	0.50	3
Ba			1	30.814	ug/l	1.00	20,362.80	2.602E-02	Pulse	0.50	3
Tl			1	0.032	ug/l	9.92	552.68	2.358E-04	Pulse	0.50	3
Sn			1	0.202	ug/l	23.37	394.45	5.039E-04	Pulse	0.30	3
Sr			1	12.980	ug/l	2.38	20,453.76	2.613E-02	Pulse	0.50	3
[Pb]			1	0.073	ug/l	36.02	1,409.40	6.024E-04	Pulse	0.50	3
Ca			1	1445.960	ug/l	2.04	12,443.98	1.039E-01	Pulse	0.50	3
Ti			1	0.538	ug/l	21.17	39.33	3.289E-04	Pulse	0.50	3
Na			1	6791.685	ug/l	1.42	3,248,564.83	2.712E+01	Pulse	1.00	3
Mg			1	159.468	ug/l	2.08	35,231.20	2.941E-01	Pulse	1.00	3
K			1	1518.071	ug/l	1.65	256,510.45	2.142E+00	Pulse	1.00	3
V			1	0.520	ug/l	5.80	1,595.41	1.332E-02	Pulse	0.50	3
Mn			1	16.013	ug/l	2.17	25,749.03	2.984E-01	Pulse	0.50	3
Fe			1	6.942	ug/l	8.42	45,048.66	5.222E-01	Pulse	0.50	3
Co			1	1.557	ug/l	3.76	9,667.10	1.120E-01	Pulse	0.50	3
Ni			1	1.740	ug/l	1.85	3,115.60	3.611E-02	Pulse	0.50	3
Cu			1	0.298	ug/l	45.40	24,492.22	2.839E-01	Pulse	0.50	3
Zn			1	14.451	ug/l	1.64	11,525.12	8.815E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	644.14	10.00	7.652E-05	Pulse	0.50	3
Al			1	8.958	ug/l	4.22	785.02	6.555E-03	Pulse	1.00	3
Se			1	0.166	ug/l	94.05	6.33	4.837E-05	Pulse	3.00	3
Sb			1	0.042	ug/l	16.54	106.00	8.106E-04	Pulse	1.00	3
Se			1	-0.304	ug/l	-32.56	15.22	1.164E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,341,730.25	1.47	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		119,799.52	1.65	83.2	Pulse	0.30	3
1	Ge		86,293.17	0.97	80.9	Pulse	0.30	3
1	In		782,793.29	1.41	81.1	Pulse	0.30	3
1	Tb		2,947,626.50	1.41	85.3	Pulse	0.50	3
1	Lu		1,786,184.96	1.79	83.5	Pulse	0.50	3
1	Ge		130,734.55	0.58	81.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		701.13	8.09	115.8	Pulse	0.30	3

Quantitation Report

File Name	075SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:03
Sample Name	FA96013-5F
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.638	ug/l	5.37	2,816.88	3.274E-02	Pulse	0.50	3
As			1	0.090	ug/l	20.42	45.67	5.308E-04	Pulse	1.00	3
Mo			1	0.047	ug/l	69.80	112.00	8.729E-04	Pulse	0.50	3
Pb			1	-0.025	ug/l	-32.28	1,977.12	8.616E-04	Pulse	1.00	3
Be			1	0.453	ug/l	2.67	10.17	8.731E-05	Pulse	2.00	3
Ag			1	0.037	ug/l	1.04	277.33	9.608E-05	Pulse	0.50	3
Ba			1	70.870	ug/l	0.35	45,776.27	5.982E-02	Pulse	0.50	3
Tl			1	0.037	ug/l	2.99	609.34	2.655E-04	Pulse	0.50	3
Sn			1	1.148	ug/l	144.60	1,917.74	2.506E-03	Pulse	0.30	3
Sr			1	18.978	ug/l	0.25	29,111.74	3.804E-02	Pulse	0.50	3
[Pb]			1	-0.006	ug/l	-20.92	978.70	4.264E-04	Pulse	0.50	3
Ca			1	1607.836	ug/l	0.70	13,436.61	1.154E-01	Pulse	0.50	3
Ti			1	0.505	ug/l	24.89	36.00	3.092E-04	Pulse	0.50	3
Na			1	11195.450	ug/l	0.84	5,200,421.83	4.467E+01	Analog	1.00	3
Mg			1	780.966	ug/l	1.12	167,088.47	1.435E+00	Pulse	1.00	3
K			1	2679.489	ug/l	0.61	428,524.70	3.680E+00	Pulse	1.00	3
V			1	0.329	ug/l	7.39	1,050.03	9.018E-03	Pulse	0.50	3
Mn			1	100.428	ug/l	2.46	160,437.15	1.864E+00	Pulse	0.50	3
Fe			1	5.705	ug/l	10.16	41,485.58	4.822E-01	Pulse	0.50	3
Co			1	9.181	ug/l	2.60	56,575.45	6.575E-01	Pulse	0.50	3
Ni			1	5.335	ug/l	3.21	9,340.28	1.086E-01	Pulse	0.50	3
Cu			1	0.279	ug/l	38.63	24,336.01	2.828E-01	Pulse	0.50	3
Zn			1	19.118	ug/l	3.45	14,402.05	1.121E-01	Pulse	1.00	3
Cd			1	0.034	ug/l	24.63	40.00	3.109E-04	Pulse	0.50	3
Al			1	39.664	ug/l	2.90	2,757.53	2.368E-02	Pulse	1.00	3
Se			1	0.141	ug/l	40.34	5.67	4.415E-05	Pulse	3.00	3
Sb			1	0.021	ug/l	42.97	60.67	4.729E-04	Pulse	1.00	3
Se			1	-0.197	ug/l	-100.78	16.11	1.254E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,295,201.00	1.15	86.1	Pulse	0.50	3
1	Sc		116,432.85	0.27	80.9	Pulse	0.30	3
1	Ge		86,081.36	2.28	80.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		765,203.82	0.78	79.2	Pulse	0.30	3
1	Tb		2,886,133.42	1.35	83.5	Pulse	0.50	3
1	Lu		1,770,542.16	1.78	82.7	Pulse	0.50	3
1	Ge		128,498.20	0.98	79.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		686.68	14.43	113.4	Pulse	0.30	3

Quantitation Report

File Name 076SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 13:07
Sample Name FA96171-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.777	ug/l	2.81	3,268.95	3.854E-02	Pulse	0.50	3
As			1	4.549	ug/l	2.58	1,662.41	1.960E-02	Pulse	1.00	3
Mo			1	0.229	ug/l	9.33	474.01	3.662E-03	Pulse	0.50	3
Pb			1	0.003	ug/l	448.36	2,210.48	9.922E-04	Pulse	1.00	3
Be			1	-0.006	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.015	ug/l	31.15	118.67	4.132E-05	Pulse	0.50	3
Ba			1	15.179	ug/l	1.30	9,691.28	1.282E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	38.89	46.67	2.096E-05	Pulse	0.50	3
Sn			1	0.201	ug/l	2.57	378.90	5.013E-04	Pulse	0.30	3
Sr			1	275.321	ug/l	0.36	413,577.05	5.471E-01	Pulse	0.50	3
[Pb]			1	0.014	ug/l	74.55	1,048.04	4.704E-04	Pulse	0.50	3
Ca			1	36155.765	ug/l	1.48	299,918.24	2.580E+00	Pulse	0.50	3
Ti			1	0.449	ug/l	40.34	32.00	2.758E-04	Pulse	0.50	3
Na			1	22872.674	ug/l	0.90	10,601,578.67	9.119E+01	Analog	1.00	3
Mg			1	5279.943	ug/l	0.95	1,127,077.21	9.694E+00	Pulse	1.00	3
K			1	6799.364	ug/l	1.32	1,062,546.25	9.140E+00	Pulse	1.00	3
V			1	0.348	ug/l	2.16	1,099.37	9.457E-03	Pulse	0.50	3
Mn			1	5.790	ug/l	1.01	9,224.88	1.088E-01	Pulse	0.50	3
Fe			1	120.182	ug/l	0.71	354,585.58	4.181E+00	Pulse	0.50	3
Co			1	0.217	ug/l	2.92	1,376.72	1.623E-02	Pulse	0.50	3
Ni			1	5.474	ug/l	1.02	9,446.34	1.114E-01	Pulse	0.50	3
Cu			1	10.893	ug/l	0.90	73,395.29	8.653E-01	Pulse	0.50	3
Zn			1	4.489	ug/l	0.97	4,795.27	3.704E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-1468.17	8.67	6.686E-05	Pulse	0.50	3
Al			1	2.388	ug/l	27.93	336.00	2.890E-03	Pulse	1.00	3
Se			1	0.194	ug/l	20.80	6.89	5.324E-05	Pulse	3.00	3
Sb			1	0.057	ug/l	27.34	135.67	1.049E-03	Pulse	1.00	3
Se			1	-0.605	ug/l	-36.06	11.78	9.102E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,228,809.83	1.16	83.6	Pulse	0.50	3
1	Sc		116,268.59	1.18	80.7	Pulse	0.30	3
1	Ge		84,821.30	1.55	79.5	Pulse	0.30	3
1	In		755,996.17	0.93	78.3	Pulse	0.30	3
1	Tb		2,880,365.67	1.62	83.3	Pulse	0.50	3
1	Lu		1,762,962.04	1.58	82.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		129,476.07	0.85	80.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		647.79	11.35	107.0	Pulse	0.30	3

Quantitation Report

File Name 077SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 13:11
Sample Name FA96171-2A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.898	ug/l	6.25	3,655.69	4.358E-02	Pulse	0.50	3
As			1	1487.639	ug/l	0.54	533,418.48	6.360E+00	Pulse	1.00	3
Mo			1	1.400	ug/l	0.76	2,711.54	2.164E-02	Pulse	0.50	3
Pb			1	-0.030	ug/l	-11.84	1,843.77	8.370E-04	Pulse	1.00	3
Be			1	0.032	ug/l	108.47	0.83	7.299E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	31.06	120.00	4.188E-05	Pulse	0.50	3
Ba			1	51.347	ug/l	1.83	32,117.07	4.334E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	9.23	104.67	4.754E-05	Pulse	0.50	3
Sn			1	0.214	ug/l	29.45	393.34	5.289E-04	Pulse	0.30	3
Sr			1	379.112	ug/l	1.17	558,128.21	7.532E-01	Pulse	0.50	3
[Pb]			1	-0.028	ug/l	-27.16	829.36	3.766E-04	Pulse	0.50	3
Ca			1	46504.047	ug/l	0.23	379,886.05	3.318E+00	Pulse	0.50	3
Ti			1	0.748	ug/l	18.50	52.00	4.535E-04	Pulse	0.50	3
Na			1	13782.304	ug/l	0.48	6,293,772.33	5.497E+01	Analog	1.00	3
Mg			1	6917.044	ug/l	0.19	1,454,068.79	1.270E+01	Pulse	1.00	3
K			1	8329.460	ug/l	0.23	1,278,565.25	1.117E+01	Pulse	1.00	3
V			1	0.602	ug/l	7.17	1,734.08	1.515E-02	Pulse	0.50	3
Mn			1	2148.230	ug/l	0.84	3,342,571.42	3.985E+01	Pulse	0.50	3
Fe			1	69141.809	ug/l	0.70	187,371,456.00	2.234E+03	Analog	0.50	3
Co			1	17.850	ug/l	1.65	107,154.61	1.278E+00	Pulse	0.50	3
Ni			1	7.577	ug/l	1.38	12,892.34	1.537E-01	Pulse	0.50	3
Cu			1	-1.599	ug/l	-2.69	15,073.23	1.797E-01	Pulse	0.50	3
Zn			1	7.403	ug/l	0.58	6,515.11	5.199E-02	Pulse	1.00	3
Cd			1	-0.006	ug/l	-55.20	3.33	2.646E-05	Pulse	0.50	3
Al			1	8.367	ug/l	2.19	712.68	6.225E-03	Pulse	1.00	3
Se			1	0.219	ug/l	42.37	7.22	5.758E-05	Pulse	3.00	3
Sb			1	0.097	ug/l	6.59	214.00	1.707E-03	Pulse	1.00	3
Se			1	0.061	ug/l	219.96	18.44	1.471E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,202,899.33	1.42	82.6	Pulse	0.50	3
1	Sc		114,496.41	1.25	79.5	Pulse	0.30	3
1	Ge		83,867.15	0.90	78.7	Pulse	0.30	3
1	In		741,166.20	2.19	76.8	Pulse	0.30	3
1	Tb		2,872,101.92	1.55	83.1	Pulse	0.50	3
1	Lu		1,748,145.79	1.89	81.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		125,325.50	0.96	77.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		632.24	4.48	104.4	Pulse	0.30	3

Quantitation Report

File Name 078SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 13:15
Sample Name FA96171-3A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.758	ug/l	5.58	3,258.28	3.774E-02	Pulse	0.50	3
As			1	2876.132	ug/l	0.49	1,061,235.17	1.230E+01	Pulse	1.00	3
Mo			1	2.099	ug/l	3.89	4,230.50	3.235E-02	Pulse	0.50	3
Pb			1	-0.025	ug/l	-18.20	1,961.45	8.602E-04	Pulse	1.00	3
Be			1	0.009	ug/l	291.94	0.33	2.856E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	13.63	108.67	3.706E-05	Pulse	0.50	3
Ba			1	13.982	ug/l	1.44	9,022.28	1.181E-02	Pulse	0.50	3
Tl			1	0.009	ug/l	5.10	164.00	7.195E-05	Pulse	0.50	3
Sn			1	0.136	ug/l	2.38	277.78	3.636E-04	Pulse	0.30	3
Sr			1	166.368	ug/l	1.45	252,592.33	3.307E-01	Pulse	0.50	3
[Pb]			1	-0.013	ug/l	-123.56	934.03	4.094E-04	Pulse	0.50	3
Ca			1	23438.966	ug/l	0.97	195,451.18	1.673E+00	Pulse	0.50	3
Ti			1	0.512	ug/l	28.46	36.67	3.136E-04	Pulse	0.50	3
Na			1	6158.922	ug/l	0.83	2,874,434.08	2.460E+01	Pulse	1.00	3
Mg			1	2958.260	ug/l	0.93	634,759.05	5.432E+00	Pulse	1.00	3
K			1	3466.179	ug/l	0.50	551,874.73	4.723E+00	Pulse	1.00	3
V			1	0.249	ug/l	8.94	845.35	7.233E-03	Pulse	0.50	3
Mn			1	2391.072	ug/l	0.53	3,828,365.58	4.436E+01	Pulse	0.50	3
Fe			1	40147.058	ug/l	0.83	111,967,728.00	1.297E+03	Analog	0.50	3
Co			1	13.789	ug/l	0.19	85,189.93	9.871E-01	Pulse	0.50	3
Ni			1	13.640	ug/l	11.68	23,828.83	2.759E-01	Pulse	0.50	3
Cu			1	-1.772	ug/l	-0.69	14,691.60	1.702E-01	Pulse	0.50	3
Zn			1	2.610	ug/l	6.16	3,581.67	2.740E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	326.15	12.00	9.190E-05	Pulse	0.50	3
Al			1	5.797	ug/l	8.27	560.01	4.792E-03	Pulse	1.00	3
Se			1	0.151	ug/l	63.21	6.00	4.581E-05	Pulse	3.00	3
Sb			1	0.163	ug/l	10.24	364.33	2.786E-03	Pulse	1.00	3
Se			1	0.212	ug/l	133.54	20.89	1.598E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,280,006.17	1.26	85.5	Pulse	0.50	3
1	Sc		116,851.97	0.35	81.1	Pulse	0.30	3
1	Ge		86,306.68	0.93	80.9	Pulse	0.30	3
1	In		763,872.40	1.23	79.1	Pulse	0.30	3
1	Tb		2,929,051.42	1.43	84.7	Pulse	0.50	3
1	Lu		1,783,137.46	1.25	83.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		130,749.17	0.82	81.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		640.01	10.14	105.7	Pulse	0.30	3

Quantitation Report

File Name	079SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:19
Sample Name	FA96096-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.886	ug/l	4.06	3,712.37	4.309E-02	Pulse	0.50	3
As			1	3.099	ug/l	2.71	1,154.37	1.340E-02	Pulse	1.00	3
Mo			1	0.054	ug/l	30.88	128.00	9.714E-04	Pulse	0.50	3
Pb			1	1.125	ug/l	1.17	14,579.54	6.346E-03	Pulse	1.00	3
Be			1	0.149	ug/l	64.22	3.50	2.960E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	20.90	130.00	4.434E-05	Pulse	0.50	3
Ba			1	41.218	ug/l	0.61	26,884.59	3.480E-02	Pulse	0.50	3
Tl			1	0.033	ug/l	12.14	547.34	2.382E-04	Pulse	0.50	3
Sn			1	0.146	ug/l	6.49	296.67	3.841E-04	Pulse	0.30	3
Sr			1	18.070	ug/l	1.85	28,000.72	3.624E-02	Pulse	0.50	3
[Pb]			1	1.178	ug/l	2.52	7,110.16	3.095E-03	Pulse	0.50	3
Ca			1	1921.768	ug/l	1.74	16,269.43	1.378E-01	Pulse	0.50	3
Ti			1	0.497	ug/l	23.86	36.00	3.044E-04	Pulse	0.50	3
Na			1	2768.441	ug/l	1.40	1,309,478.13	1.109E+01	Pulse	1.00	3
Mg			1	1191.240	ug/l	0.89	258,367.36	2.188E+00	Pulse	1.00	3
K			1	1971.803	ug/l	1.47	323,816.55	2.743E+00	Pulse	1.00	3
V			1	0.246	ug/l	2.42	844.02	7.147E-03	Pulse	0.50	3
Mn			1	71.516	ug/l	1.40	114,421.83	1.328E+00	Pulse	0.50	3
Fe			1	10054.606	ug/l	1.10	28,013,212.67	3.251E+02	Analog	0.50	3
Co			1	1.774	ug/l	1.10	10,993.14	1.276E-01	Pulse	0.50	3
Ni			1	1.600	ug/l	0.74	2,867.56	3.328E-02	Pulse	0.50	3
Cu			1	14.596	ug/l	0.70	92,069.87	1.069E+00	Pulse	0.50	3
Zn			1	37.579	ug/l	0.68	27,187.10	2.068E-01	Pulse	1.00	3
Cd			1	-0.001	ug/l	-1215.46	8.67	6.634E-05	Pulse	0.50	3
Al			1	9.485	ug/l	17.39	809.36	6.849E-03	Pulse	1.00	3
Se			1	0.198	ug/l	54.71	7.11	5.400E-05	Pulse	3.00	3
Sb			1	0.027	ug/l	34.38	73.67	5.589E-04	Pulse	1.00	3
Se			1	-0.309	ug/l	-69.78	15.22	1.160E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,297,256.50	0.97	86.1	Pulse	0.50	3
1	Sc		118,078.71	1.46	82.0	Pulse	0.30	3
1	Ge		86,158.24	0.23	80.8	Pulse	0.30	3
1	In		772,665.63	1.26	80.0	Pulse	0.30	3
1	Tb		2,927,946.08	1.45	84.7	Pulse	0.50	3
1	Lu		1,788,225.54	1.70	83.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		131,452.89	1.47	81.6	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		690.02	17.56	113.9	Pulse	0.30	3

Quantitation Report

File Name	080SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:22
Sample Name	FA96113-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.659	ug/l	5.10	2,849.55	3.360E-02	Pulse	0.50	3
As			1	0.211	ug/l	18.39	88.67	1.048E-03	Pulse	1.00	3
Mo			1	0.039	ug/l	53.79	95.33	7.439E-04	Pulse	0.50	3
Pb			1	-0.053	ug/l	-2.97	1,646.08	7.262E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1049.70	0.17	1.391E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	6.90	82.00	2.833E-05	Pulse	0.50	3
Ba			1	0.057	ug/l	31.31	44.00	5.765E-05	Pulse	0.50	3
Tl			1	0.001	ug/l	67.12	42.67	1.887E-05	Pulse	0.50	3
Sn			1	0.096	ug/l	30.88	213.34	2.794E-04	Pulse	0.30	3
Sr			1	0.069	ug/l	21.75	378.68	4.979E-04	Pulse	0.50	3
[Pb]			1	-0.036	ug/l	-29.11	807.35	3.566E-04	Pulse	0.50	3
Ca			1	26.628	ug/l	19.74	312.67	2.612E-03	Pulse	0.50	3
Ti			1	0.145	ug/l	32.46	11.33	9.547E-05	Pulse	0.50	3
Na			1	22.883	ug/l	5.52	18,188.24	1.527E-01	Pulse	1.00	3
Mg			1	1.143	ug/l	15.56	411.67	3.461E-03	Pulse	1.00	3
K			1	26.768	ug/l	7.25	19,720.15	1.654E-01	Pulse	1.00	3
V			1	0.195	ug/l	9.02	716.02	6.004E-03	Pulse	0.50	3
Mn			1	0.368	ug/l	6.73	696.02	8.198E-03	Pulse	0.50	3
Fe			1	6.330	ug/l	2.04	42,611.97	5.024E-01	Pulse	0.50	3
Co			1	0.020	ug/l	18.20	182.00	2.148E-03	Pulse	0.50	3
Ni			1	0.054	ug/l	25.85	182.00	2.144E-03	Pulse	0.50	3
Cu			1	-1.624	ug/l	-2.55	15,129.95	1.783E-01	Pulse	0.50	3
Zn			1	1.625	ug/l	7.18	2,881.89	2.234E-02	Pulse	1.00	3
Cd			1	-0.008	ug/l	-15.16	1.33	1.046E-05	Pulse	0.50	3
Al			1	2.185	ug/l	13.83	330.67	2.777E-03	Pulse	1.00	3
Se			1	0.040	ug/l	202.13	3.44	2.684E-05	Pulse	3.00	3
Sb			1	0.012	ug/l	53.37	41.33	3.216E-04	Pulse	1.00	3
Se			1	-0.346	ug/l	-95.90	14.56	1.129E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,266,515.25	2.31	85.0	Pulse	0.50	3
1	Sc		119,228.32	4.07	82.8	Pulse	0.30	3
1	Ge		84,824.61	2.44	79.6	Pulse	0.30	3
1	In		761,308.17	2.48	78.8	Pulse	0.30	3
1	Tb		2,894,225.00	2.77	83.7	Pulse	0.50	3
1	Lu		1,751,053.79	2.60	81.8	Pulse	0.50	3
1	Ge		129,057.97	2.43	80.1	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		720.02	11.41	118.9	Pulse	0.30	3

Quantitation Report

File Name	081SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:26
Sample Name	FA96113-2FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.718	ug/l	4.46	3,160.27	3.609E-02	Pulse	0.50	3
As			1	0.109	ug/l	19.17	53.67	6.126E-04	Pulse	1.00	3
Mo			1	0.047	ug/l	48.09	114.67	8.638E-04	Pulse	0.50	3
Pb			1	-0.070	ug/l	-6.44	1,482.40	6.450E-04	Pulse	1.00	3
Be			1	0.008	ug/l	299.35	0.33	2.756E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	15.11	86.00	2.915E-05	Pulse	0.50	3
Ba			1	0.154	ug/l	17.55	109.33	1.396E-04	Pulse	0.50	3
Tl			1	0.000	ug/l	124.91	34.67	1.506E-05	Pulse	0.50	3
Sn			1	0.096	ug/l	17.60	218.89	2.797E-04	Pulse	0.30	3
Sr			1	0.088	ug/l	22.49	418.01	5.342E-04	Pulse	0.50	3
[Pb]			1	-0.067	ug/l	-8.02	660.69	2.875E-04	Pulse	0.50	3
Ca			1	33.160	ug/l	10.76	370.01	3.078E-03	Pulse	0.50	3
Ti			1	0.134	ug/l	32.17	10.67	8.874E-05	Pulse	0.50	3
Na			1	24.166	ug/l	2.75	18,969.96	1.578E-01	Pulse	1.00	3
Mg			1	10.634	ug/l	1.57	2,511.16	2.089E-02	Pulse	1.00	3
K			1	29.818	ug/l	9.06	20,377.48	1.695E-01	Pulse	1.00	3
V			1	0.185	ug/l	3.13	696.02	5.790E-03	Pulse	0.50	3
Mn			1	0.282	ug/l	17.17	578.01	6.604E-03	Pulse	0.50	3
Fe			1	13.991	ug/l	13.09	65,682.28	7.499E-01	Pulse	0.50	3
Co			1	0.005	ug/l	58.41	90.67	1.035E-03	Pulse	0.50	3
Ni			1	0.080	ug/l	21.04	232.67	2.658E-03	Pulse	0.50	3
Cu			1	-1.626	ug/l	-5.40	15,606.33	1.782E-01	Pulse	0.50	3
Zn			1	0.349	ug/l	24.45	2,092.45	1.579E-02	Pulse	1.00	3
Cd			1	-0.007	ug/l	-34.60	2.67	2.005E-05	Pulse	0.50	3
Al			1	1.691	ug/l	7.81	300.67	2.501E-03	Pulse	1.00	3
Se			1	0.050	ug/l	168.24	3.78	2.854E-05	Pulse	3.00	3
Sb			1	0.009	ug/l	48.30	36.67	2.764E-04	Pulse	1.00	3
Se			1	-0.471	ug/l	-23.59	13.56	1.023E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,298,707.25	0.87	86.2	Pulse	0.50	3
1	Sc		120,226.59	0.51	83.5	Pulse	0.30	3
1	Ge		87,565.74	0.46	82.1	Pulse	0.30	3
1	In		782,530.11	0.81	81.0	Pulse	0.30	3
1	Tb		2,952,399.25	1.88	85.4	Pulse	0.50	3
1	Lu		1,796,403.25	0.68	84.0	Pulse	0.50	3
1	Ge		132,504.39	0.71	82.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		680.02	10.13	112.3	Pulse	0.30	3

Quantitation Report

File Name	082CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:30
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.824	ug/l	1.33	379,888.47	3.916E+00	Pulse	0.50	3
As			1	45.326	ug/l	1.53	37,607.81	3.877E-01	Pulse	1.00	3
Mo			1	45.829	ug/l	0.72	206,269.43	1.407E+00	Pulse	0.50	3
Pb			1	46.208	ug/l	0.92	1,075,231.79	4.418E-01	Pulse	1.00	3
Be			1	49.603	ug/l	1.71	2,515.49	1.889E-02	Pulse	2.00	3
Ag			1	49.378	ug/l	1.18	759,738.68	2.410E-01	Pulse	0.50	3
Ba			1	46.682	ug/l	0.89	67,745.34	7.880E-02	Pulse	0.50	3
Tl			1	47.209	ug/l	1.14	1,586,386.17	6.518E-01	Pulse	0.50	3
Sn			1	48.402	ug/l	1.24	176,148.38	2.049E-01	Pulse	0.30	3
Sr			1	48.339	ug/l	0.39	165,332.67	1.923E-01	Pulse	0.50	3
[Pb]			1	46.288	ug/l	0.54	509,036.77	2.091E-01	Pulse	0.50	3
Ca			1	4579.965	ug/l	1.05	87,116.56	6.541E-01	Pulse	0.50	3
Ti			1	46.359	ug/l	0.99	7,340.73	5.511E-02	Pulse	0.50	3
Na			1	4932.680	ug/l	1.59	5,242,409.17	3.937E+01	Analog	1.00	3
Mg			1	4826.158	ug/l	1.95	2,359,976.58	1.772E+01	Pulse	1.00	3
K			1	4752.876	ug/l	1.05	1,694,768.71	1.273E+01	Pulse	1.00	3
V			1	46.118	ug/l	2.15	276,208.48	2.074E+00	Pulse	0.50	3
Mn			1	46.730	ug/l	1.60	168,317.79	1.735E+00	Pulse	0.50	3
Fe			1	4752.122	ug/l	1.62	29,814,686.67	3.074E+02	Analog	0.50	3
Co			1	46.870	ug/l	1.61	650,516.31	6.706E+00	Pulse	0.50	3
Ni			1	46.487	ug/l	2.06	181,828.29	1.874E+00	Pulse	0.50	3
Cu			1	45.252	ug/l	1.34	507,806.14	5.235E+00	Pulse	0.50	3
Zn			1	46.038	ug/l	1.55	71,330.82	4.865E-01	Pulse	1.00	3
Cd			1	46.299	ug/l	1.95	97,196.01	6.629E-01	Pulse	0.50	3
Al			1	4723.320	ug/l	1.86	702,020.73	5.271E+00	Pulse	1.00	3
Se			1	45.102	ug/l	1.42	2,271.47	1.549E-02	Pulse	3.00	3
Sb			1	45.758	ug/l	1.85	218,980.14	1.493E+00	Pulse	1.00	3
Se			1	43.986	ug/l	1.86	1,106.70	7.547E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,433,828.67	0.46	91.3	Pulse	0.50	3
1	Sc		133,188.46	1.51	92.5	Pulse	0.30	3
1	Ge		97,015.23	1.70	91.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		859,646.34	1.46	89.0	Pulse	0.30	3
1	Tb		3,152,865.75	0.28	91.2	Pulse	0.50	3
1	Lu		1,946,801.21	0.27	91.0	Pulse	0.50	3
1	Ge		146,637.21	0.31	91.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		598.90	5.17	98.9	Pulse	0.30	3

Quantitation Report

File Name	083_CCV.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:34
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.924	ug/l	0.98	790,492.63	8.183E+00	Pulse	0.50	3
As			1	95.422	ug/l	0.56	78,832.71	8.161E-01	Pulse	1.00	3
Mo			1	96.189	ug/l	1.38	432,212.78	2.952E+00	Pulse	0.50	3
Pb			1	96.875	ug/l	0.60	2,212,140.83	9.251E-01	Pulse	1.00	3
Be			1	103.561	ug/l	0.46	5,248.85	3.944E-02	Pulse	2.00	3
Ag			1	101.883	ug/l	0.30	1,565,307.33	4.972E-01	Pulse	0.50	3
Ba			1	97.734	ug/l	0.75	141,796.87	1.650E-01	Pulse	0.50	3
Tl			1	99.478	ug/l	0.13	3,284,161.83	1.373E+00	Pulse	0.50	3
Sn			1	97.487	ug/l	2.37	354,626.48	4.126E-01	Pulse	0.30	3
Sr			1	96.171	ug/l	2.27	328,576.96	3.823E-01	Pulse	0.50	3
[Pb]			1	97.348	ug/l	0.47	1,050,649.29	4.394E-01	Pulse	0.50	3
Ca			1	9617.942	ug/l	1.14	182,724.32	1.373E+00	Pulse	0.50	3
Ti			1	93.874	ug/l	0.77	14,851.66	1.116E-01	Pulse	0.50	3
Na			1	10279.066	ug/l	0.24	10,909,680.67	8.197E+01	Analog	1.00	3
Mg			1	10123.665	ug/l	0.73	4,947,567.00	3.717E+01	Analog	1.00	3
K			1	9903.301	ug/l	0.27	3,510,487.50	2.638E+01	Pulse	1.00	3
V			1	96.421	ug/l	0.44	576,952.38	4.335E+00	Pulse	0.50	3
Mn			1	97.548	ug/l	0.72	349,752.71	3.621E+00	Pulse	0.50	3
Fe			1	9892.733	ug/l	1.26	61,776,148.00	6.395E+02	Analog	0.50	3
Co			1	96.951	ug/l	1.12	1,339,947.08	1.387E+01	Pulse	0.50	3
Ni			1	96.362	ug/l	1.94	375,226.75	3.884E+00	Pulse	0.50	3
Cu			1	94.615	ug/l	1.26	1,029,095.08	1.065E+01	Pulse	0.50	3
Zn			1	95.940	ug/l	1.33	146,191.16	9.986E-01	Pulse	1.00	3
Cd			1	97.145	ug/l	1.96	203,606.57	1.391E+00	Pulse	0.50	3
Al			1	9534.687	ug/l	0.95	1,416,062.71	1.064E+01	Pulse	1.00	3
Se			1	93.207	ug/l	0.97	4,683.58	3.199E-02	Pulse	3.00	3
Sb			1	95.553	ug/l	0.99	456,551.71	3.118E+00	Pulse	1.00	3
Se			1	93.494	ug/l	0.48	2,325.14	1.588E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,391,245.42	0.34	89.7	Pulse	0.50	3
1	Sc		133,098.64	0.15	92.4	Pulse	0.30	3
1	Ge		96,602.15	0.54	90.6	Pulse	0.30	3
1	In		859,510.16	0.51	89.0	Pulse	0.30	3
1	Tb		3,148,294.42	0.63	91.1	Pulse	0.50	3
1	Lu		1,949,272.00	0.33	91.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		146,405.54	0.67	90.8	Pulse	0.30	3
1	Te		2.67	114.56		Pulse	0.50	3
1	Li		626.68	8.56	103.5	Pulse	0.30	3

Quantitation Report

File Name	084_CCB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:38
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.026	ug/l	45.47	796.02	8.290E-03	Pulse	0.50	3
As			1	0.042	ug/l	18.75	48.33	5.029E-04	Pulse	1.00	3
Mo			1	0.156	ug/l	23.97	712.02	4.937E-03	Pulse	0.50	3
Pb			1	0.011	ug/l	91.35	2,632.21	1.081E-03	Pulse	1.00	3
Be			1	0.047	ug/l	85.47	2.50	1.889E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	15.18	326.00	1.051E-04	Pulse	0.50	3
Ba			1	0.022	ug/l	50.05	39.33	4.612E-05	Pulse	0.50	3
Tl			1	0.019	ug/l	41.27	667.35	2.746E-04	Pulse	0.50	3
Sn			1	0.115	ug/l	25.68	482.23	5.638E-04	Pulse	0.30	3
Sr			1	0.020	ug/l	62.89	374.01	4.380E-04	Pulse	0.50	3
[Pb]			1	0.013	ug/l	105.34	1,214.72	4.990E-04	Pulse	0.50	3
Ca			1	6.318	ug/l	17.67	213.33	1.614E-03	Pulse	0.50	3
Ti			1	0.022	ug/l	34.79	4.67	3.539E-05	Pulse	0.50	3
Na			1	9.293	ug/l	7.47	17,907.99	1.356E-01	Pulse	1.00	3
Mg			1	2.093	ug/l	35.72	1,197.71	9.049E-03	Pulse	1.00	3
K			1	5.657	ug/l	5.00	19,146.59	1.450E-01	Pulse	1.00	3
V			1	0.010	ug/l	105.63	275.33	2.081E-03	Pulse	0.50	3
Mn			1	0.071	ug/l	13.25	383.34	3.989E-03	Pulse	0.50	3
Fe			1	1.217	ug/l	55.26	36,159.87	3.766E-01	Pulse	0.50	3
Co			1	0.012	ug/l	51.66	226.67	2.362E-03	Pulse	0.50	3
Ni			1	0.018	ug/l	97.05	170.00	1.772E-03	Pulse	0.50	3
Cu			1	-0.282	ug/l	-9.87	22,726.03	2.366E-01	Pulse	0.50	3
Zn			1	0.821	ug/l	2.44	3,231.61	2.242E-02	Pulse	1.00	3
Cd			1	0.018	ug/l	100.58	46.67	3.248E-04	Pulse	0.50	3
Al			1	2.630	ug/l	26.55	594.01	4.492E-03	Pulse	1.00	3
Se			1	0.335	ug/l	15.39	19.44	1.350E-04	Pulse	3.00	3
Sb			1	0.039	ug/l	13.86	200.00	1.389E-03	Pulse	1.00	3
Se			1	-0.042	ug/l	-84.17	19.44	1.349E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,435,656.00	0.87	91.3	Pulse	0.50	3
1	Sc		132,067.26	1.09	91.7	Pulse	0.30	3

Quantitation Report

1	Ge		96,066.10	0.69	90.1	Pulse	0.30	3
1	In		854,381.46	0.70	88.5	Pulse	0.30	3
1	Tb		3,105,579.25	1.03	89.9	Pulse	0.50	3
1	Lu		1,903,325.21	0.62	89.0	Pulse	0.50	3
1	Ge		144,103.94	0.86	89.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		691.13	3.49	114.1	Pulse	0.30	3

Quantitation Report

File Name	085SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:41
Sample Name	FA96113-3FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.878	ug/l	3.84	3,777.05	4.275E-02	Pulse	0.50	3
As			1	0.800	ug/l	6.47	315.00	3.566E-03	Pulse	1.00	3
Mo			1	0.816	ug/l	8.73	1,690.75	1.267E-02	Pulse	0.50	3
Pb			1	0.062	ug/l	24.74	2,896.92	1.274E-03	Pulse	1.00	3
Be			1	0.080	ug/l	96.91	2.00	1.644E-05	Pulse	2.00	3
Ag			1	0.042	ug/l	31.21	316.67	1.073E-04	Pulse	0.50	3
Ba			1	23.992	ug/l	2.87	16,031.11	2.026E-02	Pulse	0.50	3
Tl			1	0.022	ug/l	60.53	374.67	1.649E-04	Pulse	0.50	3
Sn			1	0.307	ug/l	11.56	574.46	7.255E-04	Pulse	0.30	3
Sr			1	108.612	ug/l	0.59	170,987.88	2.160E-01	Pulse	0.50	3
[Pb]			1	0.055	ug/l	23.09	1,282.06	5.638E-04	Pulse	0.50	3
Ca			1	21896.416	ug/l	0.40	190,348.91	1.563E+00	Pulse	0.50	3
Ti			1	0.905	ug/l	9.24	66.67	5.473E-04	Pulse	0.50	3
Na			1	12217.609	ug/l	0.35	5,936,752.67	4.874E+01	Analog	1.00	3
Mg			1	5842.647	ug/l	0.17	1,306,732.29	1.073E+01	Pulse	1.00	3
K			1	1925.593	ug/l	0.96	326,635.09	2.682E+00	Pulse	1.00	3
V			1	2.663	ug/l	1.65	7,487.45	6.147E-02	Pulse	0.50	3
Mn			1	14.011	ug/l	2.36	23,084.39	2.613E-01	Pulse	0.50	3
Fe			1	106.835	ug/l	0.41	331,247.63	3.749E+00	Pulse	0.50	3
Co			1	0.305	ug/l	5.49	1,986.78	2.249E-02	Pulse	0.50	3
Ni			1	1.292	ug/l	4.55	2,392.82	2.709E-02	Pulse	0.50	3
Cu			1	1.553	ug/l	2.34	31,160.44	3.527E-01	Pulse	0.50	3
Zn			1	0.801	ug/l	6.60	2,416.49	1.811E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	94.09	26.00	1.951E-04	Pulse	0.50	3
Al			1	56.737	ug/l	1.75	4,045.09	3.321E-02	Pulse	1.00	3
Se			1	0.777	ug/l	9.01	20.44	1.532E-04	Pulse	3.00	3
Sb			1	0.156	ug/l	1.97	357.00	2.676E-03	Pulse	1.00	3
Se			1	0.183	ug/l	90.48	21.00	1.574E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,273,987.83	0.22	85.3	Pulse	0.50	3
1	Sc		121,811.91	0.32	84.6	Pulse	0.30	3
1	Ge		88,344.86	0.14	82.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		791,530.96	1.30	82.0	Pulse	0.30	3
1	Tb		2,958,192.75	1.21	85.6	Pulse	0.50	3
1	Lu		1,795,738.21	1.23	83.9	Pulse	0.50	3
1	Ge		133,424.94	0.43	82.8	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		650.01	3.59	107.3	Pulse	0.30	3

Quantitation Report

File Name	086SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:45
Sample Name	FA96113-4FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.709	ug/l	1.46	3,146.26	3.572E-02	Pulse	0.50	3
As			1	0.465	ug/l	13.27	188.00	2.136E-03	Pulse	1.00	3
Mo			1	0.675	ug/l	6.25	1,390.05	1.051E-02	Pulse	0.50	3
Pb			1	-0.028	ug/l	-6.32	1,900.78	8.443E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1094.82	0.17	1.380E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	18.78	164.00	5.569E-05	Pulse	0.50	3
Ba			1	32.233	ug/l	1.03	21,281.85	2.721E-02	Pulse	0.50	3
Tl			1	0.008	ug/l	11.74	146.00	6.481E-05	Pulse	0.50	3
Sn			1	0.145	ug/l	14.58	300.00	3.834E-04	Pulse	0.30	3
Sr			1	129.178	ug/l	1.62	200,881.18	2.569E-01	Pulse	0.50	3
[Pb]			1	-0.022	ug/l	-25.83	876.70	3.895E-04	Pulse	0.50	3
Ca			1	24861.794	ug/l	0.53	213,958.47	1.774E+00	Pulse	0.50	3
Ti			1	1.030	ug/l	77.59	74.67	6.211E-04	Pulse	0.50	3
Na			1	12496.682	ug/l	0.62	6,011,542.17	4.985E+01	Analog	1.00	3
Mg			1	6953.693	ug/l	0.74	1,539,698.04	1.277E+01	Pulse	1.00	3
K			1	2595.062	ug/l	0.58	430,354.41	3.569E+00	Pulse	1.00	3
V			1	1.280	ug/l	2.59	3,664.36	3.038E-02	Pulse	0.50	3
Mn			1	7.698	ug/l	1.78	12,698.85	1.442E-01	Pulse	0.50	3
Fe			1	46.926	ug/l	1.96	159,779.41	1.814E+00	Pulse	0.50	3
Co			1	0.205	ug/l	4.13	1,354.05	1.537E-02	Pulse	0.50	3
Ni			1	1.166	ug/l	0.83	2,161.46	2.454E-02	Pulse	0.50	3
Cu			1	-0.200	ug/l	-37.57	22,595.88	2.565E-01	Pulse	0.50	3
Zn			1	0.249	ug/l	11.31	2,020.44	1.528E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	298.71	11.33	8.562E-05	Pulse	0.50	3
Al			1	27.192	ug/l	5.58	2,017.45	1.673E-02	Pulse	1.00	3
Se			1	0.398	ug/l	52.29	11.67	8.820E-05	Pulse	3.00	3
Sb			1	0.111	ug/l	20.15	255.67	1.933E-03	Pulse	1.00	3
Se			1	-0.349	ug/l	-95.41	14.89	1.126E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,251,279.92	1.22	84.4	Pulse	0.50	3
1	Sc		120,596.52	0.66	83.7	Pulse	0.30	3
1	Ge		88,091.59	1.37	82.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		782,063.46	0.96	81.0	Pulse	0.30	3
1	Tb		2,948,826.50	1.28	85.3	Pulse	0.50	3
1	Lu		1,791,388.04	0.90	83.7	Pulse	0.50	3
1	Ge		132,238.20	0.29	82.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		704.46	7.88	116.3	Pulse	0.30	3

Quantitation Report

File Name	087SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:49
Sample Name	FA96113-5FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.803	ug/l	4.47	3,496.33	3.962E-02	Pulse	0.50	3
As			1	0.543	ug/l	10.12	217.67	2.467E-03	Pulse	1.00	3
Mo			1	0.602	ug/l	9.22	1,250.05	9.393E-03	Pulse	0.50	3
Pb			1	-0.018	ug/l	-7.17	1,993.79	8.910E-04	Pulse	1.00	3
Be			1	0.008	ug/l	299.78	0.33	2.751E-06	Pulse	2.00	3
Ag			1	0.017	ug/l	30.05	139.33	4.754E-05	Pulse	0.50	3
Ba			1	30.334	ug/l	0.85	20,032.43	2.561E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	16.25	137.33	6.136E-05	Pulse	0.50	3
Sn			1	0.113	ug/l	21.95	246.67	3.153E-04	Pulse	0.30	3
Sr			1	120.702	ug/l	0.77	187,762.48	2.400E-01	Pulse	0.50	3
[Pb]			1	-0.003	ug/l	-224.50	966.03	4.316E-04	Pulse	0.50	3
Ca			1	24520.212	ug/l	0.34	211,315.21	1.750E+00	Pulse	0.50	3
Ti			1	0.699	ug/l	60.00	51.33	4.249E-04	Pulse	0.50	3
Na			1	12088.721	ug/l	0.65	5,823,515.17	4.822E+01	Analog	1.00	3
Mg			1	6587.995	ug/l	0.01	1,460,751.71	1.210E+01	Pulse	1.00	3
K			1	2472.868	ug/l	0.77	411,387.19	3.407E+00	Pulse	1.00	3
V			1	1.567	ug/l	5.38	4,447.19	3.684E-02	Pulse	0.50	3
Mn			1	9.762	ug/l	2.10	16,100.03	1.825E-01	Pulse	0.50	3
Fe			1	72.138	ug/l	3.21	231,920.09	2.629E+00	Pulse	0.50	3
Co			1	0.221	ug/l	7.76	1,454.73	1.649E-02	Pulse	0.50	3
Ni			1	1.092	ug/l	7.89	2,033.45	2.304E-02	Pulse	0.50	3
Cu			1	-0.500	ug/l	-13.29	21,180.28	2.400E-01	Pulse	0.50	3
Zn			1	-0.067	ug/l	-77.93	1,817.75	1.366E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	530.12	10.00	7.522E-05	Pulse	0.50	3
Al			1	42.410	ug/l	1.21	3,044.92	2.522E-02	Pulse	1.00	3
Se			1	0.249	ug/l	25.00	8.33	6.259E-05	Pulse	3.00	3
Sb			1	0.097	ug/l	7.58	228.00	1.714E-03	Pulse	1.00	3
Se			1	-0.350	ug/l	-229.46	15.00	1.125E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,237,663.92	1.44	83.9	Pulse	0.50	3
1	Sc		120,765.58	1.21	83.9	Pulse	0.30	3
1	Ge		88,234.35	0.92	82.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		782,206.59	0.97	81.0	Pulse	0.30	3
1	Tb		2,936,514.25	1.05	85.0	Pulse	0.50	3
1	Lu		1,791,267.50	0.96	83.7	Pulse	0.50	3
1	Ge		133,075.09	0.45	82.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		666.68	11.30	110.1	Pulse	0.30	3

Quantitation Report

File Name	088SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 13:53
Sample Name	FA96113-6FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.183	ug/l	1.13	4,800.61	5.548E-02	Pulse	0.50	3
As			1	0.666	ug/l	11.73	259.00	2.992E-03	Pulse	1.00	3
Mo			1	0.603	ug/l	5.98	1,253.38	9.406E-03	Pulse	0.50	3
Pb			1	0.449	ug/l	2.59	6,970.76	3.119E-03	Pulse	1.00	3
Be			1	0.039	ug/l	200.59	1.00	8.507E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	16.83	141.33	4.848E-05	Pulse	0.50	3
Ba			1	35.437	ug/l	1.73	23,066.01	2.992E-02	Pulse	0.50	3
Tl			1	0.010	ug/l	5.78	181.33	8.116E-05	Pulse	0.50	3
Sn			1	0.109	ug/l	12.50	236.67	3.069E-04	Pulse	0.30	3
Sr			1	129.370	ug/l	1.15	198,338.41	2.572E-01	Pulse	0.50	3
[Pb]			1	0.456	ug/l	3.54	3,279.00	1.467E-03	Pulse	0.50	3
Ca			1	26218.856	ug/l	1.46	221,649.04	1.871E+00	Pulse	0.50	3
Ti			1	5.812	ug/l	11.16	410.68	3.463E-03	Pulse	0.50	3
Na			1	12857.748	ug/l	0.74	6,076,406.67	5.129E+01	Analog	1.00	3
Mg			1	7075.296	ug/l	1.68	1,538,920.37	1.299E+01	Pulse	1.00	3
K			1	2645.750	ug/l	1.52	430,719.98	3.636E+00	Pulse	1.00	3
V			1	1.979	ug/l	2.43	5,459.45	4.609E-02	Pulse	0.50	3
Mn			1	40.852	ug/l	1.59	65,683.53	7.592E-01	Pulse	0.50	3
Fe			1	510.894	ug/l	1.94	1,453,742.00	1.680E+01	Pulse	0.50	3
Co			1	0.459	ug/l	1.97	2,903.56	3.356E-02	Pulse	0.50	3
Ni			1	1.550	ug/l	0.70	2,792.88	3.228E-02	Pulse	0.50	3
Cu			1	0.097	ug/l	53.45	23,601.74	2.728E-01	Pulse	0.50	3
Zn			1	2.402	ug/l	3.93	3,508.32	2.633E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	411.51	11.33	8.485E-05	Pulse	0.50	3
Al			1	230.552	ug/l	2.70	15,419.33	1.302E-01	Pulse	1.00	3
Se			1	0.292	ug/l	52.59	9.34	7.002E-05	Pulse	3.00	3
Sb			1	0.112	ug/l	16.17	261.00	1.958E-03	Pulse	1.00	3
Se			1	-0.140	ug/l	-233.33	17.33	1.302E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,234,646.58	0.78	83.8	Pulse	0.50	3
1	Sc		118,484.75	1.54	82.3	Pulse	0.30	3
1	Ge		86,522.16	0.82	81.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		770,976.51	0.47	79.8	Pulse	0.30	3
1	Tb		2,917,267.00	0.75	84.4	Pulse	0.50	3
1	Lu		1,779,836.13	0.87	83.2	Pulse	0.50	3
1	Ge		133,250.45	0.50	82.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		660.01	8.27	109.0	Pulse	0.30	3

Quantitation Report

File Name 089SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 13:57
Sample Name FA96113-7FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.747	ug/l	4.07	3,288.95	3.731E-02	Pulse	0.50	3
As			1	0.505	ug/l	6.36	203.33	2.307E-03	Pulse	1.00	3
Mo			1	0.594	ug/l	9.82	1,228.04	9.263E-03	Pulse	0.50	3
Pb			1	-0.023	ug/l	-15.63	1,951.12	8.673E-04	Pulse	1.00	3
Be			1	-0.006	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.011	ug/l	21.28	94.67	3.225E-05	Pulse	0.50	3
Ba			1	30.486	ug/l	0.95	19,991.04	2.574E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	8.47	103.33	4.594E-05	Pulse	0.50	3
Sn			1	0.101	ug/l	18.29	225.56	2.906E-04	Pulse	0.30	3
Sr			1	119.643	ug/l	0.61	184,797.74	2.379E-01	Pulse	0.50	3
[Pb]			1	-0.022	ug/l	-41.84	874.69	3.890E-04	Pulse	0.50	3
Ca			1	24364.913	ug/l	0.90	208,997.34	1.739E+00	Pulse	0.50	3
Ti			1	0.349	ug/l	35.18	26.00	2.164E-04	Pulse	0.50	3
Na			1	11947.524	ug/l	0.46	5,729,091.83	4.766E+01	Analog	1.00	3
Mg			1	6557.078	ug/l	1.15	1,447,112.00	1.204E+01	Pulse	1.00	3
K			1	2396.006	ug/l	0.64	397,259.42	3.305E+00	Pulse	1.00	3
V			1	1.248	ug/l	1.05	3,567.01	2.967E-02	Pulse	0.50	3
Mn			1	6.227	ug/l	4.34	10,303.42	1.169E-01	Pulse	0.50	3
Fe			1	20.458	ug/l	4.17	84,519.56	9.588E-01	Pulse	0.50	3
Co			1	0.137	ug/l	8.44	923.36	1.048E-02	Pulse	0.50	3
Ni			1	1.092	ug/l	4.23	2,032.12	2.305E-02	Pulse	0.50	3
Cu			1	-0.612	ug/l	-5.03	20,619.01	2.339E-01	Pulse	0.50	3
Zn			1	0.509	ug/l	30.49	2,201.80	1.661E-02	Pulse	1.00	3
Cd			1	-0.002	ug/l	-59.01	7.33	5.533E-05	Pulse	0.50	3
Al			1	10.487	ug/l	9.25	890.69	7.408E-03	Pulse	1.00	3
Se			1	0.207	ug/l	33.20	7.33	5.542E-05	Pulse	3.00	3
Sb			1	0.110	ug/l	8.49	254.00	1.917E-03	Pulse	1.00	3
Se			1	0.147	ug/l	120.80	20.45	1.544E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,249,334.00	0.79	84.3	Pulse	0.50	3
1	Sc		120,205.54	0.54	83.5	Pulse	0.30	3
1	Ge		88,162.93	1.09	82.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		776,656.62	0.76	80.4	Pulse	0.30	3
1	Tb		2,937,166.58	1.28	85.0	Pulse	0.50	3
1	Lu		1,781,765.96	1.50	83.3	Pulse	0.50	3
1	Ge		132,573.81	1.53	82.2	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		633.34	8.70	104.6	Pulse	0.30	3

Quantitation Report

File Name	090SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:00
Sample Name	FA96113-8FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.735	ug/l	2.16	3,232.29	3.678E-02	Pulse	0.50	3
As			1	0.880	ug/l	5.56	343.33	3.908E-03	Pulse	1.00	3
Mo			1	0.651	ug/l	7.50	1,340.05	1.015E-02	Pulse	0.50	3
Pb			1	-0.004	ug/l	-132.82	2,150.47	9.607E-04	Pulse	1.00	3
Be			1	0.031	ug/l	40.96	0.83	7.019E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	11.07	112.67	3.872E-05	Pulse	0.50	3
Ba			1	22.544	ug/l	1.68	14,736.01	1.904E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	26.00	118.00	5.282E-05	Pulse	0.50	3
Sn			1	0.100	ug/l	19.16	222.23	2.874E-04	Pulse	0.30	3
Sr			1	105.908	ug/l	1.22	163,066.42	2.107E-01	Pulse	0.50	3
[Pb]			1	0.021	ug/l	64.44	1,088.71	4.864E-04	Pulse	0.50	3
Ca			1	21234.519	ug/l	1.12	179,652.41	1.515E+00	Pulse	0.50	3
Ti			1	0.589	ug/l	25.90	42.67	3.595E-04	Pulse	0.50	3
Na			1	12837.878	ug/l	0.87	6,070,638.00	5.121E+01	Analog	1.00	3
Mg			1	5693.099	ug/l	1.25	1,239,172.46	1.045E+01	Pulse	1.00	3
K			1	1894.219	ug/l	0.97	312,953.97	2.640E+00	Pulse	1.00	3
V			1	3.099	ug/l	0.78	8,447.85	7.126E-02	Pulse	0.50	3
Mn			1	12.597	ug/l	1.31	20,655.66	2.351E-01	Pulse	0.50	3
Fe			1	119.950	ug/l	0.75	366,742.49	4.173E+00	Pulse	0.50	3
Co			1	0.257	ug/l	5.94	1,674.74	1.906E-02	Pulse	0.50	3
Ni			1	1.290	ug/l	5.02	2,376.16	2.703E-02	Pulse	0.50	3
Cu			1	1.369	ug/l	6.64	30,110.11	3.426E-01	Pulse	0.50	3
Zn			1	0.766	ug/l	4.63	2,367.15	1.793E-02	Pulse	1.00	3
Cd			1	-0.002	ug/l	-161.15	7.33	5.567E-05	Pulse	0.50	3
Al			1	34.526	ug/l	5.82	2,467.49	2.082E-02	Pulse	1.00	3
Se			1	0.301	ug/l	32.69	9.44	7.161E-05	Pulse	3.00	3
Sb			1	0.128	ug/l	13.00	291.33	2.207E-03	Pulse	1.00	3
Se			1	-0.197	ug/l	-32.96	16.56	1.254E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,237,857.58	1.40	83.9	Pulse	0.50	3
1	Sc		118,550.20	0.89	82.3	Pulse	0.30	3
1	Ge		87,878.32	0.66	82.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		774,073.86	1.18	80.2	Pulse	0.30	3
1	Tb		2,908,420.17	1.73	84.1	Pulse	0.50	3
1	Lu		1,778,108.58	1.42	83.1	Pulse	0.50	3
1	Ge		132,028.95	0.85	81.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		710.02	8.31	117.2	Pulse	0.30	3

Quantitation Report

File Name	091SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:04
Sample Name	FA95947-1
Sample Type	Sample
Comment	
Prep Dilution	100.000
Auto Dilution	N/A
Total Dilution	100.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	5060.959	ug/l	7.18	406,693.85	4.232E+00	Pulse	0.50	3
As			1	2.589	ug/l	69.51	35.33	3.683E-04	Pulse	1.00	3
Mo			1	401.271	ug/l	3.89	17,788.59	1.233E-01	Pulse	0.50	3
Pb			1	2.202	ug/l	11.23	2,906.92	1.189E-03	Pulse	1.00	3
Be			1	-0.305	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	6.053	ug/l	3.93	934.03	3.010E-04	Pulse	0.50	3
Ba			1	3.161	ug/l	12.23	54.00	6.302E-05	Pulse	0.50	3
Tl			1	0.113	ug/l	82.19	68.00	2.783E-05	Pulse	0.50	3
Sn			1	10.766	ug/l	11.39	455.57	5.315E-04	Pulse	0.30	3
Sr			1	16.731	ug/l	14.02	878.69	1.025E-03	Pulse	0.50	3
[Pb]			1	2.156	ug/l	14.54	1,310.06	5.360E-04	Pulse	0.50	3
Ca			1	973.983	ug/l	28.38	276.00	2.103E-03	Pulse	0.50	3
Ti			1	68.446	ug/l	6.79	108.00	8.228E-04	Pulse	0.50	3
Na			1	7203.479	ug/l	0.33	83,421.58	6.355E-01	Pulse	1.00	3
Mg			1	286.771	ug/l	2.42	1,561.06	1.189E-02	Pulse	1.00	3
K			1	520.371	ug/l	8.90	18,872.66	1.438E-01	Pulse	1.00	3
V			1	12.963	ug/l	2.25	978.70	7.455E-03	Pulse	0.50	3
Mn			1	1884.226	ug/l	0.63	67,335.90	7.005E-01	Pulse	0.50	3
Fe			1	28260.085	ug/l	1.04	1,783,977.38	1.856E+01	Pulse	0.50	3
Co			1	302.517	ug/l	0.31	41,672.65	4.335E-01	Pulse	0.50	3
Ni			1	17180.905	ug/l	0.76	665,749.42	6.925E+00	Pulse	0.50	3
Cu			1	864.984	ug/l	1.57	116,988.74	1.217E+00	Pulse	0.50	3
Zn			1	121.597	ug/l	1.52	3,819.39	2.648E-02	Pulse	1.00	3
Cd			1	0.090	ug/l	322.48	12.00	8.307E-05	Pulse	0.50	3
Al			1	12234.111	ug/l	0.49	18,121.87	1.380E-01	Pulse	1.00	3
Se			1	2.489	ug/l	18.37	4.11	2.851E-05	Pulse	3.00	3
Sb			1	0.649	ug/l	28.73	48.67	3.378E-04	Pulse	1.00	3
Se			1	-27.630	ug/l	-43.93	13.78	9.545E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,444,209.08	0.63	91.7	Pulse	0.50	3
1	Sc		131,271.31	0.61	91.2	Pulse	0.30	3
1	Ge		96,133.16	0.83	90.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		857,239.55	0.59	88.8	Pulse	0.30	3
1	Tb		3,103,350.00	0.32	89.8	Pulse	0.50	3
1	Lu		1,902,236.00	0.55	88.9	Pulse	0.50	3
1	Ge		144,234.00	0.88	89.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		615.57	9.48	101.7	Pulse	0.30	3

Quantitation Report

File Name	092_MB.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:08
Sample Name	MP40806-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.019	ug/l	94.68	655.35	6.898E-03	Pulse	0.50	3
As			1	-0.006	ug/l	-178.26	11.67	1.227E-04	Pulse	1.00	3
Mo			1	0.016	ug/l	65.22	57.33	3.960E-04	Pulse	0.50	3
Pb			1	-0.059	ug/l	-6.98	1,705.42	6.990E-04	Pulse	1.00	3
Be			1	0.061	ug/l	50.75	1.67	1.270E-05	Pulse	2.00	3
Ag			1	0.008	ug/l	40.61	74.00	2.392E-05	Pulse	0.50	3
Ba			1	0.031	ug/l	10.29	30.67	3.565E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	10590.48	30.00	1.229E-05	Pulse	0.50	3
Sn			1	0.008	ug/l	164.31	80.00	9.303E-05	Pulse	0.30	3
Sr			1	0.020	ug/l	9.71	344.67	4.007E-04	Pulse	0.50	3
[Pb]			1	-0.052	ug/l	-8.01	782.02	3.205E-04	Pulse	0.50	3
Ca			1	6.578	ug/l	3.56	155.33	1.182E-03	Pulse	0.50	3
Ti			1	0.138	ug/l	66.84	12.00	9.137E-05	Pulse	0.50	3
Na			1	10.749	ug/l	5.20	13,708.02	1.043E-01	Pulse	1.00	3
Mg			1	0.724	ug/l	15.57	353.67	2.692E-03	Pulse	1.00	3
K			1	2.738	ug/l	59.26	17,554.45	1.336E-01	Pulse	1.00	3
V			1	-0.007	ug/l	-82.35	193.33	1.472E-03	Pulse	0.50	3
Mn			1	0.108	ug/l	7.10	319.33	3.363E-03	Pulse	0.50	3
Fe			1	-0.027	ug/l	-803.72	28,205.18	2.970E-01	Pulse	0.50	3
Co			1	-0.002	ug/l	-52.10	51.33	5.403E-04	Pulse	0.50	3
Ni			1	0.181	ug/l	22.14	446.67	4.700E-03	Pulse	0.50	3
Cu			1	-0.922	ug/l	-5.13	20,594.34	2.169E-01	Pulse	0.50	3
Zn			1	0.127	ug/l	29.82	2,124.12	1.466E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-286.43	9.33	6.448E-05	Pulse	0.50	3
Al			1	1.018	ug/l	20.05	279.33	2.126E-03	Pulse	1.00	3
Se			1	0.081	ug/l	93.96	4.89	3.380E-05	Pulse	3.00	3
Sb			1	-0.001	ug/l	-491.72	16.67	1.152E-04	Pulse	1.00	3
Se			1	-0.447	ug/l	-23.86	15.11	1.043E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,439,812.00	0.52	91.5	Pulse	0.50	3
1	Sc		131,388.43	0.27	91.2	Pulse	0.30	3
1	Ge		94,962.99	0.62	89.1	Pulse	0.30	3
1	In		860,119.20	0.16	89.1	Pulse	0.30	3
1	Tb		3,093,107.67	0.11	89.5	Pulse	0.50	3
1	Lu		1,909,498.92	0.85	89.2	Pulse	0.50	3
1	Ge		144,950.42	0.86	89.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		695.57	3.84	114.9	Pulse	0.30	3

Quantitation Report

File Name 093SMPL.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 14:12
Sample Name FA95171-2A
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.210	ug/l	27.40	1,040.03	1.115E-02	Pulse	0.50	3
As			1	1475.495	ug/l	1.15	58,890.45	6.310E-01	Pulse	1.00	3
Mo			1	1.390	ug/l	9.22	320.00	2.282E-03	Pulse	0.50	3
Pb			1	0.028	ug/l	60.54	2,377.17	9.925E-04	Pulse	1.00	3
Be			1	0.007	ug/l	1664.05	0.17	1.296E-06	Pulse	2.00	3
Ag			1	0.090	ug/l	23.44	83.33	2.754E-05	Pulse	0.50	3
Ba			1	50.014	ug/l	2.76	3,511.02	4.231E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	134.54	36.67	1.531E-05	Pulse	0.50	3
Sn			1	0.203	ug/l	58.62	98.89	1.189E-04	Pulse	0.30	3
Sr			1	379.873	ug/l	2.19	62,900.74	7.579E-02	Pulse	0.50	3
[Pb]			1	0.164	ug/l	36.50	1,139.38	4.758E-04	Pulse	0.50	3
Ca			1	46304.823	ug/l	0.43	42,462.39	3.310E-01	Pulse	0.50	3
Ti			1	1.330	ug/l	111.85	11.33	8.828E-05	Pulse	0.50	3
Na			1	13619.128	ug/l	0.39	703,929.63	5.487E+00	Pulse	1.00	3
Mg			1	6969.923	ug/l	0.93	164,312.77	1.281E+00	Pulse	1.00	3
K			1	8422.887	ug/l	0.19	159,845.62	1.246E+00	Pulse	1.00	3
V			1	0.563	ug/l	31.04	371.34	2.894E-03	Pulse	0.50	3
Mn			1	2145.715	ug/l	0.54	371,673.87	3.982E+00	Pulse	0.50	3
Fe			1	68850.922	ug/l	1.04	20,789,427.33	2.227E+02	Analog	0.50	3
Co			1	17.422	ug/l	1.92	11,696.90	1.253E-01	Pulse	0.50	3
Ni			1	6.567	ug/l	1.99	1,332.72	1.428E-02	Pulse	0.50	3
Cu			1	-1.166	ug/l	-53.55	24,368.73	2.611E-01	Pulse	0.50	3
Zn			1	8.081	ug/l	4.19	2,544.84	1.815E-02	Pulse	1.00	3
Cd			1	-0.071	ug/l	-42.87	2.67	1.908E-05	Pulse	0.50	3
Al			1	16.044	ug/l	9.51	314.67	2.453E-03	Pulse	1.00	3
Se			1	0.128	ug/l	377.80	3.11	2.217E-05	Pulse	3.00	3
Sb			1	0.064	ug/l	36.10	32.33	2.307E-04	Pulse	1.00	3
Se			1	-6.230	ug/l	-40.94	12.55	8.953E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,395,022.33	1.01	89.8	Pulse	0.50	3
1	Sc		128,279.59	0.31	89.1	Pulse	0.30	3
1	Ge		93,343.82	1.36	87.5	Pulse	0.30	3
1	In		830,106.19	1.50	86.0	Pulse	0.30	3
1	Tb		3,028,107.92	1.22	87.6	Pulse	0.50	3
1	Lu		1,863,886.21	0.55	87.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		140,232.98	0.52	87.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		630.01	6.50	104.0	Pulse	0.30	3

Quantitation Report

File Name	094SMPL.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:15
Sample Name	FA95171-3A
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.018	ug/l	5.62	964.03	1.035E-02	Pulse	0.50	3
As			1	2731.155	ug/l	1.03	108,753.45	1.168E+00	Pulse	1.00	3
Mo			1	2.056	ug/l	1.26	460.68	3.304E-03	Pulse	0.50	3
Pb			1	-0.037	ug/l	-72.05	2,301.82	9.616E-04	Pulse	1.00	3
Be			1	0.076	ug/l	312.47	0.33	2.606E-06	Pulse	2.00	3
Ag			1	0.063	ug/l	29.53	63.33	2.098E-05	Pulse	0.50	3
Ba			1	13.606	ug/l	5.44	970.70	1.158E-03	Pulse	0.50	3
Tl			1	0.001	ug/l	1613.97	30.67	1.279E-05	Pulse	0.50	3
Sn			1	0.055	ug/l	215.77	73.34	8.749E-05	Pulse	0.30	3
Sr			1	158.735	ug/l	1.60	26,728.22	3.188E-02	Pulse	0.50	3
[Pb]			1	0.110	ug/l	98.71	1,110.04	4.637E-04	Pulse	0.50	3
Ca			1	22247.489	ug/l	1.02	20,381.24	1.594E-01	Pulse	0.50	3
Ti			1	2.127	ug/l	19.32	17.33	1.356E-04	Pulse	0.50	3
Na			1	5889.020	ug/l	0.73	307,836.26	2.408E+00	Pulse	1.00	3
Mg			1	2821.093	ug/l	0.92	66,389.33	5.193E-01	Pulse	1.00	3
K			1	3355.647	ug/l	0.49	73,468.30	5.746E-01	Pulse	1.00	3
V			1	0.177	ug/l	90.44	259.33	2.028E-03	Pulse	0.50	3
Mn			1	2270.019	ug/l	1.47	392,296.40	4.213E+00	Pulse	0.50	3
Fe			1	38259.822	ug/l	0.81	11,539,002.00	1.239E+02	Analog	0.50	3
Co			1	13.048	ug/l	1.15	8,756.00	9.402E-02	Pulse	0.50	3
Ni			1	5.911	ug/l	5.30	1,206.71	1.296E-02	Pulse	0.50	3
Cu			1	-2.590	ug/l	-15.01	23,587.73	2.533E-01	Pulse	0.50	3
Zn			1	1.817	ug/l	49.44	2,081.78	1.493E-02	Pulse	1.00	3
Cd			1	-0.058	ug/l	-60.13	4.00	2.878E-05	Pulse	0.50	3
Al			1	12.690	ug/l	10.52	289.67	2.266E-03	Pulse	1.00	3
Se			1	0.044	ug/l	371.02	2.89	2.072E-05	Pulse	3.00	3
Sb			1	0.140	ug/l	17.84	49.33	3.539E-04	Pulse	1.00	3
Se			1	-5.884	ug/l	-40.48	12.89	9.244E-05	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,393,623.33	0.61	89.8	Pulse	0.50	3
1	Sc		127,855.31	0.42	88.8	Pulse	0.30	3
1	Ge		93,128.33	0.41	87.3	Pulse	0.30	3
1	In		838,373.11	0.34	86.8	Pulse	0.30	3
1	Tb		3,020,265.42	0.75	87.4	Pulse	0.50	3
1	Lu		1,858,972.25	0.83	86.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		139,422.99	0.60	86.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		672.24	21.95	111.0	Pulse	0.30	3

Quantitation Report

File Name	095CCVA.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:19
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	47.227	ug/l	2.18	368,486.56	3.950E+00	Pulse	0.50	3
As			1	45.594	ug/l	2.10	36,385.46	3.900E-01	Pulse	1.00	3
Mo			1	46.005	ug/l	2.99	198,498.58	1.412E+00	Pulse	0.50	3
Pb			1	46.523	ug/l	2.35	1,052,586.84	4.448E-01	Pulse	1.00	3
Be			1	50.196	ug/l	4.69	2,460.82	1.911E-02	Pulse	2.00	3
Ag			1	49.252	ug/l	1.86	732,724.77	2.404E-01	Pulse	0.50	3
Ba			1	47.002	ug/l	3.13	65,978.12	7.935E-02	Pulse	0.50	3
Tl			1	47.238	ug/l	2.77	1,543,278.29	6.522E-01	Pulse	0.50	3
Sn			1	49.001	ug/l	2.77	172,495.02	2.074E-01	Pulse	0.30	3
Sr			1	48.193	ug/l	2.81	159,461.65	1.918E-01	Pulse	0.50	3
[Pb]			1	46.106	ug/l	2.41	493,002.25	2.083E-01	Pulse	0.50	3
Ca			1	4616.839	ug/l	2.46	84,928.39	6.594E-01	Pulse	0.50	3
Ti			1	48.257	ug/l	4.74	7,385.42	5.737E-02	Pulse	0.50	3
Na			1	4978.560	ug/l	3.31	5,116,438.00	3.973E+01	Analog	1.00	3
Mg			1	4867.368	ug/l	3.31	2,301,553.00	1.787E+01	Pulse	1.00	3
K			1	4734.429	ug/l	3.35	1,632,461.83	1.268E+01	Pulse	1.00	3
V			1	46.165	ug/l	3.66	267,352.30	2.076E+00	Pulse	0.50	3
Mn			1	47.064	ug/l	2.41	163,031.21	1.748E+00	Pulse	0.50	3
Fe			1	4804.097	ug/l	1.95	28,988,904.00	3.107E+02	Analog	0.50	3
Co			1	47.189	ug/l	1.60	629,966.94	6.752E+00	Pulse	0.50	3
Ni			1	46.745	ug/l	1.96	175,857.74	1.885E+00	Pulse	0.50	3
Cu			1	45.159	ug/l	1.87	487,451.75	5.225E+00	Pulse	0.50	3
Zn			1	46.562	ug/l	1.98	69,150.21	4.918E-01	Pulse	1.00	3
Cd			1	47.215	ug/l	2.24	95,033.47	6.760E-01	Pulse	0.50	3
Al			1	4773.753	ug/l	3.27	686,055.02	5.327E+00	Pulse	1.00	3
Se			1	45.129	ug/l	3.61	2,178.57	1.550E-02	Pulse	3.00	3
Sb			1	46.423	ug/l	1.67	213,029.08	1.515E+00	Pulse	1.00	3
Se			1	45.301	ug/l	3.29	1,091.92	7.768E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,367,689.67	3.17	88.8	Pulse	0.50	3
1	Sc		128,879.30	3.66	89.5	Pulse	0.30	3
1	Ge		93,324.99	2.27	87.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		832,123.80	3.48	86.2	Pulse	0.30	3
1	Tb		3,049,573.42	2.91	88.2	Pulse	0.50	3
1	Lu		1,881,978.58	3.30	88.0	Pulse	0.50	3
1	Ge		140,644.86	2.72	87.3	Pulse	0.30	3
1	Te		2.67	114.56		Pulse	0.50	3
1	Li		662.24	4.97	109.4	Pulse	0.30	3

Quantitation Report

File Name	096_CCV.d
File Path	D:\2022\xa060822m1.b
Method File	
Method Path	
Acq Time	6/8/2022 14:23
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	6/8/2022 9:15
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.967	ug/l	1.56	758,723.98	8.020E+00	Pulse	0.50	3
As			1	93.916	ug/l	0.94	75,988.93	8.032E-01	Pulse	1.00	3
Mo			1	95.204	ug/l	1.71	415,560.39	2.922E+00	Pulse	0.50	3
Pb			1	96.619	ug/l	1.65	2,164,025.67	9.227E-01	Pulse	1.00	3
Be			1	102.152	ug/l	0.64	5,037.96	3.890E-02	Pulse	2.00	3
Ag			1	99.848	ug/l	1.18	1,508,777.46	4.873E-01	Pulse	0.50	3
Ba			1	96.953	ug/l	0.83	136,909.45	1.637E-01	Pulse	0.50	3
Tl			1	98.969	ug/l	1.26	3,204,786.00	1.366E+00	Pulse	0.50	3
Sn			1	96.266	ug/l	0.64	340,837.34	4.074E-01	Pulse	0.30	3
Sr			1	95.414	ug/l	0.80	317,290.19	3.793E-01	Pulse	0.50	3
[Pb]			1	96.103	ug/l	1.79	1,017,341.96	4.338E-01	Pulse	0.50	3
Ca			1	9507.299	ug/l	1.18	175,759.41	1.357E+00	Pulse	0.50	3
Ti			1	92.558	ug/l	1.20	14,249.20	1.100E-01	Pulse	0.50	3
Na			1	10220.972	ug/l	0.52	10,555,887.00	8.150E+01	Analog	1.00	3
Mg			1	10088.244	ug/l	0.49	4,797,441.17	3.704E+01	Analog	1.00	3
K			1	9764.814	ug/l	0.22	3,368,404.67	2.601E+01	Pulse	1.00	3
V			1	95.394	ug/l	0.57	555,435.92	4.289E+00	Pulse	0.50	3
Mn			1	96.010	ug/l	1.62	337,138.49	3.564E+00	Pulse	0.50	3
Fe			1	9815.473	ug/l	1.81	60,029,618.67	6.345E+02	Analog	0.50	3
Co			1	95.293	ug/l	1.40	1,289,868.87	1.363E+01	Pulse	0.50	3
Ni			1	94.453	ug/l	1.73	360,225.60	3.808E+00	Pulse	0.50	3
Cu			1	93.730	ug/l	1.38	998,707.60	1.056E+01	Pulse	0.50	3
Zn			1	95.568	ug/l	1.73	141,470.28	9.947E-01	Pulse	1.00	3
Cd			1	95.877	ug/l	1.54	195,212.25	1.373E+00	Pulse	0.50	3
Al			1	9509.453	ug/l	1.03	1,374,267.58	1.061E+01	Pulse	1.00	3
Se			1	94.390	ug/l	1.32	4,608.00	3.240E-02	Pulse	3.00	3
Sb			1	95.514	ug/l	1.40	443,321.99	3.117E+00	Pulse	1.00	3
Se			1	94.314	ug/l	2.80	2,278.14	1.602E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,345,543.42	0.52	88.0	Pulse	0.50	3
1	Sc		129,513.95	0.03	89.9	Pulse	0.30	3
1	Ge		94,614.22	0.75	88.7	Pulse	0.30	3
1	In		836,552.81	0.12	86.6	Pulse	0.30	3
1	Tb		3,096,514.00	0.44	89.6	Pulse	0.50	3
1	Lu		1,916,127.92	0.25	89.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		142,227.65	0.88	88.2	Pulse	0.30	3
1	Te		4.00	0.00		Pulse	0.50	3
1	Li		611.12	8.33	100.9	Pulse	0.30	3

Quantitation Report

File Name 097_CCB.d
File Path D:\2022\xa060822m1.b
Method File
Method Path
Acq Time 6/8/2022 14:27
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 6/8/2022 9:15
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.027	ug/l	77.40	782.69	8.350E-03	Pulse	0.50	3
As			1	0.036	ug/l	7.73	42.33	4.513E-04	Pulse	1.00	3
Mo			1	0.168	ug/l	26.09	748.02	5.302E-03	Pulse	0.50	3
Pb			1	0.011	ug/l	75.33	2,606.20	1.086E-03	Pulse	1.00	3
Be			1	0.044	ug/l	93.00	2.33	1.803E-05	Pulse	2.00	3
Ag			1	0.021	ug/l	37.74	331.34	1.086E-04	Pulse	0.50	3
Ba			1	0.016	ug/l	50.32	30.67	3.647E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	39.69	636.68	2.654E-04	Pulse	0.50	3
Sn			1	0.123	ug/l	25.00	502.23	5.978E-04	Pulse	0.30	3
Sr			1	0.030	ug/l	20.08	401.34	4.777E-04	Pulse	0.50	3
[Pb]			1	0.015	ug/l	36.99	1,217.38	5.076E-04	Pulse	0.50	3
Ca			1	6.342	ug/l	44.18	208.67	1.618E-03	Pulse	0.50	3
Ti			1	0.014	ug/l	142.17	3.33	2.569E-05	Pulse	0.50	3
Na			1	7.947	ug/l	12.22	16,127.15	1.248E-01	Pulse	1.00	3
Mg			1	2.278	ug/l	33.77	1,255.71	9.728E-03	Pulse	1.00	3
K			1	5.702	ug/l	24.37	18,746.21	1.451E-01	Pulse	1.00	3
V			1	0.005	ug/l	239.05	240.67	1.865E-03	Pulse	0.50	3
Mn			1	0.066	ug/l	14.55	358.67	3.824E-03	Pulse	0.50	3
Fe			1	1.226	ug/l	54.82	35,359.08	3.771E-01	Pulse	0.50	3
Co			1	0.013	ug/l	55.15	245.33	2.619E-03	Pulse	0.50	3
Ni			1	0.022	ug/l	64.44	181.33	1.935E-03	Pulse	0.50	3
Cu			1	-0.302	ug/l	-5.82	21,977.84	2.343E-01	Pulse	0.50	3
Zn			1	0.778	ug/l	6.10	3,097.92	2.199E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	33.61	33.33	2.369E-04	Pulse	0.50	3
Al			1	2.763	ug/l	23.80	599.01	4.640E-03	Pulse	1.00	3
Se			1	0.305	ug/l	13.78	17.56	1.246E-04	Pulse	3.00	3
Sb			1	0.038	ug/l	2.46	191.67	1.361E-03	Pulse	1.00	3
Se			1	-0.071	ug/l	-111.90	18.33	1.301E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,398,477.92	0.31	89.9	Pulse	0.50	3
1	Sc		129,231.03	1.33	89.7	Pulse	0.30	3

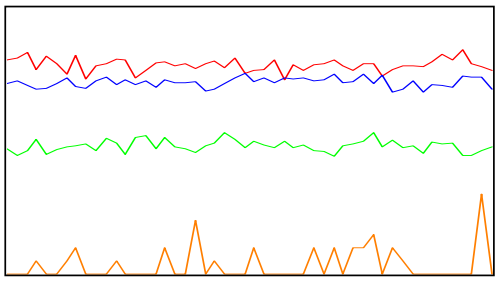
Quantitation Report

1	Ge		93,789.30	0.44	88.0	Pulse	0.30	3
1	In		840,245.75	0.71	87.0	Pulse	0.30	3
1	Tb		3,051,485.33	0.28	88.3	Pulse	0.50	3
1	Lu		1,892,171.08	0.19	88.4	Pulse	0.50	3
1	Ge		140,873.62	0.87	87.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		675.57	5.78	111.6	Pulse	0.30	3

Tune Report

Batch Folder	D:\2022\xa060822m1.b
Acq. Date-Time	6/8/2022 8:13
Report Comment	0608
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1567	15674.49	5000.00	
89	2000	960	9604.43	5000.00	
205	5000	3591	35911.95	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

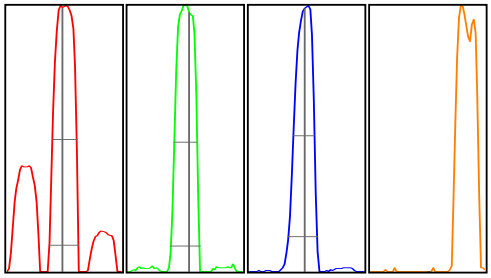
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.10	5.00	
89	4.59	5.00	
205	2.57	5.00	
78	181.79		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.00	2	
89	0.10	2	
205	0.30	2	
78	0.10	5	

Ratio	156/140	0.639 %	
Ratio	70/140	2.781 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1575.21	59.00	58.9 - 59.1		0.61	0.745	0.900	
89	928.02	89.10	88.9 - 89.1		0.57	0.723	0.900	
205	3586.46	205.00	204.9 - 205.1		0.53	0.730	0.900	
78	0.00	78.05	-		0.05	0.050		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.90 L/min	Makeup/Dilution Gas	0.20 L/min
Option Gas	0.0 %		

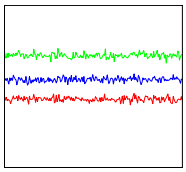
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-38 V
Extract 2	-200.0 V	Cell Exit	-70 V
Omega Bias	-100 V	Deflect	2.0 V
Omega Lens	6.9 V	Plate Bias	-60 V

Cell Parameters

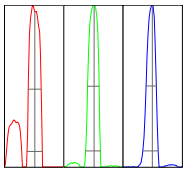
Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	190 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



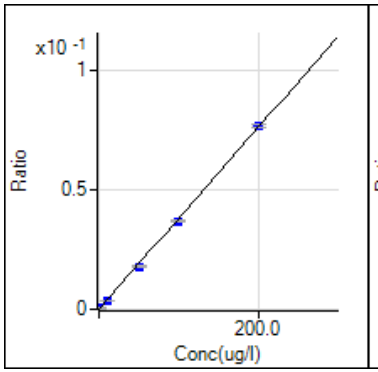
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2103.04	6906.98	5418.04
RSD%	3.2	2.2	2.5
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.15%	
Doubly Charged	70/140	5.09%	

Background			
Mass	7	89	205
Count	0.80	1.25	5.85

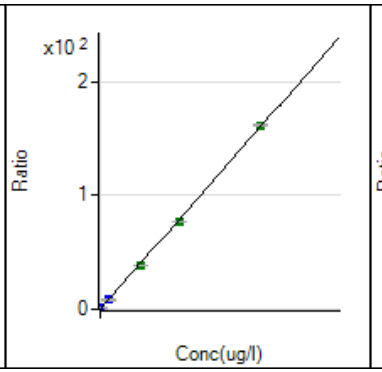


Resolution/Axis			
Mass	7	89	205
Height	2085	6851	5424
Axis	7.05	89.05	205.00
W-50%	0.64	0.57	0.51
W-10%	0.76	0.74	0.76
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

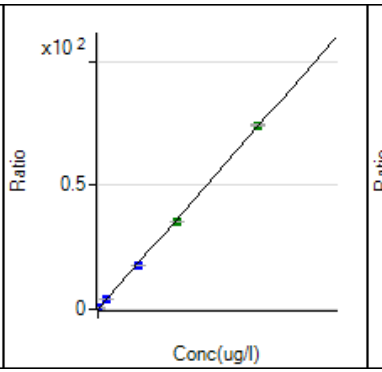
Calibration for D:\2022\xa060822m1.b\095CCVA.d



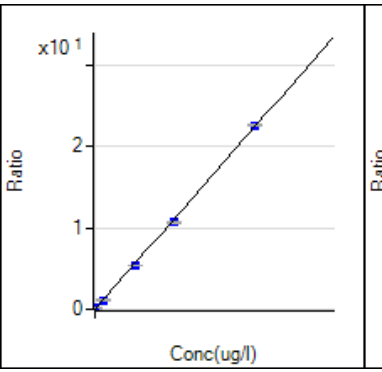
9 Be [2] / ISTD: 45 Sc
y = 3.808E-4 x + 1.161E-6
R 0.9997
DL 0.01585
BEC 0.00305



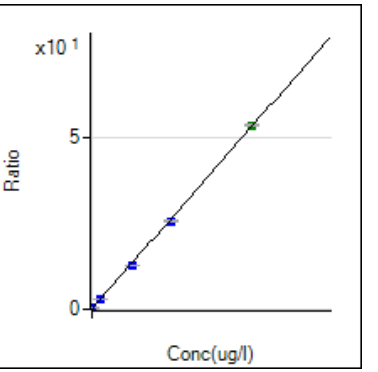
23 Na [2] / ISTD: 45 Sc
y = 7.968E-3 x + 6.151E-2
R 0.9997
DL 0.1169
BEC 7.719



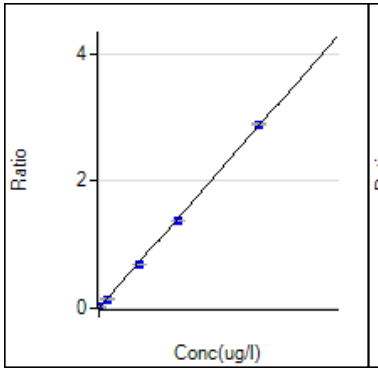
24 Mg [2] / ISTD: 45 Sc
y = 3.672E-3 x + 1.363E-3
R 0.9997
DL 0.03822
BEC 0.3714



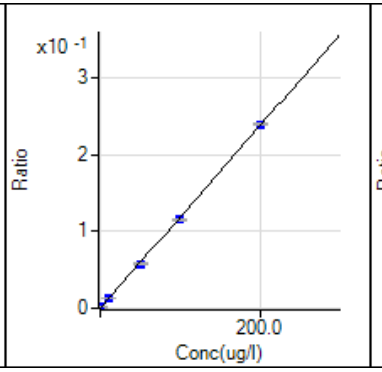
27 Al [2] / ISTD: 45 Sc
y = 1.116E-3 x + 1.558E-3
R 0.9997
DL 0.3188
BEC 1.396



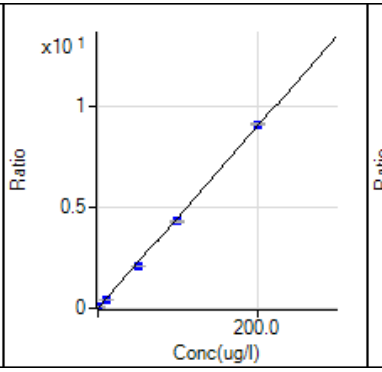
39 K [2] / ISTD: 45 Sc
y = 2.650E-3 x + 1.300E-1
R 0.9997
DL 0.8093
BEC 49.05



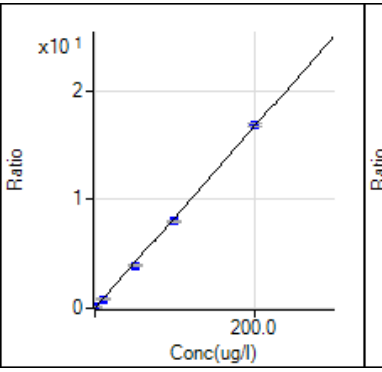
44 Ca [2] / ISTD: 45 Sc
y = 1.427E-4 x + 7.130E-4
R 0.9996
DL 3.158
BEC 4.998



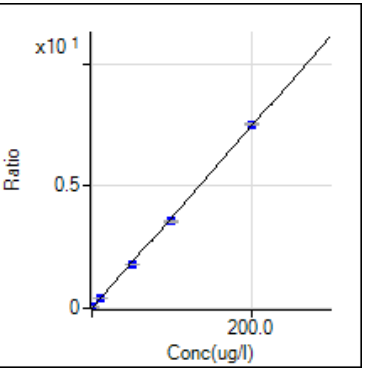
47 Ti [2] / ISTD: 45 Sc
y = 1.189E-3 x + 9.239E-6
R 0.9998
DL 0.04039
BEC 0.007773



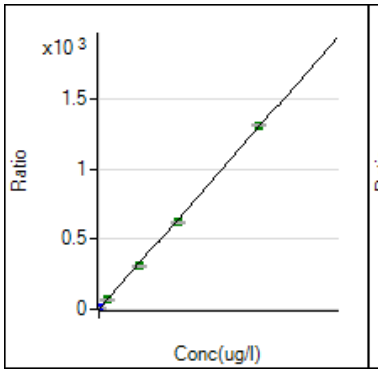
51 V [2] / ISTD: 45 Sc
y = 4.494E-2 x + 1.630E-3
R 0.9996
DL 0.01491
BEC 0.03627



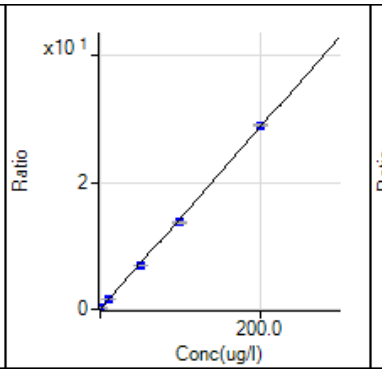
52 Cr [2] / ISTD: 72 Ge
y = 8.350E-2 x + 6.101E-3
R 0.9995
DL 0.0128
BEC 0.07307



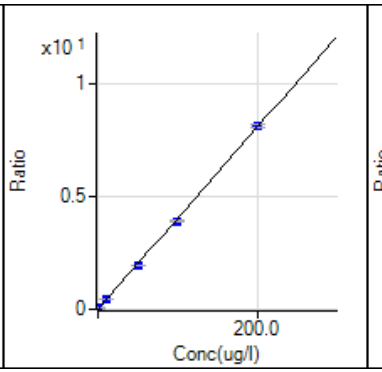
55 Mn [2] / ISTD: 72 Ge
y = 3.710E-2 x + 1.365E-3
R 0.9996
DL 0.02268
BEC 0.03679



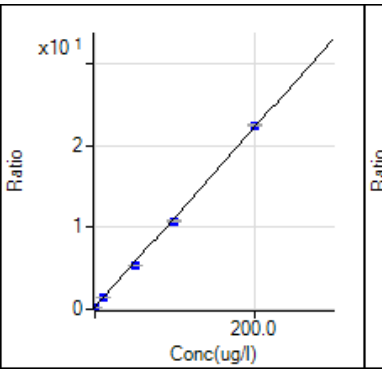
56 Fe [2] / ISTD: 72 Ge
y = 6.461E-2 x + 2.979E-1
R 0.9996
DL 0.1418
BEC 4.61



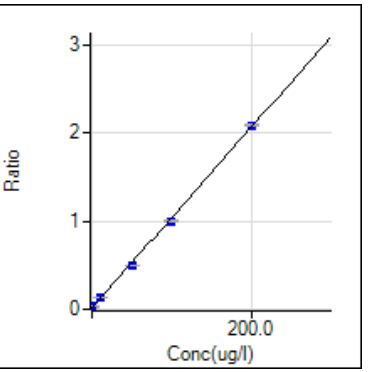
59 Co [2] / ISTD: 72 Ge
y = 1.431E-1 x + 6.881E-4
R 0.9996
DL 0.001131
BEC 0.00481



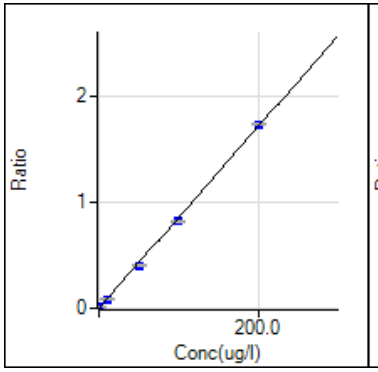
60 Ni [2] / ISTD: 72 Ge
y = 4.030E-2 x + 1.046E-3
R 0.9997
DL 0.01824
BEC 0.02597



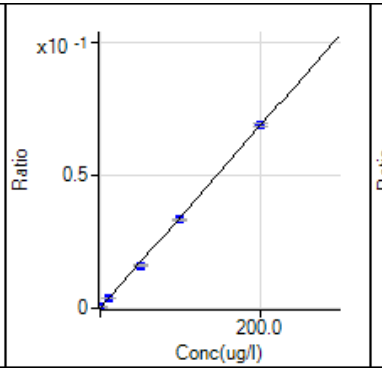
63 Cu [2] / ISTD: 72 Ge
y = 1.098E-1 x + 2.675E-1
R 0.9995
DL 0.1662
BEC 2.437



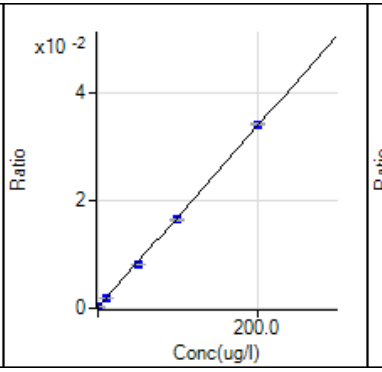
66 Zn [2] / ISTD: 74 Ge
y = 1.026E-2 x + 1.400E-2
R 0.9996
DL 0.03144
BEC 1.364



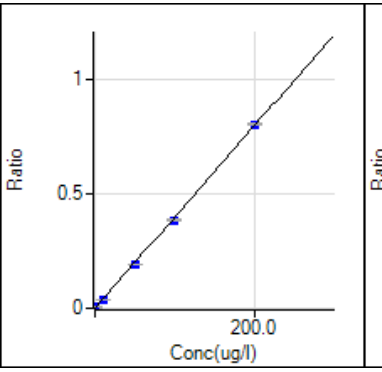
75 As [2] / ISTD: 72 Ge
y = 8.551E-3 x + 1.469E-4
R 0.9996
DL 0.00677
BEC 0.01718



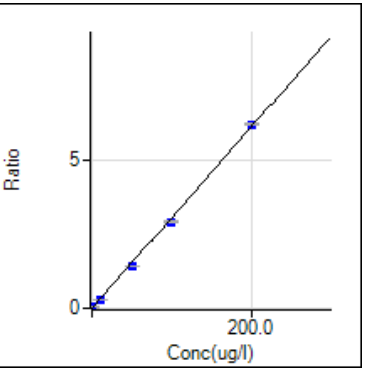
78 Se [2] / ISTD: 74 Ge
y = 3.430E-4 x + 1.997E-5
R 0.9997
DL 0.07462
BEC 0.05823



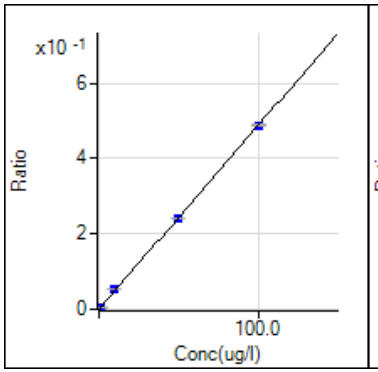
82 Se [2] / ISTD: 74 Ge
y = 1.683E-4 x + 1.420E-4
R 0.9997
DL 0.2413
BEC 0.8433



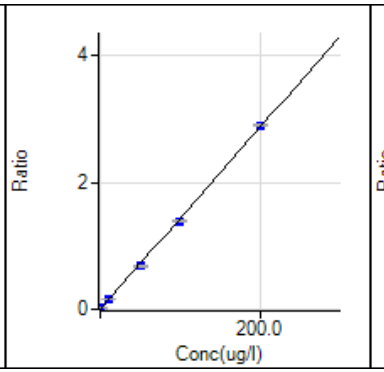
88 Sr [2] / ISTD: 115 In
y = 3.971E-3 x + 3.604E-4
R 0.9998
DL 0.05164
BEC 0.09075



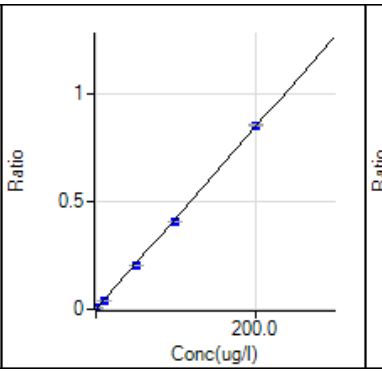
95 Mo [2] / ISTD: 74 Ge
y = 3.069E-2 x + 1.488E-4
R 0.9995
DL 0.003177
BEC 0.00485



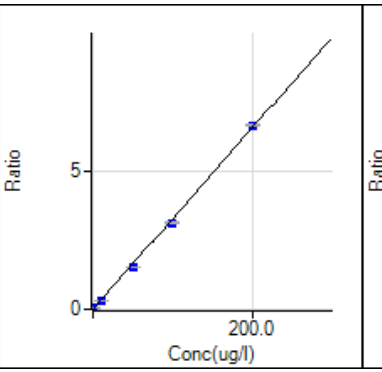
107 Ag [2] / ISTD: 159 Tb
y = 4.880E-3 x + 5.597E-6
R 1.0000
DL 0.001097
BEC 0.001147



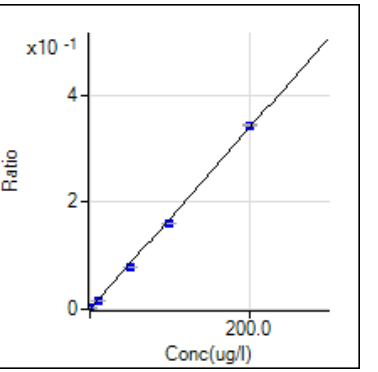
111 Cd [2] / ISTD: 74 Ge
y = 1.432E-2 x + 7.024E-5
R 0.9997
DL 0.007447
BEC 0.004906



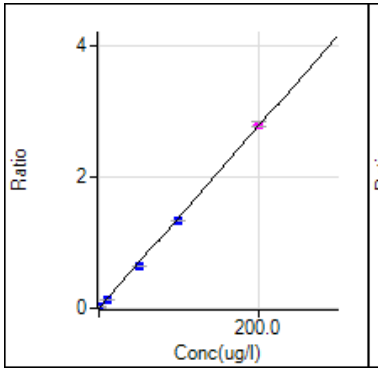
118 Sn [2] / ISTD: 115 In
y = 4.232E-3 x + 7.595E-5
R 0.9997
DL 0.008924
BEC 0.01795



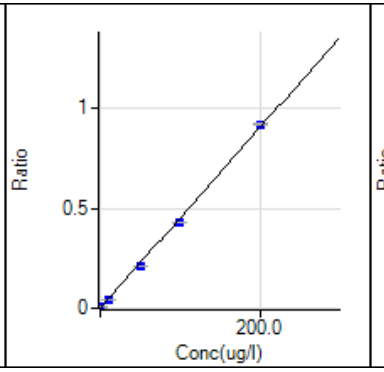
121 Sb [2] / ISTD: 74 Ge
y = 3.263E-2 x + 1.261E-4
R 0.9995
DL 0.004257
BEC 0.003864



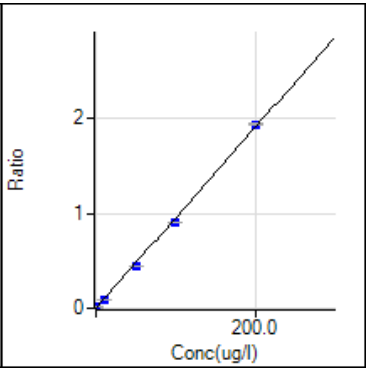
137 Ba [2] / ISTD: 115 In
y = 1.688E-3 x + 9.663E-6
R 0.9994
DL 0.01181
BEC 0.005725



205 Tl [2] / ISTD: 209 Bi
y = 1.381E-2 x + 1.225E-5
R 0.9997
DL 0.0002545
BEC 0.0008874



206 [Pb] [2] / ISTD: 209 Bi
y = 4.509E-3 x + 4.388E-4
R 0.9992
DL 0.01265
BEC 0.09733



208 Pb [2] / ISTD: 209 Bi
y = 9.539E-3 x + 9.791E-4
R 0.9993
DL 0.01088
BEC 0.1026

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 6/10/2022 9:40:43 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0003**	**.0001**	**-.0005**	**.0026**	**.0006**	**.0016**	**-.0006**	**-.0007**	**.0001**
Stddev	.0002	.0004	.0001	.0008	.0000	.0002	.0001	.0001	.0001
%RSD	86.38	287.4	20.42	30.65	2.152	12.10	16.45	14.94	69.30
#1	.0000	.0003	-.0006	.0017	.0007	.0018	-.0007	-.0006	.0001
#2	-.0004	.0003	-.0004	.0032	.0006	.0017	-.0006	-.0006	.0001
#3	-.0004	-.0003	-.0004	.0029	.0006	.0014	-.0005	-.0008	.0000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0042**	**.0009**	**.0107**	**.0019**	**.0000**	**.0003**	**.0010**	**.0086**	**-.0009**
Stddev	.0001	.0001	.0007	.0004	.000	.0001	.0001	.0008	.0000
%RSD	2.758	16.31	6.273	21.28	323.5	29.28	12.87	8.761	4.324
#1	.0043	.0009	.0099	.0020	-.0002	.0003	.0012	.0094	-.0009
#2	.0041	.0010	.0109	.0023	.0000	.0004	.0009	.0086	-.0010
#3	.0042	.0007	.0112	.0015	.0001	.0002	.0009	.0079	-.0009

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0002**	**-.0001**	**.0045**	**.0005**	**-.0011**	**.0005**	**-.0008**	**-.0004**
Stddev	.0009	.0002	.0001	.0002	.0001	.0002	.0002	.0003	.0001
%RSD	1549.	141.4	194.1	4.783	15.84	16.35	41.19	39.65	16.44
#1	-.0007	-.0001	.0001	.0046	.0005	-.0013	.0007	-.0004	-.0004
#2	.0010	.0003	-.0001	.0042	.0005	-.0010	.0004	-.0009	-.0005
#3	-.0002	.0002	-.0002	.0046	.0004	-.0009	.0003	-.0010	-.0005

Elem	Zn2062
Units	Cts/S
Avg	**.0010**
Stddev	.0001
%RSD	8.613
#1	.0009
#2	.0011
#3	.0010

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 6/10/2022 9:40:43 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**953.48**	**2140.6**	**25625.**	**8822.6**
Stddev	2.14	7.7	73.	63.2
%RSD	.22425	.35843	.28354	.71662
#1	955.19	2149.3	25639.	8811.2
#2	954.16	2137.6	25547.	8765.9
#3	951.08	2134.9	25690.	8890.8

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 6/10/2022 9:45:47 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0037**	**.0264**	**.0008**	**2.596**	**.0449**	**.1846**	**.0196**	**.1170**	**.0042**
Stddev	.0001	.0008	.0001	.005	.0001	.0013	.0004	.0004	.0001
%RSD	2.807	3.119	9.295	.1878	.2710	.7159	1.932	.3843	1.579
#1	.0038	.0272	.0008	2.595	.0450	.1861	.0194	.1174	.0042
#2	.0036	.0266	.0008	2.592	.0449	.1840	.0201	.1169	.0041
#3	.0037	.0255	.0007	2.602	.0448	.1837	.0194	.1165	.0041

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0305**	**.0521**	**.9959**	**.0017**	**.1133**	**.0328**	**.0538**	**3.765**	**.0536**
Stddev	.0001	.0001	.0037	.0005	.0007	.0001	.0003	.007	.0001
%RSD	.3829	.1514	.3712	27.31	.6036	.2404	.6412	.1791	.2101
#1	.0304	.0522	.9999	.0013	.1141	.0328	.0534	3.772	.0536
#2	.0306	.0520	.9927	.0017	.1130	.0329	.0541	3.758	.0537
#3	.0305	.0520	.9952	.0022	.1129	.0327	.0538	3.766	.0535

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0048**	**.0013**	**.0014**	**.0167**	**.1689**	**.0200**	**.0035**	**.0335**	**.0302**
Stddev	.0005	.0004	.0000	.0000	.0011	.0001	.0001	.0002	.0003
%RSD	9.874	32.39	1.298	.1036	.6382	.4802	3.307	.4676	.9710
#1	.0043	.0012	.0014	.0167	.1698	.0201	.0034	.0333	.0305
#2	.0050	.0018	.0014	.0167	.1677	.0199	.0034	.0336	.0301
#3	.0052	.0009	.0015	.0167	.1693	.0199	.0036	.0335	.0300

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**877.66**	**2067.8**	**24495.**	**8669.2**
Stddev	.37	4.4	24.	34.8
%RSD	.04259	.21243	.09925	.40113
#1	877.23	2071.0	24511.	8629.2
#2	877.87	2062.8	24467.	8686.8
#3	877.88	2069.7	24508.	8691.7

◀ Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 6/10/2022 9:50:06 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0157**	**.6808**	**.0337**	**3.276**	**2.255**	**.9446**	**1.035**	**.5941**	**.1025**
Stddev	.0001	.0015	.0006	.013	.007	.0009	.002	.0011	.0002
%RSD	.5403	.2187	1.714	.4067	.2918	.0968	.1788	.1873	.1992
#1	.0158	.6819	.0332	3.286	2.256	.9440	1.036	.5933	.1028
#2	.0156	.6791	.0343	3.261	2.248	.9441	1.033	.5937	.1025
#3	.0157	.6814	.0335	3.280	2.261	.9457	1.035	.5954	.1024

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2544**	**.8627**	**.5094**	**.5742**	**.1157**	**.5544**	**.2677**	**2.090**	**.3393**
Stddev	.0006	.0005	.0019	.0017	.0001	.0022	.0002	.004	.0009
%RSD	.2375	.0522	.3721	.2904	.0778	.3991	.0863	.1900	.2774
#1	.2537	.8624	.5103	.5745	.1156	.5519	.2676	2.089	.3385
#2	.2548	.8625	.5073	.5724	.1157	.5562	.2675	2.086	.3403
#3	.2547	.8632	.5108	.5757	.1157	.5550	.2680	2.094	.3392

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2522**	**.0739**	**.0318**	**.1308**	**.0852**	**4.314**	**.4862**	**.1204**	**.1676**
Stddev	.0002	.0003	.0002	.0002	.0002	.017	.0006	.0008	.0004
%RSD	.0731	.4267	.6072	.1349	.2406	.3876	.1277	.6590	.2201
#1	.2521	.0741	.0316	.1310	.0851	4.312	.4865	.1208	.1672
#2	.2521	.0740	.0319	.1308	.0852	4.298	.4865	.1195	.1679
#3	.2524	.0735	.0319	.1307	.0855	4.331	.4854	.1209	.1676

Elem	Zn2062
Units	Cts/S
Avg	**.3653**
Stddev	.0006
%RSD	.1507
#1	.3659
#2	.3649
#3	.3651

Zoom In Zoom Out

Sample Name: STDC Acquired: 6/10/2022 9:50:06 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**889.25**	**2110.6**	**25117.**	**8797.4**
Stddev	1.55	4.8	69.	27.8
%RSD	.17401	.22708	.27393	.31602
#1	890.79	2116.0	25173.	8828.7
#2	887.70	2108.8	25040.	8775.5
#3	889.27	2106.9	25138.	8788.2

Zoom In Zoom Out

Sample Name: STDD Acquired: 6/10/2022 9:53:48 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0304**	**1.376**	**.0674**	**6.652**	**4.554**	**1.854**	**2.017**	**1.168**	**.2002**
Stddev	.0001	.007	.0004	.036	.014	.007	.002	.002	.0002
%RSD	.4659	.5257	.5230	.5455	.2969	.3968	.0986	.1363	.0919
#1	.0304	1.376	.0677	6.636	4.551	1.862	2.016	1.167	.2003
#2	.0306	1.368	.0675	6.627	4.542	1.849	2.020	1.170	.2000
#3	.0304	1.383	.0670	6.694	4.568	1.850	2.017	1.167	.2004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5008**	**1.711**	**1.014**	**1.175**	**.2279**	**1.087**	**.5356**	**4.198**	**.6613**
Stddev	.0017	.003	.005	.011	.0016	.003	.0013	.020	.0013
%RSD	.3438	.1638	.5254	.9290	.7041	.2831	.2442	.4843	.1963
#1	.4988	1.713	1.009	1.166	.2298	1.089	.5362	4.180	.6627
#2	.5016	1.712	1.013	1.171	.2269	1.088	.5364	4.195	.6610
#3	.5019	1.708	1.020	1.187	.2271	1.083	.5340	4.220	.6601

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4969**	**.1454**	**.0620**	**.2549**	**.1662**	**8.796**	**.9627**	**.2339**	**.3330**
Stddev	.0031	.0005	.0002	.0010	.0004	.064	.0018	.0013	.0009
%RSD	.6296	.3756	.3546	.3789	.2239	.7272	.1855	.5378	.2687
#1	.4952	.1460	.0622	.2560	.1658	8.757	.9609	.2327	.3339
#2	.5005	.1453	.0617	.2544	.1665	8.761	.9645	.2338	.3330
#3	.4950	.1449	.0620	.2543	.1662	8.870	.9627	.2352	.3321

Elem	Zn2062
Units	Cts/S
Avg	**.7129**
Stddev	.0024
%RSD	.3414
#1	.7103
#2	.7150
#3	.7136

Zoom In Zoom Out

Sample Name: STDD Acquired: 6/10/2022 9:53:48 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**849.73**	**2078.2**	**24826.**	**8740.4**
Stddev	4.35	11.6	32.	39.4
%RSD	.51184	.56030	.12930	.45021
#1	846.36	2065.8	24847.	8697.9
#2	848.20	2080.0	24789.	8747.6
#3	854.64	2088.9	24840.	8775.6

Zoom In Zoom Out

Sample Name: STDE Acquired: 6/10/2022 9:58:05 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0636**	**2.905**	**.1410**	**13.40**	**9.157**	**3.757**	**4.126**	**2.360**	**.4151**
Stddev	.0004	.011	.0003	.04	.037	.022	.003	.001	.0019
%RSD	.6527	.3735	.2228	.2770	.4003	.5769	.0708	.0420	.4628
#1	.0641	2.918	.1412	13.44	9.199	3.780	4.126	2.360	.4165
#2	.0634	2.899	.1406	13.38	9.131	3.737	4.123	2.359	.4129
#3	.0634	2.899	.1412	13.37	9.141	3.753	4.129	2.361	.4158

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.021**	**3.437**	**2.060**	**2.368**	**.4651**	**2.201**	**1.082**	**8.416**	**1.349**
Stddev	.001	.011	.011	.013	.0017	.009	.001	.016	.003
%RSD	.0707	.3098	.5120	.5540	.3753	.4138	.1223	.1948	.2550
#1	1.021	3.445	2.071	2.382	.4665	2.211	1.082	8.435	1.348
#2	1.022	3.425	2.058	2.367	.4631	2.199	1.081	8.406	1.347
#3	1.021	3.442	2.051	2.356	.4657	2.193	1.084	8.408	1.353

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.033**	**.3010**	**.1309**	**.4606**	**.3382**	**17.66**	**1.958**	**.4875**	**.6835**
Stddev	.005	.0004	.0007	.0006	.0007	.08	.002	.0016	.0005
%RSD	.5040	.1269	.5162	.1394	.2047	.4377	.0754	.3275	.0725
#1	1.033	.3010	.1302	.4601	.3382	17.75	1.960	.4861	.6841
#2	1.039	.3007	.1315	.4604	.3389	17.64	1.957	.4892	.6834
#3	1.028	.3014	.1310	.4614	.3375	17.60	1.957	.4873	.6831

Elem	Zn2062
Units	Cts/S
Avg	**1.459**
Stddev	.001
%RSD	.0528
#1	1.460
#2	1.459
#3	1.460

Zoom In Zoom Out

Sample Name: STDE Acquired: 6/10/2022 9:58:05 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**817.11**	**2047.2**	**24413.**	**8768.1**
Stddev	1.27	5.9	23.	32.4
%RSD	.15584	.28886	.09426	.36906
#1	818.35	2052.9	24387.	8770.7
#2	815.80	2047.5	24431.	8799.1
#3	817.19	2041.1	24420.	8734.5

Zoom In Zoom Out

Sample Name: STDF Acquired: 6/10/2022 10:01:29 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1245**	**5.408**	**.2782**	**26.10**	**18.01**	**7.376**	**7.922**	**4.534**	**.8045**
Stddev	.0000	.023	.0012	.04	.11	.100	.004	.004	.0037
%RSD	.0181	.4185	.4349	.1401	.6258	1.349	.0473	.0903	.4585
#1	.1245	5.385	.2782	26.09	17.88	7.262	7.925	4.539	.8003
#2	.1245	5.409	.2794	26.07	18.06	7.420	7.922	4.531	.8057
#3	.1245	5.430	.2770	26.14	18.09	7.446	7.918	4.533	.8074

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.019**	**6.582**	**4.066**	**4.740**	**.9111**	**4.246**	**2.136**	**16.58**	**2.586**
Stddev	.001	.061	.006	.037	.0089	.010	.003	.02	.001
%RSD	.0572	.9246	.1383	.7825	.9749	.2446	.1592	.1458	.0291
#1	2.017	6.514	4.071	4.781	.9008	4.236	2.139	16.60	2.585
#2	2.019	6.600	4.068	4.728	.9157	4.257	2.137	16.55	2.586
#3	2.020	6.631	4.060	4.710	.9167	4.246	2.132	16.57	2.586

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.013**	**.5848**	**.2519**	**.9127**	**.6492**	**34.66**	**3.864**	**.9308**	**1.353**
Stddev	.003	.0009	.0006	.0020	.0012	.77	.007	.0014	.004
%RSD	.1352	.1569	.2419	.2207	.1852	2.217	.1703	.1536	.3222
#1	2.013	.5839	.2513	.9107	.6499	33.78	3.857	.9315	1.348
#2	2.010	.5858	.2521	.9126	.6499	35.17	3.865	.9292	1.357
#3	2.016	.5847	.2524	.9147	.6478	35.04	3.870	.9318	1.355

Elem	Zn2062
Units	Cts/S
Avg	**2.786**
Stddev	.003
%RSD	.1194
#1	2.790
#2	2.783
#3	2.784

Zoom In Zoom Out

Sample Name: STDF Acquired: 6/10/2022 10:01:29 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**761.84**	**1971.3**	**23520.**	**8663.8**
Stddev	.64	1.8	20.	93.4
%RSD	.08409	.08892	.08306	1.0785
#1	761.67	1971.7	23529.	8770.1
#2	762.54	1969.4	23534.	8626.4
#3	761.29	1972.9	23498.	8594.8

Zoom In Zoom Out

Sample Name: STDG Acquired: 6/10/2022 10:05:19 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2556**	**10.97**	**.5599**	**51.50**	**35.24**	**14.72**	**15.42**	**8.823**	**1.572**
Stddev	.0006	.04	.0013	.21	.29	.10	.01	.006	.003
%RSD	.2308	.3229	.2255	.4130	.8168	.7125	.0641	.0633	.1976
#1	.2563	10.99	.5584	51.74	35.56	14.84	15.42	8.819	1.572
#2	.2551	10.93	.5604	51.38	34.99	14.66	15.42	8.830	1.575
#3	.2555	10.99	.5608	51.37	35.17	14.66	15.41	8.821	1.569

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.015**	**12.90**	**8.135**	**9.522**	**1.837**	**8.354**	**4.188**	**33.04**	**4.990**
Stddev	.018	.06	.024	.054	.012	.017	.005	.07	.002
%RSD	.4592	.4813	.3003	.5671	.6259	.2015	.1166	.2075	.0352
#1	4.033	12.98	8.138	9.489	1.850	8.372	4.183	33.04	4.991
#2	3.996	12.88	8.110	9.493	1.833	8.350	4.192	32.98	4.989
#3	4.017	12.86	8.158	9.585	1.828	8.339	4.189	33.11	4.988

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.012**	**1.173**	**.4999**	**1.643**	**1.265**	**67.61**	**7.575**	**1.807**	**2.657**
Stddev	.011	.004	.0004	.004	.000	.57	.014	.007	.004
%RSD	.2679	.3752	.0818	.2256	.0328	.8430	.1896	.4019	.1516
#1	4.007	1.168	.5003	1.639	1.264	68.26	7.591	1.799	2.662
#2	4.004	1.176	.4994	1.645	1.265	67.18	7.568	1.807	2.655
#3	4.024	1.174	.4999	1.646	1.264	67.39	7.565	1.813	2.654

Elem	Zn2062
Units	Cts/S
Avg	**5.450**
Stddev	.018
%RSD	.3374
#1	5.470
#2	5.445
#3	5.434

Zoom In Zoom Out

Sample Name: STDG Acquired: 6/10/2022 10:05:19 Type: Cal
Method: 60102007_COMBO_09222021(v541) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**712.51**	**1909.0**	**22884.**	**8534.6**
Stddev	3.74	5.8	75.	48.2
%RSD	.52560	.30418	.32705	.56460
#1	716.12	1915.6	22798.	8479.1
#2	712.77	1906.8	22935.	8559.2
#3	708.64	1904.6	22920.	8565.6

Zoom In Zoom Out

Sample Name: HSTD Acquired: 6/10/2022 10:11:35 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5042**	**79.42**	**3.998**	**3.941**	**3.927**	**79.01**	**3.904**	**3.902**	**3.928**
Stddev	.0020	.21	.011	.015	.023	.46	.002	.005	.026
%RSD	.3887	.2591	.2725	.3788	.5841	.5778	.0390	.1219	.6644
#1	.5019	79.62	3.986	3.958	3.941	79.53	3.903	3.898	3.898
#2	.5056	79.21	4.000	3.934	3.900	78.78	3.903	3.901	3.937
#3	.5050	79.42	4.008	3.931	3.939	78.71	3.906	3.908	3.948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.979**	**78.10**	**79.96**	**4.009**	**79.64**	**3.915**	**3.947**	**80.03**	**3.881**
Stddev	.012	.44	.06	.014	.55	.019	.007	.07	.005
%RSD	.2951	.5664	.0790	.3493	.6897	.4908	.1828	.0918	.1327
#1	3.975	78.56	79.89	3.993	80.27	3.893	3.939	79.98	3.878
#2	3.992	77.67	79.96	4.019	79.24	3.925	3.947	80.00	3.879
#3	3.970	78.07	80.02	4.015	79.41	3.928	3.954	80.11	3.887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.982**	**3.980**	**3.961**	**3.744**	**3.904**	**3.955**	**3.943**	**3.899**	**3.944**
Stddev	.003	.013	.008	.010	.004	.044	.015	.014	.021
%RSD	.0797	.3217	.1934	.2769	.1012	1.103	.3829	.3602	.5286
#1	3.982	3.973	3.952	3.734	3.902	3.994	3.925	3.906	3.920
#2	3.978	3.973	3.966	3.742	3.908	3.964	3.950	3.883	3.955
#3	3.985	3.995	3.965	3.755	3.901	3.908	3.953	3.909	3.957
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 6/10/2022 10:11:35 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**3.913**
Stddev	.008
%RSD	.2045
#1	3.922
#2	3.911
#3	3.907
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**710.40**	**1909.3**	**22919.**	**8538.3**
Stddev	2.17	6.8	76.	45.6
%RSD	.30613	.35650	.33362	.53441
#1	711.65	1915.0	22981.	8486.7
#2	711.66	1911.1	22833.	8573.3
#3	707.89	1901.8	22941.	8555.0

Zoom In Zoom Out

Sample Name: ICV Acquired: 6/10/2022 10:17:25 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2491**	**39.59**	**2.012**	**2.047**	**2.051**	**39.51**	**2.019**	**2.038**	**2.048**
Stddev	.0005	.11	.004	.007	.010	.40	.001	.003	.008
%RSD	.1970	.2818	.2086	.3423	.4993	1.023	.0267	.1264	.4097
#1	.2486	39.57	2.012	2.052	2.041	39.06	2.019	2.035	2.041
#2	.2491	39.48	2.008	2.039	2.051	39.64	2.020	2.037	2.057
#3	.2496	39.70	2.016	2.049	2.061	39.84	2.020	2.040	2.044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.026**	**39.27**	**39.10**	**2.014**	**40.99**	**2.060**	**1.998**	**37.19**	**2.021**
Stddev	.004	.16	.05	.010	.35	.006	.002	.07	.002
%RSD	.2078	.4188	.1332	.4916	.8539	.3102	.1000	.1992	.0747
#1	2.028	39.09	39.13	2.025	40.59	2.054	1.998	37.27	2.020
#2	2.022	39.30	39.04	2.005	41.15	2.067	1.996	37.13	2.023
#3	2.030	39.42	39.12	2.014	41.23	2.058	2.000	37.17	2.021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.013**	**2.017**	**2.016**	**1.124**	**1.894**	**2.019**	**2.046**	**2.066**	**2.040**
Stddev	.008	.009	.004	.004	.001	.005	.003	.007	.005
%RSD	.3823	.4224	.1906	.3724	.0409	.2418	.1432	.3548	.2310
#1	2.015	2.017	2.017	1.123	1.894	2.024	2.043	2.070	2.037
#2	2.020	2.009	2.012	1.121	1.895	2.015	2.049	2.070	2.046
#3	2.005	2.026	2.020	1.129	1.893	2.017	2.045	2.057	2.038
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 6/10/2022 10:17:25 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.024**
Stddev	.007
%RSD	.3479
#1	2.024
#2	2.032
#3	2.018
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**768.92**	**1985.4**	**23775.**	**8660.1**
Stddev	1.05	9.6	31.	57.1
%RSD	.13659	.48330	.12886	.65930
#1	768.47	1986.4	23807.	8725.5
#2	770.12	1994.4	23746.	8634.7
#3	768.16	1975.3	23771.	8620.2

Zoom In Zoom Out

Sample Name: ICB Acquired: 6/10/2022 10:25:03 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0013**	**-.0004**	**-.0001**	**-.0001**	**-.0015**	**.0000**	**-.0001**	**.0000**
Stddev	.0000	.0061	.0005	.0000	.0000	.0015	.000	.0001	.000
%RSD	23.35	466.6	127.4	8.751	40.71	101.9	64.45	128.1	1956.
#1	-.0003	.0051	-.0010	-.0001	-.0001	-.0018	.0000	-.0001	-.0001
#2	-.0002	-.0069	-.0002	-.0001	-.0001	.0002	-.0001	.0000	.0002
#3	-.0002	-.0021	.0000	-.0001	-.0001	-.0027	-.0001	-.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0016**	**.0135**	**.0001**	**-.0067**	**.0000**	**.0000**	**-.0047**	**.0000**
Stddev	.000	.0004	.0147	.0003	.0048	.000	.000	.0015	.000
%RSD	1908.	21.68	109.0	385.3	72.10	219.2	1841.	31.73	243.5
#1	.0001	-.0018	.0203	.0004	-.0043	.0000	-.0001	-.0046	.0000
#2	-.0001	-.0012	-.0034	-.0001	-.0035	.0000	.0001	-.0032	-.0001
#3	.0000	-.0019	.0235	.0000	-.0122	.0000	-.0001	-.0062	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0003**	**.0007**	**.0000**	**-.0001**	**.0000**	**.0000**	**.0012**	**.0001**
Stddev	.0007	.0004	.0022	.0005	.0001	.000	.0000	.0008	.0001
%RSD	256.1	106.4	297.1	996.2	101.7	141.1	191.0	68.63	86.74
#1	-.0005	-.0007	.0018	.0004	-.0002	.0000	.0001	.0016	.0003
#2	.0006	-.0004	.0021	.0003	.0000	-.0001	.0000	.0018	.0001
#3	.0007	.0000	-.0018	-.0005	-.0002	.0000	.0000	.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB Acquired: 6/10/2022 10:25:03 Type: QC
Method: 60102007_COMBO_09222021(v541) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0000**
Stddev	.0000
%RSD	237.4
#1	.0000
#2	.0001
#3	.0000
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.37**	**2104.7**	**25316.**	**8866.0**
Stddev	2.35	5.0	88.	70.1
%RSD	.24851	.23594	.34582	.79032
#1	947.04	2110.4	25417.	8944.7
#2	942.61	2102.8	25264.	8810.4
#3	943.47	2101.0	25268.	8842.9

Zoom In Zoom Out

Sample Name: CRIA Acquired: 6/10/2022 10:29:38 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1915**	**.0089**	**.1954**	**.0048**	**.9718**	**.0051**	**.0516**	**.0099**	**.0262**
Stddev	.0066	.0011	.0010	.0000	.0038	.0000	.0003	.0002	.0003
%RSD	3.431	12.11	.5373	.9802	.3881	.3403	.5469	1.910	1.126
#1	.1931	.0090	.1942	.0048	.9717	.0051	.0519	.0100	.0264
#2	.1971	.0100	.1957	.0048	.9681	.0051	.0513	.0101	.0259
#3	.1843	.0078	.1962	.0049	.9757	.0051	.0517	.0097	.0264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3002**	**9.650**	F **.0001**	**4.826**	**.0151**	**.0492**	**9.006**	**.0424**	**.0053**
Stddev	.0016	.047	.0002	.010	.0001	.0002	.032	.0002	.0005
%RSD	.5293	.4827	106.1	.2145	.3486	.3330	.3501	.4141	9.833
#1	.2986	9.598	.0000	4.817	.0151	.0494	8.969	.0422	.0051
#2	.3002	9.666	.0003	4.837	.0152	.0492	9.023	.0424	.0059
#3	.3017	9.687	.0002	4.824	.0151	.0491	9.025	.0426	.0049
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0100						
Range			-20.00%						

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**.0099**	**.0632**	**.0500**	**.0097**	**.0101**	**.0101**	**.0503**	**.0209**
Stddev	.0004	.0015	.0008	.0002	.0001	.0001	.0006	.0003	.0002
%RSD	8.983	15.08	1.299	.4109	1.026	.7983	5.966	.6056	.8824
#1	.0055	.0094	.0624	.0501	.0096	.0101	.0101	.0499	.0211
#2	.0048	.0088	.0640	.0500	.0098	.0102	.0106	.0505	.0208
#3	.0047	.0116	.0634	.0497	.0098	.0101	.0094	.0504	.0208
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRIA Acquired: 6/10/2022 10:29:38 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**878.11**	**2055.7**	**24425.**	**8791.4**
Stddev	.64	.9	74.	16.2
%RSD	.07232	.04406	.30228	.18425
#1	877.40	2054.6	24374.	8800.4
#2	878.61	2056.3	24391.	8801.2
#3	878.34	2056.0	24510.	8772.7

Zoom In Zoom Out

Sample Name: CRIA Acquired: 6/10/2022 10:34:24 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280
Units	ppm
Avg	**.0091**
Stddev	.0001
%RSD	1.179
#1	.0092
#2	.0091
#3	.0090
Check ?	Chk Pass
Value	
Range	

Int. Std.	Y_3600
Units	Cts/S
Avg	**25326.**
Stddev	37.
%RSD	.14685
#1	25308.
#2	25300.
#3	25368.

Zoom In Zoom Out

Sample Name: ICSA Acquired: 6/10/2022 10:42:17 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**498.5**	**.0010**	**.0004**	**-.0001**	**447.1**	**.0000**	**.0006**
Stddev	.0004	10.0	.0018	.0003	.0000	5.0	.0009	.0002
%RSD	125.3	2.006	174.9	84.19	4.279	1.126	4154.	38.79
#1	.0007	487.5	-.0010	.0007	-.0001	443.2	.0008	.0004
#2	-.0001	501.0	.0026	.0002	-.0001	445.3	.0003	.0005
#3	.0004	507.1	.0016	.0001	-.0001	452.8	-.0010	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**-.0002**	F **456.8**	**-.0091**	F **-.0072**	**524.7**	**.0002**	**.0007**
Stddev	.0004	.0006	3.7	.0038	.0001	6.0	.0000	.0002
%RSD	45.92	325.3	.8205	41.32	1.667	1.146	27.21	22.83
#1	.0005	-.0004	453.5	-.0131	-.0073	518.5	.0001	.0007
#2	.0010	-.0006	456.0	-.0086	-.0072	525.1	.0002	.0005
#3	.0013	.0005	460.9	-.0056	-.0071	530.5	.0001	.0008
Check ?	Chk Pass	Chk Pass	Chk Fail	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			240.0		.0010			
Low Limit			160.0		-.0010			

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2156**	**.0009**	**.0000**	**-.0004**	**.0000**	**.0922**	**-.0008**	**.0001**
Stddev	.0033	.0008	.003	.0020	.0034	.0003	.0016	.0001
%RSD	1.520	84.27	7013.	519.1	7339.	.2731	207.1	127.6
#1	.2152	.0012	.0027	.0016	-.0035	.0923	.0002	.0002
#2	.2191	.0015	.0008	-.0005	.0033	.0919	-.0026	.0001
#3	.2125	.0000	-.0037	-.0023	.0004	.0924	.0001	.0000
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ICSA Acquired: 6/10/2022 10:42:17 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0006**	**.0006**	**.0026**
Stddev	.0002	.0024	.0001	.0005
%RSD	34.27	394.0	23.95	19.37
#1	.0004	-.0004	.0005	.0032
#2	.0007	-.0031	.0006	.0022
#3	.0005	.0017	.0007	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**660.41**	**1730.4**	**20766.**	**8315.4**
Stddev	2.37	5.5	36.	106.1
%RSD	.35843	.31997	.17456	1.2766
#1	663.09	1734.5	20756.	8425.8
#2	659.57	1724.1	20735.	8306.5
#3	658.58	1732.6	20806.	8214.0

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 6/10/2022 10:49:26 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.082**	**498.2**	**.9974**	**.4854**	**.4871**	**455.2**	**.9303**	**.4569**	**.4833**
Stddev	.006	6.1	.0046	.0013	.0012	1.8	.0016	.0010	.0036
%RSD	.5469	1.226	.4605	.2627	.2549	.3904	.1689	.2145	.7474
#1	1.077	494.9	.9922	.4841	.4857	453.4	.9317	.4574	.4801
#2	1.088	494.4	.9993	.4855	.4876	457.0	.9307	.4575	.4872
#3	1.079	505.2	1.001	.4867	.4879	455.2	.9286	.4558	.4827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5662**	**174.0**	**.6155**	**1.006**	**533.6**	**.4975**	**.8917**	**.2088**	**.8780**
Stddev	.0015	.4	.0153	.003	.9	.0017	.0022	.0004	.0020
%RSD	.2654	.2338	2.491	.2476	.1760	.3457	.2456	.2038	.2294
#1	.5646	173.7	.6323	1.006	532.6	.4958	.8925	.2089	.8783
#2	.5666	174.4	.6022	1.009	534.5	.4992	.8934	.2084	.8798
#3	.5676	173.8	.6120	1.004	533.7	.4976	.8892	.2092	.8758
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9364**	**.9915**	**.9302**	**.2319**	**.8248**	**.9383**	**.9778**	**.8708**	**.5072**
Stddev	.0044	.0053	.0065	.0006	.0002	.0010	.0046	.0079	.0028
%RSD	.4653	.5310	.6974	.2668	.0265	.1017	.4695	.9064	.5513
#1	.9392	.9942	.9264	.2312	.8249	.9372	.9739	.8723	.5054
#2	.9314	.9949	.9377	.2323	.8248	.9385	.9829	.8623	.5104
#3	.9386	.9854	.9264	.2321	.8245	.9391	.9767	.8779	.5058
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 6/10/2022 10:49:26 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.9109**
Stddev	.0034
%RSD	.3706
#1	.9140
#2	.9073
#3	.9115
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**641.56**	**1784.7**	**20939.**	**8374.2**
Stddev	.79	10.1	85.	24.1
%RSD	.12390	.56388	.40390	.28837
#1	640.89	1781.6	21003.	8400.7
#2	641.36	1776.6	20843.	8353.5
#3	642.44	1796.0	20970.	8368.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 10:57:03 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2454**	**38.52**	**1.963**	**1.972**	**1.979**	**39.25**	**1.989**	**1.988**	**2.005**
Stddev	.0008	.16	.004	.009	.006	.18	.003	.002	.017
%RSD	.3259	.4045	.2012	.4613	.3277	.4553	.1336	.1016	.8213
#1	.2447	38.37	1.963	1.963	1.972	39.06	1.991	1.988	1.987
#2	.2463	38.68	1.959	1.981	1.985	39.30	1.986	1.986	2.019
#3	.2453	38.51	1.967	1.971	1.980	39.40	1.991	1.990	2.009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.979**	**39.40**	**39.56**	**1.966**	**39.13**	**1.978**	**1.990**	**39.58**	**1.999**
Stddev	.003	.25	.05	.008	.15	.010	.004	.17	.003
%RSD	.1331	.6276	.1370	.3860	.3946	.4912	.1749	.4325	.1672
#1	1.979	39.16	39.53	1.963	38.95	1.967	1.992	39.51	2.001
#2	1.982	39.66	39.62	1.975	39.21	1.980	1.987	39.77	1.995
#3	1.977	39.38	39.52	1.961	39.23	1.986	1.993	39.45	2.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.972**	**1.964**	**1.967**	**2.059**	**1.985**	**1.968**	**1.996**	**1.986**	**1.997**
Stddev	.005	.005	.006	.006	.003	.005	.007	.007	.009
%RSD	.2468	.2498	.3328	.2990	.1365	.2627	.3307	.3627	.4592
#1	1.972	1.969	1.969	2.062	1.988	1.970	1.988	1.992	1.987
#2	1.976	1.959	1.960	2.052	1.985	1.972	2.000	1.989	2.002
#3	1.967	1.965	1.973	2.063	1.983	1.962	1.999	1.978	2.003
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 10:57:03 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.976**
Stddev	.001
%RSD	.0662
#1	1.975
#2	1.976
#3	1.978
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**769.01**	**1986.6**	**23744.**	**8771.3**
Stddev	1.90	5.1	71.	45.4
%RSD	.24667	.25556	.29852	.51754
#1	767.66	1984.1	23822.	8823.6
#2	768.19	1992.5	23684.	8741.4
#3	771.18	1983.4	23727.	8749.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 11:03:48 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0006**	**-.0012**	**.0000**	**.0000**	**.0012**	**.0000**	**.0000**	**.0000**
Stddev	.0002	.0036	.0004	.000	.000	.0017	.000	.000	.0001
%RSD	89.23	592.9	34.01	119.9	109.8	137.3	145.1	352.9	220.4
#1	-.0001	.0035	-.0014	.0000	.0000	-.0007	.0000	-.0001	.0001
#2	-.0001	-.0032	-.0008	-.0001	-.0001	.0025	.0000	.0001	-.0001
#3	-.0004	-.0021	-.0016	-.0001	.0000	.0019	-.0001	-.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0038**	**.0015**	**.0002**	**-.0011**	**.0000**	**-.0002**	**-.0063**	**-.0001**
Stddev	.0001	.0000	.0141	.0001	.0032	.0000	.0001	.0021	.0001
%RSD	27.36	.9701	957.5	39.94	299.3	164.0	40.22	32.54	158.6
#1	.0002	.0038	.0152	.0003	-.0019	.0000	-.0001	-.0068	-.0002
#2	.0004	.0037	-.0129	.0001	.0024	.0000	-.0002	-.0082	-.0001
#3	.0003	.0037	.0022	.0002	-.0037	.0000	-.0003	-.0041	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0006**	**.0003**	**.0000**	**.0000**	**.0000**	**.0006**	**.0000**
Stddev	.0003	.0009	.0006	.0002	.0003	.0000	.000	.0004	.0001
%RSD	213.7	15590.	89.83	74.40	687.1	247.3	73.95	57.84	315.3
#1	.0005	.0009	.0005	.0005	.0003	.0000	.0000	.0003	.0001
#2	-.0002	-.0009	.0002	.0003	.0000	.0000	-.0001	.0010	.0001
#3	.0001	.0001	.0013	.0001	-.0002	.0000	.0000	.0006	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 11:03:48 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	54.50
#1	.0002
#2	.0001
#3	.0000
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**949.22**	**2123.1**	**25607.**	**8847.1**
Stddev	1.37	.7	49.	8.5
%RSD	.14391	.03177	.19036	.09588
#1	949.04	2122.8	25659.	8856.7
#2	950.66	2123.9	25597.	8844.2
#3	947.95	2122.7	25563.	8840.6

Zoom In Zoom Out

Sample Name: MP40821-MB1 Acquired: 6/10/2022 11:09:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0011**	**-.0012**	**-.0001**	**-.0001**	**.0057**	**.0000**	**-.0001**	**-.0001**
Stddev	.0003	.0058	.0016	.0000	.0000	.0015	.000	.0000	.0003
%RSD	4820.	519.1	134.4	32.95	12.83	26.47	324.2	29.24	430.9
#1	.0004	.0045	-.0015	.0000	-.0001	.0041	.0000	-.0001	-.0004
#2	.0000	-.0070	.0005	-.0001	-.0001	.0071	.0001	-.0001	.0001
#3	-.0003	-.0009	-.0025	-.0001	-.0001	.0058	-.0001	-.0001	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**-.0018**	**-.0065**	**.0000**	**-.0019**	**.0000**	**-.0002**	**-.0090**	**.0006**
Stddev	.0001	.0011	.0145	.000	.0049	.000	.0001	.0004	.0002
%RSD	8.946	58.51	224.2	1094.	263.8	32.03	60.43	4.340	31.22
#1	.0015	-.0006	-.0199	.0000	-.0070	.0000	-.0001	-.0089	.0007
#2	.0016	-.0026	.0089	-.0004	.0028	.0000	-.0002	-.0094	.0006
#3	.0013	-.0022	-.0084	.0002	-.0014	.0000	-.0003	-.0086	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0001**	**.0013**	**.0027**	**.0003**	**-.0001**	**.0001**	**-.0011**	**-.0001**
Stddev	.0003	.0008	.0003	.0003	.0002	.0000	.0001	.0004	.0002
%RSD	64.64	568.5	23.16	11.08	65.72	25.88	99.60	35.75	350.4
#1	-.0009	.0003	.0017	.0030	.0004	.0000	.0000	-.0009	-.0001
#2	-.0004	.0009	.0013	.0024	.0005	-.0001	.0000	-.0009	.0002
#3	-.0002	-.0007	.0011	.0026	.0001	-.0001	.0002	-.0015	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP40821-MB1 Acquired: 6/10/2022 11:09:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0007**
Stddev	.0000
%RSD	2.389
#1	.0007
#2	.0007
#3	.0008
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.59**	**2079.7**	**25625.**	**9045.8**
Stddev	.92	4.5	62.	8.5
%RSD	.09788	.21542	.24205	.09417
#1	937.54	2081.0	25690.	9036.8
#2	939.01	2074.7	25567.	9046.9
#3	939.23	2083.4	25618.	9053.7

Zoom In Zoom Out

Sample Name: MP40821-B1 Acquired: 6/10/2022 11:13:55 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0514**	**25.58**	**1.923**	**2.015**	**.0497**	**24.00**	**.0489**	**.5058**
Stddev	.0002	.07	.004	.006	.0002	.02	.0001	.0004
%RSD	.4183	.2889	.2095	.3249	.3764	.0957	.2159	.0789
#1	.0517	25.49	1.918	2.007	.0495	24.02	.0489	.5054
#2	.0513	25.62	1.923	2.020	.0499	23.98	.0490	.5058
#3	.0513	25.62	1.926	2.016	.0498	23.98	.0489	.5061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2058**	**.2566**	**25.12**	**24.30**	F **-.0004**	**23.75**	**.5095**	**.5019**
Stddev	.0008	.0014	.04	.02	.0000	.07	.0003	.0004
%RSD	.4063	.5395	.1529	.0797	8.610	.3004	.0573	.0874
#1	.2056	.2570	25.10	24.28	-.0004	23.72	.5098	.5014
#2	.2052	.2551	25.16	24.29	-.0003	23.83	.5092	.5019
#3	.2068	.2578	25.10	24.32	-.0003	23.70	.5094	.5023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0500			
Range					-20.00%			

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.84**	**.5132**	**.4772**	**.4951**	**1.934**	**.7343**	**.5064**	**.5099**
Stddev	.05	.0002	.0008	.0040	.003	.0019	.0001	.0012
%RSD	.2377	.0380	.1747	.8073	.1383	.2534	.0170	.2410
#1	22.78	.5134	.4781	.4908	1.936	.7346	.5063	.5085
#2	22.87	.5130	.4767	.4986	1.931	.7324	.5065	.5109
#3	22.88	.5133	.4767	.4961	1.936	.7361	.5063	.5103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP40821-B1 Acquired: 6/10/2022 11:13:55 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.5161**	**1.945**	**.5056**	**.4940**
Stddev	.0009	.003	.0019	.0006
%RSD	.1830	.1356	.3762	.1185
#1	.5162	1.945	.5049	.4942
#2	.5151	1.942	.5041	.4944
#3	.5170	1.947	.5077	.4933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**807.10**	**2002.2**	**24131.**	**8947.6**
Stddev	1.15	1.2	118.	11.0
%RSD	.14251	.05959	.48959	.12277
#1	806.03	2003.5	24110.	8957.7
#2	808.32	2001.6	24259.	8949.2
#3	806.94	2001.4	24025.	8935.9

Zoom In Zoom Out

Sample Name: FA95959-3 Acquired: 6/10/2022 11:18:31 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.1184**	**.0717**	**.0097**	**.0000**	**.3334**	**-.0013**	**.0018**	**.0006**
Stddev	.0001	.0033	.0013	.0001	.000	.0006	.0000	.0001	.0001
%RSD	17.42	2.794	1.830	1.097	30.71	.1766	2.775	4.662	20.51
#1	.0006	.1170	.0710	.0098	.0000	.3331	-.0013	.0019	.0006
#2	.0008	.1160	.0732	.0096	-.0001	.3330	-.0014	.0018	.0007
#3	.0009	.1222	.0708	.0097	.0000	.3341	-.0013	.0017	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**22.37**	**1.106**	**-.0002**	**.2748**	**.0976**	**.0002**	**6.146**	**-.0006**
Stddev	.0001	.09	.004	.0003	.0082	.0008	.0001	.033	.0002
%RSD	7.672	.4020	.4048	160.6	2.976	.8338	24.78	.5364	27.19
#1	.0009	22.40	1.110	.0002	.2704	.0980	.0003	6.183	-.0004
#2	.0010	22.27	1.102	-.0005	.2697	.0981	.0002	6.118	-.0007
#3	.0011	22.44	1.107	-.0003	.2842	.0966	.0002	6.137	-.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0007**	**.0023**	**2.088**	**.0003**	**.0052**	**.0001**	**-.0001**	**.0007**
Stddev	.0007	.0006	.0026	.009	.0005	.0000	.0001	.0002	.0002
%RSD	107.9	88.79	113.6	.4117	163.7	.2743	64.16	192.9	34.19
#1	.0009	.0010	.0010	2.078	.0007	.0052	.0001	-.0004	.0005
#2	-.0001	.0010	.0005	2.094	-.0002	.0052	.0000	-.0001	.0007
#3	.0012	.0000	.0052	2.092	.0003	.0052	.0001	.0001	.0010

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0155**
Stddev	.0001
%RSD	.6781
#1	.0156
#2	.0154
#3	.0156

Zoom In Zoom Out

Sample Name: FA95959-3 Acquired: 6/10/2022 11:18:31 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**896.91**	**2077.6**	**25427.**	**9005.3**
Stddev	.57	5.7	25.	28.2
%RSD	.06401	.27535	.09734	.31290
#1	897.38	2083.8	25398.	9001.8
#2	896.27	2072.4	25439.	9035.1
#3	897.08	2076.6	25443.	8979.0

Zoom In Zoom Out

Sample Name: MP40821-D1 Acquired: 6/10/2022 11:23:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.1185**	**.0766**	**.0104**	**.0000**	**.3434**	**-.0012**	**.0018**	**.0005**
Stddev	.0004	.0032	.0006	.0000	.000	.0030	.0000	.0001	.0001
%RSD	36.06	2.741	.7412	.1052	90.96	.8592	.9376	4.364	22.50
#1	.0007	.1213	.0759	.0104	.0000	.3404	-.0012	.0017	.0006
#2	.0014	.1150	.0768	.0104	.0000	.3435	-.0012	.0018	.0005
#3	.0010	.1192	.0769	.0104	.0000	.3463	-.0012	.0019	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**22.58**	**1.134**	**-.0004**	**.2853**	**.0998**	**.0001**	**6.208**	**-.0007**
Stddev	.0002	.03	.008	.0004	.0035	.0003	.0002	.006	.0003
%RSD	9.114	.1157	.7178	118.3	1.227	.3425	270.7	.1006	35.37
#1	.0019	22.55	1.143	-.0001	.2879	.0996	.0003	6.201	-.0005
#2	.0017	22.60	1.133	-.0001	.2813	.1002	-.0001	6.210	-.0007
#3	.0016	22.58	1.127	-.0008	.2868	.0997	.0000	6.212	-.0010

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0008**	**.0012**	**2.140**	**.0002**	**.0053**	**.0002**	**.0000**	**.0005**
Stddev	.0009	.0014	.0008	.001	.0003	.0000	.0001	.0010	.0000
%RSD	328.4	185.1	69.39	.0452	162.4	.2443	29.96	2282.	6.929
#1	-.0003	-.0023	.0003	2.139	.0005	.0053	.0001	.0012	.0005
#2	-.0002	.0005	.0019	2.140	-.0001	.0053	.0002	-.0005	.0005
#3	.0013	-.0005	.0012	2.141	.0002	.0053	.0002	-.0006	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0165**
Stddev	.0002
%RSD	.9091
#1	.0167
#2	.0164
#3	.0164

Zoom In Zoom Out

Sample Name: MP40821-D1 Acquired: 6/10/2022 11:23:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**897.04**	**2068.4**	**25181.**	**9096.3**
Stddev	2.37	1.2	99.	5.1
%RSD	.26397	.05695	.39261	.05575
#1	899.07	2069.4	25228.	9097.1
#2	897.62	2068.7	25246.	9090.9
#3	894.44	2067.1	25067.	9100.9

Zoom In Zoom Out

Sample Name: MP40821-SD1 Acquired: 6/10/2022 11:28:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1174**	**.0681**	**.0100**	**-.0004**	**.3600**	**-.0017**	**.0017**	**-.0003**
Stddev	.0008	.0177	.0025	.0001	.0002	.0098	.0000	.0006	.0007
%RSD	757.1	15.08	3.645	.5385	41.50	2.726	2.674	32.33	279.8
#1	-.0003	.1341	.0673	.0099	-.0004	.3494	-.0018	.0011	-.0005
#2	-.0004	.1194	.0708	.0100	-.0005	.3617	-.0017	.0022	.0006
#3	.0011	.0988	.0660	.0099	-.0002	.3688	-.0017	.0018	-.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**24.04**	**1.105**	**.0000**	**.2788**	**.1057**	**-.0016**	**6.411**	**-.0012**
Stddev	.0001	.03	.008	.0031	.0539	.0001	.0003	.023	.0009
%RSD	4.403	.1238	.7095	6941.	19.33	.1021	20.87	.3652	76.47
#1	.0022	24.04	1.101	.0027	.2501	.1058	-.0012	6.417	-.0002
#2	.0023	24.02	1.100	.0008	.2453	.1056	-.0019	6.385	-.0021
#3	.0024	24.07	1.114	-.0034	.3409	.1058	-.0017	6.431	-.0014

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0034**	**.0064**	**2.237**	**-.0001**	**.0052**	**-.0002**	**-.0055**	**.0004**
Stddev	.0025	.0022	.0112	.010	.0003	.0002	.0003	.0038	.0010
%RSD	100.6	65.21	175.7	.4334	402.8	2.953	202.7	69.82	240.0
#1	.0008	.0053	-.0008	2.233	-.0003	.0052	.0002	-.0072	-.0007
#2	.0053	.0009	.0194	2.248	.0003	.0053	-.0004	-.0011	.0006
#3	.0013	.0041	.0007	2.229	-.0002	.0050	-.0002	-.0082	.0013

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0164**
Stddev	.0002
%RSD	1.429
#1	.0161
#2	.0166
#3	.0164

Zoom In Zoom Out

Sample Name: MP40821-SD1 Acquired: 6/10/2022 11:28:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**931.96**	**2109.7**	**25498.**	**8892.6**
Stddev	3.53	6.5	149.	8.2
%RSD	.37828	.30643	.58451	.09255
#1	934.19	2116.7	25665.	8885.4
#2	933.79	2104.0	25448.	8890.9
#3	927.90	2108.4	25380.	8901.6

Zoom In Zoom Out

Sample Name: MP40821-PS1 Acquired: 6/10/2022 11:33:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0456**	**2.414**	**.1647**	**.2482**	**.0475**	**4.900**	**.0471**	**.0511**	**.0495**
Stddev	.0002	.014	.0017	.0006	.0002	.022	.0002	.0001	.0006
%RSD	.4067	.5759	1.049	.2257	.4700	.4498	.4111	.1328	1.135
#1	.0455	2.401	.1629	.2479	.0475	4.903	.0470	.0511	.0500
#2	.0455	2.429	.1647	.2489	.0476	4.920	.0471	.0512	.0497
#3	.0458	2.413	.1664	.2479	.0472	4.876	.0473	.0511	.0489

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0971**	**24.50**	**10.16**	**-.0005**	**4.953**	**.1452**	**.0946**	**14.59**	**.0985**
Stddev	.0004	.06	.02	.0003	.013	.0005	.0002	.03	.0001
%RSD	.3917	.2281	.2118	74.60	.2674	.3288	.2341	.1857	.1285
#1	.0974	24.55	10.13	-.0001	4.968	.1456	.0944	14.56	.0984
#2	.0973	24.52	10.18	-.0007	4.942	.1446	.0948	14.62	.0984
#3	.0967	24.44	10.16	-.0005	4.949	.1453	.0948	14.59	.0986

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0456**	**.0947**	**.0910**	**2.075**	**.0484**	**.0532**	**.0974**	**.0906**	**.0494**
Stddev	.0007	.0008	.0011	.009	.0006	.0002	.0001	.0003	.0004
%RSD	1.425	.8840	1.250	.4149	1.146	.3650	.1428	.3688	.7163
#1	.0462	.0937	.0908	2.068	.0482	.0530	.0974	.0905	.0497
#2	.0457	.0949	.0922	2.072	.0481	.0533	.0973	.0903	.0493
#3	.0449	.0953	.0900	2.085	.0491	.0533	.0975	.0910	.0490

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2516**
Stddev	.0006
%RSD	.2575
#1	.2519
#2	.2520
#3	.2508

Zoom In Zoom Out

Sample Name: MP40821-PS1 Acquired: 6/10/2022 11:33:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**860.73**	**2053.4**	**24793.**	**8990.7**
Stddev	2.04	10.6	32.	15.2
%RSD	.23664	.51553	.13105	.16906
#1	863.08	2063.8	24780.	8983.4
#2	859.46	2053.9	24769.	8980.6
#3	859.64	2042.6	24830.	9008.2

Zoom In Zoom Out

Sample Name: MP40821-S1 Acquired: 6/10/2022 11:37:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0511**	**25.08**	**1.967**	**1.978**	**.0486**	**23.80**	**.0467**	**.4965**	**.2092**
Stddev	.0003	.17	.005	.012	.0003	.13	.0002	.0009	.0012
%RSD	.5225	.6966	.2762	.6049	.5175	.5411	.5139	.1805	.5672
#1	.0509	24.97	1.961	1.972	.0484	23.67	.0465	.4955	.2079
#2	.0509	25.28	1.972	1.992	.0489	23.93	.0469	.4970	.2102
#3	.0514	24.99	1.967	1.970	.0486	23.81	.0468	.4970	.2095

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2518**	**45.99**	**24.75**	**-.0005**	**23.56**	**.5890**	**.4873**	**28.26**	**.5054**
Stddev	.0009	.23	.10	.0001	.19	.0013	.0007	.13	.0011
%RSD	.3717	.4938	.3878	25.33	.8129	.2207	.1369	.4481	.2181
#1	.2516	45.74	24.72	-.0006	23.34	.5882	.4866	28.22	.5043
#2	.2528	46.17	24.86	-.0006	23.67	.5905	.4878	28.41	.5065
#3	.2510	46.07	24.67	-.0004	23.67	.5884	.4876	28.17	.5054

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4665**	**.4865**	**1.896**	**2.790**	**.4906**	**.5001**	**.5011**	**1.898**	**.4934**
Stddev	.0006	.0001	.002	.005	.0014	.0032	.0012	.003	.0022
%RSD	.1293	.0190	.1123	.1823	.2886	.6303	.2300	.1674	.4544
#1	.4666	.4865	1.897	2.785	.4890	.4997	.5001	1.901	.4926
#2	.4658	.4865	1.894	2.795	.4915	.5034	.5023	1.895	.4960
#3	.4670	.4866	1.898	2.792	.4913	.4971	.5007	1.897	.4917

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4991**
Stddev	.0008
%RSD	.1576
#1	.4982
#2	.4994
#3	.4997

Zoom In Zoom Out

Sample Name: MP40821-S1 Acquired: 6/10/2022 11:37:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**800.24**	**1992.8**	**24062.**	**8885.4**
Stddev	2.18	2.8	45.	53.4
%RSD	.27237	.14244	.18756	.60063
#1	798.43	1995.3	24098.	8946.9
#2	802.66	1989.7	24012.	8850.8
#3	799.65	1993.3	24077.	8858.6

Zoom In Zoom Out

Sample Name: MP40821-S2 Acquired: 6/10/2022 11:42:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0519**	**24.66**	**1.975**	**1.947**	**.0482**	**23.75**	**.0476**	**.5004**	**.2058**
Stddev	.0002	.02	.004	.000	.0001	.11	.0002	.0011	.0008
%RSD	.4010	.0975	.2264	.0126	.2979	.4764	.4801	.2174	.3755
#1	.0517	24.68	1.971	1.947	.0480	23.64	.0479	.5016	.2055
#2	.0517	24.64	1.980	1.946	.0481	23.75	.0476	.4995	.2067
#3	.0521	24.65	1.975	1.947	.0483	23.87	.0475	.5000	.2053

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2551**	**44.94**	**24.78**	**-.0008**	**23.35**	**.5936**	**.4922**	**27.91**	**.5077**
Stddev	.0012	.30	.05	.0000	.15	.0003	.0004	.06	.0014
%RSD	.4899	.6735	.2127	4.755	.6560	.0455	.0888	.2064	.2737
#1	.2557	44.63	24.84	-.0008	23.18	.5933	.4917	27.91	.5092
#2	.2536	44.95	24.76	-.0009	23.37	.5938	.4926	27.97	.5072
#3	.2559	45.24	24.74	-.0008	23.49	.5937	.4922	27.85	.5066

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4701**	**.4894**	**1.915**	**2.790**	**.4948**	**.4990**	**.5100**	**1.918**	**.5028**
Stddev	.0005	.0028	.002	.001	.0010	.0010	.0009	.005	.0017
%RSD	.1107	.5683	.0936	.0493	.1985	.1933	.1827	.2417	.3363
#1	.4696	.4881	1.914	2.791	.4946	.5001	.5089	1.920	.5018
#2	.4704	.4926	1.914	2.789	.4959	.4983	.5104	1.921	.5018
#3	.4705	.4874	1.917	2.789	.4940	.4985	.5106	1.913	.5047

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5010**
Stddev	.0015
%RSD	.3059
#1	.5027
#2	.4999
#3	.5004

Zoom In Zoom Out

Sample Name: MP40821-S2 Acquired: 6/10/2022 11:42:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**800.37**	**1988.1**	**23793.**	**9003.2**
Stddev	1.59	1.8	89.	59.2
%RSD	.19915	.08998	.37538	.65703
#1	801.59	1989.7	23845.	9068.2
#2	798.57	1986.2	23844.	8988.9
#3	800.95	1988.4	23690.	8952.5

Zoom In Zoom Out

Sample Name: FA95967-5 Acquired: 6/10/2022 11:47:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0105**	**-.0022**	**.0435**	**-.0001**	**101.2**	**-.0001**	**-.0003**	**.0000**
Stddev	.0006	.0010	.0008	.0002	.0000	.3	.0000	.0002	.000
%RSD	291.2	9.888	37.38	.5020	17.43	.3011	45.03	59.56	662.1
#1	.0003	.0104	-.0015	.0436	-.0001	101.3	-.0001	-.0005	-.0001
#2	-.0002	.0095	-.0031	.0433	-.0001	101.4	.0000	-.0002	.0001
#3	-.0008	.0115	-.0020	.0437	-.0001	100.9	-.0001	-.0002	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**.0211**	**1.744**	**.0027**	**23.06**	**.0007**	**.0025**	**22.01**	**.0005**
Stddev	.0000	.0009	.006	.0001	.02	.0001	.0001	.08	.0001
%RSD	.6125	4.338	.3506	5.436	.1024	9.585	4.069	.3644	16.38
#1	.0037	.0202	1.738	.0028	23.03	.0006	.0024	21.95	.0005
#2	.0037	.0220	1.744	.0025	23.08	.0006	.0026	21.98	.0006
#3	.0037	.0211	1.750	.0026	23.07	.0007	.0024	22.10	.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0016**	**.0003**	**.0013**	**2.933**	**.0004**	**.1571**	**.0011**	**.0001**	**.0023**
Stddev	.0004	.0007	.0017	.011	.0005	.0004	.0001	.0004	.0001
%RSD	22.15	254.1	131.6	.3796	124.6	.2677	12.03	796.8	5.920
#1	-.0012	.0003	-.0005	2.922	-.0002	.1569	.0011	-.0004	.0022
#2	-.0016	.0009	.0015	2.933	.0007	.1569	.0010	.0001	.0023
#3	-.0020	-.0004	.0029	2.944	.0007	.1576	.0012	.0004	.0025

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0488**
Stddev	.0001
%RSD	.2152
#1	.0488
#2	.0487
#3	.0489

Zoom In Zoom Out

Sample Name: FA95967-5 Acquired: 6/10/2022 11:47:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**795.53**	**1937.7**	**23420.**	**8776.7**
Stddev	.84	5.5	28.	14.9
%RSD	.10577	.28367	.11809	.16978
#1	794.56	1943.5	23443.	8781.8
#2	796.02	1937.2	23427.	8759.9
#3	796.01	1932.5	23389.	8788.4

Zoom In Zoom Out

Sample Name: FA95967-6 Acquired: 6/10/2022 11:51:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0044**	**-.0022**	**.0487**	**-.0001**	**108.4**	**-.0001**	**-.0004**	**-.0004**
Stddev	.0001	.0019	.0010	.0002	.0000	1.3	.0001	.0000	.0005
%RSD	26.13	43.50	45.10	.3476	16.30	1.185	116.9	9.457	118.6
#1	-.0002	.0052	-.0015	.0489	-.0001	109.2	.0000	-.0004	-.0004
#2	-.0003	.0022	-.0034	.0486	-.0001	106.9	-.0001	-.0004	-.0009
#3	-.0002	.0059	-.0018	.0486	-.0001	109.1	-.0001	-.0004	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0016**	**.1941**	**.0028**	**30.05**	**.0001**	**.0001**	**6.542**	**.0007**
Stddev	.0000	.0005	.0016	.0006	.26	.0000	.0001	.010	.0001
%RSD	5.813	28.77	.8396	22.06	.8546	20.61	220.8	.1541	13.11
#1	.0005	.0020	.1934	.0035	30.21	.0001	-.0001	6.552	.0008
#2	.0004	.0011	.1930	.0024	29.76	.0001	.0001	6.542	.0006
#3	.0005	.0019	.1960	.0025	30.20	.0001	.0002	6.532	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0016**	**-.0004**	**-.0007**	**3.950**	**.0000**	**.0919**	**.0010**	**-.0009**	**.0039**
Stddev	.0006	.0008	.0016	.009	.0004	.0004	.0001	.0006	.0001
%RSD	34.84	188.3	226.0	.2378	1187.	.4667	7.390	68.79	3.286
#1	-.0017	.0004	-.0025	3.948	-.0001	.0922	.0011	-.0002	.0038
#2	-.0021	-.0012	.0001	3.961	.0004	.0914	.0009	-.0014	.0040
#3	-.0010	-.0005	.0003	3.942	-.0003	.0921	.0011	-.0011	.0040

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0166**
Stddev	.0001
%RSD	.3260
#1	.0167
#2	.0167
#3	.0166

Zoom In Zoom Out

Sample Name: FA95967-6 Acquired: 6/10/2022 11:51:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**796.53**	**1920.4**	**23325.**	**8740.5**
Stddev	.45	4.4	23.	60.3
%RSD	.05697	.23148	.10029	.68952
#1	796.97	1919.2	23342.	8701.9
#2	796.06	1916.8	23298.	8809.9
#3	796.57	1925.4	23334.	8709.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 11:56:43 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2475**	**38.93**	**1.977**	**1.982**	**1.997**	**39.90**	**2.007**	**2.006**	**2.036**
Stddev	.0015	.13	.011	.005	.003	.04	.003	.004	.013
%RSD	.6111	.3438	.5456	.2701	.1715	.0967	.1432	.2042	.6478
#1	.2458	39.04	1.967	1.985	1.998	39.92	2.004	2.003	2.021
#2	.2487	38.98	1.975	1.984	1.999	39.92	2.010	2.006	2.047
#3	.2481	38.78	1.988	1.975	1.993	39.86	2.006	2.011	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.993**	**39.65**	**39.80**	**1.978**	**39.56**	**2.014**	**2.004**	**39.78**	**2.015**
Stddev	.002	.13	.08	.002	.07	.016	.007	.04	.005
%RSD	.1093	.3354	.1959	.0855	.1814	.7956	.3535	.0908	.2682
#1	1.993	39.54	39.82	1.979	39.53	1.997	1.996	39.82	2.009
#2	1.995	39.80	39.72	1.976	39.65	2.029	2.004	39.75	2.020
#3	1.990	39.61	39.87	1.979	39.52	2.015	2.010	39.76	2.016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.992**	**1.969**	**1.972**	**2.066**	**2.004**	**2.027**	**2.017**	**1.997**	**2.029**
Stddev	.005	.012	.011	.010	.005	.023	.007	.008	.013
%RSD	.2564	.6100	.5680	.5003	.2536	1.126	.3524	.4034	.6395
#1	1.993	1.961	1.966	2.056	1.998	2.041	2.010	1.999	2.015
#2	1.996	1.963	1.964	2.064	2.006	2.039	2.025	1.989	2.040
#3	1.986	1.983	1.985	2.077	2.008	2.000	2.016	2.004	2.032
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 11:56:43 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.005**
Stddev	.004
%RSD	.1782
#1	2.005
#2	2.008
#3	2.001
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**767.85**	**1985.8**	**23531.**	**8656.7**
Stddev	2.60	11.1	75.	13.9
%RSD	.33844	.55651	.32037	.16066
#1	769.61	1994.6	23582.	8670.4
#2	769.08	1989.4	23444.	8642.6
#3	764.87	1973.4	23566.	8657.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 12:01:23 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0008**	**-.0009**	**.0000**	**.0000**	**.0033**	**.0001**	**-.0002**	**.0000**
Stddev	.0002	.0010	.0003	.000	.0000	.0005	.0000	.0001	.0001
%RSD	99.14	126.5	31.28	962.7	47.07	15.22	35.29	85.00	558.4
#1	.0000	.0019	-.0008	.0000	.0000	.0028	.0001	.0000	.0000
#2	.0002	.0003	-.0012	.0000	.0000	.0038	.0001	-.0002	-.0001
#3	.0004	.0001	-.0007	.0000	.0001	.0031	.0001	-.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0034**	**-.0070**	**.0002**	**-.0125**	**.0001**	**.0001**	**-.0094**	**-.0001**
Stddev	.0001	.0009	.0077	.0002	.0168	.0000	.0002	.0013	.0002
%RSD	33.49	25.04	109.5	118.1	134.6	57.79	359.5	13.94	105.8
#1	.0002	.0040	-.0124	.0000	-.0145	.0000	.0002	-.0106	-.0002
#2	.0004	.0039	.0018	.0002	-.0282	.0001	.0001	-.0095	.0000
#3	.0003	.0024	-.0104	.0004	.0053	.0001	-.0002	-.0080	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0006**	**.0001**	**.0009**	**-.0004**	**.0001**	**.0001**	**.0002**	**.0000**
Stddev	.0005	.0006	.0015	.0004	.0004	.0000	.0001	.0003	.0001
%RSD	825.2	96.68	1456.	48.54	113.7	28.97	76.88	138.9	442.1
#1	.0003	.0009	-.0007	.0014	-.0003	.0001	.0001	.0005	.0001
#2	-.0005	.0010	.0019	.0008	.0000	.0001	.0001	.0004	.0001
#3	.0004	-.0001	-.0009	.0005	-.0008	.0000	.0000	-.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 12:01:23 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0003**
Stddev	.0001
%RSD	18.35
#1	.0002
#2	.0003
#3	.0003
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.35**	**2099.7**	**25283.**	**8756.4**
Stddev	2.53	8.7	54.	28.9
%RSD	.26871	.41444	.21245	.33041
#1	941.96	2109.5	25332.	8761.8
#2	943.51	2096.9	25291.	8725.1
#3	938.56	2092.8	25226.	8782.2

Zoom In Zoom Out

Sample Name: FA95967-7 Acquired: 6/10/2022 12:06:19 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0035**	**-.0026**	**.0506**	**-.0001**	**110.7**	**-.0001**	**-.0003**	**-.0002**
Stddev	.0000	.0023	.0011	.0003	.0000	.5	.0000	.0001	.0002
%RSD	41.46	65.30	44.55	.5240	13.51	.4163	31.81	49.84	101.3
#1	-.0001	.0046	-.0026	.0507	-.0001	110.8	-.0001	-.0001	.0000
#2	.0000	.0009	-.0037	.0503	-.0001	111.1	-.0001	-.0004	-.0003
#3	-.0001	.0050	-.0014	.0507	-.0001	110.2	-.0001	-.0003	-.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0026**	**.2076**	**.0028**	**30.85**	**.0002**	**.0001**	**6.342**	**.0007**
Stddev	.0002	.0012	.0015	.0003	.09	.0000	.0001	.037	.0001
%RSD	39.09	44.63	.7224	9.255	.2826	30.94	62.58	.5869	22.32
#1	.0004	.0013	.2069	.0028	30.89	.0001	.0001	6.345	.0007
#2	.0007	.0033	.2093	.0030	30.90	.0002	.0001	6.303	.0005
#3	.0003	.0032	.2065	.0025	30.75	.0002	.0002	6.377	.0008

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**-.0002**	**.0005**	**4.052**	**-.0001**	**.0950**	**.0010**	**-.0020**	**.0040**
Stddev	.0011	.0009	.0009	.011	.0005	.0005	.0001	.0003	.0001
%RSD	62.57	443.0	162.5	.2677	677.4	.4994	7.338	15.82	2.414
#1	-.0016	-.0010	.0012	4.046	.0001	.0950	.0011	-.0018	.0038
#2	-.0030	.0007	-.0005	4.046	.0003	.0945	.0010	-.0019	.0040
#3	-.0008	-.0003	.0009	4.065	-.0006	.0954	.0010	-.0024	.0040

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0064**
Stddev	.0001
%RSD	1.219
#1	.0064
#2	.0063
#3	.0065

Zoom In Zoom Out

Sample Name: FA95967-7 Acquired: 6/10/2022 12:06:19 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**789.75**	**1906.4**	**23226.**	**8697.5**
Stddev	2.26	7.9	80.	45.0
%RSD	.28678	.41199	.34583	.51789
#1	791.70	1909.1	23306.	8684.5
#2	790.28	1912.5	23145.	8660.5
#3	787.26	1897.5	23228.	8747.7

Zoom In Zoom Out

Sample Name: FA95967-8 Acquired: 6/10/2022 12:11:10 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0089**	**-.0020**	**.0811**	**-.0001**	**149.7**	**.0000**	**-.0004**	**-.0001**
Stddev	.0003	.0039	.0005	.0004	.0000	.1	.000	.0001	.0001
%RSD	113.9	43.70	27.04	.5294	10.23	.0822	99.01	26.38	59.57
#1	-.0001	.0123	-.0014	.0813	-.0001	149.8	-.0001	-.0004	-.0002
#2	-.0001	.0096	-.0023	.0806	-.0001	149.8	.0000	-.0004	.0000
#3	-.0007	.0047	-.0022	.0814	-.0001	149.6	.0000	-.0003	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0114**	**.2502**	**.0036**	**32.33**	**.0044**	**.0005**	**7.357**	**.0015**
Stddev	.0000	.0006	.0041	.0003	.13	.0000	.0002	.013	.0001
%RSD	3.962	5.100	1.641	8.333	.3924	1.062	43.31	.1703	7.696
#1	.0008	.0108	.2455	.0036	32.29	.0044	.0002	7.360	.0017
#2	.0009	.0119	.2533	.0039	32.48	.0045	.0006	7.343	.0014
#3	.0009	.0114	.2518	.0033	32.23	.0044	.0006	7.368	.0015

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0036**	**-.0010**	**.0019**	**4.806**	**.0001**	**.1953**	**.0011**	**-.0022**	**.0046**
Stddev	.0010	.0008	.0005	.018	.0006	.0009	.0000	.0012	.0001
%RSD	28.90	81.14	25.85	.3759	670.5	.4399	2.800	53.04	1.120
#1	-.0048	-.0019	.0024	4.796	.0008	.1956	.0011	-.0014	.0046
#2	-.0030	-.0006	.0019	4.796	-.0002	.1944	.0012	-.0035	.0046
#3	-.0030	-.0004	.0014	4.827	-.0003	.1960	.0011	-.0016	.0045

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0139**
Stddev	.0001
%RSD	.9981
#1	.0138
#2	.0139
#3	.0141

Zoom In Zoom Out

Sample Name: FA95967-8 Acquired: 6/10/2022 12:11:10 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**777.09**	**1890.1**	**22941.**	**8648.1**
Stddev	2.01	9.5	74.	41.0
%RSD	.25842	.50389	.32056	.47439
#1	778.11	1894.0	23012.	8658.7
#2	778.39	1897.0	22865.	8602.8
#3	774.78	1879.2	22945.	8682.8

Zoom In Zoom Out

Sample Name: FA95967-9 Acquired: 6/10/2022 12:16:09 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0072**	**-.0024**	**.0424**	**-.0001**	**99.65**	**.0000**	**-.0004**	**-.0001**
Stddev	.0001	.0049	.0014	.0004	.0000	.13	.000	.0001	.0002
%RSD	78.14	68.10	58.18	.8593	39.60	.1296	10.04	26.34	188.8
#1	.0002	.0083	-.0018	.0420	-.0001	99.65	.0000	-.0005	-.0003
#2	.0001	.0019	-.0014	.0427	-.0001	99.78	.0000	-.0003	.0001
#3	.0000	.0115	-.0039	.0426	-.0001	99.52	.0000	-.0003	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0013**	**.1782**	**.0026**	**28.72**	**.0000**	**.0000**	**5.145**	**-.0004**
Stddev	.0002	.0007	.0052	.0004	.10	.0001	.000	.045	.0001
%RSD	30.85	53.25	2.903	15.65	.3545	378.6	514.7	.8770	12.81
#1	.0006	-.0019	.1825	.0025	28.79	.0001	.0001	5.094	-.0005
#2	.0004	-.0015	.1724	.0031	28.61	-.0001	-.0002	5.160	-.0004
#3	.0007	-.0005	.1796	.0023	28.78	.0000	.0000	5.180	-.0004

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0013**	**.0002**	**.0010**	**3.990**	**.0006**	**.0727**	**.0011**	**-.0017**	**.0035**
Stddev	.0004	.0008	.0023	.007	.0005	.0004	.0001	.0003	.0002
%RSD	31.43	395.1	245.8	.1741	83.15	.6187	6.123	16.11	6.490
#1	-.0011	.0012	.0018	3.989	.0001	.0722	.0011	-.0015	.0036
#2	-.0010	-.0002	-.0017	3.984	.0012	.0730	.0011	-.0016	.0036
#3	-.0018	-.0004	.0027	3.998	.0006	.0729	.0010	-.0020	.0032

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0055**
Stddev	.0001
%RSD	1.566
#1	.0055
#2	.0055
#3	.0054

Zoom In Zoom Out

Sample Name: FA95967-9 Acquired: 6/10/2022 12:16:09 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**794.24**	**1914.6**	**23436.**	**8642.3**
Stddev	.24	2.6	27.	1.0
%RSD	.03041	.13817	.11431	.01124
#1	793.99	1914.6	23419.	8641.7
#2	794.25	1917.2	23421.	8643.4
#3	794.47	1911.9	23467.	8641.7

Zoom In Zoom Out

Sample Name: FA95967-10 Acquired: 6/10/2022 12:20:58 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0062**	**-.0021**	**-.0019**	**-.0001**	**117.7**	**.0000**	**-.0005**	**-.0001**
Stddev	.0004	.0034	.0007	.0000	.0000	1.3	.000	.0000	.0002
%RSD	277.7	55.18	32.51	2.439	18.73	1.088	93.18	5.569	486.8
#1	-.0003	.0084	-.0013	-.0019	-.0001	117.1	.0000	-.0005	.0000
#2	-.0004	.0023	-.0026	-.0019	-.0001	119.1	.0000	-.0004	-.0003
#3	.0003	.0078	-.0024	-.0018	-.0001	116.8	-.0001	-.0004	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0002**	**.6782**	**.0037**	**44.62**	**.9219**	**-.0001**	**13.84**	**-.0004**
Stddev	.0001	.0006	.0064	.0002	.40	.0060	.0001	.06	.0001
%RSD	62.26	287.5	.9412	5.514	.9070	.6546	125.6	.4481	26.30
#1	.0001	.0006	.6708	.0034	44.47	.9152	-.0002	13.86	-.0004
#2	.0001	-.0005	.6816	.0037	45.07	.9237	.0000	13.77	-.0005
#3	.0002	.0006	.6822	.0038	44.30	.9268	-.0002	13.89	-.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0028**	**.0000**	**.0024**	**4.337**	**.0005**	**.1529**	**.0011**	**-.0017**	**.0006**
Stddev	.0004	.001	.0006	.011	.0002	.0003	.0001	.0007	.0000
%RSD	15.35	1966.	24.47	.2528	38.22	.2007	13.34	44.35	7.258
#1	-.0033	.0003	.0027	4.336	.0005	.1532	.0011	-.0009	.0006
#2	-.0026	-.0011	.0029	4.326	.0007	.1526	.0009	-.0018	.0006
#3	-.0025	.0007	.0018	4.348	.0003	.1530	.0012	-.0024	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0110**
Stddev	.0001
%RSD	1.273
#1	.0108
#2	.0111
#3	.0110

Zoom In Zoom Out

Sample Name: FA95967-10 Acquired: 6/10/2022 12:20:58 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**781.01**	**1910.4**	**23217.**	**8579.5**
Stddev	2.80	5.8	26.	78.9
%RSD	.35883	.30530	.11248	.92010
#1	782.84	1910.9	23248.	8605.1
#2	782.41	1916.0	23202.	8490.9
#3	777.78	1904.4	23203.	8642.4

Zoom In Zoom Out

Sample Name: FA96002-1 Acquired: 6/10/2022 12:25:50 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.2120**	**-.0015**	**.0102**	**-.0001**	**52.25**	**-.0002**	**-.0003**	**.0019**
Stddev	.0003	.0050	.0017	.0000	.0000	.41	.0000	.0000	.0004
%RSD	201.7	2.349	109.1	.4798	56.99	.7829	19.61	13.73	20.56
#1	.0005	.2062	-.0002	.0102	-.0001	52.62	-.0002	-.0003	.0018
#2	.0001	.2145	-.0034	.0103	.0000	52.31	-.0002	-.0004	.0016
#3	-.0001	.2152	-.0010	.0102	-.0001	51.81	-.0002	-.0003	.0023

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**2.318**	**.8982**	**.0016**	**1.164**	**.0198**	**.0002**	**4.466**	**-.0004**
Stddev	.0001	.018	.0177	.0003	.017	.0001	.0001	.015	.0002
%RSD	11.99	.7560	1.973	16.02	1.487	.3821	86.37	.3296	40.74
#1	.0006	2.335	.8938	.0019	1.184	.0197	.0003	4.453	-.0005
#2	.0006	2.300	.8831	.0013	1.152	.0198	.0000	4.465	-.0002
#3	.0005	2.320	.9177	.0017	1.155	.0198	.0002	4.482	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**-.0005**	**.0011**	**4.045**	**.0004**	**.1286**	**.0077**	**-.0012**	**.0008**
Stddev	.0004	.0004	.0019	.008	.0002	.0007	.0004	.0008	.0001
%RSD	43.30	79.23	161.9	.1974	61.51	.5197	5.344	69.95	8.656
#1	-.0012	-.0008	.0000	4.043	.0006	.1284	.0075	-.0007	.0009
#2	-.0010	-.0001	.0033	4.038	.0001	.1294	.0082	-.0021	.0008
#3	-.0004	-.0005	.0001	4.054	.0005	.1281	.0074	-.0007	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0112**
Stddev	.0002
%RSD	1.364
#1	.0114
#2	.0112
#3	.0111

Zoom In Zoom Out

Sample Name: FA96002-1 Acquired: 6/10/2022 12:25:50 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**848.80**	**2018.1**	**24556.**	**8691.0**
Stddev	.34	5.4	70.	46.2
%RSD	.04060	.26924	.28418	.53203
#1	849.11	2016.7	24590.	8637.9
#2	848.43	2024.1	24476.	8713.1
#3	848.87	2013.5	24602.	8722.2

Zoom In Zoom Out

Sample Name: FA96002-2 Acquired: 6/10/2022 12:30:42 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1959**	**-.0016**	**.0114**	**-.0001**	**51.60**	**-.0002**	**-.0003**	**.0015**
Stddev	.000	.0056	.0018	.0001	.0000	.11	.0001	.0000	.0003
%RSD	3311.	2.843	111.4	1.131	23.78	.2212	21.87	17.54	21.18
#1	-.0001	.1911	-.0030	.0113	-.0001	51.73	-.0002	-.0003	.0018
#2	-.0004	.1944	-.0023	.0116	-.0001	51.52	-.0003	-.0003	.0016
#3	.0005	.2020	.0004	.0114	-.0001	51.54	-.0003	-.0002	.0012

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**2.242**	**.9041**	**.0014**	**1.149**	**.0194**	**.0001**	**4.649**	**-.0004**
Stddev	.0001	.003	.0105	.0004	.010	.0000	.0001	.032	.0001
%RSD	68.02	.1149	1.163	30.57	.8362	.2279	96.42	.6860	32.75
#1	.0002	2.240	.8964	.0018	1.156	.0194	.0003	4.612	-.0006
#2	.0001	2.242	.9161	.0009	1.138	.0194	.0002	4.666	-.0005
#3	.0003	2.245	.8998	.0015	1.152	.0194	.0000	4.669	-.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0004**	**.0014**	**4.057**	**.0000**	**.1277**	**.0083**	**-.0018**	**.0006**
Stddev	.0007	.0005	.0011	.008	.000	.0008	.0005	.0017	.0002
%RSD	147.1	128.3	75.19	.1986	4186.	.6657	6.330	94.55	34.55
#1	-.0011	.0001	.0002	4.066	.0000	.1267	.0088	.0000	.0006
#2	-.0006	-.0004	.0020	4.053	.0004	.1283	.0078	-.0021	.0004
#3	.0003	-.0010	.0020	4.052	-.0004	.1281	.0083	-.0033	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0154**
Stddev	.0001
%RSD	.7691
#1	.0153
#2	.0155
#3	.0154

Zoom In Zoom Out

Sample Name: FA96002-2 Acquired: 6/10/2022 12:30:42 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**846.00**	**2000.1**	**24412.**	**8755.4**
Stddev	2.44	2.1	10.	12.4
%RSD	.28897	.10433	.04138	.14187
#1	847.14	1997.8	24407.	8741.1
#2	843.19	2000.7	24405.	8761.1
#3	847.66	2001.9	24423.	8763.9

Zoom In Zoom Out

Sample Name: FA96002-3 Acquired: 6/10/2022 12:35:32 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1015**	**-.0026**	**.0151**	**-.0001**	**39.47**	**-.0002**	**-.0003**	**.0005**
Stddev	.0001	.0034	.0009	.0001	.0000	.19	.0000	.0001	.0001
%RSD	107.2	3.358	35.52	.4461	18.47	.4803	13.79	19.91	15.77
#1	.0001	.1053	-.0037	.0152	-.0001	39.38	-.0002	-.0003	.0005
#2	.0001	.0988	-.0022	.0151	-.0001	39.35	-.0002	-.0004	.0004
#3	.0000	.1004	-.0020	.0150	-.0001	39.69	-.0002	-.0003	.0005

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.7912**	**4.857**	**.0034**	**5.258**	**.0449**	**.0004**	**62.59**	**.0006**
Stddev	.0001	.0048	.020	.0002	.048	.0003	.0000	.05	.0001
%RSD	3.673	.6100	.4134	5.240	.9027	.6662	5.828	.0855	19.05
#1	.0023	.7941	4.834	.0035	5.255	.0447	.0004	62.58	.0007
#2	.0022	.7856	4.870	.0035	5.211	.0447	.0004	62.65	.0007
#3	.0021	.7939	4.867	.0032	5.306	.0452	.0004	62.55	.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0008**	**-.0008**	**5.617**	**.0007**	**.1609**	**.0038**	**-.0015**	**.0001**
Stddev	.0010	.0005	.0013	.016	.0007	.0003	.0003	.0013	.0001
%RSD	360.6	65.78	173.5	.2778	104.7	.1730	7.358	86.45	86.98
#1	-.0008	-.0002	.0006	5.633	.0009	.1607	.0038	-.0012	.0002
#2	-.0009	-.0012	-.0020	5.602	-.0001	.1608	.0036	-.0004	.0000
#3	.0009	-.0010	-.0009	5.617	.0012	.1612	.0042	-.0030	.0002

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0131**
Stddev	.0001
%RSD	.4099
#1	.0130
#2	.0131
#3	.0132

Zoom In Zoom Out

Sample Name: FA96002-3 Acquired: 6/10/2022 12:35:32 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**801.68**	**1962.9**	**23754.**	**8617.1**
Stddev	.76	8.3	39.	32.8
%RSD	.09478	.42396	.16617	.38113
#1	801.81	1955.9	23755.	8616.7
#2	802.37	1972.1	23794.	8650.2
#3	800.87	1960.6	23715.	8584.5

Zoom In Zoom Out

Sample Name: FA96002-4 Acquired: 6/10/2022 12:40:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0040**	**-.0020**	**.0053**	**-.0001**	**43.14**	**-.0001**	**-.0004**	**.0002**
Stddev	.0004	.0059	.0007	.0001	.0000	.33	.0000	.0001	.0003
%RSD	314.8	148.0	34.66	1.310	15.42	.7612	33.75	24.52	169.5
#1	.0003	.0102	-.0013	.0053	-.0001	42.77	-.0002	-.0004	-.0001
#2	-.0002	.0035	-.0020	.0054	-.0001	43.25	-.0001	-.0004	.0004
#3	-.0005	-.0016	-.0026	.0054	-.0001	43.40	-.0001	-.0003	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.5717**	**2.391**	**.0021**	**2.616**	**.0236**	**.0000**	**26.83**	**-.0007**
Stddev	.0001	.0034	.006	.0001	.020	.0001	.000	.09	.0001
%RSD	9.829	.5967	.2532	3.784	.7554	.3376	18580.	.3229	10.48
#1	.0009	.5692	2.385	.0022	2.595	.0236	-.0001	26.83	-.0007
#2	.0010	.5756	2.393	.0021	2.635	.0236	.0002	26.91	-.0008
#3	.0008	.5702	2.397	.0021	2.618	.0235	.0000	26.74	-.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**-.0003**	**.0006**	**5.312**	**.0001**	**.1326**	**.0010**	**-.0019**	**.0001**
Stddev	.0004	.0011	.0010	.019	.0002	.0005	.0000	.0006	.0001
%RSD	31.03	324.8	169.0	.3584	225.1	.3823	3.981	32.69	146.8
#1	-.0016	.0005	.0016	5.294	-.0001	.1322	.0009	-.0020	.0002
#2	-.0010	.0001	.0006	5.311	.0003	.1325	.0010	-.0025	.0000
#3	-.0010	-.0016	-.0004	5.332	.0001	.1332	.0010	-.0013	.0001

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0098**
Stddev	.0001
%RSD	.5335
#1	.0098
#2	.0097
#3	.0098

Zoom In Zoom Out

Sample Name: FA96002-4 Acquired: 6/10/2022 12:40:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**829.17**	**1978.2**	**23981.**	**8675.7**
Stddev	2.55	7.7	72.	41.6
%RSD	.30798	.39169	.29921	.47935
#1	831.04	1987.1	23908.	8717.7
#2	826.26	1973.7	23985.	8634.6
#3	830.21	1973.7	24051.	8674.9

Zoom In Zoom Out

Sample Name: FA96002-5 Acquired: 6/10/2022 12:45:14 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**1.691**	**.0014**	**.0309**	**.0003**	**21.63**	**-.0004**	**.0207**	**.0004**
Stddev	.0002	.005	.0007	.0002	.0000	.11	.0001	.0001	.0001
%RSD	57.69	.3134	50.96	.5153	18.31	.5270	16.25	.6567	19.19
#1	.0001	1.686	.0007	.0308	.0003	21.65	-.0003	.0208	.0004
#2	.0005	1.697	.0022	.0311	.0003	21.73	-.0005	.0206	.0003
#3	.0005	1.689	.0015	.0309	.0002	21.51	-.0004	.0208	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**9.426**	**3.588**	**.0019**	**4.555**	**.6036**	**-.0003**	**6.104**	**.0068**
Stddev	.0002	.049	.011	.0005	.015	.0013	.0001	.025	.0000
%RSD	19.03	.5162	.3018	25.41	.3261	.2164	18.12	.4012	.7127
#1	.0010	9.381	3.575	.0014	4.542	.6026	-.0004	6.076	.0068
#2	.0007	9.478	3.593	.0019	4.571	.6030	-.0003	6.116	.0068
#3	.0008	9.419	3.595	.0024	4.551	.6051	-.0003	6.121	.0069

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0003**	**.0044**	**2.983**	**.0001**	**.0772**	**.0008**	**-.0012**	**.0005**
Stddev	.0008	.0009	.0006	.004	.0002	.0002	.0001	.0010	.0002
%RSD	426.0	316.2	14.51	.1243	144.6	.2053	8.182	86.99	47.42
#1	.0003	.0004	.0037	2.987	.0001	.0771	.0008	-.0023	.0002
#2	-.0007	.0000	.0049	2.983	.0000	.0773	.0009	-.0005	.0006
#3	.0009	-.0013	.0045	2.980	.0003	.0770	.0008	-.0007	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0763**
Stddev	.0001
%RSD	.1059
#1	.0764
#2	.0762
#3	.0763

Zoom In Zoom Out

Sample Name: FA96002-5 Acquired: 6/10/2022 12:45:14 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**865.84**	**2134.8**	**25775.**	**9381.4**
Stddev	1.43	.8	56.	36.0
%RSD	.16564	.03828	.21642	.38356
#1	864.81	2135.7	25733.	9415.0
#2	865.25	2134.2	25838.	9343.4
#3	867.48	2134.5	25754.	9385.7

Zoom In Zoom Out

Sample Name: FA96002-6 Acquired: 6/10/2022 12:50:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**1.513**	**-.0003**	**.0293**	**.0003**	**21.68**	**-.0005**	**.0200**	**.0006**
Stddev	.0002	.014	.0012	.0003	.0000	.13	.0000	.0002	.0005
%RSD	64.37	.8924	451.3	.8671	8.186	.5770	8.451	1.176	88.27
#1	.0002	1.502	-.0016	.0290	.0003	21.81	-.0005	.0201	.0008
#2	.0002	1.528	.0007	.0295	.0002	21.56	-.0005	.0197	.0000
#3	.0006	1.510	.0001	.0293	.0003	21.68	-.0004	.0201	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**10.06**	**3.504**	**.0018**	**4.611**	**.5963**	**-.0002**	**6.110**	**.0067**
Stddev	.0000	.00	.022	.0005	.029	.0024	.0001	.030	.0000
%RSD	10.82	.0318	.6334	25.75	.6176	.4039	62.39	.4937	.4211
#1	.0002	10.06	3.485	.0022	4.639	.5936	-.0003	6.080	.0067
#2	.0002	10.06	3.528	.0018	4.582	.5971	-.0001	6.141	.0067
#3	.0002	10.06	3.500	.0013	4.610	.5983	-.0003	6.110	.0067

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0003**	**.0012**	**2.893**	**.0001**	**.0761**	**.0008**	**-.0018**	**.0005**
Stddev	.0009	.0003	.0014	.007	.0004	.0003	.0001	.0003	.0001
%RSD	463.4	73.51	121.7	.2458	279.3	.4103	6.515	14.66	10.63
#1	.0001	-.0001	-.0003	2.901	.0002	.0758	.0008	-.0021	.0005
#2	.0012	-.0006	.0025	2.887	-.0003	.0764	.0009	-.0015	.0006
#3	-.0007	-.0003	.0014	2.890	.0005	.0761	.0008	-.0018	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0578**
Stddev	.0001
%RSD	.1231
#1	.0578
#2	.0578
#3	.0577

Zoom In Zoom Out

Sample Name: FA96002-6 Acquired: 6/10/2022 12:50:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**868.80**	**2131.5**	**25743.**	**9348.3**
Stddev	.98	3.4	70.	14.5
%RSD	.11332	.15958	.27003	.15538
#1	868.09	2127.6	25809.	9334.2
#2	868.38	2133.0	25671.	9363.2
#3	869.92	2133.9	25749.	9347.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 12:54:52 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2496**	**38.21**	**1.950**	**1.938**	**1.970**	**39.87**	**1.992**	**1.988**	**2.047**
Stddev	.0011	.15	.007	.006	.006	.09	.003	.001	.008
%RSD	.4241	.3977	.3535	.2918	.3126	.2144	.1267	.0436	.4084
#1	.2484	38.21	1.942	1.939	1.971	39.83	1.991	1.987	2.039
#2	.2504	38.36	1.956	1.943	1.975	39.97	1.989	1.988	2.047
#3	.2500	38.06	1.951	1.932	1.963	39.82	1.994	1.989	2.055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.986**	**39.04**	**39.54**	**1.952**	**39.34**	**2.004**	**1.982**	**39.17**	**2.005**
Stddev	.010	.09	.14	.012	.09	.004	.005	.10	.002
%RSD	.4890	.2266	.3525	.6002	.2197	.2103	.2543	.2608	.1078
#1	1.984	38.95	39.69	1.961	39.24	2.003	1.979	39.25	2.004
#2	1.997	39.12	39.53	1.957	39.40	2.001	1.988	39.20	2.003
#3	1.978	39.05	39.41	1.939	39.38	2.009	1.980	39.06	2.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.980**	**1.952**	**1.957**	**2.051**	**1.986**	**1.984**	**2.015**	**1.993**	**2.028**
Stddev	.009	.006	.007	.004	.004	.007	.005	.007	.004
%RSD	.4689	.2914	.3376	.1702	.1770	.3720	.2263	.3471	.1836
#1	1.983	1.948	1.951	2.048	1.982	1.991	2.010	1.999	2.024
#2	1.969	1.959	1.964	2.055	1.989	1.976	2.019	1.985	2.031
#3	1.986	1.951	1.955	2.049	1.988	1.983	2.016	1.993	2.029
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 12:54:52 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.988**
Stddev	.008
%RSD	.3925
#1	1.991
#2	1.979
#3	1.994
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**773.38**	**2000.6**	**23566.**	**8694.1**
Stddev	1.01	8.4	69.	14.0
%RSD	.13116	.42224	.29379	.16155
#1	774.39	2006.5	23608.	8709.9
#2	772.36	1990.9	23486.	8689.4
#3	773.38	2004.3	23604.	8683.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 12:59:31 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0022**	**-.0004**	**.0000**	**.0000**	**.0027**	**.0000**	**.0001**	**-.0001**
Stddev	.0002	.0014	.0004	.0001	.0000	.0017	.0000	.0001	.0003
%RSD	733.3	66.19	99.83	145.7	25.85	63.05	70.27	99.39	493.2
#1	.0000	-.0037	-.0008	.0000	.0000	.0007	.0000	.0001	.0000
#2	.0002	-.0010	-.0003	.0001	.0000	.0038	.0001	.0001	.0002
#3	-.0002	-.0018	-.0001	.0000	.0000	.0034	.0001	.0000	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0038**	**-.0112**	**.0000**	**-.0031**	**.0001**	**.0000**	**-.0108**	**-.0002**
Stddev	.0001	.0004	.0072	.000	.0040	.0000	.000	.0019	.0001
%RSD	20.75	11.51	64.67	787.1	130.4	34.49	820.2	17.68	85.89
#1	.0005	.0033	-.0046	.0003	-.0012	.0000	-.0001	-.0127	-.0002
#2	.0004	.0040	-.0100	-.0001	-.0076	.0001	.0000	-.0107	.0000
#3	.0003	.0040	-.0189	-.0002	-.0003	.0001	.0001	-.0089	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**.0010**	**.0007**	**-.0002**	**.0001**	**.0002**	**-.0005**	**.0001**
Stddev	.0008	.0011	.0005	.0003	.0000	.0000	.0001	.0008	.0000
%RSD	326.0	434.2	46.81	36.97	19.23	29.64	70.15	143.2	49.03
#1	.0002	.0015	.0005	.0010	-.0003	.0001	.0003	-.0004	.0000
#2	-.0005	-.0004	.0014	.0005	-.0003	.0001	.0000	-.0014	.0000
#3	.0010	-.0004	.0010	.0007	-.0002	.0001	.0002	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 12:59:31 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	104.5
#1	.0001
#2	.0000
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**951.89**	**2118.1**	**25272.**	**8919.1**
Stddev	2.83	9.9	43.	22.4
%RSD	.29715	.46561	.17083	.25105
#1	955.12	2129.4	25273.	8895.7
#2	949.88	2111.4	25228.	8940.3
#3	950.66	2113.4	25314.	8921.3

Zoom In Zoom Out

Sample Name: FA96002-7 Acquired: 6/10/2022 13:04:26 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0056**	**-.0008**	**.0109**	**-.0001**	**29.29**	**-.0001**	**-.0003**	**.0223**
Stddev	.0003	.0004	.0010	.0000	.0000	.02	.0000	.0002	.0004
%RSD	569.8	6.623	121.0	.3973	14.02	.0725	27.68	51.01	1.784
#1	.0001	.0056	.0003	.0109	-.0001	29.27	-.0001	-.0001	.0222
#2	.0003	.0060	-.0016	.0109	-.0001	29.31	-.0001	-.0004	.0219
#3	-.0002	.0052	-.0012	.0110	-.0001	29.28	-.0001	-.0003	.0227

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0048**	**18.90**	**.0193**	**1.037**	**.0006**	**.0040**	**10.12**	**.0075**
Stddev	.0001	.0014	.03	.0005	.010	.0000	.0001	.01	.0002
%RSD	10.63	30.25	.1758	2.664	.9811	7.541	2.651	.1123	2.482
#1	.0009	.0031	18.94	.0187	1.037	.0006	.0041	10.13	.0073
#2	.0010	.0059	18.88	.0194	1.046	.0006	.0040	10.13	.0074
#3	.0011	.0053	18.89	.0197	1.026	.0005	.0039	10.11	.0077

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0016**	**.0013**	**3.579**	**.0000**	**.1288**	**.0009**	**-.0013**	**.0007**
Stddev	.0003	.0012	.0013	.006	.001	.0003	.0001	.0007	.0000
%RSD	38.96	75.59	101.1	.1584	7583.	.2153	7.522	51.14	3.384
#1	-.0007	.0015	.0019	3.573	.0009	.1288	.0009	-.0020	.0007
#2	-.0004	.0004	.0022	3.580	-.0005	.1285	.0009	-.0007	.0006
#3	-.0010	.0028	-.0002	3.584	-.0004	.1290	.0010	-.0013	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0127**
Stddev	.0001
%RSD	.7617
#1	.0127
#2	.0126
#3	.0128

Zoom In Zoom Out

Sample Name: FA96002-7 Acquired: 6/10/2022 13:04:26 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**850.57**	**1988.9**	**23736.**	**8922.6**
Stddev	.44	2.6	8.	23.8
%RSD	.05135	.13206	.03496	.26685
#1	850.97	1991.6	23732.	8934.8
#2	850.65	1988.5	23745.	8895.1
#3	850.10	1986.4	23730.	8937.8

Zoom In Zoom Out

Sample Name: FA96002-8 Acquired: 6/10/2022 13:09:18 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.8509**	**-.0023**	**.0063**	**-.0001**	**15.34**	**-.0001**	**-.0003**	**.0000**
Stddev	.0003	.0076	.0007	.0001	.0000	.15	.0000	.0001	.000
%RSD	194.6	.8953	31.00	1.832	25.89	1.007	36.34	24.89	579.9
#1	-.0004	.8512	-.0015	.0064	-.0001	15.40	.0000	-.0002	-.0002
#2	-.0002	.8431	-.0029	.0064	-.0001	15.16	-.0001	-.0003	-.0001
#3	.0002	.8584	-.0023	.0062	-.0001	15.45	-.0001	-.0003	.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0243**	**3.860**	**.0061**	**.3776**	**.0022**	**.0044**	**9.147**	**-.0001**
Stddev	.0001	.0014	.019	.0002	.0083	.0001	.0002	.042	.0003
%RSD	9.907	5.808	.5025	3.384	2.203	2.626	4.136	.4620	238.5
#1	.0009	.0249	3.872	.0059	.3687	.0021	.0044	9.136	-.0004
#2	.0008	.0227	3.870	.0063	.3789	.0022	.0043	9.194	-.0001
#3	.0007	.0253	3.837	.0061	.3852	.0022	.0046	9.111	.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0002**	**.0001**	**3.097**	**-.0001**	**.1942**	**.0011**	**-.0014**	**.0012**
Stddev	.0006	.0011	.0033	.007	.0006	.0003	.0001	.0008	.0001
%RSD	62.48	689.5	2245.	.2218	1055.	.1312	5.863	56.92	7.280
#1	-.0015	-.0011	.0039	3.097	-.0001	.1945	.0010	-.0009	.0012
#2	-.0004	.0006	-.0012	3.104	.0005	.1940	.0011	-.0010	.0011
#3	-.0009	.0009	-.0023	3.090	-.0006	.1942	.0010	-.0023	.0013

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0069**
Stddev	.0001
%RSD	1.772
#1	.0070
#2	.0068
#3	.0070

Zoom In Zoom Out

Sample Name: FA96002-8 Acquired: 6/10/2022 13:09:18 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**883.84**	**2048.8**	**24546.**	**8948.4**
Stddev	.60	5.6	50.	46.7
%RSD	.06800	.27396	.20553	.52217
#1	884.12	2048.8	24540.	8926.8
#2	883.15	2043.2	24499.	9002.0
#3	884.25	2054.4	24599.	8916.4

Zoom In Zoom Out

Sample Name: FA96002-9 Acquired: 6/10/2022 13:14:10 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0373**	**-.0011**	**.0219**	**.0001**	**.3200**	**.0000**	**.0015**	**.0000**
Stddev	.0002	.0027	.0003	.0001	.0000	.0017	.0001	.0001	.0001
%RSD	63.54	7.288	32.83	.4554	54.25	.5434	321.1	9.147	712.4
#1	-.0002	.0383	-.0008	.0219	.0001	.3182	.0000	.0014	.0001
#2	-.0004	.0342	-.0009	.0220	.0001	.3216	.0000	.0017	-.0001
#3	-.0001	.0394	-.0015	.0218	.0000	.3203	.0001	.0016	.0000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0603**	**2.015**	**.0012**	**.2874**	**.0369**	**-.0003**	**5.831**	**.0004**
Stddev	.0002	.0014	.005	.0002	.0146	.0000	.0001	.011	.0002
%RSD	32.04	2.370	.2370	15.00	5.070	.0384	37.08	.1862	37.78
#1	.0004	.0594	2.012	.0010	.2814	.0369	-.0005	5.843	.0003
#2	.0008	.0619	2.014	.0013	.3040	.0369	-.0002	5.827	.0006
#3	.0007	.0595	2.021	.0013	.2768	.0369	-.0003	5.822	.0004

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**.0005**	**4.490**	**-.0002**	**.0067**	**.0000**	**-.0007**	**-.0001**
Stddev	.0007	.0005	.0012	.004	.0004	.0000	.0000	.0020	.0001
%RSD	1184.	260.2	245.6	.0866	218.5	.4415	41.15	299.5	191.5
#1	-.0005	.0003	-.0003	4.486	.0002	.0067	.0001	.0016	-.0001
#2	.0009	-.0003	.0019	4.492	-.0007	.0068	.0000	-.0014	.0001
#3	-.0002	-.0007	-.0001	4.493	-.0001	.0067	.0000	-.0022	-.0001

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0528**
Stddev	.0001
%RSD	.0993
#1	.0528
#2	.0528
#3	.0527

Zoom In Zoom Out

Sample Name: FA96002-9 Acquired: 6/10/2022 13:14:10 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**911.88**	**2068.1**	**24898.**	**9007.1**
Stddev	.68	4.3	47.	25.5
%RSD	.07426	.20747	.18790	.28324
#1	912.36	2073.0	24951.	9012.6
#2	911.11	2065.0	24862.	8979.3
#3	912.18	2066.4	24880.	9029.4

Zoom In Zoom Out

Sample Name: FA96002-10 Acquired: 6/10/2022 13:19:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0038**	**-.0018**	**.0598**	**.0001**	**10.14**	**.0000**	**.0007**	**.0015**
Stddev	.0002	.0016	.0000	.0003	.0000	.04	.000	.0001	.0003
%RSD	68.20	43.33	1.981	.4683	38.53	.3886	52.83	14.54	17.92
#1	.0004	.0057	-.0018	.0595	.0000	10.13	.0000	.0006	.0016
#2	.0002	.0031	-.0019	.0599	.0001	10.18	.0000	.0007	.0012
#3	.0001	.0026	-.0018	.0600	.0001	10.10	-.0001	.0008	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0060**	**2.320**	**.0076**	**1.433**	**.0570**	**-.0003**	**11.41**	**.0030**
Stddev	.0000	.0008	.002	.0006	.010	.0002	.0001	.05	.0001
%RSD	4.621	14.02	.0920	7.309	.7033	.3729	37.64	.4045	4.194
#1	.0010	.0064	2.321	.0074	1.445	.0570	-.0003	11.36	.0031
#2	.0010	.0066	2.318	.0083	1.429	.0573	-.0002	11.43	.0029
#3	.0011	.0050	2.322	.0072	1.426	.0569	-.0005	11.44	.0029

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0007**	**.0020**	**4.143**	**.0002**	**.0492**	**.0005**	**-.0012**	**.0005**
Stddev	.0007	.0008	.0008	.010	.0003	.0002	.0000	.0006	.0002
%RSD	232.7	108.6	42.14	.2355	164.1	.3585	6.366	49.77	37.45
#1	.0005	.0000	.0011	4.152	.0003	.0490	.0005	-.0006	.0007
#2	-.0009	-.0007	.0027	4.133	.0004	.0493	.0004	-.0018	.0003
#3	-.0005	-.0015	.0022	4.144	-.0002	.0494	.0005	-.0011	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0248**
Stddev	.0001
%RSD	.5724
#1	.0249
#2	.0247
#3	.0247

Zoom In Zoom Out

Sample Name: FA96002-10 Acquired: 6/10/2022 13:19:03 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**884.05**	**2055.2**	**24619.**	**8937.3**
Stddev	2.20	4.4	48.	43.2
%RSD	.24853	.21273	.19381	.48292
#1	886.58	2054.4	24664.	8934.5
#2	882.87	2059.9	24623.	8895.7
#3	882.69	2051.2	24569.	8981.8

Zoom In Zoom Out

Sample Name: FA96002-11 Acquired: 6/10/2022 13:23:55 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**3.331**	**-.0015**	**.0474**	**.0004**	**15.61**	**.0002**	**.0253**	**.0013**
Stddev	.0002	.012	.0007	.0001	.0000	.04	.0001	.0001	.0002
%RSD	816.4	.3474	48.49	.2522	3.229	.2638	38.25	.2179	16.78
#1	-.0002	3.338	-.0010	.0476	.0005	15.58	.0003	.0253	.0011
#2	.0001	3.338	-.0024	.0474	.0004	15.66	.0003	.0253	.0013
#3	.0001	3.318	-.0012	.0474	.0004	15.60	.0001	.0254	.0015

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.9916**	**2.229**	**.0076**	**5.731**	**.1793**	**-.0003**	**6.692**	**.0219**
Stddev	.0001	.0040	.012	.0003	.015	.0007	.0001	.012	.0001
%RSD	9.819	.4057	.5392	3.928	.2648	.3637	32.31	.1833	.4998
#1	.0014	.9920	2.235	.0077	5.722	.1795	-.0003	6.706	.0218
#2	.0015	.9873	2.237	.0077	5.722	.1798	-.0004	6.683	.0219
#3	.0013	.9953	2.216	.0072	5.748	.1785	-.0002	6.688	.0220

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0010**	**.0006**	**3.783**	**.0000**	**.1075**	**.0006**	**-.0019**	**.0001**
Stddev	.0007	.0006	.0004	.017	.0002	.0002	.0001	.0006	.0002
%RSD	113.6	67.34	67.14	.4571	418.0	.2251	12.24	31.30	133.2
#1	.0010	-.0002	.0009	3.774	.0003	.1075	.0007	-.0013	.0001
#2	-.0002	-.0013	.0001	3.771	-.0001	.1077	.0006	-.0025	.0003
#3	.0010	-.0014	.0009	3.802	-.0001	.1072	.0006	-.0018	.0000

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0734**
Stddev	.0004
%RSD	.5253
#1	.0738
#2	.0733
#3	.0730

Zoom In Zoom Out

Sample Name: FA96002-11 Acquired: 6/10/2022 13:23:55 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**879.66**	**2146.4**	**25862.**	**9305.5**
Stddev	3.49	11.2	58.	25.5
%RSD	.39702	.52217	.22489	.27403
#1	882.70	2151.9	25887.	9334.8
#2	880.44	2153.9	25796.	9293.9
#3	875.84	2133.6	25904.	9288.0

Zoom In Zoom Out

Sample Name: FA96002-13 Acquired: 6/10/2022 13:28:44 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.6034**	**-.0005**	**.0290**	**.0000**	**4.380**	**-.0001**	**.0014**	**.0004**
Stddev	.0001	.0034	.0019	.0000	.0000	.063	.0001	.0001	.0002
%RSD	34.47	.5707	377.2	.1322	315.7	1.443	80.60	5.316	45.08
#1	.0003	.5994	-.0003	.0290	.0000	4.309	-.0002	.0013	.0002
#2	.0004	.6053	.0013	.0291	.0000	4.430	-.0001	.0014	.0004
#3	.0002	.6055	-.0025	.0291	.0000	4.401	.0000	.0014	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**1.643**	**1.473**	**-.0003**	**1.578**	**.0555**	**-.0005**	**3.522**	**.0004**
Stddev	.0001	.009	.008	.0002	.004	.0002	.0000	.005	.0002
%RSD	3.821	.5583	.5644	54.82	.2812	.2896	5.154	.1396	59.99
#1	.0029	1.633	1.480	-.0004	1.577	.0556	-.0005	3.523	.0001
#2	.0031	1.645	1.476	-.0005	1.583	.0554	-.0004	3.527	.0005
#3	.0029	1.651	1.464	-.0001	1.574	.0557	-.0005	3.517	.0004

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0005**	**.0012**	**1.865**	**.0001**	**.0360**	**.0007**	**-.0014**	**.0008**
Stddev	.0005	.0005	.0005	.005	.0004	.0002	.0001	.0010	.0002
%RSD	93.38	94.77	40.17	.2449	398.7	.5232	16.03	72.72	20.46
#1	.0001	-.0004	.0012	1.868	.0001	.0359	.0008	-.0013	.0010
#2	.0011	-.0001	.0017	1.860	.0005	.0362	.0006	-.0005	.0009
#3	.0004	-.0011	.0007	1.867	-.0003	.0360	.0008	-.0025	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0391**
Stddev	.0002
%RSD	.5920
#1	.0392
#2	.0392
#3	.0388

Zoom In Zoom Out

Sample Name: FA96002-13 Acquired: 6/10/2022 13:28:44 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.74**	**2080.4**	**25127.**	**9026.8**
Stddev	1.44	6.4	33.	63.1
%RSD	.15812	.30542	.13294	.69939
#1	907.85	2076.1	25101.	9099.1
#2	909.12	2087.7	25165.	8998.6
#3	906.25	2077.3	25116.	8982.7

Zoom In Zoom Out

Sample Name: FA96002-14 Acquired: 6/10/2022 13:33:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0127**	**-.0004**	**.0338**	**-.0001**	**40.19**	**-.0001**	**-.0003**	**.0002**
Stddev	.0002	.0021	.0013	.0002	.0001	.13	.0001	.0000	.0003
%RSD	176.4	16.36	332.4	.7194	65.84	.3316	45.86	9.806	212.5
#1	-.0001	.0137	-.0015	.0339	-.0001	40.05	-.0002	-.0003	.0002
#2	.0002	.0142	.0010	.0340	-.0001	40.31	-.0001	-.0003	.0004
#3	.0003	.0103	-.0006	.0335	.0000	40.22	-.0001	-.0002	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.5578**	**1.262**	**.0010**	**2.512**	**.0621**	**.0002**	**3.728**	**-.0003**
Stddev	.0002	.0052	.008	.0006	.005	.0001	.0001	.013	.0003
%RSD	18.65	.9343	.6191	63.54	.2178	.2362	42.77	.3427	98.28
#1	.0012	.5586	1.269	.0016	2.506	.0621	.0003	3.728	-.0006
#2	.0009	.5626	1.254	.0010	2.512	.0622	.0001	3.740	-.0002
#3	.0012	.5523	1.264	.0004	2.517	.0619	.0002	3.715	.0000

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0010**	**.0003**	**2.199**	**.0000**	**.1419**	**.0011**	**-.0009**	**.0000**
Stddev	.0005	.0003	.0020	.002	.0001	.0004	.0000	.0011	.0000
%RSD	141.9	25.61	617.5	.0995	279.3	.2479	4.669	121.4	99.50
#1	.0001	-.0010	.0000	2.201	.0001	.1418	.0010	-.0019	.0001
#2	-.0009	-.0007	-.0015	2.199	.0000	.1422	.0011	.0002	.0000
#3	-.0003	-.0012	.0025	2.196	-.0001	.1415	.0010	-.0010	.0000

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0143**
Stddev	.0000
%RSD	.3332
#1	.0142
#2	.0142
#3	.0143

Zoom In Zoom Out

Sample Name: FA96002-14 Acquired: 6/10/2022 13:33:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**867.24**	**2009.3**	**24224.**	**8984.8**
Stddev	.97	6.0	19.	31.1
%RSD	.11145	.30060	.07975	.34614
#1	866.25	2006.5	24219.	9018.7
#2	867.31	2005.1	24208.	8957.5
#3	868.17	2016.2	24246.	8978.3

Zoom In Zoom Out

Sample Name: MP40824-MB1 Acquired: 6/10/2022 13:38:28 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0003**	**-.0020**	**-.0001**	**-.0001**	**.0063**	**.0000**	**-.0001**	**-.0001**
Stddev	.0003	.0004	.0005	.0001	.0000	.0018	.000	.0000	.0003
%RSD	336.0	124.5	26.24	58.03	63.45	29.09	2344.	68.04	446.0
#1	.0002	-.0007	-.0025	-.0001	.0000	.0042	.0001	-.0001	-.0003
#2	.0003	.0001	-.0014	-.0001	-.0001	.0077	-.0001	.0000	-.0001
#3	-.0002	-.0003	-.0020	-.0002	-.0001	.0070	.0000	-.0001	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0007**	**-.0308**	**-.0007**	**-.0084**	**.0000**	**-.0006**	**-.0113**	**-.0002**
Stddev	.0000	.0003	.0041	.0003	.0064	.000	.0002	.0011	.0002
%RSD	1.573	39.88	13.36	48.63	76.35	45.02	42.26	9.816	103.7
#1	.0011	-.0004	-.0286	-.0010	-.0049	.0000	-.0004	-.0100	.0000
#2	.0011	-.0009	-.0356	-.0007	-.0158	-.0001	-.0008	-.0119	-.0003
#3	.0011	-.0007	-.0283	-.0003	-.0044	-.0001	-.0005	-.0120	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0005**	**.0009**	**.0010**	**-.0005**	**-.0001**	**-.0001**	**-.0005**	**-.0001**
Stddev	.0005	.0007	.0012	.0004	.0005	.0000	.0001	.0016	.0001
%RSD	130.3	136.8	141.3	43.01	107.3	46.04	97.11	298.7	45.76
#1	.0004	.0003	.0021	.0013	-.0010	-.0001	.0000	.0013	-.0001
#2	-.0001	-.0010	-.0003	.0012	-.0006	.0000	-.0001	-.0014	-.0002
#3	.0009	-.0008	.0008	.0005	.0001	-.0001	-.0001	-.0015	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP40824-MB1 Acquired: 6/10/2022 13:38:28 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0008**
Stddev	.0000
%RSD	3.800
#1	.0008
#2	.0007
#3	.0008
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**948.19**	**2096.5**	**25307.**	**8993.1**
Stddev	1.69	4.4	46.	33.8
%RSD	.17848	.20941	.18139	.37633
#1	949.88	2101.1	25360.	8972.9
#2	946.49	2096.1	25281.	9032.2
#3	948.21	2092.3	25280.	8974.3

Zoom In Zoom Out

Sample Name: MP40824-B1 Acquired: 6/10/2022 13:43:24 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0507**	**24.86**	**1.883**	**1.944**	**.0482**	**23.63**	**.0483**	**.4976**
Stddev	.0003	.05	.012	.007	.0001	.12	.0003	.0015
%RSD	.6859	.1984	.6418	.3483	.2478	.5169	.5904	.3000
#1	.0511	24.89	1.877	1.944	.0484	23.76	.0480	.4966
#2	.0504	24.80	1.875	1.938	.0481	23.61	.0483	.4970
#3	.0507	24.89	1.897	1.951	.0482	23.52	.0486	.4993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2045**	**.2525**	**24.52**	**23.95**	F **-.0002**	**23.34**	**.5004**	**.4868**
Stddev	.0010	.0004	.03	.05	.0002	.09	.0013	.0020
%RSD	.5052	.1663	.1099	.1959	66.37	.4012	.2601	.4156
#1	.2056	.2525	24.54	23.99	-.0004	23.43	.5015	.4851
#2	.2042	.2529	24.49	23.90	-.0003	23.35	.4990	.4863
#3	.2036	.2521	24.54	23.96	-.0001	23.24	.5008	.4891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0500			
Range					-20.00%			

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.39**	**.5052**	**.4703**	**.4837**	**1.899**	**.7180**	**.4967**	**.4934**
Stddev	.10	.0014	.0024	.0030	.010	.0037	.0016	.0014
%RSD	.4448	.2743	.5165	.6228	.5266	.5156	.3184	.2820
#1	22.37	.5050	.4675	.4830	1.892	.7157	.4950	.4937
#2	22.30	.5040	.4717	.4810	1.895	.7161	.4981	.4919
#3	22.49	.5067	.4718	.4869	1.911	.7223	.4971	.4946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP40824-B1 Acquired: 6/10/2022 13:43:24 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.5072**	**1.921**	**.4981**	**.4863**
Stddev	.0007	.007	.0009	.0008
%RSD	.1298	.3723	.1789	.1737
#1	.5080	1.917	.4991	.4854
#2	.5067	1.917	.4978	.4864
#3	.5070	1.929	.4975	.4870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**809.13**	**2009.6**	**23960.**	**8906.9**
Stddev	2.13	8.4	43.	35.2
%RSD	.26372	.41578	.17930	.39527
#1	810.60	2015.7	23938.	8880.9
#2	810.09	2013.0	24010.	8892.9
#3	806.68	2000.1	23933.	8947.0

Zoom In Zoom Out

Sample Name: FA96011-1 Acquired: 6/10/2022 13:48:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0082**	**-.0017**	**.0952**	**-.0001**	**168.5**	**.0000**	**-.0002**	**-.0004**
Stddev	.0002	.0015	.0011	.0004	.0000	2.0	.000	.0003	.0000
%RSD	65.65	17.71	68.22	.4322	24.16	1.160	191.1	148.5	11.05
#1	-.0004	.0099	-.0005	.0956	-.0001	167.6	.0000	.0001	-.0003
#2	-.0001	.0074	-.0027	.0952	-.0001	167.1	-.0001	-.0004	-.0004
#3	-.0005	.0074	-.0017	.0947	-.0001	170.7	.0000	-.0002	-.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0192**	**.9681**	**.0052**	**36.85**	**.0121**	**.0014**	**34.15**	**.0008**
Stddev	.0001	.0012	.0141	.0001	.15	.0000	.0002	.06	.0001
%RSD	14.88	5.995	1.458	2.074	.3952	.2651	11.01	.1697	13.12
#1	.0005	.0194	.9644	.0053	36.83	.0121	.0014	34.21	.0008
#2	.0004	.0180	.9562	.0051	36.71	.0121	.0012	34.14	.0008
#3	.0005	.0203	.9837	.0051	37.00	.0122	.0015	34.09	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0038**	**.0003**	**.0002**	**4.018**	**.0002**	**.2503**	**.0009**	**-.0007**	**.0009**
Stddev	.0004	.0006	.0005	.005	.0004	.0007	.0001	.0002	.0001
%RSD	9.541	198.2	298.1	.1220	245.3	.2609	11.39	29.36	13.85
#1	-.0042	.0000	.0008	4.012	.0005	.2507	.0008	-.0009	.0010
#2	-.0036	.0010	.0001	4.019	.0003	.2495	.0010	-.0005	.0010
#3	-.0036	-.0001	-.0003	4.022	-.0003	.2506	.0009	-.0007	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0033**
Stddev	.0001
%RSD	1.979
#1	.0032
#2	.0033
#3	.0033

Zoom In Zoom Out

Sample Name: FA96011-1 Acquired: 6/10/2022 13:48:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**762.81**	**1883.0**	**22634.**	**8642.6**
Stddev	1.80	1.5	49.	50.2
%RSD	.23546	.07924	.21831	.58049
#1	764.02	1883.5	22684.	8670.6
#2	763.66	1884.1	22633.	8672.5
#3	760.74	1881.3	22585.	8584.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 13:53:00 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2491**	**38.46**	**1.963**	**1.961**	**1.976**	**39.63**	**2.001**	**1.997**	**2.036**
Stddev	.0008	.09	.010	.004	.003	.03	.004	.002	.006
%RSD	.3039	.2418	.5276	.1860	.1575	.0866	.1893	.0856	.2847
#1	.2484	38.56	1.953	1.965	1.979	39.66	1.996	1.995	2.030
#2	.2499	38.41	1.960	1.958	1.976	39.64	2.003	1.998	2.041
#3	.2490	38.40	1.974	1.961	1.973	39.59	2.002	1.998	2.038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.993**	**39.25**	**39.74**	**1.970**	**39.28**	**2.000**	**1.990**	**39.58**	**2.014**
Stddev	.005	.12	.08	.006	.13	.009	.002	.09	.003
%RSD	.2411	.3016	.2114	.2973	.3255	.4628	.0957	.2383	.1300
#1	1.989	39.34	39.83	1.973	39.42	1.993	1.989	39.68	2.011
#2	1.992	39.11	39.71	1.973	39.18	1.996	1.989	39.50	2.015
#3	1.999	39.29	39.67	1.963	39.24	2.010	1.992	39.56	2.015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.992**	**1.953**	**1.969**	**2.055**	**1.998**	**1.991**	**2.016**	**2.003**	**2.025**
Stddev	.008	.007	.008	.001	.003	.008	.004	.008	.006
%RSD	.3942	.3600	.4222	.0602	.1519	.4197	.2061	.3797	.2873
#1	1.992	1.950	1.963	2.057	1.994	1.996	2.012	2.001	2.020
#2	2.000	1.948	1.965	2.055	2.000	1.995	2.015	2.012	2.023
#3	1.984	1.961	1.978	2.054	1.999	1.981	2.020	1.997	2.031
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 13:53:00 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.000**
Stddev	.006
%RSD	.3087
#1	1.995
#2	2.007
#3	1.998
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**772.47**	**2001.6**	**23585.**	**8726.2**
Stddev	1.03	4.4	64.	5.9
%RSD	.13368	.22100	.27129	.06793
#1	772.36	2003.0	23655.	8723.9
#2	771.49	2005.2	23531.	8732.9
#3	773.54	1996.7	23567.	8721.8

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 13:57:41 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0014**	**-.0014**	**.0000**	**.0000**	**.0039**	**.0000**	**.0000**	**.0001**
Stddev	.000	.0013	.0005	.0001	.0000	.0015	.0000	.000	.0000
%RSD	13860.	90.62	33.32	172.6	115.9	39.55	30.03	60.15	53.28
#1	.0003	-.0028	-.0019	.0001	.0001	.0022	.0000	.0000	.0001
#2	-.0002	-.0004	-.0011	.0000	.0000	.0052	.0000	-.0001	.0000
#3	-.0001	-.0009	-.0012	.0000	.0000	.0042	.0000	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0034**	**-.0082**	**-.0001**	**-.0013**	**.0000**	**.0001**	**-.0117**	**.0000**
Stddev	.0001	.0007	.0045	.0005	.0125	.0000	.0001	.0022	.000
%RSD	19.59	21.06	54.85	882.2	986.0	99.80	160.4	18.46	485.6
#1	.0003	.0042	-.0059	-.0001	-.0065	.0000	.0003	-.0097	.0002
#2	.0005	.0029	-.0053	.0005	-.0103	.0000	.0000	-.0140	-.0001
#3	.0004	.0031	-.0134	-.0006	.0130	.0000	.0000	-.0115	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**.0000**	**.0009**	**-.0005**	**.0001**	**.0002**	**-.0001**	**.0002**
Stddev	.0008	.0006	.000	.0002	.0005	.0000	.0001	.0004	.0001
%RSD	378.9	1343.	412.6	17.43	100.1	14.69	36.25	405.1	48.71
#1	-.0005	.0004	-.0001	.0007	-.0011	.0001	.0002	.0004	.0001
#2	.0011	-.0007	.0001	.0009	-.0002	.0001	.0001	-.0002	.0001
#3	.0000	.0004	.0000	.0010	-.0002	.0001	.0003	-.0005	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 13:57:41 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	72.89
#1	.0001
#2	.0001
#3	.0003
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**949.24**	**2119.5**	**25339.**	**8855.5**
Stddev	4.21	11.9	21.	14.8
%RSD	.44398	.56107	.08156	.16698
#1	953.74	2132.7	25361.	8845.1
#2	948.59	2116.1	25336.	8848.9
#3	945.38	2109.6	25320.	8872.4

Zoom In Zoom Out

Sample Name: MP40824-D1 Acquired: 6/10/2022 14:02:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0075**	**-.0022**	**.0979**	**-.0001**	**171.3**	**-.0001**	**-.0003**	**-.0004**
Stddev	.0006	.0054	.0008	.0002	.0000	.5	.0001	.0001	.0002
%RSD	221.4	72.78	36.69	.2183	4.727	.2923	57.76	43.87	37.96
#1	-.0005	.0071	-.0021	.0979	-.0001	171.4	-.0001	-.0001	-.0006
#2	.0004	.0131	-.0014	.0977	-.0001	170.8	-.0001	-.0004	-.0003
#3	-.0007	.0022	-.0030	.0981	-.0001	171.8	-.0002	-.0003	-.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0198**	**1.001**	**.0051**	**37.88**	**.0122**	**.0014**	**34.94**	**.0007**
Stddev	.0000	.0006	.008	.0004	.14	.0001	.0003	.02	.0002
%RSD	14.47	2.871	.7955	8.361	.3595	.7518	19.76	.0539	23.96
#1	.0003	.0202	.9974	.0050	37.73	.0122	.0013	34.96	.0009
#2	.0003	.0201	1.010	.0055	37.92	.0123	.0012	34.92	.0006
#3	.0003	.0192	.9949	.0047	38.00	.0122	.0017	34.95	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0031**	**.0006**	**-.0005**	**4.091**	**.0004**	**.2538**	**.0009**	**-.0027**	**.0010**
Stddev	.0012	.0008	.0008	.004	.0002	.0006	.0000	.0012	.0001
%RSD	39.71	133.0	168.1	.0867	58.13	.2198	2.000	45.12	11.15
#1	-.0017	.0013	.0001	4.095	.0002	.2531	.0009	-.0013	.0009
#2	-.0035	-.0003	-.0001	4.091	.0006	.2542	.0009	-.0034	.0010
#3	-.0040	.0008	-.0013	4.088	.0003	.2540	.0010	-.0034	.0011

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0031**
Stddev	.0001
%RSD	3.552
#1	.0032
#2	.0030
#3	.0032

Zoom In Zoom Out

Sample Name: MP40824-D1 Acquired: 6/10/2022 14:02:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**760.53**	**1876.0**	**22679.**	**8595.3**
Stddev	1.93	4.4	69.	21.0
%RSD	.25369	.23685	.30614	.24378
#1	758.89	1875.2	22614.	8599.0
#2	760.04	1872.0	22670.	8614.2
#3	762.65	1880.8	22752.	8572.7

Zoom In Zoom Out

Sample Name: MP40824-SD1 Acquired: 6/10/2022 14:07:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0103**	**-.0036**	**.0942**	**-.0006**	**171.0**	**-.0002**	**-.0005**	**-.0007**
Stddev	.0009	.0290	.0053	.0008	.0001	.6	.0001	.0007	.0010
%RSD	1421.	283.0	148.6	.8914	12.76	.3334	63.94	149.8	141.8
#1	-.0011	.0198	-.0041	.0932	-.0005	171.6	-.0003	-.0006	-.0018
#2	.0002	-.0223	-.0086	.0949	-.0006	170.5	-.0001	-.0010	-.0007
#3	.0007	.0333	.0020	.0944	-.0006	170.8	-.0003	.0003	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0115**	**.8011**	**.0034**	**37.27**	**.0120**	**-.0010**	**33.10**	**.0001**
Stddev	.0003	.0084	.0479	.0024	.23	.0002	.0005	.09	.0001
%RSD	40.84	72.75	5.975	71.75	.6251	1.827	52.37	.2639	119.4
#1	.0005	.0107	.7947	.0024	37.52	.0123	-.0005	33.00	.0000
#2	.0012	.0203	.7569	.0016	37.24	.0120	-.0016	33.16	.0001
#3	.0008	.0036	.8519	.0061	37.05	.0119	-.0009	33.13	.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0009**	**-.0043**	**3.837**	**-.0017**	**.2468**	**.0048**	**-.0028**	**.0017**
Stddev	.0023	.0068	.0105	.016	.0016	.0016	.0000	.0047	.0002
%RSD	1796.	745.0	247.1	.4139	91.83	.6586	.5674	169.7	13.69
#1	-.0025	-.0025	.0021	3.824	-.0034	.2450	.0048	.0019	.0020
#2	.0010	.0087	-.0164	3.831	-.0003	.2472	.0048	-.0027	.0015
#3	.0020	-.0034	.0015	3.855	-.0014	.2482	.0048	-.0076	.0017

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0037**
Stddev	.0006
%RSD	15.81
#1	.0032
#2	.0035
#3	.0043

Zoom In Zoom Out

Sample Name: MP40824-SD1 Acquired: 6/10/2022 14:07:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**872.77**	**2066.9**	**24760.**	**8726.3**
Stddev	4.39	13.2	44.	46.0
%RSD	.50328	.63654	.17888	.52666
#1	877.45	2080.6	24787.	8678.7
#2	872.12	2065.7	24784.	8729.8
#3	868.73	2054.3	24709.	8770.4

Zoom In Zoom Out

Sample Name: MP40824-PS1 Acquired: 6/10/2022 14:12:30 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0470**	**2.395**	**.0964**	**.3377**	**.0480**	**171.7**	**.0484**	**.0486**	**.0488**
Stddev	.0003	.003	.0009	.0004	.0002	1.0	.0000	.0001	.0002
%RSD	.6894	.1250	.8946	.1251	.3519	.5729	.0969	.3003	.3493
#1	.0469	2.394	.0974	.3373	.0482	172.5	.0485	.0486	.0489
#2	.0468	2.392	.0962	.3381	.0479	171.8	.0484	.0484	.0486
#3	.0474	2.398	.0957	.3378	.0479	170.6	.0485	.0487	.0488

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1000**	**2.869**	**10.53**	**.0048**	**41.77**	**.0609**	**.0972**	**42.99**	**.0974**
Stddev	.0001	.026	.02	.0001	.16	.0001	.0004	.09	.0002
%RSD	.1056	.9155	.1477	2.789	.3879	.1768	.3782	.2136	.1726
#1	.1000	2.895	10.55	.0046	41.94	.0608	.0969	43.05	.0972
#2	.1001	2.869	10.52	.0048	41.75	.0610	.0971	43.05	.0975
#3	.0999	2.843	10.52	.0049	41.62	.0609	.0976	42.89	.0975

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0443**	**.1004**	**.0950**	**3.955**	**.0487**	**.2963**	**.0988**	**.0888**	**.0502**
Stddev	.0002	.0006	.0030	.006	.0007	.0009	.0002	.0017	.0000
%RSD	.4146	.5582	3.165	.1597	1.378	.2882	.1826	1.965	.0884
#1	.0442	.0998	.0962	3.947	.0490	.2963	.0986	.0871	.0501
#2	.0445	.1009	.0915	3.958	.0479	.2954	.0990	.0889	.0502
#3	.0443	.1004	.0971	3.959	.0491	.2971	.0987	.0906	.0502

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2383**
Stddev	.0009
%RSD	.3749
#1	.2394
#2	.2378
#3	.2378

Zoom In Zoom Out

Sample Name: MP40824-PS1 Acquired: 6/10/2022 14:12:30 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**750.02**	**1884.8**	**22800.**	**8508.5**
Stddev	1.76	5.9	6.	26.3
%RSD	.23407	.31227	.02736	.30919
#1	750.05	1890.1	22795.	8485.8
#2	751.76	1885.8	22807.	8502.2
#3	748.25	1878.5	22797.	8537.3

Zoom In Zoom Out

Sample Name: MP40824-S1 Acquired: 6/10/2022 14:17:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0509**	**26.40**	**1.966**	**2.098**	**.0498**	**188.5**	**.0467**	**.4798**	**.1942**
Stddev	.0002	.09	.005	.005	.0002	.5	.0001	.0008	.0009
%RSD	.3014	.3554	.2692	.2390	.3641	.2876	.1427	.1644	.4487
#1	.0510	26.47	1.970	2.101	.0499	188.7	.0467	.4798	.1932
#2	.0507	26.44	1.960	2.102	.0498	189.0	.0467	.4790	.1949
#3	.0508	26.29	1.968	2.093	.0496	187.9	.0468	.4806	.1945

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2540**	**24.97**	**25.86**	**.0044**	**60.92**	**.5011**	**.4883**	**56.95**	**.4801**
Stddev	.0006	.16	.05	.0002	.34	.0012	.0015	.10	.0009
%RSD	.2509	.6403	.2090	5.220	.5505	.2388	.2976	.1738	.1805
#1	.2547	24.97	25.91	.0046	60.94	.5022	.4891	57.07	.4806
#2	.2534	25.13	25.80	.0046	61.24	.4998	.4866	56.92	.4791
#3	.2539	24.81	25.86	.0042	60.57	.5014	.4892	56.87	.4805

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4757**	**.4990**	**1.961**	**4.568**	**.4846**	**.7497**	**.5033**	**1.892**	**.4890**
Stddev	.0007	.0009	.005	.014	.0018	.0013	.0006	.005	.0006
%RSD	.1477	.1877	.2479	.3010	.3634	.1753	.1233	.2457	.1326
#1	.4756	.4992	1.967	4.574	.4866	.7509	.5029	1.890	.4892
#2	.4750	.4979	1.958	4.552	.4831	.7483	.5030	1.889	.4883
#3	.4764	.4997	1.959	4.577	.4842	.7498	.5040	1.897	.4895

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4726**
Stddev	.0002
%RSD	.0342
#1	.4725
#2	.4725
#3	.4728

Zoom In Zoom Out

Sample Name: MP40824-S1 Acquired: 6/10/2022 14:17:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**728.01**	**1918.8**	**23146.**	**8568.0**
Stddev	2.30	4.1	29.	45.2
%RSD	.31583	.21179	.12617	.52807
#1	726.35	1915.9	23177.	8552.0
#2	730.63	1923.4	23141.	8533.0
#3	727.05	1916.9	23119.	8619.1

Zoom In Zoom Out

Sample Name: MP40824-S2 Acquired: 6/10/2022 14:22:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0499**	**25.72**	**1.922**	**2.062**	**.0488**	**183.2**	**.0459**	**.4714**	**.1912**
Stddev	.0000	.11	.009	.006	.0003	.7	.0001	.0008	.0003
%RSD	.0387	.4309	.4791	.2736	.5298	.3735	.2046	.1636	.1657
#1	.0499	25.84	1.912	2.067	.0490	182.6	.0460	.4708	.1909
#2	.0499	25.63	1.924	2.063	.0485	183.1	.0458	.4711	.1915
#3	.0499	25.68	1.931	2.056	.0489	183.9	.0459	.4723	.1914

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2490**	**24.26**	**25.22**	**.0048**	**59.19**	**.4912**	**.4789**	**56.01**	**.4739**
Stddev	.0004	.06	.05	.0001	.26	.0018	.0003	.08	.0011
%RSD	.1697	.2379	.2162	2.067	.4458	.3720	.0703	.1507	.2342
#1	.2488	24.33	25.22	.0048	59.48	.4918	.4788	55.92	.4732
#2	.2495	24.23	25.16	.0048	59.10	.4926	.4787	56.09	.4734
#3	.2487	24.22	25.27	.0046	58.98	.4891	.4793	56.01	.4752

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4667**	**.4898**	**1.920**	**4.491**	**.4761**	**.7372**	**.4941**	**1.855**	**.4805**
Stddev	.0013	.0015	.007	.001	.0010	.0026	.0011	.002	.0017
%RSD	.2783	.3083	.3794	.0148	.2130	.3547	.2302	.1232	.3642
#1	.4653	.4909	1.928	4.492	.4772	.7401	.4932	1.858	.4796
#2	.4668	.4881	1.917	4.490	.4754	.7350	.4954	1.855	.4825
#3	.4679	.4903	1.915	4.491	.4756	.7366	.4938	1.853	.4794

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4661**
Stddev	.0016
%RSD	.3344
#1	.4655
#2	.4649
#3	.4678

Zoom In Zoom Out

Sample Name: MP40824-S2 Acquired: 6/10/2022 14:22:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**731.59**	**1925.0**	**23191.**	**8651.4**
Stddev	.59	.4	43.	16.9
%RSD	.08047	.01930	.18383	.19513
#1	731.26	1925.0	23239.	8642.0
#2	731.24	1925.3	23160.	8670.9
#3	732.27	1924.6	23172.	8641.4

Zoom In Zoom Out

Sample Name: FA96011-2 Acquired: 6/10/2022 14:26:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0060**	**-.0017**	**-.0006**	**-.0001**	**123.8**	**.0000**	**-.0002**	**-.0003**
Stddev	.0003	.0049	.0008	.0001	.0000	.8	.000	.0000	.0000
%RSD	208.3	81.95	50.11	16.06	50.99	.6060	119.0	9.138	19.64
#1	.0001	.0116	-.0014	-.0006	-.0001	123.8	.0000	-.0002	-.0002
#2	-.0001	.0030	-.0010	-.0007	.0000	124.5	.0000	-.0002	-.0003
#3	.0005	.0033	-.0026	-.0005	-.0001	123.0	.0000	-.0002	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0228**	**.8855**	**.0040**	**46.14**	F **5.553**	**.0002**	**16.24**	**.0010**
Stddev	.0001	.0013	.0156	.0004	.28	.022	.0004	.04	.0001
%RSD	172.5	5.645	1.763	10.12	.5996	.3969	166.6	.2230	5.779
#1	.0001	.0220	.8756	.0041	46.08	5.579	.0006	16.25	.0010
#2	.0000	.0243	.8774	.0043	46.44	5.543	.0001	16.21	.0009
#3	.0002	.0221	.9035	.0035	45.90	5.538	-.0001	16.28	.0010

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**.0014**	**-.0007**	**4.810**	**-.0004**	**.5785**	**.0011**	**.0042**	**.0010**
Stddev	.0008	.0005	.0037	.007	.0006	.0010	.0000	.0007	.0002
%RSD	39.42	32.19	540.0	.1425	141.3	.1793	3.915	15.52	16.62
#1	-.0023	.0018	-.0035	4.802	-.0001	.5795	.0011	.0042	.0010
#2	-.0012	.0009	.0036	4.814	-.0012	.5775	.0011	.0049	.0008
#3	-.0028	.0015	-.0022	4.814	.0000	.5786	.0010	.0036	.0011

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0103**
Stddev	.0002
%RSD	1.546
#1	.0102
#2	.0102
#3	.0105

Zoom In Zoom Out

Sample Name: FA96011-2 Acquired: 6/10/2022 14:26:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**781.78**	**1925.6**	**23386.**	**8578.6**
Stddev	1.38	5.2	28.	41.4
%RSD	.17713	.27069	.11902	.48306
#1	782.47	1930.9	23396.	8606.3
#2	780.18	1920.5	23407.	8531.0
#3	782.68	1925.3	23354.	8598.5

Zoom In Zoom Out

Sample Name: FA96011-3 Acquired: 6/10/2022 14:31:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0073**	**-.0018**	**.0516**	**-.0001**	**89.50**	**-.0001**	**-.0002**	**.0001**
Stddev	.0002	.0026	.0017	.0002	.0000	.22	.0000	.0002	.0002
%RSD	158.9	36.10	94.74	.3868	13.04	.2433	45.31	92.17	244.2
#1	-.0001	.0067	-.0033	.0514	-.0001	89.31	-.0001	.0000	.0002
#2	-.0004	.0051	-.0023	.0517	-.0001	89.46	-.0001	-.0003	-.0001
#3	.0001	.0102	.0001	.0517	-.0001	89.74	-.0001	-.0003	.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0084**	**.3946**	**.0032**	**35.79**	**.0013**	**.0006**	**13.80**	**.0004**
Stddev	.0003	.0009	.0186	.0004	.01	.0000	.0002	.05	.0003
%RSD	75.53	10.69	4.701	11.60	.0207	.8211	40.70	.3339	72.55
#1	.0004	.0094	.3888	.0029	35.78	.0013	.0008	13.75	.0002
#2	.0006	.0083	.3797	.0031	35.80	.0013	.0003	13.82	.0003
#3	.0001	.0076	.4154	.0036	35.80	.0013	.0006	13.83	.0008

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**.0006**	**.0018**	**3.835**	**-.0001**	**.0969**	**.0012**	**-.0004**	**.0044**
Stddev	.0009	.0009	.0022	.015	.0003	.0002	.0001	.0009	.0002
%RSD	51.56	154.0	120.8	.4015	432.0	.1894	9.230	247.4	3.821
#1	-.0014	.0011	.0035	3.821	-.0002	.0967	.0011	.0002	.0044
#2	-.0027	-.0004	.0027	3.851	.0003	.0970	.0013	-.0014	.0043
#3	-.0010	.0011	-.0007	3.833	-.0003	.0969	.0011	.0001	.0046

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0141**
Stddev	.0003
%RSD	1.958
#1	.0144
#2	.0142
#3	.0138

Zoom In Zoom Out

Sample Name: FA96011-3 Acquired: 6/10/2022 14:31:53 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**799.33**	**1939.8**	**23603.**	**8676.7**
Stddev	4.81	11.8	55.	25.1
%RSD	.60235	.60765	.23334	.28914
#1	804.88	1951.6	23647.	8698.8
#2	796.35	1928.0	23541.	8681.9
#3	796.75	1939.9	23620.	8649.4

Zoom In Zoom Out

Sample Name: FA96011-4 Acquired: 6/10/2022 14:36:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0083**	**-.0035**	**.0647**	**-.0001**	**139.6**	**-.0001**	**-.0002**	**-.0002**
Stddev	.0003	.0019	.0007	.0003	.0000	.6	.0000	.0001	.0002
%RSD	415.6	23.03	20.93	.4491	23.83	.4297	35.90	59.41	144.4
#1	-.0002	.0096	-.0026	.0650	-.0001	139.7	-.0001	-.0001	-.0002
#2	.0003	.0091	-.0037	.0648	-.0001	140.1	-.0001	-.0003	.0001
#3	-.0003	.0061	-.0040	.0644	-.0001	139.0	-.0001	-.0002	-.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0360**	**1.011**	**.0022**	**12.38**	**.0053**	**.0003**	**4.570**	**.0002**
Stddev	.0001	.0009	.012	.0006	.08	.0000	.0002	.014	.0001
%RSD	16.47	2.474	1.150	25.89	.6744	.4467	62.74	.2959	33.55
#1	.0007	.0360	1.023	.0028	12.43	.0053	.0005	4.585	.0003
#2	.0005	.0351	1.012	.0023	12.42	.0053	.0003	4.562	.0001
#3	.0008	.0369	.9995	.0016	12.28	.0053	.0001	4.562	.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**-.0007**	**.0007**	**3.384**	**.0003**	**.0947**	**.0011**	**-.0018**	**.0023**
Stddev	.0001	.0010	.0035	.002	.0001	.0003	.0001	.0008	.0001
%RSD	4.808	133.0	539.8	.0632	40.91	.2924	12.15	46.97	5.983
#1	-.0023	-.0006	-.0010	3.385	.0003	.0948	.0010	-.0018	.0024
#2	-.0023	-.0018	-.0017	3.381	.0002	.0950	.0011	-.0009	.0024
#3	-.0021	.0001	.0047	3.385	.0004	.0944	.0013	-.0026	.0022

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0145**
Stddev	.0002
%RSD	1.660
#1	.0142
#2	.0147
#3	.0145

Zoom In Zoom Out

Sample Name: FA96011-4 Acquired: 6/10/2022 14:36:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**795.07**	**1919.3**	**23400.**	**8714.7**
Stddev	.99	.3	44.	58.4
%RSD	.12476	.01409	.18890	.67064
#1	794.74	1919.6	23373.	8711.7
#2	796.19	1919.0	23451.	8657.9
#3	794.29	1919.2	23375.	8774.6

Zoom In Zoom Out

Sample Name: FA96011-5 Acquired: 6/10/2022 14:41:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0076**	**-.0024**	**.0691**	**-.0001**	**142.8**	**-.0001**	**.0006**	**-.0003**
Stddev	.0003	.0027	.0012	.0003	.0000	1.2	.0000	.0001	.0002
%RSD	167.3	35.53	52.23	.4993	18.21	.8070	38.27	20.35	69.16
#1	-.0005	.0061	-.0013	.0688	-.0001	143.5	-.0001	.0007	-.0004
#2	-.0002	.0108	-.0037	.0695	-.0001	143.4	.0000	.0006	-.0001
#3	.0001	.0061	-.0022	.0691	-.0001	141.4	-.0001	.0004	-.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0428**	**1.009**	**.0030**	**26.05**	**.0183**	**.0008**	**24.07**	**.0011**
Stddev	.0001	.0011	.006	.0004	.18	.0001	.0000	.08	.0001
%RSD	34.66	2.591	.6347	13.33	.6745	.6668	3.621	.3119	8.431
#1	.0005	.0423	1.010	.0032	26.12	.0182	.0008	23.99	.0010
#2	.0003	.0421	1.014	.0026	26.17	.0184	.0007	24.14	.0012
#3	.0006	.0441	1.002	.0033	25.84	.0183	.0007	24.08	.0012

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**-.0002**	**.0005**	**2.839**	**.0005**	**.2119**	**.0010**	**-.0014**	**.0010**
Stddev	.0004	.0010	.0017	.005	.0003	.0008	.0000	.0013	.0000
%RSD	20.65	512.8	324.4	.1789	59.23	.3835	4.329	91.39	2.703
#1	-.0023	.0007	-.0004	2.833	.0004	.2115	.0010	-.0002	.0010
#2	-.0018	-.0013	-.0005	2.841	.0002	.2128	.0011	-.0028	.0010
#3	-.0015	.0000	.0025	2.843	.0008	.2114	.0010	-.0013	.0010

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0067**
Stddev	.0002
%RSD	2.592
#1	.0065
#2	.0069
#3	.0067

Zoom In Zoom Out

Sample Name: FA96011-5 Acquired: 6/10/2022 14:41:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**779.28**	**1914.5**	**23207.**	**8568.9**
Stddev	3.15	3.0	85.	61.2
%RSD	.40444	.15777	.36636	.71383
#1	779.15	1916.5	23287.	8531.5
#2	782.50	1916.0	23117.	8535.8
#3	776.20	1911.0	23217.	8639.5

Zoom In Zoom Out

Sample Name: FA96070-21 Acquired: 6/10/2022 14:46:44 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0527**	**.0182**	**.0056**	**-.0001**	**44.98**	**-.0008**	**.0161**	**.0009**
Stddev	.0001	.0029	.0010	.0001	.0000	.31	.0000	.0000	.0003
%RSD	10.28	5.519	5.746	1.176	33.51	.6952	2.187	.2035	31.03
#1	.0006	.0556	.0180	.0057	-.0001	44.66	-.0007	.0162	.0013
#2	.0007	.0527	.0194	.0056	-.0001	45.28	-.0008	.0161	.0007
#3	.0005	.0498	.0173	.0056	-.0001	44.99	-.0008	.0161	.0008

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**13.27**	**.5712**	**.0002**	**3.346**	**.4854**	**.0021**	**7.890**	**.0008**
Stddev	.0000	.02	.0038	.0005	.020	.0010	.0002	.031	.0001
%RSD	2.906	.1353	.6645	295.4	.5995	.2143	8.475	.3962	14.54
#1	.0015	13.25	.5671	-.0002	3.332	.4845	.0021	7.918	.0008
#2	.0014	13.28	.5746	.0000	3.369	.4852	.0020	7.856	.0010
#3	.0014	13.29	.5717	.0008	3.337	.4865	.0023	7.897	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0001**	**.0006**	**3.259**	**-.0001**	**.0912**	**.0024**	**-.0007**	**.0003**
Stddev	.0008	.0002	.0012	.001	.0001	.0002	.0005	.0005	.0001
%RSD	311.0	230.8	213.8	.0276	99.68	.2258	18.75	80.44	36.90
#1	-.0011	.0001	-.0001	3.260	-.0003	.0913	.0030	-.0008	.0004
#2	.0003	-.0001	-.0002	3.259	.0000	.0909	.0023	-.0011	.0002
#3	.0001	.0002	.0020	3.258	-.0002	.0912	.0021	-.0001	.0003

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0102**
Stddev	.0000
%RSD	.3315
#1	.0102
#2	.0101
#3	.0102

Zoom In Zoom Out

Sample Name: FA96070-21 Acquired: 6/10/2022 14:46:44 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**847.18**	**2002.9**	**24380.**	**8902.9**
Stddev	2.20	1.2	62.	18.4
%RSD	.25945	.05920	.25538	.20673
#1	846.17	2001.5	24441.	8912.0
#2	845.67	2003.4	24384.	8881.7
#3	849.70	2003.7	24316.	8915.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 14:51:34 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2499**	**38.51**	**1.982**	**1.970**	**1.975**	**39.42**	**2.014**	**2.012**	**2.049**
Stddev	.0007	.26	.005	.015	.008	.21	.005	.003	.006
%RSD	.2610	.6789	.2517	.7365	.4027	.5408	.2332	.1556	.2950
#1	.2501	38.79	1.977	1.987	1.982	39.29	2.009	2.008	2.055
#2	.2503	38.45	1.987	1.961	1.976	39.66	2.018	2.013	2.049
#3	.2491	38.28	1.982	1.963	1.966	39.30	2.016	2.015	2.042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.008**	**39.09**	**39.91**	**1.984**	**39.08**	**2.014**	**2.010**	**39.74**	**2.032**
Stddev	.008	.09	.10	.016	.24	.006	.003	.19	.004
%RSD	.3905	.2293	.2518	.7835	.6251	.3223	.1636	.4677	.1725
#1	2.000	39.07	40.02	2.002	38.88	2.022	2.006	39.95	2.029
#2	2.010	39.19	39.87	1.973	39.36	2.011	2.013	39.61	2.036
#3	2.015	39.02	39.83	1.978	39.01	2.010	2.011	39.65	2.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.990**	**1.985**	**1.994**	**2.085**	**2.006**	**1.974**	**2.028**	**2.004**	**2.038**
Stddev	.006	.005	.010	.004	.002	.020	.001	.004	.005
%RSD	.2814	.2431	.4792	.1685	.0973	1.031	.0374	.2018	.2527
#1	1.984	1.986	1.984	2.081	2.004	1.954	2.028	1.999	2.044
#2	1.995	1.981	1.994	2.086	2.006	1.994	2.027	2.007	2.037
#3	1.991	1.990	2.003	2.088	2.008	1.975	2.029	2.006	2.034
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 14:51:34 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.001**
Stddev	.003
%RSD	.1584
#1	1.998
#2	2.002
#3	2.004
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**767.58**	**1975.4**	**23511.**	**8797.9**
Stddev	2.64	5.6	46.	27.8
%RSD	.34363	.28327	.19748	.31584
#1	770.61	1981.8	23557.	8820.3
#2	765.80	1972.7	23510.	8766.8
#3	766.33	1971.6	23465.	8806.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 14:56:16 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0004**	**-.0008**	**.0000**	**.0000**	**.0029**	**.0000**	**-.0001**	**.0001**
Stddev	.0001	.0032	.0006	.0001	.0000	.0005	.0000	.0002	.0004
%RSD	95.36	736.5	74.60	658.2	186.6	15.99	248.4	278.5	385.6
#1	-.0003	-.0041	-.0011	.0001	.0000	.0029	.0000	-.0001	.0004
#2	.0000	.0019	-.0011	.0000	.0000	.0034	.0000	-.0002	-.0003
#3	-.0001	.0009	-.0001	.0000	.0000	.0025	.0000	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0036**	**-.0032**	**-.0003**	**-.0120**	**.0000**	**.0001**	**-.0121**	**-.0001**
Stddev	.0001	.0013	.0113	.0002	.0044	.0000	.0001	.0015	.0000
%RSD	22.69	37.42	354.4	79.18	36.88	63.82	227.0	12.06	58.05
#1	.0005	.0042	-.0057	-.0003	-.0164	.0001	.0002	-.0129	-.0001
#2	.0006	.0020	.0091	-.0005	-.0075	.0000	.0001	-.0104	-.0001
#3	.0008	.0045	-.0131	.0000	-.0122	.0000	-.0001	-.0129	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0003**	**.0014**	**.0008**	**-.0001**	**.0001**	**.0000**	**.0003**	**.0001**
Stddev	.0004	.0003	.0012	.0004	.0002	.0000	.0001	.0005	.0001
%RSD	156.3	95.52	81.64	45.42	247.6	22.16	164.8	162.8	50.46
#1	.0008	.0001	.0025	.0007	-.0003	.0001	.0001	.0000	.0001
#2	.0001	.0001	.0002	.0005	.0002	.0000	.0000	.0000	.0002
#3	-.0001	.0006	.0015	.0012	-.0001	.0000	.0000	.0008	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass		None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 14:56:16 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0014**
Stddev	.0001
%RSD	9.908
#1	.0016
#2	.0014
#3	.0013
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**945.04**	**2099.7**	**25166.**	**8874.3**
Stddev	2.16	11.9	40.	5.4
%RSD	.22897	.56804	.15980	.06036
#1	946.65	2111.3	25176.	8868.4
#2	945.90	2100.2	25200.	8875.8
#3	942.58	2087.5	25121.	8878.8

Zoom In Zoom Out

Sample Name: FA96070-22 Acquired: 6/10/2022 15:01:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0454**	**.0175**	**.0054**	**-.0001**	**44.49**	**-.0006**	**.0159**	**.0010**
Stddev	.0002	.0040	.0007	.0000	.0000	.24	.0000	.0001	.0002
%RSD	39.14	8.795	4.108	.6227	.5953	.5468	1.974	.6075	20.54
#1	.0003	.0412	.0167	.0054	-.0001	44.77	-.0006	.0160	.0008
#2	.0006	.0491	.0179	.0055	-.0001	44.38	-.0006	.0159	.0011
#3	.0006	.0461	.0179	.0054	-.0001	44.33	-.0006	.0158	.0011

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**12.88**	**.5516**	**.0006**	**3.329**	**.4858**	**.0022**	**7.669**	**.0005**
Stddev	.0001	.02	.0052	.0004	.004	.0015	.0000	.013	.0002
%RSD	11.16	.1816	.9340	71.01	.1348	.3075	1.840	.1715	28.80
#1	.0012	12.87	.5469	.0010	3.324	.4853	.0023	7.676	.0004
#2	.0015	12.90	.5571	.0003	3.330	.4846	.0023	7.654	.0005
#3	.0012	12.86	.5508	.0004	3.332	.4875	.0022	7.678	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0006**	**.0019**	**3.239**	**.0000**	**.0895**	**.0020**	**-.0016**	**.0003**
Stddev	.0006	.0010	.0023	.007	.000	.0002	.0001	.0002	.0002
%RSD	344.9	161.1	120.7	.2232	685.3	.2221	3.309	10.37	63.47
#1	.0001	.0005	-.0007	3.238	.0003	.0897	.0020	-.0018	.0005
#2	.0008	-.0012	.0031	3.232	-.0002	.0893	.0020	-.0015	.0001
#3	-.0004	-.0012	.0033	3.246	-.0002	.0896	.0021	-.0015	.0003

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0146**
Stddev	.0002
%RSD	1.672
#1	.0147
#2	.0148
#3	.0144

Zoom In Zoom Out

Sample Name: FA96070-22 Acquired: 6/10/2022 15:01:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**846.12**	**1985.6**	**23951.**	**8935.6**
Stddev	1.22	8.4	45.	23.0
%RSD	.14434	.42270	.18836	.25770
#1	846.05	1986.6	24001.	8915.5
#2	847.38	1993.5	23913.	8960.7
#3	844.94	1976.8	23939.	8930.6

Zoom In Zoom Out

Sample Name: FA96070-23 Acquired: 6/10/2022 15:06:04 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.1559**	**-.0015**	**.0136**	**.0000**	**1.316**	**-.0007**	**-.0001**	**.0007**
Stddev	.0000	.0045	.0007	.0001	.000	.000	.0001	.0001	.0002
%RSD	7.958	2.883	45.50	.5700	75.40	.0285	9.278	72.57	26.89
#1	.0006	.1606	-.0017	.0135	.0000	1.316	-.0008	-.0001	.0007
#2	.0006	.1554	-.0007	.0135	-.0001	1.316	-.0007	.0000	.0006
#3	.0006	.1516	-.0020	.0136	.0000	1.316	-.0008	-.0001	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**14.29**	**.8903**	**-.0005**	**1.047**	**.0333**	**-.0003**	**7.737**	**-.0003**
Stddev	.0001	.05	.0040	.0004	.021	.0001	.0001	.045	.0002
%RSD	2.567	.3657	.4454	82.68	1.959	.3988	39.35	.5887	54.22
#1	.0024	14.25	.8908	-.0010	1.025	.0332	-.0002	7.762	-.0004
#2	.0023	14.26	.8940	-.0002	1.051	.0334	-.0003	7.684	-.0001
#3	.0023	14.35	.8861	-.0004	1.066	.0334	-.0004	7.765	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0006**	**.0011**	**1.451**	**-.0002**	**.0082**	**.0018**	**-.0006**	**.0011**
Stddev	.0005	.0009	.0006	.005	.0003	.0000	.0001	.0004	.0002
%RSD	42.41	137.1	56.69	.3384	137.1	.2830	6.405	75.48	17.59
#1	.0006	-.0010	.0016	1.457	-.0003	.0082	.0019	-.0009	.0010
#2	.0014	-.0013	.0004	1.449	-.0005	.0082	.0018	-.0008	.0011
#3	.0014	.0004	.0014	1.448	.0001	.0082	.0017	-.0001	.0013

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0110**
Stddev	.0002
%RSD	1.429
#1	.0110
#2	.0109
#3	.0112

Zoom In Zoom Out

Sample Name: FA96070-23 Acquired: 6/10/2022 15:06:04 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**893.67**	**2030.5**	**24651.**	**9066.6**
Stddev	2.50	7.7	14.	3.8
%RSD	.27947	.38072	.05550	.04142
#1	890.81	2021.5	24656.	9070.9
#2	895.41	2034.9	24661.	9065.2
#3	894.79	2035.0	24635.	9063.8

Zoom In Zoom Out

Sample Name: FA96152-8 Acquired: 6/10/2022 15:15:31 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**3.366**	**.0024**	**.0411**	**.0007**	**.7286**	**-.0007**	**.0082**	**.0044**
Stddev	.0003	.025	.0006	.0003	.0000	.0052	.0001	.0002	.0002
%RSD	52.17	.7565	24.61	.8334	3.913	.7136	16.06	2.296	5.423
#1	.0008	3.338	.0025	.0407	.0007	.7277	-.0007	.0083	.0042
#2	.0005	3.387	.0018	.0414	.0008	.7342	-.0008	.0080	.0046
#3	.0003	3.374	.0030	.0412	.0007	.7240	-.0006	.0083	.0043

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043**	**14.68**	**1.173**	**.0039**	**.1584**	**.5144**	**-.0001**	**5.353**	**.0013**
Stddev	.0002	.10	.006	.0005	.0122	.0017	.0000	.044	.0001
%RSD	3.659	.6491	.5434	11.52	7.683	.3259	34.90	.8308	7.198
#1	.0041	14.64	1.170	.0034	.1599	.5149	-.0002	5.302	.0013
#2	.0043	14.79	1.180	.0042	.1697	.5159	-.0001	5.374	.0013
#3	.0044	14.61	1.168	.0042	.1455	.5126	-.0001	5.384	.0012

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0129**	**-.0001**	**.0019**	**5.076**	**.0028**	**.0007**	**.1445**	**.0005**	**.0113**
Stddev	.0004	.0006	.0023	.011	.0005	.0000	.0015	.0009	.0001
%RSD	2.778	481.1	118.2	.2139	18.15	3.960	1.071	193.5	1.042
#1	.0125	.0005	.0040	5.077	.0033	.0007	.1427	.0012	.0112
#2	.0129	-.0006	-.0006	5.065	.0026	.0007	.1456	-.0005	.0114
#3	.0132	-.0002	.0024	5.087	.0024	.0007	.1452	.0006	.0113

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0080**
Stddev	.0001
%RSD	1.014
#1	.0079
#2	.0081
#3	.0080

Zoom In Zoom Out

Sample Name: FA96152-8 Acquired: 6/10/2022 15:15:31 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**901.71**	**2122.0**	**25532.**	**9305.2**
Stddev	1.56	7.3	89.	62.6
%RSD	.17267	.34170	.34991	.67231
#1	901.49	2122.0	25635.	9280.5
#2	903.36	2129.3	25478.	9258.7
#3	900.27	2114.8	25482.	9376.3

Zoom In Zoom Out

Sample Name: FA96150-1 Acquired: 6/10/2022 15:20:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0002**	**.1186**	**.0822**	**-.0002**	**129.8**	**-.0007**	**-.0006**	**.0005**
Stddev	.0009	.0149	.0060	.0003	.0001	.4	.0001	.0001	.0010
%RSD	106.5	9295.	5.063	.3631	40.71	.3147	17.37	19.67	216.3
#1	.0013	.0114	.1244	.0819	-.0003	129.4	-.0007	-.0007	-.0007
#2	-.0002	-.0167	.1189	.0825	-.0003	130.2	-.0005	-.0005	.0009
#3	.0013	.0058	.1124	.0822	-.0001	129.8	-.0008	-.0005	.0012

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.2797**	**1.764**	**.0080**	**108.5**	**.0610**	**.0345**	**129.2**	**.0015**
Stddev	.0007	.0015	.025	.0013	.8	.0006	.0004	.5	.0006
%RSD	25.15	.5245	1.405	16.37	.7077	1.007	1.301	.3592	37.92
#1	.0025	.2813	1.739	.0066	107.7	.0603	.0346	128.6	.0012
#2	.0023	.2794	1.788	.0091	109.2	.0615	.0349	129.4	.0012
#3	.0036	.2784	1.765	.0085	108.5	.0613	.0340	129.5	.0022

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**-.0043**	**.0042**	**8.373**	**-.0006**	**1.303**	**.0047**	**.0006**	**.0016**
Stddev	.0021	.0031	.0055	.031	.0008	.003	.0003	.0038	.0008
%RSD	107.8	73.45	129.5	.3746	125.4	.2067	6.312	587.6	48.92
#1	-.0021	-.0007	.0070	8.338	-.0015	1.301	.0048	.0044	.0023
#2	.0002	-.0064	-.0021	8.384	-.0001	1.304	.0043	-.0031	.0016
#3	-.0041	-.0057	.0078	8.398	-.0002	1.306	.0049	.0005	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0042**
Stddev	.0004
%RSD	9.623
#1	.0046
#2	.0039
#3	.0040

Zoom In Zoom Out

Sample Name: FA96150-1 Acquired: 6/10/2022 15:20:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**839.74**	**2003.4**	**23662.**	**8825.0**
Stddev	.76	1.6	95.	38.6
%RSD	.09039	.07838	.40286	.43718
#1	840.59	2005.1	23770.	8869.4
#2	839.48	2003.3	23588.	8799.3
#3	839.14	2001.9	23629.	8806.4

Zoom In Zoom Out

Sample Name: FA96150-2 Acquired: 6/10/2022 15:25:14 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 4.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0210**	**.0603**	**.0703**	**-.0005**	**107.7**	**-.0004**	**-.0008**	**-.0007**
Stddev	.0000	.0136	.0046	.0001	.0000	.5	.0003	.0005	.0005
%RSD	8.199	64.69	7.587	.1258	4.354	.4920	67.11	56.07	73.22
#1	.0006	.0057	.0647	.0704	-.0005	107.2	-.0005	-.0013	-.0008
#2	.0006	.0259	.0605	.0702	-.0005	107.8	-.0001	-.0004	-.0011
#3	.0006	.0315	.0556	.0704	-.0005	108.2	-.0006	-.0008	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**1.166**	**3.569**	**.0048**	**75.94**	**.0733**	**.0033**	**90.17**	**-.0007**
Stddev	.0010	.005	.035	.0010	.30	.0004	.0008	.10	.0006
%RSD	37.85	.4572	.9704	21.54	.3908	.4946	25.47	.1082	84.66
#1	.0016	1.160	3.582	.0042	75.61	.0737	.0025	90.20	-.0007
#2	.0035	1.169	3.530	.0059	76.18	.0731	.0032	90.24	-.0001
#3	.0032	1.170	3.596	.0041	76.02	.0731	.0041	90.06	-.0013

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**-.0034**	**.0047**	**8.977**	**-.0009**	**1.060**	**.0038**	**-.0015**	**.0005**
Stddev	.0029	.0009	.0049	.023	.0014	.003	.0004	.0051	.0013
%RSD	200.9	25.27	103.6	.2563	169.2	.2445	10.40	342.0	244.9
#1	-.0037	-.0041	.0060	8.951	.0007	1.057	.0039	.0044	-.0008
#2	.0019	-.0037	-.0007	8.995	-.0021	1.062	.0034	-.0038	.0018
#3	-.0026	-.0024	.0087	8.984	-.0011	1.062	.0042	-.0050	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0028**
Stddev	.0008
%RSD	27.56
#1	.0037
#2	.0022
#3	.0026

Zoom In Zoom Out

Sample Name: FA96150-2 Acquired: 6/10/2022 15:25:14 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 4.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**838.88**	**1994.3**	**23471.**	**8787.4**
Stddev	1.95	3.6	113.	23.3
%RSD	.23212	.18244	.47969	.26529
#1	840.92	1998.3	23530.	8808.3
#2	838.68	1993.6	23341.	8791.8
#3	837.04	1991.1	23542.	8762.3

Zoom In Zoom Out

Sample Name: FA96150-3 Acquired: 6/10/2022 15:30:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0270**	**.0069**	**.1081**	**-.0002**	**119.1**	**.0000**	**-.0007**	**.0000**
Stddev	.0013	.0113	.0031	.0011	.0000	2.0	.000	.0001	.0005
%RSD	312.4	41.90	45.01	.9903	17.67	1.721	372.2	15.91	3440.
#1	-.0009	.0399	.0101	.1089	-.0002	121.5	-.0001	-.0007	.0002
#2	.0017	.0216	.0039	.1086	-.0002	118.1	.0001	-.0006	-.0005
#3	.0004	.0193	.0066	.1069	-.0002	117.9	-.0002	-.0008	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.1292**	**3.188**	**.0086**	**86.38**	**.1541**	**.0141**	**118.9**	**-.0003**
Stddev	.0003	.0037	.013	.0003	1.38	.0014	.0003	.9	.0001
%RSD	20.97	2.877	.4136	3.934	1.594	.9071	2.389	.7381	30.52
#1	.0019	.1333	3.176	.0082	87.97	.1556	.0144	119.5	-.0003
#2	.0012	.1281	3.185	.0087	85.61	.1536	.0142	119.3	-.0004
#3	.0016	.1261	3.202	.0089	85.57	.1530	.0137	117.9	-.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0027**	**-.0010**	**.0034**	**11.83**	**-.0001**	**1.201**	**.0028**	**-.0041**	**.0011**
Stddev	.0007	.0017	.0046	.24	.0005	.011	.0000	.0016	.0008
%RSD	26.58	175.6	136.7	2.056	515.7	.9134	1.087	39.79	73.36
#1	-.0033	-.0026	.0087	12.07	.0001	1.211	.0027	-.0058	.0017
#2	-.0019	-.0011	-.0002	11.83	.0003	1.204	.0028	-.0041	.0014
#3	-.0030	.0008	.0017	11.58	-.0006	1.189	.0028	-.0025	.0002

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0078**
Stddev	.0004
%RSD	5.422
#1	.0083
#2	.0077
#3	.0075

Zoom In Zoom Out

Sample Name: FA96150-3 Acquired: 6/10/2022 15:30:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**791.81**	**1930.7**	**22567.**	**8697.5**
Stddev	.32	5.6	47.	70.7
%RSD	.04039	.29142	.21027	.81253
#1	791.79	1936.5	22621.	8618.0
#2	792.14	1925.2	22532.	8753.2
#3	791.50	1930.5	22548.	8721.2

Zoom In Zoom Out

Sample Name: FA96150-4 Acquired: 6/10/2022 15:34:59 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0075**	**.0212**	**.0628**	**-.0005**	**81.99**	**-.0002**	**-.0002**	**-.0014**
Stddev	.0005	.0108	.0043	.0002	.0002	.54	.0001	.0002	.0012
%RSD	139.6	144.6	20.50	.2965	33.31	.6598	49.31	88.98	84.93
#1	.0001	.0101	.0161	.0626	-.0005	81.99	-.0002	-.0002	-.0007
#2	.0009	-.0044	.0239	.0628	-.0003	81.45	-.0003	.0000	-.0028
#3	.0000	.0167	.0234	.0629	-.0006	82.53	-.0001	-.0003	-.0008

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0115**	**8.382**	**.0147**	**97.42**	**.0969**	**.0489**	**149.7**	**.0036**
Stddev	.0004	.0029	.043	.0026	.79	.0005	.0001	.5	.0002
%RSD	11.36	24.87	.5125	17.70	.8096	.5025	.2648	.3068	4.757
#1	.0029	.0132	8.351	.0153	97.31	.0964	.0488	149.2	.0034
#2	.0036	.0131	8.364	.0118	96.69	.0970	.0490	149.8	.0036
#3	.0034	.0082	8.431	.0169	98.25	.0973	.0489	150.1	.0038

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0074**	**-.0037**	**8.149**	**-.0035**	**.7335**	**.0038**	**-.0067**	**.0089**
Stddev	.0014	.0025	.0052	.006	.0015	.0034	.0005	.0015	.0003
%RSD	2502.	33.48	140.9	.0790	42.94	.4692	13.28	21.90	3.698
#1	.0006	-.0055	-.0020	8.156	-.0047	.7318	.0044	-.0070	.0087
#2	-.0017	-.0064	.0005	8.143	-.0038	.7312	.0036	-.0079	.0093
#3	.0009	-.0102	-.0095	8.149	-.0018	.7374	.0035	-.0051	.0088

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0069**
Stddev	.0005
%RSD	7.873
#1	.0065
#2	.0067
#3	.0075

Zoom In Zoom Out

Sample Name: FA96150-4 Acquired: 6/10/2022 15:34:59 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**841.62**	**1994.1**	**23463.**	**8800.9**
Stddev	1.35	4.3	27.	36.1
%RSD	.16049	.21462	.11401	.41055
#1	841.68	1995.3	23484.	8809.5
#2	842.94	1997.6	23471.	8831.9
#3	840.24	1989.3	23433.	8761.2

Zoom In Zoom Out

Sample Name: FA96150-5 Acquired: 6/10/2022 15:39:51 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**1.779**	**.0062**	**.0152**	**-.0005**	**201.5**	**-.0001**	**-.0008**	**.0357**
Stddev	.0009	.023	.0054	.0001	.0001	.4	.0001	.0005	.0008
%RSD	168.5	1.275	86.96	.5549	11.01	.2150	97.15	58.94	2.333
#1	-.0016	1.754	.0109	.0151	-.0005	201.3	-.0002	-.0012	.0362
#2	-.0002	1.786	.0003	.0152	-.0005	201.2	.0000	-.0003	.0362
#3	.0001	1.797	.0073	.0153	-.0006	202.0	.0000	-.0009	.0347

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0052**	**.3056**	**1.184**	**.0071**	**2.207**	**.0048**	**.1486**	**47.56**	**.0007**
Stddev	.0006	.0056	.084	.0019	.064	.0001	.0017	.19	.0010
%RSD	10.65	1.831	7.084	26.47	2.879	2.580	1.111	.4036	152.1
#1	.0058	.3105	1.257	.0093	2.171	.0048	.1503	47.49	-.0004
#2	.0048	.2995	1.092	.0056	2.169	.0047	.1470	47.41	.0008
#3	.0049	.3068	1.204	.0065	2.280	.0049	.1486	47.77	.0017

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**.0001**	**.0043**	**4.663**	**-.0023**	**.3425**	**.0184**	**-.0036**	**.0443**
Stddev	.0004	.0053	.0063	.006	.0002	.0006	.0005	.0005	.0016
%RSD	19.55	7588.	147.4	.1391	9.576	.1760	2.474	14.58	3.544
#1	-.0025	-.0061	.0011	4.655	-.0021	.3429	.0184	-.0031	.0456
#2	-.0025	.0036	.0002	4.667	-.0022	.3418	.0180	-.0041	.0425
#3	-.0017	.0027	.0115	4.666	-.0025	.3428	.0189	-.0036	.0446

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0150**
Stddev	.0003
%RSD	2.283
#1	.0148
#2	.0147
#3	.0154

Zoom In Zoom Out

Sample Name: FA96150-5 Acquired: 6/10/2022 15:39:51 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**863.67**	**2013.0**	**23620.**	**8844.8**
Stddev	1.37	.4	77.	18.9
%RSD	.15917	.01886	.32407	.21410
#1	865.23	2013.0	23708.	8861.8
#2	863.17	2013.4	23578.	8848.3
#3	862.63	2012.7	23573.	8824.4

Zoom In Zoom Out

Sample Name: FA96150-6 Acquired: 6/10/2022 15:44:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0418**	**.0036**	**.0550**	**-.0001**	**90.69**	**-.0001**	**-.0007**	**.0006**
Stddev	.0004	.0012	.0010	.0003	.0000	.33	.0000	.0001	.0003
%RSD	295.8	2.806	27.10	.5791	45.99	.3621	18.85	7.630	47.65
#1	.0001	.0425	.0033	.0549	-.0001	90.48	-.0001	-.0006	.0003
#2	.0005	.0425	.0048	.0547	-.0001	90.53	-.0001	-.0007	.0010
#3	-.0002	.0405	.0029	.0554	.0000	91.07	-.0001	-.0007	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**1.409**	**3.696**	**.0040**	**52.74**	**.1059**	**.0017**	**28.33**	**.0007**
Stddev	.0000	.008	.022	.0003	.13	.0004	.0002	.16	.0002
%RSD	4.517	.5973	.5889	8.343	.2462	.3805	11.39	.5752	29.31
#1	.0008	1.416	3.672	.0039	52.79	.1054	.0017	28.33	.0005
#2	.0008	1.400	3.703	.0037	52.59	.1060	.0015	28.18	.0009
#3	.0008	1.411	3.714	.0043	52.84	.1062	.0019	28.50	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**.0000**	**.0007**	**11.93**	**.0004**	**.7402**	**.0027**	**-.0025**	**.0010**
Stddev	.0003	.0007	.0006	.02	.0003	.0051	.0002	.0009	.0002
%RSD	13.14	1870.	86.07	.1775	85.67	.6831	5.767	34.96	21.74
#1	-.0018	-.0003	.0000	11.92	.0003	.7361	.0028	-.0023	.0011
#2	-.0021	-.0004	.0013	11.91	.0001	.7386	.0025	-.0018	.0008
#3	-.0024	.0009	.0009	11.95	.0007	.7459	.0027	-.0035	.0012

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0025**
Stddev	.0001
%RSD	4.102
#1	.0026
#2	.0025
#3	.0024

Zoom In Zoom Out

Sample Name: FA96150-6 Acquired: 6/10/2022 15:44:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**782.42**	**1907.9**	**22552.**	**8730.8**
Stddev	.91	6.9	42.	40.3
%RSD	.11619	.36212	.18766	.46135
#1	782.20	1910.6	22517.	8713.2
#2	783.41	1913.0	22599.	8776.8
#3	781.64	1900.1	22541.	8702.3

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 15:49:36 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2590**	**37.91**	**1.982**	**1.916**	**1.961**	**40.43**	**2.032**	**2.022**	**2.139**
Stddev	.0005	.12	.007	.001	.006	.20	.001	.003	.009
%RSD	.1977	.3038	.3425	.0710	.2987	.4834	.0600	.1360	.4343
#1	.2596	37.78	1.974	1.915	1.954	40.20	2.033	2.018	2.134
#2	.2586	38.00	1.987	1.917	1.964	40.53	2.032	2.023	2.133
#3	.2588	37.94	1.983	1.915	1.965	40.56	2.031	2.023	2.150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.051**	**38.35**	**40.18**	**1.973**	**39.18**	**2.052**	**2.004**	**39.14**	**2.069**
Stddev	.005	.05	.04	.002	.08	.012	.004	.05	.002
%RSD	.2685	.1204	.1031	.1000	.2106	.5731	.1760	.1303	.1052
#1	2.046	38.31	40.19	1.971	39.10	2.039	2.000	39.19	2.066
#2	2.057	38.36	40.13	1.974	39.17	2.052	2.007	39.08	2.071
#3	2.050	38.40	40.22	1.974	39.26	2.063	2.006	39.14	2.068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.995**	**1.980**	**1.989**	**2.093**	**2.017**	**1.985**	**2.081**	**2.017**	**2.112**
Stddev	.008	.008	.013	.009	.002	.023	.007	.006	.011
%RSD	.4165	.4149	.6537	.4133	.1032	1.174	.3441	.2864	.5413
#1	2.002	1.971	1.976	2.083	2.016	1.974	2.074	2.016	2.100
#2	1.997	1.983	1.989	2.100	2.019	2.011	2.079	2.023	2.113
#3	1.986	1.987	2.002	2.096	2.016	1.969	2.088	2.011	2.122
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 15:49:36 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.013**
Stddev	.008
%RSD	.3874
#1	2.022
#2	2.012
#3	2.006
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**770.38**	**1976.7**	**22957.**	**8759.7**
Stddev	3.07	12.1	63.	27.2
%RSD	.39799	.61061	.27238	.31086
#1	773.84	1990.6	23024.	8791.1
#2	768.02	1971.1	22949.	8743.9
#3	769.27	1968.4	22900.	8744.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 15:54:17 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0013**	**-.0015**	**.0000**	**.0000**	**.0028**	**.0001**	**.0000**	**-.0002**
Stddev	.0003	.0044	.0003	.000	.0000	.0006	.0000	.000	.0002
%RSD	367.2	336.7	21.35	1499.	65.47	21.52	78.69	60.52	114.4
#1	.0001	.0019	-.0014	.0000	.0000	.0025	.0001	.0000	.0000
#2	.0003	.0005	-.0013	.0000	.0000	.0035	.0000	.0000	-.0002
#3	-.0002	-.0064	-.0019	.0000	.0000	.0025	.0001	-.0001	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0029**	**-.0098**	**-.0004**	**-.0124**	**.0000**	**.0001**	**-.0113**	**-.0002**
Stddev	.0001	.0012	.0076	.0002	.0150	.0000	.0002	.0024	.0002
%RSD	6.998	40.66	78.16	41.32	120.3	70.59	119.6	20.97	132.5
#1	.0008	.0038	-.0012	-.0002	-.0092	.0000	.0003	-.0094	-.0003
#2	.0007	.0033	-.0159	-.0005	.0007	.0000	.0001	-.0139	-.0002
#3	.0008	.0016	-.0121	-.0005	-.0287	.0000	.0000	-.0105	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0002**	**.0016**	**.0009**	**-.0002**	**.0000**	**.0001**	**-.0007**	**.0000**
Stddev	.0005	.0011	.0010	.0004	.0004	.0000	.0001	.0005	.000
%RSD	335.2	576.1	63.49	50.27	212.5	97.46	59.43	72.69	361.2
#1	.0004	.0014	.0021	.0008	-.0003	.0001	.0001	-.0001	-.0001
#2	.0005	-.0009	.0004	.0014	.0002	.0000	.0000	-.0012	.0000
#3	-.0005	.0001	.0023	.0005	-.0005	.0000	.0001	-.0009	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 15:54:17 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	62.84
#1	.0000
#2	.0002
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**948.92**	**2096.5**	**24672.**	**8923.9**
Stddev	1.12	3.8	66.	25.6
%RSD	.11779	.18034	.26831	.28733
#1	950.20	2100.4	24618.	8915.5
#2	948.12	2092.9	24746.	8952.7
#3	948.45	2096.3	24654.	8903.6

Zoom In Zoom Out

Sample Name: FA96150-7 Acquired: 6/10/2022 15:59:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0171**	**.0164**	**.0720**	**-.0001**	**169.2**	**.0000**	**-.0002**	**.0004**
Stddev	.0005	.0047	.0023	.0004	.0000	.2	.000	.0001	.0005
%RSD	876.2	27.28	14.12	.5997	9.830	.0921	165.0	26.30	126.8
#1	.0003	.0185	.0165	.0717	-.0001	169.1	.0000	-.0003	-.0001
#2	-.0005	.0209	.0186	.0725	-.0001	169.3	-.0001	-.0002	.0009
#3	.0003	.0119	.0140	.0717	-.0001	169.0	.0000	-.0003	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0125**	**6.053**	**.0098**	**77.22**	**.0754**	**.0340**	F **146.8**	**.0021**
Stddev	.0000	.0016	.031	.0004	.32	.0003	.0001	3.3	.0000
%RSD	4.787	13.10	.5128	4.296	.4131	.4314	.4374	2.219	1.168
#1	.0008	.0117	6.028	.0100	77.06	.0755	.0342	143.6	.0020
#2	.0008	.0114	6.087	.0093	77.02	.0758	.0340	146.6	.0021
#3	.0007	.0144	6.042	.0100	77.59	.0751	.0339	150.1	.0021

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0033**	**.0007**	**.0010**	**8.587**	**-.0001**	**.9753**	**.0014**	**-.0018**	**.0082**
Stddev	.0013	.0011	.0020	.010	.0001	.0034	.0001	.0009	.0001
%RSD	39.41	156.7	198.7	.1182	63.17	.3474	3.748	48.01	.7106
#1	-.0047	-.0001	-.0013	8.580	-.0001	.9731	.0015	-.0023	.0082
#2	-.0023	.0003	.0021	8.582	-.0002	.9792	.0014	-.0008	.0082
#3	-.0028	.0019	.0022	8.598	-.0001	.9737	.0014	-.0022	.0081

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0048**
Stddev	.0002
%RSD	3.777
#1	.0050
#2	.0048
#3	.0046

Zoom In Zoom Out

Sample Name: FA96150-7 Acquired: 6/10/2022 15:59:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**721.31**	**1800.0**	**21294.**	**8464.5**
Stddev	1.41	5.4	53.	19.0
%RSD	.19525	.30044	.25028	.22499
#1	721.14	1804.7	21321.	8472.2
#2	722.79	1801.1	21233.	8478.4
#3	719.99	1794.1	21329.	8442.8

Zoom In Zoom Out

Sample Name: FA96150-8 Acquired: 6/10/2022 16:04:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.5439**	**.0627**	**.1095**	**-.0001**	**93.93**	**.0000**	**-.0003**	**.0013**
Stddev	.0003	.0012	.0011	.0009	.0000	.16	.000	.0001	.0004
%RSD	206.1	.2191	1.749	.7844	31.53	.1674	2107.	40.70	28.58
#1	.0004	.5453	.0639	.1103	-.0001	94.10	-.0002	-.0002	.0010
#2	-.0002	.5430	.0624	.1096	-.0001	93.91	.0001	-.0004	.0013
#3	.0003	.5434	.0617	.1086	-.0002	93.79	.0001	-.0004	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.9084**	**.3301**	**.0097**	**135.5**	**.1920**	**.0239**	**133.1**	**.0027**
Stddev	.0001	.0058	.0154	.0008	.6	.0008	.0004	1.2	.0002
%RSD	7.796	.6423	4.664	7.792	.4257	.4368	1.779	.8770	7.491
#1	.0017	.9105	.3124	.0093	136.1	.1927	.0243	134.2	.0029
#2	.0020	.9130	.3374	.0105	135.6	.1923	.0234	133.2	.0026
#3	.0020	.9019	.3404	.0092	134.9	.1911	.0241	131.8	.0025

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**-.0001**	**.0025**	**10.33**	**.0002**	**.8708**	**.0079**	**-.0024**	**.0057**
Stddev	.0017	.0009	.0035	.02	.0002	.0038	.0002	.0013	.0002
%RSD	117.3	779.1	139.6	.2056	143.4	.4361	2.609	54.53	3.841
#1	-.0033	.0000	.0042	10.31	.0001	.8737	.0081	-.0022	.0059
#2	-.0001	.0007	-.0015	10.32	.0000	.8723	.0077	-.0038	.0055
#3	-.0009	-.0010	.0048	10.35	.0005	.8665	.0079	-.0012	.0059

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0042**
Stddev	.0002
%RSD	5.595
#1	.0039
#2	.0044
#3	.0042

Zoom In Zoom Out

Sample Name: FA96150-8 Acquired: 6/10/2022 16:04:22 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**780.37**	**1915.0**	**22648.**	**8774.0**
Stddev	2.02	8.5	27.	15.9
%RSD	.25880	.44390	.11933	.18101
#1	782.67	1923.9	22666.	8757.5
#2	779.52	1913.9	22617.	8775.5
#3	778.91	1907.0	22662.	8789.2

Zoom In Zoom Out

Sample Name: FA96150-9 Acquired: 6/10/2022 16:09:15 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0910**	**.0131**	**.0288**	**-.0001**	**72.11**	**.0000**	**-.0002**	**-.0001**
Stddev	.0004	.0011	.0008	.0002	.0000	.55	.0001	.0001	.0003
%RSD	553.7	1.217	5.808	.6565	15.33	.7640	287.3	48.72	204.4
#1	-.0004	.0923	.0130	.0286	-.0001	72.04	.0001	-.0002	-.0001
#2	.0004	.0903	.0124	.0287	-.0001	72.69	-.0001	-.0002	-.0004
#3	-.0002	.0904	.0139	.0290	-.0001	71.60	.0000	-.0001	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**.0427**	**.8281**	**.0030**	**32.11**	**.0042**	**.0122**	**49.11**	**.0030**
Stddev	.0002	.0017	.0100	.0005	.20	.0001	.0003	.31	.0002
%RSD	5.130	4.031	1.203	16.12	.6143	1.396	2.859	.6299	5.757
#1	.0031	.0442	.8189	.0033	32.15	.0043	.0123	49.01	.0028
#2	.0034	.0408	.8387	.0024	32.29	.0042	.0118	48.86	.0032
#3	.0032	.0431	.8268	.0032	31.90	.0042	.0124	49.46	.0029

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0012**	**.0001**	**4.230**	**.0001**	**.8358**	**.0022**	**-.0017**	**.0107**
Stddev	.0006	.0010	.0008	.004	.0003	.0031	.0000	.0001	.0002
%RSD	101.3	84.59	1059.	.0991	333.5	.3736	1.785	4.172	2.291
#1	-.0012	.0007	-.0006	4.229	.0000	.8351	.0022	-.0016	.0108
#2	-.0001	.0005	-.0002	4.235	-.0002	.8331	.0022	-.0017	.0104
#3	-.0004	.0024	.0010	4.227	.0004	.8392	.0023	-.0016	.0108

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0087**
Stddev	.0001
%RSD	1.406
#1	.0088
#2	.0086
#3	.0088

Zoom In Zoom Out

Sample Name: FA96150-9 Acquired: 6/10/2022 16:09:15 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**790.22**	**1917.7**	**22861.**	**8768.5**
Stddev	.85	2.7	64.	45.3
%RSD	.10753	.14044	.27918	.51610
#1	791.19	1917.0	22840.	8785.7
#2	789.61	1915.4	22933.	8717.2
#3	789.86	1920.7	22811.	8802.7

Zoom In Zoom Out

Sample Name: FA96150-10 Acquired: 6/10/2022 16:14:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0988**	**.0035**	**.1681**	**-.0001**	**136.5**	**-.0001**	**-.0005**	**.0002**
Stddev	.0002	.0012	.0014	.0009	.0000	.2	.0001	.0001	.0001
%RSD	162.9	1.200	40.76	.5386	46.02	.1219	166.3	24.71	28.24
#1	.0001	.0976	.0019	.1690	-.0001	136.5	-.0002	-.0006	.0003
#2	-.0003	.1000	.0046	.1680	.0000	136.7	.0000	-.0005	.0002
#3	-.0002	.0988	.0040	.1672	-.0001	136.4	.0000	-.0004	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**2.000**	**2.041**	**.0040**	**43.91**	**.0479**	**.0025**	**48.71**	**.0006**
Stddev	.0001	.010	.021	.0001	.13	.0002	.0002	.15	.0001
%RSD	5.967	.4826	1.015	2.891	.2880	.4999	6.076	.3019	14.78
#1	.0022	2.010	2.059	.0038	44.03	.0476	.0027	48.86	.0005
#2	.0022	1.997	2.046	.0040	43.92	.0481	.0026	48.70	.0006
#3	.0020	1.992	2.018	.0040	43.77	.0480	.0024	48.57	.0006

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**-.0003**	**.0000**	**9.663**	**-.0003**	**1.512**	**.0042**	**-.0018**	**.0012**
Stddev	.0003	.0006	.0010	.024	.0004	.008	.0000	.0019	.0001
%RSD	28.46	223.6	3174.	.2477	121.5	.5182	.6836	103.8	9.340
#1	-.0010	.0004	.0012	9.635	-.0003	1.520	.0042	.0001	.0013
#2	-.0015	-.0004	-.0006	9.676	.0000	1.512	.0042	-.0037	.0013
#3	-.0010	-.0008	-.0005	9.677	-.0008	1.504	.0041	-.0019	.0011

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0120**
Stddev	.0003
%RSD	2.132
#1	.0118
#2	.0118
#3	.0123

Zoom In Zoom Out

Sample Name: FA96150-10 Acquired: 6/10/2022 16:14:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**764.99**	**1892.2**	**22591.**	**8696.1**
Stddev	1.75	6.5	14.	22.6
%RSD	.22883	.34612	.06272	.25953
#1	766.98	1899.8	22577.	8670.0
#2	763.69	1889.1	22605.	8709.9
#3	764.30	1887.8	22589.	8708.2

Zoom In Zoom Out

Sample Name: FA95891-33 Acquired: 6/10/2022 16:19:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.9536**	**.0318**	**.6587**	**-.0002**	**519.7**	**-.0003**	**-.0001**	**.0055**
Stddev	.0004	.0104	.0014	.0023	.0001	3.2	.0002	.0001	.0005
%RSD	111.1	1.086	4.281	.3490	35.12	.6095	82.66	211.4	9.929
#1	-.0008	.9553	.0317	.6562	-.0001	520.6	-.0003	-.0002	.0057
#2	-.0001	.9630	.0332	.6607	-.0002	522.4	-.0005	-.0001	.0049
#3	-.0001	.9425	.0304	.6593	-.0002	516.2	.0000	.0001	.0059

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**3.404**	**4.270**	**.0028**	**2.921**	**.0249**	**.0019**	**29.06**	**.0031**
Stddev	.0002	.006	.030	.0006	.027	.0002	.0003	.04	.0006
%RSD	4.859	.1671	.6939	19.41	.9203	.7307	17.46	.1484	18.28
#1	.0035	3.399	4.280	.0029	2.891	.0251	.0017	29.01	.0030
#2	.0035	3.411	4.294	.0023	2.943	.0247	.0023	29.10	.0037
#3	.0032	3.403	4.237	.0033	2.928	.0250	.0018	29.06	.0025

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0073**	**-.0024**	**-.0015**	**1.848**	**-.0003**	F **10.41**	**.0177**	**-.0019**	**.0035**
Stddev	.0013	.0010	.0082	.004	.0003	.07	.0028	.0009	.0002
%RSD	17.11	40.42	560.0	.2142	98.36	.7151	15.67	48.99	6.494
#1	-.0071	-.0035	-.0029	1.850	-.0005	10.43	.0153	-.0011	.0036
#2	-.0087	-.0020	-.0088	1.850	-.0004	10.47	.0170	-.0017	.0036
#3	-.0062	-.0017	.0074	1.843	.0000	10.33	.0208	-.0029	.0032

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0133**
Stddev	.0003
%RSD	2.575
#1	.0135
#2	.0129
#3	.0134

Zoom In Zoom Out

Sample Name: FA95891-33 Acquired: 6/10/2022 16:19:07 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**768.51**	**1895.3**	**22476.**	**8644.8**
Stddev	3.35	6.7	70.	42.5
%RSD	.43560	.35151	.31089	.49114
#1	767.15	1895.2	22518.	8668.7
#2	766.07	1888.7	22395.	8595.8
#3	772.33	1902.0	22514.	8670.0

Zoom In Zoom Out

Sample Name: FA95903-1 Acquired: 6/10/2022 16:24:18 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0107**	**-.1871**	**-.0691**	**-.0119**	**-.0084**	**315.2**	**-.0043**	**-.0204**	**-.0133**
Stddev	.0069	.2902	.0666	.0022	.0042	1.5	.0054	.0036	.0087
%RSD	64.47	155.0	96.42	18.27	49.87	.4603	125.7	17.74	65.37
#1	.0046	-.5158	-.1341	-.0095	-.0126	314.1	-.0023	-.0208	-.0100
#2	.0093	-.0791	-.0721	-.0125	-.0084	316.9	-.0104	-.0167	-.0231
#3	.0181	.0335	-.0010	-.0137	-.0042	314.7	-.0002	-.0239	-.0067

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0353**	**54.84**	**11.66**	**.6900**	**420.2**	**.0165**	**-.0516**	**1600.**	**-.0241**
Stddev	.0058	.33	.53	.0249	1.8	.0036	.0130	3.	.0039
%RSD	16.30	.6022	4.546	3.606	.4269	21.79	25.19	.1950	15.97
#1	.0314	54.95	11.06	.7003	421.8	.0137	-.0543	1598.	-.0283
#2	.0326	54.46	11.89	.7080	420.5	.0153	-.0374	1603.	-.0234
#3	.0419	55.10	12.04	.6616	418.3	.0206	-.0630	1598.	-.0207

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073**	**-.0364**	**.5054**	**4.591**	**.0038**	**4.075**	**.0109**	**-.0733**	**-.0068**
Stddev	.0743	.0516	.1602	.039	.0191	.010	.0079	.1504	.0133
%RSD	1016.	141.8	31.70	.8504	501.7	.2552	72.33	205.4	195.9
#1	.0529	-.0934	.4239	4.594	.0149	4.063	.0107	-.0356	-.0196
#2	.0475	-.0225	.6900	4.551	-.0182	4.083	.0031	-.2389	.0070
#3	-.0784	.0068	.4023	4.629	.0147	4.077	.0188	.0548	-.0078

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0419**
Stddev	.0025
%RSD	6.052
#1	.0430
#2	.0390
#3	.0437

Zoom In Zoom Out

Sample Name: FA95903-1 Acquired: 6/10/2022 16:24:18 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**894.63**	**2077.7**	**24427.**	**8839.5**
Stddev	1.64	5.0	68.	17.5
%RSD	.18301	.23938	.27836	.19776
#1	896.51	2082.2	24500.	8836.3
#2	893.93	2072.3	24415.	8823.9
#3	893.47	2078.5	24365.	8858.4

Zoom In Zoom Out

Sample Name: FA95903-3 Acquired: 6/10/2022 16:29:15 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.3229**	**.0168**	**-.0191**	**-.0055**	**325.2**	**-.0033**	**-.0100**	**-.0485**
Stddev	.0170	.2465	.0619	.0039	.0015	2.8	.0035	.0019	.0088
%RSD	2858.	76.32	368.0	20.65	27.84	.8578	106.7	18.97	18.12
#1	.0015	-.5332	-.0240	-.0232	-.0072	328.0	-.0070	-.0087	-.0585
#2	-.0185	-.0517	-.0135	-.0153	-.0049	322.5	-.0030	-.0092	-.0421
#3	.0153	-.3839	.0880	-.0187	-.0043	325.2	.0000	-.0122	-.0449

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0716**	**-.2375**	**13.09**	**.6840**	**436.3**	**.0018**	**-.0508**	**1657.**	**-.0115**
Stddev	.0061	.0945	.31	.0234	4.1	.0042	.0134	5.	.0012
%RSD	8.474	39.81	2.379	3.414	.9335	232.2	26.46	.3224	10.48
#1	.0774	-.1582	13.44	.6792	440.3	.0038	-.0410	1660.	-.0107
#2	.0653	-.2121	12.83	.6635	432.2	.0046	-.0452	1661.	-.0129
#3	.0722	-.3421	13.00	.7094	436.3	-.0030	-.0661	1651.	-.0110

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0038**	**.0334**	**.6161**	**4.399**	**-.0555**	**4.232**	**.0242**	**-.0843**	**-.0005**
Stddev	.0442	.0231	.1056	.021	.0142	.015	.0061	.0268	.0232
%RSD	1171.	69.08	17.14	.4733	25.58	.3535	25.30	31.81	4567.
#1	.0053	.0069	.7115	4.378	-.0600	4.236	.0190	-.0953	.0262
#2	-.0518	.0490	.6341	4.419	-.0396	4.244	.0227	-.1038	-.0127
#3	.0352	.0443	.5026	4.401	-.0669	4.215	.0309	-.0537	-.0151

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0141**
Stddev	.0026
%RSD	18.46
#1	.0114
#2	.0166
#3	.0143

Zoom In Zoom Out

Sample Name: FA95903-3 Acquired: 6/10/2022 16:29:15 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**892.64**	**2090.7**	**24392.**	**8885.7**
Stddev	.78	5.1	2.	65.7
%RSD	.08692	.24411	.00927	.73980
#1	893.13	2095.6	24392.	8845.1
#2	893.05	2091.1	24389.	8961.5
#3	891.75	2085.4	24394.	8850.4

Zoom In Zoom Out

Sample Name: FA95907-1 Acquired: 6/10/2022 16:34:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**-.2338**	**-.0529**	**-.0155**	**-.0092**	**324.2**	**-.0060**	**-.0145**	**-.0252**
Stddev	.0069	.2465	.0534	.0029	.0016	2.8	.0056	.0031	.0140
%RSD	304.3	105.4	101.0	18.71	17.60	.8492	93.61	21.58	55.73
#1	.0102	-.4320	-.1145	-.0188	-.0075	321.6	-.0067	-.0110	-.0103
#2	-.0016	-.3117	-.0242	-.0132	-.0107	324.0	.0000	-.0153	-.0272
#3	-.0019	.0422	-.0200	-.0146	-.0094	327.1	-.0111	-.0171	-.0381

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1215**	**54.16**	**6.215**	**.2325**	**577.7**	**1.285**	**-.0431**	**1547.**	**.0096**
Stddev	.0078	.45	.751	.0497	2.2	.005	.0148	5.	.0089
%RSD	6.423	.8383	12.09	21.39	.3767	.3986	34.40	.3510	92.95
#1	.1289	53.74	5.895	.2494	575.8	1.283	-.0580	1541.	.0140
#2	.1134	54.10	7.073	.1766	577.3	1.291	-.0428	1552.	.0154
#3	.1223	54.64	5.677	.2717	580.1	1.281	-.0284	1548.	-.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0492**	**-.0936**	**.1952**	**4.852**	**.0079**	**4.105**	**.0194**	**-.1012**	**.0017**
Stddev	.0262	.0388	.1260	.053	.0317	.022	.0036	.0639	.0115
%RSD	53.20	41.44	64.54	1.098	402.0	.5299	18.78	63.13	692.7
#1	.0584	-.0940	.3360	4.815	.0443	4.080	.0154	-.0296	.0149
#2	.0696	-.1322	.1563	4.828	-.0137	4.118	.0202	-.1525	-.0059
#3	.0197	-.0547	.0933	4.913	-.0069	4.117	.0226	-.1216	-.0041

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0495**
Stddev	.0110
%RSD	22.12
#1	.0622
#2	.0431
#3	.0433

Zoom In Zoom Out

Sample Name: FA95907-1 Acquired: 6/10/2022 16:34:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**898.38**	**2089.5**	**24362.**	**8750.5**
Stddev	1.03	4.2	63.	69.0
%RSD	.11425	.20108	.25972	.78846
#1	899.55	2092.8	24428.	8819.5
#2	897.63	2090.9	24357.	8750.5
#3	897.96	2084.8	24302.	8681.5

Zoom In Zoom Out

Sample Name: FA95907-3 Acquired: 6/10/2022 16:39:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**-.3162**	**-.0656**	**-.0173**	**-.0105**	**328.9**	**-.0055**	**-.0119**	**-.0413**
Stddev	.0159	.3369	.1748	.0006	.0019	2.5	.0023	.0047	.0236
%RSD	754.1	106.6	266.7	3.526	17.75	.7627	41.03	39.87	57.16
#1	-.0081	-.3694	.0294	-.0175	-.0083	331.6	-.0044	-.0172	-.0686
#2	.0205	.0442	.0413	-.0166	-.0114	326.6	-.0041	-.0081	-.0277
#3	-.0061	-.6233	-.2673	-.0178	-.0117	328.6	-.0082	-.0103	-.0276

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1232**	**18.14**	**7.458**	**.2457**	**615.4**	**1.338**	**-.0580**	**1658.**	**-.0011**
Stddev	.0054	.51	1.016	.0248	2.2	.004	.0120	3.	.0187
%RSD	4.367	2.816	13.63	10.08	.3569	.3118	20.76	.1621	1634.
#1	.1170	18.71	8.305	.2232	617.8	1.343	-.0515	1659.	.0091
#2	.1260	17.71	6.331	.2722	613.6	1.334	-.0506	1654.	-.0227
#3	.1265	18.00	7.737	.2417	614.7	1.338	-.0719	1659.	.0102

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0231**	**-.1120**	**.1090**	**4.640**	**-.0382**	**4.102**	**.0165**	**-.0455**	**.0086**
Stddev	.0738	.0365	.1323	.060	.0176	.018	.0056	.0751	.0249
%RSD	319.9	32.60	121.4	1.302	46.13	.4380	34.19	165.1	290.8
#1	-.0107	-.0710	.2240	4.632	-.0514	4.119	.0220	.0412	.0083
#2	.0437	-.1409	-.0356	4.704	-.0182	4.083	.0168	-.0866	-.0162
#3	-.1023	-.1243	.1387	4.584	-.0451	4.105	.0107	-.0909	.0337

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0289**
Stddev	.0123
%RSD	42.60
#1	.0148
#2	.0376
#3	.0344

Zoom In Zoom Out

Sample Name: FA95907-3 Acquired: 6/10/2022 16:39:08 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**892.21**	**2084.9**	**24342.**	**8743.4**
Stddev	2.08	4.5	99.	18.7
%RSD	.23286	.21544	.40550	.21405
#1	890.72	2087.7	24421.	8732.8
#2	891.33	2079.8	24374.	8765.0
#3	894.58	2087.4	24231.	8732.3

Zoom In Zoom Out

Sample Name: FA95907-5 Acquired: 6/10/2022 16:44:04 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0089**	**-.4570**	**-.1590**	**-.0192**	**-.0101**	**380.9**	**-.0068**	**-.0139**	**-.0407**
Stddev	.0221	.1944	.0542	.0033	.0028	2.0	.0064	.0049	.0321
%RSD	246.6	42.54	34.11	17.24	28.04	.5223	93.35	35.56	78.93
#1	.0165	-.2778	-.1239	-.0217	-.0114	382.5	-.0006	-.0152	-.0241
#2	-.0217	-.4297	-.1317	-.0154	-.0069	381.5	-.0066	-.0084	-.0778
#3	-.0217	-.6637	-.2215	-.0204	-.0120	378.6	-.0133	-.0180	-.0203

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0420**	**-.2376**	**7.004**	**.1992**	**597.6**	**.8915**	**-.0582**	**1583.**	**-.0026**
Stddev	.0183	.0605	.765	.0086	3.3	.0012	.0195	3.	.0034
%RSD	43.57	25.47	10.92	4.317	.5460	.1308	33.53	.1707	130.8
#1	.0313	-.1737	6.121	.2092	596.2	.8928	-.0357	1584.	-.0031
#2	.0631	-.2941	7.454	.1941	601.3	.8908	-.0702	1584.	-.0058
#3	.0315	-.2449	7.438	.1945	595.3	.8908	-.0687	1580.	.0010

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0146**	**-.0863**	**.1323**	**5.073**	**-.0401**	**5.160**	**.0167**	**.0426**	**.0044**
Stddev	.0177	.1386	.1835	.083	.0092	.006	.0040	.1099	.0199
%RSD	121.7	160.7	138.7	1.627	22.85	.1243	23.68	257.7	447.2
#1	.0049	.0660	.3177	5.158	-.0502	5.166	.0136	-.0827	-.0036
#2	-.0188	-.1196	.1285	4.994	-.0322	5.154	.0153	.1220	.0270
#3	-.0298	-.2052	-.0493	5.067	-.0379	5.158	.0212	.0886	-.0102

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**-.0053**
Stddev	.0057
%RSD	108.1
#1	-.0098
#2	-.0071
#3	.0011

Zoom In Zoom Out

Sample Name: FA95907-5 Acquired: 6/10/2022 16:44:04 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**894.28**	**2082.2**	**24374.**	**8742.3**
Stddev	1.54	6.2	39.	26.1
%RSD	.17238	.29728	.16196	.29909
#1	895.73	2089.3	24411.	8748.2
#2	892.66	2077.7	24378.	8713.7
#3	894.45	2079.7	24332.	8764.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 16:48:58 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2499**	**38.55**	**1.967**	**1.949**	**1.987**	**40.60**	**2.010**	**2.004**	**2.074**
Stddev	.0002	.05	.004	.006	.001	.16	.002	.002	.008
%RSD	.0921	.1301	.2018	.2962	.0567	.3881	.1096	.1220	.3722
#1	.2497	38.54	1.964	1.944	1.986	40.67	2.008	2.001	2.065
#2	.2499	38.61	1.971	1.955	1.988	40.42	2.012	2.005	2.076
#3	.2502	38.51	1.965	1.947	1.987	40.72	2.009	2.005	2.080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.998**	**39.18**	**39.91**	**1.963**	**39.70**	**2.038**	**1.990**	**39.37**	**2.019**
Stddev	.003	.04	.03	.009	.14	.007	.003	.08	.003
%RSD	.1458	.1055	.0834	.4316	.3471	.3332	.1619	.1938	.1527
#1	1.996	39.21	39.88	1.958	39.80	2.030	1.986	39.35	2.016
#2	2.002	39.13	39.95	1.972	39.54	2.041	1.992	39.45	2.021
#3	1.998	39.19	39.91	1.957	39.75	2.043	1.992	39.30	2.021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.998**	**1.948**	**1.960**	**2.048**	**2.005**	**1.984**	**2.036**	**2.006**	**2.061**
Stddev	.008	.004	.006	.006	.002	.029	.003	.007	.007
%RSD	.4105	.2152	.2991	.2971	.1166	1.475	.1300	.3758	.3468
#1	2.005	1.946	1.957	2.042	2.003	1.995	2.033	2.014	2.053
#2	1.989	1.945	1.957	2.053	2.008	1.951	2.038	2.000	2.065
#3	1.999	1.953	1.967	2.050	2.005	2.006	2.038	2.002	2.066
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 16:48:58 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.024**
Stddev	.003
%RSD	.1417
#1	2.025
#2	2.026
#3	2.021
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**777.35**	**2018.4**	**23499.**	**8587.8**
Stddev	2.94	5.3	15.	43.7
%RSD	.37794	.26315	.06461	.50914
#1	776.56	2024.5	23508.	8555.5
#2	780.60	2016.1	23481.	8637.5
#3	774.88	2014.6	23508.	8570.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 16:53:40 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0015**	**.0000**	**.0000**	**-.0007**	**.0000**	**-.0001**	**.0000**
Stddev	.0002	.0029	.0004	.0000	.0000	.0013	.0001	.0000	.0001
%RSD	278.3	53480.	29.46	202.6	125.3	169.2	283.8	33.62	2036.
#1	-.0001	.0017	-.0015	.0001	.0000	.0007	.0000	-.0001	.0001
#2	.0001	-.0034	-.0019	.0000	.0000	-.0013	.0001	.0000	.0000
#3	.0003	.0016	-.0010	.0000	.0000	-.0016	-.0001	-.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**-.0072**	**-.0003**	**-.0076**	**.0000**	**.0002**	**-.0097**	**-.0001**
Stddev	.0001	.0004	.0063	.0003	.0040	.0000	.0002	.0024	.0001
%RSD	23.59	288.2	86.80	111.3	52.74	43.78	157.5	25.04	54.34
#1	.0003	.0003	-.0049	-.0006	-.0057	.0000	.0003	-.0079	-.0001
#2	.0002	-.0001	-.0143	.0001	-.0122	.0000	.0003	-.0088	-.0001
#3	.0002	-.0006	-.0024	-.0004	-.0049	.0000	-.0001	-.0125	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0004**	**.0000**	**.0002**	**-.0009**	**.0000**	**.0001**	**.0002**	**.0002**
Stddev	.0006	.0004	.000	.0002	.0003	.0000	.0000	.0004	.0001
%RSD	202.5	93.94	2086.	110.6	33.47	82.97	11.71	219.0	44.77
#1	.0003	.0005	.0000	.0005	-.0006	.0000	.0002	-.0002	.0001
#2	.0009	.0006	.0003	.0000	-.0008	.0000	.0001	.0005	.0002
#3	-.0003	.0000	-.0004	.0001	-.0012	.0000	.0001	.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 16:53:40 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0000**
Stddev	.0001
%RSD	517.5
#1	.0001
#2	-.0001
#3	.0000
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**956.96**	**2144.9**	**25369.**	**8704.3**
Stddev	3.37	9.6	49.	33.0
%RSD	.35260	.44590	.19482	.37898
#1	959.75	2155.6	25406.	8728.6
#2	953.21	2137.4	25313.	8717.6
#3	957.93	2141.6	25387.	8666.8

Zoom In Zoom Out

Sample Name: FA95959-6 Acquired: 6/10/2022 16:58:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**35.83**	**-.0001**	**.0265**	**.0020**	**17.98**	**.0009**	**.0483**	**-.0002**
Stddev	.0006	.12	.0026	.0004	.0002	.08	.0001	.0001	.0014
%RSD	56.52	.3235	4151.	1.589	8.277	.4208	9.722	.1151	819.5
#1	-.0013	35.70	.0017	.0261	.0022	17.89	.0009	.0482	-.0005
#2	-.0014	35.84	.0011	.0264	.0019	18.03	.0009	.0483	.0014
#3	-.0004	35.93	-.0030	.0269	.0020	18.01	.0010	.0483	-.0014

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0043**	**2.484**	**.0138**	**7.808**	**.8136**	**-.0011**	**5.634**	**.0448**
Stddev	.0004	.0020	.035	.0023	.068	.0015	.0002	.037	.0017
%RSD	19.34	46.71	1.413	16.65	.8670	.1822	20.21	.6496	3.778
#1	.0018	.0061	2.448	.0157	7.778	.8128	-.0009	5.609	.0432
#2	.0027	.0021	2.484	.0112	7.886	.8153	-.0011	5.616	.0466
#3	.0022	.0047	2.518	.0144	7.762	.8127	-.0014	5.676	.0447

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**-.0017**	**.0035**	**4.648**	**-.0020**	**.1132**	**.0008**	**.0011**	**.0002**
Stddev	.0016	.0014	.0057	.009	.0013	.0002	.0002	.0031	.0003
%RSD	109.8	78.51	161.6	.1978	63.49	.1329	25.37	278.3	164.7
#1	-.0012	-.0020	.0004	4.640	-.0031	.1131	.0010	-.0025	-.0001
#2	-.0032	-.0029	.0001	4.658	-.0006	.1131	.0008	.0028	.0006
#3	.0000	-.0003	.0100	4.646	-.0024	.1134	.0006	.0030	.0001

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2161**
Stddev	.0003
%RSD	.1172
#1	.2163
#2	.2158
#3	.2161

Zoom In Zoom Out

Sample Name: FA95959-6 Acquired: 6/10/2022 16:58:37 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**923.64**	**2459.4**	**28800.**	**10051.**
Stddev	1.77	6.9	57.	37.
%RSD	.19170	.28209	.19937	.36857
#1	925.64	2467.4	28854.	10094.
#2	922.99	2455.6	28806.	10026.
#3	922.28	2455.2	28739.	10035.

Zoom In Zoom Out

Sample Name: MP40826-MB1 Acquired: 6/10/2022 17:03:28 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0006**	**-.0029**	**-.0001**	**-.0001**	**.0035**	**-.0001**	**-.0002**	**.0001**
Stddev	.0001	.0058	.0006	.0000	.0000	.0007	.0000	.0001	.0002
%RSD	120.0	954.0	18.89	40.74	20.73	21.16	34.28	47.10	140.1
#1	.0001	.0050	-.0035	-.0001	-.0001	.0042	.0000	-.0003	.0001
#2	.0001	.0027	-.0025	-.0002	-.0001	.0027	.0000	-.0002	.0004
#3	.0000	-.0059	-.0028	-.0001	-.0001	.0037	-.0001	-.0001	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0015**	**-.0160**	**-.0003**	**-.0126**	**.0001**	**-.0003**	**-.0112**	**-.0005**
Stddev	.0001	.0003	.0076	.0004	.0086	.0000	.0001	.0019	.0001
%RSD	8.254	17.87	47.35	144.8	68.33	14.82	35.50	16.96	23.82
#1	.0013	.0013	-.0205	-.0007	-.0221	.0001	-.0003	-.0124	-.0005
#2	.0012	.0013	-.0072	.0002	-.0055	.0001	-.0005	-.0122	-.0006
#3	.0011	.0018	-.0201	-.0004	-.0100	.0001	-.0002	-.0090	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0006**	**.0009**	**.0029**	**.0000**	**.0000**	**.0000**	**-.0018**	**.0001**
Stddev	.0003	.0004	.0019	.0004	.000	.000	.0001	.0006	.0001
%RSD	1059.	59.31	214.8	12.52	662.9	72.48	605.7	34.97	98.00
#1	.0000	-.0002	.0028	.0025	-.0003	.0000	-.0001	-.0025	.0000
#2	.0004	-.0009	-.0011	.0032	.0001	.0000	.0001	-.0013	.0002
#3	-.0003	-.0007	.0010	.0029	.0002	-.0001	.0000	-.0017	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass		None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP40826-MB1 Acquired: 6/10/2022 17:03:28 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0026**
Stddev	.0001
%RSD	2.749
#1	.0025
#2	.0026
#3	.0026
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**947.66**	**2120.1**	**25563.**	**8828.8**
Stddev	2.92	6.8	57.	57.5
%RSD	.30831	.32155	.22264	.65177
#1	950.03	2125.4	25620.	8765.4
#2	948.56	2122.5	25563.	8877.7
#3	944.40	2112.4	25506.	8843.2

Zoom In Zoom Out

Sample Name: MP40826-B1 Acquired: 6/10/2022 17:08:23 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0505**	**25.86**	**1.900**	**1.986**	**.0496**	**24.76**	**.0483**	**.5003**
Stddev	.0007	.08	.002	.003	.0001	.12	.0002	.0009
%RSD	1.419	.2923	.1130	.1682	.2167	.4730	.4109	.1730
#1	.0501	25.92	1.902	1.986	.0497	24.89	.0481	.4993
#2	.0513	25.89	1.898	1.990	.0495	24.68	.0484	.5005
#3	.0500	25.78	1.900	1.983	.0495	24.70	.0484	.5010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2056**	**.2533**	**25.45**	**24.54**	F **-.0008**	**24.30**	**.5114**	**.4880**
Stddev	.0009	.0015	.06	.04	.0003	.12	.0004	.0008
%RSD	.4272	.5961	.2471	.1706	34.92	.4892	.0713	.1632
#1	.2048	.2540	25.52	24.59	-.0009	24.41	.5114	.4871
#2	.2055	.2516	25.45	24.52	-.0011	24.31	.5111	.4886
#3	.2066	.2543	25.39	24.52	-.0005	24.18	.5118	.4885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0500			
Range					-20.00%			

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.98**	**.5067**	**.4736**	**.4841**	**1.903**	**.7084**	**.4955**	**.4987**
Stddev	.04	.0017	.0021	.0016	.006	.0028	.0005	.0001
%RSD	.1931	.3438	.4365	.3388	.3377	.3988	.0946	.0194
#1	22.96	.5048	.4759	.4832	1.895	.7065	.4955	.4986
#2	23.03	.5069	.4721	.4832	1.906	.7070	.4960	.4987
#3	22.94	.5083	.4726	.4860	1.907	.7116	.4951	.4988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP40826-B1 Acquired: 6/10/2022 17:08:23 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.5072**	**1.910**	**.5052**	**.4950**
Stddev	.0012	.004	.0014	.0002
%RSD	.2307	.2109	.2853	.0320
#1	.5071	1.905	.5044	.4951
#2	.5061	1.912	.5043	.4950
#3	.5084	1.912	.5069	.4948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**814.83**	**2033.3**	**24127.**	**8761.4**
Stddev	2.20	3.8	65.	27.9
%RSD	.26993	.18668	.27010	.31865
#1	812.52	2037.7	24093.	8731.5
#2	816.90	2031.8	24202.	8786.8
#3	815.07	2030.5	24085.	8766.0

Zoom In Zoom Out

Sample Name: FA96082-5 Acquired: 6/10/2022 17:13:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0215**	**.0131**	**-.0062**	**-.0006**	**558.1**	**-.0008**	**-.0002**	**-.0007**
Stddev	.0003	.0195	.0061	.0001	.0001	3.0	.0002	.0006	.0004
%RSD	53.66	90.61	46.57	1.971	13.97	.5462	23.51	243.0	56.05
#1	.0007	.0074	.0198	-.0060	-.0005	557.3	-.0007	-.0001	-.0003
#2	.0008	.0134	.0112	-.0062	-.0006	561.4	-.0010	-.0008	-.0011
#3	.0002	.0437	.0081	-.0063	-.0006	555.5	-.0006	.0003	-.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0058**	**1.337**	**16.10**	**.3201**	**469.1**	**.9749**	**.0122**	F **1514.**	**.0073**
Stddev	.0004	.002	.03	.0009	1.9	.0008	.0007	13.	.0002
%RSD	6.494	.1738	.2061	.2747	.3958	.0836	5.944	.8531	3.402
#1	.0056	1.340	16.07	.3210	469.9	.9740	.0125	1507.	.0072
#2	.0062	1.337	16.14	.3192	470.4	.9756	.0127	1529.	.0075
#3	.0055	1.335	16.11	.3201	467.0	.9751	.0114	1507.	.0071

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0078**	**.0000**	**-.0032**	**4.268**	**-.0035**	**8.841**	**.0048**	**.0052**	**.0001**
Stddev	.0016	.0030	.0013	.006	.0012	.005	.0006	.0035	.0003
%RSD	19.92	6943.	40.32	.1461	34.19	.0607	12.59	67.73	223.0
#1	-.0090	-.0004	-.0046	4.264	-.0027	8.845	.0049	.0081	-.0001
#2	-.0084	-.0027	-.0028	4.264	-.0029	8.843	.0053	.0061	.0004
#3	-.0061	.0032	-.0021	4.275	-.0049	8.835	.0042	.0013	.0001

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0253**
Stddev	.0010
%RSD	4.128
#1	.0242
#2	.0253
#3	.0263

Zoom In Zoom Out

Sample Name: FA96082-5 Acquired: 6/10/2022 17:13:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**716.00**	**1856.4**	**21568.**	**8205.0**
Stddev	1.46	3.5	29.	19.6
%RSD	.20460	.19044	.13370	.23928
#1	714.52	1860.4	21594.	8197.4
#2	716.02	1855.2	21537.	8190.3
#3	717.45	1853.6	21574.	8227.3

Zoom In Zoom Out

Sample Name: MP40826-D1 Acquired: 6/10/2022 17:18:01 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0196**	**.0146**	**-.0064**	**-.0004**	**538.6**	**-.0005**	**-.0011**	**-.0008**
Stddev	.0007	.0218	.0021	.0001	.0000	2.7	.0001	.0004	.0012
%RSD	75.69	111.4	14.29	2.012	7.114	.4994	25.31	40.86	158.8
#1	-.0006	.0214	.0135	-.0065	-.0004	541.7	-.0003	-.0006	-.0016
#2	-.0004	.0405	.0134	-.0064	-.0004	537.1	-.0005	-.0014	-.0013
#3	-.0017	-.0031	.0171	-.0063	-.0003	537.1	-.0006	-.0013	.0006

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0053**	**1.296**	**15.82**	**.3191**	**452.1**	**.9517**	**.0115**	F **1451.**	**.0073**
Stddev	.0006	.007	.09	.0015	2.0	.0043	.0012	15.	.0008
%RSD	10.82	.5542	.5409	.4726	.4487	.4485	10.31	1.062	11.62
#1	.0047	1.289	15.74	.3174	454.4	.9508	.0129	1450.	.0082
#2	.0055	1.303	15.91	.3202	450.7	.9480	.0108	1467.	.0067
#3	.0058	1.296	15.81	.3198	451.2	.9564	.0109	1437.	.0069

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0096**	**.0009**	**.0079**	**4.149**	**-.0010**	**8.681**	**.0049**	**-.0004**	**.0017**
Stddev	.0047	.0024	.0113	.006	.0012	.021	.0005	.0046	.0011
%RSD	49.36	261.9	143.0	.1559	125.8	.2364	10.62	1220.	62.85
#1	-.0149	.0033	.0177	4.150	-.0019	8.671	.0044	.0044	.0030
#2	-.0082	.0008	-.0045	4.155	-.0013	8.705	.0055	-.0008	.0009
#3	-.0057	-.0014	.0105	4.142	.0004	8.667	.0050	-.0047	.0014

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0245**
Stddev	.0003
%RSD	1.279
#1	.0242
#2	.0248
#3	.0245

Zoom In Zoom Out

Sample Name: MP40826-D1 Acquired: 6/10/2022 17:18:01 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**716.79**	**1856.7**	**21550.**	**8288.8**
Stddev	1.57	5.8	19.	25.5
%RSD	.21938	.31382	.08722	.30748
#1	718.57	1858.3	21569.	8259.5
#2	715.57	1850.3	21532.	8305.8
#3	716.24	1861.6	21549.	8301.2

Zoom In Zoom Out

Sample Name: MP40826-SD1 Acquired: 6/10/2022 17:23:02 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 25.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0069**	**-.0791**	**.0239**	**-.0065**	**-.0015**	**522.5**	**-.0004**	**-.0025**	**-.0025**
Stddev	.0080	.1529	.0405	.0005	.0007	1.8	.0009	.0016	.0107
%RSD	115.0	193.4	169.6	7.838	47.52	.3480	250.1	65.09	425.5
#1	-.0135	-.1129	-.0181	-.0065	-.0017	521.3	-.0005	-.0042	-.0036
#2	.0020	.0879	.0270	-.0071	-.0007	524.6	-.0012	-.0021	.0087
#3	-.0093	-.2121	.0626	-.0060	-.0021	521.6	.0006	-.0010	-.0126

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0125**	**1.221**	**14.37**	**.2919**	**427.7**	**.9398**	**-.0001**	**1451.**	**.0033**
Stddev	.0077	.036	.08	.0177	1.0	.0039	.0040	5.	.0020
%RSD	62.14	2.960	.5734	6.069	.2330	.4130	3545.	.3625	61.11
#1	.0176	1.256	14.29	.3122	426.5	.9363	-.0039	1452.	.0051
#2	.0162	1.184	14.35	.2840	428.1	.9392	.0041	1445.	.0011
#3	.0036	1.223	14.46	.2796	428.4	.9440	-.0005	1455.	.0035

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0118**	**-.0079**	**.0249**	**3.991**	**-.0089**	**8.394**	**.0174**	**-.0062**	**.0015**
Stddev	.0104	.0149	.0851	.038	.0031	.015	.0017	.0463	.0021
%RSD	88.34	189.2	342.2	.9443	34.56	.1729	9.718	741.8	147.0
#1	-.0188	.0029	.0665	3.948	-.0054	8.403	.0154	.0447	.0036
#2	.0002	-.0249	-.0731	4.016	-.0100	8.377	.0182	-.0175	.0014
#3	-.0166	-.0016	.0812	4.009	-.0112	8.401	.0185	-.0460	-.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0217**
Stddev	.0043
%RSD	19.86
#1	.0237
#2	.0167
#3	.0245

Zoom In Zoom Out

Sample Name: MP40826-SD1 Acquired: 6/10/2022 17:23:02 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 25.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**830.10**	**2018.9**	**23747.**	**8651.6**
Stddev	3.66	14.7	42.	13.0
%RSD	.44056	.72985	.17874	.15080
#1	832.76	2034.9	23786.	8660.2
#2	831.60	2015.8	23753.	8636.6
#3	825.93	2005.9	23702.	8658.0

Zoom In Zoom Out

Sample Name: MP40826-PS1 Acquired: 6/10/2022 17:27:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0508**	**2.447**	**.1213**	**.2419**	**.0486**	**538.4**	**.0512**	**.0501**	**.0513**
Stddev	.0017	.005	.0088	.0018	.0002	8.1	.0006	.0006	.0003
%RSD	3.300	.2225	7.265	.7534	.3379	1.511	1.210	1.124	.5793
#1	.0508	2.444	.1111	.2398	.0488	547.0	.0517	.0495	.0509
#2	.0491	2.444	.1263	.2431	.0485	537.5	.0505	.0507	.0514
#3	.0524	2.453	.1265	.2428	.0485	530.8	.0514	.0502	.0515

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1150**	**4.233**	**26.11**	**.3212**	**453.6**	**.9966**	**.1106**	F **1458.**	**.1087**
Stddev	.0006	.037	.04	.0021	6.3	.0034	.0011	23.	.0015
%RSD	.5008	.8845	.1480	.6584	1.397	.3402	.9569	1.565	1.382
#1	.1146	4.275	26.10	.3190	460.3	.9975	.1116	1482.	.1104
#2	.1148	4.217	26.15	.3233	452.9	.9994	.1109	1455.	.1081
#3	.1157	4.206	26.08	.3214	447.7	.9928	.1095	1437.	.1076

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0351**	**.1065**	**.1049**	**4.214**	**.0490**	**8.770**	**.1087**	**.0854**	**.0527**
Stddev	.0045	.0055	.0032	.023	.0019	.033	.0002	.0007	.0007
%RSD	12.71	5.157	3.003	.5452	3.800	.3784	.1553	.8348	1.292
#1	.0304	.1122	.1081	4.237	.0506	8.793	.1085	.0860	.0520
#2	.0392	.1013	.1018	4.191	.0470	8.784	.1087	.0856	.0528
#3	.0357	.1060	.1050	4.214	.0495	8.732	.1088	.0847	.0533

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2816**
Stddev	.0007
%RSD	.2653
#1	.2824
#2	.2809
#3	.2814

Zoom In Zoom Out

Sample Name: MP40826-PS1 Acquired: 6/10/2022 17:27:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**714.93**	**1844.9**	**21598.**	**8449.8**
Stddev	3.36	9.0	33.	92.5
%RSD	.46948	.49033	.15376	1.0946
#1	711.35	1837.3	21613.	8350.8
#2	718.01	1854.9	21621.	8464.5
#3	715.42	1842.4	21560.	8534.0

Zoom In Zoom Out

Sample Name: MP40826-S1 Acquired: 6/10/2022 17:32:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0537**	**26.40**	**2.060**	**1.945**	**.0476**	**548.9**	**.0473**	**.4841**	**.2007**
Stddev	.0031	.08	.020	.005	.0001	3.0	.0004	.0007	.0015
%RSD	5.730	.2995	.9789	.2707	.1134	.5531	.8786	.1528	.7372
#1	.0571	26.32	2.037	1.940	.0476	550.8	.0476	.4846	.2022
#2	.0529	26.39	2.067	1.944	.0476	550.5	.0474	.4833	.2004
#3	.0511	26.48	2.076	1.951	.0477	545.4	.0468	.4844	.1993

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2599**	**26.59**	**41.94**	**.3153**	**463.9**	**1.428**	**.4966**	F **1444.**	**.4966**
Stddev	.0011	.04	.03	.0017	1.7	.002	.0014	5.	.0011
%RSD	.4130	.1388	.0741	.5363	.3674	.1433	.2804	.3700	.2244
#1	.2597	26.63	41.93	.3139	465.7	1.430	.4955	1446.	.4966
#2	.2611	26.56	41.97	.3147	463.7	1.429	.4962	1438.	.4954
#3	.2590	26.58	41.91	.3172	462.3	1.426	.4982	1448.	.4977

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4669**	**.5086**	**2.095**	**4.879**	**.4885**	**9.098**	**.5133**	**1.840**	**.5059**
Stddev	.0026	.0086	.004	.022	.0027	.019	.0008	.016	.0014
%RSD	.5483	1.690	.2039	.4595	.5504	.2088	.1560	.8448	.2857
#1	.4686	.5096	2.090	4.857	.4875	9.077	.5132	1.858	.5071
#2	.4682	.4996	2.099	4.879	.4865	9.114	.5126	1.832	.5064
#3	.4640	.5167	2.095	4.902	.4916	9.102	.5141	1.830	.5043

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5171**
Stddev	.0021
%RSD	.3988
#1	.5194
#2	.5166
#3	.5154

Zoom In Zoom Out

Sample Name: MP40826-S1 Acquired: 6/10/2022 17:32:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**710.42**	**1858.3**	**21852.**	**8490.9**
Stddev	.70	9.5	36.	20.1
%RSD	.09823	.51342	.16497	.23661
#1	711.13	1869.3	21852.	8477.8
#2	709.73	1854.0	21817.	8480.9
#3	710.39	1851.7	21889.	8514.0

Zoom In Zoom Out

Sample Name: MP40826-S2 Acquired: 6/10/2022 17:37:49 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0553**	**27.64**	**2.202**	**2.073**	**.0504**	**575.4**	**.0506**	**.5121**	**.2110**
Stddev	.0005	.04	.007	.003	.0001	1.8	.0003	.0013	.0013
%RSD	.9469	.1322	.3225	.1318	.2620	.3096	.6125	.2502	.6024
#1	.0549	27.68	2.208	2.075	.0506	577.2	.0510	.5117	.2119
#2	.0559	27.60	2.194	2.073	.0503	573.6	.0506	.5111	.2116
#3	.0550	27.63	2.203	2.070	.0504	575.3	.0504	.5136	.2095

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2756**	**27.84**	**44.41**	**.3347**	**489.3**	**1.494**	**.5282**	F **1548.**	**.5277**
Stddev	.0028	.12	.11	.0027	1.5	.006	.0040	21.	.0011
%RSD	1.000	.4166	.2425	.8192	.3133	.3880	.7608	1.369	.2155
#1	.2767	27.85	44.51	.3370	490.8	1.488	.5235	1523.	.5272
#2	.2725	27.95	44.29	.3317	489.5	1.499	.5301	1563.	.5290
#3	.2776	27.71	44.43	.3355	487.7	1.494	.5308	1557.	.5268

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4915**	**.5367**	**2.258**	**5.221**	**.5169**	**9.595**	**.5418**	**1.952**	**.5345**
Stddev	.0043	.0071	.012	.022	.0004	.032	.0020	.006	.0004
%RSD	.8668	1.321	.5119	.4227	.0751	.3376	.3711	.3265	.0682
#1	.4888	.5286	2.248	5.199	.5169	9.587	.5402	1.955	.5342
#2	.4893	.5417	2.257	5.223	.5165	9.568	.5412	1.945	.5349
#3	.4964	.5398	2.271	5.243	.5173	9.631	.5441	1.957	.5345

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5396**
Stddev	.0025
%RSD	.4614
#1	.5399
#2	.5370
#3	.5420

Zoom In Zoom Out

Sample Name: MP40826-S2 Acquired: 6/10/2022 17:37:49 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**705.83**	**1837.5**	**21839.**	**8521.2**
Stddev	2.45	12.3	44.	14.2
%RSD	.34736	.67158	.20025	.16642
#1	708.46	1850.9	21870.	8508.9
#2	705.41	1834.8	21859.	8517.9
#3	703.61	1826.7	21789.	8536.7

Zoom In Zoom Out

Sample Name: FA96082-6 Acquired: 6/10/2022 17:42:51 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0277**	**-.0095**	**.0022**	**-.0006**	**620.7**	**-.0003**	**.0010**	**.0046**
Stddev	.0006	.0045	.0047	.0001	.0001	2.6	.0003	.0002	.0007
%RSD	89.64	16.22	49.49	3.640	15.92	.4122	108.6	23.98	15.30
#1	-.0001	.0235	-.0042	.0022	-.0005	617.8	-.0004	.0010	.0038
#2	-.0013	.0272	-.0130	.0023	-.0005	621.4	-.0005	.0013	.0051
#3	-.0006	.0324	-.0112	.0022	-.0007	622.8	.0001	.0008	.0049

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**.2616**	**29.96**	**.1787**	**243.9**	**.7088**	**.0225**	F **1548.**	**.0822**
Stddev	.0003	.0059	.12	.0014	.9	.0047	.0007	25.	.0018
%RSD	5.245	2.262	.3860	.8098	.3666	.6607	2.934	1.647	2.240
#1	.0061	.2668	29.83	.1785	243.2	.7050	.0223	1543.	.0823
#2	.0066	.2552	30.01	.1802	243.6	.7073	.0220	1525.	.0840
#3	.0060	.2629	30.05	.1773	244.9	.7140	.0233	1575.	.0803

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0168**	**-.0085**	**.0042**	**5.602**	**-.0010**	**10.99**	**.0054**	**-.0069**	**.0013**
Stddev	.0035	.0026	.0058	.018	.0014	.07	.0008	.0106	.0019
%RSD	20.62	30.20	138.0	.3301	133.9	.6110	15.24	154.9	144.9
#1	-.0158	-.0086	.0023	5.585	.0001	11.06	.0050	.0054	.0030
#2	-.0207	-.0059	.0106	5.622	-.0025	10.94	.0063	-.0128	-.0008
#3	-.0140	-.0111	-.0004	5.599	-.0007	10.96	.0048	-.0132	.0018

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0329**
Stddev	.0003
%RSD	.7847
#1	.0330
#2	.0330
#3	.0326

Zoom In Zoom Out

Sample Name: FA96082-6 Acquired: 6/10/2022 17:42:51 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**713.60**	**1837.3**	**21571.**	**8662.9**
Stddev	2.08	11.6	76.	40.9
%RSD	.29122	.63039	.35189	.47176
#1	716.00	1849.0	21654.	8701.5
#2	712.39	1825.9	21505.	8667.2
#3	712.40	1836.9	21555.	8620.1

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 17:48:00 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2444**	**38.52**	**1.959**	**1.966**	**1.970**	**39.45**	**1.985**	**1.984**	**2.010**
Stddev	.0010	.04	.003	.001	.004	.19	.001	.001	.005
%RSD	.3969	.0999	.1625	.0377	.2063	.4762	.0478	.0458	.2432
#1	.2438	38.49	1.960	1.967	1.966	39.26	1.985	1.984	2.010
#2	.2438	38.50	1.956	1.967	1.971	39.44	1.986	1.983	2.005
#3	.2455	38.56	1.962	1.966	1.974	39.64	1.985	1.984	2.015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.983**	**38.71**	**39.81**	**1.984**	**38.77**	**1.995**	**1.980**	**39.41**	**1.999**
Stddev	.006	.19	.05	.005	.28	.005	.003	.06	.003
%RSD	.2931	.4903	.1271	.2757	.7194	.2513	.1588	.1545	.1342
#1	1.976	38.55	39.87	1.989	38.56	1.989	1.983	39.48	1.997
#2	1.987	38.66	39.81	1.984	38.67	1.996	1.977	39.38	1.998
#3	1.985	38.92	39.77	1.978	39.09	1.999	1.978	39.38	2.002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.969**	**1.949**	**1.961**	**2.046**	**1.975**	**2.002**	**2.001**	**1.977**	**2.018**
Stddev	.005	.005	.003	.005	.001	.009	.006	.001	.004
%RSD	.2799	.2824	.1356	.2228	.0500	.4296	.2887	.0568	.1949
#1	1.964	1.949	1.964	2.048	1.975	2.010	1.994	1.976	2.014
#2	1.975	1.944	1.960	2.041	1.976	1.993	2.002	1.977	2.018
#3	1.969	1.955	1.959	2.049	1.974	2.004	2.006	1.978	2.021
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 17:48:00 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.977**
Stddev	.004
%RSD	.1907
#1	1.978
#2	1.979
#3	1.972
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**781.84**	**2022.3**	**23950.**	**8854.7**
Stddev	1.15	4.6	57.	42.6
%RSD	.14688	.22687	.23942	.48140
#1	782.96	2020.1	24015.	8882.7
#2	780.66	2027.6	23932.	8875.8
#3	781.88	2019.3	23904.	8805.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 17:52:43 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0009**	**-.0014**	**.0000**	**.0000**	**.0009**	**.0000**	**.0001**	**.0000**
Stddev	.0001	.0037	.0009	.0000	.0000	.0004	.0000	.0001	.0001
%RSD	205.4	399.5	61.82	115.0	556.1	40.37	122.0	103.8	706.6
#1	-.0002	.0042	-.0024	.0000	.0000	.0010	.0000	.0001	.0001
#2	-.0001	-.0030	-.0006	.0000	.0000	.0012	.0001	.0001	-.0001
#3	.0001	.0016	-.0013	.0000	.0000	.0005	.0000	.0000	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0132**	**-.0003**	**-.0135**	**.0000**	**.0000**	**.0111**	**.0000**
Stddev	.0001	.001	.0038	.0003	.0028	.0000	.000	.0011	.0002
%RSD	80.27	1979.	28.77	91.40	20.70	78.39	63.92	9.860	2977.
#1	.0002	.0002	-.0175	.0000	-.0137	.0000	-.0001	.0120	-.0002
#2	.0000	.0004	-.0116	-.0003	-.0162	.0000	.0000	.0099	.0001
#3	.0001	-.0007	-.0105	-.0005	-.0106	.0000	.0000	.0114	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**.0007**	**.0002**	**-.0002**	**.0000**	**.0001**	**.0006**	**.0002**
Stddev	.0007	.001	.0015	.0001	.0002	.0000	.0001	.0005	.0001
%RSD	303.4	3482.	203.3	92.69	71.16	15.11	134.8	97.57	35.21
#1	.0010	.0004	.0024	.0003	-.0004	.0000	.0002	.0002	.0002
#2	.0002	.0003	-.0002	.0000	-.0002	.0000	.0001	.0012	.0001
#3	-.0005	-.0008	-.0001	.0002	-.0001	.0000	.0000	.0003	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 17:52:43 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**-.0001**
Stddev	.0001
%RSD	124.7
#1	.0000
#2	.0000
#3	-.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**960.18**	**2137.2**	**25581.**	**8930.1**
Stddev	2.20	5.6	55.	10.4
%RSD	.22932	.26060	.21431	.11664
#1	960.77	2141.5	25645.	8938.4
#2	962.03	2139.1	25552.	8918.4
#3	957.74	2130.9	25548.	8933.6

Zoom In Zoom Out

Sample Name: FA96082-2 Acquired: 6/10/2022 17:57:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0708**	**-.0061**	**.0565**	**-.0004**	**113.0**	**-.0003**	**.0000**	**-.0011**
Stddev	.0017	.0096	.0059	.0011	.0001	.9	.0005	.0006	.0015
%RSD	208.3	13.55	96.65	1.897	18.19	.8010	156.1	2130.	143.9
#1	.0019	.0605	-.0119	.0575	-.0004	113.6	-.0003	-.0001	.0007
#2	.0017	.0795	-.0065	.0566	-.0003	113.4	-.0009	.0006	-.0022
#3	-.0011	.0725	.0000	.0554	-.0005	112.0	.0002	-.0004	-.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0054**	**.7006**	**76.77**	**.0392**	**179.3**	**.3766**	**.0044**	F **1272.**	**-.0002**
Stddev	.0009	.0034	.22	.0013	1.4	.0022	.0004	13.	.0008
%RSD	16.56	.4811	.2849	3.238	.7757	.5969	10.09	.9881	447.9
#1	.0063	.6986	77.02	.0386	180.0	.3761	.0049	1263.	-.0011
#2	.0045	.7045	76.62	.0407	180.2	.3790	.0040	1286.	.0005
#3	.0054	.6987	76.67	.0384	177.7	.3746	.0044	1265.	.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0031**	**-.0008**	**.0010**	**7.083**	**-.0016**	**1.496**	**.0077**	**-.0024**	**.0044**
Stddev	.0037	.0077	.0045	.012	.0011	.007	.0004	.0031	.0010
%RSD	122.2	993.1	432.3	.1701	68.29	.4540	5.482	129.3	22.48
#1	-.0037	.0071	.0028	7.096	-.0019	1.504	.0080	-.0003	.0041
#2	.0009	-.0083	-.0041	7.081	-.0004	1.493	.0078	-.0009	.0055
#3	-.0065	-.0011	.0044	7.072	-.0024	1.491	.0072	-.0059	.0036

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0423**
Stddev	.0004
%RSD	.9978
#1	.0419
#2	.0426
#3	.0426

Zoom In Zoom Out

Sample Name: FA96082-2 Acquired: 6/10/2022 17:57:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**751.33**	**1906.1**	**22206.**	**8664.0**
Stddev	2.60	5.3	66.	29.4
%RSD	.34639	.27970	.29735	.33977
#1	753.50	1911.3	22276.	8667.1
#2	748.45	1900.7	22144.	8633.1
#3	752.05	1906.2	22199.	8691.7

Zoom In Zoom Out

Sample Name: FA96252-5 Acquired: 6/10/2022 18:02:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0648**	**.0085**	**.0315**	**-.0001**	**163.6**	**-.0001**	**-.0001**	**.0009**
Stddev	.0001	.0016	.0009	.0002	.0000	1.0	.0001	.0001	.0002
%RSD	80.70	2.441	10.15	.5675	27.52	.6234	59.69	181.2	26.10
#1	.0000	.0652	.0078	.0315	-.0001	162.5	-.0001	-.0002	.0012
#2	-.0003	.0630	.0094	.0313	-.0001	164.1	-.0002	-.0001	.0008
#3	-.0002	.0661	.0082	.0317	-.0001	164.3	.0000	.0000	.0007

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0070**	**.0184**	**72.24**	**.0498**	**147.0**	**.0089**	**.0634**	F **1048.**	**.0033**
Stddev	.0003	.0008	.10	.0001	.4	.0001	.0001	8.	.0002
%RSD	3.826	4.218	.1363	.1724	.2581	1.367	.1214	.7167	5.122
#1	.0073	.0176	72.28	.0498	146.6	.0089	.0634	1057.	.0035
#2	.0067	.0191	72.13	.0497	147.0	.0087	.0635	1044.	.0031
#3	.0070	.0184	72.32	.0498	147.3	.0089	.0634	1043.	.0033

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0034**	**.0169**	**.0012**	**8.666**	**.0002**	**2.687**	**.0015**	**-.0042**	**.0104**
Stddev	.0008	.0014	.0021	.032	.0003	.035	.0001	.0007	.0001
%RSD	23.30	8.553	181.1	.3720	139.9	1.282	4.611	17.29	1.099
#1	-.0031	.0167	.0018	8.631	-.0001	2.707	.0015	-.0050	.0103
#2	-.0043	.0184	-.0012	8.671	.0003	2.707	.0016	-.0036	.0105
#3	-.0028	.0156	.0029	8.695	.0004	2.647	.0016	-.0040	.0103

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0158**
Stddev	.0002
%RSD	1.427
#1	.0160
#2	.0159
#3	.0155

Zoom In Zoom Out

Sample Name: FA96252-5 Acquired: 6/10/2022 18:02:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**604.10**	**1635.3**	**19136.**	**8159.3**
Stddev	.62	10.8	40.	6.9
%RSD	.10295	.65829	.20791	.08501
#1	604.70	1647.2	19134.	8166.0
#2	604.13	1632.4	19097.	8159.7
#3	603.46	1626.3	19176.	8152.1

Zoom In Zoom Out

Sample Name: FA96257-1 Acquired: 6/10/2022 18:07:56 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0460**	**-.0015**	**.0602**	**-.0001**	**129.0**	**.0000**	**.0000**	**-.0002**
Stddev	.0004	.0043	.0012	.0000	.0000	.6	.000	.000	.0003
%RSD	219.3	9.278	84.67	.0431	5.037	.4781	113.9	560.2	133.4
#1	-.0002	.0508	-.0025	.0602	-.0001	128.8	.0000	.0000	-.0004
#2	.0002	.0426	-.0001	.0602	-.0001	129.7	.0000	.0000	-.0004
#3	-.0005	.0446	-.0017	.0602	-.0001	128.5	-.0001	.0001	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0200**	**8.478**	**.0047**	**33.97**	**.0056**	**.0079**	**43.61**	**.0042**
Stddev	.0002	.0005	.021	.0003	.12	.0000	.0001	.05	.0001
%RSD	3.852	2.519	.2436	5.462	.3521	.5568	1.665	.1148	2.598
#1	.0042	.0203	8.479	.0044	34.01	.0056	.0081	43.58	.0042
#2	.0041	.0203	8.458	.0047	34.06	.0056	.0078	43.57	.0042
#3	.0039	.0194	8.499	.0050	33.83	.0056	.0078	43.67	.0040

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0031**	**.0014**	**.0007**	**10.75**	**.0001**	**2.379**	**.0014**	**-.0032**	**.0026**
Stddev	.0008	.0005	.0015	.01	.0003	.023	.0001	.0012	.0003
%RSD	26.07	37.65	203.5	.1037	334.4	.9561	6.354	38.79	11.90
#1	-.0035	.0019	.0017	10.76	-.0001	2.402	.0015	-.0040	.0029
#2	-.0022	.0009	-.0010	10.74	.0000	2.357	.0014	-.0018	.0025
#3	-.0037	.0013	.0015	10.74	.0003	2.378	.0013	-.0038	.0023

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0003**
Stddev	.0001
%RSD	47.93
#1	.0004
#2	.0003
#3	.0002

Zoom In Zoom Out

Sample Name: FA96257-1 Acquired: 6/10/2022 18:07:56 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**772.58**	**1884.5**	**23078.**	**8964.3**
Stddev	2.22	.7	47.	33.5
%RSD	.28757	.03614	.20348	.37375
#1	770.74	1883.9	23037.	8946.7
#2	775.05	1885.3	23068.	8943.3
#3	771.94	1884.4	23130.	9002.9

Zoom In Zoom Out

Sample Name: FA96262-1 Acquired: 6/10/2022 18:13:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068**	**.0603**	**-.0023**	**.0329**	**-.0001**	**45.62**	**.0000**	**.0095**	**.0138**
Stddev	.0001	.0039	.0005	.0001	.0000	.27	.000	.0001	.0004
%RSD	2.125	6.407	22.31	.2191	5.977	.5946	88.82	.5442	3.199
#1	.0068	.0616	-.0028	.0329	-.0001	45.60	-.0001	.0095	.0143
#2	.0067	.0634	-.0018	.0328	-.0001	45.89	.0000	.0094	.0136
#3	.0069	.0560	-.0021	.0330	-.0001	45.35	.0000	.0095	.0136

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**.1614**	**F 324.3**	**.0138**	**14.80**	**.0279**	**.0181**	**44.49**	**.0366**
Stddev	.0002	.0018	2.8	.0005	.06	.0001	.0002	.15	.0001
%RSD	4.137	1.141	.8548	3.957	.4027	.5089	1.118	.3482	.4101
#1	.0036	.1595	325.8	.0135	14.85	.0279	.0179	44.43	.0364
#2	.0037	.1613	321.1	.0135	14.82	.0277	.0182	44.37	.0367
#3	.0039	.1632	326.0	.0145	14.74	.0280	.0183	44.66	.0366

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**.0014**	**.0022**	**16.45**	**.0002**	**.2596**	**.0036**	**-.0037**	**.0005**
Stddev	.0006	.0009	.0015	.04	.0004	.0003	.0001	.0005	.0002
%RSD	25.89	60.93	67.51	.2162	191.1	.1072	3.333	12.70	37.95
#1	-.0027	.0006	.0005	16.46	-.0002	.2598	.0035	-.0041	.0004
#2	-.0016	.0023	.0033	16.41	.0003	.2593	.0035	-.0032	.0008
#3	-.0020	.0013	.0027	16.48	.0005	.2598	.0037	-.0038	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0100**
Stddev	.0001
%RSD	.7972
#1	.0101
#2	.0100
#3	.0100

Zoom In Zoom Out

Sample Name: FA96262-1 Acquired: 6/10/2022 18:13:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**744.62**	**1877.4**	**22480.**	**8985.5**
Stddev	.84	5.9	79.	25.4
%RSD	.11339	.31631	.35105	.28302
#1	744.36	1877.0	22565.	8991.1
#2	745.56	1883.5	22466.	8957.7
#3	743.93	1871.7	22409.	9007.6

Zoom In Zoom Out

Sample Name: FA96262-3 Acquired: 6/10/2022 18:18:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**.2424**	**-.0033**	**.0312**	**-.0001**	**49.29**	**-.0001**	**.0095**	**.0493**
Stddev	.0003	.0086	.0005	.0000	.0000	.12	.0001	.0001	.0006
%RSD	5.778	3.553	15.60	.0851	23.46	.2493	62.93	1.142	1.219
#1	.0046	.2490	-.0032	.0312	-.0001	49.40	-.0001	.0094	.0498
#2	.0043	.2457	-.0028	.0312	-.0001	49.31	-.0002	.0096	.0496
#3	.0042	.2327	-.0038	.0312	-.0001	49.16	-.0001	.0095	.0487

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061**	**.1389**	**F 841.6**	**.0062**	**10.84**	**.0110**	**.0270**	**63.46**	**.0365**
Stddev	.0001	.0009	3.0	.0004	.01	.0000	.0003	.09	.0001
%RSD	.9602	.6451	.3585	6.727	.1191	.3452	1.266	.1363	.1509
#1	.0061	.1385	844.4	.0066	10.85	.0111	.0266	63.46	.0365
#2	.0061	.1383	841.9	.0059	10.85	.0111	.0272	63.54	.0364
#3	.0062	.1399	838.4	.0059	10.83	.0110	.0272	63.37	.0365

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**.0002**	**-.0001**	**25.26**	**.0005**	**.2968**	**.0115**	**-.0038**	**.0013**
Stddev	.0008	.0008	.0015	.04	.0003	.0006	.0008	.0021	.0002
%RSD	44.71	408.9	1188.	.1387	45.92	.1895	6.733	55.76	18.02
#1	-.0024	.0005	-.0016	25.24	.0005	.2961	.0112	-.0019	.0013
#2	-.0009	-.0007	-.0002	25.30	.0008	.2972	.0124	-.0061	.0015
#3	-.0022	.0008	.0014	25.24	.0003	.2970	.0110	-.0034	.0011

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0117**
Stddev	.0001
%RSD	.9404
#1	.0116
#2	.0116
#3	.0118

Zoom In Zoom Out

Sample Name: FA96262-3 Acquired: 6/10/2022 18:18:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**685.68**	**1827.3**	**21512.**	**8805.4**
Stddev	.46	1.7	48.	39.6
%RSD	.06742	.09119	.22388	.44960
#1	686.22	1827.5	21547.	8765.4
#2	685.42	1825.5	21457.	8806.5
#3	685.41	1828.8	21533.	8844.5

Zoom In Zoom Out

Sample Name: FA96266-1 Acquired: 6/10/2022 18:23:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**4.503**	**-.0007**	**.0496**	**.0001**	**18.78**	**-.0002**	**.0009**	**.0062**
Stddev	.0001	.024	.0004	.0002	.0000	.04	.0000	.0001	.0003
%RSD	100.7	.5382	59.35	.3962	8.522	.2381	23.63	13.31	4.033
#1	.0001	4.486	-.0012	.0495	.0001	18.73	-.0001	.0008	.0061
#2	.0000	4.531	-.0005	.0499	.0001	18.80	-.0002	.0008	.0061
#3	.0000	4.493	-.0004	.0495	.0001	18.82	-.0002	.0010	.0065

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0586**	**1.938**	**1.906**	**.0077**	**5.550**	**.1763**	**-.0003**	**32.26**	**.0036**
Stddev	.0003	.015	.027	.0004	.024	.0006	.0001	.06	.0002
%RSD	.4688	.7622	1.414	5.243	.4390	.3219	37.62	.1941	5.920
#1	.0583	1.933	1.934	.0075	5.531	.1758	-.0002	32.27	.0036
#2	.0587	1.955	1.902	.0075	5.577	.1761	-.0003	32.32	.0033
#3	.0588	1.927	1.881	.0082	5.542	.1769	-.0004	32.19	.0038

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**-.0003**	**.0036**	**7.548**	**.0004**	**.1366**	**.0768**	**-.0019**	**.0062**
Stddev	.0008	.0005	.0009	.013	.0002	.0002	.0003	.0003	.0002
%RSD	24.88	192.8	25.02	.1684	42.72	.1507	.4383	15.58	3.060
#1	.0034	-.0007	.0044	7.534	.0005	.1365	.0771	-.0016	.0062
#2	.0024	-.0004	.0026	7.549	.0005	.1369	.0764	-.0022	.0063
#3	.0040	.0003	.0037	7.560	.0002	.1365	.0768	-.0020	.0059

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0768**
Stddev	.0002
%RSD	.2456
#1	.0767
#2	.0770
#3	.0768

Zoom In Zoom Out

Sample Name: FA96266-1 Acquired: 6/10/2022 18:23:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**840.80**	**2040.4**	**24970.**	**9253.0**
Stddev	1.89	3.3	60.	39.8
%RSD	.22422	.16189	.23880	.43047
#1	842.97	2044.0	25017.	9278.2
#2	839.57	2039.9	24992.	9207.1
#3	839.86	2037.4	24903.	9273.7

Zoom In Zoom Out

Sample Name: FA96111-2 Acquired: 6/10/2022 18:27:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0169**	**.0023**	**.5088**	**-.0004**	**73.61**	**-.0004**	**-.0005**	**-.0009**
Stddev	.0009	.0128	.0034	.0032	.0002	.41	.0002	.0004	.0011
%RSD	2387.	75.57	151.0	.6311	40.06	.5571	46.12	75.90	113.7
#1	.0005	-.0176	.0043	.5059	-.0004	73.47	-.0002	-.0001	-.0007
#2	.0006	-.0038	-.0017	.5084	-.0005	74.08	-.0004	-.0007	-.0021
#3	-.0010	-.0293	.0041	.5122	-.0002	73.29	-.0006	-.0008	.0000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**5.836**	**3.369**	**.0100**	**10.49**	**1.541**	**-.0001**	**14.01**	**-.0008**
Stddev	.0008	.012	.038	.0019	.06	.001	.0008	.07	.0014
%RSD	20.45	.2129	1.115	19.38	.5988	.0818	572.8	.5131	169.2
#1	.0041	5.848	3.352	.0079	10.46	1.540	-.0002	13.94	-.0008
#2	.0045	5.824	3.343	.0105	10.56	1.540	.0006	14.01	.0006
#3	.0029	5.835	3.412	.0117	10.46	1.542	-.0009	14.09	-.0022

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0039**	**.0022**	**12.64**	**-.0026**	**.3138**	**.0028**	**-.0006**	**.0008**
Stddev	.0033	.0027	.0085	.04	.0006	.0020	.0005	.0038	.0006
%RSD	1723.	69.31	385.9	.3139	21.94	.6317	17.69	643.7	82.13
#1	.0025	-.0070	.0082	12.61	-.0021	.3121	.0033	.0027	.0015
#2	-.0039	-.0019	.0059	12.63	-.0026	.3133	.0023	-.0048	.0006
#3	.0008	-.0028	-.0075	12.69	-.0032	.3160	.0027	.0003	.0002

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0037**
Stddev	.0007
%RSD	20.04
#1	.0028
#2	.0042
#3	.0039

Zoom In Zoom Out

Sample Name: FA96111-2 Acquired: 6/10/2022 18:27:54 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**913.97**	**2103.9**	**25529.**	**9130.8**
Stddev	1.54	11.3	44.	27.5
%RSD	.16827	.53887	.17107	.30108
#1	915.48	2113.6	25569.	9144.0
#2	914.02	2106.6	25536.	9099.2
#3	912.41	2091.4	25483.	9149.3

Zoom In Zoom Out

Sample Name: FA96111-3 Acquired: 6/10/2022 18:32:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0068**	**-.0003**	**.5187**	**-.0004**	**72.41**	**-.0007**	**-.0004**	**-.0016**
Stddev	.0002	.0170	.0037	.0048	.0000	.13	.0003	.0005	.0006
%RSD	328.1	250.9	1090.	.9280	6.126	.1820	37.27	127.9	35.74
#1	.0001	-.0166	.0036	.5136	-.0004	72.52	-.0010	.0001	-.0012
#2	-.0002	-.0166	-.0007	.5231	-.0004	72.45	-.0004	-.0005	-.0014
#3	.0003	.0128	-.0039	.5195	-.0004	72.27	-.0008	-.0009	-.0023

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0118**	**7.162**	**3.046**	**.0077**	**10.37**	**1.547**	**-.0010**	**13.77**	**-.0013**
Stddev	.0004	.026	.068	.0013	.03	.002	.0002	.07	.0002
%RSD	3.193	.3666	2.232	16.31	.3207	.1420	15.56	.4878	14.23
#1	.0119	7.139	3.020	.0071	10.38	1.545	-.0009	13.70	-.0015
#2	.0121	7.190	3.124	.0068	10.33	1.546	-.0012	13.83	-.0012
#3	.0114	7.156	2.996	.0091	10.40	1.549	-.0010	13.78	-.0012

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0014**	**.0082**	**12.60**	**-.0029**	**.3119**	**.0030**	**.0001**	**.0002**
Stddev	.0014	.0007	.0026	.02	.0007	.0016	.0002	.0025	.0009
%RSD	339.1	52.64	31.40	.1706	22.79	.5275	7.750	2688.	392.0
#1	.0007	-.0012	.0077	12.57	-.0021	.3104	.0028	-.0027	-.0002
#2	.0000	-.0007	.0109	12.60	-.0031	.3136	.0032	.0022	.0012
#3	-.0019	-.0022	.0059	12.62	-.0034	.3118	.0030	.0008	-.0004

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0067**
Stddev	.0002
%RSD	3.584
#1	.0070
#2	.0065
#3	.0065

Zoom In Zoom Out

Sample Name: FA96111-3 Acquired: 6/10/2022 18:32:45 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**908.83**	**2082.8**	**25266.**	**9115.0**
Stddev	3.26	6.8	29.	32.0
%RSD	.35923	.32645	.11674	.35104
#1	912.57	2090.2	25300.	9150.9
#2	907.30	2081.3	25244.	9089.6
#3	906.60	2076.8	25255.	9104.3

Zoom In Zoom Out

Sample Name: FA96111-4 Acquired: 6/10/2022 18:37:36 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**-.0010**	**.0133**	**.5856**	**-.0005**	**74.65**	**-.0008**	**.0000**	**-.0009**
Stddev	.0005	.0023	.0040	.0032	.0000	.32	.0003	.000	.0022
%RSD	62.45	225.4	30.11	.5393	7.634	.4325	38.88	1181.	242.7
#1	-.0009	-.0033	.0170	.5822	-.0005	74.80	-.0009	.0003	-.0027
#2	-.0002	-.0011	.0090	.5885	-.0005	74.28	-.0004	-.0004	.0016
#3	-.0012	.0013	.0140	.5861	-.0005	74.87	-.0010	.0000	-.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**11.43**	**3.375**	**.0095**	**10.51**	**1.832**	**-.0001**	**15.05**	**-.0014**
Stddev	.0001	.04	.005	.0007	.10	.004	.0005	.10	.0012
%RSD	5.882	.3270	.1615	7.585	.9506	.1942	372.6	.6668	84.36
#1	.0012	11.39	3.374	.0100	10.52	1.832	.0000	14.94	-.0004
#2	.0013	11.47	3.370	.0099	10.40	1.829	.0003	15.10	-.0011
#3	.0013	11.44	3.380	.0087	10.60	1.836	-.0006	15.12	-.0027

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**-.0030**	**.0033**	**12.73**	**-.0033**	**.3069**	**.0029**	**-.0054**	**-.0002**
Stddev	.0025	.0039	.0071	.05	.0016	.0008	.0002	.0012	.0019
%RSD	125.4	132.1	218.6	.3978	47.72	.2739	7.357	21.53	969.4
#1	-.0039	.0008	-.0049	12.70	-.0017	.3060	.0031	-.0063	-.0024
#2	.0008	-.0070	.0067	12.70	-.0048	.3073	.0028	-.0057	.0010
#3	-.0029	-.0027	.0080	12.79	-.0034	.3076	.0027	-.0041	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0082**
Stddev	.0007
%RSD	8.646
#1	.0089
#2	.0075
#3	.0082

Zoom In Zoom Out

Sample Name: FA96111-4 Acquired: 6/10/2022 18:37:36 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**906.88**	**2088.3**	**25449.**	**9122.4**
Stddev	2.67	11.4	56.	27.1
%RSD	.29398	.54762	.22040	.29750
#1	906.78	2093.0	25419.	9150.2
#2	909.59	2096.6	25513.	9121.0
#3	904.26	2075.2	25413.	9096.0

Zoom In Zoom Out

Sample Name: FA96111-5 Acquired: 6/10/2022 18:42:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**3.425**	**.0005**	**.1663**	**-.0004**	**52.70**	**-.0001**	**.0001**	**.0013**
Stddev	.0013	.037	.0026	.0004	.0001	.18	.0001	.0001	.0003
%RSD	142.7	1.083	582.2	.2430	26.03	.3472	115.6	178.6	20.91
#1	-.0020	3.460	-.0008	.1667	-.0004	52.82	-.0003	.0001	.0016
#2	.0005	3.429	-.0014	.1664	-.0004	52.49	-.0001	-.0001	.0011
#3	-.0013	3.386	.0035	.1659	-.0003	52.80	.0000	.0002	.0012

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0078**	**2.887**	**3.157**	**.0033**	**5.931**	**.3064**	**-.0018**	**9.471**	**.0031**
Stddev	.0005	.017	.019	.0020	.047	.0013	.0003	.012	.0009
%RSD	6.327	.5929	.6060	59.62	.7883	.4202	17.96	.1294	30.13
#1	.0082	2.904	3.148	.0018	5.979	.3053	-.0022	9.477	.0042
#2	.0079	2.869	3.145	.0026	5.928	.3078	-.0017	9.479	.0023
#3	.0073	2.888	3.179	.0056	5.886	.3061	-.0015	9.457	.0029

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**-.0019**	**.0082**	**11.81**	**-.0033**	**.2532**	**.1276**	**-.0035**	**.0084**
Stddev	.0025	.0033	.0041	.06	.0017	.0012	.0283	.0037	.0008
%RSD	72.29	177.8	50.23	.4809	50.53	.4580	22.14	102.9	9.299
#1	.0032	-.0031	.0103	11.86	-.0045	.2540	.1085	.0003	.0075
#2	.0010	.0019	.0108	11.81	-.0041	.2537	.1143	-.0069	.0089
#3	.0060	-.0044	.0034	11.75	-.0014	.2519	.1601	-.0041	.0088

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0230**
Stddev	.0008
%RSD	3.672
#1	.0233
#2	.0221
#3	.0237

Zoom In Zoom Out

Sample Name: FA96111-5 Acquired: 6/10/2022 18:42:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.25**	**2112.6**	**25548.**	**9150.9**
Stddev	2.67	3.0	68.	25.8
%RSD	.28982	.14063	.26625	.28162
#1	922.48	2115.9	25624.	9161.2
#2	920.98	2110.1	25494.	9170.0
#3	917.30	2111.9	25525.	9121.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 18:47:19 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2411**	**38.80**	**1.973**	**1.994**	**1.971**	**38.75**	**1.974**	**1.980**	**1.966**
Stddev	.0005	.13	.005	.012	.005	.10	.001	.001	.005
%RSD	.2056	.3449	.2440	.6103	.2612	.2507	.0405	.0231	.2540
#1	.2413	38.68	1.967	1.982	1.966	38.84	1.975	1.980	1.970
#2	.2405	38.77	1.976	1.994	1.973	38.76	1.974	1.981	1.966
#3	.2414	38.94	1.975	2.006	1.976	38.65	1.974	1.981	1.960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.979**	**38.63**	**39.91**	**2.006**	**38.38**	**1.966**	**1.984**	**39.87**	**1.983**
Stddev	.004	.08	.11	.016	.07	.003	.001	.20	.002
%RSD	.2023	.2041	.2759	.7986	.1820	.1615	.0401	.4899	.0789
#1	1.980	38.54	39.80	1.991	38.35	1.969	1.985	39.71	1.984
#2	1.974	38.67	39.91	2.004	38.46	1.965	1.984	39.82	1.983
#3	1.982	38.68	40.02	2.023	38.33	1.963	1.984	40.09	1.981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.955**	**1.964**	**1.980**	**2.058**	**1.968**	**2.003**	**1.981**	**1.966**	**1.984**
Stddev	.003	.002	.010	.002	.001	.011	.002	.009	.006
%RSD	.1544	.0778	.4839	.0965	.0588	.5435	.1043	.4855	.3238
#1	1.952	1.963	1.975	2.056	1.969	1.992	1.983	1.956	1.989
#2	1.958	1.963	1.973	2.058	1.967	2.014	1.979	1.967	1.986
#3	1.954	1.966	1.991	2.060	1.967	2.002	1.981	1.975	1.977
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 18:47:19 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.951**
Stddev	.003
%RSD	.1364
#1	1.952
#2	1.953
#3	1.948
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**778.41**	**2007.7**	**24118.**	**8954.2**
Stddev	1.77	2.9	32.	8.5
%RSD	.22802	.14424	.13071	.09523
#1	780.41	2010.6	24154.	8963.7
#2	777.01	2004.8	24098.	8947.2
#3	777.83	2007.7	24102.	8951.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 18:52:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0014**	F **-.0021**	**.0000**	**.0000**	**-.0002**	**.0000**	**.0000**
Stddev	.0002	.0044	.0005	.000	.000	.0021	.000	.000
%RSD	248.1	319.1	25.67	21.95	630.5	1214.	367.4	124.3
#1	-.0003	.0058	-.0019	.0000	.0000	.0022	.0000	.0000
#2	.0001	.0013	-.0027	.0000	.0000	-.0008	.0000	.0000
#3	-.0001	-.0030	-.0017	.0000	.0000	-.0019	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0020					
Low Limit			-.0020					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0001**	**.0006**	**.0129**	**-.0004**	**-.0009**	**.0000**	**.0000**
Stddev	.0002	.0003	.0018	.0019	.0005	.0040	.0000	.0001
%RSD	355.8	222.0	312.3	14.94	150.1	461.7	204.0	491.2
#1	.0002	-.0002	.0027	.0135	-.0009	-.0044	.0000	.0002
#2	.0000	.0003	-.0008	.0108	-.0002	.0035	.0000	-.0001
#3	-.0001	.0003	-.0001	.0145	.0001	-.0017	.0000	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**-.0003**	**.0001**	**.0002**	**.0005**	**.0005**	**-.0004**	**.0001**
Stddev	.0012	.0000	.0006	.0008	.0017	.0000	.0002	.0000
%RSD	72.44	10.34	593.3	315.0	346.4	3.646	62.58	30.46
#1	-.0031	-.0002	-.0004	-.0002	.0024	.0005	-.0006	.0000
#2	-.0010	-.0003	.0000	-.0002	-.0008	.0005	-.0004	.0000
#3	-.0010	-.0003	.0007	.0011	-.0001	.0005	-.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 18:52:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0009**	**.0002**	**-.0001**
Stddev	.0000	.0011	.0001	.0000
%RSD	64.44	131.9	57.77	42.67
#1	.0000	.0004	.0001	-.0001
#2	.0001	-.0017	.0003	.0000
#3	.0000	-.0013	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**959.74**	**2120.7**	**25813.**	**9131.9**
Stddev	.58	4.6	96.	31.7
%RSD	.06044	.21698	.37197	.34745
#1	960.37	2124.3	25921.	9166.9
#2	959.23	2122.3	25781.	9105.1
#3	959.64	2115.5	25737.	9123.8

Zoom In Zoom Out

Sample Name: FA96111-6 Acquired: 6/10/2022 18:56:57 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**3.161**	**-.0020**	**.1746**	**-.0003**	**51.99**	**-.0001**	**.0004**	**.0037**
Stddev	.0014	.032	.0053	.0006	.0000	.32	.0002	.0003	.0004
%RSD	272.8	1.018	267.4	.3479	12.79	.6182	151.7	69.16	9.600
#1	.0010	3.181	.0025	.1739	-.0003	51.88	-.0002	.0006	.0040
#2	-.0018	3.124	-.0007	.1748	-.0004	52.36	.0001	.0005	.0035
#3	-.0007	3.177	-.0078	.1751	-.0003	51.74	-.0002	.0001	.0034

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089**	**2.897**	**2.916**	**.0028**	**5.867**	**.3276**	**-.0005**	**9.672**	**.0035**
Stddev	.0010	.012	.023	.0018	.032	.0008	.0005	.040	.0008
%RSD	11.16	.4198	.7967	63.29	.5457	.2422	110.5	.4147	23.72
#1	.0080	2.905	2.890	.0047	5.903	.3283	-.0007	9.661	.0036
#2	.0086	2.904	2.933	.0027	5.853	.3278	.0001	9.639	.0026
#3	.0100	2.883	2.926	.0011	5.844	.3267	-.0009	9.717	.0042

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**-.0025**	**.0068**	**11.45**	**-.0016**	**.2487**	**.1138**	**-.0027**	**.0080**
Stddev	.0013	.0019	.0118	.01	.0010	.0009	.0155	.0015	.0006
%RSD	42.62	76.38	173.9	.1042	60.28	.3678	13.63	53.91	7.171
#1	.0021	-.0004	.0200	11.45	-.0013	.2484	.1061	-.0027	.0080
#2	.0044	-.0042	-.0025	11.46	-.0027	.2480	.1037	-.0043	.0075
#3	.0024	-.0029	.0028	11.43	-.0008	.2497	.1317	-.0013	.0086

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0186**
Stddev	.0003
%RSD	1.595
#1	.0183
#2	.0189
#3	.0185

Zoom In Zoom Out

Sample Name: FA96111-6 Acquired: 6/10/2022 18:56:57 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**917.36**	**2104.7**	**25510.**	**9163.0**
Stddev	.58	6.3	40.	40.7
%RSD	.06352	.29980	.15814	.44366
#1	917.86	2112.0	25555.	9174.5
#2	917.50	2100.9	25497.	9117.9
#3	916.72	2101.2	25478.	9196.8

Zoom In Zoom Out

Sample Name: FA96111-7 Acquired: 6/10/2022 19:01:48 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**3.236**	**-.0079**	**.1557**	**-.0003**	**37.32**	**-.0005**	**.0003**	**.0030**
Stddev	.0010	.042	.0051	.0005	.0002	.38	.0003	.0001	.0007
%RSD	216.9	1.300	64.90	.3026	58.95	1.019	64.50	43.97	22.21
#1	.0003	3.278	-.0045	.1560	-.0005	37.74	-.0008	.0002	.0036
#2	-.0016	3.235	-.0054	.1552	-.0003	37.01	-.0002	.0004	.0023
#3	-.0001	3.194	-.0138	.1560	-.0001	37.20	-.0005	.0002	.0033

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0083**	**2.676**	**4.177**	**.0021**	**5.147**	**.1913**	**-.0013**	**6.992**	**.0029**
Stddev	.0003	.017	.049	.0005	.044	.0002	.0008	.015	.0015
%RSD	3.422	.6340	1.162	23.62	.8520	.1267	60.21	.2184	50.73
#1	.0083	2.695	4.138	.0026	5.107	.1916	-.0021	6.996	.0041
#2	.0085	2.662	4.161	.0022	5.194	.1913	-.0008	6.975	.0013
#3	.0080	2.670	4.231	.0016	5.141	.1911	-.0008	7.005	.0034

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**-.0026**	**.0062**	**10.87**	**-.0009**	**.1938**	**.1008**	**-.0013**	**.0077**
Stddev	.0007	.0024	.0047	.04	.0015	.0009	.0058	.0043	.0008
%RSD	19.19	92.83	76.54	.3903	159.3	.4844	5.748	340.0	10.56
#1	.0035	-.0023	.0058	10.92	.0008	.1936	.0945	.0032	.0069
#2	.0044	-.0052	.0111	10.84	-.0020	.1931	.1058	-.0054	.0085
#3	.0030	-.0004	.0017	10.85	-.0015	.1949	.1021	-.0017	.0078

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0282**
Stddev	.0002
%RSD	.7982
#1	.0284
#2	.0283
#3	.0280

Zoom In Zoom Out

Sample Name: FA96111-7 Acquired: 6/10/2022 19:01:48 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**918.67**	**2083.8**	**25272.**	**9158.3**
Stddev	1.92	8.3	45.	62.4
%RSD	.20882	.40019	.17869	.68085
#1	916.99	2082.8	25276.	9087.9
#2	920.76	2092.5	25316.	9206.8
#3	918.25	2075.9	25226.	9180.2

Zoom In Zoom Out

Sample Name: FA96297-1 Acquired: 6/10/2022 19:06:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0139**	**-.0003**	**.1339**	**-.0001**	**133.0**	**-.0002**	**.0010**	**.0009**
Stddev	.0001	.0014	.0026	.0002	.0000	.9	.0001	.0002	.0003
%RSD	87.06	10.19	1011.	.1307	21.94	.6779	49.82	19.34	29.79
#1	-.0002	.0150	.0008	.1341	-.0001	132.5	-.0002	.0008	.0006
#2	-.0001	.0123	-.0032	.1338	-.0001	132.5	-.0001	.0011	.0011
#3	.0000	.0144	.0016	.1338	-.0001	134.0	-.0002	.0011	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0147**	**1.091**	**1.481**	**.0095**	**139.2**	**.9727**	**.0074**	F **650.6**	**.0045**
Stddev	.0002	.008	.017	.0003	1.1	.0031	.0003	5.3	.0003
%RSD	1.533	.7256	1.153	2.787	.8105	.3185	4.153	.8185	6.105
#1	.0145	1.086	1.478	.0093	138.4	.9695	.0070	644.6	.0043
#2	.0149	1.087	1.465	.0098	138.8	.9756	.0075	652.5	.0046
#3	.0146	1.100	1.499	.0093	140.5	.9730	.0076	654.7	.0048

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**-.0005**	**-.0002**	**11.94**	**.0006**	**1.066**	**.0010**	**-.0011**	**.0036**
Stddev	.0011	.0010	.0042	.04	.0004	.003	.0001	.0017	.0002
%RSD	92.22	201.0	1764.	.3727	64.64	.2387	7.551	160.1	4.608
#1	-.0016	-.0016	-.0011	11.96	.0009	1.068	.0010	.0009	.0038
#2	-.0021	-.0002	-.0039	11.89	.0008	1.066	.0009	-.0021	.0035
#3	.0000	.0003	.0044	11.97	.0002	1.063	.0010	-.0020	.0035

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0128**
Stddev	.0001
%RSD	.9908
#1	.0129
#2	.0128
#3	.0126

Zoom In Zoom Out

Sample Name: FA96297-1 Acquired: 6/10/2022 19:06:39 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**649.91**	**1703.4**	**20127.**	**8448.3**
Stddev	1.88	6.2	58.	54.7
%RSD	.28867	.36120	.28820	.64767
#1	649.51	1699.0	20141.	8488.1
#2	651.95	1710.5	20063.	8470.9
#3	648.27	1700.8	20176.	8385.9

Zoom In Zoom Out

Sample Name: FA96297-2 Acquired: 6/10/2022 19:11:38 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0121**	**-.0014**	**.1388**	**-.0001**	**136.0**	**-.0002**	**.0009**	**.0012**
Stddev	.0002	.0023	.0012	.0003	.0000	.7	.0001	.0001	.0005
%RSD	66.71	19.20	88.17	.2087	31.34	.4969	35.59	16.38	41.76
#1	-.0006	.0115	-.0026	.1391	-.0001	136.6	-.0001	.0010	.0009
#2	-.0001	.0102	-.0002	.1386	-.0001	135.3	-.0002	.0007	.0009
#3	-.0005	.0147	-.0013	.1386	-.0001	136.0	-.0002	.0008	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081**	**1.087**	**1.556**	**.0100**	**143.7**	**.9915**	**.0077**	F **663.5**	**.0048**
Stddev	.0002	.003	.008	.0001	.5	.0018	.0002	3.2	.0000
%RSD	2.713	.2365	.5001	1.094	.3622	.1845	2.649	.4825	.9314
#1	.0081	1.087	1.555	.0101	144.3	.9905	.0078	665.1	.0047
#2	.0079	1.089	1.565	.0099	143.6	.9936	.0078	665.5	.0047
#3	.0083	1.084	1.550	.0101	143.2	.9904	.0075	659.8	.0048

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**-.0002**	**-.0014**	**12.19**	**.0008**	**1.090**	**.0008**	**-.0012**	**.0037**
Stddev	.0007	.0006	.0030	.01	.0002	.005	.0000	.0004	.0002
%RSD	29.64	342.2	206.2	.0713	25.93	.4422	4.732	31.95	6.025
#1	-.0017	-.0006	-.0047	12.19	.0010	1.095	.0008	-.0009	.0040
#2	-.0031	-.0005	-.0008	12.20	.0006	1.085	.0008	-.0010	.0035
#3	-.0025	.0005	.0011	12.18	.0008	1.090	.0008	-.0016	.0037

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0152**
Stddev	.0000
%RSD	.2862
#1	.0152
#2	.0152
#3	.0151

Zoom In Zoom Out

Sample Name: FA96297-2 Acquired: 6/10/2022 19:11:38 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**646.53**	**1701.5**	**20304.**	**8386.5**
Stddev	.59	2.0	15.	40.1
%RSD	.09185	.11611	.07375	.47767
#1	646.29	1703.3	20292.	8341.4
#2	646.09	1699.4	20299.	8399.8
#3	647.20	1701.9	20321.	8418.2

Zoom In Zoom Out

Sample Name: FA96171-1B Acquired: 6/10/2022 19:16:41 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0104**	**.0017**	**.0153**	**-.0001**	**37.72**	**-.0001**	**-.0002**	**.0000**
Stddev	.0003	.0021	.0007	.0001	.0000	.21	.0000	.0000	.0001
%RSD	130.9	20.37	40.00	.5015	28.58	.5493	16.30	26.53	5036.
#1	.0005	.0080	.0013	.0152	-.0001	37.80	-.0001	-.0001	.0000
#2	.0000	.0110	.0024	.0154	-.0001	37.88	-.0001	-.0002	-.0001
#3	.0001	.0121	.0012	.0153	-.0001	37.49	-.0001	-.0002	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0131**	**.1077**	**7.102**	**.0011**	**4.894**	**.0060**	**.0000**	**20.47**	**.0049**
Stddev	.0001	.0017	.027	.0004	.032	.0001	.0000	.01	.0002
%RSD	1.024	1.576	.3820	40.71	.6567	1.100	919.4	.0720	3.718
#1	.0132	.1080	7.071	.0006	4.919	.0060	.0000	20.46	.0047
#2	.0129	.1092	7.121	.0015	4.905	.0059	.0000	20.45	.0049
#3	.0131	.1059	7.114	.0011	4.858	.0060	.0000	20.48	.0050

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**-.0013**	**.0017**	**6.155**	**.0003**	**.2947**	**.0008**	**-.0017**	**.0001**
Stddev	.0004	.0009	.0017	.005	.0005	.0006	.0001	.0004	.0001
%RSD	64.28	64.10	100.1	.0787	161.0	.2122	12.89	26.57	53.64
#1	-.0012	-.0007	.0025	6.158	-.0001	.2941	.0009	-.0014	.0000
#2	-.0003	-.0023	.0028	6.158	.0002	.2953	.0009	-.0014	.0001
#3	-.0006	-.0010	-.0003	6.149	.0008	.2945	.0007	-.0022	.0002

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0087**
Stddev	.0002
%RSD	2.556
#1	.0085
#2	.0087
#3	.0090

Zoom In Zoom Out

Sample Name: FA96171-1B Acquired: 6/10/2022 19:16:41 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**840.26**	**1972.4**	**24141.**	**9008.2**
Stddev	1.09	3.2	39.	29.0
%RSD	.13021	.16341	.15991	.32234
#1	840.34	1971.9	24175.	8991.6
#2	839.12	1969.5	24148.	8991.2
#3	841.31	1975.9	24099.	9041.7

Zoom In Zoom Out

Sample Name: FA96171-2B Acquired: 6/10/2022 19:21:33 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0037**	**1.529**	**.0541**	**-.0001**	**47.45**	**-.0032**	**.0172**	**.0007**
Stddev	.0003	.0043	.005	.0001	.0000	.10	.0001	.0000	.0001
%RSD	13.41	116.3	.3527	.1121	27.28	.2194	2.809	.2007	16.64
#1	.0022	.0005	1.528	.0541	-.0001	47.41	-.0032	.0172	.0007
#2	.0025	.0020	1.524	.0541	-.0001	47.36	-.0031	.0172	.0005
#3	.0029	.0086	1.535	.0540	-.0001	47.56	-.0033	.0172	.0007

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**64.74**	**8.432**	**-.0011**	**6.296**	**2.213**	**.0007**	**12.11**	**.0038**
Stddev	.0001	.05	.026	.0005	.016	.001	.0001	.02	.0002
%RSD	7.289	.0770	.3119	47.85	.2533	.0558	21.84	.1268	4.295
#1	.0007	64.72	8.462	-.0005	6.299	2.212	.0007	12.12	.0037
#2	.0008	64.71	8.417	-.0014	6.279	2.213	.0008	12.09	.0038
#3	.0007	64.80	8.416	-.0014	6.311	2.214	.0005	12.10	.0040

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0003**	**.0025**	**7.301**	**-.0003**	**.3923**	**.0010**	**-.0010**	**.0008**
Stddev	.0008	.0008	.0019	.004	.0002	.0005	.0001	.0004	.0002
%RSD	114.0	292.4	74.03	.0618	48.32	.1250	14.16	39.14	18.85
#1	.0004	-.0012	.0004	7.305	-.0005	.3928	.0009	-.0014	.0009
#2	.0016	.0003	.0031	7.301	-.0003	.3922	.0011	-.0008	.0009
#3	.0001	.0001	.0041	7.296	-.0002	.3918	.0010	-.0008	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0025**
Stddev	.0002
%RSD	7.841
#1	.0027
#2	.0024
#3	.0023

Zoom In Zoom Out

Sample Name: FA96171-2B Acquired: 6/10/2022 19:21:33 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**835.30**	**1985.2**	**24256.**	**9038.3**
Stddev	1.32	1.2	19.	15.0
%RSD	.15757	.06224	.07973	.16577
#1	836.29	1983.8	24247.	9052.3
#2	835.81	1986.0	24278.	9040.2
#3	833.81	1985.7	24242.	9022.5

Zoom In Zoom Out

Sample Name: FA96171-3B Acquired: 6/10/2022 19:26:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0013**	**2.868**	**.0148**	**-.0001**	**23.43**	**-.0017**	**.0132**	**-.0001**
Stddev	.0003	.0043	.006	.0001	.0000	.13	.0001	.0002	.0003
%RSD	23.01	330.2	.2122	.5117	17.41	.5579	4.482	1.488	505.9
#1	.0015	-.0035	2.875	.0148	-.0001	23.48	-.0018	.0130	-.0003
#2	.0010	.0047	2.866	.0149	-.0001	23.52	-.0017	.0134	.0002
#3	.0015	.0026	2.863	.0148	-.0001	23.28	-.0016	.0131	.0000

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**36.92**	**3.377**	**-.0008**	**2.609**	**2.437**	**.0014**	**5.274**	**.0043**
Stddev	.0002	.12	.024	.0004	.025	.005	.0001	.012	.0001
%RSD	43.88	.3162	.7061	48.97	.9526	.2087	8.685	.2295	3.446
#1	.0002	37.04	3.394	-.0006	2.630	2.431	.0016	5.278	.0045
#2	.0005	36.91	3.387	-.0012	2.581	2.440	.0015	5.284	.0042
#3	.0005	36.81	3.349	-.0005	2.616	2.440	.0013	5.261	.0044

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0000**	**.0034**	**5.807**	**-.0001**	**.1701**	**.0008**	**-.0001**	**.0004**
Stddev	.0002	.0005	.0019	.003	.0001	.0007	.0000	.0008	.0001
%RSD	56.62	2848.	54.40	.0477	65.40	.4310	3.360	895.3	31.06
#1	.0005	-.0004	.0013	5.809	-.0002	.1702	.0008	-.0010	.0003
#2	.0006	.0006	.0044	5.809	-.0002	.1707	.0008	.0002	.0003
#3	.0002	-.0002	.0047	5.804	.0000	.1693	.0008	.0005	.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**-.0007**
Stddev	.0002
%RSD	25.27
#1	-.0009
#2	-.0006
#3	-.0006

Zoom In Zoom Out

Sample Name: FA96171-3B Acquired: 6/10/2022 19:26:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**873.25**	**2022.4**	**24695.**	**9155.2**
Stddev	1.50	1.8	33.	28.2
%RSD	.17183	.09024	.13359	.30802
#1	872.38	2022.3	24659.	9124.2
#2	874.98	2020.7	24705.	9161.9
#3	872.39	2024.4	24723.	9179.4

Zoom In Zoom Out

Sample Name: FA96198-1 Acquired: 6/10/2022 19:31:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.3338**	**.0159**	**.9406**	**-.0001**	**32.53**	**.0000**	**-.0001**	**.0001**
Stddev	.0003	.0036	.0007	.0023	.0000	.18	.000	.0001	.0002
%RSD	112.6	1.084	4.673	.2456	12.71	.5557	122.4	68.27	249.8
#1	.0003	.3359	.0153	.9427	-.0001	32.47	.0000	-.0001	.0001
#2	.0000	.3296	.0158	.9381	-.0001	32.40	.0000	-.0001	.0002
#3	.0005	.3358	.0167	.9408	-.0001	32.74	.0000	-.0003	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1168**	**1.939**	**.0163**	**3.699**	**.1031**	**.0152**	**4.786**	**-.0004**
Stddev	.000	.0005	.019	.0004	.013	.0002	.0002	.013	.0001
%RSD	857.6	.4624	.9879	2.232	.3554	.2115	1.148	.2685	21.92
#1	.0000	.1173	1.952	.0160	3.684	.1033	.0150	4.794	-.0003
#2	-.0003	.1168	1.917	.0167	3.708	.1029	.0152	4.771	-.0005
#3	.0002	.1162	1.948	.0161	3.705	.1033	.0153	4.793	-.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0029**	**.0003**	**2.512**	**-.0002**	**.1484**	**.0027**	**-.0021**	**.0241**
Stddev	.0004	.0005	.0006	.004	.0002	.0005	.0002	.0006	.0002
%RSD	57.43	17.74	236.0	.1697	69.39	.3347	5.632	28.18	.6879
#1	-.0011	.0025	.0008	2.507	-.0002	.1485	.0028	-.0027	.0243
#2	-.0007	.0035	.0005	2.514	-.0004	.1478	.0028	-.0020	.0240
#3	-.0003	.0027	-.0005	2.515	-.0001	.1488	.0026	-.0016	.0240

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0043**
Stddev	.0000
%RSD	.4130
#1	.0043
#2	.0042
#3	.0043

Zoom In Zoom Out

Sample Name: FA96198-1 Acquired: 6/10/2022 19:31:13 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**874.05**	**2033.8**	**24819.**	**9211.8**
Stddev	.58	4.5	26.	43.6
%RSD	.06624	.22091	.10663	.47278
#1	874.65	2038.1	24803.	9229.1
#2	874.00	2029.1	24804.	9244.1
#3	873.49	2034.2	24850.	9162.3

Zoom In Zoom Out

Sample Name: FA96082-6 Acquired: 6/10/2022 19:36:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079**	**-.2305**	**-.1867**	**-.0100**	**-.0082**	**579.7**	**-.0057**	**-.0034**	**-.0334**
Stddev	.0291	.1809	.1091	.0020	.0027	3.7	.0033	.0089	.0101
%RSD	367.3	78.45	58.44	20.23	32.78	.6403	58.71	257.7	30.17
#1	-.0242	-.1559	-.2509	-.0108	-.0087	582.0	-.0020	-.0014	-.0359
#2	.0153	-.4368	-.0607	-.0077	-.0052	581.6	-.0067	-.0131	-.0420
#3	.0327	-.0989	-.2484	-.0114	-.0105	575.4	-.0084	.0042	-.0223

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0444**	**.0679**	**24.89**	**.1201**	**222.4**	**.6710**	**-.0344**	**1477.**	**.0667**
Stddev	.0175	.0927	.88	.0380	1.0	.0083	.0054	3.	.0129
%RSD	39.42	136.4	3.550	31.66	.4476	1.241	15.77	.1965	19.28
#1	.0438	.0645	25.33	.0765	223.1	.6613	-.0347	1479.	.0565
#2	.0272	-.0229	23.88	.1375	221.3	.6758	-.0397	1478.	.0624
#3	.0622	.1623	25.48	.1464	222.8	.6757	-.0289	1474.	.0811

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0042**	**-.0733**	**.0471**	**5.070**	**-.0831**	**10.17**	**.0350**	**-.0480**	**.0170**
Stddev	.0235	.0604	.0731	.037	.0253	.01	.0056	.1440	.0015
%RSD	555.4	82.31	155.0	.7229	30.43	.1191	15.91	300.3	9.106
#1	.0119	-.0971	-.0011	5.071	-.1045	10.18	.0305	.1181	.0162
#2	-.0312	-.1182	.1312	5.106	-.0895	10.17	.0412	-.1235	.0161
#3	.0066	-.0047	.0113	5.033	-.0552	10.16	.0333	-.1385	.0188

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0232**
Stddev	.0116
%RSD	50.22
#1	.0147
#2	.0184
#3	.0364

Zoom In Zoom Out

Sample Name: FA96082-6 Acquired: 6/10/2022 19:36:05 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.01**	**2093.1**	**24917.**	**9130.4**
Stddev	1.71	6.1	96.	30.6
%RSD	.18892	.28967	.38364	.33537
#1	908.93	2099.0	24933.	9108.2
#2	906.47	2093.4	25003.	9117.6
#3	905.64	2086.9	24814.	9165.3

Zoom In Zoom Out

Sample Name: FA96082-2 Acquired: 6/10/2022 19:41:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0148**	**-.2469**	**-.0515**	**.0406**	**-.0068**	**103.3**	**-.0035**	**-.0096**	**-.0355**
Stddev	.0172	.1683	.1772	.0034	.0010	.4	.0061	.0063	.0066
%RSD	116.2	68.16	343.9	8.464	13.99	.4241	175.3	65.91	18.66
#1	-.0016	-.1228	.0509	.0373	-.0072	103.3	-.0001	-.0064	-.0309
#2	-.0086	-.4384	-.2561	.0405	-.0057	103.7	.0002	-.0168	-.0325
#3	-.0343	-.1795	.0506	.0442	-.0075	102.9	-.0105	-.0054	-.0431

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0413**	**.3695**	**65.99**	**.0022**	**160.0**	**.3350**	**-.0355**	**1182.**	**-.0134**
Stddev	.0121	.1156	.87	.0313	.5	.0040	.0099	4.	.0082
%RSD	29.38	31.28	1.320	1415.	.3429	1.182	27.84	.3126	61.33
#1	.0358	.3319	64.99	-.0332	159.8	.3319	-.0464	1183.	-.0041
#2	.0328	.4993	66.50	.0137	160.7	.3337	-.0271	1186.	-.0198
#3	.0551	.2775	66.49	.0262	159.6	.3395	-.0331	1179.	-.0162

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0298**	**-.0767**	**.1736**	**6.441**	**-.0578**	**1.365**	**.0026**	**-.0743**	**.0095**
Stddev	.0829	.0643	.0424	.071	.0282	.010	.0112	.0886	.0177
%RSD	277.9	83.88	24.40	1.096	48.79	.7323	431.0	119.2	185.3
#1	-.0124	-.0986	.1837	6.363	-.0733	1.366	.0102	-.1742	-.0097
#2	-.1200	-.0043	.1271	6.500	-.0252	1.373	.0079	-.0432	.0250
#3	.0429	-.1271	.2099	6.460	-.0747	1.354	-.0103	-.0055	.0134

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0335**
Stddev	.0163
%RSD	48.75
#1	.0186
#2	.0308
#3	.0510

Zoom In Zoom Out

Sample Name: FA96082-2 Acquired: 6/10/2022 19:41:00 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**911.68**	**2091.8**	**25018.**	**9051.7**
Stddev	1.44	8.3	86.	16.8
%RSD	.15744	.39887	.34402	.18612
#1	913.30	2096.4	25104.	9049.0
#2	911.17	2096.9	25020.	9036.3
#3	910.57	2082.2	24932.	9069.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 19:45:55 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2457**	**38.90**	**1.989**	**1.992**	**1.983**	**39.58**	**1.999**	**2.000**	**2.012**
Stddev	.0007	.15	.007	.003	.007	.27	.001	.004	.011
%RSD	.2975	.3872	.3485	.1554	.3601	.6893	.0352	.2182	.5301
#1	.2449	39.00	1.982	1.995	1.987	39.67	1.999	1.995	2.000
#2	.2459	38.97	1.995	1.992	1.988	39.79	2.000	2.002	2.016
#3	.2463	38.73	1.992	1.989	1.975	39.27	1.999	2.003	2.020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.014**	**38.68**	**40.36**	**2.019**	**38.70**	**2.003**	**2.002**	**39.94**	**2.017**
Stddev	.009	.13	.14	.001	.18	.010	.006	.02	.003
%RSD	.4246	.3452	.3392	.0499	.4527	.5203	.3117	.0492	.1230
#1	2.008	38.73	40.39	2.018	38.79	1.996	1.995	39.96	2.014
#2	2.011	38.77	40.48	2.020	38.82	1.998	2.005	39.95	2.017
#3	2.024	38.52	40.21	2.019	38.50	2.015	2.006	39.92	2.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.969**	**1.984**	**1.993**	**2.083**	**1.988**	**2.032**	**2.018**	**1.980**	**2.034**
Stddev	.006	.011	.008	.009	.001	.010	.008	.006	.012
%RSD	.2856	.5418	.3809	.4405	.0416	.4760	.3855	.3216	.5959
#1	1.970	1.973	1.985	2.073	1.987	2.022	2.010	1.984	2.023
#2	1.974	1.986	1.994	2.084	1.989	2.042	2.017	1.983	2.033
#3	1.963	1.994	2.000	2.091	1.987	2.032	2.026	1.973	2.047
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 19:45:55 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.972**
Stddev	.006
%RSD	.3033
#1	1.977
#2	1.973
#3	1.965
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**775.56**	**1990.0**	**23720.**	**8857.5**
Stddev	2.87	11.6	64.	32.6
%RSD	.37051	.58307	.27061	.36824
#1	778.86	2002.8	23771.	8847.5
#2	773.56	1987.0	23742.	8831.0
#3	774.28	1980.1	23648.	8893.9

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 19:50:37 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0025**	**-.0008**	**-.0001**	**.0000**	**.0007**	**.0000**	**-.0001**	**-.0001**
Stddev	.0002	.0025	.0009	.0001	.0000	.0006	.0000	.0001	.0001
%RSD	503.5	99.92	108.2	188.3	190.7	86.91	226.7	160.2	93.06
#1	-.0001	-.0048	-.0012	.0000	.0000	.0014	.0000	.0000	-.0003
#2	.0000	.0002	.0002	.0000	.0000	.0002	.0000	-.0001	.0000
#3	.0002	-.0029	-.0014	-.0002	.0000	.0005	.0001	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0036**	**.0001**	**-.0097**	**.0000**	**.0001**	**-.0016**	**-.0002**
Stddev	.0002	.0004	.0041	.0002	.0030	.000	.0000	.0029	.0002
%RSD	169.9	345.7	112.8	240.0	30.92	240.7	69.20	179.6	151.2
#1	.0000	.0004	-.0069	.0000	-.0078	-.0001	.0000	.0017	-.0004
#2	.0003	.0001	-.0049	.0000	-.0131	.0000	.0001	-.0033	.0001
#3	.0000	-.0003	.0010	.0003	-.0081	.0000	.0001	-.0034	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0001**	**.0018**	**.0007**	**-.0008**	**.0000**	**.0001**	**-.0006**	**.0000**
Stddev	.0008	.0004	.0025	.0001	.0005	.0000	.0001	.0008	.0001
%RSD	146.6	421.2	142.6	15.39	64.15	42.91	90.24	140.8	254.1
#1	-.0008	.0004	.0020	.0007	-.0014	.0000	.0002	-.0008	.0001
#2	.0004	-.0004	-.0009	.0005	-.0005	.0000	.0001	-.0013	-.0001
#3	-.0012	.0003	.0042	.0007	-.0005	.0000	.0000	.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 19:50:37 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**-.0001**
Stddev	.0001
%RSD	53.42
#1	-.0002
#2	-.0001
#3	-.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**966.01**	**2143.8**	**25785.**	**9065.3**
Stddev	1.19	3.6	82.	56.7
%RSD	.12364	.16701	.31857	.62515
#1	966.97	2147.9	25865.	9130.7
#2	966.39	2142.3	25701.	9035.9
#3	964.68	2141.2	25790.	9029.4

Zoom In Zoom Out

Sample Name: FA96082-5 Acquired: 6/10/2022 19:55:34 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0116**	**-.0641**	**-.0172**	**-.0174**	**-.0095**	**474.3**	**-.0033**	**-.0134**	**-.0333**
Stddev	.0142	.2928	.1040	.0012	.0007	2.2	.0046	.0134	.0363
%RSD	122.6	456.5	605.7	7.149	7.136	.4613	138.5	99.73	109.1
#1	-.0263	-.3725	-.0989	-.0162	-.0095	472.2	-.0068	-.0238	-.0076
#2	-.0104	.2102	.0999	-.0174	-.0102	474.2	.0019	.0017	-.0748
#3	.0020	-.0302	-.0526	-.0187	-.0088	476.5	-.0051	-.0181	-.0174

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0345**	**1.008**	**11.79**	**.2613**	**385.4**	**.8607**	**-.0221**	**1353.**	**-.0085**
Stddev	.0069	.034	.36	.0129	2.3	.0038	.0024	5.	.0270
%RSD	19.90	3.393	3.082	4.947	.6023	.4361	11.03	.3637	319.9
#1	.0272	1.040	11.55	.2753	383.5	.8564	-.0223	1347.	-.0299
#2	.0353	1.012	12.21	.2590	384.8	.8630	-.0196	1356.	-.0174
#3	.0408	.9723	11.62	.2498	388.0	.8628	-.0244	1356.	.0219

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0703**	**-.0951**	**.0662**	**3.696**	**-.0421**	**7.852**	**.0266**	**-.0600**	**.0111**
Stddev	.0612	.0894	.0819	.008	.0448	.022	.0102	.0798	.0047
%RSD	87.14	93.94	123.8	.2222	106.4	.2795	38.36	132.9	42.19
#1	-.1205	-.1955	.0271	3.693	-.0653	7.827	.0379	-.1450	.0088
#2	-.0882	-.0244	.0111	3.689	.0095	7.860	.0182	-.0484	.0165
#3	-.0021	-.0655	.1603	3.705	-.0704	7.869	.0236	.0133	.0080

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0174**
Stddev	.0063
%RSD	36.48
#1	.0192
#2	.0103
#3	.0226

Zoom In Zoom Out

Sample Name: FA96082-5 Acquired: 6/10/2022 19:55:34 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**901.50**	**2080.0**	**25045.**	**9006.7**
Stddev	.36	1.9	92.	34.0
%RSD	.04015	.08965	.36798	.37735
#1	901.20	2081.9	25150.	9045.5
#2	901.90	2078.2	25001.	8992.1
#3	901.41	2079.9	24982.	8982.4

Zoom In Zoom Out

Sample Name: MP40826-D1 Acquired: 6/10/2022 20:00:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0333**	**-.6199**	**-.0356**	**-.0156**	**-.0083**	**473.4**	**-.0040**	**-.0001**	**-.0452**
Stddev	.0122	.2764	.1845	.0010	.0037	5.6	.0032	.0097	.0139
%RSD	36.56	44.60	517.8	6.666	44.89	1.177	80.97	9396.	30.68
#1	-.0425	-.3097	.1740	-.0146	-.0116	467.0	-.0019	.0084	-.0589
#2	-.0379	-.7095	-.1732	-.0155	-.0042	476.0	-.0078	.0019	-.0312
#3	-.0195	-.8404	-.1077	-.0167	-.0092	477.2	-.0024	-.0106	-.0454

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0186**	**.9317**	**11.67**	**.2440**	**382.1**	**.8544**	**-.0267**	**1348.**	**.0042**
Stddev	.0129	.0912	.08	.0148	1.5	.0055	.0114	6.	.0047
%RSD	69.15	9.793	.7065	6.050	.4019	.6410	42.85	.4322	112.6
#1	.0054	.8263	11.75	.2374	381.1	.8492	-.0226	1342.	.0080
#2	.0192	.9834	11.69	.2338	383.9	.8540	-.0178	1347.	-.0011
#3	.0311	.9853	11.58	.2610	381.3	.8601	-.0395	1353.	.0057

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0532**	**-.0374**	**-.0088**	**3.692**	**-.0551**	**7.853**	**.0271**	**-.0693**	**.0194**
Stddev	.0141	.0538	.0791	.045	.0155	.018	.0053	.0790	.0220
%RSD	26.47	143.7	897.9	1.221	28.24	.2294	19.71	113.9	113.4
#1	-.0529	-.0351	.0810	3.671	-.0424	7.835	.0222	-.1275	.0226
#2	-.0674	.0151	-.0680	3.744	-.0504	7.853	.0328	-.1011	-.0040
#3	-.0392	-.0924	-.0394	3.662	-.0724	7.871	.0263	.0206	.0396

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0096**
Stddev	.0094
%RSD	98.30
#1	.0017
#2	.0200
#3	.0070

Zoom In Zoom Out

Sample Name: MP40826-D1 Acquired: 6/10/2022 20:00:28 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**900.82**	**2083.5**	**24944.**	**9038.2**
Stddev	1.01	1.1	63.	83.0
%RSD	.11235	.05187	.25391	.91811
#1	901.22	2082.9	25005.	9134.0
#2	901.56	2082.8	24878.	8991.2
#3	899.67	2084.8	24950.	8989.3

Zoom In Zoom Out

Sample Name: MP40826-S1 Acquired: 6/10/2022 20:05:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0529**	**24.12**	**1.777**	**1.760**	**.0343**	**497.3**	**.0452**	**.4693**	**.1569**
Stddev	.0085	.15	.079	.003	.0037	.8	.0049	.0100	.0149
%RSD	16.02	.6172	4.449	.1657	10.81	.1689	10.84	2.128	9.515
#1	.0611	24.01	1.686	1.758	.0305	498.2	.0433	.4613	.1726
#2	.0533	24.05	1.813	1.763	.0345	496.7	.0507	.4805	.1553
#3	.0442	24.29	1.832	1.759	.0379	496.9	.0415	.4662	.1429

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2716**	**24.23**	**34.06**	**.2844**	**405.0**	**1.338**	**.4020**	**1364.**	**.4756**
Stddev	.0127	.16	.53	.0134	.6	.004	.0100	1.	.0063
%RSD	4.663	.6511	1.554	4.696	.1473	.3000	2.490	.1025	1.330
#1	.2612	24.33	33.45	.2700	404.7	1.337	.3927	1364.	.4738
#2	.2857	24.32	34.37	.2869	404.6	1.335	.4006	1365.	.4704
#3	.2678	24.05	34.36	.2963	405.6	1.343	.4126	1363.	.4826

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3873**	**.3729**	**1.797**	**4.354**	**.3963**	**8.242**	**.5021**	**1.698**	**.4557**
Stddev	.0346	.1002	.207	.047	.0548	.017	.0040	.058	.0077
%RSD	8.927	26.88	11.51	1.083	13.83	.2027	.7996	3.406	1.699
#1	.3480	.3911	1.601	4.346	.4145	8.260	.5058	1.633	.4618
#2	.4006	.4628	1.775	4.311	.4396	8.226	.5027	1.745	.4470
#3	.4132	.2649	2.013	4.404	.3347	8.241	.4978	1.715	.4583

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4735**
Stddev	.0063
%RSD	1.330
#1	.4682
#2	.4805
#3	.4719

Zoom In Zoom Out

Sample Name: MP40826-S1 Acquired: 6/10/2022 20:05:23 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**902.02**	**2082.1**	**24888.**	**9041.1**
Stddev	1.38	7.3	50.	7.7
%RSD	.15339	.35188	.19926	.08554
#1	903.59	2089.5	24873.	9038.9
#2	901.45	2081.8	24943.	9034.6
#3	901.00	2074.9	24848.	9049.6

Zoom In Zoom Out

Sample Name: MP40826-S2 Acquired: 6/10/2022 20:10:17 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0149**	**23.11**	**1.694**	**1.781**	**.0367**	**499.5**	**.0438**	**.4654**	**.1416**
Stddev	.0178	.50	.058	.010	.0029	.2	.0046	.0079	.0218
%RSD	119.5	2.156	3.440	.5852	7.799	.0441	10.42	1.689	15.40
#1	.0084	23.41	1.653	1.792	.0356	499.6	.0440	.4578	.1334
#2	.0351	23.40	1.669	1.779	.0346	499.6	.0391	.4735	.1663
#3	.0013	22.54	1.761	1.772	.0399	499.2	.0483	.4648	.1250

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2746**	**24.09**	**34.16**	**.2307**	**403.7**	**1.345**	**.4385**	**1371.**	**.4801**
Stddev	.0125	.09	.34	.0194	1.2	.018	.0194	6.	.0214
%RSD	4.542	.3708	.9871	8.403	.2863	1.317	4.431	.4432	4.454
#1	.2604	24.12	34.21	.2114	403.0	1.365	.4585	1378.	.4721
#2	.2839	24.16	34.46	.2305	402.9	1.331	.4196	1366.	.5043
#3	.2795	23.99	33.80	.2502	405.0	1.340	.4375	1370.	.4638

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4729**	**.3757**	**1.805**	**4.413**	**.4066**	**8.355**	**.4980**	**1.755**	**.4653**
Stddev	.0575	.0925	.218	.046	.0518	.051	.0083	.052	.0073
%RSD	12.15	24.63	12.07	1.045	12.73	.6145	1.667	2.990	1.571
#1	.4611	.2821	1.554	4.418	.4338	8.397	.4907	1.769	.4595
#2	.5354	.3779	1.946	4.457	.3469	8.298	.5070	1.798	.4735
#3	.4223	.4672	1.916	4.365	.4391	8.372	.4962	1.696	.4629

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4771**
Stddev	.0079
%RSD	1.648
#1	.4687
#2	.4843
#3	.4784

Zoom In Zoom Out

Sample Name: MP40826-S2 Acquired: 6/10/2022 20:10:17 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**899.99**	**2082.2**	**24780.**	**9100.6**
Stddev	2.03	8.1	96.	11.8
%RSD	.22587	.39122	.38556	.12941
#1	900.80	2080.1	24865.	9114.1
#2	897.67	2075.3	24798.	9092.4
#3	901.48	2091.2	24677.	9095.2

Zoom In Zoom Out

Sample Name: MP40826-PS1 Acquired: 6/10/2022 20:15:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0334**	**1.792**	**-.0633**	**.2217**	**.0407**	**495.2**	**.0490**	**.0378**	**.0286**
Stddev	.0173	.406	.1031	.0023	.0045	3.4	.0049	.0058	.0234
%RSD	51.87	22.64	162.8	1.045	10.93	.6790	9.914	15.40	81.70
#1	.0498	1.786	-.1464	.2215	.0359	492.1	.0546	.0418	.0483
#2	.0350	2.200	-.0956	.2195	.0415	494.6	.0461	.0311	.0347
#3	.0153	1.389	.0520	.2241	.0447	498.8	.0462	.0406	.0028

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1385**	**3.842**	**21.67**	**.2865**	**400.8**	**.9493**	**.0637**	**1398.**	**.1072**
Stddev	.0118	.043	.48	.0387	2.6	.0018	.0115	4.	.0028
%RSD	8.551	1.128	2.195	13.53	.6519	.1879	18.10	.2528	2.644
#1	.1291	3.890	21.48	.2446	398.2	.9492	.0527	1395.	.1055
#2	.1518	3.807	21.32	.3210	400.8	.9475	.0628	1396.	.1056
#3	.1345	3.827	22.22	.2939	403.4	.9511	.0757	1402.	.1104

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0613**	**.0621**	**.1264**	**3.803**	**-.0060**	**8.119**	**.1259**	**.1531**	**.0540**
Stddev	.0504	.0903	.0317	.032	.0397	.033	.0085	.0228	.0123
%RSD	82.29	145.4	25.09	.8371	662.0	.4086	6.730	14.88	22.72
#1	.0155	.1145	.1505	3.768	-.0454	8.081	.1276	.1300	.0669
#2	.0531	.1139	.0905	3.829	.0340	8.132	.1334	.1755	.0426
#3	.1154	-.0422	.1383	3.812	-.0066	8.143	.1167	.1538	.0523

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2663**
Stddev	.0065
%RSD	2.436
#1	.2706
#2	.2589
#3	.2696

Zoom In Zoom Out

Sample Name: MP40826-PS1 Acquired: 6/10/2022 20:15:11 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**902.74**	**2081.8**	**24821.**	**9061.5**
Stddev	1.25	7.3	20.	54.2
%RSD	.13826	.34841	.08221	.59829
#1	902.07	2088.3	24843.	9110.0
#2	904.18	2083.0	24817.	9071.6
#3	901.96	2074.0	24803.	9003.0

Zoom In Zoom Out

Sample Name: MP40826-SD1 Acquired: 6/10/2022 20:20:06 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 500.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.1089**	**-1.057**	**-.7507**	**-.0667**	**-.0380**	**500.1**	**.0041**	**-.0548**	**-.2387**
Stddev	.2038	1.874	.2456	.0271	.0028	.9	.0324	.0073	.0968
%RSD	187.2	177.2	32.72	40.63	7.412	.1811	788.3	13.36	40.54
#1	-.2947	-1.718	-.8493	-.0373	-.0389	501.0	-.0320	-.0632	-.2703
#2	.1092	1.057	-.4711	-.0722	-.0349	500.0	.0137	-.0501	-.1301
#3	-.1411	-2.511	-.9317	-.0907	-.0403	499.2	.0306	-.0511	-.3158

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1427**	**-.1581**	**8.173**	**.2622**	**398.3**	**.8708**	**-.2673**	**1417.**	**-.0400**
Stddev	.0264	.6636	2.526	.1955	6.0	.0187	.0818	4.	.0753
%RSD	18.48	419.7	30.91	74.56	1.509	2.149	30.58	.2723	188.2
#1	.1256	-.0844	7.709	.4817	397.2	.8543	-.2122	1421.	-.0358
#2	.1731	.4656	5.911	.1982	404.8	.8670	-.2286	1413.	-.1172
#3	.1294	-.8555	10.90	.1068	393.0	.8912	-.3613	1417.	.0331

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.1888**	**-.4613**	**.5651**	**3.681**	**-.1563**	**8.239**	**-.0076**	**-.2941**	**.0081**
Stddev	.1039	.5206	.2012	.038	.1055	.048	.0166	.4768	.1476
%RSD	55.03	112.9	35.61	1.026	67.51	.5769	218.8	162.1	1816.
#1	-.3075	.0369	.5077	3.669	-.2575	8.257	-.0267	-.3726	.1654
#2	-.1442	-.4189	.3989	3.651	-.0469	8.186	.0002	.2171	-.1274
#3	-.1146	-1.002	.7889	3.723	-.1646	8.276	.0037	-.7268	-.0136

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**-.0053**
Stddev	.0510
%RSD	956.1
#1	.0217
#2	-.0641
#3	.0264

Zoom In Zoom Out

Sample Name: MP40826-SD1 Acquired: 6/10/2022 20:20:06 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 500.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**946.56**	**2121.4**	**25445.**	**9093.4**
Stddev	1.58	3.3	83.	22.2
%RSD	.16708	.15575	.32565	.24451
#1	947.96	2123.2	25479.	9109.8
#2	946.88	2123.4	25506.	9102.4
#3	944.85	2117.6	25351.	9068.1

Zoom In Zoom Out

Sample Name: MP40827-MB1 Acquired: 6/10/2022 20:25:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0016**	**-.0028**	**-.0001**	**-.0001**	**.0054**	**-.0001**	**-.0002**	**.0003**
Stddev	.0002	.0028	.0012	.0001	.0000	.0013	.0000	.0000	.0002
%RSD	154.3	181.4	42.17	39.85	6.492	24.67	70.97	14.51	77.94
#1	.0001	-.0044	-.0020	-.0001	-.0001	.0050	.0000	-.0002	.0005
#2	-.0003	.0012	-.0022	-.0001	-.0001	.0069	.0000	-.0002	.0001
#3	-.0001	-.0015	-.0042	-.0002	-.0001	.0044	-.0001	-.0002	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0031**	**-.0165**	**-.0001**	**-.0069**	**.0001**	**-.0003**	**-.0061**	**-.0004**
Stddev	.0001	.0009	.0072	.0004	.0044	.0000	.0000	.0005	.0001
%RSD	7.395	28.52	43.82	258.3	63.87	2.049	15.17	7.627	20.26
#1	.0013	.0037	-.0249	.0000	-.0115	.0001	-.0003	-.0056	-.0004
#2	.0015	.0021	-.0117	-.0006	-.0065	.0001	-.0003	-.0065	-.0004
#3	.0016	.0035	-.0130	.0002	-.0027	.0001	-.0004	-.0061	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0005**	**.0017**	**.0031**	**.0001**	**.0000**	**.0001**	**-.0018**	**.0000**
Stddev	.0006	.0002	.0013	.0003	.0001	.000	.0001	.0004	.000
%RSD	329.7	49.81	76.16	9.219	99.17	96.29	199.9	21.30	311.9
#1	-.0005	-.0008	.0032	.0034	.0000	.0000	.0000	-.0015	-.0001
#2	-.0005	-.0003	.0009	.0031	.0000	.0000	.0000	-.0018	-.0001
#3	.0005	-.0004	.0010	.0028	.0002	-.0001	.0002	-.0023	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP40827-MB1 Acquired: 6/10/2022 20:25:01 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0011**
Stddev	.0001
%RSD	8.718
#1	.0011
#2	.0012
#3	.0010
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**950.61**	**2087.9**	**25629.**	**9231.0**
Stddev	.53	4.5	28.	55.5
%RSD	.05612	.21490	.10765	.60100
#1	950.23	2089.5	25625.	9167.2
#2	951.22	2091.3	25603.	9257.3
#3	950.38	2082.8	25658.	9268.3

Zoom In Zoom Out

Sample Name: MP40827-B1 Acquired: 6/10/2022 20:29:56 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0497**	**24.81**	**1.874**	**1.936**	**.0474**	**23.32**	**.0479**	**.4920**
Stddev	.0001	.14	.001	.009	.0003	.15	.0002	.0005
%RSD	.1843	.5615	.0353	.4412	.5577	.6473	.3628	.0915
#1	.0496	24.90	1.875	1.943	.0475	23.28	.0478	.4920
#2	.0497	24.65	1.875	1.926	.0471	23.20	.0479	.4915
#3	.0498	24.88	1.874	1.938	.0476	23.49	.0481	.4924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2018**	**.2529**	**23.77**	**24.11**	F **-.0006**	**22.68**	**.4981**	**.4866**
Stddev	.0005	.0014	.04	.15	.0003	.09	.0022	.0007
%RSD	.2416	.5652	.1867	.6198	45.88	.3798	.4397	.1508
#1	.2018	.2513	23.74	24.19	-.0007	22.60	.4956	.4859
#2	.2022	.2540	23.75	23.93	-.0007	22.68	.4987	.4874
#3	.2013	.2534	23.82	24.20	-.0003	22.77	.4999	.4864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0500			
Range					-20.00%			

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.40**	**.5013**	**.4581**	**.4808**	**1.888**	**.7145**	**.4888**	**.4969**
Stddev	.12	.0004	.0017	.0007	.006	.0015	.0004	.0034
%RSD	.5426	.0879	.3788	.1506	.3192	.2097	.0910	.6786
#1	22.51	.5014	.4587	.4801	1.895	.7141	.4883	.4991
#2	22.27	.5008	.4562	.4809	1.885	.7133	.4891	.4931
#3	22.42	.5017	.4595	.4815	1.884	.7162	.4890	.4986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP40827-B1 Acquired: 6/10/2022 20:29:56 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.5075**	**1.863**	**.4994**	**.4760**
Stddev	.0011	.004	.0014	.0012
%RSD	.2149	.1982	.2843	.2599
#1	.5063	1.861	.4978	.4748
#2	.5082	1.860	.5005	.4773
#3	.5081	1.867	.5000	.4759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**821.64**	**2020.3**	**24206.**	**9200.8**
Stddev	3.23	4.6	41.	23.1
%RSD	.39323	.22651	.16890	.25112
#1	818.69	2016.7	24247.	9205.6
#2	825.09	2025.5	24166.	9221.2
#3	821.14	2018.7	24206.	9175.7

Zoom In Zoom Out

Sample Name: FA96176-1 Acquired: 6/10/2022 20:34:33 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.2071**	**-.0004**	**.0149**	**-.0001**	**131.8**	**-.0005**	**.0003**	**.0015**
Stddev	.0002	.0067	.0002	.0001	.0000	.3	.0001	.0000	.0002
%RSD	73.53	3.221	68.50	.7045	43.23	.2464	12.89	6.559	13.26
#1	.0004	.2026	-.0004	.0150	.0000	131.9	-.0004	.0003	.0015
#2	.0001	.2039	-.0001	.0148	-.0001	132.1	-.0006	.0003	.0013
#3	.0005	.2147	-.0006	.0149	-.0001	131.5	-.0006	.0003	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**9.605**	**.8609**	**.0003**	**7.898**	**.0294**	**.0080**	**26.81**	**-.0002**
Stddev	.0001	.024	.0125	.0002	.030	.0001	.0001	.02	.0002
%RSD	19.34	.2472	1.449	58.65	.3744	.2369	1.403	.0907	100.6
#1	.0006	9.579	.8471	.0004	7.866	.0295	.0081	26.81	-.0003
#2	.0005	9.611	.8714	.0001	7.924	.0295	.0080	26.79	.0000
#3	.0007	9.626	.8642	.0005	7.903	.0294	.0079	26.83	-.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**-.0001**	**.0002**	**3.574**	**.0002**	**.3028**	**.0071**	**-.0002**	**.0031**
Stddev	.0006	.0010	.0013	.002	.0003	.0001	.0006	.0013	.0001
%RSD	34.27	770.6	534.0	.0660	208.2	.0300	8.043	776.3	4.360
#1	-.0022	.0001	.0013	3.574	-.0001	.3029	.0078	-.0001	.0030
#2	-.0018	.0008	.0006	3.576	.0001	.3027	.0067	.0011	.0030
#3	-.0010	-.0012	-.0012	3.571	.0005	.3029	.0069	-.0015	.0032

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0091**
Stddev	.0002
%RSD	2.368
#1	.0092
#2	.0092
#3	.0089

Zoom In Zoom Out

Sample Name: FA96176-1 Acquired: 6/10/2022 20:34:33 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**801.09**	**1942.4**	**23631.**	**8951.3**
Stddev	2.67	4.1	40.	34.7
%RSD	.33273	.20857	.16844	.38748
#1	804.14	1946.8	23590.	8991.1
#2	799.88	1938.9	23670.	8927.4
#3	799.25	1941.3	23633.	8935.5

Zoom In Zoom Out

Sample Name: MP40827-D1 Acquired: 6/10/2022 20:39:34 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1773**	**-.0006**	**.0147**	**-.0001**	**131.1**	**-.0005**	**.0002**	**.0012**
Stddev	.0003	.0025	.0005	.0001	.0000	1.3	.0001	.0001	.0001
%RSD	272.2	1.428	78.69	.8017	15.92	.9955	10.76	65.21	4.938
#1	.0003	.1797	-.0011	.0147	-.0001	132.2	-.0005	.0002	.0013
#2	-.0002	.1776	-.0003	.0147	-.0001	131.5	-.0006	.0001	.0012
#3	.0002	.1747	-.0004	.0149	-.0001	129.7	-.0005	.0003	.0013

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**9.514**	**.8328**	**.0005**	**7.847**	**.0289**	**.0079**	**26.65**	**-.0003**
Stddev	.0002	.038	.0059	.0000	.095	.0001	.0001	.15	.0001
%RSD	31.67	.4039	.7079	7.157	1.205	.2000	.8990	.5804	31.85
#1	.0007	9.531	.8279	.0005	7.875	.0288	.0080	26.52	-.0002
#2	.0003	9.540	.8393	.0005	7.925	.0289	.0078	26.62	-.0003
#3	.0006	9.470	.8312	.0004	7.742	.0289	.0079	26.82	-.0003

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**.0001**	**-.0005**	**3.514**	**.0000**	**.3008**	**.0059**	**-.0012**	**.0032**
Stddev	.0007	.0008	.0029	.015	.001	.0007	.0004	.0008	.0002
%RSD	33.54	682.4	550.7	.4235	3500.	.2338	6.601	65.12	4.730
#1	-.0022	.0010	-.0003	3.528	-.0006	.3001	.0060	-.0004	.0030
#2	-.0014	-.0006	-.0035	3.515	.0008	.3008	.0054	-.0019	.0032
#3	-.0028	.0000	.0023	3.499	-.0002	.3015	.0061	-.0012	.0033

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0045**
Stddev	.0001
%RSD	1.653
#1	.0045
#2	.0044
#3	.0044

Zoom In Zoom Out

Sample Name: MP40827-D1 Acquired: 6/10/2022 20:39:34 Type: Unk
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**804.58**	**1958.3**	**23691.**	**8968.3**
Stddev	1.43	4.8	20.	71.2
%RSD	.17733	.24536	.08369	.79350
#1	802.96	1953.6	23706.	8913.0
#2	805.09	1958.1	23698.	8943.2
#3	805.67	1963.2	23669.	9048.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 20:44:34 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2444**	**38.95**	**1.975**	**1.993**	**1.984**	**39.57**	**1.988**	**1.989**	**2.002**
Stddev	.0001	.11	.001	.005	.007	.38	.001	.002	.003
%RSD	.0499	.2834	.0632	.2381	.3564	.9555	.0699	.1137	.1658
#1	.2446	39.05	1.974	1.995	1.989	39.74	1.986	1.987	2.006
#2	.2443	38.96	1.975	1.988	1.988	39.82	1.988	1.991	2.000
#3	.2445	38.83	1.977	1.997	1.976	39.13	1.989	1.990	2.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.993**	**38.80**	**40.08**	**2.003**	**38.75**	**1.999**	**1.987**	**39.90**	**1.997**
Stddev	.004	.14	.08	.005	.26	.010	.003	.14	.003
%RSD	.1868	.3713	.1922	.2376	.6653	.5051	.1406	.3569	.1492
#1	1.994	38.91	40.17	2.006	38.93	2.008	1.984	40.00	1.994
#2	1.989	38.84	40.02	1.997	38.85	2.002	1.988	39.73	1.997
#3	1.996	38.64	40.06	2.005	38.45	1.988	1.989	39.96	1.999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.963**	**1.963**	**1.972**	**2.057**	**1.981**	**2.011**	**2.006**	**1.971**	**2.019**
Stddev	.007	.007	.003	.004	.004	.036	.002	.005	.005
%RSD	.3751	.3366	.1340	.1961	.2010	1.785	.0847	.2527	.2507
#1	1.967	1.956	1.972	2.053	1.978	2.008	2.008	1.972	2.024
#2	1.954	1.969	1.970	2.057	1.979	2.049	2.005	1.965	2.020
#3	1.967	1.965	1.975	2.061	1.985	1.977	2.005	1.975	2.014
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 6/10/2022 20:44:34 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**1.974**
Stddev	.003
%RSD	.1577
#1	1.977
#2	1.975
#3	1.971
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**785.76**	**2026.5**	**24079.**	**8899.5**
Stddev	2.38	7.0	27.	53.9
%RSD	.30235	.34651	.11278	.60524
#1	786.52	2034.5	24057.	8869.7
#2	787.67	2023.7	24071.	8867.2
#3	783.10	2021.4	24110.	8961.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 20:49:15 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0052**	**-.0006**	**.0000**	**.0000**	**.0012**	**.0000**	**-.0001**	**.0000**
Stddev	.000	.0025	.0012	.000	.000	.0008	.0000	.0001	.000
%RSD	254.1	48.36	196.2	174.2	1789.	67.27	71.16	53.73	1024.
#1	.0001	-.0043	.0007	-.0001	.0000	.0011	.0000	.0000	-.0002
#2	.0000	-.0033	-.0010	.0000	.0000	.0004	.0000	-.0002	.0000
#3	-.0002	-.0080	-.0015	-.0001	.0000	.0020	.0000	-.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0005**	**-.0125**	**-.0004**	**-.0082**	**.0000**	**.0001**	**-.0049**	**-.0001**
Stddev	.000	.0010	.0098	.0002	.0077	.000	.0002	.0046	.0002
%RSD	481.0	200.9	78.53	41.25	94.15	137.9	146.5	94.53	199.7
#1	-.0002	.0002	-.0076	-.0002	-.0165	.0000	.0001	-.0053	.0001
#2	.0001	-.0001	-.0237	-.0005	-.0070	.0000	.0003	-.0092	-.0001
#3	.0000	-.0016	-.0060	-.0005	-.0012	.0000	.0000	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0003**	**.0016**	**.0008**	**-.0002**	**.0000**	**.0001**	**-.0007**	**.0001**
Stddev	.0004	.0010	.0008	.0003	.0004	.0000	.0000	.0006	.0001
%RSD	1301.	300.8	48.70	34.02	182.0	43.22	35.26	87.22	134.9
#1	.0002	-.0012	.0017	.0007	-.0006	.0000	.0001	-.0003	-.0001
#2	-.0004	.0008	.0024	.0011	.0002	.0000	.0001	-.0004	.0002
#3	.0002	-.0006	.0008	.0006	-.0003	.0000	.0000	-.0015	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 6/10/2022 20:49:15 Type: QC
Method: 60102007_COMBO_09222021(v542) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**-.0001**
Stddev	.0001
%RSD	66.03
#1	-.0002
#2	-.0001
#3	-.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**975.57**	**2174.0**	**26184.**	**9056.8**
Stddev	2.98	2.9	44.	88.5
%RSD	.30590	.13475	.16902	.97742
#1	978.48	2177.3	26182.	9102.1
#2	975.70	2171.7	26141.	9113.6
#3	972.52	2173.1	26229.	8954.8

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000205	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000054	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000036	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000625	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000237	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000004	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000016	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	-0.000082	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000035	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	0.000004	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	-0.000005	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000028	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No
Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No
			Fe	0.000006	0.000000	No
			Mo	-0.002189	0.000000	No
			Cu	0.000467	0.000000	No
			Ti	0.000036	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Si	0.000043	0.000000	No
			Ca	0.000012	0.000000	No
			Cr	-0.000260	0.000000	No
			Mg	0.000002	0.000000	No
Sb 206.833 {463}	☒	11	Fe	0.000013	0.000000	No
			Cr	0.011486	0.000000	No
			Mo	-0.002538	0.000000	No
			V	-0.000441	0.000000	No
			Sn	-0.008695	0.000000	No
			Ti	0.000278	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000818	0.000000	No
			Al	0.000005	0.000000	No
			Mn	-0.000133	0.000000	No
			Mg	-0.000002	0.000000	No
Se 196.090 {472}	☒	12	Fe	-0.000052	0.000000	No
			Ca	0.000006	0.000000	No
			Mn	0.000331	0.000000	No
			Mo	0.000111	0.000000	No
			Al	0.000001	0.000000	No
			V	0.000000	0.000000	No
			Zn	0.000000	0.000000	No
			Sr	-0.000111	0.000000	No
			As	0.000125	0.000000	No
			Cd	-0.000250	0.000000	No
			Mg	0.000002	0.000000	No
			Cr	-0.000326	0.000000	No
Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000014	0.000000	No
Sr 407.771 { 83}	☒	2	Ca	0.000004	0.000000	No
			Al	0.000012	0.000000	No
Ti 334.941 {101}	☒	1	Ca	-0.000007	0.000000	No
Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
			Fe	-0.000029	0.000000	No
			Al	0.000000	0.000000	No
			Ba	-0.000051	0.000000	No
			Ti	-0.000648	0.000000	No
			Sb	0.000167	0.000000	No
			Ca	0.000001	0.000000	No
			Cr	0.000340	0.000000	No
			Mg	-0.000002	0.000000	No
			V	0.000015	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000006	0.000000	No
			Cr	-0.003634	0.000000	No
			Mo	-0.009536	0.000000	No
			Ti	0.000303	0.000000	No
			Mn	-0.000333	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
			Al	0.000014	0.000000	No
			Ca	0.000003	0.000000	No
			Fe	-0.000008	0.000000	No
			As	0.001105	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000273	0.549230	0.000000	1.000000
Al 396.152 { 85}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000126	0.137392	0.000000	1.000000
As 189.042 {478}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000458	0.139828	0.000000	1.000000
Ba 455.403 { 74}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.002711	13.013603	0.000000	1.000000
Be 313.042 {108}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000645	8.927219	0.000000	1.000000
Ca 317.933 {106}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.001630	0.184766	0.000000	1.000000
Cd 226.502 {449}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000617	3.919335	0.000000	1.000000
Co 228.616 {447}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000645	2.254058	0.000000	1.000000
Cr 267.716 {126}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000077	0.399334	0.000000	1.000000
Cu 324.754 {104}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.004180	1.007357	0.000000	1.000000
Fe 259.940 {130}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000890	0.164485	0.000000	1.000000
In 230.606 {446}*	6/10/2022 10:48:45	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.010667	0.101313	0.000000	1.000000
Li 670.784 { 50}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.001896	2.366448	0.000000	1.000000
Mg 279.079 {121}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000048	0.022942	0.000000	1.000000
Mn 257.610 {131}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000329	2.121285	0.000000	1.000000
Mo 202.030 {467}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.001012	1.058901	0.000000	1.000000
Na 589.592 { 57}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.008559	0.412352	0.000000	1.000000
Ni 231.604 {445}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000910	1.281232	0.000000	1.000000
Pb 220.353 {453}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000057	1.005758	0.000000	1.000000
Sb 206.833 {463}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000153	0.293951	0.000000	1.000000
Se 196.090 {472}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000074	0.126206	0.000000	1.000000
Si 212.412 {459}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.004504	0.436124	0.000000	1.000000
Sn 189.989 {477}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000495	0.322621	0.000000	1.000000
Sr 407.771 { 83}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.001060	17.161062	0.000000	1.000000
Ti 334.941 {101}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000474	1.915576	0.000000	1.000000
Tl 190.856 {477}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000793	0.460761	0.000000	1.000000
V 292.402 {115}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	-0.000441	0.679460	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	6/10/2022 10:48:45	6/10/2022 10:08:51	Linear	1/Conc	0.000998	1.389643	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999537	0.000057	0.000340	0.001132	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999755	0.000635	0.004589	0.015296	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999942	0.000016	0.001417	0.004723	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999901	0.008640	0.000073	0.000243	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999889	0.000978	0.000036	0.000121	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999970	0.000665	0.001900	0.006332	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999668	0.000748	0.000071	0.000238	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999638	0.001419	0.000131	0.000438	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999816	0.000080	0.000295	0.000985	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999981	0.000103	0.000167	0.000557	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999686	0.001052	0.001270	0.004234	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999961	0.000958	0.013209	0.044031	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.999387	0.000820	0.000546	0.001822	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999977	0.000164	0.011459	0.038196	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999796	0.000547	0.000049	0.000162	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999925	0.000304	0.000184	0.000613	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999725	0.010375	0.003032	0.010108	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999517	0.000832	0.000233	0.000775	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999946	0.000077	0.000780	0.002600	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999950	0.000022	0.001011	0.003369	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999846	0.000023	0.002301	0.007669	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.997589	0.001633	0.000488	0.001626	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999684	0.000189	0.000515	0.001717	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999853	0.003064	0.000033	0.000112	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999922	0.000249	0.000092	0.000305	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999606	0.000135	0.001160	0.003867	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999940	0.000172	0.000226	0.000752	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999680	0.000518	0.000150	0.000500	OK.	1.000000	0.000000	1	0

SGS Orlando

Date:	06/07/22
Time	16:40

[24hr]

Analysts Name:	Adam K
MP Batch ID:	40804
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	22120177	ACC1321	0.05	MU45274
Conc. HCl (B)	4121100	ACC1319	0.2	KU15244
NA	NA	MET7215	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	10	**Therm ID**	6071	**Temp. C**		**Corr. Factor**	-2	**Corrected Observed Temp. C**	-2
pH Paper Lot Number	212719			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2202231

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	3	Matrix Spike(MS)	50	50	Y	
	3	Matrix Spike Dup(MSD)	50	50	Y	
	3	Duplicate(DUP)	50	50	Y	
1(QC) C	3	FA95838-1A	50	50	Y	
2	8	FA95973-9F	50	50	Y	
3	8	FA95973-10F	50	50	Y	
4	8	FA96013-1F	50	50	Y	
5	8	FA96013-2F	50	50	Y	
6	8	FA96013-3F	50	50	Y	
7	8	FA96013-4F	50	50	Y	
8	8	FA96013-5F	50	50	Y	
9	2	FA96171-1A	50	50	Y	
10	1	FA96171-2A	50	50	Y	
11	1	FA96171-3A	50	50	Y	
12	4	FA96096-1	50	50	Y	
13	2	FA96113-1A	50	50	Y	
14	2	FA96113-2FA	50	50	Y	
15	2	FA96113-3FA	50	50	Y	
16	2	FA96113-4FA	50	50	Y	
17	2	FA96113-5FA	50	50	Y	
18	2	FA96113-6FA	50	50	Y	
19	2	FA96113-7FA	50	50	Y	
20	2	FA96113-8FA	50	50	Y	
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

SGS Orlando

Date:	06/10/22
Time	9:30

[24hr]

Analysts Name:	Jordan Cuoco
MP Batch ID:	40826
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	22120177	ACC1316	0.5	KU15244
Conc. HCl (B)	4121100	ACC1319	0.25	KU15244
NA	NA	MET7238	0.25	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	9	**Therm ID**	204	**Temp. C**	94	**Corr. Factor**	-2	**Corrected Observed Temp. C**	92
pH Paper Lot Number	212719			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2202231

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	0	Matrix Spike(MS)	50	50	y	
	0	Matrix Spike Dup(MSD)	50	50	y	
	0	Duplicate(DUP)	50	50	y	
1(QC) C		FA96082-5	50	50	y	
2		FA96082-6	50	50	y	
3		FA96086-2	50	50	y	
4		FA96252-5	50	50	y	
5		FA96257-1	50	50	y	
6		FA96262-1	50	50	y	
7		FA96262-3	50	50	y	
8		FA96266-1	50	50	y	
9		FA96111-2	50	50	y	
10		FA96111-3	50	50	y	
11		FA96111-4	50	50	y	
12		FA96111-5	50	50	y	
13		FA96111-6	50	50	y	
14		FA96111-7	50	50	y	
15		FA96297-1	50	50	y	
16		FA96297-2	50	50	y	
17		FA96171-1B	50	50	y	
18		FA96171-2B	50	50	y	
19		FA96171-3B	50	50	y	
20		FA96198-1	50	50	y	
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP37782/GN91531	2.0	0.0	mg/l	50	51.4	102.8	90-110%
Nitrogen, Nitrate	GP37782/GN91531	0.10	0.0	mg/l	2.5	2.63	105.2	90-110%
Nitrogen, Nitrite	GP37782/GN91531	0.10	0.0	mg/l	2.5	2.56	102.4	90-110%
Sulfate	GP37782/GN91531	2.0	0.0	mg/l	50	51.5	103.0	90-110%

Associated Samples:
Batch GP37782: FA96171-1B
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP37782/GN91531	FA96206-1	mg/l	3.2	50	55.5	104.6	90-110%
Nitrogen, Nitrate	GP37782/GN91531	FA96206-1	mg/l	0.54	2.5	3.2	106.4	90-110%
Nitrogen, Nitrite	GP37782/GN91531	FA96206-1	mg/l	0.040 U	2.5	2.6	104.0	90-110%
Sulfate	GP37782/GN91531	FA96206-1	mg/l	7.5	50	57.6	100.2	90-110%

Associated Samples:
Batch GP37782: FA96171-1B
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP37782/GN91531	FA96206-1	mg/l	3.2	50	55.5	0.0	15%
Nitrogen, Nitrate	GP37782/GN91531	FA96206-1	mg/l	0.54	2.5	3.2	0.0	15%
Nitrogen, Nitrite	GP37782/GN91531	FA96206-1	mg/l	0.040 U	2.5	2.6	0.0	15%
Sulfate	GP37782/GN91531	FA96206-1	mg/l	7.5	50	57.6	0.0	15%

Associated Samples:
Batch GP37782: FA96171-1B
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022060701.CSV Date Analyzed: 06/02/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN91531
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:53	GN91531-STD1	1		STDA
11:19	GN91531-STD2	1		STDB
11:41	GN91531-STD3	1		STDC
12:02	GN91531-STD4	1		STDD
12:23	GN91531-STD5	1		STDE
12:44	GN91531-STD6	1		STDF
13:06	GN91531-STD7	1		STDG
13:27	GN91531-STD8	1		STDH
13:48	GN91531-STD9	1		STDI
14:10	GN91531-STD10	1		STDJ
14:31	GN91531-STD11	1		STDK
14:53	GN91531-ICV1	1		
15:14	GN91531-ICB1	1		
15:36	GN91531-CRI1	1		
16:22	GN91531-CCV1	1		
17:00	GN91531-CCB1	1		
10:32	GN91531-CCV2	1		
11:19	GP37782-B1	1		
11:40	GP37782-MB1	1		
12:01	FA96206-1	1		(sample used for QC only; not part of login FA96171)
12:22	GP37782-S1	1		
12:43	GP37782-S2	1		
13:24	ZZZZZZ	1		
13:46	ZZZZZZ	1		
14:28	GN91531-CCV3	1		
14:49	GN91531-CCB2	1		
15:10	ZZZZZZ	20		
15:30	ZZZZZZ	50		
15:51	ZZZZZZ	100		
16:12	ZZZZZZ	100		
16:33	ZZZZZZ	100		
16:54	ZZZZZZ	100		
17:14	FA96218-6	100		(sample used for QC only; not part of login FA96171)

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022060701.CSV Date Analyzed: 06/02/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN91531
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:35	GP37782-S3	100		
17:56	GP37782-S4	100		
18:17	FA96171-1B	1		
18:38	GN91531-CCV4	1		
18:59	GN91531-CCB3	1		
19:20	ZZZZZZ	1		
19:41	ZZZZZZ	1		
20:02	ZZZZZZ	5		
20:23	ZZZZZZ	5		
20:44	ZZZZZZ	5		
21:05	ZZZZZZ	5		
21:26	GP37783-MB1F	1		
21:47	GP37783-B1F	1		
22:08	FA96029-21	5		(sample used for QC only; not part of login FA96171)
22:29	GP37783-S1	5		
22:50	GN91531-CCV5	1		
23:11	GN91531-CCB4	1		
23:32	GP37783-S2	5		
23:53	ZZZZZZ	5		
00:14	ZZZZZZ	5		
00:35	ZZZZZZ	5		
00:56	ZZZZZZ	5		
01:17	ZZZZZZ	5		
01:38	ZZZZZZ	5		
01:59	GN91531-CCV6	1		
02:21	GN91531-CCB5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA96171
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022060701.CSV Date Analyzed: 06/02/22 Methods: EPA 300/SW846 9056A
Run ID: GN91531 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN91531-ICV1	Chloride	52.2	2.0	0.80	50	104.4	90-110
GN91531-ICV1	Sulfate	50.8	2.0	0.60	50	101.6	90-110
GN91531-ICB1	Chloride	0.80 U	2.0	0.80			
GN91531-ICB1	Sulfate	0.60 U	2.0	0.60			
GN91531-CRI1	Chloride	1.13	2.0	0.80	1	113.0	50-150
GN91531-CRI1	Sulfate	0.846	2.0	0.60	1	84.6	50-150
GN91531-CCV1	Chloride	50.3	2.0	0.80	50	100.6	90-110
GN91531-CCV1	Sulfate	49.9	2.0	0.60	50	99.8	90-110
GN91531-CCB1	Chloride	0.80 U	2.0	0.80			
GN91531-CCB1	Sulfate	0.60 U	2.0	0.60			
GN91531-CCV2	Chloride	50.6	2.0	0.80	50	101.2	90-110
GN91531-CCV2	Sulfate	50.1	2.0	0.60	50	100.2	90-110
GN91531-CCV3	Chloride	50.6	2.0	0.80	50	101.2	90-110
GN91531-CCV3	Sulfate	49.0	2.0	0.60	50	98.0	90-110
GN91531-CCB2	Chloride	0.80 U	2.0	0.80			
GN91531-CCB2	Sulfate	0.60 U	2.0	0.60			
GN91531-CCV4	Chloride	50.7	2.0	0.80	50	101.4	90-110
GN91531-CCV4	Sulfate	49.1	2.0	0.60	50	98.2	90-110
GN91531-CCB3	Chloride	0.80 U	2.0	0.80			
GN91531-CCB3	Sulfate	0.60 U	2.0	0.60			
GN91531-CCV5	Chloride	50.8	2.0	0.80	50	101.6	90-110
GN91531-CCV5	Sulfate	49.7	2.0	0.60	50	99.4	90-110
GN91531-CCB4	Chloride	0.80 U	2.0	0.80			
GN91531-CCB4	Sulfate	0.60 U	2.0	0.60			
GN91531-CCV6	Chloride	50.8	2.0	0.80	50	101.6	90-110
GN91531-CCV6	Sulfate	49.5	2.0	0.60	50	99.0	90-110
GN91531-CCB5	Chloride	0.80 U	2.0	0.80			
GN91531-CCB5	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

General Chemistry

Raw Data

IC STANDARDS PREP LOG

STANDARD NAME	ANALYTES	STOCK MFG. #	STOCK LOT #	STOCK EXP. DATE	STOCK CONC. (mg/l)	VOLUME ADDED (ml)	TOTAL VOLUME (ml)	STANDARD CONC. (mg/l)	PREP DATE	INITIALS	STD LOT #	EXP. DATE
Std10	PO_4	WC1929	Spex	4-30-23	1000	0.5	50	10	6-1-22	JR	ICV13753	6-2-22
↓	Br	WC1855	SpectroPure	7-1-22	↓	1	↓	20	↓	↓	↓	↓
CCV	NO_2/NO_3	ICV13747/8	Ref	6-2-22	100	5	200	2.5	6-2-22	JR	ICV13754	6-2-22
	SO_4	WC18697	LGC	1-6-23	1000	10		50				
	Cl	91	Fisher	10-1-23		↓		↓				
	F	48	LGC	8-26-22		0.5		2.5				
↓	Br	↓ 55	SpectroPure	7-1-22	↓	2	↓	10			↓	
Std10	NO_2/NO_3	ICV13747/8	Ref	6-2-22	100	5	50	↓			ICV13755	
	SO_4	WC18697	LGC	1-6-23	1000			100				
	Cl	91	Fisher	10-1-23		↓		↓				
	F	48	LGC	8-26-22		0.5		10				
↓	Br	↓ 55	SpectroPure	7-1-22	↓	1	↓	20	↓	↓	↓	↓
$1°NO_2$	NO_2	WC1874	Absolute	11-1-22	1000	2.5	25	100	6-3-22	JR	ICV13756	6-4-22
$1°NO_3$	NO_3	42	Ricca	7-31-23							7	
$2°NO_2$	NO_2	77	Absolute	11-10-23							8	
$2°NO_3$	NO_3	↓ 99	↓	11-3-24	↓	↓	↓	↓			9	
CCV	NO_2/NO_3	ICV13756/7	Ref	6-4-22	100	5	200	2.5			ICV13760	
	SO_4	WC18697	LGC	1-6-23	1000	10		50				
	Cl	91	Fisher	10-1-23		↓		↓				
	F	48	LGC	8-26-22		0.2		2.5				
↓	Br	↓ 55	Spectro Pure	4-30-23	↓	2	↓	10			↓	
B1	NO_2/NO_3	ICV13758/9	Ref	6-4-22	100	1.25	50	2.5			ICV13761	
	SO_4	GN33313	↓	6-8-22	1000	2.5		50				
	Cl	↓ 41	↓	↓	↓	↓		↓				
	F	WC1893	Labchem	12-28-23		0.125		2.5				
↓	Br	GN33315	Ref	6-8-22	↓	0.5	↓	10	↓	↓	↓	↓
$1°NO_2$	NO_2	WC1874	Absolute	7-31-23	1000	2.5	25	100	6-7-22	JR	ICV13762	6-8-22
$1°NO_3$	NO_3	42	Ricca	11-1-22							3	
$2°NO_2$	NO_2	77	Absolute	11-10-23							4	
$2°NO_3$	NO_3	↓ 99	↓	11-3-24	↓	↓	↓	↓			5	
CCV	NO_2/NO_3	ICV13762/3	Ref	6-8-22	100	5	200	2.5			ICV13766	
	SO_4	WC18697	LGC	1-6-23	1000	10		50				
	Cl	91	Fisher	10-1-23		↓		↓				
	F	48	LGC	8-26-22		0.5		2.5				
↓	Br	↓ 55	SpectroPure	7-1-22	↓	2	↓	10	↓	↓	↓	↓

IC STANDARDS PREP LOG

STANDARD NAME	ANALYTES	STOCK MFG. #	STOCK LOT #	STOCK EXP. DATE	STOCK CONC. (mg/l)	VOLUME ADDED (ml)	TOTAL VOLUME (ml)	STANDARD CONC. (mg/l)	PREP DATE	INITIALS	STD LOT #	EXP. DATE
B1	NO_2/NO_3	IC01374/5	Ref	6-8-22	100	1.25	50	2.5	6-7-22	JR	IC01374E7	6-8-22
	SO_4	GN33313	↓	↓	1000	2.5		50				
	Cl	↓ 4	↓	↓		↓		↓				
	F	WC18013	Lachem	12-28-23		0.125		2.5				
	Br	GN33315	Ref	6-8-22	↓	0.5	↓	10	↓	↓	↓	↓

JR 6/7/22

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

Date:	6-7-22 @ 10:05
Analyst:	JR
Instrument:	#4
Inst. File Name:	4202206070 1.csv

Prep Batchs:	377882/3
Analytical Batch:	91531
Calibration Date:	6/2/22
Pump pressure:	9.00MPa

Vial lot#	686254-E 23469
Cap lot#	—
Syringe lot#	—
Filter lot#	—

Standards	
ICAL:	—
ICV:	—
CCV:	1C013766
QC:	↓ 7

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed F	Cl	NO2	Br	NO3	SO4	Results OK or Dilution Needed (1) F	Cl	NO2	Br	NO3	SO4	Comments
Rinse																		(1) Ok unless marked
CW	-	AQ	N/A	1	N		—	—		—	—							
MBI	-						—	—		—	—			FT				
BI	-						—	—		—	—							
MBI (2)	-						—	—		—	—							(2) Re-run; large baseline shift in first MBI contributed to the NO3 peak.
FA96206-1	3		(3)				—	—		—								
-1S1							—	—		—	—							
-1S2							—	—		—	—							
(4) -2				10			—	—		—								(3) Dilutions made from historical results.
-3				1			—	—		—								
-4							—	—		—								
-5							—	—		—								(4) Re-run after CCV/CCB for dilution
CW	-		-				—	—		—	—							
CCB	-		-	6			—	—		—	—							
FA96218-1	2		(3)	50			—			—	—							(5) Not running at 1x due to large unknown peak at the beginning of the sample.
-2				100														
-3																		
-4																		
-5																		
-6																		
-6S3							—	—		—	—							
-6S4							—	—		—	—							
FA96171-1B	1		368µS	1			—				—							
CW	-		-				—	—		—	—							
CCB	-		-				—	—		—	—							
FA96111-7	5		187µS				—				—							
FA96102-7	7		2mS								—							
(5) FA96102-9			5.1mS	5							—							
-10			3.1mS								—							

Rev 0116 LM

SGS Accutest - Orlando

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

Date: 6/7/22 (cont.)	
Analyst:	
Instrument:	
Inst. File Name:	

Prep Batchs:	
Analytical Batch:	
Calibration Date:	
Pump pressure:	

Vial lot#	
Cap lot#	
Syringe lot#	
Filter lot#	

Standards	
ICAL:	
ICV:	
CCV:	
QC:	

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed F	Cl	NO2	Br	NO3	SO4	Results OK or Dilution Needed F	Cl	NO2	Br	NO3	SO4	Comments
(1) FA96170-7	7	AQ	9.hS	5	N													(1) Not running at 1x due to large unknown peak at the beginning of the sample.
FA96206-5	3	↓	(2)	5	↓		—											(2) Dilutions made from historical results.
MBLF	1	SO	-	1	1 (3)		—			—	—					F↑		(3) pre-diluted samples are clear and pre-filtering is not necessary. All samples run through 0.2 micron filter during analysis.
BLF	↓	↓	-	↓														
FA96230-21			-	5												ER		
↓ -21SL	↓	↓	-	↓														
CW	-	AQ	-	1														
CW3	-	↓	-	↓														
FA96229-21S2	1	SO	-	5														
-22	2	↓	-	1												ER		
-23	1		-													↓		
-24	↓		-															
-25	2		-															
-26	↓		-															
-27	↓	↓	-	↓														
CW	-	AQ	-	1														
CW3	-	↓	-	↓	↓ ↓	↓				↓	↓							

ja 6/8/22

IC Soil Prep

Method: SW846 9056A

Analyst: JL
GP 37783/6

Date (mm/dd/yy): 6/7/22
Time (24:00): 13:53

	Sample ID	Bottle #	Weight g	Final Vol ml
MB	MBIF	-	5.16	50
SB	BIF	-	4.99	
MS1	FA96029-21	1	5.14	
MSD1	-21		5.17	
QC1	-21		5.07	
2	-22	2	5.19	
3	-23	1	5.01	
4	-24		5.10	
5	-25	2	5.26	
6	-26		5.12	
7	-27		5.01	
8				
9				
10				
MS2				
MSD2				
QC2				
12				
13				
14				
15				
16				
17				
18				
19				
20				

JL 6/7/22

Balance ID AdvPro1

REAGENTS
Spike Lot # 1C013767
Cup Lot # 2202231
SRM Lot # 29273875
Vial Lot # 686254-E23469
Syringe Lot # 19M0410
Filter Lot # 2806324132

Comments: GP37786 was arc-run for NO_3.

Analyst's Signature: [signature] Date: 6/7/22

Reveiwer's Signature: Date:

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Sample data

Ident	STDK	
Sample type	Standard 10	
Determination start	2022-06-02 14:31:31 UTC-4	
Method	SGS In-Vial Anions191003A	
Operator	JR	

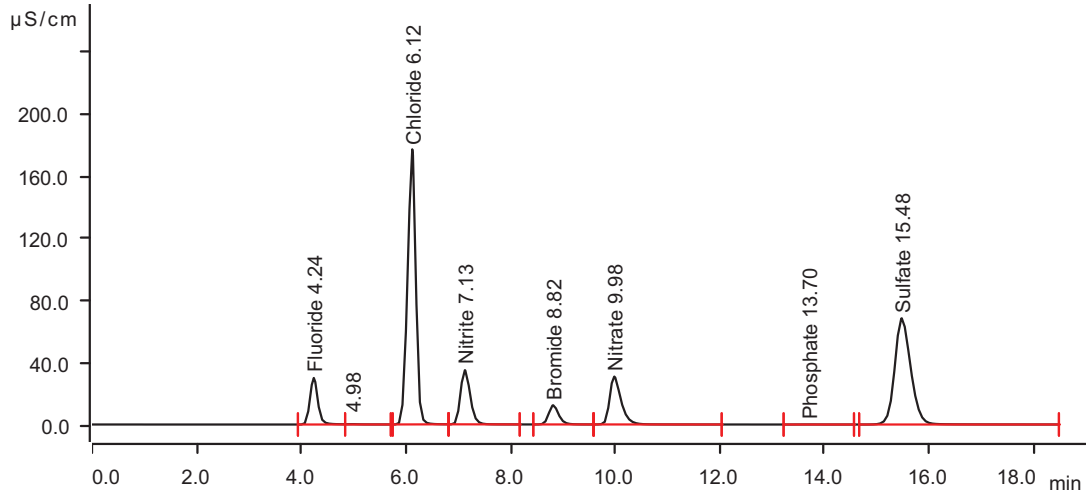
Anions

Data source	Conductivity detector 1 (930 Compact IC Flex 1)	
Channel	Conductivity	
Recording time	18.5	min
Integration	Automatically	
Column type	Metrosep A Supp 5 - 150/4.0	
Eluent composition	not defined	
Flow	0.700	mL/min
Maximum flow monitored	yes	
Pressure	9.06	MPa
Maximum pressure monitored	yes	
Temperature	30.0	°C

MagIC Net

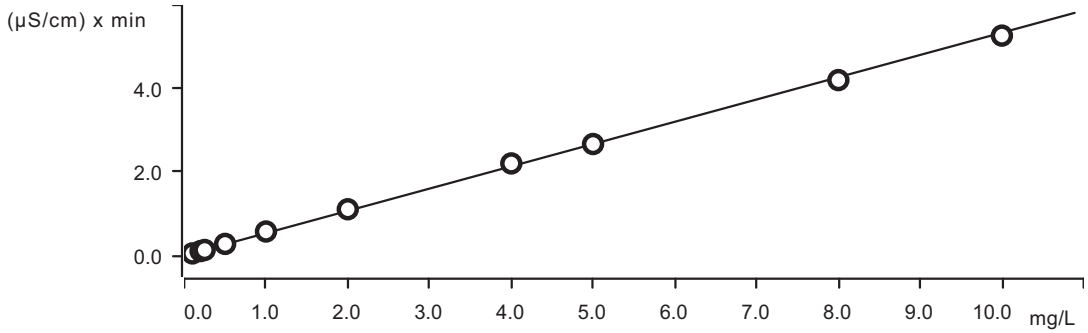
2022-06-04 9:31:31

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration mg/L	Component name
1	4.240	5.2677	29.810	9.868	Fluoride
2	4.980	0.0616	0.206	invalid	
3	6.122	32.0825	176.110	102.678	Chloride
4	7.127	7.4960	34.677	10.136	Nitrite
5	8.815	2.7394	12.288	21.130	Bromide
6	9.982	7.7646	30.674	10.453	Nitrate
7	13.698	0.0110	0.028	11.244	Phosphate
8	15.477	24.1865	68.001	101.851	Sulfate

Fluoride (Anions)



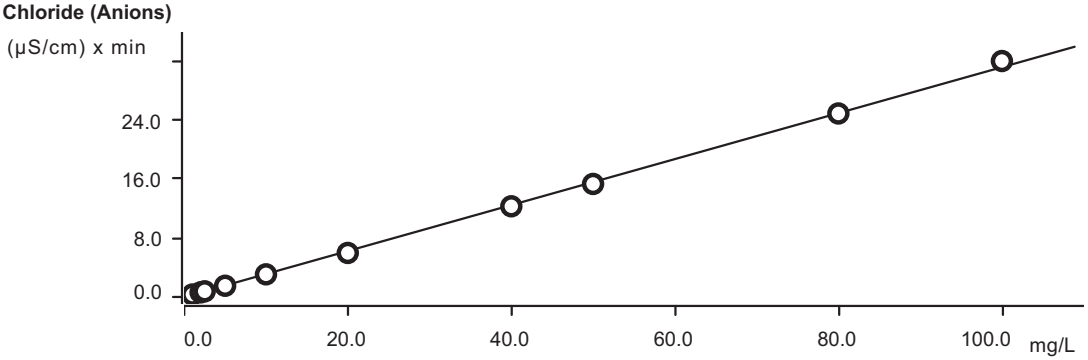
Function: . . . . . *A = 3.48160E-3 + 0.0266728× Q*

Relative standard deviation . . . . . *2.837539 %*

Correlation coefficient *0.999718*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0519	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.1077	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1338	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.2797	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.5766	STDF	2022-06-02 12:44:58 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	1.1094	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	2.2072	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	2.6715	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	4.2025	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	5.2677	STDK	2022-06-02 14:31:31 UTC-4

Chloride (Anions)



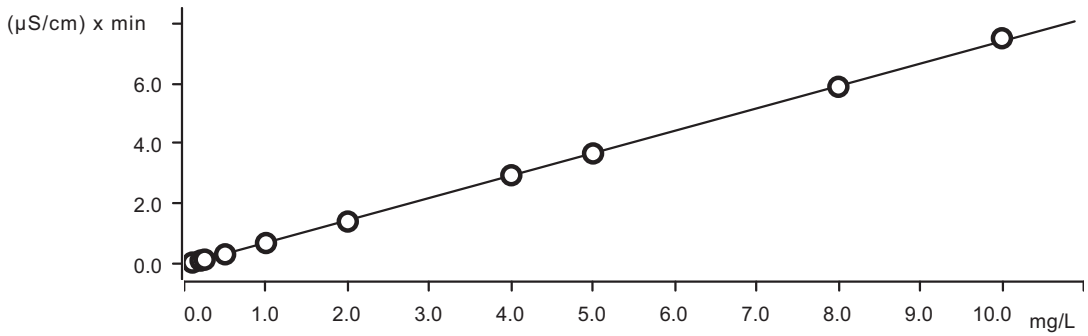
Function: . . . . . *A = - 0.0846962 + 0.0156642× Q*

Relative standard deviation . . . . . *3.420692 %*

Correlation coefficient *0.999622*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	1.000	20.0	1.0	1.0	0.2553	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	2.000	20.0	1.0	1.0	0.5433	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	2.500	20.0	1.0	1.0	0.6869	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	5.000	20.0	1.0	1.0	1.4455	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	10.000	20.0	1.0	1.0	3.0023	STDF	2022-06-02 12:44:58 UTC-4
Standard 6	1	20.000	20.0	1.0	1.0	5.9191	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	40.000	20.0	1.0	1.0	12.2788	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	50.000	20.0	1.0	1.0	15.3256	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	80.000	20.0	1.0	1.0	24.9329	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	100.000	20.0	1.0	1.0	32.0825	STDK	2022-06-02 14:31:31 UTC-4

Nitrite (Anions)



Function: . . . . . *A = - 0.0244348 + 0.0370960× Q*

Relative standard deviation . . . . . *1.793527 %*

Correlation coefficient *0.999895*

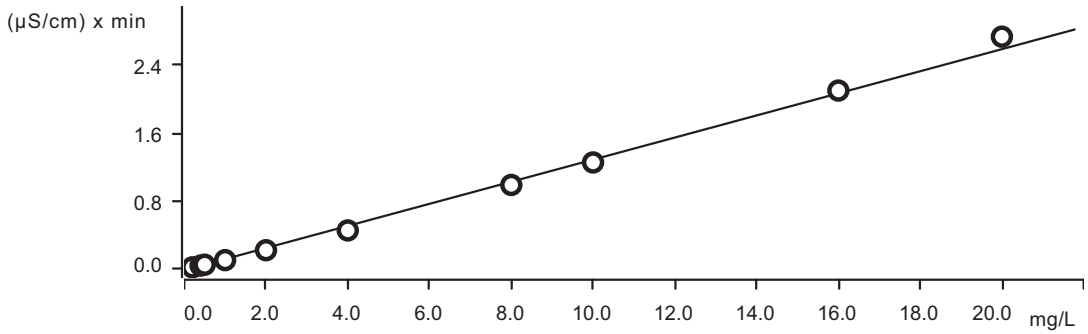
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0580	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.1223	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1544	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.3308	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.7050	STDF	2022-06-02 12:44:58 UTC-4

MagIC Net

2022-06-04 9:31:31

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	2.000	20.0	1.0	1.0	1.4173	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	2.9526	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	3.6757	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	5.8854	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	7.4960	STDK	2022-06-02 14:31:31 UTC-4

Bromide (Anions)



Function: . . . . . *A = - 0.0129775 + 6.51283E-3× Q*

Relative standard deviation . . . . . *7.546442 %*

Correlation coefficient *0.998268*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	0.200	20.0	1.0	1.0	0.0199	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	0.400	20.0	1.0	1.0	0.0405	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	0.500	20.0	1.0	1.0	0.0508	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	1.000	20.0	1.0	1.0	0.1047	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	2.000	20.0	1.0	1.0	0.2215	STDF	2022-06-02 12:44:58 UTC-4
Standard 6	1	4.000	20.0	1.0	1.0	0.4548	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	8.000	20.0	1.0	1.0	0.9911	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	10.000	20.0	1.0	1.0	1.2565	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	16.000	20.0	1.0	1.0	2.1041	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	20.000	20.0	1.0	1.0	2.7394	STDK	2022-06-02 14:31:31 UTC-4

MagIC Net

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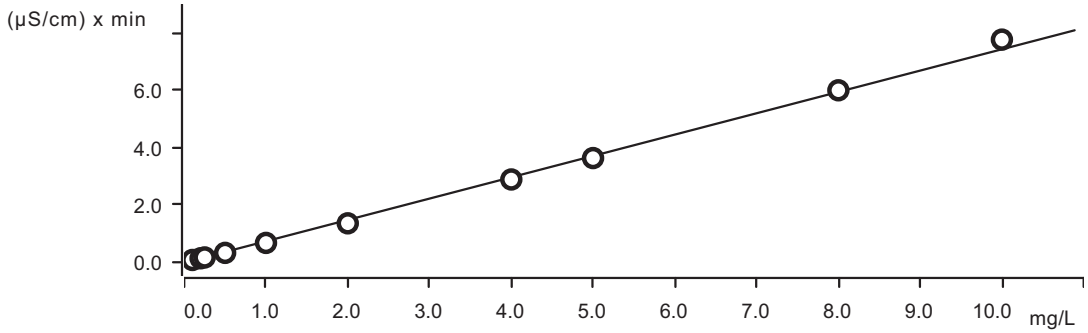
Nitrate (Anions)



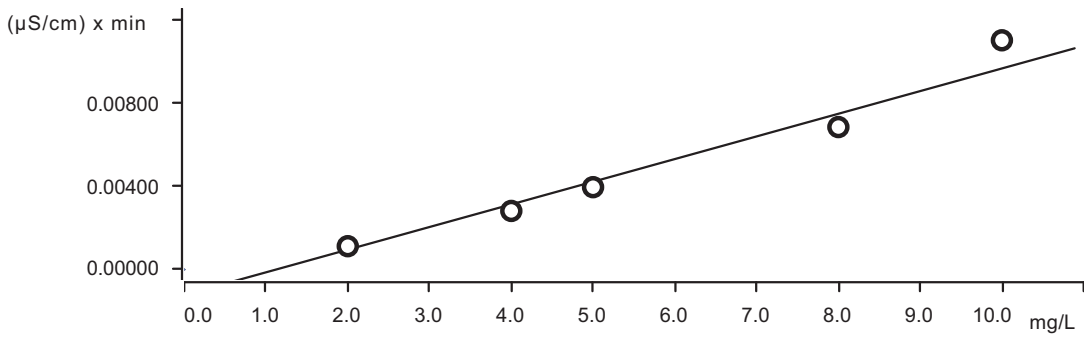
Function: . . . . . *A = - 0.0399263 + 0.0373301× Q*

Relative standard deviation . . . . . *5.967490 %*

Correlation coefficient *0.998903*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0515	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.1101	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1400	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.3002	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.6489	STDF	2022-06-02 12:44:58 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	1.3342	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	2.8692	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	3.6180	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	5.9903	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	7.7646	STDK	2022-06-02 14:31:31 UTC-4

Phosphate (Anions)



MagIC Net

2022-06-04 9:31:31

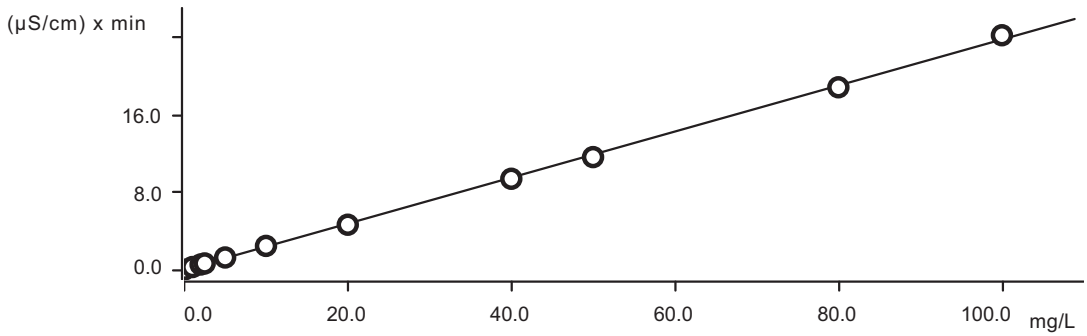
Function: . . . . . A = - 1.21821E-3 + 5.42451E-5× Q

Relative standard deviation . . . . . 17.504179 %

Correlation coefficient 0.979595

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	n. d.	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	n. d.	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	n. d.	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	n. d.	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	n. d.	STDF	2022-06-02 12:44:58 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	0.0011	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	0.0028	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	0.0039	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	0.0068	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	0.0110	STDK	2022-06-02 14:31:31 UTC-4

Sulfate (Anions)



Function: . . . . . A = 1.98329E-3 + 0.0118725× Q

Relative standard deviation . . . . . 2.891501 %

Correlation coefficient 0.999757

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0015	STDA	2022-06-02 10:53:30 UTC-4
Standard 1	1	1.000	20.0	1.0	1.0	0.2715	STDB	2022-06-02 11:19:43 UTC-4
Standard 2	1	2.000	20.0	1.0	1.0	0.5316	STDC	2022-06-02 11:41:04 UTC-4
Standard 3	1	2.500	20.0	1.0	1.0	0.6419	STDD	2022-06-02 12:02:25 UTC-4
Standard 4	1	5.000	20.0	1.0	1.0	1.2578	STDE	2022-06-02 12:23:41 UTC-4
Standard 5	1	10.000	20.0	1.0	1.0	2.4527	STDF	2022-06-02 12:44:58 UTC-4

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	20.000	20.0	1.0	1.0	4.6362	STDG	2022-06-02 13:06:16 UTC-4
Standard 7	1	40.000	20.0	1.0	1.0	9.3791	STDH	2022-06-02 13:27:35 UTC-4
Standard 8	1	50.000	20.0	1.0	1.0	11.6133	STDI	2022-06-02 13:48:53 UTC-4
Standard 9	1	80.000	20.0	1.0	1.0	18.8172	STDJ	2022-06-02 14:10:11 UTC-4
Standard 10	1	100.000	20.0	1.0	1.0	24.1865	STDK	2022-06-02 14:31:31 UTC-4

MagIC Net

Summary Report

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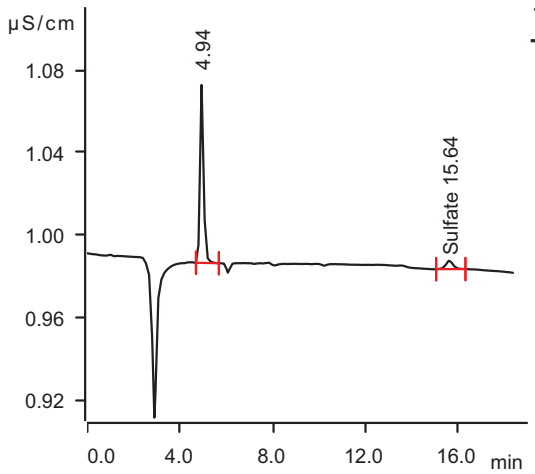
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDA
Sample type . . . . . Standard 100
Determination start 2022-06-02 10:53:30
Dilution factor 1.00

Anions

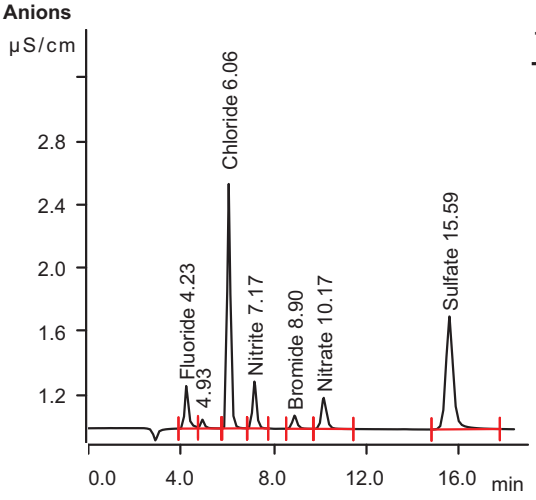


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.64	Sulfate	0.0015	-0.002	-0.002

Sample data

Ident . . . . . STDB
Sample type . . . . . Standard 1
Determination start 2022-06-02 11:19:43
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	0.0519	0.091	0.091
6.06	Chloride	0.2553	1.085	1.085
7.17	Nitrite	0.0580	0.111	0.111
8.90	Bromide	0.0199	0.252	0.252
10.17	Nitrate	0.0515	0.122	0.122
15.59	Sulfate	0.2715	1.135	1.135

MagIC Net

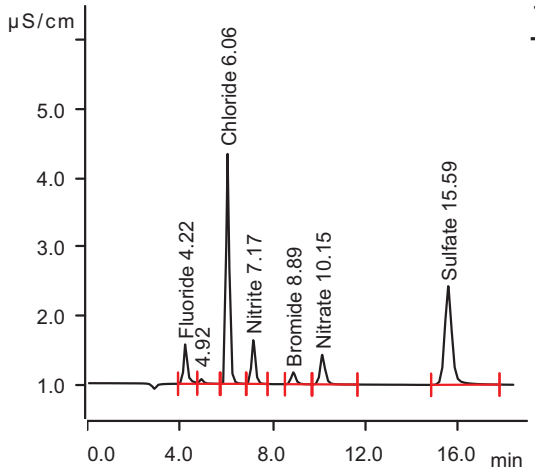
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDC
Sample type . . . . . Standard 2
Determination start 2022-06-02 11:41:04
Dilution factor 1.00

Anions

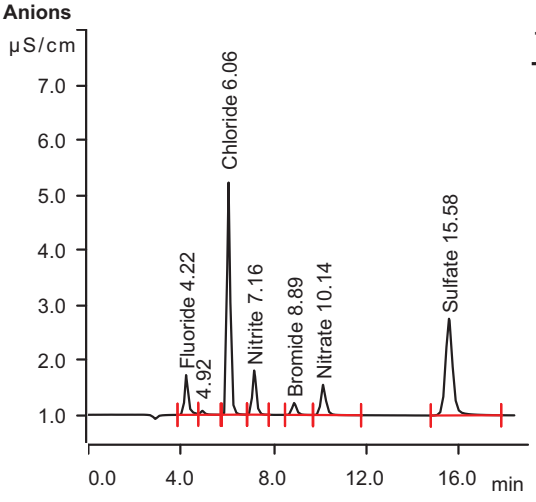


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	0.1077	0.195	0.195
6.06	Chloride	0.5433	2.005	2.005
7.17	Nitrite	0.1223	0.198	0.198
8.89	Bromide	0.0405	0.411	0.411
10.15	Nitrate	0.1101	0.201	0.201
15.59	Sulfate	0.5316	2.231	2.231

Sample data

Ident . . . . . STDD
Sample type . . . . . Standard 3
Determination start 2022-06-02 12:02:25
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	0.1338	0.244	0.244
6.06	Chloride	0.6869	2.463	2.463
7.16	Nitrite	0.1544	0.241	0.241
8.89	Bromide	0.0508	0.490	0.490
10.14	Nitrate	0.1400	0.241	0.241
15.58	Sulfate	0.6419	2.695	2.695

MagIC Net

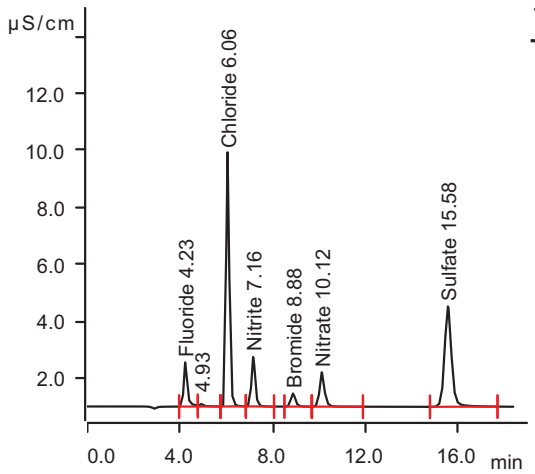
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDE
Sample type . . . . . Standard 4
Determination start 2022-06-02 12:23:41
Dilution factor 1.00

Anions

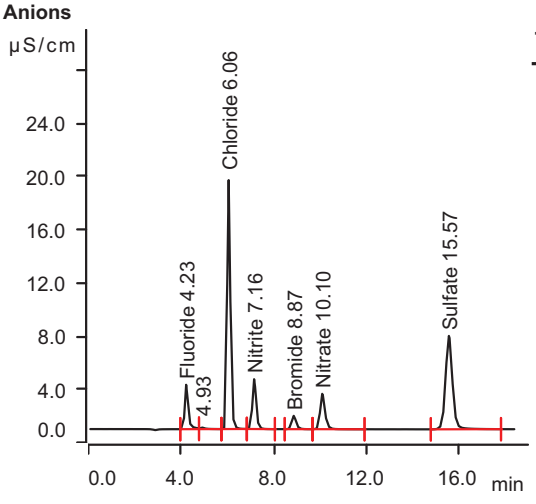


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	0.2797	0.518	0.518
6.06	Chloride	1.4455	4.884	4.884
7.16	Nitrite	0.3308	0.479	0.479
8.88	Bromide	0.1047	0.904	0.904
10.12	Nitrate	0.3002	0.456	0.456
15.58	Sulfate	1.2578	5.289	5.289

Sample data

Ident . . . . . STDF
Sample type . . . . . Standard 5
Determination start 2022-06-02 12:44:58
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	0.5766	1.074	1.074
6.06	Chloride	3.0023	9.854	9.854
7.16	Nitrite	0.7050	0.983	0.983
8.87	Bromide	0.2215	1.800	1.800
10.10	Nitrate	0.6489	0.923	0.923
15.57	Sulfate	2.4527	10.321	10.321

MagIC Net

Summary Report

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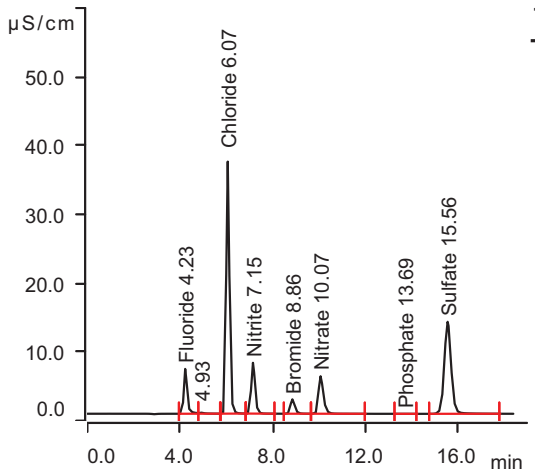
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDG
Sample type . . . . . Standard 6
Determination start 2022-06-02 13:06:16
Dilution factor 1.00

Anions

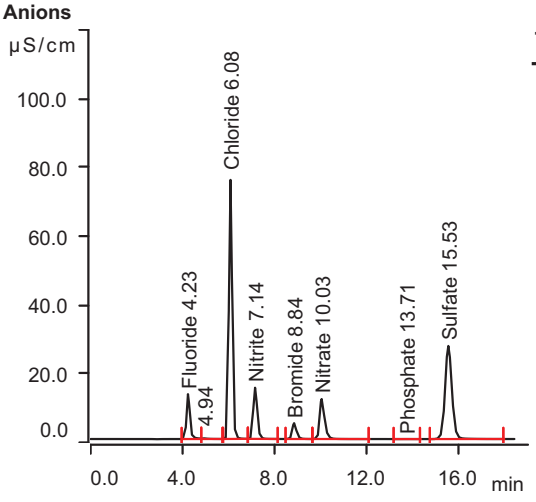


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	1.1094	2.073	2.073
6.07	Chloride	5.9191	19.164	19.164
7.15	Nitrite	1.4173	1.943	1.943
8.86	Bromide	0.4548	3.591	3.591
10.07	Nitrate	1.3342	1.840	1.840
13.69	Phosphate	0.0011	2.153	2.153
15.56	Sulfate	4.6362	19.516	19.516

Sample data

Ident . . . . . STDH
Sample type . . . . . Standard 7
Determination start 2022-06-02 13:27:35
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	2.2072	4.131	4.131
6.08	Chloride	12.2788	39.464	39.464
7.14	Nitrite	2.9526	4.013	4.013
8.84	Bromide	0.9911	7.708	7.708
10.03	Nitrate	2.8692	3.896	3.896
13.71	Phosphate	0.0028	3.710	3.710
15.53	Sulfate	9.3791	39.491	39.491

MagIC Net

Summary Report

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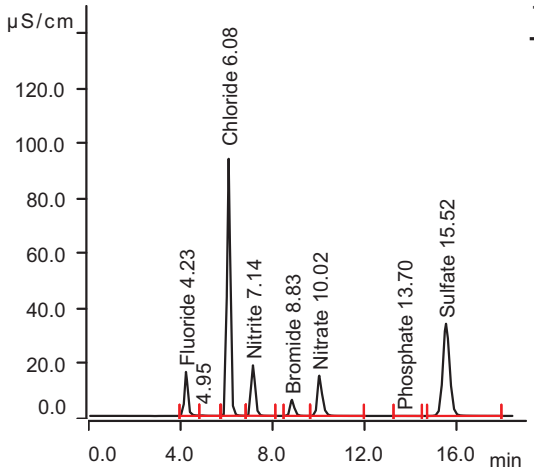
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDI
Sample type . . . . . Standard 8
Determination start 2022-06-02 13:48:53
Dilution factor 1.00

Anions

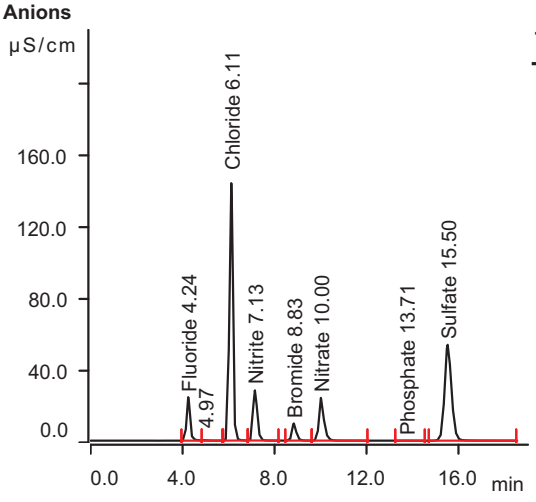


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	2.6715	5.001	5.001
6.08	Chloride	15.3256	49.190	49.190
7.14	Nitrite	3.6757	4.987	4.987
8.83	Bromide	1.2565	9.746	9.746
10.02	Nitrate	3.6180	4.899	4.899
13.70	Phosphate	0.0039	4.759	4.759
15.52	Sulfate	11.6133	48.900	48.900

Sample data

Ident . . . . . STDJ
Sample type . . . . . Standard 9
Determination start 2022-06-02 14:10:11
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.24	Fluoride	4.2025	7.871	7.871
6.11	Chloride	24.9329	79.856	79.856
7.13	Nitrite	5.8854	7.966	7.966
8.83	Bromide	2.1041	16.253	16.253
10.00	Nitrate	5.9903	8.077	8.077
13.71	Phosphate	0.0068	7.412	7.412
15.50	Sulfate	18.8172	79.238	79.238

MagIC Net

Summary Report

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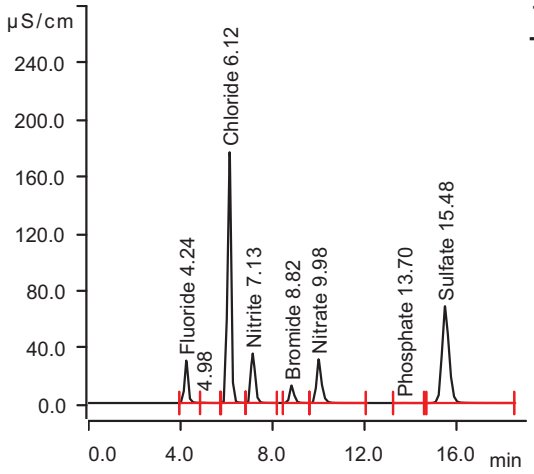
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDK
Sample type . . . . . Standard 10
Determination start 2022-06-02 14:31:31
Dilution factor 1.00

Anions

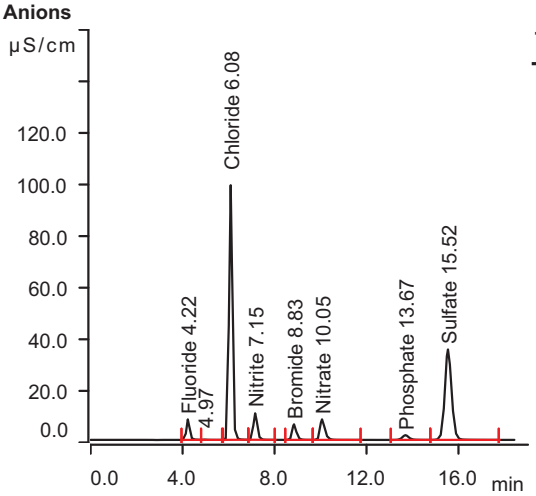


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.24	Fluoride	5.2677	9.868	9.868
6.12	Chloride	32.0825	102.678	102.678
7.13	Nitrite	7.4960	10.136	10.136
8.82	Bromide	2.7394	21.130	21.130
9.98	Nitrate	7.7646	10.453	10.453
13.70	Phosphate	0.0110	11.244	11.244
15.48	Sulfate	24.1865	101.851	101.851

Sample data

Ident ICV
Sample type . . . . . Sample
Determination start 2022-06-02 14:53:07
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	1.2901	2.412	2.412
6.08	Chloride	16.2597	52.171	52.171
7.15	Nitrite	1.9763	2.697	2.697
8.83	Bromide	1.2931	10.027	10.027
10.05	Nitrate	1.9454	2.659	2.659
13.67	Phosphate	0.6167	569.587	569.587
15.52	Sulfate	12.0629	50.793	50.793

MagIC Net

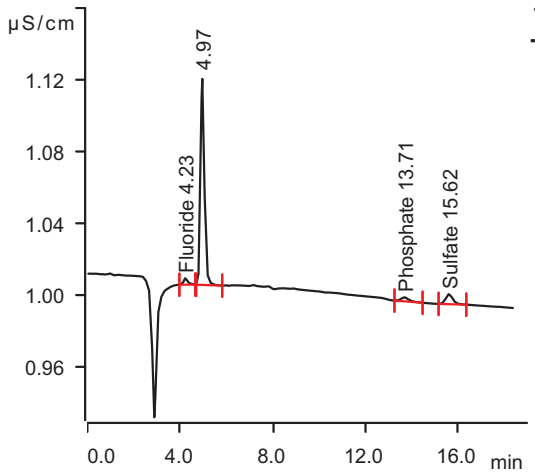
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident . . . . . ICB
Sample type . . . . . Sample
Determination start 2022-06-02 15:14:44
Dilution factor 1.00

Anions

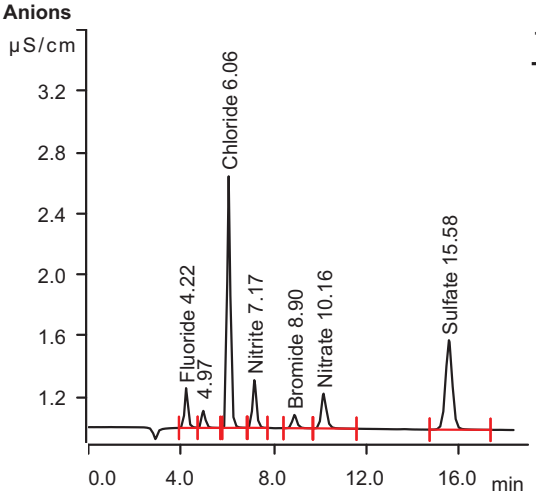


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.23	Fluoride	0.0007	-0.005	-0.005
13.71	Phosphate	0.0009	1.932	1.932
15.62	Sulfate	0.0020	0.000	0.000

Sample data

Ident . . . . . CRI
Sample type . . . . . Sample
Determination start 2022-06-02 15:36:16
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	0.0432	0.074	0.074
6.06	Chloride	0.2686	1.128	1.128
7.17	Nitrite	0.0607	0.115	0.115
8.90	Bromide	0.0206	0.258	0.258
10.16	Nitrate	0.0595	0.133	0.133
15.58	Sulfate	0.2029	0.846	0.846

MagIC Net

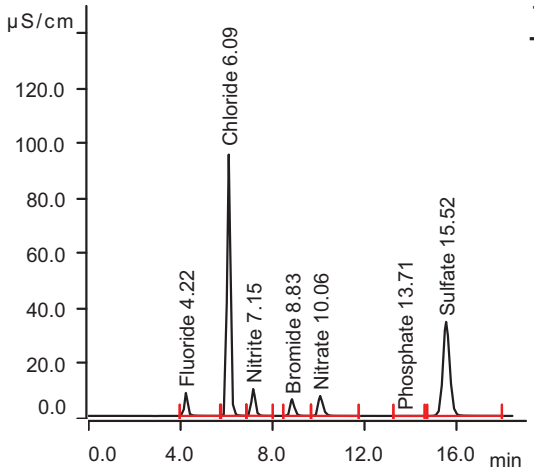
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-02 16:22:53
Dilution factor 1.00

Anions

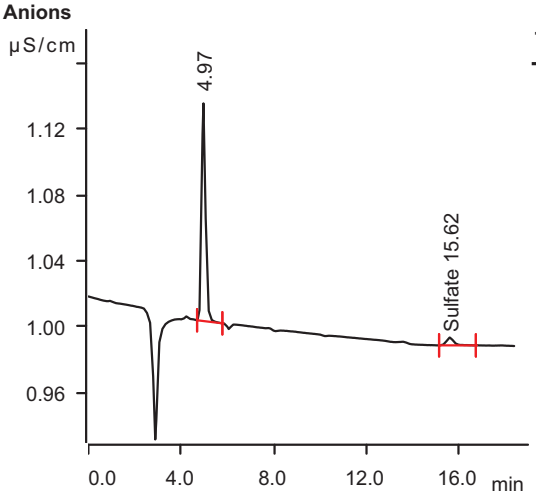


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	1.3869	2.593	2.593
6.09	Chloride	15.6863	50.341	50.341
7.15	Nitrite	1.8706	2.554	2.554
8.83	Bromide	1.3109	10.164	10.164
10.06	Nitrate	1.7748	2.431	2.431
13.71	Phosphate	0.0037	4.579	4.579
15.52	Sulfate	11.8535	49.912	49.912

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-06-02 17:00:42
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.62	Sulfate	0.0018	-0.001	-0.001

MagIC Net

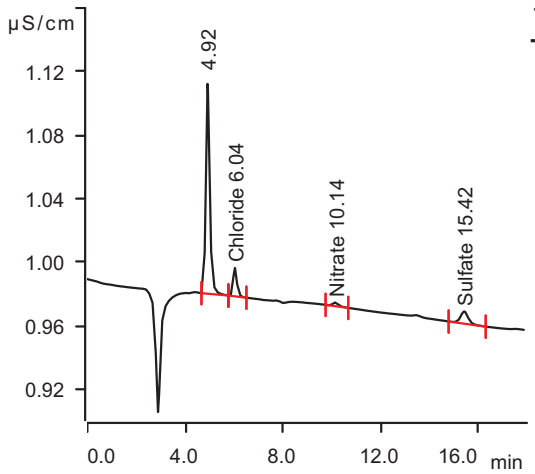
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident . . . . . Rinse
Sample type . . . . . Sample
Determination start 2022-06-07 10:05:56
Dilution factor 1.00

Anions

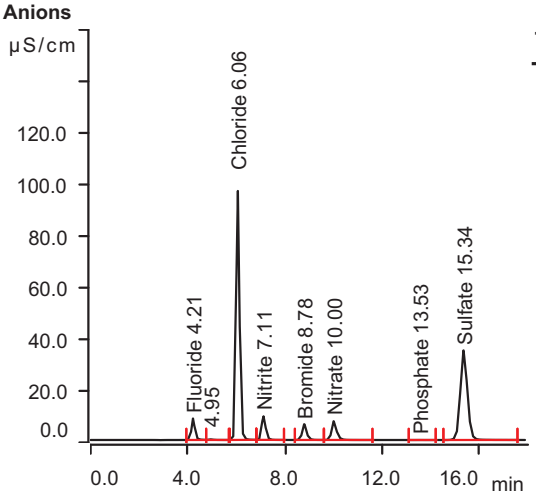


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.04	Chloride	0.0031	0.280	0.280
10.14	Nitrate	0.0007	0.054	0.054
15.42	Sulfate	0.0029	0.004	0.004

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-07 10:32:09
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.3395	2.505	2.505
6.06	Chloride	15.7827	50.649	50.649
7.11	Nitrite	1.7280	2.362	2.362
8.78	Bromide	1.3158	10.201	10.201
10.00	Nitrate	1.7684	2.422	2.422
13.53	Phosphate	0.0024	3.356	3.356
15.34	Sulfate	11.8907	50.068	50.068

MagIC Net

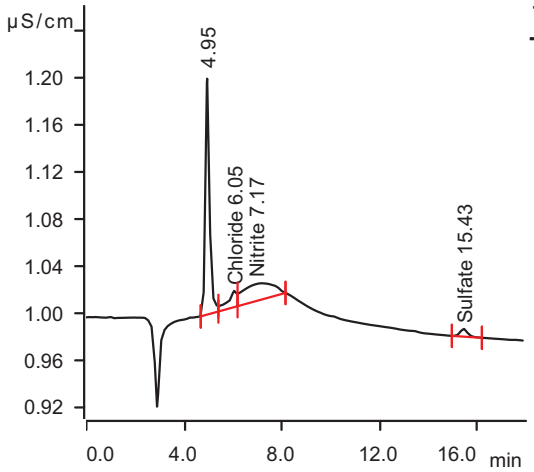
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-06-07 10:57:57
Dilution factor 1.00

Anions

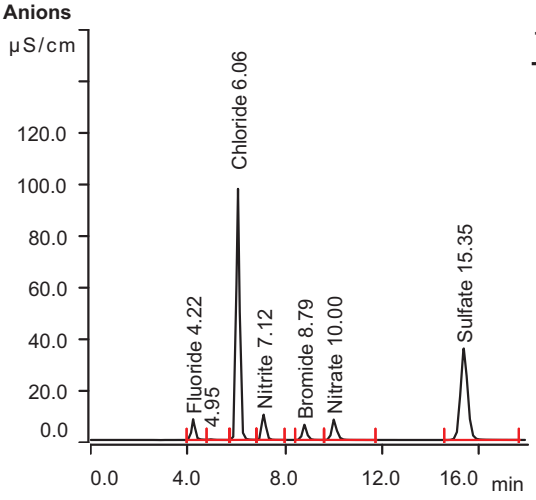


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.05	Chloride	0.0059	0.289	0.289
7.17	Nitrite	0.0210	0.061	0.061
15.43	Sulfate	0.0024	0.002	0.002

Sample data

Ident B1
Sample type . . . . . Sample
Determination start 2022-06-07 11:19:03
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.22	Fluoride	1.3457	2.516	2.516
6.06	Chloride	16.0147	51.389	51.389
7.12	Nitrite	1.8727	2.557	2.557
8.79	Bromide	1.2683	9.837	9.837
10.00	Nitrate	1.9257	2.633	2.633
15.35	Sulfate	12.2293	51.494	51.494

MagIC Net

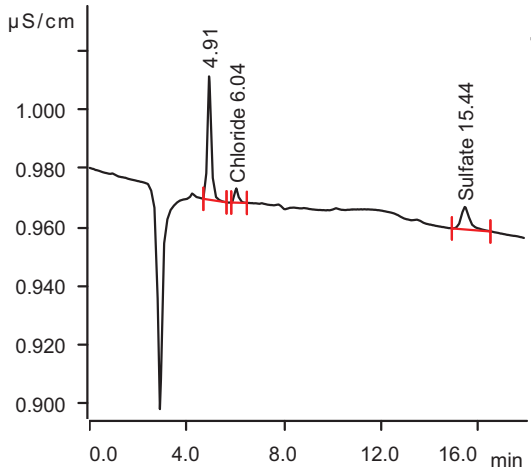
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-06-07 11:40:05
Dilution factor 1.00

Anions

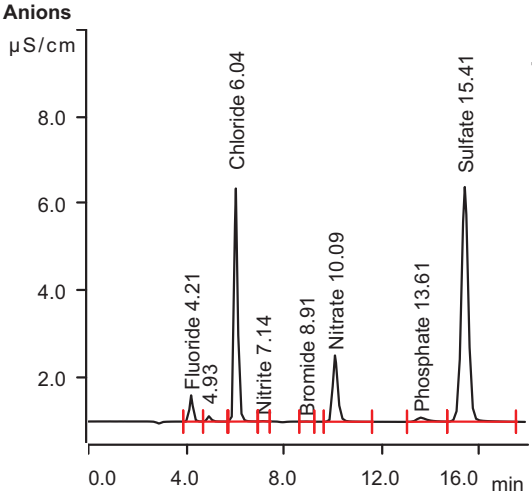


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.04	Chloride	0.0009	0.273	0.273
15.44	Sulfate	0.0032	0.005	0.005

Sample data

Ident FA96206-1
Sample type . . . . . Sample
Determination start 2022-06-07 12:01:05
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0973	0.176	0.176
6.04	Chloride	0.9085	3.170	3.170
7.14	Nitrite	0.0015	0.035	0.035
8.91	Bromide	0.0008	0.106	0.106
10.09	Nitrate	0.3640	0.541	0.541
13.61	Phosphate	0.0478	45.157	45.157
15.41	Sulfate	1.7738	7.462	7.462

MagIC Net

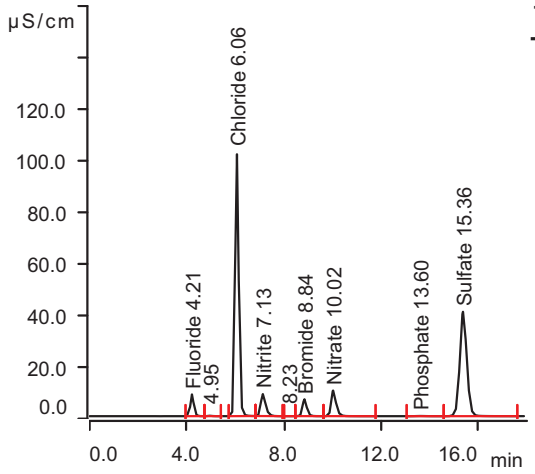
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96206-1S1
Sample type . . . . . Sample
Determination start 2022-06-07 12:22:07
Dilution factor 1.00

Anions

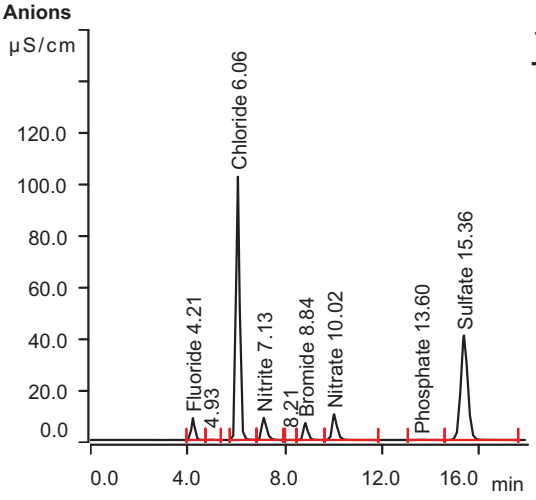


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.3336	2.493	2.493
6.06	Chloride	17.3035	55.503	55.503
7.13	Nitrite	1.9234	2.625	2.625
8.84	Bromide	1.3238	10.263	10.263
10.02	Nitrate	2.3615	3.216	3.216
13.60	Phosphate	0.0371	35.286	35.286
15.36	Sulfate	13.6689	57.557	57.557

Sample data

Ident FA96206-1S2
Sample type . . . . . Sample
Determination start 2022-06-07 12:43:08
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.3337	2.494	2.494
6.06	Chloride	17.3068	55.514	55.514
7.13	Nitrite	1.9245	2.627	2.627
8.84	Bromide	1.3244	10.267	10.267
10.02	Nitrate	2.3623	3.218	3.218
13.60	Phosphate	0.0383	36.455	36.455
15.36	Sulfate	13.6715	57.568	57.568

MagIC Net

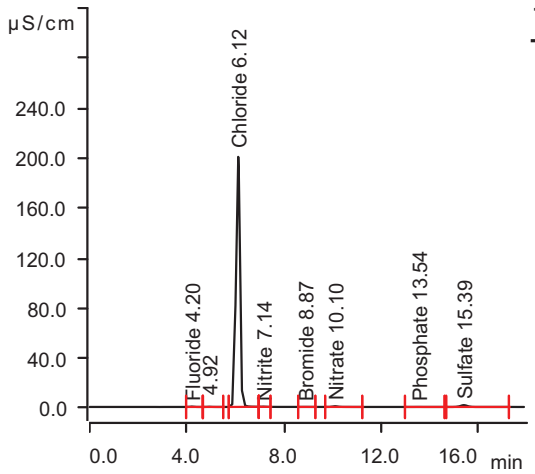
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96206-2
Sample type . . . . . Sample
Determination start 2022-06-07 13:04:10
Dilution factor 10.00

Anions

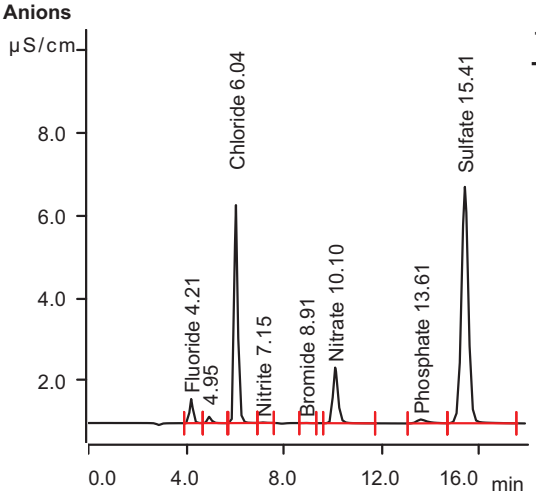


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.20	Fluoride	0.0502	0.088	0.876
6.12	Chloride	37.3098	119.363	1193.631
7.14	Nitrite	0.0254	0.067	0.672
8.87	Bromide	0.0044	0.134	1.336
10.10	Nitrate	0.1394	0.240	2.402
13.54	Phosphate	0.0107	11.029	110.291
15.39	Sulfate	0.4821	2.022	20.219

Sample data

Ident FA96206-3
Sample type . . . . . Sample
Determination start 2022-06-07 13:24:57
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0934	0.169	0.169
6.04	Chloride	0.8932	3.121	3.121
7.15	Nitrite	0.0031	0.037	0.037
8.91	Bromide	0.0009	0.106	0.106
10.10	Nitrate	0.3228	0.486	0.486
13.61	Phosphate	0.0470	44.428	44.428
15.41	Sulfate	1.8774	7.898	7.898

MagIC Net

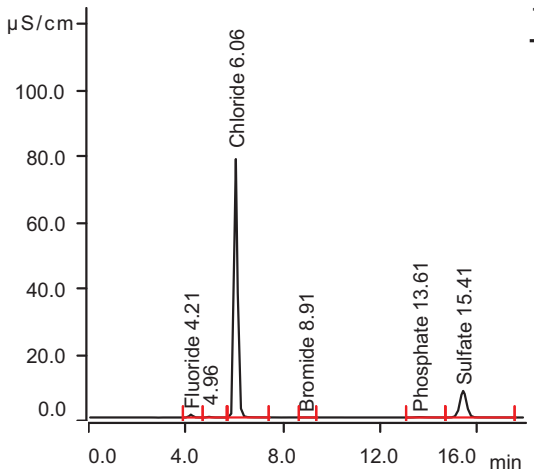
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96206-4
Sample type . . . . . Sample
Determination start 2022-06-07 13:46:02
Dilution factor 1.00

Anions

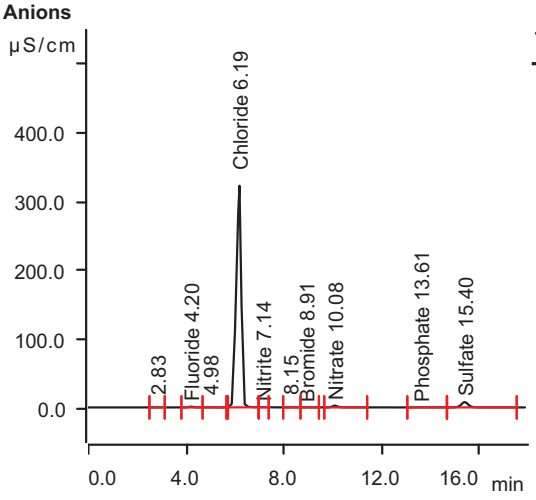


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.1380	0.252	0.252
6.06	Chloride	13.2946	42.707	42.707
8.91	Bromide	0.0026	0.120	0.120
13.61	Phosphate	0.0487	45.975	45.975
15.41	Sulfate	2.6328	11.079	11.079

Sample data

Ident FA96206-5
Sample type . . . . . Sample
Determination start 2022-06-07 14:07:02
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.20	Fluoride	0.1919	0.353	0.353
6.19	Chloride	75.9899	242.830	242.830
7.14	Nitrite	0.0313	0.075	0.075
8.91	Bromide	0.0106	0.181	0.181
10.08	Nitrate	0.6153	0.878	0.878
13.61	Phosphate	0.0519	48.925	48.925
15.40	Sulfate	2.5586	10.767	10.767

MagIC Net

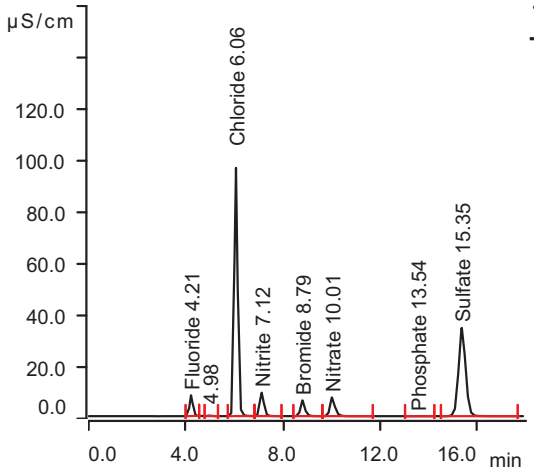
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-07 14:28:05
Dilution factor 1.00

Anions

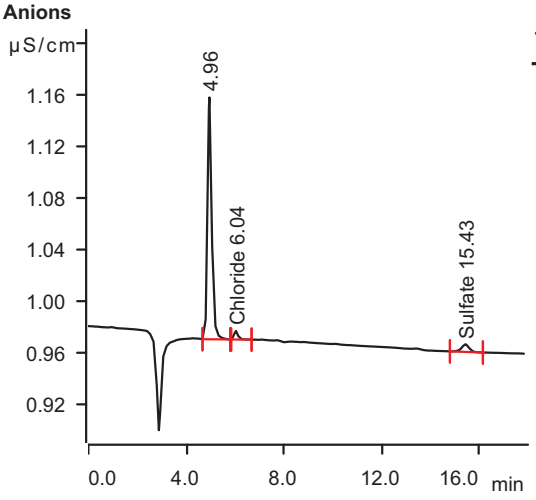


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.2153	2.272	2.272
6.06	Chloride	15.7660	50.595	50.595
7.12	Nitrite	1.7293	2.364	2.364
8.79	Bromide	1.3156	10.200	10.200
10.01	Nitrate	1.7704	2.425	2.425
13.54	Phosphate	0.0028	3.707	3.707
15.35	Sulfate	11.6306	48.973	48.973

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-06-07 14:49:12
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.04	Chloride	0.0012	0.274	0.274
15.43	Sulfate	0.0021	0.001	0.001

MagIC Net

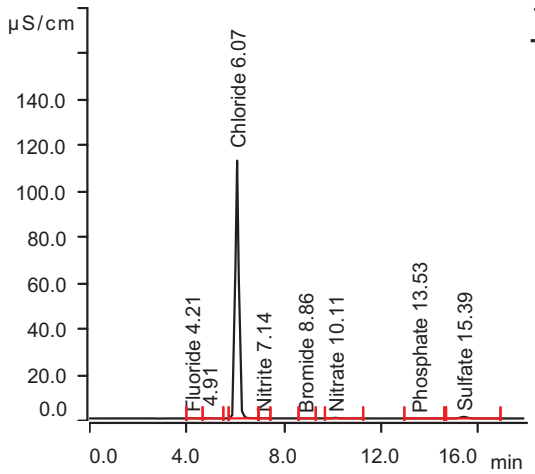
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96206-2
Sample type . . . . . Sample
Determination start 2022-06-07 15:10:12
Dilution factor 20.00

Anions

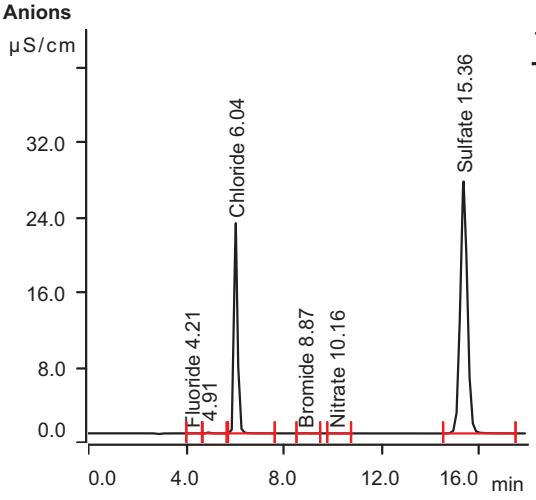


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0248	0.040	0.798
6.07	Chloride	18.6884	59.924	1198.472
7.14	Nitrite	0.0121	0.049	0.984
8.86	Bromide	0.0022	0.116	2.329
10.11	Nitrate	0.0663	0.142	2.845
13.53	Phosphate	0.0054	6.103	122.058
15.39	Sulfate	0.2305	0.962	19.249

Sample data

Ident FA96218-1
Sample type . . . . . Sample
Determination start 2022-06-07 15:30:58
Dilution factor 50.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0024	-0.002	-0.101
6.04	Chloride	3.5883	11.724	586.205
8.87	Bromide	0.0032	0.124	6.222
10.16	Nitrate	0.0009	0.055	2.731
15.36	Sulfate	9.0484	38.098	1904.901

MagIC Net

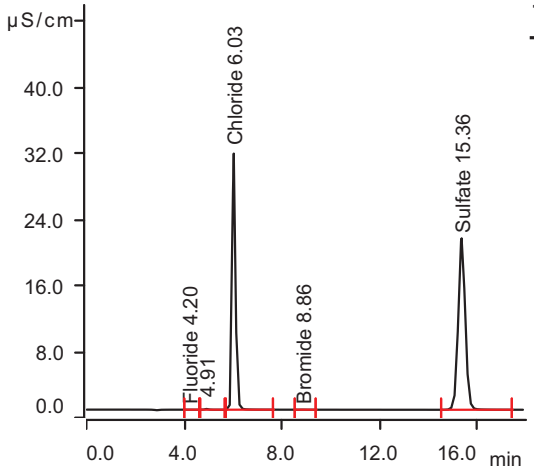
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96218-2
Sample type . . . . . Sample
Determination start 2022-06-07 15:51:43
Dilution factor 100.00

Anions

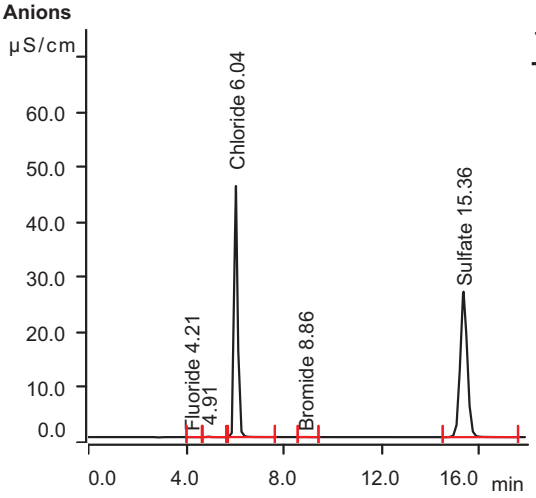


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.20	Fluoride	0.0005	-0.006	-0.554
6.03	Chloride	4.9415	16.044	1604.357
8.86	Bromide	0.0024	0.118	11.783
15.36	Sulfate	6.9477	29.251	2925.130

Sample data

Ident FA96218-3
Sample type . . . . . Sample
Determination start 2022-06-07 16:12:29
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0012	-0.004	-0.424
6.04	Chloride	7.3361	23.687	2368.728
8.86	Bromide	0.0036	0.127	12.689
15.36	Sulfate	8.9081	37.507	3750.733

MagIC Net

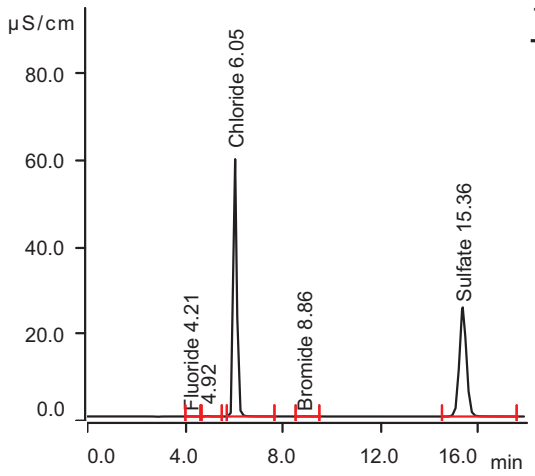
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96218-4
Sample type . . . . . Sample
Determination start 2022-06-07 16:33:14
Dilution factor 100.00

Anions

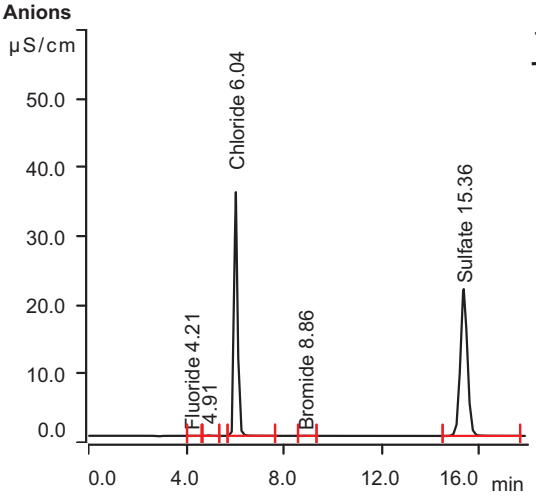


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0014	-0.004	-0.388
6.05	Chloride	9.5462	30.742	3074.173
8.86	Bromide	0.0077	0.159	15.903
15.36	Sulfate	8.4551	35.599	3559.938

Sample data

Ident FA96218-5
Sample type . . . . . Sample
Determination start 2022-06-07 16:54:02
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0004	-0.006	-0.569
6.04	Chloride	5.6477	18.298	1829.765
8.86	Bromide	0.0022	0.117	11.673
15.36	Sulfate	7.1494	30.101	3010.075

MagIC Net

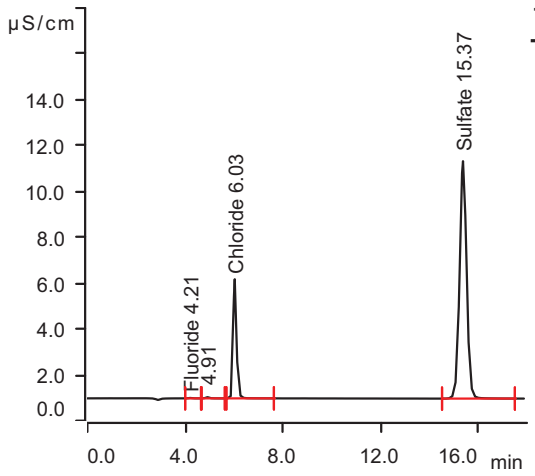
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96218-6
Sample type . . . . . Sample
Determination start 2022-06-07 17:14:46
Dilution factor 100.00

Anions

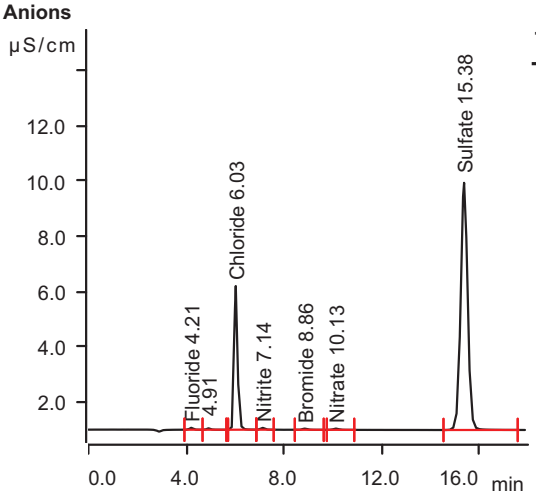


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0030	-0.001	-0.083
6.03	Chloride	0.8315	2.924	292.437
15.37	Sulfate	3.4382	14.471	1447.132

Sample data

Ident FA96218-6S3
Sample type . . . . . Sample
Determination start 2022-06-07 17:35:32
Dilution factor 100.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0118	0.016	1.567
6.03	Chloride	0.8328	2.929	292.874
7.14	Nitrite	0.0127	0.050	5.010
8.86	Bromide	0.0100	0.177	17.651
10.13	Nitrate	0.0120	0.070	6.950
15.38	Sulfate	2.9771	12.530	1252.951

MagIC Net

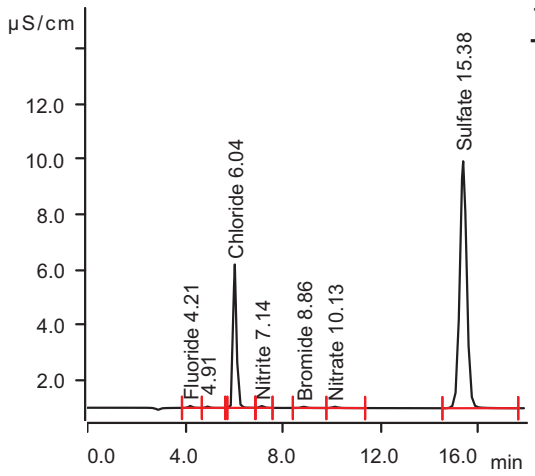
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96218-6S4
Sample type . . . . . Sample
Determination start 2022-06-07 17:56:16
Dilution factor 100.00

Anions

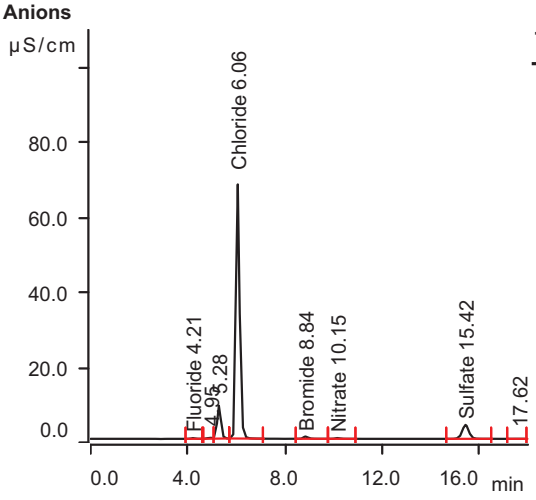


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0121	0.016	1.608
6.04	Chloride	0.8268	2.910	290.959
7.14	Nitrite	0.0127	0.050	4.999
8.86	Bromide	0.0102	0.178	17.782
10.13	Nitrate	0.0123	0.070	6.998
15.38	Sulfate	2.9771	12.529	1252.944

Sample data

Ident FA96171-1B
Sample type . . . . . Sample
Determination start 2022-06-07 18:17:03
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0327	0.055	0.055
6.06	Chloride	11.7887	37.900	37.900
8.84	Bromide	0.1380	1.159	1.159
10.15	Nitrate	0.0487	0.119	0.119
15.42	Sulfate	1.2055	5.068	5.068

MagIC Net

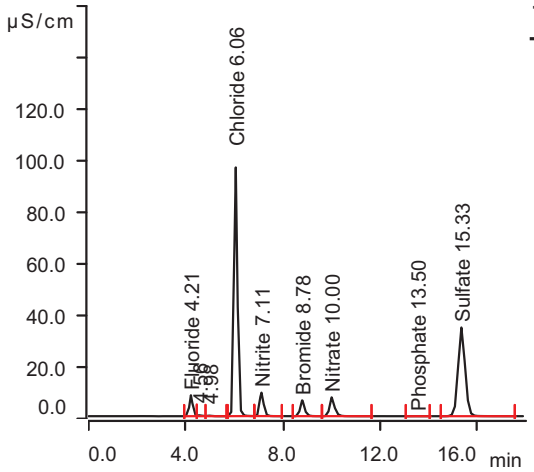
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-07 18:38:11
Dilution factor 1.00

Anions

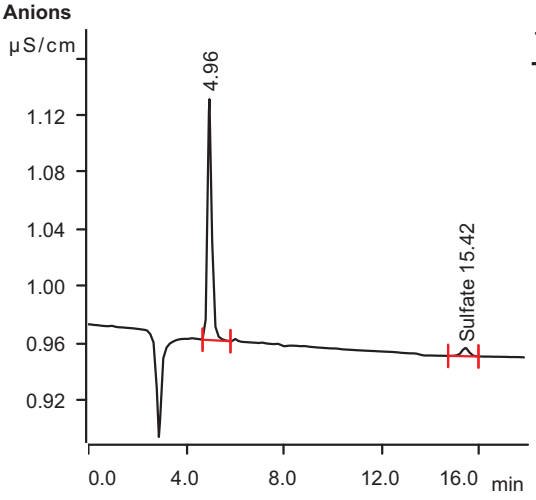


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.2464	2.330	2.330
6.06	Chloride	15.7857	50.658	50.658
7.11	Nitrite	1.7300	2.365	2.365
8.78	Bromide	1.3172	10.212	10.212
10.00	Nitrate	1.7730	2.428	2.428
13.50	Phosphate	0.0015	2.509	2.509
15.33	Sulfate	11.6578	49.087	49.087

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-06-07 18:59:23
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.42	Sulfate	0.0021	0.001	0.001

MagIC Net

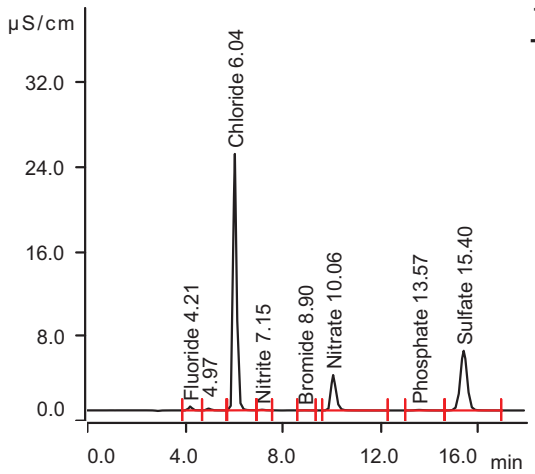
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96111-7
Sample type . . . . . Sample
Determination start 2022-06-07 19:20:26
Dilution factor 1.00

Anions

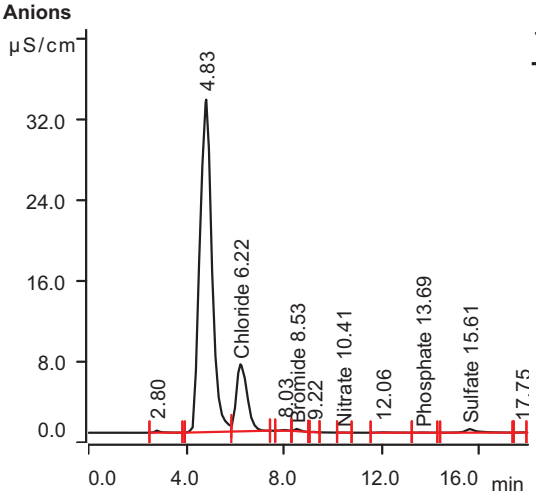


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0610	0.108	0.108
6.04	Chloride	3.9937	13.018	13.018
7.15	Nitrite	0.0117	0.049	0.049
8.90	Bromide	0.0018	0.114	0.114
10.06	Nitrate	0.7939	1.117	1.117
13.57	Phosphate	0.0220	21.391	21.391
15.40	Sulfate	1.8416	7.747	7.747

Sample data

Ident FA96102-7
Sample type . . . . . Sample
Determination start 2022-06-07 19:41:37
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.22	Chloride	3.4178	11.180	11.180
8.53	Bromide	0.0595	0.556	0.556
10.41	Nitrate	0.0014	0.055	0.055
13.69	Phosphate	0.0068	7.402	7.402
15.61	Sulfate	0.2021	0.843	0.843

MagIC Net

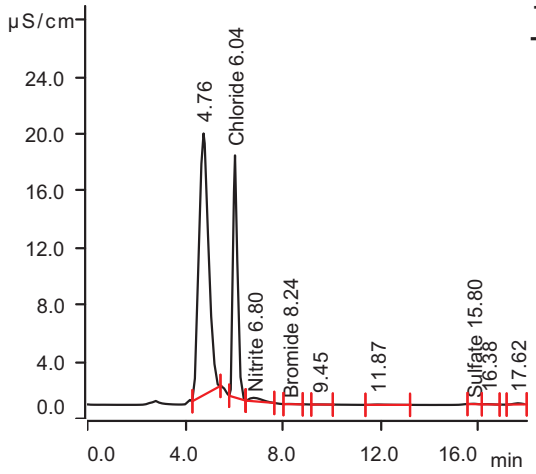
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96102-9
Sample type . . . . . Sample
Determination start 2022-06-07 20:02:43
Dilution factor 5.00

Anions

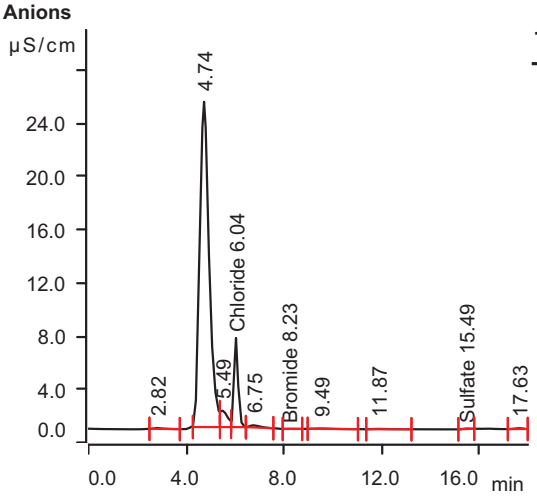


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.04	Chloride	3.4853	11.395	56.977
6.80	Nitrite	0.1450	0.228	1.142
8.24	Bromide	0.0063	0.148	0.740
15.80	Sulfate	0.0076	0.024	0.119

Sample data

Ident FA96102-10
Sample type . . . . . Sample
Determination start 2022-06-07 20:23:33
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.04	Chloride	1.2209	4.167	20.837
8.23	Bromide	0.0037	0.128	0.641
15.49	Sulfate	0.0098	0.033	0.164

MagIC Net

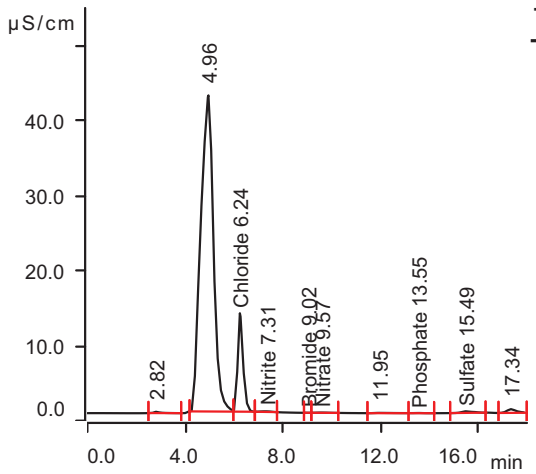
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96170-7
Sample type . . . . . Sample
Determination start 2022-06-07 20:44:23
Dilution factor 5.00

Anions

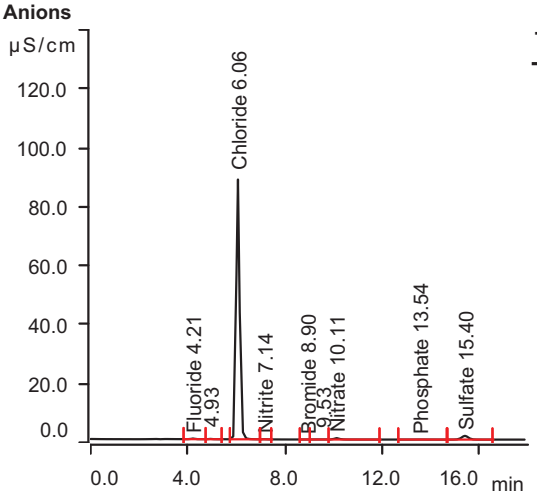


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
6.24	Chloride	3.3021	10.811	54.053
7.31	Nitrite	0.0393	0.086	0.429
9.02	Bromide	0.0005	0.104	0.518
9.57	Nitrate	0.0203	0.081	0.403
13.55	Phosphate	0.0115	11.693	58.463
15.49	Sulfate	0.1117	0.462	2.310

Sample data

Ident FA96206-5
Sample type . . . . . Sample
Determination start 2022-06-07 21:05:13
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0395	0.068	0.338
6.06	Chloride	14.3723	46.147	230.734
7.14	Nitrite	0.0075	0.043	0.215
8.90	Bromide	0.0024	0.118	0.591
10.11	Nitrate	0.1263	0.223	1.113
13.54	Phosphate	0.0085	8.940	44.700
15.40	Sulfate	0.4167	1.747	8.733

MagIC Net

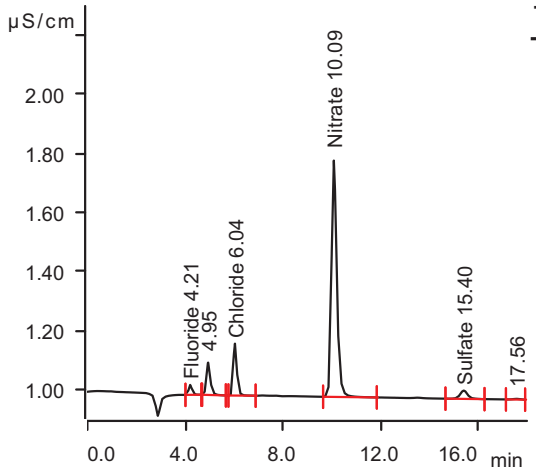
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident MB1F
Sample type . . . . . Sample
Determination start 2022-06-07 21:26:03
Dilution factor 1.00

Anions

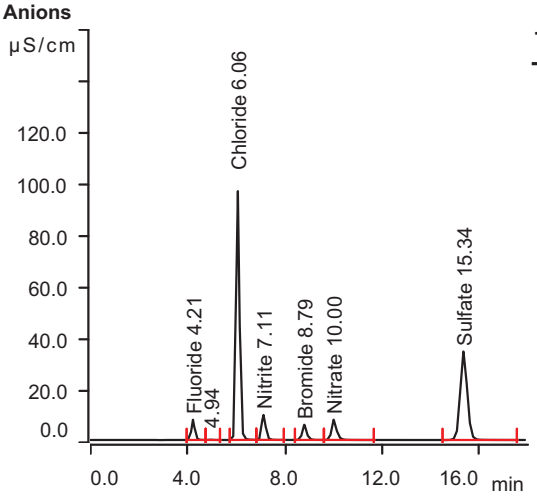


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0054	0.004	0.004
6.04	Chloride	0.0302	0.367	0.367
10.09	Nitrate	0.2013	0.323	0.323
15.40	Sulfate	0.0103	0.035	0.035

Sample data

Ident B1F
Sample type . . . . . Sample
Determination start 2022-06-07 21:47:09
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.2071	2.256	2.256
6.06	Chloride	15.8100	50.736	50.736
7.11	Nitrite	1.8457	2.521	2.521
8.79	Bromide	1.2698	9.848	9.848
10.00	Nitrate	1.9168	2.621	2.621
15.34	Sulfate	11.6641	49.114	49.114

MagIC Net

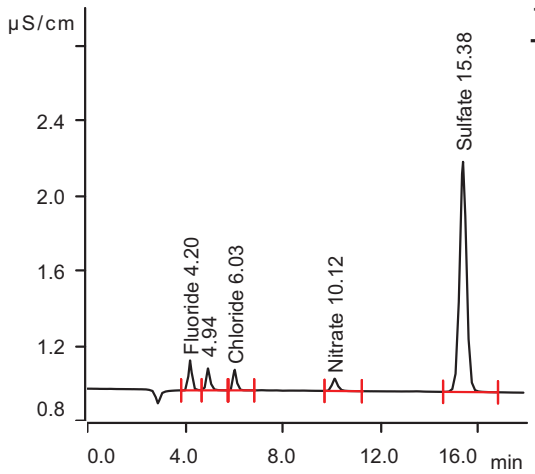
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96029-21
Sample type . . . . . Sample
Determination start 2022-06-07 22:08:12
Dilution factor 5.00

Anions

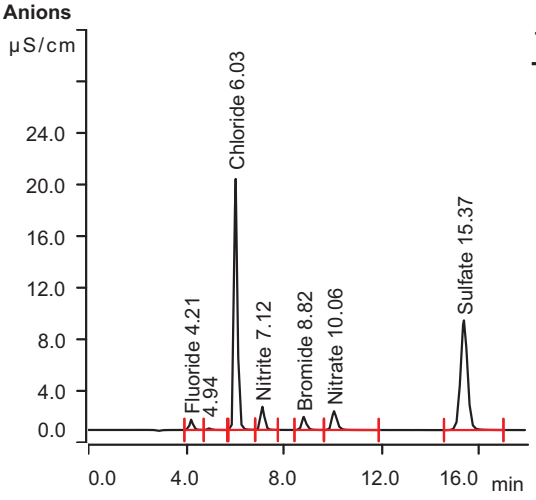


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.20	Fluoride	0.0258	0.042	0.209
6.03	Chloride	0.0188	0.330	1.651
10.12	Nitrate	0.0175	0.077	0.385
15.38	Sulfate	0.4070	1.706	8.529

Sample data

Ident FA96029-21S1
Sample type . . . . . Sample
Determination start 2022-06-07 22:29:14
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.1310	0.239	1.195
6.03	Chloride	3.1083	10.192	50.960
7.12	Nitrite	0.3335	0.482	2.412
8.82	Bromide	0.2225	1.808	9.040
10.06	Nitrate	0.3563	0.531	2.654
15.37	Sulfate	2.8427	11.963	59.817

MagIC Net

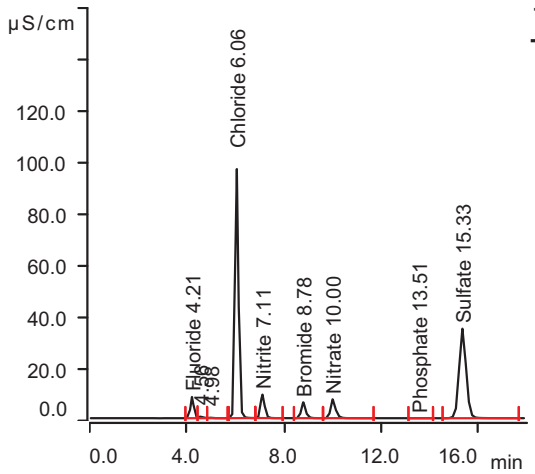
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-07 22:50:16
Dilution factor 1.00

Anions

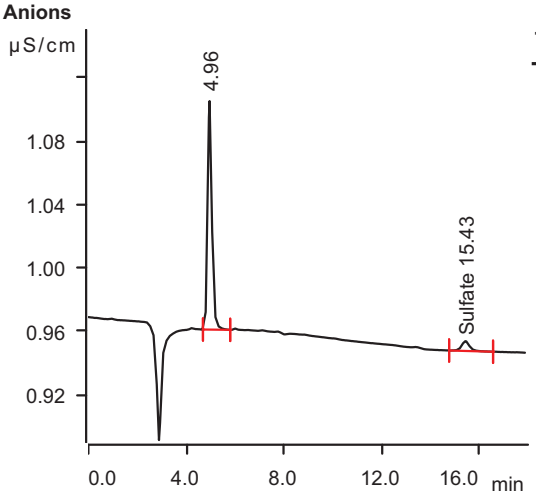


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.2808	2.395	2.395
6.06	Chloride	15.8361	50.819	50.819
7.11	Nitrite	1.7357	2.372	2.372
8.78	Bromide	1.3211	10.242	10.242
10.00	Nitrate	1.7775	2.434	2.434
13.51	Phosphate	0.0016	2.554	2.554
15.33	Sulfate	11.8094	49.726	49.726

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-06-07 23:11:26
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.43	Sulfate	0.0024	0.002	0.002

MagIC Net

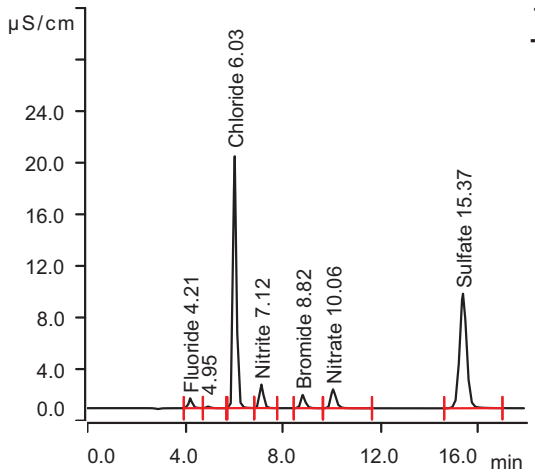
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96029-21S2
Sample type . . . . . Sample
Determination start 2022-06-07 23:32:29
Dilution factor 5.00

Anions

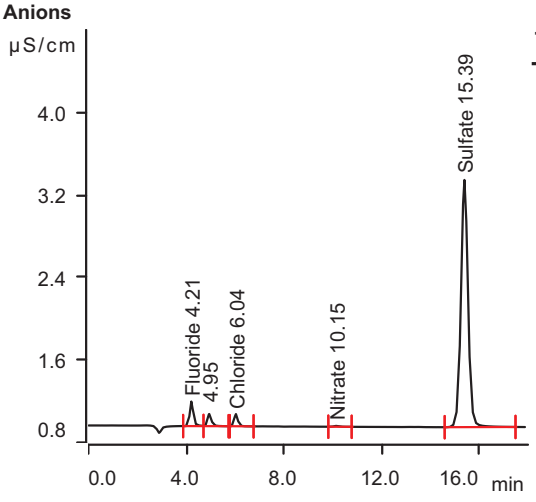


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.1310	0.239	1.196
6.03	Chloride	3.1308	10.264	51.319
7.12	Nitrite	0.3397	0.491	2.454
8.82	Bromide	0.2248	1.825	9.127
10.06	Nitrate	0.3583	0.533	2.667
15.37	Sulfate	2.9991	12.622	63.110

Sample data

Ident FA96029-22
Sample type . . . . . Sample
Determination start 2022-06-07 23:53:39
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0407	0.070	0.349
6.04	Chloride	0.0203	0.335	1.675
10.15	Nitrate	0.0023	0.056	0.282
15.39	Sulfate	0.8076	3.393	16.964

MagIC Net

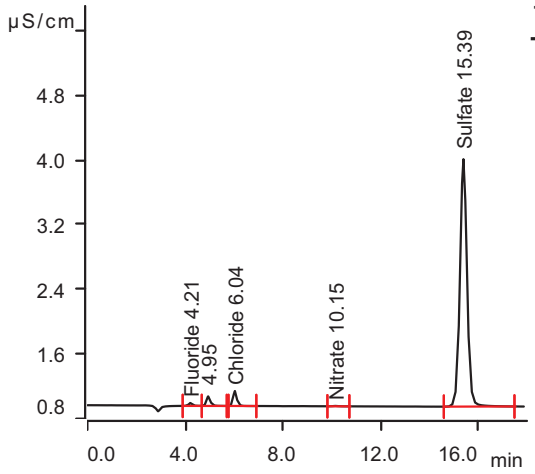
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96029-23
Sample type . . . . . Sample
Determination start 2022-06-08 00:14:42
Dilution factor 5.00

Anions

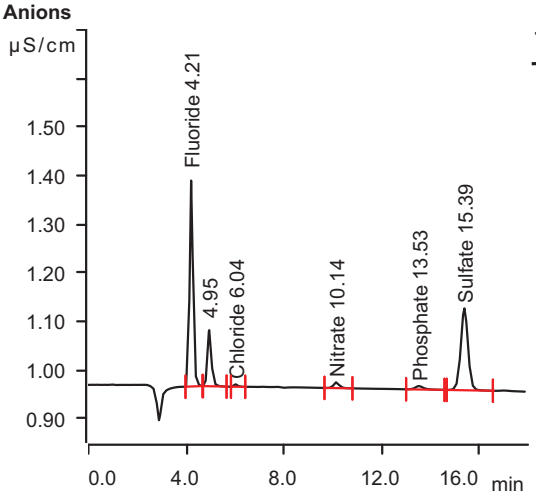


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0066	0.006	0.029
6.04	Chloride	0.0316	0.371	1.856
10.15	Nitrate	0.0012	0.055	0.275
15.39	Sulfate	1.0284	4.323	21.613

Sample data

Ident FA96029-24
Sample type . . . . . Sample
Determination start 2022-06-08 00:35:47
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0665	0.118	0.591
6.04	Chloride	0.0008	0.273	1.365
10.14	Nitrate	0.0033	0.058	0.289
13.53	Phosphate	0.0029	3.755	18.774
15.39	Sulfate	0.0585	0.238	1.189

MagIC Net

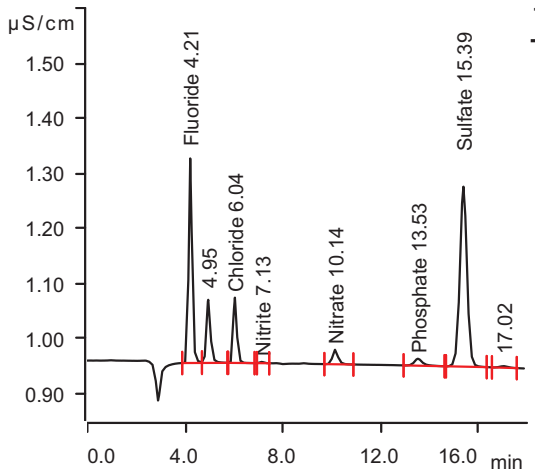
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96029-25
Sample type . . . . . Sample
Determination start 2022-06-08 00:56:49
Dilution factor 5.00

Anions

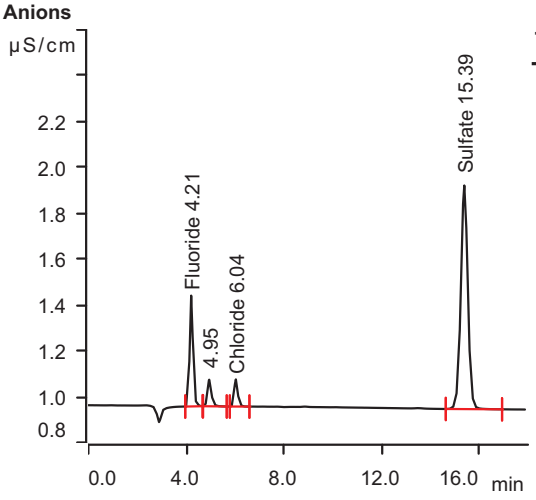


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0590	0.104	0.520
6.04	Chloride	0.0203	0.335	1.676
7.13	Nitrite	0.0005	0.034	0.168
10.14	Nitrate	0.0071	0.063	0.315
13.53	Phosphate	0.0051	5.792	28.959
15.39	Sulfate	0.1117	0.462	2.310

Sample data

Ident FA96029-26
Sample type . . . . . Sample
Determination start 2022-06-08 01:17:54
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0750	0.134	0.670
6.04	Chloride	0.0201	0.335	1.673
15.39	Sulfate	0.3245	1.358	6.791

MagIC Net

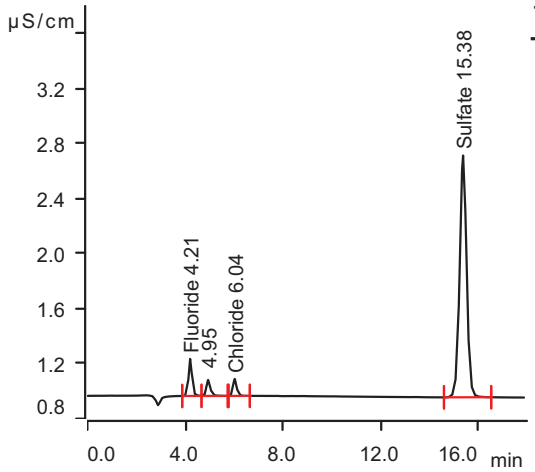
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident FA96029-27
Sample type . . . . . Sample
Determination start 2022-06-08 01:38:57
Dilution factor 5.00

Anions

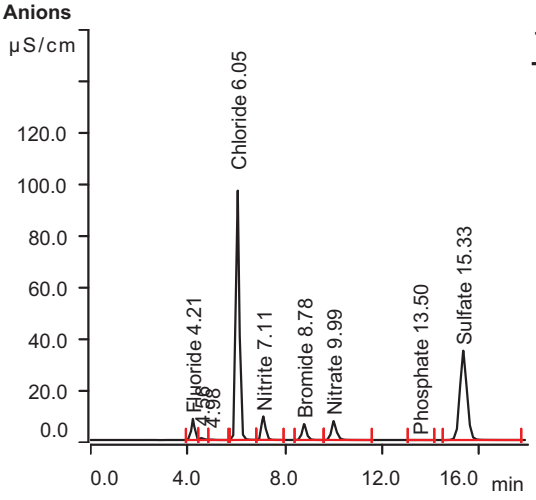


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	0.0433	0.075	0.373
6.04	Chloride	0.0211	0.338	1.688
15.38	Sulfate	0.5806	2.437	12.183

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-06-08 01:59:59
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.21	Fluoride	1.2657	2.366	2.366
6.05	Chloride	15.8319	50.806	50.806
7.11	Nitrite	1.7342	2.370	2.370
8.78	Bromide	1.3213	10.244	10.244
9.99	Nitrate	1.7785	2.436	2.436
13.50	Phosphate	0.0014	2.403	2.403
15.33	Sulfate	11.7629	49.530	49.530

MagIC Net

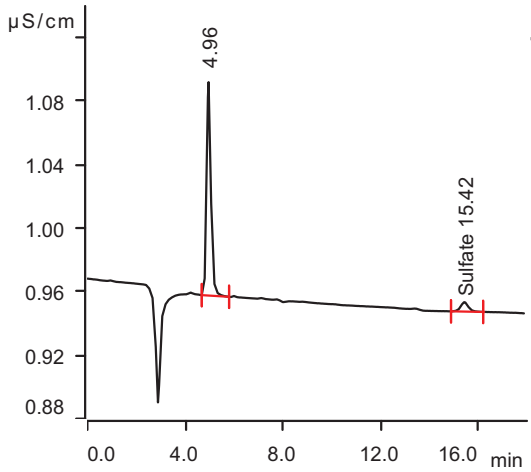
Summary Report

2022-06-08 3:40:52
MagIC Net 3.2 - 123

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-06-08 02:21:07
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.42	Sulfate	0.0022	0.001	0.001

Misc. Forms

Custody Documents and Other Forms

(SGS Dayton, NJ)

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

E

SGS

WW

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # FA96171

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: SGS North America Inc.	Project Name: Shepley's Hill (SHL); Devens, MA		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL- Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 4405 Vineland Rd, Suite C-15	Street	Billing Information (if different from Report to)	
City: Orlando State: FL Zip: 32811	City State	Company Name	
Project Contact: evita.martinez@sgs.com E-mail	Project #	Street Address	
Phone #: 407-425-6700 Fax #	Client Purchase Order #	City State Zip	
Sampler(s) Name(s): JR Phone	Project Manager	Attention:	

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	NO2,NO32,NO3O,353.2	LAB USE ONLY
1	EFFLUENT		6/3/22	11:45:00 AM	JR	AQ	2				1	1				X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 6/17/2022

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ]
- [X] FL

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SGS-NJ direct sub

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1 Courier	2 Courier	6/3/22 20:00	2
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐ Therm. ID: 40	On Ice ☐ Cooler Temp. 3.5°C

10.1

10

FA96171: Chain of Custody
Page 1 of 3
SGS Dayton, NJ

TF-051922-207 FA96171

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNA	DI WATER	MEOH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
1	Effluent	6/3/22	11:45	JWR	w	4					x	x				X	X	X	X	X		
2	Influent EW-01	6/3/22	12:05	JWR	w	1					x					X					X	
3	Influent EW-04	6/3/22	12:00	JWR	w	1					x					X					X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Service Center
Northborough, MA 6/3

Turnaround Time (Business days)

X 10 Day (Business)
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other

Approved By: / Date:
Initial Assessment RAJK
Label Verification

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

Direct Sub XN030 only to Dayton - Remaining volume to be shipped to Orlando for FA#

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 [signature] 1410	6/3/22	2 Thelma Fleming	3 [signature]	6/3/22 1424	4 [signature]
5 [signature]	6/3/22	6 Brandon Mallory	7 Brandon Mallory	6/3/22 10:00	8 [signature]

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.5

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

10.1 10

FA96171: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: FA96171 **Client:** _____ **Project:** _____

Date / Time Received: 6/3/2022 8:00:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.5);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

QC Evaluation: DOD QSM5.x Limits

Job Number: FA96171
Account: SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA
Collected: 06/03/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No DOD QSM5.x Limits Found.

* Sample used for QC is not from job FA96171

General Chemistry

QC Data Summaries

(SGS Dayton, NJ)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Nitrate + Nitrite	GP40542/GN30022	0.10	0.0	mg/l	2	2.10	105.0	90-110%
Nitrogen, Nitrite	GN29949	0.010	0.0	mg/l	0.04	0.039	97.5	90-110%

Associated Samples:
Batch GN29949: FA96171-1
Batch GP40542: FA96171-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate + Nitrite	GP40542/GN30022	JD46125-3	mg/l	4.2	4.2	0.0	0-33%

Associated Samples:
Batch GP40542: FA96171-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GP40542/GN30022	JD46125-3	mg/l	4.2	1	4.9	70.0(a)	90-110%
Nitrogen, Nitrite	GN29949	FA96171-1	mg/l	0.0030 U	0.04	0.039	97.5	22-140%

Associated Samples:
Batch GN29949: FA96171-1
Batch GP40542: FA96171-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrite	GN29949	FA96171-1	mg/l	0.0030 U	0.04	0.039	0.0	20%

Associated Samples:
Batch GN29949: FA96171-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Analyst: BR Run ID: GN30022
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:58	GN30022-STD1	1		STDA
12:59	GN30022-STD2	1		STDB
13:00	GN30022-STD3	1		STDC
13:01	GN30022-STD4	1		STDD
13:02	GN30022-STD5	1		STDE
13:03	GN30022-STD6	1		STDF
13:04	GN30022-STD7	1		STDG
13:06	GN30022-ICV1	1		
13:07	GN30022-ICB1	1		
13:09	GN30022-CCV1	1		
13:10	GN30022-CCB1	1		
13:11	GP40539-MB1	1		
13:12	GP40539-B1	1		
13:13	GP40539-S1	1		
13:14	GP40539-S2	1		
13:15	GP40539-D1	1		
13:16	JD46011-5	1		(sample used for QC only; not part of login FA96171)
13:17	JD46011-6	1		(sample used for QC only; not part of login FA96171)
13:18	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:21	ZZZZZZ	1		
13:22	GN30022-CCV2	1		
13:23	GN30022-CCB2	1		
13:24	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:31	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Analyst: BR Run ID: GN30022
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:35	GN30022-CCV3	1		
13:36	GN30022-CCB3	1		
13:37	ZZZZZZ	1		
13:38	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:42	ZZZZZZ	6		
13:43	GP40540-MB1	1		
13:45	GP40540-S1	1		
13:46	GP40540-S2	1		
13:47	GP40540-D1	1		
13:48	GN30022-CCV4	1		
13:49	GN30022-CCB4	1		
13:50	GP40540-B1	1		
13:51	JD46013-8	1		(sample used for QC only; not part of login FA96171)
13:53	JD46041-1	1		(sample used for QC only; not part of login FA96171)
13:54	ZZZZZZ	1		
13:55	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:57	ZZZZZZ	1		
13:58	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:01	GN30022-CCV5	1		
14:02	GN30022-CCB5	1		
14:04	ZZZZZZ	1		
14:05	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:11	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Analyst: BR Run ID: GN30022
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:14	JD46041-1	3		(sample used for QC only; not part of login FA96171)
14:15	GN30022-CCV6	1		
14:16	GN30022-CCB6	1		
14:19	GP40540-S2	3		
14:21	GP40541-MB1	1		
14:22	GP40541-B1	1		
14:23	GP40541-S1	1		
14:24	GP40541-S2	1		
14:25	GP40541-D1	1		
14:26	ZZZZZZ	9		
14:27	ZZZZZZ	9		
14:28	GN30022-CCV7	1		
14:29	GN30022-CCB7	1		
14:30	JD46093-1	1		(sample used for QC only; not part of login FA96171)
14:32	JD46093-2	1		(sample used for QC only; not part of login FA96171)
14:33	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:36	ZZZZZZ	1		
14:37	ZZZZZZ	1		
14:38	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:41	ZZZZZZ	1		
14:42	GN30022-CCV8	1		
14:43	GN30022-CCB8	1		
14:44	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Analyst: BR Run ID: GN30022
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:53	ZZZZZZ	1		
14:54	ZZZZZZ	1		
14:55	GN30022-CCV9	1		
14:56	GN30022-CCB9	1		
14:57	GP40542-MB1	1		
14:58	GP40542-B1	1		
14:59	GP40542-S1	1		
15:01	GP40542-S2	1		
15:02	GP40542-D1	1		
15:03	JD46125-3	1		(sample used for QC only; not part of login FA96171)
15:04	JD46125-4	1		(sample used for QC only; not part of login FA96171)
15:05	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:08	GN30022-CCV10	1		
15:09	GN30022-CCB10	1		
15:10	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:13	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:17	ZZZZZZ	1		
15:18	FA96171-1	1		
15:21	GN30022-CCV11	1		
15:22	GN30022-CCB11	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA96171
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Run ID: GN30022 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN30022-ICV1	Nitrogen, Nitrate + Nitrite	2.19	0.10	0.090	2	109.5	90-110
GN30022-ICB1	Nitrogen, Nitrate + Nitrite	-0.0973	0.10	0.090			
GN30022-CCV1	Nitrogen, Nitrate + Nitrite	2.75	0.10	0.090	2.5	110.0	90-110
GN30022-CCB1	Nitrogen, Nitrate + Nitrite	-0.0963	0.10	0.090			
GN30022-CCV2	Nitrogen, Nitrate + Nitrite	2.63	0.10	0.090	2.5	105.2	90-110
GN30022-CCB2	Nitrogen, Nitrate + Nitrite	-0.0962	0.10	0.090			
GN30022-CCV3	Nitrogen, Nitrate + Nitrite	2.64	0.10	0.090	2.5	105.6	90-110
GN30022-CCB3	Nitrogen, Nitrate + Nitrite	-0.0969	0.10	0.090			
GN30022-CCV4	Nitrogen, Nitrate + Nitrite	2.59	0.10	0.090	2.5	103.6	90-110
GN30022-CCB4	Nitrogen, Nitrate + Nitrite	-0.0974	0.10	0.090			
GN30022-CCV5	Nitrogen, Nitrate + Nitrite	2.56	0.10	0.090	2.5	102.4	90-110
GN30022-CCB5	Nitrogen, Nitrate + Nitrite	-0.0984	0.10	0.090			
GN30022-CCV6	Nitrogen, Nitrate + Nitrite	2.59	0.10	0.090	2.5	103.6	90-110
GN30022-CCB6	Nitrogen, Nitrate + Nitrite	-0.0949	0.10	0.090			
GN30022-CCV7	Nitrogen, Nitrate + Nitrite	2.60	0.10	0.090	2.5	104.0	90-110
GN30022-CCB7	Nitrogen, Nitrate + Nitrite	-0.0985	0.10	0.090			
GN30022-CCV8	Nitrogen, Nitrate + Nitrite	2.51	0.10	0.090	2.5	100.4	90-110
GN30022-CCB8	Nitrogen, Nitrate + Nitrite	-0.0963	0.10	0.090			
GN30022-CCV9	Nitrogen, Nitrate + Nitrite	2.55	0.10	0.090	2.5	102.0	90-110
GN30022-CCB9	Nitrogen, Nitrate + Nitrite	-0.0962	0.10	0.090			
GN30022-CCV10	Nitrogen, Nitrate + Nitrite	2.39	0.10	0.090	2.5	95.6	90-110
GN30022-CCB10	Nitrogen, Nitrate + Nitrite	-0.0986	0.10	0.090			
GN30022-CCV11	Nitrogen, Nitrate + Nitrite	2.38	0.10	0.090	2.5	95.2	90-110
GN30022-CCB11	Nitrogen, Nitrate + Nitrite	-0.0952	0.10	0.090			

(!) Outside of QC limits

General Chemistry

Raw Data

(SGS Dayton, NJ)

Test: Nitrogen, Nitrite
Product: NO2
Method: SM4500NO2 B-11 (Aqueous) ◉ Units: mg/l
SM4500NO2 B-11 M (Solids) ○ mg/kg

Analyst: JO
GN Batch ID: GN29949
GP Batch ID: NA
Date: 6/4/2022
Instrument ID: M Pipet Ii GLASS PIPETTE CLASS A

Original Calibration Information — Calibration Date: 4/4/2022

	Blank	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7
Known:	0.000	0.010	0.025	0.050	0.075	0.100	0.200	
Absorbance:	0.000	0.033	0.085	0.170	0.256	0.338	0.694	
Actual Value:	#DIV/0!	0.010	0.025	0.050	0.075	0.098	0.201	
% RE:	#DIV/0!	-2.80	-1.13	0.39	0.51	1.73	-0.49	

Continuing Calibration Check Standards Data: 6/4/2022

	Blank	Std 1	Std 6
Known:	0.000	0.010	0.200
Absorbance:	0.000	0.034	0.695
Recovery:	0.0%	105.7%	100.6%
Actual Value:		0.011	0.201

Correlation Coeff. = 0.99992
Slope = 0.28850
Intercept = 0.00076

Bottle #	Sample ID	Time Analyzed	Initial Wt (g) or Vol (ml)	Final Vol (ml)	Dilution	Sample Abs	Background Abs.	Result From Curve (mg/L)	Final Result	DL	Units	Factor	pH between 5 and 9 (Y or N)
	ICV	14:44	50	50	1	0.333	NA	0.097	0.097	NA	mg/l	NA	
	CCV	15:00	50	50	1	0.335	NA	0.097	0.097	NA	mg/l	NA	
	CCB	15:00	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
	GN29949-MB1	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
	GN29949-B1	15:00	50	50	1	0.134	0.000	0.039	0.039	0.010	mg/l	1	Y
2	GN29949-S1	15:00	50	50	1	0.132	0.000	0.039	0.039	0.010	mg/l	1	Y
2	GN29949-MSD1	15:00	50	50	1	0.131	0.000	0.039	0.039	0.010	mg/l	1	Y
2	FA96171-1	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
6	JD46081-1	15:00	50	50	1	0.038	0.000	0.012	0.012	0.010	mg/l	1	Y
6	JD46081-2	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
6	JD46081-3	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
6	JD46081-4	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
6	JD46081-5	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
	CCVA	15:00	50	50	1	0.695	NA	0.201	0.201	NA	mg/l	NA	
	CCB	15:00	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
5	JD46093-1	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
5	JD46093-2	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
5	JD46093-3	15:00	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
		15:00	50	50	1								
		15:00	50	50	1								
		15:00	50	50	1								
		15:00	50	50	1								
		15:00	50	50	1								
		15:00	50	50	1								
		15:00	50	50	1								
	CCV	15:00	50	50	1	0.335	NA	0.097	0.097	NA	mg/l	NA	
	CCB	15:00	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
	CCVA		50	50	1		NA			NA		NA	
	CCB		50	50	1		NA			NA		NA	

QC FA96171-1
BS/MS/MSD → 2-0ml @ 1pp → 5ml DI/Each 9

Analyst: _____ Date: 6/4/22 QC Reviewer: _____ Date: _____

SGS

Test: **Nitrogen, Nitrite**
Product: **NO2**
Method: **SM18 4500 NO2B (aqueous)**
SM18 4500 NO2B M (solids)

Units: mg/l mg/kg

Analyst: JO
GNBatch ID: GN29949
GPBatch ID:
Date: 6/4/22

Preparation Batch QC Summary Units = mg/l

Method Blank ID: MB1 Date: 6/4/22 Result: <0.01 DL: 0.01 <DL: Y
Spike Blank ID: B1 Date: " Result: 0.039 Spike: 0.04 %Rec.: 97.5
MS ID: FA96171-1 Samp. Result: <0.01 MS Result: 0.039 Spike: 0.04 %Rec: 97.5
MSDUP ID: " Samp. Result: <0.01 MSDUP Result: 0.039 Spike: 0.04 %Rec: 97.5
MSDUP ID: " MSDUP Result: 0.039 MS Result: 0.039 %RPD: 0

Method Blank ID: (SOIL) Date: Result: DL: <DL:
Spike Blank ID: Date: Result: Spike: %Rec.:
MS ID: Samp. Result: MS Result: Spike: %Rec:
MSDUP ID: Samp. Result: MSDUP Result: Spike: %Rec:
MSDUP ID: MSDUP Result: MS Result: %RPD:

Analysis Batch QC Summary Units =
ICV (Ext): 6/4/22 Result: 0.097 TV: 0.1 %Rec: 97

CCV : Result: 0.097 TV: 0.1 %Rec.: 97
CCVA : Result: 0.201 TV: 0.2 %Rec.: 100.5
CCV : Result: 0.097 TV: 0.1 %Rec.: 97
CCVA : Result: TV: 0.2 %Rec.:
CCV : Result: TV: 0.1 %Rec.:
CCVA : Result: TV: 0.2 %Rec.:

CCB: 6/4/22 Result: <0.01 DL: 0.01 <DL: Y
CCB: " Result: <0.01 DL: 0.01 <DL: Y
CCB: " Result: <0.01 DL: 0.01 <DL: Y
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:

Reagent Reference Numbers:
Qc-------BS/MS/MSD-----2 ML OF 2 PPM NO2 STD --50 ML DI /H2O /SAMPLE----TV 0.04 Mg/L
MS/MSD- SAMPLE NO--- QC-1
QC-2

Analyst: Date: 6/4/22

Comments:

Form: GN032-01
Rev. Date:9/4/09]

SGS

Reagent Information Log - Nitrite as Nitrogen

Reagent	Reagent # or Manufacturer/Lot
Calibration Source: 1000 mg/l nitrite stock (STD)	ERA LOT #291020M XP: 10/21/2022
External Check (ICV)	ERA LOT #120421M XP: 4/7/2023
Spiking Solution Source (1 PPM)	ERA LOT #291020M XP: 10/21/2022
Color Reagent	GNE5-70224-NO2 XP 6/26/22
NH4OH	FISHER 193136 XP 2/20/2027

All standards and stocks were made as described in the SOP for this method (circle one): Y or N
If no (N), see attached page for standards prep.

Form: GN087A-42
Rev. Date:6/4/2022

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: NO2

GN or GP Number: GN29949

Standard	Manufacturer/Lot Number	Concentration	Expiration Date
1000 mg/l Nitrite Standard	ERA LOT# 291020M	1000 PPM	10/21/2022
1000 mg/l Nitrite Standard (ICV)	ERA LOT# 120421M	1000 PPM	4/7/2023

Standard Description	Lot or Tracking #	Initial Volume	Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
10 PPM NO2 STANDARD	GNE6-70311-NO2	1.0 ml	1000 mg/l Nitrite Standard	A	DI water	100 ml	10 mg/l	6/4/2022	JO	6/4/2022
1 PPM NO2 STANDARD	GNE6-70312-NO2	10.0 ml	10 PPM NO2 STANDARD	A	DI water	100 ml	1 mg/L	6/4/2022	MRP	6/4/2022
10 PPM NO2 EXTERNAL	GNE6-70313-NO2	1.0 ml	Nitrite Standard (ICV)	A	DI water	100 ml	10 mg/l	6/4/2022	MRP	6/4/2022
1 PPM NO2 EXTERNAL	GNE6-70314-NO2	10.0 ml	10 PPM NO2 EXTERNAL	A	DI water	100 ml	1 mg/l	6/4/2022	MRP	6/4/2022

Standard Description	Intermediate or Stock used to prepare standard	Initial Volume	Concentration of Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
0.2 mg/L (high)	GNE6-70312-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	6/4/2022	JO	6/4/2022
0.1 mg/L		10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L			
0.075 mg/L		7.5 ml	1.0 mg/L	A	DI water	100 ml	0.075 mg/L			
0.05 mg/L		5.0 ml	1.0 mg/L	A	DI water	100 ml	0.05 mg/L			
0.025 mg/L		2.5 ml	1.0 mg/L	A	DI water	100 ml	0.025 mg/L			
0.01 mg/L (low)	GNE6-70312-NO2	1.0 ml	1.0 mg/L	A	DI water	100 ml	0.01 mg/L	6/4/2022	JO	6/4/2022
0 mg/L	NA	NA	NA	NA	NA	100 ml	NA	6/4/2022	JO	6/4/2022
CCV	GNE6-70312-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	6/4/2022	JO	6/4/2022
CCVA	GNE6-70312-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	6/4/2022	JO	6/4/2022
ICV	GNE6-70314-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	6/4/2022	JO	6/4/2022

* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01
Rev. Date: 1/13/09

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E060722W1.NO32 Date Analyzed: 06/07/22 Methods: EPA 353.2/LACHAT
Analyst: BR Run ID: GN30022

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: BR Date 06/07/2022

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 6/7/22

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GN30022

Author: Chemistry

Date : 6/7/2022

Original Run Filename: OM_6-7-2022_12-57-19PM.OMN Created: 6/7/2022 12:57:19 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_6-7-2022_12-57-19PMa.OMN Last Modified: 6/7/2022 3:32:51 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

EOG0722w1.no32

Sample	Rep.	Cup No.	Channel 1 NO32 (mg/L)	Detection Time	MDF	
STDA	1	1	5.00	6/7/2022@12:58:10 PM		
STDB	1	2	2.50	6/7/2022@12:59:16 PM		
STDC	1	3	1.00	6/7/2022@1:00:21 PM		
STDD	1	4	0.500	6/7/2022@1:01:25 PM		
STDE	1	5	0.200	6/7/2022@1:02:31 PM		
STDF	1	6	0.100	6/7/2022@1:03:36 PM		
STDG	1	7	0.00	6/7/2022@1:04:41 PM		
EFFCHK	1	8	2.09	6/7/2022@1:05:47 PM		-104.5%
	Known Conc:		2.00			
ICV	1	9	2.19	6/7/2022@1:06:53 PM		-109.5%
	Known Conc:		2.00			
ICB	1	10	-0.0973	6/7/2022@1:07:58 PM		
	Known Conc:		0.00			
CCV	1	11	2.75	6/7/2022@1:09:04 PM		-110.0%
	Known Conc:		2.50			
CCB	1	12	-0.0963	6/7/2022@1:10:09 PM		
	Known Conc:		0.00			
GP40539-MB1	1	13	-0.0934	6/7/2022@1:11:15 PM		
GP40539-B1	1	14	2.19	6/7/2022@1:12:21 PM		-109.5%
GP40539-S1	1	15	1.10	6/7/2022@1:13:27 PM		
GP40539-S2	1	16	1.06	6/7/2022@1:14:32 PM		
GP40539-D1	1	17	-0.0944	6/7/2022@1:15:38 PM		
JD46011-5	1	18	-0.0627	6/7/2022@1:16:44 PM		
JD46011-6	1	19	-0.0890	6/7/2022@1:17:50 PM		
LA78972-1	1	20	0.200	6/7/2022@1:18:56 PM		
LA78972-2	1	21	0.205	6/7/2022@1:20:02 PM		
LA78972-3	1	22	0.523	6/7/2022@1:21:08 PM		
CCV	1	11	2.63	6/7/2022@1:22:13 PM		-105.2%
	Known Conc:		2.50			
CCB	1	12	-0.0962	6/7/2022@1:23:19 PM		
	Known Conc:		0.00			
LA78972-4	1	23	0.406	6/7/2022@1:24:24 PM		
JD46005-1	1	24	0.238	6/7/2022@1:25:30 PM		
JD46008-3	1	25	-0.0399	6/7/2022@1:26:36 PM		
JD46008-4	1	26	8.89	6/7/2022@1:27:42 PM		-out of range
JD46008-5	1	27	-0.0576	6/7/2022@1:28:48 PM		
JD46008-6	1	28	0.979	6/7/2022@1:29:54 PM		
JD46011-4	1	29	-0.0736	6/7/2022@1:31:00 PM		
JD46011-7	1	30	-0.0883	6/7/2022@1:32:06 PM		
JD46011-8	1	31	-0.0907	6/7/2022@1:33:12 PM		
JD46011-9	1	32	-0.0712	6/7/2022@1:34:19 PM		
CCV	1	11	2.64	6/7/2022@1:35:24 PM		-105.6%
	Known Conc:		2.50			
CCB	1	12	-0.0969	6/7/2022@1:36:30 PM		
	Known Conc:		0.00			
JD46011-10	1	33	-0.0754	6/7/2022@1:37:36 PM		
JD46013-2	1	34	4.59	6/7/2022@1:38:42 PM		
JD46013-3	1	35	-0.0928	6/7/2022@1:39:48 PM		
JD46013-4	1	36	-0.0810	6/7/2022@1:40:54 PM		
JD46008-4 2	1	26	4.48	6/7/2022@1:42:00 PM	6.00	BR 1mL sample, 5mL NO32 blank
GP40540-MB1	1	37	-0.0998	6/7/2022@1:43:06 PM		
conf	1	38	2.31	6/7/2022@1:44:13 PM		
GP40540-S1	1	39	1.07	6/7/2022@1:45:19 PM		
GP40540-S2	1	40	6.76	6/7/2022@1:46:25 PM		-out of range
GP40540-D1	1	41	-0.0913	6/7/2022@1:47:31 PM		
CCV	1	11	2.59	6/7/2022@1:48:37 PM		-103.6%
	Known Conc:		2.50			
CCB	1	12	-0.0974	6/7/2022@1:49:43 PM		
	Known Conc:		0.00			
GP40540-B1	1	38	1.99	6/7/2022@1:50:49 PM		-99.5%

wrong injection

12.2 12

Author: Chemistry

Date : 6/7/2022

JD46013-8	1	42	-0.0866	6/7/2022@1:51:56 PM	
JD46041-1	1	43	6.54	6/7/2022@1:53:01 PM	
JD46041-2	1	44	-0.0742	6/7/2022@1:54:08 PM	
JD46041-3	1	45	-0.0337	6/7/2022@1:55:15 PM	
JD46041-4	1	46	0.0363	6/7/2022@1:56:21 PM	
JD46041-5	1	47	0.141	6/7/2022@1:57:27 PM	
JD46041-6	1	48	8.96e-3	6/7/2022@1:58:33 PM	
JD46081-1	1	49	0.201	6/7/2022@1:59:40 PM	
JD46081-2	1	50	-0.0660	6/7/2022@2:00:47 PM	
CCV	1	11	2.56	6/7/2022@2:01:52 PM	
	Known Conc:		2.50		
CCB	1	12	-0.0984	6/7/2022@2:02:58 PM	
	Known Conc:		0.00		
JD46081-3	1	51	6.42e-3	6/7/2022@2:04:04 PM	
JD46081-4	1	52	-0.0411	6/7/2022@2:05:10 PM	
JD46081-5	1	53	-0.0801	6/7/2022@2:06:17 PM	
TD82121-1	1	54	-0.0546	6/7/2022@2:07:22 PM	
TD82121-2	1	55	8.66	6/7/2022@2:08:30 PM	
TD82121-3	1	56	8.01	6/7/2022@2:09:37 PM	
TD82121-4	1	57	-0.0308	6/7/2022@2:10:44 PM	
TD82121-5	1	58	0.230	6/7/2022@2:11:50 PM	
conf	1	40	3.46	6/7/2022@2:12:56 PM	3.00
JD46041-1 2	1	43	3.15	6/7/2022@2:14:03 PM	3.00
CCV	1	11	2.59	6/7/2022@2:15:08 PM	
	Known Conc:		2.50		
	Calibration:		Table/Fig. : 1		
CCB	1	12	-0.0949	6/7/2022@2:16:14 PM	
	Known Conc:		0.00		
TD82121-2	1	55	6.26	6/7/2022@2:17:20 PM	6.00
TD82121-3	1	56	5.39	6/7/2022@2:18:27 PM	6.00
GP40540-S2 2	1	40	3.48	6/7/2022@2:19:54 PM	3.00
GP40541-MB1	1	59	-0.0939	6/7/2022@2:21:00 PM	
GP40541-B1	1	60	2.12	6/7/2022@2:22:06 PM	
GP40541-S1	1	61	1.09	6/7/2022@2:23:13 PM	
GP40541-S2	1	62	1.09	6/7/2022@2:24:20 PM	
GP40541-D1	1	63	-0.0803	6/7/2022@2:25:27 PM	
TD82121-2 2	1	55	3.03	6/7/2022@2:26:34 PM	9.00
TD82121-3 2	1	56	2.33	6/7/2022@2:27:41 PM	9.00
CCV	1	11	2.60	6/7/2022@2:28:46 PM	
	Known Conc:		2.50		
CCB	1	12	-0.0985	6/7/2022@2:29:52 PM	
	Known Conc:		0.00		
JD46093-1	1	64	-0.0834	6/7/2022@2:30:58 PM	
JD46093-2	1	65	-0.0918	6/7/2022@2:32:05 PM	
JD46093-3	1	66	0.0919	6/7/2022@2:33:11 PM	
JD46013-1	1	67	0.573	6/7/2022@2:34:19 PM	
JD46013-5	1	68	0.816	6/7/2022@2:35:26 PM	
JD46013-6	1	69	0.133	6/7/2022@2:36:33 PM	
JD46013-7	1	70	-0.0821	6/7/2022@2:37:40 PM	
JD46111-1	1	71	-0.0720	6/7/2022@2:38:47 PM	
JD46111-2	1	72	-0.0849	6/7/2022@2:39:53 PM	
JD46111-3	1	73	-0.0751	6/7/2022@2:41:01 PM	
CCV	1	11	2.51	6/7/2022@2:42:06 PM	
	Known Conc:		2.50		
CCB	1	12	-0.0963	6/7/2022@2:43:12 PM	
	Known Conc:		0.00		
JD46111-4	1	74	-0.0908	6/7/2022@2:44:19 PM	
JD46111-5	1	75	-0.0862	6/7/2022@2:45:26 PM	
JD46111-6	1	76	-0.0777	6/7/2022@2:46:33 PM	
JD46111-7	1	77	-0.0781	6/7/2022@2:47:40 PM	
JD46111-8	1	78	-0.0582	6/7/2022@2:48:47 PM	
JD46124-1	1	79	-0.0402	6/7/2022@2:49:54 PM	
JD46124-2	1	80	-0.0753	6/7/2022@2:51:01 PM	
JD46124-3	1	81	1.42	6/7/2022@2:52:09 PM	
JD46125-1	1	82	0.973	6/7/2022@2:53:16 PM	
JD46125-2	1	83	-0.0850	6/7/2022@2:54:23 PM	
CCV	1	11	2.55	6/7/2022@2:55:28 PM	
	Known Conc:		2.50		

- out of range

-102.4%

-> out of range

wrong injection

-2mL sample, 4mL NO32 blank

-103.6%

-1mL sample, 5mL no32 blank; dilutions not needed

-2 mL sample, 4 mL no32 blank

-106.0%

-1mL sample, 8mL NO32 blank

-104.0%

-100.4%

-102.0%

12.2

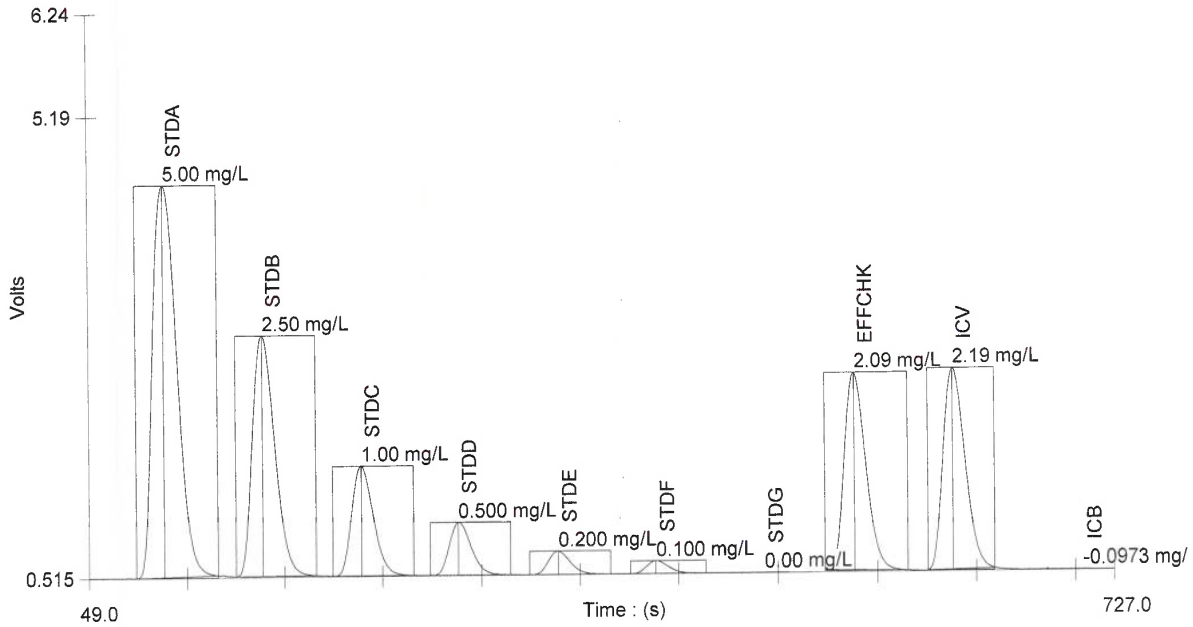
12

Author: Chemistry

Date : 6/7/2022

CCB	1	12	-0.0962	6/7/2022@2:56:34 PM	
	Known Conc:		0.00		
GP40542-MB1	1	84	-0.0574	6/7/2022@2:57:40 PM	
GP40542-B1	1	85	2.10	6/7/2022@2:58:48 PM	105.0%
GP40542-S1	1	86	4.86	6/7/2022@2:59:56 PM	
GP40542-S2	1	87	4.73	6/7/2022@3:01:03 PM	
GP40542-D1	1	88	4.20	6/7/2022@3:02:10 PM	
JD46125-3	1	89	4.23	6/7/2022@3:03:17 PM	
JD46125-4	1	90	4.12	6/7/2022@3:04:24 PM	
JD46125-5	1	1	3.09	6/7/2022@3:05:30 PM	
JD46125-6	1	2	3.49	6/7/2022@3:06:36 PM	
JD46125-7	1	3	0.432	6/7/2022@3:07:41 PM	
CCV	1	11	2.39	6/7/2022@3:08:47 PM	95.6%
	Known Conc:		2.50		
CCB	1	12	-0.0986	6/7/2022@3:09:52 PM	
	Known Conc:		0.00		
JD46125-8	1	4	-0.0826	6/7/2022@3:10:58 PM	
JD46125-9	1	5	-0.0322	6/7/2022@3:12:03 PM	
JD46125-10	1	6	-0.0907	6/7/2022@3:13:08 PM	
JD46125-11	1	7	3.95	6/7/2022@3:14:13 PM	
JD46125-12	1	8	4.18	6/7/2022@3:15:19 PM	
JD46125-13	1	9	-0.0981	6/7/2022@3:16:25 PM	
LA79284-1	1	10	2.55	6/7/2022@3:17:31 PM	
FA96171-1	1	13	0.0440	6/7/2022@3:18:36 PM	
CCV	1	11	2.38	6/7/2022@3:21:36 PM	95.2%
	Known Conc:		2.50		
CCB	1	12	-0.0952	6/7/2022@3:22:42 PM	
	Known Conc:		0.00		

Channel 1 - Set: 1 / 13

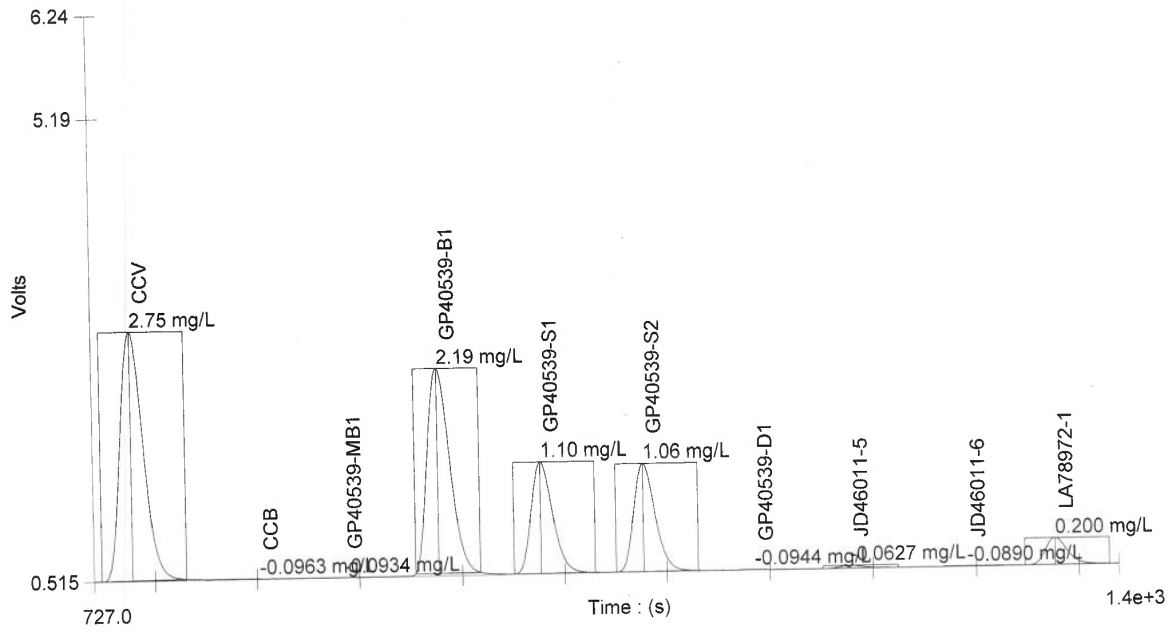


12.2 12

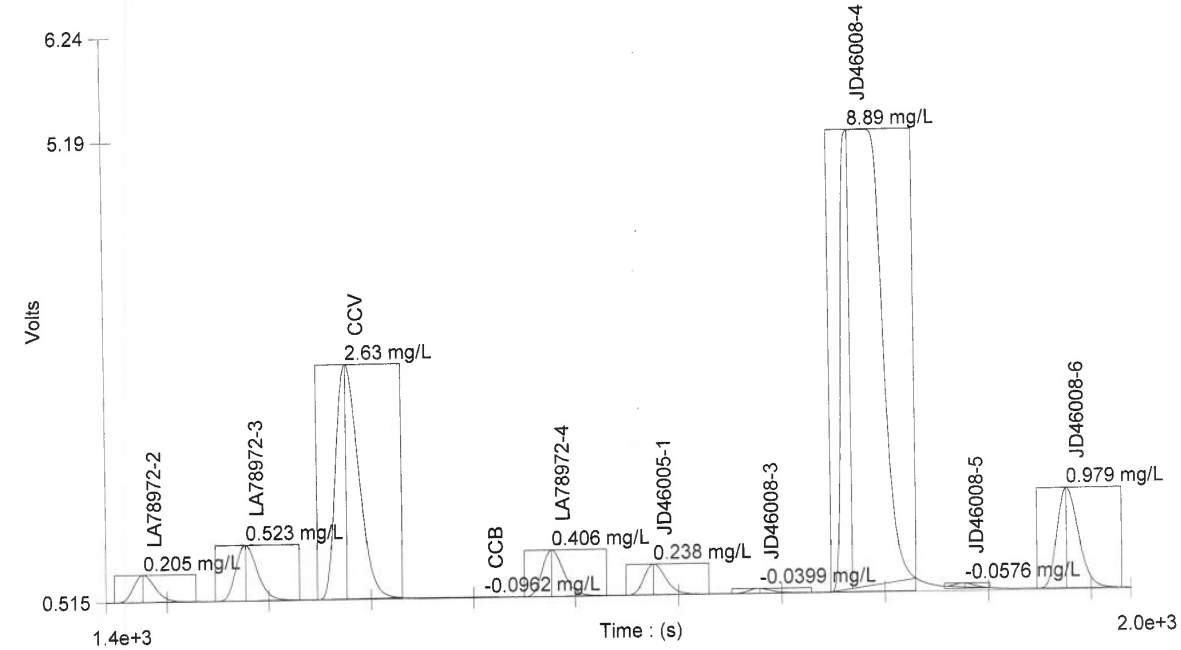
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 2 / 13



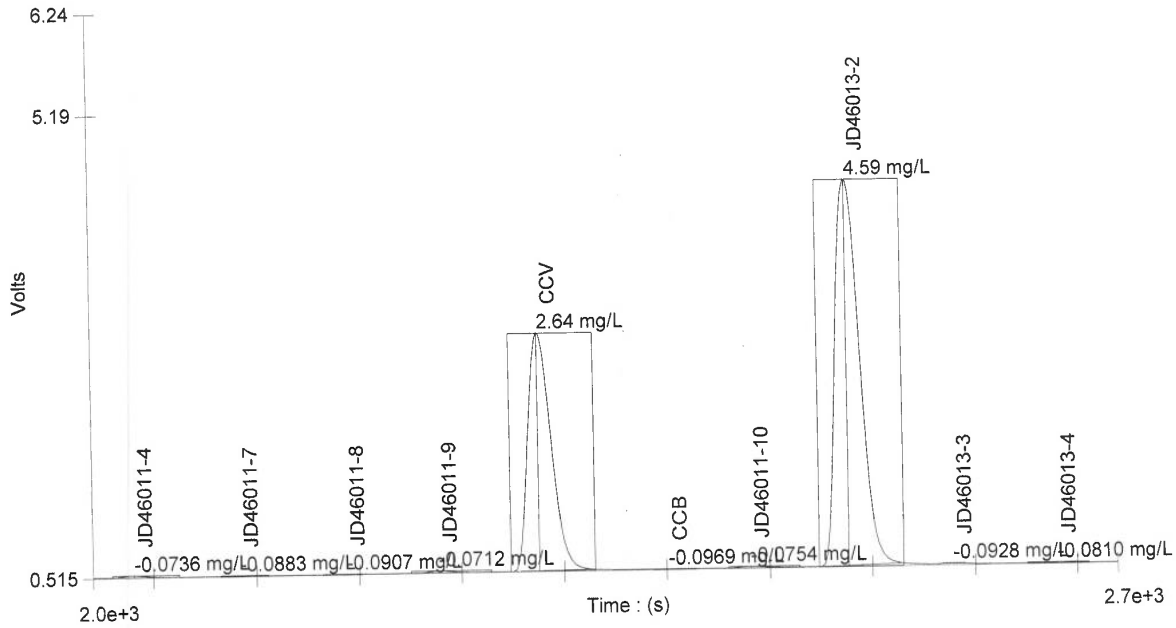
Channel 1 - Set: 3 / 13



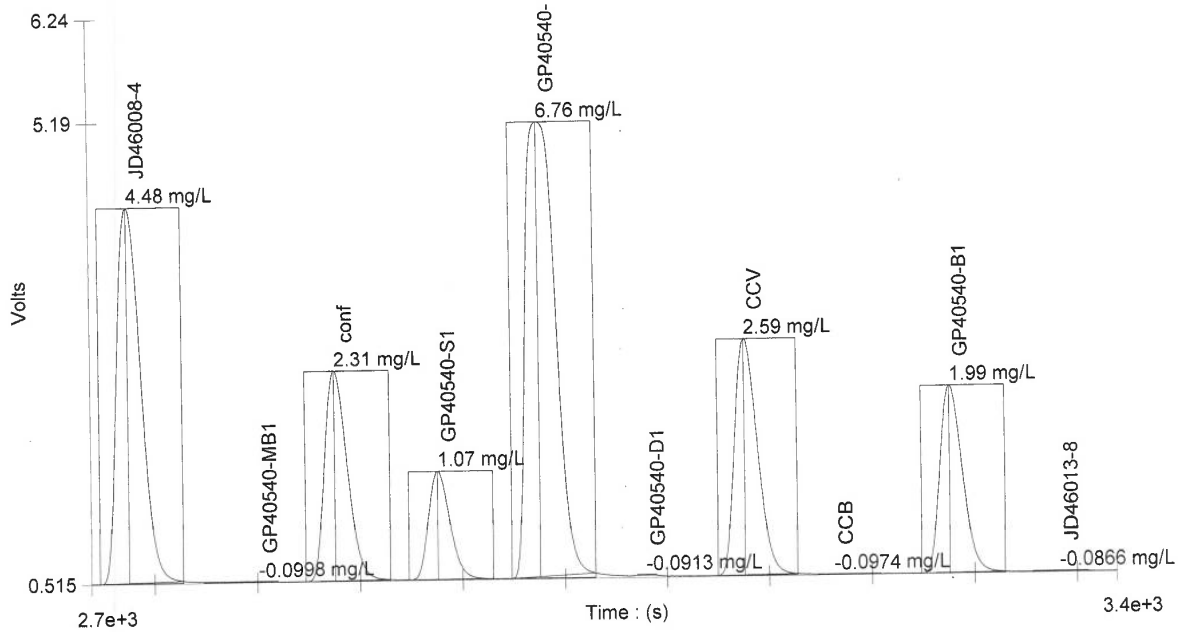
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 4 / 13



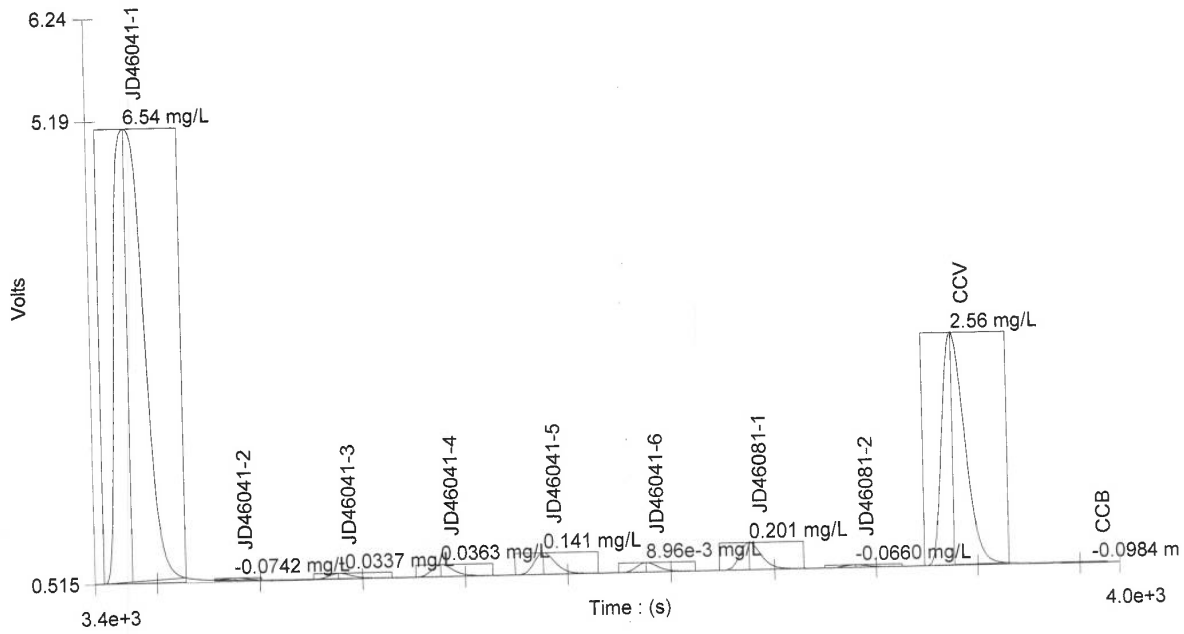
Channel 1 - Set: 5 / 13



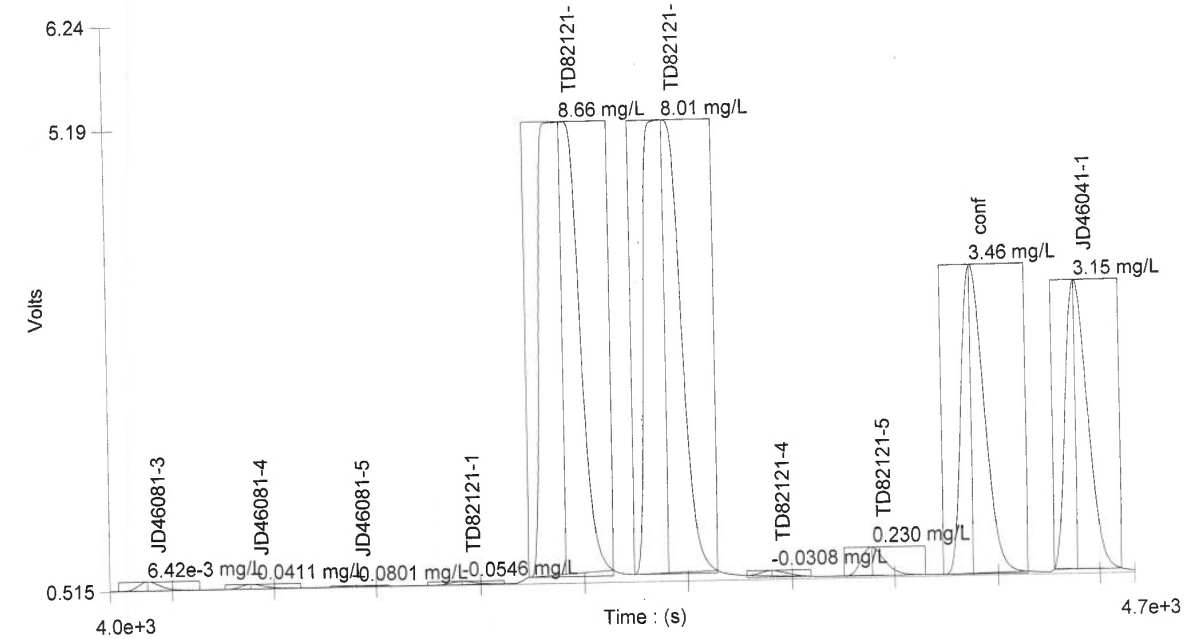
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 6 / 13



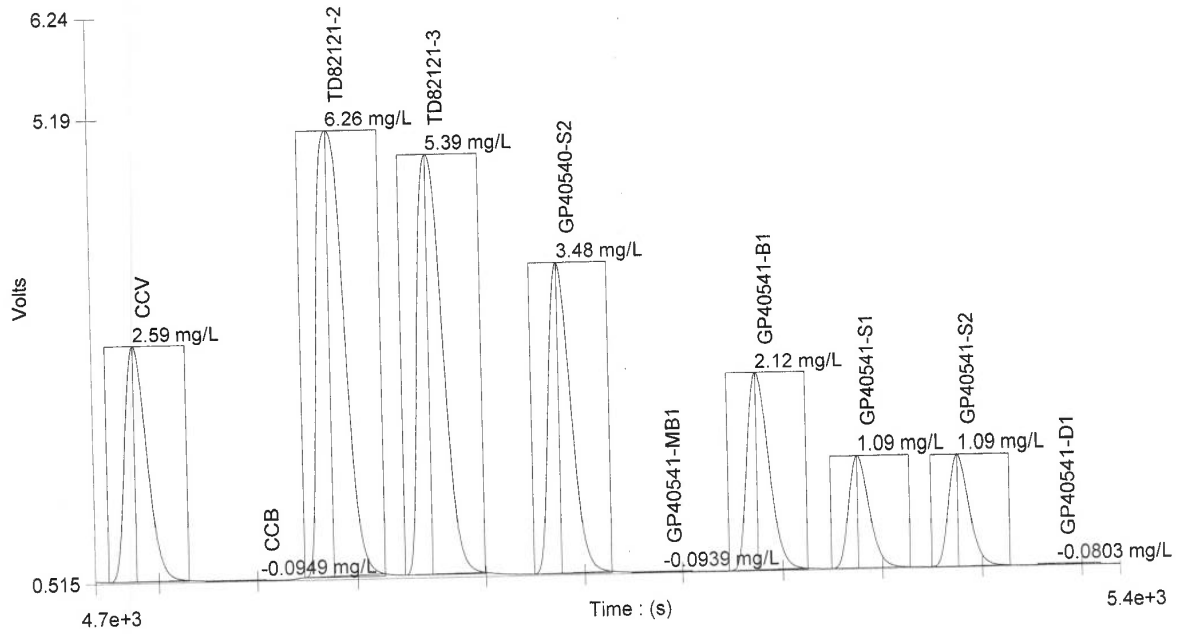
Channel 1 - Set: 7 / 13



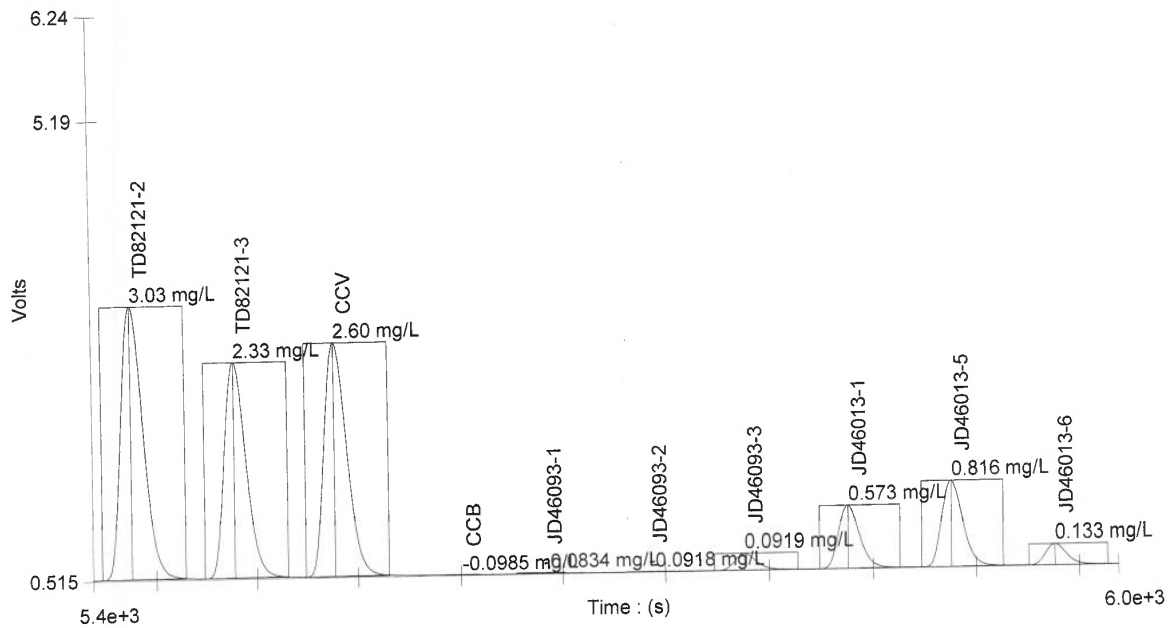
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 8 / 13



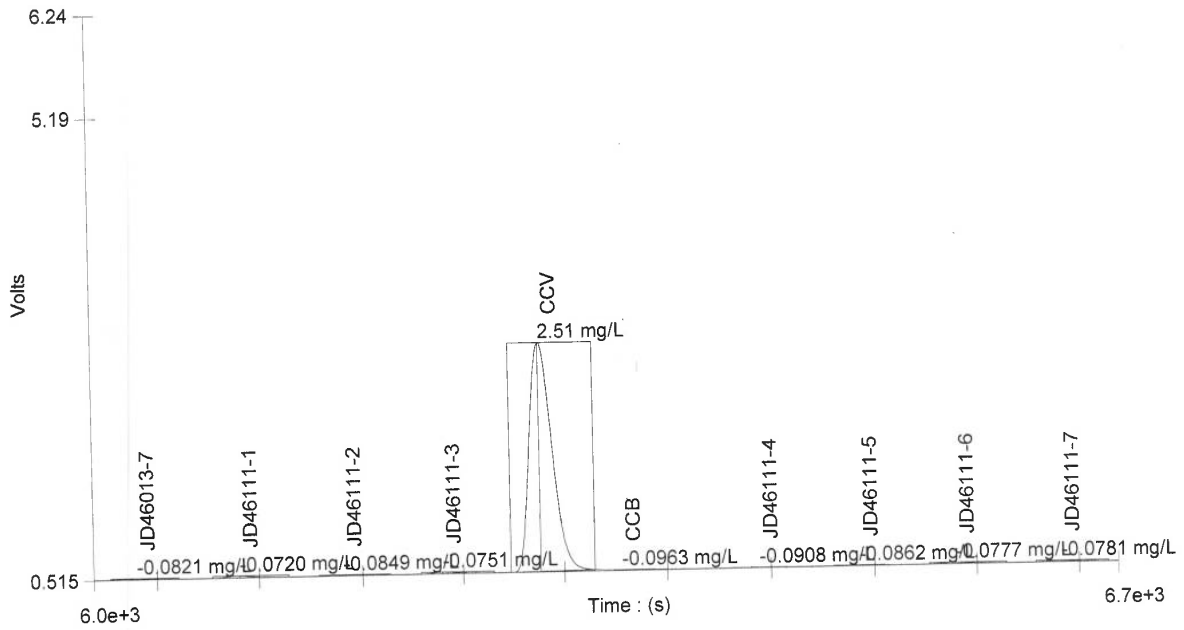
Channel 1 - Set: 9 / 13



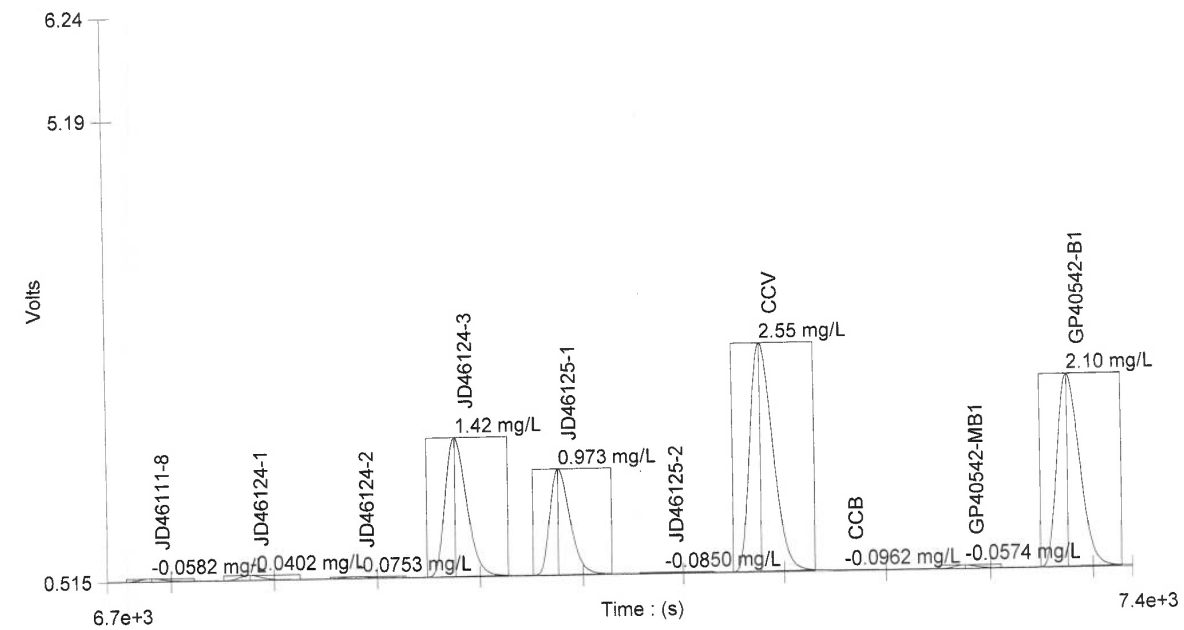
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 10 / 13



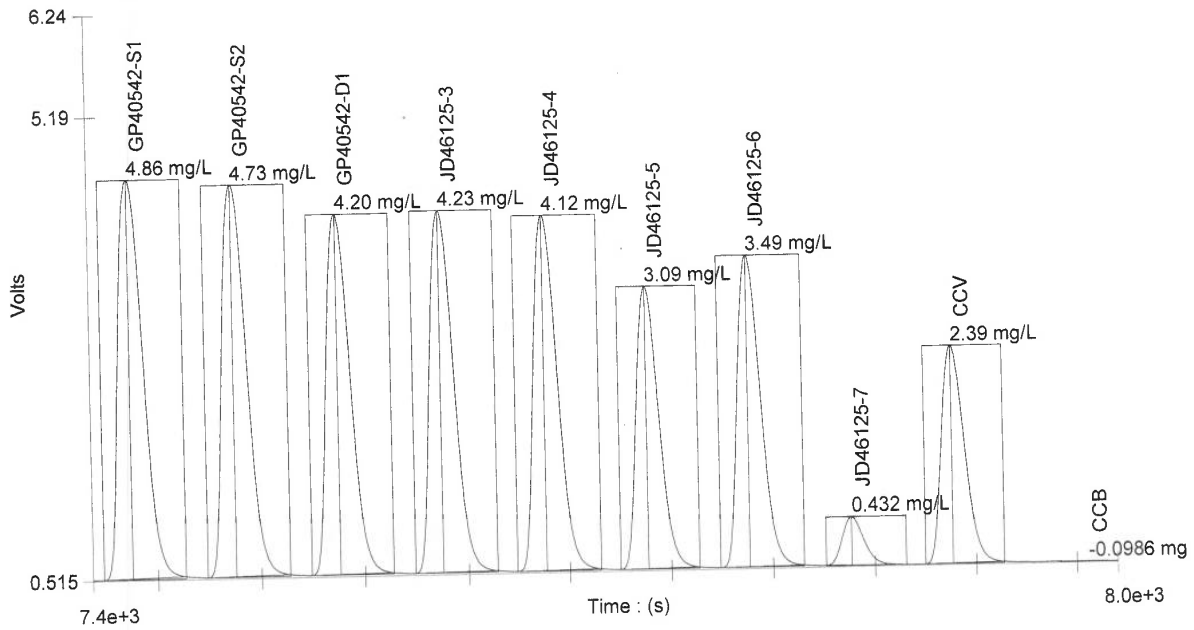
Channel 1 - Set: 11 / 13



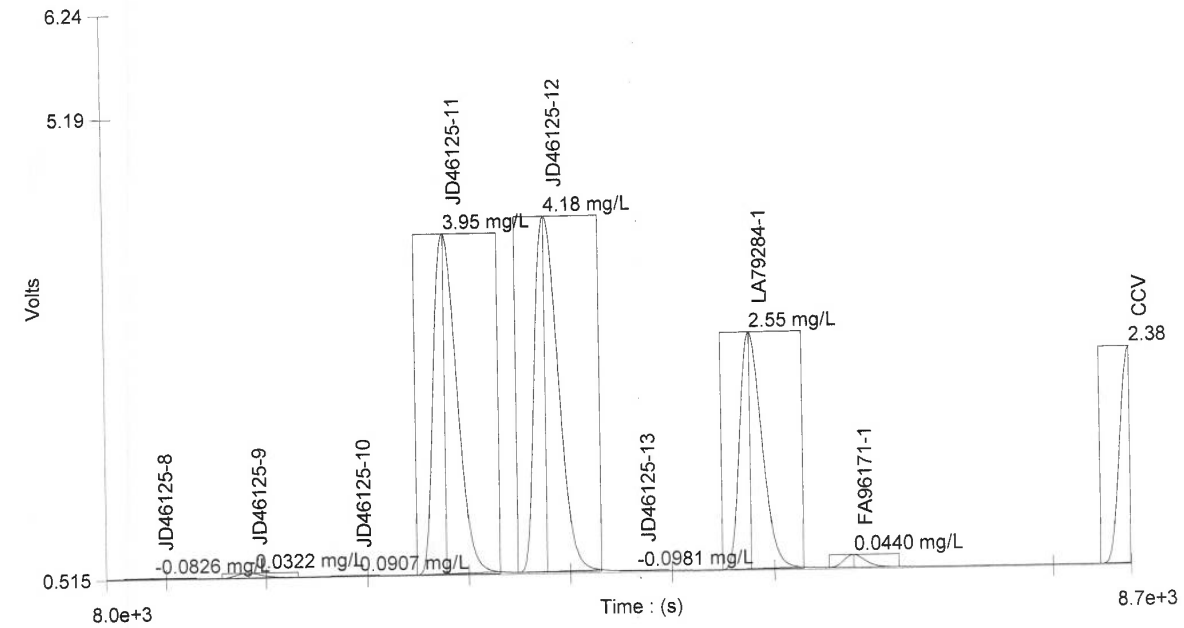
Author: Chemistry

Date : 6/7/2022

Channel 1 - Set: 12 / 13



Channel 1 - Set: 13 / 13



12.2 12

Author: Chemistry

Date : 6/7/2022

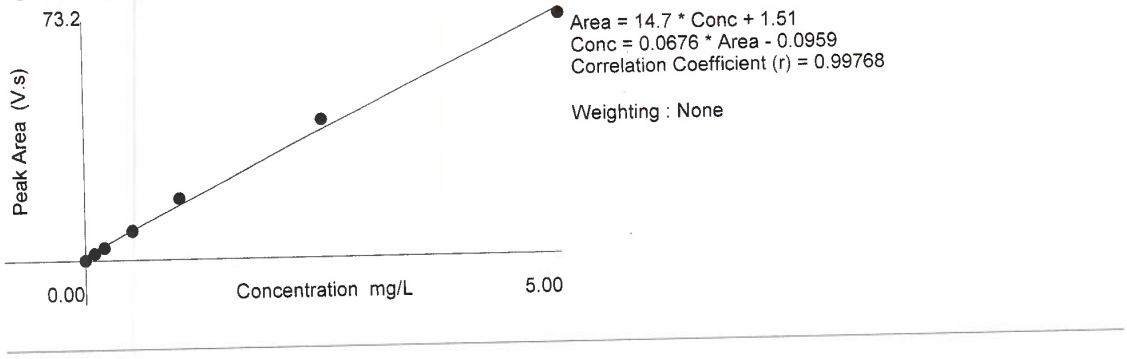
Table : 1 (NO32)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	5.00	1	73.2	3.97	0.0	2.5	4.86	6/7/2022	12:58:10 PM
2	2.50	1	41.4	2.45	0.0	-8.0	2.70	6/7/2022	12:59:16 PM
3	1.00	1	18.2	1.11	0.0	-12.2	1.14	6/7/2022	1:00:21 PM
4	0.500	1	8.71	0.529	0.0	1.8	0.493	6/7/2022	1:01:25 PM
5	0.200	1	3.80	0.231	0.0	14.6	0.161	6/7/2022	1:02:31 PM
6	0.100	1	2.08	0.125	0.0	30.2	0.0448	6/7/2022	1:03:36 PM
7	0.00	1	0.0320	1.75e-3			-0.0938	6/7/2022	1:04:41 PM

14.07.

55.2%

Figure : 1 (NO32)



12.2

12

SGS

Analyst: BR

Prep Date: 6/7/2022

Batch ID: GP40539

Pipette ID: 48

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46011-5	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46011-6	Y
LA78972-1			Y
LA78972-2			Y
LA78972-3			Y
LA78972-4			Y
JD46005-1			Y
JD46008-3			Y
JD46008-4			Y
JD46008-5			Y
JD46008-6			Y
JD46011-4			Y
JD46011-5			Y
JD46011-6			Y
JD46011-7			Y
JD46011-8			Y
JD46011-9			Y
JD46011-10			Y
JD46013-2			
JD46013-3			
JD46013-4			

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer: _____

Date: _____

12.2 12

SGS

Analyst: BR

Prep Date: 6/7/2022

Pipette ID: 48

Batch ID: GP40540

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46013-8	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46041-1	Y
JD46013-8			Y
JD46041-1			Y
JD46041-2			Y
JD46041-3			Y
JD46041-4			Y
JD46041-5			Y
JD46041-6			Y
JD46081-1			Y
JD46081-2			Y
JD46081-3			Y
JD46081-4			Y
JD46081-5			Y
TD82121-1			Y
TD82121-2			Y
TD82121-3			Y
TD82121-4			Y
TD82121-5			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer: _____

Date: _____

12.2 12

SGS

Analyst: BR

Prep Date: 6/7/2022

Pipette ID: 48

Batch ID: GP40541

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46093-1	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46093-2	Y
JD46093-1			Y
JD46093-2			Y
JD46093-3			Y
JD46013-1			Y
JD46013-5			Y
JD46013-6			Y
JD46013-7			Y
JD46111-1			Y
JD46111-2			Y
JD46111-3			Y
JD46111-4			Y
JD46111-5			Y
JD46111-6			Y
JD46111-7			Y
JD46111-8			Y
JD46124-1			Y
JD46124-2			
JD46124-3			
JD46125-1			
JD46125-2			

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer: _____

Date: _____

12.2 12

SGS

Analyst: BR

Prep Date: 6/7/2022

Batch ID: GP40542

Pipette ID: 48

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46125-3	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD46125-4	Y
JD46125-3			Y
JD46125-4			Y
JD46125-5			Y
JD46125-6			Y
JD46125-7			Y
JD46125-8			Y
JD46125-9			Y
JD46125-10			Y
JD46125-11			Y
JD46125-12			Y
JD46125-13			Y
LA79284-1			Y
FA96171-1			Y
			Y
			Y
			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer:

Date: 6/7/22

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SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

GN/GP number: GN30022

Product: NO32

Analyst: BR

Date: 6/7/2022

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume used in ml	Pipette ID*	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Standard ID
100 ppm NO3 intermediate	GNE8-66815-NO32	1000	10	48	Carrier	100 ml	100	7/7/2022	NO32-100-051122
100 ppm NO2 Intermediate	GNE8-66816-NO32	1000	10	48	Carrier	100 ml	100	7/7/2022	NO2-100-051122
100 ppm NO3 External	GNE8-66817-NO32	1000	10	48	Carrier	100 ml	100	7/7/2022	NO32E-100-051122

Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml		Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	
5.0 mg/l NO3	NO32-100-051122	100 mg/l	5.0	48	Carrier	100 ml	5.0	6/14/2022	STDA-052622
2.5 mg/l NO3	NO32-100-051122	100 mg/l	2.5	48	Carrier	100 ml	2.5	6/14/2022	STDB-052622
1.0 mg/l NO3	NO32-100-051122	100 mg/l	1.0	48	Carrier	100 ml	1.0	6/14/2022	STDC-052622
0.5 mg/l NO3	NO32-100-051122	100 mg/l	0.5	48	Carrier	100 ml	0.5	6/14/2022	STDD-052622
0.2 mg/l NO3	NO32-100-051122	100 mg/l	0.2	48	Carrier	100 ml	0.2	6/14/2022	STDE-052622
0.1 mg/l NO3	NO32-100-051122	100 mg/l	0.1	48	Carrier	100 ml	0.1	6/14/2022	STDF-052622
Effcheck 2.0	NO2-100-051122	100 mg/l	2.0	48	Carrier	100 ml	2.0	6/14/2022	EFFcheck-052322
ICV	NO32E-100-051122	100 mg/l	2.0	48	Carrier	100 ml	2.0	6/14/2022	ICV-052322

*If Class A glass pipettes are used, enter an A.

SGS

Reagent Information Log - Nitrate Lachat Autoanalyzer

Reagent	Reagent # or Manufacturer/Lot	Expiration Date
Nitrate Stock Solution	GNE2-69019-NO32	8/18/2022
Ammonium Chloride Buffer Solution	GNE5-70188-NO3	11/24/2022
Sulfanilamide Color Reagent	GNE5-70026-NO32	6/11/2022
1:1 NH4OH	GNE5-70027-NO3	11/11/2022
Carrier Solution	GNE5-70187-NO32	11/24/2022
1000 ppm Nitrite Solution	GNE2-69020-NO32	8/18/2022
Nitrate External Stock Solution	GNE2-69021-NO32	8/18/2022

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-43
Rev. Date: 7/19/06

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA97199

Sampling Date: 07/08/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **157**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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EHS.US.CustomerCare@sgs.com

Sections: 1 2 3

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Section 2: Subcontract Lab Data **4**
Section 3: Misc. Forms **155**
3.1: Chain of Custody 156

SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA97199

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA97199-1	07/08/22	13:00	JR	07/12/22	AQ	Water	EFFLUENT

Subcontract Lab Data

Report of Analysis

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 07/20/2022

Report # 222071638

Project FA 97199 Shepley's Hill

Samples Collected 7/8/22

Deliver To	*Additional Recipients*
Evita Martinez SGS North America Inc. 4405 Vineland Rd Suite C-15 Orlando, FL 32811 407.425.6700	NONE

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

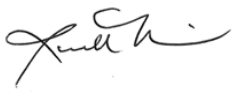
J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 222071638

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: SGS Accutest - Orlando **Report:** 222071638

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

This report was completed in accordance with DOD QSM 5.3 as specified in the contract.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22207163801	EFFLUENT	Water	7/08/22 13:00	7/16/22 11:23

Test Summary

EPA 6020B					
Lab ID	**Client ID**	**Matrix**	**Batch**	**Instru**	**RunDate**
22207163801	EFFLUENT	Water	745743	ICPMS2	7/19/22 18:42

Manual Integrations

Manual Integrations for LC and IC (if performed) are documented in the raw data.
No other manual integrations were performed by Pace Gulf Coast.

Q Flag Summary

NO Q FLAGS FOR THIS WORKORDER

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

EPA 6020B						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22207163801	EFFLUENT	Arsenic	ug/L	1.60	1	NA

Metals

Form I

Sample Results

I

INORGANIC ANALYSIS DATA SHEET

Report No:	222071638	Client Sample ID:	EFFLUENT
Collect Date:	07/08/22 Time: 1300	GCAL Sample ID:	22207163801
Matrix:	Water % Solids: NA	Instrument ID:	ICPMS2
Sample Amt:	50 mL	Lab File ID:	2220719A_MS2.b\1304SMPL.d
Prep Vol.:	50 (mL)	Dilution Factor:	1 Analyst: LWZ
Prep Date:	07/18/22	Analysis Date:	07/19/22 Time: 1842
Prep Batch:	745553	Analytical Batch:	745743
Prep Method:	3010A	Analytical Method:	EPA 6020B

ANALYTE	*RESULT*	*UNITS*	*Q*	*DL*	*LOQ*
Arsenic	1.60	ug/L		0.25	1.00

FORM I - IN

Sample Report

Sample Name	22207163801	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1304SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 18:42:38	**Total Dilution**	1.0000
Sample Type	Sample	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	MeasValue	Final Conc	RSD	CPS	LDR	QC Flag
Li	7	45	No Gas	-2.091	-2.091	1.1	142631.61	500	
Be	9	6	No Gas	-0.018	-0.018	15.1	75.33	1000	
B	11	45	No Gas	79.698	79.698	2.5	175539.31	500	
Sr	88	72	No Gas	343.138	343.138	1.8	32607166.18	1000	
Zr	90	72	No Gas	0.201	0.201	2.0	15555.28	100	
Mo	95	115	No Gas	0.082	0.082	3.1	3859.45	1000	
Ag	107	115	No Gas	0	0.000	12.2	285.56	100	
Cd	111	115	No Gas	-0.001	-0.001	6.8	148.89	1000	
Sb	121	115	No Gas	-0.001	-0.001	3.2	4362.94	1000	
Ba	137	115	No Gas	15.781	15.781	1.1	283085.22	1000	
Tl	205	209	No Gas	-0.146	-0.146	14.4	1143.42	1000	
Pb	208	209	No Gas	0.104	0.104	1.5	8743.19	1000	
Na	23	45	He	27464.1	27464.100	1.1	7275935.73	100000	
Mg	24	45	He	5531.464	5531.464	0.4	577683.10	100000	
Al	27	45	He	3.291	3.291	7.4	98.00	20000	
Si	29	45	He	839593.531	839593.531	1.8	8539.79	10000	>LDR
K	39	45	He	7255.551	7255.551	0.8	688707.05	100000	
Ca	44	45	He	42227.001	42227.001	0.5	209018.39	500000	
Ti	47	45	He	0.16	0.160	33.8	12.33	1000	
V	51	72	He	0.081	0.081	5.2	352.23	1000	
Cr	52	72	He	0.215	0.215	6.7	1143.39	1000	
Mn	55	72	He	1.973	1.973	4.7	2680.27	5000	
Fe	57	72	He	28	28.000	9.9	1933.54	100000	
Co	59	72	He	0.185	0.185	4.8	1397.86	1000	
Ni	60	72	He	5.917	5.917	5.3	12626.63	2000	
Cu	63	103	He	23.277	23.277	0.9	151657.87	1000	
Zn	66	72	He	5.785	5.785	1.9	4038.37	20000	
As	75	72	He	1.597	1.597	2.2	1281.39	1000	
Se	78	72	He	0.007	0.007	9.8	6.60	50	
Sn	120	115	He	0.006	0.006	1.2	730.02	1000	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	8909596.12	10527461.3	84.63	
Ge	72	He	135188.37	173915.266666667	77.73	
In	115	He	1785913.15	2255077.88333333	79.2	
Lu	175	He	5900018.45	6994799.89666667	84.35	
Rh	103	He	7146880.97	8666729.93333333	82.46	
Sc	45	He	108889.71	146200.886666667	74.48	
Tb	159	He	10713779.42	12272531.4833333	87.3	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2096362.91	3591502.72666667	58.37
Bi	209	No Gas	20356747.61	21116033.02	96.4
Ge	72	No Gas	2897449.82	3357560.21333333	86.3
In	115	No Gas	26604383.71	27682959.2866667	96.1
Lu	175	No Gas	33462370.34	32670085.35	102.43
Rh	103	No Gas	22982646.31	25504832.32	90.11
Sc	45	No Gas	10526935.14	12820081.7133333	82.11
Tb	159	No Gas	35226978.64	34961401.1466667	100.76

Flag
<70% or >120%

Metals

Form II

Calibration Verifications

II

INITIAL CALIBRATION VERIFICATION (ICV) STANDARD

Report No:	222071638	GCAL QC ID:	1600
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\009_ICV.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1140	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	50.0	52.5	105		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Initial Calibration Verification (ICV) Report

Sample Name	1600	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	009_ICV.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 11:40:53	**Total Dilution**	1.0000
Sample Type	ICV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	258.992	0.3	5027153.26	250	103.6	
Be	9	6	No Gas	55.537	0.4	229816.23	50	111.07	> +/- 10%
B	11	45	No Gas	286.129	0.2	753910.02	250	114.45	> +/- 10%
Sr	88	72	No Gas	53.371	0.7	5870444.70	50	106.74	
Zr	90	72	No Gas	47.956	0.5	3377299.31	50	95.91	
Mo	95	115	No Gas	49.568	0.5	1025535.62	50	99.14	
Ag	107	115	No Gas	50.681	1.0	2673748.85	50	101.36	
Cd	111	115	No Gas	50.965	0.3	593342.89	50	101.93	
Sb	121	115	No Gas	52.856	0.4	2401622.13	50	105.71	
Ba	137	115	No Gas	50.693	0.5	943299.13	50	101.39	
Tl	205	209	No Gas	48.933	1.3	4950660.13	50	97.87	
Pb	208	209	No Gas	49.377	0.8	3496103.18	50	98.75	
Na	23	45	He	5107.233	1.1	1766124.09	5000	102.14	
Mg	24	45	He	5167.269	1.4	700557.59	5000	103.35	
Al	27	45	He	1028.672	0.8	30906.30	1000	102.87	
Si	29	45	He	508665.787	2.4	7118.39	5000	10173.32	> +/- 10%
K	39	45	He	5105.159	0.8	630741.16	5000	102.1	
Ca	44	45	He	25471.463	1.6	163752.07	25000	101.89	
Ti	47	45	He	50.324	1.8	3235.36	50	100.65	
V	51	72	He	50.341	2.2	158903.34	50	100.68	
Cr	52	72	He	51.004	1.0	230412.74	50	102.01	
Mn	55	72	He	49.856	1.5	82889.74	50	99.71	
Fe	57	72	He	5087.495	2.1	428585.43	5000	101.75	
Co	59	72	He	51.171	1.2	463440.56	50	102.34	
Ni	60	72	He	103.492	0.8	271596.10	100	103.49	
Cu	63	103	He	52.034	0.9	403032.66	50	104.07	
Zn	66	72	He	1033.839	1.4	779289.53	1000	103.38	
As	75	72	He	52.483	1.5	49551.90	50	104.97	
Se	78	72	He	25.350	2.0	1334.63	25	101.4	
Sn	120	115	He	51.713	1.3	315678.94	50	103.43	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	10162193.39	10527461.3	96.53	
Ge	72	He	168142.78	173915.266666667	96.68	
In	115	He	2187874.71	2255077.88333333	97.02	
Lu	175	He	6999163.44	6994799.89666667	100.06	
Rh	103	He	8522939.66	8666729.93333333	98.34	
Sc	45	He	141330.89	146200.886666667	96.67	
Tb	159	He	12374595.65	12272531.4833333	100.83	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	3590754.89	3591502.72666667	99.98	
Bi	209	No Gas	20933532.61	21116033.02	99.14	
Ge	72	No Gas	3352975.84	3357560.21333333	99.86	
In	115	No Gas	27545709.64	27682959.2866667	99.5	
Lu	175	No Gas	33274074.50	32670085.35	101.85	
Rh	103	No Gas	24859880.12	25504832.32	97.47	
Sc	45	No Gas	12686203.94	12820081.7133333	98.96	
Tb	159	No Gas	35576678.64	34961401.1466667	101.76	

II

LOW LEVEL CONTINUING CALIBRATION VERIFICATION (LLCCV) STANDARD

Report No:	222071638	GCAL QC ID:	1803
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\1211CCV1.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1228	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1.00	1.01	101		ug/L

CONTROL LIMITS 70-130%

FORM II - IN

Low Level Continuing Calibration Verification(LLCCV) Report

Sample Name	1803	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1211CCV1.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 12:28:39	**Total Dilution**	1.0000
Sample Type	LLCCV1	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: Initial 6020B DOD 80-120% / 70-130% 6020B and 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	5.456	2.5	309239.09	5	109.12	
Be	9	6	No Gas	1.177	2.1	4773.44	1	117.7	
B	11	45	No Gas	11.466	0.3	31934.21	10	114.66	
Sr	88	72	No Gas	1.078	5.5	118133.36	1	107.8	
Zr	90	72	No Gas	1.187	2.6	85670.53	1	118.7	
Mo	95	115	No Gas	0.911	3.0	21357.12	1	91.1	
Ag	107	115	No Gas	1.039	2.4	55728.61	1	103.9	
Cd	111	115	No Gas	1.063	2.5	12667.98	1	106.3	
Sb	121	115	No Gas	1.945	3.2	93828.25	2	97.25	
Ba	137	115	No Gas	1.012	1.0	19149.90	1	101.2	
Tl	205	209	No Gas	0.841	5.0	102731.82	1	84.1	
Pb	208	209	No Gas	0.999	3.1	73741.61	1	99.9	
Na	23	45	He	87.278	2.7	40782.75	100	87.28	
Mg	24	45	He	108.647	0.9	14480.73	100	108.65	
Al	27	45	He	20.818	3.6	634.02	20	104.09	
Si	29	45	He	3484.499	9.3	1031.38	200	1742.25	> +/- 20%
K	39	45	He	94.452	4.8	16926.73	100	94.45	
Ca	44	45	He	515.099	3.6	3398.78	500	103.02	
Ti	47	45	He	1.012	11.8	68.67	1	101.2	
V	51	72	He	1.034	4.6	3361.53	1	103.4	
Cr	52	72	He	1.051	4.0	5069.81	1	105.1	
Mn	55	72	He	5.280	1.3	8615.93	5	105.6	
Fe	57	72	He	105.669	5.2	8736.22	100	105.67	
Co	59	72	He	1.086	3.1	9665.47	1	108.6	
Ni	60	72	He	2.178	3.5	5751.19	2	108.9	
Cu	63	103	He	1.040	2.8	9185.17	1	104	
Zn	66	72	He	21.346	1.5	16339.25	20	106.73	
As	75	72	He	1.007	2.3	1012.04	1	100.7	
Se	78	72	He	1.019	1.1	59.73	1	101.9	
Sn	120	115	He	1.023	3.7	6903.98	1	102.3	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	10338902.76	10527461.3	98.21	
Ge	72	He	164133.36	173915.266666667	94.38	
In	115	He	2136817.57	2255077.88333333	94.76	
Lu	175	He	6788500.73	6994799.89666667	97.05	
Rh	103	He	8564291.88	8666729.93333333	98.82	
Sc	45	He	137201.80	146200.886666667	93.84	
Tb	159	He	12139681.49	12272531.4833333	98.92	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	3531458.87	3591502.72666667	98.33	
Bi	209	No Gas	21339231.35	21116033.02	101.06	
Ge	72	No Gas	3286244.38	3357560.21333333	97.88	
In	115	No Gas	27915063.07	27682959.2866667	100.84	
Lu	175	No Gas	32810351.18	32670085.35	100.43	
Rh	103	No Gas	25356152.33	25504832.32	99.42	
Sc	45	No Gas	12564083.94	12820081.7133333	98	
Tb	159	No Gas	35198965.31	34961401.1466667	100.68	

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222071638	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\1290_CCV.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1744	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	10.1	101		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1290_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 17:44:09	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	34.929	2.1	737301.60	50	69.86	> +/- 10%
Be	9	6	No Gas	12.211	1.4	30968.02	10	122.11	> +/- 10%
B	11	45	No Gas	42.556	2.3	97644.20	50	85.11	> +/- 10%
Sr	88	72	No Gas	11.053	1.5	1097298.13	10	110.53	> +/- 10%
Zr	90	72	No Gas	10.559	2.1	673073.97	10	105.59	
Mo	95	115	No Gas	9.219	2.2	191039.68	10	92.19	
Ag	107	115	No Gas	9.849	2.7	515610.86	10	98.49	
Cd	111	115	No Gas	9.910	3.1	114570.82	10	99.1	
Sb	121	115	No Gas	19.258	2.5	870734.36	20	96.29	
Ba	137	115	No Gas	10.042	2.3	185429.65	10	100.42	
Tl	205	209	No Gas	9.330	2.8	963175.06	10	93.3	
Pb	208	209	No Gas	9.510	3.6	679214.53	10	95.1	
Na	23	45	He	1011.758	2.4	289163.87	1000	101.18	
Mg	24	45	He	1016.378	1.5	110944.73	1000	101.64	
Al	27	45	He	191.871	3.1	4655.41	200	95.94	
Si	29	45	He	107296.735	4.5	1855.46	2000	5364.84	> +/- 10%
K	39	45	He	1019.991	1.3	105133.13	1000	102	
Ca	44	45	He	4965.103	2.0	25789.35	5000	99.3	
Ti	47	45	He	10.074	4.7	524.68	10	100.74	
V	51	72	He	9.816	0.4	26247.80	10	98.16	
Cr	52	72	He	10.163	2.7	39031.40	10	101.63	
Mn	55	72	He	49.584	2.7	69531.52	50	99.17	
Fe	57	72	He	991.645	3.5	70496.34	1000	99.16	
Co	59	72	He	10.343	2.3	79046.32	10	103.43	
Ni	60	72	He	20.915	2.7	46417.42	20	104.57	
Cu	63	103	He	9.882	2.6	69256.80	10	98.82	
Zn	66	72	He	205.628	2.7	131176.23	200	102.81	
As	75	72	He	10.142	1.5	8134.95	10	101.42	
Se	78	72	He	9.649	1.4	432.67	10	96.49	
Sn	120	115	He	10.269	3.5	53754.01	10	102.69	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9349402.78	10527461.3	88.81	
Ge	72	He	141808.64	173915.266666667	81.54	
In	115	He	1860923.21	2255077.88333333	82.52	
Lu	175	He	5955850.12	6994799.89666667	85.15	
Rh	103	He	7622299.14	8666729.93333333	87.95	
Sc	45	He	113662.34	146200.886666667	77.74	
Tb	159	He	10916944.84	12272531.4833333	88.95	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2301015.35	3591502.72666667	64.07
Bi	209	No Gas	21069155.10	21116033.02	99.78
Ge	72	No Gas	3022595.37	3357560.21333333	90.02
In	115	No Gas	27378543.57	27682959.2866667	98.9
Lu	175	No Gas	33425297.00	32670085.35	102.31
Rh	103	No Gas	24346883.48	25504832.32	95.46
Sc	45	No Gas	10871406.24	12820081.7133333	84.8
Tb	159	No Gas	35430982.81	34961401.1466667	101.34

Flag
<70% or >120%

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222071638	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\1308_CCV.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1857	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	10.2	102		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1308_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 18:57:03	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	32.307	0.5	714433.84	50	64.61	> +/- 10%
Be	9	6	No Gas	12.071	0.6	30354.77	10	120.71	> +/- 10%
B	11	45	No Gas	39.781	1.8	93884.74	50	79.56	> +/- 10%
Sr	88	72	No Gas	11.127	0.6	1148746.34	10	111.27	> +/- 10%
Zr	90	72	No Gas	10.457	0.1	693169.52	10	104.57	
Mo	95	115	No Gas	9.194	0.3	199923.10	10	91.94	
Ag	107	115	No Gas	9.804	0.8	538532.10	10	98.04	
Cd	111	115	No Gas	9.877	0.7	119799.63	10	98.77	
Sb	121	115	No Gas	19.105	0.4	906423.92	20	95.52	
Ba	137	115	No Gas	10.055	0.6	194822.00	10	100.55	
Tl	205	209	No Gas	9.319	0.9	1002879.98	10	93.19	
Pb	208	209	No Gas	9.460	0.4	704265.20	10	94.6	
Na	23	45	He	995.587	0.6	293763.53	1000	99.56	
Mg	24	45	He	1026.099	0.4	115575.31	1000	102.61	
Al	27	45	He	193.696	1.3	4848.81	200	96.85	
Si	29	45	He	100496.620	8.2	1847.46	2000	5024.83	> +/- 10%
K	39	45	He	1032.301	0.6	109738.95	1000	103.23	
Ca	44	45	He	5044.219	0.8	27039.83	5000	100.88	
Ti	47	45	He	10.226	2.0	549.34	10	102.26	
V	51	72	He	9.819	1.5	27406.49	10	98.19	
Cr	52	72	He	10.000	1.6	40080.80	10	100	
Mn	55	72	He	49.369	0.8	72240.00	50	98.74	
Fe	57	72	He	1006.766	1.3	74672.85	1000	100.68	
Co	59	72	He	10.241	0.2	81677.95	10	102.41	
Ni	60	72	He	20.681	0.5	47893.16	20	103.41	
Cu	63	103	He	9.958	0.4	72794.64	10	99.58	
Zn	66	72	He	203.070	0.5	135188.94	200	101.54	
As	75	72	He	10.180	1.5	8521.50	10	101.8	
Se	78	72	He	9.779	1.2	457.50	10	97.79	
Sn	120	115	He	10.227	0.6	55922.38	10	102.27	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9790443.81	10527461.3	93	
Ge	72	He	147984.81	173915.266666667	85.09	
In	115	He	1944000.82	2255077.88333333	86.21	
Lu	175	He	6224685.32	6994799.89666667	88.99	
Rh	103	He	7951205.24	8666729.93333333	91.74	
Sc	45	He	117290.17	146200.886666667	80.23	
Tb	159	He	11287814.00	12272531.4833333	91.98	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2281482.70	3591502.72666667	63.52
Bi	209	No Gas	21966658.84	21116033.02	104.03
Ge	72	No Gas	3143125.36	3357560.21333333	93.61
In	115	No Gas	28725925.42	27682959.2866667	103.77
Lu	175	No Gas	35084716.98	32670085.35	107.39
Rh	103	No Gas	25384196.21	25504832.32	99.53
Sc	45	No Gas	11167557.89	12820081.7133333	87.11
Tb	159	No Gas	37158153.61	34961401.1466667	106.28

Flag
<70% or >120%

II

INITIAL CALIBRATION VERIFICATION (ICV) STANDARD

Report No:	222071638	GCAL QC ID:	1600
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\015_ICV.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1404	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	50.0	52.1	104		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Initial Calibration Verification (ICV) Report

Sample Name	1600	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	015_ICV.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:04:09	**Total Dilution**	1.0000
Sample Type	ICV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	257.306	0.4	16952558.92	250	102.92	
Be	9	45	No Gas	51.274	0.3	852787.79	50	102.55	
B	11	45	No Gas	294.754	0.7	4220707.85	250	117.9	> +/- 10%
Sr	88	72	No Gas	51.394	0.5	17791000.57	50	102.79	
Zr	90	72	No Gas	48.061	0.1	9883553.22	50	96.12	
Mo	95	115	No Gas	49.434	0.5	2980856.48	50	98.87	
Ag	107	115	No Gas	52.538	1.4	8054300.23	50	105.08	
Cd	111	115	No Gas	51.244	1.1	1817343.19	50	102.49	
Sb	121	209	No Gas	54.838	1.1	6855399.87	50	109.68	
Ba	137	115	No Gas	50.891	0.9	2564142.61	50	101.78	
Tl	205	175	No Gas	50.636	0.5	12253590.24	50	101.27	
Pb	208	209	No Gas	52.976	1.8	9052384.45	50	105.95	
Na	23	45	He	5246.521	0.7	10271521.93	5000	104.93	
Mg	24	45	He	5242.950	0.8	3642050.36	5000	104.86	
Al	27	45	He	1033.454	1.2	147557.58	1000	103.35	
Si	29	45	He	521439.078	2.8	37040.77	5000	10428.78	> +/- 10%
K	39	45	He	5112.664	0.2	3262113.80	5000	102.25	
Ca	44	45	He	25536.018	0.7	710674.58	25000	102.14	
Ti	47	45	He	51.258	0.7	14309.88	50	102.52	
V	51	72	He	50.402	0.2	640282.42	50	100.8	
Cr	52	72	He	51.187	0.3	960357.32	50	102.37	
Mn	55	72	He	49.684	0.2	335315.40	50	99.37	
Fe	57	72	He	5093.863	0.8	1665809.77	5000	101.88	
Co	59	72	He	50.932	0.1	1736418.13	50	101.86	
Ni	60	72	He	104.619	0.3	1004971.66	100	104.62	
Cu	63	45	He	54.243	0.6	1432839.11	50	108.49	
Zn	66	103	He	1016.830	0.4	2937644.81	1000	101.68	
As	75	72	He	52.050	0.2	201234.62	50	104.1	
Se	78	72	He	24.921	1.1	5563.44	25	99.68	
Sn	120	115	He	51.702	0.3	746079.19	50	103.4	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	17439907.24	18465816.8066667	94.44	
Ge	72	He	572561.42	586421.103333333	97.64	
In	115	He	5570799.87	5691865.72666667	97.87	
Lu	175	He	12678210.23	12752607.7266667	99.42	
Rh	103	He	22534241.88	24372966.2533333	92.46	
Sc	45	He	640710.31	657305.666666667	97.48	
Tb	159	He	23553247.98	24246106.3066667	97.14	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13530998.98	13717472.23	98.64	
Bi	209	No Gas	54685385.85	60861477.4233333	89.85	
Ge	72	No Gas	10213816.26	10792997.07	94.63	
In	115	No Gas	81968027.54	87343412.0733333	93.85	
Lu	175	No Gas	91780628.63	96431715.23	95.18	
Rh	103	No Gas	72792092.66	79124190.19	92	
Sc	45	No Gas	42931062.74	44531507.12	96.41	
Tb	159	No Gas	98389055.20	104667051.773333	94	

II

LOW LEVEL CONTINUING CALIBRATION VERIFICATION (LLCCV) STANDARD

Report No:	222071638	GCAL QC ID:	1803
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\1811CCV1.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1430	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1.00	0.960	96		ug/L

CONTROL LIMITS 70-130%

FORM II - IN

Low Level Continuing Calibration Verification(LLCCV) Report

Sample Name	1803	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1811CCV1.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:30:39	**Total Dilution**	1.0000
Sample Type	LLCCV1	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: Initial 6020B DOD 80-120% / 70-130% 6020B and 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	5.836	1.2	1125474.57	5	116.72	
Be	9	45	No Gas	1.052	1.5	18685.45	1	105.2	
B	11	45	No Gas	11.860	1.1	193092.63	10	118.6	
Sr	88	72	No Gas	1.026	0.4	376798.01	1	102.6	
Zr	90	72	No Gas	1.125	0.6	251283.01	1	112.5	
Mo	95	115	No Gas	0.855	0.9	66224.99	1	85.5	
Ag	107	115	No Gas	1.072	1.0	174053.98	1	107.2	
Cd	111	115	No Gas	1.048	1.8	39263.01	1	104.8	
Sb	121	209	No Gas	1.904	0.2	281729.98	2	95.2	
Ba	137	115	No Gas	1.010	1.1	53475.31	1	101	
Tl	205	175	No Gas	0.809	1.7	282477.07	1	80.9	
Pb	208	209	No Gas	1.032	0.9	191623.37	1	103.2	
Na	23	45	He	106.763	0.3	241298.17	100	106.76	
Mg	24	45	He	109.945	1.1	80981.51	100	109.94	
Al	27	45	He	21.782	0.9	3399.07	20	108.91	
Si	29	45	He	11322.954	18.6	7313.20	200	5661.48	> +/- 20%
K	39	45	He	106.912	1.5	86554.40	100	106.91	
Ca	44	45	He	524.652	0.2	15721.85	500	104.93	
Ti	47	45	He	1.052	2.5	343.00	1	105.2	
V	51	72	He	1.039	1.9	14343.73	1	103.9	
Cr	52	72	He	1.070	0.6	22430.47	1	107	
Mn	55	72	He	5.330	2.3	37327.22	5	106.6	
Fe	57	72	He	107.709	1.3	36502.74	100	107.71	
Co	59	72	He	1.067	1.0	37790.70	1	106.7	
Ni	60	72	He	2.202	1.3	22226.88	2	110.1	
Cu	63	45	He	1.136	0.9	33919.19	1	113.6	
Zn	66	103	He	20.577	1.3	65376.05	20	102.88	
As	75	72	He	0.955	1.9	4346.32	1	95.5	
Se	78	72	He	1.005	1.9	249.11	1	100.5	
Sn	120	115	He	1.010	2.5	17542.12	1	101	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	18543860.97	18465816.8066667	100.42	
Ge	72	He	590638.31	586421.103333333	100.72	
In	115	He	5693069.10	5691865.72666667	100.02	
Lu	175	He	12859219.39	12752607.7266667	100.84	
Rh	103	He	24082363.49	24372966.2533333	98.81	
Sc	45	He	664745.29	657305.666666667	101.13	
Tb	159	He	24148326.31	24246106.3066667	99.6	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13903560.27	13717472.23	101.36	
Bi	209	No Gas	58286045.80	60861477.4233333	95.77	
Ge	72	No Gas	10652710.41	10792997.07	98.7	
In	115	No Gas	85936583.10	87343412.0733333	98.39	
Lu	175	No Gas	94306618.59	96431715.23	97.8	
Rh	103	No Gas	78069263.56	79124190.19	98.67	
Sc	45	No Gas	44244107.13	44531507.12	99.35	
Tb	159	No Gas	101083641.83	104667051.773333	96.58	

II

LINEAR DYNAMIC RANGE (LDR) STANDARD

Report No:	222071638	GCAL QC ID:	2500
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\1814_QC1.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1454	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1000	913	91		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Linear Dynamic Range Check (LDR) Report

Sample Name	LDR	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1814_QC1.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:54:18	**Total Dilution**	1.0000
Sample Type	QC1	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Be	9	45	No Gas	959.108	1.5	13062852.00	1000	95.91	
Sr	88	72	No Gas	968.379	1.3	252742189.57	1000	96.84	
Mo	95	115	No Gas	1054.770	0.6	43827470.48	1000	105.48	
Cd	111	115	No Gas	919.577	0.8	22554809.10	1000	91.96	
Sb	121	209	No Gas	1079.125	0.2	85880512.14	1000	107.91	
Ba	137	115	No Gas	996.608	0.5	34731431.95	1000	99.66	
Tl	205	175	No Gas	939.550	0.5	161759454.25	1000	93.96	
Pb	208	209	No Gas	1022.009	0.2	111553481.67	1000	102.2	
Na	23	45	He	98249.401	0.9	190112083.84	100000	98.25	
Mg	24	45	He	96625.769	0.7	66455252.34	100000	96.63	
Al	27	45	He	21144.121	0.9	2987069.25	20000	105.72	
K	39	45	He	105012.192	1.5	66076235.68	100000	105.01	
Ca	44	45	He	508824.570	1.9	14017908.13	500000	101.76	
Ti	47	45	He	966.749	1.7	266697.17	1000	96.67	
V	51	72	He	1039.086	1.2	11447818.99	1000	103.91	
Cr	52	72	He	996.014	1.0	16195710.47	1000	99.6	
Mn	55	72	He	5198.927	1.2	30440981.01	5000	103.98	
Fe	57	72	He	98482.277	1.3	27958894.58	100000	98.48	
Co	59	72	He	914.127	1.4	27053737.82	1000	91.41	
Ni	60	72	He	1751.798	1.6	14604408.31	2000	87.59	QC1 Main CR1 Failed
Cu	63	45	He	744.838	1.4	19455939.23	1000	74.48	QC1 Main CR1 Failed
Zn	66	103	He	19680.795	1.7	42180123.88	20000	98.4	
As	75	72	He	913.355	1.9	3058237.17	1000	91.34	
Sn	120	115	He	986.656	1.8	12293613.40	1000	98.67	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	12780868.56	18465816.8066667	69.21	<70% or >120%
Ge	72	He	497079.72	586421.103333333	84.76	
In	115	He	4840300.13	5691865.72666667	85.04	
Lu	175	He	11212861.08	12752607.7266667	87.93	
Rh	103	He	16727067.11	24372966.2533333	68.63	<70% or >120%
Sc	45	He	634713.52	657305.666666667	96.56	
Tb	159	He	19919919.70	24246106.3066667	82.16	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Bi)	6	No Gas	11252787.66	13717472.23	82.03
Bi	209	No Gas	34945894.48	60861477.4233333	57.42
Ge	72	No Gas	7703270.81	10792997.07	71.37
In	115	No Gas	56812826.01	87343412.0733333	65.05
Lu	175	No Gas	65706457.35	96431715.23	68.14
Rh	103	No Gas	49382963.59	79124190.19	62.41
Sc	45	No Gas	35180048.60	44531507.12	79
Tb	159	No Gas	70179513.95	104667051.773333	67.05

Flag
<70% or >120%
<70% or >120%
<70% or >120%

Flag
<70% or >120%
<70% or >120%

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222071638	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\1825_CCV.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1542	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	10.1	101		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1825_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 15:42:54	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	45	No Gas	51.596	0.8	4152791.29	50	103.19	
Be	9	45	No Gas	10.252	1.0	178538.75	10	102.52	
B	11	45	No Gas	53.827	0.9	820206.58	50	107.65	
Sr	88	72	No Gas	9.968	1.1	3625319.22	10	99.68	
Zr	90	72	No Gas	9.667	1.3	2093824.71	10	96.67	
Mo	95	115	No Gas	9.550	1.1	604602.29	10	95.5	
Ag	107	115	No Gas	10.466	1.7	1658612.78	10	104.66	
Cd	111	115	No Gas	10.109	2.0	370533.29	10	101.09	
Sb	121	209	No Gas	19.394	1.1	2522302.75	20	96.97	
Ba	137	115	No Gas	9.822	1.6	511237.34	10	98.22	
Tl	205	175	No Gas	10.151	1.4	2519550.74	10	101.51	
Pb	208	209	No Gas	10.055	0.7	1777575.86	10	100.55	
Na	23	45	He	1061.955	0.4	2213000.07	1000	106.2	
Mg	24	45	He	1063.127	0.6	780350.67	1000	106.31	
Al	27	45	He	208.187	0.3	31493.49	200	104.09	
Si	29	45	He	105045.636	11.3	13243.94	2000	5252.28	> +/- 10%
K	39	45	He	1036.316	1.5	710499.83	1000	103.63	
Ca	44	45	He	5096.699	0.8	150077.46	5000	101.93	
Ti	47	45	He	10.255	2.5	3051.32	10	102.55	
V	51	72	He	10.115	0.6	133985.10	10	101.15	
Cr	52	72	He	10.340	0.4	202806.39	10	103.4	
Mn	55	72	He	51.270	0.1	359200.71	50	102.54	
Fe	57	72	He	1045.736	0.8	355167.74	1000	104.57	
Co	59	72	He	10.368	0.4	367165.38	10	103.68	
Ni	60	72	He	21.112	0.2	210862.08	20	105.56	
Cu	63	45	He	10.819	0.6	303737.69	10	108.19	
Zn	66	103	He	205.123	0.4	623738.52	200	102.56	
As	75	72	He	10.095	0.8	40959.13	10	100.95	
Se	78	72	He	10.001	0.1	2328.98	10	100.01	
Sn	120	115	He	10.126	0.3	150408.43	10	101.26	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	17960438.48	18465816.8066667	97.26	
Ge	72	He	594381.24	586421.103333333	101.36	
In	115	He	5666364.59	5691865.72666667	99.55	
Lu	175	He	12635759.39	12752607.7266667	99.08	
Rh	103	He	23661755.72	24372966.2533333	97.08	
Sc	45	He	675752.30	657305.666666667	102.81	
Tb	159	He	23611926.31	24246106.3066667	97.38	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	14041792.93	13717472.23	102.36	
Bi	209	No Gas	56479570.82	60861477.4233333	92.8	
Ge	72	No Gas	10715887.07	10792997.07	99.29	
In	115	No Gas	84815018.51	87343412.0733333	97.11	
Lu	175	No Gas	91732408.63	96431715.23	95.13	
Rh	103	No Gas	76764763.62	79124190.19	97.02	
Sc	45	No Gas	44815436.00	44531507.12	100.64	
Tb	159	No Gas	98791871.86	104667051.773333	94.39	

Metals

Form III

Blanks

III
INITIAL CALIBRATION BLANK

Report No:	222071638	Blank ID:	1700
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\011_ICB.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1215	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Initial Calibration Blank (ICB) Report

Sample Name	1700	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	011_ICB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 12:15:59	**Total Dilution**	1.0000
Sample Type	ICB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass
Units : ppb			

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	0.168	2.8	213031.97	2.5	
Be	9	6	No Gas	-0.016	7.6	136.00	0.5	
B	11	45	No Gas	1.731	1.8	6651.69	5	
Sr	88	72	No Gas	0.002	7.4	2113.57	0.5	
Zr	90	72	No Gas	0.129	3.6	12737.95	0.5	
Mo	95	115	No Gas	-0.034	13.3	1632.34	0.5	
Ag	107	115	No Gas	-0.001	5.5	252.23	0.5	
Cd	111	115	No Gas	-0.001	5.4	155.56	0.5	
Sb	121	115	No Gas	0.005	2.3	4880.91	1	
Ba	137	115	No Gas	0.000	23.1	121.11	0.5	
Tl	205	209	No Gas	-0.120	3.0	3984.07	0.5	
Pb	208	209	No Gas	-0.003	12.6	1453.47	0.5	
Na	23	45	He	-17.106	1.4	6014.75	50	
Mg	24	45	He	0.584	44.7	266.68	50	
Al	27	45	He	0.213	5.9	34.00	10	
Si	29	45	He	3225.078	22.1	1032.71	100	> LOD
K	39	45	He	-6.085	1.7	5011.02	50	
Ca	44	45	He	5.768	16.8	225.01	250	
Ti	47	45	He	0.068	60.8	10.00	0.5	
V	51	72	He	-0.005	19.2	161.11	0.5	
Cr	52	72	He	-0.003	11.2	430.01	0.5	
Mn	55	72	He	0.005	13.9	63.33	2.5	
Fe	57	72	He	-0.052	25.0	40.00	50	
Co	59	72	He	0.001	14.0	68.89	0.5	
Ni	60	72	He	-0.012	17.6	143.34	1	
Cu	63	103	He	-0.020	18.9	957.82	0.5	
Zn	66	72	He	-0.288	5.3	438.90	10	
As	75	72	He	-0.043	11.8	46.67	0.5	
Se	78	72	He	0.002	30.4	7.81	0.5	
Sn	120	115	He	-0.035	16.5	627.80	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	10274370.26	10527461.3	97.6	
Ge	72	He	164157.19	173915.266666667	94.39	
In	115	He	2121630.25	2255077.88333333	94.08	
Lu	175	He	6696825.52	6994799.89666667	95.74	
Rh	103	He	8501999.10	8666729.93333333	98.1	
Sc	45	He	138201.31	146200.886666667	94.53	
Tb	159	He	12002528.57	12272531.4833333	97.8	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	3575365.19	3591502.72666667	99.55	
Bi	209	No Gas	21530283.01	21116033.02	101.96	
Ge	72	No Gas	3290391.40	3357560.21333333	98	
In	115	No Gas	27891888.51	27682959.2866667	100.75	
Lu	175	No Gas	32948228.67	32670085.35	100.85	
Rh	103	No Gas	25566107.32	25504832.32	100.24	
Sc	45	No Gas	12634221.17	12820081.7133333	98.55	
Tb	159	No Gas	35201726.98	34961401.1466667	100.69	

III
CONTINUING CALIBRATION BLANK

Report No:	222071638	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\1291_CCB.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1748	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1291_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 17:48:20	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	-2.728	1.9	136752.68	2.5	
Be	9	6	No Gas	-0.015	12.8	88.67	0.5	
B	11	45	No Gas	0.584	1.8	3130.44	5	
Sr	88	72	No Gas	0.007	8.0	2423.62	0.5	
Zr	90	72	No Gas	0.005	4.4	3843.91	0.5	
Mo	95	115	No Gas	-0.046	22.1	1365.64	0.5	
Ag	107	115	No Gas	0.001	5.1	325.56	0.5	
Cd	111	115	No Gas	-0.004	14.8	116.67	0.5	
Sb	121	115	No Gas	0.053	1.2	6965.11	1	
Ba	137	115	No Gas	0.005	18.0	213.34	0.5	
Tl	205	209	No Gas	-0.145	3.8	1356.79	0.5	
Pb	208	209	No Gas	-0.008	1.9	1123.43	0.5	
Na	23	45	He	-27.401	3.8	2110.21	50	
Mg	24	45	He	1.082	22.1	273.35	50	
Al	27	45	He	0.274	34.3	29.33	10	
Si	29	45	He	11243.844	9.1	930.70	100	> LOD
K	39	45	He	3.714	4.2	5101.06	50	
Ca	44	45	He	-1.476	14.0	148.33	250	
Ti	47	45	He	0.102	34.6	10.00	0.5	
V	51	72	He	0.001	14.9	156.67	0.5	
Cr	52	72	He	0.001	11.3	387.79	0.5	
Mn	55	72	He	0.010	45.7	61.11	2.5	
Fe	57	72	He	0.304	44.1	60.00	50	
Co	59	72	He	0.001	28.5	64.44	0.5	
Ni	60	72	He	-0.030	14.7	85.56	1	
Cu	63	103	He	-0.031	5.7	782.25	0.5	
Zn	66	72	He	-0.566	4.3	203.34	10	
As	75	72	He	-0.053	3.1	32.00	0.5	
Se	78	72	He	0.032	28.0	8.07	0.5	
Sn	120	115	He	-0.055	13.7	446.68	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9439177.15	10527461.3	89.66	
Ge	72	He	142075.95	173915.266666667	81.69	
In	115	He	1865454.47	2255077.88333333	82.72	
Lu	175	He	5936792.20	6994799.89666667	84.87	
Rh	103	He	7695789.70	8666729.93333333	88.8	
Sc	45	He	113963.88	146200.886666667	77.95	
Tb	159	He	10903379.42	12272531.4833333	88.84	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2267721.07	3591502.72666667	63.14
Bi	209	No Gas	21357528.43	21116033.02	101.14
Ge	72	No Gas	3017487.94	3357560.21333333	89.87
In	115	No Gas	27625851.03	27682959.2866667	99.79
Lu	175	No Gas	33646952.83	32670085.35	102.99
Rh	103	No Gas	24582339.02	25504832.32	96.38
Sc	45	No Gas	10842085.40	12820081.7133333	84.57
Tb	159	No Gas	35566089.47	34961401.1466667	101.73

Flag
<70% or >120%

III
CONTINUING CALIBRATION BLANK

Report No:	222071638	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\1309_CCB.d
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1900	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1309_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 19:00:32	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	-3.030	0.4	137616.53	2.5	
Be	9	6	No Gas	-0.027	16.9	60.67	0.5	
B	11	45	No Gas	0.446	4.3	2943.74	5	
Sr	88	72	No Gas	0.008	4.1	2683.69	0.5	
Zr	90	72	No Gas	0.006	4.0	4051.73	0.5	
Mo	95	115	No Gas	-0.054	16.7	1256.74	0.5	
Ag	107	115	No Gas	0.001	9.1	345.57	0.5	
Cd	111	115	No Gas	-0.003	11.6	135.56	0.5	
Sb	121	115	No Gas	0.050	2.2	7205.26	1	
Ba	137	115	No Gas	0.007	9.1	253.34	0.5	
Tl	205	209	No Gas	-0.145	9.4	1336.78	0.5	
Pb	208	209	No Gas	-0.009	9.9	1090.09	0.5	
Na	23	45	He	-19.341	0.6	4584.17	50	
Mg	24	45	He	0.834	26.9	260.01	50	
Al	27	45	He	0.332	17.7	32.67	10	
Si	29	45	He	-1268.627	6.8	856.03	100	
K	39	45	He	0.695	6.3	5067.70	50	
Ca	44	45	He	-3.298	12.0	146.67	250	
Ti	47	45	He	0.099	45.7	10.33	0.5	
V	51	72	He	0.008	37.1	184.45	0.5	
Cr	52	72	He	0.000	6.7	404.45	0.5	
Mn	55	72	He	0.020	27.2	78.89	2.5	
Fe	57	72	He	0.086	12.4	46.67	50	
Co	59	72	He	0.001	51.6	61.11	0.5	
Ni	60	72	He	-0.014	12.1	126.67	1	
Cu	63	103	He	-0.027	2.6	853.37	0.5	
Zn	66	72	He	-0.621	6.8	176.67	10	
As	75	72	He	-0.065	11.0	24.00	0.5	
Se	78	72	He	0.012	9.9	7.56	0.5	
Sn	120	115	He	-0.065	3.7	411.12	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9853494.85	10527461.3	93.6	
Ge	72	He	149332.33	173915.266666667	85.86	
In	115	He	1958199.87	2255077.88333333	86.84	
Lu	175	He	6209734.91	6994799.89666667	88.78	
Rh	103	He	8082488.57	8666729.93333333	93.26	
Sc	45	He	120291.43	146200.886666667	82.28	
Tb	159	He	11368882.75	12272531.4833333	92.64	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2313176.10	3591502.72666667	64.41
Bi	209	No Gas	22135650.50	21116033.02	104.83
Ge	72	No Gas	3168859.60	3357560.21333333	94.38
In	115	No Gas	28972156.04	27682959.2866667	104.66
Lu	175	No Gas	35043193.64	32670085.35	107.26
Rh	103	No Gas	25813324.53	25504832.32	101.21
Sc	45	No Gas	11305389.83	12820081.7133333	88.19
Tb	159	No Gas	37391383.61	34961401.1466667	106.95

Flag
<70% or >120%

III
INITIAL CALIBRATION BLANK

Report No:	222071638	Blank ID:	1700
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\017_ICB.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1415	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Initial Calibration Blank (ICB) Report

Sample Name	1700	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	017_ICB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:15:07	**Total Dilution**	1.0000
Sample Type	ICB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	0.534	1.6	762654.47	2.5	
Be	9	45	No Gas	-0.017	13.3	374.68	0.5	
B	11	45	No Gas	2.987	0.1	61264.05	5	
Sr	88	72	No Gas	0.000	3.8	6354.96	0.5	
Zr	90	72	No Gas	0.211	5.1	54511.71	0.5	
Mo	95	115	No Gas	-0.092	8.0	6681.64	0.5	
Ag	107	115	No Gas	-0.004	5.9	1488.98	0.5	
Cd	111	115	No Gas	0.000	5.6	385.57	0.5	
Sb	121	209	No Gas	-0.024	1.2	26021.82	1	
Ba	137	115	No Gas	0.001	14.5	254.45	0.5	
Tl	205	175	No Gas	-0.233	2.3	25020.92	0.5	
Pb	208	209	No Gas	-0.002	7.7	3460.58	0.5	
Na	23	45	He	-2.323	5.0	19706.77	50	
Mg	24	45	He	-0.119	6.8	1646.82	50	
Al	27	45	He	-0.347	3.4	121.33	10	
Si	29	45	He	326.263	16.9	6466.13	100	> LOD
K	39	45	He	-1.174	2.9	14938.06	50	
Ca	44	45	He	3.936	1.9	680.02	250	
Ti	47	45	He	0.015	14.2	42.33	0.5	
V	51	72	He	0.000	6.6	723.36	0.5	
Cr	52	72	He	0.001	4.8	1753.46	0.5	
Mn	55	72	He	0.013	8.9	324.45	2.5	
Fe	57	72	He	0.136	30.0	216.68	50	
Co	59	72	He	0.000	10.9	250.00	0.5	
Ni	60	72	He	-0.002	11.6	392.23	1	
Cu	63	45	He	0.013	6.0	3103.69	0.5	
Zn	66	103	He	0.378	8.4	3023.68	10	
As	75	72	He	-0.071	6.2	260.33	0.5	
Se	78	72	He	0.014	9.3	21.11	0.5	
Sn	120	115	He	-0.046	7.6	2053.51	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	18595025.14	18465816.8066667	100.7	
Ge	72	He	580942.50	586421.103333333	99.07	
In	115	He	5624940.00	5691865.72666667	98.82	
Lu	175	He	12861621.89	12752607.7266667	100.85	
Rh	103	He	23861440.72	24372966.2533333	97.9	
Sc	45	He	647217.01	657305.666666667	98.47	
Tb	159	He	24111442.14	24246106.3066667	99.44	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13396834.81	13717472.23	97.66	
Bi	209	No Gas	58687034.12	60861477.4233333	96.43	
Ge	72	No Gas	10505522.08	10792997.07	97.34	
In	115	No Gas	85215515.49	87343412.0733333	97.56	
Lu	175	No Gas	94052118.60	96431715.23	97.53	
Rh	103	No Gas	77435932.48	79124190.19	97.87	
Sc	45	No Gas	43210941.62	44531507.12	97.03	
Tb	159	No Gas	101113601.82	104667051.773333	96.6	

III
METHOD BLANK

Report No:	222071638	Blank ID:	MB2371934
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\1822SMPL.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1530	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	1.00	ug/L	U	0.25	1.00

FORM III - IN

Method Blank (MB) Report

Sample Name	2371934	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1822SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 15:30:20	**Total Dilution**	1.0000
Sample Type	MBWATER	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	0.183	0.9	753636.58	2.5	
Be	9	45	No Gas	-0.019	6.2	343.34	0.5	
B	11	45	No Gas	1.593	1.9	41995.63	5	
Sr	88	72	No Gas	0.015	3.0	11665.09	0.5	
Zr	90	72	No Gas	0.000	2.7	10048.10	0.5	
Mo	95	115	No Gas	-0.111	12.4	5491.12	0.5	
Ag	107	115	No Gas	-0.004	3.4	1460.10	0.5	
Cd	111	115	No Gas	0.001	1.9	401.12	0.5	
Sb	121	209	No Gas	-0.048	2.4	22404.53	1	
Ba	137	115	No Gas	0.031	5.3	1824.59	0.5	
Tl	205	175	No Gas	-0.283	2.4	12753.16	0.5	
Pb	208	209	No Gas	0.000	7.7	3784.02	0.5	
Na	23	45	He	7.061	2.0	39268.63	50	
Mg	24	45	He	2.455	3.7	3547.22	50	
Al	27	45	He	1.662	6.4	422.01	10	
Si	29	45	He	7199.696	20.0	7063.07	100	> 1/2 LOQ
K	39	45	He	2.119	0.7	17520.93	50	
Ca	44	45	He	34.241	2.4	1573.45	250	
Ti	47	45	He	0.183	27.4	92.00	0.5	
V	51	72	He	0.049	6.0	1360.08	0.5	
Cr	52	72	He	0.001	2.2	1761.23	0.5	
Mn	55	72	He	0.239	5.2	1872.36	2.5	
Fe	57	72	He	0.676	6.3	396.69	50	
Co	59	72	He	0.002	8.8	317.79	0.5	
Ni	60	72	He	0.019	3.7	590.02	1	
Cu	63	45	He	0.050	1.2	4218.43	0.5	
Zn	66	103	He	2.760	3.5	10242.54	10	
As	75	72	He	-0.081	6.6	220.33	0.5	
Se	78	72	He	0.026	7.3	23.87	0.5	
Sn	120	115	He	-0.009	7.8	2529.17	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	17803513.49	18465816.8066667	96.41	
Ge	72	He	581651.52	586421.103333333	99.19	
In	115	He	5504776.44	5691865.72666667	96.71	
Lu	175	He	12404394.82	12752607.7266667	97.27	
Rh	103	He	23714053.50	24372966.2533333	97.3	
Sc	45	He	664984.33	657305.666666667	101.17	
Tb	159	He	23394790.49	24246106.3066667	96.49	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13440409.60	13717472.23	97.98	
Bi	209	No Gas	57351110.81	60861477.4233333	94.23	
Ge	72	No Gas	10581385.41	10792997.07	98.04	
In	115	No Gas	85246879.65	87343412.0733333	97.6	
Lu	175	No Gas	93359698.61	96431715.23	96.81	
Rh	103	No Gas	77396141.37	79124190.19	97.82	
Sc	45	No Gas	43985946.03	44531507.12	98.77	
Tb	159	No Gas	100390975.17	104667051.773333	95.91	

III
CONTINUING CALIBRATION BLANK

Report No:	222071638	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\1826_CCB.d
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1547	Analytical Method:	EPA 6020B

ANALYTE	*RESULT*	*UNITS*	*Q*	*DL*	*LOQ*
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1826_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 15:47:05	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	45	No Gas	0.319	0.7	788548.27	2.5	
Be	9	45	No Gas	-0.023	14.6	290.67	0.5	
B	11	45	No Gas	1.458	2.2	41397.13	5	
Sr	88	72	No Gas	-0.001	2.5	6098.19	0.5	
Zr	90	72	No Gas	0.001	0.6	10560.65	0.5	
Mo	95	115	No Gas	-0.113	14.3	5432.21	0.5	
Ag	107	115	No Gas	-0.004	2.1	1442.31	0.5	
Cd	111	115	No Gas	-0.001	14.6	324.45	0.5	
Sb	121	209	No Gas	-0.020	0.5	25948.35	1	
Ba	137	115	No Gas	0.001	7.7	287.78	0.5	
Tl	205	175	No Gas	-0.287	4.0	11492.10	0.5	
Pb	208	209	No Gas	-0.005	4.1	2810.41	0.5	
Na	23	45	He	-3.745	2.4	17901.10	50	
Mg	24	45	He	-0.295	4.6	1613.48	50	
Al	27	45	He	-0.333	17.7	130.67	10	
Si	29	45	He	11758.301	18.7	7566.67	100	> LOD
K	39	45	He	0.863	2.2	17210.48	50	
Ca	44	45	He	4.541	8.5	738.36	250	
Ti	47	45	He	0.036	7.1	51.00	0.5	
V	51	72	He	0.008	2.2	846.70	0.5	
Cr	52	72	He	0.007	7.4	1927.93	0.5	
Mn	55	72	He	0.005	13.6	283.34	2.5	
Fe	57	72	He	0.146	13.5	226.68	50	
Co	59	72	He	0.001	22.9	282.23	0.5	
Ni	60	72	He	0.004	1.7	461.12	1	
Cu	63	45	He	0.018	0.9	3438.21	0.5	
Zn	66	103	He	0.286	6.2	2783.63	10	
As	75	72	He	-0.086	4.9	207.00	0.5	
Se	78	72	He	0.041	13.2	27.97	0.5	
Sn	120	115	He	0.118	6.6	4447.43	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	18006906.40	18465816.8066667	97.51	
Ge	72	He	597803.10	586421.103333333	101.94	
In	115	He	5660007.88	5691865.72666667	99.44	
Lu	175	He	12596290.64	12752607.7266667	98.77	
Rh	103	He	24207863.48	24372966.2533333	99.32	
Sc	45	He	685583.66	657305.666666667	104.3	
Tb	159	He	23748027.15	24246106.3066667	97.95	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	14268124.77	13717472.23	104.01	
Bi	209	No Gas	57331972.48	60861477.4233333	94.2	
Ge	72	No Gas	10830356.51	10792997.07	100.35	
In	115	No Gas	85647456.60	87343412.0733333	98.06	
Lu	175	No Gas	92231045.29	96431715.23	95.64	
Rh	103	No Gas	78467514.66	79124190.19	99.17	
Sc	45	No Gas	45498255.97	44531507.12	102.17	
Tb	159	No Gas	99492361.85	104667051.773333	95.06	

Metals

Form IV

Interference Checks

IV
ICPMS INTERFERENCE CHECKS

Report No:	222071638	ICSA \ AB ID:	2000 \ 2100
Instrument ID:	ICPMS2	Analytical Batch:	745743
Analyst:	LWZ	Analytical Method:	EPA 6020B
Lab File ID ICSA1:	2220719A_MS2.b\1212ICSA.d	Lab File ID ICSAB1:	2220719A_MS2.b\1213ICSB.d
Lab File ID ICSA2:	2220719A_MS2.b\1274ICSA.d	Lab File ID ICSAB2:	2220719A_MS2.b\1275ICSB.d

Concentration Units: ug/L

		Analyzed (A/AB):	07/19/22 1234	07/19/22 1238		07/19/22 1637	07/19/22 1641	
ANALYTE	***TRUE A***	***TRUE AB***	***ICSA1***	***ICSAB1***	***%R***	***ICSA2***	***ICSAB2***	***%R***
Aluminum	1000	1000	1020	1000	100	965	962	96
Antimony	0	0	-0.0090	-0.0050		-0.010	-0.0080	
Arsenic	0	10.0	-0.051	10.4	104	-0.063	10.3	103
Barium	0	0	0.0080	0.012		0.020	0.022	
Beryllium	0	0	-0.020	-0.023		-0.024	-0.031	
Boron	0	20.0	0.65	20.5	102	0.23	16.7	84
Cadmium	0	10.0	0.024	11.3	113	0.026	11.1	111
Calcium	3000	3000	2910	3030	101	2900	2950	98
Chromium	0	20.0	0.0010	20.3	102	0.011	20.1	100
Cobalt	0	20.0	0.027	20.8	104	0.026	20.6	103
Copper	0	20.0	-0.0060	19.9	100	-0.019	19.8	99
Iron	2500	2500	2550	2570	103	2510	2500	100
Lead	0	0	0.0	0.0010		-0.0010	-0.0010	
Lithium	0	20.0	0.082	19.6	98	-2.5	12.1	60
Magnesium	1000	1000	1040	1050	105	1030	1020	102
Manganese	0	20.0	0.061	19.9	100	0.065	19.4	97
Molybdenum	20.0	20.0	18.6	18.6	93	18.0	18.0	90
Nickel	0	20.0	0.0090	20.6	103	-0.0020	20.7	104
Potassium	1000	1000	982	1000	100	1000	1010	101
Selenium	0	10.0	-0.018	9.77	98	0.0030	9.33	93
Silicon	0	1000	-4500	91300	9130	3780	97100	9710
Silver	0	5.00	0.0010	4.99	100	0.0010	4.90	98
Sodium	2500	2500	2480	2490	100	2500	2490	100
Strontium	0	10.0	0.022	10.3	103	0.026	10.9	109
Thallium	0	0	-0.13	-0.13		-0.14	-0.15	
Tin	0	10.0	0.050	10.0	100	0.037	10.0	100
Titanium	20.0	20.0	19.2	19.4	97	19.7	20.0	100
Vanadium	0	20.0	-0.010	19.7	98	-0.0040	19.3	96
Zinc	0	20.0	-0.43	21.1	106	-0.35	21.3	106
Zirconium	0	20.0	0.062	20.9	104	0.027	21.3	106

FORM IV - IN

Interference Check Solution A (ICS-A) Report

Sample Name	2000	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1212ICSA.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 12:34:14	**Total Dilution**	1.0000
Sample Type	ICSA	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	0.082	1.0	208176.14	2.5	
Be	9	6	No Gas	-0.020	4.9	116.67	0.5	
B	11	45	No Gas	0.652	3.2	3770.60	5	
Sr	88	72	No Gas	0.022	8.1	4307.46	0.5	
Zr	90	72	No Gas	0.062	4.8	8090.14	0.5	
Mo	95	115	No Gas	18.565	1.6	388077.46	20	
Ag	107	115	No Gas	0.001	6.8	368.90	0.5	
Cd	111	115	No Gas	0.024	4.4	447.79	0.5	
Sb	121	115	No Gas	-0.009	1.8	4199.56	1	
Ba	137	115	No Gas	0.008	11.3	277.78	0.5	
Tl	205	209	No Gas	-0.126	4.7	3317.18	0.5	
Pb	208	209	No Gas	0.000	7.4	1676.83	0.5	
Na	23	45	He	2483.818	1.3	836520.90	2500	
Mg	24	45	He	1041.302	0.4	136651.44	1000	
Al	27	45	He	1016.046	0.7	29518.86	1000	
Si	29	45	He	-4493.623	18.5	934.70	100	> LOD
K	39	45	He	982.330	1.7	121942.68	1000	
Ca	44	45	He	2910.227	1.7	18256.43	3000	
Ti	47	45	He	19.203	1.4	1197.05	20	
V	51	72	He	-0.010	6.8	146.67	0.5	
Cr	52	72	He	0.001	4.1	444.46	0.5	
Mn	55	72	He	0.061	35.2	152.23	2.5	
Fe	57	72	He	2545.344	0.2	208149.62	2500	
Co	59	72	He	0.027	12.8	300.01	0.5	
Ni	60	72	He	0.009	9.4	196.67	1	
Cu	63	103	He	-0.006	6.0	1048.94	0.5	
Zn	66	72	He	-0.431	3.5	332.23	10	
As	75	72	He	-0.051	15.5	39.33	0.5	
Se	78	72	He	-0.018	24.4	6.72	0.5	
Sn	120	115	He	0.050	3.9	1124.51	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	10255833.60	10527461.3	97.42	
Ge	72	He	163225.76	173915.266666667	93.85	
In	115	He	2119548.03	2255077.88333333	93.99	
Lu	175	He	6788850.11	6994799.89666667	97.06	
Rh	103	He	8416256.61	8666729.93333333	97.11	
Sc	45	He	136655.37	146200.886666667	93.47	
Tb	159	He	12128451.90	12272531.4833333	98.83	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	3454557.02	3591502.72666667	96.19	
Bi	209	No Gas	21283074.68	21116033.02	100.79	
Ge	72	No Gas	3289601.19	3357560.21333333	97.98	
In	115	No Gas	27786667.02	27682959.2866667	100.37	
Lu	175	No Gas	33182381.17	32670085.35	101.57	
Rh	103	No Gas	25076971.78	25504832.32	98.32	
Sc	45	No Gas	12439768.95	12820081.7133333	97.03	
Tb	159	No Gas	35286276.14	34961401.1466667	100.93	

Interference Check Solution AB (ICS-AB) Report

Sample Name	2100	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1213ICSB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 12:38:06	**Total Dilution**	1.0000
Sample Type	ICSB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	19.585	0.2	564153.81	20	
Be	9	6	No Gas	-0.023	5.7	107.33	0.5	
B	11	45	No Gas	20.500	0.9	54940.16	20	
Sr	88	72	No Gas	10.292	0.6	1118684.57	10	
Zr	90	72	No Gas	20.862	0.3	1452039.39	20	
Mo	95	115	No Gas	18.646	0.2	394346.74	20	
Ag	107	115	No Gas	4.989	0.7	268303.41	5	
Cd	111	115	No Gas	11.330	0.6	134459.21	10	
Sb	121	115	No Gas	-0.005	3.1	4441.86	1	
Ba	137	115	No Gas	0.012	4.8	341.12	0.5	
Tl	205	209	No Gas	-0.127	2.8	3197.19	0.5	
Pb	208	209	No Gas	0.001	6.2	1790.18	0.5	
Na	23	45	He	2487.523	0.6	825101.71	2500	
Mg	24	45	He	1047.721	1.1	135421.13	1000	
Al	27	45	He	1003.582	1.6	28716.72	1000	
Si	29	45	He	91283.418	10.5	2014.15	1000	> +/- 20%
K	39	45	He	1003.702	1.1	122592.36	1000	
Ca	44	45	He	3034.699	0.7	18742.03	3000	
Ti	47	45	He	19.415	2.4	1192.05	20	
V	51	72	He	19.696	1.5	59870.33	20	
Cr	52	72	He	20.260	0.9	88246.54	20	
Mn	55	72	He	19.873	0.9	31792.14	20	
Fe	57	72	He	2571.781	1.0	208262.37	2500	
Co	59	72	He	20.780	0.8	180943.58	20	
Ni	60	72	He	20.597	2.1	52102.91	20	
Cu	63	103	He	19.922	1.3	153776.14	20	
Zn	66	72	He	21.102	2.1	15915.41	20	
As	75	72	He	10.366	1.5	9476.42	10	
Se	78	72	He	9.768	5.9	499.06	10	
Sn	120	115	He	10.024	1.2	59811.41	10	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	10220146.30	10527461.3	97.08	
Ge	72	He	161625.43	173915.266666667	92.93	
In	115	He	2120776.43	2255077.88333333	94.04	
Lu	175	He	6784119.90	6994799.89666667	96.99	
Rh	103	He	8455743.83	8666729.93333333	97.57	
Sc	45	He	134597.00	146200.886666667	92.06	
Tb	159	He	12146224.82	12272531.4833333	98.97	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	3467239.25	3591502.72666667	96.54	
Bi	209	No Gas	21629737.18	21116033.02	102.43	
Ge	72	No Gas	3308926.54	3357560.21333333	98.55	
In	115	No Gas	28111236.89	27682959.2866667	101.55	
Lu	175	No Gas	33671618.67	32670085.35	103.07	
Rh	103	No Gas	25270119.55	25504832.32	99.08	
Sc	45	No Gas	12446848.95	12820081.7133333	97.09	
Tb	159	No Gas	35830423.63	34961401.1466667	102.49	

Interference Check Solution A (ICS-A) Report

Sample Name	2000	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1274ICSA.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 16:37:02	**Total Dilution**	1.0000
Sample Type	ICSA	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail
Units : ppb			

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	-2.510	2.0	144956.14	2.5	> LOD
Be	9	6	No Gas	-0.024	17.8	70.00	0.5	
B	11	45	No Gas	0.232	6.3	2420.28	5	
Sr	88	72	No Gas	0.026	5.2	4477.51	0.5	
Zr	90	72	No Gas	0.027	4.6	5338.83	0.5	
Mo	95	115	No Gas	17.963	1.8	381264.57	20	
Ag	107	115	No Gas	0.001	7.9	381.12	0.5	
Cd	111	115	No Gas	0.026	12.1	475.57	0.5	
Sb	121	115	No Gas	-0.010	3.0	4217.34	1	
Ba	137	115	No Gas	0.020	4.7	510.02	0.5	
Tl	205	209	No Gas	-0.145	8.5	1366.78	0.5	
Pb	208	209	No Gas	-0.001	11.3	1610.16	0.5	
Na	23	45	He	2501.551	0.9	733164.99	2500	
Mg	24	45	He	1025.366	3.9	117157.45	1000	
Al	27	45	He	964.517	2.4	24394.41	1000	
Si	29	45	He	3775.583	11.3	896.70	100	> LOD
K	39	45	He	1003.047	2.3	108285.83	1000	
Ca	44	45	He	2896.680	3.1	15815.27	3000	
Ti	47	45	He	19.743	1.7	1071.04	20	
V	51	72	He	-0.004	24.7	148.89	0.5	
Cr	52	72	He	0.011	3.9	441.12	0.5	
Mn	55	72	He	0.065	18.6	143.34	2.5	
Fe	57	72	He	2514.516	1.0	185430.14	2500	
Co	59	72	He	0.026	14.1	263.34	0.5	
Ni	60	72	He	-0.002	6.3	152.23	1	
Cu	63	103	He	-0.019	3.4	886.70	0.5	
Zn	66	72	He	-0.352	2.2	351.12	10	
As	75	72	He	-0.063	0.0	25.00	0.5	
Se	78	72	He	0.003	36.0	7.05	0.5	
Sn	120	115	He	0.037	9.1	950.04	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9577584.02	10527461.3	90.98	
Ge	72	He	147197.88	173915.266666667	84.64	
In	115	He	1916188.59	2255077.88333333	84.97	
Lu	175	He	6093539.91	6994799.89666667	87.12	
Rh	103	He	7834564.69	8666729.93333333	90.4	
Sc	45	He	118947.60	146200.886666667	81.36	
Tb	159	He	11168164.00	12272531.4833333	91	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2357792.96	3591502.72666667	65.65
Bi	209	No Gas	21302679.27	21116033.02	100.88
Ge	72	No Gas	3102439.88	3357560.21333333	92.4
In	115	No Gas	28207164.56	27682959.2866667	101.89
Lu	175	No Gas	34266021.16	32670085.35	104.89
Rh	103	No Gas	24904505.68	25504832.32	97.65
Sc	45	No Gas	11206143.72	12820081.7133333	87.41
Tb	159	No Gas	36398636.12	34961401.1466667	104.11

Flag
<70% or >120%

Interference Check Solution AB (ICS-AB) Report

Sample Name	2100	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
File Name	1275ICSB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/19/2022 16:41:13	**Total Dilution**	1.0000
Sample Type	ICSB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Fail
Units : ppb			

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	12.088	0.8	385431.87	20	> +/- 20%
Be	9	6	No Gas	-0.031	21.4	52.00	0.5	
B	11	45	No Gas	16.670	2.0	40641.90	20	
Sr	88	72	No Gas	10.917	2.7	1110978.47	10	
Zr	90	72	No Gas	21.338	2.3	1390430.99	20	
Mo	95	115	No Gas	17.951	1.7	380988.74	20	
Ag	107	115	No Gas	4.901	2.5	264507.35	5	
Cd	111	115	No Gas	11.118	2.1	132392.24	10	
Sb	121	115	No Gas	-0.008	4.2	4320.71	1	
Ba	137	115	No Gas	0.022	8.4	536.68	0.5	
Tl	205	209	No Gas	-0.146	6.6	1206.76	0.5	
Pb	208	209	No Gas	-0.001	9.1	1636.83	0.5	
Na	23	45	He	2492.021	0.8	719273.53	2500	
Mg	24	45	He	1017.580	1.5	114449.98	1000	
Al	27	45	He	962.113	0.9	23958.38	1000	
Si	29	45	He	97070.774	5.8	1810.12	1000	> +/- 20%
K	39	45	He	1005.116	2.5	106845.73	1000	
Ca	44	45	He	2953.755	0.9	15877.02	3000	
Ti	47	45	He	19.956	3.0	1066.37	20	
V	51	72	He	19.274	1.3	52915.23	20	
Cr	52	72	He	20.132	0.9	79191.45	20	
Mn	55	72	He	19.361	3.3	27979.92	20	
Fe	57	72	He	2496.638	2.3	182621.80	2500	
Co	59	72	He	20.636	2.4	162303.48	20	
Ni	60	72	He	20.678	1.5	47238.91	20	
Cu	63	103	He	19.810	2.2	141492.71	20	
Zn	66	72	He	21.322	0.2	14518.42	20	
As	75	72	He	10.322	2.0	8522.50	10	
Se	78	72	He	9.332	1.7	431.01	10	
Sn	120	115	He	9.995	2.1	53536.43	10	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9573351.74	10527461.3	90.94	
Ge	72	He	145974.84	173915.266666667	83.93	
In	115	He	1903593.39	2255077.88333333	84.41	
Lu	175	He	6068777.82	6994799.89666667	86.76	
Rh	103	He	7824055.52	8666729.93333333	90.28	
Sc	45	He	117135.83	146200.886666667	80.12	
Tb	159	He	11091988.17	12272531.4833333	90.38	

Name	Mass	Mode	CPS	Ref CPS	Rec
(Li)	6	No Gas	2381012.45	3591502.72666667	66.3
Bi	209	No Gas	21445463.02	21116033.02	101.56
Ge	72	No Gas	3097997.86	3357560.21333333	92.27
In	115	No Gas	28204786.86	27682959.2866667	101.89
Lu	175	No Gas	34366874.49	32670085.35	105.19
Rh	103	No Gas	24997657.34	25504832.32	98.01
Sc	45	No Gas	11226349.83	12820081.7133333	87.57
Tb	159	No Gas	36386590.29	34961401.1466667	104.08

Flag
<70% or >120%

IV
ICPMS INTERFERENCE CHECKS

Report No:	222071638	ICSA \ AB ID:	2000 \ 2100
Instrument ID:	ICPMS2	Analytical Batch:	745619
Analyst:	LWZ	Analytical Method:	EPA 6020B
Lab File ID ICSA1:	2220718A_MS2.b\1812ICSA.d	Lab File ID ICSAB1:	2220718A_MS2.b\1813ICSB.d
Lab File ID ICSA2:		Lab File ID ICSAB2:	

Concentration Units: ug/L

			Analyzed (A/AB):	07/18/22 1435	07/18/22 1440			
ANALYTE	***TRUE A***	***TRUE AB***	***ICSA1***	***ICSAB1***	***%R***	***ICSA2***	***ICSAB2***	***%R***
Aluminum	1000	1000	1040	1030	103			
Antimony	0	0	-0.045	-0.043				
Arsenic	0	10.0	-0.084	10.2	102			
Barium	0	0	0.0090	0.013				
Beryllium	0	0	-0.021	-0.022				
Boron	0	20.0	0.80	21.7	108			
Cadmium	0	10.0	0.036	11.4	114			
Calcium	3000	3000	2960	3030	101			
Chromium	0	20.0	0.016	20.4	102			
Cobalt	0	20.0	0.029	20.6	103			
Copper	0	20.0	0.019	21.1	106			
Iron	2500	2500	2590	2560	102			
Lead	0	0	0.0	0.0010				
Lithium	0	20.0	0.44	21.2	106			
Magnesium	1000	1000	1060	1060	106			
Manganese	0	20.0	0.043	20.0	100			
Molybdenum	20.0	20.0	18.5	18.6	93			
Nickel	0	20.0	0.029	20.8	104			
Potassium	1000	1000	1020	1010	101			
Selenium	0	10.0	0.0070	9.60	96			
Silicon	0	1000	6670	96100	9610			
Silver	0	5.00	-0.0030	5.20	104			
Sodium	2500	2500	2650	2630	105			
Strontium	0	10.0	0.021	9.81	98			
Thallium	0	0	-0.26	-0.26				
Tin	0	10.0	-0.043	9.87	99			
Titanium	20.0	20.0	19.6	19.9	100			
Vanadium	0	20.0	0.0030	19.7	98			
Zinc	0	20.0	-0.0040	20.9	104			
Zirconium	0	20.0	0.11	20.6	103			

FORM IV - IN

Interference Check Solution A (ICS-A) Report

Sample Name	2000	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1812ICSA.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:35:59	**Total Dilution**	1.0000
Sample Type	ICSA	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	0.436	0.1	781976.97	2.5	
Be	9	45	No Gas	-0.021	6.0	320.01	0.5	
B	11	45	No Gas	0.802	4.3	30925.64	5	
Sr	88	72	No Gas	0.021	3.0	14010.63	0.5	
Zr	90	72	No Gas	0.109	2.3	33758.45	0.5	
Mo	95	115	No Gas	18.546	0.2	1170886.97	20	
Ag	107	115	No Gas	-0.003	3.6	1691.23	0.5	
Cd	111	115	No Gas	0.036	2.8	1701.23	0.5	
Sb	121	209	No Gas	-0.045	2.9	22713.90	1	
Ba	137	115	No Gas	0.009	1.8	686.70	0.5	
Tl	205	175	No Gas	-0.261	1.6	18206.36	0.5	
Pb	208	209	No Gas	0.000	3.3	3747.33	0.5	
Na	23	45	He	2648.463	0.4	5474330.75	2500	
Mg	24	45	He	1061.302	0.2	778031.11	1000	
Al	27	45	He	1036.202	0.5	155844.46	1000	
Si	29	45	He	6669.642	18.5	7135.78	100	> LOD
K	39	45	He	1020.791	0.6	699206.86	1000	
Ca	44	45	He	2963.686	1.2	87410.36	3000	
Ti	47	45	He	19.612	1.5	5791.81	20	
V	51	72	He	0.003	14.4	775.58	0.5	
Cr	52	72	He	0.016	2.1	2086.84	0.5	
Mn	55	72	He	0.043	7.3	542.24	2.5	
Fe	57	72	He	2588.595	0.7	876774.31	2500	
Co	59	72	He	0.029	6.2	1263.40	0.5	
Ni	60	72	He	0.029	7.9	705.58	1	
Cu	63	45	He	0.019	3.9	3404.88	0.5	
Zn	66	103	He	-0.004	3.5	1846.80	10	
As	75	72	He	-0.084	3.9	212.33	0.5	
Se	78	72	He	0.007	12.7	20.08	0.5	
Sn	120	115	He	-0.043	4.5	2114.63	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	18207577.23	18465816.8066667	98.6	
Ge	72	He	592966.23	586421.103333333	101.12	
In	115	He	5693654.95	5691865.72666667	100.03	
Lu	175	He	12886474.39	12752607.7266667	101.05	
Rh	103	He	23754562.39	24372966.2533333	97.46	
Sc	45	He	674909.00	657305.666666667	102.68	
Tb	159	He	24133666.31	24246106.3066667	99.54	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13996863.93	13717472.23	102.04	
Bi	209	No Gas	57348929.15	60861477.4233333	94.23	
Ge	72	No Gas	10736564.85	10792997.07	99.48	
In	115	No Gas	85420977.16	87343412.0733333	97.8	
Lu	175	No Gas	93784441.93	96431715.23	97.25	
Rh	103	No Gas	76624350.29	79124190.19	96.84	
Sc	45	No Gas	44674508.22	44531507.12	100.32	
Tb	159	No Gas	100984908.50	104667051.773333	96.48	

Interference Check Solution AB (ICS-AB) Report

Sample Name	2100	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1813ICSB.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 14:40:10	**Total Dilution**	1.0000
Sample Type	ICSB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass
Units : ppb			

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	45	No Gas	21.154	0.5	2142079.71	20	
Be	9	45	No Gas	-0.022	4.5	298.67	0.5	
B	11	45	No Gas	21.657	0.9	340380.32	20	
Sr	88	72	No Gas	9.805	1.3	3570808.07	10	
Zr	90	72	No Gas	20.550	1.3	4445433.43	20	
Mo	95	115	No Gas	18.630	0.9	1172902.66	20	
Ag	107	115	No Gas	5.199	1.6	828488.46	5	
Cd	111	115	No Gas	11.449	0.8	421420.91	10	
Sb	121	209	No Gas	-0.043	1.1	22974.36	1	
Ba	137	115	No Gas	0.013	4.0	921.16	0.5	
Tl	205	175	No Gas	-0.262	1.7	17672.31	0.5	
Pb	208	209	No Gas	0.001	5.1	4007.43	0.5	
Na	23	45	He	2627.659	0.5	5419059.92	2500	
Mg	24	45	He	1062.471	0.3	777082.67	1000	
Al	27	45	He	1032.742	0.4	154967.45	1000	
Si	29	45	He	96135.895	7.6	12648.06	1000	> +/- 20%
K	39	45	He	1012.413	1.5	692018.03	1000	
Ca	44	45	He	3033.207	1.0	89238.20	3000	
Ti	47	45	He	19.858	2.4	5850.83	20	
V	51	72	He	19.713	0.4	261019.67	20	
Cr	52	72	He	20.420	0.9	399700.31	20	
Mn	55	72	He	20.003	0.3	140609.81	20	
Fe	57	72	He	2557.090	0.9	870212.80	2500	
Co	59	72	He	20.584	0.9	730352.02	20	
Ni	60	72	He	20.767	1.1	207913.41	20	
Cu	63	45	He	21.141	0.9	588656.25	20	
Zn	66	103	He	20.923	0.6	65599.25	20	
As	75	72	He	10.246	0.2	41659.77	10	
Se	78	72	He	9.595	1.2	2240.33	10	
Sn	120	115	He	9.871	1.5	148177.99	10	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	18116598.90	18465816.8066667	98.11	
Ge	72	He	595748.90	586421.103333333	101.59	
In	115	He	5723095.68	5691865.72666667	100.55	
Lu	175	He	12883830.23	12752607.7266667	101.03	
Rh	103	He	23775802.94	24372966.2533333	97.55	
Sc	45	He	673349.91	657305.666666667	102.44	
Tb	159	He	24126800.47	24246106.3066667	99.51	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	14164130.33	13717472.23	103.26	
Bi	209	No Gas	57342692.48	60861477.4233333	94.22	
Ge	72	No Gas	10729473.74	10792997.07	99.41	
In	115	No Gas	85183575.36	87343412.0733333	97.53	
Lu	175	No Gas	93376341.94	96431715.23	96.83	
Rh	103	No Gas	76889868.06	79124190.19	97.18	
Sc	45	No Gas	44680889.34	44531507.12	100.34	
Tb	159	No Gas	100458635.17	104667051.773333	95.98	

Metals

Form VII

Lab Control Spikes

VII
LABORATORY CONTROL SAMPLE

Report No:	222071638	GCAL ID:	2371935 (LCS)
Matrix:	Water	Instrument ID:	ICPMS2
Analyst:	LWZ	Lab File ID:	2220718A_MS2.b\1823SMPL.d
Prep Date:	07/18/22 Time: 0715	Analysis Date:	07/18/22 Time: 1534
Prep Batch:	745553	Analytical Batch:	745619
Prep Method:	3010A	Analytical Method:	EPA 6020B

ANALYTE	*UNITS*	*TRUE*	*FOUND*	*% R*	*Q*	*LCL*	*UCL*
Arsenic	ug/L	50.0	52.2	104		84	116

FORM VII - IN

Laboratory Control Sample (LCS) Report

Sample Name	2371935	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
File Name	1823SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	7/18/2022 15:34:31	**Total Dilution**	1.0000
Sample Type	LCS6020	**Sample Pass/Fail**	Fail
ISTD Ref FileName	010CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 80-120% 6020B / 85-115% 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	SpkAmt	Rec	QC Flag
Li	7	45	No Gas	249.583	0.6	16424243.92	250	99.83	
Be	9	45	No Gas	52.563	0.3	872004.02	50	105.13	
B	11	45	No Gas	258.798	0.4	3698732.97	250	103.52	
Sr	88	72	No Gas	51.842	0.8	17828400.99	50	103.68	
Zr	90	72	No Gas	10.270	0.4	2105651.44	10	102.7	
Mo	95	115	No Gas	51.110	0.7	3013917.80	50	102.22	
Ag	107	115	No Gas	52.825	0.5	7920471.63	50	105.65	
Cd	111	115	No Gas	52.590	0.3	1824110.06	50	105.18	
Sb	121	209	No Gas	108.813	0.1	13239893.09	100	108.81	
Ba	137	115	No Gas	51.740	0.8	2549647.33	50	103.48	
Tl	205	175	No Gas	52.077	0.4	12453498.56	50	104.15	
Pb	208	209	No Gas	54.265	0.7	9042988.61	50	108.53	
Na	23	45	He	5467.851	0.4	10646739.42	5000	109.36	
Mg	24	45	He	5404.645	0.9	3734240.36	5000	108.09	
Al	27	45	He	1048.972	0.5	148969.87	1000	104.9	
Si	29	45	He	514602.524	3.7	36441.36	5000	10292.05	LCS6020 Main CR1 Failed
K	39	45	He	5259.162	0.3	3337364.85	5000	105.18	
Ca	44	45	He	25921.129	0.3	717535.62	25000	103.68	
Ti	47	45	He	51.410	1.0	14275.85	50	102.82	
V	51	72	He	52.150	0.6	649060.49	50	104.3	
Cr	52	72	He	53.003	0.3	974238.57	50	106.01	
Mn	55	72	He	52.121	0.7	344637.69	50	104.24	
Fe	57	72	He	5242.035	0.3	1679603.26	5000	104.84	
Co	59	72	He	52.823	0.2	1764445.00	50	105.65	
Ni	60	72	He	106.620	0.7	1003482.49	100	106.62	
Cu	63	45	He	53.765	0.4	1412684.91	50	107.53	
Zn	66	103	He	1048.532	0.4	2963642.45	1000	104.85	
As	75	72	He	52.216	0.4	197790.39	50	104.43	
Se	78	72	He	10.028	0.9	2203.91	10	100.28	
Sn	120	115	He	52.433	0.8	724125.93	50	104.87	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	16646083.92	18465816.8066667	90.15	
Ge	72	He	560976.97	586421.103333333	95.66	
In	115	He	5346829.66	5691865.72666667	93.94	
Lu	175	He	12126443.99	12752607.7266667	95.09	
Rh	103	He	22047309.13	24372966.2533333	90.46	
Sc	45	He	637292.85	657305.666666667	96.96	
Tb	159	He	22701184.66	24246106.3066667	93.63	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	13453509.59	13717472.23	98.08	
Bi	209	No Gas	53332442.54	60861477.4233333	87.63	
Ge	72	No Gas	10146924.04	10792997.07	94.01	
In	115	No Gas	80328949.56	87343412.0733333	91.97	
Lu	175	No Gas	90716048.65	96431715.23	94.07	
Rh	103	No Gas	71918352.70	79124190.19	90.89	
Sc	45	No Gas	42824212.74	44531507.12	96.17	
Tb	159	No Gas	96892548.56	104667051.773333	92.57	

Metals

Form VIII

Tunes

VIII
ICP-MS TUNE

Report No:	222071638	GCAL QC ID:	1150
Instrument ID:	ICPMS2	Lab File ID:	2220719A_MS2.b\QCTune\2220719A_MS2-QCTu
Analyst:	LWZ	Analytical Batch:	745743
Analysis Date:	07/19/22 Time: 1040	Analytical Method:	EPA 6020B

ELEMENT - MASS	*AVG MEASURED MASS (amu)*	*PEAK WIDTH AT 5% PEAK HEIGHT (amu)*	*%RSD*
Be-9	9.05	.7852	.7896
Mg-24	23.95	.7895	1.5461
Mg-25	24.95	.7906	.6557
Mg-26	25.9	.79	.378
Co-59	58.95	.7822	.2433
In-115	115	.7693	.4
Pb-206	206	.7818	.4486
Pb-207	207	.7628	.4168
Pb-208	208	.8091	.607

FORM VIII - IN

US EPA Tune Check Sample Report

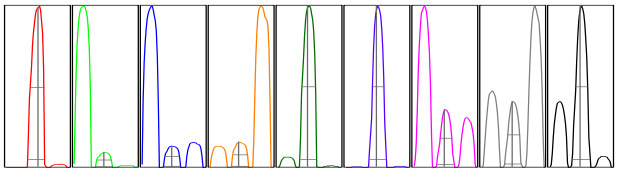
Batch Folder C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b
Report Comment
Instrument Name G8403A JP14170244

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	14353	0.79	5.00	
24	141720	1.55	5.00	
25	19279	0.66	5.00	
26	22799	0.38	5.00	
59	375931	0.24	5.00	
115	370453	0.40	5.00	
206	82776	0.45	5.00	
207	71410	0.42	5.00	
208	176918	0.61	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	14358	14212	14525	14310	14358
24	141189	141071	140226	140537	145576
25	19199	19271	19494	19176	19256
26	22818	22871	22874	22667	22767
59	375638	376733	377059	375161	375063
115	368027	371377	370027	371346	371486
206	82341	82963	82406	83067	83101
207	70930	71551	71350	71507	71712
208	175124	176987	177096	177974	177411

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	2337	9.05	8.9 - 9.1		0.785	0.849	
24	22586	23.95	23.9 - 24.1		0.790	0.849	
25	2969	24.95	24.9 - 25.1		0.791	0.849	
26	3506	25.90	25.9 - 26.1		0.790	0.849	
59	62428	58.95	58.9 - 59.1		0.782	0.849	
115	67851	115.00	114.9 - 115.1		0.769	0.849	
206	15068	206.00	205.9 - 206.1		0.782	0.849	
207	12909	207.00	206.9 - 207.1		0.763	0.849	
208	31765	208.00	207.9 - 208.1		0.809	0.849	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	1.00	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.20	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.3	V	Deflect	16.6	V
Extract 2	-105.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

VIII
ICP-MS TUNE

Report No:	222071638	GCAL QC ID:	1150
Instrument ID:	ICPMS2	Lab File ID:	2220718A_MS2.b\QCTune\2220718A_MS2-QCTu
Analyst:	LWZ	Analytical Batch:	745619
Analysis Date:	07/18/22 Time: 1248	Analytical Method:	EPA 6020B

ELEMENT - MASS	*AVG MEASURED MASS (amu)*	*PEAK WIDTH AT 5% PEAK HEIGHT (amu)*	*%RSD*
Be-9	9	.7778	.2768
Mg-24	23.9	.7886	.9516
Mg-25	24.9	.7883	.888
Mg-26	25.95	.7879	1.204
Co-59	58.95	.7808	.4389
In-115	115	.7309	.3377
Pb-206	206	.7457	.6419
Pb-207	206.95	.7764	.604
Pb-208	207.95	.7763	.4795

FORM VIII - IN

US EPA Tune Check Sample Report

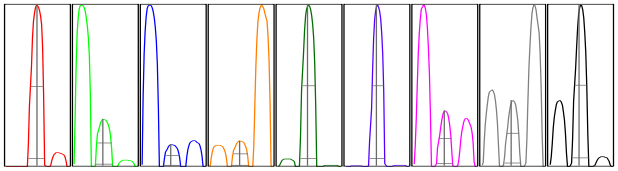
Batch Folder C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b
Report Comment
Instrument Name G8403A JP14170244

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	43543	0.28	5.00	
24	474381	0.95	5.00	
25	63607	0.89	5.00	
26	75327	1.20	5.00	
59	1144854	0.44	5.00	
115	1062221	0.34	5.00	
206	219729	0.64	5.00	
207	188654	0.60	5.00	
208	466183	0.48	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	43601	43677	43548	43540	43351
24	480116	478128	472855	470946	469859
25	64562	63559	63540	63242	63133
26	76343	76227	75011	74713	74342
59	1150250	1146952	1147629	1141599	1137840
115	1059391	1058841	1060842	1065197	1066834
206	217737	220268	218807	221038	220793
207	186713	189092	188963	188786	189714
208	463134	465236	465806	468149	468588

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7322	9.00	8.9 - 9.1		0.778	0.849	
24	75167	23.90	23.9 - 24.1		0.789	0.849	
25	10156	24.90	24.9 - 25.1		0.788	0.849	
26	12051	25.95	25.9 - 26.1		0.788	0.849	
59	193473	58.95	58.9 - 59.1		0.781	0.849	
115	196631	115.00	114.9 - 115.1		0.731	0.849	
206	40499	206.00	205.9 - 206.1		0.746	0.849	
207	34837	206.95	206.9 - 207.1		0.776	0.849	
208	85455	207.95	207.9 - 208.1		0.776	0.849	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	1.00	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.20	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.0	V	Deflect	14.8	V
Extract 2	-130.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Metals

Form XIII

Preparation Logs

XIII
PREPARATION LOG

Report No: 222071638

Prep Method: EPA 3010A Prep Batch: 745553

CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*PREP DATE*	*WEIGHT*	*UNITS*	*VOLUME*	*UNITS*
BGMW 14072022 MS	22207153702	07/18/22			50	mL
BGMW 14072022 MSD	22207153703	07/18/22			50	mL
EFFLUENT	22207163801	07/18/22			50	mL
LCS2371935	2371935	07/18/22			50	mL
MB2371934	2371934	07/18/22			50	mL

FORM XIII - IN

Metals

Form XIV

Run Logs

XIV
ANALYSIS RUN LOG

Report No: 222071638 Analytical Batch: 745743 Start Date: 07/19/22

Instrument ID: ICPMS2 Analytical Method: EPA 6020B End Date: 07/19/22

CLIENT SAMPLE ID	GCAL SAMPLE ID	PF	D/F	TIME	Analyte Symbols																																		
					Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr					
ITUNE	1150	*	1	1039			X																																
IICALB	1300	*	1	1119			X																																
IICAL2	1302	*	1	1123			X																																
IICAL4	1304	*	1	1128			X																																
IICAL5	1305	*	1	1132			X																																
IICAL6	1306	*	1	1136			X																																
ICV	1600	*	1	1140			X																																
ICV	1600	*	1	1208			X																																
ICB	1700	*	1	1215			X																																
LLCCV	1803	*	1	1228			X																																
ICSA	2000	*	1	1234			X																																
ICSAB	2100	*	1	1238			X																																
LDR	2500	*	1	1243			X																																
ICSA	2000	*	1	1637			X																																
ICSAB	2100	*	1	1641			X																																
CCV	1800	*	1	1744			X																																
CCB	1900	*	1	1748			X																																
EFFLUENT	22207163801	*	1	1842			X																																
CCV	1800	*	1	1857			X																																
CCB	1900	*	1	1900			X																																

FORM XIV - IN

XIV
ANALYSIS RUN LOG

Report No: 222071638 Analytical Batch: 745619 Start Date: 07/18/22

Instrument ID: ICPMS2 Analytical Method: EPA 6020B End Date: 07/18/22

CLIENT SAMPLE ID	GCAL SAMPLE ID	PF	D/F	TIME	Analyte Symbols																																	
					Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr				
ITUNE	1150	*	1	1247			X																															
IICALB	1300	*	1	1341			X																															
IICAL2	1302	*	1	1345			X																															
IICAL4	1304	*	1	1351			X																															
IICAL5	1305	*	1	1355			X																															
IICAL6	1306	*	1	1359			X																															
ICV	1600	*	1	1404			X																															
ICV	1600	*	1	1410			X																															
ICB	1700	*	1	1415			X																															
LLCCV	1803	*	1	1430			X																															
ICSA	2000	*	1	1435			X																															
ICSAB	2100	*	1	1440			X																															
LDR	2500	*	1	1454			X																															
MB2371934	2371934	*	1	1530			X																															
LCS2371935	2371935	*	1	1534			X																															
CCV	1800	*	1	1542			X																															
CCB	1900	*	1	1547			X																															

FORM XIV - IN

Metals

Form XV

Internal Standards

XV (He)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222071638	Start Date:	07/19/22
Instrument ID:	ICPMS2	End Date:	07/19/22
Analytical Method	EPA 6020B	Analytical Batch:	745743

			Internal Standards %RI For:													
CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*TIME*	*ISTD1*	*Q*	*ISTD2*	*Q*	*ISTD3*	*Q*	*ISTD4*	*Q*	*ISTD5*	*Q*	*ISTD6*	*Q*	*ISTD7*	*Q*
EFFLUENT	22207163801	1842	85		78		79		84		82		74		87	

ISTD 1: Bismuth (He)
ISTD 2: Germanium (He)
ISTD 3: Indium (He)
ISTD 4: Lutetium (He)
ISTD 5: Rhodium (He)
ISTD 6: Scandium (He)
ISTD 7: Terbium (He)

FORM XV - IN

XV (No Gas)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222071638	Start Date:	07/19/22
Instrument ID:	ICPMS2	End Date:	07/19/22
Analytical Method	EPA 6020B	Analytical Batch:	745743

			Internal Standards %RI For:													
CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*TIME*	*ISTD8*	*Q*	*ISTD9*	*Q*	*ISTD10*	*Q*	*ISTD11*	*Q*	*ISTD12*	*Q*	*ISTD13*	*Q*	*ISTD14*	*Q*
EFFLUENT	22207163801	1842	96		86		96		102		90		82		101	

ISTD 8: Bismuth (No Gas)
ISTD 9: Germanium (No Gas)
ISTD 10 Indium (No Gas)
ISTD 11 Lutetium (No Gas)
ISTD 12 Rhodium (No Gas)
ISTD 13 Scandium (No Gas)
ISTD 14 Terbium (No Gas)

FORM XV - IN

XV (He)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222071638	Start Date:	07/18/22
Instrument ID:	ICPMS2	End Date:	07/18/22
Analytical Method	EPA 6020B	Analytical Batch:	745619

			Internal Standards %RI For:															
CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*TIME*	*ISTD1*	*Q*	*ISTD2*	*Q*	*ISTD3*	*Q*	*ISTD4*	*Q*	*ISTD5*	*Q*	*ISTD6*	*Q*	*ISTD7*	*Q*
MB2371934	2371934	1530	96		99		97		97		97		101		96	
LCS2371935	2371935	1534	90		96		94		95		90		97		94	

ISTD 1: Bismuth (He)
ISTD 2: Germanium (He)
ISTD 3: Indium (He)
ISTD 4: Lutetium (He)
ISTD 5: Rhodium (He)
ISTD 6: Scandium (He)
ISTD 7: Terbium (He)

FORM XV - IN

XV (No Gas)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222071638	Start Date:	07/18/22
Instrument ID:	ICPMS2	End Date:	07/18/22
Analytical Method	EPA 6020B	Analytical Batch:	745619

			Internal Standards %RI For:																	
CLIENT SAMPLE ID	***GCAL SAMPLE ID***	***TIME***	***ISTD8***	***Q***	***ISTD9***	***Q***	***ISTD10***	***Q***	***ISTD11***	***Q***	***ISTD12***	***Q***	***ISTD13***	***Q***	***ISTD14***	***Q***
MB2371934	2371934	1530	94		98		98		97		98		99		96	
LCS2371935	2371935	1534	88		94		92		94		91		96		93	

ISTD 8: Bismuth (No Gas)
ISTD 9: Germanium (No Gas)
ISTD 10 Indium (No Gas)
ISTD 11 Lutetium (No Gas)
ISTD 12 Rhodium (No Gas)
ISTD 13 Scandium (No Gas)
ISTD 14 Terbium (No Gas)

FORM XV - IN

Metals

ICPMS ICALs

Pace Analytical

BATCH COVERSHEET

ANALYST: LWZ

DATE: 07/18/22

ICP/MS Metals Analysis

BATCH: **745619**

STANDARDS

ICAL Standard	MET 335-8-1
ICV Standard	MET 335-7-1
ICSA Standard	MET 335-7-2
ICSAB Standard	MET 335-7-3
Internal Standard	344-88-12
Tune	344-88-13
P/A	344-76-4

ACID MATRIX

2% HNO3 \ 0.5% HCL Solution	MET 335-9-5
5% HNO3 \ 2% HCL Solution	MET 335-10-1

EQUIPMENT

Pipette 1	MET-109
Pipette 2	MET-112
Pipette 3	MET-105
Pipette 4	MET-107
Pipette 5	

Instrument ID	ICPMS2
ICPMS Data File	2220718A_MS2

ADDITIONAL STANDARDS

LDR Standard	MET 335-6-6
	ICVB - MET 335-6-5

LAB QC LIMITS

200.8 Correlation Coefficient (R) =0.998

6020B Correlation Coefficient (R) =0.995

ICV Recovery 90-110%

LLCCV Recovery 80-120%

ICSA \ ICSAB Recovery 80-120%

CCV Recovery 90-110%

Sample						
Data File	Acq. Date-Time	Type	Sample Name	Total Dil.	Vial Number	Comments
001SMPL.d	7/18/2022 13:08	Sample	Blank	1	1101	
002SMPL.d	7/18/2022 13:11	Sample	Blank	1	1102	
003SMPL.d	7/18/2022 13:14	Sample	Blank	1	1103	
004CALB.d	7/18/2022 13:18	CalBlk	1300	1	1104	
005CALS.d	7/18/2022 13:21	CalStd	1302	1	1105	
006CALS.d	7/18/2022 13:26	CalStd	1304	1	1106	
007SMPL.d	7/18/2022 13:30	Sample	Blank	1	1101	
008SMPL.d	7/18/2022 13:33	Sample	Blank	1	1102	
009SMPL.d	7/18/2022 13:37	Sample	Blank	1	1103	
010CALB.d	7/18/2022 13:41	CalBlk	1300	1	1104	
011CALS.d	7/18/2022 13:45	CalStd	1302	1	1105	
012CALS.d	7/18/2022 13:51	CalStd	1304	1	1106	
013CALS.d	7/18/2022 13:55	CalStd	1305	1	1107	
014CALS.d	7/18/2022 13:59	CalStd	1306	1	1108	
015_ICV.d	7/18/2022 14:04	ICV	1600	1	1109	
016_ICV.d	7/18/2022 14:10	ICV	1600 B	1	1110	
017_ICB.d	7/18/2022 14:15	ICB	1700	1	1111	
0180.1.d	7/18/2022 14:22	LLCCV0.1	1804	1	1112	
1810.5.d	7/18/2022 14:26	LLCCV0.5	1804	1	1201	
1811CCV1.d	7/18/2022 14:30	LLCCV1	1803	1	1202	
1812ICSA.d	7/18/2022 14:35	ICSA	2000	1	1203	
1813ICSB.d	7/18/2022 14:40	ICSB	2100	1	1204	
1814_QC1.d	7/18/2022 14:54	QC1	LDR	1	1205	
1815SMPL.d	7/18/2022 14:58	Sample	2500	1	1206	
1816SMPL.d	7/18/2022 15:05	LCS6020	PREP TEST	1	2101	
1817SMPL.d	7/18/2022 15:09	MBWATER	2367933	1	4201	
1818SMPL.d	7/18/2022 15:13	MBWATER	2371928	1	2102	
1819SMPL.d	7/18/2022 15:17	LCS6020	2371929	1	2103	
1820SMPL.d	7/18/2022 15:21	AllRef	22207160901TCLP	100	2207	
1821SMPL.d	7/18/2022 15:26	MS10XP	2371933	100	2208	
1822SMPL.d	7/18/2022 15:30	MBWATER	2371934	1	2302	
1823SMPL.d	7/18/2022 15:34	LCS6020	2371935	1	2303	
1824SMPL.d	7/18/2022 15:38	Sample	22207160901T	10	2304	
1825_CCV.d	7/18/2022 15:42	CCV	1800	1	1401	
1826_CCB.d	7/18/2022 15:47	CCB	1900	1	1501	
1827SMPL.d	7/18/2022 15:51	Sample	22207123701	100	2104	
1828SMPL.d	7/18/2022 15:56	AllRef	22207123703	100	2105	
1829SMPL.d	7/18/2022 16:00	MS10XP	2371930	100	2106	
1830SMPL.d	7/18/2022 16:04	Sample	22207134401	100	2107	
1831SMPL.d	7/18/2022 16:08	Sample	22207134402	100	2108	
1832SMPL.d	7/18/2022 16:12	AllRef	22207134403	100	2109	
1833SMPL.d	7/18/2022 16:17	MS10XP	2371931	100	2110	
1834SMPL.d	7/18/2022 16:21	MSD10XP	2371932	100	2111	
1835SMPL.d	7/18/2022 16:25	PDS	2372155	100	2112	
1836SMPL.d	7/18/2022 16:29	Sample	2372156	500	2201	

1837SMPL.d	7/18/2022 16:33	Sample	22207137301	100	2202	
1838SMPL.d	7/18/2022 16:37	Sample	22207137401	100	2203	
1839SMPL.d	7/18/2022 16:42	Sample	22207137501	100	2204	
1840SMPL.d	7/18/2022 16:46	Sample	22207137601	100	2205	
1841_CCV.d	7/18/2022 16:50	CCV	1800	1	1402	
1842_CCB.d	7/18/2022 16:54	CCB	1900	1	1502	
1843SMPL.d	7/18/2022 16:58	Sample	22207123601	100	2206	
1844SMPL.d	7/18/2022 17:03	Sample	22207136101	100	2209	
1845SMPL.d	7/18/2022 17:07	Sample	22207136102	100	2210	
1846SMPL.d	7/18/2022 17:11	Sample	22207140701	100	2211	
1847SMPL.d	7/18/2022 17:15	Sample	22207140801	100	2212	
1848SMPL.d	7/18/2022 17:19	Sample	22207140901	100	2301	
1849SMPL.d	7/18/2022 17:24	AllRef	22207153701	1	2305	
1850SMPL.d	7/18/2022 17:28	MS	22207153702	1	2306	
1851SMPL.d	7/18/2022 17:32	MSD	22207153703	1	2307	
1852SMPL.d	7/18/2022 17:36	PDS	2372157	1	2308	
1853SMPL.d	7/18/2022 17:40	Sample	2372158	5	2309	
1854_CCV.d	7/18/2022 17:45	CCV	1800	1	1403	
1855_CCB.d	7/18/2022 17:49	CCB	1900	1	1503	
1856SMPL.d	7/18/2022 17:53	Sample	22207153704	1	2310	
1857SMPL.d	7/18/2022 17:57	Sample	22207153705	1	2311	
1858SMPL.d	7/18/2022 18:01	Sample	22207153709	1	2312	
1859SMPL.d	7/18/2022 18:06	MBWATER	2371150	1	3101	
1860SMPL.d	7/18/2022 18:10	LCS6020	2371151	1	3102	
1861SMPL.d	7/18/2022 18:14	AllRef	22207072001	100	3103	
1862SMPL.d	7/18/2022 18:18	MS10XP	2371152	100	3104	
1863SMPL.d	7/18/2022 18:23	MSD10XP	2371153	100	3105	
1864SMPL.d	7/18/2022 18:27	PDS	2371650	100	3106	
1865SMPL.d	7/18/2022 18:31	Sample	2371651	500	3107	
1866SMPL.d	7/18/2022 18:35	Sample	22207072002	100	3108	
1867SMPL.d	7/18/2022 18:39	Sample	22207110401	100	3109	
1868SMPL.d	7/18/2022 18:44	Sample	22207130401	100	3110	
1869SMPL.d	7/18/2022 18:48	Sample	22207112401	100	3111	
1870SMPL.d	7/18/2022 18:52	Sample	22207112601	100	3112	
1871SMPL.d	7/18/2022 18:56	Sample	22207126701	100	3201	
1872_CCV.d	7/18/2022 19:00	CCV	1800	1	1404	
1873_CCB.d	7/18/2022 19:04	CCB	1900	1	1504	
1874SMPL.d	7/18/2022 19:09	MBSOIL	2366946	40	3308	
1875SMPL.d	7/18/2022 19:13	LCS6020	2366947	40	3309	
1876SMPL.d	7/18/2022 19:17	Sample	22207016501	393.7008	3310	
1877SMPL.d	7/18/2022 19:21	Sample	22207016502	393.7008	3311	
1878SMPL.d	7/18/2022 19:25	Sample	22207016503	400	3312	
1879SMPL.d	7/18/2022 19:30	Sample	22207016504	411.1842	3401	
1880SMPL.d	7/18/2022 19:34	Sample	22207016505	381.6794	3402	
1881SMPL.d	7/18/2022 19:38	Sample	22207016506	359.7122	3403	
1882SMPL.d	7/18/2022 19:42	Sample	22207016507	378.7879	3404	
1883SMPL.d	7/18/2022 19:46	Sample	22207016508	400	3405	

1884SMPL.d	7/18/2022 19:51	Sample	22207016509	396.8254	3406	
1885SMPL.d	7/18/2022 19:55	Sample	22207016510	396.8254	3407	
1886_CCV.d	7/18/2022 19:59	CCV	1800	1	1405	
1887_CCB.d	7/18/2022 20:03	CCB	1900	1	1505	
1888SMPL.d	7/18/2022 20:07	Sample	22207016511	359.7122	3408	
1889SMPL.d	7/18/2022 20:12	AllRef	22207016512	400	3409	
1890SMPL.d	7/18/2022 20:16	MSSOIL	22207016513	400	3410	
1891SMPL.d	7/18/2022 20:20	MSDSOIL	22207016514	400	3411	
1892SMPL.d	7/18/2022 20:24	PDS	2371612	400	3412	
1893SMPL.d	7/18/2022 20:28	Sample	2371613	2000	3501	
1894SMPL.d	7/18/2022 20:33	Sample	22207016515	384.6154	3502	
1895SMPL.d	7/18/2022 20:37	Sample	22207016516	367.6471	3503	
1896SMPL.d	7/18/2022 20:41	Sample	22207016517	400	3504	
1897SMPL.d	7/18/2022 20:45	Sample	22207016518	403.2258	3505	
1898SMPL.d	7/18/2022 20:49	Sample	22207016519	367.6471	3506	
1899SMPL.d	7/18/2022 20:54	Sample	22207016520	396.8254	3507	
1900_CCV.d	7/18/2022 20:58	CCV	1800	1	1406	
1901_CCB.d	7/18/2022 21:02	CCB	1900	1	1506	
1902SMPL.d	7/18/2022 21:06	MBSOIL	2370588	40	3508	
1903SMPL.d	7/18/2022 21:10	LCS6020	2370589	40	3509	
1904SMPL.d	7/18/2022 21:15	Sample	22207137301	3787.8788	3510	
1905SMPL.d	7/18/2022 21:19	Sample	22207137401	396.8254	3511	
1906SMPL.d	7/18/2022 21:23	Sample	22207137501	400	3512	
1907SMPL.d	7/18/2022 21:27	Sample	22207137601	370.3704	4101	
1908SMPL.d	7/18/2022 21:32	Sample	22207134901	370.3704	4102	
1909SMPL.d	7/18/2022 21:36	Sample	22207134902	4000	4103	
1910SMPL.d	7/18/2022 21:40	Sample	22207134903	3787.8788	4104	
1911SMPL.d	7/18/2022 21:44	Sample	22207134904	3731.3433	4105	
1912_CCV.d	7/18/2022 21:48	CCV	1800	1	1406	
1913_CCB.d	7/18/2022 21:53	CCB	1900	1	1506	
1914SMPL.d	7/18/2022 21:57	AllRef	22207134905	3731.3433	4106	
1915SMPL.d	7/18/2022 22:01	MSSOIL	22207134906	4000	4107	
1916SMPL.d	7/18/2022 22:05	MSDSOIL	22207134907	4000	4108	
1917SMPL.d	7/18/2022 22:09	PDS	2371585	3731.3433	4109	
1918SMPL.d	7/18/2022 22:14	Sample	2371586	18656.7164	4110	
1919SMPL.d	7/18/2022 22:18	MBWATER	2369934	1	3202	
1920SMPL.d	7/18/2022 22:22	LCS6020	2369935	1	3203	
1921SMPL.d	7/18/2022 22:26	Sample	22206308901	1	3204	
1922SMPL.d	7/18/2022 22:29	Sample	22207130601 D	10	3205	
1923SMPL.d	7/18/2022 22:33	Sample	22207130602 D	10	3206	
1924SMPL.d	7/18/2022 22:37	Sample	22207130603 D	10	3207	
1925SMPL.d	7/18/2022 22:40	Sample	2371614	50	3208	
1926SMPL.d	7/18/2022 22:44	Sample	22207130604 D	10	3209	
1927SMPL.d	7/18/2022 22:47	Sample	22207130605 D	10	3210	
1928_CCV.d	7/18/2022 22:51	CCV	1800	1	1407	
1929_CCB.d	7/18/2022 22:54	CCB	1900	1	1507	
1930SMPL.d	7/18/2022 22:58	Sample	22207130606 D	10	3211	

1931SMPL.d	7/18/2022 23:01	Sample	22207130608 D	1	3212	
1932SMPL.d	7/18/2022 23:05	Sample	22207144301	1	3301	
1933SMPL.d	7/18/2022 23:08	Sample	22207144302	1	3302	
1934SMPL.d	7/18/2022 23:12	Sample	22207144303	1	3303	
1935SMPL.d	7/18/2022 23:15	Sample	2371615	5	3304	
1936SMPL.d	7/18/2022 23:19	Sample	22207144304	1	3305	
1937SMPL.d	7/18/2022 23:22	Sample	22207144305	1	3306	
1938SMPL.d	7/18/2022 23:27	Sample	22207144306	1	3307	
1939_CCV.d	7/18/2022 23:31	CCV	1800	1	1408	
1940_CCB.d	7/18/2022 23:35	CCB	1900	1	1508	
1941SMPL.d	7/18/2022 23:39	MBSOIL	2371154	40	4202	
1942SMPL.d	7/18/2022 23:43	LCS6020	2371156	40	4203	
1943SMPL.d	7/18/2022 23:48	Sample	22207145901	390.625	4204	
1944SMPL.d	7/18/2022 23:52	Sample	22207145902	387.5969	4205	
1945SMPL.d	7/18/2022 23:56	Sample	22207145903	378.7879	4206	
1946SMPL.d	7/19/2022 0:00	Sample	22207145904	390.625	4207	
1947SMPL.d	7/19/2022 0:04	Sample	22207148201	396.8254	4208	
1948SMPL.d	7/19/2022 0:09	Sample	22207153401	375.9398	4209	
1949SMPL.d	7/19/2022 0:13	Sample	22207153402	396.8254	4210	
1950SMPL.d	7/19/2022 0:17	Sample	22207153403	390.625	4211	
1951SMPL.d	7/19/2022 0:21	Sample	22207153404	370.3704	4212	
1952_CCV.d	7/19/2022 0:25	CCV	1800	1	1408	
1953_CCB.d	7/19/2022 0:30	CCB	1900	1	1508	
1954SMPL.d	7/19/2022 0:34	AllRef	22207153405	400	4301	
1955SMPL.d	7/19/2022 0:38	MSSOIL	22207153407	400	4302	
1956SMPL.d	7/19/2022 0:41	MSDSOIL	22207153408	400	4303	
1957SMPL.d	7/19/2022 0:45	PDS	2372333	400	4304	
1958SMPL.d	7/19/2022 0:48	Sample	2372334	2000	4305	
1959SMPL.d	7/19/2022 0:52	Sample	22207153406	387.5969	4306	
1960SMPL.d	7/19/2022 0:55	Sample	22207153801	393.7008	4307	
1961SMPL.d	7/19/2022 0:59	Sample	22207153802	396.8254	4308	
1962SMPL.d	7/19/2022 1:02	Sample	22207153803	387.5969	4309	
1963SMPL.d	7/19/2022 1:06	Sample	22207153804	393.7008	4310	
1964_CCV.d	7/19/2022 1:09	CCV	1800	1	1407	
1965_CCB.d	7/19/2022 1:13	CCB	1900	1	1507	
1966SMPL.d	7/19/2022 1:16	Sample	22207113401	10	4111	
1967SMPL.d	7/19/2022 1:20	Sample	2500	1	5	
1968SMPL.d	7/19/2022 1:23	Sample	22207113402	10	4112	
1969SMPL.d	7/19/2022 1:27	Sample	2500	1	5	
1970SMPL.d	7/19/2022 1:30	Sample	22207156401	10	2401	
1971SMPL.d	7/19/2022 1:34	Sample	2500	1	5	
1972SMPL.d	7/19/2022 1:37	Sample	22207156501	1	2402	
1973SMPL.d	7/19/2022 1:42	Sample	2500	1	5	
1974SMPL.d	7/19/2022 1:46	Sample	22207163801	1	2403	
1975SMPL.d	7/19/2022 1:50	Sample	2500	1	5	
1976SMPL.d	7/19/2022 1:54	Sample	22207019601	10	2404	
1977SMPL.d	7/19/2022 1:58	Sample	2500	1	5	

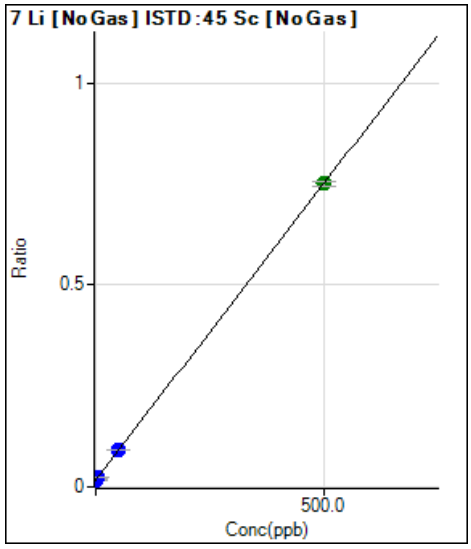
1978_CCV.d	7/19/2022 2:03	CCV	1800	1	1404	
1979_CCB.d	7/19/2022 2:07	CCB	1900	1	1504	
1980SMPL.d	7/19/2022 2:11	Sample	2500	1	5	
1981SMPL.d	7/19/2022 2:15	Sample	2500	1	5	
1982SMPL.d	7/19/2022 2:19	Sample	2500	1	5	

Tune Mode	Mass	Name	ISTD	R	a	b (blank)	DL	BEC	Units
No Gas	7	Li	45 Sc [No Gas]	0.999994205	0.001469127	0.016863845	0.108323152	11.478823	ppb
No Gas	9	Be	45 Sc [No Gas]	0.999996311	0.000387116	1.52E-05	0.006614926	0.039216633	ppb
No Gas	11	B	45 Sc [No Gas]	0.999992605	0.000332098	0.000425803	0.066975747	1.282158726	ppb
He	23	Na	45 Sc [He]	0.999992944	0.003048532	0.037529485	0.941473627	12.31067354	ppb
He	24	Mg	45 Sc [He]	0.99999023	0.001083703	0.002673454	0.408799946	2.466962992	ppb
He	27	Al	45 Sc [He]	0.999998311	0.000222593	0.000264777	0.299729411	1.189509868	ppb
He	29	Si	45 Sc [He]	-0.093381819	9.18E-08	0.009966733	52623.69185	108626.1342	ppb
He	39	K	45 Sc [He]	0.999999607	0.000991149	0.024247562	2.417022296	24.46410199	ppb
He	44	Ca	45 Sc [He]	0.999999453	4.34E-05	0.000879879	0.633769476	20.27251968	ppb
He	47	Ti	45 Sc [He]	0.999999466	0.000434582	5.89E-05	0.102997286	0.135458059	ppb
He	51	V	72 Ge [He]	0.999999646	0.022162759	0.001246677	0.006298194	0.05625099	ppb
He	52	Cr	72 Ge [He]	0.999998507	0.032709884	0.002987783	0.010991986	0.091341898	ppb
He	55	Mn	72 Ge [He]	0.99999937	0.011779254	0.000409222	0.009712579	0.034740893	ppb
He	57	Fe	72 Ge [He]	0.999997949	0.000571124	0.00029568	0.110985216	0.517716436	ppb
He	59	Co	72 Ge [He]	0.999996584	0.059536686	0.000432188	0.00104054	0.007259181	ppb
He	60	Ni	72 Ge [He]	0.999988004	0.016770807	0.000702664	0.007528855	0.041898041	ppb
He	63	Cu	45 Sc [He]	0.999936841	0.041149915	0.004280013	0.01289347	0.10401025	ppb
He	66	Zn	103 Rh [He]	0.999999756	0.000128131	7.82E-05	0.131883371	0.610692533	ppb
He	75	As	72 Ge [He]	0.999999797	0.006734691	0.000927026	0.007629824	0.137649428	ppb
He	78	Se	72 Ge [He]	0.999984265	0.000388718	3.10E-05	0.039771547	0.079731986	ppb
No Gas	88	Sr	72 Ge [No Gas]	0.999998531	0.033880351	0.000605615	0.001996569	0.017875096	ppb
No Gas	90	Zr	72 Ge [No Gas]	0.99999974	0.020114202	0.000951577	0.002808204	0.047308691	ppb
No Gas	95	Mo	115 In [No Gas]	0.999990861	0.000731248	0.000145763	0.002548932	0.199334922	ppb
No Gas	107	Ag	115 In [No Gas]	0.99998623	0.0018661	2.46E-05	0.002481645	0.01316801	ppb
No Gas	111	Cd	115 In [No Gas]	0.999998658	0.000431717	4.35E-06	0.004382018	0.010085749	ppb
No Gas	118	(Sn)	115 In [No Gas]	0.999998495	0.001243091	0.000209896	0.009037835	0.168849764	ppb
He	118	(Sn)	115 In [He]	0.999998987	0.001755579	0.000332621	0.019795052	0.18946516	ppb
He	120	Sn	115 In [He]	0.999999201	0.002573827	0.000482954	0.010667358	0.187640585	ppb
No Gas	121	Sb	209 Bi [No Gas]	0.999992441	0.002276923	0.000498788	0.012043606	0.21906224	ppb
No Gas	137	Ba	115 In [No Gas]	0.999999685	0.000613415	2.58E-06	0.00051834	0.004209855	ppb
He	156	[Se]	115 In [He]						ppb
No Gas	201	Hg							
No Gas	205	Tl	175 Lu [No Gas]	0.999995665	0.002619321	0.000876854	0.033026622	0.334763856	ppb
No Gas	206	(Pb)	209 Bi [No Gas]	0.999998466	0.001555402	3.33E-05	0.00057495	0.021409707	ppb
No Gas	207	(Pb)	209 Bi [No Gas]	0.999998622	0.001310518	2.82E-05	0.011185746	0.021539038	ppb
No Gas	208	Pb	209 Bi [No Gas]	0.999999387	0.003123431	6.52E-05	0.00209156	0.020878574	ppb
No Gas	6	(Li)							ppb
No Gas	45	Sc							ppb
He	45	Sc							ppb
No Gas	72	Ge							ppb
He	72	Ge							ppb
No Gas	103	Rh							ppb
He	103	Rh							ppb
No Gas	115	In							ppb
He	115	In							ppb
No Gas	159	Tb							ppb
He	159	Tb							ppb
No Gas	175	Lu							ppb
He	175	Lu							ppb
No Gas	209	Bi							ppb
He	209	Bi							ppb

Calibration for 1810.5.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\2220718A_MS2.b\
Analysis File: 2220718A_MS2.batch.bin
DA Date-Time: 7/18/2022 15:49:09
Calibration Title: EPA6020
Calibration Method: External Calibration
VIS Interpolation Fit:

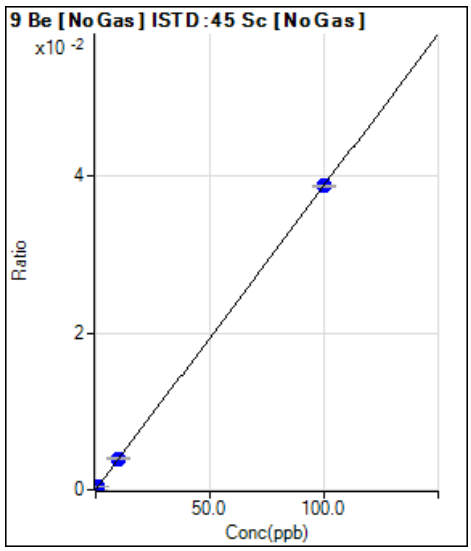
Level	Standard Data File	Sample Name	Acq. Date-Time
1	010CALB.d	1300	7/18/2022 13:41:26
2			
3	011CALS.d	1302	7/18/2022 13:45:37
4			
5	012CALS.d	1304	7/18/2022 13:51:11
6	013CALS.d	1305	7/18/2022 13:55:32
7	014CALS.d	1306	7/18/2022 13:59:53
8			



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	750977.95	0.0169	P	0.3
2	☐	0.000					
3	☐	0.500	0.866	786855.12	0.0181	P	0.5
4	☐	2.500					
5	☐	5.000	5.584	1103019.15	0.0251	P	0.9
6	☐	50.000	51.879	4081056.19	0.0931	P	0.4
7	☐	500.000	499.806	31569329.53	0.7511	A	1.3
8	☐						

y = 0.0015 * x + 0.0169
R = 1.0000
DL = 0.1083
BEC = 11.48

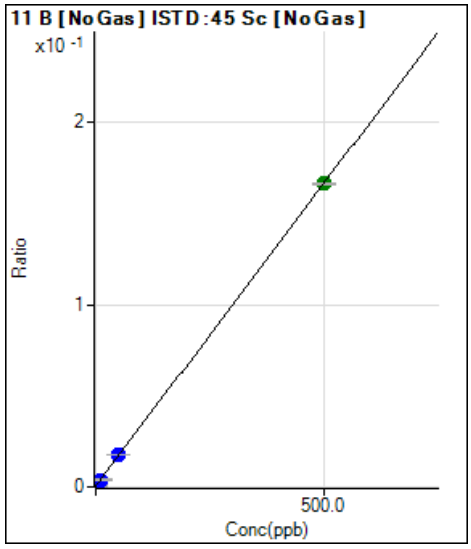
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	676.02	0.0000	P	5.6
2	☐	0.000					
3	☐	0.100	0.096	2276.85	0.0001	P	2.6
4	☐	0.500					
5	☐	1.000	1.035	18291.67	0.0004	P	1.4
6	☐	10.000	10.273	175025.84	0.0040	P	0.7
7	☐	100.000	99.972	1627212.29	0.0387	P	0.4
8	☐						

y = 3.8712E-004 * x + 1.5181E-005
R = 1.0000
DL = 0.006615
BEC = 0.03922

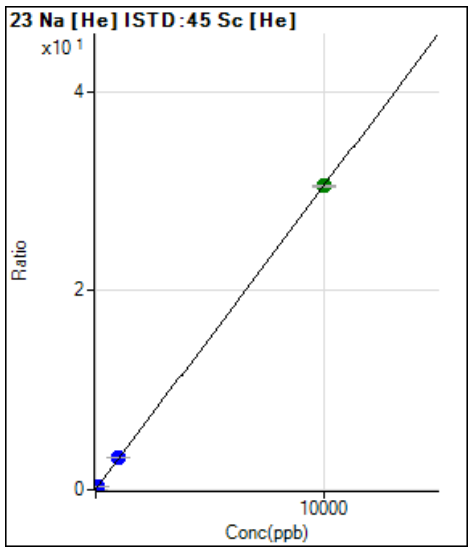
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18959.18	0.0004	P	1.7
2	☐	0.000					
3	☐	1.000	1.344	37841.20	0.0009	P	2.6
4	☐	5.000					
5	☐	10.000	10.590	173487.63	0.0039	P	2.2
6	☐	50.000	52.091	777155.51	0.0177	P	0.9
7	☐	500.000	499.778	6993687.19	0.1664	A	0.5
8	☐						

y = 3.3210E-004 * x + 4.2580E-004
R = 1.0000
DL = 0.06698
BEC = 1.282

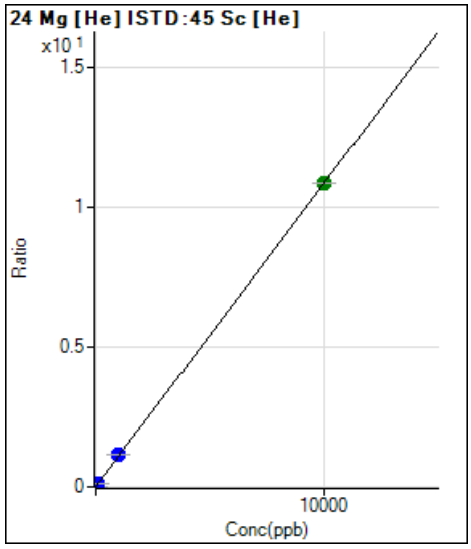
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24670.89	0.0375	P	2.5
2	☐	0.000					
3	☐	10.000	8.346	41631.65	0.0630	P	3.8
4	☐	50.000					
5	☐	100.000	107.680	240484.86	0.3658	P	0.1
6	☐	1000.000	1037.662	2120633.98	3.2009	P	0.9
7	☐	10000.00	9996.159	19631782.63	30.511	A	0.5
8	☐						

y = 0.0030 * x + 0.0375
R = 1.0000
DL = 0.9415
BEC = 12.31

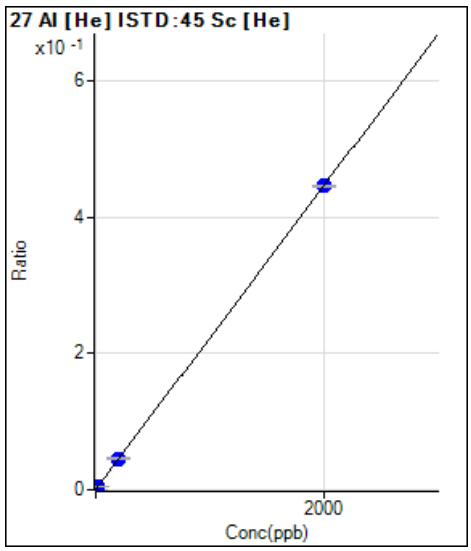
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1756.83	0.0027	P	5.5
2	☐	0.000					
3	☐	10.000	6.508	6431.60	0.0097	P	15.
4	☐	50.000					
5	☐	100.000	109.455	79734.72	0.1213	P	1.4
6	☐	1000.000	1043.656	751123.71	1.1337	P	1.1
7	☐	10000.00	9995.543	6971493.65	10.834	A	0.2
8	☐						

y = 0.0011 * x + 0.0027
R = 1.0000
DL = 0.4088
BEC = 2.467

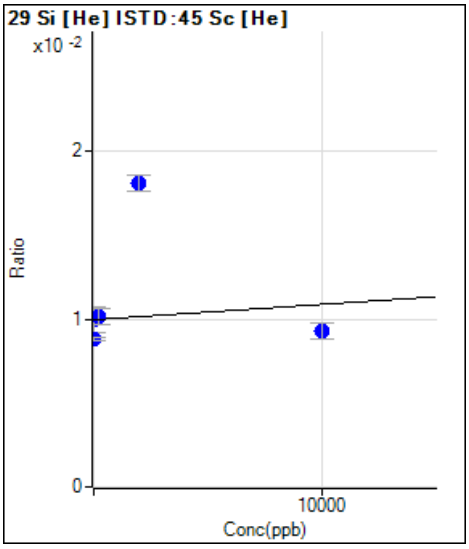
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	174.00	0.0003	P	8.4
2	☐	0.000					
3	☐	2.000	1.714	427.34	0.0006	P	11.
4	☐	10.000					
5	☐	20.000	21.394	3305.05	0.0050	P	3.7
6	☐	200.000	203.629	30204.26	0.0456	P	2.2
7	☐	2000.000	1999.623	286564.91	0.4454	P	0.4
8	☐						

y = 2.2259E-004 * x + 2.6478E-004
R = 1.0000
DL = 0.2997
BEC = 1.19

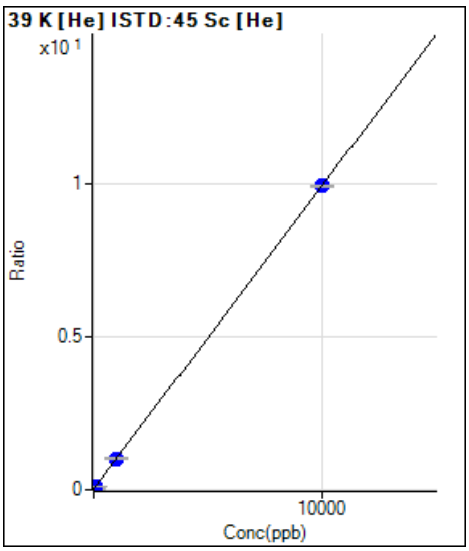
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6546.82	0.0100	P	16.
2	☐	0.000					
3	☐	20.000	-12703.28	5817.83	0.0088	P	1.7
4	☐	100.000					
5	☐	200.000	1774.714	6656.19	0.0101	P	9.8
6	☐	2000.000	88417.455	11976.16	0.0181	P	5.3
7	☐	10000.00	-7289.539	5983.23	0.0093	P	9.6
8	☐						

y = 9.1753E-008 * x + 0.0100
R = -0.0934
DL = 5.262E+04
BEC = 1.086E+05

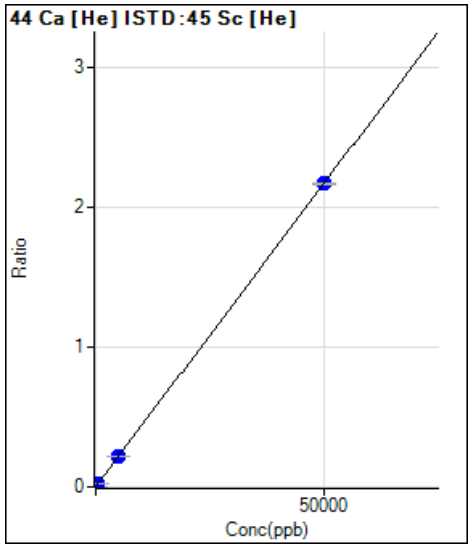
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15935.70	0.0242	P	3.3
2	☐	0.000					
3	☐	10.000	7.148	20715.00	0.0313	P	4.2
4	☐	50.000					
5	☐	100.000	104.492	84026.46	0.1278	P	2.8
6	☐	1000.000	1006.858	677235.20	1.0222	P	1.1
7	☐	10000.00	9999.272	6392513.03	9.9350	P	0.5
8	☐						

y = 9.9115E-004 * x + 0.0242
R = 1.0000
DL = 2.417
BEC = 24.46

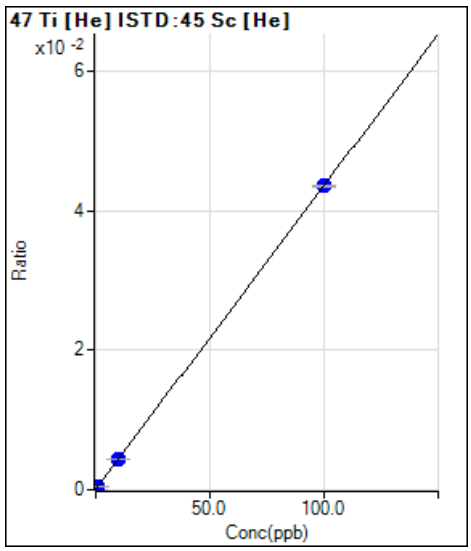
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	578.35	0.0009	P	1.0
2	☐	0.000					
3	☐	50.000	29.789	1436.76	0.0022	P	12.
4	☐	250.000					
5	☐	500.000	528.072	15645.10	0.0238	P	1.8
6	☐	5000.000	5036.077	145400.37	0.2195	P	0.8
7	☐	50000.00	49996.132	1396793.63	2.1708	P	0.7
8	☐						

y = 4.3403E-005 * x + 8.7988E-004
R = 1.0000
DL = 0.6338
BEC = 20.27

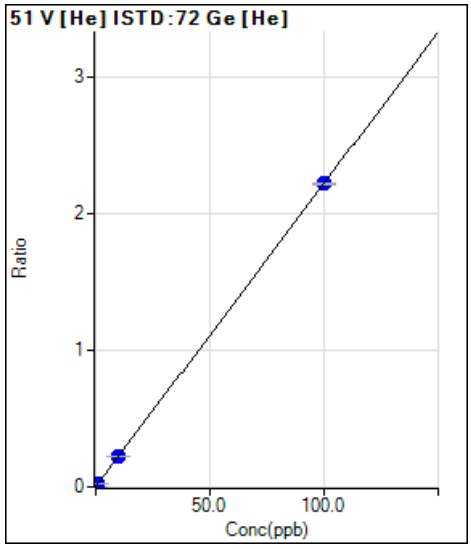
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.67	0.0001	P	25.
2	☐	0.000					
3	☐	0.100	0.076	60.67	0.0001	P	13.
4	☐	0.500					
5	☐	1.000	1.008	326.67	0.0005	P	6.7
6	☐	10.000	10.093	2944.97	0.0044	P	1.0
7	☐	100.000	99.991	27997.56	0.0435	P	0.8
8	☐						

y = 4.3458E-004 * x + 5.8868E-005
R = 1.0000
DL = 0.103
BEC = 0.1355

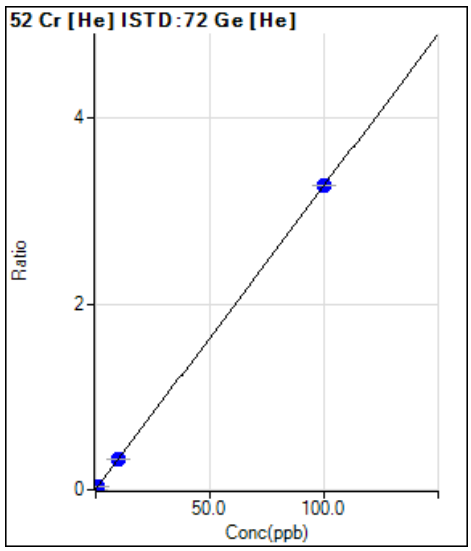
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	731.14	0.0012	P	3.7
2		0.000					
3		0.100	0.060	1533.43	0.0026	P	15.
4		0.500					
5		1.000	1.011	13985.60	0.0237	P	1.7
6		10.000	9.921	131135.72	0.2211	P	1.0
7		100.000	100.008	1259313.66	2.2177	P	0.5
8							

y = 0.0222 * x + 0.0012
R = 1.0000
DL = 0.006298
BEC = 0.05625

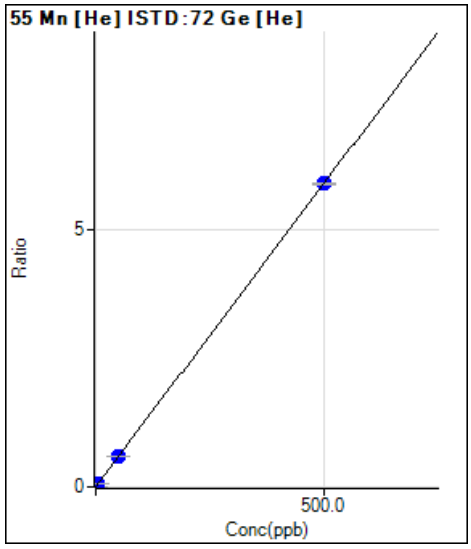
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	1752.35	0.0030	P	4.0
2		0.000					
3		0.100	0.056	2882.53	0.0048	P	5.1
4		0.500					
5		1.000	1.049	22049.88	0.0373	P	0.9
6		10.000	10.154	198738.48	0.3351	P	1.3
7		100.000	99.984	1858831.66	3.2735	P	0.1
8							

y = 0.0327 * x + 0.0030
R = 1.0000
DL = 0.01099
BEC = 0.09134

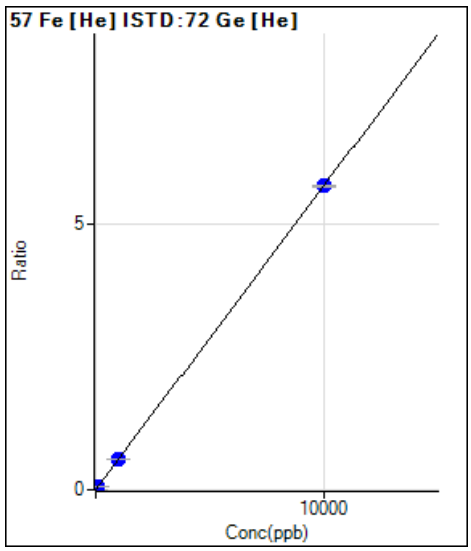
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	240.00	0.0004	P	9.3
2		0.000					
3		0.500	0.319	2489.13	0.0042	P	16.
4		2.500					
5		5.000	5.231	36669.98	0.0620	P	0.4
6		50.000	50.456	352697.97	0.5947	P	1.3
7		500.000	499.952	3344321.46	5.8895	P	0.3
8							

y = 0.0118 * x + 4.0922E-004
R = 1.0000
DL = 0.009713
BEC = 0.03474

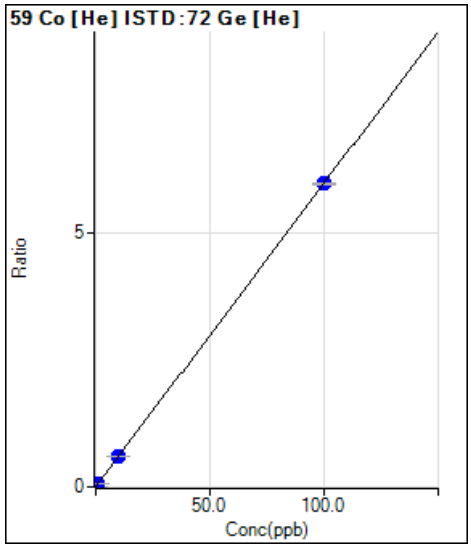
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	173.34	0.0003	P	7.1
2		0.000					
3		10.000	5.959	2206.92	0.0037	P	12.
4		50.000					
5		100.000	105.520	35804.48	0.0606	P	1.8
6		1000.000	1018.729	345214.30	0.5821	P	1.1
7		10000.00	9998.076	3242680.89	5.7104	P	0.5
8							

y = 5.7112E-004 * x + 2.9568E-004
R = 1.0000
DL = 0.111
BEC = 0.5177

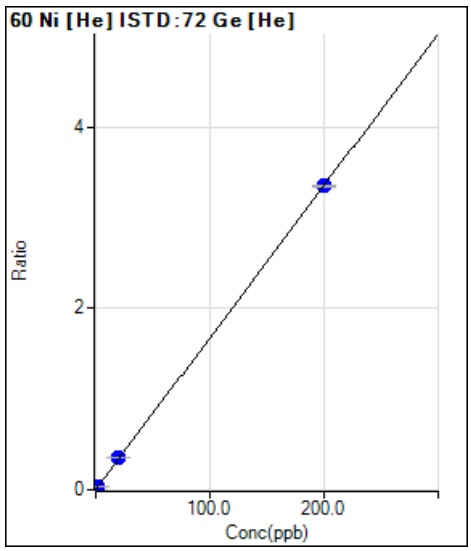
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	253.34	0.0004	P	4.8
2		0.000					
3		0.100	0.066	2613.60	0.0044	P	13.
4		0.500					
5		1.000	1.071	37951.07	0.0642	P	2.3
6		10.000	10.252	362238.91	0.6108	P	0.9
7		100.000	99.974	3380135.56	5.9526	P	0.2
8							

y = 0.0595 * x + 4.3219E-004
R = 1.0000
DL = 0.001041
BEC = 0.007259

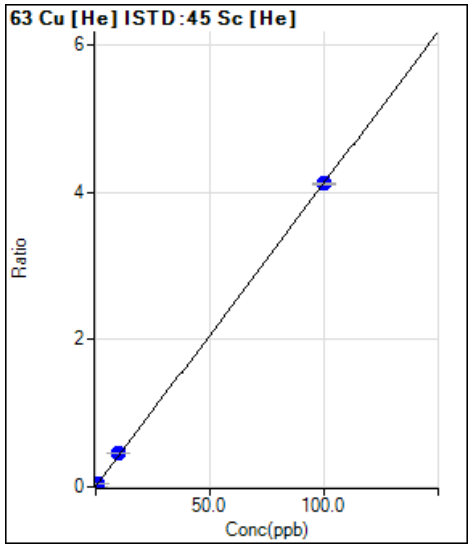
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	412.23	0.0007	P	6.0
2		0.000					
3		0.200	0.137	1790.13	0.0030	P	10.
4		1.000					
5		2.000	2.158	21815.14	0.0369	P	1.2
6		20.000	20.969	208967.21	0.3524	P	1.4
7		200.000	199.902	1904117.35	3.3532	P	0.3
8							

y = 0.0168 * x + 7.0266E-004
R = 1.0000
DL = 0.007529
BEC = 0.0419

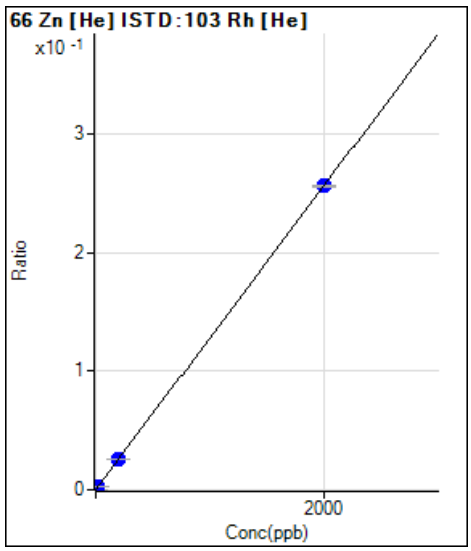
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2813.64	0.0043	P	4.1
2	☐	0.000					
3	☐	0.100	0.089	5257.67	0.0080	P	4.0
4	☐	0.500					
5	☐	1.000	1.141	33688.64	0.0512	P	0.6
6	☐	10.000	11.127	306204.74	0.4622	P	0.8
7	☐	100.000	99.886	2647446.01	4.1146	P	0.4
8	☐						

y = 0.0411 * x + 0.0043
R = 0.9999
DL = 0.01289
BEC = 0.104

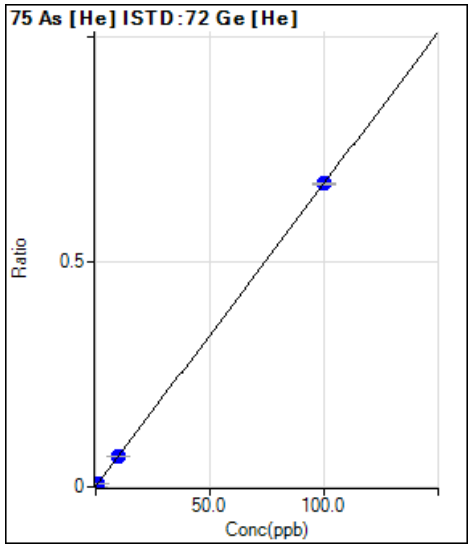
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1907.93	0.0001	P	7.2
2	☐	0.000					
3	☐	2.000	1.382	6192.50	0.0003	P	6.6
4	☐	10.000					
5	☐	20.000	20.443	65099.31	0.0027	P	1.4
6	☐	200.000	201.021	614632.89	0.0258	P	0.7
7	☐	2000.000	1999.894	5653457.14	0.2563	P	0.8
8	☐						

y = 1.2813E-004 * x + 7.8248E-005
R = 1.0000
DL = 0.1319
BEC = 0.6107

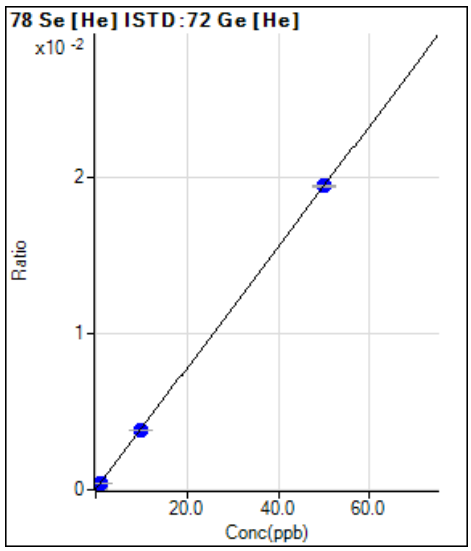
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	543.68	0.0009	P	1.8
2	☐	0.000					
3	☐	0.100	0.038	703.69	0.0012	P	6.6
4	☐	0.500					
5	☐	1.000	0.980	4450.35	0.0075	P	2.0
6	☐	10.000	10.012	40536.30	0.0684	P	1.1
7	☐	100.000	99.999	382953.12	0.6744	P	0.5
8	☐						

y = 0.0067 * x + 9.2703E-004
R = 1.0000
DL = 0.00763
BEC = 0.1376

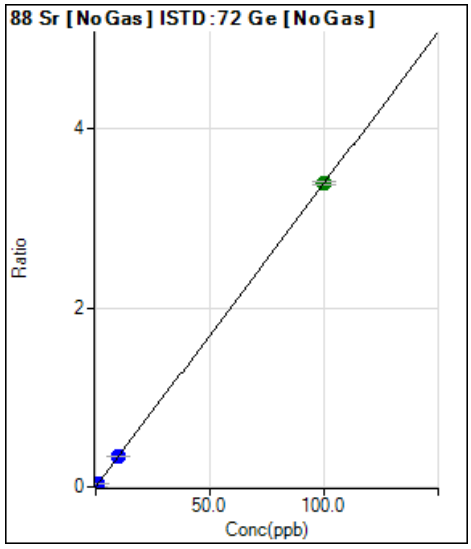
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.17	0.0000	P	16.
2	☐	0.000					
3	☐	0.100	0.064	33.25	0.0001	P	15.
4	☐	0.500					
5	☐	1.000	0.967	240.67	0.0004	P	0.9
6	☐	10.000	9.723	2259.76	0.0038	P	1.5
7	☐	50.000	50.056	11066.60	0.0195	P	0.7
8	☐						

y = 3.8872E-004 * x + 3.0993E-005
R = 1.0000
DL = 0.03977
BEC = 0.07973

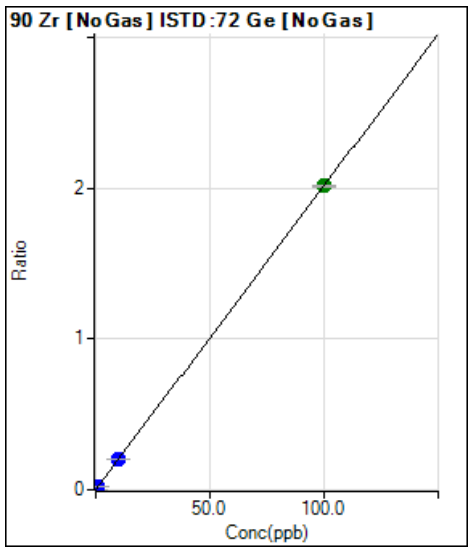
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6535.04	0.0006	P	3.7
2	☐	0.000					
3	☐	0.100	0.109	45228.65	0.0043	P	1.3
4	☐	0.500					
5	☐	1.000	1.031	378674.50	0.0355	P	0.5
6	☐	10.000	10.178	3659216.82	0.3454	P	0.0
7	☐	100.000	99.982	33965145.33	3.3880	A	1.0
8	☐						

y = 0.0339 * x + 6.0561E-004
R = 1.0000
DL = 0.001997
BEC = 0.01788

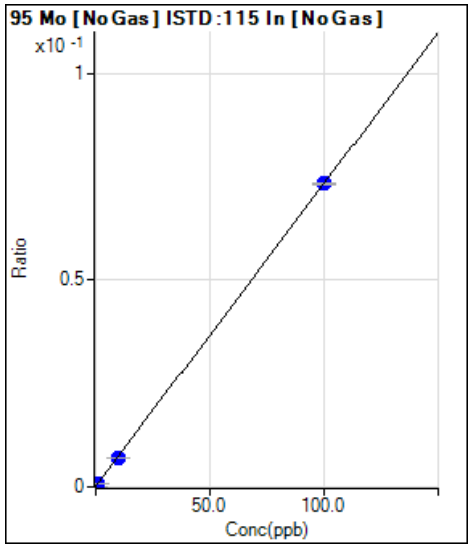
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10271.54	0.0010	P	2.0
2	☐	0.000					
3	☐	0.100	0.084	27923.78	0.0026	P	2.0
4	☐	0.500					
5	☐	1.000	0.929	209188.00	0.0196	P	0.7
6	☐	10.000	9.937	2127326.79	0.2008	P	0.1
7	☐	100.000	100.007	20175618.64	2.0125	A	0.4
8	☐						

y = 0.0201 * x + 9.5158E-004
R = 1.0000
DL = 0.002808
BEC = 0.04731

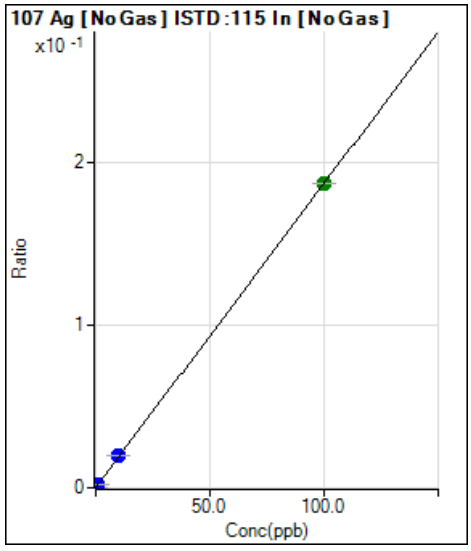
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12731.28	0.0001	P	0.4
2	☐	0.000					
3	☐	0.100	0.054	15977.91	0.0002	P	1.4
4	☐	0.500					
5	☐	1.000	0.894	69471.33	0.0008	P	0.4
6	☐	10.000	9.544	610787.40	0.0071	P	0.4
7	☐	100.000	100.047	5865261.71	0.0733	P	0.5
8	☐						

y = 7.3125E-004 * x + 1.4576E-004
R = 1.0000
DL = 0.002549
BEC = 0.1993

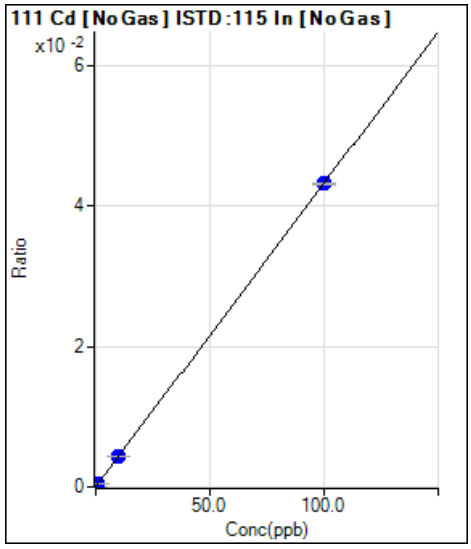
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2146.85	0.0000	P	6.3
2	☐	0.000					
3	☐	0.100	0.109	19657.03	0.0002	P	1.0
4	☐	0.500					
5	☐	1.000	1.067	175137.86	0.0020	P	0.8
6	☐	10.000	10.532	1686993.47	0.0197	P	0.4
7	☐	100.000	99.946	14924896.07	0.1865	A	0.1
8	☐						

y = 0.0019 * x + 2.4573E-005
R = 1.0000
DL = 0.002482
BEC = 0.01317

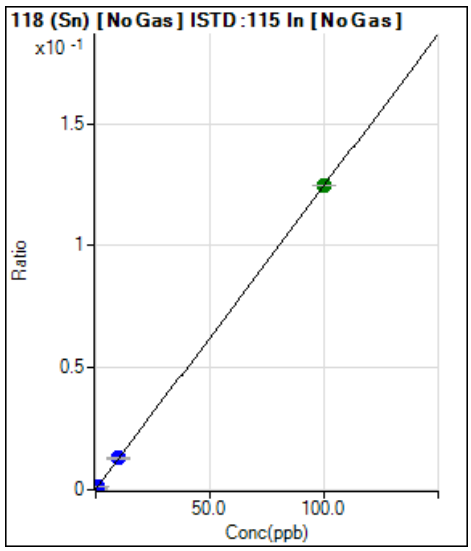
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0000	P	14.
2	☐	0.000					
3	☐	0.100	0.106	4324.04	0.0001	P	1.4
4	☐	0.500					
5	☐	1.000	1.044	39567.17	0.0005	P	0.7
6	☐	10.000	10.171	376781.09	0.0044	P	0.4
7	☐	100.000	99.982	3454007.02	0.0432	P	0.4
8	☐						

y = 4.3172E-004 * x + 4.3542E-006
R = 1.0000
DL = 0.004382
BEC = 0.01009

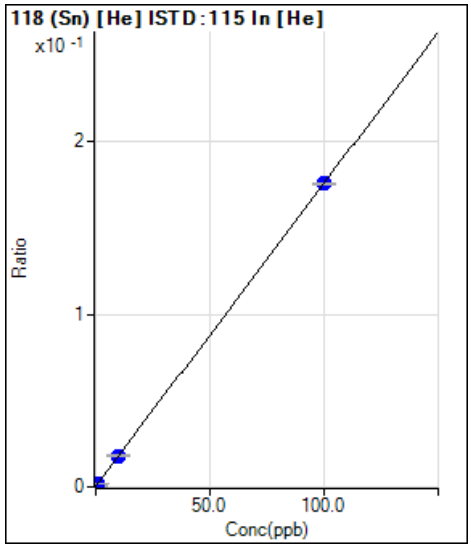
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18334.23	0.0002	P	1.8
2	☐	0.000					
3	☐	0.100	0.122	31242.30	0.0004	P	1.3
4	☐	0.500					
5	☐	1.000	1.026	129117.13	0.0015	P	0.6
6	☐	10.000	10.183	1103119.78	0.0129	P	0.5
7	☐	100.000	99.981	9961082.66	0.1245	A	0.1
8	☐						

y = 0.0012 * x + 2.0990E-004
R = 1.0000
DL = 0.009038
BEC = 0.1688

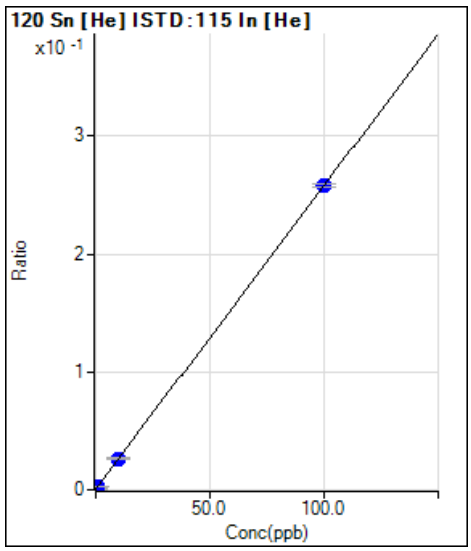
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1893.50	0.0003	P	3.5
2	☐	0.000					
3	☐	0.100	0.120	3151.49	0.0005	P	2.0
4	☐	0.500					
5	☐	1.000	1.037	12334.37	0.0022	P	2.0
6	☐	10.000	10.153	104374.60	0.0182	P	1.5
7	☐	100.000	99.984	979165.31	0.1759	P	0.6
8	☐						

y = 0.0018 * x + 3.3262E-004
R = 1.0000
DL = 0.0198
BEC = 0.1895

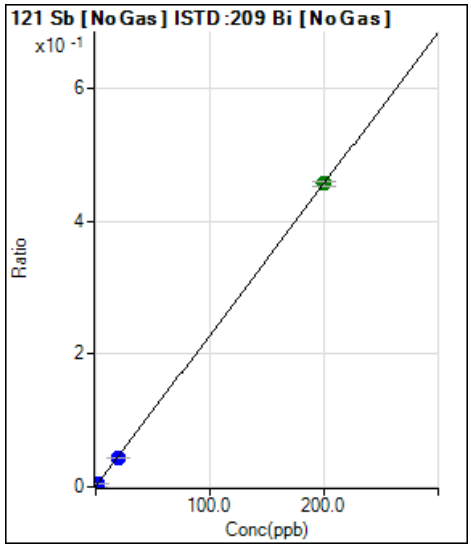
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2749.19	0.0005	P	1.9
2	☐	0.000					
3	☐	0.100	0.112	4477.43	0.0008	P	2.2
4	☐	0.500					
5	☐	1.000	1.052	18274.12	0.0032	P	2.2
6	☐	10.000	10.135	152731.16	0.0266	P	0.7
7	☐	100.000	99.986	1435507.30	0.2578	P	1.0
8	☐						

y = 0.0026 * x + 4.8295E-004
R = 1.0000
DL = 0.01067
BEC = 0.1876

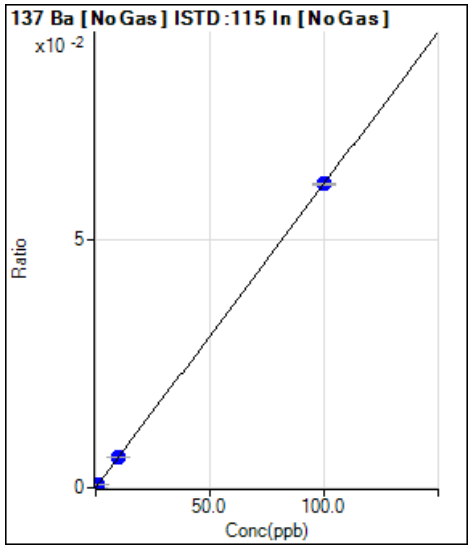
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30350.42	0.0005	P	1.8
2	☐	0.000					
3	☐	0.200	0.189	55549.82	0.0009	P	1.8
4	☐	1.000					
5	☐	2.000	1.925	289115.01	0.0049	P	0.6
6	☐	20.000	19.215	2580058.30	0.0442	P	0.3
7	☐	200.000	200.079	23994047.38	0.4561	A	1.4
8	☐						

y = 0.0023 * x + 4.9879E-004
R = 1.0000
DL = 0.01204
BEC = 0.2191

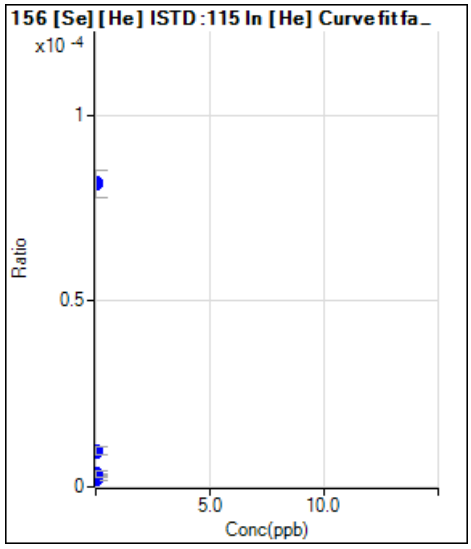
Weight: <None>
Min Conc: <None>



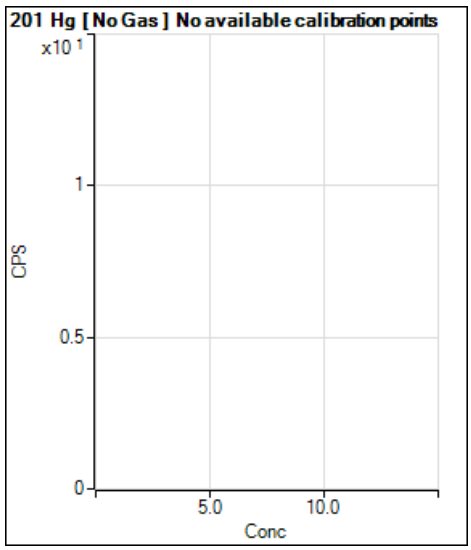
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	225.56	0.0000	P	4.1
2	☐	0.000					
3	☐	0.100	0.112	6165.87	0.0001	P	0.8
4	☐	0.500					
5	☐	1.000	1.014	54283.79	0.0006	P	0.4
6	☐	10.000	9.931	522446.35	0.0061	P	0.6
7	☐	100.000	100.007	4908620.78	0.0613	P	0.6
8	☐	1000.000					

y = 6.1342E-004 * x + 2.5824E-006
R = 1.0000
DL = 0.0005183
BEC = 0.00421

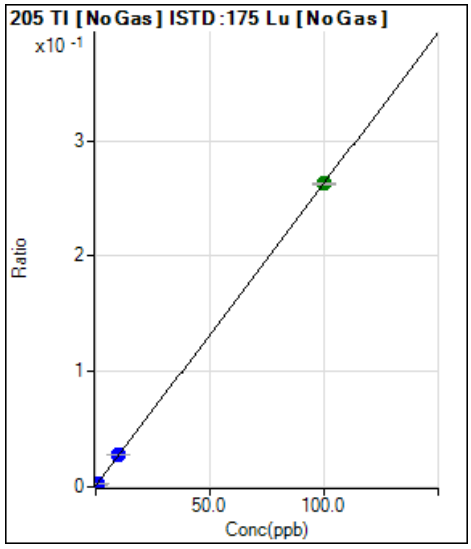
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		13.33	0.0000	P	43.
2	☐	0.000					
3	☐	0.000		14.45	0.0000	P	74.
4	☐	0.000					
5	☐	0.000		20.00	0.0000	P	44.
6	☐	0.000		55.56	0.0000	P	21.
7	☐	0.000		454.46	0.0001	P	9.3
8	☐						



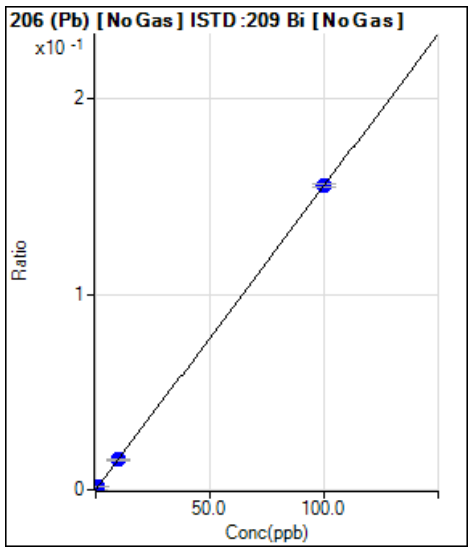
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			21.67		P	13.
2	☐						
3	☐			29.83		P	23.
4	☐						
5	☐			21.67		P	7.4
6	☐			31.33		P	17.
7	☐			49.33		P	15.
8	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	84527.67	0.0009	P	3.3
2		0.000					
3		0.100	0.020	88774.84	0.0009	P	1.8
4		0.500					
5		1.000	0.930	314240.24	0.0033	P	0.9
6		10.000	10.235	2648221.94	0.0277	P	0.9
7		100.000	99.977	23671553.82	0.2627	A	0.3
8							

y = 0.0026 * x + 8.7685E-004
R = 1.0000
DL = 0.03303
BEC = 0.3348

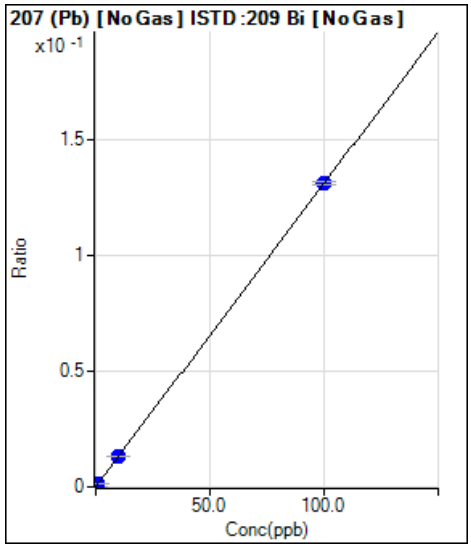
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	2026.90	0.0000	P	0.9
2		0.000					
3		0.100	0.101	11398.58	0.0002	P	3.8
4		0.500					
5		1.000	0.987	92913.74	0.0016	P	1.5
6		10.000	9.825	893032.43	0.0153	P	1.1
7		100.000	100.018	8187896.75	0.1556	P	0.9
8							

y = 0.0016 * x + 3.3301E-005
R = 1.0000
DL = 0.000575
BEC = 0.02141

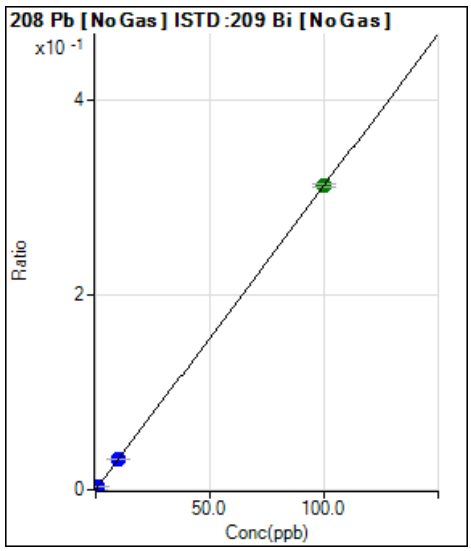
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	1716.84	0.0000	P	17.
2		0.000					
3		0.100	0.100	9507.05	0.0002	P	4.4
4		0.500					
5		1.000	1.012	80194.53	0.0014	P	0.8
6		10.000	9.841	753643.11	0.0129	P	0.8
7		100.000	100.016	6898073.23	0.1311	P	1.1
8							

y = 0.0013 * x + 2.8227E-005
R = 1.0000
DL = 0.01119
BEC = 0.02154

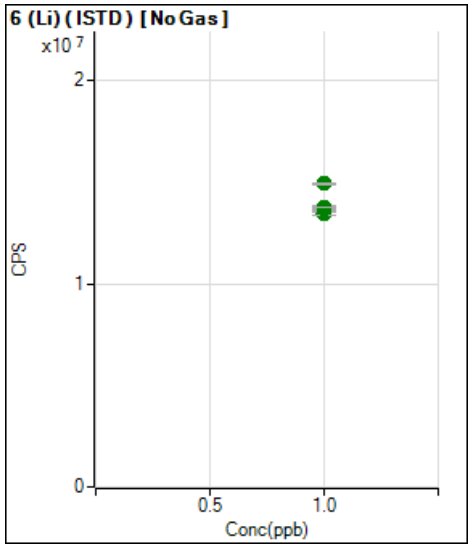
Weight: <None>
Min Conc: <None>



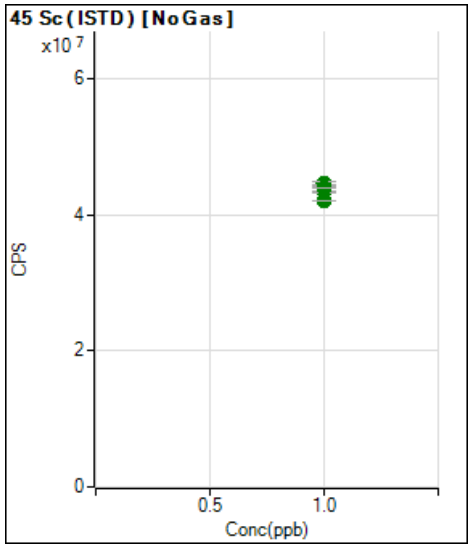
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	3967.42	0.0001	P	3.3
2		0.000					
3		0.100	0.105	23468.00	0.0004	P	1.5
4		0.500					
5		1.000	1.042	196529.28	0.0033	P	0.6
6		10.000	10.116	1846132.26	0.0317	P	1.0
7		100.000	99.988	16435033.09	0.3124	A	1.0
8							

y = 0.0031 * x + 6.5213E-005
R = 1.0000
DL = 0.002092
BEC = 0.02088

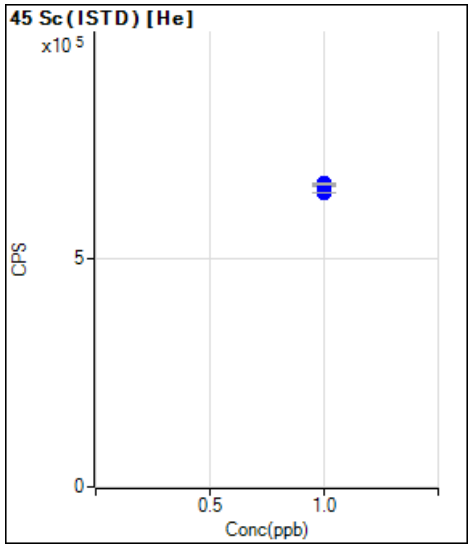
Weight: <None>
Min Conc: <None>



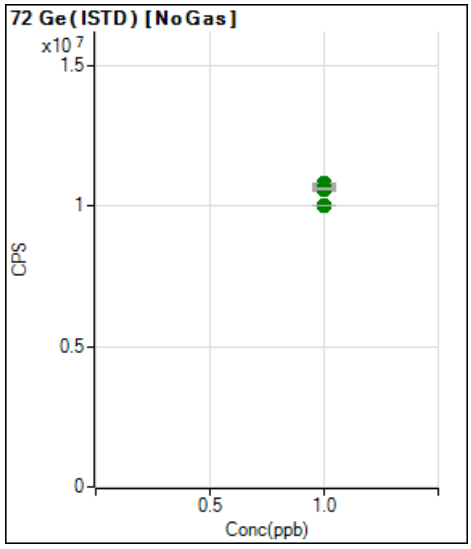
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13743756.46		A	1.2
2	☐	1.000					
3	☐	1.000		13439796.05		A	0.7
4	☐	1.000					
5	☐	1.000		13654583.13		A	0.5
6	☐	1.000		13762647.71		A	0.4
7	☐	1.000		14915879.78		A	0.2
8	☐	1.000					



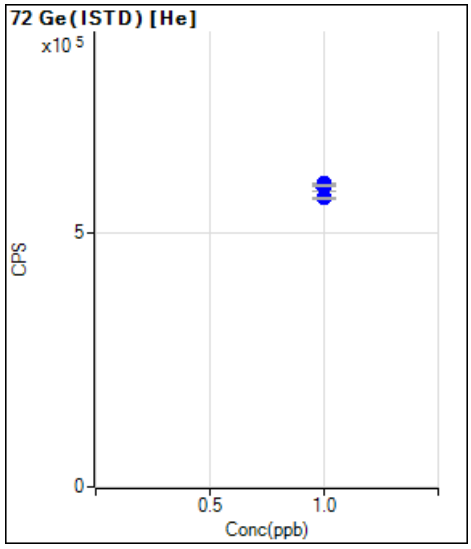
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		44531507.12		A	1.1
2	☐	1.000					
3	☐	1.000		43387091.61		A	0.5
4	☐	1.000					
5	☐	1.000		44003847.14		A	0.7
6	☐	1.000		43844647.15		A	0.1
7	☐	1.000		42029460.55		A	0.4
8	☐	1.000					



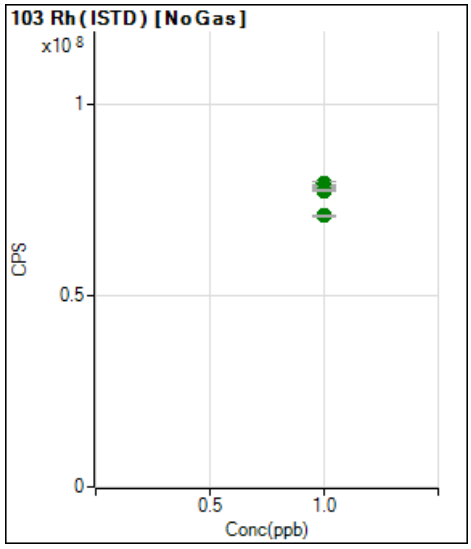
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		657305.67		P	0.7
2	☐	1.000					
3	☐	1.000		661030.20		P	0.6
4	☐	1.000					
5	☐	1.000		657430.06		P	0.8
6	☐	1.000		662531.41		P	0.5
7	☐	1.000		643431.69		P	0.2
8	☐	1.000					



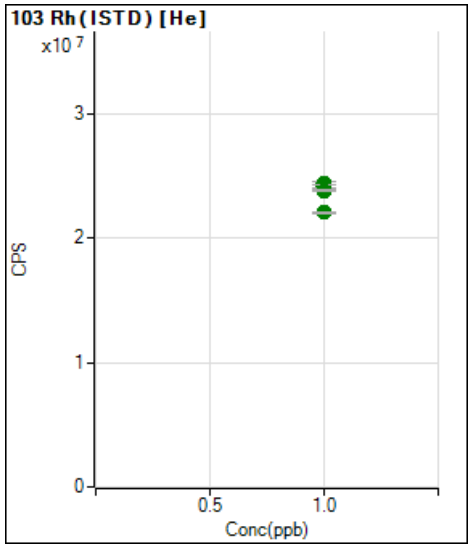
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10792997.07		A	0.9
2	☐	1.000					
3	☐	1.000		10556661.25		A	0.5
4	☐	1.000					
5	☐	1.000		10657015.97		A	0.5
6	☐	1.000		10593376.25		A	0.5
7	☐	1.000		10025117.10		A	0.2
8	☐	1.000					



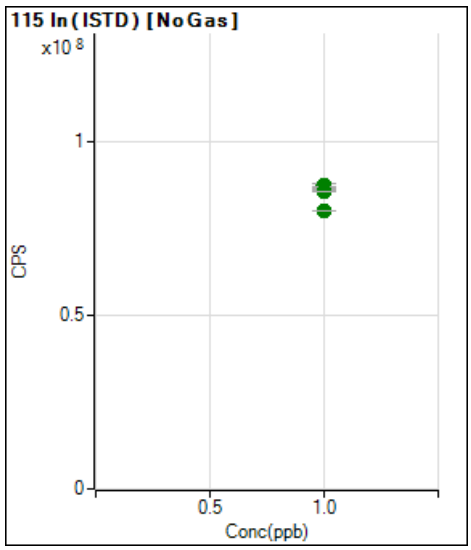
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		586421.10		P	1.4
2	☐	1.000					
3	☐	1.000		596226.42		P	0.8
4	☐	1.000					
5	☐	1.000		591228.33		P	0.5
6	☐	1.000		593045.10		P	0.5
7	☐	1.000		567848.27		P	0.3
8	☐	1.000					



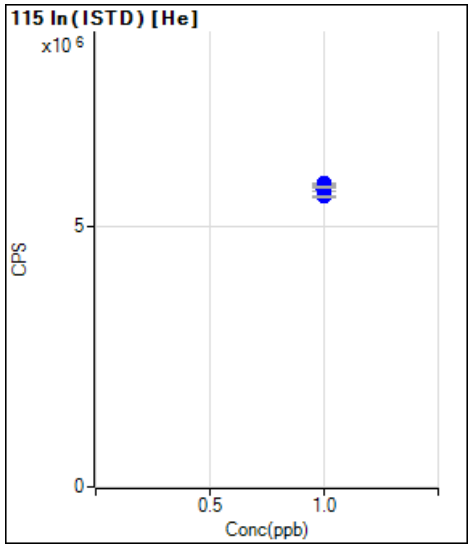
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		79124190.19		A	0.9
2	☐	1.000					
3	☐	1.000		78146765.78		A	0.6
4	☐	1.000					
5	☐	1.000		78437439.10		A	0.5
6	☐	1.000		77360288.04		A	0.4
7	☐	1.000		70721361.64		A	0.6
8	☐	1.000					



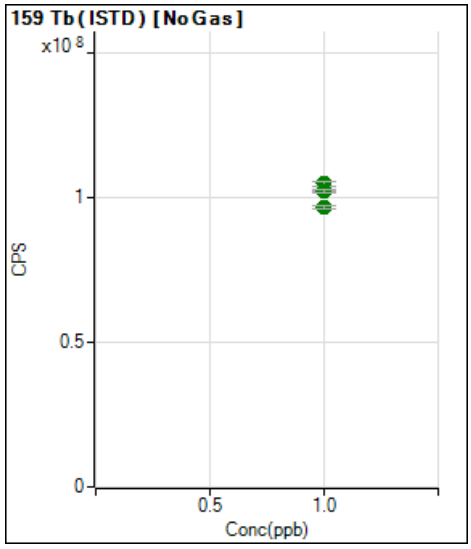
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		24372966.25		A	1.0
2	☐	1.000					
3	☐	1.000		24258887.93		A	0.1
4	☐	1.000					
5	☐	1.000		24134187.93		A	0.9
6	☐	1.000		23790135.17		A	0.6
7	☐	1.000		22056269.68		A	0.6
8	☐	1.000					



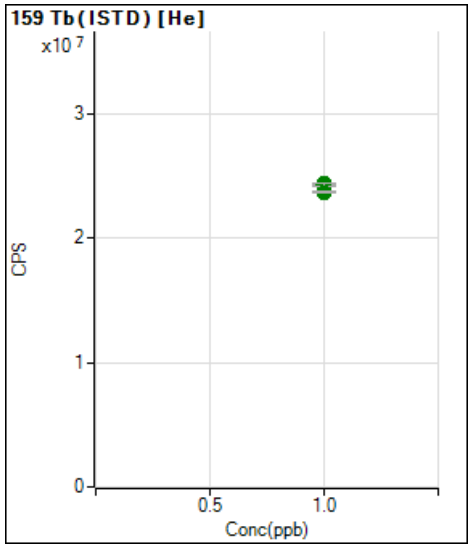
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		87343705.42		A	1.1
2	☐	1.000					
3	☐	1.000		86386629.90		A	0.3
4	☐	1.000					
5	☐	1.000		86926838.77		A	0.7
6	☐	1.000		85726838.82		A	0.2
7	☐	1.000		80011496.82		A	0.3
8	☐	1.000					



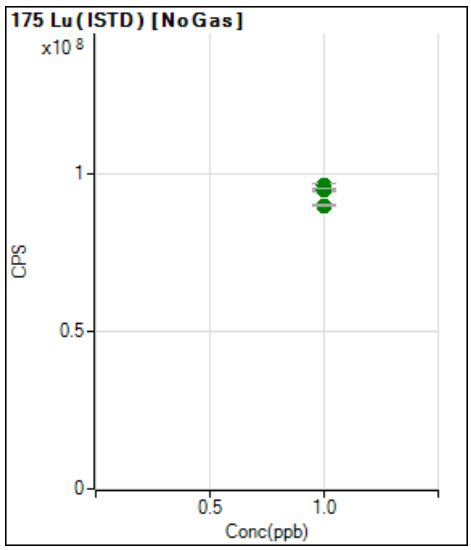
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5691896.02		P	0.9
2	☐	1.000					
3	☐	1.000		5810121.30		P	0.2
4	☐	1.000					
5	☐	1.000		5727853.52		P	0.4
6	☐	1.000		5748832.69		P	0.7
7	☐	1.000		5567912.42		P	0.7
8	☐	1.000					



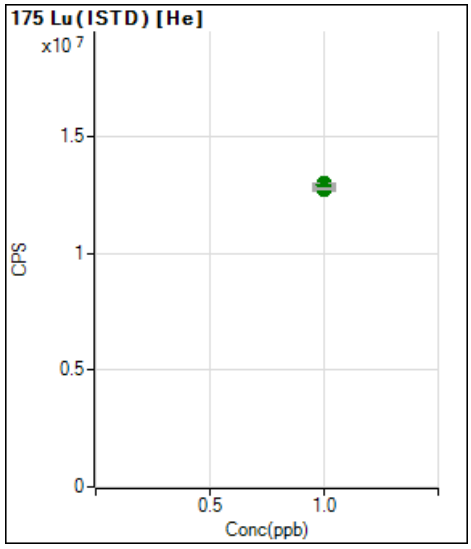
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		104667051.7		A	1.3
2	☐	1.000					
3	☐	1.000		102243675.1		A	0.7
4	☐	1.000					
5	☐	1.000		102124438.4		A	0.5
6	☐	1.000		102002535.1		A	0.7
7	☐	1.000		96437191.90		A	1.0
8	☐	1.000					



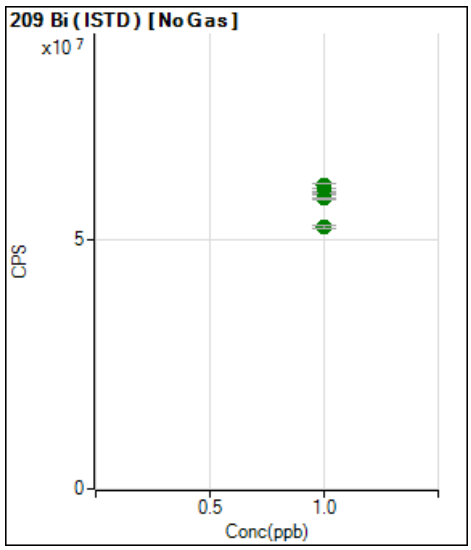
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		24246106.31		A	0.6
2	☐	1.000					
3	☐	1.000		24372359.64		A	0.5
4	☐	1.000					
5	☐	1.000		24346878.81		A	0.2
6	☐	1.000		24283433.81		A	0.7
7	☐	1.000		23674847.98		A	0.4
8	☐	1.000					



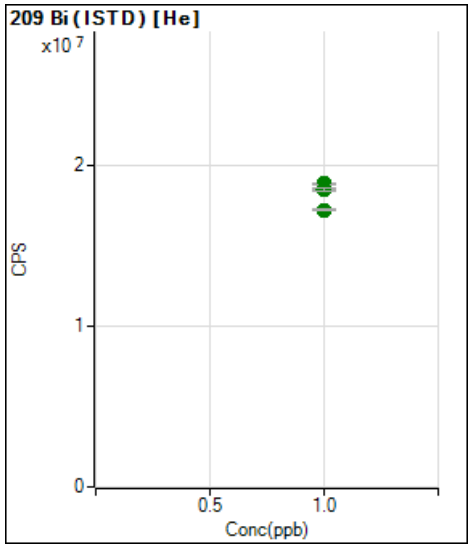
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		96431715.23		A	1.6
2	☐	1.000					
3	☐	1.000		95468538.58		A	0.6
4	☐	1.000					
5	☐	1.000		94885655.25		A	1.1
6	☐	1.000		95651898.57		A	0.3
7	☐	1.000		90091358.66		A	0.4
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12752607.73		A	0.7
2	☐	1.000					
3	☐	1.000		13000784.81		A	0.5
4	☐	1.000					
5	☐	1.000		12904397.73		A	0.8
6	☐	1.000		12960204.81		A	1.0
7	☐	1.000		12755571.89		A	0.4
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		60861477.42		A	1.8
2	☐	1.000					
3	☐	1.000		59773270.78		A	0.2
4	☐	1.000					
5	☐	1.000		59225334.12		A	0.8
6	☐	1.000		58307170.80		A	0.4
7	☐	1.000		52617682.55		A	1.3
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		18465816.81		A	0.1
2	☐	1.000					
3	☐	1.000		18824042.64		A	0.3
4	☐	1.000					
5	☐	1.000		18754442.22		A	0.4
6	☐	1.000		18464647.64		A	1.0
7	☐	1.000		17205280.16		A	0.8
8	☐	1.000					

Pace Analytical

BATCH COVERSHEET

ANALYST: LWZ

DATE: 07/19/22

ICP/MS Metals Analysis

BATCH: **745743**

STANDARDS

ICAL Standard	MET 335-8-1
ICV Standard	MET 335-7-1
ICSA Standard	MET 335-7-2
ICSAB Standard	MET 335-7-3
Internal Standard	344-88-12
Tune	344-88-13
P/A	344-76-4

ACID MATRIX

2% HNO3 \ 0.5% HCL Solution	MET 335-9-5
5% HNO3 \ 2% HCL Solution	MET 335-10-1

EQUIPMENT

Pipette 1	MET-109
Pipette 2	MET-112
Pipette 3	MET-105
Pipette 4	MET-107
Pipette 5	

Instrument ID	ICPMS2
ICPMS Data File	2220719A_MS2

ADDITIONAL STANDARDS

LDR Standard	MET 335-10-2
	ICVB - MET 335-10-3

LAB QC LIMITS

200.8 Correlation Coefficient (R) =0.998

6020B Correlation Coefficient (R) =0.995

ICV Recovery 90-110%

LLCCV Recovery 80-120%

ICSA \ ICSAB Recovery 80-120%

CCV Recovery 90-110%

Sample						
Data File	Acq. Date-Time	Type	Sample Name	Total Dil.	Vial Number	Comments
001SMPL.d	7/19/2022 11:06	Sample	Blank	1	1101	
002SMPL.d	7/19/2022 11:10	Sample	Blank	1	1102	
003SMPL.d	7/19/2022 11:14	Sample	Blank	1	1103	
004CALB.d	7/19/2022 11:19	CalBlk	1300	1	1104	
005CALS.d	7/19/2022 11:23	CalStd	1302	1	1105	
006CALS.d	7/19/2022 11:28	CalStd	1304	1	1106	
007CALS.d	7/19/2022 11:32	CalStd	1305	1	1107	
008CALS.d	7/19/2022 11:36	CalStd	1306	1	1108	
009_ICV.d	7/19/2022 11:40	ICV	1600	1	1109	
010_ICV.d	7/19/2022 12:08	ICV	1600 B	1	1110	
011_ICB.d	7/19/2022 12:15	ICB	1700	1	1111	
0120.1.d	7/19/2022 12:20	LLCCV0.1	1804	1	1112	
1210.5.d	7/19/2022 12:24	LLCCV0.5	1804	1	1201	
1211CCV1.d	7/19/2022 12:28	LLCCV1	1803	1	1202	
1212ICSA.d	7/19/2022 12:34	ICSA	2000	1	1203	
1213ICSB.d	7/19/2022 12:38	ICSB	2100	1	1204	
1214_QC1.d	7/19/2022 12:43	QC1	LDR	1	1205	
1215SMPL.d	7/19/2022 12:47	Sample	2500	1	1206	
1216SMPL.d	7/19/2022 12:51	MBSOIL	2366946	40	2101	
1217SMPL.d	7/19/2022 12:54	LCS6020	2366947	40	2102	
1218SMPL.d	7/19/2022 12:58	Sample	22207016501	393.7008	2103	
1219SMPL.d	7/19/2022 13:01	Sample	22207016502	393.7008	2104	
1220SMPL.d	7/19/2022 13:05	Sample	2500	1	5	
1221SMPL.d	7/19/2022 13:08	Sample	22207016503	400	2105	
1222SMPL.d	7/19/2022 13:12	Sample	22207016504	411.1842	2106	
1223SMPL.d	7/19/2022 13:15	Sample	22207016505	381.6794	2107	
1224SMPL.d	7/19/2022 13:19	Sample	22207016506	359.7122	2108	
1225SMPL.d	7/19/2022 13:22	Sample	22207016507	378.7879	2109	
1226SMPL.d	7/19/2022 13:26	Sample	22207016508	400	2110	
1227SMPL.d	7/19/2022 13:29	Sample	22207016509	396.8254	2111	
1228SMPL.d	7/19/2022 13:33	Sample	22207016510	396.8254	2112	
1229_CCV.d	7/19/2022 13:36	CCV	1800	1	1401	
1230_CCB.d	7/19/2022 13:41	CCB	1900	1	1501	
1231SMPL.d	7/19/2022 13:47	Sample	22207016511	359.7122	2201	
1232SMPL.d	7/19/2022 13:51	Sample	22207016512	400	2202	
1233SMPL.d	7/19/2022 13:55	Sample	22207016513	400	2203	
1234SMPL.d	7/19/2022 13:59	Sample	22207016514	400	2204	
1235SMPL.d	7/19/2022 14:04	Sample	2371612	400	2205	
1236SMPL.d	7/19/2022 14:08	Sample	2371613	2000	2206	
1237SMPL.d	7/19/2022 14:11	Sample	22207016515	384.6154	2207	
1238SMPL.d	7/19/2022 14:15	Sample	22207016516	367.6471	2208	
1239SMPL.d	7/19/2022 14:18	Sample	22207016517	400	2209	
1240SMPL.d	7/19/2022 14:22	Sample	22207016518	403.2258	2210	
1241SMPL.d	7/19/2022 14:25	Sample	22207016519	367.6471	2211	
1242SMPL.d	7/19/2022 14:29	Sample	22207016520	396.8254	2212	

1243_CCV.d	7/19/2022 14:32	CCV	1800	1	1402	
1244_CCB.d	7/19/2022 14:36	CCB	1900	1	1502	
1245SMPL.d	7/19/2022 14:40	Sample	22207113401	10	2301	
1246SMPL.d	7/19/2022 14:44	Sample	2500	1	5	
1247SMPL.d	7/19/2022 14:47	Sample	22207113402	10	2302	
1248SMPL.d	7/19/2022 14:51	Sample	2500	1	5	
1249SMPL.d	7/19/2022 14:54	MBSOIL	2371154	40	2303	
1250SMPL.d	7/19/2022 14:58	LCS6020	2371156	40	2304	
1251SMPL.d	7/19/2022 15:01	Sample	22207145901	390.625	2305	
1252SMPL.d	7/19/2022 15:05	Sample	22207145902	387.5969	2306	
1253SMPL.d	7/19/2022 15:08	Sample	22207145903	378.7879	2307	
1254SMPL.d	7/19/2022 15:12	Sample	22207145904	390.625	2308	
1255SMPL.d	7/19/2022 15:16	Sample	22207148201	396.8254	2309	
1256SMPL.d	7/19/2022 15:20	Sample	22207153401	375.9398	2310	
1257SMPL.d	7/19/2022 15:24	Sample	22207153402	396.8254	2311	
1258_CCV.d	7/19/2022 15:28	CCV	1800	1	1403	
1259_CCB.d	7/19/2022 15:33	CCB	1900	1	1503	
1260SMPL.d	7/19/2022 15:38	Sample	22207153403	390.625	2312	
1261SMPL.d	7/19/2022 15:42	Sample	22207153404	370.3704	2401	
1262SMPL.d	7/19/2022 15:46	AllRef	22207153405	400	2402	
1263SMPL.d	7/19/2022 15:50	MSSOIL	22207153407	400	2403	
1264SMPL.d	7/19/2022 15:55	MSDSOIL	22207153408	400	2404	
1265SMPL.d	7/19/2022 15:59	PDS	2372333	400	2405	
1266SMPL.d	7/19/2022 16:03	Sample	2372334	2000	2406	
1267SMPL.d	7/19/2022 16:07	Sample	22207153406	387.5969	2407	
1268SMPL.d	7/19/2022 16:11	Sample	22207153801	393.7008	2408	
1269SMPL.d	7/19/2022 16:16	Sample	22207153802	396.8254	2409	
1270SMPL.d	7/19/2022 16:20	Sample	22207153803	387.5969	2410	
1271SMPL.d	7/19/2022 16:24	Sample	22207153804	393.7008	2411	
1272_CCV.d	7/19/2022 16:28	CCV	1800	1	1404	
1273_CCB.d	7/19/2022 16:32	CCB	1900	1	1504	
1274ICSA.d	7/19/2022 16:37	ICSA	2000	1	1203	
1275ICSB.d	7/19/2022 16:41	ICSB	2100	1	1204	
1276SMPL.d	7/19/2022 16:45	MBWATER	2369934	1	2412	
1277SMPL.d	7/19/2022 16:49	LCS6020	2369935	1	2501	
1278SMPL.d	7/19/2022 16:53	Sample	22206308901	1	2502	
1279SMPL.d	7/19/2022 16:58	MBSOIL	2370588	40	3106	
1280SMPL.d	7/19/2022 17:02	LCS6020	2370589	40	3107	
1281SMPL.d	7/19/2022 17:06	Sample	22207134901	3703.7037	3108	
1282SMPL.d	7/19/2022 17:10	Sample	22207134902	4000	3109	
1283SMPL.d	7/19/2022 17:14	Sample	22207134903	3759.3985	3110	
1284SMPL.d	7/19/2022 17:18	Sample	22207134904	3787.8788	3111	
1285SMPL.d	7/19/2022 17:23	AllRef	22207134905	3731.3433	3112	
1286SMPL.d	7/19/2022 17:27	MSSOIL	22207134906	4000	3201	
1287SMPL.d	7/19/2022 17:31	MSDSOIL	22207134907	4000	3202	
1288SMPL.d	7/19/2022 17:35	PDS	2371585	3731.3433	3203	
1289SMPL.d	7/19/2022 17:39	Sample	2371586	18656.7164	3204	

1290_CCV.d	7/19/2022 17:44	CCV	1800	1	1405	
1291_CCB.d	7/19/2022 17:48	CCB	1900	1	1505	
1292SMPL.d	7/19/2022 17:52	Sample	22207153701	10	3205	
1293SMPL.d	7/19/2022 17:56	Sample	22207153702	10	3206	
1294SMPL.d	7/19/2022 18:00	Sample	22207153703	10	3207	
1295SMPL.d	7/19/2022 18:05	Sample	2372157	10	3208	
1296SMPL.d	7/19/2022 18:09	Sample	2372158	50	3209	
1297SMPL.d	7/19/2022 18:13	Sample	22207153704	10	3210	
1298SMPL.d	7/19/2022 18:17	Sample	22207153705	10	3211	
1299SMPL.d	7/19/2022 18:21	Sample	22207153709	100	3212	
1300SMPL.d	7/19/2022 18:26	Sample	22207156401	10	3301	
1301SMPL.d	7/19/2022 18:30	Sample	2500	1	5	
1302SMPL.d	7/19/2022 18:34	Sample	22207156501	1	3302	
1303SMPL.d	7/19/2022 18:38	Sample	2500	1	5	
1304SMPL.d	7/19/2022 18:42	Sample	22207163801	1	3303	
1305SMPL.d	7/19/2022 18:46	Sample	2500	1	5	
1306SMPL.d	7/19/2022 18:50	Sample	22207019601	10	3304	
1307SMPL.d	7/19/2022 18:53	Sample	2500	1	5	
1308_CCV.d	7/19/2022 18:57	CCV	1800	1	1406	
1309_CCB.d	7/19/2022 19:00	CCB	1900	1	1506	
1310SMPL.d	7/19/2022 19:04	MBWATER	2371142	1	3305	
1311SMPL.d	7/19/2022 19:07	LCS200.8	2371143	1	3306	
1312SMPL.d	7/19/2022 19:11	LCS200.8	2371144	1	3307	
1313SMPL.d	7/19/2022 19:14	Sample	22207145301	1	3308	
1314SMPL.d	7/19/2022 19:18	Sample	22207145302	10	3309	
1315SMPL.d	7/19/2022 19:21	Sample	22207145303	1	3310	
1316SMPL.d	7/19/2022 19:25	Sample	22207145304	1	3311	
1317SMPL.d	7/19/2022 19:28	Sample	22207145305	1	3312	
1318SMPL.d	7/19/2022 19:32	Sample	22207145306	100	3401	
1319SMPL.d	7/19/2022 19:35	Sample	22207145307	100	3402	
1320SMPL.d	7/19/2022 19:39	Sample	22207145308	1	3403	
1321SMPL.d	7/19/2022 19:42	Sample	22207145309	1	3404	
1322SMPL.d	7/19/2022 19:46	Sample	22207145310	1	3405	
1323_CCV.d	7/19/2022 19:50	CCV	1800	1	1407	
1324_CCB.d	7/19/2022 19:55	CCB	1900	1	1507	
1325SMPL.d	7/19/2022 19:59	MBWATER	2372429	1	3406	
1326SMPL.d	7/19/2022 20:03	LCS200.8	2372430	1	3407	
1327SMPL.d	7/19/2022 20:07	LCS200.8	2372431	1	3408	
1328SMPL.d	7/19/2022 20:11	Sample	22207183601	5000	3409	
1329SMPL.d	7/19/2022 20:16	Sample	2500	1	5	
1330SMPL.d	7/19/2022 20:20	MBWATER	2371148	1	3410	
1331SMPL.d	7/19/2022 20:24	LCS6020	2371149	1	3411	
1332SMPL.d	7/19/2022 20:28	Sample	22207147001	10	3412	
1333SMPL.d	7/19/2022 20:32	Sample	22207146101	1	3501	
1334SMPL.d	7/19/2022 20:37	Sample	22207146102	1	3502	
1335SMPL.d	7/19/2022 20:41	Sample	22207146201	1	3503	
1336SMPL.d	7/19/2022 20:45	Sample	22207146202	1	3504	

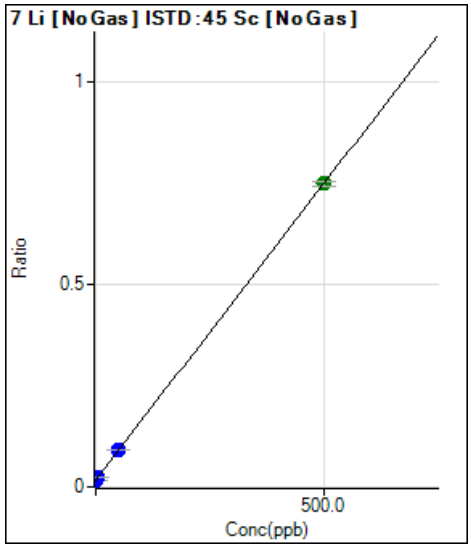
1337SMPL.d	7/19/2022 20:49	Sample	22207146203	1	3505	
1338SMPL.d	7/19/2022 20:53	Sample	22207146204	1	3506	
1339_CCV.d	7/19/2022 20:58	CCV	1800	1	1408	
1340_CCB.d	7/19/2022 21:02	CCB	1900	1	1508	
1341SMPL.d	7/19/2022 21:06	Sample	22207146205	1	3507	
1342SMPL.d	7/19/2022 21:10	Sample	22207146206	1	3508	
1343SMPL.d	7/19/2022 21:14	Sample	22207146207	1	3509	
1344SMPL.d	7/19/2022 21:19	Sample	2372781	1	3510	
1345SMPL.d	7/19/2022 21:23	Sample	2372782	5	3511	
1346SMPL.d	7/19/2022 21:27	Sample	22207146208	1	3512	
1347SMPL.d	7/19/2022 21:31	Sample	22207146209	1	4101	
1348SMPL.d	7/19/2022 21:35	Sample	22207146210	1	4102	
1349SMPL.d	7/19/2022 21:40	Sample	22207146211	1	4103	
1350SMPL.d	7/19/2022 21:44	Sample	22207146212	1	4104	
1351SMPL.d	7/19/2022 21:48	Sample	22207153302	1	4105	
1352SMPL.d	7/19/2022 21:52	Sample	22207153303	1	4106	
1353_CCV.d	7/19/2022 21:57	CCV	1800	1	1409	
1354_CCB.d	7/19/2022 22:01	CCB	1900	1	1509	
1355SMPL.d	7/19/2022 22:05	Sample	2371145	1	4202	
1356SMPL.d	7/19/2022 22:09	Sample	2371146	1	4203	
1357SMPL.d	7/19/2022 22:13	Sample	2371147	1	4204	
1358SMPL.d	7/19/2022 22:18	Sample	22207145311	10	4205	
1359SMPL.d	7/19/2022 22:22	Sample	22207146501	100	4206	
1360SMPL.d	7/19/2022 22:26	Sample	22207149301	300	4207	
1361SMPL.d	7/19/2022 22:30	Sample	22207149302	300	4208	
1362SMPL.d	7/19/2022 22:34	Sample	22207151101	1	4209	
1363SMPL.d	7/19/2022 22:39	Sample	2371922	40	4210	
1364SMPL.d	7/19/2022 22:43	Sample	2371923	40	4211	
1365SMPL.d	7/19/2022 22:47	Sample	2371924	40	4212	
1366SMPL.d	7/19/2022 22:51	Sample	22207154501	396.8254	4301	
1367SMPL.d	7/19/2022 22:55	Sample	22207157001	400	4302	
1368SMPL.d	7/19/2022 23:00	Sample	22207154701	378.7879	4303	
1369SMPL.d	7/19/2022 23:04	Sample	22207154702	400	4304	
1370SMPL.d	7/19/2022 23:08	Sample	22207154703	378.7879	4305	
1371_CCV.d	7/19/2022 23:12	CCV	1800	1	1410	
1372_CCB.d	7/19/2022 23:17	CCB	1900	1	1510	
1373SMPL.d	7/19/2022 23:21	Sample	22207154704	400	4306	
1374SMPL.d	7/19/2022 23:25	Sample	22207164901	390.625	4307	
1375SMPL.d	7/19/2022 23:29	Sample	22207164902	373.1343	4308	
1376SMPL.d	7/19/2022 23:33	Sample	22207164903	381.6794	4309	
1377SMPL.d	7/19/2022 23:38	Sample	22207164904	387.5969	4310	
1378SMPL.d	7/19/2022 23:42	Sample	22207164905	400	4311	
1379SMPL.d	7/19/2022 23:46	Sample	22207164906	396.8254	4312	
1380SMPL.d	7/19/2022 23:50	Sample	22207164907	364.9635	4401	
1381SMPL.d	7/19/2022 23:54	Sample	22207164908	387.5969	4402	
1382SMPL.d	7/19/2022 23:59	Sample	22207164909	375.9398	4403	
1383_CCV.d	7/20/2022 0:03	CCV	1800	1	1411	

1384_CCB.d	7/20/2022 0:07	CCB	1900	1	1511	
1385SMPL.d	7/20/2022 0:11	Sample	22207164910	390.625	4404	
1386SMPL.d	7/20/2022 0:15	Sample	22207130601 D	10	2503	
1387SMPL.d	7/20/2022 0:20	Sample	22207130602 D	10	2504	
1388SMPL.d	7/20/2022 0:24	Sample	22207130603 D	10	2505	
1389SMPL.d	7/20/2022 0:28	Sample	2371614	50	2506	
1390SMPL.d	7/20/2022 0:32	Sample	22207130604 D	10	2507	
1391SMPL.d	7/20/2022 0:36	Sample	22207130605 D	10	2508	
1392SMPL.d	7/20/2022 0:40	Sample	22207130606 D	10	2509	
1393SMPL.d	7/20/2022 0:43	Sample	22207130608 D	1	2510	
1394_CCV.d	7/20/2022 0:47	CCV	1800	1	1412	
1395_CCB.d	7/20/2022 0:50	CCB	1900	1	1512	
1396SMPL.d	7/20/2022 0:54	Sample	22207144301	1	2511	
1397SMPL.d	7/20/2022 0:57	Sample	22207144302	1	2512	
1398SMPL.d	7/20/2022 1:01	Sample	22207144303	1	3101	
1399SMPL.d	7/20/2022 1:04	Sample	2371615	5	3102	
1400SMPL.d	7/20/2022 1:08	Sample	22207144304	1	3103	
1401SMPL.d	7/20/2022 1:11	Sample	22207144305	1	3104	
1402SMPL.d	7/20/2022 1:15	Sample	22207144306	1	3105	
1403_CCV.d	7/20/2022 1:18	CCV	1800	1	1412	
1404_CCB.d	7/20/2022 1:22	CCB	1900	1	1512	
1405SMPL.d	7/20/2022 1:25	Sample	2370605	40	4107	
1406SMPL.d	7/20/2022 1:29	Sample	2370606	40	4108	
1407SMPL.d	7/20/2022 1:32	Sample	2370607	40	4109	
1408SMPL.d	7/20/2022 1:36	Sample	22207140701	3968.254	4110	
1409SMPL.d	7/20/2022 1:40	Sample	2500	1	5	
1410SMPL.d	7/20/2022 1:44	Sample	22207140801	396.8254	4111	
1411SMPL.d	7/20/2022 1:48	Sample	2500	1	5	
1412SMPL.d	7/20/2022 1:53	Sample	22207140901	396.8254	4112	
1413SMPL.d	7/20/2022 1:57	Sample	2500	1	5	
1414SMPL.d	7/20/2022 2:01	Sample	22207142001	384.6154	4201	
1415SMPL.d	7/20/2022 2:05	Sample	2500	1	5	
1416_CCV.d	7/20/2022 2:09	CCV	1800	1	1411	
1417_CCB.d	7/20/2022 2:14	CCB	1900	1	1511	
1418SMPL.d	7/20/2022 2:18	Sample	2500	1	5	
1419SMPL.d	7/20/2022 2:22	Sample	2500	1	5	
1420SMPL.d	7/20/2022 2:26	Sample	2500	1	5	

Tune Mode	Mass	Name	ISTD	R	a	b (blank)	DL	BEC	Units
No Gas	7	Li	45 Sc [No Gas]	0.999999194	0.001465924	0.016615167	0.391082115	11.33425831	ppb
No Gas	9	Be	6 (Li) [No Gas]	0.999869929	0.001097618	5.61E-05	0.008046238	0.051104741	ppb
No Gas	11	B	45 Sc [No Gas]	0.999998738	0.000207112	0.000168061	0.097175751	0.811452186	ppb
He	23	Na	45 Sc [He]	0.999999291	0.002430215	0.085112216	1.492937843	35.0225087	ppb
He	24	Mg	45 Sc [He]	0.999996544	0.000959032	0.00136207	1.81687588	1.420254994	ppb
He	27	Al	45 Sc [He]	0.999999431	0.000212403	0.0002007	0.133451012	0.944898324	ppb
He	29	Si	45 Sc [He]	-0.112550103	8.48E-08	0.007227113	30589.9649	85181.57504	ppb
He	39	K	45 Sc [He]	0.999999848	0.00086611	0.041544085	2.85230259	47.96628098	ppb
He	44	Ca	45 Sc [He]	0.999999816	4.54E-05	0.00136978	17.21285465	30.14916352	ppb
He	47	Ti	45 Sc [He]	0.999999784	0.000454066	4.08E-05	0.116060316	0.089960267	ppb
He	51	V	72 Ge [He]	0.999999786	0.018751449	0.001086262	0.015354859	0.057929474	ppb
He	52	Cr	72 Ge [He]	0.99999919	0.026815934	0.002706057	0.051921966	0.100912278	ppb
He	55	Mn	72 Ge [He]	0.999996722	0.009881455	0.000331658	0.016278392	0.03356364	ppb
He	57	Fe	72 Ge [He]	0.999993286	0.000500948	0.00026982	1.123499141	0.538618605	ppb
He	59	Co	72 Ge [He]	0.999994726	0.053857488	0.000378237	0.006815983	0.007022925	ppb
He	60	Ni	72 Ge [He]	0.999994325	0.015598597	0.001062038	0.028975874	0.068085469	ppb
He	63	Cu	103 Rh [He]	0.999998436	0.000906339	0.00013021	0.060133967	0.143665695	ppb
He	66	Zn	72 Ge [He]	0.999992585	0.004479281	0.003965331	0.154191184	0.885260525	ppb
He	75	As	72 Ge [He]	0.999999597	0.005605267	0.000524942	0.017723319	0.09365155	ppb
He	78	Se	72 Ge [He]	0.999992901	0.000311396	4.68E-05	0.139102676	0.150315991	ppb
No Gas	88	Sr	72 Ge [No Gas]	0.999993012	0.032794087	0.000576721	0.001289143	0.017586135	ppb
No Gas	90	Zr	72 Ge [No Gas]	0.999996778	0.020979335	0.001160619	0.010193215	0.05532201	ppb
No Gas	95	Mo	115 In [No Gas]	0.999990549	0.000747824	8.40E-05	0.00693973	0.112315695	ppb
No Gas	107	Ag	115 In [No Gas]	0.999999466	0.001911	1.08E-05	0.00148851	0.005634786	ppb
No Gas	111	Cd	115 In [No Gas]	0.999999973	0.000421645	5.90E-06	0.003767743	0.013993468	ppb
No Gas	118	(Sn)	115 In [No Gas]	0.999999162	0.001322563	0.000150858	0.012822674	0.114064685	ppb
He	118	(Sn)	115 In [He]	0.999999553	0.001883833	0.000242738	0.020971392	0.12885337	ppb
He	120	Sn	115 In [He]	0.999999748	0.002774529	0.000391718	0.003767565	0.141183429	ppb
No Gas	121	Sb	115 In [No Gas]	0.999991964	0.001642918	0.000165991	0.0137105	0.10103428	ppb
No Gas	137	Ba	115 In [No Gas]	0.999997883	0.000674032	4.34E-06	0.002035797	0.006440976	ppb
He	156	[Se]	115 In [He]						ppb
No Gas	201	Hg							
No Gas	205	Tl	209 Bi [No Gas]	0.999986365	0.004817545	0.000760853	0.009212241	0.15793365	ppb
No Gas	206	(Pb)	209 Bi [No Gas]	0.99999734	0.001589717	4.31E-05	0.012255849	0.027088502	ppb
No Gas	207	(Pb)	209 Bi [No Gas]	0.999998628	0.001374162	3.52E-05	0.003125198	0.025638695	ppb
No Gas	208	Pb	209 Bi [No Gas]	0.999995687	0.003380852	7.82E-05	0.004105883	0.023134396	ppb
No Gas	6	(Li)							ppb
No Gas	45	Sc							ppb
He	45	Sc							ppb
No Gas	72	Ge							ppb
He	72	Ge							ppb
No Gas	103	Rh							ppb
He	103	Rh							ppb
No Gas	115	In							ppb
He	115	In							ppb
No Gas	159	Tb							ppb
He	159	Tb							ppb
No Gas	175	Lu							ppb
He	175	Lu							ppb
No Gas	209	Bi							ppb
He	209	Bi							ppb

Batch Folder: C:\Agilent\ICPMH\1\DATA\2220719A_MS2.b\
Analysis File: 2220719A_MS2.batch.bin
DA Date-Time: 7/20/2022 09:04:27
Calibration Title: EPA6020
Calibration Method: External Calibration
VIS Interpolation Fit:

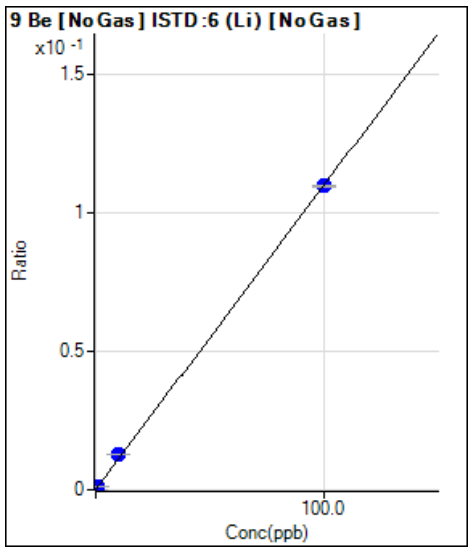
Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	1300	7/19/2022 11:19:08
2			
3	005CALS.d	1302	7/19/2022 11:23:20
4			
5	006CALS.d	1304	7/19/2022 11:28:12
6	007CALS.d	1305	7/19/2022 11:32:33
7	008CALS.d	1306	7/19/2022 11:36:54
8			



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	212977.16	0.0166	P	1.2
2	☐	0.000					
3	☐	0.500	0.652	222838.31	0.0176	P	0.5
4	☐	2.500					
5	☐	5.000	5.379	318605.98	0.0245	P	0.3
6	☐	50.000	50.699	1158707.28	0.0909	P	1.0
7	☐	500.000	499.926	9413911.73	0.7495	A	1.4
8	☐						

y = 0.0015 * x + 0.0166
R = 1.0000
DL = 0.3911
BEC = 11.33

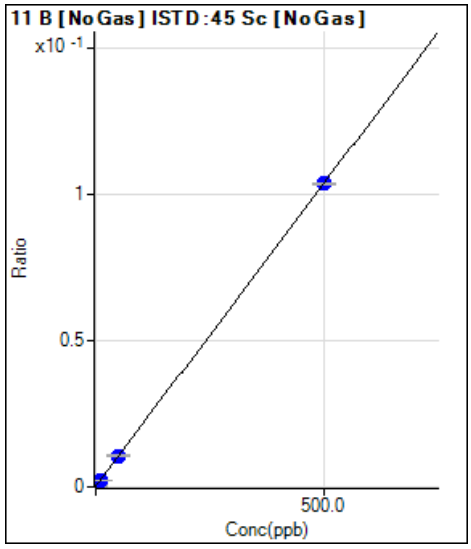
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202.00	0.0001	P	5.2
2	☐	0.000					
3	☐	0.100	0.113	644.68	0.0002	P	9.0
4	☐	0.500					
5	☐	1.000	1.215	5090.88	0.0014	P	2.0
6	☐	10.000	11.628	46996.00	0.0128	P	1.9
7	☐	100.000	99.835	453764.13	0.1096	P	0.5
8	☐						

y = 0.0011 * x + 5.6093E-005
R = 0.9999
DL = 0.008046
BEC = 0.0511

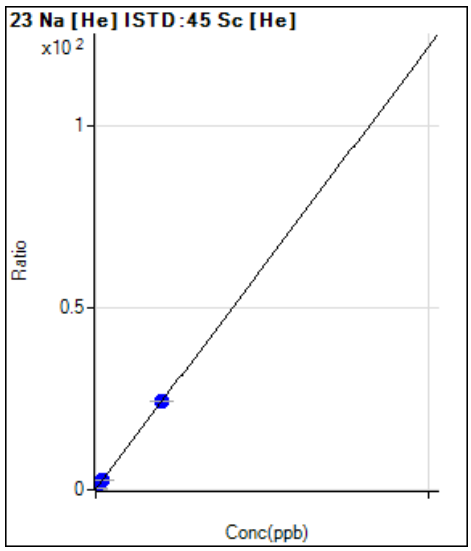
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2153.55	0.0002	P	4.0
2	☐	0.000					
3	☐	1.000	1.394	5787.97	0.0005	P	8.0
4	☐	5.000					
5	☐	10.000	10.272	29850.00	0.0023	P	0.9
6	☐	50.000	50.904	136476.79	0.0107	P	1.3
7	☐	500.000	499.903	1302654.33	0.1037	P	0.8
8	☐						

y = 2.0711E-004 * x + 1.6806E-004
R = 1.0000
DL = 0.09718
BEC = 0.8115

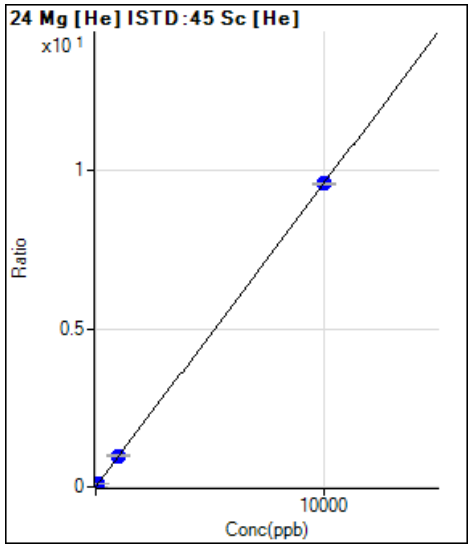
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12442.22	0.0851	P	1.4
2	☐	0.000					
3	☐	10.000	7.200	14987.93	0.1026	P	4.0
4	☐	50.000					
5	☐	100.000	100.790	48315.05	0.3301	P	3.4
6	☐	1000.000	988.118	353047.26	2.4865	P	0.4
7	☐	10000.00	10001.18	3537176.92	24.390	P	0.3
8	☐						

y = 0.0024 * x + 0.0851
R = 1.0000
DL = 1.493
BEC = 35.02

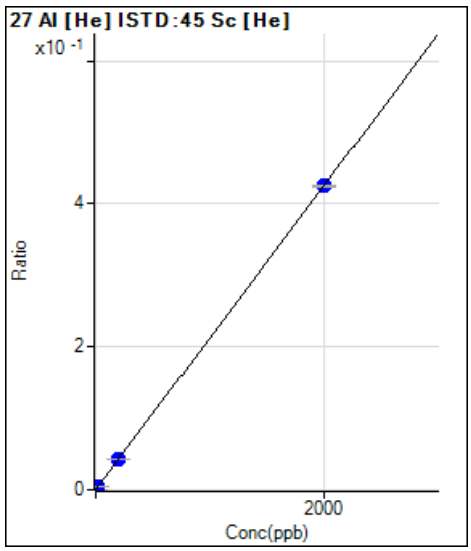
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0014	P	42.6
2	☐	0.000					
3	☐	10.000	8.965	1453.47	0.0100	P	24.3
4	☐	50.000					
5	☐	100.000	107.478	15288.25	0.1044	P	3.0
6	☐	1000.000	1026.543	139979.30	0.9858	P	2.2
7	☐	10000.00	9997.272	1390668.11	9.5891	P	0.6
8	☐						

y = 9.5903E-004 * x + 0.0014
R = 1.0000
DL = 1.817
BEC = 1.42

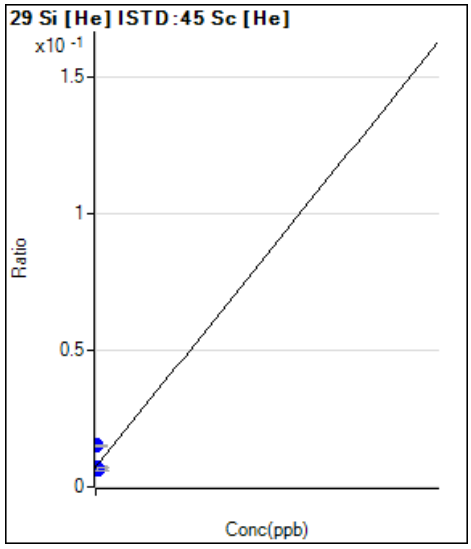
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29.33	0.0002	P	4.7
2	☐	0.000					
3	☐	2.000	1.722	82.67	0.0006	P	30.1
4	☐	10.000					
5	☐	20.000	22.036	714.69	0.0049	P	4.9
6	☐	200.000	201.089	6093.27	0.0429	P	2.8
7	☐	2000.000	1999.871	61633.87	0.4250	P	0.3
8	☐						

y = 2.1240E-004 * x + 2.0070E-004
R = 1.0000
DL = 0.1335
BEC = 0.9449

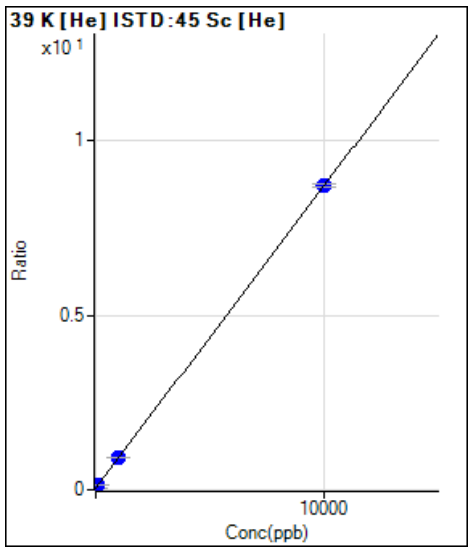
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1055.38	0.0072	P	12.0
2	☐	0.000					
3	☐	20.000	-8201.042	954.04	0.0065	P	2.5
4	☐	100.000					
5	☐	200.000	673.922	1066.71	0.0073	P	10.1
6	☐	2000.000	92628.94	2142.17	0.0151	P	5.2
7	☐	10000.00	-8118.826	947.37	0.0065	P	12.9
8	☐						

y = 8.4844E-008 * x + 0.0072
R = -0.1126
DL = 3.059E+04
BEC = 8.518E+04

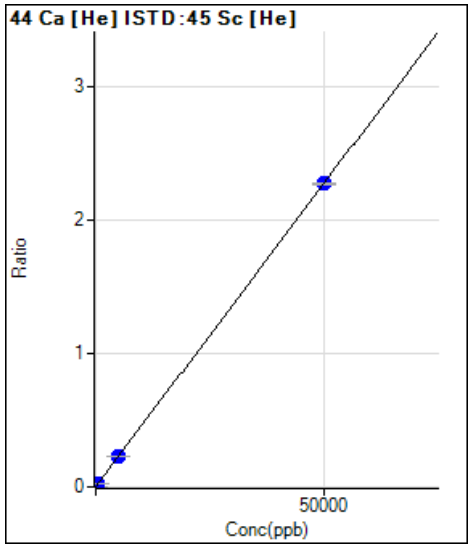
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6074.77	0.0415	P	2.0
2	☐	0.000					
3	☐	10.000	6.695	6915.20	0.0473	P	3.5
4	☐	50.000					
5	☐	100.000	103.422	19189.66	0.1311	P	2.0
6	☐	1000.000	1000.825	128978.68	0.9084	P	0.7
7	☐	10000.00	9999.887	1262092.04	8.7025	P	1.0
8	☐						

y = 8.6611E-004 * x + 0.0415
R = 1.0000
DL = 2.852
BEC = 47.97

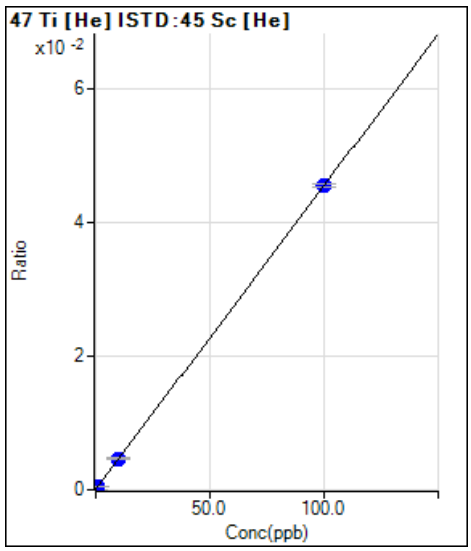
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0014	P	19.0
2	☐	0.000					
3	☐	50.000	40.675	470.02	0.0032	P	14.0
4	☐	250.000					
5	☐	500.000	525.490	3695.53	0.0252	P	2.3
6	☐	5000.000	5012.529	32530.88	0.2291	P	2.4
7	☐	50000.00	49998.50	329642.88	2.2730	P	0.8
8	☐						

y = 4.5433E-005 * x + 0.0014
R = 1.0000
DL = 17.21
BEC = 30.15

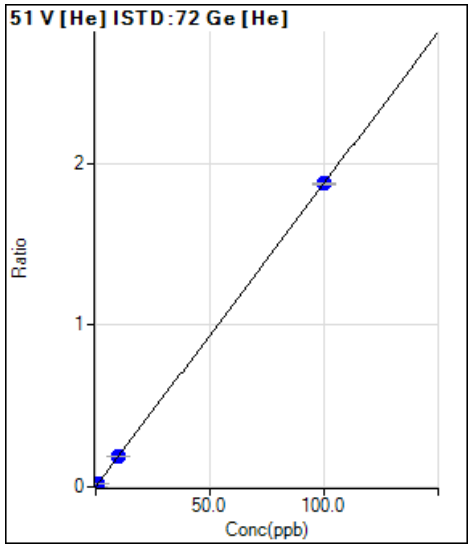
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.00	0.0000	P	43.0
2	☐	0.000					
3	☐	0.100	0.111	13.33	0.0001	P	22.0
4	☐	0.500					
5	☐	1.000	1.044	75.33	0.0005	P	17.1
6	☐	10.000	10.069	655.02	0.0046	P	4.1
7	☐	100.000	99.993	6590.13	0.0454	P	0.9
8	☐						

y = 4.5407E-004 * x + 4.0848E-005
R = 1.0000
DL = 0.1161
BEC = 0.08996

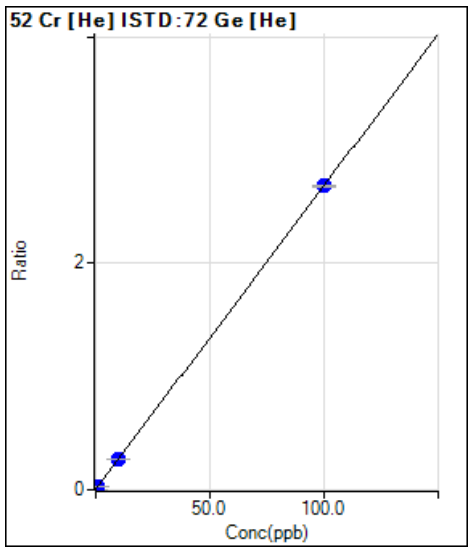
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.89	0.0011	P	8.8
2	☐	0.000					
3	☐	0.100	0.080	450.01	0.0026	P	6.1
4	☐	0.500					
5	☐	1.000	1.044	3579.36	0.0207	P	5.2
6	☐	10.000	9.969	31620.47	0.1880	P	2.9
7	☐	100.000	100.003	321262.06	1.8763	P	0.7
8	☐						

y = 0.0188 * x + 0.0011
R = 1.0000
DL = 0.01535
BEC = 0.05793

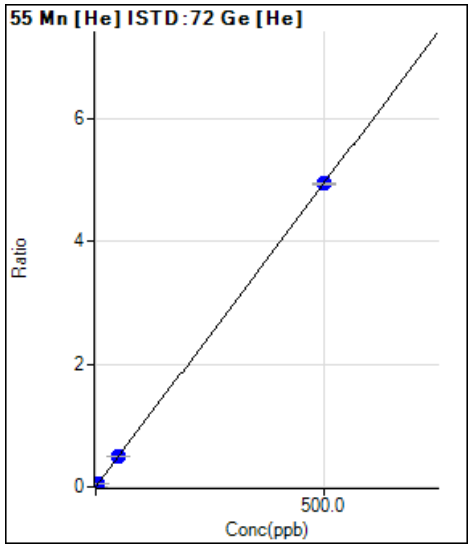
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	470.01	0.0027	P	17.2
2	☐	0.000					
3	☐	0.100	0.064	768.92	0.0044	P	11.5
4	☐	0.500					
5	☐	1.000	1.051	5353.24	0.0309	P	1.9
6	☐	10.000	10.108	46048.12	0.2738	P	1.3
7	☐	100.000	99.989	459559.72	2.6840	P	0.7
8	☐						

y = 0.0268 * x + 0.0027
R = 1.0000
DL = 0.05192
BEC = 0.1009

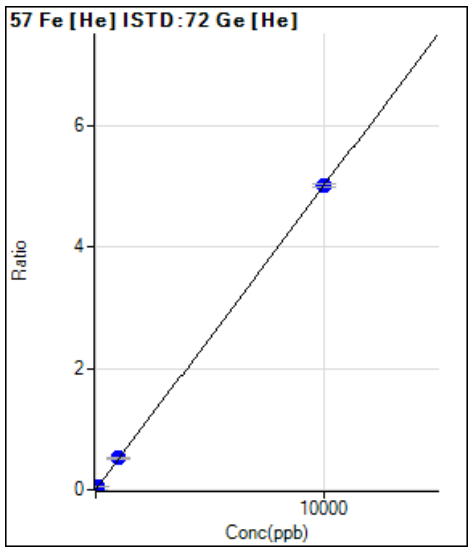
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57.78	0.0003	P	16.2
2	☐	0.000					
3	☐	0.500	0.425	786.70	0.0045	P	20.1
4	☐	2.500					
5	☐	5.000	5.241	9029.51	0.0521	P	1.0
6	☐	50.000	51.274	85278.79	0.5070	P	1.2
7	☐	500.000	499.870	845784.91	4.9398	P	0.8
8	☐						

y = 0.0099 * x + 3.3166E-004
R = 1.0000
DL = 0.01628
BEC = 0.03356

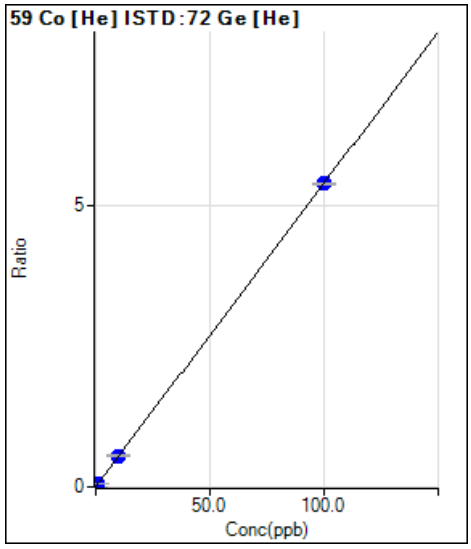
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0003	P	69.5
2	☐	0.000					
3	☐	10.000	7.633	710.05	0.0041	P	24.4
4	☐	50.000					
5	☐	100.000	105.243	9183.19	0.0530	P	6.0
6	☐	1000.000	1036.157	87352.73	0.5193	P	1.9
7	☐	10000.00	9996.334	857443.48	5.0079	P	0.9
8	☐						

y = 5.0095E-004 * x + 2.6982E-004
R = 1.0000
DL = 1.123
BEC = 0.5386

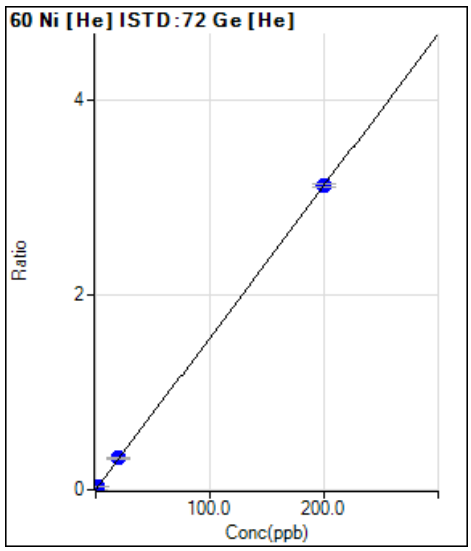
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.56	0.0004	P	32.4
2	☐	0.000					
3	☐	0.100	0.086	866.70	0.0050	P	27.0
4	☐	0.500					
5	☐	1.000	1.041	9776.66	0.0564	P	2.1
6	☐	10.000	10.322	93572.49	0.5563	P	1.4
7	☐	100.000	99.967	921929.13	5.3844	P	0.6
8	☐						

y = 0.0539 * x + 3.7824E-004
R = 1.0000
DL = 0.006816
BEC = 0.007023

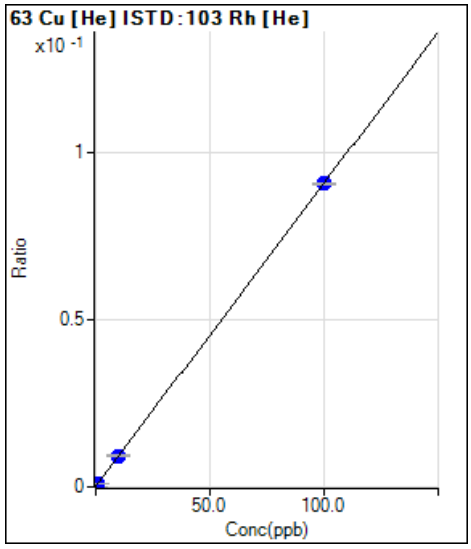
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	184.45	0.0011	P	14.2
2	☐	0.000					
3	☐	0.200	0.182	677.80	0.0039	P	16.9
4	☐	1.000					
5	☐	2.000	2.136	5956.81	0.0344	P	2.0
6	☐	20.000	20.680	54438.03	0.3236	P	1.3
7	☐	200.000	199.931	534180.27	3.1197	P	1.2
8	☐						

y = 0.0156 * x + 0.0011
R = 1.0000
DL = 0.02898
BEC = 0.06809

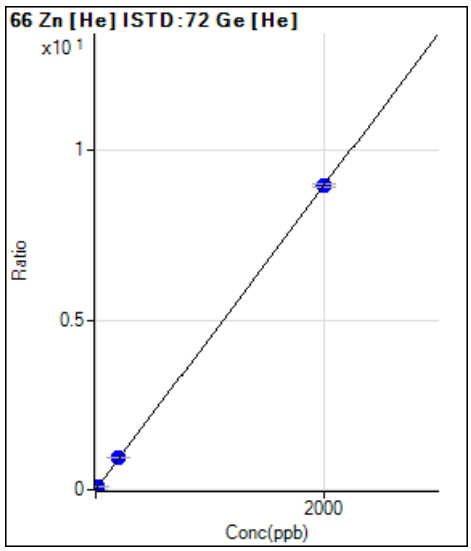
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.06	0.0001	P	14.0
2	☐	0.000					
3	☐	0.100	0.097	1917.92	0.0002	P	9.8
4	☐	0.500					
5	☐	1.000	1.064	9659.90	0.0011	P	2.4
6	☐	10.000	10.180	80895.51	0.0094	P	0.8
7	☐	100.000	99.981	770261.91	0.0907	P	0.2
8	☐						

y = 9.0634E-004 * x + 1.3021E-004
R = 1.0000
DL = 0.06013
BEC = 0.1437

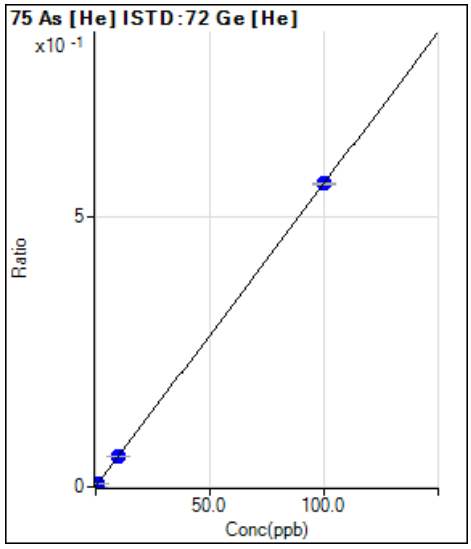
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.02	0.0040	P	5.8
2	☐	0.000					
3	☐	2.000	1.374	1755.68	0.0101	P	17.2
4	☐	10.000					
5	☐	20.000	21.020	16999.99	0.0981	P	2.1
6	☐	200.000	207.533	157036.38	0.9336	P	0.6
7	☐	2000.000	1999.237	1533980.01	8.9591	P	1.1
8	☐						

y = 0.0045 * x + 0.0040
R = 1.0000
DL = 0.1542
BEC = 0.8853

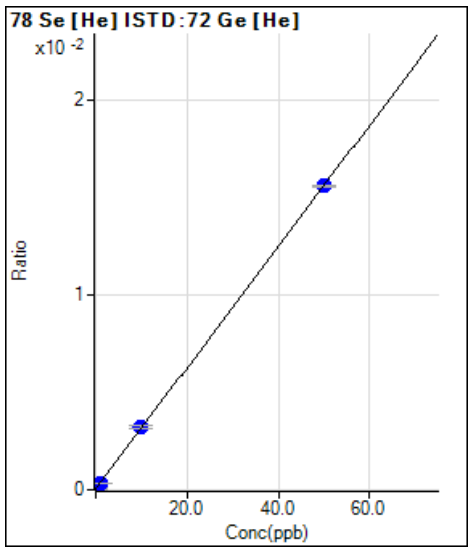
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91.33	0.0005	P	6.3
2	☐	0.000					
3	☐	0.100	0.070	159.33	0.0009	P	17.3
4	☐	0.500					
5	☐	1.000	0.990	1052.71	0.0061	P	1.9
6	☐	10.000	10.073	9585.49	0.0570	P	0.5
7	☐	100.000	99.993	96060.26	0.5610	P	0.9
8	☐						

y = 0.0056 * x + 5.2494E-004
R = 1.0000
DL = 0.01772
BEC = 0.09365

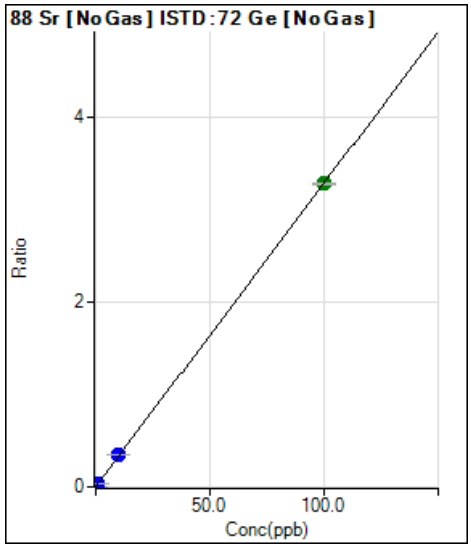
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.17	0.0000	P	30.8
2	☐	0.000					
3	☐	0.100	0.066	11.67	0.0001	P	7.6
4	☐	0.500					
5	☐	1.000	0.966	60.25	0.0003	P	5.6
6	☐	10.000	10.155	539.68	0.0032	P	3.8
7	☐	50.000	49.970	2672.41	0.0156	P	0.9
8	☐						

y = 3.1140E-004 * x + 4.6808E-005
R = 1.0000
DL = 0.1391
BEC = 0.1503

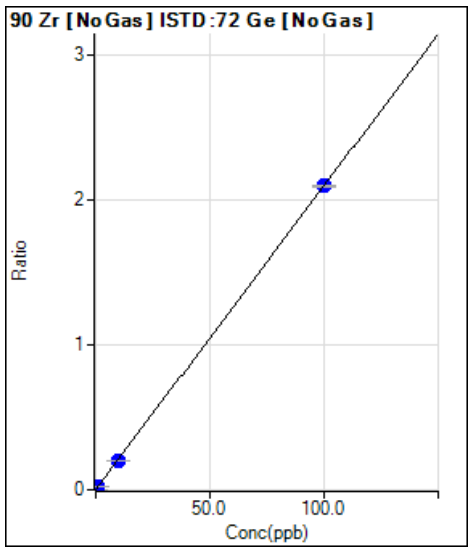
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1936.86	0.0006	P	2.4
2	☐	0.000					
3	☐	0.100	0.110	14107.41	0.0042	P	3.5
4	☐	0.500					
5	☐	1.000	1.075	121859.86	0.0358	P	1.4
6	☐	10.000	10.385	1144629.51	0.3411	P	0.2
7	☐	100.000	99.961	10885457.3	3.2787	A	0.8
8	☐						

y = 0.0328 * x + 5.7672E-004
R = 1.0000
DL = 0.001289
BEC = 0.01759

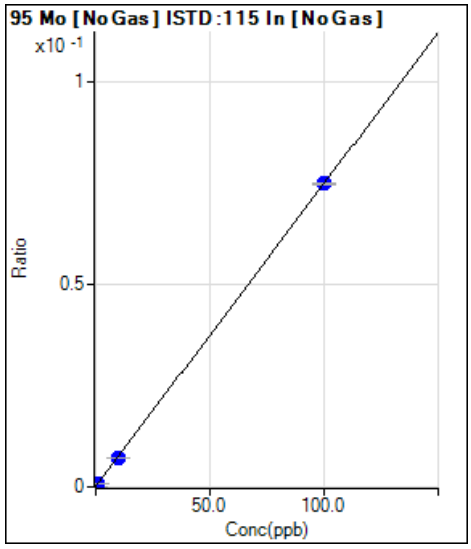
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3899.47	0.0012	P	6.1
2	☐	0.000					
3	☐	0.100	0.079	9497.67	0.0028	P	1.9
4	☐	0.500					
5	☐	1.000	0.902	68295.31	0.0201	P	0.4
6	☐	10.000	9.730	688808.38	0.2053	P	0.6
7	☐	100.000	100.028	6971782.92	2.0997	P	0.3
8	☐						

y = 0.0210 * x + 0.0012
R = 1.0000
DL = 0.01019
BEC = 0.05532

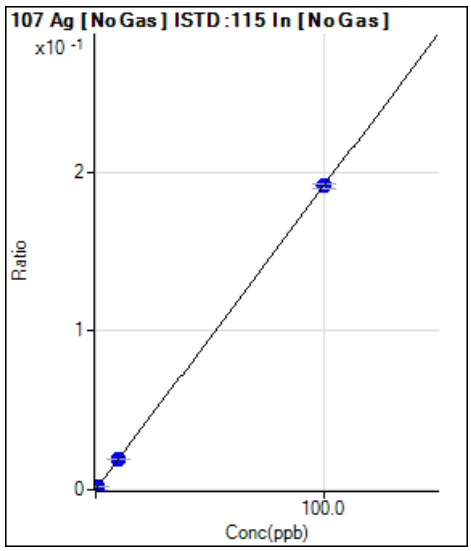
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2324.66	0.0001	P	2.1
2	☐	0.000					
3	☐	0.100	0.079	3927.24	0.0001	P	1.5
4	☐	0.500					
5	☐	1.000	0.943	22177.22	0.0008	P	2.1
6	☐	10.000	9.553	201228.26	0.0072	P	0.8
7	☐	100.000	100.045	2010574.64	0.0749	P	0.6
8	☐						

y = 7.4782E-004 * x + 8.3992E-005
R = 1.0000
DL = 0.00694
BEC = 0.1123

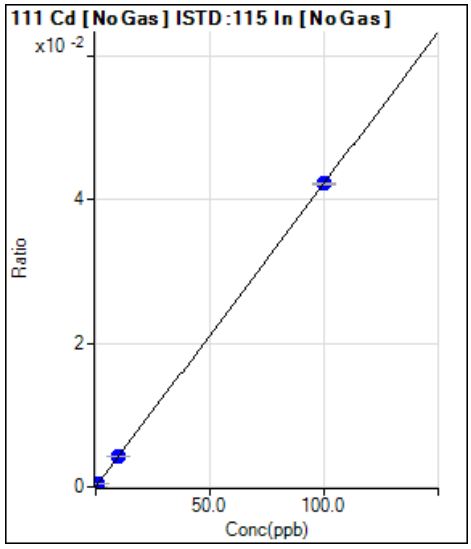
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	297.78	0.0000	P	8.8
2	☐	0.000					
3	☐	0.100	0.108	5956.87	0.0002	P	2.9
4	☐	0.500					
5	☐	1.000	1.047	56501.42	0.0020	P	1.3
6	☐	10.000	10.109	538134.03	0.0193	P	0.6
7	☐	100.000	99.989	5129694.66	0.1911	P	1.4
8	☐						

y = 0.0019 * x + 1.0768E-005
R = 1.0000
DL = 0.001489
BEC = 0.005635

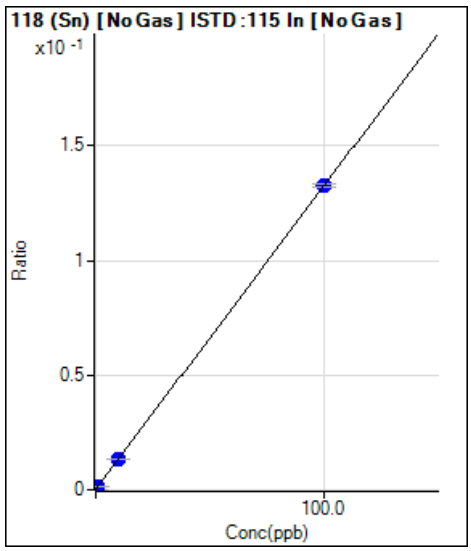
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.33	0.0000	P	9.0
2	☐	0.000					
3	☐	0.100	0.109	1420.09	0.0001	P	1.1
4	☐	0.500					
5	☐	1.000	1.023	12278.75	0.0004	P	1.9
6	☐	10.000	9.996	117499.63	0.0042	P	1.2
7	☐	100.000	100.000	1132020.06	0.0422	P	0.7
8	☐						

y = 4.2164E-004 * x + 5.9003E-006
R = 1.0000
DL = 0.003768
BEC = 0.01399

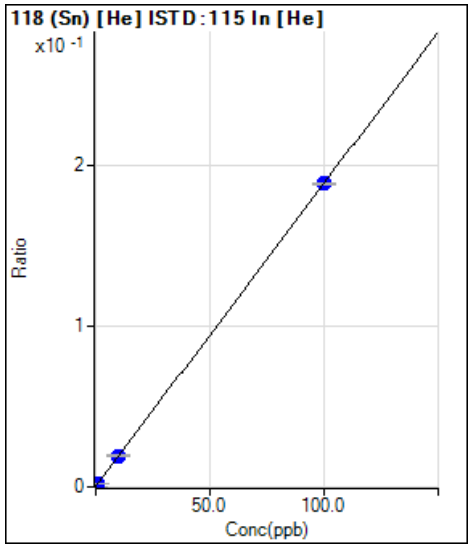
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4177.35	0.0002	P	3.7
2	☐	0.000					
3	☐	0.100	0.123	8592.70	0.0003	P	2.1
4	☐	0.500					
5	☐	1.000	1.038	42814.60	0.0015	P	0.5
6	☐	10.000	9.895	368533.25	0.0132	P	0.5
7	☐	100.000	100.010	3554735.56	0.1324	P	1.1
8	☐						

y = 0.0013 * x + 1.5086E-004
R = 1.0000
DL = 0.01282
BEC = 0.1141

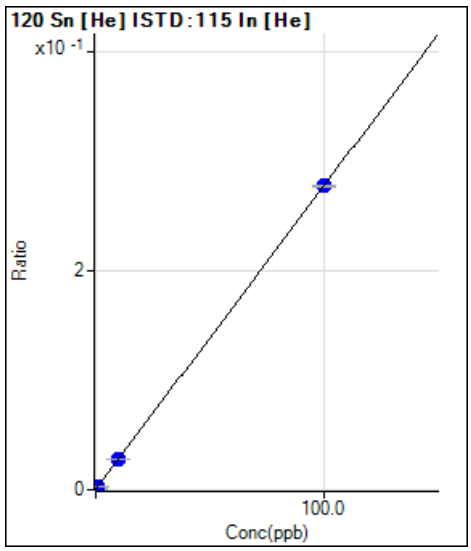
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	547.79	0.0002	P	5.4
2	☐	0.000					
3	☐	0.100	0.120	1061.16	0.0005	P	7.7
4	☐	0.500					
5	☐	1.000	1.011	4859.77	0.0021	P	4.5
6	☐	10.000	10.101	42525.37	0.0193	P	2.8
7	☐	100.000	99.990	414764.21	0.1886	P	0.4
8	☐						

y = 0.0019 * x + 2.4274E-004
R = 1.0000
DL = 0.02097
BEC = 0.1289

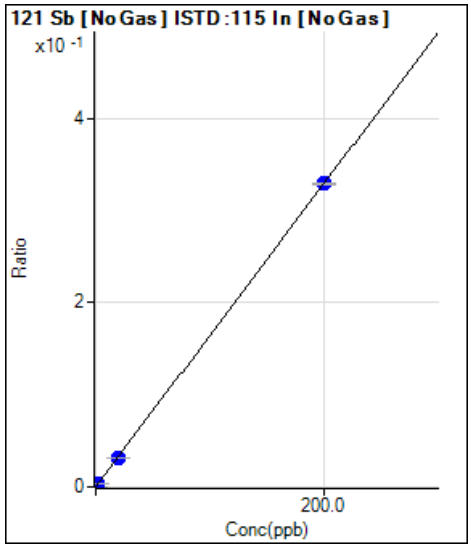
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	883.37	0.0004	P	0.9
2	☐	0.000					
3	☐	0.100	0.119	1633.45	0.0007	P	4.9
4	☐	0.500					
5	☐	1.000	1.024	7313.08	0.0032	P	0.7
6	☐	10.000	10.079	62565.40	0.0284	P	1.2
7	☐	100.000	99.992	610950.06	0.2778	P	0.7
8	☐						

y = 0.0028 * x + 3.9172E-004
R = 1.0000
DL = 0.003768
BEC = 0.1412

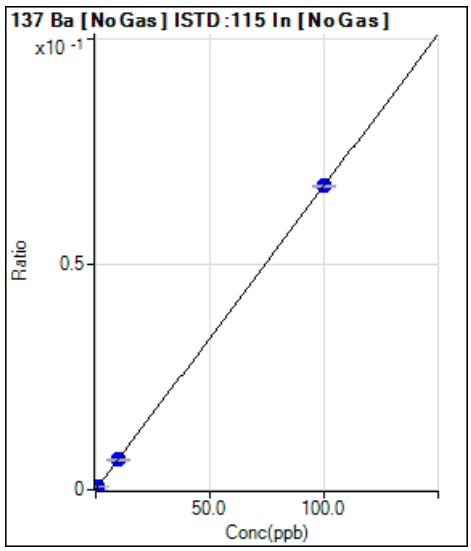
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4591.91	0.0002	P	4.5
2	☐	0.000					
3	☐	0.200	0.187	12989.41	0.0005	P	1.2
4	☐	1.000					
5	☐	2.000	1.964	95299.92	0.0034	P	1.0
6	☐	20.000	19.200	882791.67	0.0317	P	0.3
7	☐	200.000	200.080	8828347.43	0.3289	P	0.8
8	☐						

y = 0.0016 * x + 1.6599E-004
R = 1.0000
DL = 0.01371
BEC = 0.101

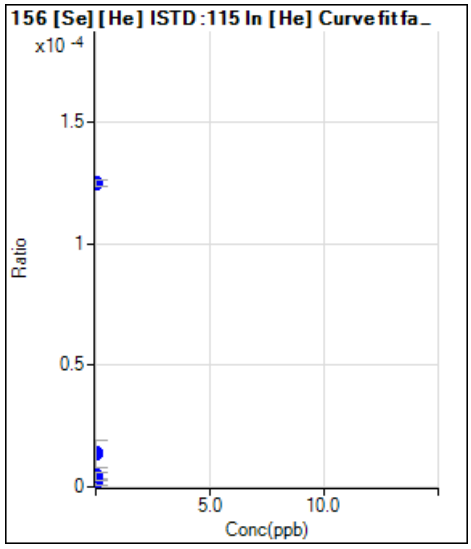
Weight: <None>
Min Conc: <None>



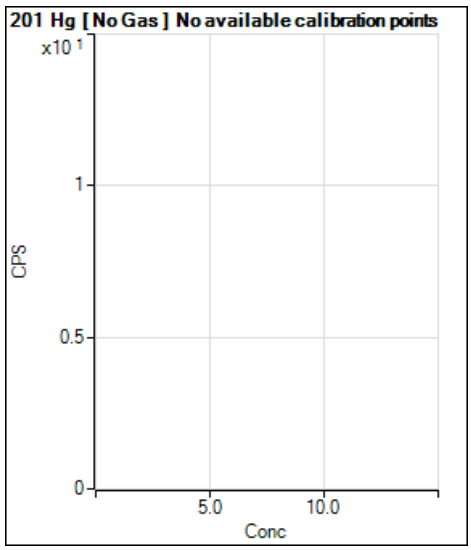
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	10.5
2	☐	0.000					
3	☐	0.100	0.112	2186.86	0.0001	P	2.8
4	☐	0.500					
5	☐	1.000	1.027	19578.26	0.0007	P	1.7
6	☐	10.000	9.811	184229.73	0.0066	P	0.9
7	☐	100.000	100.019	1809764.51	0.0674	P	0.3
8	☐	1000.000					

y = 6.7403E-004 * x + 4.3414E-006
R = 1.0000
DL = 0.002036
BEC = 0.006441

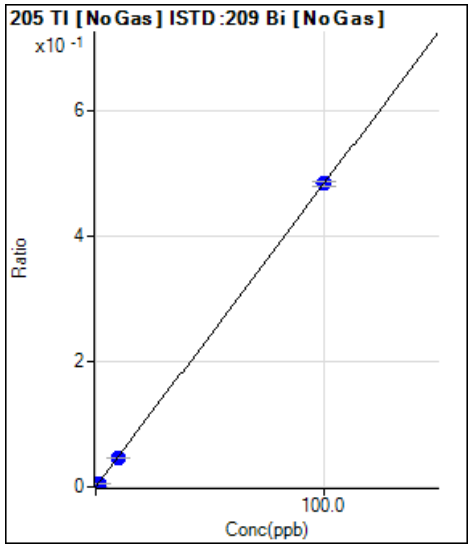
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		4.44	0.0000	P	114.
2	☐	0.000					
3	☐	0.000		4.44	0.0000	P	114.
4	☐	0.000					
5	☐	0.000		10.00	0.0000	P	65.9
6	☐	0.000		30.00	0.0000	P	79.8
7	☐	0.000		274.45	0.0001	P	2.2
8	☐						



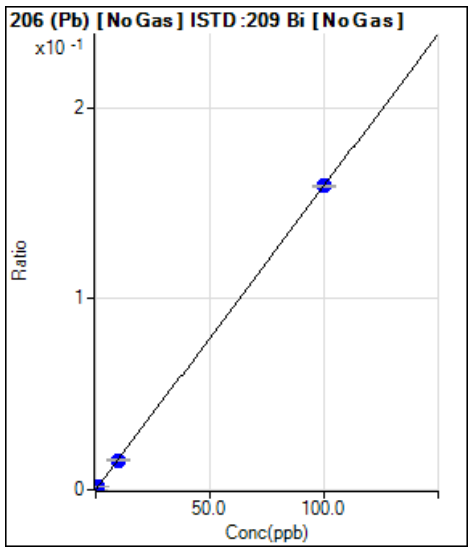
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			8.67		P	23.3
2	☐						
3	☐			10.67		P	10.8
4	☐						
5	☐			10.33		P	20.1
6	☐			13.67		P	15.2
7	☐			24.33		P	13.4
8	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16060.12	0.0008	P	1.9
2	☐	0.000					
3	☐	0.100	0.058	21865.34	0.0010	P	2.1
4	☐	0.500					
5	☐	1.000	0.909	110421.70	0.0051	P	0.9
6	☐	10.000	9.453	975693.37	0.0463	P	1.0
7	☐	100.000	100.056	9700422.77	0.4828	P	1.3
8	☐						

y = 0.0048 * x + 7.6085E-004
R = 1.0000
DL = 0.009212
BEC = 0.1579

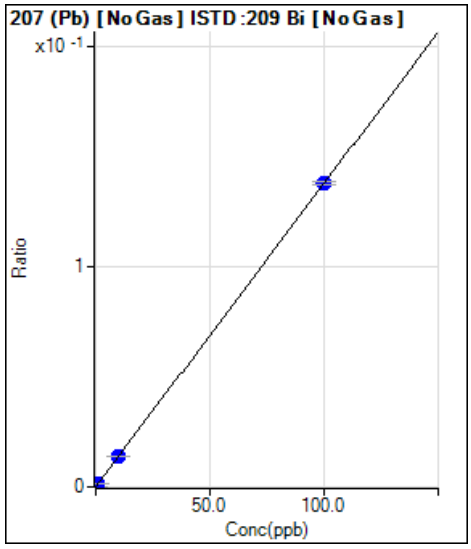
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	906.73	0.0000	P	15.1
2	☐	0.000					
3	☐	0.100	0.103	4337.52	0.0002	P	2.6
4	☐	0.500					
5	☐	1.000	0.993	34846.31	0.0016	P	0.4
6	☐	10.000	9.773	328283.58	0.0156	P	0.6
7	☐	100.000	100.023	3195865.26	0.1591	P	0.6
8	☐						

y = 0.0016 * x + 4.3063E-005
R = 1.0000
DL = 0.01226
BEC = 0.02709

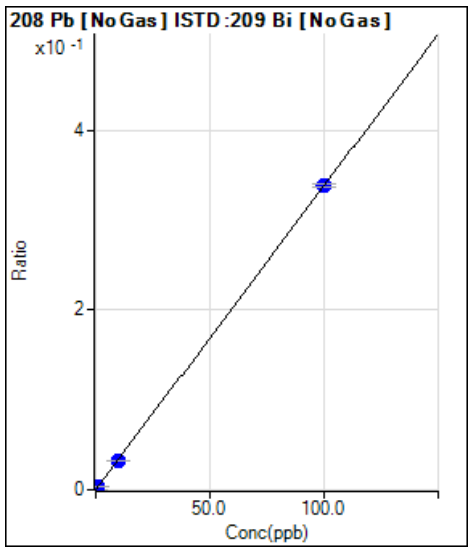
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	743.38	0.0000	P	4.1
2	☐	0.000					
3	☐	0.100	0.096	3507.26	0.0002	P	4.1
4	☐	0.500					
5	☐	1.000	1.006	30478.85	0.0014	P	1.0
6	☐	10.000	9.839	285632.13	0.0136	P	0.8
7	☐	100.000	100.016	2762347.36	0.1375	P	1.2
8	☐						

y = 0.0014 * x + 3.5232E-005
R = 1.0000
DL = 0.003125
BEC = 0.02564

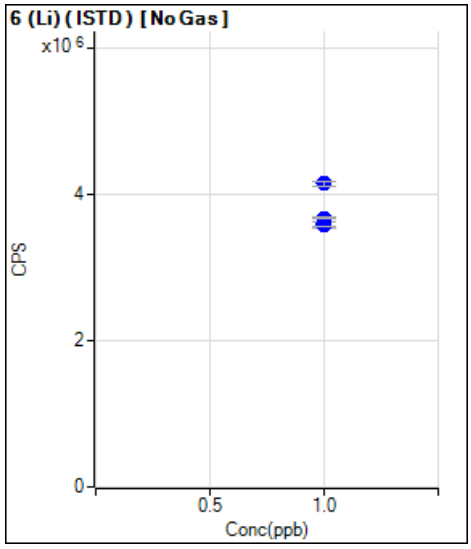
Weight: <None>
Min Conc: <None>



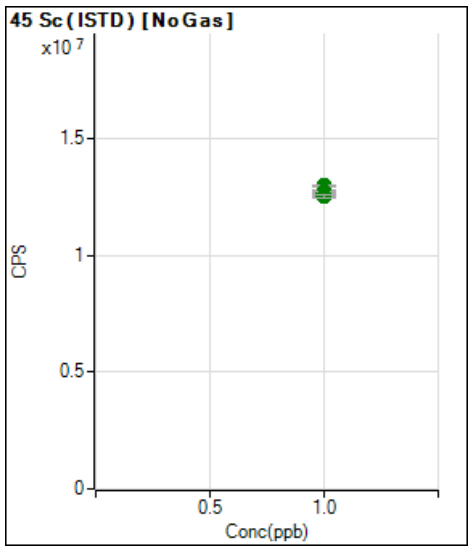
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1650.16	0.0001	P	5.9
2	☐	0.000					
3	☐	0.100	0.108	9290.22	0.0004	P	0.5
4	☐	0.500					
5	☐	1.000	0.976	72604.62	0.0034	P	1.2
6	☐	10.000	9.709	693297.65	0.0329	P	0.8
7	☐	100.000	100.029	6796728.86	0.3383	P	1.2
8	☐						

y = 0.0034 * x + 7.8214E-005
R = 1.0000
DL = 0.004106
BEC = 0.02313

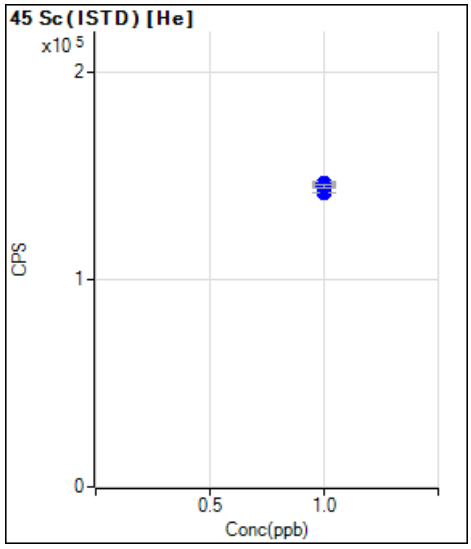
Weight: <None>
Min Conc: <None>



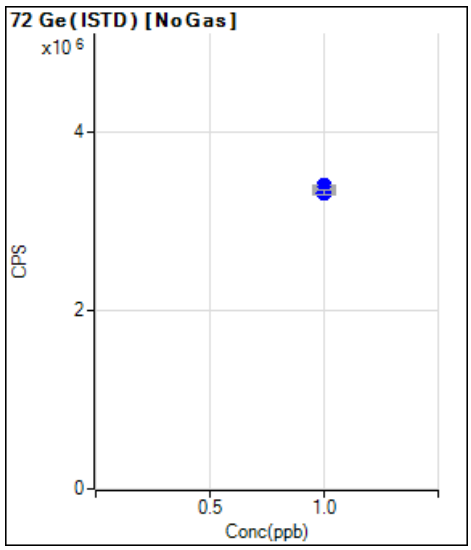
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3598956.93		P	3.3
2	☐	1.000					
3	☐	1.000		3582321.30		P	1.8
4	☐	1.000					
5	☐	1.000		3663839.74		P	0.5
6	☐	1.000		3666485.78		P	0.7
7	☐	1.000		4138976.40		P	1.4
8	☐	1.000					



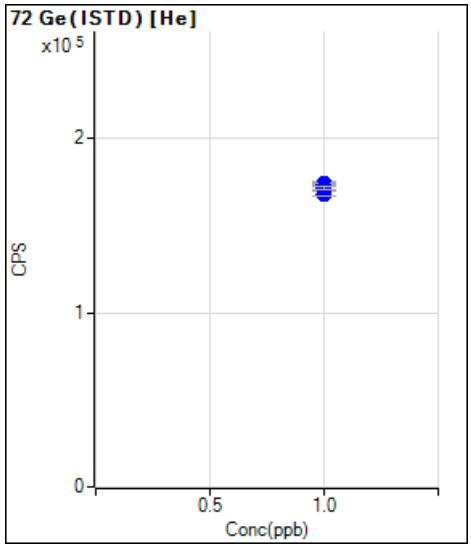
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12820081.7		A	2.1
2	☐	1.000					
3	☐	1.000		12682945.3		A	1.7
4	☐	1.000					
5	☐	1.000		13004271.9		A	0.2
6	☐	1.000		12742240.6		A	0.3
7	☐	1.000		12561929.7		A	1.0
8	☐	1.000					



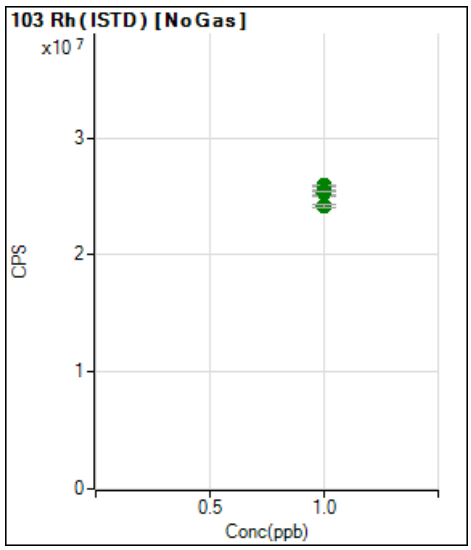
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		146200.89		P	1.6
2	☐	1.000					
3	☐	1.000		146088.07		P	0.7
4	☐	1.000					
5	☐	1.000		146365.66		P	1.1
6	☐	1.000		141988.10		P	0.2
7	☐	1.000		145024.64		P	1.1
8	☐	1.000					



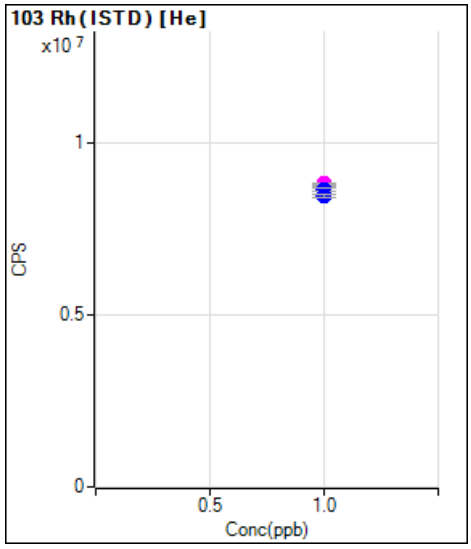
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3357560.21		P	2.4
2	☐	1.000					
3	☐	1.000		3361130.08		P	1.9
4	☐	1.000					
5	☐	1.000		3401348.55		P	0.3
6	☐	1.000		3355241.95		P	0.6
7	☐	1.000		3320333.06		P	1.7
8	☐	1.000					



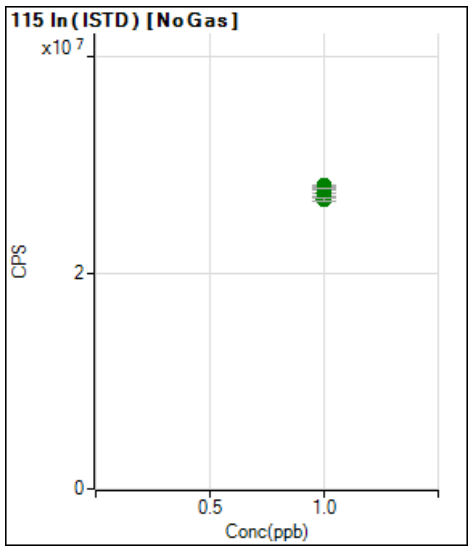
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		173915.27		P	1.7
2	☐	1.000					
3	☐	1.000		173568.55		P	0.7
4	☐	1.000					
5	☐	1.000		173247.71		P	0.7
6	☐	1.000		168215.00		P	1.3
7	☐	1.000		171223.48		P	0.8
8	☐	1.000					



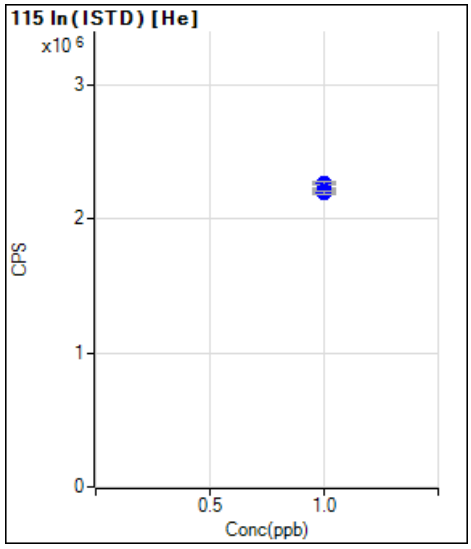
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		25504832.3		A	2.4
2	☐	1.000					
3	☐	1.000		25310791.2		A	2.2
4	☐	1.000					
5	☐	1.000		25917946.7		A	0.1
6	☐	1.000		25421630.6		A	0.1
7	☐	1.000		24167315.7		A	1.2
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8666729.93		M	1.6
2	☐	1.000					
3	☐	1.000		8789328.26		M	0.8
4	☐	1.000					
5	☐	1.000		8827998.82		M	0.8
6	☐	1.000		8645129.38		P	1.1
7	☐	1.000		8488118.27		P	1.1
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		27683026.1		A	2.3
2	☐	1.000					
3	☐	1.000		27406395.5		A	2.2
4	☐	1.000					
5	☐	1.000		28094626.6		A	0.3
6	☐	1.000		27839686.6		A	0.3
7	☐	1.000		26842896.7		A	1.2
8	☐	1.000					



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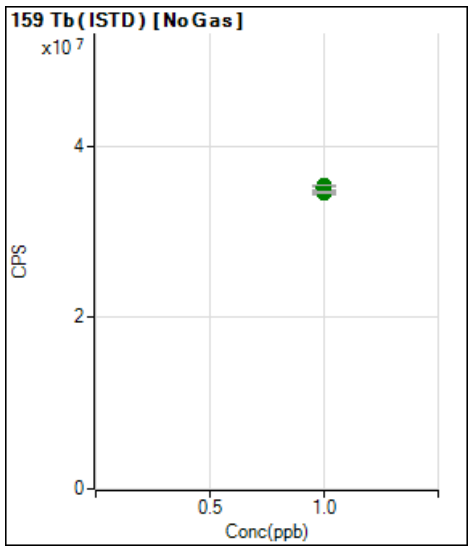
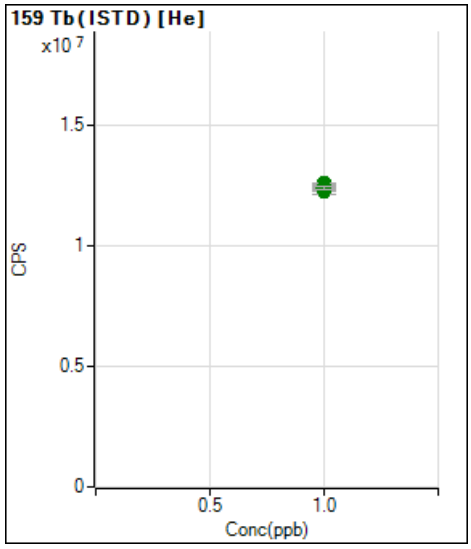
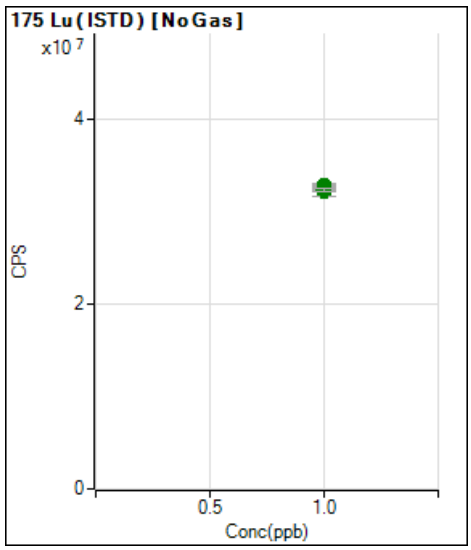
2	☐	1.000					
3	☐	1.000		2261335.95		P	0.5
4	☐	1.000					
5	☐	1.000		2262591.23		P	1.0
6	☐	1.000		2206512.55		P	1.2
7	☐	1.000		2199163.11		P	1.2
8	☐	1.000					



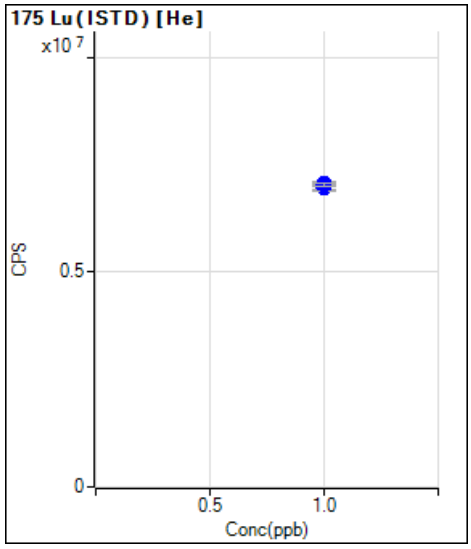
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		34961401.1		A	1.6
2	☐	1.000					
3	☐	1.000		34739135.3		A	2.6
4	☐	1.000					
5	☐	1.000		35347740.3		A	0.6
6	☐	1.000		35143284.4		A	1.3
7	☐	1.000		34490576.9		A	0.6
8	☐	1.000					



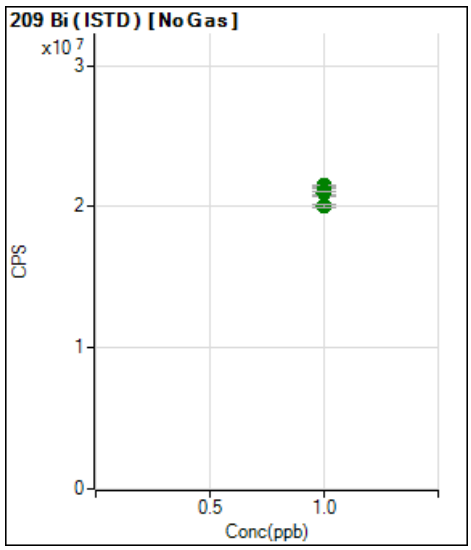
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12272531.4		A	2.5
2	☐	1.000					
3	☐	1.000		12432521.4		A	0.3
4	☐	1.000					
5	☐	1.000		12582004.3		A	0.9
6	☐	1.000		12365998.1		A	1.3
7	☐	1.000		12389128.5		A	1.1
8	☐	1.000					



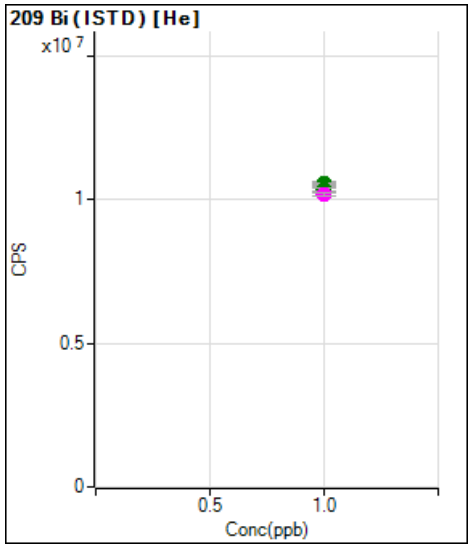
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		32670085.3		A	2.4
2	☐	1.000					
3	☐	1.000		32131756.1		A	2.7
4	☐	1.000					
5	☐	1.000		32851034.5		A	0.6
6	☐	1.000		32594885.3		A	1.2
7	☐	1.000		32353229.5		A	1.0
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		6994799.90		P	2.0
2		1.000					
3		1.000		7058042.81		P	0.7
4		1.000					
5		1.000		7060080.31		P	1.1
6		1.000		6955269.90		P	1.6
7		1.000		7038867.39		P	0.9
8		1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		21116033.0		A	3.0
2		1.000					
3		1.000		21003007.6		A	2.6
4		1.000					
5		1.000		21489369.6		A	0.1
6		1.000		21071796.3		A	0.2
7		1.000		20092789.7		A	1.1
8		1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10527461.3		A	1.1
2	☐	1.000					
3	☐	1.000		10477429.4		A	1.1
4	☐	1.000					
5	☐	1.000		10540295.4		A	0.9
6	☐	1.000		10350701.7		A	1.1
7	☐	1.000		10155926.1		M	1.1
8	☐	1.000					

Metals

Prep Sheets

3010A Metals Water Preparation

ANALYST/ TECH	JEL	START DATE/TIME	7/18/2022 07:15	END DATE/TIME	7/18/2022 11:15	BATCH	745553

#	CLIENT	TYPE	CLIENT ID	LAB ID	INITIAL VOL (mL)	FINAL VOL (mL)	COMMENT	STANDARDS\ REAGENTS
1	QC	MB	MB 2371934	2371934	50	50		GCAL - 8 - 250uL 2131556
2	QC	LCS	LCS 2371935	2371935	50	50		
3	0176	SAMP	BRRF AMINE WASTEWATER	22207160901	50	50		Sb,Ag,Se SPIKE - 250uL 344-100-11
4	5270	SAMP	BGMW 14072022	22207153701	50	50		
5	5270	MS	BGMW 14072022 MS	22207153702	50	50		Li,B,Zr SPIKE - 250uL 344-100-12
6	5270	MSD	BGMW 14072022 MSD	22207153703	50	50		
7	5270	SAMP	CMW 45072022	22207153704	50	50		Si SPIKE - 250uL 2131569
8	5270	FD	CMW 45072022 FD	22207153705	50	50		
9	5270	SAMP	CMW 43072022	22207153709	50	50		1:1 HNO3 226-39-9
10	4367	SAMP	SUNSHINE	22207156401	50	50		
11	4367	SAMP	BIMBO	22207156501	50	50		1:1 HCL 226-39-7
12	AL-O	SAMP	EFFLUENT	22207163801	50	50		
13	4156	SAMP	PES-0024	22207019601	50	50		
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								Digestion Vessel Lot# 052662
28								
29								
30								

EQUIPMENT\CONDITIONS

DIGESTION BLOCK\THERMOMETER ID	TEMPERATURE	PIPETTE 1
B1	94	93
PIPETTE 2	PIPETTE 3	
115		

NOTES

TCLPs are reduced in volume due to sample matrix. Matrix-Water. 6020_W_EX

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: FA97199

Client ID: AL-O - SGS Accutest - Orlando
SDG: 222071638
PM: RWe

Client / Reporting Information	Project Information	Billing Information (if different from Report to)
Company Name: SGS North America Inc.	Project Name: Shepley's Hill (SHL); Devens, MA	
Street Address: 4405 Vineland Rd, Suite C-15	Street	
City: Orlando State: FL Zip: 32811	City State	Company Name
Project Contact: evita.martinez@sgs.com E-mail	Project #	Street Address
Phone #: 407-425-6700 Fax #	Client Purchase Order #	City State Zip
Sampler(s) Name(s): JR Phone	Project Manager	Attention:

LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	ASMS.	LAB USE ONLY
1	EFFLUENT		7/8/22	1:00:00 PM	JR	AQ										X	1

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 7/19/2022

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [X] FL

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Please send to Pace in LA
7979 Innovation Park Drive
Baton Rouge, LA 70820

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		7/8/22	1	2		2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by: FedEx	Date Time: 7/11/22 11:23	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Therm. ID: / Cooler Temp.

2.4E42 5200 7352 6845

Pace Analytical®

SAMPLE RECEIVING CHECKLIST

22207163 8

SAMPLE DELIVERY GROUP 222071638	
Client **PM** RWe AL-O - SGS Accutest - Orlando	**Transport Method** FEDEX
Profile Number 299627	**Received By** Roberts, George S.
Line Item(s) 1 - Arsenic	**Receive Date(s)** 07/16/22

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E42	Temp °C
570073526845		2.4

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA97199

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # TF-083021-18-2 | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	Total Arsenic - 6020A	LAB USE ONLY
1	Effluent	7/8/22	13:00	JWR	W	1					x					X	

INIT.
LABEL VER.
3.0 CLM

Turnaround Time (Business days)

10 Day (Business)
7 Day
X 5 Day- Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other

Approved By: / Date:
Initial Assessment MA 7/8
Label Verification

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

☐ COMMERCIAL "A" (RESULTS ONLY)
☐ COMMERCIAL "B" (RESULTS PLUS QC)
☐ REDT1 (EPA LEVEL 3)
☒ FULLT1 (EPA LEVEL 4)
☒ EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

SGS Service Center Northborough, MA 7/8

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		7-8-22 1447	2	3	7/8/22 16:20	4
5		7/9/22 18:20	6 Brandon Mallory	7 Brandon Mallory	7/8/22 21:15	8 7/12/22 945

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.2

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

FA97199: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA97199 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL)

Date / Time Received: 7/12/2022 9:45:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 5272 0643 2170

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 7/12/2022 9:45:00 AM Reviewer: _____ Date: _____

FA97199: Chain of Custody
Page 2 of 2

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA97914

Sampling Date: 08/05/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **154**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3

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-1-

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Section 2: Subcontract Lab Data **4**
Section 3: Misc. Forms **149**
3.1: Chain of Custody 150

SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA97914

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA97914-1	08/05/22	10:30	JR	08/06/22	AQ	Water	EFFLUENT

Subcontract Lab Data

Report of Analysis

LELAP Certificate Number: 01955
A2LA Accredited (DoD ELAP-QSM 5.4) Certificate Number: 6429.01

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/07/2022

Report # 222081830

Project FA97914X

Samples Collected 8/5/22

Deliver To	***Additional Recipients***
Evita Martinez SGS North America Inc. 4405 Vineland Rd Suite C-15 Orlando, FL 32811 407.425.6700	NONE

A2LA ACCREDITED
CERT # 6429.01

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

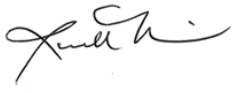
J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 222081830

Certifications

Certification	Certification Number
A2LA Accredited (DoD ELAP-QSM 5.4)	6429.01
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: SGS Accutest - Orlando **Report:** 222081830

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

This report was completed in accordance with DOD QSM 5.3 as specified in the contract.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22208183001	EFFLUENT	Water	8/05/22 10:30	8/18/22 09:55

Test Summary

EPA 6020B					
Lab ID	**Client ID**	**Matrix**	**Batch**	**Instru**	**RunDate**
22208183001	EFFLUENT	Water	748307	ICPMS2	8/24/22 16:09

Manual Integrations

Manual Integrations for LC and IC (if performed) are documented in the raw data.
No other manual integrations were performed by Pace Gulf Coast.

Q Flag Summary

NO Q FLAGS FOR THIS WORKORDER

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

EPA 6020B						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22208183001	EFFLUENT	Arsenic	ug/L	17.5	1	NA

Metals

Form I

Sample Results

I

INORGANIC ANALYSIS DATA SHEET

Report No:	222081830	Client Sample ID:	EFFLUENT
Collect Date:	08/05/22 Time: 1030	GCAL Sample ID:	22208183001
Matrix:	Water % Solids: NA	Instrument ID:	ICPMS2
Sample Amt:	50 mL	Lab File ID:	2220824B_MS2.b\1218SMPL.d
Prep Vol.:	50 (mL)	Dilution Factor:	1 Analyst: LWZ
Prep Date:	08/19/22	Analysis Date:	08/24/22 Time: 1609
Prep Batch:	747964	Analytical Batch:	748307
Prep Method:	3010A	Analytical Method:	EPA 6020B

ANALYTE	*RESULT*	*UNITS*	*Q*	*DL*	*LOQ*
Arsenic	17.5	ug/L		0.25	1.00

FORM I - IN

Sample Name	22208183001	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1218SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 16:09:11	**Total Dilution**	1.0000
Sample Type	Sample	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	MeasValue	Final Conc	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	1.968	1.968	0.7	195631.02	500	
Be	9	45	No Gas	0.021	0.021	15.9	88.00	1000	
B	11	6	No Gas	119.647	119.647	0.5	218955.81	500	
Sr	88	72	No Gas	287.847	287.847	0.9	21112034.69	1000	
Zr	90	103	No Gas	0.008	0.008	4.2	1823.47	100	
Mo	95	115	No Gas	0.336	0.336	8.0	4924.23	1000	
Ag	107	115	No Gas	0	0.000	7.5	258.89	100	
Cd	111	115	No Gas	0.014	0.014	7.5	142.22	1000	
Sb	121	115	No Gas	0.622	0.622	2.5	24557.03	1000	
Ba	137	115	No Gas	16.589	16.589	0.2	225323.30	1000	
Tl	205	209	No Gas	0.009	0.009	3.1	1773.52	1000	
Pb	208	209	No Gas	0.13	0.130	3.7	8643.08	1000	
Na	23	45	He	24744.354	24744.354	0.6	6528103.65	100000	
Mg	24	45	He	5372.282	5372.282	1.0	580709.43	100000	
Al	27	45	He	2.911	2.911	19.1	94.67	20000	
Si	29	45	He	8581.803	8581.803	1.6	7035.03	10000	
K	39	45	He	7118.057	7118.057	0.3	559393.82	100000	
Ca	44	45	He	40410.366	40410.366	0.6	166209.52	500000	
Ti	47	45	He	0.493	0.493	120.5	23.00	1000	
V	51	72	He	0.067	0.067	7.8	162.23	1000	
Cr	52	72	He	0.22	0.220	6.3	810.03	1000	
Mn	55	72	He	18.93	18.930	1.9	18992.33	5000	
Fe	57	72	He	472.175	472.175	0.8	24584.43	100000	
Co	59	72	He	0.22	0.220	2.4	1300.07	1000	
Ni	60	72	He	5.31	5.310	1.6	8769.37	2000	
Cu	63	72	He	21.421	21.421	0.8	104945.01	1000	
Zn	66	72	He	8.761	8.761	2.0	4435.16	20000	
As	75	72	He	17.464	17.464	1.7	8870.05	1000	
Se	78	72	He	0.006	0.006	6.9	6.40	50	
Sn	120	115	He	0.1	0.100	8.3	718.91	1000	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4642025.66	4512767.53666667	102.86	
Ge	72	He	87395.17	83815.7133333333	104.27	
In	115	He	995160.82	963865.463333333	103.25	
Lu	175	He	2894984.54	2744423.08333333	105.49	
Rh	103	He	4064809.28	3975038.59	102.26	
Sc	45	He	78688.95	75607.8566666667	104.08	
Tb	159	He	5465006.17	5171112.73666667	105.68	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2849860.89	2875345.31333333	99.11	
Bi	209	No Gas	16093051.43	15539350.6033333	103.56	
Ge	72	No Gas	1915797.63	1859144.92333333	103.05	
In	115	No Gas	16763369.78	16063323.1133333	104.36	
Lu	175	No Gas	24856385.47	23162533.82	107.31	
Rh	103	No Gas	14694041.64	14488774.98	101.42	
Sc	45	No Gas	7008569.17	6851018.89333333	102.3	
Tb	159	No Gas	25062517.96	23584859.65	106.27	

Metals

Form II

Calibration Verifications

II

INITIAL CALIBRATION VERIFICATION (ICV) STANDARD

Report No:	222081830	GCAL QC ID:	1600
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\009_ICV.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1652	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	50.0	50.1	100		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Initial Calibration Verification (ICV) Report

Sample Name	1600	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	009_ICV.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 16:52:01	**Total Dilution**	1.0000
Sample Type	ICV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	255.431	0.2	7766590.72	250	102.17	
Be	9	6	No Gas	50.863	0.1	353177.79	50	101.73	
B	11	6	No Gas	281.149	1.2	1448931.59	250	112.46	> +/- 10%
Sr	88	72	No Gas	49.356	0.2	8228247.38	50	98.71	
Zr	90	72	No Gas	47.034	0.2	4799860.37	50	94.07	
Mo	95	115	No Gas	48.051	0.1	1475770.77	50	96.1	
Ag	107	115	No Gas	50.540	0.6	4023173.73	50	101.08	
Cd	111	115	No Gas	49.170	0.8	874408.28	50	98.34	
Sb	121	115	No Gas	53.816	0.5	3727563.19	50	107.63	
Ba	137	115	No Gas	49.117	0.3	1470762.86	50	98.23	
Tl	205	209	No Gas	51.000	1.6	8982853.82	50	102	
Pb	208	209	No Gas	49.657	0.6	11981076.39	50	99.31	
Na	23	45	He	5112.593	0.4	3011597.46	5000	102.25	
Mg	24	45	He	5000.422	0.2	1127001.39	5000	100.01	
Al	27	45	He	993.049	1.6	44621.77	1000	99.3	
Si	29	45	He	5192.403	2.2	9700.51	5000	103.85	
K	39	45	He	4959.038	0.4	851104.72	5000	99.18	
Ca	44	45	He	24619.842	0.5	203768.40	25000	98.48	
Ti	47	45	He	49.622	1.5	4300.30	50	99.24	
V	51	72	He	48.748	1.2	215835.21	50	97.5	
Cr	52	72	He	49.501	0.2	316023.41	50	99	
Mn	55	72	He	48.966	0.7	99641.96	50	97.93	
Fe	57	72	He	4915.482	0.4	538923.06	5000	98.31	
Co	59	72	He	49.647	0.5	617529.47	50	99.29	
Ni	60	103	He	99.986	0.4	361824.19	100	99.99	
Cu	63	103	He	51.700	0.5	543675.20	50	103.4	
Zn	66	103	He	979.269	0.4	991942.29	1000	97.93	
As	75	72	He	50.127	0.7	55917.02	50	100.25	
Se	78	72	He	25.059	0.9	1370.49	25	100.24	
Sn	120	115	He	49.344	0.8	298467.34	50	98.69	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9550090.69	10240207.5566667	93.26	
Ge	72	He	193051.87	206259.536666667	93.6	
In	115	He	2117871.09	2254875.09	93.92	
Lu	175	He	5811359.91	5982897.41333333	97.13	
Rh	103	He	9498609.90	10571093.47	89.85	
Sc	45	He	190207.95	203724.926666667	93.37	
Tb	159	He	11549345.25	12167806.4866667	94.92	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6294318.60	6456265.40333333	97.49	
Bi	209	No Gas	38436884.43	40437616.8966667	95.05	
Ge	72	No Gas	4864200.50	5052757.85666667	96.27	
In	115	No Gas	43092895.89	45738056.6266667	94.22	
Lu	175	No Gas	60772485.76	61881639.0766667	98.21	
Rh	103	No Gas	37440044.07	40761897.27	91.85	
Sc	45	No Gas	18514651.49	19674041.9966667	94.11	
Tb	159	No Gas	61886030.74	63342192.3933333	97.7	

II

LOW LEVEL CONTINUING CALIBRATION VERIFICATION (LLCCV) STANDARD

Report No:	222081830	GCAL QC ID:	1803
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1111CCV1.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1706	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1.00	1.01	101		ug/L

CONTROL LIMITS 70-130%

FORM II - IN

Low Level Continuing Calibration Verification(LLCCV) Report

Sample Name	1803	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1111CCV1.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:06:03	**Total Dilution**	1.0000
Sample Type	LLCCV1	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: Initial 6020B DOD 80-120% / 70-130% 6020B and 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	5.849	0.1	498901.40	5	116.98	
Be	9	6	No Gas	1.038	2.1	7036.99	1	103.8	
B	11	6	No Gas	11.622	0.4	87213.03	10	116.22	
Sr	88	72	No Gas	0.992	0.8	166201.63	1	99.2	
Zr	90	72	No Gas	0.926	0.9	97284.29	1	92.6	
Mo	95	115	No Gas	0.971	1.1	30850.94	1	97.1	
Ag	107	115	No Gas	0.977	0.5	79666.70	1	97.7	
Cd	111	115	No Gas	0.969	2.2	17601.04	1	96.9	
Sb	121	115	No Gas	2.043	0.5	148281.23	2	102.15	
Ba	137	115	No Gas	0.951	0.6	29127.07	1	95.1	
Tl	205	209	No Gas	0.967	0.5	177956.79	1	96.7	
Pb	208	209	No Gas	0.969	0.2	244121.40	1	96.9	
Na	23	45	He	100.437	0.7	61870.75	100	100.44	
Mg	24	45	He	101.212	1.0	22961.41	100	101.21	
Al	27	45	He	20.878	7.9	980.70	20	104.39	
Si	29	45	He	207.678	4.7	1406.08	200	103.84	
K	39	45	He	100.648	2.8	21993.47	100	100.65	
Ca	44	45	He	488.951	2.1	4143.98	500	97.79	
Ti	47	45	He	1.107	9.5	100.67	1	110.7	
V	51	72	He	0.966	6.7	4398.48	1	96.6	
Cr	52	72	He	0.999	0.7	6704.91	1	99.9	
Mn	55	72	He	4.905	3.1	10060.18	5	98.1	
Fe	57	72	He	100.042	1.7	11014.42	100	100.04	
Co	59	72	He	1.016	0.4	12681.12	1	101.6	
Ni	60	103	He	1.965	2.4	7391.93	2	98.25	
Cu	63	103	He	0.998	1.3	11441.22	1	99.8	
Zn	66	103	He	19.349	1.4	20703.58	20	96.74	
As	75	72	He	1.012	3.5	1144.38	1	101.2	
Se	78	72	He	0.921	2.4	56.48	1	92.1	
Sn	120	115	He	0.804	2.5	6359.28	1	80.4	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9749013.19	10240207.5566667	95.2	
Ge	72	He	193208.83	206259.536666667	93.67	
In	115	He	2115954.22	2254875.09	93.84	
Lu	175	He	5722276.79	5982897.41333333	95.64	
Rh	103	He	9760365.72	10571093.47	92.33	
Sc	45	He	188785.68	203724.926666667	92.67	
Tb	159	He	11526053.58	12167806.4866667	94.73	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6118488.57	6456265.40333333	94.77	
Bi	209	No Gas	39850066.91	40437616.8966667	98.55	
Ge	72	No Gas	4812365.64	5052757.85666667	95.24	
In	115	No Gas	43865039.41	45738056.6266667	95.9	
Lu	175	No Gas	61336687.42	61881639.0766667	99.12	
Rh	103	No Gas	38476480.69	40761897.27	94.39	
Sc	45	No Gas	18465102.60	19674041.9966667	93.86	
Tb	159	No Gas	62439349.07	63342192.3933333	98.57	

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222081830	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1122_CCV.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1746	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	9.62	96		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1122_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:46:17	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	52.759	0.3	1912889.03	50	105.52	
Be	9	6	No Gas	10.222	0.5	72378.19	10	102.22	
B	11	6	No Gas	51.563	0.4	296779.74	50	103.13	
Sr	88	72	No Gas	9.878	0.6	1661410.08	10	98.78	
Zr	90	72	No Gas	9.672	0.3	997618.81	10	96.72	
Mo	95	115	No Gas	9.391	0.5	296282.24	10	93.91	
Ag	107	115	No Gas	9.651	0.4	788545.14	10	96.51	
Cd	111	115	No Gas	9.577	0.1	174785.65	10	95.77	
Sb	121	115	No Gas	19.678	0.5	1401147.65	20	98.39	
Ba	137	115	No Gas	9.453	0.2	290520.38	10	94.53	
Tl	205	209	No Gas	9.638	1.8	1758955.60	10	96.38	
Pb	208	209	No Gas	9.469	1.1	2367237.06	10	94.69	
Na	23	45	He	1007.716	0.3	607867.13	1000	100.77	
Mg	24	45	He	1008.888	0.2	232100.50	1000	100.89	
Al	27	45	He	200.045	0.6	9206.18	200	100.02	
Si	29	45	He	2075.126	5.1	4608.73	2000	103.76	
K	39	45	He	973.231	1.1	174383.24	1000	97.32	
Ca	44	45	He	4864.781	1.8	41157.08	5000	97.3	
Ti	47	45	He	9.689	1.4	860.70	10	96.89	
V	51	72	He	9.744	1.7	43912.75	10	97.44	
Cr	52	72	He	9.830	1.6	64005.38	10	98.3	
Mn	55	72	He	48.963	0.9	101189.12	50	97.93	
Fe	57	72	He	988.743	0.4	110123.70	1000	98.87	
Co	59	72	He	9.902	0.8	125122.53	10	99.02	
Ni	60	103	He	19.355	0.7	72212.55	20	96.78	
Cu	63	103	He	9.885	0.6	107610.36	10	98.85	
Zn	66	103	He	192.814	0.8	201637.22	200	96.41	
As	75	72	He	9.620	0.8	10911.08	10	96.2	
Se	78	72	He	9.927	1.2	555.22	10	99.27	
Sn	120	115	He	9.423	0.6	59194.49	10	94.23	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9740765.48	10240207.5566667	95.12	
Ge	72	He	196063.60	206259.536666667	95.06	
In	115	He	2153002.23	2254875.09	95.48	
Lu	175	He	5804153.25	5982897.41333333	97.01	
Rh	103	He	9783649.06	10571093.47	92.55	
Sc	45	He	193928.46	203724.926666667	95.19	
Tb	159	He	11616765.25	12167806.4866667	95.47	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6416858.37	6456265.40333333	99.39	
Bi	209	No Gas	39798452.74	40437616.8966667	98.42	
Ge	72	No Gas	4901105.64	5052757.85666667	97	
In	115	No Gas	44209747.33	45738056.6266667	96.66	
Lu	175	No Gas	61120325.76	61881639.0766667	98.77	
Rh	103	No Gas	38775179.57	40761897.27	95.13	
Sc	45	No Gas	18860475.36	19674041.9966667	95.86	
Tb	159	No Gas	62323744.07	63342192.3933333	98.39	

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222081830	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1138_CCV.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1842	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	9.99	100		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1138_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 18:42:37	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	55.041	0.1	1710959.25	50	110.08	> +/- 10%
Be	9	6	No Gas	10.784	0.7	65966.07	10	107.84	
B	11	6	No Gas	56.687	0.9	279151.21	50	113.37	> +/- 10%
Sr	88	72	No Gas	10.232	0.3	1591679.25	10	102.32	
Zr	90	72	No Gas	10.194	0.4	972341.56	10	101.94	
Mo	95	115	No Gas	9.439	0.9	283574.50	10	94.39	
Ag	107	115	No Gas	9.838	0.7	765402.36	10	98.38	
Cd	111	115	No Gas	9.878	0.2	171672.84	10	98.78	
Sb	121	115	No Gas	20.412	0.4	1383869.04	20	102.06	
Ba	137	115	No Gas	9.893	0.3	289525.25	10	98.93	
Tl	205	209	No Gas	9.985	1.1	1804568.83	10	99.85	
Pb	208	209	No Gas	9.796	0.9	2425212.33	10	97.96	
Na	23	45	He	1054.088	0.3	560537.60	1000	105.41	
Mg	24	45	He	1039.277	0.3	210818.89	1000	103.93	
Al	27	45	He	200.749	2.6	8145.58	200	100.37	
Si	29	45	He	1954.616	3.7	3883.86	2000	97.73	
K	39	45	He	1004.844	2.4	158609.60	1000	100.48	
Ca	44	45	He	4993.956	0.1	37253.44	5000	99.88	
Ti	47	45	He	9.881	3.8	774.02	10	98.81	
V	51	72	He	9.794	1.1	39761.03	10	97.94	
Cr	52	72	He	10.097	0.7	59210.05	10	100.97	
Mn	55	72	He	49.519	0.5	92190.74	50	99.04	
Fe	57	72	He	1004.223	0.6	100757.17	1000	100.42	
Co	59	72	He	10.264	0.3	116828.60	10	102.64	
Ni	60	103	He	19.627	0.4	67709.12	20	98.14	
Cu	63	103	He	9.986	0.9	100517.61	10	99.86	
Zn	66	103	He	193.032	0.8	186649.74	200	96.52	
As	75	72	He	9.994	1.1	10210.58	10	99.94	
Se	78	72	He	9.759	2.0	491.79	10	97.59	
Sn	120	115	He	9.792	1.6	55748.34	10	97.92	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9322200.69	10240207.5566667	91.04	
Ge	72	He	176620.92	206259.536666667	85.63	
In	115	He	1953103.15	2254875.09	86.62	
Lu	175	He	5420510.33	5982897.41333333	90.6	
Rh	103	He	9046642.98	10571093.47	85.58	
Sc	45	He	171002.37	203724.926666667	83.94	
Tb	159	He	10983998.59	12167806.4866667	90.27	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	5543013.01	6456265.40333333	85.85	
Bi	209	No Gas	39410214.41	40437616.8966667	97.46	
Ge	72	No Gas	4533077.32	5052757.85666667	89.71	
In	115	No Gas	42098249.95	45738056.6266667	92.04	
Lu	175	No Gas	60435930.76	61881639.0766667	97.66	
Rh	103	No Gas	36442284.11	40761897.27	89.4	
Sc	45	No Gas	17137339.32	19674041.9966667	87.11	
Tb	159	No Gas	61178857.42	63342192.3933333	96.58	

II

INITIAL CALIBRATION VERIFICATION (ICV) STANDARD

Report No:	222081830	GCAL QC ID:	1600
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\009_ICV.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1511	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	50.0	50.8	102		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Initial Calibration Verification (ICV) Report

Sample Name	1600	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	009_ICV.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:11:58	**Total Dilution**	1.0000
Sample Type	ICV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	266.321	0.7	4255985.98	250	106.53	
Be	9	45	No Gas	49.596	1.0	169897.92	50	99.19	
B	11	6	No Gas	297.018	2.2	547721.39	250	118.81	> +/- 10%
Sr	88	72	No Gas	49.035	1.3	3527348.49	50	98.07	
Zr	90	103	No Gas	45.861	1.0	2045359.29	50	91.72	
Mo	95	115	No Gas	48.343	0.8	637940.79	50	96.69	
Ag	107	115	No Gas	50.678	1.5	1729526.22	50	101.36	
Cd	111	115	No Gas	49.364	1.3	357204.54	50	98.73	
Sb	121	115	No Gas	52.359	0.9	1576499.00	50	104.72	
Ba	137	115	No Gas	49.130	0.9	638761.52	50	98.26	
Tl	205	209	No Gas	48.222	1.6	4043217.44	50	96.44	
Pb	208	209	No Gas	48.473	1.7	2885885.58	50	96.95	
Na	23	45	He	5017.842	1.5	1279798.37	5000	100.36	
Mg	24	45	He	5005.065	1.6	522379.54	5000	100.1	
Al	27	45	He	998.712	1.7	22577.58	1000	99.87	
Si	29	45	He	5276.490	2.2	4343.32	5000	105.53	
K	39	45	He	5000.830	1.4	380342.94	5000	100.02	
Ca	44	45	He	24786.713	0.8	98465.50	25000	99.15	
Ti	47	45	He	50.650	4.6	1999.47	50	101.3	
V	51	72	He	49.265	1.4	99364.90	50	98.53	
Cr	52	72	He	49.202	1.6	140467.19	50	98.4	
Mn	55	72	He	49.406	1.0	48129.32	50	98.81	
Fe	57	72	He	4958.632	2.1	250695.92	5000	99.17	
Co	59	72	He	49.839	1.3	278842.47	50	99.68	
Ni	60	72	He	101.389	0.7	162085.44	100	101.39	
Cu	63	72	He	51.106	1.6	242911.66	50	102.21	
Zn	66	72	He	1001.521	2.2	461415.52	1000	100.15	
As	75	72	He	50.802	2.5	25066.13	50	101.6	
Se	78	72	He	24.585	1.3	635.59	25	98.34	
Sn	120	115	He	49.684	1.4	159881.30	50	99.37	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4592799.20	4512767.53666667	101.77	
Ge	72	He	84960.92	83815.7133333333	101.37	
In	115	He	973776.23	963865.463333333	101.03	
Lu	175	He	2831418.81	2744423.08333333	103.17	
Rh	103	He	4001354.98	3975038.59	100.66	
Sc	45	He	75974.04	75607.8566666667	100.48	
Tb	159	He	5349137.21	5171112.73666667	103.44	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2970519.40	2875345.31333333	103.31	
Bi	209	No Gas	15437637.27	15539350.6033333	99.35	
Ge	72	No Gas	1878505.48	1859144.92333333	101.04	
In	115	No Gas	16047261.93	16063323.1133333	99.9	
Lu	175	No Gas	23630978.82	23162533.82	102.02	
Rh	103	No Gas	14178993.88	14488774.98	97.86	
Sc	45	No Gas	6812892.92	6851018.89333333	99.44	
Tb	159	No Gas	23894512.98	23584859.65	101.31	

II

LOW LEVEL CONTINUING CALIBRATION VERIFICATION (LLCCV) STANDARD

Report No:	222081830	GCAL QC ID:	1803
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\1211CCV1.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1542	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1.00	1.02	102		ug/L

CONTROL LIMITS 70-130%

FORM II - IN

Low Level Continuing Calibration Verification(LLCCV) Report

Sample Name	1803	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1211CCV1.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:42:35	**Total Dilution**	1.0000
Sample Type	LLCCV1	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: Initial 6020B DOD 80-120% / 70-130% 6020B and 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	5.519	0.1	250437.95	5	110.38	
Be	9	45	No Gas	1.028	2.9	3552.43	1	102.8	
B	11	6	No Gas	13.150	0.8	35355.33	10	131.5	> +/- 20%
Sr	88	72	No Gas	1.006	0.6	74279.05	1	100.6	
Zr	90	103	No Gas	1.263	0.3	59997.67	1	126.3	> +/- 20%
Mo	95	115	No Gas	0.958	2.4	13156.14	1	95.8	
Ag	107	115	No Gas	1.005	1.2	35145.61	1	100.5	
Cd	111	115	No Gas	1.007	0.6	7453.14	1	100.7	
Sb	121	115	No Gas	2.036	0.3	67146.50	2	101.8	
Ba	137	115	No Gas	0.984	1.2	13106.29	1	98.4	
Tl	205	209	No Gas	0.939	2.2	82079.30	1	93.9	
Pb	208	209	No Gas	0.952	3.0	58947.72	1	95.2	
Na	23	45	He	100.076	2.7	28327.47	100	100.08	
Mg	24	45	He	99.056	1.1	10760.88	100	99.06	
Al	27	45	He	20.617	9.3	506.01	20	103.08	
Si	29	45	He	250.707	14.3	638.68	200	125.35	> +/- 20%
K	39	45	He	98.030	2.5	10710.81	100	98.03	
Ca	44	45	He	575.068	1.3	2433.58	500	115.01	
Ti	47	45	He	0.827	11.1	36.33	1	82.7	
V	51	72	He	0.960	3.7	2011.27	1	96	
Cr	52	72	He	1.037	5.0	3200.39	1	103.7	
Mn	55	72	He	5.185	2.8	5217.65	5	103.7	
Fe	57	72	He	100.013	1.1	5217.79	100	100.01	
Co	59	72	He	1.009	1.6	5828.99	1	100.9	
Ni	60	72	He	2.035	1.7	3375.98	2	101.75	
Cu	63	72	He	1.008	3.5	5268.78	1	100.8	
Zn	66	72	He	21.557	1.9	10471.62	20	107.78	
As	75	72	He	1.015	2.6	524.01	1	101.5	
Se	78	72	He	1.054	6.3	33.89	1	105.4	
Sn	120	115	He	0.967	3.6	3592.72	1	96.7	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4702032.95	4512767.53666667	104.19	
Ge	72	He	87200.74	83815.7133333333	104.04	
In	115	He	1003270.77	963865.463333333	104.09	
Lu	175	He	2868375.69	2744423.08333333	104.52	
Rh	103	He	4144452.61	3975038.59	104.26	
Sc	45	He	78187.80	75607.8566666667	103.41	
Tb	159	He	5414604.50	5171112.73666667	104.71	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2879853.17	2875345.31333333	100.16	
Bi	209	No Gas	15914512.26	15539350.6033333	102.41	
Ge	72	No Gas	1905729.51	1859144.92333333	102.51	
In	115	No Gas	16336026.24	16063323.1133333	101.7	
Lu	175	No Gas	23657001.31	23162533.82	102.13	
Rh	103	No Gas	14747934.41	14488774.98	101.79	
Sc	45	No Gas	6846048.62	6851018.89333333	99.93	
Tb	159	No Gas	24013958.81	23584859.65	101.82	

II

LINEAR DYNAMIC RANGE (LDR) STANDARD

Report No:	222081830	GCAL QC ID:	2500
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\1214_QC1.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1553	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	1000	974	97		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Linear Dynamic Range Check (LDR) Report

Sample Name	LDR	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1214_QC1.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:53:05	**Total Dilution**	1.0000
Sample Type	QC1	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Be	9	45	No Gas	954.003	0.9	3398660.83	1000	95.4	
Sr	88	72	No Gas	962.047	0.9	67333992.33	1000	96.2	
Mo	95	115	No Gas	1039.897	0.9	12906464.21	1000	103.99	
Cd	111	115	No Gas	957.548	0.7	6518951.55	1000	95.75	
Sb	121	115	No Gas	967.046	0.8	27317932.80	1000	96.7	
Ba	137	115	No Gas	977.654	0.9	11958698.97	1000	97.77	
Tl	205	209	No Gas	971.940	1.3	71984137.26	1000	97.19	
Pb	208	209	No Gas	962.090	0.3	50598007.58	1000	96.21	
Na	23	45	He	95891.681	0.7	27136835.43	100000	95.89	
Mg	24	45	He	93977.658	0.9	10896850.26	100000	93.98	
Al	27	45	He	19335.902	0.7	485222.75	20000	96.68	
K	39	45	He	98554.762	0.5	8267283.21	100000	98.55	
Ca	44	45	He	492828.126	0.4	2173898.46	500000	98.57	
Ti	47	45	He	980.568	0.8	42957.02	1000	98.06	
V	51	72	He	1027.232	0.4	2156108.52	1000	102.72	
Cr	52	72	He	1001.110	0.5	2971634.53	1000	100.11	
Mn	55	72	He	5032.496	0.8	5099707.30	5000	100.65	
Fe	57	72	He	99319.445	0.4	5225662.63	100000	99.32	
Co	59	72	He	969.272	0.5	5644253.94	1000	96.93	
Ni	60	72	He	1885.343	0.5	3136872.24	2000	94.27	
Cu	63	72	He	916.602	0.4	4528624.54	1000	91.66	
Zn	66	72	He	18139.819	0.3	8693300.49	20000	90.7	
As	75	72	He	974.484	0.6	500220.20	1000	97.45	
Sn	120	115	He	991.995	0.7	3192075.36	1000	99.2	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4199516.60	4512767.53666667	93.06	
Ge	72	He	88429.13	83815.7133333333	105.5	
In	115	He	975950.00	963865.463333333	101.25	
Lu	175	He	2895426.10	2744423.08333333	105.5	
Rh	103	He	3832713.04	3975038.59	96.42	
Sc	45	He	84422.38	75607.8566666667	111.66	
Tb	159	He	5406268.67	5171112.73666667	104.55	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2905384.75	2875345.31333333	101.04	
Bi	209	No Gas	13639726.47	15539350.6033333	87.78	
Ge	72	No Gas	1828117.15	1859144.92333333	98.33	
In	115	No Gas	15099596.37	16063323.1133333	94	
Lu	175	No Gas	22751001.33	23162533.82	98.22	
Rh	103	No Gas	13178945.59	14488774.98	90.96	
Sc	45	No Gas	7085180.28	6851018.89333333	103.42	
Tb	159	No Gas	23043867.16	23584859.65	97.71	

II

CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD

Report No:	222081830	GCAL QC ID:	1800
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\1237_CCV.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1715	Analytical Method:	EPA 6020B

ANALYTE	*TRUE*	*FOUND*	*%RECOVERY*	*Q*	*UNITS*
Arsenic	10.0	10.2	102		ug/L

CONTROL LIMITS 90-110%

FORM II - IN

Continuing Calibration Verification (CCV) Report

Sample Name	1800	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1237_CCV.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 17:15:26	**Total Dilution**	1.0000
Sample Type	CCV	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 90-110%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	Rec	QC Flag
Li	7	6	No Gas	60.860	0.8	943461.39	50	121.72	> +/- 10%
Be	9	45	No Gas	10.073	0.8	33059.02	10	100.73	
B	11	6	No Gas	63.374	1.0	107730.72	50	126.75	> +/- 10%
Sr	88	72	No Gas	10.109	0.4	697384.70	10	101.09	
Zr	90	103	No Gas	9.593	0.3	427724.37	10	95.93	
Mo	95	115	No Gas	9.620	0.3	126985.35	10	96.2	
Ag	107	115	No Gas	10.031	0.5	341986.37	10	100.31	
Cd	111	115	No Gas	10.122	0.8	73163.68	10	101.22	
Sb	121	115	No Gas	20.486	0.9	618821.02	20	102.43	
Ba	137	115	No Gas	10.027	1.3	130230.02	10	100.27	
Tl	205	209	No Gas	9.622	0.3	845577.69	10	96.22	
Pb	208	209	No Gas	9.733	0.3	607288.34	10	97.33	
Na	23	45	He	1054.160	0.7	253681.72	1000	105.42	
Mg	24	45	He	1053.352	1.0	103202.37	1000	105.34	
Al	27	45	He	206.486	1.9	4397.33	200	103.24	
Si	29	45	He	2232.518	3.9	1960.14	2000	111.63	> +/- 10%
K	39	45	He	1018.193	0.8	74878.48	1000	101.82	
Ca	44	45	He	5043.734	1.9	18855.55	5000	100.87	
Ti	47	45	He	10.167	7.5	378.34	10	101.67	
V	51	72	He	10.190	2.1	19458.44	10	101.9	
Cr	52	72	He	10.177	0.9	27601.37	10	101.77	
Mn	55	72	He	50.268	1.7	46324.69	50	100.54	
Fe	57	72	He	1024.241	1.6	48992.32	1000	102.42	
Co	59	72	He	10.247	0.7	54249.52	10	102.47	
Ni	60	72	He	20.781	1.1	31454.79	20	103.9	
Cu	63	72	He	10.462	1.1	47294.90	10	104.62	
Zn	66	72	He	208.202	1.6	90936.87	200	104.1	
As	75	72	He	10.215	1.1	4774.12	10	102.15	
Se	78	72	He	10.261	3.6	254.23	10	102.61	
Sn	120	115	He	9.963	2.4	30695.67	10	99.63	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4527984.83	4512767.53666667	100.34	
Ge	72	He	80379.79	83815.7133333333	95.9	
In	115	He	926724.58	963865.463333333	96.15	
Lu	175	He	2714146.73	2744423.08333333	98.9	
Rh	103	He	3848299.99	3975038.59	96.81	
Sc	45	He	71249.95	75607.8566666667	94.24	
Tb	159	He	5157670.86	5171112.73666667	99.74	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2730296.83	2875345.31333333	94.96	
Bi	209	No Gas	16167452.68	15539350.6033333	104.04	
Ge	72	No Gas	1799783.05	1859144.92333333	96.81	
In	115	No Gas	16061387.88	16063323.1133333	99.99	
Lu	175	No Gas	24175187.14	23162533.82	104.37	
Rh	103	No Gas	14137559.99	14488774.98	97.58	
Sc	45	No Gas	6524235.43	6851018.89333333	95.23	
Tb	159	No Gas	24024532.14	23584859.65	101.86	

Metals

Form III

Blanks

III
INITIAL CALIBRATION BLANK

Report No:	222081830	Blank ID:	1700
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\010_ICB.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1655	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Initial Calibration Blank (ICB) Report

Sample Name	1700	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	010_ICB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 16:55:36	**Total Dilution**	1.0000
Sample Type	ICB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass
Units : ppb			

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.646	0.2	352342.44	2.5	
Be	9	6	No Gas	0.009	16.1	86.00	0.5	
B	11	6	No Gas	4.130	2.2	50541.52	5	
Sr	88	72	No Gas	0.001	5.7	2827.05	0.5	
Zr	90	72	No Gas	0.026	2.6	6546.00	0.5	
Mo	95	115	No Gas	0.218	15.8	7311.96	0.5	
Ag	107	115	No Gas	0.010	10.3	1270.07	0.5	
Cd	111	115	No Gas	0.007	4.2	197.78	0.5	
Sb	121	115	No Gas	0.120	1.0	12879.30	1	
Ba	137	115	No Gas	0.013	6.4	541.13	0.5	
Tl	205	209	No Gas	0.020	6.4	5107.87	0.5	
Pb	208	209	No Gas	0.003	1.5	2643.53	0.5	
Na	23	45	He	0.005	1.5	3250.46	50	
Mg	24	45	He	0.100	7.1	353.35	50	
Al	27	45	He	-0.011	37.9	50.67	10	
Si	29	45	He	9.492	8.1	1090.72	100	
K	39	45	He	1.131	2.5	5194.43	50	
Ca	44	45	He	2.271	17.3	150.00	250	
Ti	47	45	He	0.000	27.0	5.67	0.5	
V	51	72	He	-0.011	12.0	73.33	0.5	
Cr	52	72	He	0.002	2.6	340.01	0.5	
Mn	55	72	He	0.010	35.3	100.00	2.5	
Fe	57	72	He	0.715	34.6	116.67	50	
Co	59	72	He	0.002	25.8	61.11	0.5	
Ni	60	103	He	0.007	3.4	114.45	1	
Cu	63	103	He	0.009	9.5	775.58	0.5	
Zn	66	103	He	0.182	4.8	774.48	10	
As	75	72	He	0.062	14.9	85.33	0.5	
Se	78	72	He	0.095	7.1	11.56	0.5	
Sn	120	115	He	-0.141	6.3	686.69	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9801216.93	10240207.5566667	95.71	
Ge	72	He	194640.91	206259.536666667	94.37	
In	115	He	2140424.08	2254875.09	94.92	
Lu	175	He	5762856.37	5982897.41333333	96.32	
Rh	103	He	9867575.17	10571093.47	93.34	
Sc	45	He	190745.95	203724.926666667	93.63	
Tb	159	He	11595389.00	12167806.4866667	95.3	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6126138.13	6456265.40333333	94.89	
Bi	209	No Gas	39799038.57	40437616.8966667	98.42	
Ge	72	No Gas	4851784.81	5052757.85666667	96.02	
In	115	No Gas	43864786.12	45738056.6266667	95.9	
Lu	175	No Gas	60419420.77	61881639.0766667	97.64	
Rh	103	No Gas	38709926.24	40761897.27	94.97	
Sc	45	No Gas	18530382.04	19674041.9966667	94.19	
Tb	159	No Gas	61739214.08	63342192.3933333	97.47	

III
CONTINUING CALIBRATION BLANK

Report No:	222081830	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1123_CCB.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1749	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1123_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:49:46	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.400	0.5	373065.05	2.5	
Be	9	6	No Gas	0.010	22.6	106.67	0.5	
B	11	6	No Gas	1.124	0.7	38659.92	5	
Sr	88	72	No Gas	-0.001	4.3	2553.64	0.5	
Zr	90	72	No Gas	0.006	1.3	4705.26	0.5	
Mo	95	115	No Gas	0.087	18.7	3320.42	0.5	
Ag	107	115	No Gas	0.005	14.3	916.71	0.5	
Cd	111	115	No Gas	0.003	8.6	118.89	0.5	
Sb	121	115	No Gas	0.091	2.3	11232.33	1	
Ba	137	115	No Gas	0.000	11.4	161.11	0.5	
Tl	205	209	No Gas	0.006	14.6	2547.01	0.5	
Pb	208	209	No Gas	0.004	8.0	2896.91	0.5	
Na	23	45	He	-0.188	1.6	3400.50	50	
Mg	24	45	He	-0.117	26.9	330.02	50	
Al	27	45	He	0.077	18.6	59.33	10	
Si	29	45	He	18.207	6.8	1197.39	100	
K	39	45	He	-0.459	4.8	5337.85	50	
Ca	44	45	He	5.168	24.1	188.34	250	
Ti	47	45	He	0.009	57.1	7.00	0.5	
V	51	72	He	-0.013	7.4	68.89	0.5	
Cr	52	72	He	0.000	9.8	354.45	0.5	
Mn	55	72	He	0.007	28.4	101.11	2.5	
Fe	57	72	He	0.251	14.3	70.00	50	
Co	59	72	He	0.002	32.8	67.78	0.5	
Ni	60	103	He	-0.001	18.7	87.78	1	
Cu	63	103	He	0.012	5.8	844.48	0.5	
Zn	66	103	He	0.002	5.5	611.13	10	
As	75	72	He	0.032	25.3	55.00	0.5	
Se	78	72	He	0.038	15.7	9.06	0.5	
Sn	120	115	He	-0.170	7.4	534.46	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9896922.35	10240207.5566667	96.65	
Ge	72	He	208421.30	206259.536666667	101.05	
In	115	He	2256017.88	2254875.09	100.05	
Lu	175	He	5887073.87	5982897.41333333	98.4	
Rh	103	He	10311593.20	10571093.47	97.55	
Sc	45	He	206817.13	203724.926666667	101.52	
Tb	159	He	11883777.32	12167806.4866667	97.67	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6617284.29	6456265.40333333	102.49	
Bi	209	No Gas	39999136.07	40437616.8966667	98.92	
Ge	72	No Gas	5068006.74	5052757.85666667	100.3	
In	115	No Gas	45459750.70	45738056.6266667	99.39	
Lu	175	No Gas	61717684.08	61881639.0766667	99.74	
Rh	103	No Gas	40105686.18	40761897.27	98.39	
Sc	45	No Gas	19673072.55	19674041.9966667	100	
Tb	159	No Gas	63331979.05	63342192.3933333	99.98	

III
METHOD BLANK

Report No:	222081830	Blank ID:	MB2385930
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1124SMPL.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1753	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	1.00	ug/L	U	0.25	1.00

FORM III - IN

Method Blank (MB) Report

Sample Name	2385930	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1124SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:53:16	**Total Dilution**	1.0000
Sample Type	MBWATER	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.368	0.9	380753.21	2.5	
Be	9	6	No Gas	0.011	21.5	114.67	0.5	
B	11	6	No Gas	1.665	1.5	42500.12	5	
Sr	88	72	No Gas	0.043	4.1	10270.71	0.5	
Zr	90	72	No Gas	0.006	3.2	4730.82	0.5	
Mo	95	115	No Gas	0.053	16.6	2250.21	0.5	
Ag	107	115	No Gas	0.004	6.6	837.81	0.5	
Cd	111	115	No Gas	0.003	18.3	121.11	0.5	
Sb	121	115	No Gas	0.186	2.3	18310.87	1	
Ba	137	115	No Gas	2.220	0.4	71075.11	0.5	> 1/2 LOQ
Tl	205	209	No Gas	0.003	4.6	2026.89	0.5	
Pb	208	209	No Gas	0.011	4.8	4653.85	0.5	
Na	23	45	He	11.303	2.8	10744.20	50	
Mg	24	45	He	2.281	8.5	916.72	50	
Al	27	45	He	1.582	10.0	132.67	10	
Si	29	45	He	48.884	16.2	1252.06	100	
K	39	45	He	2.326	2.5	5848.01	50	
Ca	44	45	He	15.164	9.0	278.34	250	
Ti	47	45	He	0.106	41.0	16.00	0.5	
V	51	72	He	0.009	19.4	172.22	0.5	
Cr	52	72	He	0.010	10.5	417.79	0.5	
Mn	55	72	He	0.607	3.9	1397.86	2.5	
Fe	57	72	He	0.544	53.3	103.34	50	
Co	59	72	He	0.002	20.0	60.00	0.5	
Ni	60	103	He	0.018	2.1	160.00	1	
Cu	63	103	He	0.176	0.5	2691.39	0.5	
Zn	66	103	He	1.536	5.1	2280.21	10	
As	75	72	He	0.020	11.6	39.67	0.5	
Se	78	72	He	-0.007	35.7	6.31	0.5	
Sn	120	115	He	-0.164	8.0	564.46	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9696532.56	10240207.5566667	94.69	
Ge	72	He	205502.44	206259.536666667	99.63	
In	115	He	2223434.36	2254875.09	98.61	
Lu	175	He	5797511.37	5982897.41333333	96.9	
Rh	103	He	10236145.98	10571093.47	96.83	
Sc	45	He	206624.61	203724.926666667	101.42	
Tb	159	He	11739380.66	12167806.4866667	96.48	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6771748.33	6456265.40333333	104.89	
Bi	209	No Gas	40150350.23	40437616.8966667	99.29	
Ge	72	No Gas	5144561.32	5052757.85666667	101.82	
In	115	No Gas	45962099.36	45738056.6266667	100.49	
Lu	175	No Gas	61650245.75	61881639.0766667	99.63	
Rh	103	No Gas	40734132.83	40761897.27	99.93	
Sc	45	No Gas	20077063.09	19674041.9966667	102.05	
Tb	159	No Gas	63252632.39	63342192.3933333	99.86	

III
CONTINUING CALIBRATION BLANK

Report No:	222081830	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220823B_MS2.b\1139_CCB.d
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 1846	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1139_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 18:46:06	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.288	1.1	323652.68	2.5	
Be	9	6	No Gas	0.006	6.6	62.67	0.5	
B	11	6	No Gas	2.641	1.7	40895.79	5	
Sr	88	72	No Gas	-0.001	3.6	2356.94	0.5	
Zr	90	72	No Gas	0.009	3.6	4557.45	0.5	
Mo	95	115	No Gas	0.065	15.1	2470.25	0.5	
Ag	107	115	No Gas	0.005	7.3	898.93	0.5	
Cd	111	115	No Gas	0.000	15.5	65.56	0.5	
Sb	121	115	No Gas	0.052	1.6	7901.17	1	
Ba	137	115	No Gas	0.000	22.6	145.56	0.5	
Tl	205	209	No Gas	0.003	4.2	1870.20	0.5	
Pb	208	209	No Gas	0.003	7.5	2600.21	0.5	
Na	23	45	He	1.854	3.6	4057.37	50	
Mg	24	45	He	0.050	8.3	320.02	50	
Al	27	45	He	-0.059	28.7	45.33	10	
Si	29	45	He	-69.175	12.3	896.70	100	
K	39	45	He	-0.665	3.3	4567.54	50	
Ca	44	45	He	5.037	20.6	161.67	250	
Ti	47	45	He	0.022	28.6	7.00	0.5	
V	51	72	He	-0.014	40.0	55.56	0.5	
Cr	52	72	He	0.001	12.4	311.12	0.5	
Mn	55	72	He	0.007	15.4	86.67	2.5	
Fe	57	72	He	0.502	54.5	86.67	50	
Co	59	72	He	0.001	17.2	48.89	0.5	
Ni	60	103	He	-0.007	29.6	57.78	1	
Cu	63	103	He	0.016	0.7	810.04	0.5	
Zn	66	103	He	-0.137	7.0	417.79	10	
As	75	72	He	0.016	6.5	31.00	0.5	
Se	78	72	He	0.014	22.7	6.64	0.5	
Sn	120	115	He	-0.188	6.7	372.23	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9346547.15	10240207.5566667	91.27	
Ge	72	He	181251.63	206259.536666667	87.88	
In	115	He	2002795.97	2254875.09	88.82	
Lu	175	He	5427527.84	5982897.41333333	90.72	
Rh	103	He	9398735.18	10571093.47	88.91	
Sc	45	He	178264.67	203724.926666667	87.5	
Tb	159	He	11048970.67	12167806.4866667	90.8	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	5794128.94	6456265.40333333	89.74	
Bi	209	No Gas	39724867.74	40437616.8966667	98.24	
Ge	72	No Gas	4620649.81	5052757.85666667	91.45	
In	115	No Gas	42835568.28	45738056.6266667	93.65	
Lu	175	No Gas	60411400.77	61881639.0766667	97.62	
Rh	103	No Gas	37380880.74	40761897.27	91.71	
Sc	45	No Gas	17662217.63	19674041.9966667	89.77	
Tb	159	No Gas	61446315.75	63342192.3933333	97.01	

III
INITIAL CALIBRATION BLANK

Report No:	222081830	Blank ID:	1700
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\011_ICB.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1532	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Initial Calibration Blank (ICB) Report

Sample Name	1700	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	011_ICB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:32:08	**Total Dilution**	1.0000
Sample Type	ICB	**Sample Pass/Fail**	Fail
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	0.092	2.6	167125.11	2.5	
Be	9	45	No Gas	0.004	31.2	26.67	0.5	
B	11	6	No Gas	8.643	4.1	27021.33	5	> LOD
Sr	88	72	No Gas	0.001	11.1	903.39	0.5	
Zr	90	103	No Gas	0.376	5.0	18407.42	0.5	
Mo	95	115	No Gas	0.036	8.6	768.92	0.5	
Ag	107	115	No Gas	0.000	4.4	265.56	0.5	
Cd	111	115	No Gas	0.003	37.7	58.89	0.5	
Sb	121	115	No Gas	0.056	6.7	6529.36	1	
Ba	137	115	No Gas	0.000	21.2	74.45	0.5	
Tl	205	209	No Gas	0.001	18.6	1016.75	0.5	
Pb	208	209	No Gas	-0.001	5.2	510.03	0.5	
Na	23	45	He	-1.278	6.1	1720.17	50	
Mg	24	45	He	0.221	19.7	146.67	50	
Al	27	45	He	-0.191	10.8	21.33	10	
Si	29	45	He	34.757	15.8	461.34	100	
K	39	45	He	0.969	5.7	3083.77	50	
Ca	44	45	He	-0.992	7.4	78.33	250	
Ti	47	45	He	0.017	45.8	3.33	0.5	
V	51	72	He	-0.002	71.0	17.78	0.5	
Cr	52	72	He	0.004	16.8	173.34	0.5	
Mn	55	72	He	0.164	18.8	194.45	2.5	
Fe	57	72	He	0.260	74.2	43.33	50	
Co	59	72	He	-0.003	60.1	20.00	0.5	
Ni	60	72	He	-0.004	37.6	31.11	1	
Cu	63	72	He	0.002	1.9	356.67	0.5	
Zn	66	72	He	0.092	18.8	320.01	10	
As	75	72	He	0.009	41.7	14.67	0.5	
Se	78	72	He	0.004	22.4	6.16	0.5	
Sn	120	115	He	-0.022	4.4	312.23	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4634400.76	4512767.53666667	102.7	
Ge	72	He	84924.54	83815.7133333333	101.32	
In	115	He	980184.17	963865.463333333	101.69	
Lu	175	He	2802162.04	2744423.08333333	102.1	
Rh	103	He	4028075.40	3975038.59	101.33	
Sc	45	He	75975.27	75607.8566666667	100.49	
Tb	159	He	5288743.36	5171112.73666667	102.27	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2833979.64	2875345.31333333	98.56	
Bi	209	No Gas	15590732.27	15539350.6033333	100.33	
Ge	72	No Gas	1870091.31	1859144.92333333	100.59	
In	115	No Gas	16061042.28	16063323.1133333	99.99	
Lu	175	No Gas	23384934.65	23162533.82	100.96	
Rh	103	No Gas	14399996.09	14488774.98	99.39	
Sc	45	No Gas	6777521.54	6851018.89333333	98.93	
Tb	159	No Gas	23609782.98	23584859.65	100.11	

III
CONTINUING CALIBRATION BLANK

Report No:	222081830	Blank ID:	1900
Instrument ID:	ICPMS2	Lab File ID:	2220824B_MS2.b\1238_CCB.d
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 1718	Analytical Method:	EPA 6020B

ANALYTE	RESULT	UNITS	Q	DL	LOQ
Arsenic	0.50	ug/L	U	0.25	1.00

FORM III - IN

Continuing Calibration Blank (CCB) Report

Sample Name	1900	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1238_CCB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 17:18:55	**Total Dilution**	1.0000
Sample Type	CCB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Name	Mass	ISTD	Mode	Conc	RSD	CPS	Limit	QC Flag
Li	7	6	No Gas	-0.133	0.2	160333.33	2.5	
Be	9	45	No Gas	0.006	9.2	33.33	0.5	
B	11	6	No Gas	4.739	2.2	19229.30	5	
Sr	88	72	No Gas	0.002	26.7	940.07	0.5	
Zr	90	103	No Gas	0.005	3.5	1692.35	0.5	
Mo	95	115	No Gas	0.064	12.3	1156.73	0.5	
Ag	107	115	No Gas	0.001	13.9	304.45	0.5	
Cd	111	115	No Gas	0.001	15.2	45.55	0.5	
Sb	121	115	No Gas	0.033	0.8	5970.22	1	
Ba	137	115	No Gas	-0.001	17.2	70.00	0.5	
Tl	205	209	No Gas	0.004	12.7	1370.12	0.5	
Pb	208	209	No Gas	0.001	6.1	623.37	0.5	
Na	23	45	He	3.474	4.9	2800.36	50	
Mg	24	45	He	0.653	37.1	183.34	50	
Al	27	45	He	0.006	20.4	24.67	10	
Si	29	45	He	34.734	16.7	441.34	100	
K	39	45	He	-0.650	4.0	2830.38	50	
Ca	44	45	He	2.546	22.9	88.33	250	
Ti	47	45	He	0.074	43.3	5.33	0.5	
V	51	72	He	0.009	44.0	38.89	0.5	
Cr	52	72	He	-0.009	15.5	131.12	0.5	
Mn	55	72	He	-0.011	42.9	23.33	2.5	
Fe	57	72	He	-0.329	86.6	13.33	50	
Co	59	72	He	0.000	22.3	34.44	0.5	
Ni	60	72	He	-0.007	61.5	24.44	1	
Cu	63	72	He	-0.008	1.7	301.12	0.5	
Zn	66	72	He	-0.295	23.3	136.67	10	
As	75	72	He	0.032	25.0	25.00	0.5	
Se	78	72	He	-0.001	30.4	5.83	0.5	
Sn	120	115	He	-0.023	4.5	298.89	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4635372.43	4512767.53666667	102.72	
Ge	72	He	81796.44	83815.7133333333	97.59	
In	115	He	948829.75	963865.463333333	98.44	
Lu	175	He	2768275.27	2744423.08333333	100.87	
Rh	103	He	3965556.51	3975038.59	99.76	
Sc	45	He	72629.83	75607.8566666667	96.06	
Tb	159	He	5250606.80	5171112.73666667	101.54	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2776466.42	2875345.31333333	96.56	
Bi	209	No Gas	16478843.92	15539350.6033333	106.05	
Ge	72	No Gas	1836444.79	1859144.92333333	98.78	
In	115	No Gas	16396627.36	16063323.1133333	102.07	
Lu	175	No Gas	24452854.64	23162533.82	105.57	
Rh	103	No Gas	14507092.20	14488774.98	100.13	
Sc	45	No Gas	6644922.93	6851018.89333333	96.99	
Tb	159	No Gas	24529102.96	23584859.65	104	

Metals

Form IV

Interference Checks

IV
ICPMS INTERFERENCE CHECKS

Report No:	222081830	ICSA \ AB ID:	2000 \ 2100
Instrument ID:	ICPMS2	Analytical Batch:	748298
Analyst:	LWZ	Analytical Method:	EPA 6020B
Lab File ID ICSA1:	2220823B_MS2.b\1112ICSA.d	Lab File ID ICSAB1:	2220823B_MS2.b\1113ICSB.d
Lab File ID ICSA2:		Lab File ID ICSAB2:	

Concentration Units: ug/L

		Analyzed (A/AB):	08/23/22 1709	08/23/22 1713				
ANALYTE	***TRUE A***	***TRUE AB***	***ICSA1***	***ICSAB1***	***%R***	***ICSA2***	***ICSAB2***	***%R***
Aluminum	1000	1000	980	989	99			
Antimony	0	0	0.050	0.047				
Arsenic	0	10.0	0.0080	10.0	100			
Barium	0	0	0.0090	0.012				
Beryllium	0	0	0.0030	0.0030				
Boron	0	20.0	1.24	21.7	108			
Cadmium	0	10.0	0.014	10.8	108			
Calcium	3000	3000	2830	2940	98			
Chromium	0	20.0	0.013	19.4	97			
Cobalt	0	20.0	0.027	19.9	100			
Copper	0	20.0	0.017	19.3	96			
Iron	2500	2500	2430	2450	98			
Lead	0	0	0.0050	0.0070				
Lithium	0	20.0	0.31	21.8	109			
Magnesium	1000	1000	1000	1010	101			
Manganese	0	20.0	0.090	19.4	97			
Molybdenum	20.0	20.0	18.1	18.1	90			
Nickel	0	20.0	0.024	19.1	96			
Potassium	1000	1000	971	971	97			
Selenium	0	10.0	-0.018	9.65	96			
Silicon	0	1000	-1.6	991	99			
Silver	0	5.00	0.011	4.71	94			
Sodium	2500	2500	2480	2490	100			
Strontium	0	10.0	0.024	9.82	98			
Thallium	0	0	0.0030	0.0010				
Tin	0	10.0	-0.098	9.46	95			
Titanium	20.0	20.0	18.8	19.1	96			
Vanadium	0	20.0	-0.015	19.0	95			
Zinc	0	20.0	0.21	19.7	98			
Zirconium	0	20.0	0.018	20.1	100			

FORM IV - IN

Interference Check Solution A (ICS-A) Report

Sample Name	2000	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1112ICSA.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:09:32	**Total Dilution**	1.0000
Sample Type	ICSA	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	6	No Gas	0.307	0.5	341980.83	2.5	
Be	9	6	No Gas	0.003	23.3	47.33	0.5	
B	11	6	No Gas	1.242	1.1	36287.32	5	
Sr	88	72	No Gas	0.024	3.5	6591.73	0.5	
Zr	90	72	No Gas	0.018	1.3	5664.50	0.5	
Mo	95	115	No Gas	18.109	0.6	563126.35	20	
Ag	107	115	No Gas	0.011	11.4	1397.87	0.5	
Cd	111	115	No Gas	0.014	3.0	321.12	0.5	
Sb	121	115	No Gas	0.050	3.5	7870.06	1	
Ba	137	115	No Gas	0.009	9.7	425.57	0.5	
Tl	205	209	No Gas	0.003	4.0	1993.57	0.5	
Pb	208	209	No Gas	0.005	0.5	3113.59	0.5	
Na	23	45	He	2482.826	0.6	1469134.25	2500	
Mg	24	45	He	1001.884	0.2	226831.83	1000	
Al	27	45	He	979.791	0.4	44174.38	1000	
Si	29	45	He	-1.609	12.7	1072.71	100	
K	39	45	He	971.096	0.8	171253.81	1000	
Ca	44	45	He	2832.158	2.1	23637.37	3000	
Ti	47	45	He	18.788	4.0	1637.10	20	
V	51	72	He	-0.015	11.8	56.67	0.5	
Cr	52	72	He	0.013	9.4	414.46	0.5	
Mn	55	72	He	0.090	9.9	263.34	2.5	
Fe	57	72	He	2433.791	0.4	269125.01	2500	
Co	59	72	He	0.027	13.5	371.12	0.5	
Ni	60	103	He	0.024	4.8	175.56	1	
Cu	63	103	He	0.017	3.4	845.59	0.5	
Zn	66	103	He	0.212	7.7	790.03	10	
As	75	72	He	0.008	11.0	24.00	0.5	
Se	78	72	He	-0.018	5.5	5.37	0.5	
Sn	120	115	He	-0.098	5.2	936.71	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9595892.56	10240207.5566667	93.71	
Ge	72	He	194701.21	206259.536666667	94.4	
In	115	He	2122128.41	2254875.09	94.11	
Lu	175	He	5761343.66	5982897.41333333	96.3	
Rh	103	He	9678049.89	10571093.47	91.55	
Sc	45	He	190849.44	203724.926666667	93.68	
Tb	159	He	11604133.58	12167806.4866667	95.37	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6112207.66	6456265.40333333	94.67	
Bi	209	No Gas	39386359.41	40437616.8966667	97.4	
Ge	72	No Gas	4810270.50	5052757.85666667	95.2	
In	115	No Gas	43609157.89	45738056.6266667	95.35	
Lu	175	No Gas	60867804.10	61881639.0766667	98.36	
Rh	103	No Gas	37994845.16	40761897.27	93.21	
Sc	45	No Gas	18414190.38	19674041.9966667	93.6	
Tb	159	No Gas	61877889.08	63342192.3933333	97.69	

Interference Check Solution AB (ICS-AB) Report

Sample Name	2100	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1113ICSB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:13:01	**Total Dilution**	1.0000
Sample Type	ICSB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass
Units : ppb			

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	6	No Gas	21.830	0.5	945577.22	20	
Be	9	6	No Gas	0.003	29.8	44.67	0.5	
B	11	6	No Gas	21.725	0.2	136054.33	20	
Sr	88	72	No Gas	9.815	0.4	1614964.51	10	
Zr	90	72	No Gas	20.092	0.4	2023171.38	20	
Mo	95	115	No Gas	18.102	0.5	561303.26	20	
Ag	107	115	No Gas	4.711	0.5	378878.24	5	
Cd	111	115	No Gas	10.840	0.7	194573.40	10	
Sb	121	115	No Gas	0.047	1.3	7632.14	1	
Ba	137	115	No Gas	0.012	16.7	521.13	0.5	
Tl	205	209	No Gas	0.001	3.0	1516.81	0.5	
Pb	208	209	No Gas	0.007	3.8	3486.98	0.5	
Na	23	45	He	2492.618	0.5	1440096.23	2500	
Mg	24	45	He	1010.763	0.6	223439.53	1000	
Al	27	45	He	989.434	1.3	43556.02	1000	
Si	29	45	He	991.135	9.5	2663.59	1000	
K	39	45	He	971.073	0.2	167202.78	1000	
Ca	44	45	He	2936.038	0.8	23919.50	3000	
Ti	47	45	He	19.142	2.6	1628.76	20	
V	51	72	He	19.005	0.4	82920.40	20	
Cr	52	72	He	19.443	0.9	122400.87	20	
Mn	55	72	He	19.394	1.8	38901.17	20	
Fe	57	72	He	2448.192	0.7	264283.56	2500	
Co	59	72	He	19.892	0.3	243613.88	20	
Ni	60	103	He	19.135	0.7	69916.06	20	
Cu	63	103	He	19.319	0.3	205341.84	20	
Zn	66	103	He	19.688	0.7	20671.35	20	
As	75	72	He	10.036	2.4	11033.85	10	
Se	78	72	He	9.649	2.7	523.30	10	
Sn	120	115	He	9.455	1.5	57654.77	10	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9606132.57	10240207.5566667	93.81	
Ge	72	He	190069.51	206259.536666667	92.15	
In	115	He	2090024.84	2254875.09	92.69	
Lu	175	He	5691064.29	5982897.41333333	95.12	
Rh	103	He	9581407.40	10571093.47	90.64	
Sc	45	He	186343.76	203724.926666667	91.47	
Tb	159	He	11427232.75	12167806.4866667	93.91	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6087981.16	6456265.40333333	94.3	
Bi	209	No Gas	39304481.91	40437616.8966667	97.2	
Ge	72	No Gas	4794385.37	5052757.85666667	94.89	
In	115	No Gas	43483267.75	45738056.6266667	95.07	
Lu	175	No Gas	60590674.10	61881639.0766667	97.91	
Rh	103	No Gas	37807117.39	40761897.27	92.75	
Sc	45	No Gas	18270637.61	19674041.9966667	92.87	
Tb	159	No Gas	61616654.08	63342192.3933333	97.28	

IV
ICPMS INTERFERENCE CHECKS

Report No:	222081830	ICSA \ AB ID:	2000 \ 2100
Instrument ID:	ICPMS2	Analytical Batch:	748307
Analyst:	LWZ	Analytical Method:	EPA 6020B
Lab File ID ICSA1:	2220824B_MS2.b\1212ICSA.d	Lab File ID ICSAB1:	2220824B_MS2.b\1213ICSB.d
Lab File ID ICSA2:		Lab File ID ICSAB2:	

Concentration Units: ug/L

			Analyzed (A/AB):	08/24/22 1546	08/24/22 1549			
ANALYTE	***TRUE A***	***TRUE AB***	***ICSA1***	***ICSAB1***	***%R***	***ICSA2***	***ICSAB2***	***%R***
Aluminum	1000	1000	1000	995	100			
Antimony	0	0	0.038	0.041				
Arsenic	0	10.0	0.010	10.2	102			
Barium	0	0	0.0090	0.011				
Beryllium	0	0	0.0050	0.0020				
Boron	0	20.0	1.84	23.4	117			
Cadmium	0	10.0	0.0090	11.3	113			
Calcium	3000	3000	2980	2950	98			
Chromium	0	20.0	0.013	19.6	98			
Cobalt	0	20.0	0.026	20.2	101			
Copper	0	20.0	-0.0010	20.2	101			
Iron	2500	2500	2510	2500	100			
Lead	0	0	0.0030	0.0060				
Lithium	0	20.0	-0.085	22.0	110			
Magnesium	1000	1000	1010	1000	100			
Manganese	0	20.0	0.32	19.7	98			
Molybdenum	20.0	20.0	18.6	18.8	94			
Nickel	0	20.0	0.026	20.0	100			
Potassium	1000	1000	1010	1000	100			
Selenium	0	10.0	-0.012	9.88	99			
Silicon	0	1000	25.7	1060	106			
Silver	0	5.00	0.0090	4.88	98			
Sodium	2500	2500	2450	2440	98			
Strontium	0	10.0	0.027	9.61	96			
Thallium	0	0	0.0040	0.0010				
Tin	0	10.0	0.22	9.57	96			
Titanium	20.0	20.0	19.8	19.7	98			
Vanadium	0	20.0	-0.0020	19.5	98			
Zinc	0	20.0	0.24	21.5	108			
Zirconium	0	20.0	0.056	19.9	100			

FORM IV - IN

Interference Check Solution A (ICS-A) Report

Sample Name	2000	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1212ICSA.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:46:05	**Total Dilution**	1.0000
Sample Type	ICSA	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	6	No Gas	-0.085	0.7	165549.95	2.5	
Be	9	45	No Gas	0.005	28.8	31.33	0.5	
B	11	6	No Gas	1.844	0.7	15461.66	5	
Sr	88	72	No Gas	0.027	3.9	2823.72	0.5	
Zr	90	103	No Gas	0.056	3.7	4012.83	0.5	
Mo	95	115	No Gas	18.551	0.3	247810.35	20	
Ag	107	115	No Gas	0.009	6.0	577.80	0.5	
Cd	111	115	No Gas	0.009	31.8	100.00	0.5	
Sb	121	115	No Gas	0.038	2.1	6061.36	1	
Ba	137	115	No Gas	0.009	3.9	195.56	0.5	
Tl	205	209	No Gas	0.004	2.3	1290.11	0.5	
Pb	208	209	No Gas	0.003	6.1	753.39	0.5	
Na	23	45	He	2452.094	0.8	650826.60	2500	
Mg	24	45	He	1006.224	2.3	109214.80	1000	
Al	27	45	He	1004.569	0.5	23592.49	1000	
Si	29	45	He	25.699	12.0	472.68	100	
K	39	45	He	1011.085	1.0	82384.63	1000	
Ca	44	45	He	2977.637	1.8	12365.31	3000	
Ti	47	45	He	19.752	3.0	811.69	20	
V	51	72	He	-0.002	44.4	18.89	0.5	
Cr	52	72	He	0.013	10.6	206.67	0.5	
Mn	55	72	He	0.325	15.0	365.57	2.5	
Fe	57	72	He	2505.958	0.2	131882.14	2500	
Co	59	72	He	0.026	6.3	190.00	0.5	
Ni	60	72	He	0.026	23.1	82.23	1	
Cu	63	72	He	-0.001	13.6	357.79	0.5	
Zn	66	72	He	0.238	5.8	403.34	10	
As	75	72	He	0.010	13.3	15.67	0.5	
Se	78	72	He	-0.012	34.1	5.99	0.5	
Sn	120	115	He	0.225	7.6	1147.84	0.5	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4725297.22	4512767.53666667	104.71	
Ge	72	He	88431.44	83815.7133333333	105.51	
In	115	He	1012342.73	963865.463333333	105.03	
Lu	175	He	2896262.98	2744423.08333333	105.53	
Rh	103	He	4158920.81	3975038.59	104.63	
Sc	45	He	78923.70	75607.8566666667	104.39	
Tb	159	He	5473680.33	5171112.73666667	105.85	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2851494.46	2875345.31333333	99.17	
Bi	209	No Gas	15689380.18	15539350.6033333	100.97	
Ge	72	No Gas	1892394.44	1859144.92333333	101.79	
In	115	No Gas	16233036.48	16063323.1133333	101.06	
Lu	175	No Gas	23846641.31	23162533.82	102.95	
Rh	103	No Gas	14572217.75	14488774.98	100.58	
Sc	45	No Gas	6816268.90	6851018.89333333	99.49	
Tb	159	No Gas	23984104.64	23584859.65	101.69	

Interference Check Solution AB (ICS-AB) Report

Sample Name	2100	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b
File Name	1213ICSB.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/24/2022 15:49:33	**Total Dilution**	1.0000
Sample Type	ICSB	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Spiked Element Recovery: 80-120%

Name	Mass	ISTD	Mode	Conc	RSD	CPS	ExpValue	QC Flag
Li	7	6	No Gas	22.035	0.6	496680.04	20	
Be	9	45	No Gas	0.002	9.1	22.00	0.5	
B	11	6	No Gas	23.417	3.6	53367.92	20	
Sr	88	72	No Gas	9.607	0.4	708844.03	10	
Zr	90	103	No Gas	19.896	0.7	928218.43	20	
Mo	95	115	No Gas	18.761	0.1	254459.40	20	
Ag	107	115	No Gas	4.879	1.1	171246.98	5	
Cd	111	115	No Gas	11.302	0.9	84030.08	10	
Sb	121	115	No Gas	0.041	4.1	6251.47	1	
Ba	137	115	No Gas	0.011	20.4	226.67	0.5	
Tl	205	209	No Gas	0.001	7.4	1093.42	0.5	
Pb	208	209	No Gas	0.006	9.0	943.41	0.5	
Na	23	45	He	2435.131	0.9	658175.45	2500	
Mg	24	45	He	1003.368	2.1	110896.79	1000	
Al	27	45	He	994.522	0.7	23786.12	1000	
Si	29	45	He	1058.363	8.8	1290.73	1000	
K	39	45	He	1000.938	0.7	83088.09	1000	
Ca	44	45	He	2951.107	2.1	12480.38	3000	
Ti	47	45	He	19.676	1.4	823.36	20	
V	51	72	He	19.542	0.5	41493.67	20	
Cr	52	72	He	19.579	1.3	58919.00	20	
Mn	55	72	He	19.721	1.4	20242.92	20	
Fe	57	72	He	2500.725	0.4	133054.87	2500	
Co	59	72	He	20.238	1.2	119185.34	20	
Ni	60	72	He	19.977	2.4	33645.18	20	
Cu	63	72	He	20.192	1.1	101221.25	20	
Zn	66	72	He	21.528	0.5	10721.78	20	
As	75	72	He	10.178	2.6	5291.98	10	
Se	78	72	He	9.878	2.7	272.65	10	
Sn	120	115	He	9.565	0.2	32890.54	10	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	4836843.37	4512767.53666667	107.18	
Ge	72	He	89410.52	83815.7133333333	106.68	
In	115	He	1030219.52	963865.463333333	106.88	
Lu	175	He	2957784.33	2744423.08333333	107.77	
Rh	103	He	4235823.86	3975038.59	106.56	
Sc	45	He	80373.48	75607.8566666667	106.3	
Tb	159	He	5592822.00	5171112.73666667	108.16	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	2884355.32	2875345.31333333	100.31	
Bi	209	No Gas	15903936.01	15539350.6033333	102.35	
Ge	72	No Gas	1924993.81	1859144.92333333	103.54	
In	115	No Gas	16482645.31	16063323.1133333	102.61	
Lu	175	No Gas	24055978.81	23162533.82	103.86	
Rh	103	No Gas	14818747.74	14488774.98	102.28	
Sc	45	No Gas	6920029.86	6851018.89333333	101.01	
Tb	159	No Gas	24191129.64	23584859.65	102.57	

Metals

Form VII

Lab Control Spikes

VII
LABORATORY CONTROL SAMPLE

Report No:	222081830		GCAL ID:	2385931 (LCS)	
Matrix:	Water		Instrument ID:	ICPMS2	
Analyst:	LWZ		Lab File ID:	2220823B_MS2.b\1125SMPL.d	
Prep Date:	08/19/22	Time: 1200	Analysis Date:	08/23/22	Time: 1756
Prep Batch:	747964		Analytical Batch:	748298	
Prep Method:	3010A		Analytical Method:	EPA 6020B	

ANALYTE	*UNITS*	*TRUE*	*FOUND*	*% R*	*Q*	*LCL*	*UCL*
Arsenic	ug/L	50.0	52.1	104		84	116

FORM VII - IN

Laboratory Control Sample (LCS) Report

Sample Name	2385931	**Data Path Name**	C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b
File Name	1125SMPL.d	**Comment**	ICPMS-2,LWZ
Acq Time	8/23/2022 17:56:47	**Total Dilution**	1.0000
Sample Type	LCS6020	**Sample Pass/Fail**	Pass
ISTD Ref FileName	004CALB.d	**ISTD Pass/Fail**	Pass

Units : ppb

QC Analyte Table

Recovery Limits: 80-120% 6020B / 85-115% 200.8

Name	Mass	ISTD	Mode	Conc	RSD	CPS	SpkAmt	Rec	QC Flag
Li	7	6	No Gas	263.622	1.2	8318767.38	250	105.45	
Be	9	6	No Gas	53.210	0.4	383969.59	50	106.42	
B	11	6	No Gas	266.027	1.3	1426597.89	250	106.41	
Sr	88	72	No Gas	51.762	0.7	8779746.53	50	103.52	
Zr	90	72	No Gas	10.279	0.3	1070298.85	10	102.79	
Mo	95	115	No Gas	51.637	0.5	1607849.52	50	103.27	
Ag	107	115	No Gas	52.113	0.7	4205917.33	50	104.23	
Cd	111	115	No Gas	51.421	0.6	927134.69	50	102.84	
Sb	121	115	No Gas	112.654	1.0	7906455.52	100	112.65	
Ba	137	115	No Gas	51.995	0.6	1578515.67	50	103.99	
Tl	205	209	No Gas	54.211	1.4	9525479.44	50	108.42	
Pb	208	209	No Gas	52.553	1.4	12648450.64	50	105.11	
Na	23	45	He	5413.836	0.1	3280726.31	5000	108.28	
Mg	24	45	He	5255.730	0.2	1218647.07	5000	105.11	
Al	27	45	He	1046.432	0.8	48370.55	1000	104.64	
Si	29	45	He	5288.918	2.0	10144.13	5000	105.78	
K	39	45	He	5242.401	0.1	925356.05	5000	104.85	
Ca	44	45	He	25931.437	0.8	220801.46	25000	103.73	
Ti	47	45	He	50.707	1.1	4521.03	50	101.41	
V	51	72	He	52.359	0.3	234630.58	50	104.72	
Cr	52	72	He	52.830	0.9	341352.76	50	105.66	
Mn	55	72	He	52.751	0.8	108636.81	50	105.5	
Fe	57	72	He	5224.054	0.4	579693.85	5000	104.48	
Co	59	72	He	52.746	0.7	664044.89	50	105.49	
Ni	60	103	He	105.003	0.4	381812.57	100	105	
Cu	63	103	He	52.863	0.1	558572.01	50	105.73	
Zn	66	103	He	1041.636	0.2	1060180.10	1000	104.16	
As	75	72	He	52.087	0.5	58808.23	50	104.17	
Se	78	72	He	10.398	2.6	579.36	10	103.98	
Sn	120	115	He	51.478	0.3	310412.47	50	102.96	

QC ISTD Table

Recovery Limits: 30 - 120% DOD 6020B / 70-130% 6020B / 60-125% 200.8

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
Bi	209	He	9309007.57	10240207.5566667	90.91	
Ge	72	He	195395.48	206259.536666667	94.73	
In	115	He	2111826.82	2254875.09	93.66	
Lu	175	He	5719952.62	5982897.41333333	95.61	
Rh	103	He	9544528.51	10571093.47	90.29	
Sc	45	He	195685.49	203724.926666667	96.05	
Tb	159	He	11413031.50	12167806.4866667	93.8	

Name	Mass	Mode	CPS	Ref CPS	Rec	Flag
(Li)	6	No Gas	6540984.70	6456265.40333333	101.31	
Bi	209	No Gas	38335396.93	40437616.8966667	94.8	
Ge	72	No Gas	4948982.44	5052757.85666667	97.95	
In	115	No Gas	43690090.64	45738056.6266667	95.52	
Lu	175	No Gas	61507654.09	61881639.0766667	99.4	
Rh	103	No Gas	38166758.48	40761897.27	93.63	
Sc	45	No Gas	19123273.68	19674041.9966667	97.2	
Tb	159	No Gas	62682262.40	63342192.3933333	98.96	

Metals

Form VIII

Tunes

VIII
ICP-MS TUNE

Report No:	222081830	GCAL QC ID:	1150
Instrument ID:	ICPMS2	Lab File ID:	2220823A_MS2.b\QCTune\2220823A_MS2-QCTu
Analyst:	LWZ	Analytical Batch:	748298
Analysis Date:	08/23/22 Time: 0944	Analytical Method:	EPA 6020B

ELEMENT - MASS	*AVG MEASURED MASS (amu)*	*PEAK WIDTH AT 5% PEAK HEIGHT (amu)*	*%RSD*
Be-9	9	.7821	1.0822
Mg-24	23.95	.8269	.9084
Mg-25	24.95	.7922	1.3574
Mg-26	25.9	.792	1.0851
Co-59	58.95	.7831	.8699
In-115	115	.777	.3099
Pb-206	206	.7682	.7181
Pb-207	207	.7811	.8487
Pb-208	207.95	.7808	.5862

FORM VIII - IN

US EPA Tune Check Sample Report

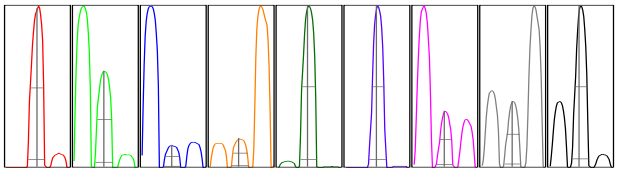
Batch Folder C:\Agilent\ICPMH\1\DATA\2220823A_MS2.b
Report Comment
Instrument Name G8403A JP14170244

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	21318	1.08	5.00	
24	154288	0.91	5.00	
25	20582	1.36	5.00	
26	23950	1.09	5.00	
59	539010	0.87	5.00	
115	567726	0.31	5.00	
206	152778	0.72	5.00	
207	131441	0.85	5.00	
208	320441	0.59	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	21656	21440	21257	21103	21134
24	156728	153907	154017	153596	153190
25	20997	20426	20626	20616	20246
26	24364	23876	24016	23803	23690
59	546725	539362	536509	538039	534417
115	570161	568325	567248	567585	565308
206	151468	152107	152872	154376	153069
207	130906	129778	131886	132625	132012
208	318607	318651	322133	322594	320219

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	3526	9.00	8.9 - 9.1		0.782	0.849	
24	23944	23.95	23.9 - 24.1		0.827	0.849	
25	3189	24.95	24.9 - 25.1		0.792	0.849	
26	3765	25.90	25.9 - 26.1		0.792	0.849	
59	89543	58.95	58.9 - 59.1		0.783	0.849	
115	103346	115.00	114.9 - 115.1		0.777	0.849	
206	27617	206.00	205.9 - 206.1		0.768	0.849	
207	23685	207.00	206.9 - 207.1		0.781	0.849	
208	58147	207.95	207.9 - 208.1		0.781	0.849	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	1.00	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.20	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.0	V	Deflect	18.4	V
Extract 2	-165.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-80	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	200	V			

VIII
ICP-MS TUNE

Report No:	222081830	GCAL QC ID:	1150
Instrument ID:	ICPMS2	Lab File ID:	2220823A_MS2.b\2220824A_MS2.b\QCTune\222
Analyst:	LWZ	Analytical Batch:	748307
Analysis Date:	08/24/22 Time: 0959	Analytical Method:	EPA 6020B

ELEMENT - MASS	*AVG MEASURED MASS (amu)*	*PEAK WIDTH AT 5% PEAK HEIGHT (amu)*	*%RSD*
Be-9	9.05	.7839	.9017
Mg-24	23.95	.8269	.2537
Mg-25	24.95	.7925	.2065
Mg-26	25.9	.7926	.2318
Co-59	58.95	.7834	.3425
In-115	115	.7783	.4365
Pb-206	206	.7722	1.1891
Pb-207	207	.7817	1.128
Pb-208	207.95	.7858	.967

FORM VIII - IN

US EPA Tune Check Sample Report

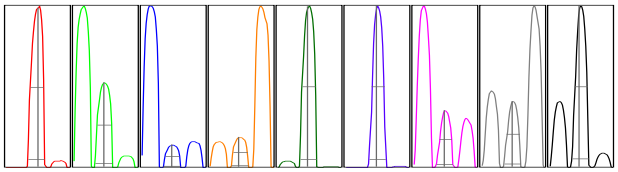
Batch Folder C:\Agilent\ICPMH\1\DATA\2220823A_MS2.b\2220824A_MS2.b
Report Comment
Instrument Name G8403A JP14170244

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	17719	0.90	5.00	
24	120006	0.25	5.00	
25	16351	0.21	5.00	
26	19061	0.23	5.00	
59	425826	0.34	5.00	
115	453189	0.44	5.00	
206	118619	1.19	5.00	
207	102606	1.13	5.00	
208	249471	0.97	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	17654	17705	17986	17559	17689
24	120090	120411	120118	119752	119657
25	16321	16329	16368	16333	16402
26	19114	18993	19079	19059	19061
59	426763	425310	427707	423908	425445
115	450305	452077	454256	454075	455233
206	116556	118253	118728	119123	120436
207	100929	102108	102827	103171	103995
208	246678	247101	250891	250700	251988

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	2893	9.05	8.9 - 9.1		0.784	0.849	
24	18545	23.95	23.9 - 24.1		0.827	0.849	
25	2545	24.95	24.9 - 25.1		0.793	0.849	
26	2961	25.90	25.9 - 26.1		0.793	0.849	
59	70597	58.95	58.9 - 59.1		0.783	0.849	
115	82103	115.00	114.9 - 115.1		0.778	0.849	
206	21319	206.00	205.9 - 206.1		0.772	0.849	
207	18401	207.00	206.9 - 207.1		0.782	0.849	
208	45148	207.95	207.9 - 208.1		0.786	0.849	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	1.00	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.20	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.5	V	Deflect	18.4	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-80	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	200	V			

Metals

Form XIII

Preparation Logs

XIII
PREPARATION LOG

Report No: 222081830

Prep Method: EPA 3010A Prep Batch: 747964

CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*PREP DATE*	*WEIGHT*	*UNITS*	*VOLUME*	*UNITS*
CNC735MW02WG20220816 MS	22208191102	08/19/22			50	mL
CNC735MW02WG20220816 MSD	22208191103	08/19/22			50	mL
EFFLUENT	22208183001	08/19/22			50	mL
LCS2385931	2385931	08/19/22			50	mL
MB2385930	2385930	08/19/22			50	mL

FORM XIII - IN

Metals

Form XIV

Run Logs

XIV
ANALYSIS RUN LOG

Report No: 222081830 Analytical Batch: 748298 Start Date: 08/23/22

Instrument ID: ICPMS2 Analytical Method: EPA 6020B End Date: 08/23/22

CLIENT SAMPLE ID	GCAL SAMPLE ID	PF	D/F	TIME	Analyte Symbols																																
					Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr			
ITUNE	1150	*	1	0944			X																														
IICALB	1300	*	1	1632			X																														
IICAL2	1302	*	1	1636			X																														
IICAL4	1304	*	1	1641			X																														
IICAL5	1305	*	1	1644			X																														
IICAL6	1306	*	1	1648			X																														
ICV	1600	*	1	1652			X																														
ICB	1700	*	1	1655			X																														
LLCCV	1803	*	1	1706			X																														
ICSA	2000	*	1	1709			X																														
ICSAB	2100	*	1	1713			X																														
CCV	1800	*	1	1746			X																														
CCB	1900	*	1	1749			X																														
MB2385930	2385930	*	1	1753			X																														
LCS2385931	2385931	*	1	1756			X																														
CCV	1800	*	1	1842			X																														
CCB	1900	*	1	1846			X																														

FORM XIV - IN

XIV
ANALYSIS RUN LOG

Report No: 222081830 Analytical Batch: 748307 Start Date: 08/24/22

Instrument ID: ICPMS2 Analytical Method: EPA 6020B End Date: 08/25/22

CLIENT SAMPLE ID	GCAL SAMPLE ID	PF	D/F	TIME	Analyte Symbols																																		
					Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	Zr					
ITUNE	1150	*	1	0958			X																																
IICALB	1300	*	1	1453			X																																
IICAL2	1302	*	1	1456			X																																
IICAL4	1304	*	1	1500			X																																
IICAL5	1305	*	1	1504			X																																
IICAL6	1306	*	1	1508			X																																
ICV	1600	*	1	1511			X																																
ICB	1700	*	1	1532			X																																
LLCCV	1803	*	1	1542			X																																
ICSA	2000	*	1	1546			X																																
ICSAB	2100	*	1	1549			X																																
LDR	2500	*	1	1553			X																																
EFFLUENT	22208183001	*	1	1609			X																																
CCV	1800	*	1	1715			X																																
CCB	1900	*	1	1718			X																																

FORM XIV - IN

Metals

Form XV

Internal Standards

XV (He)

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222081830	Start Date:	08/23/22
Instrument ID:	ICPMS2	End Date:	08/23/22
Analytical Method	EPA 6020B	Analytical Batch:	748298

			Internal Standards %RI For:													
CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*TIME*	*ISTD1*	*Q*	*ISTD2*	*Q*	*ISTD3*	*Q*	*ISTD4*	*Q*	*ISTD5*	*Q*	*ISTD6*	*Q*	*ISTD7*	*Q*
MB2385930	2385930	1753	95		100		99		97		97		101		96	
LCS2385931	2385931	1756	91		95		94		96		90		96		94	

ISTD 1: Bismuth (He)
ISTD 2: Germanium (He)
ISTD 3: Indium (He)
ISTD 4: Lutetium (He)
ISTD 5: Rhodium (He)
ISTD 6: Scandium (He)
ISTD 7: Terbium (He)

FORM XV - IN

XV (No Gas)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222081830	Start Date:	08/23/22
Instrument ID:	ICPMS2	End Date:	08/23/22
Analytical Method	EPA 6020B	Analytical Batch:	748298

			Internal Standards %RI For:															
CLIENT SAMPLE ID	*GCAL SAMPLE ID*	*TIME*	*ISTD8*	*Q*	*ISTD9*	*Q*	*ISTD10*	*Q*	*ISTD11*	*Q*	*ISTD12*	*Q*	*ISTD13*	*Q*	*ISTD14*	*Q*
MB2385930	2385930	1753	99		102		100		100		100		102		100	
LCS2385931	2385931	1756	95		98		96		99		94		97		99	

ISTD 8: Bismuth (No Gas)
ISTD 9: Germanium (No Gas)
ISTD 10 Indium (No Gas)
ISTD 11 Lutetium (No Gas)
ISTD 12 Rhodium (No Gas)
ISTD 13 Scandium (No Gas)
ISTD 14 Terbium (No Gas)

FORM XV - IN

XV (He)

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222081830	Start Date:	08/24/22
Instrument ID:	ICPMS2	End Date:	08/25/22
Analytical Method	EPA 6020B	Analytical Batch:	748307

			Internal Standards %RI For:													
CLIENT SAMPLE ID	***GCAL SAMPLE ID***	***TIME***	***ISTD1***	***Q***	***ISTD2***	***Q***	***ISTD3***	***Q***	***ISTD4***	***Q***	***ISTD5***	***Q***	***ISTD6***	***Q***	***ISTD7***	***Q***
EFFLUENT	22208183001	1609	103		104		103		105		102		104		106	

ISTD 1: Bismuth (He)
ISTD 2: Germanium (He)
ISTD 3: Indium (He)
ISTD 4: Lutetium (He)
ISTD 5: Rhodium (He)
ISTD 6: Scandium (He)
ISTD 7: Terbium (He)

FORM XV - IN

XV (No Gas)
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Report No:	222081830	Start Date:	08/24/22
Instrument ID:	ICPMS2	End Date:	08/25/22
Analytical Method	EPA 6020B	Analytical Batch:	748307

			Internal Standards %RI For:															
CLIENT SAMPLE ID	GCAL SAMPLE ID	TIME	ISTD8	Q	ISTD9	Q	ISTD10	Q	ISTD11	Q	ISTD12	Q	ISTD13	Q	ISTD14	Q
EFFLUENT	22208183001	1609	104		103		104		107		101		102		106	

ISTD 8: Bismuth (No Gas)
ISTD 9: Germanium (No Gas)
ISTD 10 Indium (No Gas)
ISTD 11 Lutetium (No Gas)
ISTD 12 Rhodium (No Gas)
ISTD 13 Scandium (No Gas)
ISTD 14 Terbium (No Gas)

FORM XV - IN

Metals

ICPMS ICALs

Pace Analytical

BATCH COVERSHEET

ANALYST: LWZ

DATE: 08/23/22

ICP/MS Metals Analysis

BATCH: **748298**

STANDARDS

ICAL Standard	MET 335-26-1
ICV Standard	MET 335-24-7
ICSA Standard	MET 335-25-1
ICSAB Standard	MET 335-25-2
Internal Standard	MET 335-10-6
Tune	344-88-13
P/A	344-76-4

ACID MATRIX

2% HNO3 \ 0.5% HCL Solution	MET 335-22-2
5% HNO3 \ 2% HCL Solution	MET 335-22-1

EQUIPMENT

Pipette 1	MET-109
Pipette 2	MET-112
Pipette 3	MET-105
Pipette 4	MET-107
Pipette 5	

Instrument ID	ICPMS2
ICPMS Data File	2220823B_MS2

ADDITIONAL STANDARDS

LDR Standard	MET 335-24-6
	ICVB - MET 335-18-3

LAB QC LIMITS

200.8 Correlation Coefficient (R) =0.998

6020B Correlation Coefficient (R) =0.995

ICV Recovery 90-110%

LLCCV Recovery 80-120%

ICSA \ ICSAB Recovery 80-120%

CCV Recovery 90-110%

Sample					
Data File	Acq. Date-Time	Type	Level	Sample Name	Total Dil.
001SMPL.d	8/23/2022 16:22	Sample		Blank	1
002SMPL.d	8/23/2022 16:25	Sample		Blank	1
003SMPL.d	8/23/2022 16:29	Sample		Blank	1
004CALB.d	8/23/2022 16:32	CalBlk	1	1300	1
005CALS.d	8/23/2022 16:36	CalStd	3	1302	1
006CALS.d	8/23/2022 16:41	CalStd	5	1304	1
007CALS.d	8/23/2022 16:44	CalStd	6	1305	1
008CALS.d	8/23/2022 16:48	CalStd	7	1306	1
009_ICV.d	8/23/2022 16:52	ICV		1600	1
010_ICB.d	8/23/2022 16:55	ICB		1700	1
0110.1.d	8/23/2022 16:59	LLCCV0.1		1804	1
1110.5.d	8/23/2022 17:02	LLCCV0.5		1804	1
1111CCV1.d	8/23/2022 17:06	LLCCV1		1803	1
1112ICSA.d	8/23/2022 17:09	ICSA		2000	1
1113ICSB.d	8/23/2022 17:13	ICSB		2100	1
1114_QC1.d	8/23/2022 17:16	QC1		LDR	1
1115SMPL.d	8/23/2022 17:20	Sample		2500	1
1116SMPL.d	8/23/2022 17:24	Sample		22208182701	396.8254
1117SMPL.d	8/23/2022 17:28	AllRef		22208060601	400
1118SMPL.d	8/23/2022 17:32	MSSOIL		2380902	400
1119SMPL.d	8/23/2022 17:35	MSDSOIL		2380903	400
1120SMPL.d	8/23/2022 17:39	PDS		2386581	400
1121SMPL.d	8/23/2022 17:42	Sample		2386582	2000
1122_CCV.d	8/23/2022 17:46	CCV		1800	1
1123_CCB.d	8/23/2022 17:49	CCB		1900	1
1124SMPL.d	8/23/2022 17:53	MBWATER		2385930	1
1125SMPL.d	8/23/2022 17:56	LCS6020		2385931	1
1126SMPL.d	8/23/2022 18:00	AllRef		22208191101	1
1127SMPL.d	8/23/2022 18:03	MS		22208191102	1
1128SMPL.d	8/23/2022 18:07	MSD		22208191103	1
1129SMPL.d	8/23/2022 18:10	PDS		2387001	1
1130SMPL.d	8/23/2022 18:14	Sample		2387002	5
1131SMPL.d	8/23/2022 18:17	Sample		22208191104	10
1132SMPL.d	8/23/2022 18:21	Sample		22208191105	10
1133SMPL.d	8/23/2022 18:24	Sample		22208191106	1
1134SMPL.d	8/23/2022 18:28	Sample		22208191107	1
1135SMPL.d	8/23/2022 18:31	Sample		22208191108	10
1136SMPL.d	8/23/2022 18:35	Sample		22208191109	1
1137SMPL.d	8/23/2022 18:39	Sample		22208191110	1
1138_CCV.d	8/23/2022 18:42	CCV		1800	1
1139_CCB.d	8/23/2022 18:46	CCB		1900	1
1140SMPL.d	8/23/2022 18:49	Sample		22208191111	1
1141SMPL.d	8/23/2022 18:53	Sample		22208183001	1
1142SMPL.d	8/23/2022 18:56	MBWATER		2386473	1
1143SMPL.d	8/23/2022 19:00	LCS6020		2386474	1

1144SMPL.d	8/23/2022 19:03	Sample		22208180101	100
1145SMPL.d	8/23/2022 19:07	AllRef		22208187601	100
1146SMPL.d	8/23/2022 19:10	MS		2386475	100
1147SMPL.d	8/23/2022 19:14	MSD		2386476	100
1148SMPL.d	8/23/2022 19:17	PDS		2387007	100
1149SMPL.d	8/23/2022 19:21	Sample		2387008	500
1150SMPL.d	8/23/2022 19:24	MBWATER		2385691	1
1151SMPL.d	8/23/2022 19:28	LCS200.8		2385692	1
1152SMPL.d	8/23/2022 19:31	Sample		22208185201	1
1153SMPL.d	8/23/2022 19:35	Sample		2385693	1
1154SMPL.d	8/23/2022 19:38	Sample		2385694	1
1155SMPL.d	8/23/2022 19:42	Sample		22208186101	1
1156SMPL.d	8/23/2022 19:45	Sample		22208186103	1
1157SMPL.d	8/23/2022 19:49	Sample		22208187501	300
1158SMPL.d	8/23/2022 19:52	Sample		22208187502	300
1159SMPL.d	8/23/2022 19:56	Sample		22208190101	1
1160_CCV.d	8/23/2022 19:59	CCV		1800	1
1161_CCB.d	8/23/2022 20:03	CCB		1900	1
1162SMPL.d	8/23/2022 20:06	Sample		2500	1
1163SMPL.d	8/23/2022 20:10	Sample		2500	1
1164SMPL.d	8/23/2022 20:13	Sample		2500	1

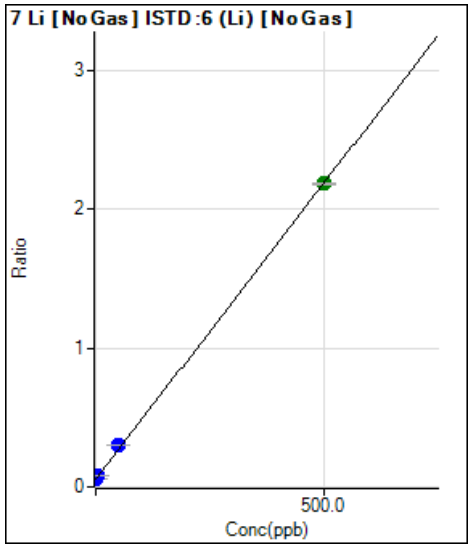
Vial Number
1101
1102
1103
1104
1105
1106
1107
1108
1109
1111
1112
1201
1202
1203
1204
1205
1206
3503
4212
4301
4302
4303
4304
1406
1506
4305
4306
4307
4308
4309
4310
4311
4312
4401
4402
4403
4404
4405
4406
1401
1501
4407
4408
2101
2102

2103
2104
2105
2106
2107
2108
4409
4410
4411
4412
4501
4502
4503
4504
4505
2112
1401
1501
5
5
5

Tune Mode	Mass	Name	ISTD	R	a	b (blank)	DL	BEC	Units
No Gas	7	Li	6 (Li) [No Gas]	0.999975337	0.004617483	0.054531405	0.191690389	11.80976893	ppb
No Gas	9	Be	6 (Li) [No Gas]	0.999989833	0.001103146	4.55E-06	0.003487187	0.004124747	ppb
No Gas	11	B	6 (Li) [No Gas]	0.999992083	0.000801255	0.004941844	0.526162851	6.167629736	ppb
He	23	Na	45 Sc [He]	0.999999771	0.00309361	0.017024904	3.517489178	5.503248544	ppb
He	24	Mg	45 Sc [He]	0.999999806	0.001184586	0.001734913	0.335568212	1.464573281	ppb
He	27	Al	45 Sc [He]	0.999999675	0.000235964	0.000268451	0.535091532	1.137677735	ppb
He	29	Si	45 Sc [He]	0.999970841	8.74E-06	0.005634155	238.8553158	644.9035591	ppb
He	39	K	45 Sc [He]	0.999999932	0.000897031	0.026217699	5.03181671	29.22719891	ppb
He	44	Ca	45 Sc [He]	0.999999936	4.35E-05	0.000687147	4.416748319	15.80152895	ppb
He	47	Ti	45 Sc [He]	0.999996789	0.000455042	2.95E-05	0.086691564	0.064803626	ppb
He	51	V	72 Ge [He]	0.999999295	0.022922317	0.000630236	0.003357444	0.027494444	ppb
He	52	Cr	72 Ge [He]	0.999999657	0.033035626	0.001691064	0.013923382	0.051189099	ppb
He	55	Mn	72 Ge [He]	0.999999969	0.010532533	0.000409133	0.016684936	0.03884469	ppb
He	57	Fe	72 Ge [He]	0.999999959	0.00056788	0.00019354	0.438181208	0.340810543	ppb
He	59	Co	72 Ge [He]	0.99999929	0.06442749	0.00018308	0.001710057	0.002841652	ppb
He	60	Ni	103 Rh [He]	0.999999479	0.000380892	8.83E-06	0.014786233	0.023176185	ppb
He	63	Cu	103 Rh [He]	0.999999942	0.001105777	6.88E-05	0.012939123	0.062260461	ppb
He	66	Zn	103 Rh [He]	0.999998117	0.000106582	5.91E-05	0.009503244	0.554239802	ppb
He	75	As	72 Ge [He]	0.999999698	0.005776789	7.77E-05	0.011773921	0.013443359	ppb
He	78	Se	72 Ge [He]	0.999997997	0.000281988	3.26E-05	0.063338448	0.11576475	ppb
No Gas	88	Sr	72 Ge [No Gas]	0.999999985	0.034263047	0.00053846	0.003474733	0.015715477	ppb
No Gas	90	Zr	72 Ge [No Gas]	0.999999265	0.020962987	0.000797059	0.001045819	0.038022191	ppb
No Gas	95	Mo	115 In [No Gas]	0.999983356	0.000712476	1.12E-05	0.005465658	0.015684201	ppb
No Gas	107	Ag	115 In [No Gas]	0.999998647	0.001847071	1.11E-05	0.001553246	0.005984213	ppb
No Gas	111	Cd	115 In [No Gas]	0.999997762	0.000412653	1.58E-06	0.001107454	0.003826714	ppb
No Gas	118	(Sn)	115 In [No Gas]	0.999983334	0.001323592	0.00032249	0.022540923	0.243647294	ppb
He	118	(Sn)	115 In [He]	0.99999599	0.001918242	0.000505023	0.025546812	0.263274059	ppb
He	120	Sn	115 In [He]	0.99999448	0.002841418	0.000720503	0.020961561	0.253571698	ppb
No Gas	121	Sb	115 In [No Gas]	0.999999954	0.00160552	0.000100541	0.003460834	0.062622208	ppb
No Gas	137	Ba	115 In [No Gas]	0.999994099	0.000694805	3.62E-06	0.002141064	0.00520967	ppb
He	156	[Se]	115 In [He]						ppb
No Gas	201	Hg							
No Gas	205	Tl	209 Bi [No Gas]	0.999997354	0.004582742	3.50E-05	0.000522832	0.007645117	ppb
No Gas	206	(Pb)	209 Bi [No Gas]	0.999986908	0.001603024	9.89E-06	0.000884202	0.006170666	ppb
No Gas	207	(Pb)	209 Bi [No Gas]	0.999985388	0.001378963	1.14E-05	0.005396226	0.008254888	ppb
No Gas	208	Pb	209 Bi [No Gas]	0.999992498	0.006277194	4.57E-05	0.000494441	0.007275407	ppb
No Gas	6	(Li)							ppb
No Gas	45	Sc							ppb
He	45	Sc							ppb
No Gas	72	Ge							ppb
He	72	Ge							ppb
No Gas	103	Rh							ppb
He	103	Rh							ppb
No Gas	115	In							ppb
He	115	In							ppb
No Gas	159	Tb							ppb
He	159	Tb							ppb
No Gas	175	Lu							ppb
He	175	Lu							ppb
No Gas	209	Bi							ppb
He	209	Bi							ppb

Batch Folder: C:\Agilent\ICPMH\1\DATA\2220823B_MS2.b\
Analysis File: 2220823B_MS2.batch.bin
DA Date-Time: 8/24/2022 09:14:58
Calibration Title: EPA6020
Calibration Method: External Calibration
VIS Interpolation Fit:

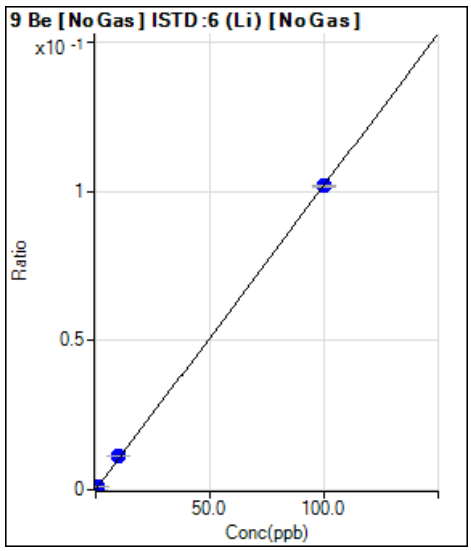
Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	1300	8/23/2022 16:32:37
2			
3	005CALS.d	1302	8/23/2022 16:36:06
4			
5	006CALS.d	1304	8/23/2022 16:41:04
6	007CALS.d	1305	8/23/2022 16:44:45
7	008CALS.d	1306	8/23/2022 16:48:24
8			



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	352075.01	0.0544	P	0.5
2	☐	0.000					
3	☐	0.500	1.037	370374.34	0.0588	P	0.3
4	☐	2.500					
5	☐	5.000	6.136	509162.92	0.0806	P	0.5
6	☐	50.000	57.512	1878455.70	0.2994	P	0.5
7	☐	500.000	499.237	15030118.5	2.1812	A	0.5
8	☐						

y = 0.0043 * x + 0.0544
R = 0.9999
DL = 0.207
BEC = 11.81

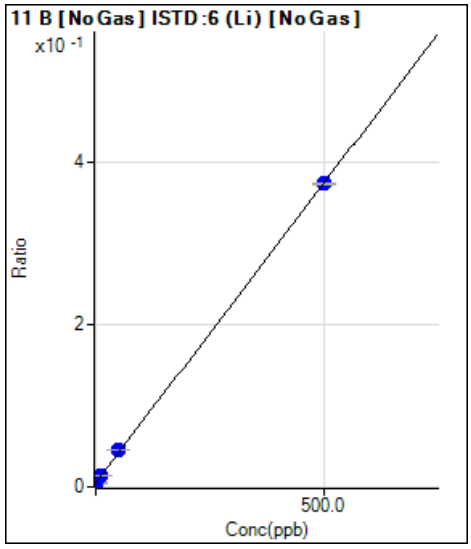
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29.33	0.0000	P	28.2
2	☐	0.000					
3	☐	0.100	0.113	756.69	0.0001	P	6.3
4	☐	0.500					
5	☐	1.000	1.131	7317.12	0.0012	P	1.9
6	☐	10.000	11.192	71621.29	0.0114	P	0.6
7	☐	100.000	99.879	701817.73	0.1019	P	0.3
8	☐						

y = 0.0010 * x + 4.5415E-006
R = 0.9999
DL = 0.003765
BEC = 0.004125

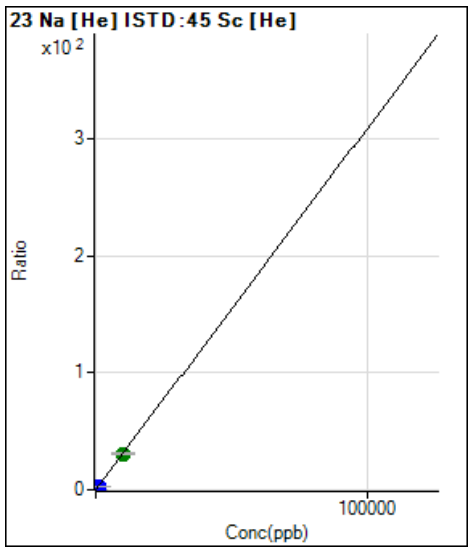
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31901.03	0.0049	P	2.8
2	☐	0.000					
3	☐	1.000	1.658	38770.11	0.0062	P	2.1
4	☐	5.000					
5	☐	10.000	11.441	84675.65	0.0134	P	3.0
6	☐	50.000	55.883	290325.54	0.0463	P	1.5
7	☐	500.000	499.382	2580214.81	0.3744	P	0.8
8	☐						

y = 7.3992E-004 * x + 0.0049
R = 0.9999
DL = 0.5688
BEC = 6.168

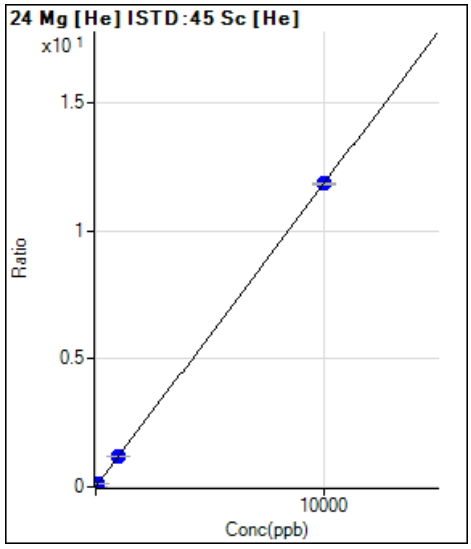
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3467.20	0.0170	P	21.3
2	☐	0.000					
3	☐	10.000	8.527	8752.80	0.0434	P	2.7
4	☐	50.000					
5	☐	100.000	102.768	67859.93	0.3349	P	1.0
6	☐	1000.000	1006.057	615391.72	3.1294	P	1.9
7	☐	10000.00	9999.368	6056168.87	30.951	A	0.6
8	☐						

y = 0.0031 * x + 0.0170
R = 1.0000
DL = 3.517
BEC = 5.503

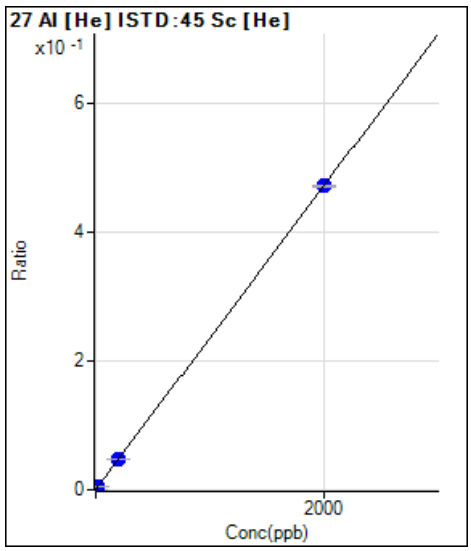
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.35	0.0017	P	7.6
2	☐	0.000					
3	☐	10.000	8.141	2293.59	0.0114	P	11.7
4	☐	50.000					
5	☐	100.000	100.391	24443.89	0.1207	P	1.7
6	☐	1000.000	1005.352	234544.65	1.1927	P	1.5
7	☐	10000.00	9999.463	2318107.15	11.847	P	0.3
8	☐						

y = 0.0012 * x + 0.0017
R = 1.0000
DL = 0.3356
BEC = 1.465

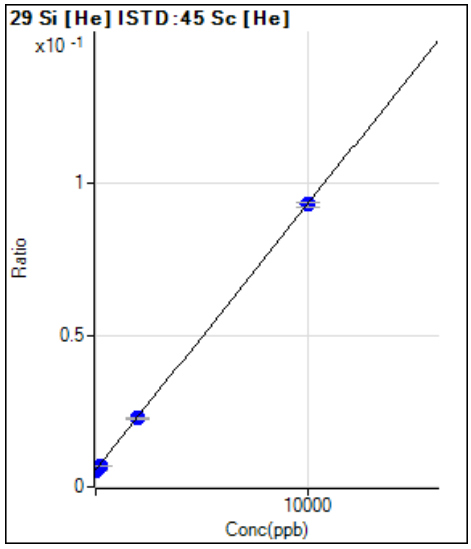
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54.67	0.0003	P	15.7
2	☐	0.000					
3	☐	2.000	1.499	125.33	0.0006	P	31.9
4	☐	10.000					
5	☐	20.000	19.580	990.71	0.0049	P	9.6
6	☐	200.000	201.246	9390.97	0.0478	P	2.1
7	☐	2000.000	1999.880	92391.30	0.4722	P	0.3
8	☐						

y = 2.3596E-004 * x + 2.6845E-004
R = 1.0000
DL = 0.5351
BEC = 1.138

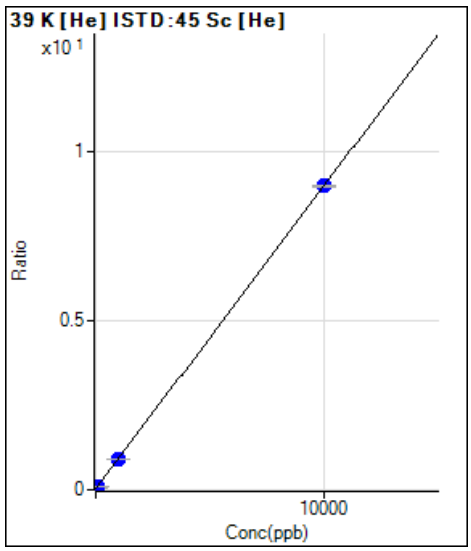
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1147.39	0.0056	P	12.3
2	☐	0.000					
3	☐	20.000	-60.251	1030.04	0.0051	P	1.6
4	☐	100.000					
5	☐	200.000	142.020	1392.74	0.0069	P	5.9
6	☐	2000.000	1932.010	4427.34	0.0225	P	1.8
7	☐	10000.00	10014.91	18221.73	0.0931	P	1.6
8	☐						

y = 8.7364E-006 * x + 0.0056
R = 1.0000
DL = 238.9
BEC = 644.9

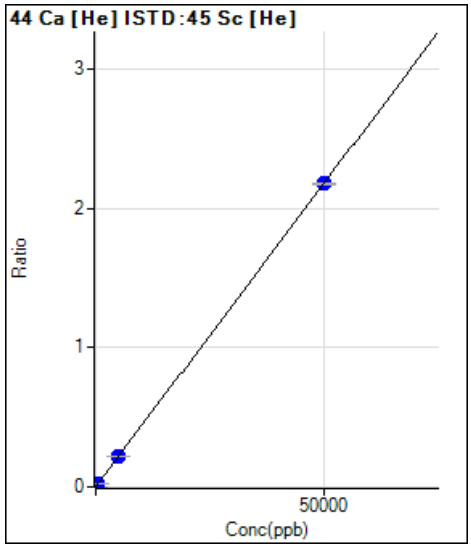
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5341.14	0.0262	P	5.7
2	☐	0.000					
3	☐	10.000	10.920	7262.03	0.0360	P	3.5
4	☐	50.000					
5	☐	100.000	100.226	23525.91	0.1161	P	0.6
6	☐	1000.000	996.819	180998.12	0.9204	P	1.2
7	☐	10000.00	10000.31	1760405.60	8.9968	P	0.5
8	☐						

y = 8.9703E-004 * x + 0.0262
R = 1.0000
DL = 5.032
BEC = 29.23

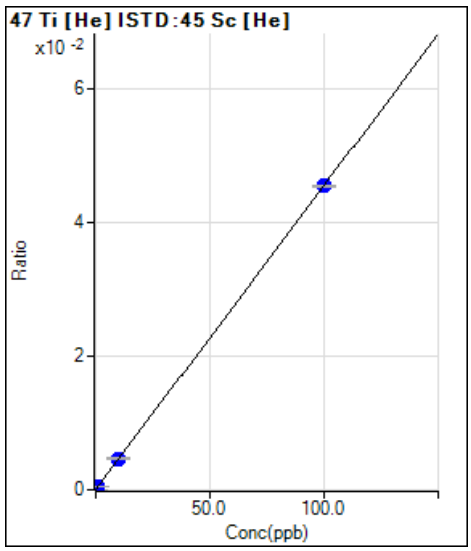
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0007	P	9.3
2	☐	0.000					
3	☐	50.000	37.417	466.68	0.0023	P	2.3
4	☐	250.000					
5	☐	500.000	504.923	4587.47	0.0226	P	5.2
6	☐	5000.000	5007.827	42962.26	0.2185	P	1.0
7	☐	50000.00	49999.18	425580.16	2.1750	P	0.3
8	☐						

y = 4.3486E-005 * x + 6.8715E-004
R = 1.0000
DL = 4.417
BEC = 15.8

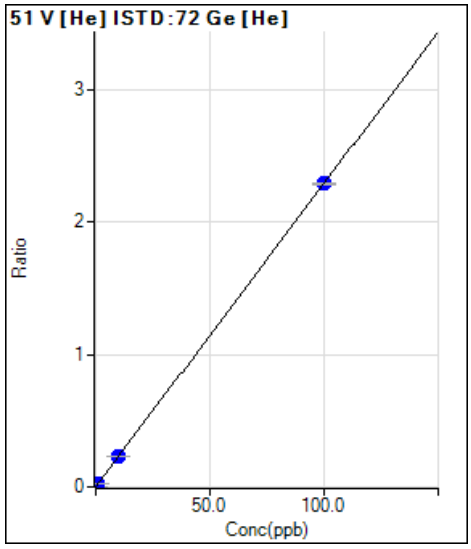
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.00	0.0000	P	44.6
2	☐	0.000					
3	☐	0.100	0.077	13.00	0.0001	P	27.4
4	☐	0.500					
5	☐	1.000	0.984	96.67	0.0005	P	8.9
6	☐	10.000	10.236	921.70	0.0047	P	7.5
7	☐	100.000	99.977	8907.35	0.0455	P	0.8
8	☐						

y = 4.5504E-004 * x + 2.9488E-005
R = 1.0000
DL = 0.08669
BEC = 0.0648

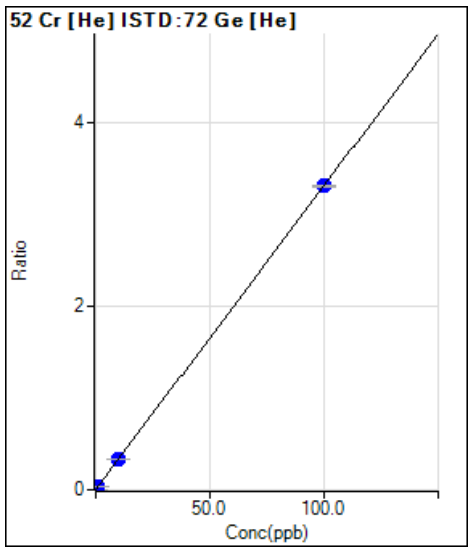
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0006	P	4.1
2	☐	0.000					
3	☐	0.100	0.077	495.57	0.0024	P	4.9
4	☐	0.500					
5	☐	1.000	0.971	4721.91	0.0229	P	3.8
6	☐	10.000	9.871	45663.52	0.2269	P	1.7
7	☐	100.000	100.013	453090.57	2.2932	P	0.7
8	☐						

y = 0.0229 * x + 6.3024E-004
R = 1.0000
DL = 0.003357
BEC = 0.02749

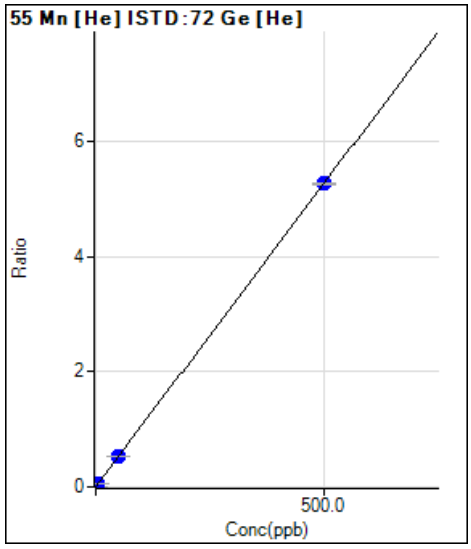
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	348.90	0.0017	P	9.1
2	☐	0.000					
3	☐	0.100	0.091	968.93	0.0047	P	8.7
4	☐	0.500					
5	☐	1.000	1.006	7205.16	0.0349	P	1.7
6	☐	10.000	9.919	66285.25	0.3294	P	1.5
7	☐	100.000	100.008	653113.79	3.3055	P	0.7
8	☐						

y = 0.0330 * x + 0.0017
R = 1.0000
DL = 0.01392
BEC = 0.05119

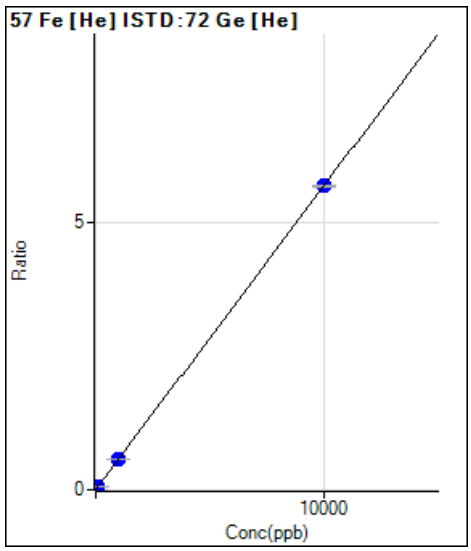
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84.44	0.0004	P	14.3
2	☐	0.000					
3	☐	0.500	0.416	991.15	0.0048	P	2.4
4	☐	2.500					
5	☐	5.000	5.038	11028.66	0.0535	P	2.0
6	☐	50.000	50.059	106192.62	0.5277	P	1.2
7	☐	500.000	499.994	1040617.00	5.2666	P	0.2
8	☐						

y = 0.0105 * x + 4.0913E-004
R = 1.0000
DL = 0.01668
BEC = 0.03884

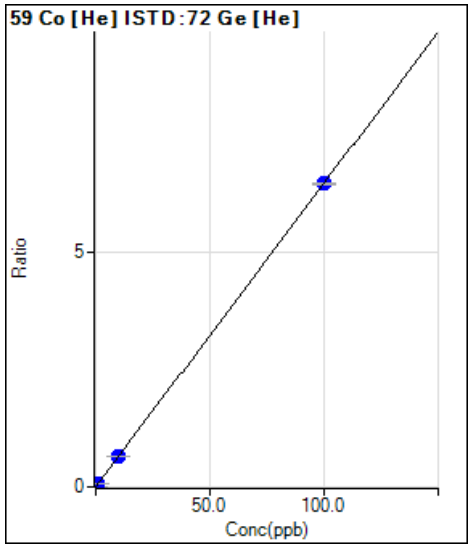
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0002	P	42.9
2	☐	0.000					
3	☐	10.000	8.801	1073.41	0.0052	P	3.7
4	☐	50.000					
5	☐	100.000	98.864	11621.64	0.0563	P	4.4
6	☐	1000.000	1001.895	114543.42	0.5691	P	1.3
7	☐	10000.00	9999.823	1122074.39	5.6789	P	0.4
8	☐						

y = 5.6788E-004 * x + 1.9354E-004
R = 1.0000
DL = 0.4382
BEC = 0.3408

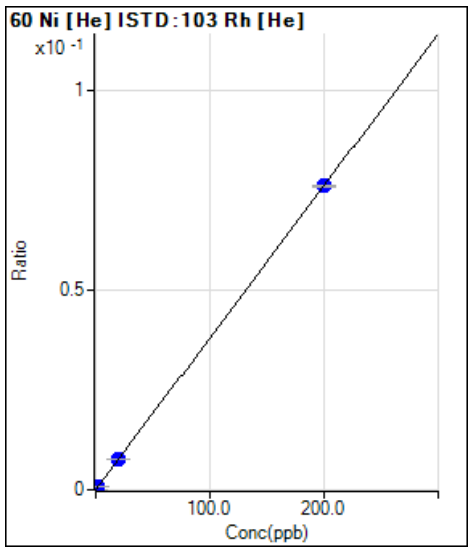
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37.78	0.0002	P	20.1
2	☐	0.000					
3	☐	0.100	0.088	1204.51	0.0058	P	16.0
4	☐	0.500					
5	☐	1.000	0.998	13307.19	0.0645	P	0.9
6	☐	10.000	10.112	131151.16	0.6517	P	1.5
7	☐	100.000	99.989	1272898.56	6.4422	P	0.3
8	☐						

y = 0.0644 * x + 1.8308E-004
R = 1.0000
DL = 0.00171
BEC = 0.002842

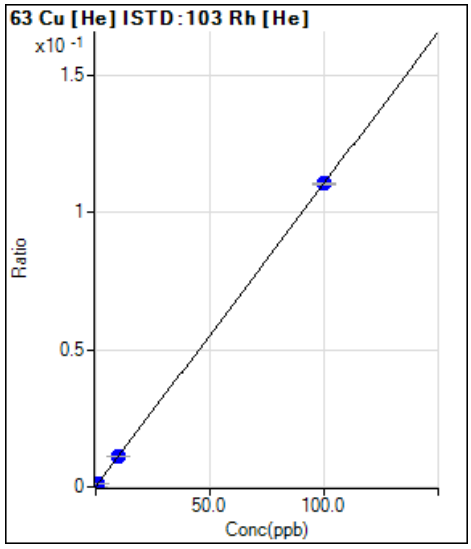
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0000	P	21.3
2	☐	0.000					
3	☐	0.200	0.171	764.47	0.0001	P	8.4
4	☐	1.000					
5	☐	2.000	1.949	7758.79	0.0008	P	3.3
6	☐	20.000	19.781	76648.12	0.0075	P	0.9
7	☐	200.000	200.022	731416.43	0.0762	P	0.2
8	☐						

y = 3.8089E-004 * x + 8.8276E-006
R = 1.0000
DL = 0.01479
BEC = 0.02318

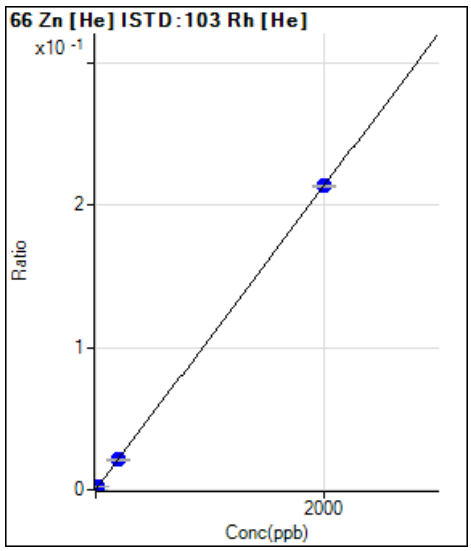
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	727.81	0.0001	P	6.9
2	☐	0.000					
3	☐	0.100	0.099	1843.47	0.0002	P	2.9
4	☐	0.500					
5	☐	1.000	1.036	12532.09	0.0012	P	1.4
6	☐	10.000	10.014	113219.81	0.0111	P	0.2
7	☐	100.000	99.998	1062099.64	0.1106	P	0.3
8	☐						

y = 0.0011 * x + 6.8846E-005
R = 1.0000
DL = 0.01294
BEC = 0.06226

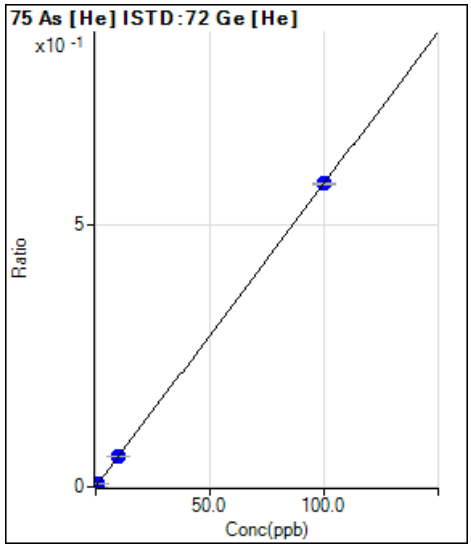
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	624.47	0.0001	P	0.6
2	☐	0.000					
3	☐	2.000	1.539	2303.54	0.0002	P	7.9
4	☐	10.000					
5	☐	20.000	19.310	21857.51	0.0021	P	2.0
6	☐	200.000	195.896	212757.76	0.0209	P	0.4
7	☐	2000.000	2000.418	2047187.21	0.2133	P	0.3
8	☐						

y = 1.0658E-004 * x + 5.9072E-005
R = 1.0000
DL = 0.009503
BEC = 0.5542

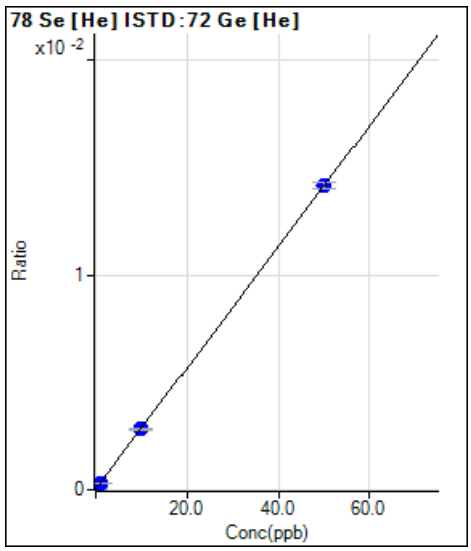
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.00	0.0001	P	29.2
2	☐	0.000					
3	☐	0.100	0.085	117.33	0.0006	P	7.1
4	☐	0.500					
5	☐	1.000	0.991	1197.39	0.0058	P	4.0
6	☐	10.000	9.918	11546.25	0.0574	P	0.9
7	☐	100.000	100.008	114167.28	0.5778	P	0.5
8	☐						

y = 0.0058 * x + 7.7659E-005
R = 1.0000
DL = 0.01177
BEC = 0.01344

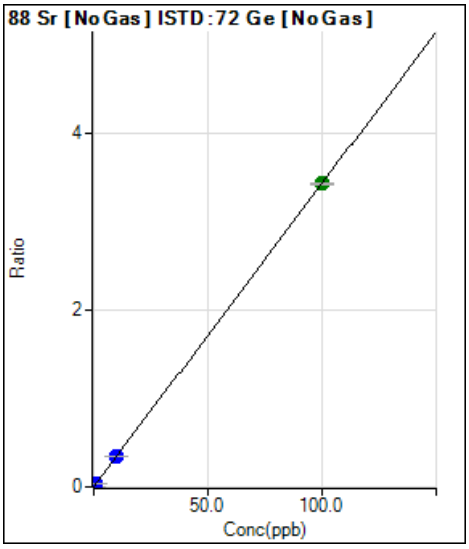
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.75	0.0000	P	18.4
2	☐	0.000					
3	☐	0.100	0.077	11.25	0.0001	P	15.4
4	☐	0.500					
5	☐	1.000	0.891	58.58	0.0003	P	8.4
6	☐	10.000	9.937	570.68	0.0028	P	2.7
7	☐	50.000	50.015	2793.94	0.0141	P	2.1
8	☐						

y = 2.8209E-004 * x + 3.2725E-005
R = 1.0000
DL = 0.06405
BEC = 0.1158

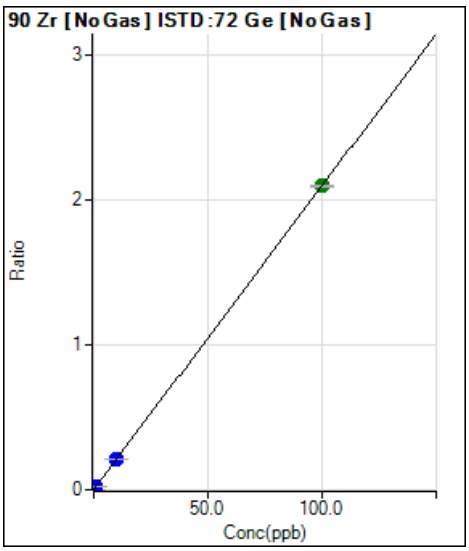
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2720.35	0.0005	P	7.4
2	☐	0.000					
3	☐	0.100	0.095	19440.32	0.0038	P	2.7
4	☐	0.500					
5	☐	1.000	0.992	175393.51	0.0345	P	1.8
6	☐	10.000	9.981	1720865.76	0.3425	P	0.3
7	☐	100.000	100.002	16560543.0	3.4269	A	0.6
8	☐						

y = 0.0343 * x + 5.3846E-004
R = 1.0000
DL = 0.003475
BEC = 0.01572

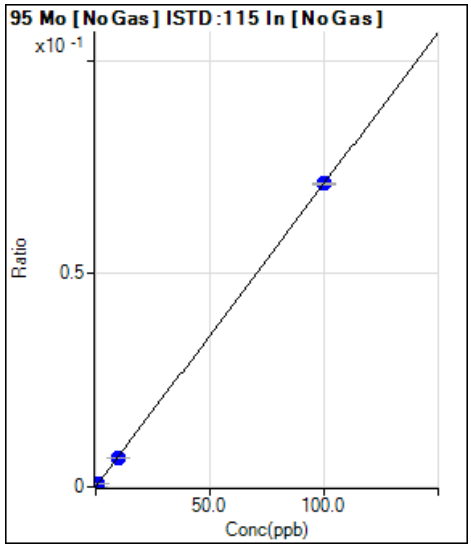
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4027.28	0.0008	P	0.9
2	☐	0.000					
3	☐	0.100	0.073	11886.11	0.0023	P	3.1
4	☐	0.500					
5	☐	1.000	0.908	100783.51	0.0198	P	1.5
6	☐	10.000	9.873	1043832.28	0.2078	P	0.6
7	☐	100.000	100.014	10135760.1	2.0974	A	0.4
8	☐						

y = 0.0210 * x + 7.9706E-004
R = 1.0000
DL = 0.001046
BEC = 0.03802

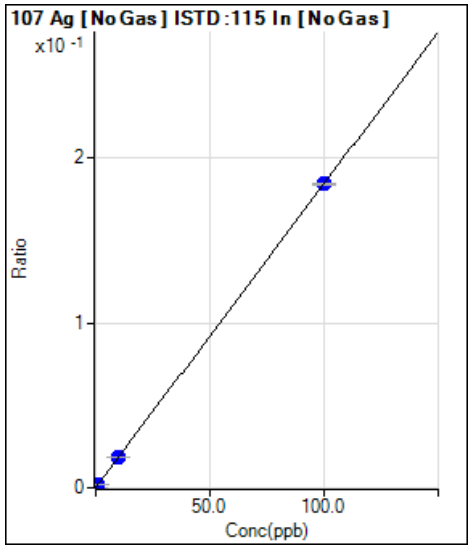
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	511.13	0.0000	P	11.6
2	☐	0.000					
3	☐	0.100	0.098	3654.95	0.0001	P	1.4
4	☐	0.500					
5	☐	1.000	0.935	30651.64	0.0007	P	2.4
6	☐	10.000	9.435	301983.30	0.0067	P	0.1
7	☐	100.000	100.057	3046469.46	0.0711	P	0.2
8	☐						

y = 7.1098E-004 * x + 1.1175E-005
R = 1.0000
DL = 0.005477
BEC = 0.01568

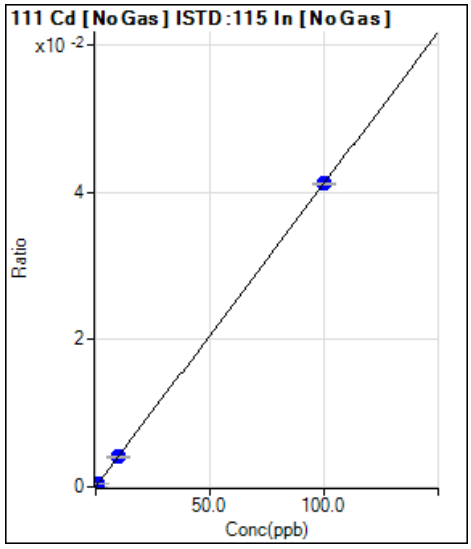
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	505.57	0.0000	P	8.7
2	☐	0.000					
3	☐	0.100	0.102	9018.51	0.0002	P	2.6
4	☐	0.500					
5	☐	1.000	0.981	82544.92	0.0018	P	0.6
6	☐	10.000	9.853	816752.03	0.0182	P	0.7
7	☐	100.000	100.015	7893677.46	0.1844	P	0.4
8	☐						

y = 0.0018 * x + 1.1053E-005
R = 1.0000
DL = 0.001557
BEC = 0.005984

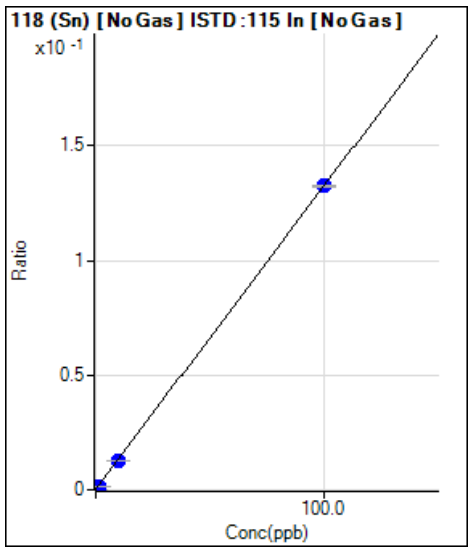
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	72.22	0.0000	P	9.6
2	☐	0.000					
3	☐	0.100	0.099	1905.71	0.0000	P	8.8
4	☐	0.500					
5	☐	1.000	0.981	18404.23	0.0004	P	0.9
6	☐	10.000	9.805	181546.28	0.0040	P	0.9
7	☐	100.000	100.020	1763581.67	0.0412	P	0.3
8	☐						

y = 4.1179E-004 * x + 1.5791E-006
R = 1.0000
DL = 0.00111
BEC = 0.003827

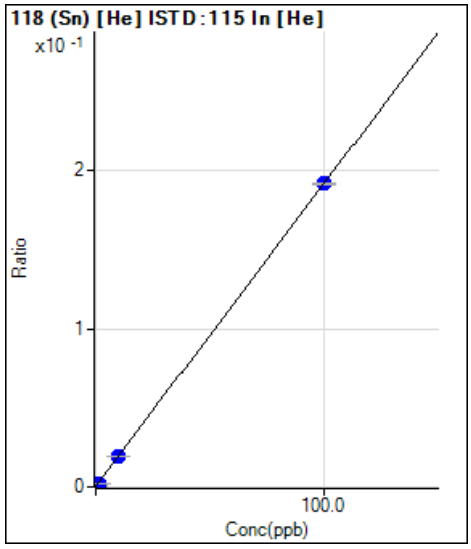
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14750.03	0.0003	P	3.1
2	☐	0.000					
3	☐	0.100	-0.082	9694.52	0.0002	P	1.2
4	☐	0.500					
5	☐	1.000	0.793	62149.13	0.0014	P	1.0
6	☐	10.000	9.364	570388.81	0.0127	P	1.1
7	☐	100.000	100.066	5673009.22	0.1325	P	0.2
8	☐						

y = 0.0013 * x + 3.2249E-004
R = 1.0000
DL = 0.02259
BEC = 0.2436

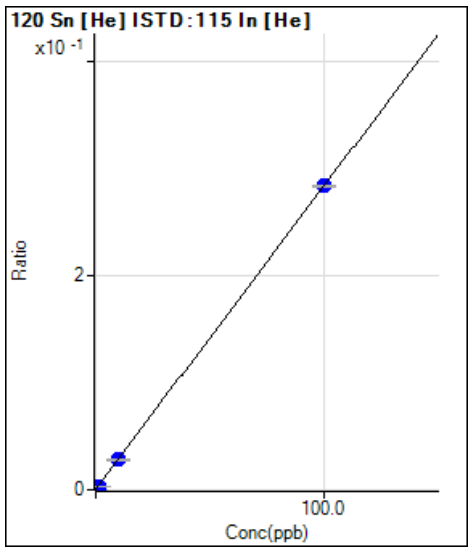
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1138.95	0.0005	P	3.2
2	☐	0.000					
3	☐	0.100	-0.100	712.25	0.0003	P	10.7
4	☐	0.500					
5	☐	1.000	0.815	4649.70	0.0021	P	4.2
6	☐	10.000	9.698	42492.53	0.0191	P	1.1
7	☐	100.000	100.032	415206.46	0.1918	P	0.6
8	☐						

y = 0.0019 * x + 5.0502E-004
R = 1.0000
DL = 0.02562
BEC = 0.2633

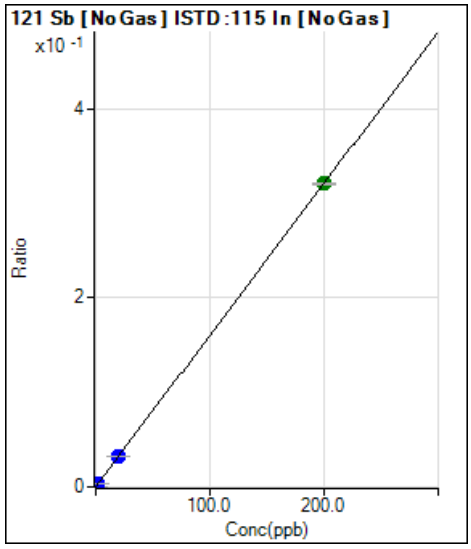
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1624.56	0.0007	P	2.8
2	☐	0.000					
3	☐	0.100	-0.088	1065.61	0.0005	P	1.1
4	☐	0.500					
5	☐	1.000	0.796	6707.22	0.0030	P	1.5
6	☐	10.000	9.639	62505.25	0.0280	P	1.2
7	☐	100.000	100.038	615013.14	0.2841	P	0.3
8	☐						

y = 0.0028 * x + 7.2050E-004
R = 1.0000
DL = 0.02103
BEC = 0.2536

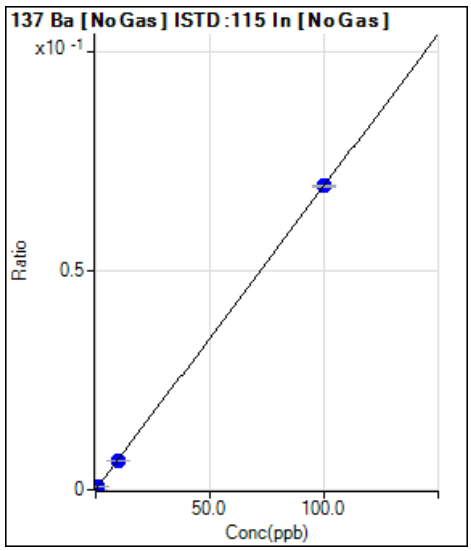
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	4598.57	0.0001	P	1.8
2		0.000					
3		0.200	0.206	19452.36	0.0004	P	0.4
4		1.000					
5		2.000	2.004	150233.00	0.0033	P	0.5
6		20.000	19.980	1443250.98	0.0321	P	0.9
7		200.000	200.002	13724230.8	0.3205	A	0.5
8							

y = 0.0016 * x + 1.0054E-004
R = 1.0000
DL = 0.003468
BEC = 0.06262

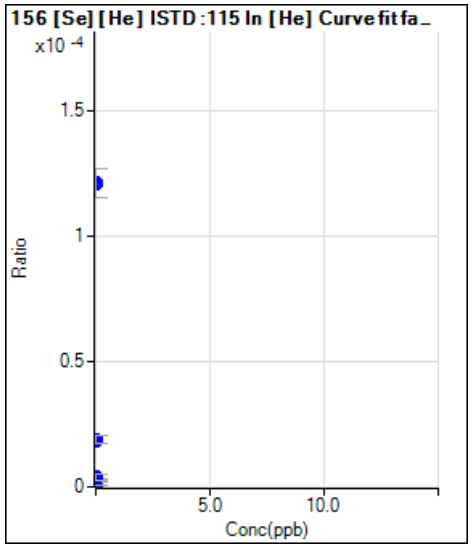
Weight: <None>
Min Conc: <None>



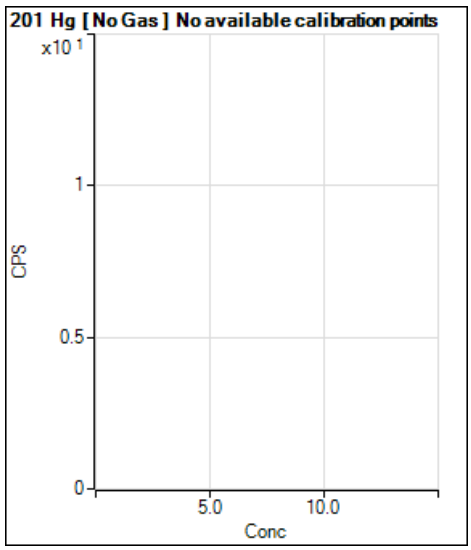
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	165.56	0.0000	P	13.7
2		0.000					
3		0.100	0.096	3162.62	0.0001	P	2.5
4		0.500					
5		1.000	0.949	30002.30	0.0007	P	2.0
6		10.000	9.668	301431.24	0.0067	P	0.8
7		100.000	100.034	2969837.45	0.0694	P	0.6
8		1000.000					

y = 6.9335E-004 * x + 3.6197E-006
R = 1.0000
DL = 0.002146
BEC = 0.00521

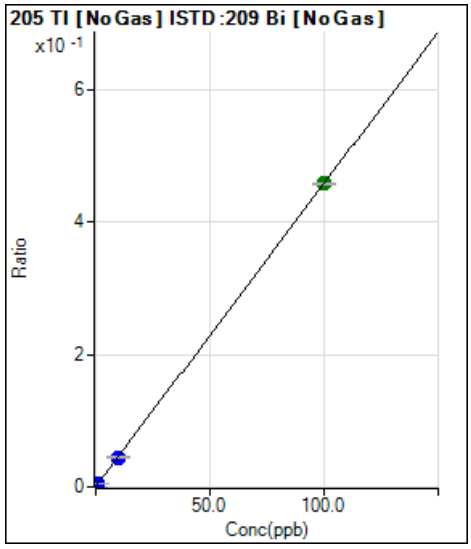
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		4.44	0.0000	P	114.
2	☐	0.000					
3	☐	0.000		3.33	0.0000	P	100.
4	☐	0.000					
5	☐	0.000		8.89	0.0000	P	77.4
6	☐	0.000		42.22	0.0000	P	19.7
7	☐	0.000		262.23	0.0001	P	9.5
8	☐						



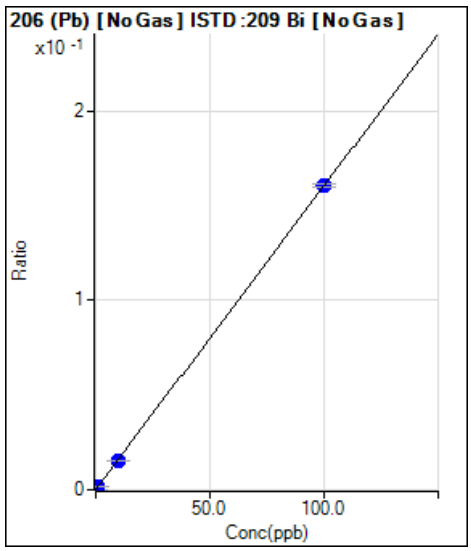
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			15.00		P	24.0
2	☐						
3	☐			15.17		P	15.2
4	☐						
5	☐			15.17		P	28.0
6	☐			20.67		P	11.9
7	☐			53.33		P	8.4
8	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.79	0.0000	P	2.3
2	☐	0.000					
3	☐	0.100	0.098	19378.01	0.0005	P	2.8
4	☐	0.500					
5	☐	1.000	0.951	176442.99	0.0044	P	0.6
6	☐	10.000	9.764	1789635.39	0.0448	P	0.9
7	☐	100.000	100.024	17381987.2	0.4584	A	0.5
8	☐						

y = 0.0046 * x + 3.5036E-005
R = 1.0000
DL = 0.0005228
BEC = 0.007645

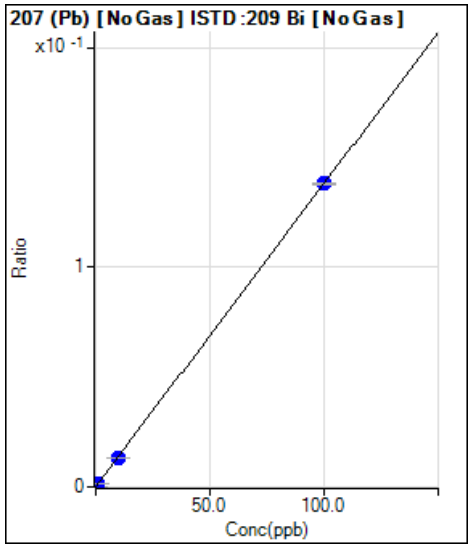
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.02	0.0000	P	4.8
2	☐	0.000					
3	☐	0.100	0.100	6815.30	0.0002	P	2.9
4	☐	0.500					
5	☐	1.000	0.936	60611.82	0.0015	P	0.9
6	☐	10.000	9.482	607893.08	0.0152	P	1.0
7	☐	100.000	100.052	6082102.20	0.1604	P	0.9
8	☐						

y = 0.0016 * x + 9.8917E-006
R = 1.0000
DL = 0.0008842
BEC = 0.006171

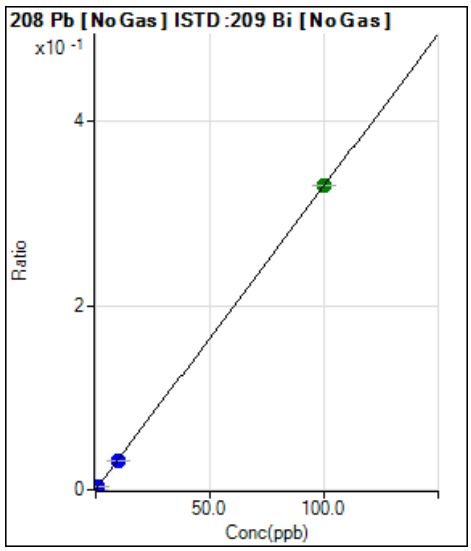
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.03	0.0000	P	21.8
2	☐	0.000					
3	☐	0.100	0.095	5708.10	0.0001	P	1.5
4	☐	0.500					
5	☐	1.000	0.941	52561.34	0.0013	P	3.5
6	☐	10.000	9.453	521440.70	0.0130	P	0.6
7	☐	100.000	100.055	5231979.30	0.1380	P	0.8
8	☐						

y = 0.0014 * x + 1.1383E-005
R = 1.0000
DL = 0.005396
BEC = 0.008255

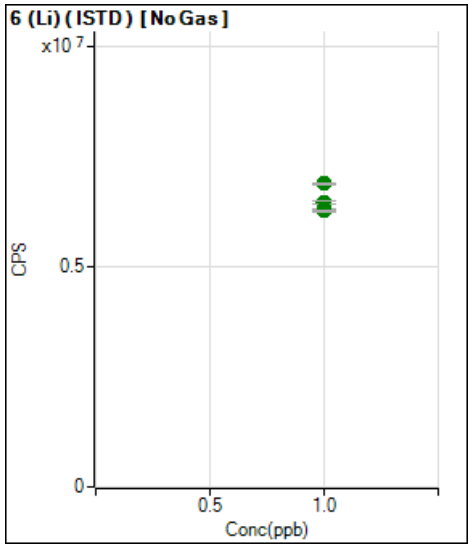
Weight: <None>
Min Conc: <None>



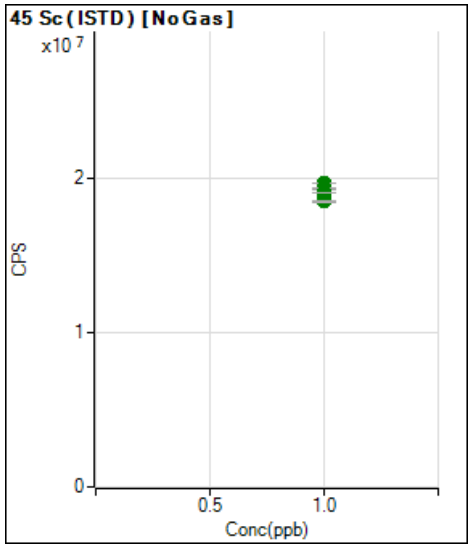
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	986.74	0.0000	P	11.3
2	☐	0.000					
3	☐	0.100	0.101	14288.17	0.0004	P	1.8
4	☐	0.500					
5	☐	1.000	0.983	130990.24	0.0033	P	1.7
6	☐	10.000	9.738	1283433.05	0.0321	P	0.6
7	☐	100.000	100.026	12498834.3	0.3296	A	0.1
8	☐						

y = 0.0033 * x + 2.4394E-005
R = 1.0000
DL = 0.002516
BEC = 0.007275

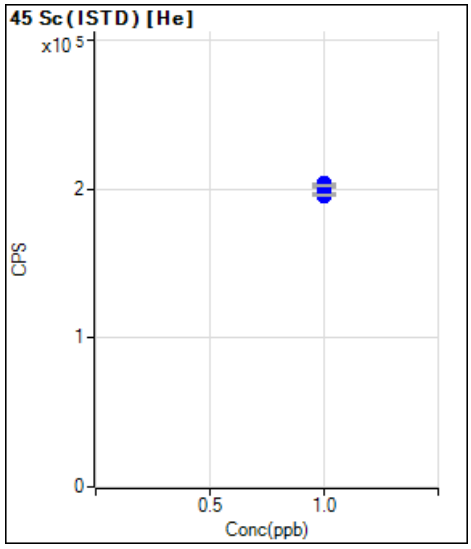
Weight: <None>
Min Conc: <None>



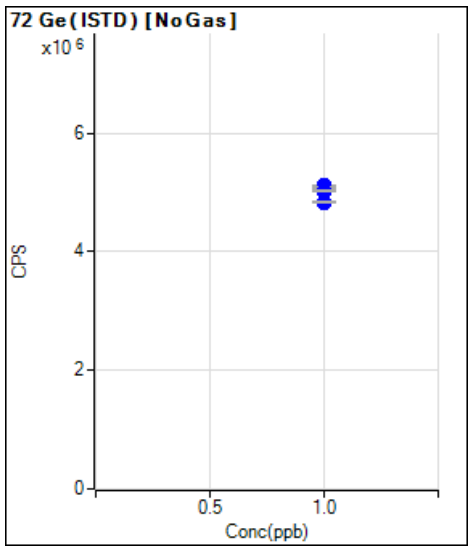
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6468588.03		A	0.8
2	☐	1.000					
3	☐	1.000		6294191.16		A	0.4
4	☐	1.000					
5	☐	1.000		6319677.62		A	0.2
6	☐	1.000		6273436.16		A	0.6
7	☐	1.000		6890797.40		A	0.9
8	☐	1.000					



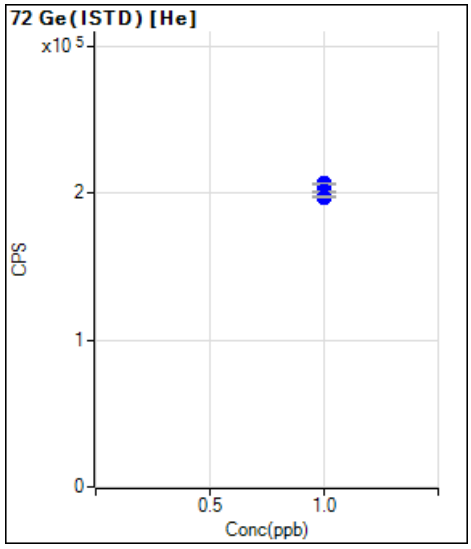
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19674042.0		A	0.1
2	☐	1.000					
3	☐	1.000		19336518.6		A	0.4
4	☐	1.000					
5	☐	1.000		19403748.1		A	0.1
6	☐	1.000		19095340.3		A	0.3
7	☐	1.000		18548663.7		A	0.6
8	☐	1.000					



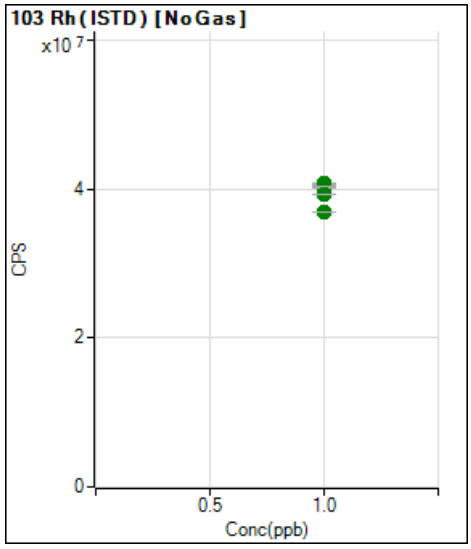
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		203724.93		P	0.5
2	☐	1.000					
3	☐	1.000		201675.03		P	0.7
4	☐	1.000					
5	☐	1.000		202588.75		P	0.7
6	☐	1.000		196667.15		P	1.0
7	☐	1.000		195673.09		P	0.6
8	☐	1.000					



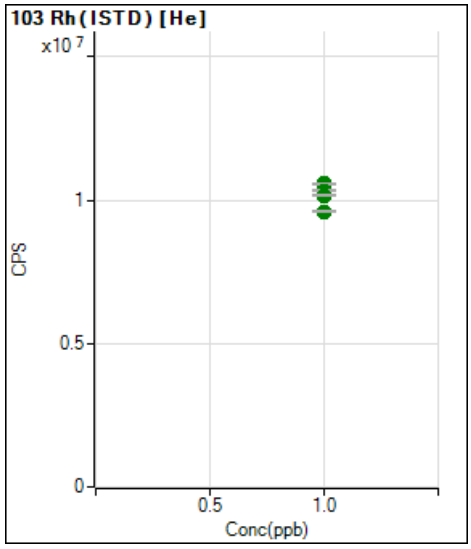
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5052757.86		P	0.3
2	☐	1.000					
3	☐	1.000		5110859.24		P	0.4
4	☐	1.000					
5	☐	1.000		5079475.91		P	0.5
6	☐	1.000		5024298.27		P	0.1
7	☐	1.000		4832641.75		P	0.7
8	☐	1.000					



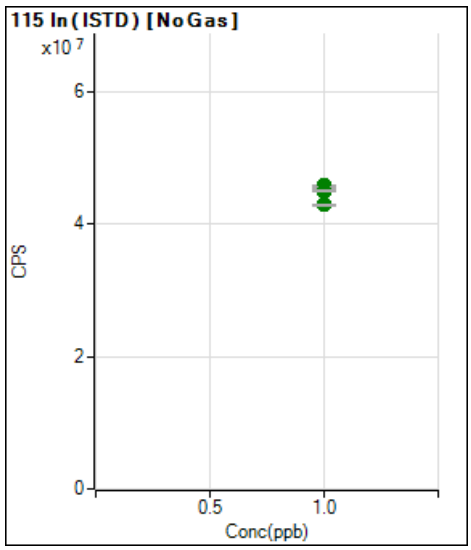
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		206259.54		P	0.7
2	☐	1.000					
3	☐	1.000		206750.71		P	0.1
4	☐	1.000					
5	☐	1.000		206270.73		P	0.6
6	☐	1.000		201267.91		P	0.8
7	☐	1.000		197589.68		P	0.8
8	☐	1.000					



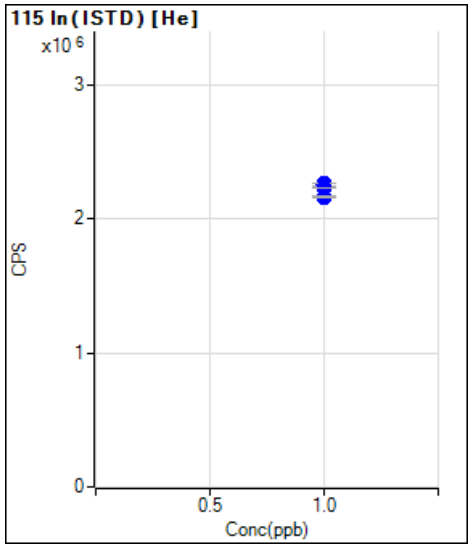
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		40761897.2		A	0.2
2	☐	1.000					
3	☐	1.000		40304630.6		A	0.4
4	☐	1.000					
5	☐	1.000		40200065.0		A	0.5
6	☐	1.000		39315313.9		A	0.3
7	☐	1.000		36995557.4		A	0.1
8	☐	1.000					



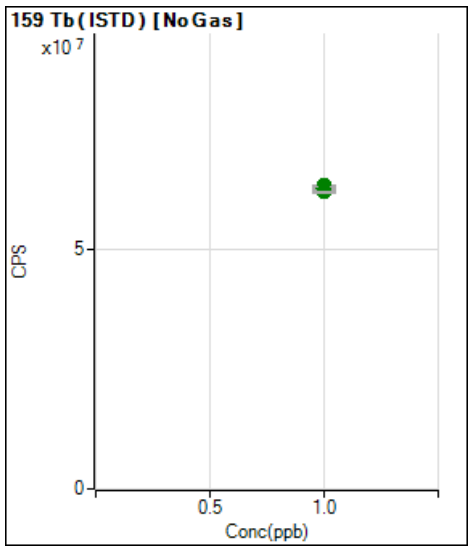
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10571093.4		A	0.5
2	☐	1.000					
3	☐	1.000		10328189.8		A	0.5
4	☐	1.000					
5	☐	1.000		10324502.0		A	0.8
6	☐	1.000		10161384.3		A	0.3
7	☐	1.000		9599138.23		A	0.4
8	☐	1.000					



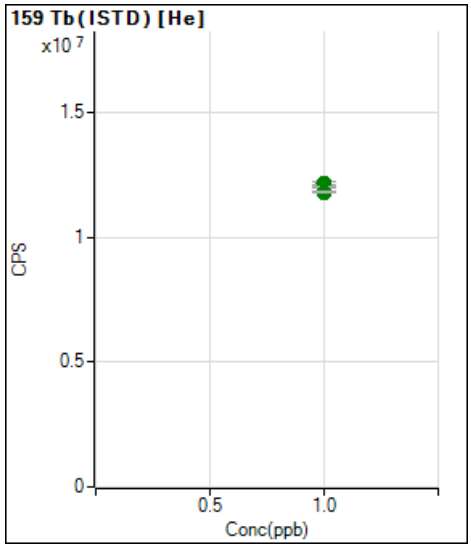
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		45738292.6		A	0.1
2	☐	1.000					
3	☐	1.000		45218223.7		A	0.8
4	☐	1.000					
5	☐	1.000		45364203.7		A	0.7
6	☐	1.000		44944983.7		A	0.2
7	☐	1.000		42818141.6		A	0.9
8	☐	1.000					



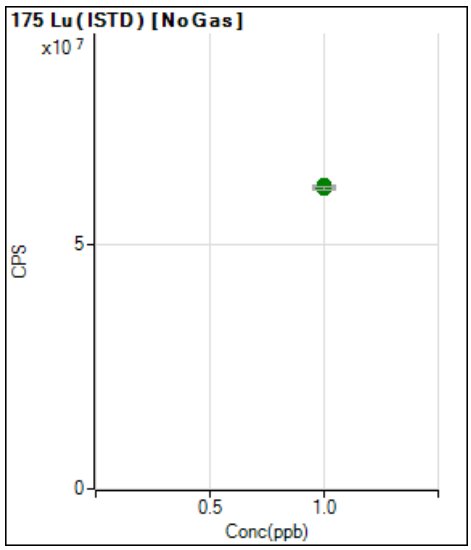
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2254893.31		P	0.9
2	☐	1.000					
3	☐	1.000		2263663.59		P	0.2
4	☐	1.000					
5	☐	1.000		2254551.30		P	0.7
6	☐	1.000		2230365.05		P	0.3
7	☐	1.000		2164727.07		P	0.5
8	☐	1.000					



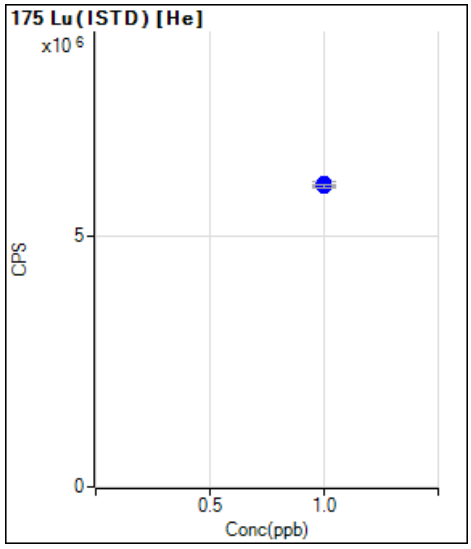
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		63342192.3		A	1.0
2	☐	1.000					
3	☐	1.000		63513999.0		A	0.2
4	☐	1.000					
5	☐	1.000		63007080.7		A	0.2
6	☐	1.000		62908152.3		A	0.9
7	☐	1.000		62155219.0		A	0.4
8	☐	1.000					



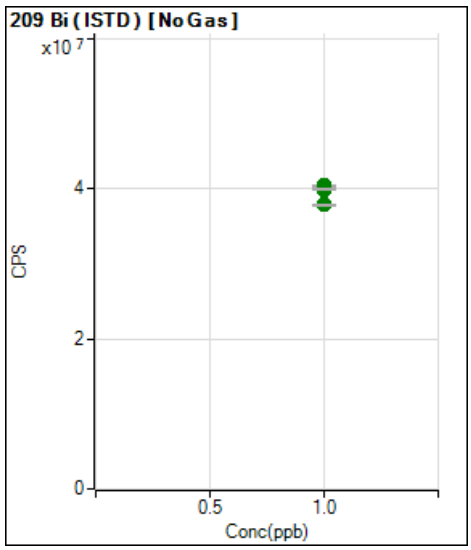
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12167806.4		A	1.0
2	☐	1.000					
3	☐	1.000		12105388.1		A	0.8
4	☐	1.000					
5	☐	1.000		12068307.3		A	0.4
6	☐	1.000		12033903.1		A	0.3
7	☐	1.000		11826856.9		A	0.5
8	☐	1.000					



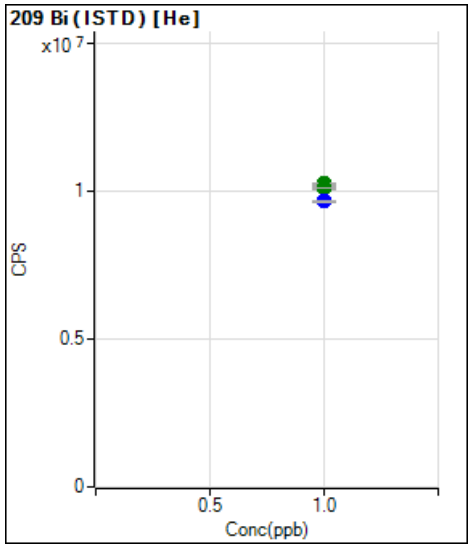
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		61881639.0		A	0.4
2	☐	1.000					
3	☐	1.000		61781535.7		A	0.6
4	☐	1.000					
5	☐	1.000		61482330.7		A	0.6
6	☐	1.000		61399172.4		A	0.8
7	☐	1.000		61308939.0		A	0.6
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5982897.41		P	0.8
2	☐	1.000					
3	☐	1.000		6044562.62		P	1.1
4	☐	1.000					
5	☐	1.000		6012788.45		P	0.6
6	☐	1.000		6021915.12		P	0.2
7	☐	1.000		5984644.29		P	1.0
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		40437616.9		A	0.4
2	☐	1.000					
3	☐	1.000		40093408.5		A	0.4
4	☐	1.000					
5	☐	1.000		40150491.9		A	0.6
6	☐	1.000		39966335.2		A	0.6
7	☐	1.000		37917754.4		A	0.6
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10240207.5		A	0.7
2	☐	1.000					
3	☐	1.000		10091820.2		A	0.8
4	☐	1.000					
5	☐	1.000		10110010.8		A	0.8
6	☐	1.000		10091350.6		A	0.3
7	☐	1.000		9642329.86		P	0.9
8	☐	1.000					

Pace Analytical

BATCH COVERSHEET

ANALYST LWZ

DATE 08/24/22

ICP/MS Metals Analysis

BATCH **748307**

STANDARDS

ICAL Standard	MET 335-26-1
ICV Standard	MET 335-24-7
ICSA Standard	MET 335-25-1
ICSAB Standard	MET 335-25-2
Internal Standard	MET 335-10-6
Tune	344-88-13
P/A	344-76-4

ACID MATRIX

2% HNO3 \ 0.5% HCL Solution	MET 335-22-2
5% HNO3 \ 2% HCL Solution	MET 335-22-1

EQUIPMENT

Pipette 1	MET-109
Pipette 2	MET-112
Pipette 3	MET-105
Pipette 4	MET-107
Pipette 5	

Instrument ID	ICPMS2
ICPMS Data File	2220824A_MS2

ADDITIONAL STANDARDS

LDR Standard	MET 335-24-6
	ICVB - MET 335-18-3

LAB QC LIMITS

200.8 Correlation Coefficient (R) =0.998

6020B Correlation Coefficient (R) =0.995

ICV Recovery 90-110%

LLCCV Recovery 80-120%

ICSA \ ICSAB Recovery 80-120%

CCV Recovery 90-110%

Sample					
Data File	Acq. Date-Time	Type	Level	Sample Name	Total Dil.
001SMPL.d	8/24/2022 14:42	Sample		Blank	1
002SMPL.d	8/24/2022 14:46	Sample		Blank	1
003SMPL.d	8/24/2022 14:49	Sample		Blank	1
004CALB.d	8/24/2022 14:53	CalBlk	1	1300	1
005CALS.d	8/24/2022 14:56	CalStd	3	1302	1
006CALS.d	8/24/2022 15:00	CalStd	5	1304	1
007CALS.d	8/24/2022 15:04	CalStd	6	1305	1
008CALS.d	8/24/2022 15:08	CalStd	7	1306	1
009_ICV.d	8/24/2022 15:11	ICV		1600	1
010_ICV.d	8/24/2022 15:28	ICV		1600 B	1
011_ICB.d	8/24/2022 15:32	ICB		1700	1
0120.1.d	8/24/2022 15:35	LLCCV0.1		1804	1
1210.5.d	8/24/2022 15:39	LLCCV0.5		1804	1
1211CCV1.d	8/24/2022 15:42	LLCCV1		1803	1
1212ICSA.d	8/24/2022 15:46	ICSA		2000	1
1213ICSB.d	8/24/2022 15:49	ICSB		2100	1
1214_QC1.d	8/24/2022 15:53	QC1		LDR	1
1215SMPL.d	8/24/2022 15:56	Sample		2500	1
1216SMPL.d	8/24/2022 16:02	Sample		22208190101	1
1217SMPL.d	8/24/2022 16:05	Sample		22208191111	1
1218SMPL.d	8/24/2022 16:09	Sample		22208183001	1
1219SMPL.d	8/24/2022 16:12	MBWATER		2386473	1
1220SMPL.d	8/24/2022 16:16	LCS6020		2386474	1
1221SMPL.d	8/24/2022 16:19	Sample		22208180101	100
1222SMPL.d	8/24/2022 16:23	AllRef		22208187601	100
1223SMPL.d	8/24/2022 16:26	MS10XP		2386475	100
1224SMPL.d	8/24/2022 16:30	MSD10XP		2386476	100
1225SMPL.d	8/24/2022 16:33	PDS		2387007	100
1226SMPL.d	8/24/2022 16:37	Sample		2387008	500
1227SMPL.d	8/24/2022 16:40	MBWATER		2385691	1
1228SMPL.d	8/24/2022 16:44	LCS200.8		2385692	1
1229SMPL.d	8/24/2022 16:47	Sample		22208185201	1
1230SMPL.d	8/24/2022 16:51	Sample		238593	1
1231SMPL.d	8/24/2022 16:54	Sample		2385694	1
1232SMPL.d	8/24/2022 16:57	Sample		22208186101	1
1233SMPL.d	8/24/2022 17:01	Sample		22208186103	1
1234SMPL.d	8/24/2022 17:04	Sample		22208187501	300
1235SMPL.d	8/24/2022 17:08	Sample		2500	1
1236SMPL.d	8/24/2022 17:11	Sample		22208187502	300
1237_CCV.d	8/24/2022 17:15	CCV		1800	1
1238_CCB.d	8/24/2022 17:18	CCB		1900	1
1239SMPL.d	8/24/2022 17:22	MBWATER		2386321	1
1240SMPL.d	8/24/2022 17:25	LCS6020		2386322	1
1241SMPL.d	8/24/2022 17:29	Sample		22208194301	1
1242SMPL.d	8/24/2022 17:32	Sample		22208210201	1

1243SMPL.d	8/24/2022 17:36	AllRef		22208210202	1
1244SMPL.d	8/24/2022 17:39	MS		2386323	1
1245SMPL.d	8/24/2022 17:43	MSD		2386324	1
1246SMPL.d	8/24/2022 17:46	PDS		2387599	1
1247SMPL.d	8/24/2022 17:50	Sample		2387600	5
1248SMPL.d	8/24/2022 17:53	Sample		22208210203	1
1249SMPL.d	8/24/2022 17:57	Sample		22208210204	1
1250SMPL.d	8/24/2022 18:00	Sample		22208210205	1
1251SMPL.d	8/24/2022 18:04	Sample		22208210206	1
1252SMPL.d	8/24/2022 18:07	Sample		22208210301	1
1253SMPL.d	8/24/2022 18:11	Sample		22208210302	1
1254SMPL.d	8/24/2022 18:14	Sample		22208210303	1
1255_CCV.d	8/24/2022 18:18	CCV		1800	1
1256_CCB.d	8/24/2022 18:21	CCB		1900	1
1257SMPL.d	8/24/2022 18:25	Sample		22208210304	1
1258SMPL.d	8/24/2022 18:28	Sample		22208210305	1
1259SMPL.d	8/24/2022 18:32	Sample		22208210306	1
1260SMPL.d	8/24/2022 18:35	Sample		22208210307	1
1261SMPL.d	8/24/2022 18:39	Sample		22208210308	1
1262SMPL.d	8/24/2022 18:42	Sample		22208080813	1
1263SMPL.d	8/24/2022 18:46	MBWATER		2386706	1
1264SMPL.d	8/24/2022 18:49	LCS200.8		2386707	1
1265SMPL.d	8/24/2022 18:53	Sample		22208224101	1
1266SMPL.d	8/24/2022 18:56	Sample		22208224601	1
1267SMPL.d	8/24/2022 19:00	Sample		22208223301	300
1268SMPL.d	8/24/2022 19:03	Sample		22208223302	300
1269SMPL.d	8/24/2022 19:07	Sample		2386708	300
1270SMPL.d	8/24/2022 19:10	Sample		2386709	300
1271_CCV.d	8/24/2022 19:14	CCV		1800	1
1272_CCB.d	8/24/2022 19:17	CCB		1900	1
1273SMPL.d	8/24/2022 19:21	Sample		22208223303	300
1274SMPL.d	8/24/2022 19:24	Sample		22208223901	1
1275SMPL.d	8/24/2022 19:28	MBWATER		2386710	1
1276SMPL.d	8/24/2022 19:31	LCS6020		2386711	1
1277SMPL.d	8/24/2022 19:35	Sample		22208222501	5
1278SMPL.d	8/24/2022 19:38	MBWATER		2386802	1
1279SMPL.d	8/24/2022 19:42	LCS6020		2386803	1
1280SMPL.d	8/24/2022 19:45	AllRef		2208170902	100
1281SMPL.d	8/24/2022 19:49	MS10XP		2386804	100
1282SMPL.d	8/24/2022 19:52	MSD10XP		2386805	100
1283SMPL.d	8/24/2022 19:56	PDS		2387752	100
1284SMPL.d	8/24/2022 19:59	Sample		2387753	500
1285SMPL.d	8/24/2022 20:03	Sample		22208171202	100
1286SMPL.d	8/24/2022 20:06	Sample		22208180201	100
1287SMPL.d	8/24/2022 20:10	Sample		22208186301	100
1288_CCV.d	8/24/2022 20:13	CCV		1800	1
1289_CCB.d	8/24/2022 20:17	CCB		1900	1

1290SMPL.d	8/24/2022 20:20	Sample		22208183501	100
1291SMPL.d	8/24/2022 20:24	Sample		22208183502	100
1292SMPL.d	8/24/2022 20:27	Sample		22208187201	100
1293SMPL.d	8/24/2022 20:31	AllRef		22208182901	400
1294SMPL.d	8/24/2022 20:34	MSSOIL		2385449	400
1295SMPL.d	8/24/2022 20:38	MSDSOIL		2385450	400
1296SMPL.d	8/24/2022 20:41	PDS		2386579	400
1297SMPL.d	8/24/2022 20:45	Sample		2386580	2000
1298SMPL.d	8/24/2022 20:48	Sample		22208182902	396.8254
1299SMPL.d	8/24/2022 20:52	Sample		22208183401	390.625
1300SMPL.d	8/24/2022 20:55	Sample		22208183402	400
1301SMPL.d	8/24/2022 20:59	MBSOIL		2386386	40
1302SMPL.d	8/24/2022 21:02	LCS6020		2386387	40
1303SMPL.d	8/24/2022 21:06	AllRef		22208220101	400
1304SMPL.d	8/24/2022 21:09	MSSOIL		2386388	400
1305SMPL.d	8/24/2022 21:13	MSDSOIL		2386389	400
1306SMPL.d	8/24/2022 21:16	PDS		2387609	400
1307SMPL.d	8/24/2022 21:20	Sample		2387610	2000
1308_CCV.d	8/24/2022 21:23	CCV		1800	1
1309_CCB.d	8/24/2022 21:27	CCB		1900	1
1310SMPL.d	8/24/2022 21:30	Sample		22208220202	396.8254
1311SMPL.d	8/24/2022 21:34	Sample		22208220203	400
1312SMPL.d	8/24/2022 21:37	Sample		22208220204	396.8254
1313SMPL.d	8/24/2022 21:41	Sample		22208220205	364.9635
1314SMPL.d	8/24/2022 21:44	Sample		22208220206	390.625
1315SMPL.d	8/24/2022 21:48	Sample		22208220207	378.7879
1316SMPL.d	8/24/2022 21:51	Sample		22208220208	384.6154
1317SMPL.d	8/24/2022 21:55	Sample		22208220209	381.6794
1318_CCV.d	8/24/2022 21:58	CCV		1800	1
1319_CCB.d	8/24/2022 22:02	CCB		1900	1
1320SMPL.d	8/24/2022 22:05	Sample		2385278	5000
1321SMPL.d	8/24/2022 22:09	Sample		2385279	5000
1322SMPL.d	8/24/2022 22:12	Sample		22208022901	100000
1323SMPL.d	8/24/2022 22:16	Sample		2385280	100000
1324SMPL.d	8/24/2022 22:19	Sample		2385281	100000
1325SMPL.d	8/24/2022 22:23	Sample		22208022902	100000
1326SMPL.d	8/24/2022 22:26	Sample		22208172401	100000
1327SMPL.d	8/24/2022 22:30	Sample		22208172402	100000
1328SMPL.d	8/24/2022 22:33	Sample		22208172403	100000
1329SMPL.d	8/24/2022 22:37	Sample		22208172404	100000
1330SMPL.d	8/24/2022 22:40	Sample		22208172405	100000
1331SMPL.d	8/24/2022 22:44	Sample		22208172406	100000
1332SMPL.d	8/24/2022 22:47	Sample		22208172407	100000
1333SMPL.d	8/24/2022 22:51	Sample		22208172408	100000
1334_CCV.d	8/24/2022 22:54	CCV		1800	1
1335_CCB.d	8/24/2022 22:58	CCB		1900	1
1336SMPL.d	8/24/2022 23:01	MBWATER		2386467	1

1337SMPL.d	8/24/2022 23:05	LCS6020		2386468	1
1338SMPL.d	8/24/2022 23:08	LCS6020		2386730	1
1339SMPL.d	8/24/2022 23:12	Sample		22208220801	100
1340SMPL.d	8/24/2022 23:15	Sample		2500	1
1341SMPL.d	8/24/2022 23:19	Sample		22208220802	100
1342SMPL.d	8/24/2022 23:22	Sample		2500	1
1343SMPL.d	8/24/2022 23:26	Sample		22208220803	100
1344SMPL.d	8/24/2022 23:29	Sample		2500	1
1345SMPL.d	8/24/2022 23:33	Sample		22208220804	100
1346SMPL.d	8/24/2022 23:36	Sample		2500	1
1347SMPL.d	8/24/2022 23:40	Sample		22208220805	100
1348SMPL.d	8/24/2022 23:43	Sample		2500	1
1349SMPL.d	8/24/2022 23:47	Sample		22208220806	100
1350SMPL.d	8/24/2022 23:50	Sample		2500	1
1351SMPL.d	8/24/2022 23:54	Sample		22208220807	100
1352SMPL.d	8/24/2022 23:57	Sample		2500	1
1353SMPL.d	8/25/2022 0:01	Sample		22208220808	100
1354SMPL.d	8/25/2022 0:05	Sample		2500	1
1355_CCV.d	8/25/2022 0:08	CCV		1800	1
1356_CCB.d	8/25/2022 0:11	CCB		1900	1
1357SMPL.d	8/25/2022 0:15	Sample		22208220809	100
1358SMPL.d	8/25/2022 0:19	Sample		2500	1
1359SMPL.d	8/25/2022 0:22	Sample		22208220810	100
1360SMPL.d	8/25/2022 0:26	Sample		2500	1
1361SMPL.d	8/25/2022 0:29	Sample		22208220811	100
1362SMPL.d	8/25/2022 0:33	Sample		2500	1
1363SMPL.d	8/25/2022 0:36	Sample		22208220812	100
1364SMPL.d	8/25/2022 0:40	Sample		2500	1
1365SMPL.d	8/25/2022 0:43	Sample		22208220813	100
1366SMPL.d	8/25/2022 0:47	Sample		2500	1
1367SMPL.d	8/25/2022 0:50	Sample		22208220814	100
1368SMPL.d	8/25/2022 0:54	Sample		2500	1
1369SMPL.d	8/25/2022 0:57	Sample		22208220819	100
1370SMPL.d	8/25/2022 1:01	Sample		2500	1
1371SMPL.d	8/25/2022 1:04	Sample		22208220820	100
1372SMPL.d	8/25/2022 1:08	Sample		2500	1
1373_CCV.d	8/25/2022 1:11	CCV		1800	1
1374_CCB.d	8/25/2022 1:15	CCB		1900	1
1375SMPL.d	8/25/2022 1:18	AllRef		22208222201	200
1376SMPL.d	8/25/2022 1:22	MS		2386728	200
1377SMPL.d	8/25/2022 1:25	MSD		2386729	200
1378SMPL.d	8/25/2022 1:29	PDS		2387607	200
1379SMPL.d	8/25/2022 1:32	Sample		2387608	1000
1380SMPL.d	8/25/2022 1:36	AllRef		22208222201	2
1381SMPL.d	8/25/2022 1:39	Sample		2500	1
1382SMPL.d	8/25/2022 1:43	MS		2386728	2
1383SMPL.d	8/25/2022 1:46	Sample		2500	1

1384SMPL.d	8/25/2022 1:50	MSD		2386729	2
1385SMPL.d	8/25/2022 1:53	Sample		2500	1
1386SMPL.d	8/25/2022 1:57	PDS		2387607	2
1387SMPL.d	8/25/2022 2:00	Sample		2500	1
1388SMPL.d	8/25/2022 2:04	Sample		2387608	10
1389SMPL.d	8/25/2022 2:07	Sample		2500	1
1390SMPL.d	8/25/2022 2:11	Sample		22208222202	2
1391SMPL.d	8/25/2022 2:14	Sample		2500	1
1392SMPL.d	8/25/2022 2:18	Sample		F1	100
1393SMPL.d	8/25/2022 2:21	Sample		F2	100
1394_CCV.d	8/25/2022 2:25	CCV		1800	1
1395_CCB.d	8/25/2022 2:28	CCB		1900	1
1396SMPL.d	8/25/2022 2:32	Sample		2500	1
1397SMPL.d	8/25/2022 2:35	Sample		2500	1
1398SMPL.d	8/25/2022 2:39	Sample		2500	1

Vial Number
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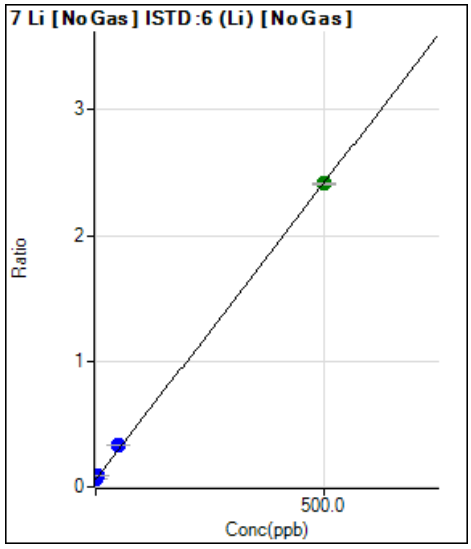
Tune Mode	Mass	Name	ISTD	R	a	b (blank)	DL	BEC	Units
No Gas	7	Li	6 (Li) [No Gas]	0.999959144	0.005160078	0.058493226	0.12414023	11.33572485	ppb
No Gas	9	Be	45 Sc [No Gas]	0.999999956	0.000502844	2.14E-06	0.002643199	0.004256629	ppb
No Gas	11	B	6 (Li) [No Gas]	0.999970255	0.000606276	0.004304595	1.053478197	7.100062835	ppb
He	23	Na	45 Sc [He]	0.999999469	0.003351973	0.026918592	1.219276033	8.030671302	ppb
He	24	Mg	45 Sc [He]	0.999999981	0.001373544	0.001625082	0.832353465	1.183130743	ppb
He	27	Al	45 Sc [He]	0.999998442	0.000297242	0.000337578	1.305666911	1.135700642	ppb
He	29	Si	45 Sc [He]	0.999961623	9.75E-06	0.00574085	299.5464589	588.8266249	ppb
He	39	K	45 Sc [He]	0.999999407	0.000993282	0.039611771	9.333030822	39.87966386	ppb
He	44	Ca	45 Sc [He]	0.999999907	5.23E-05	0.001083557	19.635612	20.73695728	ppb
He	47	Ti	45 Sc [He]	0.999996504	0.000518895	3.52E-05	0.286859157	0.0678554	ppb
He	51	V	72 Ge [He]	0.999999602	0.023735862	0.000265203	0.007657656	0.0111731	ppb
He	52	Cr	72 Ge [He]	0.999999669	0.033565759	0.001895033	0.00663289	0.056457334	ppb
He	55	Mn	72 Ge [He]	0.999999977	0.011459332	0.000410063	0.040888062	0.035784212	ppb
He	57	Fe	72 Ge [He]	0.999998363	0.000594995	0.000359055	0.628070957	0.603458973	ppb
He	59	Co	72 Ge [He]	0.99999904	0.065851126	0.000410741	0.00445575	0.006237421	ppb
He	60	Ni	72 Ge [He]	0.999998355	0.018815114	0.000437711	0.016894667	0.023263795	ppb
He	63	Cu	72 Ge [He]	0.999994616	0.05586733	0.004105536	0.023908605	0.07348724	ppb
He	66	Zn	72 Ge [He]	0.999997563	0.00541934	0.003270149	0.249650011	0.60342208	ppb
He	75	As	72 Ge [He]	0.999998691	0.005804736	0.000119488	0.016817345	0.020584636	ppb
He	78	Se	72 Ge [He]	0.999985973	0.000301435	7.15E-05	0.039992222	0.237080437	ppb
No Gas	88	Sr	72 Ge [No Gas]	0.999996295	0.03828458	0.000450119	0.003272105	0.011757182	ppb
No Gas	90	Zr	103 Rh [No Gas]	0.999989739	0.003143319	9.94E-05	0.004986213	0.031621664	ppb
No Gas	95	Mo	115 In [No Gas]	0.999986726	0.000821943	1.81E-05	0.015379002	0.02205154	ppb
No Gas	107	Ag	115 In [No Gas]	0.9999999	0.002126336	1.56E-05	0.001242645	0.007352816	ppb
No Gas	111	Cd	115 In [No Gas]	0.99999993	0.000450871	2.28E-06	0.005960548	0.005058644	ppb
No Gas	118	(Sn)	115 In [No Gas]	0.999996644	0.001509508	0.000167001	0.008873756	0.110632635	ppb
He	118	(Sn)	115 In [He]	0.999995596	0.002228044	0.000252945	0.065321843	0.113527881	ppb
He	120	Sn	115 In [He]	0.999997643	0.003296776	0.000391407	0.042905378	0.118724286	ppb
No Gas	121	Sb	115 In [No Gas]	0.999999836	0.001870513	0.000302067	0.010565076	0.161488873	ppb
No Gas	137	Ba	115 In [No Gas]	0.999998026	0.000810079	4.98E-06	0.003789245	0.006145571	ppb
He	156	[Se]	115 In [He]						ppb
No Gas	201	Hg							
No Gas	205	Tl	209 Bi [No Gas]	0.999986103	0.005429818	6.09E-05	0.002071979	0.011219503	ppb
No Gas	206	(Pb)	209 Bi [No Gas]	0.999997227	0.001804422	1.29E-05	0.00177724	0.007131821	ppb
No Gas	207	(Pb)	209 Bi [No Gas]	0.999997022	0.001546547	1.25E-05	0.008955806	0.008051504	ppb
No Gas	208	Pb	209 Bi [No Gas]	0.999994828	0.003855745	3.52E-05	0.007251368	0.009131181	ppb
No Gas	6	(Li)							ppb
No Gas	45	Sc							ppb
He	45	Sc							ppb
No Gas	72	Ge							ppb
He	72	Ge							ppb
No Gas	103	Rh							ppb
He	103	Rh							ppb
No Gas	115	In							ppb
He	115	In							ppb
No Gas	159	Tb							ppb
He	159	Tb							ppb
No Gas	175	Lu							ppb
He	175	Lu							ppb
No Gas	209	Bi							ppb
He	209	Bi							ppb

Calibration for 008CALS.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\2220824B_MS2.b\
Analysis File: 2220824B_MS2.batch.bin
DA Date-Time: 8/25/2022 08:47:57
Calibration Title: EPA6020
Calibration Method: External Calibration
VIS Interpolation Fit:

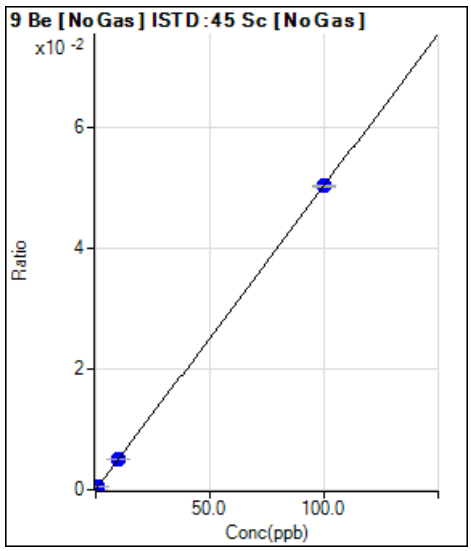
Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	1300	8/24/2022 14:53:20
2			
3	005CALS.d	1302	8/24/2022 14:56:49
4			
5	006CALS.d	1304	8/24/2022 15:00:58
6	007CALS.d	1305	8/24/2022 15:04:40
7	008CALS.d	1306	8/24/2022 15:08:19
8			



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	168186.20	0.0584	P	0.4
2	☐	0.000					
3	☐	0.500	0.528	174316.65	0.0609	P	0.6
4	☐	2.500					
5	☐	5.000	6.099	251074.01	0.0872	P	1.1
6	☐	50.000	58.835	972351.84	0.3360	P	0.2
7	☐	500.000	499.106	8180160.71	2.4135	A	0.7
8	☐						

y = 0.0047 * x + 0.0584
R = 0.9998
DL = 0.1352
BEC = 11.34

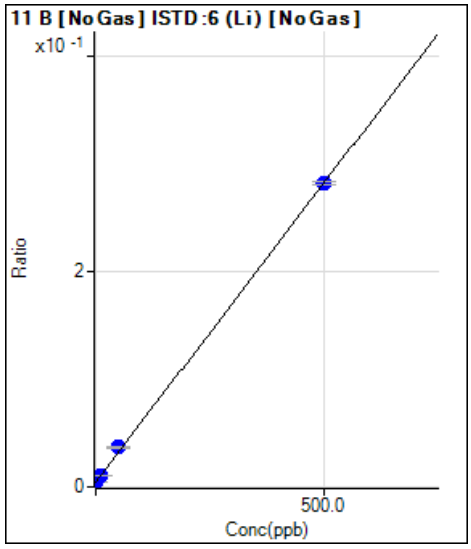
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.67	0.0000	P	20.7
2	☐	0.000					
3	☐	0.100	0.098	346.01	0.0001	P	3.7
4	☐	0.500					
5	☐	1.000	1.000	3434.41	0.0005	P	2.6
6	☐	10.000	10.028	34100.01	0.0050	P	2.2
7	☐	100.000	99.997	342184.29	0.0503	P	0.3
8	☐						

y = 5.0284E-004 * x + 2.1404E-006
R = 1.0000
DL = 0.002643
BEC = 0.004257

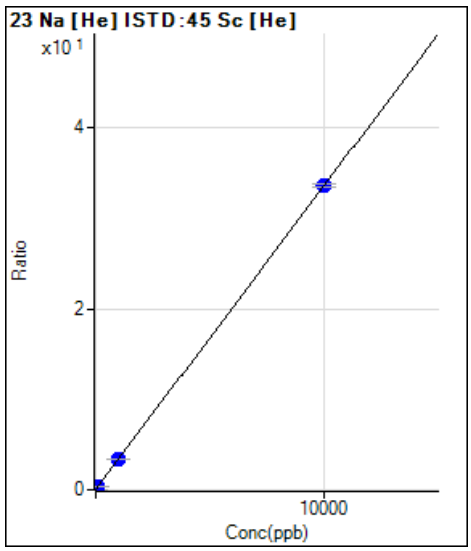
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12378.77	0.0043	P	4.9
2	☐	0.000					
3	☐	1.000	1.139	14113.63	0.0049	P	2.2
4	☐	5.000					
5	☐	10.000	11.527	30802.00	0.0107	P	1.4
6	☐	50.000	58.139	105781.55	0.0366	P	2.4
7	☐	500.000	499.155	953240.69	0.2812	P	0.9
8	☐						

y = 5.5484E-004 * x + 0.0043
R = 0.9999
DL = 1.149
BEC = 7.1

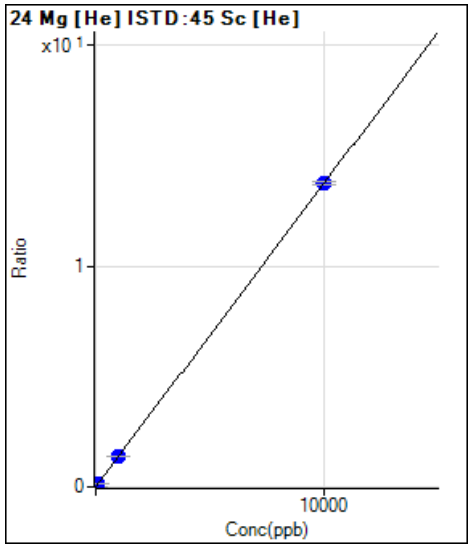
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2036.87	0.0269	P	5.1
2	☐	0.000					
3	☐	10.000	9.608	4327.43	0.0591	P	7.8
4	☐	50.000					
5	☐	100.000	98.197	27105.01	0.3561	P	3.6
6	☐	1000.000	989.371	255911.99	3.3433	P	0.3
7	☐	10000.00	10001.08	2587843.19	33.550	P	1.2
8	☐						

y = 0.0034 * x + 0.0269
R = 1.0000
DL = 1.219
BEC = 8.031

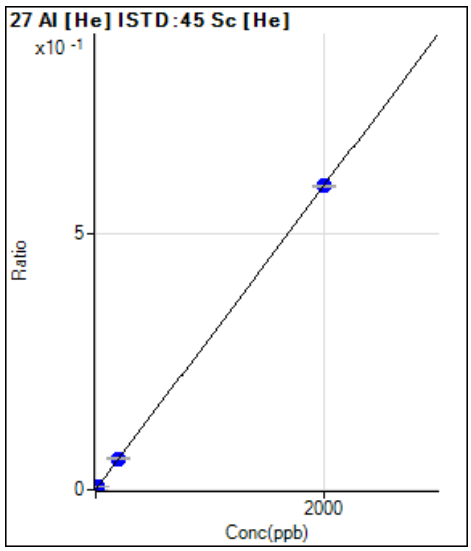
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.34	0.0016	P	23.5
2	☐	0.000					
3	☐	10.000	10.377	1163.42	0.0159	P	10.7
4	☐	50.000					
5	☐	100.000	102.212	10810.89	0.1420	P	2.8
6	☐	1000.000	1000.608	105324.01	1.3760	P	1.3
7	☐	10000.00	9999.917	1059583.53	13.736	P	1.0
8	☐						

y = 0.0014 * x + 0.0016
R = 1.0000
DL = 0.8324
BEC = 1.183

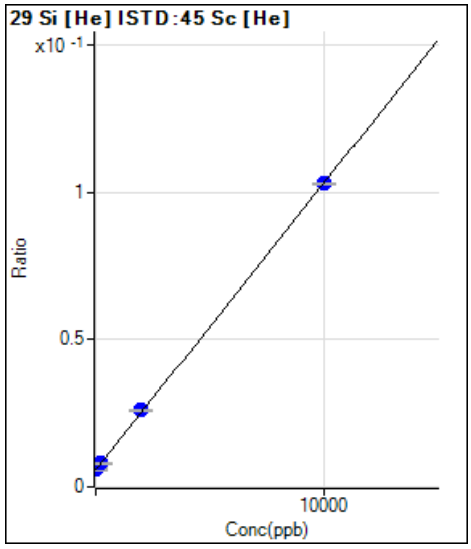
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.33	0.0003	P	38.3
2	☐	0.000					
3	☐	2.000	1.743	62.67	0.0009	P	15.9
4	☐	10.000					
5	☐	20.000	22.876	543.34	0.0071	P	3.1
6	☐	200.000	202.844	4640.75	0.0606	P	3.4
7	☐	2000.000	1999.687	45873.53	0.5947	P	0.8
8	☐						

y = 2.9724E-004 * x + 3.3758E-004
R = 1.0000
DL = 1.306
BEC = 1.136

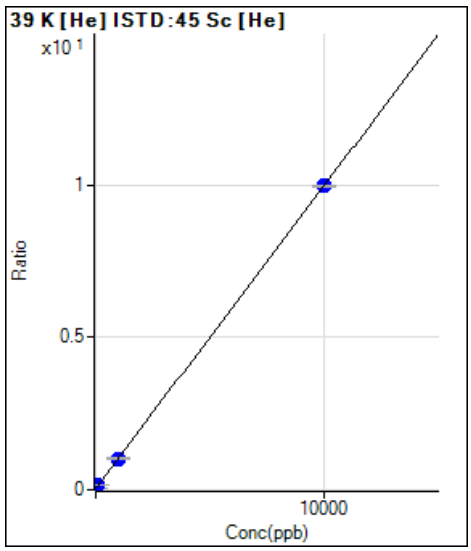
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	432.68	0.0057	P	17.0
2	☐	0.000					
3	☐	20.000	27.138	440.01	0.0060	P	11.0
4	☐	100.000					
5	☐	200.000	231.588	608.68	0.0080	P	8.3
6	☐	2000.000	2086.718	1996.81	0.0261	P	3.0
7	☐	10000.00	9982.010	7950.14	0.1031	P	0.7
8	☐						

y = 9.7496E-006 * x + 0.0057
R = 1.0000
DL = 299.5
BEC = 588.8

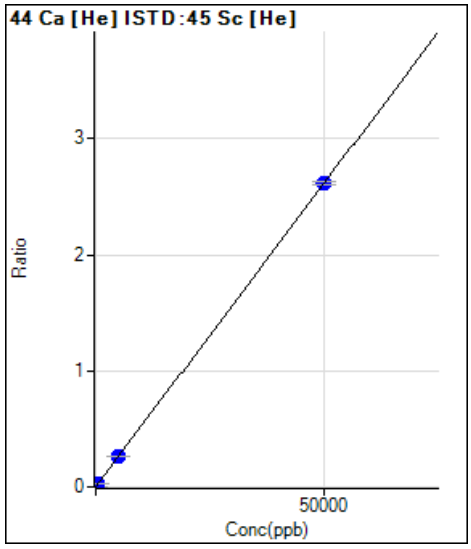
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2990.41	0.0396	P	7.8
2	☐	0.000					
3	☐	10.000	11.562	3740.62	0.0511	P	5.7
4	☐	50.000					
5	☐	100.000	102.301	10750.95	0.1412	P	4.1
6	☐	1000.000	990.641	78349.69	1.0236	P	1.7
7	☐	10000.00	10000.91	769297.86	9.9733	P	0.3
8	☐						

y = 9.9328E-004 * x + 0.0396
R = 1.0000
DL = 9.333
BEC = 39.88

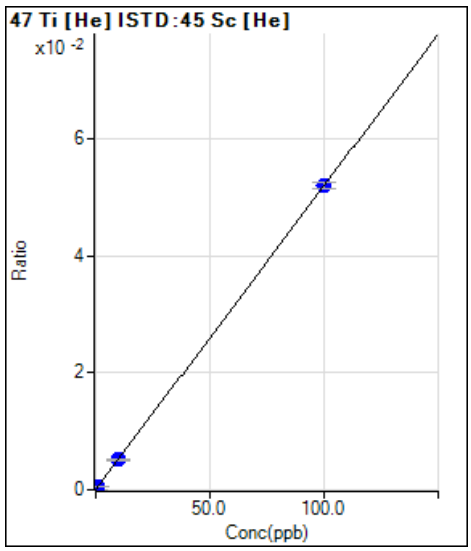
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	81.67	0.0011	P	31.6
2	☐	0.000					
3	☐	50.000	52.003	278.34	0.0038	P	10.1
4	☐	250.000					
5	☐	500.000	489.657	2030.18	0.0267	P	3.1
6	☐	5000.000	5015.790	20143.89	0.2632	P	1.6
7	☐	50000.00	49998.52	201604.36	2.6136	P	1.0
8	☐						

y = 5.2252E-005 * x + 0.0011
R = 1.0000
DL = 19.64
BEC = 20.74

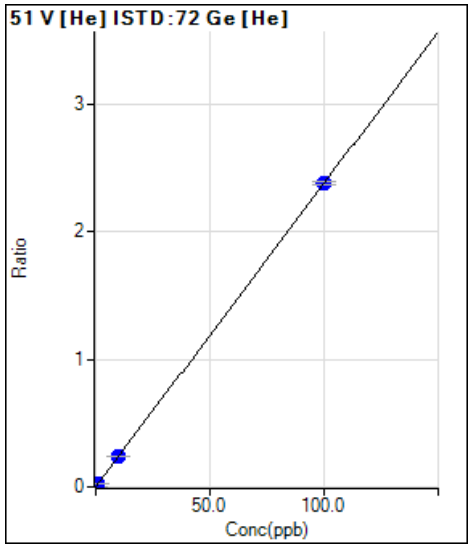
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.67	0.0000	P	140.
2	☐	0.000					
3	☐	0.100	0.125	7.33	0.0001	P	30.1
4	☐	0.500					
5	☐	1.000	0.852	36.33	0.0005	P	9.2
6	☐	10.000	9.751	390.01	0.0051	P	1.4
7	☐	100.000	100.026	4005.88	0.0519	P	2.1
8	☐						

y = 5.1890E-004 * x + 3.5210E-005
R = 1.0000
DL = 0.2869
BEC = 0.06786

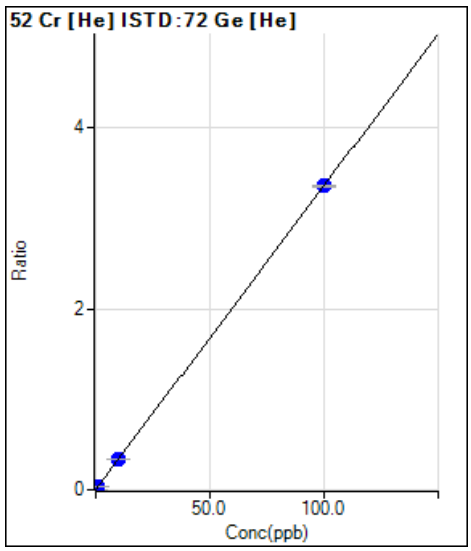
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0003	P	22.8
2	☐	0.000					
3	☐	0.100	0.116	247.78	0.0030	P	16.8
4	☐	0.500					
5	☐	1.000	0.972	1994.60	0.0233	P	3.4
6	☐	10.000	10.076	20324.07	0.2394	P	1.5
7	☐	100.000	99.993	202666.14	2.3737	P	1.0
8	☐						

y = 0.0237 * x + 2.6520E-004
R = 1.0000
DL = 0.007658
BEC = 0.01117

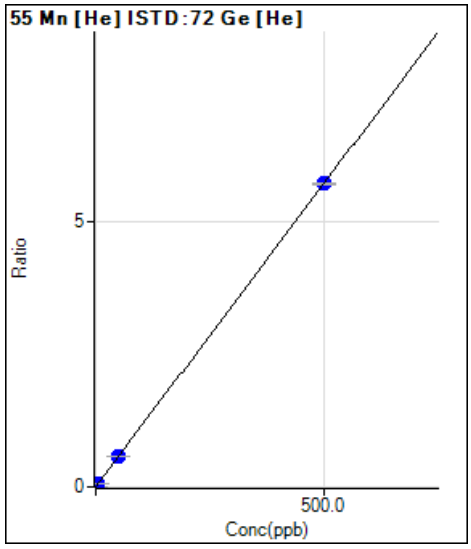
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.89	0.0019	P	3.9
2	☐	0.000					
3	☐	0.100	0.085	388.90	0.0047	P	9.6
4	☐	0.500					
5	☐	1.000	0.946	2876.98	0.0337	P	0.8
6	☐	10.000	10.046	28782.47	0.3391	P	1.0
7	☐	100.000	99.996	286747.60	3.3583	P	0.5
8	☐						

y = 0.0336 * x + 0.0019
R = 1.0000
DL = 0.006633
BEC = 0.05646

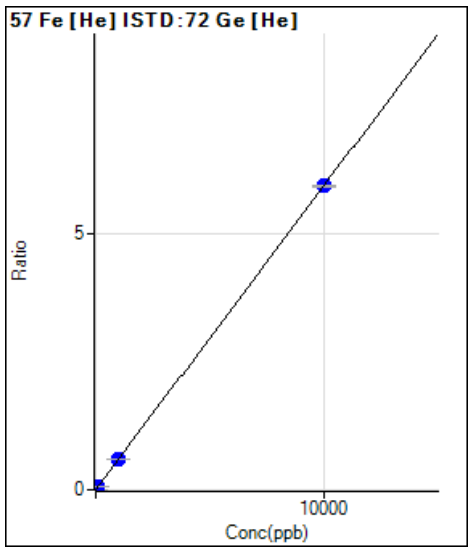
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.45	0.0004	P	38.1
2	☐	0.000					
3	☐	0.500	0.492	494.46	0.0060	P	9.4
4	☐	2.500					
5	☐	5.000	5.003	4937.54	0.0577	P	3.0
6	☐	50.000	49.894	48565.17	0.5722	P	1.3
7	☐	500.000	500.011	489263.26	5.7302	P	0.8
8	☐						

y = 0.0115 * x + 4.1006E-004
R = 1.0000
DL = 0.04089
BEC = 0.03578

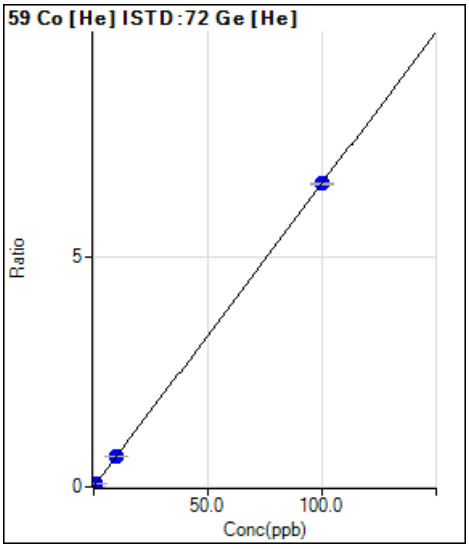
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0004	P	34.7
2	☐	0.000					
3	☐	10.000	10.414	536.70	0.0066	P	14.4
4	☐	50.000					
5	☐	100.000	100.793	5157.75	0.0603	P	5.7
6	☐	1000.000	1018.061	51447.48	0.6061	P	0.6
7	☐	10000.00	9998.186	507933.90	5.9492	P	0.6
8	☐						

y = 5.9500E-004 * x + 3.5906E-004
R = 1.0000
DL = 0.6281
BEC = 0.6035

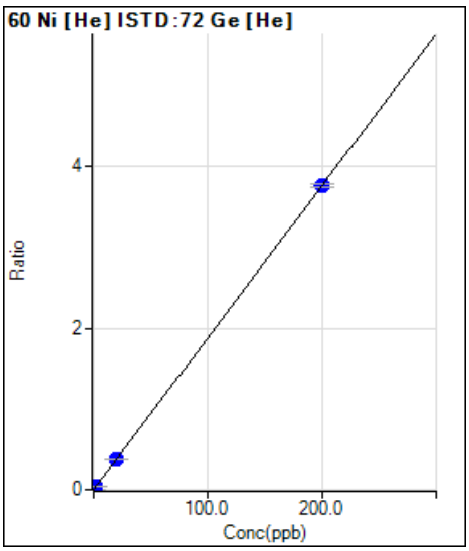
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.44	0.0004	P	23.8
2	☐	0.000					
3	☐	0.100	0.094	542.24	0.0066	P	11.9
4	☐	0.500					
5	☐	1.000	1.025	5803.44	0.0679	P	2.5
6	☐	10.000	10.139	56705.40	0.6681	P	2.1
7	☐	100.000	99.986	562207.36	6.5846	P	0.7
8	☐						

y = 0.0659 * x + 4.1074E-004
R = 1.0000
DL = 0.004456
BEC = 0.006237

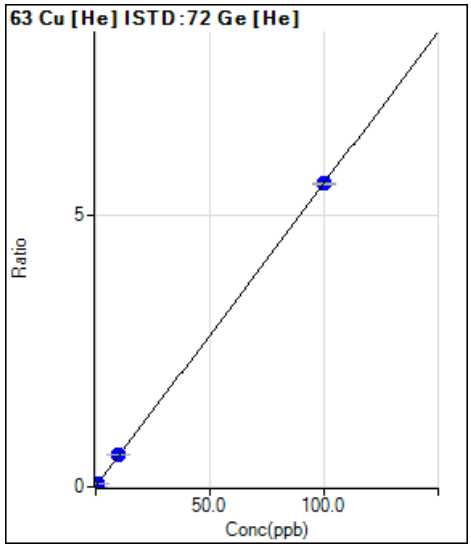
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0004	P	24.2
2	☐	0.000					
3	☐	0.200	0.214	365.57	0.0045	P	8.2
4	☐	1.000					
5	☐	2.000	2.054	3340.42	0.0391	P	4.4
6	☐	20.000	20.372	32573.86	0.3837	P	1.5
7	☐	200.000	199.962	321247.38	3.7627	P	1.2
8	☐						

y = 0.0188 * x + 4.3771E-004
R = 1.0000
DL = 0.01689
BEC = 0.02326

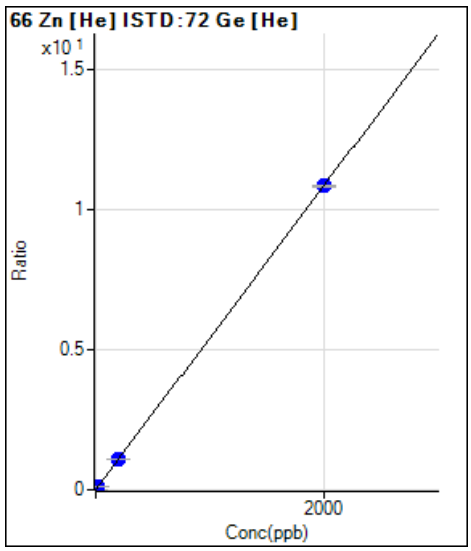
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	344.45	0.0041	P	10.8
2	☐	0.000					
3	☐	0.100	0.094	765.58	0.0094	P	5.9
4	☐	0.500					
5	☐	1.000	1.038	5308.80	0.0621	P	4.9
6	☐	10.000	10.328	49325.88	0.5811	P	0.9
7	☐	100.000	99.967	477177.12	5.5890	P	0.7
8	☐						

y = 0.0559 * x + 0.0041
R = 1.0000
DL = 0.02391
BEC = 0.07349

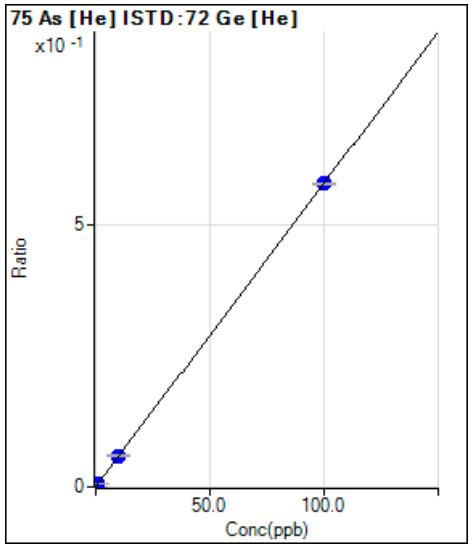
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	274.45	0.0033	P	13.8
2	☐	0.000					
3	☐	2.000	1.765	1050.05	0.0128	P	2.6
4	☐	10.000					
5	☐	20.000	20.490	9771.14	0.1143	P	2.2
6	☐	200.000	204.356	94283.24	1.1107	P	0.9
7	☐	2000.000	1999.560	925489.37	10.839	P	0.8
8	☐						

y = 0.0054 * x + 0.0033
R = 1.0000
DL = 0.2496
BEC = 0.6034

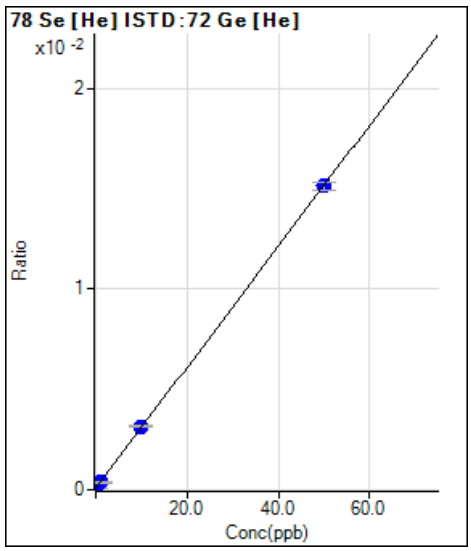
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0001	P	27.2
2	☐	0.000					
3	☐	0.100	0.101	57.67	0.0007	P	7.6
4	☐	0.500					
5	☐	1.000	0.986	499.68	0.0058	P	1.4
6	☐	10.000	10.154	5013.21	0.0591	P	3.3
7	☐	100.000	99.985	49564.66	0.5805	P	0.6
8	☐						

y = 0.0058 * x + 1.1949E-004
R = 1.0000
DL = 0.01682
BEC = 0.02058

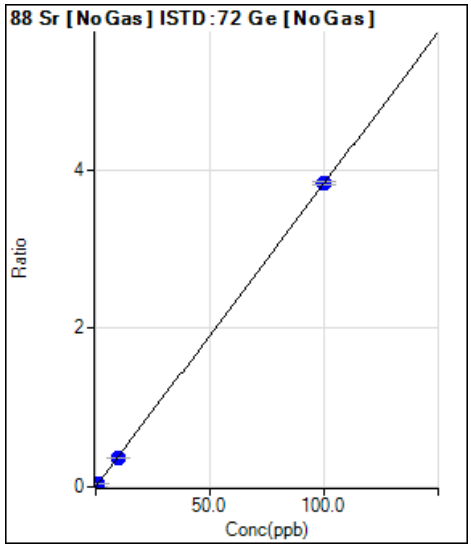
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.00	0.0001	P	5.6
2	☐	0.000					
3	☐	0.100	0.093	8.17	0.0001	P	10.6
4	☐	0.500					
5	☐	1.000	0.962	30.92	0.0004	P	4.5
6	☐	10.000	10.229	267.92	0.0032	P	1.7
7	☐	50.000	49.955	1292.48	0.0151	P	2.3
8	☐						

y = 3.0156E-004 * x + 7.1623E-005
R = 1.0000
DL = 0.03961
BEC = 0.2371

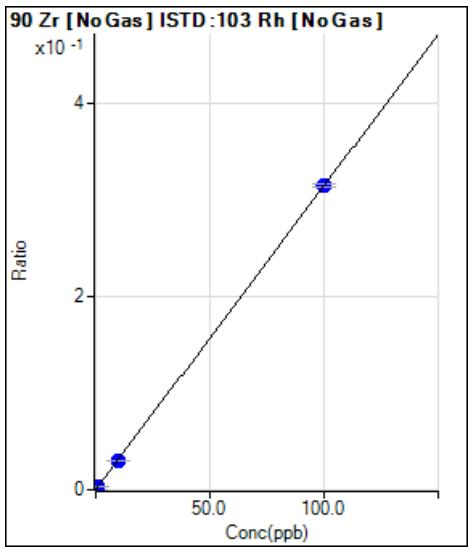
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	836.71	0.0005	P	9.3
2	☐	0.000					
3	☐	0.100	0.097	7739.00	0.0042	P	6.4
4	☐	0.500					
5	☐	1.000	0.971	70352.41	0.0376	P	0.8
6	☐	10.000	9.725	690953.32	0.3728	P	0.6
7	☐	100.000	100.028	7153564.68	3.8300	P	1.1
8	☐						

y = 0.0383 * x + 4.5012E-004
R = 1.0000
DL = 0.003272
BEC = 0.01176

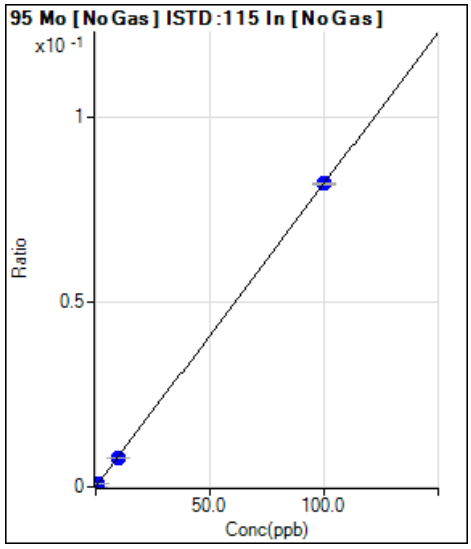
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.09	0.0001	P	5.3
2	☐	0.000					
3	☐	0.100	0.075	4746.40	0.0003	P	4.0
4	☐	0.500					
5	☐	1.000	0.874	40709.65	0.0028	P	1.2
6	☐	10.000	9.524	426401.47	0.0300	P	0.8
7	☐	100.000	100.049	4409367.46	0.3146	P	1.0
8	☐						

y = 0.0031 * x + 9.9397E-005
R = 1.0000
DL = 0.004986
BEC = 0.03162

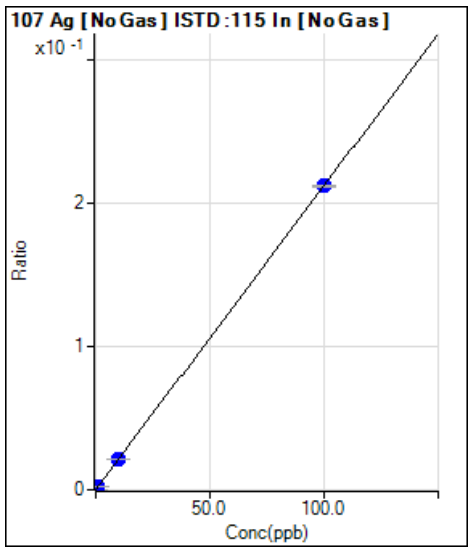
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	291.12	0.0000	P	23.2
2	☐	0.000					
3	☐	0.100	0.101	1597.89	0.0001	P	9.0
4	☐	0.500					
5	☐	1.000	0.960	12869.20	0.0008	P	2.5
6	☐	10.000	9.505	124358.54	0.0078	P	0.5
7	☐	100.000	100.050	1301286.30	0.0821	P	0.2
8	☐						

y = 8.1998E-004 * x + 1.8125E-005
R = 1.0000
DL = 0.01542
BEC = 0.02205

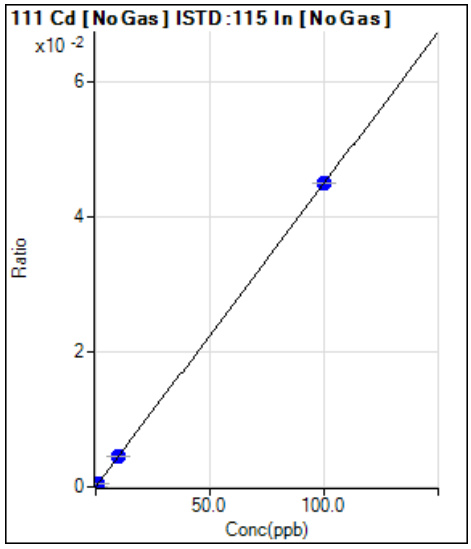
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	251.12	0.0000	P	5.6
2	☐	0.000					
3	☐	0.100	0.106	3806.11	0.0002	P	3.8
4	☐	0.500					
5	☐	1.000	0.999	34107.49	0.0021	P	0.5
6	☐	10.000	9.979	337239.62	0.0212	P	0.7
7	☐	100.000	100.002	3364277.65	0.2121	P	0.2
8	☐						

y = 0.0021 * x + 1.5635E-005
R = 1.0000
DL = 0.001246
BEC = 0.007353

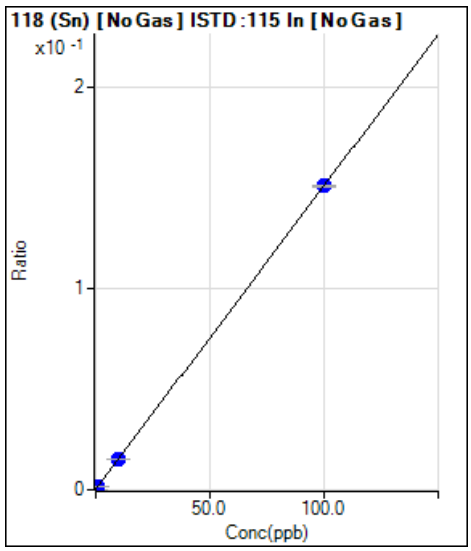
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	39.3
2	☐	0.000					
3	☐	0.100	0.105	781.14	0.0000	P	5.5
4	☐	0.500					
5	☐	1.000	0.973	7030.69	0.0004	P	2.4
6	☐	10.000	9.992	71584.76	0.0045	P	0.1
7	☐	100.000	100.001	713343.50	0.0450	P	0.2
8	☐						

y = 4.4979E-004 * x + 2.2808E-006
R = 1.0000
DL = 0.005975
BEC = 0.005059

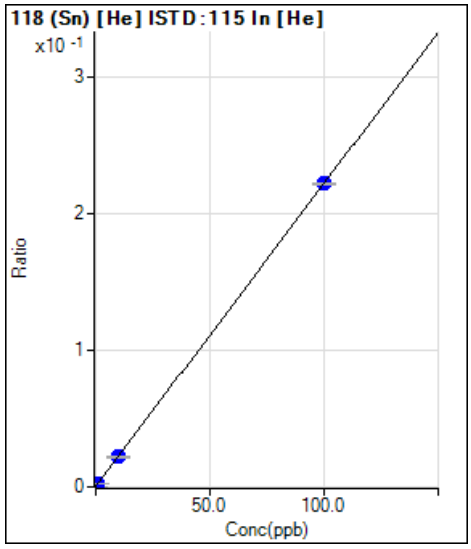
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2682.51	0.0002	P	2.7
2	☐	0.000					
3	☐	0.100	0.086	4690.82	0.0003	P	2.3
4	☐	0.500					
5	☐	1.000	1.002	26764.28	0.0017	P	0.6
6	☐	10.000	9.763	236713.46	0.0149	P	0.2
7	☐	100.000	100.024	2391321.15	0.1508	P	0.3
8	☐						

y = 0.0015 * x + 1.6700E-004
R = 1.0000
DL = 0.008895
BEC = 0.1106

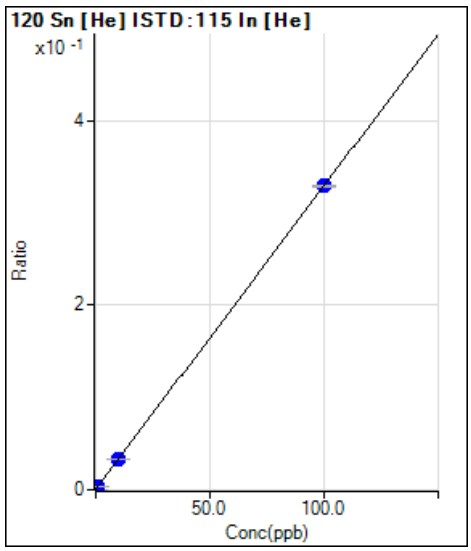
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	244.45	0.0003	P	19.2
2	☐	0.000					
3	☐	0.100	0.083	408.90	0.0004	P	3.2
4	☐	0.500					
5	☐	1.000	1.025	2474.69	0.0025	P	2.5
6	☐	10.000	9.743	21440.80	0.0219	P	0.9
7	☐	100.000	100.025	216571.07	0.2223	P	0.3
8	☐						

y = 0.0022 * x + 2.5294E-004
R = 1.0000
DL = 0.06555
BEC = 0.1135

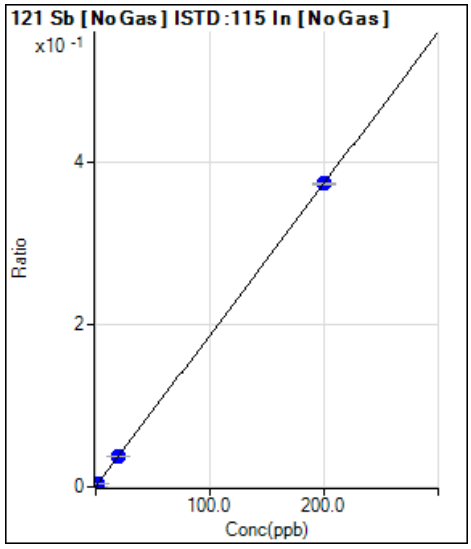
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0004	P	12.0
2	☐	0.000					
3	☐	0.100	0.096	661.13	0.0007	P	8.1
4	☐	0.500					
5	☐	1.000	0.981	3537.15	0.0036	P	0.7
6	☐	10.000	9.811	31960.71	0.0326	P	0.9
7	☐	100.000	100.019	320433.66	0.3290	P	0.7
8	☐						

y = 0.0033 * x + 3.9141E-004
R = 1.0000
DL = 0.04306
BEC = 0.1187

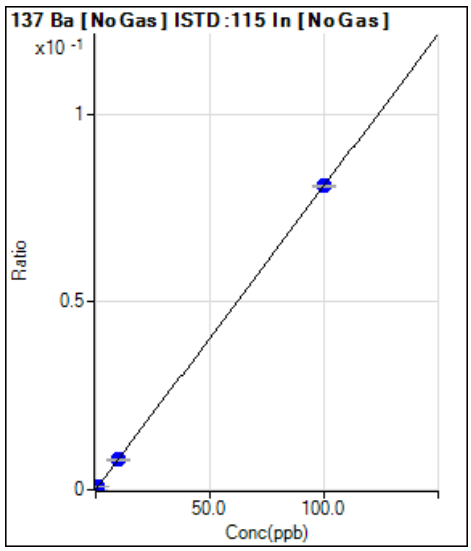
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4852.00	0.0003	P	2.2
2	☐	0.000					
3	☐	0.200	0.214	11066.66	0.0007	P	1.2
4	☐	1.000					
5	☐	2.000	2.056	66116.09	0.0041	P	0.4
6	☐	20.000	20.167	603902.51	0.0379	P	0.4
7	☐	200.000	199.983	5922771.43	0.3735	P	0.6
8	☐						

y = 0.0019 * x + 3.0207E-004
R = 1.0000
DL = 0.01059
BEC = 0.1615

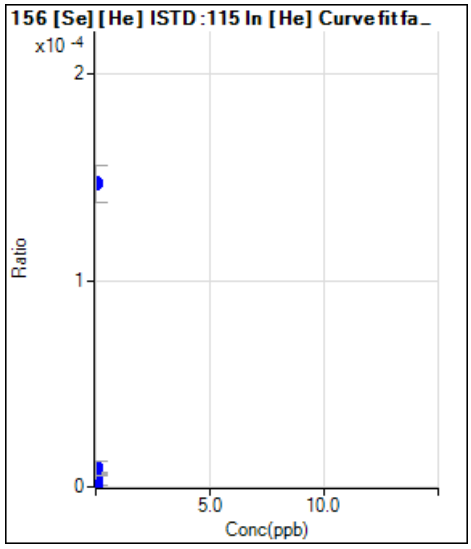
Weight: <None>
Min Conc: <None>



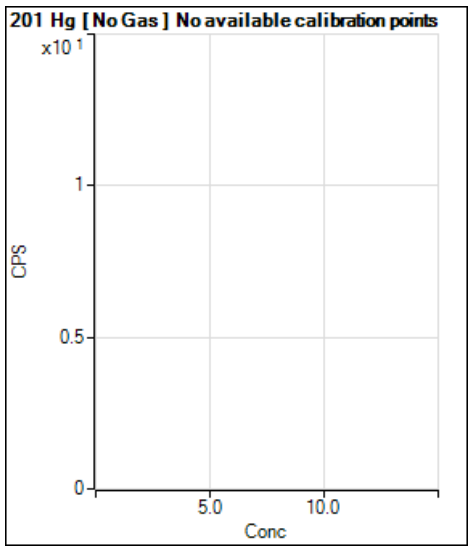
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	20.6
2	☐	0.000					
3	☐	0.100	0.097	1320.08	0.0001	P	6.2
4	☐	0.500					
5	☐	1.000	0.968	12574.63	0.0008	P	3.2
6	☐	10.000	9.818	126391.90	0.0079	P	0.6
7	☐	100.000	100.019	1281901.44	0.0808	P	0.2
8	☐	1000.000					

y = 8.0814E-004 * x + 4.9784E-006
R = 1.0000
DL = 0.003798
BEC = 0.006146

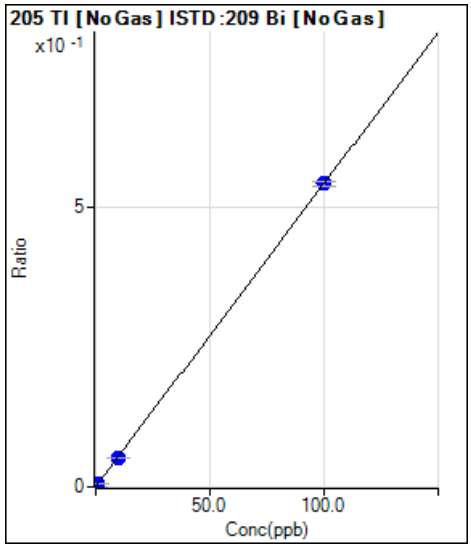
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		3.33	0.0000	P	173.
2	☐	0.000					
3	☐	0.000		3.33	0.0000	P	173.
4	☐	0.000					
5	☐	0.000		0.00	0.0000	P	
6	☐	0.000		8.89	0.0000	P	77.7
7	☐	0.000		143.34	0.0001	P	11.9
8	☐						



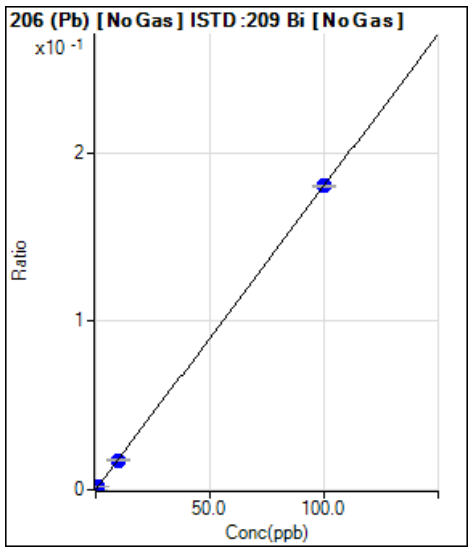
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			12.33		P	36.6
2	☐						
3	☐			11.67		P	27.9
4	☐						
5	☐			12.00		P	18.2
6	☐			15.67		P	23.1
7	☐			30.17		P	6.3
8	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	946.74	0.0001	P	6.2
2	☐	0.000					
3	☐	0.100	0.095	8806.57	0.0006	P	1.7
4	☐	0.500					
5	☐	1.000	0.956	81321.26	0.0052	P	0.9
6	☐	10.000	9.470	794893.63	0.0515	P	1.5
7	☐	100.000	100.053	8217467.59	0.5433	P	1.4
8	☐						

y = 0.0054 * x + 6.0920E-005
R = 1.0000
DL = 0.002072
BEC = 0.01122

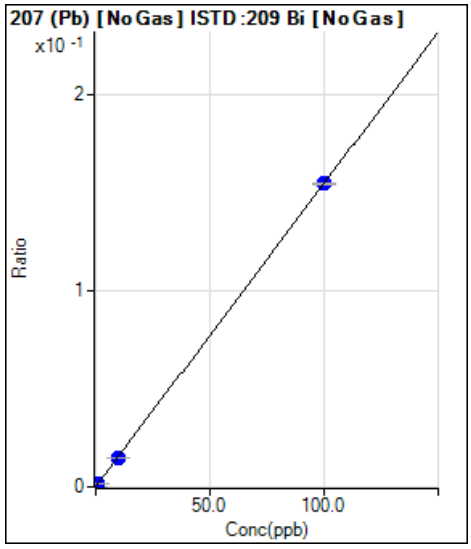
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0000	P	8.3
2	☐	0.000					
3	☐	0.100	0.099	2927.10	0.0002	P	1.9
4	☐	0.500					
5	☐	1.000	0.990	27883.37	0.0018	P	1.2
6	☐	10.000	9.766	272306.30	0.0176	P	1.4
7	☐	100.000	100.023	2729983.40	0.1805	P	0.5
8	☐						

y = 0.0018 * x + 1.2869E-005
R = 1.0000
DL = 0.001777
BEC = 0.007132

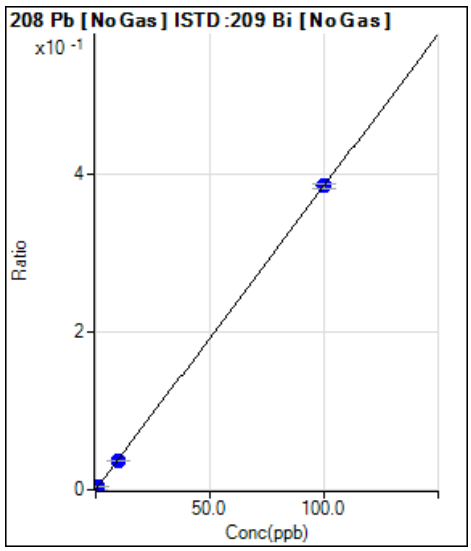
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.34	0.0000	P	37.1
2	☐	0.000					
3	☐	0.100	0.107	2723.72	0.0002	P	7.5
4	☐	0.500					
5	☐	1.000	0.960	23204.21	0.0015	P	2.2
6	☐	10.000	9.754	233135.35	0.0151	P	0.6
7	☐	100.000	100.025	2339864.45	0.1547	P	0.8
8	☐						

y = 0.0015 * x + 1.2452E-005
R = 1.0000
DL = 0.008956
BEC = 0.008052

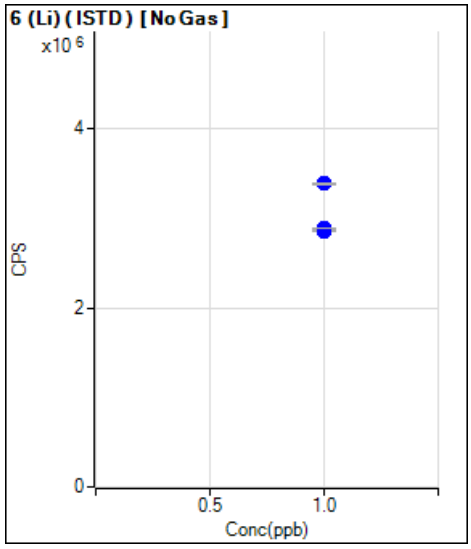
Weight: <None>
Min Conc: <None>



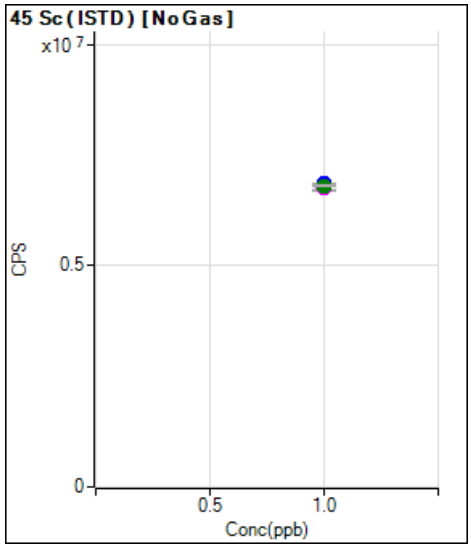
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.70	0.0000	P	26.5
2	☐	0.000					
3	☐	0.100	0.096	6184.98	0.0004	P	5.2
4	☐	0.500					
5	☐	1.000	0.974	58733.12	0.0038	P	0.6
6	☐	10.000	9.676	576656.31	0.0373	P	1.2
7	☐	100.000	100.033	5833936.79	0.3857	P	1.4
8	☐						

y = 0.0039 * x + 3.5208E-005
R = 1.0000
DL = 0.007251
BEC = 0.009131

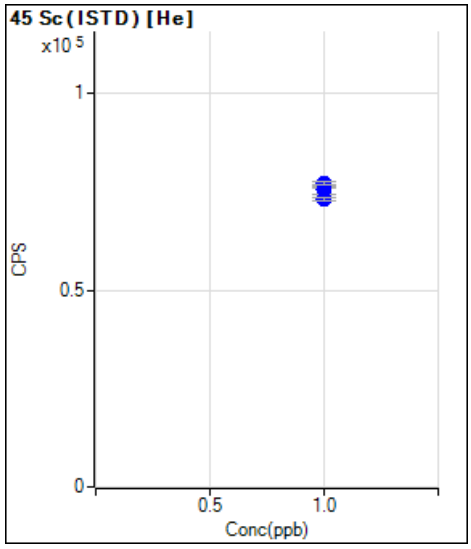
Weight: <None>
Min Conc: <None>



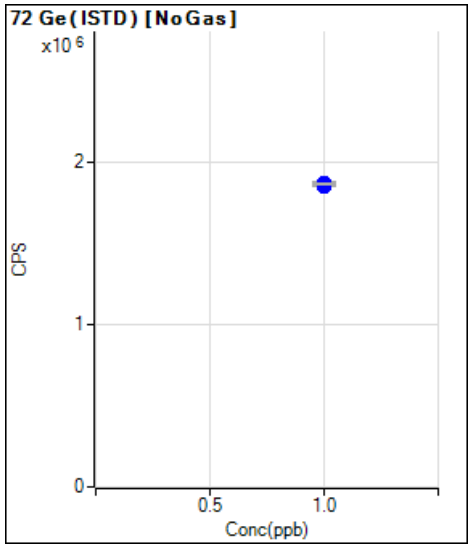
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2881231.83		P	0.8
2	☐	1.000					
3	☐	1.000		2863957.14		P	0.4
4	☐	1.000					
5	☐	1.000		2880904.33		P	0.6
6	☐	1.000		2893958.50		P	0.2
7	☐	1.000		3389417.45		P	0.5
8	☐	1.000					



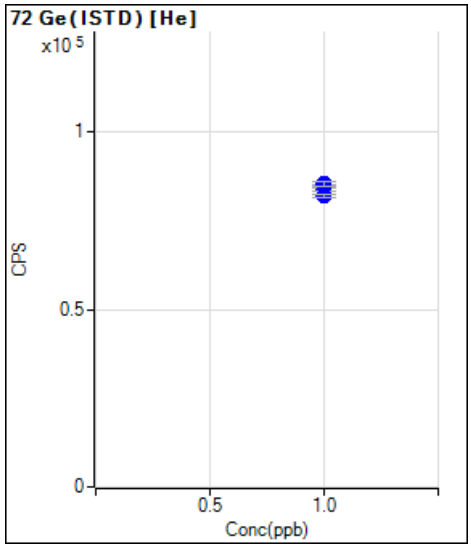
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6851018.89		P	0.1
2	☐	1.000					
3	☐	1.000		6736368.34		M	1.8
4	☐	1.000					
5	☐	1.000		6803679.04		M	0.8
6	☐	1.000		6760853.06		M	1.5
7	☐	1.000		6804947.64		A	0.6
8	☐	1.000					



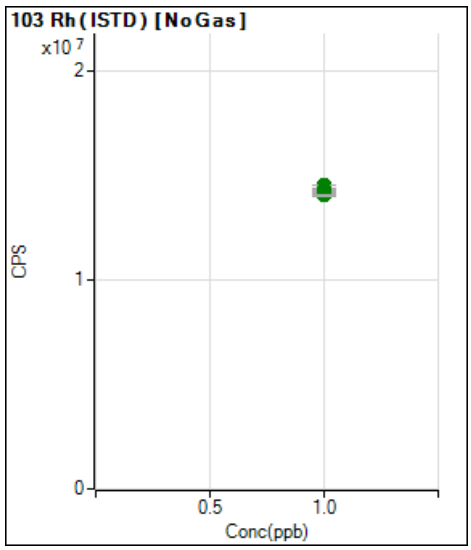
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		75607.86		P	3.0
2	☐	1.000					
3	☐	1.000		73243.73		P	1.4
4	☐	1.000					
5	☐	1.000		76119.14		P	0.5
6	☐	1.000		76545.79		P	0.3
7	☐	1.000		77136.57		P	1.1
8	☐	1.000					



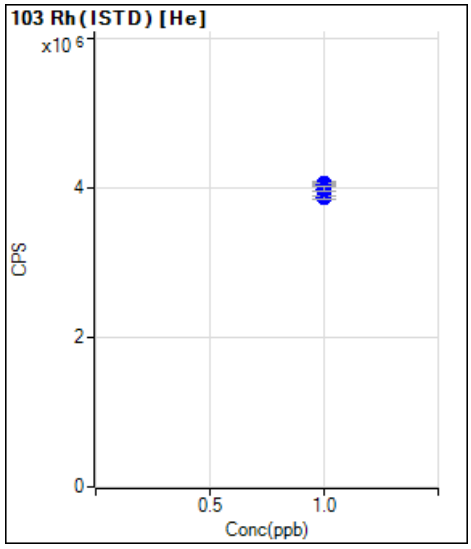
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1859144.92		P	0.4
2	☐	1.000					
3	☐	1.000		1860017.29		P	0.5
4	☐	1.000					
5	☐	1.000		1870707.56		P	1.3
6	☐	1.000		1853592.08		P	0.4
7	☐	1.000		1867851.94		P	0.5
8	☐	1.000					



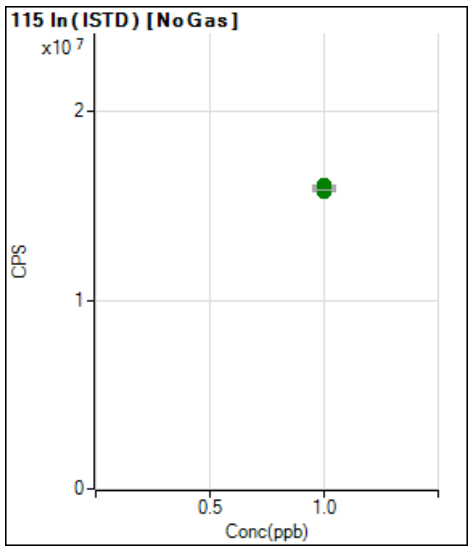
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		83815.71		P	1.4
2	☐	1.000					
3	☐	1.000		81831.13		P	1.1
4	☐	1.000					
5	☐	1.000		85488.23		P	1.0
6	☐	1.000		84881.68		P	0.3
7	☐	1.000		85382.24		P	1.2
8	☐	1.000					



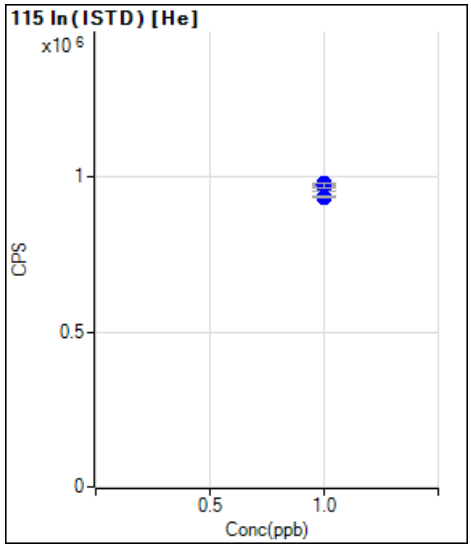
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14488774.9		A	0.1
2	☐	1.000					
3	☐	1.000		14210488.3		A	0.6
4	☐	1.000					
5	☐	1.000		14294495.5		A	0.6
6	☐	1.000		14196927.2		A	0.4
7	☐	1.000		14016763.3		A	0.4
8	☐	1.000					



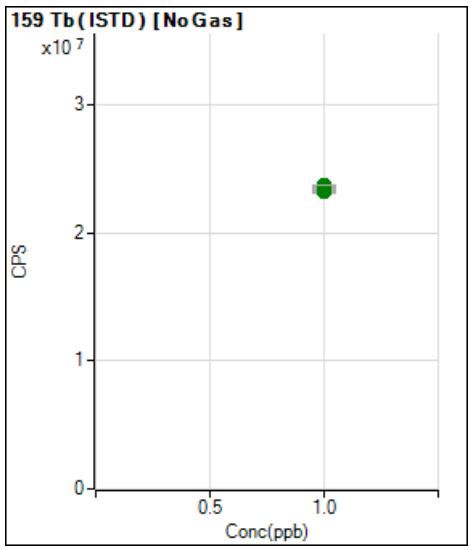
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3975038.59		P	1.5
2	☐	1.000					
3	☐	1.000		3873926.37		P	1.2
4	☐	1.000					
5	☐	1.000		4051127.62		P	1.1
6	☐	1.000		4043005.53		P	1.1
7	☐	1.000		3979347.62		P	1.4
8	☐	1.000					



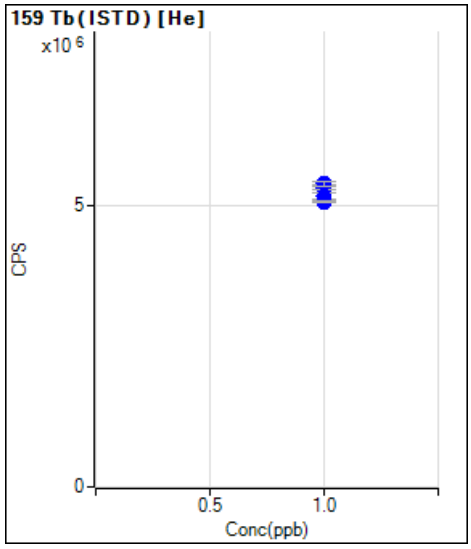
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16063366.0		A	0.3
2	☐	1.000					
3	☐	1.000		15785427.7		A	0.6
4	☐	1.000					
5	☐	1.000		15975452.7		A	0.8
6	☐	1.000		15919784.3		A	0.5
7	☐	1.000		15858393.2		A	0.1
8	☐	1.000					



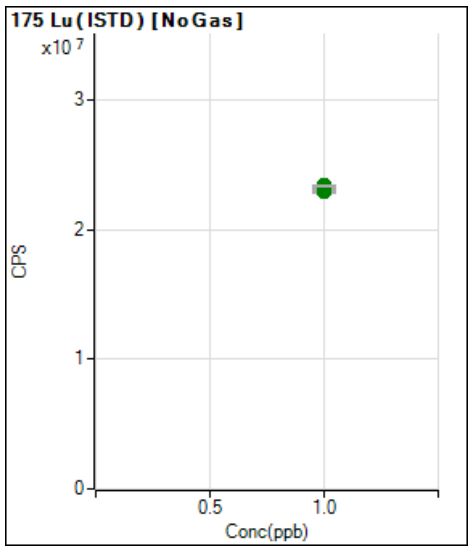
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		963869.37		P	2.2
2	☐	1.000					
3	☐	1.000		936923.19		P	0.8
4	☐	1.000					
5	☐	1.000		978647.70		P	1.1
6	☐	1.000		979732.67		P	0.7
7	☐	1.000		974081.94		P	1.6
8	☐	1.000					



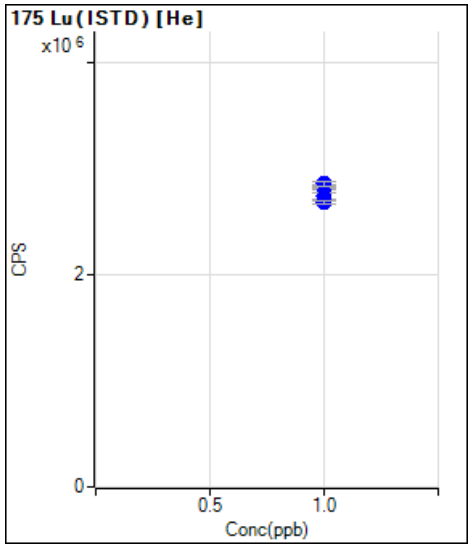
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		23584859.6		A	0.7
2	☐	1.000					
3	☐	1.000		23193623.8		A	0.6
4	☐	1.000					
5	☐	1.000		23388687.9		A	1.0
6	☐	1.000		23605326.3		A	0.6
7	☐	1.000		23663666.3		A	0.1
8	☐	1.000					



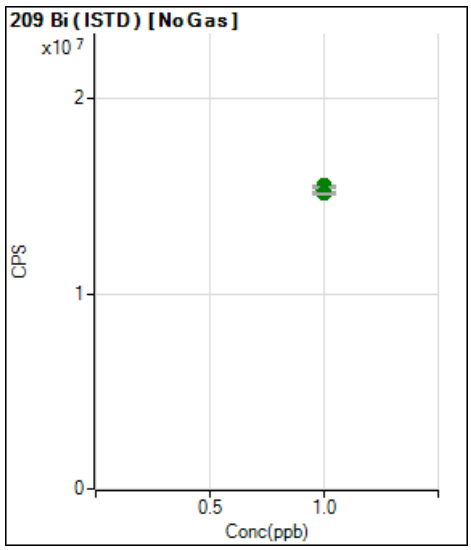
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5171112.74		P	2.4
2	☐	1.000					
3	☐	1.000		5062365.86		P	0.8
4	☐	1.000					
5	☐	1.000		5319059.09		P	1.0
6	☐	1.000		5333571.17		P	1.4
7	☐	1.000		5388938.46		P	1.4
8	☐	1.000					



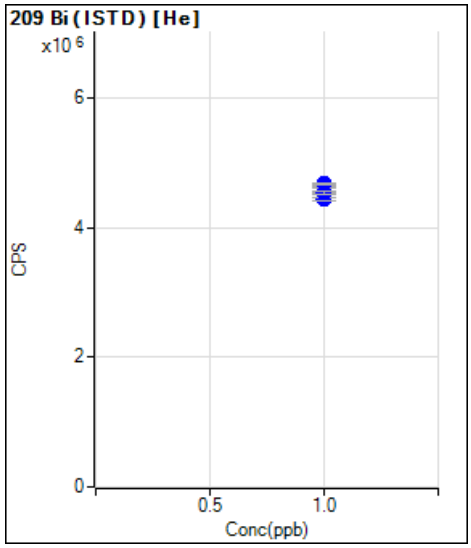
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		23162533.8		A	0.6
2	☐	1.000					
3	☐	1.000		22978704.6		A	1.2
4	☐	1.000					
5	☐	1.000		23016187.1		A	0.4
6	☐	1.000		23195212.1		A	0.4
7	☐	1.000		23415019.6		A	0.4
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2744423.08		P	1.9
2	☐	1.000					
3	☐	1.000		2692465.69		P	1.2
4	☐	1.000					
5	☐	1.000		2827983.50		P	1.1
6	☐	1.000		2836996.83		P	0.7
7	☐	1.000		2862200.48		P	1.9
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15539350.6		A	0.4
2	☐	1.000					
3	☐	1.000		15328873.5		A	0.8
4	☐	1.000					
5	☐	1.000		15492792.6		A	1.0
6	☐	1.000		15441253.1		A	0.0
7	☐	1.000		15125076.8		A	0.6
8	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4512767.54		P	1.7
2	☐	1.000					
3	☐	1.000		4434733.79		P	1.2
4	☐	1.000					
5	☐	1.000		4635083.68		P	0.5
6	☐	1.000		4680170.56		P	0.8
7	☐	1.000		4545684.10		P	1.0
8	☐	1.000					

Metals

Prep Sheets

Pace Analytical

3010A Metals Water Preparation

ANALYST/ TECH	JEL	START DATE/TIME	8/19/2022 12:00	END DATE/TIME	8/19/2022 16:00	BATCH	747964

#	CLIENT	TYPE	CLIENT ID	LAB ID	INITIAL VOL (mL)	FINAL VOL (mL)	COMMENT	STANDARDS\ REAGENTS
1	QC	MB	MB 2385930	2385930	50	50		GCAL - 8 - 250uL
2	QC	LCS	LCS 2385931	2385931	50	50		2131556
3	4838	SAMP	CNC735MW02WG20220816	22208191101	50	50		Sb,Ag,Se SPIKE - 250uL
4	4838	MS	CNC735MW02WG20220816 MS	22208191102	50	50		345-17-4
5	4838	MSD	CNC735MW02WG20220816 MSD	22208191103	50	50		Li,B,Zr SPIKE - 250uL
6	4838	SAMP	CNC735MW03WG20220816	22208191104	50	50		345-17-5
7	4838	FD	CNC735MW03WG20220816-a	22208191105	50	50		Si SPIKE - 250uL
8	4838	SAMP	CNC735MW04WG20220817	22208191106	50	50		2131569
9	4838	SAMP	CNC735MW05WG20220817	22208191107	50	50		1:1 HNO3
10	4838	SAMP	CNC735MW06WG20220817	22208191108	50	50		226-40-5
11	4838	SAMP	CNC735MW07WG20220818	22208191109	50	50		1:1 HCL
12	4838	EQBK	EQUIPMENT BLANK	22208191110	50	50		226-40-6
13	4838	SAMP	CNC735MW01WG20220816	22208191111	50	50		
14	AL-O	SAMP	EFFLUENT	22208183001	50	50		
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								Digestion Vessel Lot#
28								052622
29								
30								

EQUIPMENT\CONDITIONS

DIGESTION BLOCK\THERMOMETER ID	TEMPERATURE	PIPETTE 1
B1	**94**	**117**
PIPETTE 2	PIPETTE 3	
115		

NOTES

TCLPs are reduced in volume due to sample matrix. Matrix-Water. 6020_W_EX

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: FA97914X

Client / Reporting Information

ompany Name: SGS North America Inc.
reet Address: 4405 Vineland Rd, Suite C-15
ity: Orlando State: FL Zip: 32811
roject Contact: E-mail: evita.martinez@sgs.com
hone #: 407-425-6700 Fax #:
ampler(s) Name(s): JR Phone:

Project Information

Project Name: FA97914X
Street:
City: State: MA
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Wat; GW - Ground Wat; WW - Water; SW - Surface Wat; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquic; AIR - Air; SOL - Other Solic; WP - Wipe; FB-Field Blank; EB-Equipment Bla; RB- Rinse Blank; TB-Trip Blank

SGS ample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	ASMS ,6020	LAB USE ONL
1X	EFFLUENT		8/5/22	10:30:00 AM	JR	AQ	1			1						X	1

Client ID: AL-O - SGS Accutest - Orlando
SDG: 222081830
PM: RWe

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 6 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 8/24/2022

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [X] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other DOD 5.3

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Pace Gulf Coast
1.1642
5200 7353 8204

http://www.sgs.com/en/terms-and-condition

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	8/5/22	1	2		2
Relinquished by Sampler: FedEx	Date Time: 8/8/22 9:55	Received By:	Relinquished By:	Date Time: 8/8/22 9:55	Received By:

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 222081830	
Client **PM** RWe AL-O - SGS Accutest - Orlando	**Transport Method** FEDEX
Profile Number 299627	**Received By** Roberts, George S.
Line Item(s) 1 - Arsenic	**Receive Date(s)** 08/18/22

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☐	☑

COOLERS

Airbill	Thermometer ID: E42	Temp °C
570073538264		1.1

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : FA97914 PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	Total Arsenic - 6020A	LAB USE ONLY
1	Effluent	8/5/22	10:30	JWR	W	1					x					X	

INITIAL ASSESSMENT SM
LABEL VERIFICATION SM

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
X 5 Day- Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

SGS Service Center Northborough, MA
8/5

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Sovcon	8/5/22 1330	2	3	8/5/22 1730	4
	Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		8/6/22 930	6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 1.8 CSH 30937

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

FA97914: Chain of Custody
Page 1 of 5

SGS Sample Receipt Summary

Job Number: FA97914 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 8/6/2022 9:30:00 AM **Delivery Method:** FED EX **Airbill #'s:** 9304 4372 1991

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (1.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 8/6/2022 9:30:00 AM Reviewer: _____ Date: _____

Job Change Order: FA97914

Requested Date:	8/15/2022	**Received Date:**	8/6/2022
Account Name:	Sovereign Consulting	**Due Date:**	8/15/2022
Project Description:	Shepley's Hill (SHL); Devens, MA	**Deliverable:**	FULT1
CSR:	EM	**TAT (Days):**	7

==========

Sample #: FA97914-1

Dept:

TAT: 7

EFFLUENT

Change:
Please remove all test codes

==========

Above Changes Per: Evita Martinez **Date/Time:** 8/15/2022 2:16:57 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

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FA97914: Chain of Custody
Page 4 of 5

Job Change Order: FA97914

Requested Date:	8/17/2022	**Received Date:**	8/6/2022
Account Name:	Sovereign Consulting	**Due Date:**	8/15/2022
Project Description:	Shepley's Hill (SHL); Devens, MA	**Deliverable:**	FULT1
CSR:	EM	**TAT (Days):**	7

==========

Sample #: FA97914-all

Dept:

TAT: 7

Change:
Please add ASMS

==========

FA97914: Chain of Custody
Page 5 of 5

Above Changes Per: Evita Martinez **Date/Time:** 8/17/2022 1:10:14 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

The results set forth herein are provided by SGS North America Inc.

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Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA98819

Sampling Date: 09/09/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **1485**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA98819

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA98819-1	09/09/22	10:15	JR	09/10/22	AQ	Ground Water	EFFLUENT
FA98819-1A	09/09/22	10:15	JR	09/10/22	AQ	Ground Water	EFFLUENT
FA98819-1B	09/09/22	10:15	JR	09/10/22	AQ	Ground Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA98819

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 9/30/2022 3:02:46 PM

On 09/10/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA98819 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method EPA 624.1

Matrix: AQ **Batch ID:** V2P3587

Sample(s) FA98819-1MS, FA98819-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Trichlorofluoromethane, Vinyl Chloride are outside control limits for sample FA98819-1MSD. Probable cause is due to sample non-homogeneity.

FA98819-1 for Acrylonitrile: Result reported from HCl preserved sample and should be used for screening purposes only.

FA98819-1 for Trichlorofluoromethane: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98819-1 for 2-Chloroethyl Vinyl Ether: Result reported from HCl preserved sample and should be used for screening purposes only.

FA98819-1 for Acrolein: Result reported from HCl preserved sample and should be used for screening purposes only.

Matrix: AQ **Batch ID:** V2P3591

FA98819-1: Sample re-analyzed beyond hold time. Confirmation run.

MS Semi-volatiles By Method EPA 625.1

Matrix: AQ **Batch ID:** OP93036

Sample(s) FA98756-2MS, FA98756-2MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,2'-Oxybis(1-chloropropane), 2,4,6-Trichlorophenol, 2,4-Dinitrotoluene, Benzo(a)pyrene, Butyl Benzyl Phthalate, Isophorone are outside control limits.

Matrix Spike Recovery(s) for 1,2,4-Trichlorobenzene, 2,2'-Oxybis(1-chloropropane), 2,4,6-Trichlorophenol, Isophorone are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Isophorone are outside control limits. Probable cause is due to matrix interference.

FA98819-1 for bis(2-Chloroethyl)ether: Associated CCV outside of control limits high, sample was ND.

FA98819-1 for 2,4,6-Trichlorophenol: Associated BS outside control limits high, sample was ND.

FA98819-1 for 2,4-Dinitrotoluene: Associated BS outside control limits high, sample was ND.

FA98819-1 for Benzo(a)pyrene: Associated BS outside control limits high, sample was ND.

FA98819-1 for Butyl Benzyl Phthalate: Associated BS outside control limits high, sample was ND.

FA98819-1 for Isophorone: Associated BS outside control limits high, sample was ND.

FA98819-1 for Benzidine: Associated CCV outside of control limits high, sample was ND.

FA98819-1 for Hexachlorocyclopentadiene: Associated CCV outside of control limits high, sample was ND.

FA98819-1 for N-Nitrosodi-n-propylamine: Associated CCV outside of control limits high, sample was ND.

FA98819-1 for Phenol: Associated CCV outside of control limits high, sample was ND.

FA98819-1 for 2,2'-Oxybis(1-chloropropane): Associated BS and CCV outside of control limits high, sample was ND.

FA98819-1 for Benzyl Alcohol: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method EPA 608.3

Matrix: AQ **Batch ID:** OP93037

Sample(s) FA98756-2MS, FA98756-2MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** OP93038

Sample(s) FA98756-3MS, FA98756-3MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP41228

Sample(s) FA98999-1DUP, FA98999-1MS, FA98999-1MSD, FA98999-1PS, FA98999-1SDL were used as the QC samples.

RPD(s) for Duplicate for Silver are outside control limits for sample MP41228-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Chromium, Silver are outside control limits for sample MP41228-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP41211

Sample(s) FA98621-8DUP, FA98621-8MS, FA98621-8MSD, FA98621-8SDL, FA98679-3SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP41211-SD1, MP41211-SD2. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP41239

Sample(s) FA99026-1DUP, FA99026-1MS, FA99026-1MSD, FA99026-1SDL were used as the QC samples for metals.

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP38049

Sample(s) FA98910-3MS, FA98910-3MSD were used as the QC samples for Chloride, Sulfate.

Matrix: AQ **Batch ID:** R57735

FA98819-1A for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** N:GP42401

FA98819-1A for Nitrogen, Nitrate + Nitrite: Analysis performed at SGS Dayton, NJ.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** N:R199507

FA98819-1A for Nitrogen, Nitrate: Analysis performed at SGS Dayton, NJ.

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** N:GN33204

FA98819-1A for Nitrogen, Nitrite: Analysis performed at SGS Dayton, NJ.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	SGS Orlando, FL	**Job No:**	FA98819
Site:	SCMAW: Shepley's Hill (SHL); Devens, MA	**Report Date**	9/26/2022 11:27:28 A

On 09/9/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA98819 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** GP42401

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD51942-2DUP, JD51942-2MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** R199507

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- FA98819-1A for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** GN33204

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD51437-3MS, JD51437-3MSD were used as the QC samples for Nitrogen, Nitrite.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: FA98819
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA98819-1	**EFFLUENT**					
Methylene Chloride [a]		41.1 J	100	80	ug/l	EPA 624.1
Barium		16.0 J	200	5.0	ug/l	SW846 6010D
Copper		14.7 J	25	2.0	ug/l	SW846 6010D
Magnesium		5330	5000	100	ug/l	SW846 6010D
Manganese		11.8 J	15	2.0	ug/l	SW846 6010D
Chloride		35.2	2.0	1.0	mg/l	EPA 300/SW846 9056A
Sulfate		6.1	2.0	1.0	mg/l	EPA 300/SW846 9056A
FA98819-1A	**EFFLUENT**					
No hits reported in this sample.						
FA98819-1B	**EFFLUENT**					
Arsenic		8.8	2.0	1.0	ug/l	SW846 6020B

(a) Suspected laboratory contaminant. Confirmed ND by re-analysis beyond holdtime.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 624.1	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P93422.D	1	09/27/22 13:35	CF	n/a	n/a	V2P3591
Run #2	2P93340.D	20	09/23/22 20:53	CF	n/a	n/a	V2P3587

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	400 U [b]	500	400	200	ug/l	
107-02-8	Acrolein [c]	200 U [b]	400	200	120	ug/l	
107-13-1	Acrylonitrile [c]	100 U [b]	200	100	42	ug/l	
71-43-2	Benzene	10 U [b]	20	10	6.2	ug/l	
75-27-4	Bromodichloromethane	10 U [b]	20	10	4.8	ug/l	
75-25-2	Bromoform	10 U [b]	20	10	8.1	ug/l	
78-93-3	2-Butanone (MEK)	70 U [b]	100	70	40	ug/l	
75-15-0	Carbon Disulfide	20 U [b]	40	20	11	ug/l	
56-23-5	Carbon Tetrachloride	10 U [b]	20	10	7.1	ug/l	
108-90-7	Chlorobenzene	10 U [b]	20	10	4.0	ug/l	
75-00-3	Chloroethane	20 U [b]	40	20	13	ug/l	
110-75-8	2-Chloroethyl Vinyl Ether [c]	70 U [b]	100	70	42	ug/l	
67-66-3	Chloroform	10 U [b]	20	10	6.0	ug/l	
124-48-1	Dibromochloromethane	10 U [b]	20	10	5.5	ug/l	
95-50-1	1,2-Dichlorobenzene	10 U [b]	20	10	6.5	ug/l	
541-73-1	1,3-Dichlorobenzene	10 U [b]	20	10	4.3	ug/l	
106-46-7	1,4-Dichlorobenzene	10 U [b]	20	10	5.1	ug/l	
75-34-3	1,1-Dichloroethane	10 U [b]	20	10	6.8	ug/l	
107-06-2	1,2-Dichloroethane	10 U [b]	20	10	6.2	ug/l	
75-35-4	1,1-Dichloroethylene	10 U [b]	20	10	6.4	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10 U [b]	20	10	5.5	ug/l	
156-60-5	trans-1,2-Dichloroethylene	10 U [b]	20	10	4.4	ug/l	
78-87-5	1,2-Dichloropropane	10 U [b]	20	10	8.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	10 U [b]	20	10	5.8	ug/l	
10061-02-6	trans-1,3-Dichloropropene	10 U [b]	20	10	4.3	ug/l	
100-41-4	Ethylbenzene	10 U [b]	20	10	7.1	ug/l	
591-78-6	2-Hexanone	100 U [b]	200	100	40	ug/l	
74-83-9	Methyl Bromide	80 U [b]	100	80	40	ug/l	
74-87-3	Methyl Chloride	20 U [b]	40	20	10	ug/l	
75-09-2	Methylene Chloride [d]	41.1 [b]	100	80	40	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	40 U [b]	100	40	20	ug/l	
100-42-5	Styrene	10 U [b]	20	10	4.4	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 624.1	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	10 U [b]	20	10	6.0	ug/l	
127-18-4	Tetrachloroethylene	10 U [b]	20	10	4.3	ug/l	
108-88-3	Toluene	10 U [b]	20	10	6.0	ug/l	
71-55-6	1,1,1-Trichloroethane	10 U [b]	20	10	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	10 U [b]	20	10	9.3	ug/l	
79-01-6	Trichloroethylene	10 U [b]	20	10	6.9	ug/l	
75-69-4	Trichlorofluoromethane [e]	20 U [b]	40	20	10	ug/l	
108-05-4	Vinyl Acetate	100 U [b]	200	100	40	ug/l	
75-01-4	Vinyl Chloride	10 U [b]	20	10	8.2	ug/l	
	m,p-Xylene	20 U [b]	40	20	9.3	ug/l	
95-47-6	o-Xylene	10 U [b]	20	10	5.1	ug/l	
1330-20-7	Xylene (total)	30 U [b]	60	30	14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	79-125%
2037-26-5	Toluene-D8	102%	94%	85-112%
460-00-4	4-Bromofluorobenzene	102%	97%	83-118%

(a) Sample re-analyzed beyond hold time. Confirmation run.
(b) Result is from Run# 2
(c) Result reported from HCl preserved sample and should be used for screening purposes only.
(d) Suspected laboratory contaminant. Confirmed ND by re-analysis beyond holdtime.
(e) Associated CCV outside of DOD QSM control limits high, sample is ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 625.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6F15641.D	1	09/13/22 16:55	KA	09/13/22 06:45	OP93036	S6F586
Run #2							

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
65-85-0	Benzoic Acid	25 U	50	25	9.9	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	0.99 U	5.0	0.99	0.59	ug/l	
95-57-8	2-Chlorophenol	0.99 U	5.0	0.99	0.62	ug/l	
120-83-2	2,4-Dichlorophenol	0.99 U	5.0	0.99	0.83	ug/l	
105-67-9	2,4-Dimethylphenol	2.0 U	5.0	2.0	0.73	ug/l	
51-28-5	2,4-Dinitrophenol	20 U	25	20	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	4.0 U	9.9	4.0	2.0	ug/l	
95-48-7	2-Methylphenol	0.99 U	5.0	0.99	0.55	ug/l	
	3&4-Methylphenol	2.0 U	5.0	2.0	0.97	ug/l	
88-75-5	2-Nitrophenol	2.0 U	5.0	2.0	0.84	ug/l	
100-02-7	4-Nitrophenol	9.9 U	25	9.9	5.0	ug/l	
87-86-5	Pentachlorophenol	9.9 U	25	9.9	5.0	ug/l	
108-95-2	Phenol [a]	2.0 U	5.0	2.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	2.0 U	5.0	2.0	0.73	ug/l	
88-06-2	2,4,6-Trichlorophenol [b]	2.0 U	5.0	2.0	0.74	ug/l	
83-32-9	Acenaphthene	0.99 U	5.0	0.99	0.62	ug/l	
208-96-8	Acenaphthylene	0.99 U	5.0	0.99	0.63	ug/l	
62-53-3	Aniline	2.0 U	5.0	2.0	0.99	ug/l	
120-12-7	Anthracene	0.99 U	5.0	0.99	0.79	ug/l	
92-87-5	Benzidine [a]	9.9 U	25	9.9	5.0	ug/l	
56-55-3	Benzo(a)anthracene	0.99 U	5.0	0.99	0.75	ug/l	
50-32-8	Benzo(a)pyrene [b]	0.99 U	5.0	0.99	0.78	ug/l	
205-99-2	Benzo(b)fluoranthene	0.99 U	5.0	0.99	0.77	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.99 U	5.0	0.99	0.81	ug/l	
207-08-9	Benzo(k)fluoranthene	0.99 U	5.0	0.99	0.85	ug/l	
100-51-6	Benzyl Alcohol [a]	0.99 U	5.0	0.99	0.61	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	0.99 U	5.0	0.99	0.84	ug/l	
85-68-7	Butyl Benzyl Phthalate [b]	2.0 U	5.0	2.0	0.99	ug/l	
86-74-8	Carbazole	0.99 U	5.0	0.99	0.59	ug/l	
106-47-8	4-Chloroaniline	0.99 U	5.0	0.99	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	2.0 U	5.0	2.0	0.80	ug/l	
111-44-4	bis(2-Chloroethyl)ether [a]	0.99 U	5.0	0.99	0.72	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 625.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

ABN Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane) [c]	0.99 U	5.0	0.99	0.75	ug/l	
91-58-7	2-Chloronaphthalene	2.0 U	5.0	2.0	0.50	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	0.99 U	5.0	0.99	0.53	ug/l	
218-01-9	Chrysene	0.99 U	5.0	0.99	0.84	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.99 U	5.0	0.99	0.80	ug/l	
132-64-9	Dibenzofuran	0.99 U	5.0	0.99	0.60	ug/l	
95-50-1	1,2-Dichlorobenzene	2.0 U	5.0	2.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	2.0 U	5.0	2.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	2.0 U	5.0	2.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	2.0 U	5.0	2.0	0.64	ug/l	
84-66-2	Diethyl Phthalate	2.0 U	5.0	2.0	0.99	ug/l	
131-11-3	Dimethyl Phthalate	2.0 U	5.0	2.0	0.99	ug/l	
84-74-2	Di-n-butyl Phthalate	2.0 U	5.0	2.0	0.99	ug/l	
117-84-0	Di-n-octyl Phthalate	2.0 U	5.0	2.0	0.99	ug/l	
121-14-2	2,4-Dinitrotoluene [b]	0.99 U	5.0	0.99	0.80	ug/l	
606-20-2	2,6-Dinitrotoluene	0.99 U	5.0	0.99	0.71	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.0 U	5.0	2.0	0.99	ug/l	
206-44-0	Fluoranthene	0.99 U	5.0	0.99	0.55	ug/l	
86-73-7	Fluorene	0.99 U	5.0	0.99	0.69	ug/l	
118-74-1	Hexachlorobenzene	0.99 U	5.0	0.99	0.69	ug/l	
87-68-3	Hexachlorobutadiene	0.99 U	5.0	0.99	0.50	ug/l	
77-47-4	Hexachlorocyclopentadiene [a]	3.5 U	5.0	3.5	1.8	ug/l	
67-72-1	Hexachloroethane	2.0 U	5.0	2.0	1.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.99 U	5.0	0.99	0.71	ug/l	
78-59-1	Isophorone [b]	0.99 U	5.0	0.99	0.77	ug/l	
90-12-0	1-Methylnaphthalene	0.99 U	5.0	0.99	0.52	ug/l	
91-57-6	2-Methylnaphthalene	0.99 U	5.0	0.99	0.59	ug/l	
91-20-3	Naphthalene	0.99 U	5.0	0.99	0.50	ug/l	
88-74-4	2-Nitroaniline	3.5 U	5.0	3.5	1.8	ug/l	
99-09-2	3-Nitroaniline	2.0 U	5.0	2.0	0.87	ug/l	
100-01-6	4-Nitroaniline	2.0 U	5.0	2.0	1.2	ug/l	
98-95-3	Nitrobenzene	2.0 U	5.0	2.0	0.92	ug/l	
62-75-9	N-Nitrosodimethylamine	2.0 U	5.0	2.0	0.50	ug/l	
621-64-7	N-Nitrosodi-n-propylamine [a]	2.0 U	5.0	2.0	0.66	ug/l	
86-30-6	N-Nitrosodiphenylamine	2.0 U	5.0	2.0	0.80	ug/l	
85-01-8	Phenanthrene	0.99 U	5.0	0.99	0.86	ug/l	
129-00-0	Pyrene	0.99 U	5.0	0.99	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.0 U	5.0	2.0	1.1	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 625.1 SW846 3510C	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

ABN Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		14-67%
4165-62-2	Phenol-d5	17%		10-50%
118-79-6	2,4,6-Tribromophenol	83%		33-118%
4165-60-0	Nitrobenzene-d5	66%		42-108%
321-60-8	2-Fluorobiphenyl	67%		40-106%
1718-51-0	Terphenyl-d14	78%		39-121%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated BS outside control limits high, sample was ND.
(c) Associated BS and CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 608.3 SW846 3510C	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST163773.D	1	09/20/22 19:57	EM	09/13/22 07:39	OP93037	GST3992
Run #2	XX081794.D	1	09/21/22 14:06	EM	09/13/22 07:46	OP93038	GXX1548

	Initial Volume	Final Volume
Run #1	980 ml	5.0 ml
Run #2	980 ml	5.0 ml

Pesticide TCL List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
309-00-2	Aldrin	0.010 U	0.026	0.010	0.0026	ug/l	
319-84-6	alpha-BHC	0.010 U	0.026	0.010	0.0026	ug/l	
319-85-7	beta-BHC	0.010 U	0.026	0.010	0.0030	ug/l	
319-86-8	delta-BHC	0.010 U	0.026	0.010	0.0026	ug/l	
58-89-9	gamma-BHC (Lindane)	0.010 U	0.026	0.010	0.0026	ug/l	
12789-03-6	Chlordane	0.18 U	0.26	0.18	0.10	ug/l	
5103-71-9	alpha-Chlordane	0.010 U	0.026	0.010	0.0026	ug/l	
5103-74-2	gamma-Chlordane	0.010 U	0.026	0.010	0.0027	ug/l	
60-57-1	Dieldrin	0.010 U	0.026	0.010	0.0026	ug/l	
72-54-8	4,4'-DDD	0.010 U	0.051	0.010	0.0051	ug/l	
72-55-9	4,4'-DDE	0.010 U	0.051	0.010	0.0051	ug/l	
50-29-3	4,4'-DDT	0.010 U	0.051	0.010	0.0051	ug/l	
72-20-8	Endrin	0.010 U	0.051	0.010	0.0026	ug/l	
1031-07-8	Endosulfan sulfate	0.010 U	0.051	0.010	0.0026	ug/l	
7421-93-4	Endrin aldehyde	0.010 U	0.051	0.010	0.0026	ug/l	
53494-70-5	Endrin ketone	0.010 U	0.051	0.010	0.0026	ug/l	
959-98-8	Endosulfan-I	0.010 U	0.026	0.010	0.0026	ug/l	
33213-65-9	Endosulfan-II	0.010 U	0.026	0.010	0.0026	ug/l	
76-44-8	Heptachlor	0.010 U	0.026	0.010	0.0026	ug/l	
1024-57-3	Heptachlor epoxide	0.010 U	0.026	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	0.010 U	0.051	0.010	0.0051	ug/l	
8001-35-2	Toxaphene	0.51 U	1.0	0.51	0.26	ug/l	
12674-11-2	Aroclor 1016	0.13 U [a]	0.26	0.13	0.10	ug/l	
11104-28-2	Aroclor 1221	0.18 U [a]	0.26	0.18	0.10	ug/l	
11141-16-5	Aroclor 1232	0.18 U [a]	0.26	0.18	0.10	ug/l	
53469-21-9	Aroclor 1242	0.13 U [a]	0.26	0.13	0.10	ug/l	
12672-29-6	Aroclor 1248	0.13 U [a]	0.26	0.13	0.10	ug/l	
11097-69-1	Aroclor 1254	0.13 U [a]	0.26	0.13	0.10	ug/l	
11096-82-5	Aroclor 1260	0.13 U [a]	0.26	0.13	0.10	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	EPA 608.3 SW846 3510C	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Pesticide TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%	97%	42-127%
2051-24-3	Decachlorobiphenyl	79%	76%	27-127%

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: EFFLUENT
Lab Sample ID: FA98819-1
Matrix: AQ - Ground Water
Project: Shepley's Hill (SHL); Devens, MA

Date Sampled: 09/09/22
Date Received: 09/10/22
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Barium	16.0 J	200	5.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	0.20	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Chromium	5.0 U	10	5.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Copper	14.7 J	25	2.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Lead	2.0 U	5.0	2.0	1.1	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Magnesium	5330	5000	100	35	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Manganese	11.8 J	15	2.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	09/22/22	09/22/22	JC	SW846 7470A [2]	SW846 7470A [4]
Selenium	5.0 U	10	5.0	2.9	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]
Silver	2.0 U	10	2.0	0.70	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA18931
(2) Instrument QC Batch: MA18933
(3) Prep QC Batch: MP41228
(4) Prep QC Batch: MP41239

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Chloride	35.2	2.0	1.0	0.80	mg/l	1	09/15/22 18:31	JB	EPA 300/SW846 9056A
Sulfate	6.1	2.0	1.0	0.60	mg/l	1	09/15/22 18:31	JB	EPA 300/SW846 9056A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate [a]	0.10 U	0.11	0.10	0.093	mg/l	1	09/21/22 17:46	ANJ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite [b]	0.11 U	0.12	0.11	0.096	mg/l	1	09/21/22 17:46	ANJ	EPA 300/SW846 9056A
Nitrogen, Nitrate + Nitrite [c]	0.095 U	0.10	0.095	0.090	mg/l	1	09/21/22 17:46	ANJ	EPA 353.2/LACHAT
Nitrogen, Nitrite [c]	0.0050 U	0.010	0.0050	0.0030	mg/l	1	09/10/22 08:43	ANJ	SM4500NO2 B-11

(a) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite) Analysis performed at SGS Dayton, NJ.
(b) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)
(c) Analysis performed at SGS Dayton, NJ.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA98819-1B	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	8.8	2.0	1.0	0.21	ug/l	2	09/14/22	09/15/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18915
(2) Prep QC Batch: MP41211

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Subcontract Lab Data

Report of Analysis

LELAP Certificate Number: 01955
A2LA Accredited (DoD ELAP-QSM 5.4) Certificate Number: 6429.01

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/28/2022

Report # 222091446

Project FA98819

Samples Collected 9/9/22

Deliver To	***Additional Recipients***
Evita Martinez SGS North America Inc. 4405 Vineland Rd Suite C-15 Orlando, FL 32811 407.425.6700	NONE

A2LA ACCREDITED
CERT # 6429.01

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 222091446

Certifications

Certification	Certification Number
A2LA Accredited (DoD ELAP-QSM 5.4)	6429.01
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: SGS Accutest - Orlando **Report:** 222091446

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

This report was completed in accordance with DOD QSM 5.3 as specified in the contract.

This report is being revised on 9-22-22 to change the report format to include mdl level reporting

This report is being revised on 9-28-22 to correct the project name to read FA98819

This report supersedes and replaces any prior reports issued under this workorder

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22209144601	EFFLUENT	Water	9/09/22 10:15	9/14/22 09:34

Test Summary

EPA 1664A					
Lab ID	**Client ID**	**Matrix**	**Batch**	**Instru**	**RunDate**
22209144601	EFFLUENT	Water	749733	BAL20	9/15/22 08:03

Manual Integrations

Manual Integrations for LC and IC (if performed) are documented in the raw data.
No other manual integrations were performed by Pace Gulf Coast.

Q Flag Summary

NO Q FLAGS FOR THIS WORKORDER

Detect Summary

No analytes were detected for analyses performed by Pace Gulf Coast.

EPA 1664A

Form I

Sample Results

I - GENERAL CHEMISTRY ANALYSIS DATA SHEET

Report No:	222091446	Client Sample ID:	EFFLUENT
Collect Date:	09/09/22 1015	LAB Sample ID:	22209144601
Matrix:	Water	Instrument ID:	BAL20
% Solids:	NA	Analyst:	WMT
Sample Amt:	NA	Lab File ID:	NA
Prep Vol.:	NA	Dilution Factor:	1
Prep Date:	NA	Analysis Date:	09/15/22 0803
Prep Batch:	NA	Analytical Batch:	749733
Prep Method:	NA	Analytical Method:	EPA 1664A

ANALYTE	*RESULT*	*UNITS*	*Q*	*DL*	*LOD*	*LOQ*
Oil and Grease	2.0	mg/L	U	1.5	2.0	5.1

FORM I - GENCHEM

EPA 1664A

Form III

Blanks

III - METHOD BLANK

Report No:	222091446	Blank ID:	MB2395632
Matrix:	Water	Instrument ID:	BAL20
Analysis Date:	09/15/22 0803	Lab File ID:	NA
Analytical Method:	EPA 1664A	Analytical Batch:	749733

5

ANALYTE	*RESULT*	*UNITS*	*Q*	*DL*	*LOD*	*LOQ*
Oil and Grease	2.0	mg/L	U	1.5	2.0	5.0

FORM III - GENCHEM

EPA 1664A

Form VII

Lab Control Spikes

VII - LABORATORY CONTROL SPIKE

Report No:	222091446	LAB ID:	LCS2395633
Matrix:	Water	Instrument ID:	BAL20
Analyst:	WMT	Lab File ID:	NA
Prep Date:	NA	Analysis Date:	09/15/22 0803
Prep Batch:	NA	Analytical Batch:	749733
Prep Method:	NA	Analytical Method:	EPA 1664A

ANALYTE	*UNITS*	*TRUE*	*FOUND*	*%REC*	*Q*	*% REC LIMITS*
Oil and Grease	mg/L	40.0	40.2	100		78 - 114

FORM VII - GENCHEM

VII - LABORATORY CONTROL SPIKE DUPLICATE

Report No:	222091446	LAB ID:	LCSD2395634
Matrix:	Water	Instrument ID:	BAL20
Analyst:	WMT	Lab File ID:	NA
Prep Date:	NA	Analysis Date:	09/15/22 0803
Prep Batch:	NA	Analytical Batch:	749733
Prep Method:	NA	Analytical Method:	EPA 1664A

ANALYTE	*UNITS*	*TRUE*	*FOUND*	*%REC*	*Q*	*%REC LIMITS*	*RPD*	*Q*	*RPD LIMITS*
Oil and Grease	mg/L	40.0	39.2	98		78 - 114	3		0 - 18

FORM VII - GENCHEM

EPA 1664A

Form XIV

Run Logs

XIV - ANALYSIS RUN LOG

Report No:	222091446	Analytical Batch:	749733	Start Date:	09/15/22
Instrument ID:	Balance 20 - Extractions O&G	Analytical Method:	EPA 1664A	End Date:	09/15/22

5

				ANALYTES
CLIENT SAMPLE ID	LAB SAMPLE ID	DILUTION	TIME	Oil and Grease
MB2395632	2395632	1	0803	X
LCS2395633	2395633	1	0803	X
LCSD2395634	2395634	1	0803	X
EFFLUENT	22209144601	1	0803	X

FORM XIV - GENCHEM

EPA 1664A

Raw Data

Pace Analytical

1664 Oil and Grease Water

ANALYST/ TECH	WMT	START DATE/TIME	9/15/2022 08:03	END DATE/TIME	9/15/2022 11:20	BATCH	749733

#	TYPE	LAB ID	Sample Vol (mL)	Adjusted pH	Pan ID	Initial Pan Wgt (g)	Final Wgt #1 (g)	Final Wgt #2 (g)	Diff #1 (g)	Final Wgt #3 (g)	Diff #2 (g)	Conc (mg/L)	Rec (%)	STANDARDS\ REAGENTS
1	MB	2395632	1000	<2	91501	4.0749	4.0764	4.0759	.0005			1		O&G Spike 2mg/ml / Vol 10.0mL EXT800-1-8
2	LCS	2395633	1000	<2	91502	4.1874	4.2280	4.2276	.0004			40.2	101	
3	LCSD	2395634	1000	<2	91503	4.1599	4.1996	4.1991	.0005			39.2	98	1:1 HCL 2129458
4	SAMP	22209141601	980	<2	91504	4.1304	4.1316	4.1312	.0004			.8		
5	SAMP	22209142301	990	<2	91505	4.1313	4.1327	4.1325	.0002			1.2		Hexane 2131800
6	SAMP	22209142302	960	<2	91506	4.1804	4.1810	4.1807	.0003			.3		
7	SAMP	22209142303	960	<2	91507	4.1575	4.1626	4.1622	.0004			4.9		Sodium Sulfate 2131860
8	SAMP	22209142304	1000	<2	91508	4.1527	4.1537	4.1536	.0001			.9		
9	SAMP	22209141302	1000	<2	91509	4.1636	4.1724	4.1722	.0002			8.6		Desiccant Stock # 23005
10	SAMP	22209144601	990	<2	91510	4.1378	4.1385	4.1383	.0002			.5		
11	SAMP	22209141701	1000	<2	91511	4.1508	4.1520	4.1515	.0005			.7		Desiccant Color (B/P/K) BLUE
12	SAMP	22209142808	980	<2	91512	4.1456	4.1459	4.1457	.0002			.1		
13	SAMP	22209144402	1000	<2	91513	4.1865	4.1870	4.1867	.0003			.2		
14	SAMP	22209146101	990	<2	91514	4.2113	4.2120	4.2125	.0005			1.2		
15	SAMP	22209146102	990	<2	91515	4.2311	4.2321	4.2322	.0001			1.1		
16	SAMP	22209146103	980	<2	91516	4.1849	4.1865	4.1863	.0002			1.4		
17	SAMP	22209146602	1000	<2	91517	4.1884	4.1885	4.1890	.0005			.6		
18	SAMP	22209146604	1000	<2	91518	4.2008	4.2018	4.2017	.0001			.9		
19	SAMP	22209146901	990	<2	91519	4.1547	4.1551	4.1552	.0001			.5		
20	SAMP	22209147202	990	<2	91520	4.1537	4.1555	4.1559	.0004			2.2		
21	SAMP	22209148601	980	<2	91521	4.1809	4.1820	4.1825	.0005			1.6		
22	SAMP	22209148501	990	<2	91522	4.0842	4.0850	4.0855	.0005			1.3		
23	SAMP	22209148502	980	<2	91523	4.0968	4.0999	4.1004	.0005			3.7		
24														
25														
26														
27														
28														
29														
30														

EQUIPMENT\CONDITIONS

BALANCE ID **BAL20**	BALANCE CAL BEFORE 1g **0.9999**	BALANCE CAL BEFORE 0.002g **0.0021**
BALANCE CAL AFTER 1g **0.9998**	BALANCE CAL AFTER 0.002g **0.0019**	Pipette Lot # **2022728-1**
LCS Recovery (%)	LCSD/DUP Recovery (%)	

NOTES

O&G mg/L = [(wt of flask and residue (g) - wt of flask (g))x1,000,000] / sample volume (ml); Desiccant Color abbreviations B = Blue, P = Purple, K = Pink.

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: FA98819

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 4405 Vineland Rd, Suite C-15
City: Orlando State: FL Zip: 32811
Project Contact: evita.martinez@sgs.com E-mail:
Phone #: 407-425-6700 Fax #:
Sampler(s) Name(s): JR Phone:

Project Information

Project Name: Shepley's Hill (SHL); Devens, MA
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	PHC1664	LAB USE ONLY
1	EFFLUENT		9/9/22	10:15:00 AM	JR	AQ	2				x					X	

Client ID: AL-O - SGS Accutest - Orlando
SDG: 222091446
PM: RWe

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [x] other Due 9/26/2022

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [x] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [x] FL

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Please send (2) bottles 1Lamber w H2SO4 to PACE
7979 Innovation Park Drive
Baton Rouge, LA 70820

DOD project 5700 4.4E42 7354 5347

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 1700 9/13/22	Received By: 1	Relinquished By: 2 FedEx	Date Time: 914-220939	Received By: 2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐ Therm. ID:	On Ice ☐ Cooler Temp.

Pace Analytical®

SAMPLE RECEIVING CHECKLIST

* 2 2 2 0 9 1 4 4 6 *

SAMPLE DELIVERY GROUP 222091446	
Client **PM** RWe AL-O - SGS Accutest - Orlando	**Transport Method** FEDEX
Profile Number 299627	**Received By** Henderson, Jacob R
Line Item(s) 2 - 1664	**Receive Date(s)** 09/14/22

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☐	☑

COOLERS

Airbill	Thermometer ID: E42	Temp °C
5700 7354 5347		4.4

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA98819

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	Total Metals List - 6010C	Total Mercury - 7470A	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	VOCs - 624	SVOCs - 625	PCBs - 608	Pesticides - 608	TPH - 1664A	LAB USE ONLY
	Effluent	9/9/22	10:15	JWR	GW	15		x	x		x	x				X	X	X	X	X	X	X	X	X	X	X	

INITIAL ASSESSMENT

LABEL VERIFICATION SM

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

☐ COMMERCIAL "A" (RESULTS ONLY)
☐ COMMERCIAL "B" (RESULTS PLUS QC)
☐ REDT1 (EPA LEVEL 3)
☒ FULLT1 (EPA LEVEL 4)
☒ EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples
6010 Metals List = Ba, Cd, Cr, Cu, Pb, Mg, Mn, Se, Ag
* XND30 Volume directly subject to NJ from MASC
SGS Service Center
Northborough, MA 9/8/9
FPA TF 9/9/22

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	sovcon	9-9-22 1415	2	3	9/9/22	4 9/10/22 1100
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.0 CAM CS# 024411

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

FA98819: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA98819 **Client:** SOVEREIGN CONSULTING INC **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 9/10/2022 11:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 2645

Therm ID: IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑
	W	**or**	**S**	**N/A**
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 9/10/2022 11:00:00 A Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98819
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP41211	SW846 6020B						
MP41211-B1	7440-38-2	Arsenic	BSP	REC	117	%	84-116
MP41211-S1*	7440-38-2	Arsenic	MS	REC	113.8	%	84-116
MP41211-S2*	7440-38-2	Arsenic	MSD	REC	114.3	%	84-116
MP41211-S2*	7440-38-2	Arsenic	MSD	RPD	.4	%	20
MP41211-D1*	7440-38-2	Arsenic	DUP	RPD	15.4	%	20
MP41228	SW846 6010D						
MP41228-B1	7440-39-3	Barium	BSP	REC	103.5	%	88-113
MP41228-B1	7440-43-9	Cadmium	BSP	REC	101.8	%	88-113
MP41228-B1	7440-47-3	Chromium	BSP	REC	105.5	%	90-113
MP41228-B1	7440-50-8	Copper	BSP	REC	105.6	%	86-114
MP41228-B1	7439-92-1	Lead	BSP	REC	101	%	86-113
MP41228-B1	7439-95-4	Magnesium	BSP	REC	103.2	%	85-113
MP41228-B1	7439-96-5	Manganese	BSP	REC	105.4	%	90-114
MP41228-B1	7782-49-2	Selenium	BSP	REC	98.5	%	83-114
MP41228-B1	7440-22-4	Silver	BSP	REC	91	%	84-115
MP41228-S1*	7440-39-3	Barium	MS	REC	99.2	%	88-113
MP41228-S1*	7440-43-9	Cadmium	MS	REC	99.6	%	88-113
MP41228-S1*	7440-47-3	Chromium	MS	REC	104.2	%	90-113
MP41228-S1*	7440-50-8	Copper	MS	REC	99.6	%	86-114
MP41228-S1*	7439-92-1	Lead	MS	REC	97.6	%	86-113
MP41228-S1*	7439-95-4	Magnesium	MS	REC	101	%	85-113
MP41228-S1*	7439-96-5	Manganese	MS	REC	101.1	%	90-114
MP41228-S1*	7782-49-2	Selenium	MS	REC	97.5	%	83-114
MP41228-S1*	7440-22-4	Silver	MS	REC	87.2	%	84-115
MP41228-S2*	7440-39-3	Barium	MSD	REC	100.2	%	88-113
MP41228-S2*	7440-39-3	Barium	MSD	RPD	1	%	20
MP41228-S2*	7440-43-9	Cadmium	MSD	REC	100	%	88-113
MP41228-S2*	7440-43-9	Cadmium	MSD	RPD	.4	%	20
MP41228-S2*	7440-47-3	Chromium	MSD	REC	104.7	%	90-113
MP41228-S2*	7440-47-3	Chromium	MSD	RPD	.5	%	20
MP41228-S2*	7440-50-8	Copper	MSD	REC	99.6	%	86-114
MP41228-S2*	7440-50-8	Copper	MSD	RPD	0	%	20
MP41228-S2*	7439-92-1	Lead	MSD	REC	98.4	%	86-113
MP41228-S2*	7439-92-1	Lead	MSD	RPD	.8	%	20
MP41228-S2*	7439-95-4	Magnesium	MSD	REC	101.4	%	85-113
MP41228-S2*	7439-95-4	Magnesium	MSD	RPD	.4	%	20
MP41228-S2*	7439-96-5	Manganese	MSD	REC	101.5	%	90-114
MP41228-S2*	7439-96-5	Manganese	MSD	RPD	.4	%	20
MP41228-S2*	7782-49-2	Selenium	MSD	REC	98	%	83-114
MP41228-S2*	7782-49-2	Selenium	MSD	RPD	.5	%	20

* Sample used for QC is not from job FA98819

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98819
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP41228-S2*	7440-22-4	Silver	MSD	REC	89	%	84-115
MP41228-S2*	7440-22-4	Silver	MSD	RPD	2	%	20
MP41228-D1*	7440-39-3	Barium	DUP	RPD	1.3	%	20
MP41228-D1*	7440-43-9	Cadmium	DUP	RPD	0	%	20
MP41228-D1*	7440-47-3	Chromium	DUP	RPD	3.8	%	20
MP41228-D1*	7440-50-8	Copper	DUP	RPD	0	%	20
MP41228-D1*	7439-92-1	Lead	DUP	RPD	0	%	20
MP41228-D1*	7439-95-4	Magnesium	DUP	RPD	2.3	%	20
MP41228-D1*	7439-96-5	Manganese	DUP	RPD	.7	%	20
MP41228-D1*	7782-49-2	Selenium	DUP	RPD	0	%	20
MP41228-D1*	7440-22-4	Silver	DUP	RPD	200 [a]	%	20
MP41239	SW846 7470A						
MP41239-B1	7439-97-6	Mercury	BSP	REC	103.3	%	82-119
MP41239-S1*	7439-97-6	Mercury	MS	REC	103.3	%	82-119
MP41239-S2*	7439-97-6	Mercury	MSD	REC	106.7	%	82-119
MP41239-S2*	7439-97-6	Mercury	MSD	RPD	3.2	%	20
MP41239-D1*	7439-97-6	Mercury	DUP	RPD	0	%	20
GP38049	EPA 300/SW846 9056A						
GP38049-B1	16887-00-6	Chloride	BSP	REC	101.6	%	87-111
GP38049-B1	14808-79-8	Sulfate	BSP	REC	100.6	%	87-112
GP38049-S1*	16887-00-6	Chloride	MS	REC	96.4	%	87-111
GP38049-S1*	14808-79-8	Sulfate	MS	REC	97.6	%	87-112
GP38049-S2*	16887-00-6	Chloride	MSD	RPD	0	%	15
GP38049-S2*	16887-00-6	Chloride	MSD	REC	96.4	%	87-111
GP38049-S2*	14808-79-8	Sulfate	MSD	RPD	.2	%	15
GP38049-S2*	14808-79-8	Sulfate	MSD	REC	97.4	%	87-112

(a) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA98819

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3587-MB	2P93312.D	1	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-02-8	Acrolein	ND	20	6.1	ug/l	
107-13-1	Acrylonitrile	ND	10	2.1	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
110-75-8	2-Chloroethyl Vinyl Ether	ND	5.0	2.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3587-MB	2P93312.D	1	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3587-BS	2P93308.D	1	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
107-02-8	Acrolein	125	112	90	31-154
107-13-1	Acrylonitrile	125	143	114	58-126
71-43-2	Benzene	25	28.3	113	81-122
75-27-4	Bromodichloromethane	25	27.5	110	79-123
75-25-2	Bromoform	25	25.1	100	66-123
78-93-3	2-Butanone (MEK)	125	122	98	56-143
75-15-0	Carbon Disulfide	25	24.9	100	66-148
56-23-5	Carbon Tetrachloride	25	29.9	120	76-136
108-90-7	Chlorobenzene	25	26.8	107	82-124
75-00-3	Chloroethane	25	25.2	101	62-144
110-75-8	2-Chloroethyl Vinyl Ether	125	128	102	56-122
67-66-3	Chloroform	25	28.5	114	80-124
124-48-1	Dibromochloromethane	25	25.0	100	78-122
95-50-1	1,2-Dichlorobenzene	25	25.8	103	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	25.6	102	78-120
75-34-3	1,1-Dichloroethane	25	29.9	120	81-122
107-06-2	1,2-Dichloroethane	25	26.8	107	75-125
75-35-4	1,1-Dichloroethylene	25	29.4	118	78-137
156-59-2	cis-1,2-Dichloroethylene	25	28.8	115	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.9	116	76-127
78-87-5	1,2-Dichloropropane	25	27.3	109	76-124
10061-01-5	cis-1,3-Dichloropropene	25	27.5	110	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.5	110	80-120
100-41-4	Ethylbenzene	25	26.5	106	81-121
591-78-6	2-Hexanone	125	114	91	61-129
74-83-9	Methyl Bromide	25	23.7	95	59-143
74-87-3	Methyl Chloride	25	27.6	110	50-159
75-09-2	Methylene Chloride	25	23.1	92	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	114	91	66-122
100-42-5	Styrene	25	26.8	107	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	25.2	101	72-120
127-18-4	Tetrachloroethylene	25	30.4	122	76-135
108-88-3	Toluene	25	26.0	104	80-120
71-55-6	1,1,1-Trichloroethane	25	29.3	117	75-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3587-BS	2P93308.D	1	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-00-5	1,1,2-Trichloroethane	25	26.7	107	76-119
79-01-6	Trichloroethylene	25	28.4	114	81-126
75-69-4	Trichlorofluoromethane	25	29.4	118	71-156
108-05-4	Vinyl Acetate	125	121	97	43-154
75-01-4	Vinyl Chloride	25	27.9	112	69-159
	m,p-Xylene	50	52.5	105	79-126
95-47-6	o-Xylene	25	27.7	111	80-127
1330-20-7	Xylene (total)	75	80.2	107	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98819-1MS	2P93342.D	20	09/23/22	CF	n/a	n/a	V2P3587
FA98819-1MSD	2P93344.D	20	09/23/22	CF	n/a	n/a	V2P3587
FA98819-1	2P93340.D	20	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	FA98819-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	500 U		2500	2700	108	2500	2770	111	3	50-147/21
107-02-8	Acrolein	400 U		2500	2150	86	2500	2240	90	4	31-154/29
107-13-1	Acrylonitrile	200 U		2500	2990	120	2500	3060	122	2	58-126/16
71-43-2	Benzene	20 U		500	582	116	500	554	111	5	81-122/14
75-27-4	Bromodichloromethane	20 U		500	538	108	500	518	104	4	79-123/19
75-25-2	Bromoform	20 U		500	446	89	500	427	85	4	66-123/21
78-93-3	2-Butanone (MEK)	100 U		2500	2690	108	2500	2780	111	3	56-143/18
75-15-0	Carbon Disulfide	40 U		500	407	81	500	411	82	1	66-148/23
56-23-5	Carbon Tetrachloride	20 U		500	543	109	500	524	105	4	76-136/23
108-90-7	Chlorobenzene	20 U		500	526	105	500	504	101	4	82-124/14
75-00-3	Chloroethane	40 U		500	588	118	500	483	97	20	62-144/20
110-75-8	2-Chloroethyl Vinyl Ether	100 U		2500	2350	94	2500	2320	93	1	56-122/23
67-66-3	Chloroform	20 U		500	577	115	500	546	109	6	80-124/15
124-48-1	Dibromochloromethane	20 U		500	470	94	500	458	92	3	78-122/19
95-50-1	1,2-Dichlorobenzene	20 U		500	501	100	500	480	96	4	82-124/14
541-73-1	1,3-Dichlorobenzene	20 U		500	502	100	500	487	97	3	84-125/14
106-46-7	1,4-Dichlorobenzene	20 U		500	494	99	500	481	96	3	78-120/15
75-34-3	1,1-Dichloroethane	20 U		500	607	121	500	581	116	4	81-122/15
107-06-2	1,2-Dichloroethane	20 U		500	555	111	500	533	107	4	75-125/14
75-35-4	1,1-Dichloroethylene	20 U		500	577	115	500	549	110	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	20 U		500	566	113	500	554	111	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	20 U		500	576	115	500	553	111	4	76-127/17
78-87-5	1,2-Dichloropropane	20 U		500	562	112	500	518	104	8	76-124/14
10061-01-5	cis-1,3-Dichloropropene	20 U		500	516	103	500	504	101	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	20 U		500	495	99	500	480	96	3	80-120/22
100-41-4	Ethylbenzene	20 U		500	521	104	500	493	99	6	81-121/14
591-78-6	2-Hexanone	200 U		2500	2430	97	2500	2480	99	2	61-129/18
74-83-9	Methyl Bromide	100 U		500	203	41*	500	239	48*	16	59-143/19
74-87-3	Methyl Chloride	40 U		500	564	113	500	484	97	15	50-159/19
75-09-2	Methylene Chloride	41.1	J	500	501	92	500	475	87	5	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U		2500	2420	97	2500	2490	100	3	66-122/16
100-42-5	Styrene	20 U		500	500	100	500	487	97	3	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	20 U		500	502	100	500	484	97	4	72-120/14
127-18-4	Tetrachloroethylene	20 U		500	520	104	500	511	102	2	76-135/16
108-88-3	Toluene	20 U		500	505	101	500	485	97	4	80-120/14
71-55-6	1,1,1-Trichloroethane	20 U		500	571	114	500	550	110	4	75-130/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98819-1MS	2P93342.D	20	09/23/22	CF	n/a	n/a	V2P3587
FA98819-1MSD	2P93344.D	20	09/23/22	CF	n/a	n/a	V2P3587
FA98819-1	2P93340.D	20	09/23/22	CF	n/a	n/a	V2P3587

The QC reported here applies to the following samples: **Method:** EPA 624.1

FA98819-1

CAS No.	Compound	FA98819-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-00-5	1,1,2-Trichloroethane	20 U		500	519	104	500	503	101	3	76-119/14
79-01-6	Trichloroethylene	20 U		500	557	111	500	539	108	3	81-126/15
75-69-4	Trichlorofluoromethane	40 U		500	697	139	500	556	111	23*	71-156/21
108-05-4	Vinyl Acetate	200 U		2500	2640	106	2500	2700	108	2	43-154/14
75-01-4	Vinyl Chloride	20 U		500	606	121	500	502	100	19*	69-159/18
	m,p-Xylene	40 U		1000	1020	102	1000	980	98	4	79-126/15
95-47-6	o-Xylene	20 U		500	511	102	500	511	102	0	80-127/14
1330-20-7	Xylene (total)	60 U		1500	1530	102	1500	1490	99	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA98819-1	Limits
1868-53-7	Dibromofluoromethane	100%	100%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	96%	100%	79-125%
2037-26-5	Toluene-D8	93%	93%	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	97%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample:	V2P3560-BFB	**Injection Date:**	08/24/22
Lab File ID:	2P92263.D	**Injection Time:**	09:49
Instrument ID:	GCMS2P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	60128	18.5		Pass
75	30.0 - 60.0% of mass 95	160765	49.4		Pass
95	Base peak, 100% relative abundance	325269	100.0		Pass
96	5.0 - 9.0% of mass 95	21171	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	238912	73.5		Pass
175	5.0 - 9.0% of mass 174	18335	5.64	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	231146	71.1	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	15221	4.68	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3560-IC3560	2P92263.D	08/24/22	09:50	00:01	Initial cal 1
V2P3560-IC3560	2P92265.D	08/24/22	10:22	00:33	Initial cal 2
V2P3560-IC3560	2P92267.D	08/24/22	10:54	01:05	Initial cal 3
V2P3560-IC3560	2P92269.D	08/24/22	11:26	01:37	Initial cal 4
V2P3560-ICC3560	2P92271.D	08/24/22	11:59	02:10	Initial cal 5
V2P3560-IC3560	2P92273.D	08/24/22	12:31	02:42	Initial cal 6
V2P3560-IC3560	2P92275.D	08/24/22	13:04	03:15	Initial cal 7
V2P3560-ICV3560	2P92279.D	08/24/22	14:09	04:20	Initial cal verification 5
V2P3560-CC3560	2P92279A.D	08/24/22	14:09	04:20	Continuing cal 5
V2P3560-ICV3560	2P92281.D	08/24/22	14:41	04:52	Initial cal verification 4
V2P3560-BS	2P92281A.D	08/24/22	14:41	04:52	Blank Spike
V2P3560-MB	2P92285.D	08/24/22	15:44	05:55	Method Blank
ZZZZZZ	2P92289.D	08/24/22	16:49	07:00	(unrelated sample)
ZZZZZZ	2P92293.D	08/24/22	17:52	08:03	(unrelated sample)
ZZZZZZ	2P92299.D	08/24/22	19:28	09:39	(unrelated sample)
FA98254-9	2P92303.D	08/24/22	20:31	10:42	(used for QC only; not part of job FA98819)
ZZZZZZ	2P92305.D	08/24/22	21:03	11:14	(unrelated sample)
FA98254-9MS	2P92307.D	08/24/22	21:35	11:46	Matrix Spike
FA98254-9MSD	2P92309.D	08/24/22	22:07	12:18	Matrix Spike Duplicate
V2P3560-ECC3560	2P92311.D	08/24/22	22:38	12:49	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample:	V2P3586-BFB	**Injection Date:**	09/23/22
Lab File ID:	2P93306.D	**Injection Time:**	11:41
Instrument ID:	GCMS2P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	54330	16.9		Pass
75	30.0 - 60.0% of mass 95	150317	46.8		Pass
95	Base peak, 100% relative abundance	321365	100.0		Pass
96	5.0 - 9.0% of mass 95	21075	6.56		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	240618	74.9		Pass
175	5.0 - 9.0% of mass 174	18458	5.74	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	238400	74.2	(99.1) [a]	Pass
177	5.0 - 9.0% of mass 176	15984	4.97	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3586-CC3560	2P93306.D	09/23/22	11:41	00:00	Continuing cal 5
V2P3587-BS	2P93308.D	09/23/22	12:13	00:32	Blank Spike
V2P3586-BS	2P93308.D	09/23/22	12:13	00:32	Blank Spike
V2P3586-MB	2P93312.D	09/23/22	13:18	01:37	Method Blank
V2P3587-MB	2P93312.D	09/23/22	13:18	01:37	Method Blank
ZZZZZZ	2P93314.D	09/23/22	13:51	02:10	(unrelated sample)
ZZZZZZ	2P93316.D	09/23/22	14:23	02:42	(unrelated sample)
ZZZZZZ	2P93318.D	09/23/22	14:56	03:15	(unrelated sample)
ZZZZZZ	2P93320.D	09/23/22	15:29	03:48	(unrelated sample)
ZZZZZZ	2P93322.D	09/23/22	16:02	04:21	(unrelated sample)
ZZZZZZ	2P93324.D	09/23/22	16:34	04:53	(unrelated sample)
ZZZZZZ	2P93326.D	09/23/22	17:07	05:26	(unrelated sample)
FA98918-5	2P93328.D	09/23/22	17:39	05:58	(used for QC only; not part of job FA98819)
ZZZZZZ	2P93332.D	09/23/22	18:44	07:03	(unrelated sample)
ZZZZZZ	2P93334.D	09/23/22	19:17	07:36	(unrelated sample)
ZZZZZZ	2P93336.D	09/23/22	19:49	08:08	(unrelated sample)
ZZZZZZ	2P93338.D	09/23/22	20:21	08:40	(unrelated sample)
FA98819-1	2P93340.D	09/23/22	20:53	09:12	EFFLUENT
FA98819-1MS	2P93342.D	09/23/22	21:25	09:44	Matrix Spike
FA98819-1MSD	2P93344.D	09/23/22	21:57	10:16	Matrix Spike Duplicate
FA98918-5MS	2P93346.D	09/23/22	22:29	10:48	Matrix Spike
FA98918-5MSD	2P93348.D	09/23/22	23:02	11:21	Matrix Spike Duplicate
V2P3586-ECC3560	2P93350.D	09/23/22	23:34	11:53	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-BFB
Lab File ID: 2P93390.D
Instrument ID: GCMS2P
Injection Date: 09/26/22
Injection Time: 12:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	47277	17.1		Pass
75	30.0 - 60.0% of mass 95	129829	46.9		Pass
95	Base peak, 100% relative abundance	277077	100.0		Pass
96	5.0 - 9.0% of mass 95	17976	6.49		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	208512	75.3		Pass
175	5.0 - 9.0% of mass 174	15384	5.55	(7.38) [a]	Pass
176	95.0 - 101.0% of mass 174	205802	74.3	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	14055	5.07	(6.83) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3589-IC3589	2P93390.D	09/26/22	12:30	00:00	Initial cal 1
V2P3589-IC3589	2P93392.D	09/26/22	13:03	00:33	Initial cal 2
V2P3589-IC3589	2P93394.D	09/26/22	13:35	01:05	Initial cal 3
V2P3589-IC3589	2P93396.D	09/26/22	14:07	01:37	Initial cal 4
V2P3589-ICC3589	2P93398.D	09/26/22	14:39	02:09	Initial cal 5
V2P3589-IC3589	2P93400.D	09/26/22	15:11	02:41	Initial cal 6
V2P3589-IC3589	2P93402.D	09/26/22	15:43	03:13	Initial cal 7
V2P3589-ICV3589	2P93406.D	09/26/22	16:48	04:18	Initial cal verification 5
V2P3589-ICV3589	2P93408.D	09/26/22	17:20	04:50	Initial cal verification 4

Instrument Performance Check (BFB)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-BFB
Lab File ID: 2P93412.D
Instrument ID: GCMS2P
Injection Date: 09/27/22
Injection Time: 10:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	56992	16.8		Pass
75	30.0 - 60.0% of mass 95	160165	47.3		Pass
95	Base peak, 100% relative abundance	338816	100.0		Pass
96	5.0 - 9.0% of mass 95	23842	7.04		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	239360	70.6		Pass
175	5.0 - 9.0% of mass 174	18096	5.34	(7.56) [a]	Pass
176	95.0 - 101.0% of mass 174	232298	68.6	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	15895	4.69	(6.84) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3590-CC3589	2P93412.D	09/27/22	10:53	00:00	Continuing cal 5
V2P3591-BS	2P93414.D	09/27/22	11:25	00:32	Blank Spike
V2P3590-BS	2P93414.D	09/27/22	11:25	00:32	Blank Spike
V2P3591-MB	2P93418.D	09/27/22	12:30	01:37	Method Blank
V2P3590-MB	2P93418.D	09/27/22	12:30	01:37	Method Blank
ZZZZZZ	2P93420.D	09/27/22	13:03	02:10	(unrelated sample)
FA98819-1	2P93422.D	09/27/22	13:35	02:42	EFFLUENT
FA98968-3	2P93424.D	09/27/22	14:08	03:15	(used for QC only; not part of job FA98819)
ZZZZZZ	2P93426.D	09/27/22	14:40	03:47	(unrelated sample)
ZZZZZZ	2P93430.D	09/27/22	15:39	04:46	(unrelated sample)
ZZZZZZ	2P93432.D	09/27/22	16:14	05:21	(unrelated sample)
ZZZZZZ	2P93434.D	09/27/22	16:46	05:53	(unrelated sample)
ZZZZZZ	2P93436.D	09/27/22	17:19	06:26	(unrelated sample)
ZZZZZZ	2P93438.D	09/27/22	17:51	06:58	(unrelated sample)
ZZZZZZ	2P93440.D	09/27/22	18:24	07:31	(unrelated sample)
ZZZZZZ	2P93442.D	09/27/22	18:56	08:03	(unrelated sample)
ZZZZZZ	2P93444.D	09/27/22	19:29	08:36	(unrelated sample)
ZZZZZZ	2P93446.D	09/27/22	20:01	09:08	(unrelated sample)
ZZZZZZ	2P93448.D	09/27/22	20:34	09:41	(unrelated sample)
ZZZZZZ	2P93450.D	09/27/22	21:06	10:13	(unrelated sample)
FA98968-3MS	2P93452.D	09/27/22	21:38	10:45	Matrix Spike
FA98968-3MSD	2P93454.D	09/27/22	22:11	11:18	Matrix Spike Duplicate
V2P3590-ECC3589	2P93456.D	09/27/22	22:43	11:50	Ending cal 5

Internal Standard Area Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	V2P3586-CC3560	**Injection Date:**	09/23/22
Lab File ID:	2P93306.D	**Injection Time:**	11:41
Instrument ID:	GCMS2P	**Method:**	EPA 624.1

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	1362226	3.72	951717	5.64	439370	7.33
Check Std [b]	1124849	3.72	869549	5.64	414062	7.33
Upper Limit [c]	2249698	3.89	1739098	5.81	828124	7.50
Lower Limit [d]	562425	3.55	434775	5.47	207031	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2P3587-BS	1142739	3.72	877581	5.64	421193	7.33
V2P3586-BS	1142739	3.72	877581	5.64	421193	7.33
V2P3587-MB	1057762	3.72	790682	5.64	375195	7.33
V2P3586-MB	1057762	3.72	790682	5.64	375195	7.33
ZZZZZZ	1029480	3.72	769602	5.65	355319	7.33
ZZZZZZ	1001880	3.72	748286	5.64	351612	7.33
ZZZZZZ	999525	3.72	752404	5.64	354018	7.33
ZZZZZZ	1007999	3.72	768195	5.64	389312	7.33
ZZZZZZ	1029128	3.72	779376	5.64	399697	7.33
ZZZZZZ	1020239	3.72	765242	5.64	364324	7.33
ZZZZZZ	983440	3.72	737423	5.64	354299	7.33
FA98918-5	1001572	3.73	757954	5.64	356148	7.33
ZZZZZZ	975044	3.72	741567	5.64	346172	7.33
ZZZZZZ	973697	3.72	735522	5.64	340484	7.33
ZZZZZZ	958095	3.72	732151	5.64	341622	7.33
ZZZZZZ	944580	3.72	714613	5.64	335015	7.33
FA98819-1	940684	3.72	721077	5.65	343342	7.33
FA98819-1MS	996531	3.72	792902	5.64	389711	7.33
FA98819-1MSD	1027411	3.72	811292	5.65	394401	7.33
FA98918-5MS	1083295	3.72	833430	5.64	396873	7.33
FA98918-5MSD	1118013	3.72	869023	5.64	422375	7.33
V2P3586-ECC3560	1159066	3.72	895884	5.65	428166	7.33

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4

(a) Initial Cal is: V2P3560-ICC3560 2P92271.D 08/24/22 11:59
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	V2P3590-CC3589	**Injection Date:**	09/27/22
Lab File ID:	2P93412.D	**Injection Time:**	10:53
Instrument ID:	GCMS2P	**Method:**	EPA 624.1

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	1233954	3.72	883171	5.64	418365	7.33
Check Std [b]	1261898	3.72	917251	5.64	421154	7.33
Upper Limit [c]	2523796	3.89	1834502	5.81	842308	7.50
Lower Limit [d]	630949	3.55	458626	5.47	210577	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2P3590-BS	1272845	3.72	917487	5.64	428750	7.33
V2P3591-BS [e]	1272845	3.72	917487	5.64	428750	7.33
V2P3590-MB [f]	1205604	3.72	834710	5.64	392222	7.33
V2P3591-MB	1205604	3.72	834710	5.64	392222	7.33
ZZZZZZ	1197996	3.72	837449	5.64	378751	7.33
FA98819-1 [g]	1173795	3.72	816747	5.64	376733	7.33
FA98968-3	1158220	3.72	813172	5.64	369133	7.33
ZZZZZZ	1125790	3.72	796399	5.64	364105	7.33
ZZZZZZ	1120683	3.72	785430	5.64	353857	7.33
ZZZZZZ	1128947	3.72	782484	5.64	358188	7.33
ZZZZZZ	1085240	3.72	753624	5.64	348309	7.33
ZZZZZZ	1087139	3.73	757160	5.64	348093	7.33
ZZZZZZ	1091170	3.72	764756	5.64	345824	7.33
ZZZZZZ	1066084	3.72	744499	5.64	344639	7.33
ZZZZZZ	1048545	3.72	731099	5.64	342996	7.33
ZZZZZZ	1074117	3.72	744659	5.64	346777	7.33
ZZZZZZ	1078496	3.72	753415	5.64	337878	7.33
ZZZZZZ	1049251	3.72	737660	5.64	336778	7.33
ZZZZZZ	1048218	3.72	731185	5.64	330457	7.33
FA98968-3MS	1141499	3.72	810089	5.64	380580	7.33
FA98968-3MSD	1182487	3.72	848750	5.64	391718	7.33
V2P3590-ECC3589	1209565	3.72	870727	5.65	397648	7.33

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4

(a) Initial Cal is: V2P3589-ICC3589 2P93398.D 09/26/22 14:39
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) No MS/MSD available for this run.
(f) Sample was treated with an anti-foaming agent.

Internal Standard Area Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	V2P3590-CC3589	**Injection Date:**	09/27/22
Lab File ID:	2P93412.D	**Injection Time:**	10:53
Instrument ID:	GCMS2P	**Method:**	EPA 624.1

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT

(g) Sample re-analyzed beyond hold time. Confirmation run.

Surrogate Recovery Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Method: EPA 624.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA98819-1	2P93340.D	96	100	94	97
FA98819-1	2P93422.D	97	102	102	102
FA98819-1MS	2P93342.D	100	101	93	96
FA98819-1MSD	2P93344.D	100	96	93	96
V2P3587-BS	2P93308.D	101	96	94	98
V2P3587-MB	2P93312.D	96	98	96	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

Response Factor Report MSVOA13

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Calibration Files
1 =2P92263.D 2 =2P92265.D 3 =2P92267.D 4 =2P92269.D
5 =2P92271.D 6 =2P92273.D 7 =2P92275.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.137	0.141	0.121	0.116	0.147	0.141	0.139	0.135	8.40
3)P Chloromethane	0.143	0.159	0.148	0.141	0.152	0.164	0.160	0.153	5.77
4) 1,3-butadiene	0.137	0.161	0.115	0.132	0.145	0.155	0.148	0.142	10.93
5)C Vinyl Chloride	0.168	0.189	0.176	0.174	0.194	0.201	0.200	0.186	7.09
6) Bromomethane	0.128	0.131	0.120	0.111	0.109	0.106	0.100	0.115	10.11
7) Chloroethane	0.096	0.089	0.066	0.056	0.056	0.057	0.054	0.068	25.99
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9946									
Response Ratio = 0.00000 + 0.06373 *A + -0.00506 *A^2									
8) Trichlorofluorome	0.170	0.233	0.210	0.188	0.212	0.145	0.100	0.180	25.44
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9923									
Response Ratio = 0.00000 + 0.24268 *A + -0.06989 *A^2									
9) Ethyl Ether	0.157	0.193	0.164	0.164	0.176	0.195	0.168	0.174	8.47
10) Ethanol	0.006	0.006	0.004	0.005	0.005	0.005	0.004	0.005	14.87
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9962									
Response Ratio = 0.00000 + 0.00560 *A + -0.00004 *A^2									
11) 1,2-Dichlorotrifl	0.137	0.175	0.142	0.155	0.170	0.179	0.181	0.163	11.20
12)C 1,1-Dichloroethen	0.192	0.254	0.203	0.229	0.249	0.267	0.270	0.238	12.96
13) Freon 113	0.110	0.157	0.121	0.137	0.163	0.166	0.168	0.146	16.08
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973									
Response Ratio = 0.00000 + 0.13945 *A + 0.01587 *A^2									
14) Carbon Disulfide	0.327	0.367	0.315	0.369	0.424	0.472	0.493	0.395	17.55
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 0.34698 *A + 0.07745 *A^2									
15) Iodomethane	0.063	0.060	0.067	0.094	0.117	0.129	0.125	0.094	32.53
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9924									
Response Ratio = 0.00000 + 0.08797 *A + 0.02186 *A^2									
16) Acrolein	0.053	0.068	0.057	0.064	0.065	0.070	0.068	0.064	9.99
17) Allyl chloride	0.149	0.177	0.132	0.164	0.180	0.194	0.201	0.171	14.31
18) Methylene Chlorid	0.881	0.353	0.258	0.232	0.228	0.237	0.220	0.344	69.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9913									
Response Ratio = 0.00000 + 0.27200 *A + -0.02738 *A^2									
19) Acetone	0.178	0.129	0.107	0.114	0.110	0.115	0.108	0.123	20.64
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9985									
Response Ratio = 0.00000 + 0.11705 *A + -0.00078 *A^2									
20) Methyl acetate	0.197	0.245	0.220	0.234	0.238	0.253	0.241	0.233	7.97
21) trans-1,2-Dichlor	0.190	0.260	0.218	0.233	0.245	0.268	0.271	0.241	12.22
22) Hexane	0.097	0.115	0.088	0.105	0.130	0.140	0.144	0.117	18.42

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            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9969
              Response Ratio = 0.00000 + 0.10376 *A + 0.02196 *A^2

23)  Methyl Tert Butyl 0.444 0.567 0.504 0.541 0.565 0.616 0.604 0.549  10.83
24)  Tert Butyl Alcoho 0.060 0.071 0.062 0.071 0.070 0.073 0.068 0.068   7.11
25)  Acetonitrile      0.040 0.046 0.034 0.037 0.035             0.038  12.26
26)  Di-isopropyl ethe 0.417 0.549 0.470 0.487 0.520 0.568 0.557 0.510  10.73
27)  Chloroprene       0.771 0.769 0.633 0.702 0.715 0.754 0.736 0.726   6.66
28)P 1,1-Dichloroethan 0.267 0.334 0.287 0.307 0.325 0.349 0.346 0.317   9.74
29)  Acrylonitrile     0.125 0.122 0.101 0.111 0.112 0.117 0.115 0.115   6.99
30)  ETBE              0.468 0.624 0.553 0.584 0.618 0.672 0.661 0.597  11.73
31)  Vinyl acetate     0.382 0.422 0.356 0.398 0.424 0.450 0.442 0.411   8.19
32)  cis-1,2-Dichloroe 0.161 0.208 0.173 0.181 0.192 0.204 0.203 0.189   9.36
33)  2,2-Dichloropropa 0.171 0.240 0.207 0.233 0.259 0.288 0.295 0.242  18.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 0.22221 *A + 0.03923 *A^2

34)  Bromochloromethan 0.078 0.093 0.083 0.082 0.085 0.090 0.087 0.085   5.86
35)  Cyclohexane       0.221 0.301 0.250 0.275 0.316 0.332 0.346 0.292  15.50
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.27060 *A + 0.03946 *A^2

36)C Chloroform        0.239 0.346 0.294 0.307 0.330 0.355 0.353 0.318  13.15
37)  Ethyl acetate     0.307 0.327 0.275 0.303 0.310 0.331 0.321 0.311   6.06
38)  Tetrahydrofuran   0.116 0.130 0.106 0.115 0.117 0.124 0.120 0.119   6.36
39)S Dibromofluorometh 0.201 0.209 0.212 0.215 0.215 0.216 0.219 0.213   2.70
40)  Carbon Tetrachlor 0.133 0.201 0.158 0.188 0.208 0.224 0.238 0.193  18.93
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 0.17573 *A + 0.03201 *A^2

41)  1,1,1-Trichloroet 0.202 0.274 0.230 0.263 0.285 0.306 0.312 0.268  14.81
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.25339 *A + 0.03146 *A^2

42)  2-Butanone        0.303 0.223 0.179 0.193 0.185 0.197 0.189 0.210  20.66
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
              Response Ratio = 0.00000 + 0.19499 *A + -0.00048 *A^2

43)  1,1-Dichloroprope 0.191 0.253 0.212 0.232 0.249 0.263 0.268 0.238  11.76
44)  tert-Butyl format 0.089 0.119 0.106 0.125 0.145 0.166 0.170 0.132  23.11
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.11733 *A + 0.00574 *A^2

45)  Propionitrile     0.054 0.070 0.053 0.062 0.061 0.064 0.064 0.061   9.67
46)  Methacrylonitrile 0.136 0.182 0.141 0.164 0.168 0.178 0.172 0.163  11.02
47)  Benzene           0.645 0.813 0.706 0.727 0.769 0.835 0.832 0.761   9.43
48)  TAME              0.409 0.561 0.496 0.534 0.565 0.623 0.611 0.543  13.50
49)S 1,2-Dichloroethan 0.293 0.293 0.297 0.297 0.304 0.290 0.293 0.295   1.53
50)  Isobutyl alcohol  0.025 0.034 0.029 0.034 0.034 0.033 0.031 0.031  10.88
51)  1,2-Dichloroethan 0.241 0.289 0.254 0.262 0.277 0.294 0.288 0.272   7.42
52)  Tert Amyl Alcohol 0.038 0.054 0.050 0.057 0.058 0.062 0.059 0.054  15.10
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.05596 *A + 0.00021 *A^2

53)  Trichloroethene   0.191 0.207 0.173 0.183 0.194 0.210 0.212 0.196   7.52
54)  Methylcyclohexane 0.192 0.262 0.213 0.237 0.283 0.299 0.314 0.257  17.68
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.23271 *A + 0.04298 *A^2

55)  Dibromomethane    0.093 0.111 0.097 0.105 0.111 0.120 0.118 0.108   9.54
```

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

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56)C 1,2-Dichloropropa 0.144 0.197 0.170 0.182 0.190 0.206 0.205 0.185  11.88
57)  Bromodichlorometh 0.124 0.182 0.162 0.188 0.212 0.241 0.244 0.193  22.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.17720 *A + 0.03671 *A^2

58)  Methyl methacryla 0.163 0.200 0.161 0.206 0.216 0.236 0.239 0.203  15.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.19091 *A + 0.02627 *A^2

59)  1,4-Dioxane       0.005 0.006 0.006 0.006 0.006 0.006 0.005 0.006   7.44
60)  2-Chloroethyl vin 0.118 0.161 0.137 0.150 0.162 0.175 0.174 0.154  13.44
61)  cis-1,3-Dichlorop 0.159 0.225 0.211 0.247 0.274 0.312 0.309 0.248  22.33
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9977
              Response Ratio = 0.00000 + 0.23328 *A + 0.04258 *A^2


62) I   Chlorobenzene-d5      ----------------ISTD--------------------
63)S Toluene-d8        1.388 1.371 1.377 1.380 1.387 1.353 1.375 1.376   0.85
64)C Toluene           1.076 1.275 1.089 1.120 1.182 1.261 1.260 1.180   7.32
65)  2-Nitropropane    0.046 0.064 0.061 0.087 0.103 0.122 0.122 0.086  35.24
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9947
              Response Ratio = 0.00000 + 0.07723 *A + 0.00500 *A^2

66)  4-Methyl-2-pentan 0.473 0.484 0.404 0.446 0.452 0.475 0.454 0.455   5.83
67)  trans-1,3-Dichlor 0.213 0.292 0.285 0.322 0.362 0.397 0.393 0.323  20.59
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9981
              Response Ratio = 0.00000 + 0.31086 *A + 0.04684 *A^2

68)  Tetrachloroethene 0.227 0.268 0.224 0.243 0.256 0.269 0.267 0.251   7.77
69)  Ethyl methacrylat 0.256 0.421 0.336 0.406 0.440 0.472 0.473 0.400  19.69
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.38873 *A + 0.04695 *A^2

70)  1,1,2-Trichloroet 0.170 0.218 0.188 0.197 0.207 0.221 0.213 0.202   9.01
71)  Dibromochlorometh 0.114 0.175 0.163 0.199 0.224 0.254 0.254 0.198  26.01
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.18521 *A + 0.03845 *A^2

72)  1,3-Dichloropropa 0.406 0.488 0.409 0.428 0.454 0.484 0.473 0.449   7.77
73)  1,2-Dibromoethane 0.188 0.254 0.225 0.239 0.255 0.279 0.269 0.244  12.48
74)  3,3-dimethyl-1-bu 0.063 0.096 0.085 0.102 0.105 0.108 0.100 0.094  16.53
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.10092 *A + 0.00002 *A^2

75)  2-hexanone        0.517 0.546 0.461 0.527 0.522 0.526 0.480 0.511   5.77
76)  1-Chlorohexane    0.376 0.395 0.320 0.342 0.379 0.410 0.414 0.376   9.19
77)C Ethylbenzene      1.129 1.390 1.181 1.236 1.322 1.402 1.402 1.295   8.73
78)P Chlorobenzene     0.634 0.766 0.642 0.676 0.709 0.763 0.757 0.707   8.13
79)  1,1,1,2-Tetrachlo 0.145 0.213 0.190 0.209 0.232 0.257 0.254 0.214  18.21
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.20474 *A + 0.02784 *A^2

80)  m,p-Xylene        0.861 1.084 0.932 0.982 1.054 1.129 1.125 1.024   9.98
81)  o-Xylene          0.808 1.063 0.937 0.977 1.039 1.118 1.111 1.008  10.91
82)  Styrene           0.585 0.768 0.681 0.758 0.822 0.902 0.880 0.771  14.44
83)P Bromoform         0.052 0.088 0.082 0.107 0.122 0.147 0.147 0.106  32.85
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9964
              Response Ratio = 0.00000 + 0.09538 *A + 0.02857 *A^2

84)  Isopropylbenzene  0.935 1.217 1.033 1.121 1.221 1.304 1.308 1.163  12.06
```

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

```
 85) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 86)S 4-Bromofluorobenz 0.776 0.769 0.776 0.789 0.773 0.782 0.795 0.780   1.16
 87)  cis-1,4-Dichloro- 0.220 0.273 0.218 0.273 0.296 0.342 0.354 0.282  18.95
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
               Response Ratio = 0.00000 + 0.24838 *A + 0.05642 *A^2

 88)  n-Propylbenzene   2.531 3.209 2.723 2.939 3.141 3.434 3.496 3.068  11.65
 89)  Bromobenzene      0.512 0.677 0.572 0.600 0.626 0.681 0.673 0.620  10.25
 90)P 1,1,2,2-Tetrachlo 0.676 0.857 0.776 0.831 0.849 0.911 0.894 0.828   9.63
 91)  1,3,5-Trimethylbe 1.672 2.276 1.931 2.038 2.194 2.397 2.444 2.136  12.87
 92)  2-Chlorotoluene   1.522 1.982 1.680 1.781 1.878 2.045 2.073 1.851  10.97
 93)  trans-1,4-Dichlor 0.289 0.347 0.305 0.350 0.372 0.415 0.404 0.355  13.28
 94)  1,2,3-Trichloropr 0.270 0.314 0.297 0.307 0.312 0.336 0.324 0.309   6.86
 95)  Cyclohexanone     0.063 0.066 0.058 0.070 0.066 0.067 0.063 0.065   5.54
 96)  4-Chlorotoluene   1.667 2.091 1.747 1.892 1.946 2.149 2.168 1.951  10.06
 97)  tert-Butylbenzene 0.902 1.217 1.062 1.131 1.202 1.330 1.366 1.173  13.57
 98)  a-Methyl styrene                                          0.000  -1.00
 99)  1,2,4-Trimethylbe 1.708 2.152 1.861 2.027 2.130 2.343 2.361 2.083  11.50
100)  Pentachloroethane 0.153 0.233 0.186 0.259 0.278 0.317 0.330 0.251  25.97
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.22648 *A + 0.05530 *A^2

101)  sec-Butylbenzene  1.827 2.387 1.980 2.165 2.359 2.562 2.619 2.271  12.97
102)  4-Isopropyltoluen 1.433 2.038 1.766 1.928 2.085 2.279 2.346 1.982  15.76
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 1.85030 *A + 0.26250 *A^2

103)  1,3-Dichlorobenze 0.972 1.198 1.019 1.072 1.110 1.222 1.205 1.114   8.81
104)  1,2,3-Trimethylbe 1.688 2.233 1.913 2.008 2.125 2.322 2.339 2.090  11.34
105)  1,4-Dichlorobenze 1.025 1.297 1.067 1.109 1.171 1.247 1.234 1.164   8.67
106)  n-Butylbenzene    0.710 1.029 0.864 0.937 1.024 1.116 1.137 0.974  15.43
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.91407 *A + 0.11950 *A^2

107)  Benzyl Chloride   0.104 0.152 0.162 0.225 0.282 0.347 0.357 0.233  42.56
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9951
               Response Ratio = 0.00000 + 0.19341 *A + 0.08927 *A^2

108)  1,2-Dichlorobenze 0.909 1.122 0.944 1.021 1.055 1.145 1.125 1.046   8.88
109)  1,2-Dibromo-3-Chl 0.116 0.152 0.146 0.188 0.200 0.236 0.236 0.182  25.23
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9975
               Response Ratio = 0.00000 + 0.16732 *A + 0.03807 *A^2

110)  Hexachlorobutadie 0.152 0.216 0.165 0.172 0.201 0.215 0.223 0.192  14.82
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.17454 *A + 0.02550 *A^2

111)  1,2,4-Trichlorobe 0.471 0.572 0.503 0.528 0.573 0.623 0.626 0.556  10.56
112)  Naphthalene       1.632 2.223 2.003 2.240 2.380 2.677 2.624 2.254  16.02
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
               Response Ratio = 0.00000 + 2.16008 *A + 0.26529 *A^2

113)  1,2,3-Trichlorobe 0.477 0.539 0.466 0.493 0.528 0.579 0.573 0.522   8.65
 ----------------------------------------------------------------------------
 (#) = Out of Range

          V2P_2022-08-24.M        Wed Aug 24 15:20:42 2022
```

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-08-24\2P92279.D Vial: 60
Acq On : 24 Aug 2022 2:09 pm Operator: courtnef
Sample : ICV3560-5 Inst : MSVOA13
Misc : MS52204,V2P3560,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	102	0.00	3.72
2	Dichlorodifluoromethane		----------NA----------				
3 P	Chloromethane	0.153	0.137	10.5	92	0.00	1.25
4	1,3-butadiene	0.142	0.133	6.3	93	0.00	1.32
5 C	Vinyl Chloride	0.186	0.169	9.1	89	0.00	1.30
6	Bromomethane	0.115	0.098	14.8	92	0.00	1.51
	----------	Amount	Calc.	%Drift	----------		
7	Chloroethane	40.000	34.864	12.8	96	0.00	1.58
8	Trichlorofluoromethane	40.000	36.722	8.2	85	0.00	1.67
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether	0.174	0.166	4.6	96	0.00	1.88
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol	800.000	698.394	12.7	86	0.02	1.98
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha	0.163	0.174	-6.7	105	0.00	1.98
12 C	1,1-Dichloroethene	0.238	0.241	-1.3	99	0.00	1.98
	----------	Amount	Calc.	%Drift	----------		
13	Freon 113	40.000	36.928	7.7	87	0.00	2.02
14	Carbon Disulfide	40.000	34.352	14.1	83	0.00	2.00
15	Iodomethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
16	Acrolein	0.064	0.054	15.6	84	0.00	2.16
17	Allyl chloride	0.171	0.198	-15.8	112	0.00	2.25
	----------	Amount	Calc.	%Drift	----------		
18	Methylene Chloride	40.000	32.471	18.8	92	0.00	2.30
19	Acetone	200.000	200.830	-0.4	106	0.00	2.32
	----------	AvgRF	CCRF	%Dev	----------		
20	Methyl acetate	0.233	0.228	2.1	98	0.00	2.40
21	trans-1,2-Dichloroethene	0.241	0.238	1.2	99	0.00	2.40
	----------	Amount	Calc.	%Drift	----------		
22	Hexane	40.000	41.523	-3.8	100	0.00	2.47
	----------	AvgRF	CCRF	%Dev	----------		

Initial Calibration Verification

Job Number: FA98819
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Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

23		Methyl Tert Butyl Ether	0.549	0.637	-16.0	115	0.00	2.48
24		Tert Butyl Alcohol	0.068	0.062	8.8	90	0.00	2.51
25		Acetonitrile	0.038	0.031	18.4	90	0.00	2.55
26		Di-isopropyl ether	0.510	0.509	0.2	100	0.00	2.69
27		Chloroprene	0.726	0.921	-26.9#	132	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.324	-2.2	102	0.00	2.73
29		Acrylonitrile	0.115	0.120	-4.3	110	0.00	2.73
30		ETBE	0.597	0.549	8.0	91	0.00	2.88
31		Vinyl acetate	0.411	0.416	-1.2	100	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.183	3.2	98	0.00	3.02
			Amount	Calc.	%Drift			
33		2,2-Dichloropropane	40.000	37.190	7.0	92	0.00	3.09
			AvgRF	CCRF	%Dev			
34		Bromochloromethane	0.085	0.078	8.2	94	0.00	3.13
			Amount	Calc.	%Drift			
35		Cyclohexane	40.000	37.159	7.1	90	0.00	3.17
			AvgRF	CCRF	%Dev			
36	C	Chloroform	0.318	0.310	2.5	96	0.00	3.17
37		Ethyl acetate	0.311	0.306	1.6	101	0.00	3.23
38		Tetrahydrofuran	0.119	0.114	4.2	99	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.217	-1.9	103	0.00	3.26
			Amount	Calc.	%Drift			
40		Carbon Tetrachloride	40.000	40.012	-0.0	99	0.00	3.27
41		1,1,1-Trichloroethane	40.000	38.417	4.0	96	0.00	3.30
42		2-Butanone	200.000	199.870	0.1	107	0.00	3.32
			AvgRF	CCRF	%Dev			
43		1,1-Dichloropropene	0.238	0.229	3.8	94	0.00	3.36
			Amount	Calc.	%Drift			
44		tert-Butyl formate	200.000	175.631	12.2	85	0.00	3.41
			AvgRF	CCRF	%Dev			
45		Propionitrile	0.061	0.057	6.6	96	0.00	3.46
46		Methacrylonitrile	0.163	0.158	3.1	96	0.00	3.48
47		Benzene	0.761	0.725	4.7	96	0.00	3.49
48		TAME	0.543	0.719	-32.4#	130	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.306	-3.7	103	0.00	3.55
50		Isobutyl alcohol	0.031	0.033	-6.5	102	0.00	3.59
51		1,2-Dichloroethane	0.272	0.262	3.7	96	0.00	3.59
			Amount	Calc.	%Drift			
52		Tert Amyl Alcohol	400.000	350.606	12.3	88	0.00	3.65
			AvgRF	CCRF	%Dev			
53		Trichloroethene	0.196	0.184	6.1	97	0.00	3.82
			Amount	Calc.	%Drift			
54		Methylcyclohexane	40.000	38.557	3.6	93	0.00	3.85
			AvgRF	CCRF	%Dev			
55		Dibromomethane	0.108	0.101	6.5	93	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.173	6.5	93	0.00	4.11
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

57		Bromodichloromethane	40.000	39.634	0.9	98	0.00	4.15
58		Methyl methacrylate	40.000	38.542	3.6	96	0.00	4.24
			AvgRF	CCRF	%Dev			
59		1,4-Dioxane	0.006	0.006	0.0	100	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.157	-1.9	99	0.00	4.48
			Amount	Calc.	%Drift			
61		cis-1,3-Dichloropropene	40.000	39.104	2.2	97	0.00	4.52
			AvgRF	CCRF	%Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64
63	S	Toluene-d8	1.376	1.376	0.0	103	0.00	4.65
64	C	Toluene	1.180	1.115	5.5	98	0.00	4.68
			Amount	Calc.	%Drift			
65		2-Nitropropane	200.000	191.129	4.4	93	0.00	4.78
			AvgRF	CCRF	%Dev			
66		4-Methyl-2-pentanone	0.455	0.450	1.1	103	0.00	4.89
			Amount	Calc.	%Drift			
67		trans-1,3-Dichloropropene	40.000	40.810	-2.0	102	0.00	4.92
			AvgRF	CCRF	%Dev			
68		Tetrachloroethene	0.251	0.240	4.4	97	0.00	4.94
			Amount	Calc.	%Drift			
69		Ethyl methacrylate	40.000	38.356	4.1	96	0.00	5.03
			AvgRF	CCRF	%Dev			
70		1,1,2-Trichloroethane	0.202	0.191	5.4	96	0.00	5.02
			Amount	Calc.	%Drift			
71		Dibromochloromethane	40.000	37.409	6.5	93	0.00	5.14
			AvgRF	CCRF	%Dev			
72		1,3-Dichloropropane	0.449	0.400	10.9	91	0.00	5.19
73		1,2-Dibromoethane	0.244	0.243	0.4	99	0.00	5.29
			Amount	Calc.	%Drift			
74		3,3-dimethyl-1-butanol	2000.000	1907.858	4.6	96	0.00	5.42
			AvgRF	CCRF	%Dev			
75		2-hexanone	0.511	0.500	2.2	100	0.00	5.43
76		1-Chlorohexane	0.376	0.344	8.5	94	0.00	5.65
77	C	Ethylbenzene	1.295	1.227	5.3	96	0.00	5.69
78	P	Chlorobenzene	0.707	0.672	5.0	98	0.00	5.65
			Amount	Calc.	%Drift			
79		1,1,1,2-Tetrachloroethane	40.000	38.355	4.1	97	0.00	5.70
			AvgRF	CCRF	%Dev			
80		m,p-Xylene	1.024	0.972	5.1	96	0.00	5.78
81		o-Xylene	1.008	1.000	0.8	100	0.00	6.08
82		Styrene	0.771	0.767	0.5	97	0.00	6.11
			Amount	Calc.	%Drift			
83	P	Bromoform	40.000	38.188	4.5	95	0.00	6.12

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

			AvgRF	CCRF	%Dev			
84		Isopropylbenzene	1.163	1.139	2.1	97	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.782	-0.3	103	0.00	6.50
			Amount	Calc.	%Drift			
87		cis-1,4-Dichloro-2-butene	40.000	37.917	5.2	95	0.00	6.53
			AvgRF	CCRF	%Dev			
88		n-Propylbenzene	3.068	2.985	2.7	97	0.00	6.61
89		Bromobenzene	0.620	0.572	7.7	93	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.813	1.8	97	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.062	3.5	95	0.00	6.76
92		2-Chlorotoluene	1.851	1.808	2.3	98	0.00	6.72
93		trans-1,4-Dichloro-2-Bute	0.355	0.305	14.1	83	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.280	9.4	91	0.00	6.73
95		Cyclohexanone	0.065	0.068	-4.6	105	0.00	6.75
96		4-Chlorotoluene	1.951	1.891	3.1	99	0.00	6.84
97		tert-Butylbenzene	1.173	1.152	1.8	97	0.00	6.99
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.083	2.049	1.6	98	0.00	7.04
			Amount	Calc.	%Drift			
100		Pentachloroethane	40.000	41.245	-3.1	103	0.00	7.00
			AvgRF	CCRF	%Dev			
101		sec-Butylbenzene	2.271	2.324	-2.3	100	0.00	7.13
			Amount	Calc.	%Drift			
102		4-Isopropyltoluene	40.000	40.151	-0.4	101	0.00	7.25
			AvgRF	CCRF	%Dev			
103		1,3-Dichlorobenzene	1.114	1.090	2.2	100	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	2.111	-1.0	101	0.00	7.37
105		1,4-Dichlorobenzene	1.164	1.108	4.8	96	0.00	7.34
			Amount	Calc.	%Drift			
106		n-Butylbenzene	40.000	36.646	8.4	91	0.00	7.56
107		Benzyl Chloride	40.000	29.878	25.3#	66	0.00	7.52
			AvgRF	CCRF	%Dev			
108		1,2-Dichlorobenzene	1.046	1.011	3.3	97	0.00	7.65
			Amount	Calc.	%Drift			
109		1,2-Dibromo-3-Chloropropa	40.000	36.459	8.9	90	0.00	8.21
110		Hexachlorobutadiene	40.000	38.078	4.8	93	0.00	8.69
			AvgRF	CCRF	%Dev			
111		1,2,4-Trichlorobenzene	0.556	0.537	3.4	95	0.00	8.68
			Amount	Calc.	%Drift			
112		Naphthalene	40.000	39.130	2.2	99	0.00	8.88
			AvgRF	CCRF	%Dev			
113		1,2,3-Trichlorobenzene	0.522	0.497	4.8	96	0.00	9.01

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 2P92271.D  V2P_2022-08-24.M        Wed Aug 24 15:19:29 2022
```

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-08-24\2P92281.D Vial: 61
Acq On : 24 Aug 2022 2:41 pm Operator: courtnef
Sample : ICV3560-4 Inst : MSVOA13
Misc : MS52204,V2P3560,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	105	0.00	3.72
2	Dichlorodifluoromethane	0.135	0.115	14.8	103	0.00	1.12
3 P	Chloromethane		----------NA----------				
4	1,3-butadiene		----------NA----------				
5 C	Vinyl Chloride		----------NA----------				
6	Bromomethane		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
7	Chloroethane		----------NA----------				
8	Trichlorofluoromethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha		----------NA----------				
12 C	1,1-Dichloroethene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
13	Freon 113		----------NA----------				
14	Carbon Disulfide		----------NA----------				
15	Iodomethane	25.000	22.821	8.7	99	0.00	2.06
	----------	AvgRF	CCRF	%Dev	----------		
16	Acrolein		----------NA----------				
17	Allyl chloride		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
18	Methylene Chloride		----------NA----------				
19	Acetone		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
20	Methyl acetate		----------NA----------				
21	trans-1,2-Dichloroethene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
22	Hexane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

23		Methyl Tert Butyl Ether		----------NA----------					
24		Tert Butyl Alcohol		----------NA----------					
25		Acetonitrile		----------NA----------					
26		Di-isopropyl ether		----------NA----------					
27		Chloroprene		----------NA----------					
28	P	1,1-Dichloroethane		----------NA----------					
29		Acrylonitrile		----------NA----------					
30		ETBE		----------NA----------					
31		Vinyl acetate		----------NA----------					
32		cis-1,2-Dichloroethene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
33		2,2-Dichloropropane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
34		Bromochloromethane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
35		Cyclohexane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
36	C	Chloroform		----------NA----------					
37		Ethyl acetate		----------NA----------					
38		Tetrahydrofuran		----------NA----------					
39	S	Dibromofluoromethane	0.213	0.215	-0.9	104	0.00	3.27	
		----------	Amount	Calc.	%Drift	----------			
40		Carbon Tetrachloride		----------NA----------					
41		1,1,1-Trichloroethane		----------NA----------					
42		2-Butanone		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
43		1,1-Dichloropropene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
44		tert-Butyl formate		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
45		Propionitrile		----------NA----------					
46		Methacrylonitrile		----------NA----------					
47		Benzene		----------NA----------					
48		TAME		----------NA----------					
49	S	1,2-Dichloroethane-d4	0.295	0.300	-1.7	105	0.00	3.55	
50		Isobutyl alcohol		----------NA----------					
51		1,2-Dichloroethane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
52		Tert Amyl Alcohol		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
53		Trichloroethene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
54		Methylcyclohexane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
55		Dibromomethane		----------NA----------					
56	C	1,2-Dichloropropane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			

57		Bromodichloromethane			----------NA----------				
58		Methyl methacrylate			----------NA----------				
			AvgRF	CCRF	%Dev				
59		1,4-Dioxane			----------NA----------				
60		2-Chloroethyl vinyl ether			----------NA----------				
			Amount	Calc.	%Drift				
61		cis-1,3-Dichloropropene			----------NA----------				
			AvgRF	CCRF	%Dev				
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64	
63	S	Toluene-d8	1.376	1.377	-0.1	104	0.00	4.65	
64	C	Toluene			----------NA----------				
			Amount	Calc.	%Drift				
65		2-Nitropropane			----------NA----------				
			AvgRF	CCRF	%Dev				
66		4-Methyl-2-pentanone			----------NA----------				
			Amount	Calc.	%Drift				
67		trans-1,3-Dichloropropene			----------NA----------				
			AvgRF	CCRF	%Dev				
68		Tetrachloroethene			----------NA----------				
			Amount	Calc.	%Drift				
69		Ethyl methacrylate			----------NA----------				
			AvgRF	CCRF	%Dev				
70		1,1,2-Trichloroethane			----------NA----------				
			Amount	Calc.	%Drift				
71		Dibromochloromethane			----------NA----------				
			AvgRF	CCRF	%Dev				
72		1,3-Dichloropropane			----------NA----------				
73		1,2-Dibromoethane			----------NA----------				
			Amount	Calc.	%Drift				
74		3,3-dimethyl-1-butanol			----------NA----------				
			AvgRF	CCRF	%Dev				
75		2-hexanone			----------NA----------				
76		1-Chlorohexane			----------NA----------				
77	C	Ethylbenzene			----------NA----------				
78	P	Chlorobenzene			----------NA----------				
			Amount	Calc.	%Drift				
79		1,1,1,2-Tetrachloroethane			----------NA----------				
			AvgRF	CCRF	%Dev				
80		m,p-Xylene			----------NA----------				
81		o-Xylene			----------NA----------				
82		Styrene			----------NA----------				
			Amount	Calc.	%Drift				
83	P	Bromoform			----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

			AvgRF	CCRF	%Dev			
84		Isopropylbenzene		NA				
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.763	2.2	103	0.00	6.50

			Amount	Calc.	%Drift			
87		cis-1,4-Dichloro-2-butene		NA				

			AvgRF	CCRF	%Dev			
88		n-Propylbenzene		NA				
89		Bromobenzene		NA				
90	P	1,1,2,2-Tetrachloroethane		NA				
91		1,3,5-Trimethylbenzene		NA				
92		2-Chlorotoluene		NA				
93		trans-1,4-Dichloro-2-Bute		NA				
94		1,2,3-Trichloropropane		NA				
95		Cyclohexanone		NA				
96		4-Chlorotoluene		NA				
97		tert-Butylbenzene		NA				
98		a-Methyl styrene		NA				
99		1,2,4-Trimethylbenzene		NA				

			Amount	Calc.	%Drift			
100		Pentachloroethane		NA				

			AvgRF	CCRF	%Dev			
101		sec-Butylbenzene		NA				

			Amount	Calc.	%Drift			
102		4-Isopropyltoluene		NA				

			AvgRF	CCRF	%Dev			
103		1,3-Dichlorobenzene		NA				
104		1,2,3-Trimethylbenzene		NA				
105		1,4-Dichlorobenzene		NA				

			Amount	Calc.	%Drift			
106		n-Butylbenzene		NA				
107		Benzyl Chloride		NA				

			AvgRF	CCRF	%Dev			
108		1,2-Dichlorobenzene		NA				

			Amount	Calc.	%Drift			
109		1,2-Dibromo-3-Chloropropa		NA				
110		Hexachlorobutadiene		NA				

			AvgRF	CCRF	%Dev			
111		1,2,4-Trichlorobenzene		NA				

			Amount	Calc.	%Drift			
112		Naphthalene		NA				

			AvgRF	CCRF	%Dev			
113		1,2,3-Trichlorobenzene		NA				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

(#) = Out of Range SPCC's out = 4 CCC's out = 6
2P92269.D V2P_2022-08-24.M Wed Aug 24 15:20:21 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-09-23\2P93306.D Vial: 52
Acq On : 23 Sep 2022 11:41 am Operator: courtnef
Sample : CC3560-5 Inst : MSVOA13
Misc : MS52362,V2P3586,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:29:43 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	83	0.00	3.72
		Amount	Calc.	%Drift			
2	Dichlorodifluoromethane	40.000	45.938	-14.8	89	0.00	1.12
		AvgRF	CCRF	%Dev			
3 P	Chloromethane	0.153	0.181	-18.3	98	0.00	1.25
4	1,3-butadiene	0.142	0.116	18.3	66	0.00	1.32
5 C	Vinyl Chloride	0.186	0.216	-16.1	92	0.00	1.30
6	Bromomethane	0.115	0.111	3.5	85	0.00	1.50
		Amount	Calc.	%Drift			
7	Chloroethane	40.000	43.412	-8.5	96	0.00	1.58
8	Trichlorofluoromethane	40.000	53.947	-34.9#	88	0.00	1.67
		AvgRF	CCRF	%Dev			
9	Ethyl Ether	0.174	0.199	-14.4	93	0.00	1.88
		Amount	Calc.	%Drift			
10	Ethanol	800.000	968.409	-21.1#	92	0.00	1.97
		AvgRF	CCRF	%Dev			
11	1,2-Dichlorotrifluoroetha	0.163	0.223	-36.8#	108	0.00	1.97
12 C	1,1-Dichloroethene	0.238	0.265	-11.3	88	0.00	1.98
		Amount	Calc.	%Drift			
13	Freon 113	40.000	44.908	-12.3	87	0.00	2.01
14	Carbon Disulfide	40.000	39.167	2.1	78	0.00	2.00
15	Iodomethane	40.000	55.409	-38.5#	110	0.00	2.06
		AvgRF	CCRF	%Dev			
16	Acrolein	0.064	0.069	-7.8	88	0.00	2.15
17	Allyl chloride	0.171	0.182	-6.4	83	0.00	2.25
		Amount	Calc.	%Drift			
18	Methylene Chloride	40.000	39.719	0.7	90	0.00	2.30
19	Acetone	200.000	208.286	-4.1	89	0.00	2.31
		AvgRF	CCRF	%Dev			
20	Methyl acetate	0.233	0.270	-15.9	94	0.00	2.40
21	trans-1,2-Dichloroethene	0.241	0.273	-13.3	92	0.00	2.40

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

			Amount	Calc.	%Drift			
22		Hexane	40.000	47.064	-17.7	93	0.00	2.47
			AvgRF	CCRF	%Dev			
23		Methyl Tert Butyl Ether	0.549	0.666	-21.3#	97	0.00	2.47
24		Tert Butyl Alcohol	0.068	0.081	-19.1	95	0.00	2.51
25		Acetonitrile	0.038	0.040	-5.3	94	0.00	2.55
26		Di-isopropyl ether	0.510	0.607	-19.0	97	0.00	2.69
27		Chloroprene	0.726	0.798	-9.9	92	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.366	-15.5	93	0.00	2.73
29		Acrylonitrile	0.115	0.124	-7.8	92	0.00	2.73
30		ETBE	0.597	0.707	-18.4	95	0.00	2.88
31		Vinyl acetate	0.411	0.451	-9.7	88	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.215	-13.8	93	0.00	3.02
			Amount	Calc.	%Drift			
33		2,2-Dichloropropane	40.000	43.836	-9.6	90	0.00	3.09
			AvgRF	CCRF	%Dev			
34		Bromochloromethane	0.085	0.096	-12.9	93	0.00	3.12
			Amount	Calc.	%Drift			
35		Cyclohexane	40.000	43.295	-8.2	86	0.00	3.16
			AvgRF	CCRF	%Dev			
36	C	Chloroform	0.318	0.368	-15.7	92	0.00	3.17
37		Ethyl acetate	0.311	0.345	-10.9	92	0.00	3.23
38		Tetrahydrofuran	0.119	0.144	-21.0#	102	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.213	0.0	82	0.00	3.27
			Amount	Calc.	%Drift			
40		Carbon Tetrachloride	40.000	42.927	-7.3	87	0.00	3.27
41		1,1,1-Trichloroethane	40.000	44.433	-11.1	90	0.00	3.30
42		2-Butanone	200.000	209.682	-4.8	90	0.00	3.31
			AvgRF	CCRF	%Dev			
43		1,1-Dichloropropene	0.238	0.274	-15.1	91	0.00	3.37
			Amount	Calc.	%Drift			
44		tert-Butyl formate	200.000	225.400	-12.7	92	0.00	3.41
			AvgRF	CCRF	%Dev			
45		Propionitrile	0.061	0.069	-13.1	94	0.00	3.46
46		Methacrylonitrile	0.163	0.178	-9.2	87	0.00	3.49
47		Benzene	0.761	0.882	-15.9	95	0.00	3.50
48		TAME	0.543	0.645	-18.8	94	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.271	8.1	74	0.00	3.55
50		Isobutyl alcohol	0.031	0.037	-19.4	92	0.00	3.59
51		1,2-Dichloroethane	0.272	0.299	-9.9	89	0.00	3.59
			Amount	Calc.	%Drift			
52		Tert Amyl Alcohol	400.000	477.430	-19.4	98	0.00	3.65
			AvgRF	CCRF	%Dev			
53		Trichloroethene	0.196	0.222	-13.3	94	0.00	3.83
			Amount	Calc.	%Drift			
54		Methylcyclohexane	40.000	45.211	-13.0	90	0.00	3.85
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

55		Dibromomethane	0.108	0.126	-16.7	94	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.222	-20.0#	97	0.00	4.11
		----------	Amount	Calc.	%Drift	----------		
57		Bromodichloromethane	40.000	44.224	-10.6	90	0.00	4.14
58		Methyl methacrylate	40.000	41.968	-4.9	85	0.00	4.23
		----------	AvgRF	CCRF	%Dev	----------		
59		1,4-Dioxane	0.006	0.007	-16.7	96	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.169	-9.7	86	0.00	4.48
		----------	Amount	Calc.	%Drift	----------		
61		cis-1,3-Dichloropropene	40.000	45.585	-14.0	93	0.00	4.52
		----------	AvgRF	CCRF	%Dev	----------		
62	I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00	5.64
63	S	Toluene-d8	1.376	1.297	5.7	85	0.00	4.65
64	C	Toluene	1.180	1.239	-5.0	96	0.00	4.68
		----------	Amount	Calc.	%Drift	----------		
65		2-Nitropropane	200.000	200.778	-0.4	87	0.00	4.78
		----------	AvgRF	CCRF	%Dev	----------		
66		4-Methyl-2-pentanone	0.455	0.454	0.2	92	0.00	4.89
		----------	Amount	Calc.	%Drift	----------		
67		trans-1,3-Dichloropropene	40.000	42.087	-5.2	93	0.00	4.92
		----------	AvgRF	CCRF	%Dev	----------		
68		Tetrachloroethene	0.251	0.292	-16.3	104	0.00	4.94
		----------	Amount	Calc.	%Drift	----------		
69		Ethyl methacrylate	40.000	40.309	-0.8	89	0.00	5.03
		----------	AvgRF	CCRF	%Dev	----------		
70		1,1,2-Trichloroethane	0.202	0.218	-7.9	96	0.00	5.02
		----------	Amount	Calc.	%Drift	----------		
71		Dibromochloromethane	40.000	42.464	-6.2	94	0.00	5.14
		----------	AvgRF	CCRF	%Dev	----------		
72		1,3-Dichloropropane	0.449	0.473	-5.3	95	0.00	5.20
73		1,2-Dibromoethane	0.244	0.270	-10.7	96	0.00	5.29
		----------	Amount	Calc.	%Drift	----------		
74		3,3-dimethyl-1-butanol	2000.000	2074.695	-3.7	92	0.00	5.42
		----------	AvgRF	CCRF	%Dev	----------		
75		2-hexanone	0.511	0.521	-2.0	91	0.00	5.43
76		1-Chlorohexane	0.376	0.402	-6.9	97	0.00	5.65
77	C	Ethylbenzene	1.295	1.372	-5.9	95	0.00	5.68
78	P	Chlorobenzene	0.707	0.763	-7.9	98	0.00	5.66
		----------	Amount	Calc.	%Drift	----------		
79		1,1,1,2-Tetrachloroethane	40.000	43.163	-7.9	97	0.00	5.70
		----------	AvgRF	CCRF	%Dev	----------		
80		m,p-Xylene	1.024	1.090	-6.4	94	0.00	5.78
81		o-Xylene	1.008	1.075	-6.6	95	0.00	6.08

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

82		Styrene	0.771	0.856	-11.0	95	0.00	6.11
			Amount	Calc.	%Drift			
83	P	Bromoform	40.000	41.979	-4.9	94	0.00	6.12
			AvgRF	CCRF	%Dev			
84		Isopropylbenzene	1.163	1.275	-9.6	95	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.757	2.9	92	0.00	6.50
			Amount	Calc.	%Drift			
87		cis-1,4-Dichloro-2-butene	40.000	35.585	11.0	82	0.00	6.53
			AvgRF	CCRF	%Dev			
88		n-Propylbenzene	3.068	3.173	-3.4	95	0.00	6.61
89		Bromobenzene	0.620	0.658	-6.1	99	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.873	-5.4	97	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.212	-3.6	95	0.00	6.76
92		2-Chlorotoluene	1.851	1.898	-2.5	95	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.355	0.318	10.4	80	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.322	-4.2	97	0.00	6.73
95		Cyclohexanone	0.065	0.069	-6.2	100	0.00	6.74
96		4-Chlorotoluene	1.951	1.987	-1.8	96	0.00	6.83
97		tert-Butylbenzene	1.173	1.191	-1.5	93	0.00	6.99
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.083	2.149	-3.2	95	0.00	7.05
			Amount	Calc.	%Drift			
100		Pentachloroethane	40.000	37.593	6.0	86	0.00	6.99
			AvgRF	CCRF	%Dev			
101		sec-Butylbenzene	2.271	2.390	-5.2	95	0.00	7.13
			Amount	Calc.	%Drift			
102		4-Isopropyltoluene	40.000	41.658	-4.1	97	0.00	7.24
			AvgRF	CCRF	%Dev			
103		1,3-Dichlorobenzene	1.114	1.180	-5.9	100	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	1.072	48.7#	48#	0.00	7.38
105		1,4-Dichlorobenzene	1.164	1.198	-2.9	96	0.00	7.34
			Amount	Calc.	%Drift			
106		n-Butylbenzene	40.000	40.599	-1.5	94	0.00	7.56
107		Benzyl Chloride	40.000	38.566	3.6	84	0.00	7.52
			AvgRF	CCRF	%Dev			
108		1,2-Dichlorobenzene	1.046	1.106	-5.7	99	0.00	7.65
			Amount	Calc.	%Drift			
109		1,2-Dibromo-3-Chloropropa	40.000	40.064	-0.2	93	0.00	8.21
110		Hexachlorobutadiene	40.000	41.308	-3.3	95	0.00	8.69
			AvgRF	CCRF	%Dev			
111		1,2,4-Trichlorobenzene	0.556	0.598	-7.6	98	0.00	8.68
			Amount	Calc.	%Drift			
112		Naphthalene	40.000	41.109	-2.8	97	0.00	8.89
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

113	1,2,3-Trichlorobenzene	0.522	0.561	-7.5	100	0.00	9.01	

(#) = Out of Range SPCC's out = 0 CCC's out = 1
2P92271.D V2P_2022-08-24.M Fri Sep 23 11:57:31 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\An...\V2P3586-87\2P93350.D Vial: 74
Acq On : 23 Sep 2022 11:34 pm Operator: courtnef
Sample : ECC3560-5 Inst : MSVOA13
Misc : MS52399,V2P3586,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\met...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:29:43 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	85	0.00	3.72
	---------- True	Calc.	% Drift	----------			
2	Dichlorodifluoromethane	40.000	43.188	-8.0	87	0.00	1.13
	---------- AvgRF	CCRF	% Dev	----------			
3 P	Chloromethane	0.153	0.170	-11.1	95	0.00	1.25
4	1,3-butadiene	0.142	0.140	1.4	82	0.00	1.33
5 C	Vinyl Chloride	0.186	0.206	-10.8	90	0.00	1.31
6	Bromomethane	0.115	0.084	27.0	66	0.00	1.52
	---------- True	Calc.	% Drift	----------			
7	Chloroethane	40.000	41.576	-3.9	95	0.00	1.59
8	Trichlorofluoromethane	40.000	51.506	-28.8	88	0.00	1.68
	---------- AvgRF	CCRF	% Dev	----------			
9	Ethyl Ether	0.174	0.199	-14.4	96	0.00	1.89
	---------- True	Calc.	% Drift	----------			
10	Ethanol	800.000	930.613	-16.3	92	0.00	1.97
	---------- AvgRF	CCRF	% Dev	----------			
11	1,2-Dichlorotrifluoroetha	0.163	0.215	-31.9	107	0.00	1.98
12 C	1,1-Dichloroethene	0.238	0.254	-6.7	87	0.00	1.99
	---------- True	Calc.	% Drift	----------			
13	Freon 113	40.000	42.630	-6.6	85	0.00	2.02
14	Carbon Disulfide	40.000	37.937	5.2	77	0.00	2.01
15	Iodomethane	40.000	49.197	-23.0	98	0.00	2.06
	---------- AvgRF	CCRF	% Dev	----------			
16	Acrolein	0.064	0.057	10.9	75	0.00	2.16
17	Allyl chloride	0.171	0.167	2.3	79	0.00	2.25
	---------- True	Calc.	% Drift	----------			
18	Methylene Chloride	40.000	38.867	2.8	91	0.00	2.31
19	Acetone	200.000	207.866	-3.9	91	0.00	2.32
	---------- AvgRF	CCRF	% Dev	----------			
20	Methyl acetate	0.233	0.271	-16.3	97	0.00	2.40
21	trans-1,2-Dichloroethene	0.241	0.263	-9.1	91	0.00	2.40

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

			True	Calc.	% Drift			
22		Hexane	40.000	42.015	-5.0	84	0.00	2.47
			AvgRF	CCRF	% Dev			
23		Methyl Tert Butyl Ether	0.549	0.645	-17.5	97	0.00	2.47
24		Tert Butyl Alcohol	0.068	0.083	-22.1	101	0.00	2.51
25		Acetonitrile	0.038	0.039	-2.6	94	0.00	2.56
26		Di-isopropyl ether	0.510	0.595	-16.7	97	0.00	2.69
27		Chloroprene	0.726	0.791	-9.0	94	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.349	-10.1	91	0.00	2.73
29		Acrylonitrile	0.115	0.124	-7.8	95	0.00	2.73
30		ETBE	0.597	0.690	-15.6	95	0.00	2.89
31		Vinyl acetate	0.411	0.372	9.5	75	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.207	-9.5	92	0.00	3.03
			True	Calc.	% Drift			
33		2,2-Dichloropropane	40.000	34.347	14.1	70	0.00	3.09
			AvgRF	CCRF	% Dev			
34		Bromochloromethane	0.085	0.092	-8.2	92	0.00	3.13
			True	Calc.	% Drift			
35		Cyclohexane	40.000	42.074	-5.2	86	0.00	3.17
			AvgRF	CCRF	% Dev			
36	C	Chloroform	0.318	0.352	-10.7	91	0.00	3.17
37		Ethyl acetate	0.311	0.338	-8.7	93	0.00	3.23
38		Tetrahydrofuran	0.119	0.136	-14.3	98	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.211	0.9	84	0.00	3.27
			True	Calc.	% Drift			
40		Carbon Tetrachloride	40.000	42.431	-6.1	88	0.00	3.27
41		1,1,1-Trichloroethane	40.000	42.129	-5.3	88	0.00	3.30
42		2-Butanone	200.000	205.105	-2.6	91	0.00	3.32
			AvgRF	CCRF	% Dev			
43		1,1-Dichloropropene	0.238	0.260	-9.2	89	0.00	3.37
			True	Calc.	% Drift			
44		tert-Butyl formate	200.000	195.107	2.4	80	0.00	3.41
			AvgRF	CCRF	% Dev			
45		Propionitrile	0.061	0.069	-13.1	96	0.00	3.46
46		Methacrylonitrile	0.163	0.176	-8.0	89	0.00	3.49
47		Benzene	0.761	0.841	-10.5	93	0.00	3.50
48		TAME	0.543	0.626	-15.3	94	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.279	5.4	78	0.00	3.55
50		Isobutyl alcohol	0.031	0.037	-19.4	93	0.00	3.59
51		1,2-Dichloroethane	0.272	0.292	-7.4	90	0.00	3.59
			True	Calc.	% Drift			
52		Tert Amyl Alcohol	400.000	466.406	-16.6	99	0.00	3.65
			AvgRF	CCRF	% Dev			
53		Trichloroethene	0.196	0.215	-9.7	94	0.00	3.83
			True	Calc.	% Drift			
54		Methylcyclohexane	40.000	42.619	-6.5	86	0.00	3.85
			AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

55		Dibromomethane	0.108	0.123	-13.9	95	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.216	-16.8	97	0.00	4.11
			True	Calc.	% Drift			
57		Bromodichloromethane	40.000	42.642	-6.6	89	0.00	4.15
58		Methyl methacrylate	40.000	41.937	-4.8	88	0.00	4.23
			AvgRF	CCRF	% Dev			
59		1,4-Dioxane	0.006	0.006	0.0	91	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.165	-7.1	86	0.00	4.48
			True	Calc.	% Drift			
61		cis-1,3-Dichloropropene	40.000	42.601	-6.5	89	0.00	4.52
			AvgRF	CCRF	% Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00	5.65
63	S	Toluene-d8	1.376	1.290	6.2	88	0.00	4.65
64	C	Toluene	1.180	1.191	-0.9	95	0.00	4.68
			True	Calc.	% Drift			
65		2-Nitropropane	200.000	196.068	2.0	87	0.00	4.78
			AvgRF	CCRF	% Dev			
66		4-Methyl-2-pentanone	0.455	0.449	1.3	93	0.00	4.89
			True	Calc.	% Drift			
67		trans-1,3-Dichloropropene	40.000	39.170	2.1	89	0.00	4.92
			AvgRF	CCRF	% Dev			
68		Tetrachloroethene	0.251	0.371	-47.8	137	0.00	4.94
			True	Calc.	% Drift			
69		Ethyl methacrylate	40.000	39.352	1.6	90	0.00	5.03
			AvgRF	CCRF	% Dev			
70		1,1,2-Trichloroethane	0.202	0.209	-3.5	95	0.00	5.02
			True	Calc.	% Drift			
71		Dibromochloromethane	40.000	40.875	-2.2	93	0.00	5.14
			AvgRF	CCRF	% Dev			
72		1,3-Dichloropropane	0.449	0.465	-3.6	97	0.00	5.20
73		1,2-Dibromoethane	0.244	0.262	-7.4	97	0.00	5.30
			True	Calc.	% Drift			
74		3,3-dimethyl-1-butanol	2000.000	2005.532	-0.3	92	0.00	5.42
			AvgRF	CCRF	% Dev			
75		2-hexanone	0.511	0.505	1.2	91	0.00	5.43
76		1-Chlorohexane	0.376	0.375	0.3	93	0.00	5.65
77	C	Ethylbenzene	1.295	1.306	-0.8	93	0.00	5.68
78	P	Chlorobenzene	0.707	0.727	-2.8	96	0.00	5.66
			True	Calc.	% Drift			
79		1,1,1,2-Tetrachloroethane	40.000	41.384	-3.5	96	0.00	5.70
			AvgRF	CCRF	% Dev			
80		m,p-Xylene	1.024	1.037	-1.3	93	0.00	5.78
81		o-Xylene	1.008	1.043	-3.5	95	0.00	6.08

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

82		Styrene	0.771	0.797	-3.4	91	0.00	6.11
		----------	True	Calc.	% Drift	----------		
83	P	Bromoform	40.000	39.836	0.4	91	0.00	6.12
		----------	AvgRF	CCRF	% Dev	----------		
84		Isopropylbenzene	1.163	1.213	-4.3	94	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.765	1.9	96	0.00	6.50
		----------	True	Calc.	% Drift	----------		
87		cis-1,4-Dichloro-2-butene	40.000	24.338	39.2	55	0.00	6.53
		----------	AvgRF	CCRF	% Dev	----------		
88		n-Propylbenzene	3.068	2.999	2.2	93	0.00	6.61
89		Bromobenzene	0.620	0.624	-0.6	97	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.834	-0.7	96	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.085	2.4	93	0.00	6.76
92		2-Chlorotoluene	1.851	1.799	2.8	93	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.355	0.231	34.9	61	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.318	-2.9	99	0.00	6.72
95		Cyclohexanone	0.065	0.066	-1.5	99	0.00	6.74
96		4-Chlorotoluene	1.951	1.879	3.7	94	0.00	6.83
97		tert-Butylbenzene	1.173	1.129	3.8	92	0.00	6.99
98		a-Methyl styrene	0.000	0.000	0.0	0#	0.00	7.14
99		1,2,4-Trimethylbenzene	2.083	2.059	1.2	94	0.00	7.05
		----------	True	Calc.	% Drift	----------		
100		Pentachloroethane	40.000	14.765	63.1#	31	0.00	6.99
		----------	AvgRF	CCRF	% Dev	----------		
101		sec-Butylbenzene	2.271	2.252	0.8	93	0.00	7.13
		----------	True	Calc.	% Drift	----------		
102		4-Isopropyltoluene	40.000	39.447	1.4	95	0.00	7.25
		----------	AvgRF	CCRF	% Dev	----------		
103		1,3-Dichlorobenzene	1.114	1.119	-0.4	98	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	1.022	51.1#	47#	0.00	7.37
105		1,4-Dichlorobenzene	1.164	1.145	1.6	95	0.00	7.34
		----------	True	Calc.	% Drift	----------		
106		n-Butylbenzene	40.000	38.455	3.9	92	0.00	7.56
107		Benzyl Chloride	40.000	25.683	35.8	53	0.00	7.52
		----------	AvgRF	CCRF	% Dev	----------		
108		1,2-Dichlorobenzene	1.046	1.046	0.0	97	0.00	7.65
		----------	True	Calc.	% Drift	----------		
109		1,2-Dibromo-3-Chloropropa	40.000	38.140	4.6	91	0.00	8.21
110		Hexachlorobutadiene	40.000	39.029	2.4	92	0.00	8.69
		----------	AvgRF	CCRF	% Dev	----------		
111		1,2,4-Trichlorobenzene	0.556	0.561	-0.9	95	0.00	8.68
		----------	True	Calc.	% Drift	----------		
112		Naphthalene	40.000	39.648	0.9	96	0.00	8.88
		----------	AvgRF	CCRF	% Dev	----------		

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

113	1,2,3-Trichlorobenzene	0.522	0.528	-1.1	97	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2P92271.D V2P_2022-08-24.M Sun Sep 25 22:07:05 2022

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICC3589
Lab FileID: 2P93398.D

Response Factor Report MSVOA13

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Calibration Files
1 =2P93390.D 2 =2P93392.D 3 =2P93394.D 4 =2P93396.D
5 =2P93398.D 6 =2P93400.D 7 =2P93402.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.190	0.166	0.181	0.197	0.198	0.202	0.196	0.190	6.54
3)P Chloromethane	0.186	0.167	0.187	0.185	0.184	0.185	0.185	0.183	3.79
4) 1,3-butadiene	0.180	0.143	0.165	0.164	0.157	0.153	0.146	0.158	7.96
5)C Vinyl Chloride	0.189	0.191	0.214	0.219	0.214	0.215	0.217	0.208	6.22
6) Bromomethane	0.155	0.114	0.122	0.105	0.100	0.097	0.090	0.112	19.45
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 0.11413 *A + -0.01235 *A^2									
7) Chloroethane	0.073	0.062	0.064	0.064	0.062	0.058	0.057	0.063	8.27
8) Trichlorofluorome	0.221	0.217	0.239	0.225	0.208	0.110		0.203	23.13
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9914									
Response Ratio = 0.00000 + 0.27926 *A + -0.11622 *A^2									
9) Ethyl Ether	0.217	0.173	0.185	0.183	0.178	0.177	0.177	0.184	8.23
10) Ethanol	0.007	0.005	0.006	0.005	0.006	0.005	0.004	0.005	14.99
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 0.00608 *A + -0.00005 *A^2									
11) 1,2-Dichlorotrifl	0.243	0.190	0.200	0.207	0.196	0.200	0.204	0.206	8.52
12)C 1,1-Dichloroethen	0.249	0.221	0.234	0.245	0.243	0.247	0.246	0.241	4.03
13) Freon 113	0.186	0.137	0.150	0.167	0.158	0.166	0.164	0.161	9.41
14) Carbon Disulfide	0.355	0.282	0.316	0.361	0.376	0.413	0.431	0.362	14.32
15) Iodomethane	0.045	0.039	0.071	0.119	0.134	0.136	0.127	0.096	44.74
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9959									
Response Ratio = 0.00000 + 0.13092 *A + -0.00100 *A^2									
16) Acrolein	0.094	0.061	0.066	0.060	0.061	0.062	0.064	0.067	18.12
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 0.06120 *A + 0.00018 *A^2									
17) Allyl chloride	0.171	0.134	0.159	0.168	0.176	0.172	0.170	0.164	8.77
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.17406 *A + -0.00187 *A^2									
18) Methylene Chlorid	1.118	0.410	0.308	0.245	0.237	0.216	0.212	0.392	83.46
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9978									
Response Ratio = 0.00000 + 0.25501 *A + -0.02257 *A^2									
19) Acetone	0.144	0.114	0.117	0.111	0.107	0.105	0.104	0.114	12.05
20) Methyl acetate	0.276	0.224	0.240	0.238	0.230	0.228	0.231	0.238	7.36
21) trans-1,2-Dichlor	0.257	0.220	0.250	0.249	0.244	0.250	0.254	0.246	5.05
22) Hexane	0.139	0.108	0.113	0.132	0.135	0.143	0.142	0.130	10.75
23) Methyl Tert Butyl	0.608	0.526	0.590	0.600	0.592	0.594	0.600	0.587	4.70
24) Tert Butyl Alcoho	0.076	0.062	0.068	0.070	0.068	0.065	0.067	0.068	6.54
25) Acetonitrile	0.053	0.043	0.044	0.040	0.038	0.034		0.042	15.92

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICC3589
Lab FileID: 2P93398.D

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            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.04452 *A + -0.00078 *A^2

26)  Di-isopropyl ethe 0.577 0.484 0.533 0.550 0.537 0.535 0.539 0.536   5.17
27)  Chloroprene       0.675 0.668 0.723 0.720 0.707 0.693 0.698 0.698   2.98
28)P 1,1-Dichloroethan 0.359 0.289 0.327 0.330 0.326 0.324 0.328 0.326   6.22
29)  Acrylonitrile     0.106 0.104 0.113 0.113 0.111 0.107 0.108 0.109   3.23
30)  ETBE              0.636 0.548 0.616 0.637 0.625 0.622 0.630 0.616   5.06
31)  Vinyl acetate     0.305 0.340 0.390 0.405 0.401 0.395 0.387 0.375  10.05
32)  cis-1,2-Dichloroe 0.215 0.183 0.197 0.196 0.192 0.195 0.198 0.196   4.77
33)  2,2-Dichloropropa 0.219 0.199 0.235 0.254 0.258 0.265 0.273 0.243  11.03
34)  Bromochloromethan 0.101 0.088 0.092 0.088 0.085 0.082 0.084 0.088   7.31
35)  Cyclohexane       0.299 0.255 0.277 0.303 0.305 0.311 0.311 0.295   7.09
36)C Chloroform        0.342 0.302 0.335 0.336 0.328 0.328 0.330 0.329   3.87
37)  Ethyl acetate     0.287 0.284 0.306 0.308 0.302 0.295 0.292 0.296   3.15
38)  Tetrahydrofuran   0.162 0.121 0.128 0.117 0.117 0.115 0.113 0.125  13.88
39)S Dibromofluorometh 0.201 0.206 0.207 0.211 0.210 0.210 0.214 0.208   2.03
40)  Carbon Tetrachlor 0.187 0.165 0.184 0.205 0.197 0.220 0.225 0.198  10.76
41)  1,1,1-Trichloroet 0.265 0.240 0.272 0.285 0.277 0.285 0.289 0.273   6.25
42)  2-Butanone        0.208 0.186 0.198 0.190 0.185 0.182 0.181 0.190   5.17
43)  1,1-Dichloroprope 0.258 0.227 0.246 0.253 0.248 0.251 0.254 0.248   4.09
44)  tert-Butyl format 0.149 0.116 0.139 0.135 0.147 0.155 0.162 0.143  10.56
45)  Propionitrile     0.074 0.061 0.066 0.066 0.064 0.061 0.060 0.065   7.51
46)  Methacrylonitrile 0.174 0.156 0.172 0.169 0.165 0.154 0.146 0.162   6.43
47)  Benzene           0.920 0.727 0.800 0.804 0.779 0.778 0.794 0.800   7.32
48)  TAME              0.559 0.498 0.557 0.574 0.571 0.575 0.583 0.560   5.14
49)S 1,2-Dichloroethan 0.285 0.285 0.282 0.281 0.285 0.270 0.266 0.279   2.88
50)  Isobutyl alcohol  0.031 0.029 0.033 0.034 0.034 0.032 0.031 0.032   5.86
51)  1,2-Dichloroethan 0.330 0.256 0.283 0.273 0.266 0.258 0.256 0.275   9.59
52)  Tert Amyl Alcohol 0.054 0.047 0.055 0.058 0.057 0.056 0.057 0.055   6.83
53)  Trichloroethene   0.234 0.184 0.204 0.203 0.196 0.200 0.202 0.203   7.40
54)  Methylcyclohexane 0.292 0.235 0.263 0.275 0.282 0.296 0.292 0.276   7.76
55)  Dibromomethane    0.124 0.097 0.111 0.113 0.111 0.112 0.113 0.112   7.04
56)C 1,2-Dichloropropa 0.216 0.173 0.195 0.197 0.195 0.196 0.198 0.196   6.29
57)  Bromodichlorometh 0.165 0.150 0.182 0.200 0.207 0.216 0.227 0.192  14.44
58)  Methyl methacryla 0.186 0.165 0.185 0.208 0.213 0.199 0.206 0.195   8.73
59)  1,4-Dioxane       0.007 0.005 0.006 0.006 0.006 0.005 0.005 0.006  12.93
60)  2-Chloroethyl vin 0.188 0.142 0.159 0.149 0.152 0.154 0.156 0.157   9.32
61)  cis-1,3-Dichlorop 0.207 0.198 0.240 0.268 0.276 0.288 0.297 0.253  15.39
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 0.24688 *A + 0.02670 *A^2


62) I   Chlorobenzene-d5      ----------------ISTD--------------------
63)S Toluene-d8        1.360 1.362 1.370 1.347 1.347 1.339 1.362 1.355   0.80
64)C Toluene           1.487 1.150 1.254 1.233 1.192 1.185 1.220 1.246   8.98
65)  2-Nitropropane    0.060 0.052 0.071 0.085 0.091 0.096 0.099 0.079  23.29
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9978
              Response Ratio = 0.00000 + 0.07634 *A + 0.00247 *A^2

66)  4-Methyl-2-pentan 0.420 0.435 0.478 0.463 0.451 0.434 0.425 0.444   4.77
67)  trans-1,3-Dichlor 0.249 0.251 0.325 0.346 0.351 0.361 0.370 0.322  15.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 0.32252 *A + 0.02523 *A^2

68)  Tetrachloroethene 0.301 0.263 0.286 0.280 0.277 0.275 0.285 0.281   4.11
69)  Ethyl methacrylat 0.322 0.332 0.401 0.432 0.441 0.423 0.428 0.397  12.43
70)  1,1,2-Trichloroet 0.222 0.190 0.213 0.215 0.207 0.207 0.209 0.209   4.74
71)  Dibromochlorometh 0.140 0.148 0.193 0.216 0.221 0.237 0.247 0.200  20.92
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
```

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICC3589
Lab FileID: 2P93398.D

```
                Response Ratio = 0.00000 + 0.19434 *A + 0.02764 *A^2

 72)  1,3-Dichloropropa 0.487 0.413 0.470 0.468 0.458 0.450 0.453 0.457   5.01
 73)  1,2-Dibromoethane 0.247 0.228 0.258 0.260 0.259 0.261 0.265 0.254   5.01
 74)  3,3-dimethyl-1-bu 0.121 0.093 0.105 0.099 0.100 0.095 0.092 0.101  10.00
 75)  2-hexanone        0.556 0.509 0.561 0.521 0.501 0.460 0.426 0.505   9.72
 76)  1-Chlorohexane    0.467 0.346 0.406 0.386 0.371 0.393 0.383 0.393   9.57
 77)C Ethylbenzene      1.451 1.216 1.388 1.357 1.322 1.302 1.342 1.340   5.44
 78)P Chlorobenzene     0.814 0.687 0.767 0.753 0.729 0.723 0.743 0.745   5.31
 79)  1,1,1,2-Tetrachlo 0.195 0.189 0.223 0.235 0.239 0.239 0.247 0.224  10.28
 80)  m,p-Xylene        1.105 0.950 1.054 1.067 1.044 1.040 1.066 1.047   4.57
 81)  o-Xylene          1.048 0.922 1.050 1.049 1.043 1.034 1.070 1.031   4.75
 82)  Styrene           0.631 0.643 0.773 0.830 0.827 0.832 0.852 0.770  12.22
 83)P Bromoform         0.076 0.075 0.094 0.112 0.121 0.135 0.142 0.108  25.06
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
                Response Ratio = 0.00000 + 0.09818 *A + 0.02339 *A^2

 84)  Isopropylbenzene  1.170 1.041 1.193 1.254 1.237 1.241 1.274 1.202   6.60

 85) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 86)S 4-Bromofluorobenz 0.761 0.767 0.758 0.755 0.762 0.782 0.795 0.769   1.90
 87)  cis-1,4-Dichloro- 0.217 0.204 0.213 0.246 0.255 0.260 0.270 0.238  11.01
 88)  n-Propylbenzene   2.959 2.733 3.069 3.112 3.074 3.168 3.280 3.056   5.67
 89)  Bromobenzene      0.716 0.600 0.645 0.645 0.628 0.648 0.663 0.649   5.47
 90)P 1,1,2,2-Tetrachlo 0.881 0.762 0.845 0.855 0.841 0.841 0.842 0.838   4.37
 91)  1,3,5-Trimethylbe 2.046 1.894 2.142 2.205 2.172 2.222 2.281 2.138   6.07
 92)  2-Chlorotoluene   1.950 1.698 1.847 1.861 1.843 1.874 1.923 1.857   4.34
 93)  trans-1,4-Dichlor 0.273 0.238 0.287 0.305 0.293 0.295 0.303 0.285   8.12
 94)  1,2,3-Trichloropr 0.381 0.290 0.309 0.318 0.310 0.305 0.310 0.317   9.17
 95)  Cyclohexanone     0.062 0.060 0.063 0.068 0.067 0.063 0.065 0.064   4.48
 96)  4-Chlorotoluene   2.005 1.725 1.944 1.949 1.919 1.939 2.004 1.926   4.91
 97)  tert-Butylbenzene 1.184 1.018 1.138 1.185 1.171 1.206 1.241 1.163   6.14
 98)  a-Methyl styrene                                                0.000  -1.00
 99)  1,2,4-Trimethylbe 1.851 1.798 2.059 2.126 2.099 2.166 2.205 2.043   7.70
100)  Pentachloroethane 0.163 0.183 0.232 0.253 0.277 0.286 0.290 0.241  21.06
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
                Response Ratio = 0.00000 + 0.23973 *A + 0.02807 *A^2

101)  sec-Butylbenzene  2.346 2.019 2.282 2.386 2.368 2.470 2.515 2.341   6.91
102)  4-Isopropyltoluen 1.822 1.709 1.983 2.104 2.103 2.171 2.249 2.020   9.61
103)  1,3-Dichlorobenze 1.189 1.050 1.156 1.165 1.148 1.157 1.181 1.150   4.02
104)  1,2,3-Trimethylbe 2.139 1.833 2.090 2.113 2.091 2.141 2.180 2.084   5.51
105)  1,4-Dichlorobenze 1.446 1.137 1.219 1.209 1.173 1.186 1.205 1.225   8.28
106)  n-Butylbenzene    0.921 0.878 0.962 1.018 1.022 1.061 1.076 0.991   7.40
107)  Benzyl Chloride   0.091 0.112 0.151 0.214 0.243 0.288 0.314 0.202  42.77
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
                Response Ratio = 0.00000 + 0.16942 *A + 0.07611 *A^2

108)  1,2-Dichlorobenze 1.164 0.995 1.091 1.100 1.081 1.095 1.098 1.089   4.57
109)  1,2-Dibromo-3-Chl 0.139 0.125 0.156 0.179 0.189 0.206 0.219 0.173  19.93
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
                Response Ratio = 0.00000 + 0.15908 *A + 0.03101 *A^2

110)  Hexachlorobutadie 0.215 0.178 0.207 0.212 0.214 0.222 0.227 0.211   7.48
111)  1,2,4-Trichlorobe 0.599 0.507 0.559 0.590 0.592 0.626 0.642 0.588   7.57
112)  Naphthalene       1.900 1.779 2.138 2.343 2.387 2.506 2.596 2.236  13.76
113)  1,2,3-Trichlorobe 0.629 0.476 0.546 0.562 0.561 0.580 0.603 0.565   8.58
 ------------------------------------------------------------------------------
 (#) = Out of Range
```

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICC3589
Lab FileID: 2P93398.D

V2P_2022-09-26.M Tue Sep 27 10:59:24 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93406.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-09-26\2P93406.D Vial: 60
Acq On : 26 Sep 2022 4:48 pm Operator: courtnef
Sample : ICV3589-5 Inst : MSVOA13
Misc : MS52362,V2P3589,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 27 10:56:19 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	104	0.00	3.72
2	Dichlorodifluoromethane		----------NA----------				
3 P	Chloromethane	0.183	0.172	6.0	97	0.00	1.26
4	1,3-butadiene	0.158	0.165	-4.4	109	0.00	1.32
5 C	Vinyl Chloride	0.208	0.192	7.7	93	0.00	1.31
	----------	Amount	Calc.	%Drift	----------		
6	Bromomethane	40.000	35.358	11.6	96	0.00	1.51
	----------	AvgRF	CCRF	%Dev	----------		
7	Chloroethane	0.063	0.056	11.1	93	0.00	1.58
	----------	Amount	Calc.	%Drift	----------		
8	Trichlorofluoromethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether	0.184	0.153	16.8	89	0.00	1.89
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol	800.000	734.147	8.2	92	0.01	1.99
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha	0.206	0.187	9.2	99	0.00	1.98
12 C	1,1-Dichloroethene	0.241	0.231	4.1	99	0.00	1.98
13	Freon 113	0.161	0.140	13.0	92	0.00	2.01
14	Carbon Disulfide	0.362	0.304	16.0	84	0.00	2.00
	----------	Amount	Calc.	%Drift	----------		
15	Iodomethane	40.000	24.241	39.4#	61	0.00	2.07
16	Acrolein	200.000	180.473	9.8	95	0.00	2.16
17	Allyl chloride	40.000	47.380	-18.5	120	0.00	2.25
18	Methylene Chloride	40.000	36.424	8.9	95	0.00	2.31
	----------	AvgRF	CCRF	%Dev	----------		
19	Acetone	0.114	0.114	0.0	110	0.00	2.32
20	Methyl acetate	0.238	0.241	-1.3	109	0.00	2.40
21	trans-1,2-Dichloroethene	0.246	0.238	3.3	101	0.00	2.41
22	Hexane	0.130	0.129	0.8	99	0.00	2.47
23	Methyl Tert Butyl Ether	0.587	0.628	-7.0	110	0.00	2.48
24	Tert Butyl Alcohol	0.068	0.069	-1.5	104	0.00	2.52
	----------	Amount	Calc.	%Drift	----------		

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Sample: V2P3589-ICV3589
Lab FileID: 2P93406.D

25		Acetonitrile	400.000	356.767	10.8	95	0.00	2.56
			AvgRF	CCRF	%Dev			
26		Di-isopropyl ether	0.536	0.515	3.9	99	0.00	2.69
27		Chloroprene			NA			
28	P	1,1-Dichloroethane	0.326	0.326	0.0	104	0.00	2.73
29		Acrylonitrile	0.109	0.124	-13.8	116	0.00	2.73
30		ETBE	0.616	0.572	7.1	95	0.00	2.89
31		Vinyl acetate	0.375	0.383	-2.1	99	0.00	2.87
32		cis-1,2-Dichloroethene	0.196	0.193	1.5	104	0.00	3.02
33		2,2-Dichloropropane	0.243	0.239	1.6	96	0.00	3.09
34		Bromochloromethane	0.088	0.084	4.5	103	0.00	3.13
35		Cyclohexane	0.295	0.285	3.4	97	0.00	3.16
36	C	Chloroform	0.329	0.321	2.4	101	0.00	3.17
37		Ethyl acetate	0.296	0.304	-2.7	104	0.00	3.23
38		Tetrahydrofuran	0.125	0.115	8.0	102	0.00	3.26
39	S	Dibromofluoromethane	0.208	0.213	-2.4	105	0.00	3.27
40		Carbon Tetrachloride	0.198	0.196	1.0	103	0.00	3.27
41		1,1,1-Trichloroethane	0.273	0.276	-1.1	103	0.00	3.30
42		2-Butanone	0.190	0.190	0.0	106	0.00	3.32
43		1,1-Dichloropropene	0.248	0.235	5.2	98	0.00	3.37
44		tert-Butyl formate	0.143	0.119	16.8	84	0.00	3.41
45		Propionitrile	0.065	0.063	3.1	102	0.00	3.47
46		Methacrylonitrile	0.162	0.160	1.2	100	0.00	3.49
47		Benzene	0.800	0.758	5.3	101	0.00	3.50
48		TAME			NA			
49	S	1,2-Dichloroethane-d4	0.279	0.283	-1.4	103	0.00	3.56
50		Isobutyl alcohol	0.032	0.035	-9.4	106	0.00	3.60
51		1,2-Dichloroethane	0.275	0.254	7.6	99	0.00	3.59
52		Tert Amyl Alcohol	0.055	0.056	-1.8	102	0.00	3.65
53		Trichloroethene	0.203	0.195	3.9	103	0.00	3.83
54		Methylcyclohexane	0.276	0.273	1.1	100	0.00	3.85
55		Dibromomethane	0.112	0.108	3.6	101	0.00	4.05
56	C	1,2-Dichloropropane	0.196	0.185	5.6	99	0.00	4.11
57		Bromodichloromethane	0.192	0.209	-8.9	105	0.00	4.15
58		Methyl methacrylate	0.195	0.211	-8.2	103	0.00	4.24
59		1,4-Dioxane	0.006	0.006	0.0	111	0.00	4.26
60		2-Chloroethyl vinyl ether	0.157	0.155	1.3	105	0.00	4.48
			Amount	Calc.	%Drift			
61		cis-1,3-Dichloropropene	40.000	40.828	-2.1	103	0.00	4.52
			AvgRF	CCRF	%Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64
63	S	Toluene-d8	1.355	1.347	0.6	104	0.00	4.65
64	C	Toluene	1.246	1.182	5.1	104	0.00	4.68
			Amount	Calc.	%Drift			
65		2-Nitropropane	200.000	213.860	-6.9	106	0.00	4.78
			AvgRF	CCRF	%Dev			
66		4-Methyl-2-pentanone	0.444	0.435	2.0	101	0.00	4.89
			Amount	Calc.	%Drift			
67		trans-1,3-Dichloropropene	40.000	43.716	-9.3	112	0.00	4.92
			AvgRF	CCRF	%Dev			
68		Tetrachloroethene	0.281	0.270	3.9	102	0.00	4.94
69		Ethyl methacrylate	0.397	0.416	-4.8	99	0.00	5.03

Initial Calibration Verification

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Sample: V2P3589-ICV3589
Lab FileID: 2P93406.D

70		1,1,2-Trichloroethane	0.209	0.208	0.5	105	0.00	5.02
		----------	Amount	Calc.	%Drift	----------		
71		Dibromochloromethane	40.000	40.005	-0.0	102	0.00	5.14
		----------	AvgRF	CCRF	%Dev	----------		
72		1,3-Dichloropropane	0.457	0.422	7.7	96	0.00	5.20
73		1,2-Dibromoethane	0.254	0.254	0.0	102	0.00	5.30
74		3,3-dimethyl-1-butanol	0.101	0.095	5.9	99	0.00	5.42
75		2-hexanone	0.505	0.477	5.5	100	0.00	5.43
76		1-Chlorohexane	0.393	0.408	-3.8	115	0.00	5.65
77	C	Ethylbenzene	1.340	1.331	0.7	105	0.00	5.68
78	P	Chlorobenzene	0.745	0.734	1.5	105	0.00	5.66
79		1,1,1,2-Tetrachloroethane	0.224	0.236	-5.4	103	0.00	5.70
80		m,p-Xylene	1.047	1.031	1.5	103	0.00	5.78
81		o-Xylene	1.031	1.064	-3.2	107	0.00	6.08
82		Styrene	0.770	0.825	-7.1	104	0.00	6.11
		----------	Amount	Calc.	%Drift	----------		
83	P	Bromoform	40.000	42.358	-5.9	108	0.00	6.12
		----------	AvgRF	CCRF	%Dev	----------		
84		Isopropylbenzene	1.202	1.248	-3.8	105	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	7.34
86	S	4-Bromofluorobenzene	0.769	0.775	-0.8	105	0.00	6.50
87		cis-1,4-Dichloro-2-butene	0.238	0.239	-0.4	97	0.00	6.52
88		n-Propylbenzene	3.056	3.118	-2.0	105	0.00	6.61
89		Bromobenzene	0.649	0.611	5.9	101	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.838	0.832	0.7	102	0.00	6.63
91		1,3,5-Trimethylbenzene	2.138	2.133	0.2	102	0.00	6.75
92		2-Chlorotoluene	1.857	1.859	-0.1	104	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.285	0.278	2.5	98	0.00	6.76
94		1,2,3-Trichloropropane	0.317	0.289	8.8	96	0.00	6.72
95		Cyclohexanone	0.064	0.063	1.6	96	0.00	6.74
96		4-Chlorotoluene	1.926	1.952	-1.3	105	0.00	6.83
97		tert-Butylbenzene	1.163	1.176	-1.1	104	0.00	7.00
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.043	2.106	-3.1	104	0.00	7.05
		----------	Amount	Calc.	%Drift	----------		
100		Pentachloroethane	40.000	43.465	-8.7	107	0.00	7.00
		----------	AvgRF	CCRF	%Dev	----------		
101		sec-Butylbenzene	2.341	2.501	-6.8	109	0.00	7.13
102		4-Isopropyltoluene	2.020	2.226	-10.2	110	0.00	7.25
103		1,3-Dichlorobenzene	1.150	1.173	-2.0	106	0.00	7.28
104		1,2,3-Trimethylbenzene	2.084	2.190	-5.1	108	0.00	7.37
105		1,4-Dichlorobenzene	1.225	1.179	3.8	104	0.00	7.35
106		n-Butylbenzene	0.991	0.964	2.7	98	0.00	7.56
		----------	Amount	Calc.	%Drift	----------		
107		Benzyl Chloride	40.000	34.610	13.5	82	0.00	7.52
		----------	AvgRF	CCRF	%Dev	----------		
108		1,2-Dichlorobenzene	1.089	1.079	0.9	103	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
109		1,2-Dibromo-3-Chloropropa	40.000	39.656	0.9	100	0.00	8.20

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93406.D

		AvgRF	CCRF	%Dev			
110	Hexachlorobutadiene	0.211	0.203	3.8	98	0.00	8.68
111	1,2,4-Trichlorobenzene	0.588	0.591	-0.5	103	0.00	8.68
112	Naphthalene	2.236	2.441	-9.2	106	0.00	8.88
113	1,2,3-Trichlorobenzene	0.565	0.566	-0.2	104	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2P93398.D V2P_2022-09-26.M Tue Sep 27 10:57:38 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93408.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-09-26\2P93408.D Vial: 61
Acq On : 26 Sep 2022 5:20 pm Operator: courtnef
Sample : ICV3589-4 Inst : MSVOA13
Misc : MS52362,V2P3589,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 27 10:56:19 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	107	0.00	3.72
2	Dichlorodifluoromethane	0.190	0.186	2.1	101	0.00	1.13
3 P	Chloromethane		----------NA----------				
4	1,3-butadiene		----------NA----------				
5 C	Vinyl Chloride		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
6	Bromomethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
7	Chloroethane		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
8	Trichlorofluoromethane	25.000	28.236	-12.9	115	0.00	1.68
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha		----------NA----------				
12 C	1,1-Dichloroethene		----------NA----------				
13	Freon 113		----------NA----------				
14	Carbon Disulfide		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
15	Iodomethane		----------NA----------				
16	Acrolein		----------NA----------				
17	Allyl chloride		----------NA----------				
18	Methylene Chloride		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
19	Acetone		----------NA----------				
20	Methyl acetate		----------NA----------				
21	trans-1,2-Dichloroethene		----------NA----------				
22	Hexane		----------NA----------				
23	Methyl Tert Butyl Ether		----------NA----------				
24	Tert Butyl Alcohol		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93408.D

			AvgRF	CCRF	%Dev			
25		Acetonitrile		NA				
			AvgRF	CCRF	%Dev			
26		Di-isopropyl ether		NA				
27		Chloroprene	0.698	0.903	-29.4#	134	0.00	2.73
28	P	1,1-Dichloroethane		NA				
29		Acrylonitrile		NA				
30		ETBE		NA				
31		Vinyl acetate		NA				
32		cis-1,2-Dichloroethene		NA				
33		2,2-Dichloropropane		NA				
34		Bromochloromethane		NA				
35		Cyclohexane		NA				
36	C	Chloroform		NA				
37		Ethyl acetate		NA				
38		Tetrahydrofuran		NA				
39	S	Dibromofluoromethane	0.208	0.211	-1.4	107	0.00	3.27
40		Carbon Tetrachloride		NA				
41		1,1,1-Trichloroethane		NA				
42		2-Butanone		NA				
43		1,1-Dichloropropene		NA				
44		tert-Butyl formate		NA				
45		Propionitrile		NA				
46		Methacrylonitrile		NA				
47		Benzene		NA				
48		TAME	0.560	0.698	-24.6#	130	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.279	0.276	1.1	105	0.00	3.55
50		Isobutyl alcohol		NA				
51		1,2-Dichloroethane		NA				
52		Tert Amyl Alcohol		NA				
53		Trichloroethene		NA				
54		Methylcyclohexane		NA				
55		Dibromomethane		NA				
56	C	1,2-Dichloropropane		NA				
57		Bromodichloromethane		NA				
58		Methyl methacrylate		NA				
59		1,4-Dioxane		NA				
60		2-Chloroethyl vinyl ether		NA				
			Amount	Calc.	%Drift			
61		cis-1,3-Dichloropropene		NA				
			AvgRF	CCRF	%Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	5.65
63	S	Toluene-d8	1.355	1.360	-0.4	108	0.00	4.65
64	C	Toluene		NA				
			Amount	Calc.	%Drift			
65		2-Nitropropane		NA				
			AvgRF	CCRF	%Dev			
66		4-Methyl-2-pentanone		NA				
			Amount	Calc.	%Drift			
67		trans-1,3-Dichloropropene		NA				
			AvgRF	CCRF	%Dev			
68		Tetrachloroethene		NA				
69		Ethyl methacrylate		NA				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93408.D

70		1,1,2-Trichloroethane		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
71		Dibromochloromethane		----------NA----------				
		---------- AvgRF	CCRF	%Dev	----------			
72		1,3-Dichloropropane		----------NA----------				
73		1,2-Dibromoethane		----------NA----------				
74		3,3-dimethyl-1-butanol		----------NA----------				
75		2-hexanone		----------NA----------				
76		1-Chlorohexane		----------NA----------				
77	C	Ethylbenzene		----------NA----------				
78	P	Chlorobenzene		----------NA----------				
79		1,1,1,2-Tetrachloroethane		----------NA----------				
80		m,p-Xylene		----------NA----------				
81		o-Xylene		----------NA----------				
82		Styrene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
83	P	Bromoform		----------NA----------				
		---------- AvgRF	CCRF	%Dev	----------			
84		Isopropylbenzene		----------NA----------				
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	7.33
86	S	4-Bromofluorobenzene	0.769	0.772	-0.4	108	0.00	6.50
87		cis-1,4-Dichloro-2-butene		----------NA----------				
88		n-Propylbenzene		----------NA----------				
89		Bromobenzene		----------NA----------				
90	P	1,1,2,2-Tetrachloroethane		----------NA----------				
91		1,3,5-Trimethylbenzene		----------NA----------				
92		2-Chlorotoluene		----------NA----------				
93		trans-1,4-Dichloro-2-Bute		----------NA----------				
94		1,2,3-Trichloropropane		----------NA----------				
95		Cyclohexanone		----------NA----------				
96		4-Chlorotoluene		----------NA----------				
97		tert-Butylbenzene		----------NA----------				
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
100		Pentachloroethane		----------NA----------				
		---------- AvgRF	CCRF	%Dev	----------			
101		sec-Butylbenzene		----------NA----------				
102		4-Isopropyltoluene		----------NA----------				
103		1,3-Dichlorobenzene		----------NA----------				
104		1,2,3-Trimethylbenzene		----------NA----------				
105		1,4-Dichlorobenzene		----------NA----------				
106		n-Butylbenzene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
107		Benzyl Chloride		----------NA----------				
		---------- AvgRF	CCRF	%Dev	----------			
108		1,2-Dichlorobenzene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
109		1,2-Dibromo-3-Chloropropa		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3589-ICV3589
Lab FileID: 2P93408.D

		AvgRF	CCRF	%Dev
110	Hexachlorobutadiene			NA
111	1,2,4-Trichlorobenzene			NA
112	Naphthalene			NA
113	1,2,3-Trichlorobenzene			NA

(#) = Out of Range SPCC's out = 4 CCC's out = 6
2P93396.D V2P_2022-09-26.M Tue Sep 27 10:59:12 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-CC3589
Lab FileID: 2P93412.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-09-27\2P93412.D Vial: 52
Acq On : 27 Sep 2022 10:53 am Operator: courtnef
Sample : CC3589-5 Inst : MSVOA13
Misc : MS52362,V2P3590,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 27 10:56:19 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	102	0.00	3.72
2	Dichlorodifluoromethane	0.190	0.214	-12.6	111	0.00	1.12
3 P	Chloromethane	0.183	0.190	-3.8	105	0.00	1.25
4	1,3-butadiene	0.158	0.150	5.1	98	0.00	1.32
5 C	Vinyl Chloride	0.208	0.220	-5.8	105	0.00	1.30
		Amount	Calc.	%Drift			
6	Bromomethane	40.000	45.891	-14.7	120	0.00	1.51
		AvgRF	CCRF	%Dev			
7	Chloroethane	0.063	0.060	4.8	99	0.00	1.58
		Amount	Calc.	%Drift			
8	Trichlorofluoromethane	40.000	-50.000	225.0#	107	0.00	1.67
		AvgRF	CCRF	%Dev			
9	Ethyl Ether	0.184	0.173	6.0	99	0.00	1.88
		Amount	Calc.	%Drift			
10	Ethanol	800.000	762.170	4.7	94	0.00	1.97
		AvgRF	CCRF	%Dev			
11	1,2-Dichlorotrifluoroetha	0.206	0.202	1.9	105	0.00	1.98
12 C	1,1-Dichloroethene	0.241	0.245	-1.7	103	0.00	1.98
13	Freon 113	0.161	0.163	-1.2	106	0.00	2.01
14	Carbon Disulfide	0.362	0.393	-8.6	107	0.00	2.00
		Amount	Calc.	%Drift			
15	Iodomethane	40.000	33.187	17.0	83	0.00	2.06
16	Acrolein	200.000	201.460	-0.7	104	0.00	2.15
17	Allyl chloride	40.000	39.913	0.2	100	0.00	2.25
18	Methylene Chloride	40.000	36.683	8.3	94	0.00	2.30
		AvgRF	CCRF	%Dev			
19	Acetone	0.114	0.108	5.3	104	0.00	2.32
20	Methyl acetate	0.238	0.229	3.8	102	0.00	2.39
21	trans-1,2-Dichloroethene	0.246	0.245	0.4	103	0.00	2.40
22	Hexane	0.130	0.132	-1.5	100	0.00	2.47
23	Methyl Tert Butyl Ether	0.587	0.591	-0.7	102	0.00	2.47
24	Tert Butyl Alcohol	0.068	0.068	0.0	102	0.00	2.51
		Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-CC3589
Lab FileID: 2P93412.D

25		Acetonitrile	400.000	380.656	4.8	99	0.00	2.55
			AvgRF	CCRF	%Dev			
26		Di-isopropyl ether	0.536	0.528	1.5	101	0.00	2.69
27		Chloroprene	0.698	0.705	-1.0	102	0.00	2.73
28	P	1,1-Dichloroethane	0.326	0.327	-0.3	103	0.00	2.73
29		Acrylonitrile	0.109	0.110	-0.9	102	0.00	2.73
30		ETBE	0.616	0.616	0.0	101	0.00	2.88
31		Vinyl acetate	0.375	0.397	-5.9	101	0.00	2.86
32		cis-1,2-Dichloroethene	0.196	0.199	-1.5	106	0.00	3.02
33		2,2-Dichloropropane	0.243	0.267	-9.9	106	0.00	3.08
34		Bromochloromethane	0.088	0.084	4.5	102	0.00	3.13
35		Cyclohexane	0.295	0.302	-2.4	101	0.00	3.16
36	C	Chloroform	0.329	0.335	-1.8	104	0.00	3.17
37		Ethyl acetate	0.296	0.299	-1.0	101	0.00	3.23
38		Tetrahydrofuran	0.125	0.120	4.0	105	0.00	3.26
39	S	Dibromofluoromethane	0.208	0.213	-2.4	104	0.00	3.26
40		Carbon Tetrachloride	0.198	0.209	-5.6	109	0.00	3.27
41		1,1,1-Trichloroethane	0.273	0.288	-5.5	106	0.00	3.29
42		2-Butanone	0.190	0.186	2.1	103	0.00	3.31
43		1,1-Dichloropropene	0.248	0.253	-2.0	104	0.00	3.37
44		tert-Butyl formate	0.143	0.148	-3.5	103	0.00	3.41
45		Propionitrile	0.065	0.063	3.1	100	0.00	3.46
46		Methacrylonitrile	0.162	0.159	1.9	99	0.00	3.48
47		Benzene	0.800	0.795	0.6	104	0.00	3.49
48		TAME	0.560	0.566	-1.1	101	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.279	0.282	-1.1	101	0.00	3.55
50		Isobutyl alcohol	0.032	0.032	0.0	97	0.00	3.59
51		1,2-Dichloroethane	0.275	0.263	4.4	101	0.00	3.59
52		Tert Amyl Alcohol	0.055	0.057	-3.6	103	0.00	3.65
53		Trichloroethene	0.203	0.199	2.0	104	0.00	3.83
54		Methylcyclohexane	0.276	0.285	-3.3	103	0.00	3.85
55		Dibromomethane	0.112	0.112	0.0	104	0.00	4.05
56	C	1,2-Dichloropropane	0.196	0.196	0.0	103	0.00	4.11
57		Bromodichloromethane	0.192	0.213	-10.9	105	0.00	4.15
58		Methyl methacrylate	0.195	0.203	-4.1	98	0.00	4.23
59		1,4-Dioxane	0.006	0.006	0.0	102	0.00	4.26
60		2-Chloroethyl vinyl ether	0.157	0.151	3.8	101	0.00	4.48
			Amount	Calc.	%Drift			
61		cis-1,3-Dichloropropene	40.000	41.924	-4.8	105	0.00	4.52
			AvgRF	CCRF	%Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64
63	S	Toluene-d8	1.355	1.334	1.5	103	0.00	4.65
64	C	Toluene	1.246	1.191	4.4	104	0.00	4.68
			Amount	Calc.	%Drift			
65		2-Nitropropane	200.000	219.601	-9.8	109	0.00	4.78
			AvgRF	CCRF	%Dev			
66		4-Methyl-2-pentanone	0.444	0.446	-0.5	103	0.00	4.89
			Amount	Calc.	%Drift			
67		trans-1,3-Dichloropropene	40.000	41.056	-2.6	104	0.00	4.92
			AvgRF	CCRF	%Dev			
68		Tetrachloroethene	0.281	0.270	3.9	101	0.00	4.93
69		Ethyl methacrylate	0.397	0.425	-7.1	100	0.00	5.03

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-CC3589
Lab FileID: 2P93412.D

70		1,1,2-Trichloroethane	0.209	0.205	1.9	103	0.00	5.02
		----------	Amount	Calc.	%Drift	----------		
71		Dibromochloromethane	40.000	42.207	-5.5	108	0.00	5.14
		----------	AvgRF	CCRF	%Dev	----------		
72		1,3-Dichloropropane	0.457	0.454	0.7	103	0.00	5.20
73		1,2-Dibromoethane	0.254	0.260	-2.4	104	0.00	5.30
74		3,3-dimethyl-1-butanol	0.101	0.097	4.0	101	0.00	5.42
75		2-hexanone	0.505	0.485	4.0	101	0.00	5.43
76		1-Chlorohexane	0.393	0.393	0.0	110	0.00	5.65
77	C	Ethylbenzene	1.340	1.320	1.5	104	0.00	5.68
78	P	Chlorobenzene	0.745	0.732	1.7	104	0.00	5.66
79		1,1,1,2-Tetrachloroethane	0.224	0.240	-7.1	105	0.00	5.70
80		m,p-Xylene	1.047	1.043	0.4	104	0.00	5.78
81		o-Xylene	1.031	1.040	-0.9	104	0.00	6.08
82		Styrene	0.770	0.833	-8.2	105	0.00	6.11
		----------	Amount	Calc.	%Drift	----------		
83	P	Bromoform	40.000	41.935	-4.8	106	0.00	6.12
		----------	AvgRF	CCRF	%Dev	----------		
84		Isopropylbenzene	1.202	1.232	-2.5	103	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	7.33
86	S	4-Bromofluorobenzene	0.769	0.783	-1.8	103	0.00	6.50
87		cis-1,4-Dichloro-2-butene	0.238	0.260	-9.2	103	0.00	6.53
88		n-Propylbenzene	3.056	3.166	-3.6	104	0.00	6.61
89		Bromobenzene	0.649	0.662	-2.0	106	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.838	0.838	0.0	100	0.00	6.63
91		1,3,5-Trimethylbenzene	2.138	2.221	-3.9	103	0.00	6.76
92		2-Chlorotoluene	1.857	1.877	-1.1	103	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.285	0.303	-6.3	104	0.00	6.76
94		1,2,3-Trichloropropane	0.317	0.316	0.3	102	0.00	6.72
95		Cyclohexanone	0.064	0.068	-6.3	102	0.00	6.74
96		4-Chlorotoluene	1.926	1.969	-2.2	103	0.00	6.83
97		tert-Butylbenzene	1.163	1.205	-3.6	104	0.00	6.99
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.043	2.157	-5.6	103	0.00	7.05
		----------	Amount	Calc.	%Drift	----------		
100		Pentachloroethane	40.000	43.327	-8.3	104	0.00	6.99
		----------	AvgRF	CCRF	%Dev	----------		
101		sec-Butylbenzene	2.341	2.445	-4.4	104	0.00	7.13
102		4-Isopropyltoluene	2.020	2.155	-6.7	103	0.00	7.25
103		1,3-Dichlorobenzene	1.150	1.172	-1.9	103	0.00	7.28
104		1,2,3-Trimethylbenzene	2.084	2.125	-2.0	102	0.00	7.37
105		1,4-Dichlorobenzene	1.225	1.204	1.7	103	0.00	7.34
106		n-Butylbenzene	0.991	1.049	-5.9	103	0.00	7.56
		----------	Amount	Calc.	%Drift	----------		
107		Benzyl Chloride	40.000	44.805	-12.0	110	0.00	7.52
		----------	AvgRF	CCRF	%Dev	----------		
108		1,2-Dichlorobenzene	1.089	1.084	0.5	101	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
109		1,2-Dibromo-3-Chloropropa	40.000	42.762	-6.9	106	0.00	8.20

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-CC3589
Lab FileID: 2P93412.D

		AvgRF	CCRF	%Dev			
110	Hexachlorobutadiene	0.211	0.221	-4.7	104	0.00	8.69
111	1,2,4-Trichlorobenzene	0.588	0.612	-4.1	104	0.00	8.68
112	Naphthalene	2.236	2.449	-9.5	103	0.00	8.88
113	1,2,3-Trichlorobenzene	0.565	0.562	0.5	101	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2P93398.D V2P_2022-09-26.M Tue Sep 27 11:19:21 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-ECC3589
Lab FileID: 2P93456.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\An...\V2P3590-91\2P93456.D Vial: 74
Acq On : 27 Sep 2022 10:43 pm Operator: courtnef
Sample : ECC3589-5 Inst : MSVOA13
Misc : MS52449,V2P3590,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\met...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Sep 27 10:56:19 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	98	0.00	3.72
2	Dichlorodifluoromethane	0.190	0.180	5.3	89	0.00	1.12
3 P	Chloromethane	0.183	0.184	-0.5	98	0.00	1.25
4	1,3-butadiene	0.158	0.172	-8.9	108	0.00	1.32
5 C	Vinyl Chloride	0.208	0.208	0.0	95	0.00	1.31
		True	Calc.	% Drift			
6	Bromomethane	40.000	35.636	10.9	92	0.00	1.51
		AvgRF	CCRF	% Dev			
7	Chloroethane	0.063	0.059	6.3	94	0.00	1.58
		True	Calc.	% Drift			
8	Trichlorofluoromethane	40.000	46.820	-17.1	94	0.00	1.67
		AvgRF	CCRF	% Dev			
9	Ethyl Ether	0.184	0.177	3.8	97	0.00	1.88
		True	Calc.	% Drift			
10	Ethanol	800.000	822.326	-2.8	96	0.00	1.97
		AvgRF	CCRF	% Dev			
11	1,2-Dichlorotrifluoroetha	0.206	0.197	4.4	98	0.00	1.98
12 C	1,1-Dichloroethene	0.241	0.239	0.8	97	0.00	1.98
13	Freon 113	0.161	0.156	3.1	97	0.00	2.01
14	Carbon Disulfide	0.362	0.367	-1.4	96	0.00	2.00
		True	Calc.	% Drift			
15	Iodomethane	40.000	39.012	2.5	93	0.00	2.06
16	Acrolein	200.000	181.436	9.3	90	0.00	2.16
17	Allyl chloride	40.000	39.424	1.4	95	0.00	2.25
18	Methylene Chloride	40.000	37.954	5.1	93	0.00	2.30
		AvgRF	CCRF	% Dev			
19	Acetone	0.114	0.113	0.9	104	0.00	2.32
20	Methyl acetate	0.238	0.247	-3.8	105	0.00	2.40
21	trans-1,2-Dichloroethene	0.246	0.246	0.0	99	0.00	2.40
22	Hexane	0.130	0.122	6.2	89	0.00	2.47
23	Methyl Tert Butyl Ether	0.587	0.586	0.2	97	0.00	2.47
24	Tert Butyl Alcohol	0.068	0.071	-4.4	101	0.00	2.51
		True	Calc.	% Drift			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-ECC3589
Lab FileID: 2P93456.D

25		Acetonitrile	400.000	394.079	1.5	98	0.00	2.56
		----------	AvgRF	CCRF	% Dev	----------		
26		Di-isopropyl ether	0.536	0.546	-1.9	100	0.00	2.69
27		Chloroprene	0.698	0.725	-3.9	100	0.00	2.73
28	P	1,1-Dichloroethane	0.326	0.329	-0.9	99	0.00	2.73
29		Acrylonitrile	0.109	0.112	-2.8	99	0.00	2.73
30		ETBE	0.616	0.625	-1.5	98	0.00	2.88
31		Vinyl acetate	0.375	0.345	8.0	84	0.00	2.86
32		cis-1,2-Dichloroethene	0.196	0.193	1.5	99	0.00	3.02
33		2,2-Dichloropropane	0.243	0.221	9.1	84	0.00	3.09
34		Bromochloromethane	0.088	0.084	4.5	97	0.00	3.13
35		Cyclohexane	0.295	0.297	-0.7	95	0.00	3.16
36	C	Chloroform	0.329	0.326	0.9	97	0.00	3.17
37		Ethyl acetate	0.296	0.304	-2.7	99	0.00	3.23
38		Tetrahydrofuran	0.125	0.124	0.8	103	0.00	3.26
39	S	Dibromofluoromethane	0.208	0.211	-1.4	99	0.00	3.27
40		Carbon Tetrachloride	0.198	0.198	0.0	99	0.00	3.27
41		1,1,1-Trichloroethane	0.273	0.281	-2.9	99	0.00	3.30
42		2-Butanone	0.190	0.192	-1.1	102	0.00	3.31
43		1,1-Dichloropropene	0.248	0.245	1.2	97	0.00	3.37
44		tert-Butyl formate	0.143	0.131	8.4	87	0.00	3.41
45		Propionitrile	0.065	0.064	1.5	98	0.00	3.46
46		Methacrylonitrile	0.162	0.164	-1.2	97	0.00	3.49
47		Benzene	0.800	0.784	2.0	99	0.00	3.50
48		TAME	0.560	0.566	-1.1	97	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.279	0.277	0.7	95	0.00	3.55
50		Isobutyl alcohol	0.032	0.033	-3.1	96	0.00	3.59
51		1,2-Dichloroethane	0.275	0.260	5.5	96	0.00	3.59
52		Tert Amyl Alcohol	0.055	0.058	-5.5	100	0.00	3.65
53		Trichloroethene	0.203	0.199	2.0	100	0.00	3.83
54		Methylcyclohexane	0.276	0.268	2.9	93	0.00	3.85
55		Dibromomethane	0.112	0.111	0.9	98	0.00	4.05
56	C	1,2-Dichloropropane	0.196	0.196	0.0	99	0.00	4.11
57		Bromodichloromethane	0.192	0.203	-5.7	96	0.00	4.14
58		Methyl methacrylate	0.195	0.204	-4.6	94	0.00	4.23
59		1,4-Dioxane	0.006	0.006	0.0	98	0.00	4.26
60		2-Chloroethyl vinyl ether	0.157	0.149	5.1	96	0.00	4.48
		----------	True	Calc.	% Drift	----------		
61		cis-1,3-Dichloropropene	40.000	40.315	-0.8	96	0.00	4.52
		----------	AvgRF	CCRF	% Dev	----------		
62	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00	5.65
63	S	Toluene-d8	1.355	1.359	-0.3	99	0.00	4.65
64	C	Toluene	1.246	1.183	5.1	98	0.00	4.68
		----------	True	Calc.	% Drift	----------		
65		2-Nitropropane	200.000	202.801	-1.4	95	0.00	4.78
		----------	AvgRF	CCRF	% Dev	----------		
66		4-Methyl-2-pentanone	0.444	0.460	-3.6	100	0.00	4.89
		----------	True	Calc.	% Drift	----------		
67		trans-1,3-Dichloropropene	40.000	39.249	1.9	94	0.00	4.92
		----------	AvgRF	CCRF	% Dev	----------		
68		Tetrachloroethene	0.281	0.355	-26.3	127	0.00	4.94
69		Ethyl methacrylate	0.397	0.423	-6.5	95	0.00	5.03

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-ECC3589
Lab FileID: 2P93456.D

70		1,1,2-Trichloroethane	0.209	0.207	1.0	98	0.00	5.02
		----------	True	Calc.	% Drift	----------		
71		Dibromochloromethane	40.000	39.905	0.2	96	0.00	5.14
		----------	AvgRF	CCRF	% Dev	----------		
72		1,3-Dichloropropane	0.457	0.450	1.5	97	0.00	5.20
73		1,2-Dibromoethane	0.254	0.255	-0.4	97	0.00	5.30
74		3,3-dimethyl-1-butanol	0.101	0.103	-2.0	101	0.00	5.42
75		2-hexanone	0.505	0.513	-1.6	101	0.00	5.43
76		1-Chlorohexane	0.393	0.338	14.0	90	0.00	5.65
77	C	Ethylbenzene	1.340	1.292	3.6	96	0.00	5.68
78	P	Chlorobenzene	0.745	0.721	3.2	97	0.00	5.66
79		1,1,1,2-Tetrachloroethane	0.224	0.232	-3.6	96	0.00	5.70
80		m,p-Xylene	1.047	1.031	1.5	97	0.00	5.78
81		o-Xylene	1.031	1.028	0.3	97	0.00	6.08
82		Styrene	0.770	0.787	-2.2	94	0.00	6.11
		----------	True	Calc.	% Drift	----------		
83	P	Bromoform	40.000	36.546	8.6	86	0.00	6.12
		----------	AvgRF	CCRF	% Dev	----------		
84		Isopropylbenzene	1.202	1.214	-1.0	97	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	7.33
86	S	4-Bromofluorobenzene	0.769	0.784	-2.0	98	0.00	6.50
87		cis-1,4-Dichloro-2-butene	0.238	0.186	21.8	69	0.00	6.53
88		n-Propylbenzene	3.056	3.096	-1.3	96	0.00	6.61
89		Bromobenzene	0.649	0.651	-0.3	99	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.838	0.830	1.0	94	0.00	6.63
91		1,3,5-Trimethylbenzene	2.138	2.179	-1.9	95	0.00	6.76
92		2-Chlorotoluene	1.857	1.879	-1.2	97	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.285	0.238	16.5	77	0.00	6.76
94		1,2,3-Trichloropropane	0.317	0.310	2.2	95	0.00	6.73
95		Cyclohexanone	0.064	0.070	-9.4	99	0.00	6.74
96		4-Chlorotoluene	1.926	1.943	-0.9	96	0.00	6.83
97		tert-Butylbenzene	1.163	1.165	-0.2	95	0.00	6.99
98		a-Methyl styrene	0.000	0.000	0.0	0#	0.00	7.14
99		1,2,4-Trimethylbenzene	2.043	2.130	-4.3	96	0.00	7.05
		----------	True	Calc.	% Drift	----------		
100		Pentachloroethane	40.000	21.503	46.2	47	0.00	6.99
		----------	AvgRF	CCRF	% Dev	----------		
101		sec-Butylbenzene	2.341	2.365	-1.0	95	0.00	7.14
102		4-Isopropyltoluene	2.020	2.085	-3.2	94	0.00	7.25
103		1,3-Dichlorobenzene	1.150	1.143	0.6	95	0.00	7.28
104		1,2,3-Trimethylbenzene	2.084	2.115	-1.5	96	0.00	7.38
105		1,4-Dichlorobenzene	1.225	1.179	3.8	96	0.00	7.34
106		n-Butylbenzene	0.991	0.990	0.1	92	0.00	7.56
		----------	True	Calc.	% Drift	----------		
107		Benzyl Chloride	40.000	32.284	19.3	69	0.00	7.52
		----------	AvgRF	CCRF	% Dev	----------		
108		1,2-Dichlorobenzene	1.089	1.086	0.3	95	0.00	7.65
		----------	True	Calc.	% Drift	----------		
109		1,2-Dibromo-3-Chloropropa	40.000	39.712	0.7	92	0.00	8.21

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3590-ECC3589
Lab FileID: 2P93456.D

		AvgRF	CCRF	% Dev			
110	Hexachlorobutadiene	0.211	0.203	3.8	90	0.00	8.69
111	1,2,4-Trichlorobenzene	0.588	0.575	2.2	92	0.00	8.68
112	Naphthalene	2.236	2.386	-6.7	95	0.00	8.89
113	1,2,3-Trichlorobenzene	0.565	0.562	0.5	95	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2P93398.D V2P_2022-09-26.M Tue Sep 27 23:37:07 2022

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3560	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3560-BFB	2P92263.D	08/24/22 09:49	n/a	BFB Tune
V2P3560-IC3560	2P92263.D	08/24/22 09:50	n/a	Initial cal 1
V2P3560-IC3560	2P92265.D	08/24/22 10:22	n/a	Initial cal 2
V2P3560-IC3560	2P92267.D	08/24/22 10:54	n/a	Initial cal 3
V2P3560-IC3560	2P92269.D	08/24/22 11:26	n/a	Initial cal 4
V2P3560-ICC3560	2P92271.D	08/24/22 11:59	n/a	Initial cal 5
V2P3560-IC3560	2P92273.D	08/24/22 12:31	n/a	Initial cal 6
V2P3560-IC3560	2P92275.D	08/24/22 13:04	n/a	Initial cal 7
V2P3560-ICV3560	2P92279.D	08/24/22 14:09	n/a	Initial cal verification 5
V2P3560-CC3560	2P92279A.D	08/24/22 14:09	n/a	Continuing cal 5
V2P3560-ICV3560	2P92281.D	08/24/22 14:41	n/a	Initial cal verification 4
V2P3560-BS	2P92281A.D	08/24/22 14:41	n/a	Blank Spike
V2P3560-MB	2P92285.D	08/24/22 15:44	n/a	Method Blank
ZZZZZZ	2P92289.D	08/24/22 16:49	n/a	(unrelated sample)
ZZZZZZ	2P92293.D	08/24/22 17:52	n/a	(unrelated sample)
ZZZZZZ	2P92299.D	08/24/22 19:28	n/a	(unrelated sample)
FA98254-9	2P92303.D	08/24/22 20:31	n/a	(used for QC only; not part of job FA98819)
ZZZZZZ	2P92305.D	08/24/22 21:03	n/a	(unrelated sample)
FA98254-9MS	2P92307.D	08/24/22 21:35	n/a	Matrix Spike
FA98254-9MSD	2P92309.D	08/24/22 22:07	n/a	Matrix Spike Duplicate
V2P3560-ECC3560	2P92311.D	08/24/22 22:38	n/a	Ending cal 5

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3586	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3586-BFB	2P93306.D	09/23/22 11:41	n/a	BFB Tune
V2P3586-CC3560	2P93306.D	09/23/22 11:41	n/a	Continuing cal 5
V2P3586-BS	2P93308.D	09/23/22 12:13	n/a	Blank Spike
V2P3586-MB	2P93312.D	09/23/22 13:18	n/a	Method Blank
ZZZZZZ	2P93314.D	09/23/22 13:51	n/a	(unrelated sample)
ZZZZZZ	2P93316.D	09/23/22 14:23	n/a	(unrelated sample)
ZZZZZZ	2P93318.D	09/23/22 14:56	n/a	(unrelated sample)
ZZZZZZ	2P93320.D	09/23/22 15:29	n/a	(unrelated sample)
ZZZZZZ	2P93322.D	09/23/22 16:02	n/a	(unrelated sample)
ZZZZZZ	2P93324.D	09/23/22 16:34	n/a	(unrelated sample)
ZZZZZZ	2P93326.D	09/23/22 17:07	n/a	(unrelated sample)
FA98918-5	2P93328.D	09/23/22 17:39	n/a	(used for QC only; not part of job FA98819)
ZZZZZZ	2P93332.D	09/23/22 18:44	n/a	(unrelated sample)
ZZZZZZ	2P93334.D	09/23/22 19:17	n/a	(unrelated sample)
ZZZZZZ	2P93336.D	09/23/22 19:49	n/a	(unrelated sample)
ZZZZZZ	2P93338.D	09/23/22 20:21	n/a	(unrelated sample)
FA98918-5MS	2P93346.D	09/23/22 22:29	n/a	Matrix Spike
FA98918-5MSD	2P93348.D	09/23/22 23:02	n/a	Matrix Spike Duplicate
V2P3586-ECC3560	2P93350.D	09/23/22 23:34	n/a	Ending cal 5

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3587	**Method:** EPA 624.1	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3587-BS	2P93308.D	09/23/22 12:13	n/a	Blank Spike
V2P3587-MB	2P93312.D	09/23/22 13:18	n/a	Method Blank
FA98819-1	2P93340.D	09/23/22 20:53	n/a	EFFLUENT
FA98819-1MS	2P93342.D	09/23/22 21:25	n/a	Matrix Spike
FA98819-1MSD	2P93344.D	09/23/22 21:57	n/a	Matrix Spike Duplicate

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3589	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3589-BFB	2P93390.D	09/26/22 12:30	n/a	BFB Tune
V2P3589-IC3589	2P93390.D	09/26/22 12:30	n/a	Initial cal 1
V2P3589-IC3589	2P93392.D	09/26/22 13:03	n/a	Initial cal 2
V2P3589-IC3589	2P93394.D	09/26/22 13:35	n/a	Initial cal 3
V2P3589-IC3589	2P93396.D	09/26/22 14:07	n/a	Initial cal 4
V2P3589-ICC3589	2P93398.D	09/26/22 14:39	n/a	Initial cal 5
V2P3589-IC3589	2P93400.D	09/26/22 15:11	n/a	Initial cal 6
V2P3589-IC3589	2P93402.D	09/26/22 15:43	n/a	Initial cal 7
V2P3589-ICV3589	2P93406.D	09/26/22 16:48	n/a	Initial cal verification 5
V2P3589-ICV3589	2P93408.D	09/26/22 17:20	n/a	Initial cal verification 4

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3590	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3590-BFB	2P93412.D	09/27/22 10:53	n/a	BFB Tune
V2P3590-CC3589	2P93412.D	09/27/22 10:53	n/a	Continuing cal 5
V2P3590-BS	2P93414.D	09/27/22 11:25	n/a	Blank Spike
V2P3590-MB	2P93418.D	09/27/22 12:30	n/a	Method Blank
ZZZZZZ	2P93420.D	09/27/22 13:03	n/a	(unrelated sample)
FA98968-3	2P93424.D	09/27/22 14:08	n/a	(used for QC only; not part of job FA98819)
ZZZZZZ	2P93426.D	09/27/22 14:40	n/a	(unrelated sample)
ZZZZZZ	2P93430.D	09/27/22 15:39	n/a	(unrelated sample)
ZZZZZZ	2P93432.D	09/27/22 16:14	n/a	(unrelated sample)
ZZZZZZ	2P93434.D	09/27/22 16:46	n/a	(unrelated sample)
ZZZZZZ	2P93436.D	09/27/22 17:19	n/a	(unrelated sample)
ZZZZZZ	2P93438.D	09/27/22 17:51	n/a	(unrelated sample)
ZZZZZZ	2P93440.D	09/27/22 18:24	n/a	(unrelated sample)
ZZZZZZ	2P93442.D	09/27/22 18:56	n/a	(unrelated sample)
ZZZZZZ	2P93444.D	09/27/22 19:29	n/a	(unrelated sample)
ZZZZZZ	2P93446.D	09/27/22 20:01	n/a	(unrelated sample)
ZZZZZZ	2P93448.D	09/27/22 20:34	n/a	(unrelated sample)
ZZZZZZ	2P93450.D	09/27/22 21:06	n/a	(unrelated sample)
FA98968-3MS	2P93452.D	09/27/22 21:38	n/a	Matrix Spike
FA98968-3MSD	2P93454.D	09/27/22 22:11	n/a	Matrix Spike Duplicate
V2P3590-ECC3589	2P93456.D	09/27/22 22:43	n/a	Ending cal 5

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3591	**Method:** EPA 624.1	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3591-BS	2P93414.D	09/27/22 11:25	n/a	Blank Spike
V2P3591-MB	2P93418.D	09/27/22 12:30	n/a	Method Blank
FA98819-1	2P93422.D	09/27/22 13:35	n/a	EFFLUENT

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93340.D
Acq On : 23 Sep 2022 8:53 pm
Operator : courtnef
Sample : FA98819-1, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 69 Sample Multiplier: 1

Quant Time: Sep 25 21:34:44 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

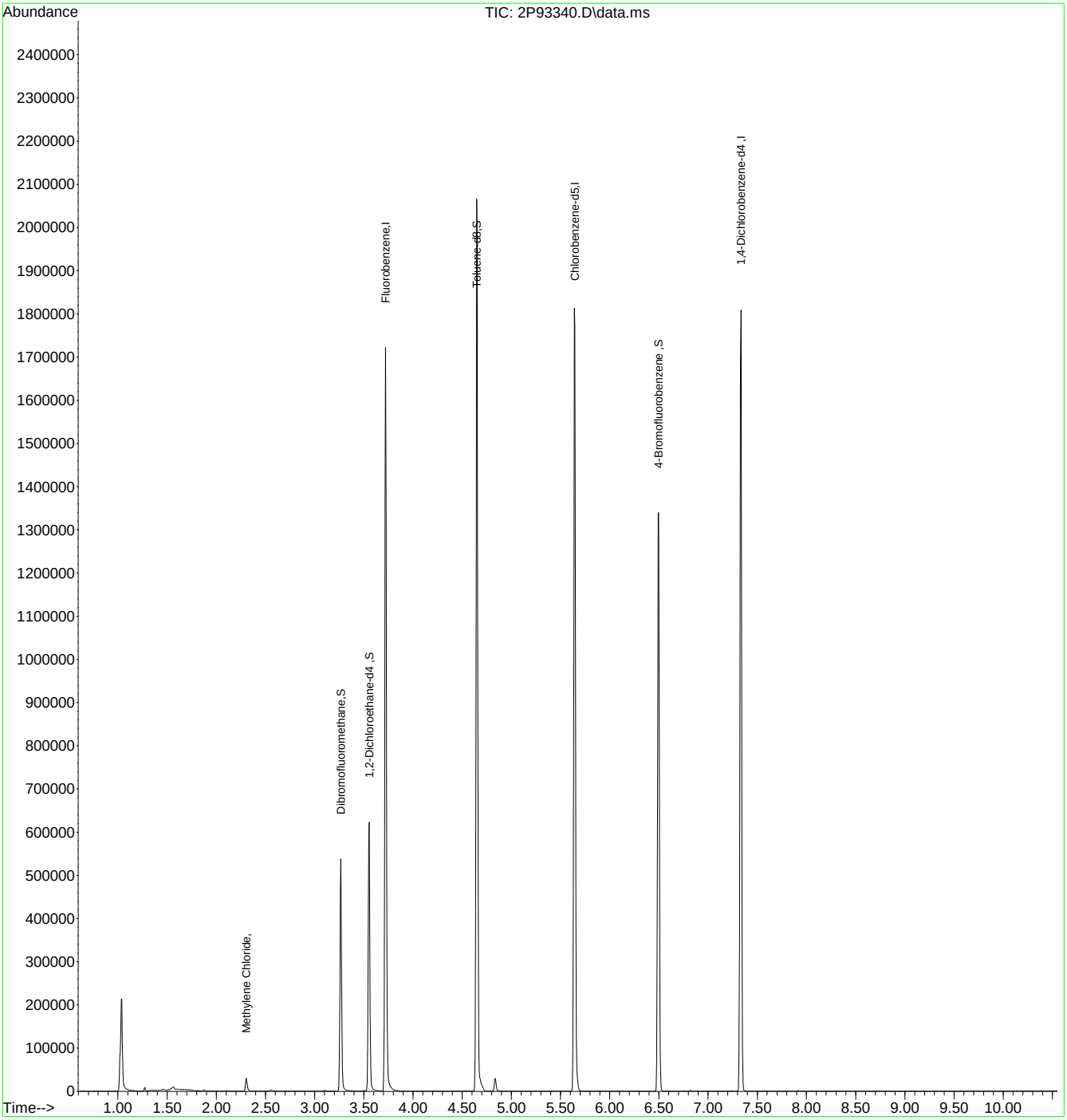
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	940684	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.646	117	721077	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	343342	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	191137	47.81	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.62%			
49) 1,2-Dichloroethane-d4	3.554	65	277305	49.94	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.88%			
63) Toluene-d8	4.647	98	935087	47.13	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 94.26%			
86) 4-Bromofluorobenzene	6.498	174	259003	48.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.72%			
Target Compounds						Qvalue
18) Methylene Chloride	2.305	49	10485	2.06	ug/L	92

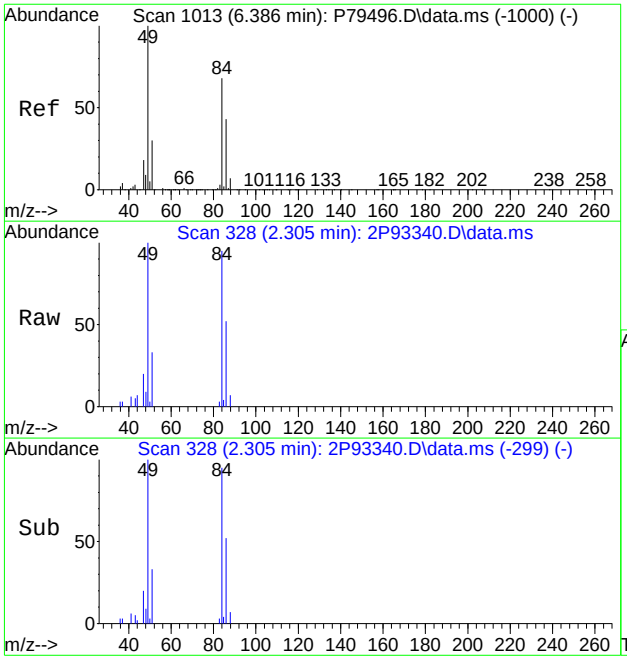
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93340.D
Acq On : 23 Sep 2022 8:53 pm
Operator : courtnef
Sample : FA98819-1, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 69 Sample Multiplier: 1

Quant Time: Sep 25 21:34:44 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

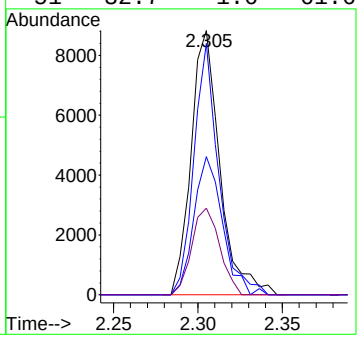




#18
Methylene Chloride
Concen: 2.06 ug/L
RT: 2.305 min Scan# 328
Delta R.T. 0.002 min
Lab File: 2P93340.D
Acq: 23 Sep 2022 8:53 pm

Tgt Ion: 49 Resp: 10485

Ion	Ratio	Lower	Upper
49	100		
84	95.1	52.0	112.0
86	52.2	23.9	83.9
51	32.7	1.6	61.6



Quantitation Report (QT Reviewed)

Data Path : C:\Users\Organics\Desktop\
Data File : 2P93422.D
Acq On : 27 Sep 2022 1:35 pm
Operator : courtnef
Sample : FA98819-1
Misc : MS52434,V2P3591,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 27 22:18:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

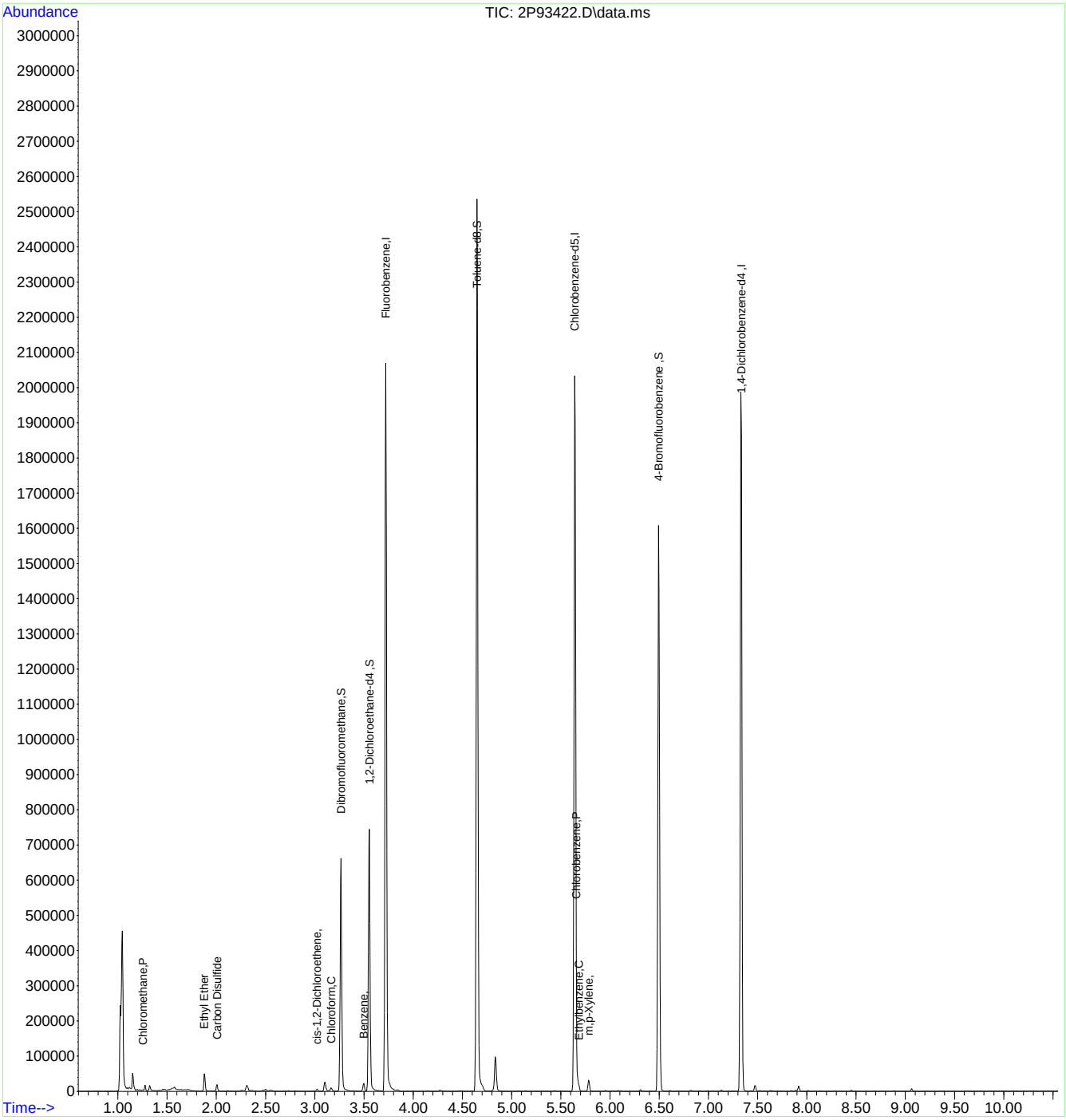
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1173795	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.641	117	816747	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.335	152	376733	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	237204	48.48	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.96%			
49) 1,2-Dichloroethane-d4	3.555	65	333109	50.80	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.60%			
63) Toluene-d8	4.648	98	1132291	51.15	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.30%			
86) 4-Bromofluorobenzene	6.493	174	294846	50.91	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.82%			
Target Compounds						Qvalue
3) Chloromethane	1.255	50	3218	0.75	ug/L	92
9) Ethyl Ether	1.877	59	17022	3.93	ug/L	97
14) Carbon Disulfide	2.007	76	14967	1.76	ug/L	97
32) cis-1,2-Dichloroethene	3.022	96	1866	0.40	ug/L	89
36) Chloroform	3.168	83	3150	0.41	ug/L	90
47) Benzene	3.497	78	10810	0.58	ug/L	69
77) Ethylbenzene	5.683	91	5585	0.26	ug/L	95
78) Chlorobenzene	5.657	112	6556	0.54	ug/L	94
80) m,p-Xylene	5.782	91	13487	0.79	ug/L	90

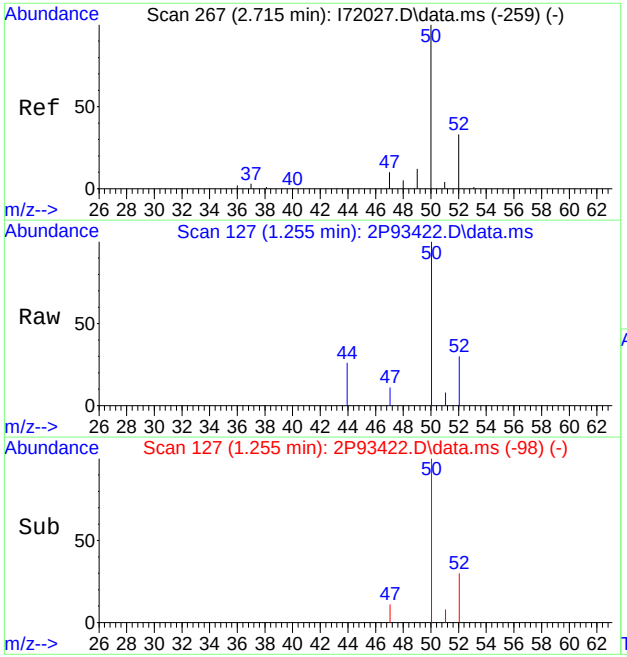
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\Users\Organics\Desktop\
Data File : 2P93422.D
Acq On : 27 Sep 2022 1:35 pm
Operator : courtnef
Sample : FA98819-1
Misc : MS52434,V2P3591,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 27 22:18:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

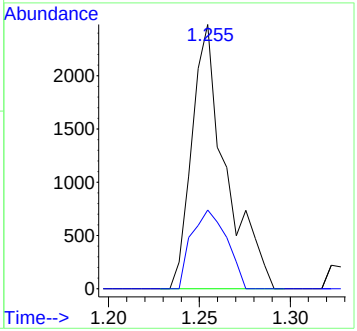


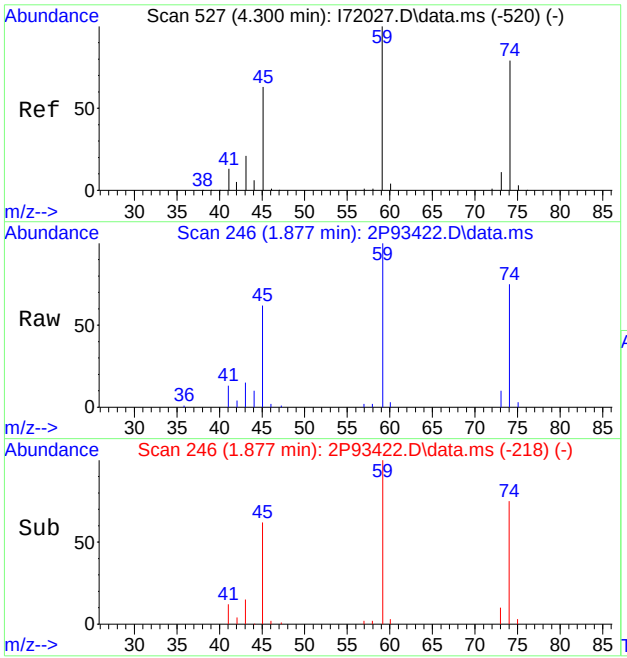


#3
Chloromethane
Concen: 0.75 ug/L
RT: 1.255 min Scan# 127
Delta R.T. 0.003 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 50 Resp: 3218

Ion	Ratio	Lower	Upper
50	100		
52	29.8	4.4	64.4

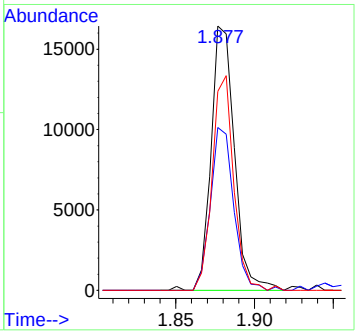




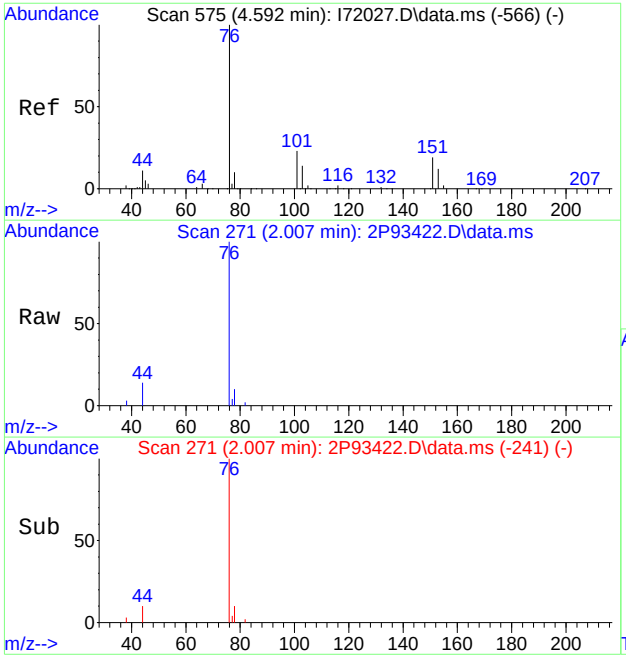
#9
Ethyl Ether
Concen: 3.93 ug/L
RT: 1.877 min Scan# 246
Delta R.T. -0.002 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 59 Resp: 17022

Ion	Ratio	Lower	Upper
59	100		
45	61.6	39.4	79.4
74	75.3	52.0	92.0



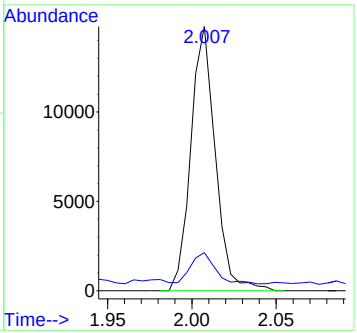
8.1.2
8

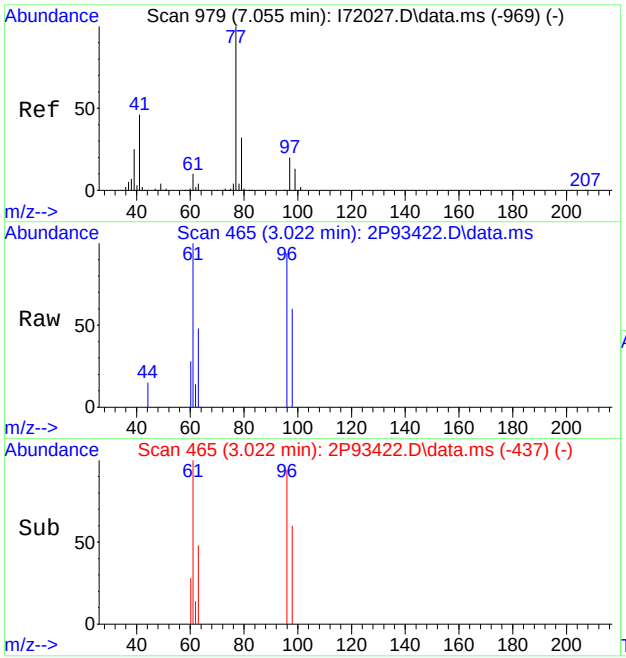


#14
Carbon Disulfide
Concen: 1.76 ug/L
RT: 2.007 min Scan# 271
Delta R.T. 0.008 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 76 Resp: 14967

Ion	Ratio	Lower	Upper
76	100		
44	11.3	0.0	42.7

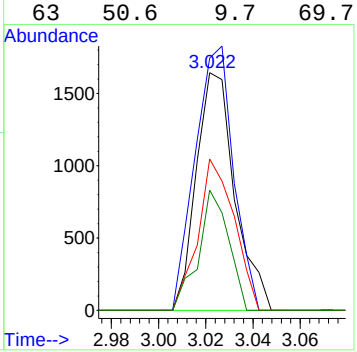


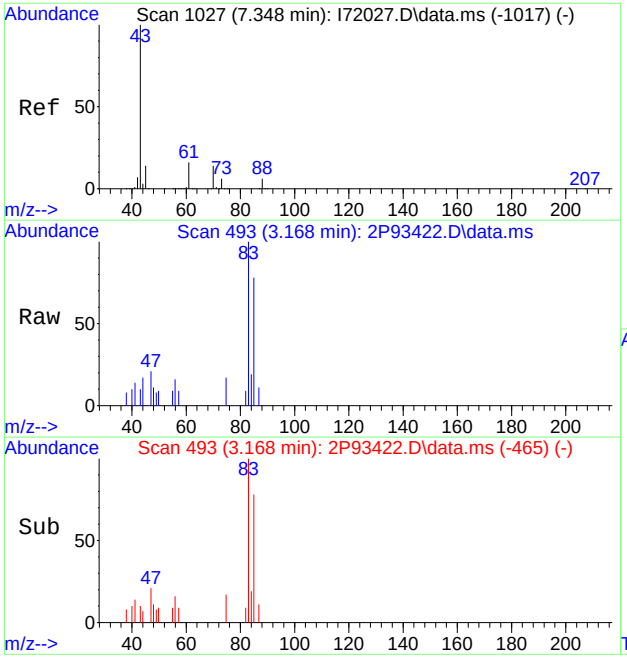


#32
cis-1,2-Dichloroethene
Concen: 0.40 ug/L
RT: 3.022 min Scan# 465
Delta R.T. -0.002 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 96 Resp: 1866

Ion	Ratio	Lower	Upper
96	100		
61	106.2	91.2	151.2
98	63.7	36.3	96.3
63	50.6	9.7	69.7

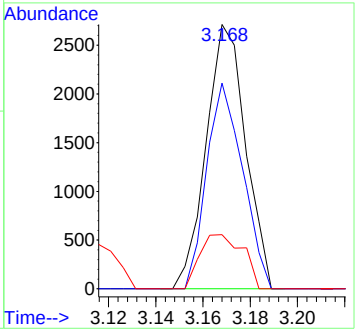


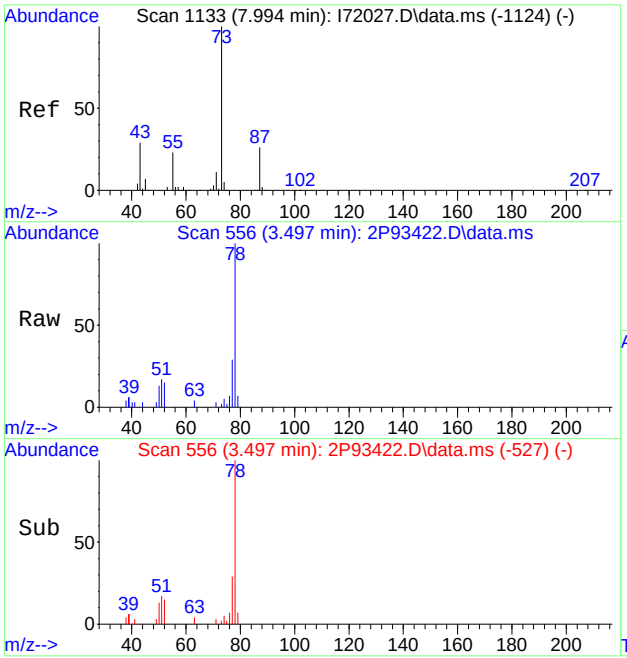


#36
Chloroform
Concen: 0.41 ug/L
RT: 3.168 min Scan# 493
Delta R.T. -0.002 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 83 Resp: 3150

Ion	Ratio	Lower	Upper
83	100		
85	77.8	37.6	97.6
47	20.5	0.0	49.8

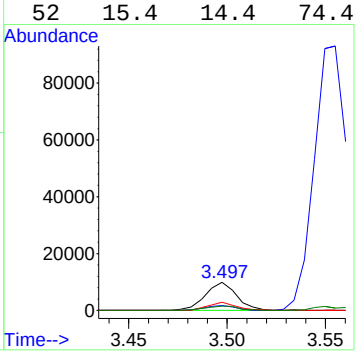


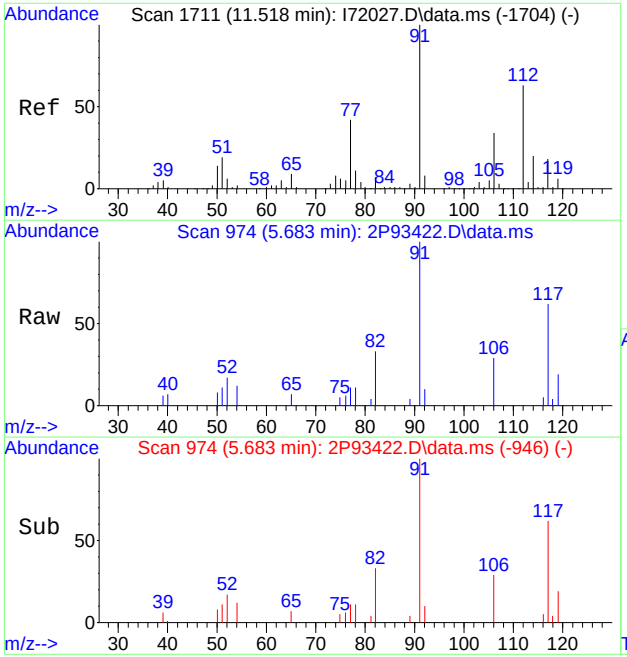


#47
Benzene
Concen: 0.58 ug/L
RT: 3.497 min Scan# 556
Delta R.T. 0.003 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 78 Resp: 10810

Ion	Ratio	Lower	Upper
78	100		
51	17.0	1.1	61.1
77	28.8	0.0	52.5
52	15.4	14.4	74.4

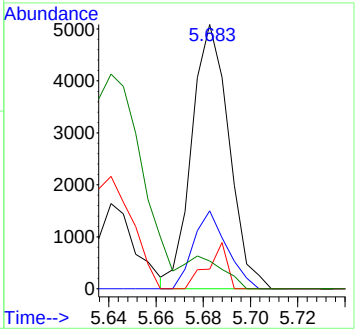


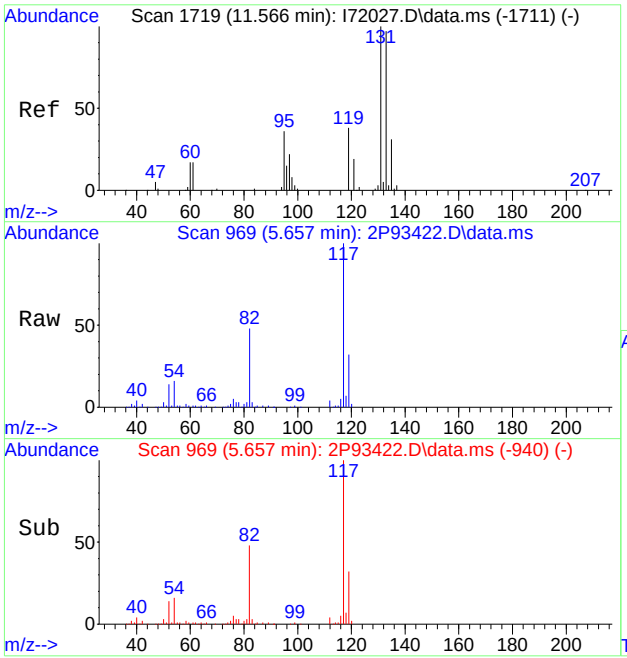


#77
Ethylbenzene
Concen: 0.26 ug/L
RT: 5.683 min Scan# 974
Delta R.T. -0.002 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 91 Resp: 5585

Ion	Ratio	Lower	Upper
91	100		
106	29.5	2.4	62.4
65	7.4	0.0	38.1
51	10.5	0.0	38.7

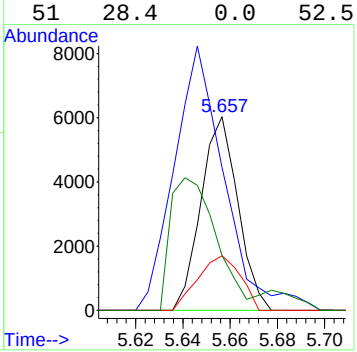


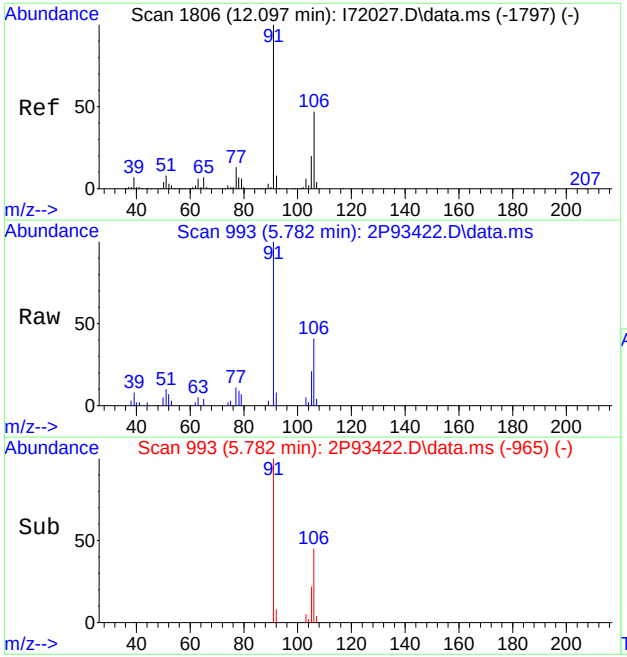


#78
Chlorobenzene
Concen: 0.54 ug/L
RT: 5.657 min Scan# 969
Delta R.T. 0.003 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion:112 Resp: 6556

Ion	Ratio	Lower	Upper
112	100		
77	64.9	32.8	92.8
114	28.3	3.4	63.4
51	28.4	0.0	52.5

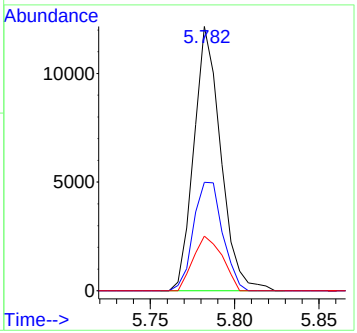




#80
m,p-Xylene
Concen: 0.79 ug/L
RT: 5.782 min Scan# 993
Delta R.T. -0.002 min
Lab File: 2P93422.D
Acq: 27 Sep 2022 1:35 pm

Tgt Ion: 91 Resp: 13487

Ion	Ratio	Lower	Upper
91	100		
106	41.1	19.5	79.5
105	20.7	0.0	52.3



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93312.D
Acq On : 23 Sep 2022 1:18 pm
Operator : courtnef
Sample : MB
Misc : MS52362,V2P3586,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 25 21:09:15 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.723	96	1057762	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.642	117	790682	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.330	152	375195	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.268	113	215164	47.86	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.72%			
49) 1,2-Dichloroethane-d4	3.556	65	305211	48.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 97.76%			
63) Toluene-d8	4.654	98	1043877	47.98	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.96%			
86) 4-Bromofluorobenzene	6.499	174	286377	48.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.88%			

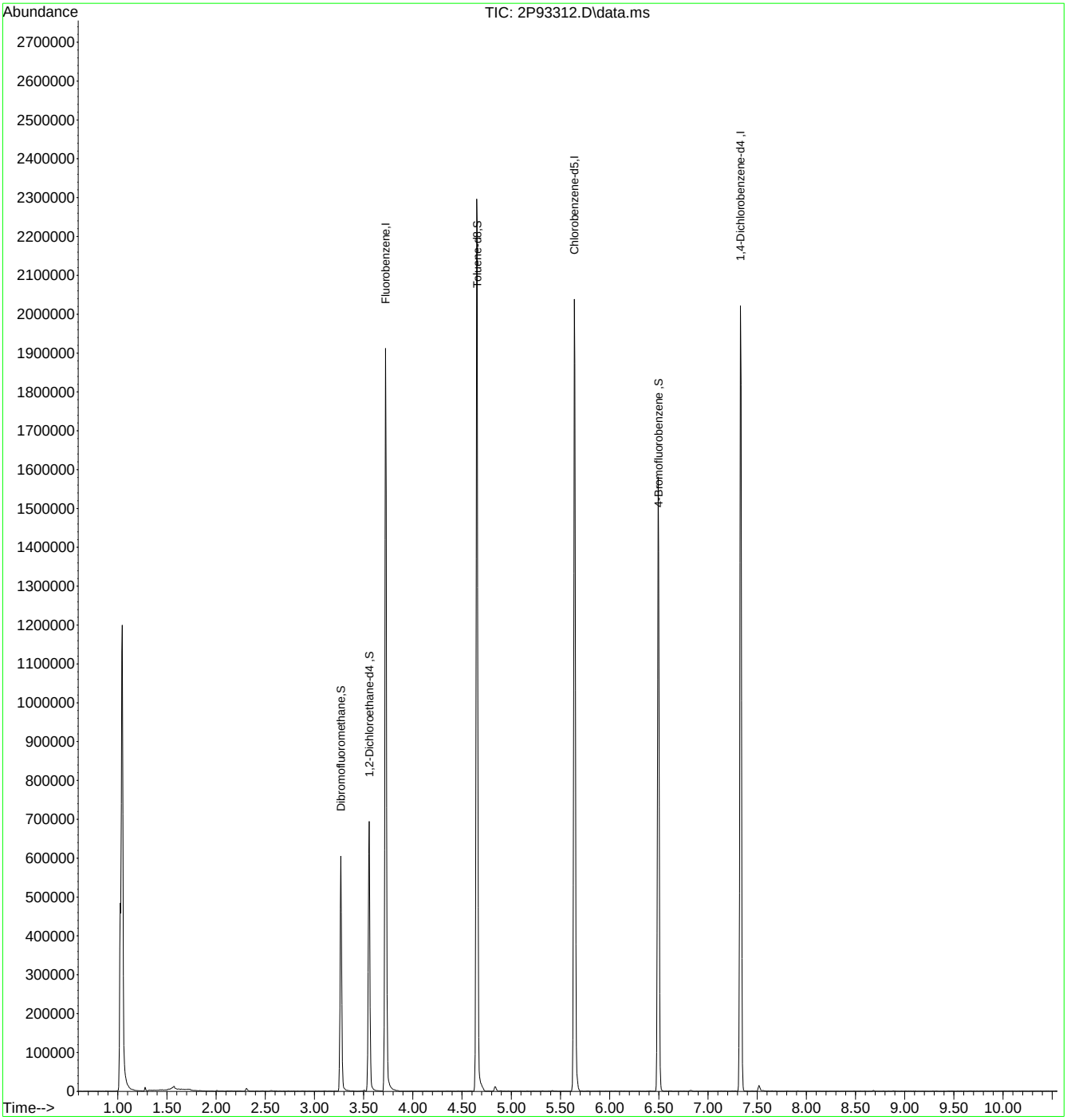
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93312.D
Acq On : 23 Sep 2022 1:18 pm
Operator : courtnef
Sample : MB
Misc : MS52362,V2P3586,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 25 21:09:15 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1142739	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	877581	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	421193	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	244584	50.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.72%			
49) 1,2-Dichloroethane-d4	3.554	65	323264	47.92	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 95.84%			
63) Toluene-d8	4.651	98	1140243	47.22	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 94.44%			
86) 4-Bromofluorobenzene	6.497	174	321183	48.89	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.128	85	84881	26.91	ug/L	98
3) Chloromethane	1.253	50	96065	27.56	ug/L	99
4) 1,3-butadiene	1.321	39	126740	39.13	ug/L	95
5) Vinyl Chloride	1.305	62	118328	27.86	ug/L	98
6) Bromomethane	1.509	94	62226	23.67	ug/L	97
7) Chloroethane	1.583	64	35239	25.20	ug/L	98
8) Trichlorofluoromethane	1.671	101	135272	29.35	ug/L	99
9) Ethyl Ether	1.881	59	101848	25.62	ug/L	98
10) Ethanol	1.964	45	68284	578.97	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.980	67	121401	32.64	ug/L	98
12) 1,1-Dichloroethene	1.985	61	159604	29.38	ug/L	99
13) Freon 113	2.016	101	105750	30.99	ug/L	96
14) Carbon Disulfide	2.006	76	219122	24.87	ug/L	100
15) Iodomethane	2.064	142	83882	35.47	ug/L	97
16) Acrolein	2.158	56	162807	111.97	ug/L	99
17) Allyl chloride	2.252	41	133250	34.11	ug/L	93
18) Methylene Chloride	2.304	49	136935	23.10	ug/L	98
19) Acetone	2.320	43	325791	123.83	ug/L	97
20) Methyl acetate	2.398	43	773005	145.38	ug/L	99
21) trans-1,2-Dichloroethene	2.403	61	158913	28.88	ug/L	98
22) Hexane	2.471	56	88482	32.77	ug/L	94
23) Methyl Tert Butyl Ether	2.471	73	360099	28.71	ug/L	97
24) Tert Butyl Alcohol	2.508	59	426436	274.91	ug/L	98
25) Acetonitrile	2.555	41	244511	277.89	ug/L	96
26) Di-isopropyl ether	2.686	45	331132	28.43	ug/L	99
27) Chloroprene	2.733	53	582133	35.09	ug/L	90
28) 1,1-Dichloroethane	2.733	63	216055	29.86	ug/L	99
29) Acrylonitrile	2.733	52	374675	142.85	ug/L	80
30) ETBE	2.884	59	369903	27.11	ug/L	98
31) Vinyl acetate	2.863	43	1135427	120.99	ug/L	99
32) cis-1,2-Dichloroethene	3.025	96	124458	28.84	ug/L	98
33) 2,2-Dichloropropane	3.088	77	151047	27.14	ug/L	99
34) Bromochloromethane	3.130	128	52447	26.88	ug/L	97
35) Cyclohexane	3.167	56	211668	31.36	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.172	83	206900	28.49	ug/L		98
37) Ethyl acetate	3.229	43	922065	129.90	ug/L		99
38) Tetrahydrofuran	3.261	42	74997	27.67	ug/L		94
40) Carbon Tetrachloride	3.271	117	133058m	29.88	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	182132	29.32	ug/L		98
42) 2-Butanone	3.318	43	542168	122.40	ug/L		99
43) 1,1-Dichloropropene	3.365	75	158252	29.04	ug/L		97
44) tert-Butyl formate	3.412	59	328938	110.69	ug/L		98
45) Propionitrile	3.459	54	411970	294.90	ug/L		98
46) Methacrylonitrile	3.486	41	1071060	287.02	ug/L		99
47) Benzene	3.496	78	493002	28.35	ug/L		91
48) TAME	3.569	73	360858	29.09	ug/L		98
50) Isobutyl alcohol	3.590	43	425335m	595.16	ug/L		
51) 1,2-Dichloroethane	3.590	62	166819	26.79	ug/L		98
52) Tert Amyl Alcohol	3.653	59	350095	268.29	ug/L		98
53) Trichloroethene	3.825	95	127016	28.37	ug/L		96
54) Methylcyclohexane	3.846	83	199080	33.33	ug/L		99
55) Dibromomethane	4.050	93	67661	27.51	ug/L		96
56) 1,2-Dichloropropane	4.113	63	115470	27.33	ug/L		97
57) Bromodichloromethane	4.149	83	124190	27.53	ug/L		99
58) Methyl methacrylate	4.238	41	132410	28.16	ug/L		96
59) 1,4-Dioxane	4.259	88	77309	582.22	ug/L		100
60) 2-Chloroethyl vinyl ether	4.479	63	450087	128.04	ug/L		98
61) cis-1,3-Dichloropropene	4.521	75	161170	27.47	ug/L		97
64) Toluene	4.683	91	539487	26.04	ug/L		99
65) 2-Nitropropane	4.777	41	183729	117.64	ug/L		98
66) 4-Methyl-2-pentanone	4.892	43	912580	114.18	ug/L		98
67) trans-1,3-Dichloropropene	4.918	75	162282	27.47	ug/L		86
68) Tetrachloroethene	4.939	166	133720	30.39	ug/L		99
69) Ethyl methacrylate	5.028	69	190279	26.23	ug/L		94
70) 1,1,2-Trichloroethane	5.017	83	94592	26.69	ug/L		94
71) Dibromochloromethane	5.143	129	89752	25.01	ug/L		96
72) 1,3-Dichloropropane	5.195	76	191328	24.28	ug/L		95
73) 1,2-Dibromoethane	5.294	107	111990	26.14	ug/L		98
74) 3,3-dimethyl-1-butanol	5.415	57	1953783	1098.32	ug/L		98
75) 2-hexanone	5.430	43	1020302	113.70	ug/L	#	78
76) 1-Chlorohexane	5.650	91	179076m	27.10	ug/L		
77) Ethylbenzene	5.681	91	602543	26.52	ug/L		98
78) Chlorobenzene	5.655	112	332177	26.77	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.697	131	101774	26.42	ug/L		97
80) m,p-Xylene	5.781	91	942603	52.46	ug/L		98
81) o-Xylene	6.079	91	489902	27.70	ug/L		99
82) Styrene	6.110	104	363082	26.84	ug/L		98
83) Bromoform	6.120	173	48271	25.07	ug/L		98
84) Isopropylbenzene	6.309	105	566379	27.76	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	51311	22.27	ug/L		93
88) n-Propylbenzene	6.612	91	665555	25.75	ug/L		97
89) Bromobenzene	6.570	156	127557	24.41	ug/L		97
90) 1,1,2,2-Tetrachloroethane	6.633	83	175397	25.16	ug/L		99
91) 1,3,5-Trimethylbenzene	6.758	105	453646	25.21	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

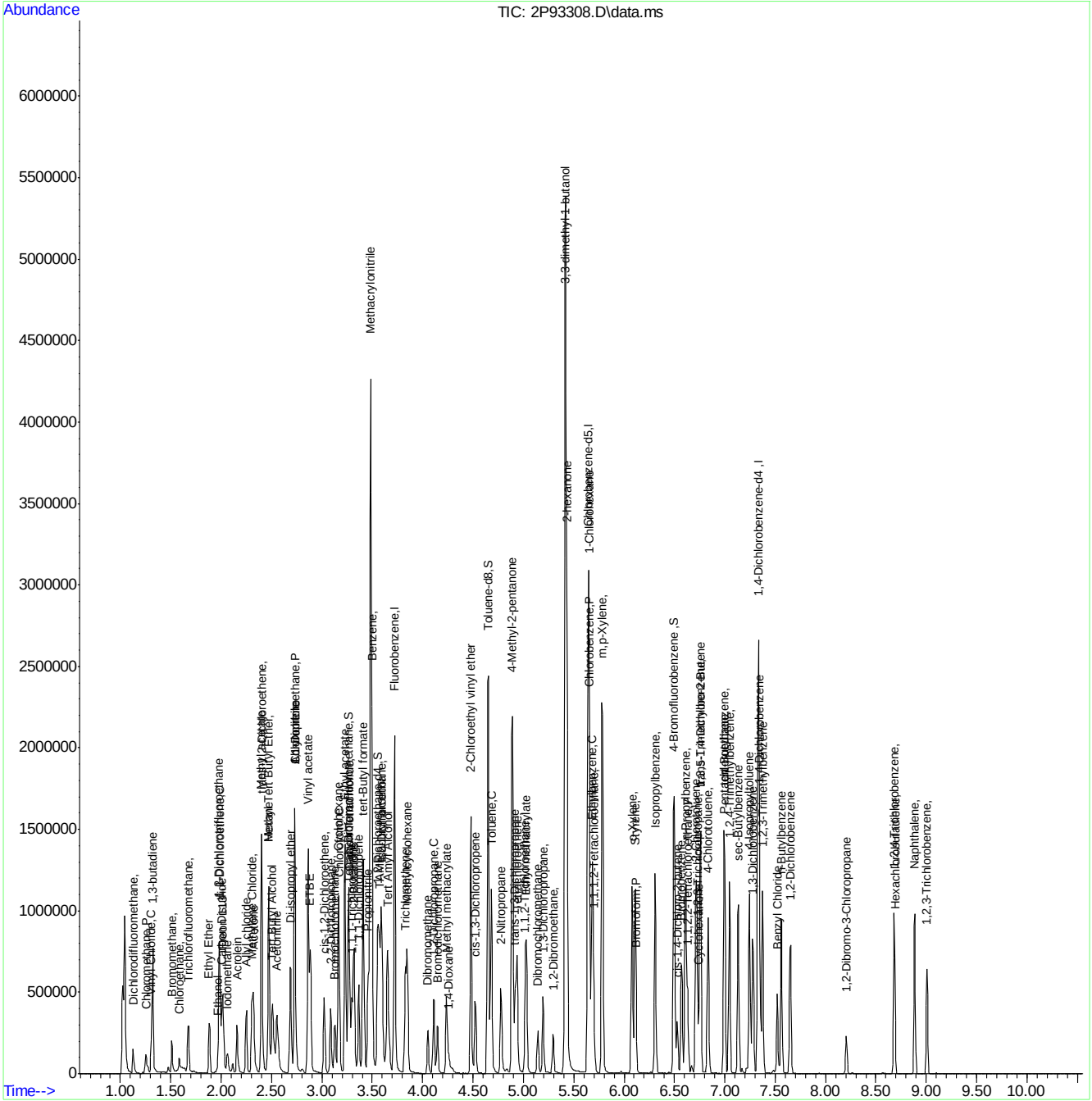
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	394844	25.32	ug/L		99
93)	trans-1,4-Dichloro-2-B...	6.758	53	63513	21.26	ug/L		93
94)	1,2,3-Trichloropropane	6.727	110	62192	23.92	ug/L		96
95)	Cyclohexanone	6.743	55	61049	112.13	ug/L		93
96)	4-Chlorotoluene	6.831	91	415474	25.27	ug/L		97
97)	tert-Butylbenzene	6.994	91	254996	25.81	ug/L		100
99)	1,2,4-Trimethylbenzene	7.046	105	452978	25.81	ug/L		99
100)	Pentachloroethane	6.999	167	52977	24.77	ug/L	#	89
101)	sec-Butylbenzene	7.135	105	536915	28.06	ug/L		99
102)	4-Isopropyltoluene	7.244	119	467336	27.79	ug/L		98
103)	1,3-Dichlorobenzene	7.276	146	250807	26.72	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	467586	26.56	ug/L		99
105)	1,4-Dichlorobenzene	7.344	146	250597	25.55	ug/L		98
106)	n-Butylbenzene	7.558	92	208577	25.40	ug/L		97
107)	Benzyl Chloride	7.522	126	38152	19.80	ug/L	#	91
108)	1,2-Dichlorobenzene	7.652	146	226989	25.76	ug/L		97
109)	1,2-Dibromo-3-Chloropr...	8.206	75	36563	23.44	ug/L		91
110)	Hexachlorobutadiene	8.687	225	42796	26.98	ug/L		94
111)	1,2,4-Trichlorobenzene	8.682	180	120543	25.72	ug/L		98
112)	Naphthalene	8.886	128	490558	25.38	ug/L		99
113)	1,2,3-Trichlorobenzene	9.006	180	112349	25.54	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

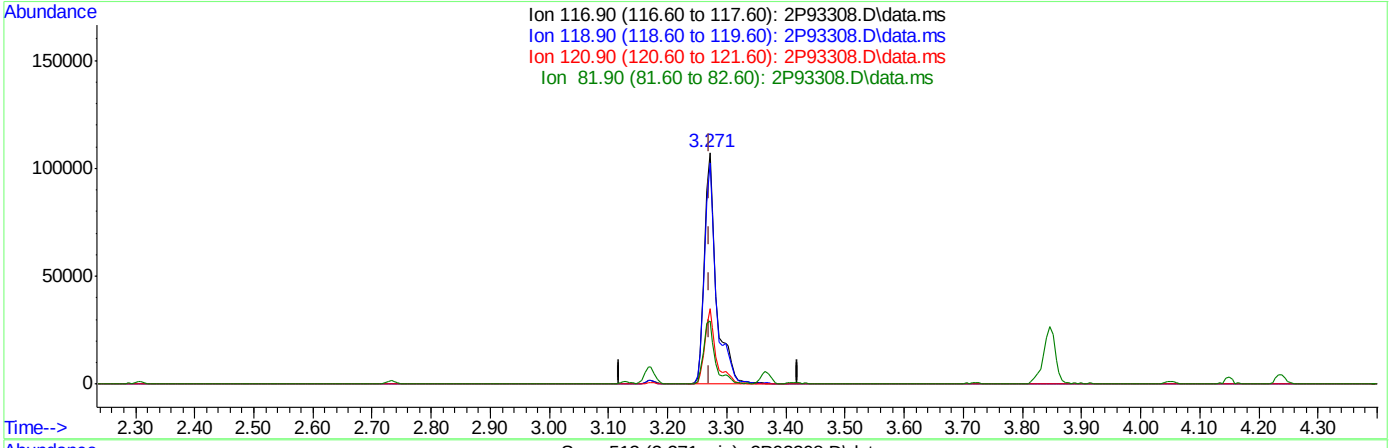
Sample Number: V2P3587-BS
Lab FileID: 2P93308.D
Injection Time: 09/23/22 12:13
Method: EPA 624.1
Analyst approved: 09/23/22 14:04 Courtney Failla
Supervisor approved: 09/26/22 12:49 Karen Watson

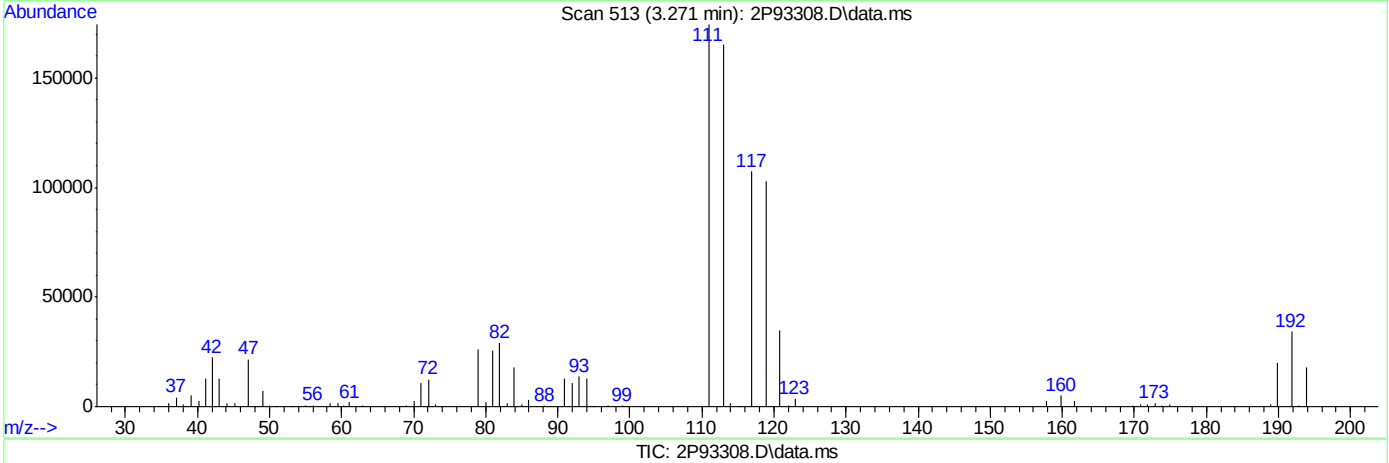
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 33.86ug/L

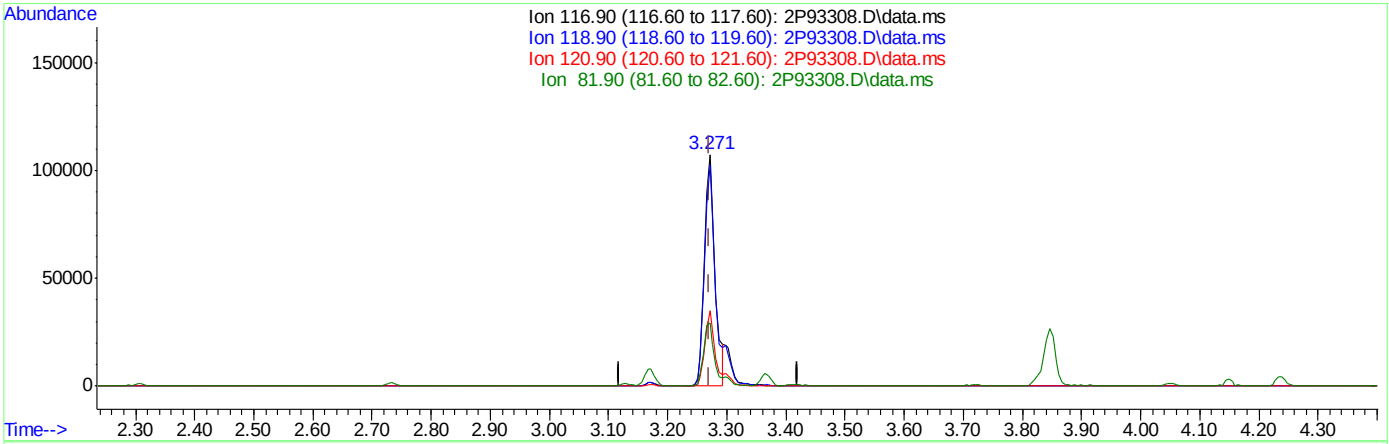
response 152773

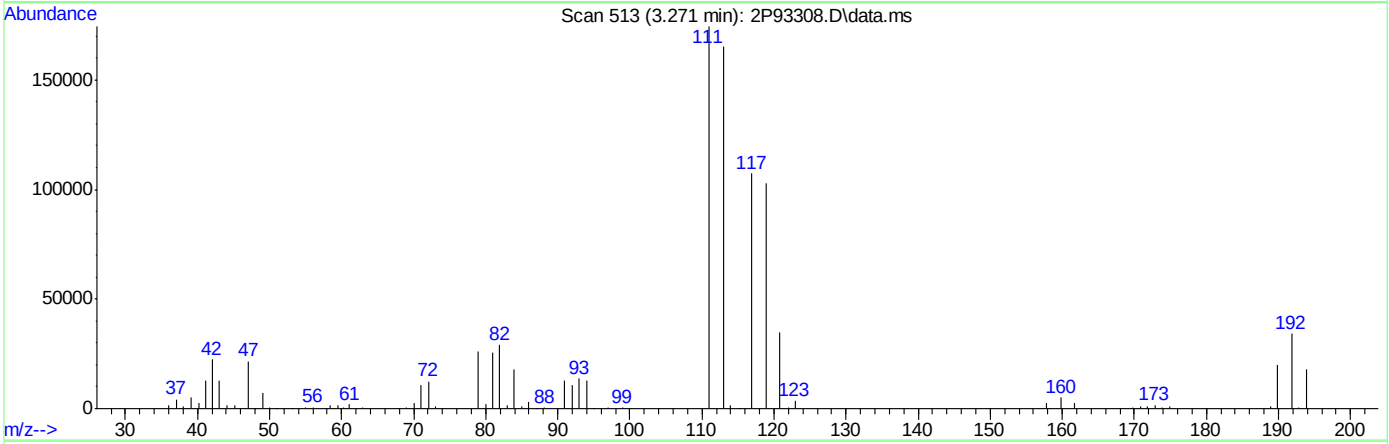
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.70
120.90	29.50	32.57
81.90	28.30	27.03

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 29.88ug/L m

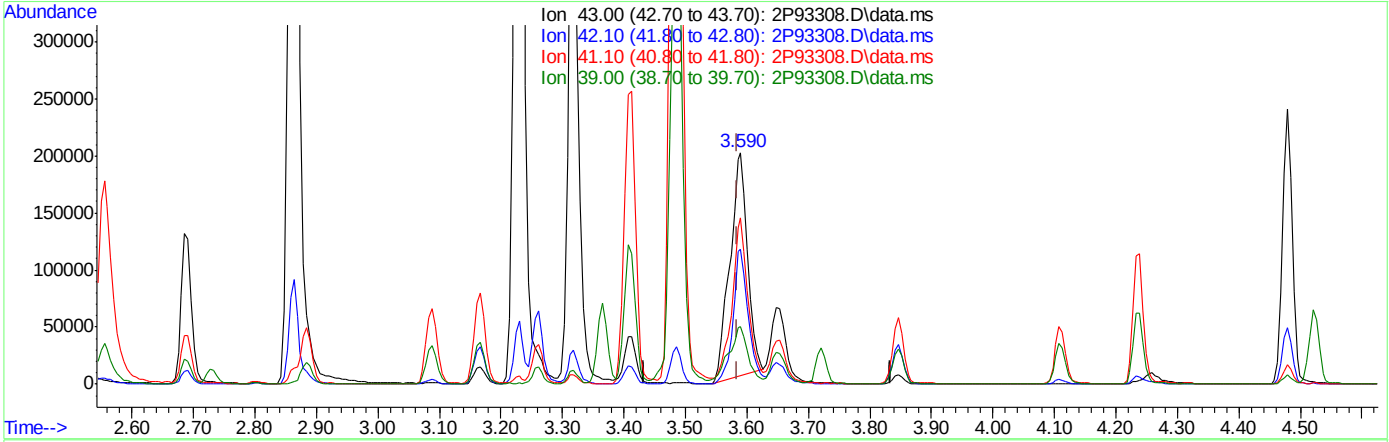
response 133058

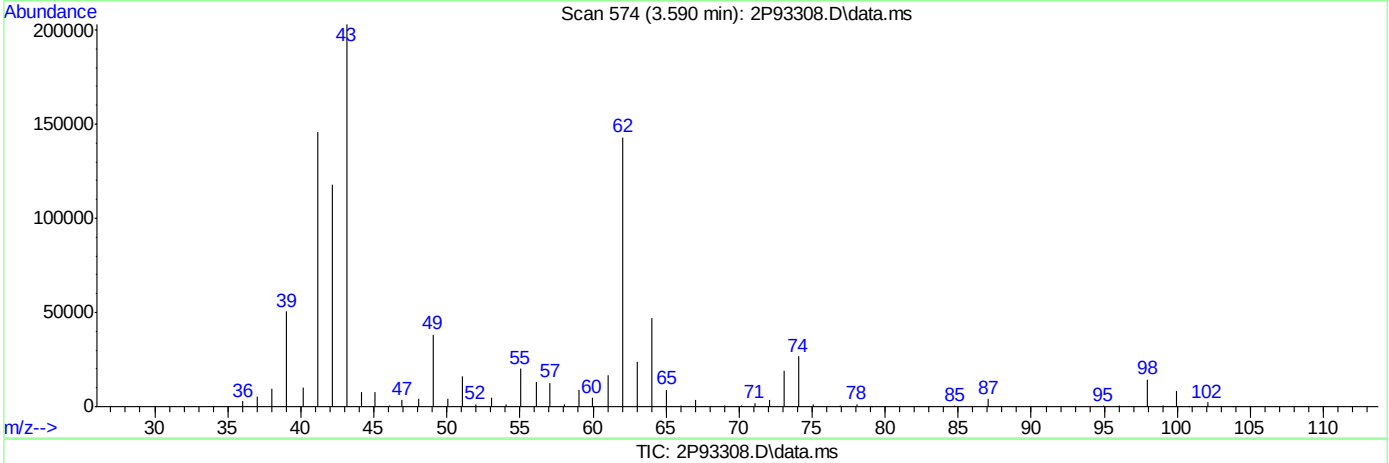
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.70
120.90	29.50	32.57
81.90	28.30	27.03

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 545.98ug/L

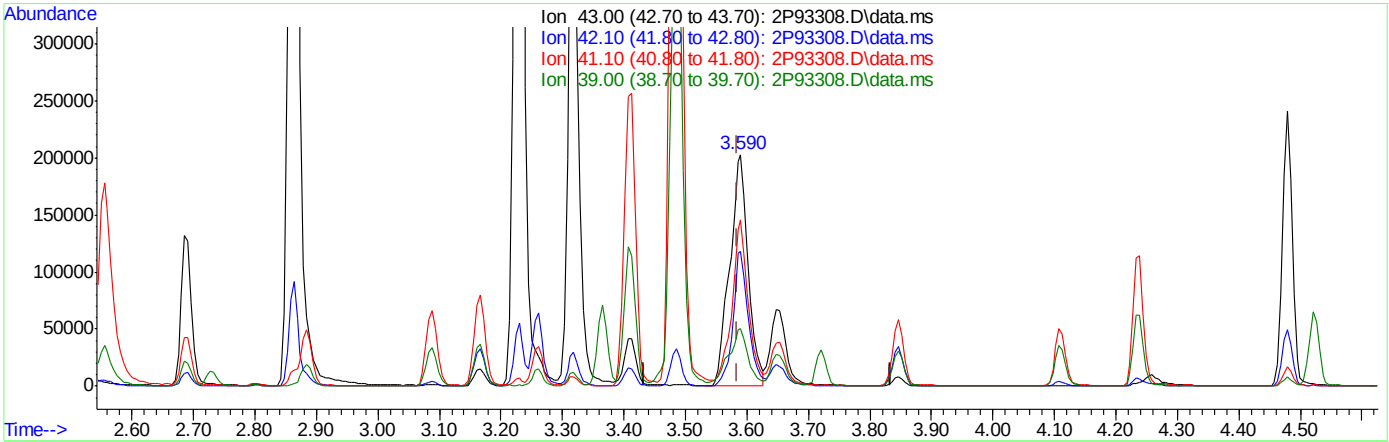
response 390191

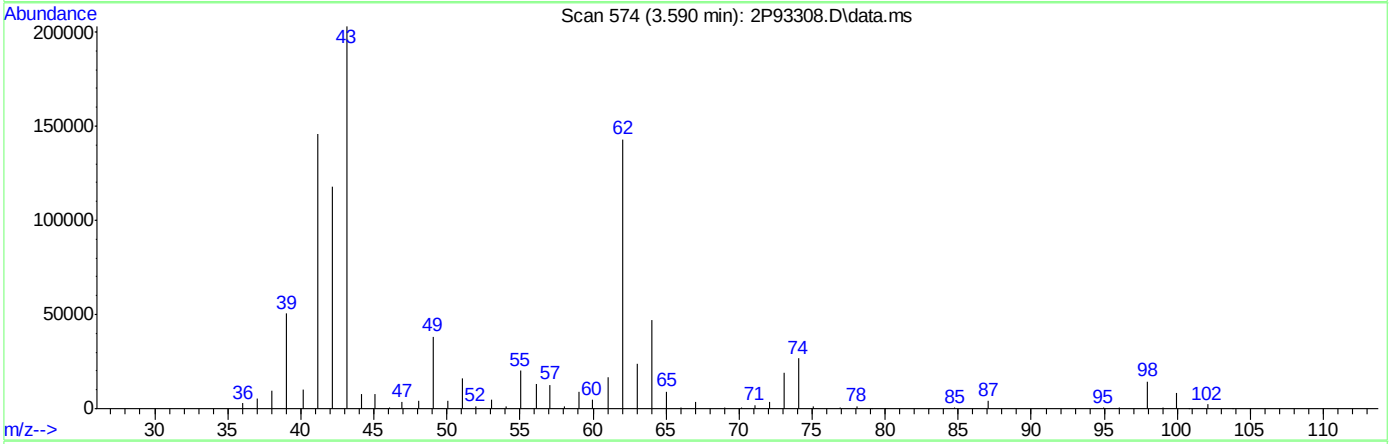
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.97
41.10	70.00	69.52
39.00	27.50	22.95

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 595.16ug/L m

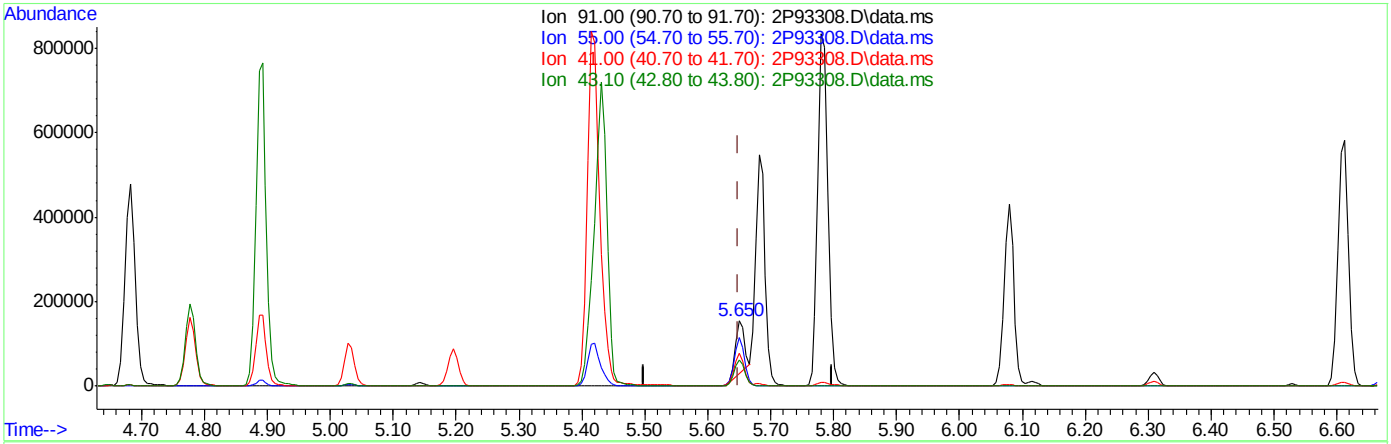
response 425335

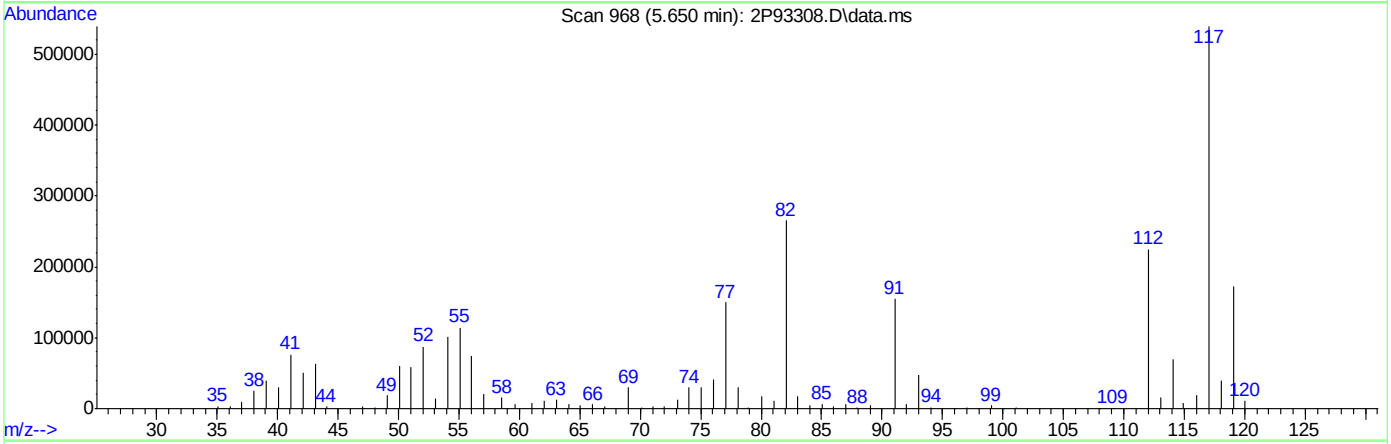
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.01
41.10	70.00	71.75
39.00	27.50	24.91

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 18.53ug/L

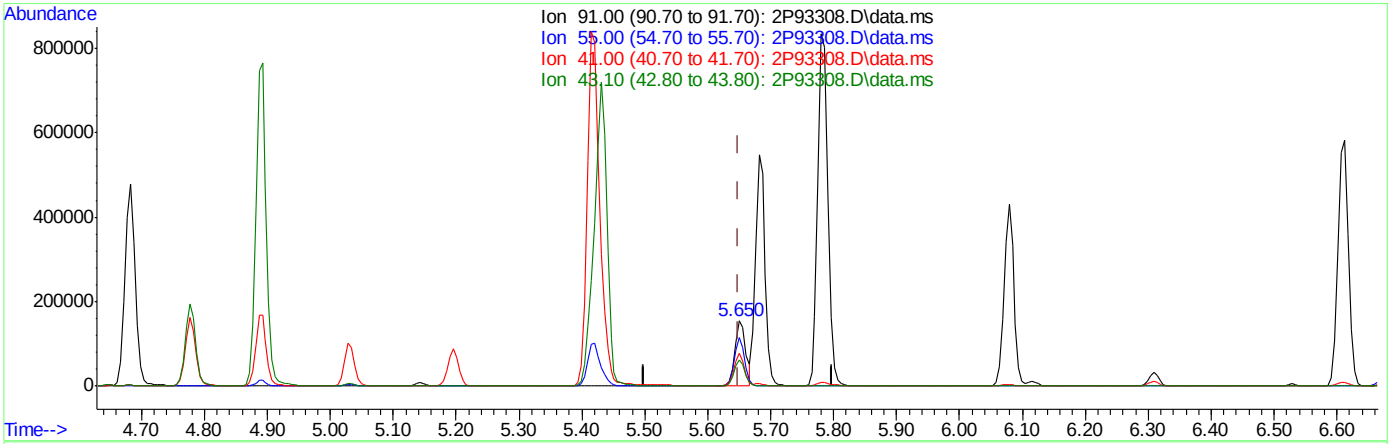
response 122435

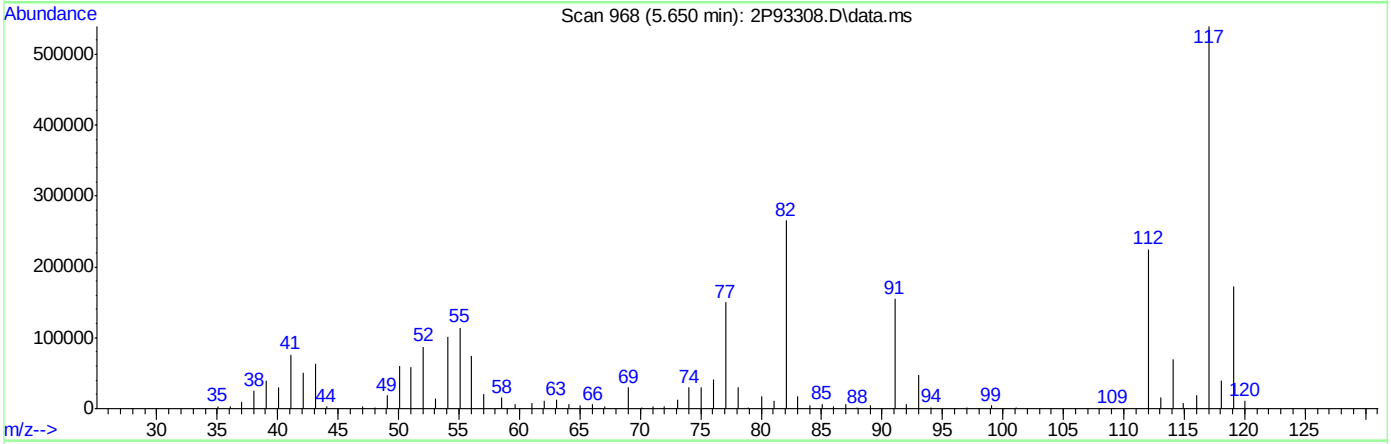
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	72.35
41.00	53.40	48.36
43.10	41.30	40.48

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 27.10ug/L m

response 179076

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	73.87
41.00	53.40	49.67
43.10	41.30	40.94

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/30/22 14:46

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:42:40 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.724	96	996531	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.643	117	792902	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	389711	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.270	113	210973	49.81	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	99.62%		
49) 1,2-Dichloroethane-d4	3.552	65	296135	50.34	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery =	100.68%		
63) Toluene-d8	4.650	98	1011037	46.34	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery =	92.68%		
86) 4-Bromofluorobenzene	6.495	174	290735	47.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	95.66%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.126	85	78435	28.51	ug/L	100
3) Chloromethane	1.257	50	85697	28.19	ug/L	97
4) 1,3-butadiene	1.325	39	115783	40.99	ug/L	98
5) Vinyl Chloride	1.309	62	112294	30.32	ug/L	98
6) Bromomethane	1.513	94	23267	10.15	ug/L	98
7) Chloroethane	1.586	64	35580	29.38	ug/L	96
8) Trichlorofluoromethane	1.675	101	134774	34.87	ug/L	99
9) Ethyl Ether	1.884	59	97179	28.03	ug/L	99
10) Ethanol	1.973	45	52173m	501.62	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.984	67	105061	32.39	ug/L	95
12) 1,1-Dichloroethene	1.984	61	136544	28.83	ug/L	96
13) Freon 113	2.020	101	88174	29.72	ug/L	96
14) Carbon Disulfide	2.004	76	153507	20.35	ug/L	96
15) Iodomethane	2.062	142	31036	16.37	ug/L	97
16) Acrolein	2.161	56	136326	107.51	ug/L	99
17) Allyl chloride	2.250	41	96114	28.21	ug/L	94
18) Methylene Chloride	2.308	49	129016	25.06	ug/L	98
19) Acetone	2.318	43	308820	134.80	ug/L	98
20) Methyl acetate	2.402	43	704355	151.91	ug/L	99
21) trans-1,2-Dichloroethene	2.407	61	138254	28.81	ug/L	99
22) Hexane	2.475	56	75198	32.02	ug/L	96
23) Methyl Tert Butyl Ether	2.475	73	305843	27.96	ug/L	97
24) Tert Butyl Alcohol	2.512	59	349924	258.68	ug/L	97
25) Acetonitrile	2.559	41	190741	248.58	ug/L	96
26) Di-isopropyl ether	2.689	45	293577	28.91	ug/L	97
27) Chloroprene	2.731	53	511484	35.36	ug/L	91
28) 1,1-Dichloroethane	2.731	63	191578	30.36	ug/L	98
29) Acrylonitrile	2.731	52	341889	149.48	ug/L	85
30) ETBE	2.888	59	320112	26.90	ug/L	98
31) Vinyl acetate	2.862	43	1080606	132.04	ug/L	99
32) cis-1,2-Dichloroethene	3.024	96	106483	28.29	ug/L	94
33) 2,2-Dichloropropane	3.092	77	101399	21.29	ug/L	99
34) Bromochloromethane	3.128	128	47286	27.79	ug/L	96
35) Cyclohexane	3.165	56	184359	31.32	ug/L	95
36) Chloroform	3.170	83	182779	28.86	ug/L	98
37) Ethyl acetate	3.228	43	849228	137.20	ug/L	100
38) Tetrahydrofuran	3.259	42	71024	30.05	ug/L	98
40) Carbon Tetrachloride	3.270	117	104433m	27.13	ug/L	
41) 1,1,1-Trichloroethane	3.296	97	154506	28.57	ug/L	99
42) 2-Butanone	3.317	43	520140	134.74	ug/L	96
43) 1,1-Dichloropropene	3.369	75	134946	28.40	ug/L	96
44) tert-Butyl formate	3.411	59	272685	105.69	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:42:40 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.463	54	334728	274.76	ug/L		98
46) Methacrylonitrile	3.484	41	883967	271.63	ug/L		98
47) Benzene	3.500	78	441269	29.09	ug/L		81
48) TAME	3.568	73	304603	28.16	ug/L		95
50) Isobutyl alcohol	3.588	43	346990m	556.77	ug/L		
51) 1,2-Dichloroethane	3.594	62	150790	27.77	ug/L		97
52) Tert Amyl Alcohol	3.651	59	297729	261.77	ug/L		92
53) Trichloroethene	3.829	95	108652	27.83	ug/L		97
54) Methylcyclohexane	3.850	83	166508	32.09	ug/L		99
55) Dibromomethane	4.054	93	58279	27.18	ug/L		91
56) 1,2-Dichloropropane	4.111	63	103621	28.12	ug/L		99
57) Bromodichloromethane	4.148	83	105547	26.89	ug/L		96
58) Methyl methacrylate	4.237	41	104988	25.77	ug/L		94
59) 1,4-Dioxane	4.258	88	66878	577.56	ug/L		98
60) 2-Chloroethyl vinyl ether	4.482	63	359916	117.41	ug/L		97
61) cis-1,3-Dichloropropene	4.524	75	131365	25.82	ug/L		98
64) Toluene	4.681	91	472811	25.26	ug/L		100
65) 2-Nitropropane	4.781	41	157215	112.11	ug/L		98
66) 4-Methyl-2-pentanone	4.890	43	874827	121.14	ug/L		99
67) trans-1,3-Dichloropropene	4.922	75	131159	24.76	ug/L		86
68) Tetrachloroethene	4.937	166	103284	25.98	ug/L		98
69) Ethyl methacrylate	5.031	69	146910	22.60	ug/L		97
70) 1,1,2-Trichloroethane	5.021	83	83062	25.94	ug/L		96
71) Dibromochloromethane	5.141	129	75675	23.48	ug/L		99
72) 1,3-Dichloropropane	5.199	76	168165	23.62	ug/L		95
73) 1,2-Dibromoethane	5.298	107	99520	25.71	ug/L		94
74) 3,3-dimethyl-1-butanol	5.418	57	1788731	1112.86	ug/L		98
75) 2-hexanone	5.429	43	987041	121.74	ug/L		91
76) 1-Chlorohexane	5.654	91	144449m	24.19	ug/L		
77) Ethylbenzene	5.685	91	534725	26.05	ug/L		99
78) Chlorobenzene	5.654	112	294854	26.30	ug/L		100
79) 1,1,1,2-Tetrachloroethane	5.701	131	88715	25.55	ug/L		97
80) m,p-Xylene	5.784	91	826499	50.91	ug/L		100
81) o-Xylene	6.077	91	408282	25.55	ug/L		99
82) Styrene	6.108	104	305441m	24.99	ug/L		
83) Bromoform	6.119	173	38206	22.28	ug/L		98
84) Isopropylbenzene	6.307	105	485776	26.35	ug/L		100
87) cis-1,4-Dichloro-2-butene	6.527	53	27514	13.40	ug/L	#	77
88) n-Propylbenzene	6.610	91	583660	24.41	ug/L		100
89) Bromobenzene	6.574	156	112831	23.34	ug/L		89
90) 1,1,2,2-Tetrachloroethane	6.631	83	161763	25.08	ug/L		98
91) 1,3,5-Trimethylbenzene	6.757	105	393902	23.66	ug/L		99
92) 2-Chlorotoluene	6.715	91	349578	24.23	ug/L		99
93) trans-1,4-Dichloro-2-B...	6.757	53	41036	14.84	ug/L	#	81
94) 1,2,3-Trichloropropane	6.725	110	55213	22.95	ug/L		97
95) Cyclohexanone	6.746	55	54045	107.29	ug/L		95
96) 4-Chlorotoluene	6.835	91	360916	23.73	ug/L		99
97) tert-Butylbenzene	6.992	91	218921	23.95	ug/L		98
99) 1,2,4-Trimethylbenzene	7.044	105	395813	24.38	ug/L		98
100) Pentachloroethane	6.997	167	45603	23.20	ug/L	#	80
101) sec-Butylbenzene	7.133	105	461093	26.05	ug/L		100
102) 4-Isopropyltoluene	7.248	119	401655	25.94	ug/L		97
103) 1,3-Dichlorobenzene	7.279	146	218007	25.10	ug/L		97
104) 1,2,3-Trimethylbenzene	7.374	105	413859	25.41	ug/L		100
105) 1,4-Dichlorobenzene	7.342	146	223930	24.68	ug/L		98
106) n-Butylbenzene	7.562	92	173417	22.96	ug/L		99
107) Benzyl Chloride	7.520	126	22265	13.17	ug/L	#	83
108) 1,2-Dichlorobenzene	7.651	146	204001	25.03	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:42:40 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.205	75	28863	20.26	ug/L	98
110) Hexachlorobutadiene	8.686	225	35442	24.32	ug/L	94
111) 1,2,4-Trichlorobenzene	8.681	180	100763	23.24	ug/L	97
112) Naphthalene	8.884	128	414032	23.26	ug/L	99
113) 1,2,3-Trichlorobenzene	9.010	180	97309	23.91	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
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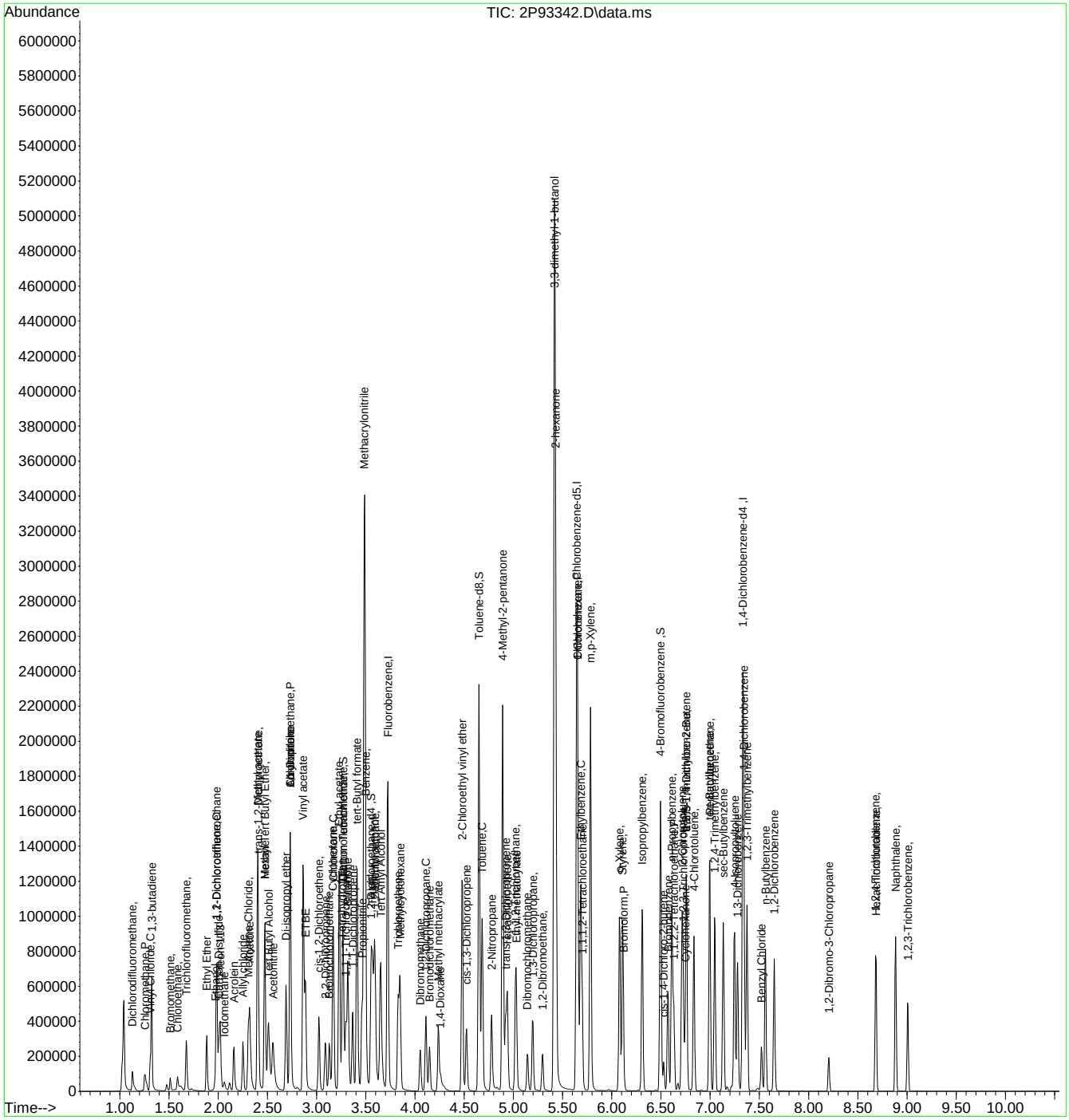
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: FA98819-1MS
Lab FileID: 2P93342.D
Injection Time: 09/23/22 21:25
Method: EPA 624.1
Analyst approved: 09/26/22 06:16 Antonette Clutario
Supervisor approved: 09/30/22 14:46 Lindsay Ritner

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.97	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
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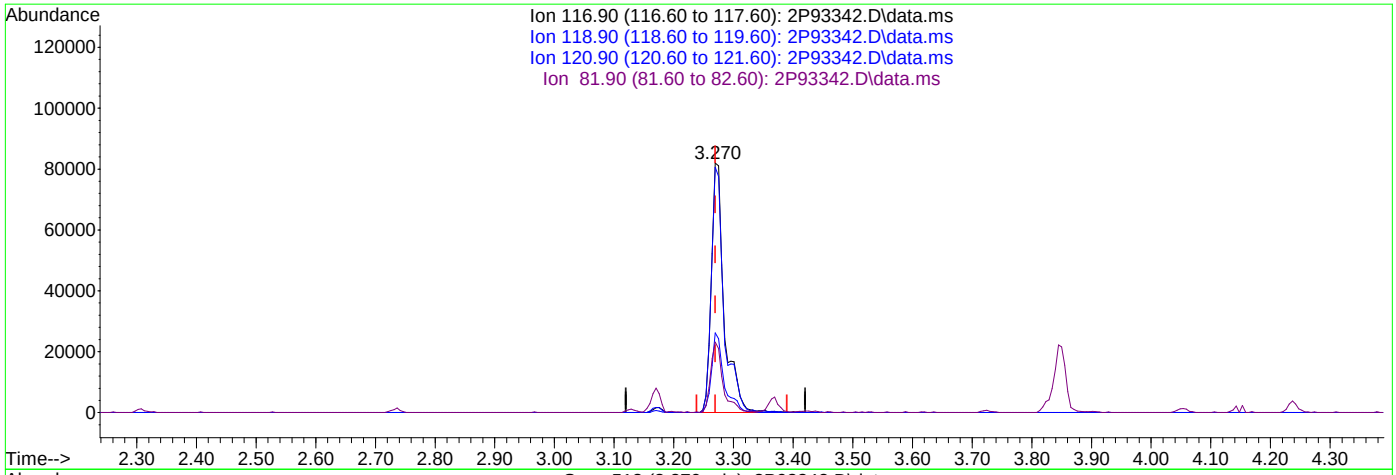
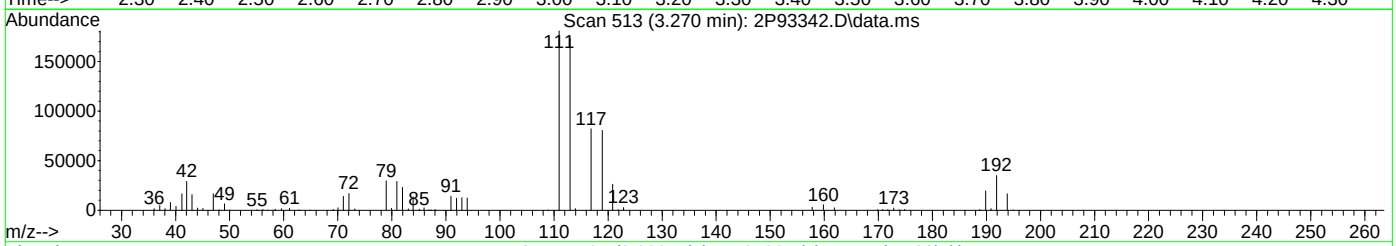
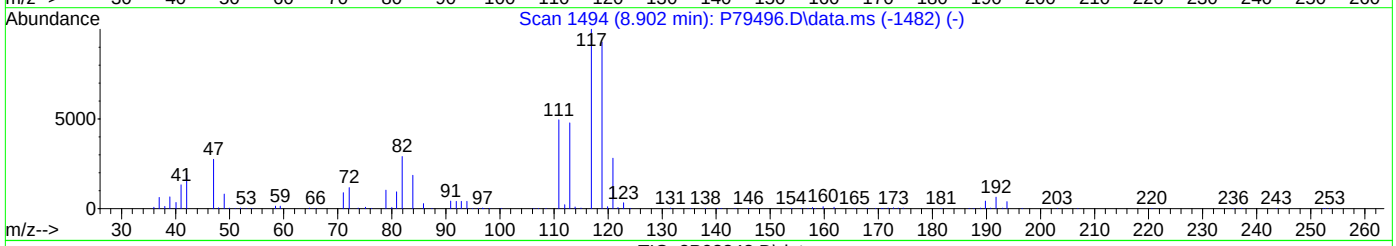
Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 31.52ug/L

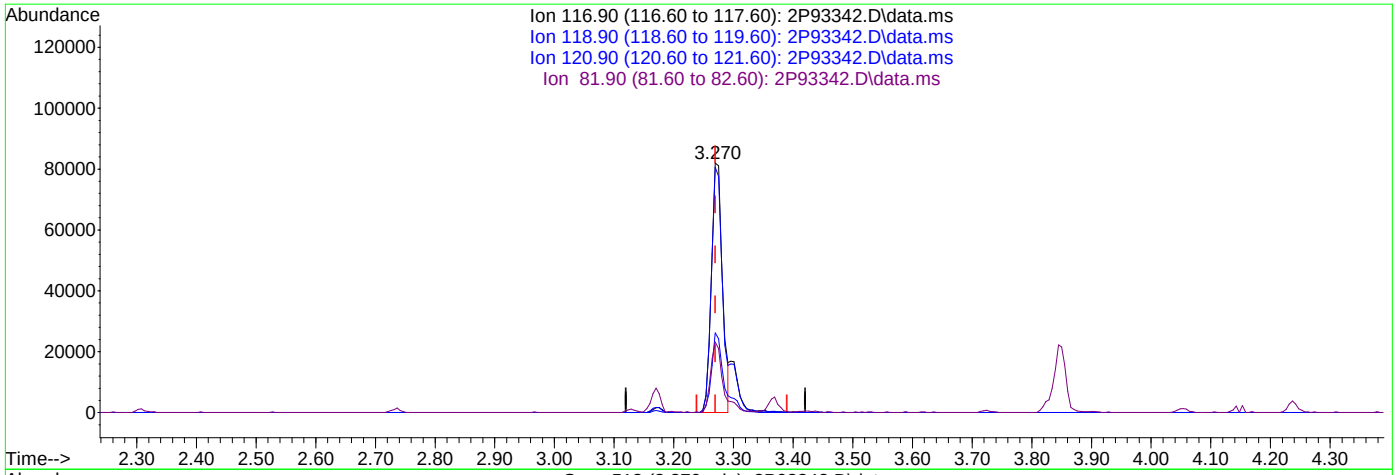
response 123078

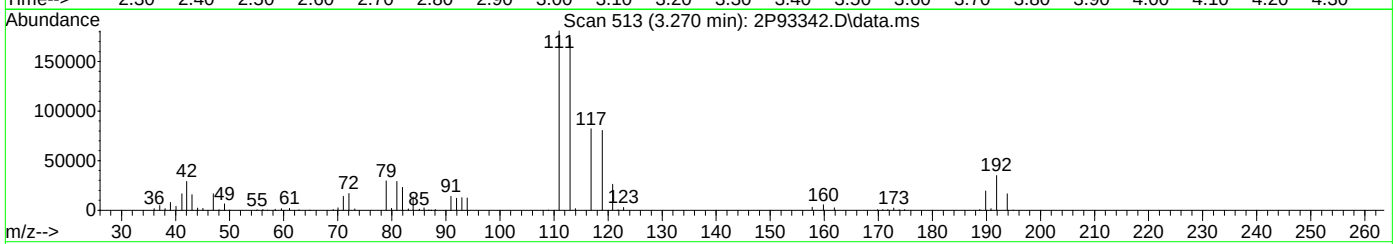
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	98.24
120.90	29.50	31.95
81.90	28.30	28.01

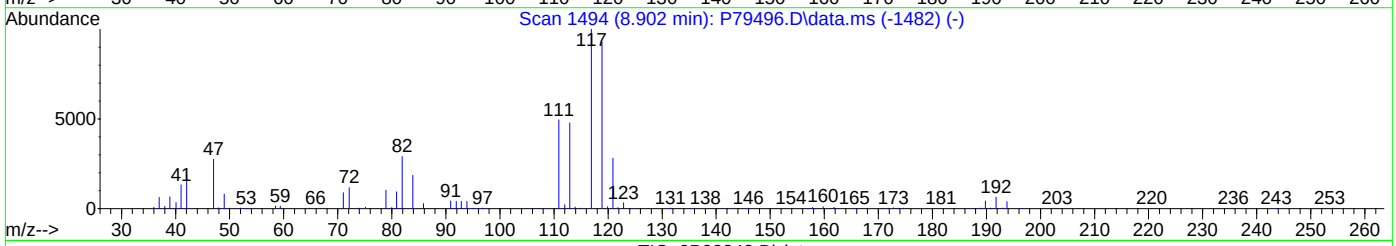
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 27.13ug/L m

response 104433

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	98.24
120.90	29.50	31.95
81.90	28.30	28.26

2P93342.D edits: Carbon Tetrachloride

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
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Quant Title : SW-846 Method 5035A/8260B
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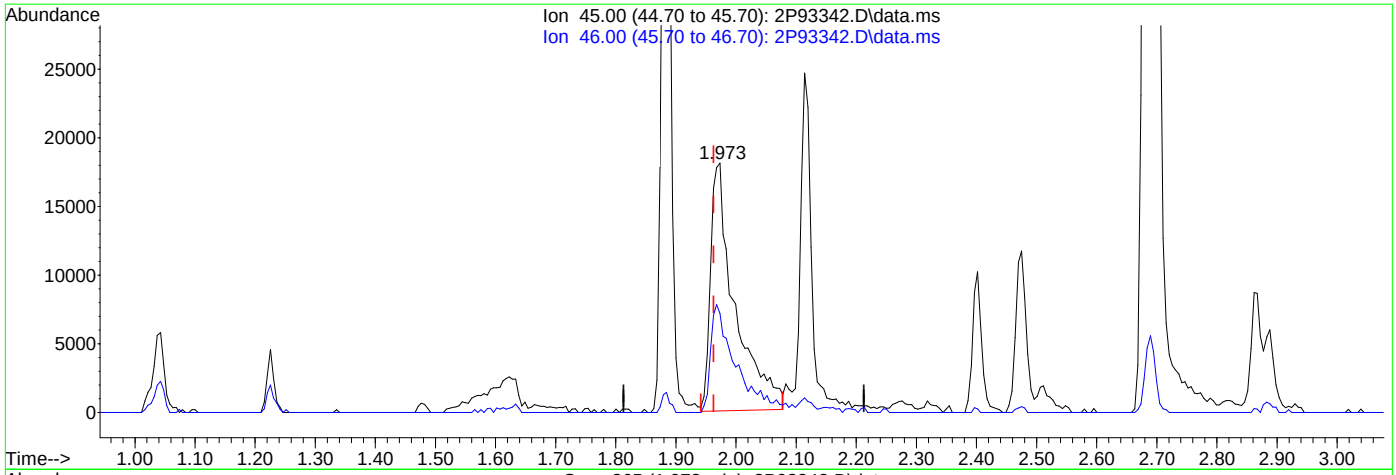
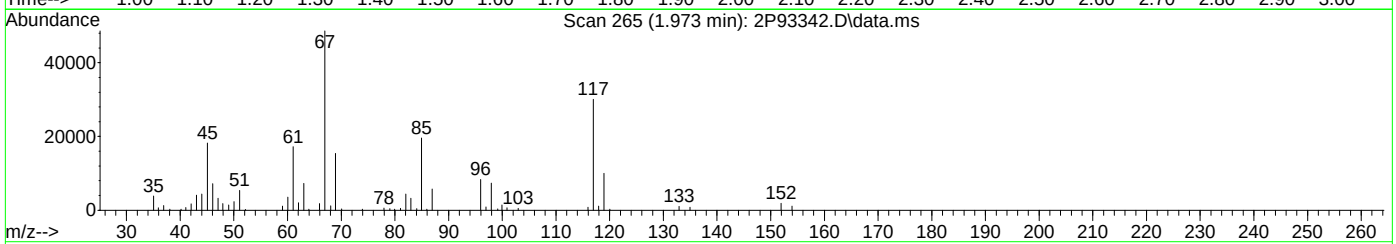
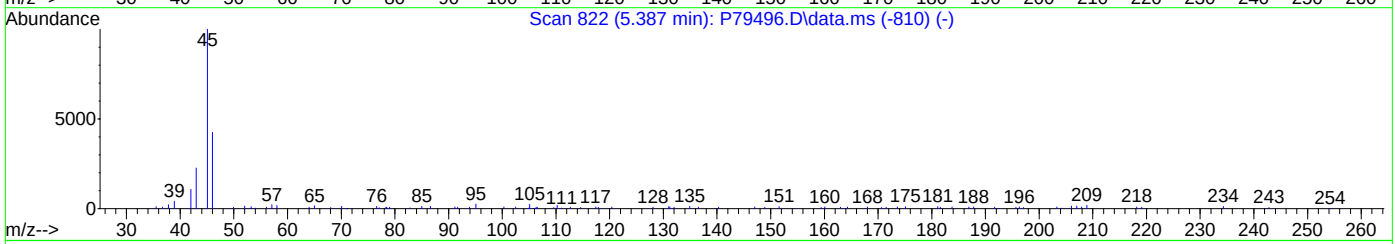






TIC: 2P93342.D\data.ms

(10) Ethanol

1.973min (+0.010) 488.13ug/L

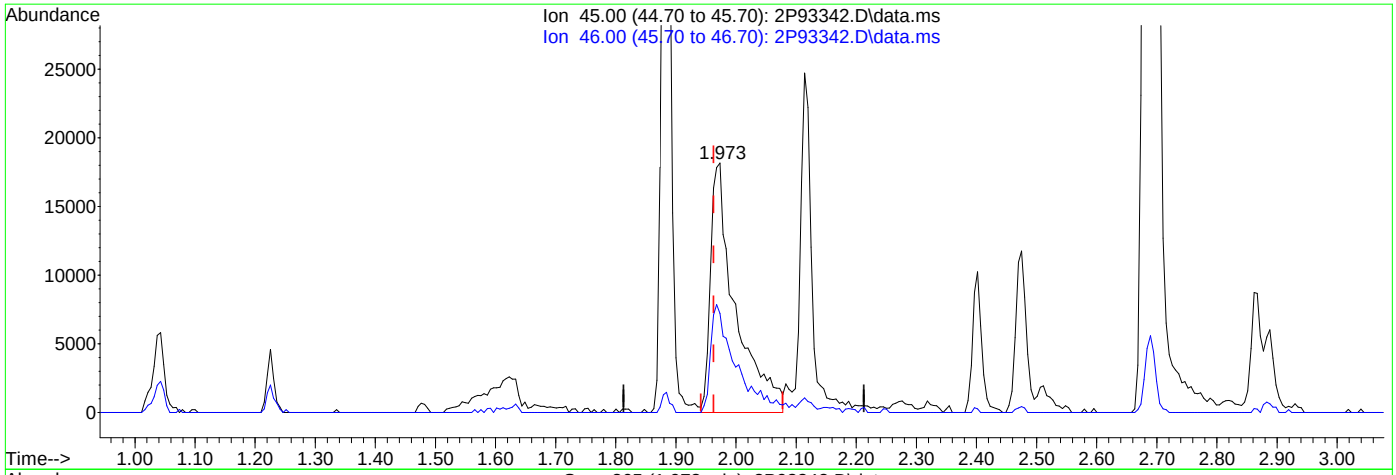
response 50868

Ion	Exp%	Act%
45.00	100	100
46.00	42.70	40.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



TIC: 2P93342.D\data.ms

(10) Ethanol

1.973min (+0.010) 501.62ug/L m

response 52173

Ion	Exp%	Act%
45.00	100	100
46.00	42.70	39.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
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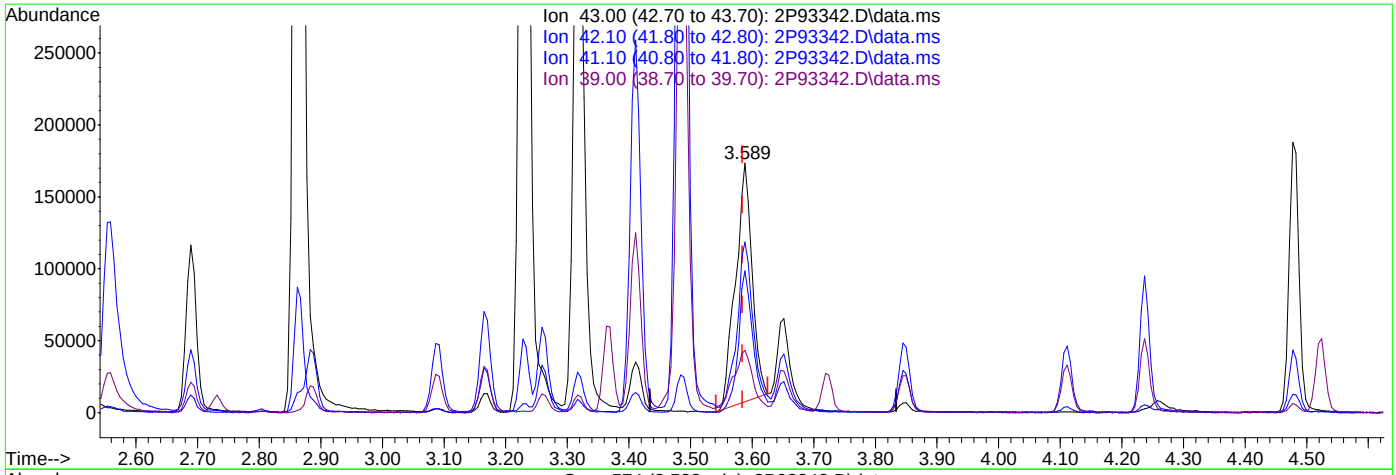
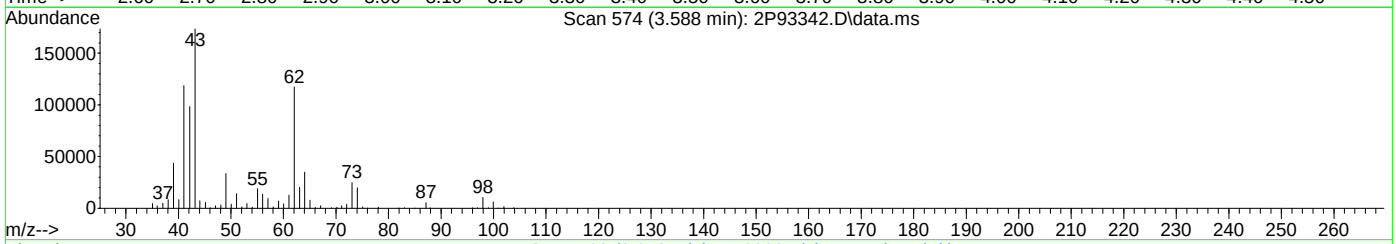
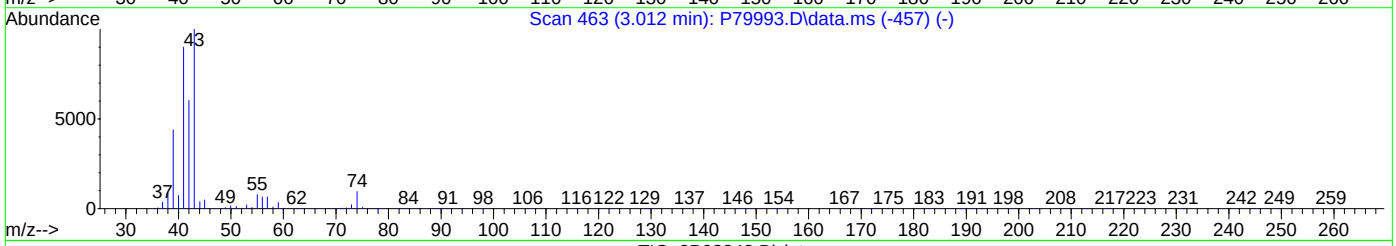






TIC: 2P93342.D\data.ms

(50) Isobutyl alcohol

3.588min (+0.004) 501.31ug/L

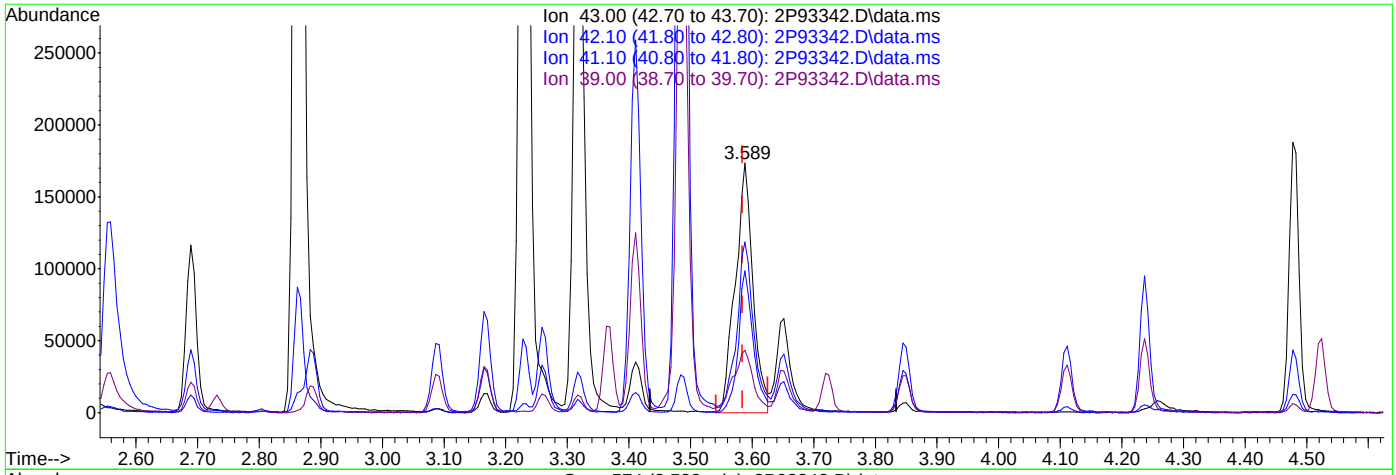
response 312426

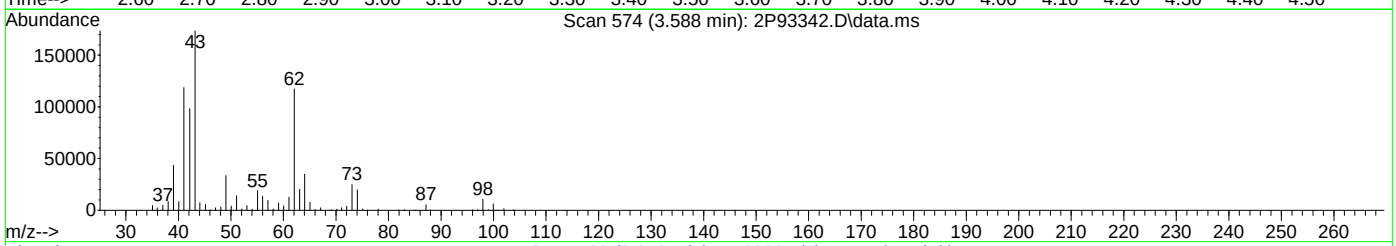
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.68
41.10	70.00	66.01
39.00	27.50	23.13

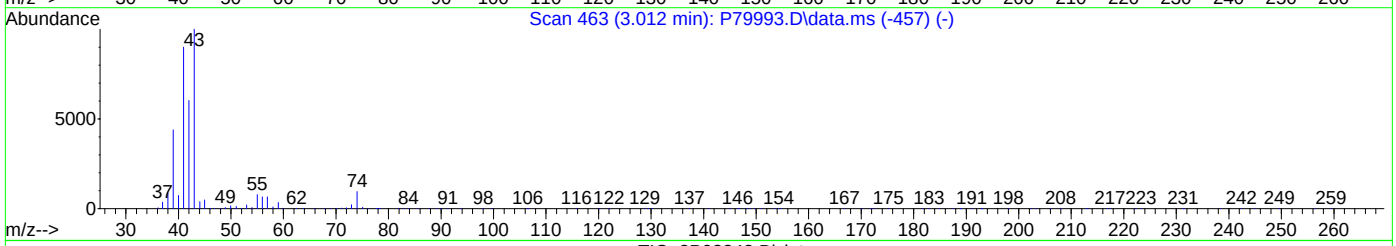
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(50) Isobutyl alcohol

3.588min (+0.004) 556.77ug/L m

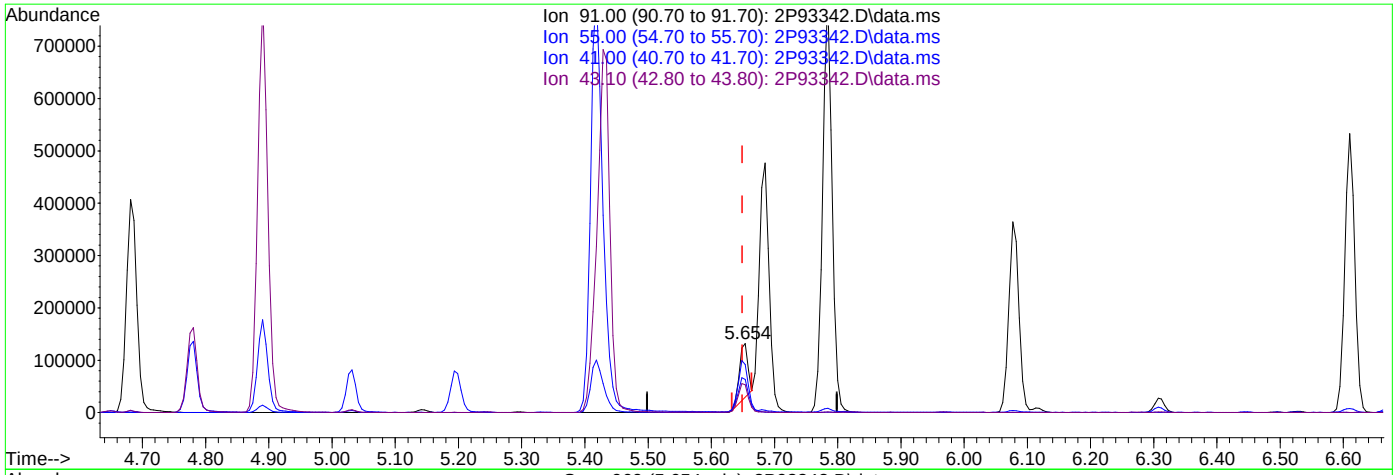
response 346990

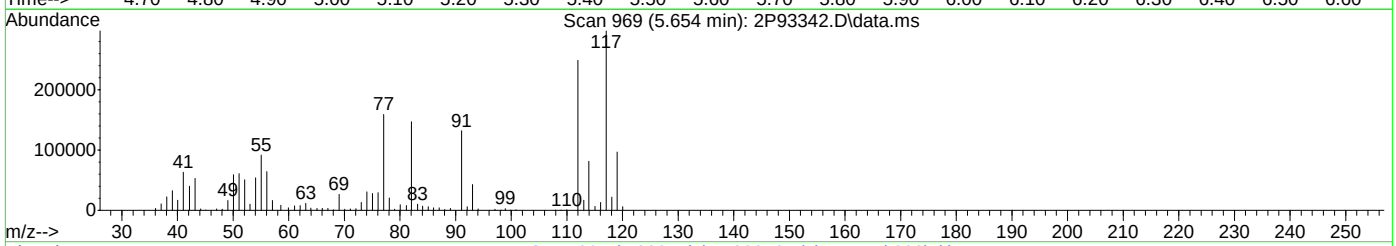
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.69
41.10	70.00	68.35
39.00	27.50	25.02

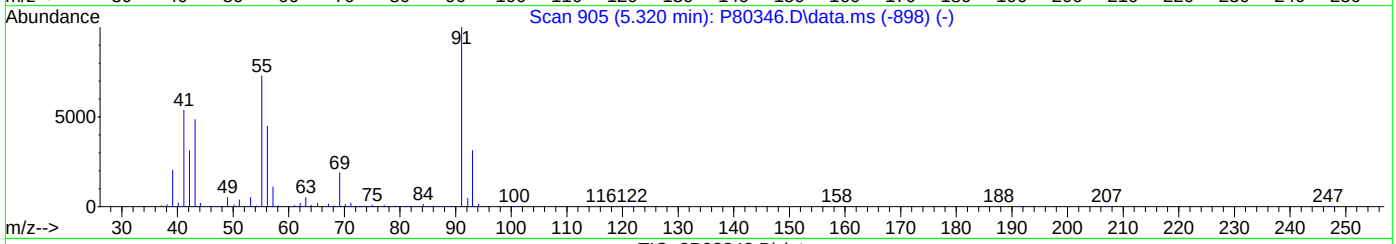
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.004) 17.16ug/L

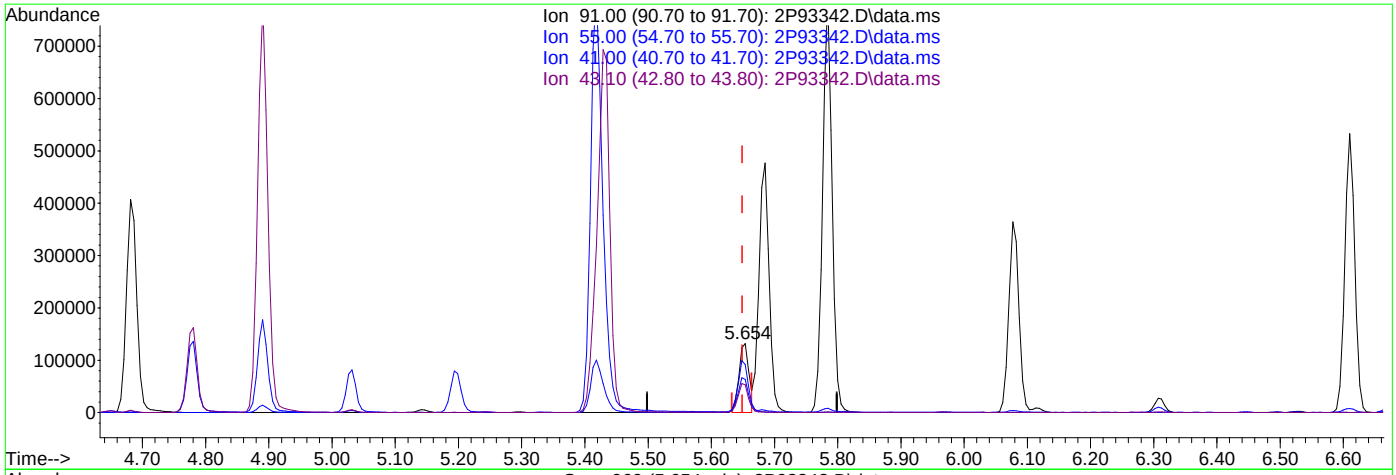
response 102436

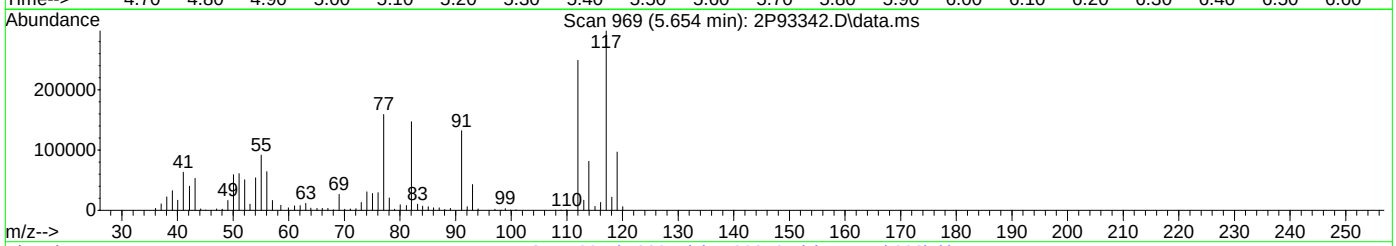
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.88
41.00	53.40	45.56
43.10	41.30	39.32

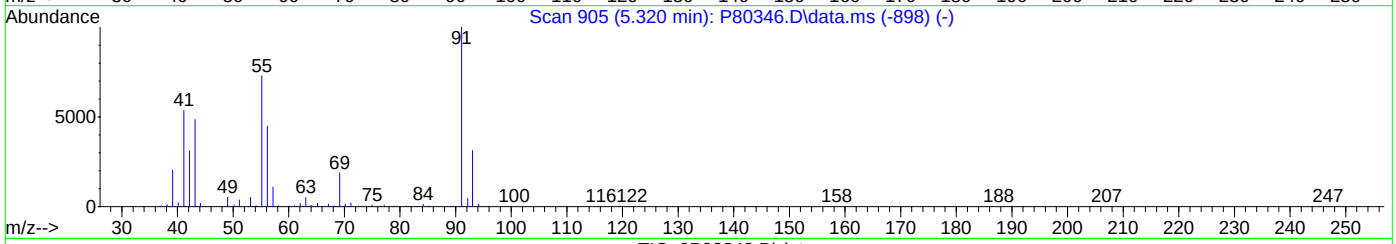
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.004) 24.19ug/L m

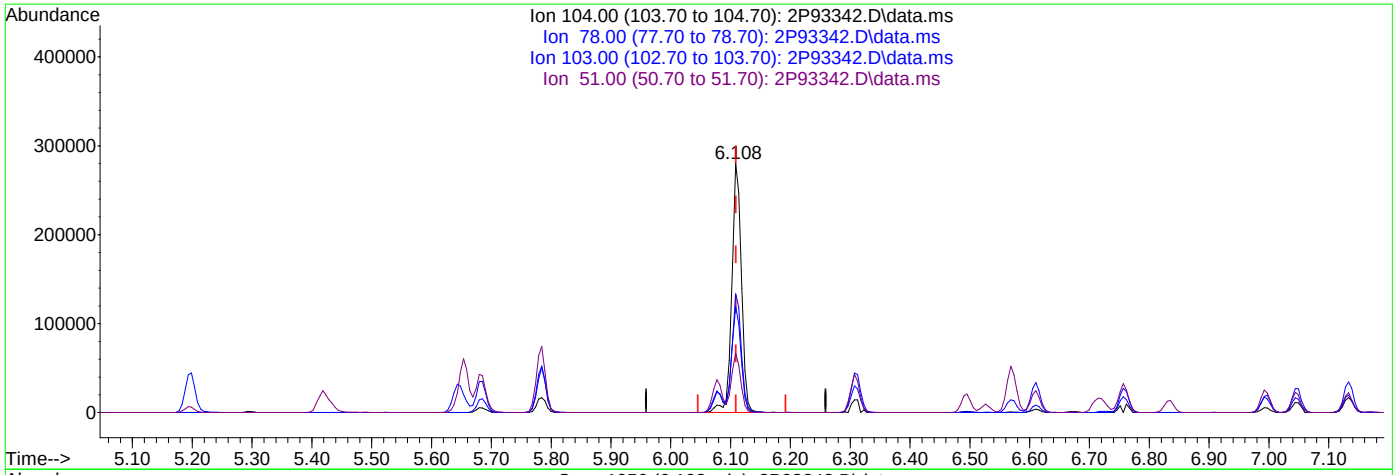
response 144449

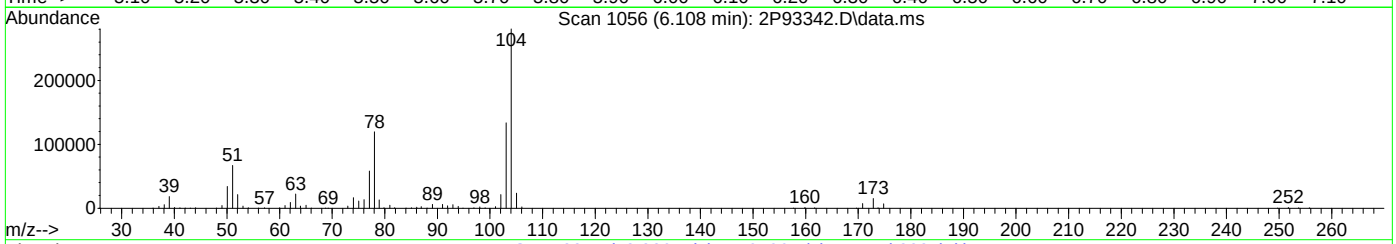
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.60
41.00	53.40	47.94
43.10	41.30	40.21

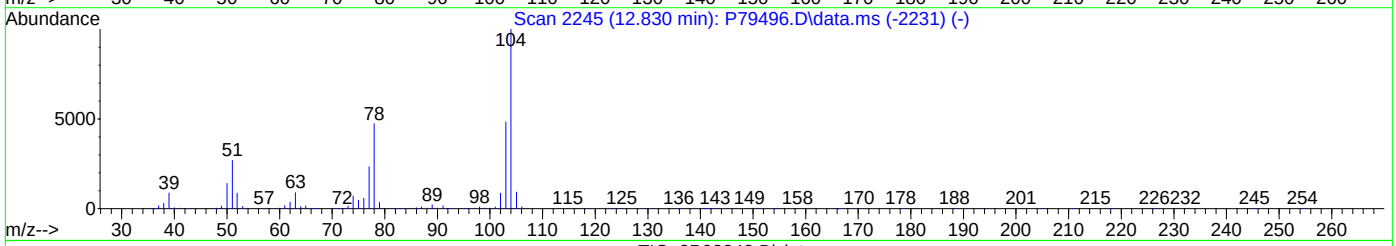
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(82) Styrene ( )

6.108min (-0.001) 25.75ug/L

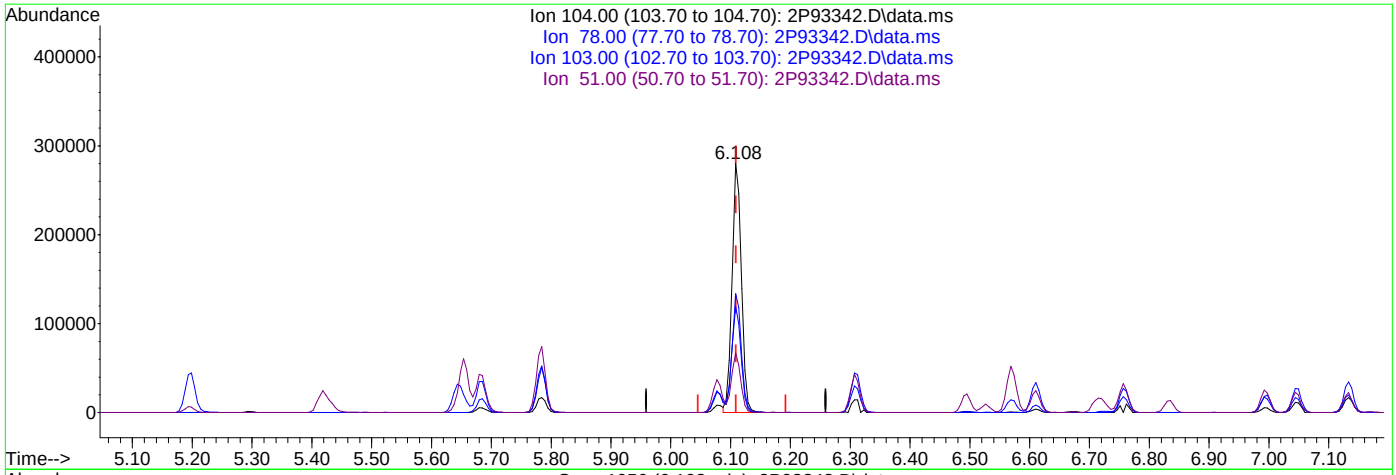
response 314768

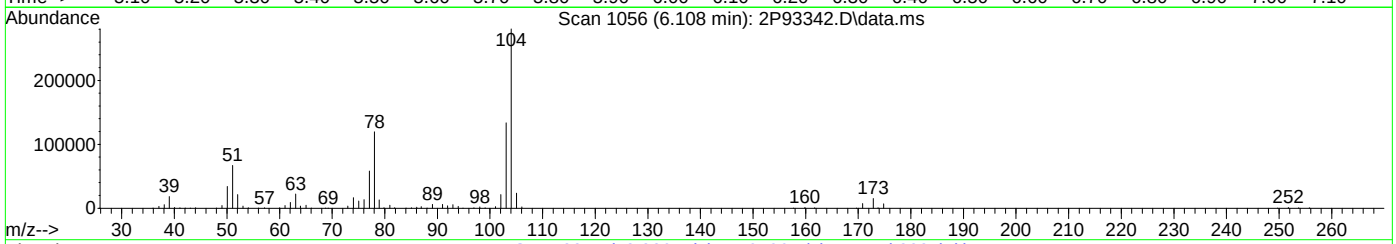
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.53
103.00	48.00	47.60
51.00	24.10	23.82

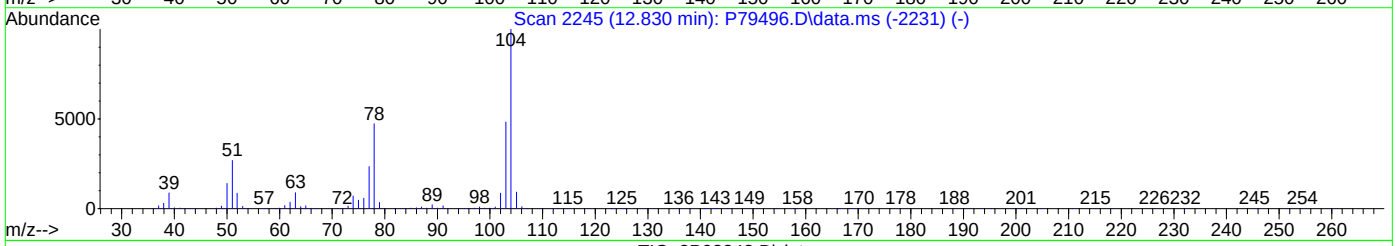
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93342.D
Acq On : 23 Sep 2022 9:25 pm
Operator : courtnef
Sample : FA98819-1MS, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Sep 25 21:00:11 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93342.D\data.ms

(82) Styrene ( )

6.108min (-0.001) 24.99ug/L m

response 305441

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.53
103.00	48.00	47.60
51.00	24.10	23.82

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/30/22 14:46

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:47:47 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1027411	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	811292	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	394401	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	219328	50.23	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.46%			
49) 1,2-Dichloroethane-d4	3.554	65	291803	48.11	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 96.22%			
63) Toluene-d8	4.652	98	1034431	46.34	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 92.68%			
86) 4-Bromofluorobenzene	6.497	174	294009	47.79	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.58%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.128	85	68840	24.27	ug/L	100
3) Chloromethane	1.254	50	75871	24.21	ug/L	97
4) 1,3-butadiene	1.322	39	123984	42.57	ug/L	98
5) Vinyl Chloride	1.306	62	95949	25.12	ug/L	99
6) Bromomethane	1.510	94	28242	11.95	ug/L	98
7) Chloroethane	1.583	64	30440	24.17	ug/L	96
8) Trichlorofluoromethane	1.677	101	116473	27.81	ug/L	97
9) Ethyl Ether	1.881	59	95394	26.69	ug/L	98
10) Ethanol	1.965	45	58679m	551.15	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.980	67	107443	32.13	ug/L	98
12) 1,1-Dichloroethene	1.986	61	134179	27.47	ug/L	99
13) Freon 113	2.017	101	86588	28.38	ug/L	97
14) Carbon Disulfide	2.001	76	160114	20.57	ug/L	97
15) Iodomethane	2.064	142	47047	23.32	ug/L	96
16) Acrolein	2.158	56	146420	112.00	ug/L	99
17) Allyl chloride	2.252	41	106941	30.44	ug/L	90
18) Methylene Chloride	2.305	49	126418	23.75	ug/L	98
19) Acetone	2.320	43	326962	138.50	ug/L	99
20) Methyl acetate	2.399	43	699189	146.26	ug/L	99
21) trans-1,2-Dichloroethene	2.404	61	136866	27.66	ug/L	99
22) Hexane	2.472	56	75130	31.14	ug/L	93
23) Methyl Tert Butyl Ether	2.472	73	304925	27.04	ug/L	98
24) Tert Butyl Alcohol	2.508	59	356822	255.85	ug/L	96
25) Acetonitrile	2.555	41	211841	267.78	ug/L	99
26) Di-isopropyl ether	2.686	45	290049	27.70	ug/L	96
27) Chloroprene	2.728	53	544498	36.51	ug/L	91
28) 1,1-Dichloroethane	2.733	63	188881	29.03	ug/L	100
29) Acrylonitrile	2.733	52	360561	152.90	ug/L	84
30) ETBE	2.885	59	315104	25.69	ug/L	97
31) Vinyl acetate	2.864	43	1138269	134.91	ug/L	99
32) cis-1,2-Dichloroethene	3.026	96	107398	27.68	ug/L	98
33) 2,2-Dichloropropane	3.089	77	102956	20.99	ug/L	98
34) Bromochloromethane	3.131	128	45784	26.10	ug/L	94
35) Cyclohexane	3.167	56	179982	29.78	ug/L	98
36) Chloroform	3.167	83	178277	27.30	ug/L	98
37) Ethyl acetate	3.230	43	905345	141.87	ug/L	99
38) Tetrahydrofuran	3.261	42	67939	27.88	ug/L	94
40) Carbon Tetrachloride	3.272	117	103678m	26.21	ug/L	
41) 1,1,1-Trichloroethane	3.298	97	152906	27.49	ug/L	98
42) 2-Butanone	3.319	43	553237	139.04	ug/L	99
43) 1,1-Dichloropropene	3.366	75	137037	27.97	ug/L	98
44) tert-Butyl formate	3.408	59	281559	105.84	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:47:47 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.460	54	357865	284.93	ug/L		99
46) Methacrylonitrile	3.486	41	947993	282.55	ug/L		99
47) Benzene	3.497	78	432810	27.68	ug/L		89
48) TAME	3.570	73	303297	27.19	ug/L		97
50) Isobutyl alcohol	3.585	43	371834m	578.70	ug/L		
51) 1,2-Dichloroethane	3.591	62	149106	26.64	ug/L		98
52) Tert Amyl Alcohol	3.648	59	301808	257.46	ug/L		92
53) Trichloroethene	3.826	95	108564	26.97	ug/L		98
54) Methylcyclohexane	3.847	83	167432	31.38	ug/L		99
55) Dibromomethane	4.051	93	58676	26.54	ug/L		96
56) 1,2-Dichloropropane	4.108	63	98466	25.92	ug/L		97
57) Bromodichloromethane	4.145	83	104525	25.92	ug/L		99
58) Methyl methacrylate	4.234	41	112444	26.70	ug/L		94
59) 1,4-Dioxane	4.260	88	65732	550.60	ug/L		94
60) 2-Chloroethyl vinyl ether	4.479	63	366213	115.88	ug/L		98
61) cis-1,3-Dichloropropene	4.521	75	132005	25.22	ug/L		99
64) Toluene	4.683	91	464369	24.24	ug/L		99
65) 2-Nitropropane	4.777	41	155593	108.84	ug/L		98
66) 4-Methyl-2-pentanone	4.887	43	918714	124.33	ug/L		99
67) trans-1,3-Dichloropropene	4.919	75	129673	23.98	ug/L		85
68) Tetrachloroethene	4.939	166	104020	25.57	ug/L		96
69) Ethyl methacrylate	5.028	69	157900	23.68	ug/L		93
70) 1,1,2-Trichloroethane	5.018	83	82390	25.14	ug/L		94
71) Dibromochloromethane	5.143	129	75421	22.92	ug/L		100
72) 1,3-Dichloropropane	5.196	76	166983	22.92	ug/L		96
73) 1,2-Dibromoethane	5.295	107	96685	24.41	ug/L		91
74) 3,3-dimethyl-1-butanol	5.415	57	1824713	1109.53	ug/L		97
75) 2-hexanone	5.431	43	1030310	124.19	ug/L	#	74
76) 1-Chlorohexane	5.650	91	154640m	25.31	ug/L		
77) Ethylbenzene	5.682	91	518103	24.67	ug/L		99
78) Chlorobenzene	5.656	112	289136	25.21	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.697	131	85347	24.11	ug/L		98
80) m,p-Xylene	5.781	91	813854	48.99	ug/L		100
81) o-Xylene	6.079	91	417945	25.56	ug/L		100
82) Styrene	6.111	104	304668m	24.36	ug/L		
83) Bromoform	6.116	173	37308	21.37	ug/L		95
84) Isopropylbenzene	6.309	105	475341	25.20	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	28537	13.71	ug/L	#	83
88) n-Propylbenzene	6.607	91	572858	23.67	ug/L		100
89) Bromobenzene	6.571	156	112443	22.98	ug/L		97
90) 1,1,2,2-Tetrachloroethane	6.628	83	157918	24.19	ug/L		99
91) 1,3,5-Trimethylbenzene	6.759	105	390186	23.16	ug/L		99
92) 2-Chlorotoluene	6.712	91	341013	23.35	ug/L		99
93) trans-1,4-Dichloro-2-B...	6.759	53	42873	15.32	ug/L		88
94) 1,2,3-Trichloropropane	6.727	110	54880	22.54	ug/L		94
95) Cyclohexanone	6.743	55	58487	114.73	ug/L		95
96) 4-Chlorotoluene	6.832	91	360623	23.43	ug/L		97
97) tert-Butylbenzene	6.994	91	214529	23.19	ug/L		98
99) 1,2,4-Trimethylbenzene	7.046	105	387212	23.56	ug/L		98
100) Pentachloroethane	6.994	167	49701	24.81	ug/L	#	79
101) sec-Butylbenzene	7.135	105	461558	25.76	ug/L		100
102) 4-Isopropyltoluene	7.245	119	396080	25.32	ug/L		98
103) 1,3-Dichlorobenzene	7.276	146	214131	24.36	ug/L		99
104) 1,2,3-Trimethylbenzene	7.376	105	409065	24.82	ug/L		99
105) 1,4-Dichlorobenzene	7.344	146	220908	24.05	ug/L		97
106) n-Butylbenzene	7.559	92	174883	22.89	ug/L		98
107) Benzyl Chloride	7.522	126	21022	12.37	ug/L	#	78
108) 1,2-Dichlorobenzene	7.653	146	198150	24.02	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:47:47 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.207	75	29524	20.46	ug/L	93
110) Hexachlorobutadiene	8.688	225	35031	23.79	ug/L	93
111) 1,2,4-Trichlorobenzene	8.683	180	100267	22.85	ug/L	97
112) Naphthalene	8.887	128	411319	22.86	ug/L	100
113) 1,2,3-Trichlorobenzene	9.007	180	97413	23.65	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

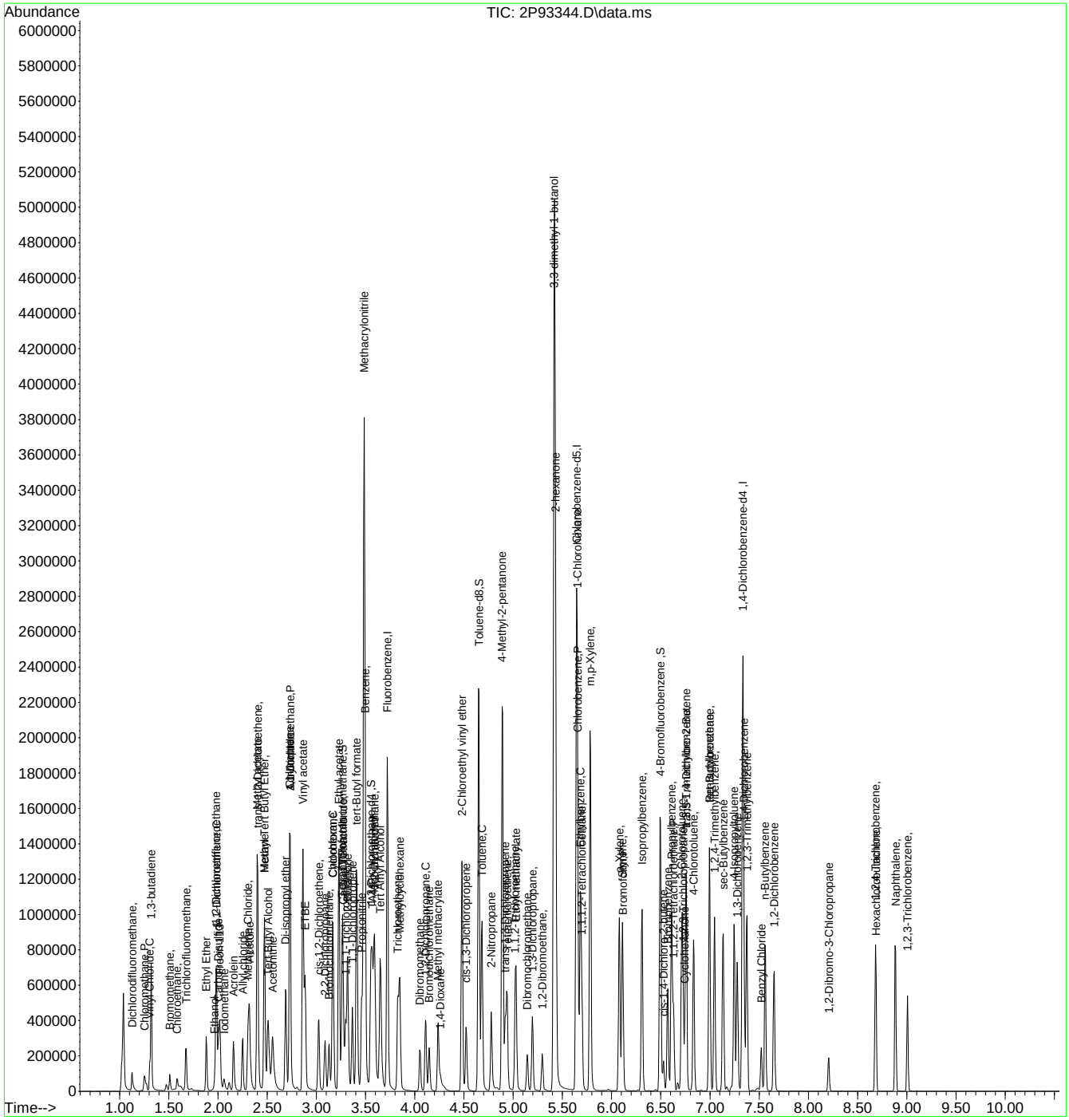
8.4.2

8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:47:47 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

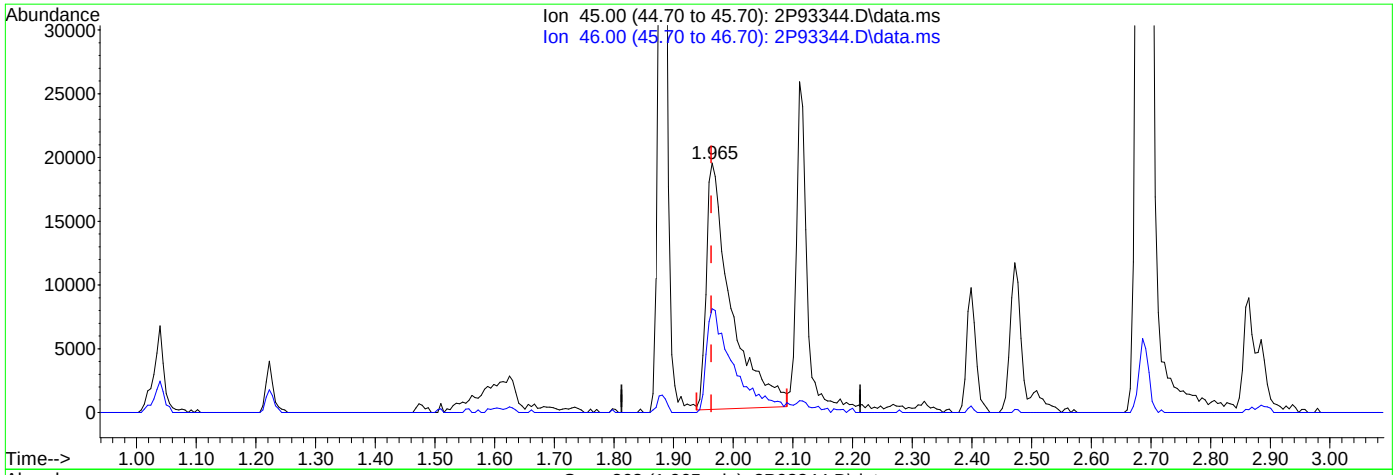
Sample Number: FA98819-1MSD
Lab FileID: 2P93344.D
Injection Time: 09/23/22 21:57
Method: EPA 624.1
Analyst approved: 09/26/22 06:16 Antonette Clutario
Supervisor approved: 09/30/22 14:46 Lindsay Ritner

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.96	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



TIC: 2P93344.D\data.ms

(10) Ethanol

1.965min (+0.002) 520.23ug/L

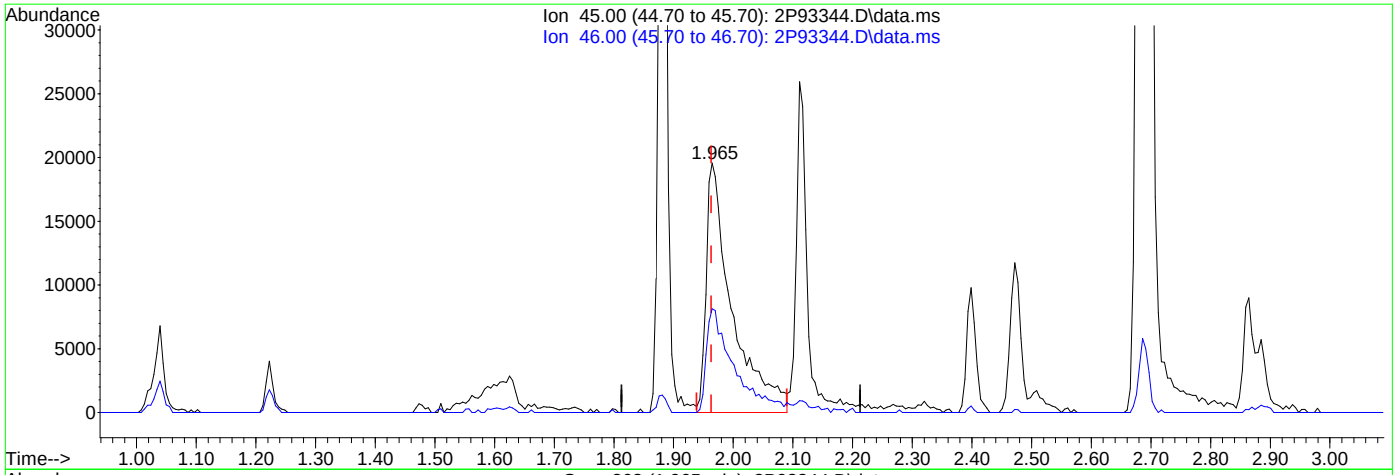
response 55636

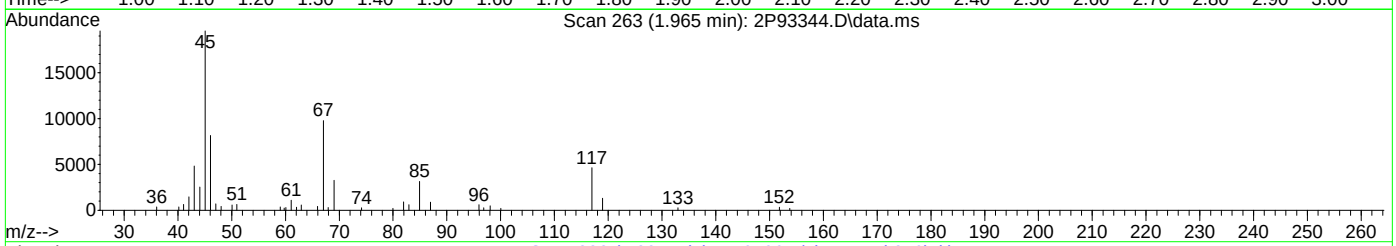
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	42.60
0.00	0.00	0.00
0.00	0.00	0.00

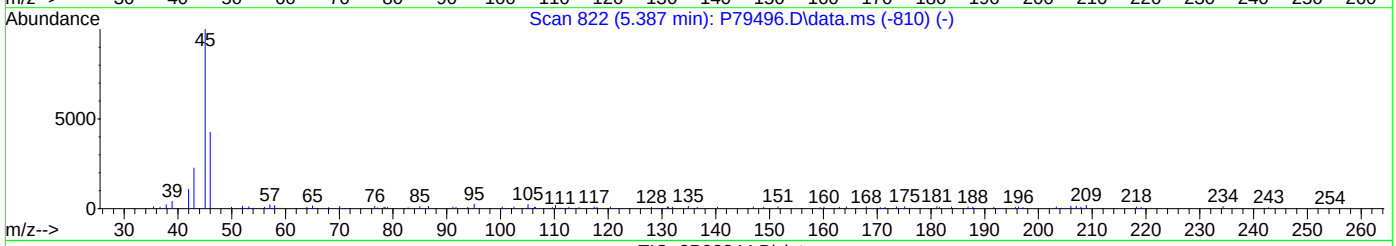
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(10) Ethanol

1.965min (+0.002) 551.15ug/L m

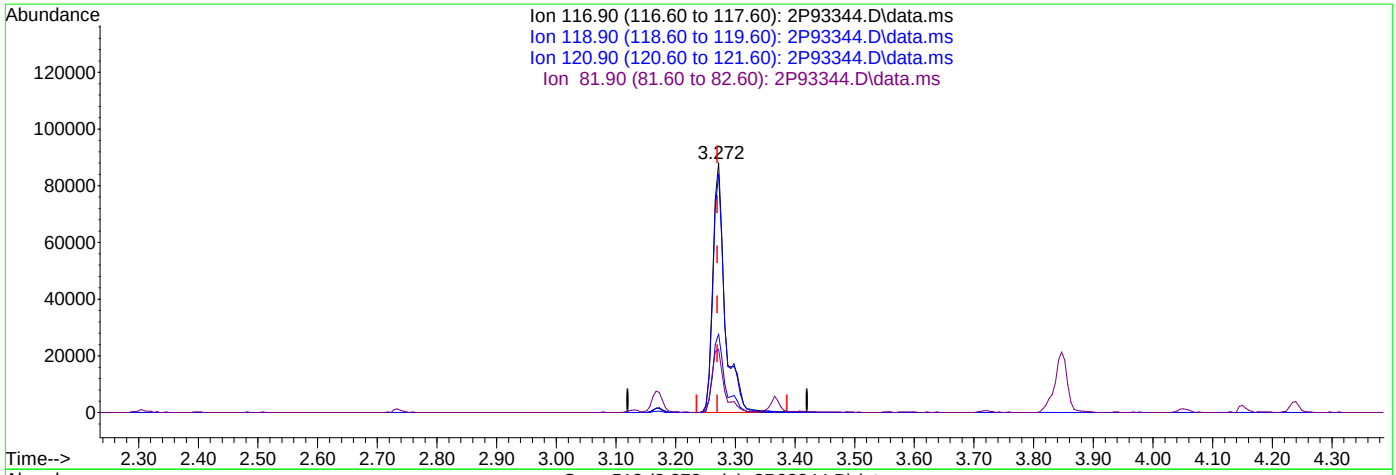
response 58679

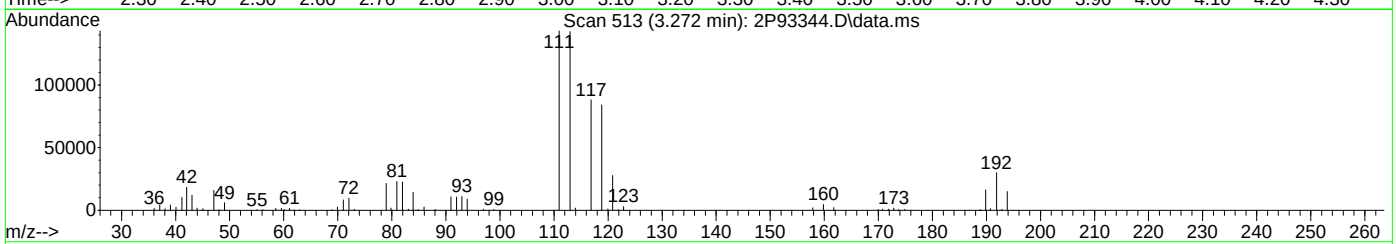
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	41.58
0.00	0.00	0.00
0.00	0.00	0.00

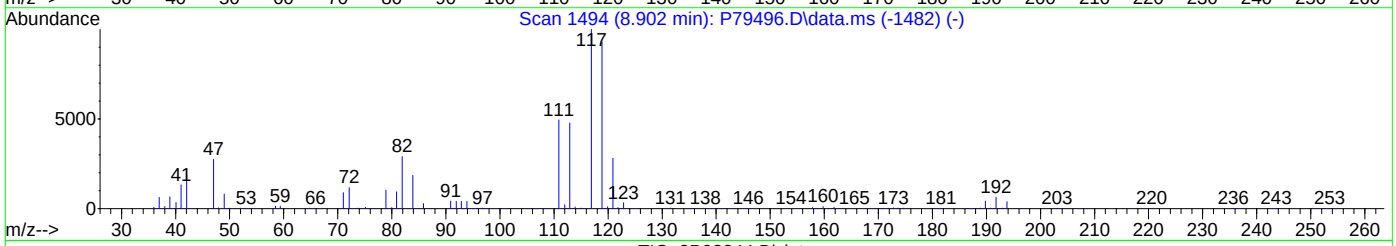
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 30.92ug/L

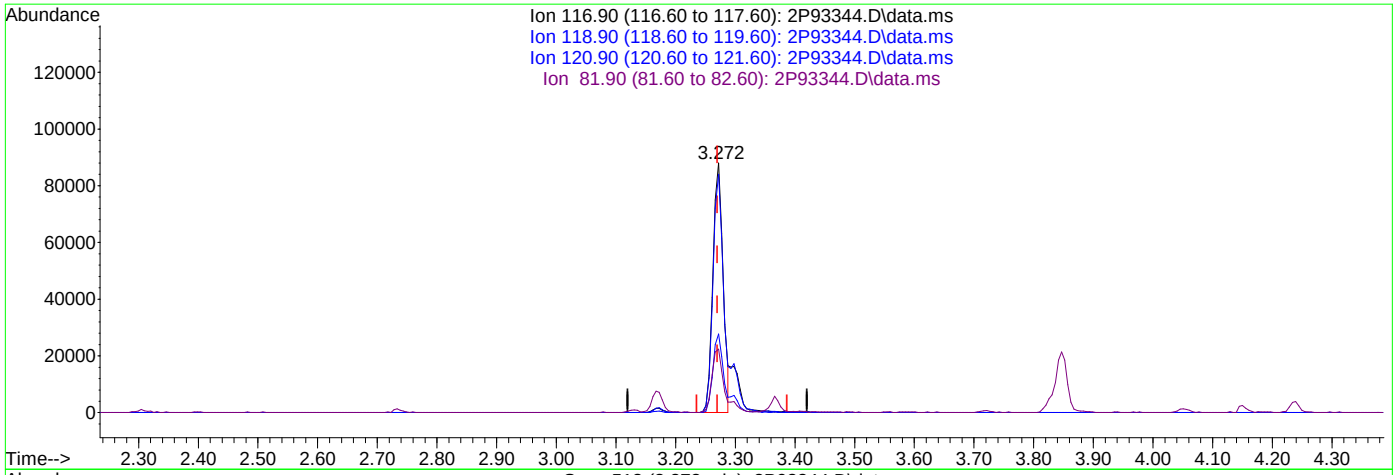
response 124220

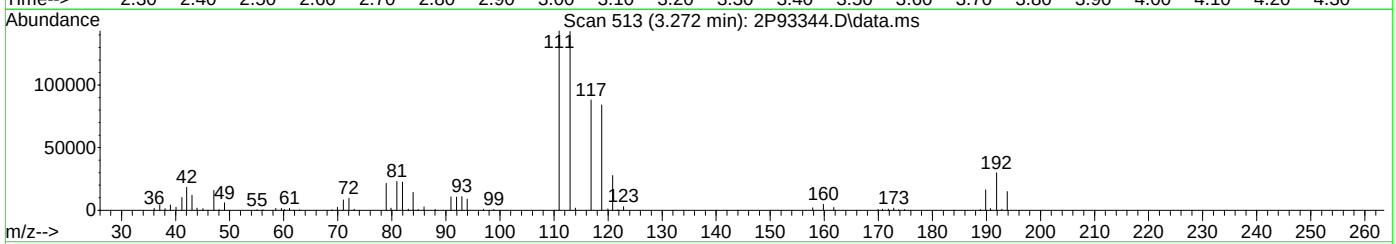
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.48
120.90	29.50	31.45
81.90	28.30	25.44

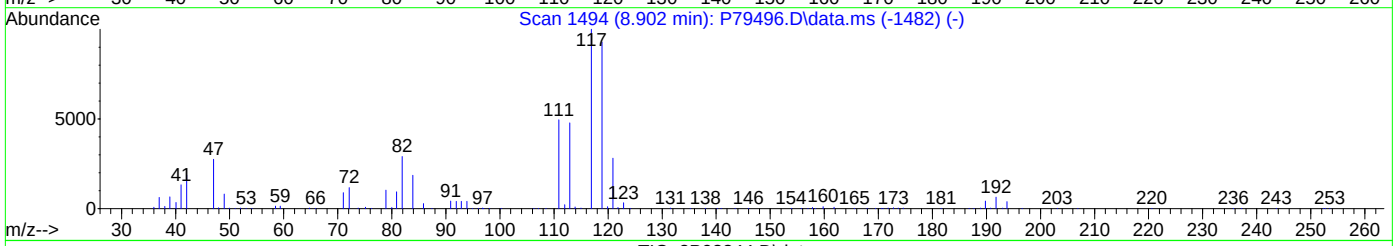
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 26.21ug/L m

response 103678

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.48
120.90	29.50	31.45
81.90	28.30	25.44

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
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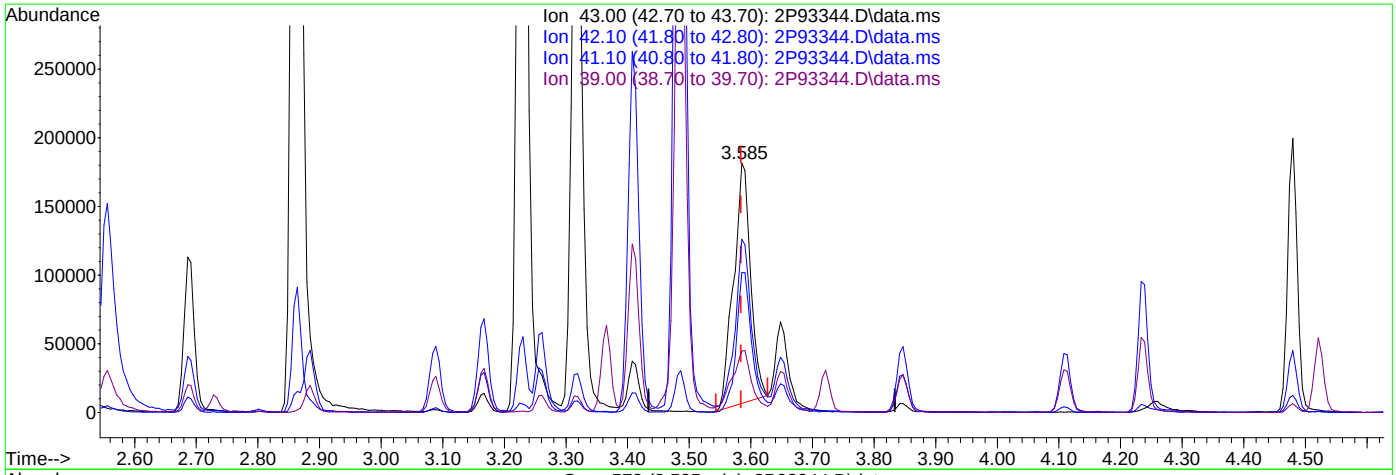
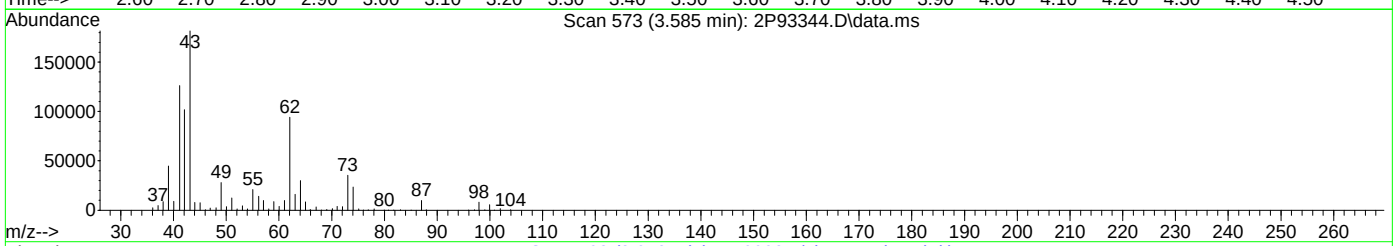
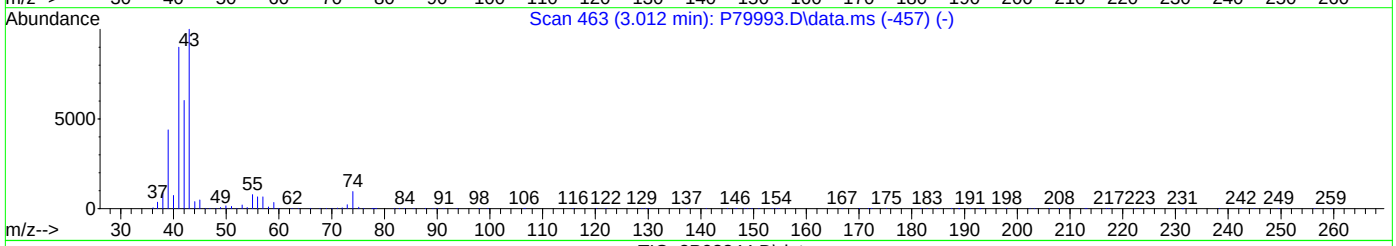






TIC: 2P93344.D\data.ms

(50) Isobutyl alcohol

3.585min (+0.001) 526.40ug/L

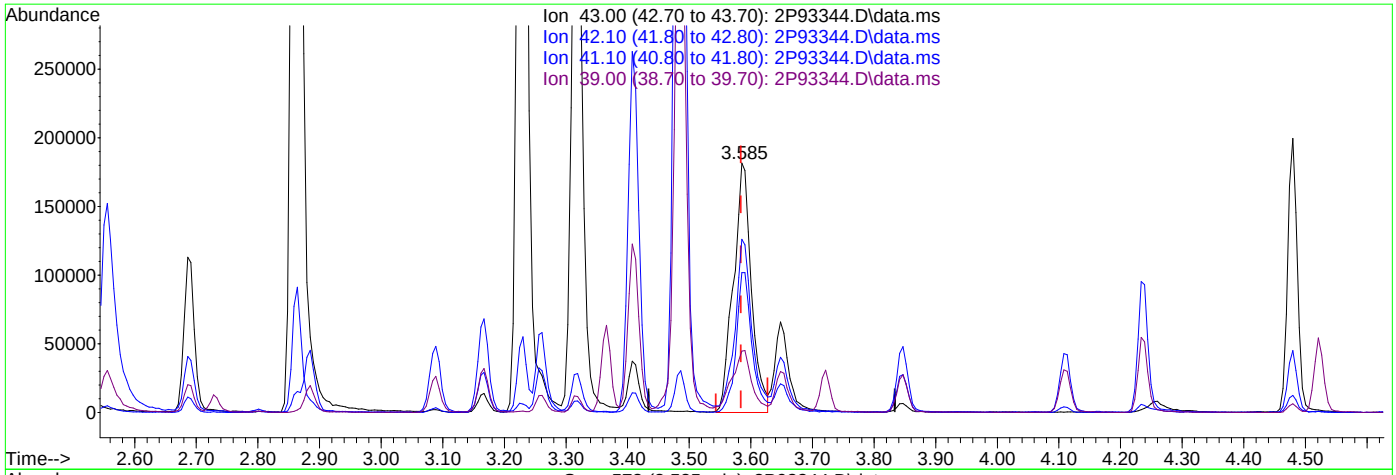
response 338229

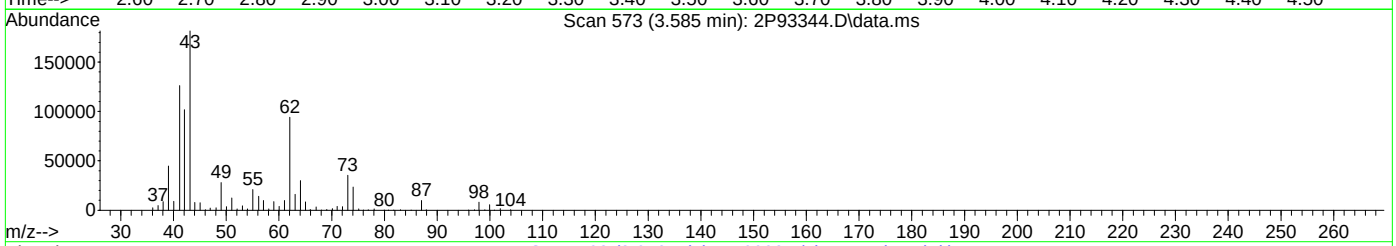
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.10
41.10	70.00	67.16
39.00	27.50	22.36

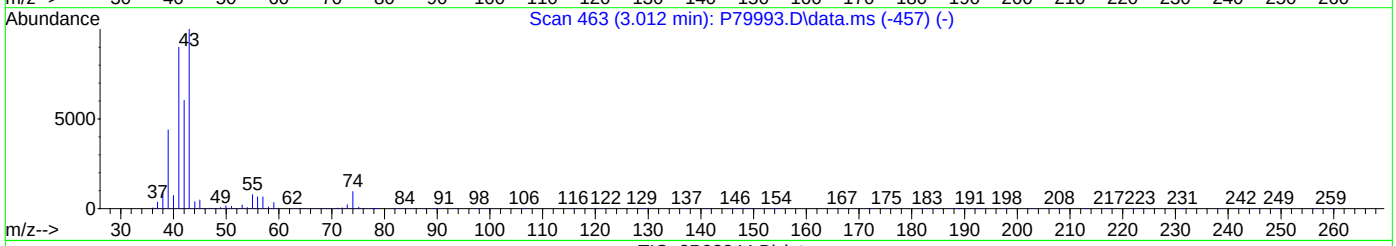
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(50) Isobutyl alcohol

3.585min (+0.001) 578.70ug/L m

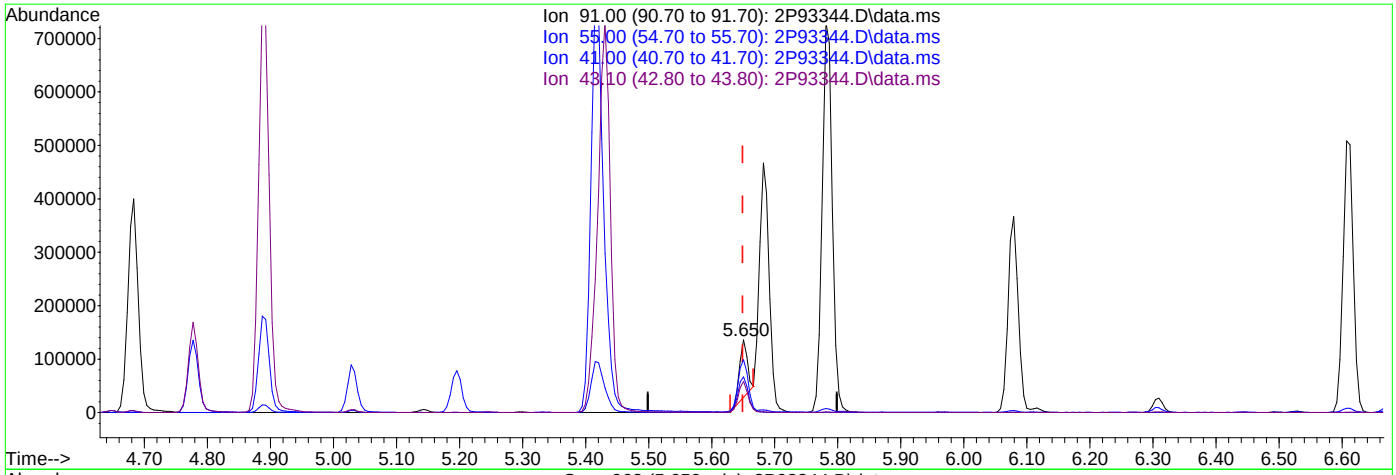
response 371834

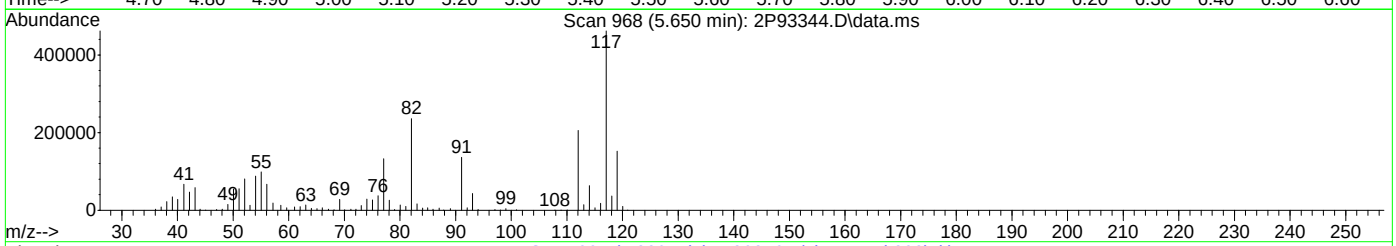
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.09
41.10	70.00	69.46
39.00	27.50	24.63

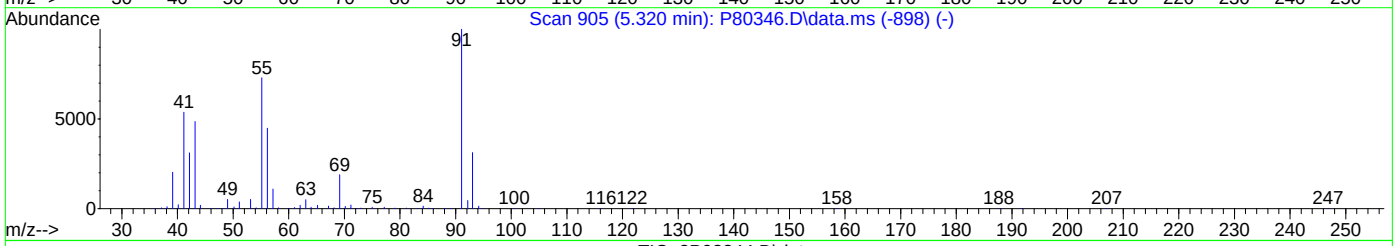
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 16.28ug/L

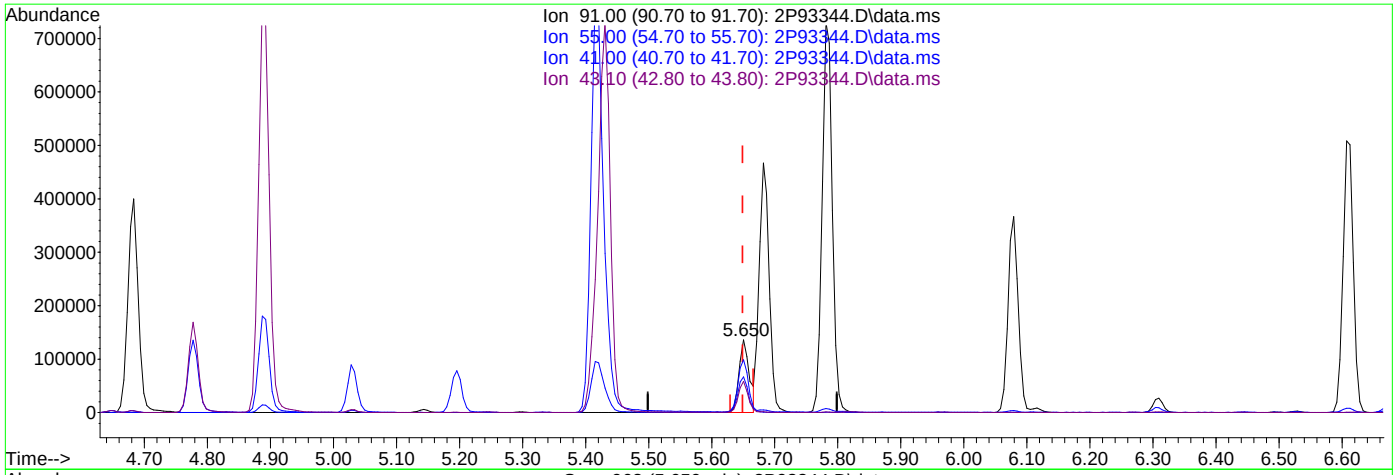
response 99465

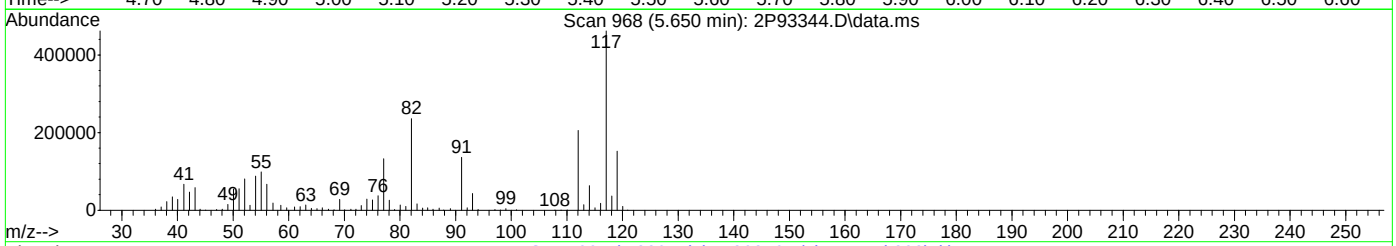
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	70.75
41.00	53.40	47.63
43.10	41.30	42.20

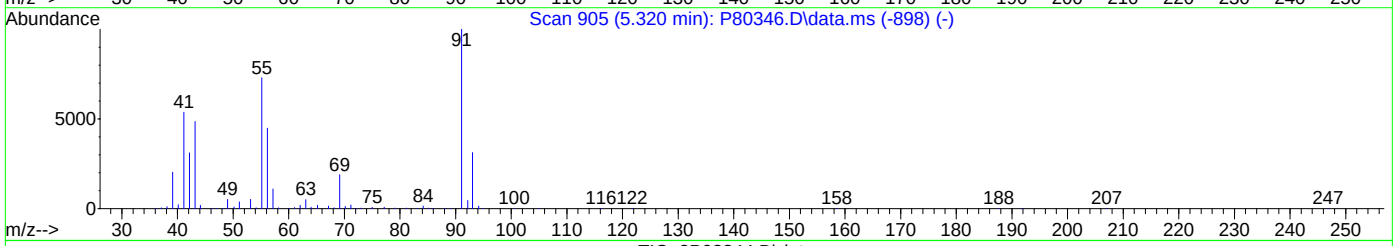
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 25.31ug/L m

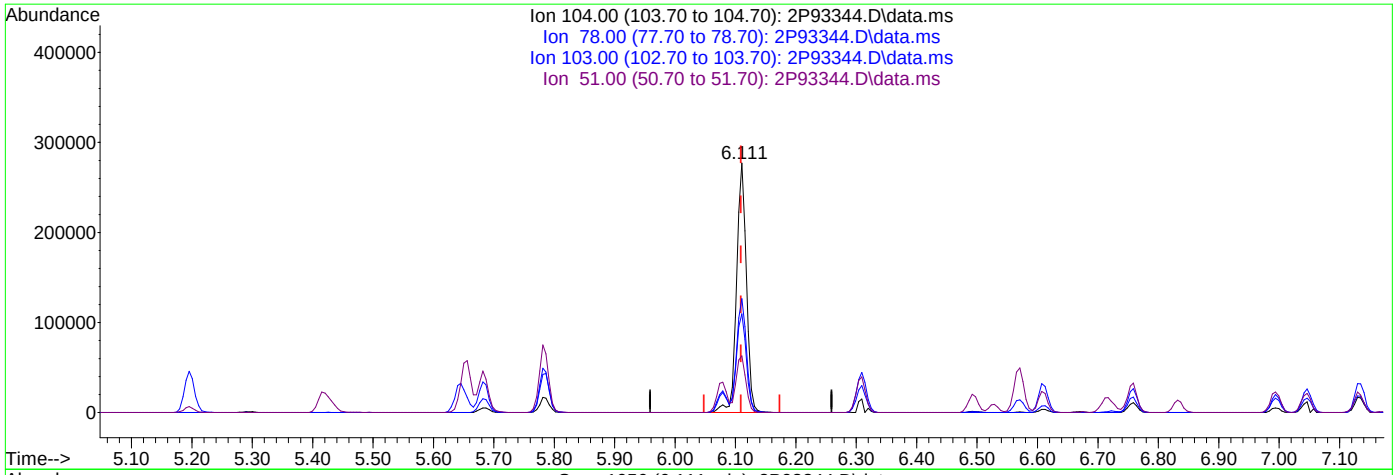
response 154640

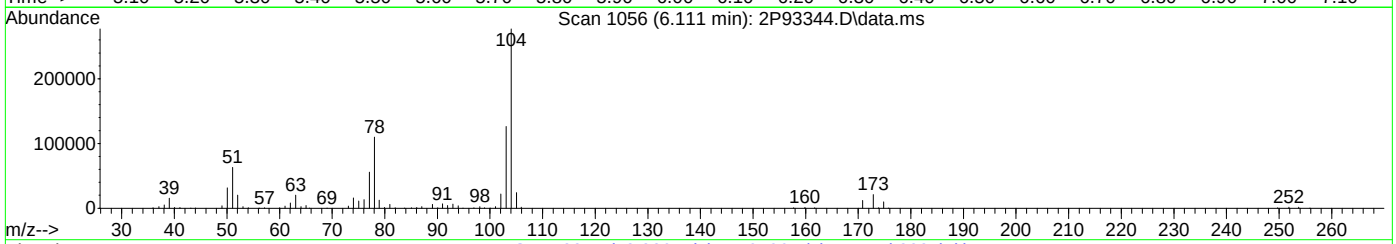
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	72.54
41.00	53.40	49.08
43.10	41.30	42.88

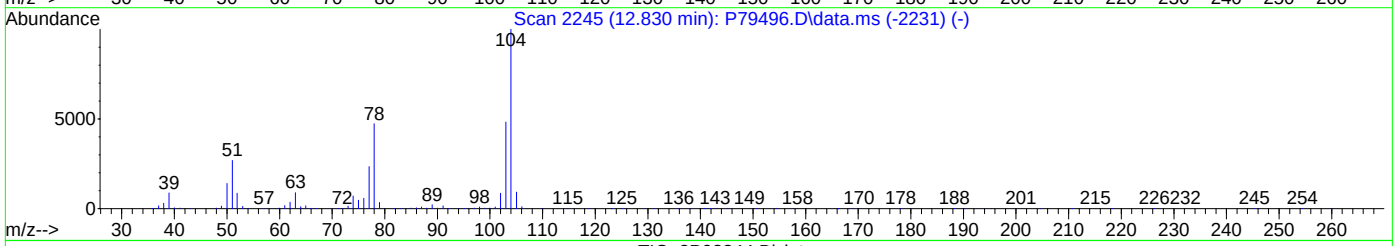
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(82) Styrene ( )

6.111min (+0.001) 25.00ug/L

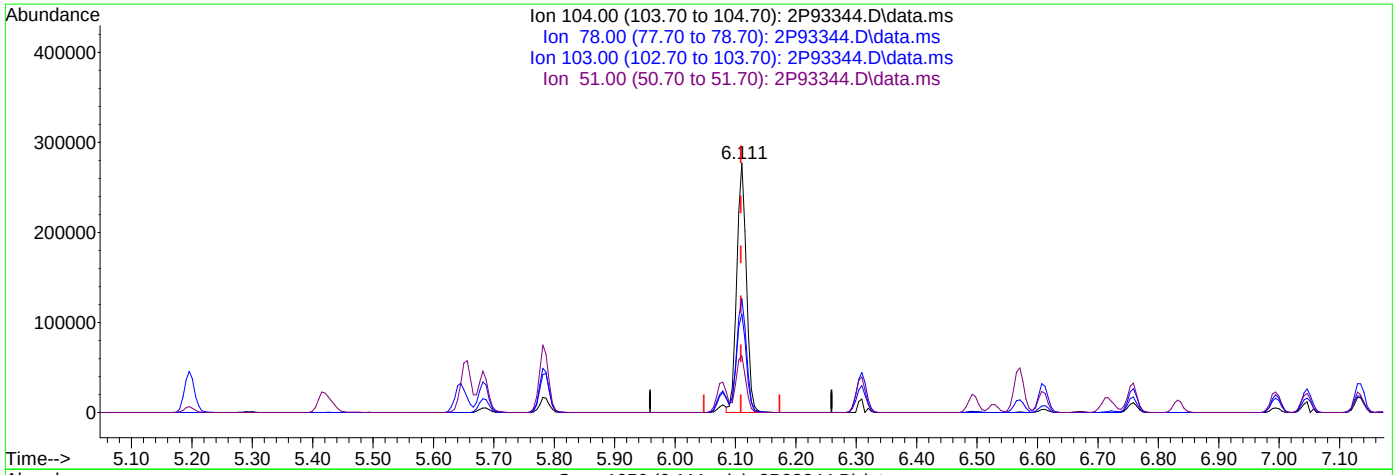
response 312657

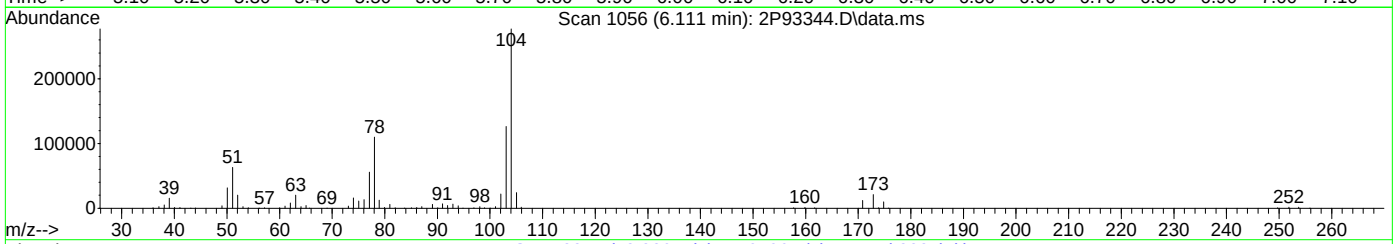
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	39.54
103.00	48.00	45.61
51.00	24.10	22.70

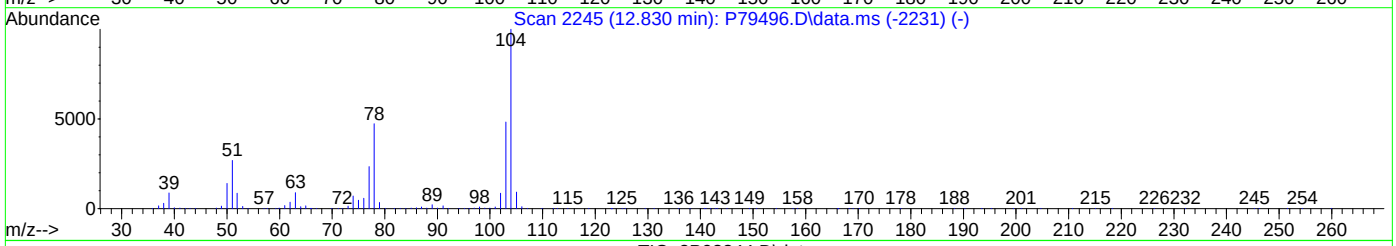
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93344.D
Acq On : 23 Sep 2022 9:57 pm
Operator : courtnef
Sample : FA98819-1MSD, 20X
Misc : MS52434,V2P3587,,,,,20
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Sep 25 21:00:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93344.D\data.ms

(82) Styrene ( )

6.111min (+0.001) 24.36ug/L m

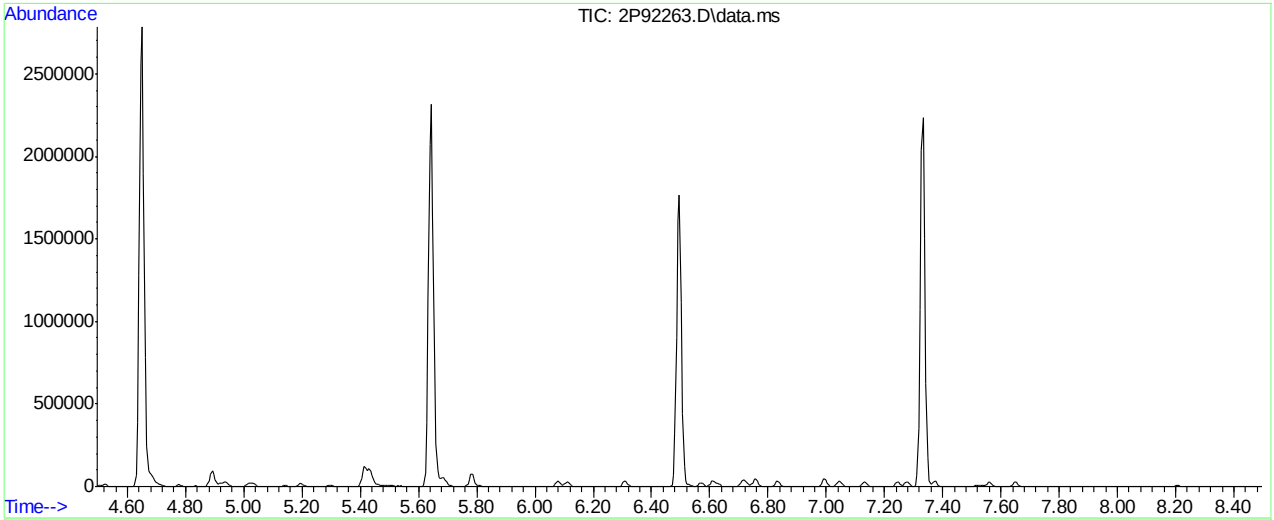
response 304668

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	39.54
103.00	48.00	45.61
51.00	24.10	22.70

Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\2022-08-24\2P92263.D Vial: 52
Acq On : 24 Aug 2022 9:50 am Operator: courtnef
Sample : BFB Inst : MSVOA13
Misc : MS52204,V2P3560,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1121

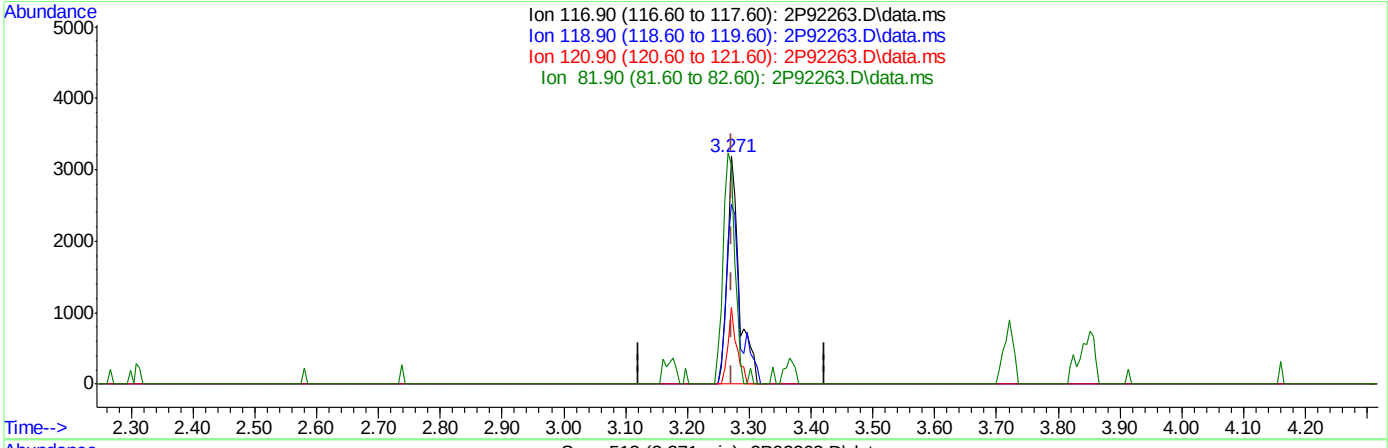
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	60128	PASS
75	95	30	60	49.4	160765	PASS
95	95	100	100	100.0	325269	PASS
96	95	5	9	6.5	21171	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.5	238912	PASS
175	174	5	9	7.7	18335	PASS
176	174	95	101	96.7	231146	PASS
177	176	5	9	6.6	15221	PASS

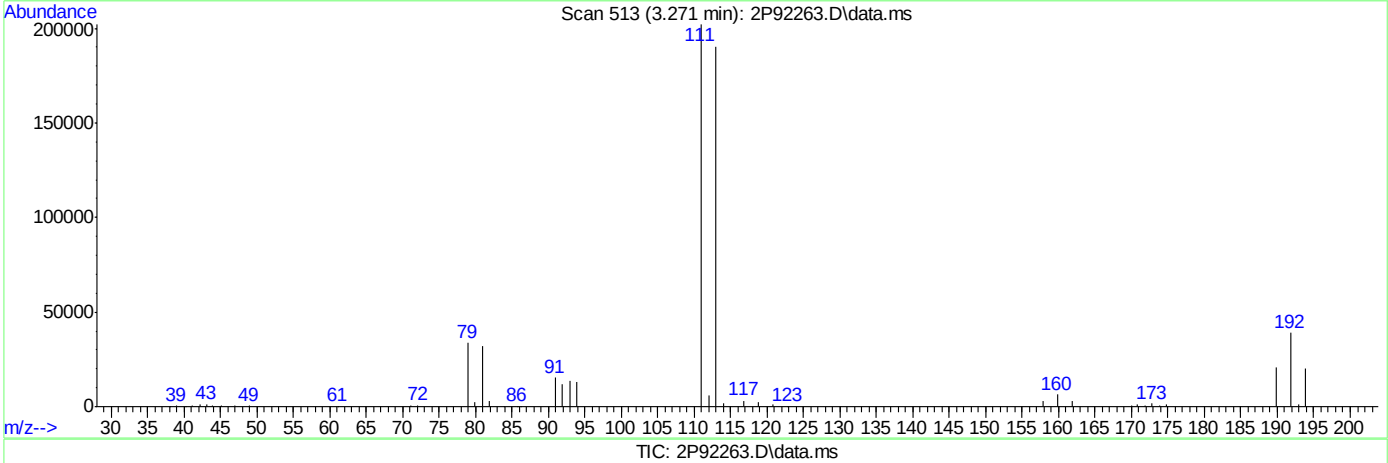
2P92263.D V2P_2022-08-24.M Wed Aug 24 10:08:43 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.79ug/L

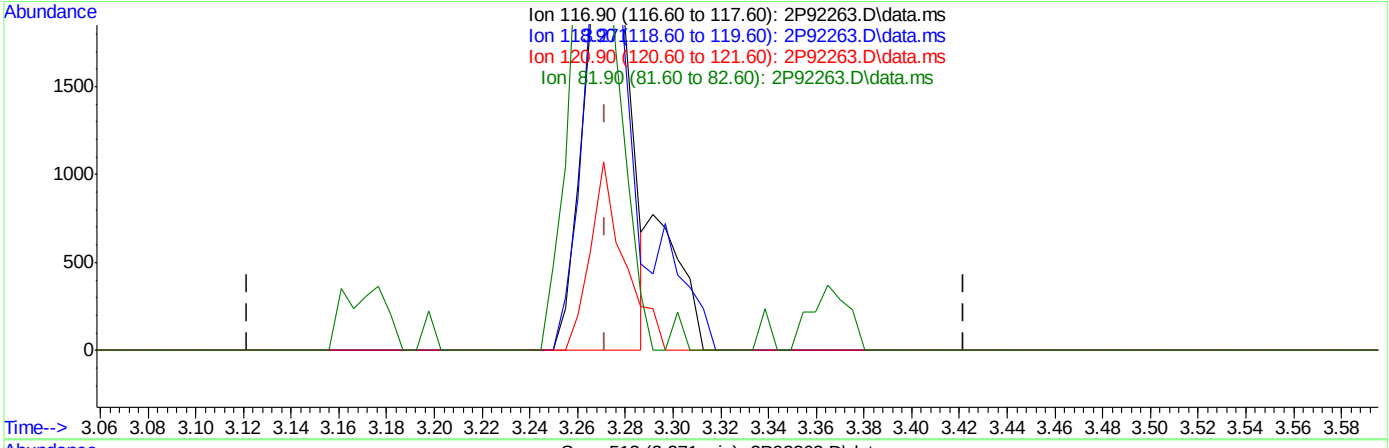
response 4233

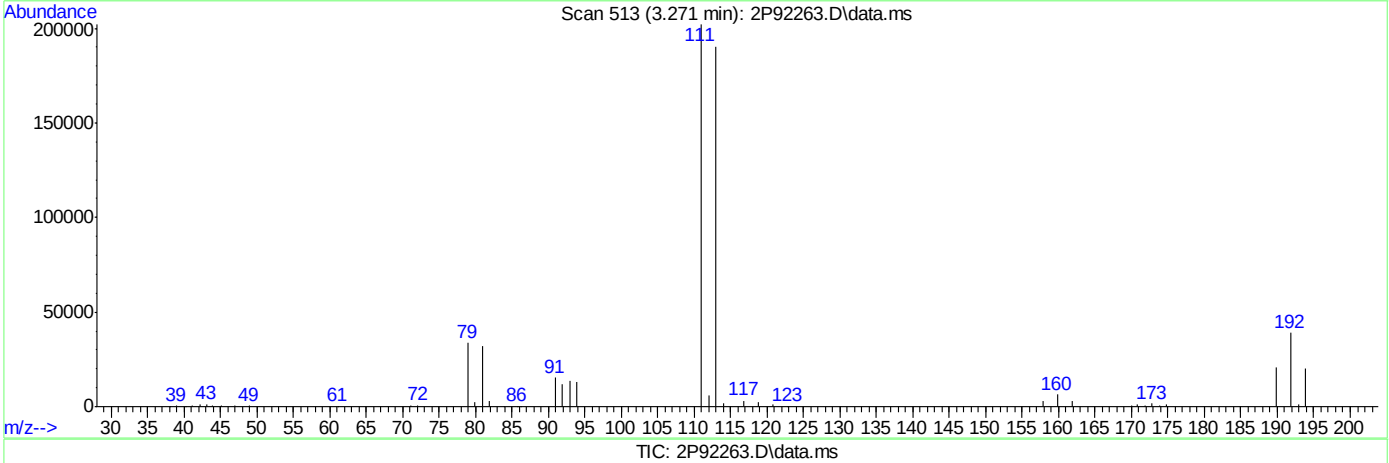
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.65ug/L m

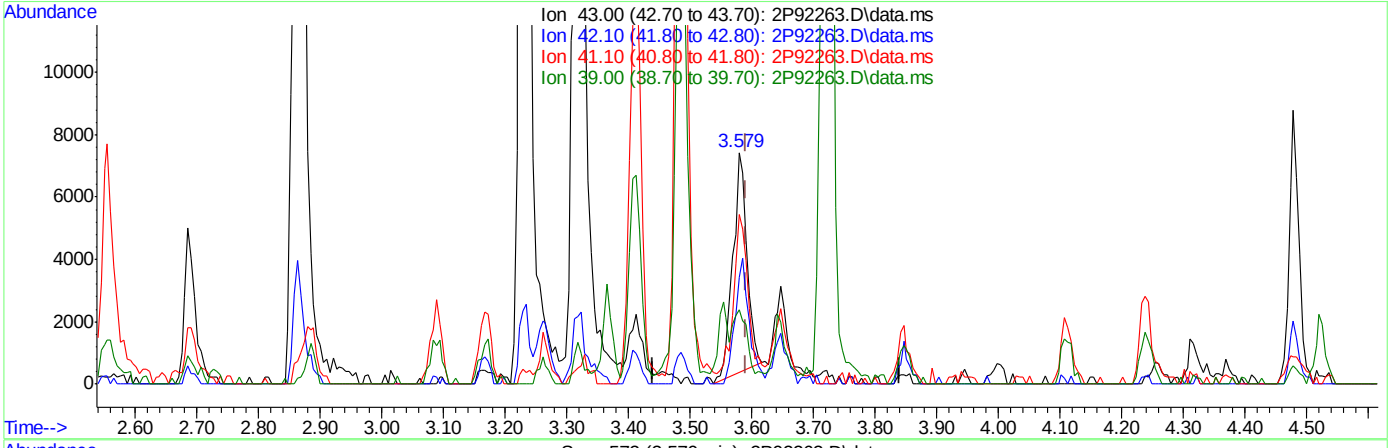
response 3481

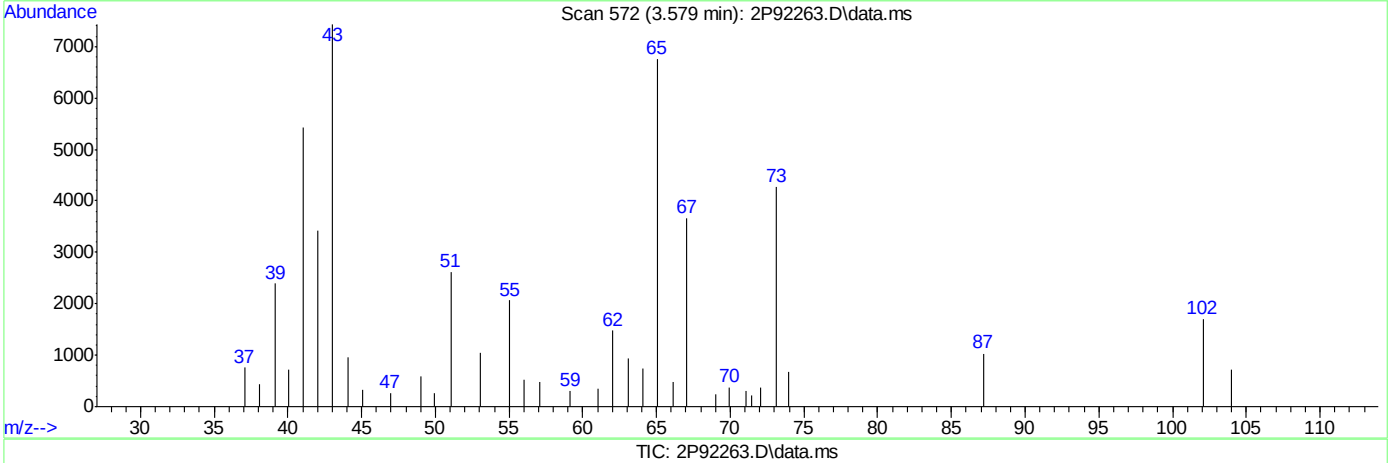
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 8.01ug/L

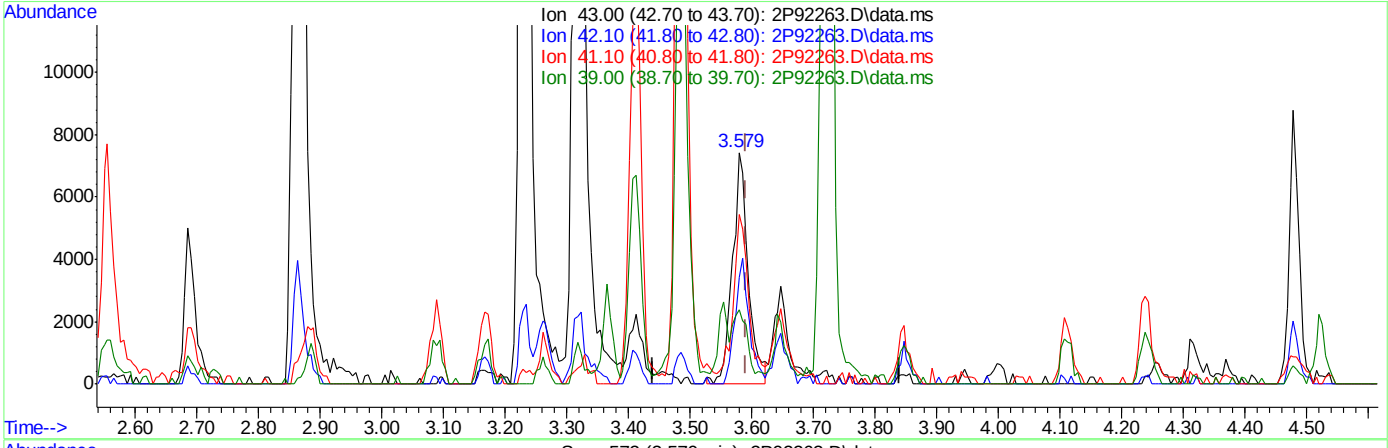
response 11164

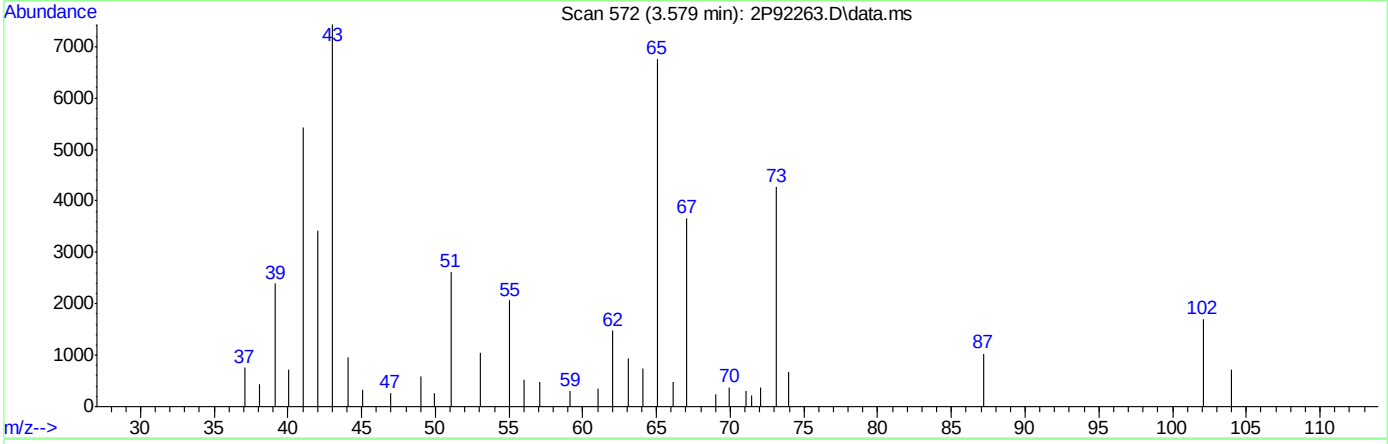
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	68.24
39.00	28.00	27.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 9.38ug/L m

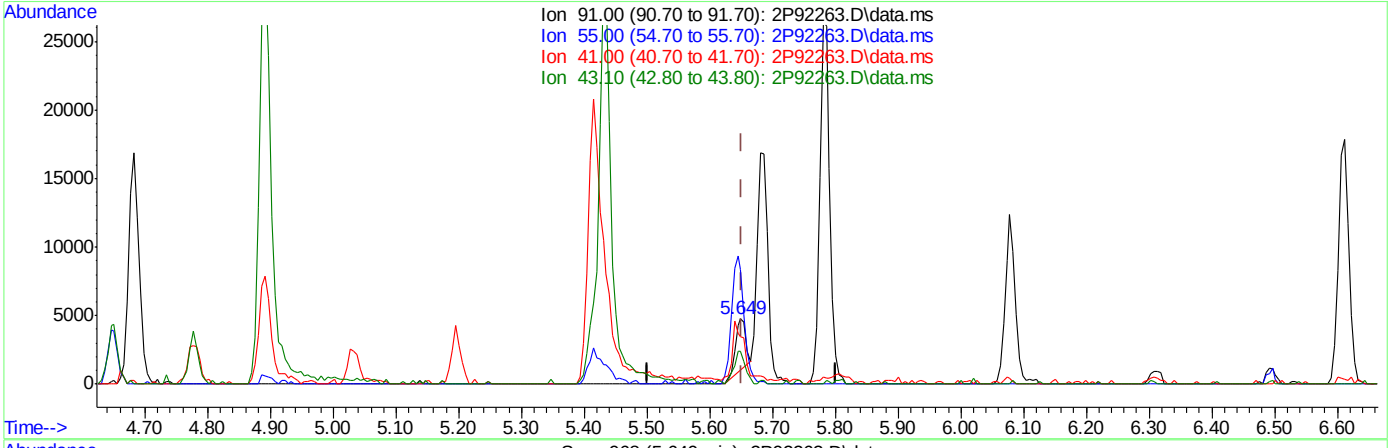
response 13077

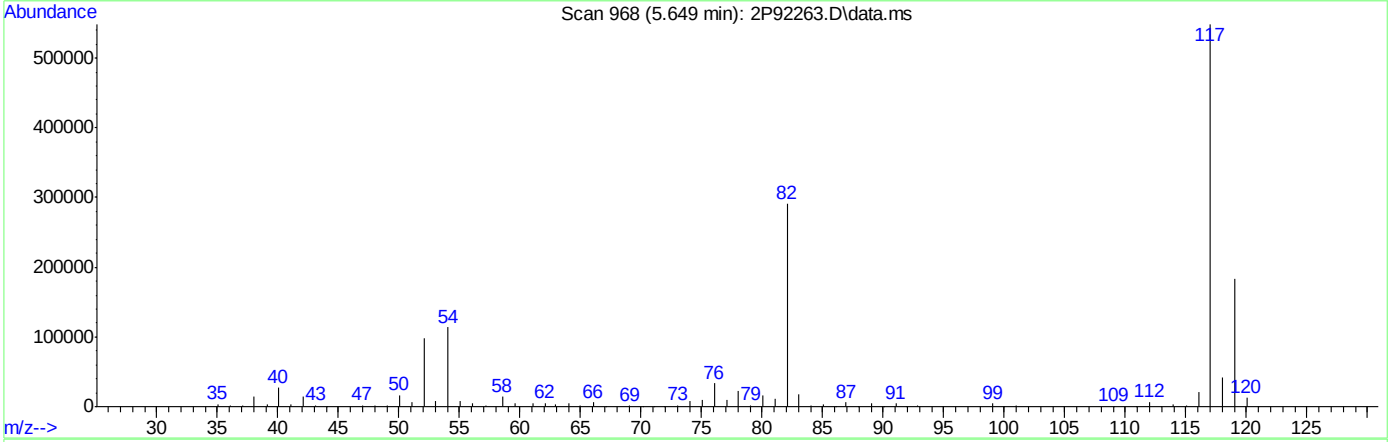
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	73.04
39.00	28.00	32.25

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 0.69ug/L

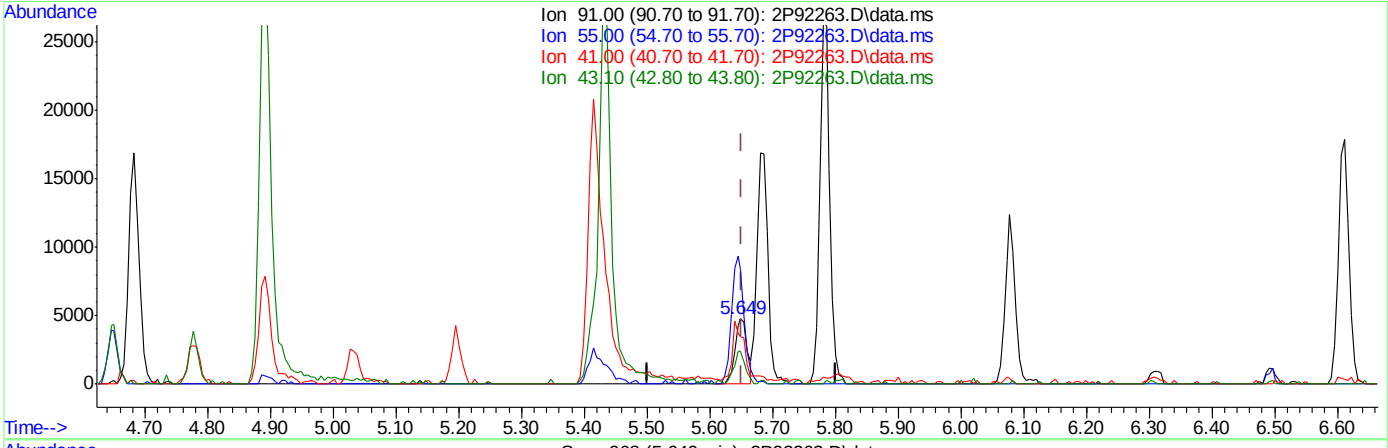
response 4594

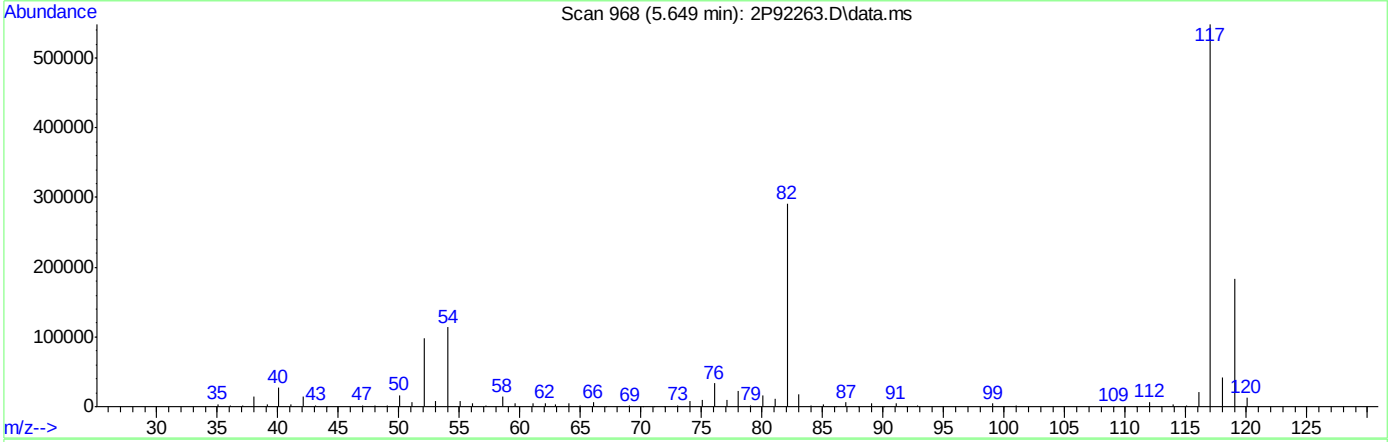
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	164.44#
41.00	83.00	62.38#
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 1.00ug/L m

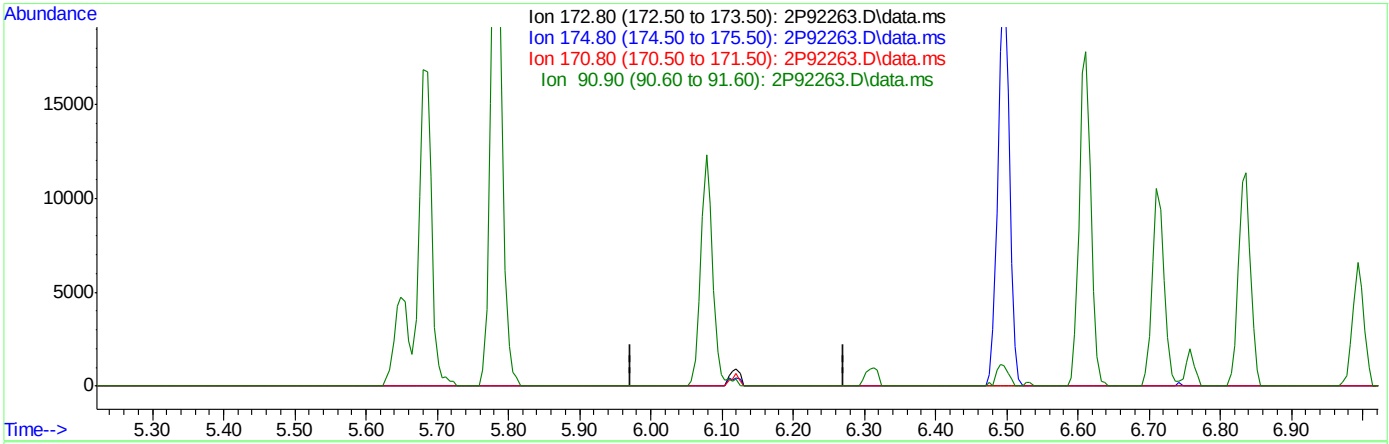
response 6715

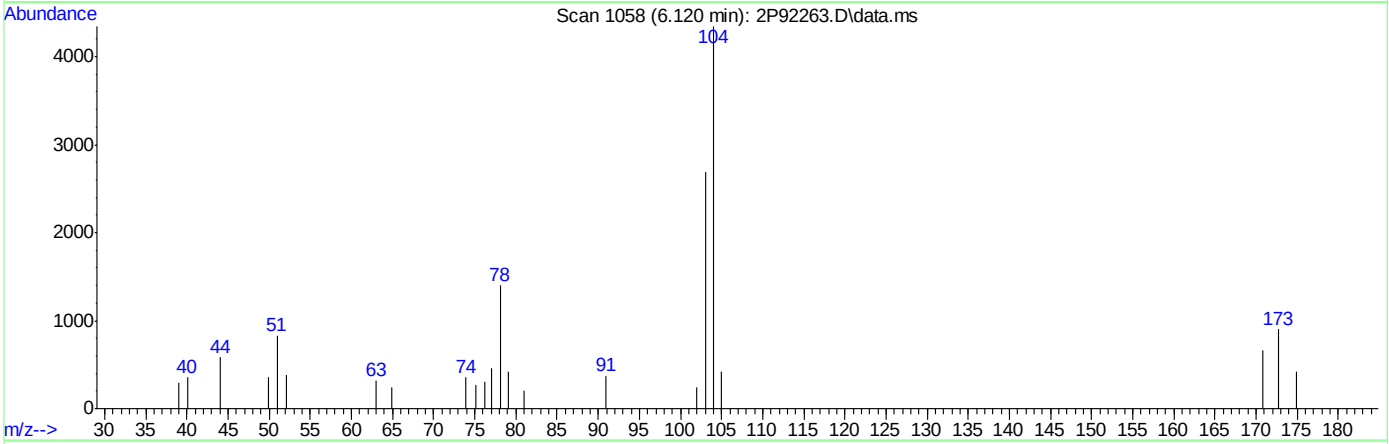
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	176.32#
41.00	83.00	73.01
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.122min (-6.122) 0.00ug/L

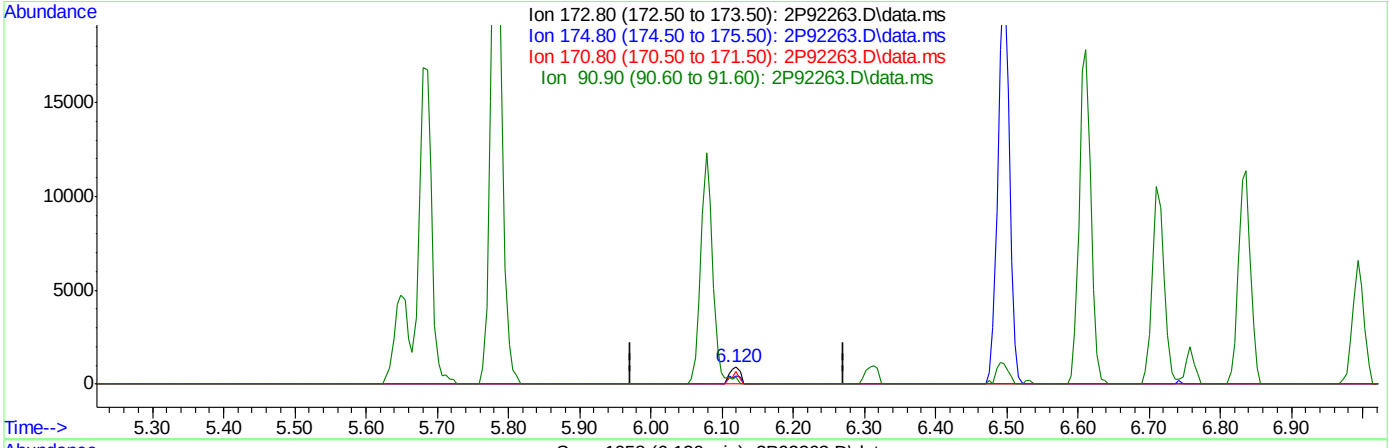
response 0

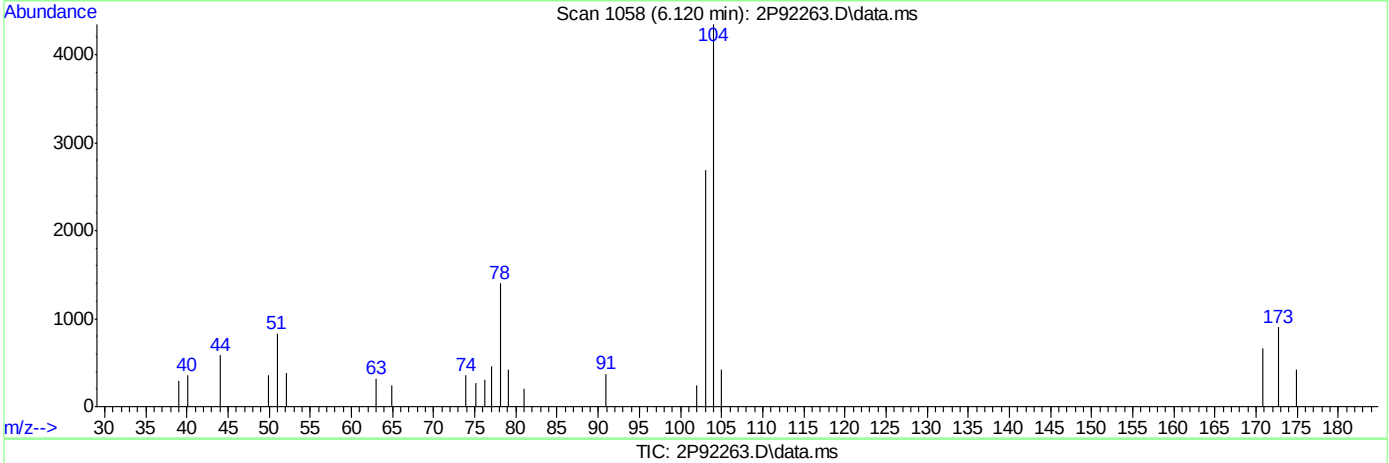
Ion	Exp%	Act%
172.80	100	0.00
174.80	46.40	0.00#
170.80	50.50	0.00#
90.90	21.40	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.120min (-0.002) 0.54ug/L m

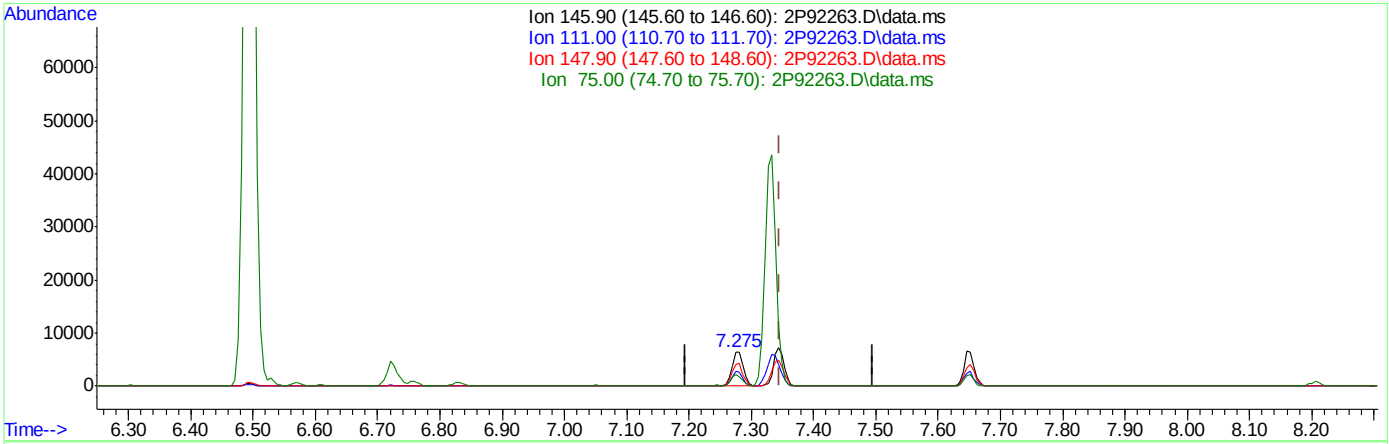
response 935

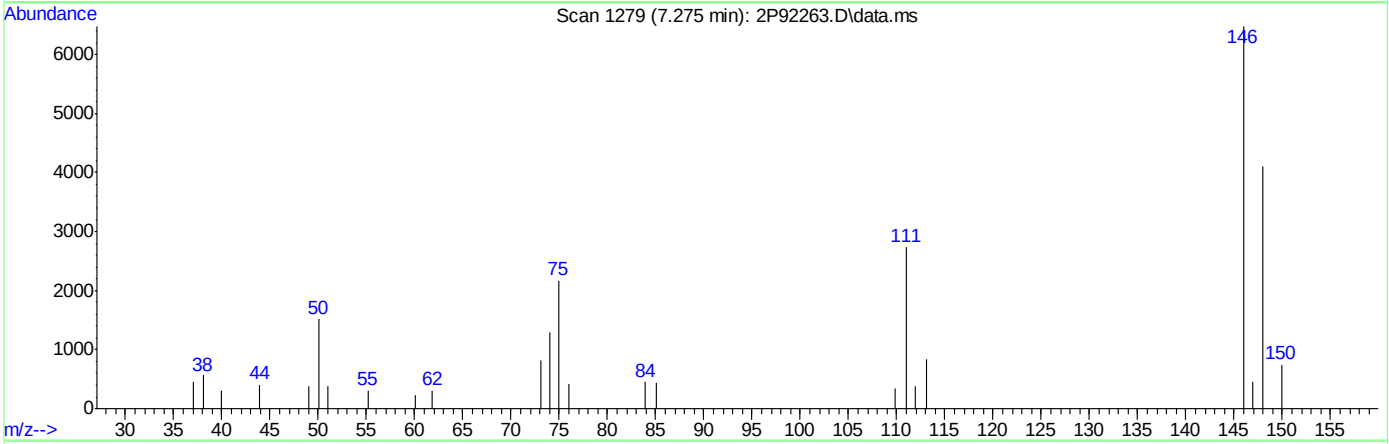
Ion	Exp%	Act%
172.80	100	100
174.80	46.40	47.28
170.80	50.50	73.03
90.90	21.40	41.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.275min (-0.071) 0.87ug/L

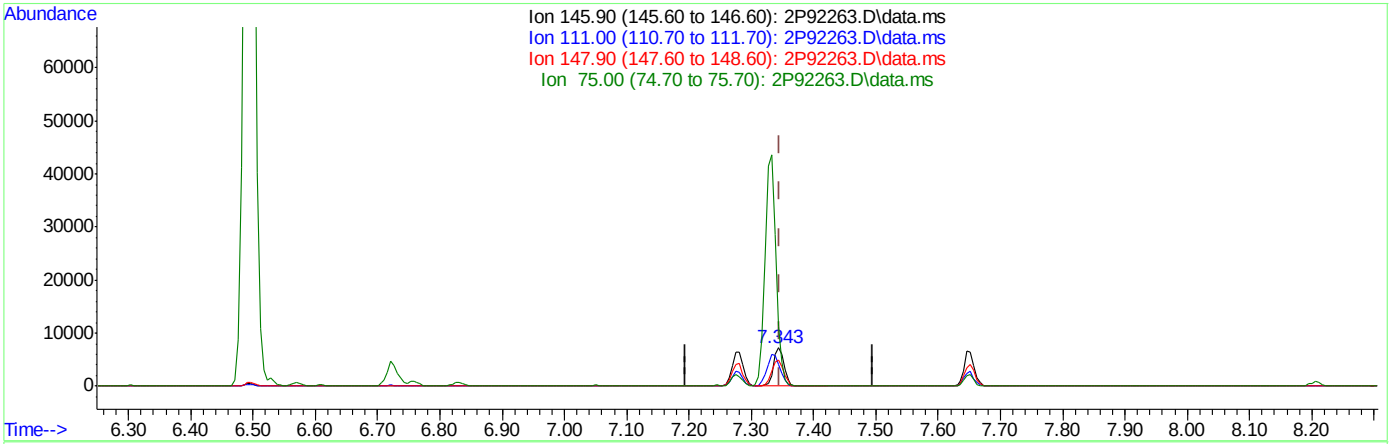
response 7813

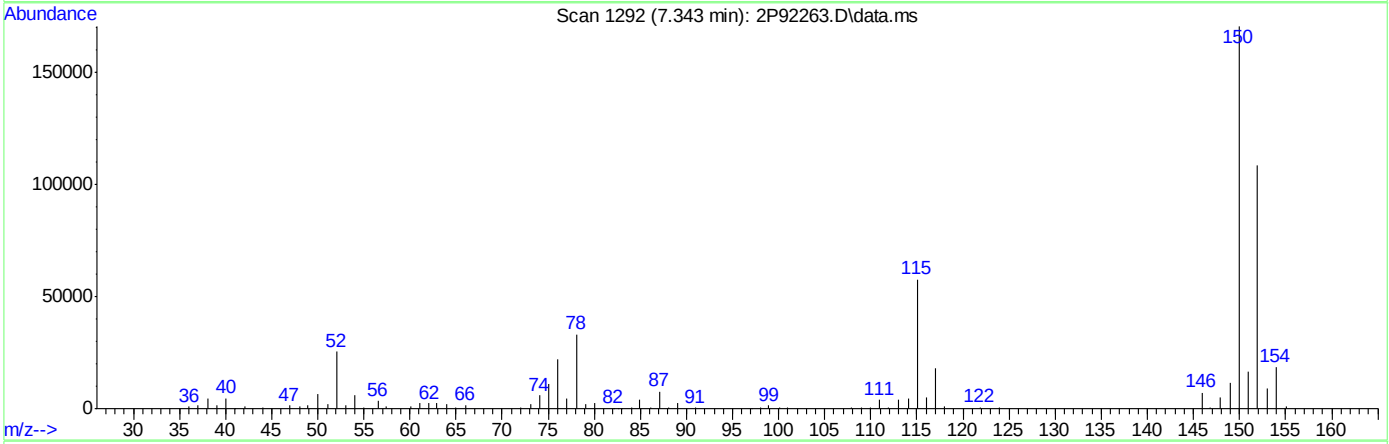
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	42.36
147.90	61.90	63.43
75.00	34.60	33.55

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (-0.003) 0.91ug/L m

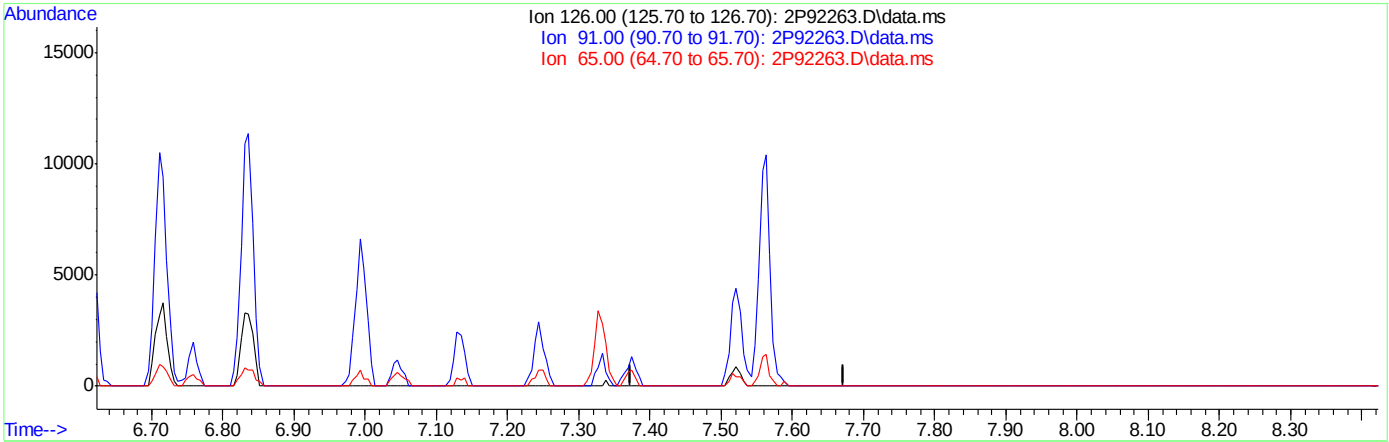
response 8240

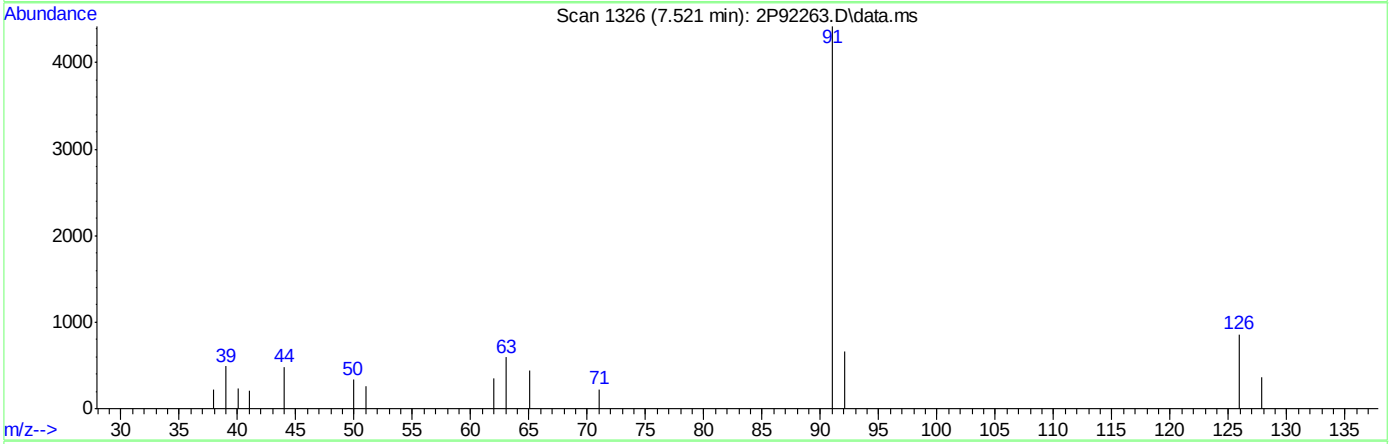
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	55.61
147.90	61.90	69.94
75.00	34.60	155.89#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.523min (-7.523) 0.00ug/L

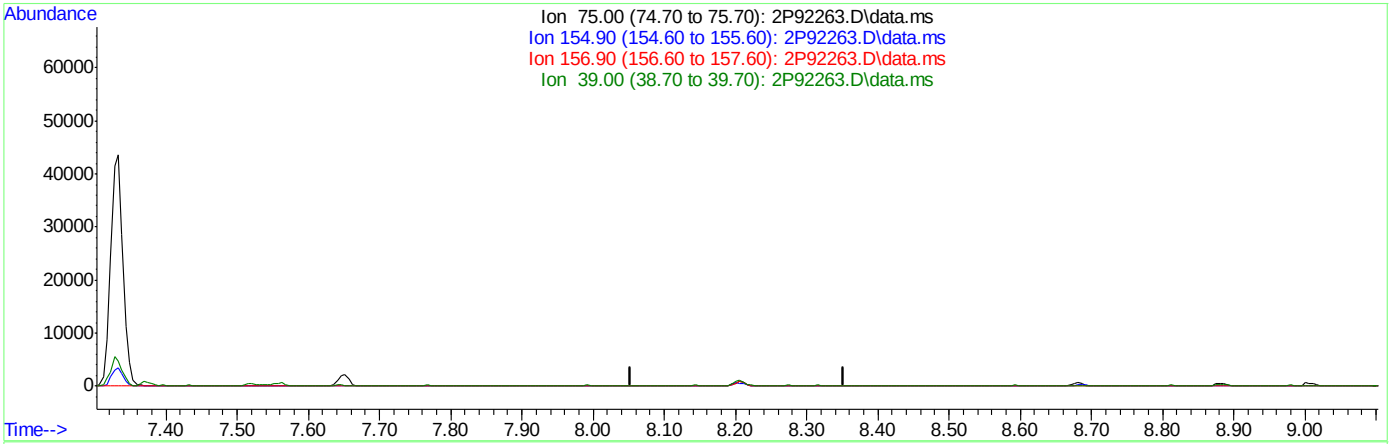
response 0

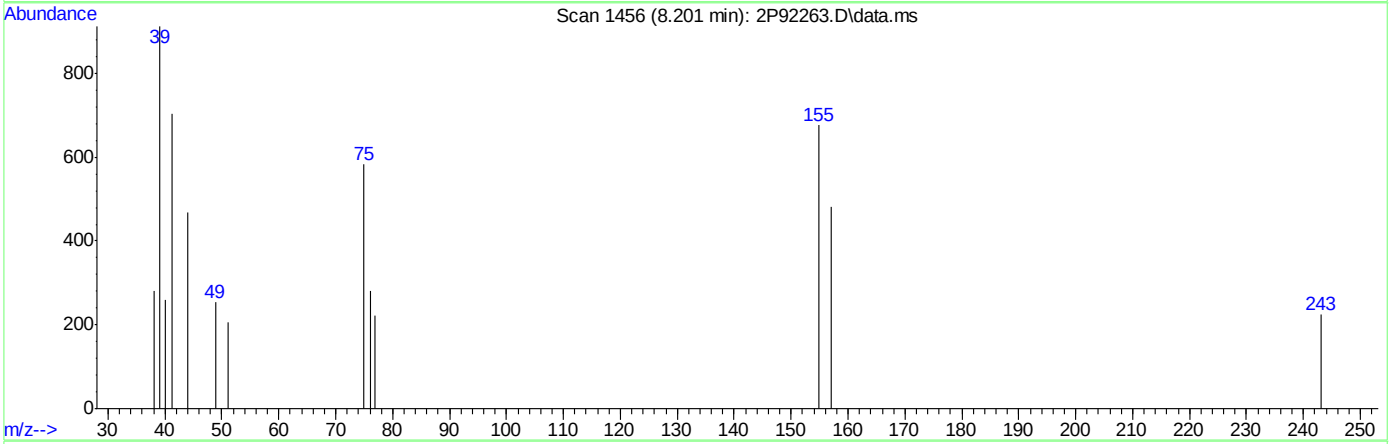
Ion	Exp%	Act%
126.00	100	0.00
91.00	524.80	0.00#
65.00	71.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.203min (-8.203) 0.00ug/L

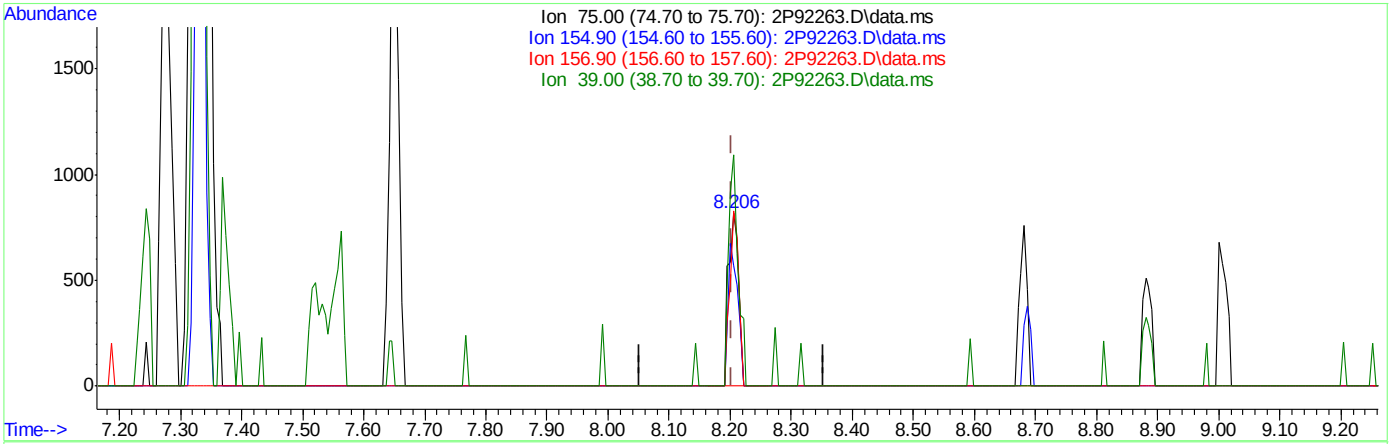
response 0

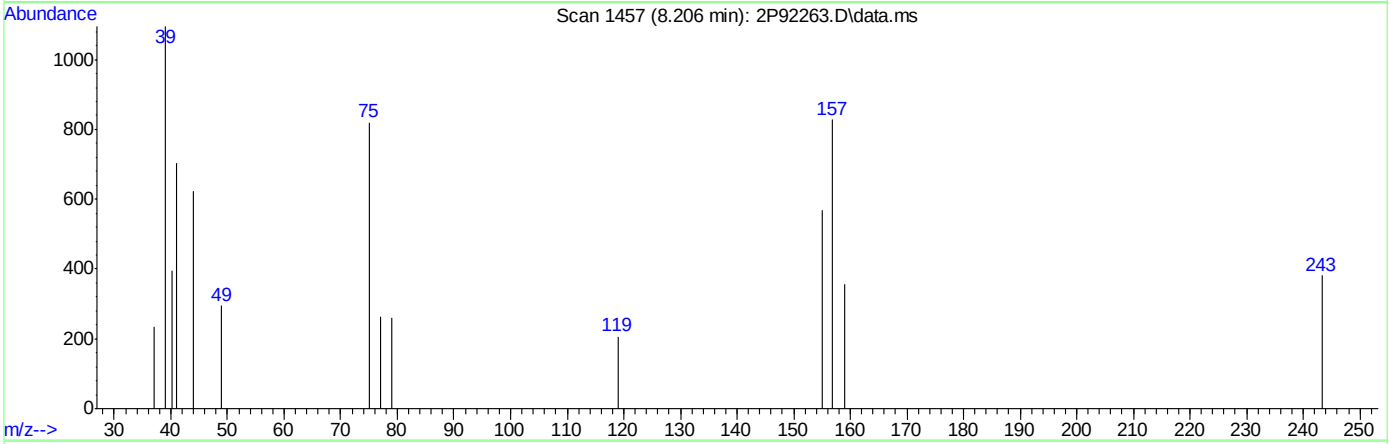
Ion	Exp%	Act%
75.00	100	0.00
154.90	74.10	0.00#
156.90	85.50	0.00#
39.00	122.20	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.206min (+0.003) 0.74ug/L m

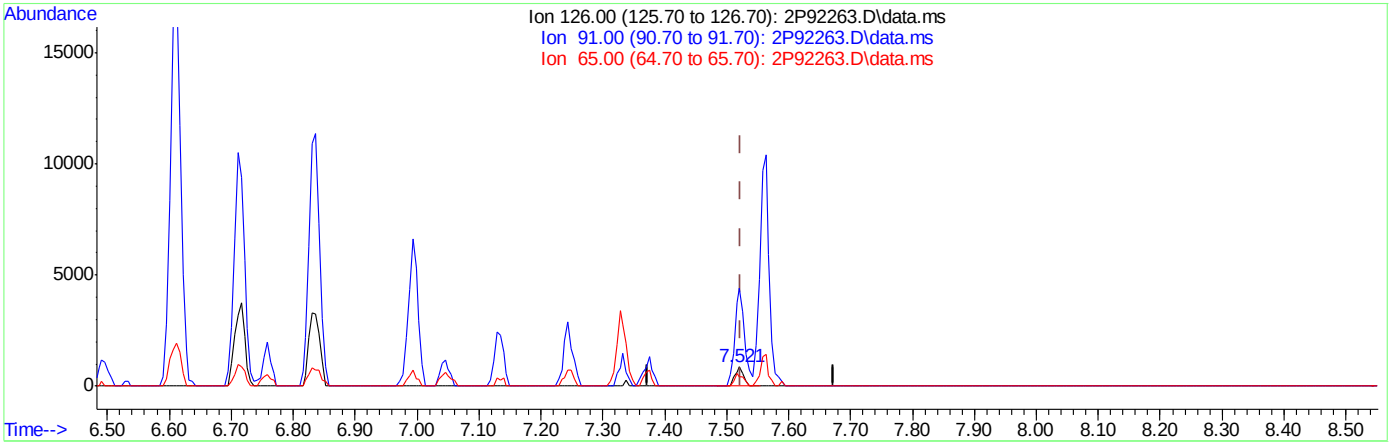
response 932

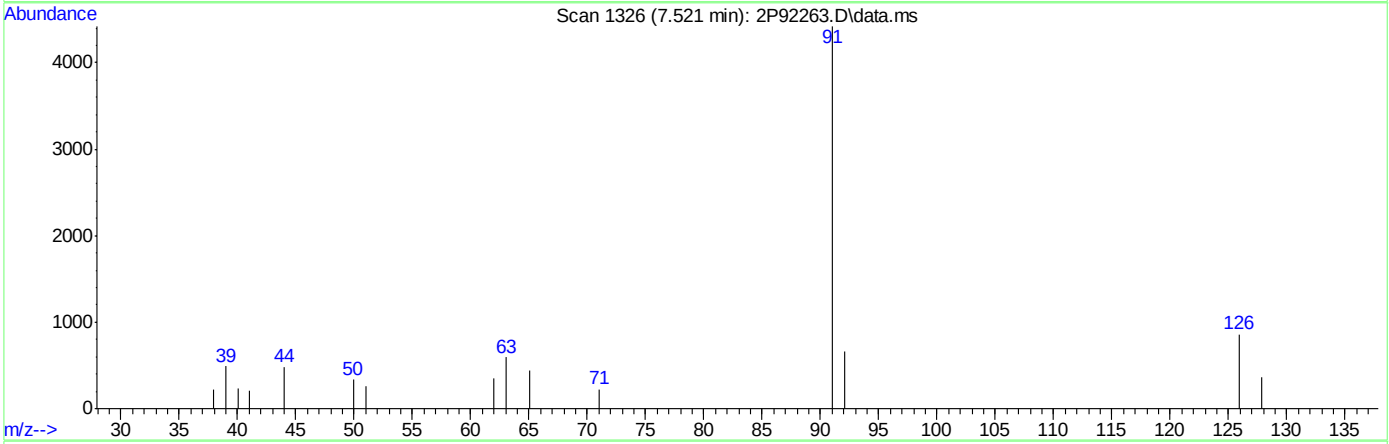
Ion	Exp%	Act%
75.00	100	100
154.90	74.10	69.60
156.90	85.50	101.10
39.00	122.20	133.70

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.521min (-0.002) 0.62ug/L m

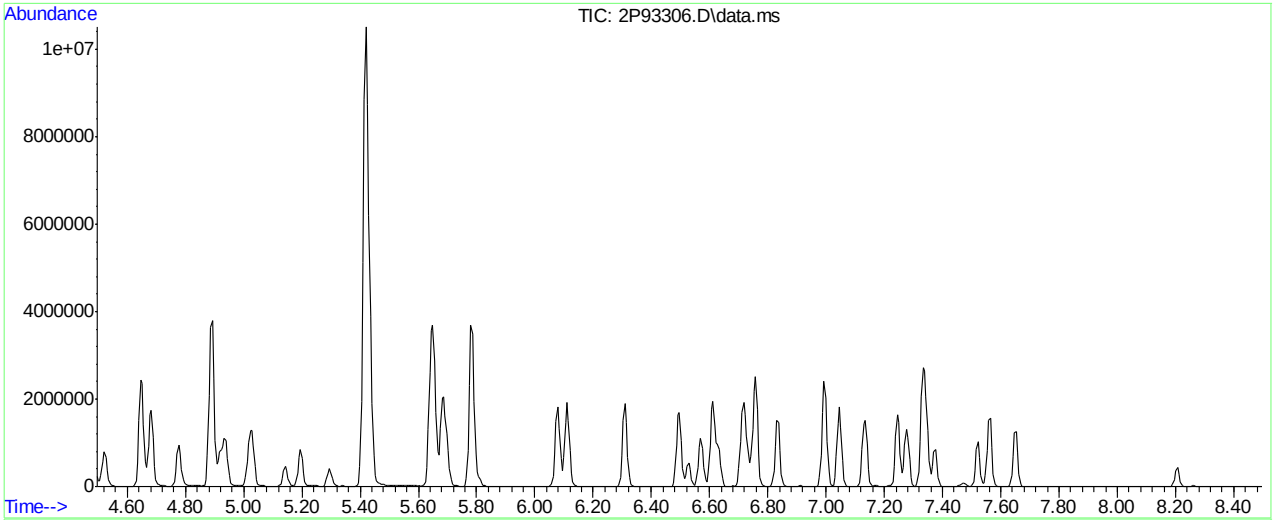
response 838

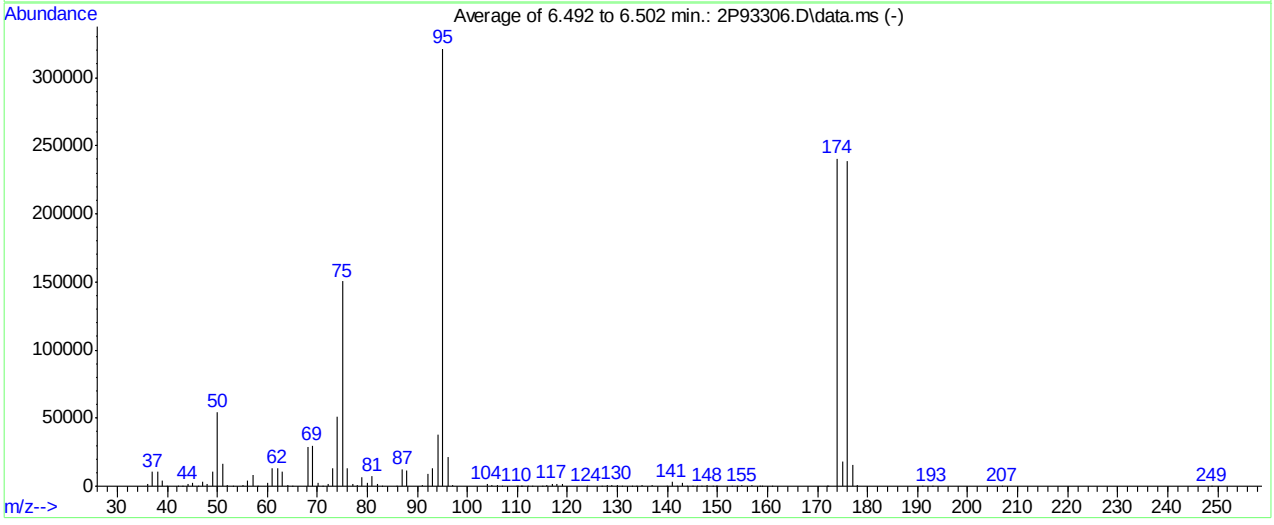
Ion	Exp%	Act%
126.00	100	100
91.00	524.80	516.36
65.00	71.60	51.29#
0.00	0.00	0.00

Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\2022-09-23\2P93306.D Vial: 52
Acq On : 23 Sep 2022 11:41 am Operator: courtnef
Sample : BFB Inst : MSVOA13
Misc : MS52362,V2P3586,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1122

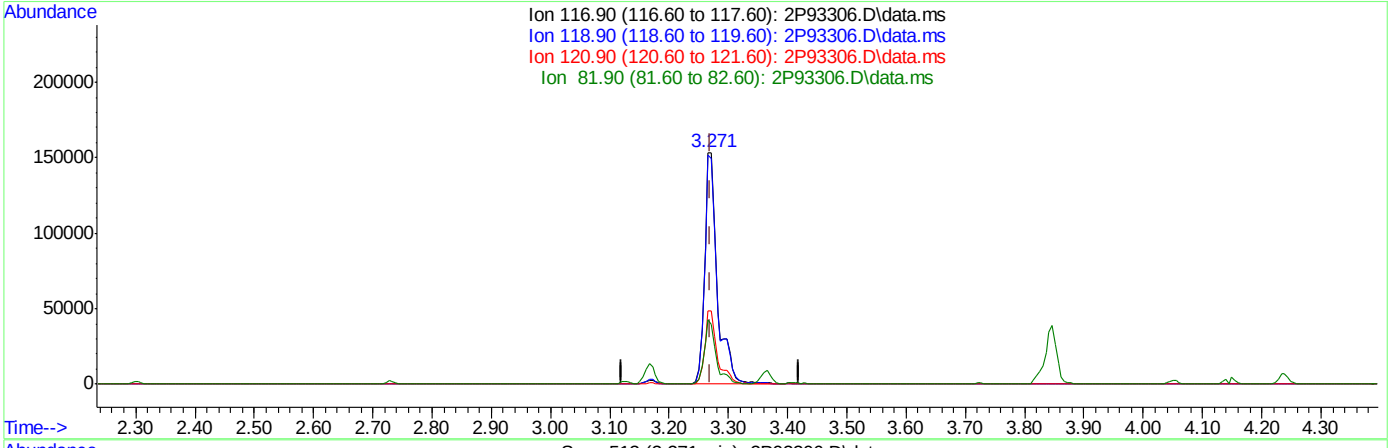
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	54330	PASS
75	95	30	60	46.8	150317	PASS
95	95	100	100	100.0	321365	PASS
96	95	5	9	6.6	21075	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.9	240618	PASS
175	174	5	9	7.7	18458	PASS
176	174	95	101	99.1	238400	PASS
177	176	5	9	6.7	15984	PASS

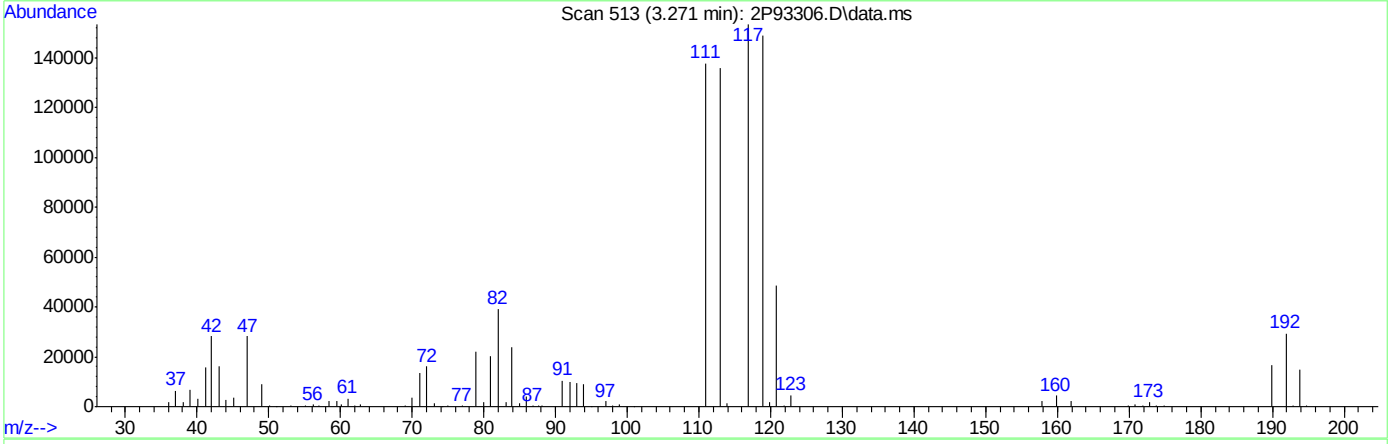
2P93306.D V2P_2022-08-24.M Fri Sep 23 11:56:55 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 49.50ug/L

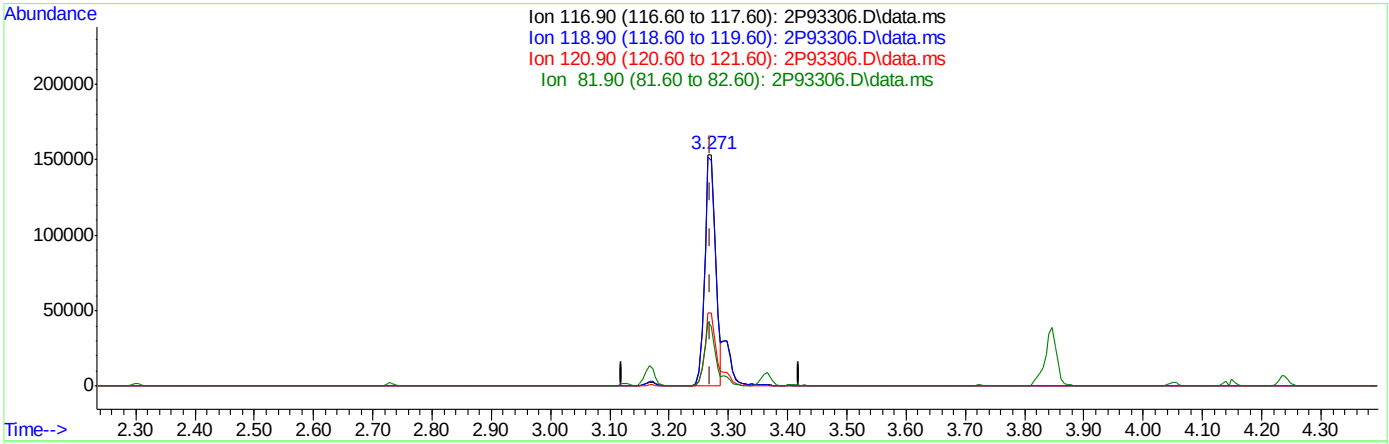
response 230963

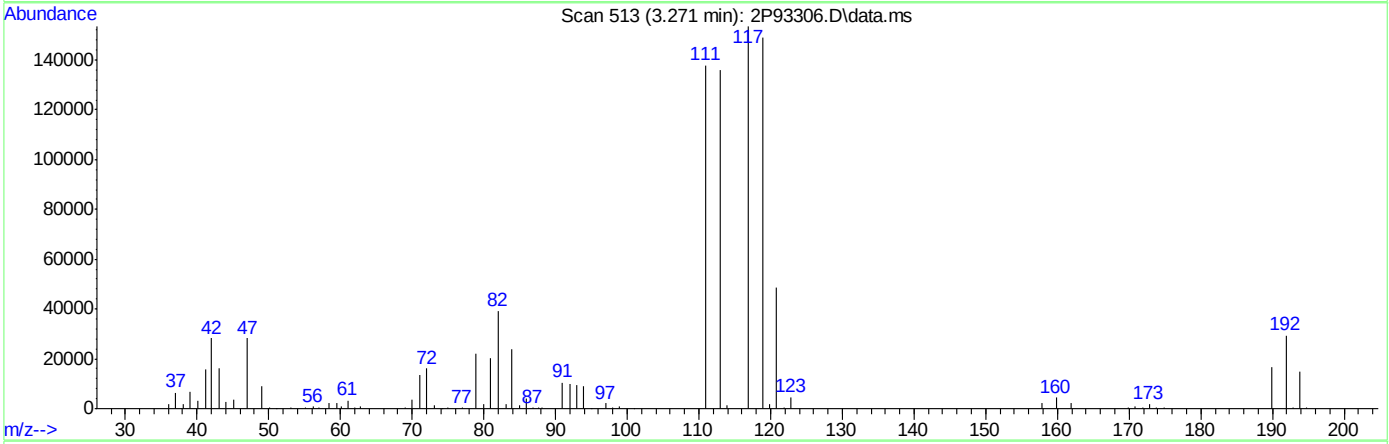
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.42

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 42.93ug/L m

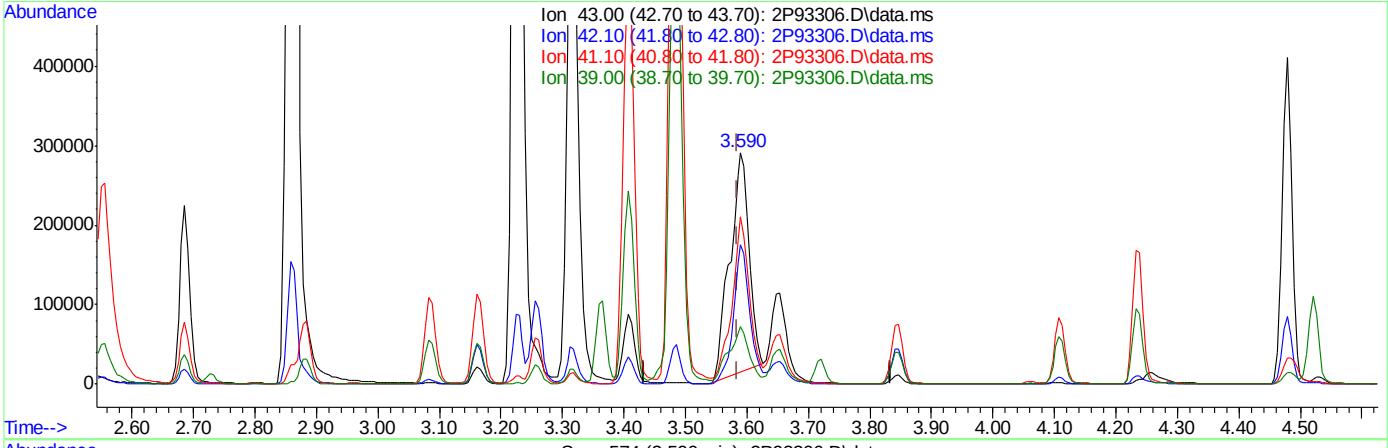
response 196250

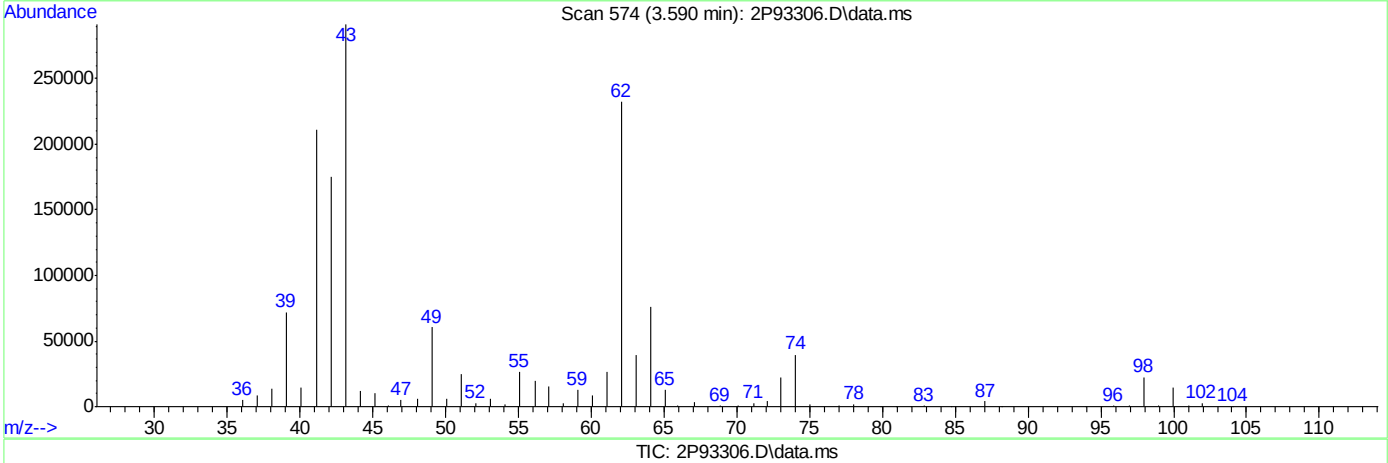
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.66

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 857.25ug/L

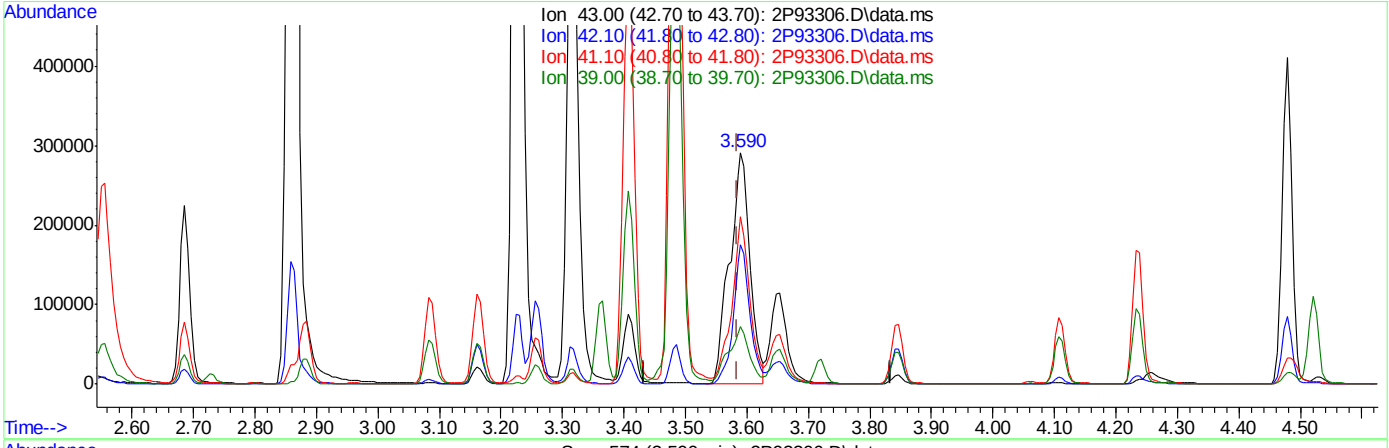
response 603049

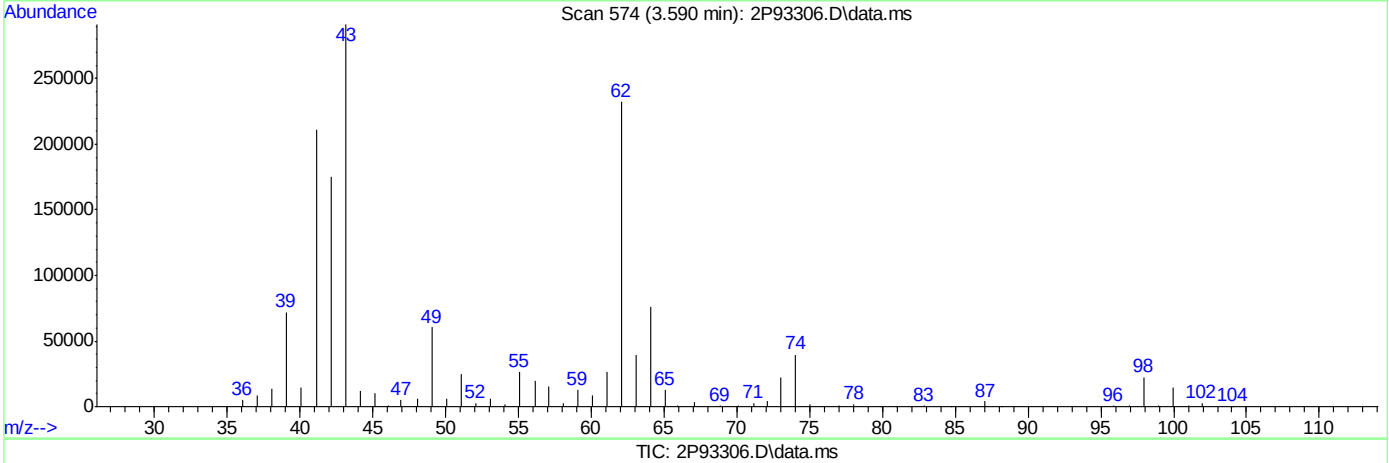
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.32
41.10	70.00	70.12
39.00	27.50	23.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 957.41ug/L m

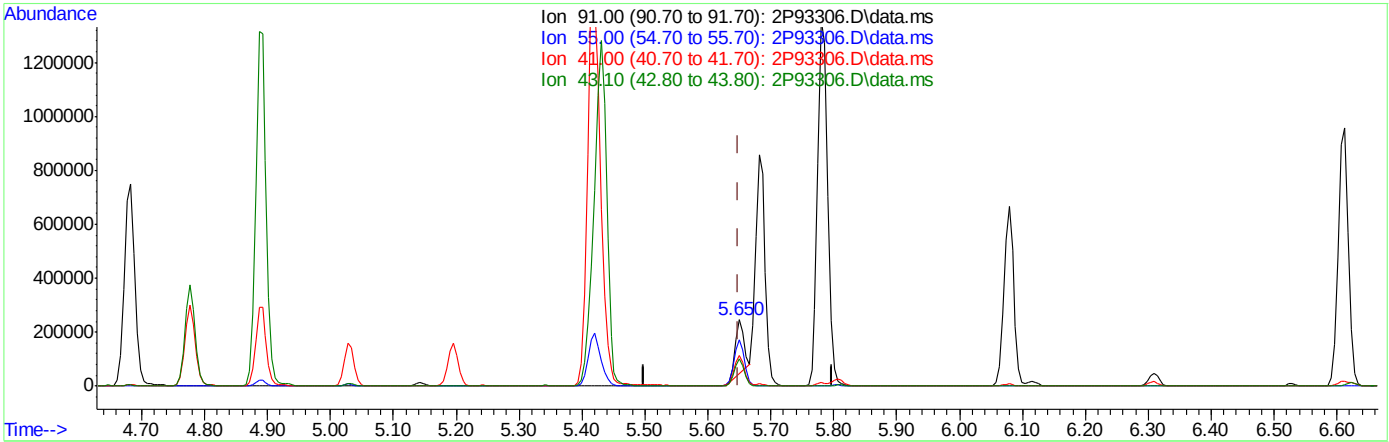
response 673510

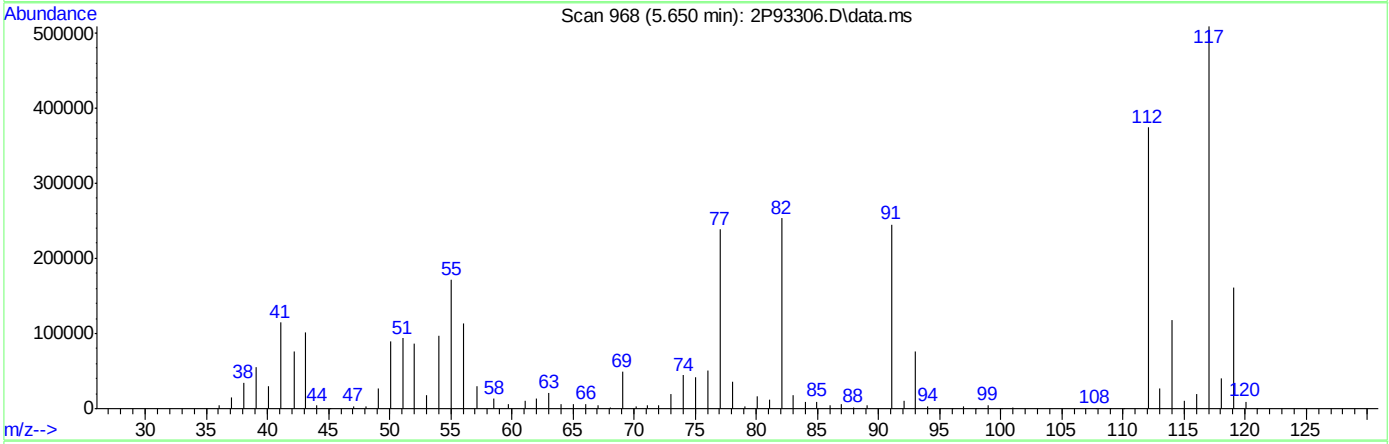
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.18
41.10	70.00	72.37
39.00	27.50	24.69

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 28.77ug/L

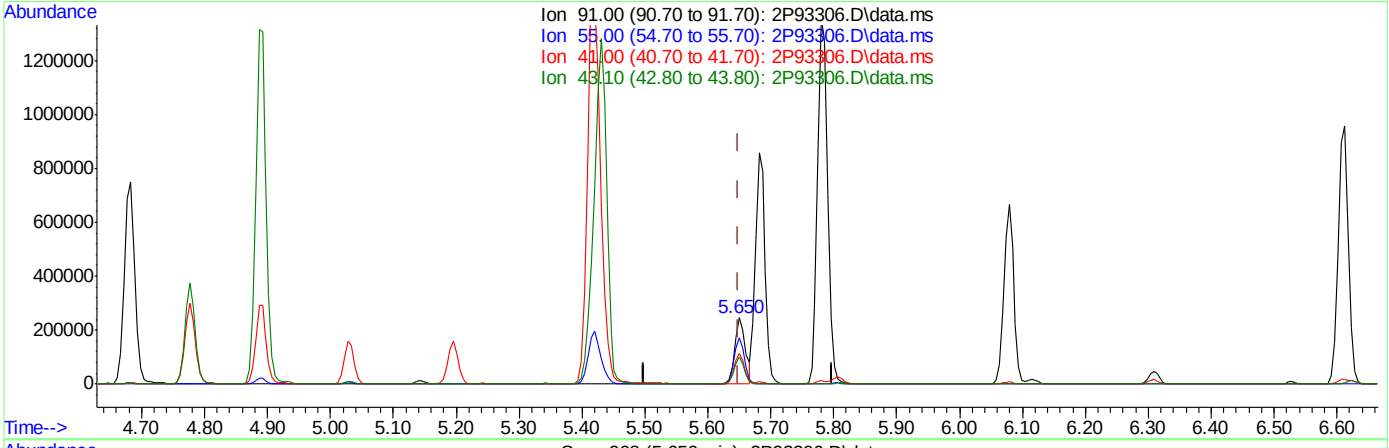
response 188381

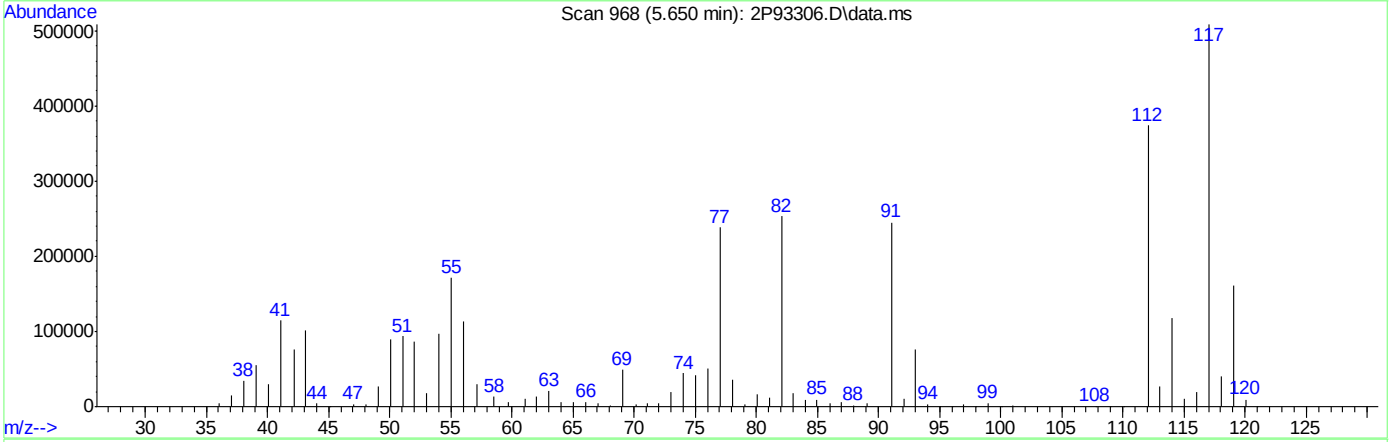
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	68.79
41.00	53.40	45.28
43.10	41.30	41.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 42.69ug/L m

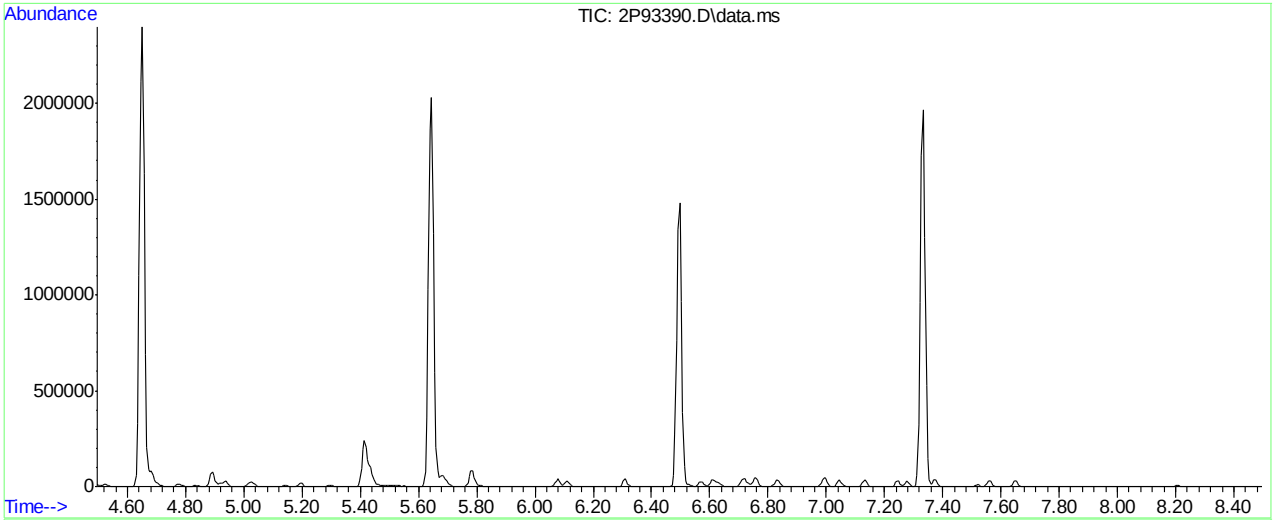
response 279491

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.94
41.00	53.40	46.67
43.10	41.30	41.65

Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\2022-09-26\2P93390.D Vial: 52
Acq On : 26 Sep 2022 12:30 pm Operator: courtnef
Sample : BFB Inst : MSVOA13
Misc : MS52362,V2P3589,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1122

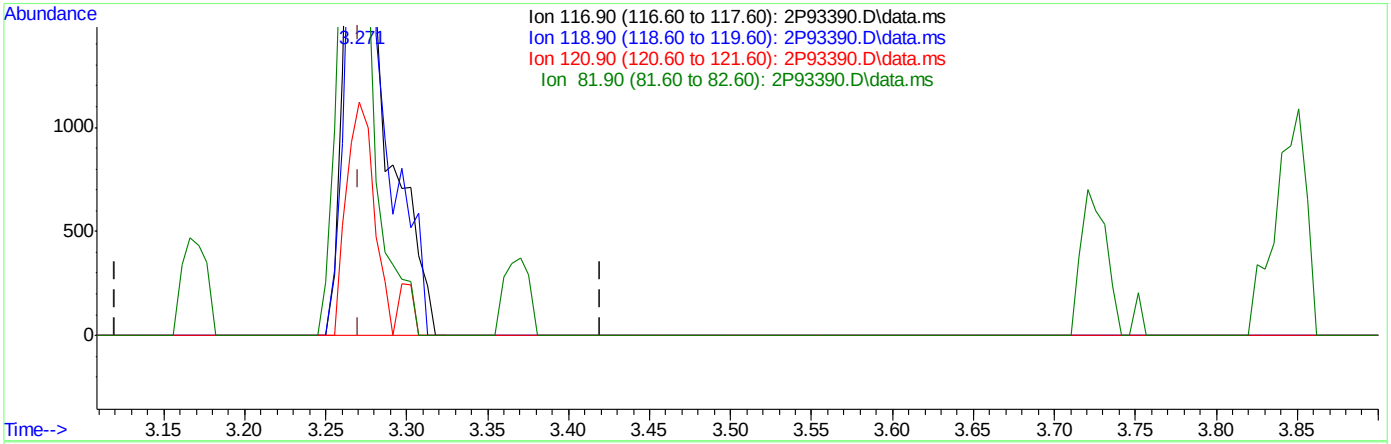
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	47277	PASS
75	95	30	60	46.9	129829	PASS
95	95	100	100	100.0	277077	PASS
96	95	5	9	6.5	17976	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.3	208512	PASS
175	174	5	9	7.4	15384	PASS
176	174	95	101	98.7	205802	PASS
177	176	5	9	6.8	14055	PASS

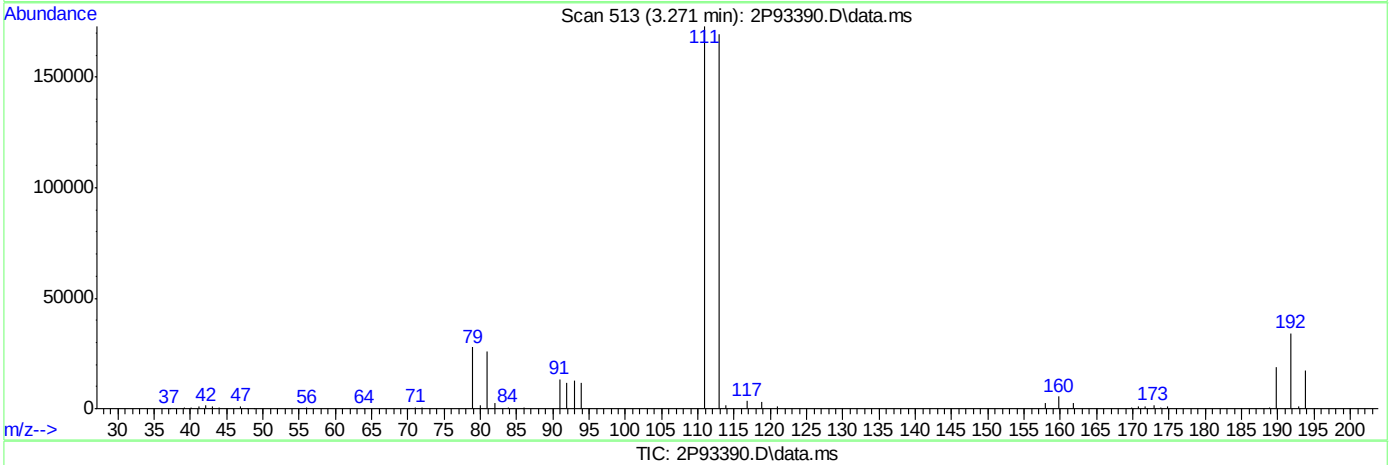
2P93390.D V2P_2022-09-26.M Mon Sep 26 14:47:36 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 1.29ug/L

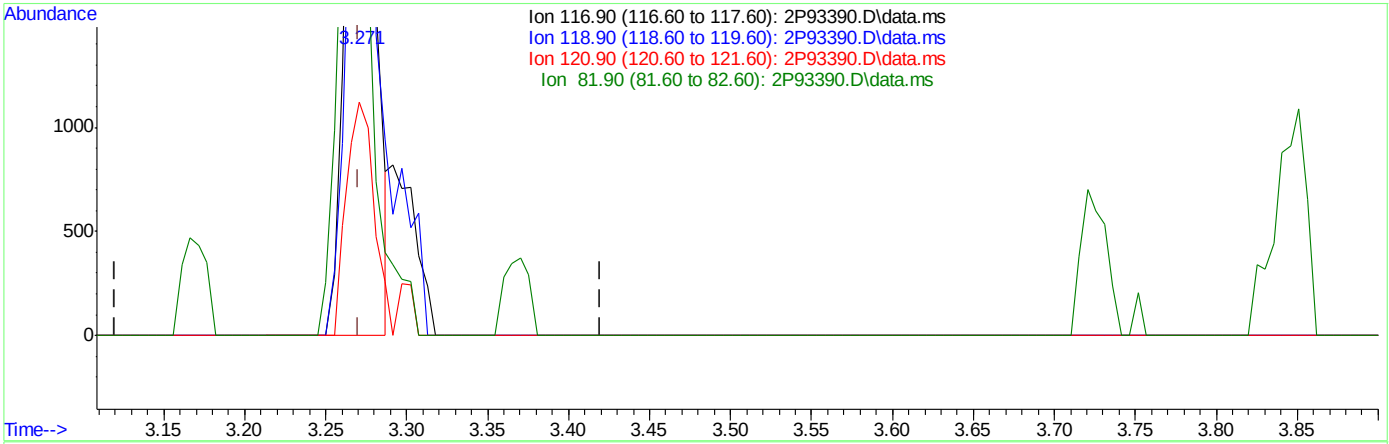
response 5082

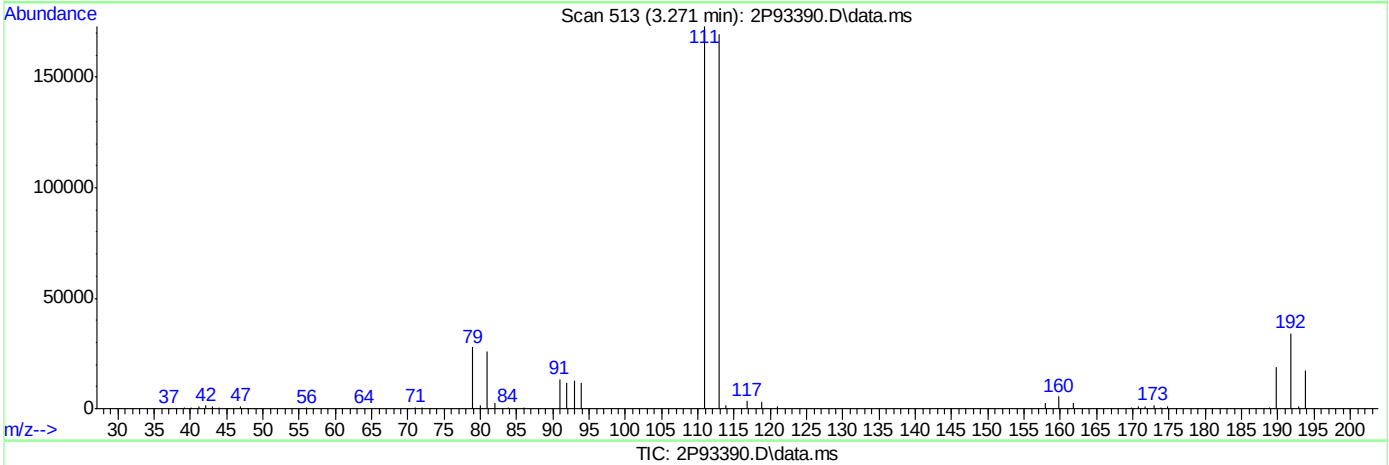
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.16
120.90	29.50	31.59
81.90	28.30	75.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 1.06ug/L m

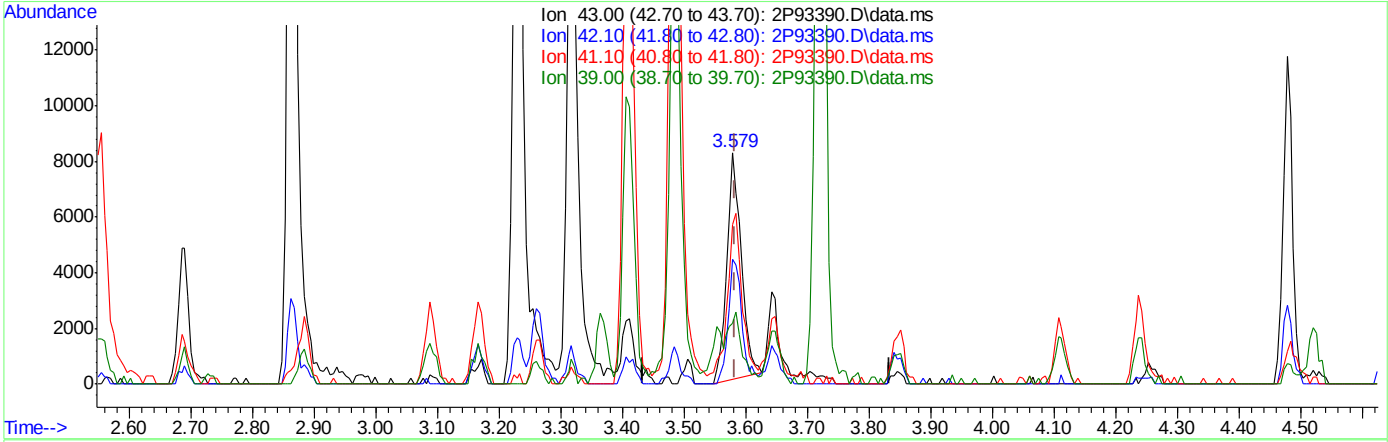
response 4184

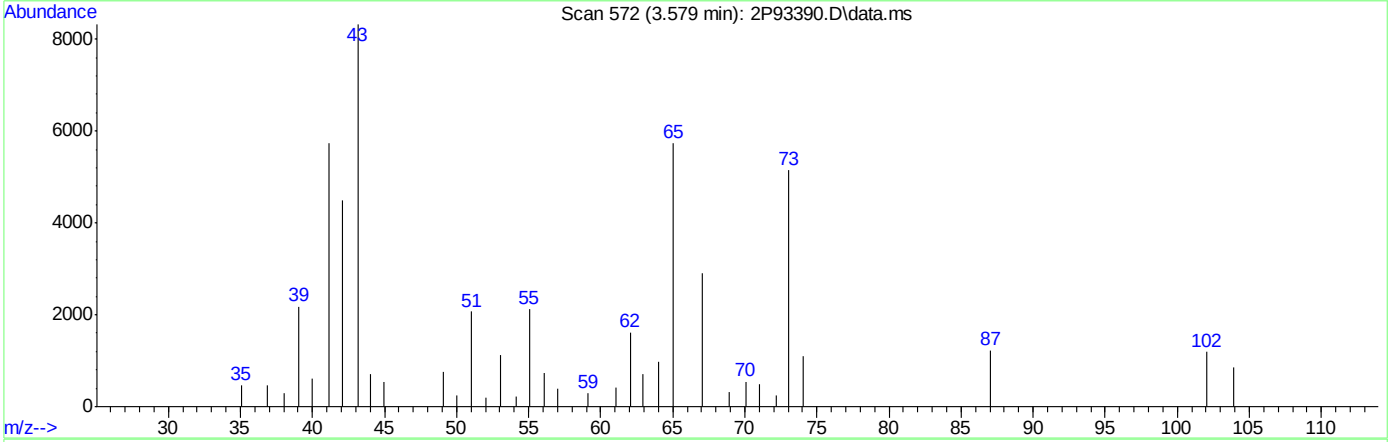
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.16
120.90	29.50	31.59
81.90	28.30	75.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.005) 18.81ug/L

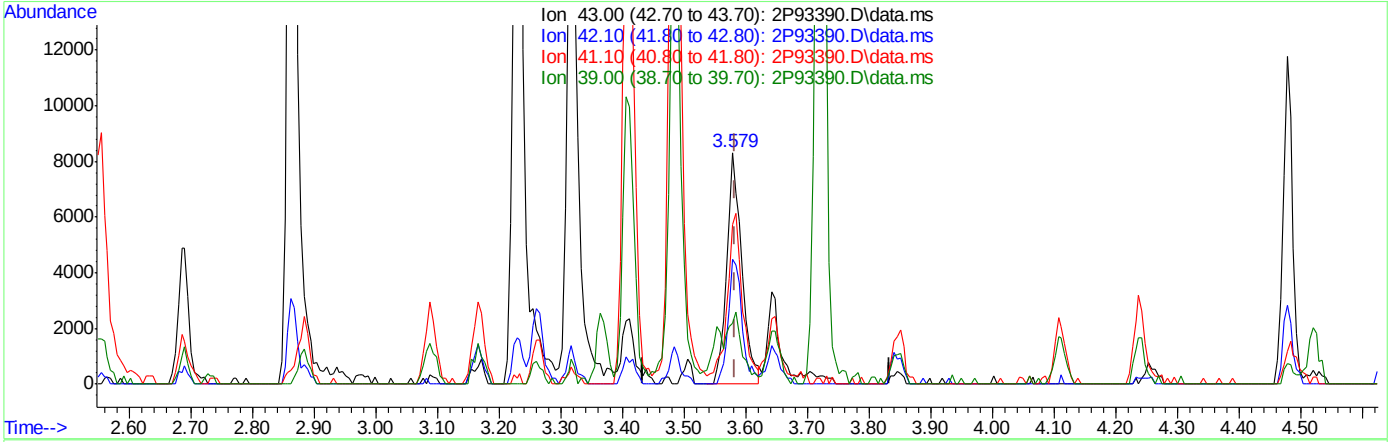
response 13164

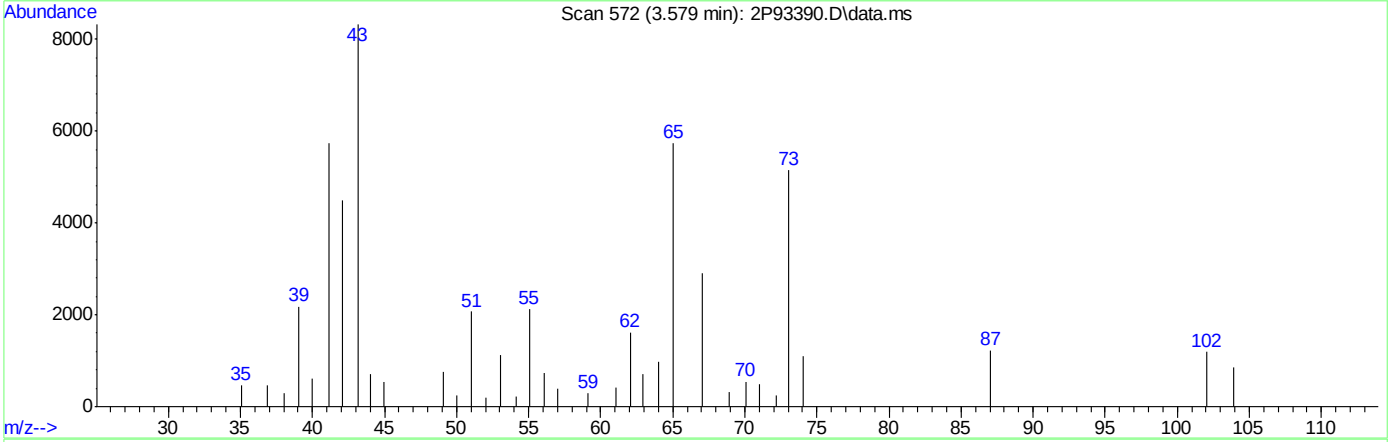
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	54.11
41.10	70.00	64.09
39.00	27.50	22.44

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.005) 20.00ug/L m

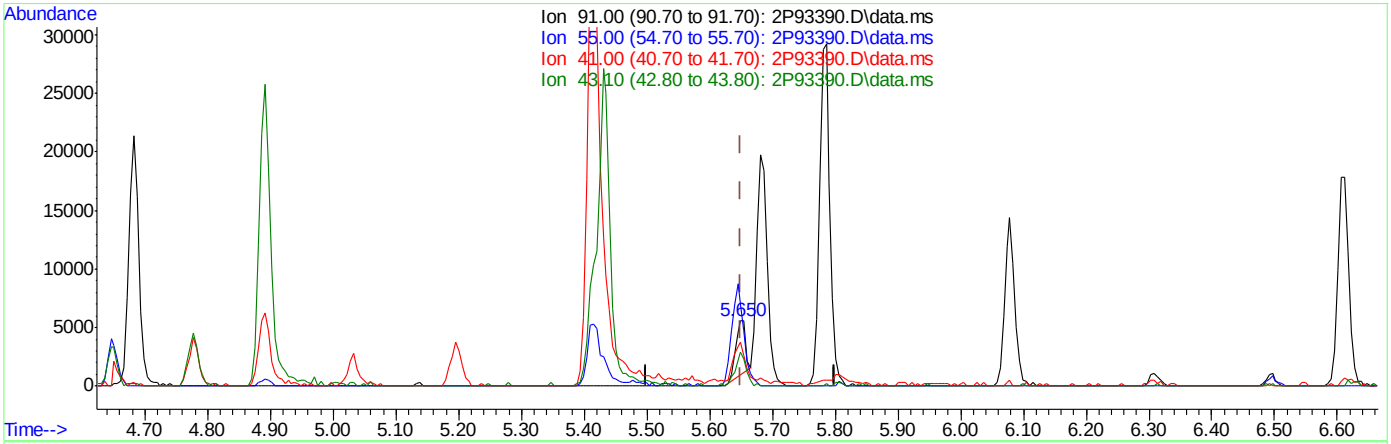
response 13998

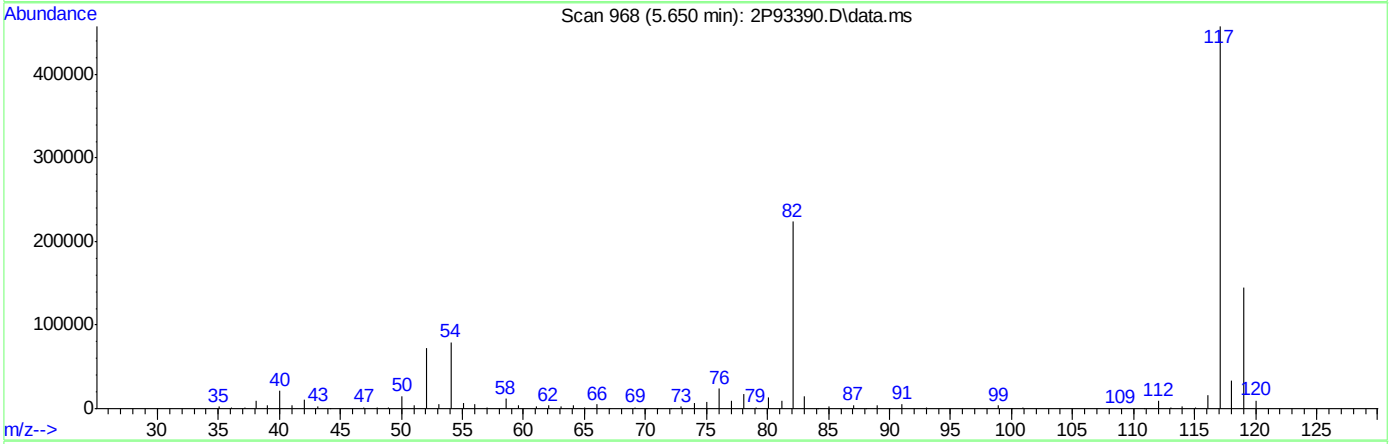
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	54.11
41.10	70.00	69.01
39.00	27.50	26.15

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 0.91ug/L

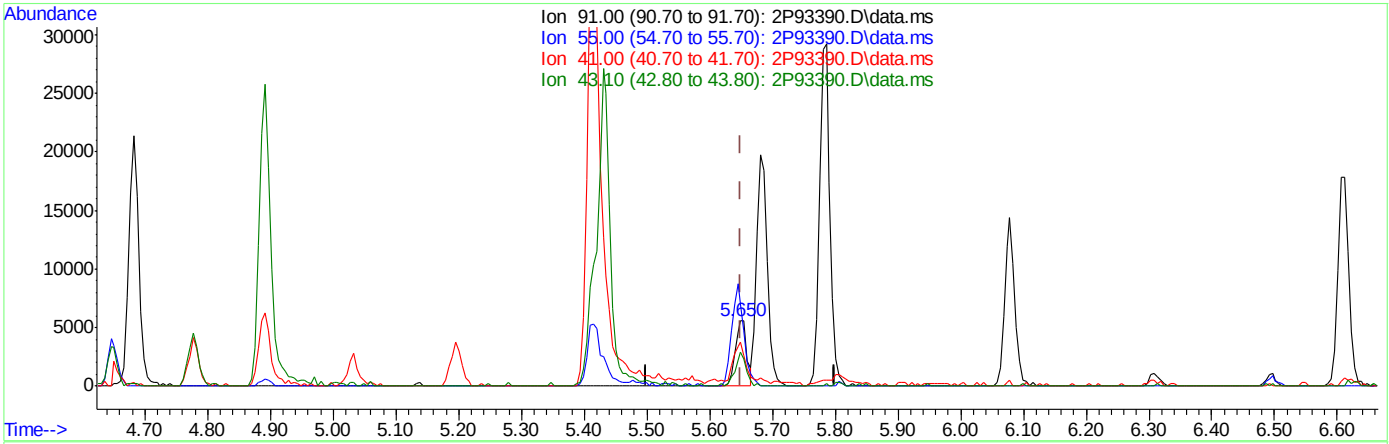
response 5399

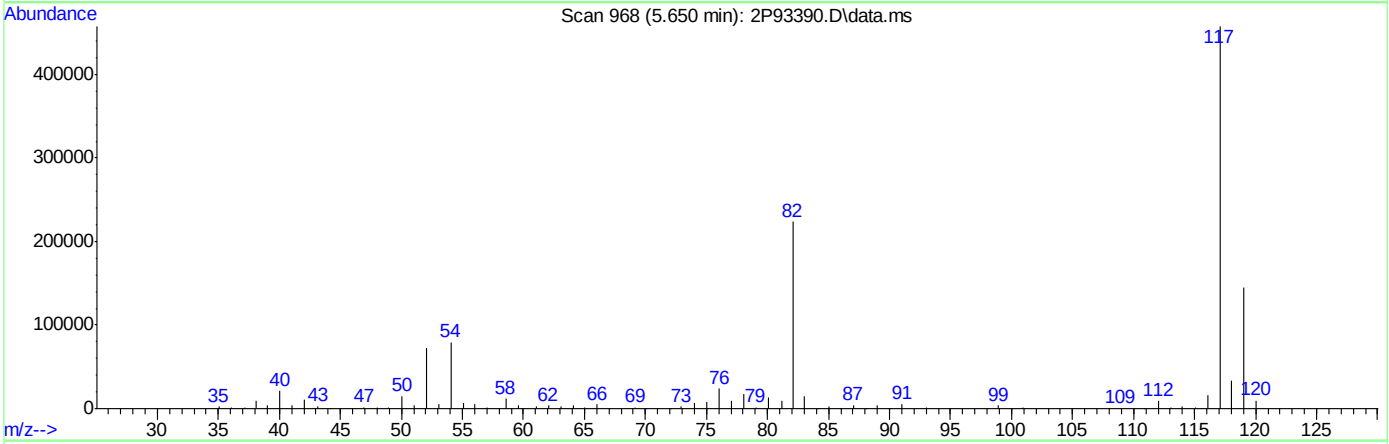
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	117.99#
41.00	53.40	59.61
43.10	41.30	51.85

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 1.24ug/L m

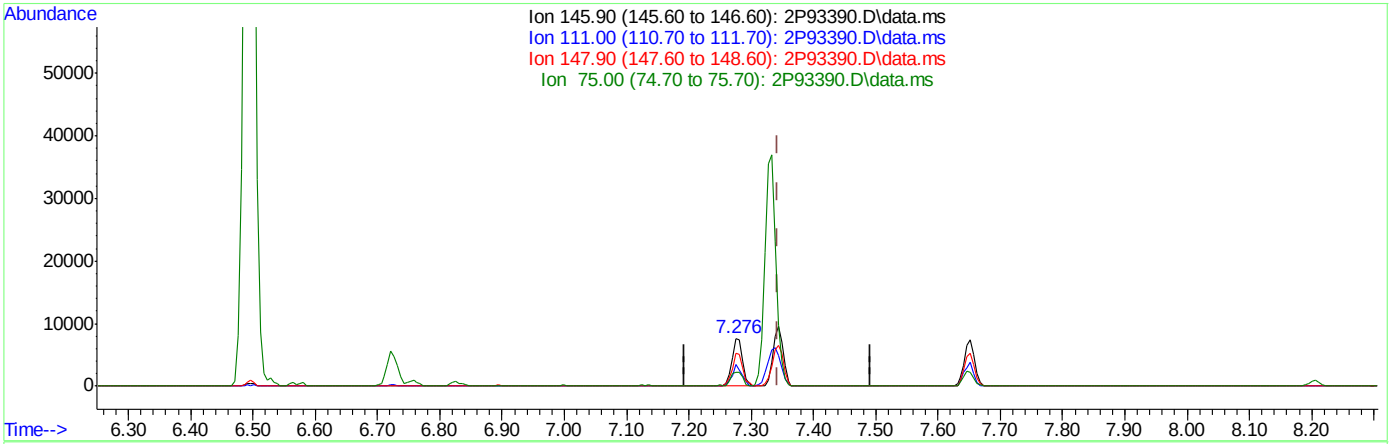
response 7402

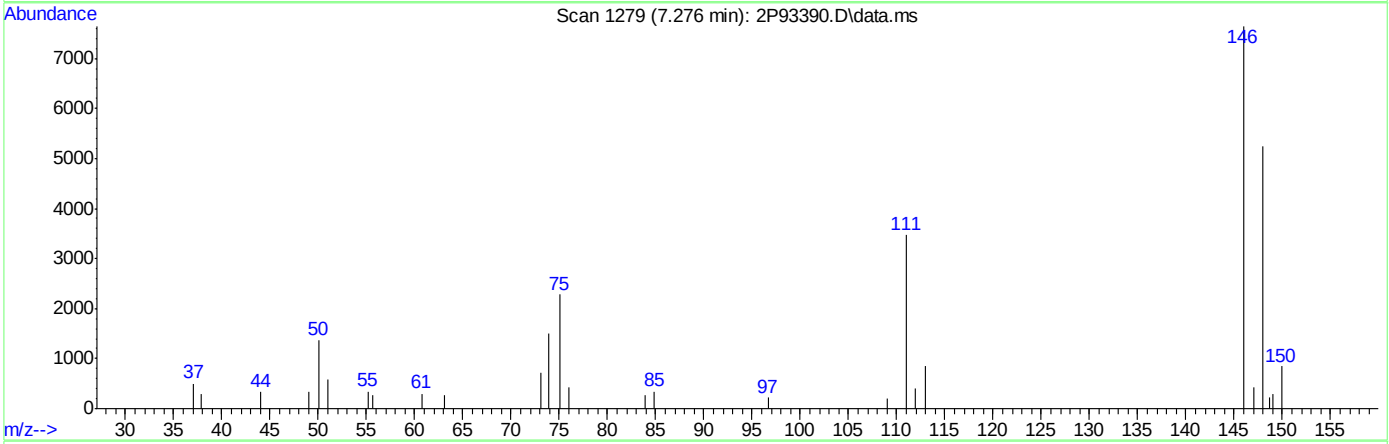
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	125.80#
41.00	53.40	67.69
43.10	41.30	51.85

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(105) 1,4-Dichlorobenzene

7.276min (-0.067) 1.02ug/L

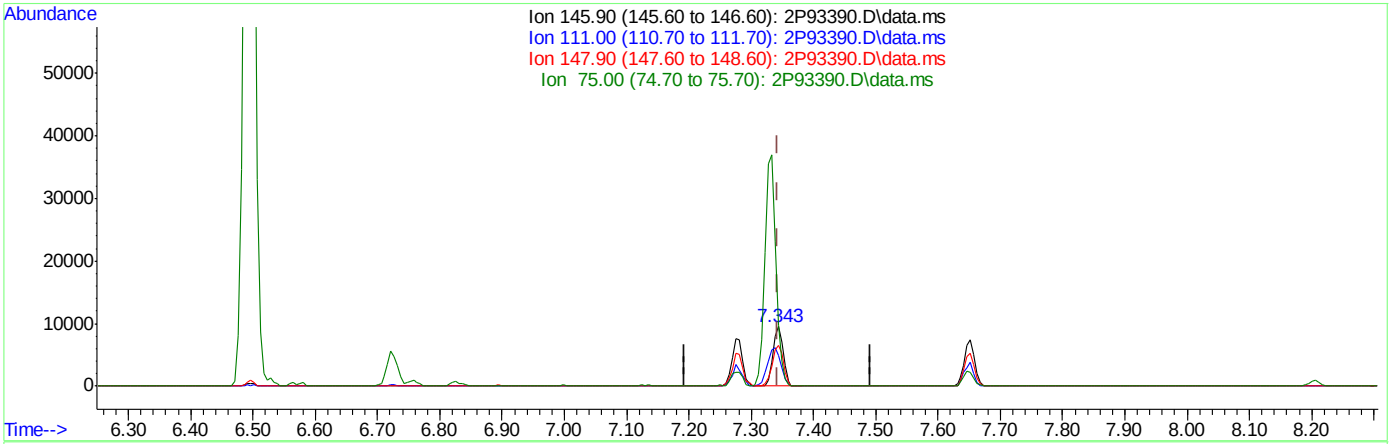
response 8596

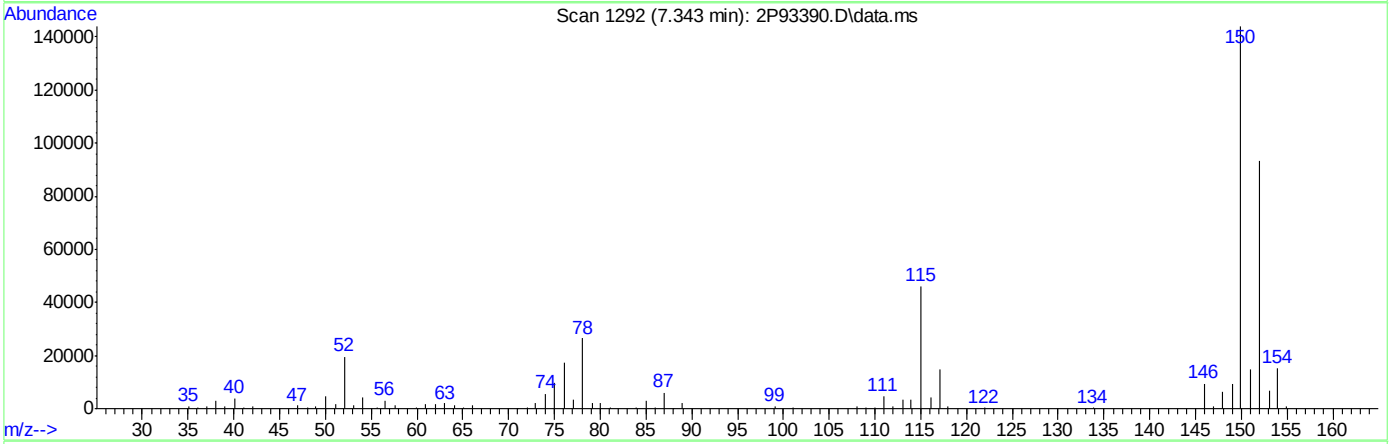
Ion	Exp%	Act%
145.90	100	100
111.00	40.10	45.37
147.90	63.20	68.52
75.00	36.60	27.17

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (+0.000) 1.24ug/L m

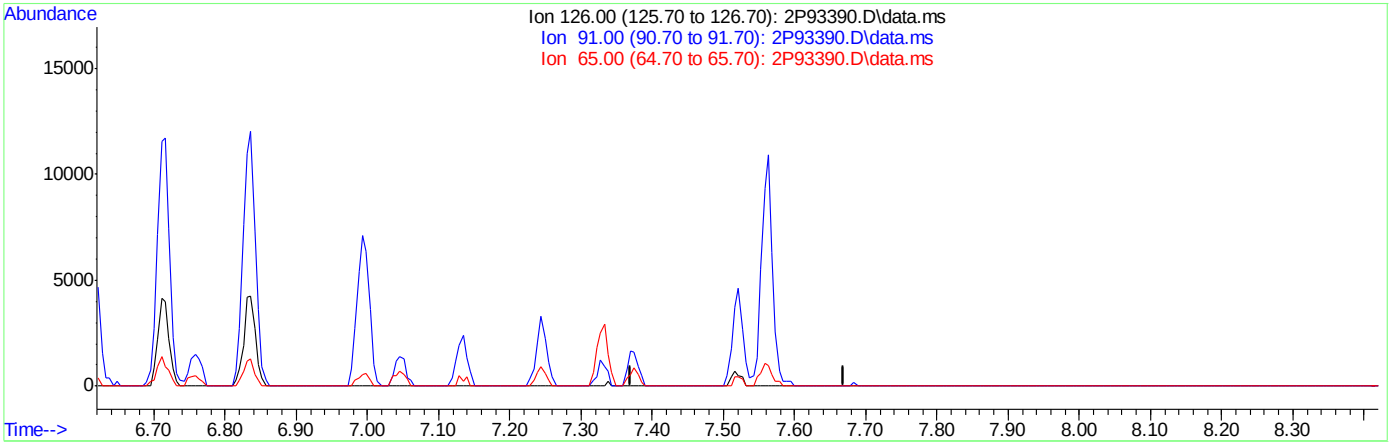
response 10453

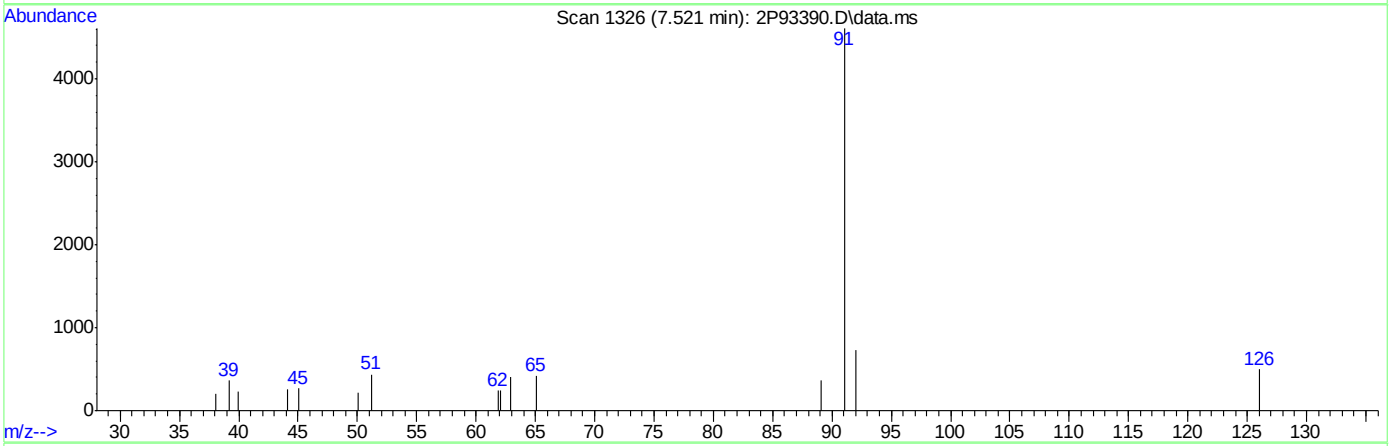
Ion	Exp%	Act%
145.90	100	100
111.00	40.10	51.16
147.90	63.20	68.12
75.00	36.60	102.84#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(107) Benzyl Chloride

7.520min (-7.520) 0.00ug/L

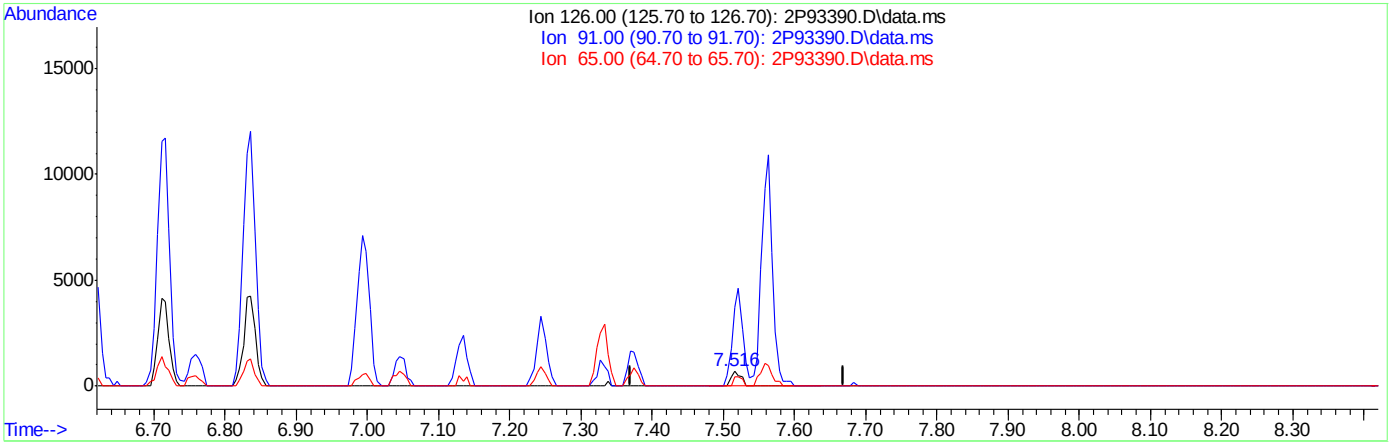
response 0

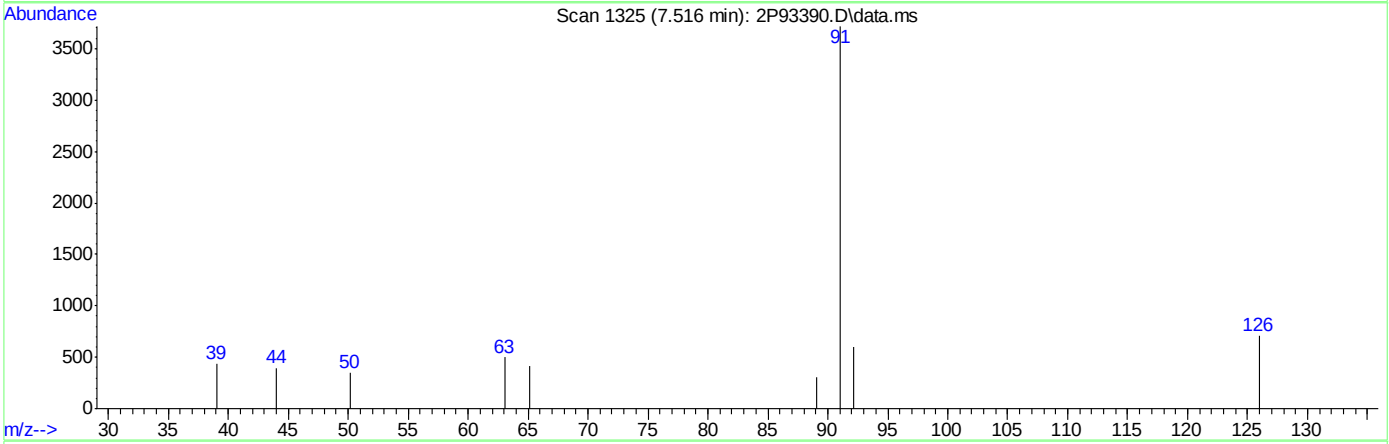
Ion	Exp%	Act%
126.00	100	0.00
91.00	500.60	0.00#
65.00	60.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(107) Benzyl Chloride

7.516min (-0.004) 0.47ug/L m

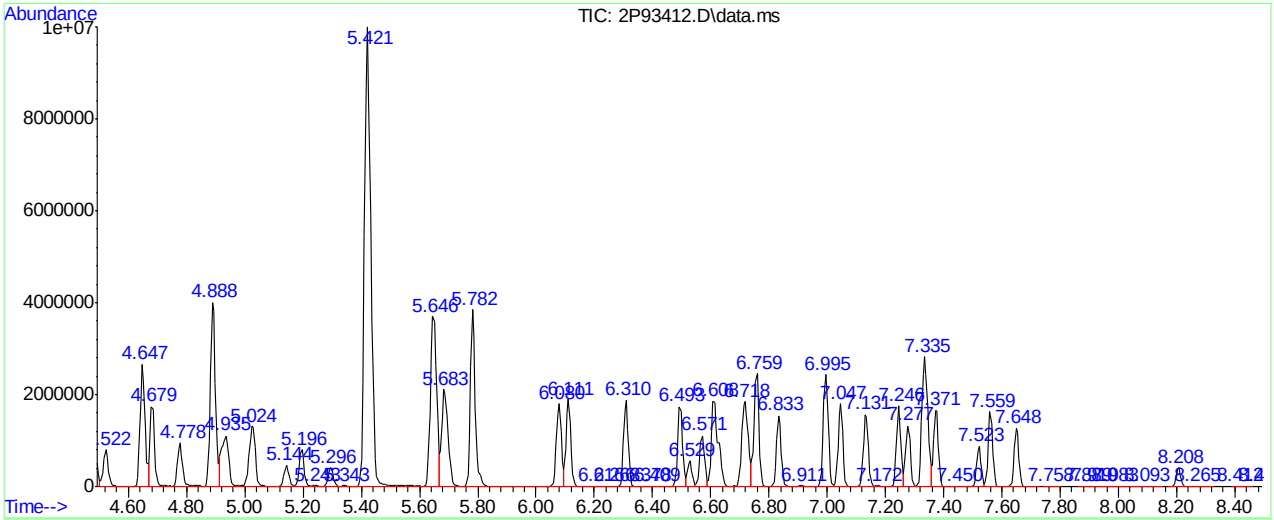
response 657

Ion	Exp%	Act%
126.00	100	100
91.00	500.60	524.86#
65.00	60.50	59.04
0.00	0.00	0.00

Methods: SW-846 8260B

Data File : C:\msdchem\1\DATA\2022-09-27\2P93412.D Vial: 52
Acq On : 27 Sep 2022 10:53 am Operator: courtnef
Sample : BFB Inst : MSVOA13
Misc : MS52362,V2P3590,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-09-26.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 1128, 1129, 1130; Background Corrected with Scan 1121

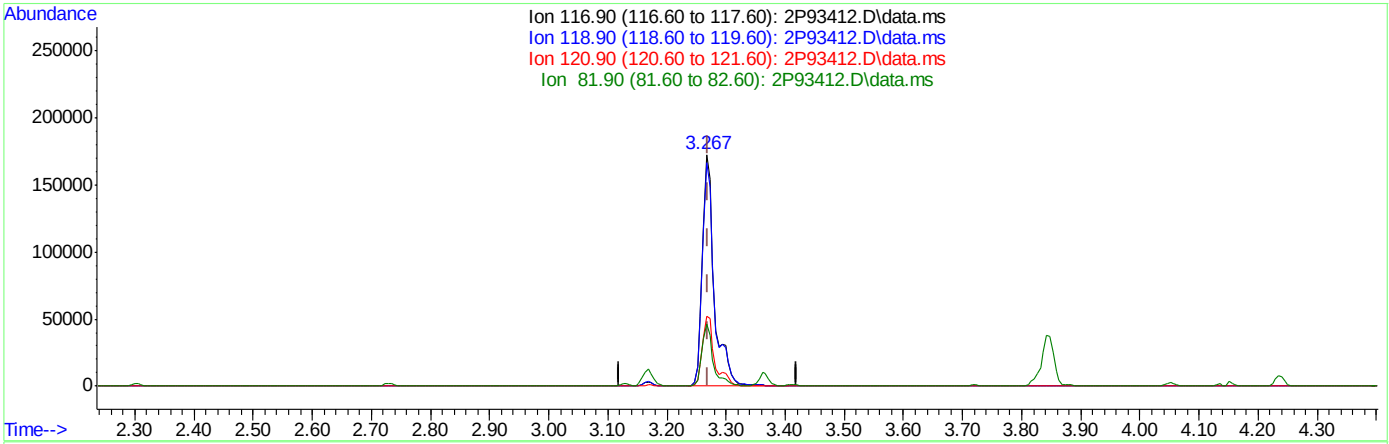
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	56992	PASS
75	95	30	60	47.3	160165	PASS
95	95	100	100	100.0	338816	PASS
96	95	5	9	7.0	23842	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	70.6	239360	PASS
175	174	5	9	7.6	18096	PASS
176	174	95	101	97.0	232298	PASS
177	176	5	9	6.8	15895	PASS

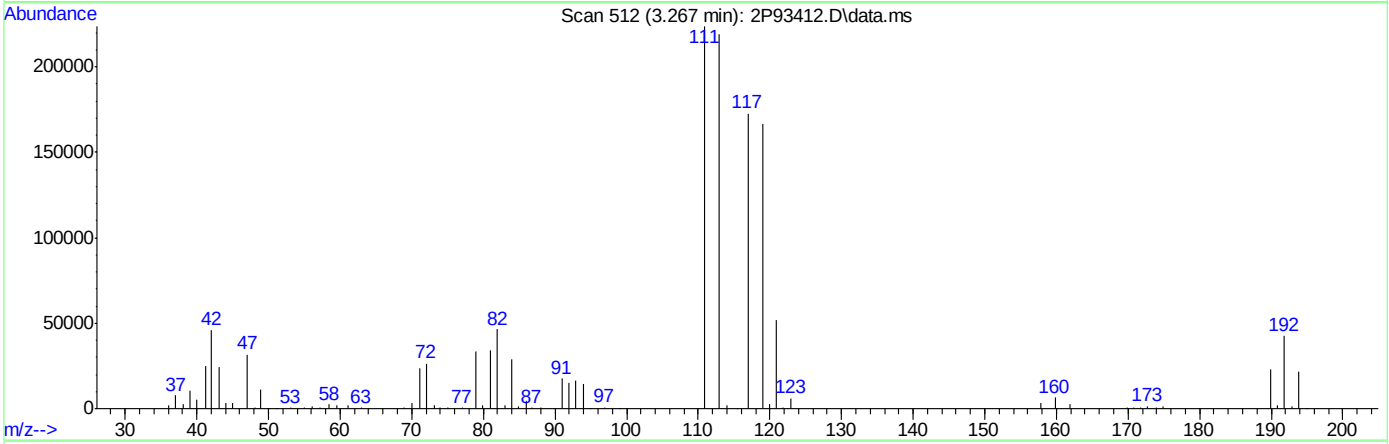
2P93412.D V2P_2022-09-26.M Tue Sep 27 11:08:53 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(40) Carbon Tetrachloride ( )

3.267min (-0.003) 49.19ug/L

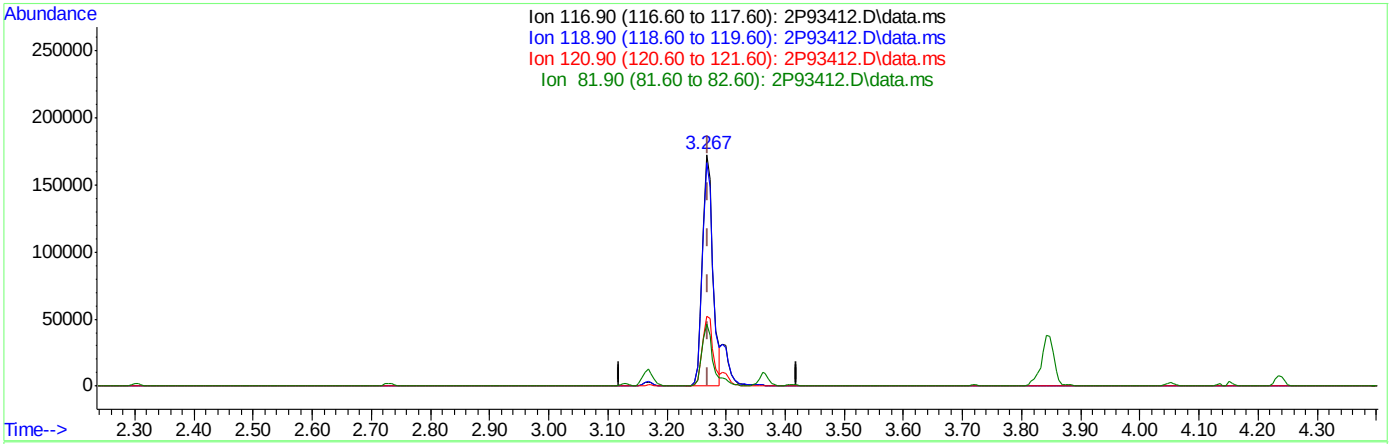
response 245326

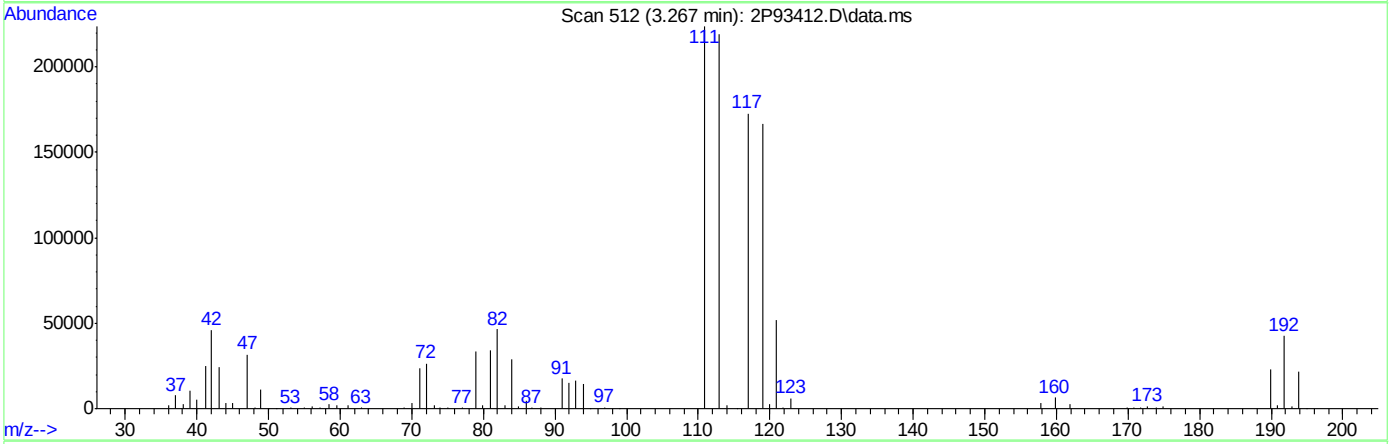
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	96.48
120.90	31.30	30.14
81.90	25.80	26.83

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(40) Carbon Tetrachloride ( )

3.267min (-0.003) 42.37ug/L m

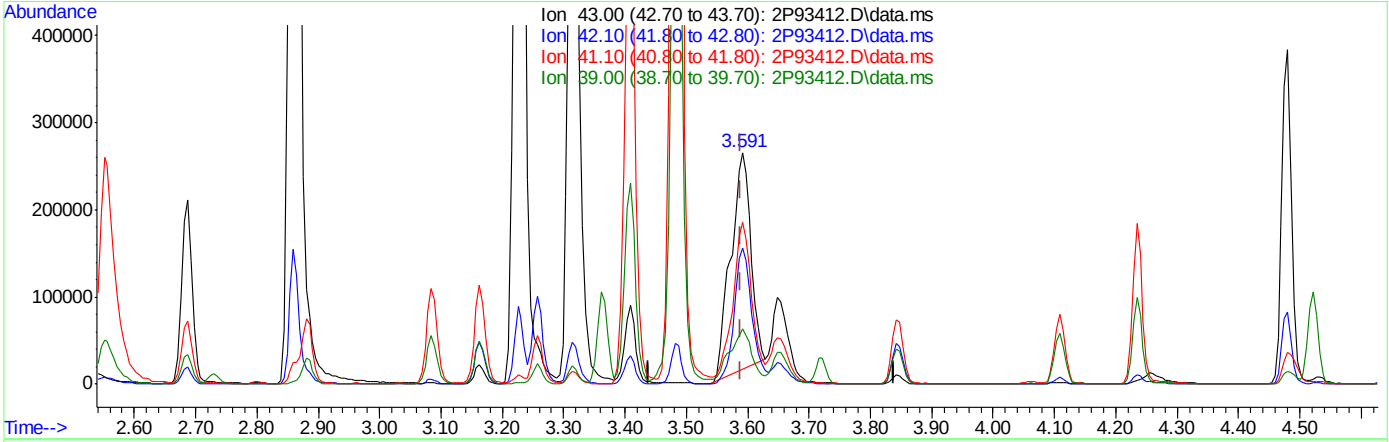
response 211303

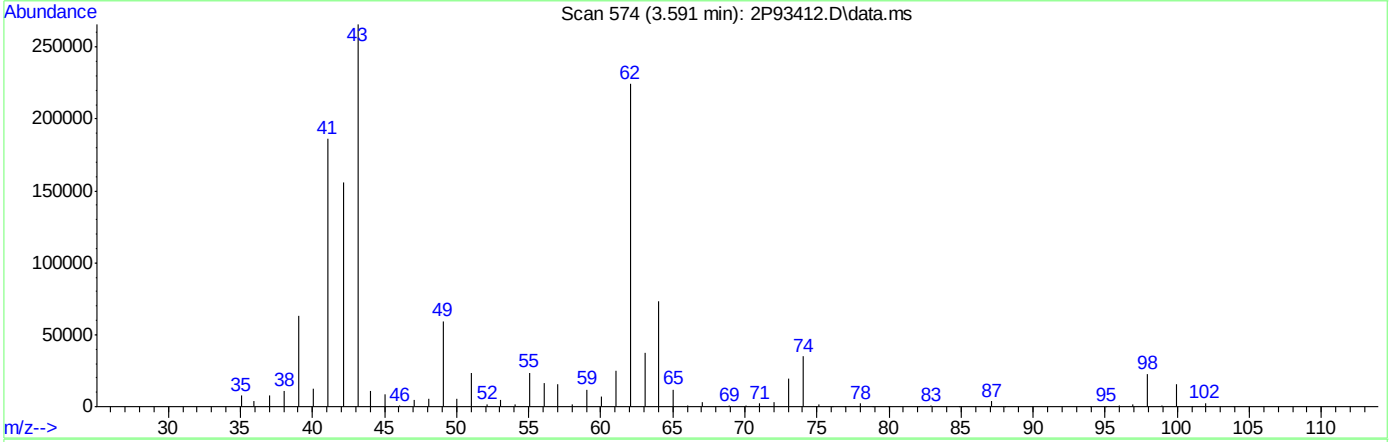
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	96.48
120.90	31.30	30.14
81.90	25.80	26.95

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.003) 705.18ug/L

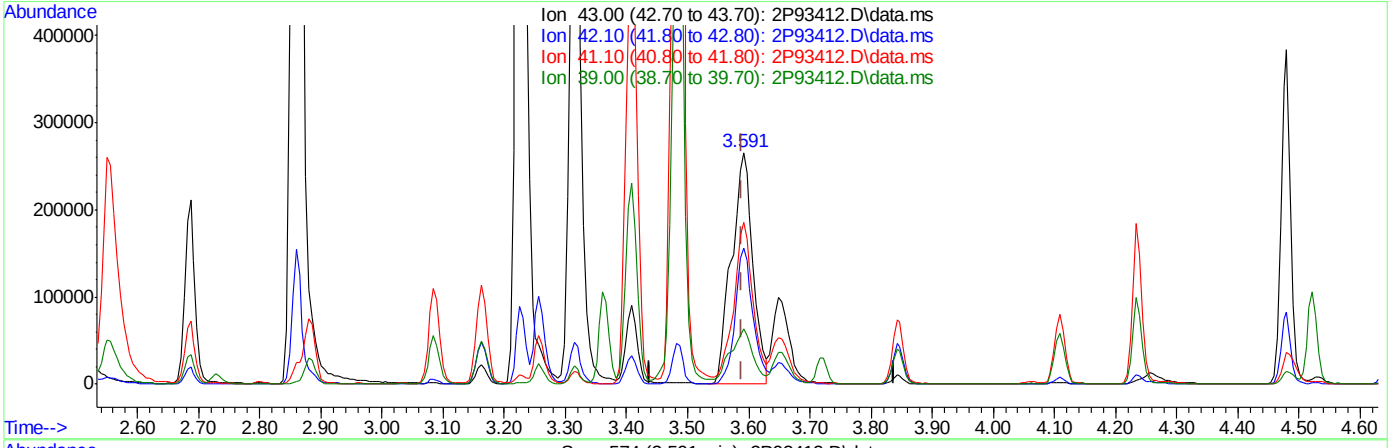
response 571416

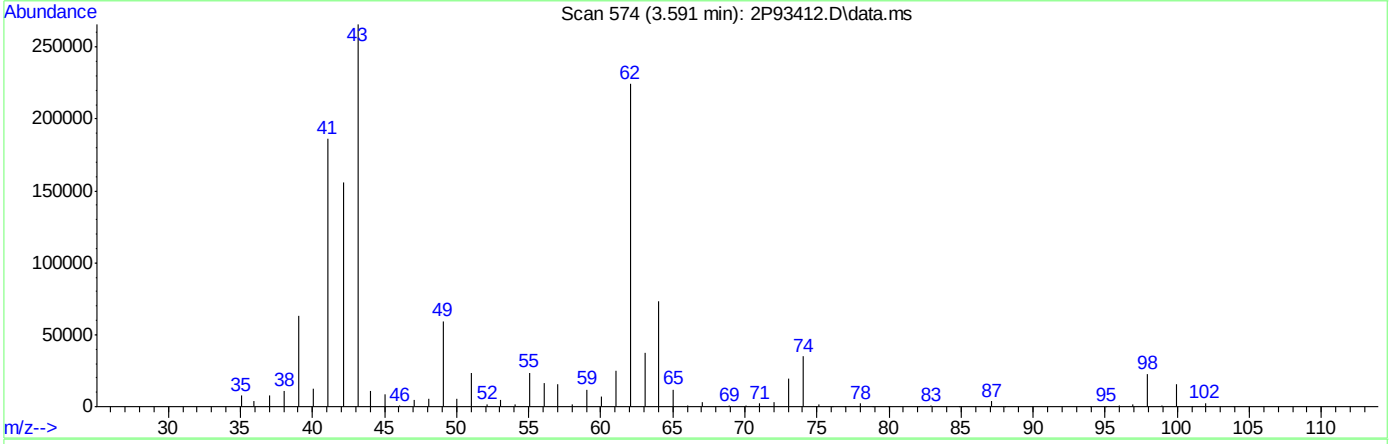
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.76
41.10	69.60	67.07
39.00	23.50	21.73

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.003) 801.24ug/L m

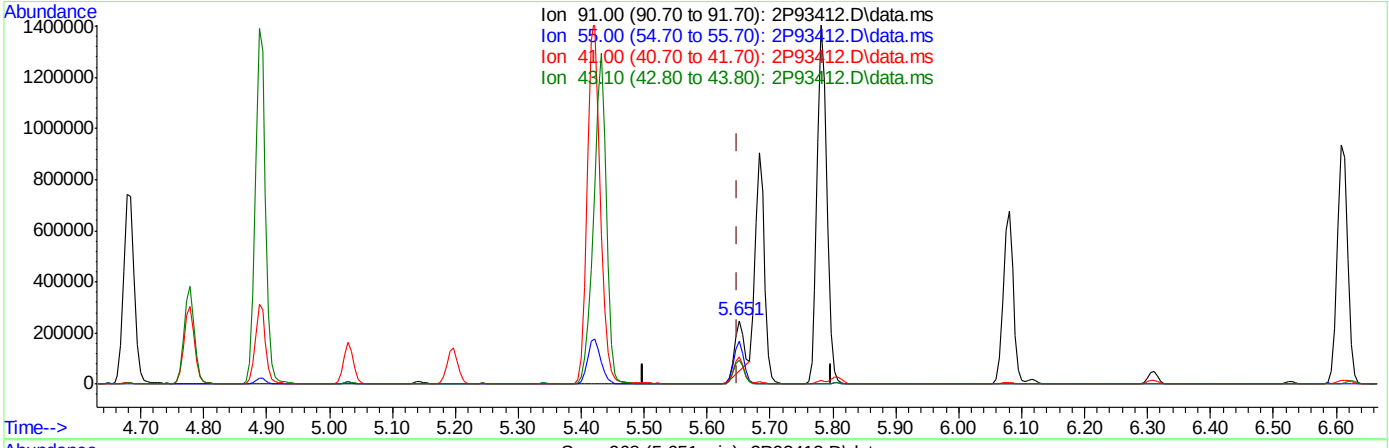
response 649255

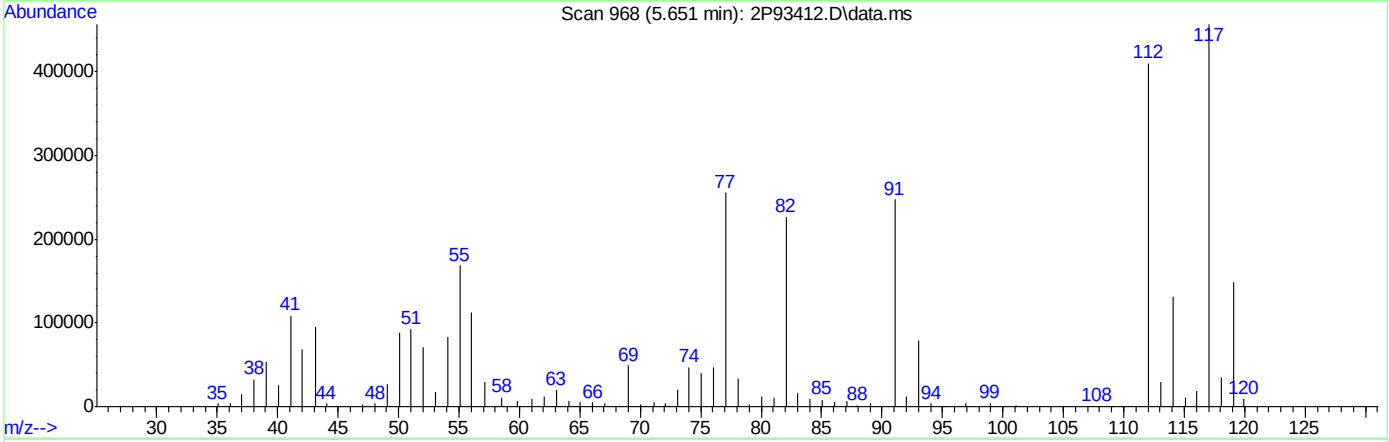
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.80
41.10	69.60	70.02
39.00	23.50	23.77

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.003) 25.81ug/L

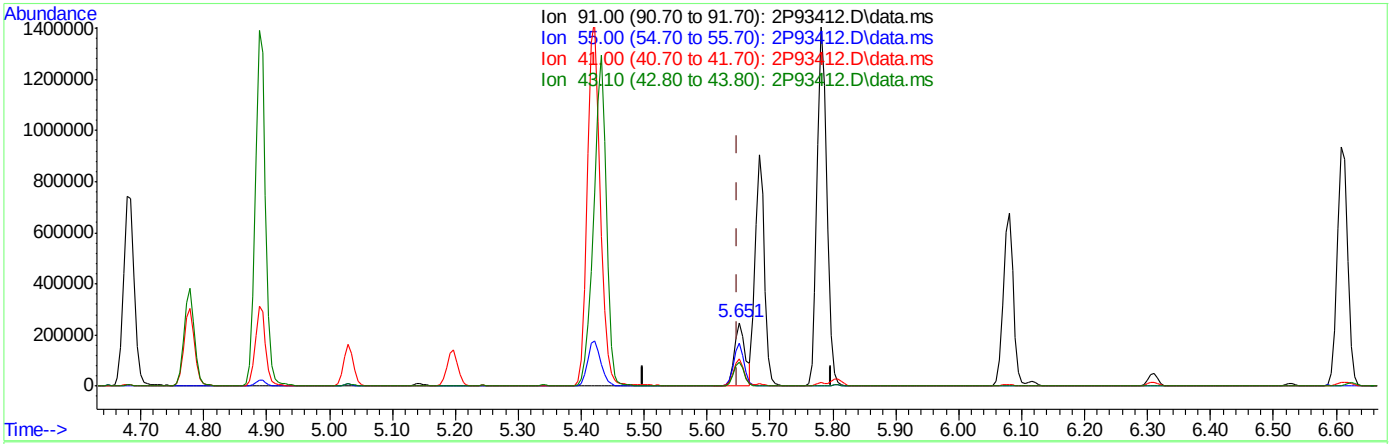
response 186211

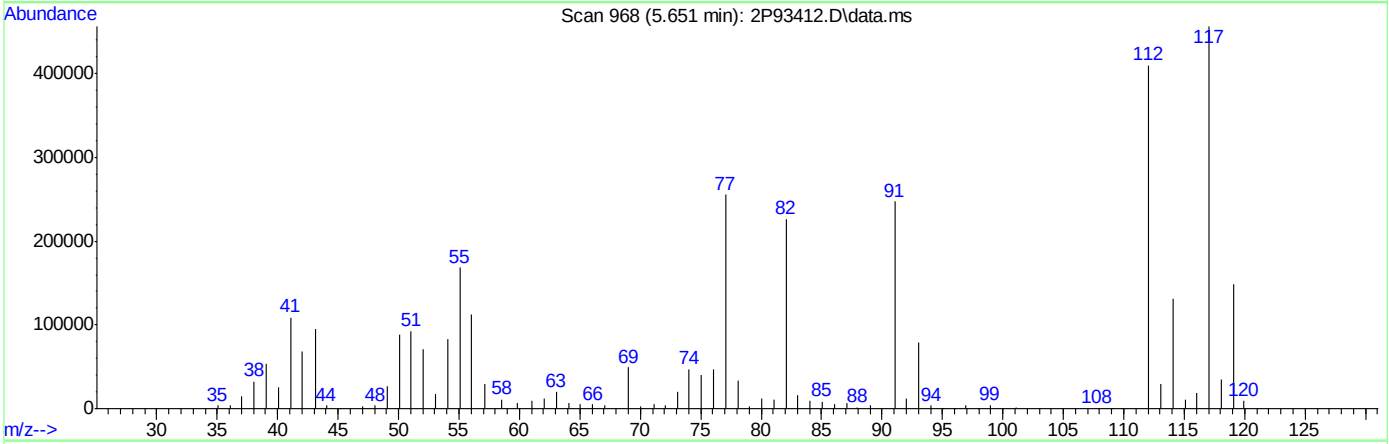
Ion	Exp%	Act%
91.00	100	100
55.00	71.70	66.37
41.00	48.20	42.64
43.10	41.80	37.92

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.003) 39.99ug/L m

response 288491

Ion	Exp%	Act%
91.00	100	100
55.00	71.70	68.02
41.00	48.20	43.92
43.10	41.80	38.40

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1304217	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	892129	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	401789	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	262735	44.58	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 89.16%				
49) 1,2-Dichloroethane-d4	3.553	65	381615	41.54	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.08%				
63) Toluene-d8	4.651	98	1238365	52.07	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 104.14%				
86) 4-Bromofluorobenzene	6.496	174	311640	46.66	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.32%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	3574	0.73	ug/L		97
3) Chloromethane	1.247	50	3730	0.51	ug/L		96
4) 1,3-butadiene	1.321	39	3578	0.55	ug/L	#	75
5) Vinyl Chloride	1.305	62	4374	0.67	ug/L		95
6) Bromomethane	1.514	94	3340	1.31	ug/L		93
7) Chloroethane	1.587	64	2508	1.12	ug/L		86
8) Trichlorofluoromethane	1.687	101	4423	0.76	ug/L		98
9) Ethyl Ether	1.880	59	4098	0.67	ug/L	#	81
10) Ethanol	1.948	45	3081	12.83	ug/L		97
11) 1,2-Dichlorotrifluoroe...	1.979	67	3561	0.67	ug/L		96
12) 1,1-Dichloroethene	1.985	61	4997	0.59	ug/L		94
13) Freon 113	2.021	101	2875	0.66	ug/L	#	83
14) Carbon Disulfide	2.006	76	8522	0.84	ug/L		99
15) Iodomethane	2.068	142	1647	0.28	ug/L		90
16) Acrolein	2.157	56	6920	3.30	ug/L		96
17) Allyl chloride	2.251	41	3882	0.51	ug/L		88
18) Methylene Chloride	2.303	49	22978	1.88	ug/L		82
19) Acetone	2.319	43	23241	5.06	ug/L		85
20) Methyl acetate	2.398	43	25726	2.50	ug/L		89
21) trans-1,2-Dichloroethene	2.408	61	4958	0.57	ug/L	#	64
22) Hexane	2.471	56	2541	0.57	ug/L	#	69
23) Methyl Tert Butyl Ether	2.471	73	11584	0.72	ug/L		90
24) Tert Butyl Alcohol	2.497	59	15715	6.54	ug/L		95
25) Acetonitrile	2.554	41	10318	5.97	ug/L		93
26) Di-isopropyl ether	2.685	45	10876	0.51	ug/L		83
27) Chloroprene	2.732	53	20115	0.60	ug/L		89
28) 1,1-Dichloroethane	2.732	63	6975	0.65	ug/L		96
29) Acrylonitrile	2.732	52	16323	3.74	ug/L	#	77
30) ETBE	2.884	59	12215	0.59	ug/L		89
31) Vinyl acetate	2.863	43	49819	3.22	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	4205	0.81	ug/L	#	81
33) 2,2-Dichloropropane	3.088	77	4472	0.66	ug/L		92
34) Bromochloromethane	3.124	128	2046	0.88	ug/L	#	57
35) Cyclohexane	3.166	56	5756	0.52	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	6236	0.66	ug/L		86
37) Ethyl acetate	3.229	43	39999	3.20	ug/L		91
38) Tetrahydrofuran	3.260	42	3036	0.58	ug/L	#	45
40) Carbon Tetrachloride	3.271	117	3481m	0.65	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	5280	0.70	ug/L		91
42) 2-Butanone	3.318	43	39494	5.20	ug/L		81
43) 1,1-Dichloropropene	3.365	75	4992	0.70	ug/L		91
44) tert-Butyl formate	3.412	59	11587	3.27	ug/L	#	83
45) Propionitrile	3.459	54	14196	6.21	ug/L		98
46) Methacrylonitrile	3.485	41	35516	4.94	ug/L		96
47) Benzene	3.495	78	16815	0.77	ug/L	#	64
48) TAME	3.569	73	10665	0.69	ug/L		95
50) Isobutyl alcohol	3.579	43	13077m	9.38	ug/L		
51) 1,2-Dichloroethane	3.590	62	6285	0.67	ug/L		86
52) Tert Amyl Alcohol	3.642	59	9886	5.46	ug/L	#	70
53) Trichloroethene	3.830	95	4974	0.93	ug/L		90
54) Methylcyclohexane	3.846	83	5002	0.66	ug/L	#	81
55) Dibromomethane	4.050	93	2414	0.80	ug/L		76
56) 1,2-Dichloropropane	4.112	63	3763	0.62	ug/L		92
57) Bromodichloromethane	4.149	83	3228	0.65	ug/L		88
58) Methyl methacrylate	4.238	41	4252	0.51	ug/L	#	84
59) 1,4-Dioxane	4.259	88	2736	16.46	ug/L		80
60) 2-Chloroethyl vinyl ether	4.478	63	15384	3.18	ug/L		80
61) cis-1,3-Dichloropropene	4.520	75	4141	0.59	ug/L		88
64) Toluene	4.682	91	19190	0.92	ug/L		91
65) 2-Nitropropane	4.776	41	4134	1.83	ug/L	#	79
66) 4-Methyl-2-pentanone	4.891	43	42161	3.76	ug/L		94
67) trans-1,3-Dichloropropene	4.918	75	3792	0.65	ug/L		84
68) Tetrachloroethene	4.938	166	4054	0.80	ug/L		90
69) Ethyl methacrylate	5.032	69	4575	0.62	ug/L	#	80
70) 1,1,2-Trichloroethane	5.022	83	3028	0.82	ug/L		86
71) Dibromochloromethane	5.142	129	2030	0.64	ug/L		86
72) 1,3-Dichloropropane	5.200	76	7245	0.87	ug/L	#	74
73) 1,2-Dibromoethane	5.294	107	3358	0.76	ug/L		90
74) 3,3-dimethyl-1-butanol	5.414	57	56387	23.02	ug/L		94
75) 2-hexanone	5.430	43	46159	3.39	ug/L		79
76) 1-Chlorohexane	5.649	91	6715m	1.00	ug/L		
77) Ethylbenzene	5.681	91	20142	0.88	ug/L		96
78) Chlorobenzene	5.655	112	11307	0.92	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.696	131	2585	0.73	ug/L		90
80) m,p-Xylene	5.780	91	30713	1.70	ug/L		93
81) o-Xylene	6.078	91	14421	0.81	ug/L		96
82) Styrene	6.115	104	10442	0.78	ug/L		85
83) Bromoform	6.120	173	935m	0.54	ug/L		
84) Isopropylbenzene	6.308	105	16684	0.82	ug/L		94
87) cis-1,4-Dichloro-2-butene	6.528	53	1764	0.69	ug/L	#	64
88) n-Propylbenzene	6.611	91	20338	0.90	ug/L		99
89) Bromobenzene	6.575	156	4112	0.88	ug/L	#	81
90) 1,1,2,2-Tetrachloroethane	6.627	83	5436	0.88	ug/L		97
91) 1,3,5-Trimethylbenzene	6.758	105	13433	0.85	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

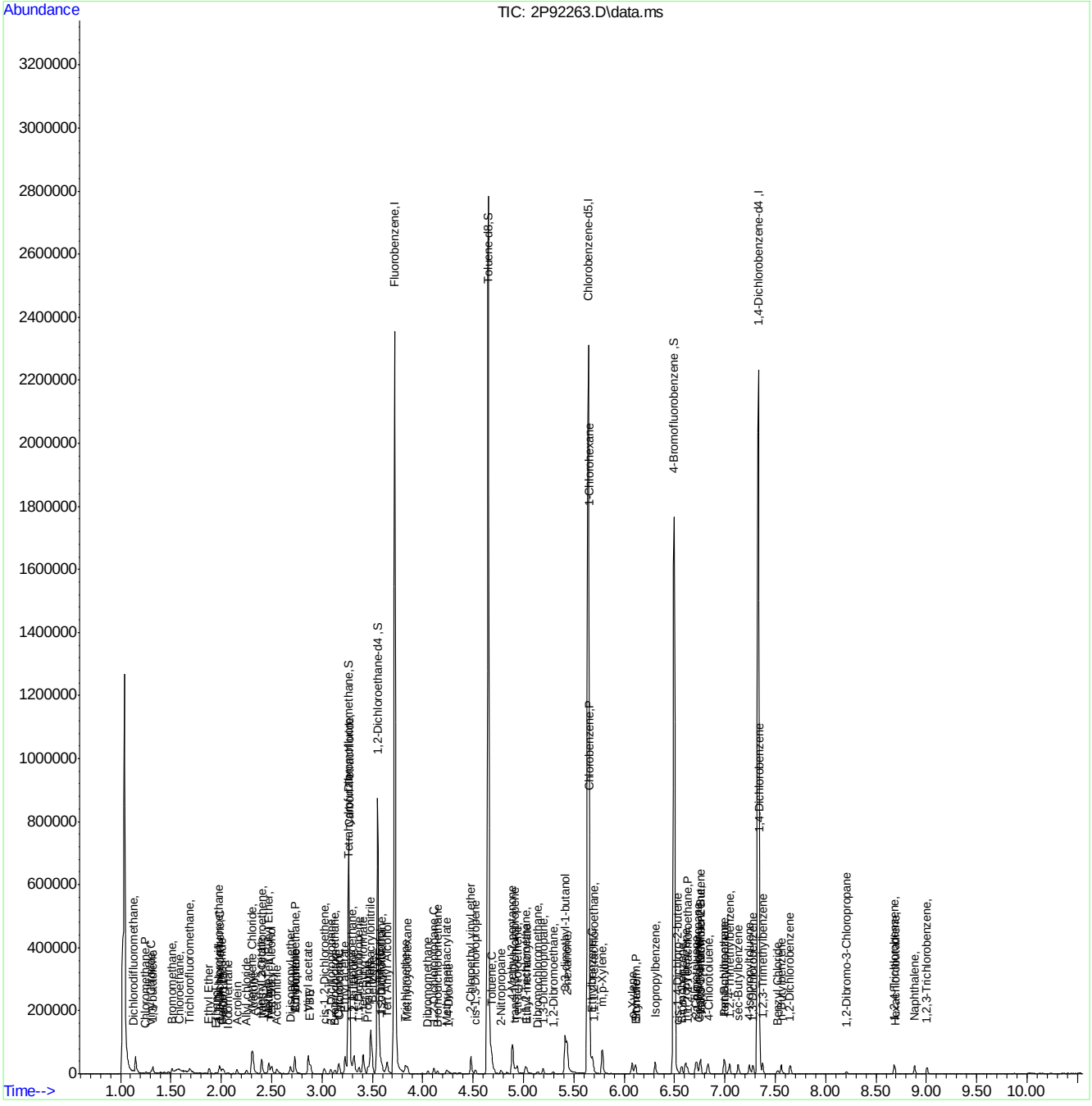
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.711	91	12229	0.89	ug/L		99
93) trans-1,4-Dichloro-2-B...	6.758	53	2321	0.70	ug/L	#	77
94) 1,2,3-Trichloropropane	6.726	110	2170	0.95	ug/L		79
95) Cyclohexanone	6.747	55	2532	4.30	ug/L		89
96) 4-Chlorotoluene	6.836	91	13399	0.94	ug/L		95
97) tert-Butylbenzene	6.993	91	7248	0.83	ug/L		96
99) 1,2,4-Trimethylbenzene	7.045	105	13729	0.90	ug/L		96
100) Pentachloroethane	6.998	167	1229	0.69	ug/L	#	23
101) sec-Butylbenzene	7.134	105	14679	0.87	ug/L		97
102) 4-Isopropyltoluene	7.244	119	11513	0.80	ug/L		97
103) 1,3-Dichlorobenzene	7.275	146	7813	0.93	ug/L		98
104) 1,2,3-Trimethylbenzene	7.375	105	13562	0.88	ug/L		96
105) 1,4-Dichlorobenzene	7.343	146	8240m	0.91	ug/L		
106) n-Butylbenzene	7.563	92	5703	0.79	ug/L		92
107) Benzyl Chloride	7.521	126	838m	0.62	ug/L		
108) 1,2-Dichlorobenzene	7.646	146	7308	0.89	ug/L		90
109) 1,2-Dibromo-3-Chloropr...	8.206	75	932m	0.74	ug/L		
110) Hexachlorobutadiene	8.692	225	1221	0.66	ug/L		89
111) 1,2,4-Trichlorobenzene	8.682	180	3782	0.83	ug/L		94
112) Naphthalene	8.886	128	13112	0.84	ug/L		98
113) 1,2,3-Trichlorobenzene	9.006	180	3832	0.89	ug/L		84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92263.D **Analyst approved:** 08/24/22 10:09 Courtney Failla
Injection Time: 08/24/22 09:50 **Supervisor approved:** 08/25/22 11:34 Karen Watson

Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Bromoform	75-25-2		6.12	Missed peak
1,4-Dichlorobenzene	106-46-7		7.34	Missed peak
Benzyl Chloride	100-44-7		7.52	Missed peak
1,2-Dibromo-3-chloropropane	96-12-8		8.21	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
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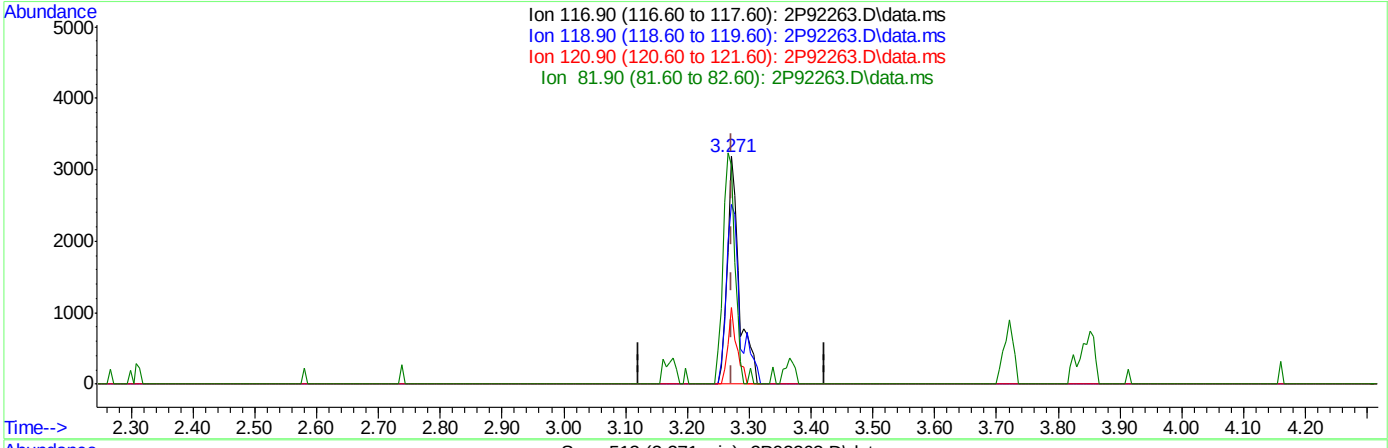
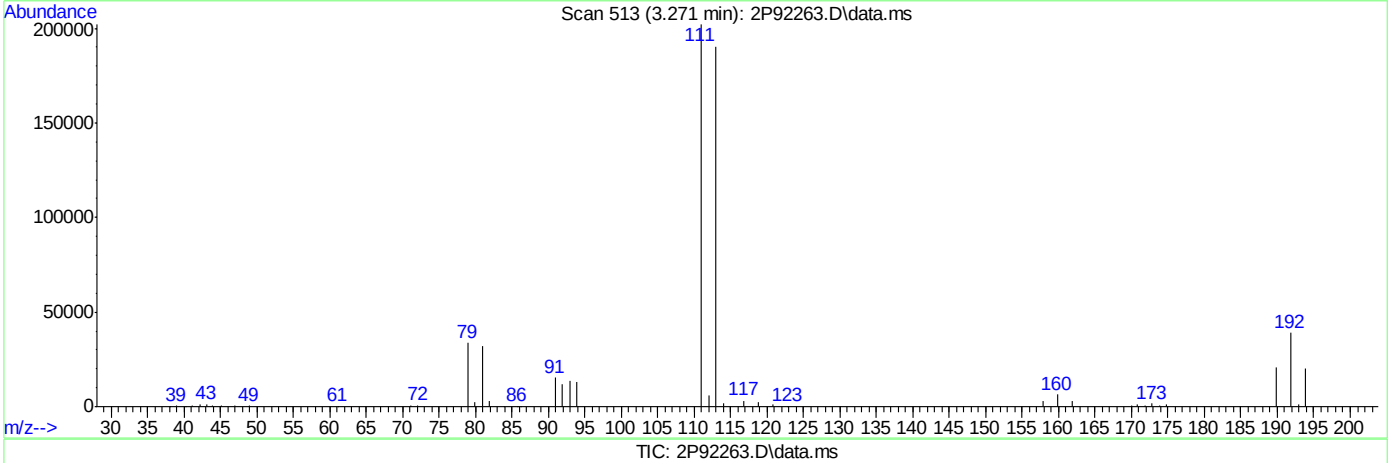




TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.79ug/L

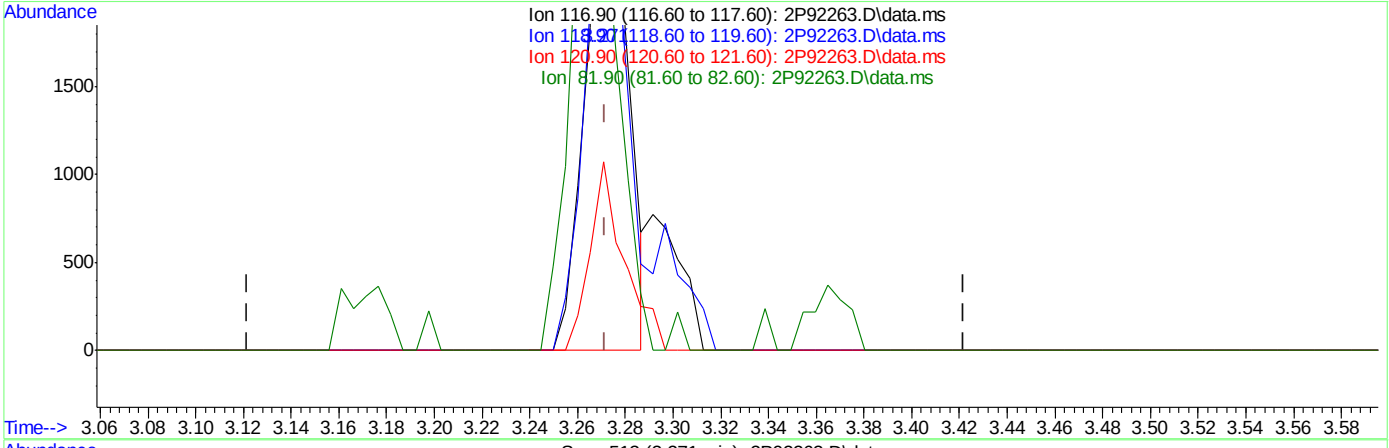
response 4233

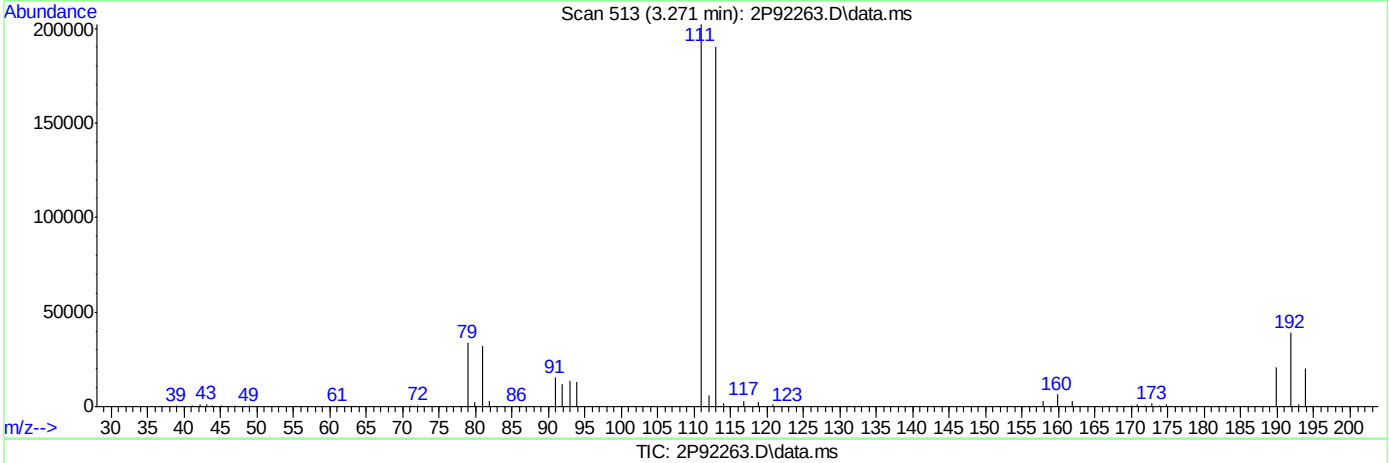
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.65ug/L m

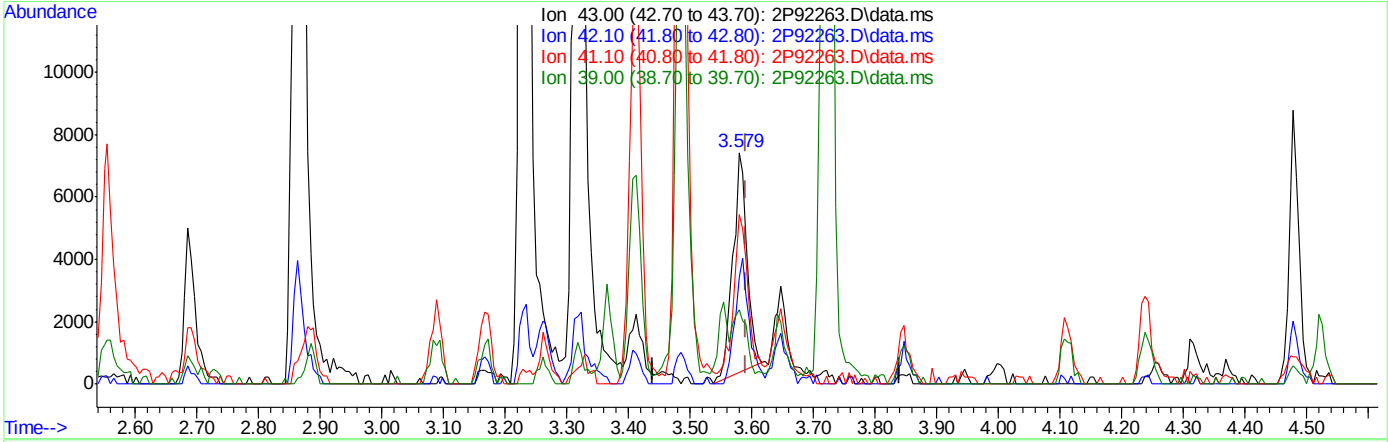
response 3481

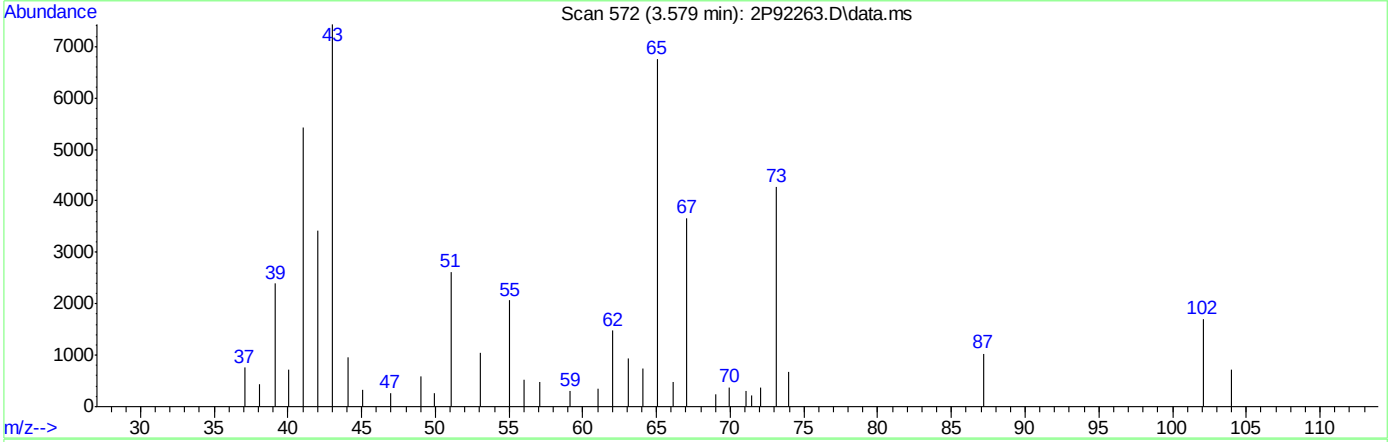
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 8.01ug/L

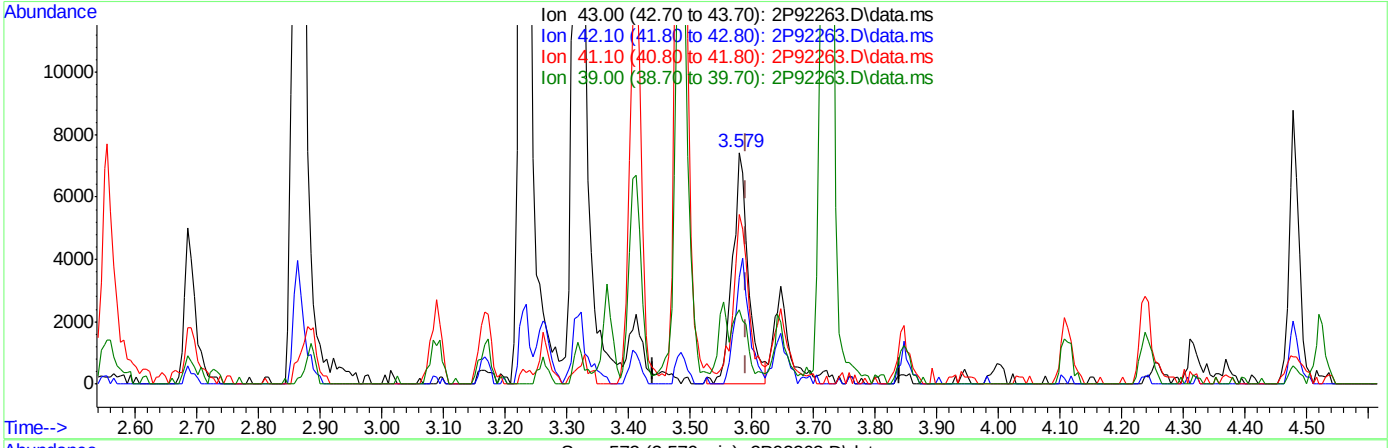
response 11164

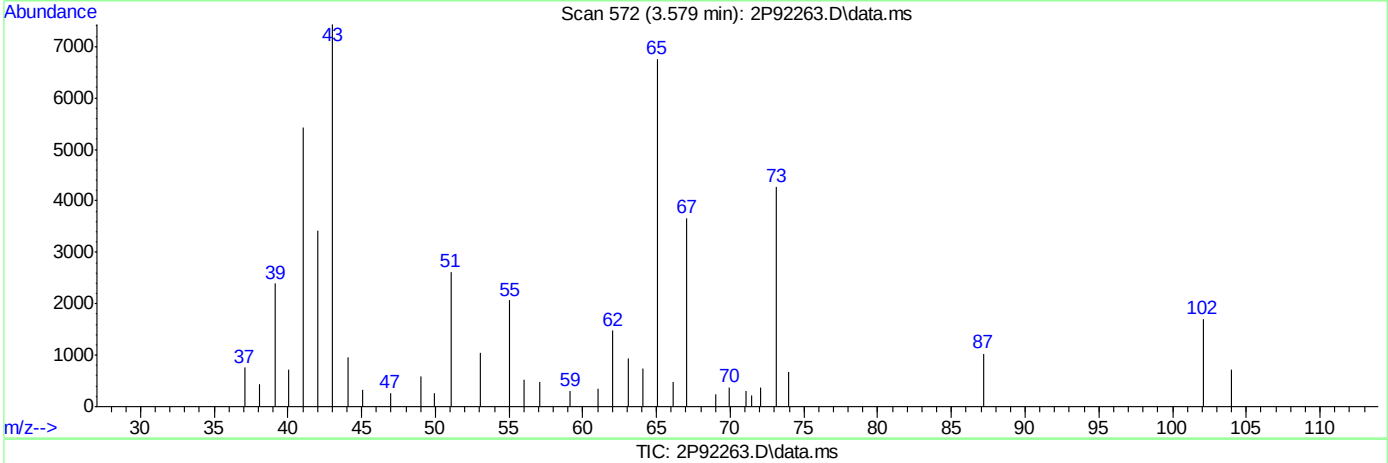
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	68.24
39.00	28.00	27.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 9.38ug/L m

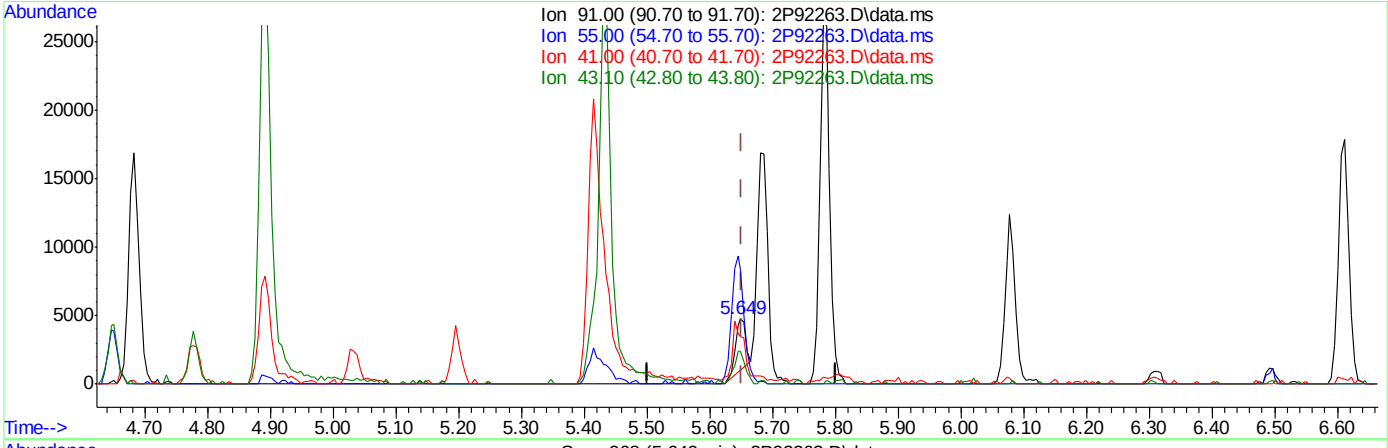
response 13077

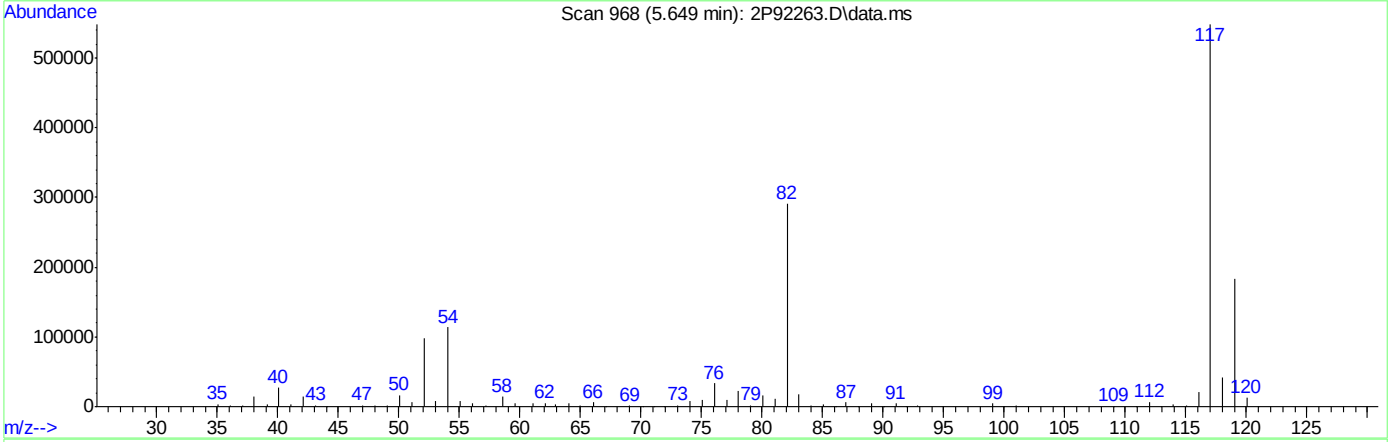
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	73.04
39.00	28.00	32.25

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 0.69ug/L

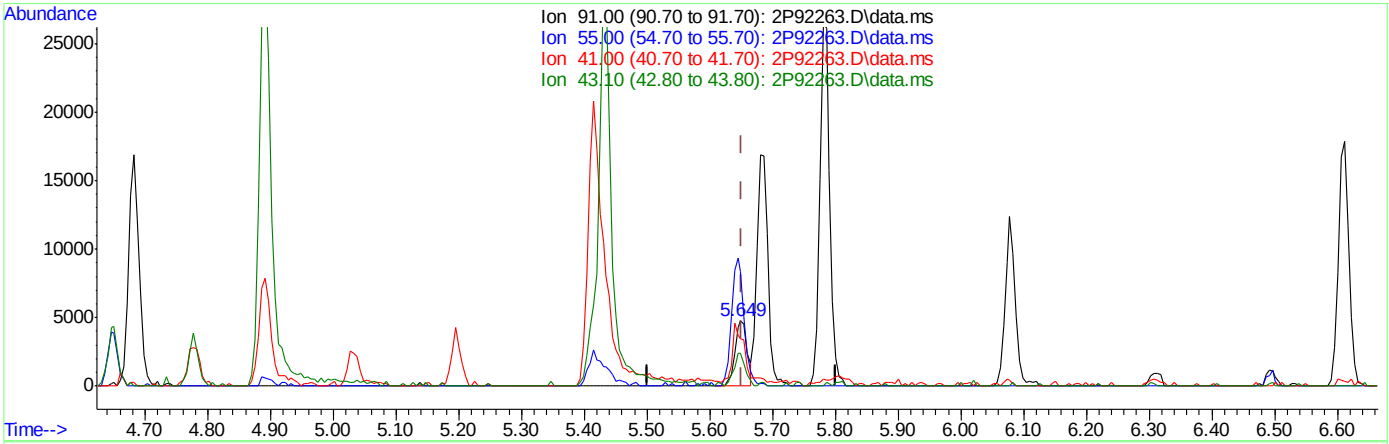
response 4594

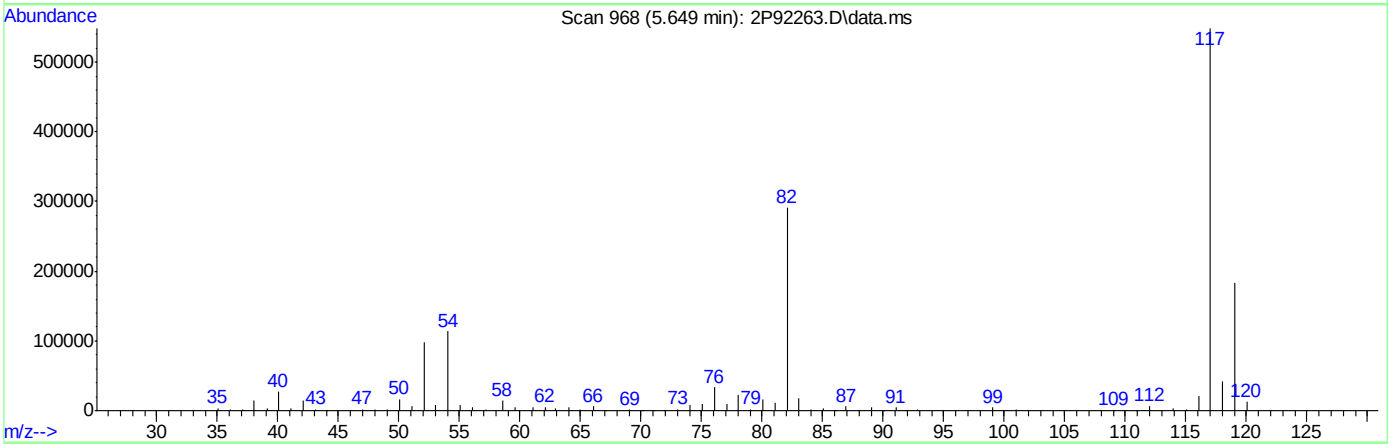
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	164.44#
41.00	83.00	62.38#
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 1.00ug/L m

response 6715

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	176.32#
41.00	83.00	73.01
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
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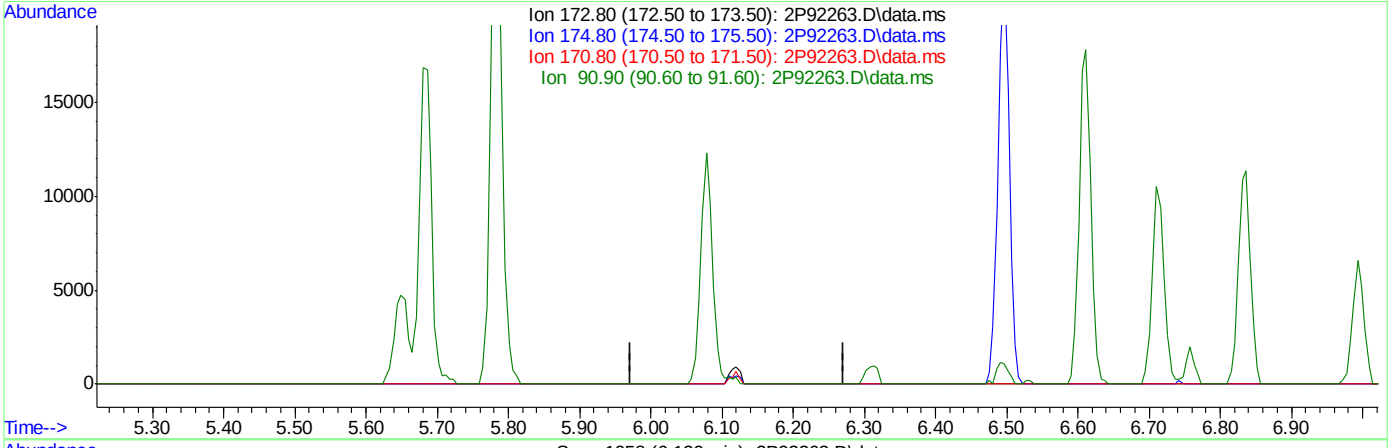

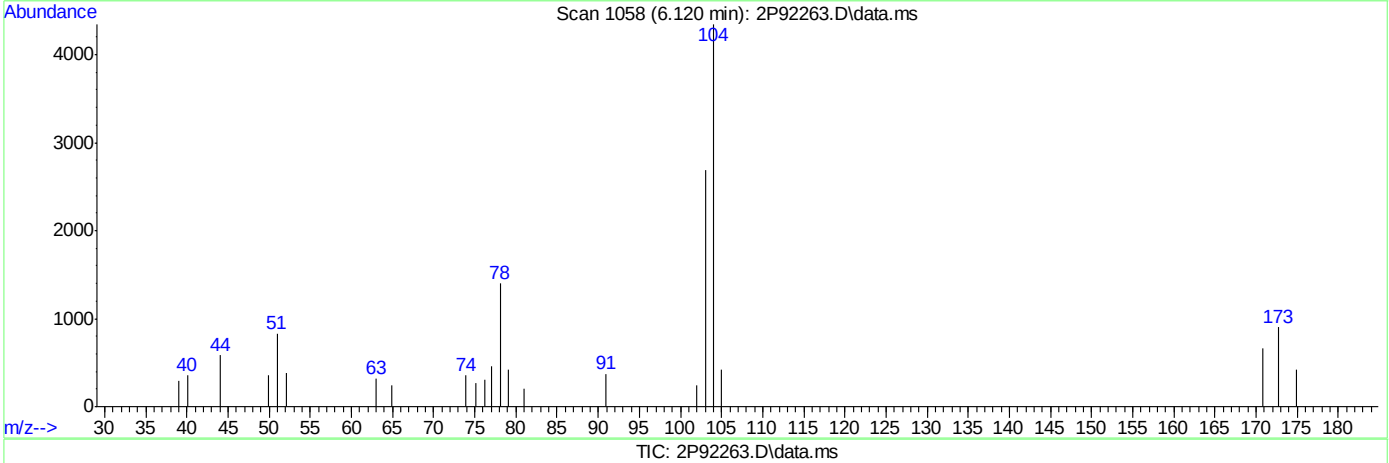

TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.122min (-6.122) 0.00ug/L

response 0

Ion	Exp%	Act%
172.80	100	0.00
174.80	46.40	0.00#
170.80	50.50	0.00#
90.90	21.40	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
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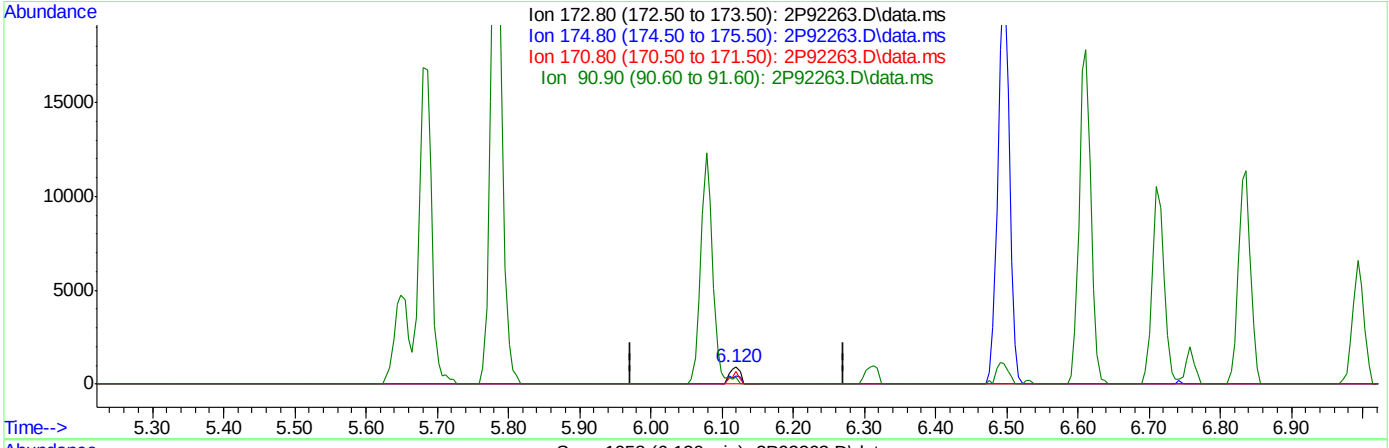

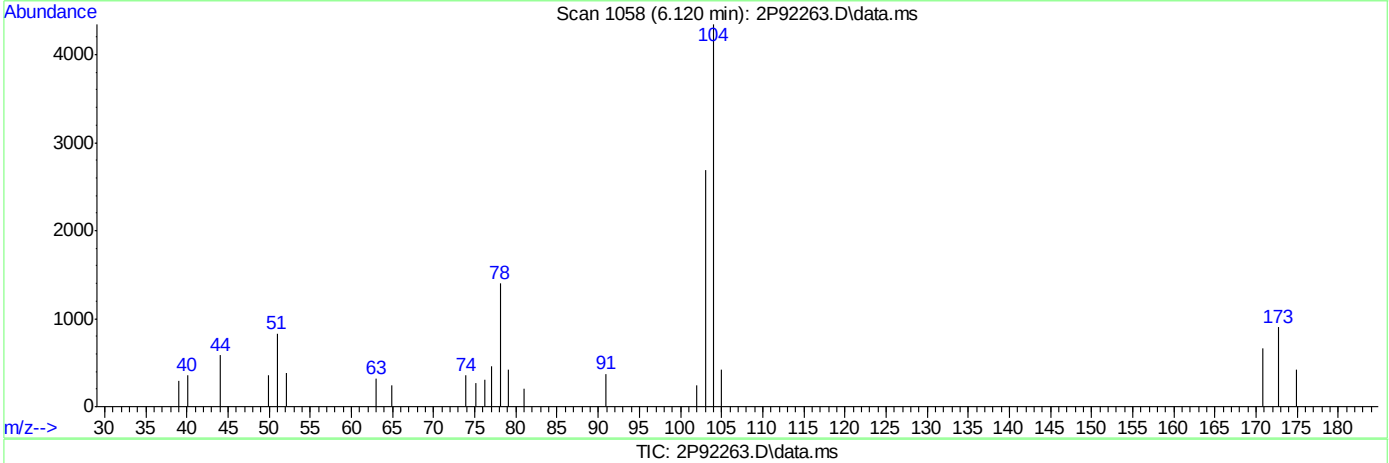

TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.120min (-0.002) 0.54ug/L m

response 935

Ion	Exp%	Act%
172.80	100	100
174.80	46.40	47.28
170.80	50.50	73.03
90.90	21.40	41.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
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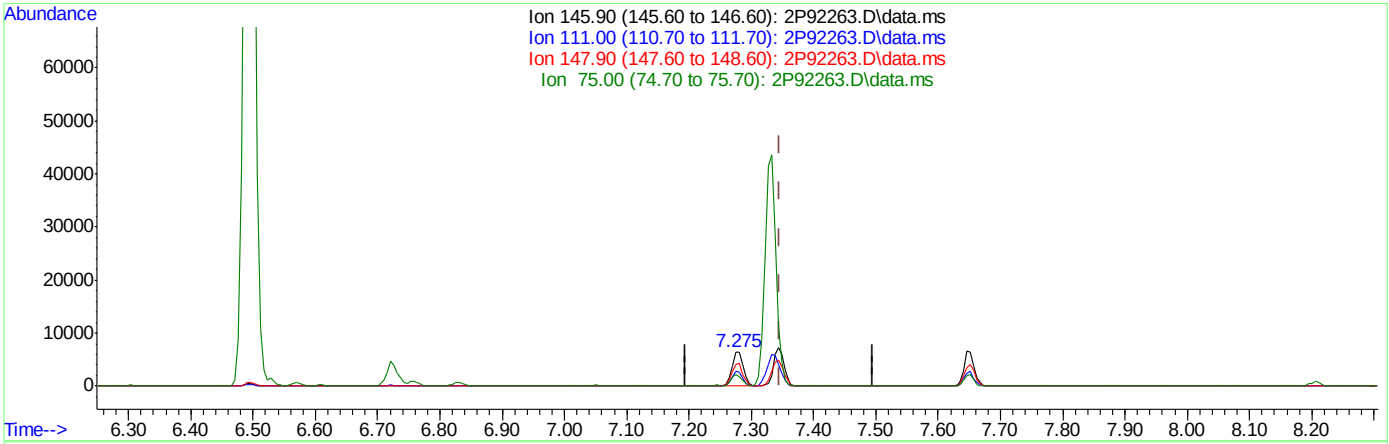
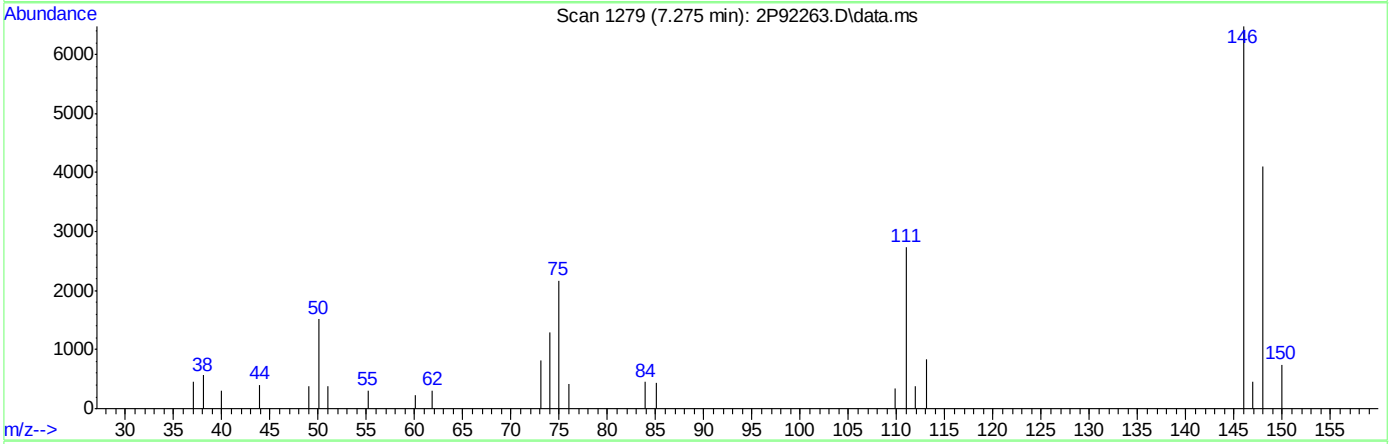




TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.275min (-0.071) 0.87ug/L

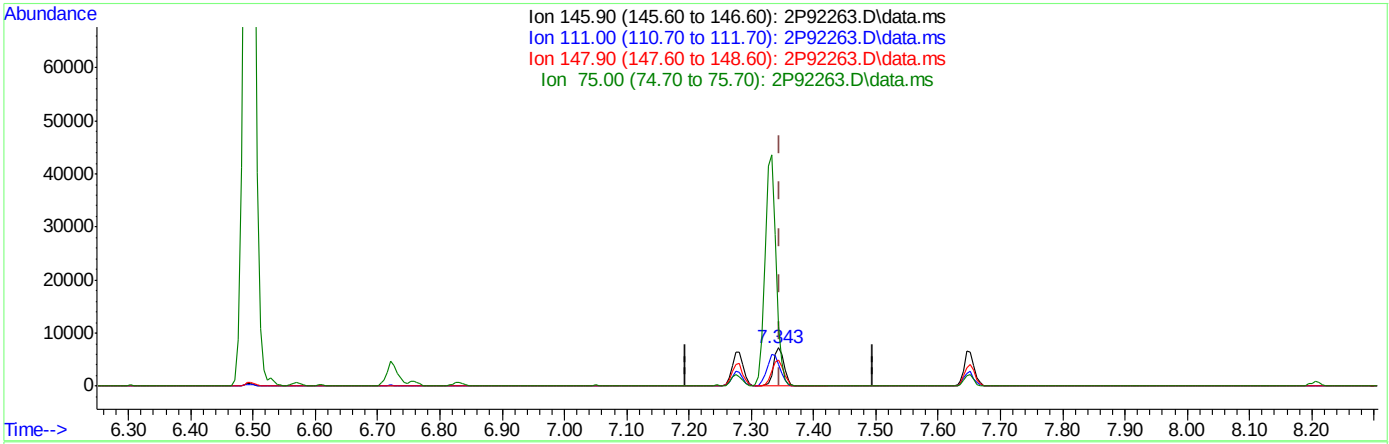
response 7813

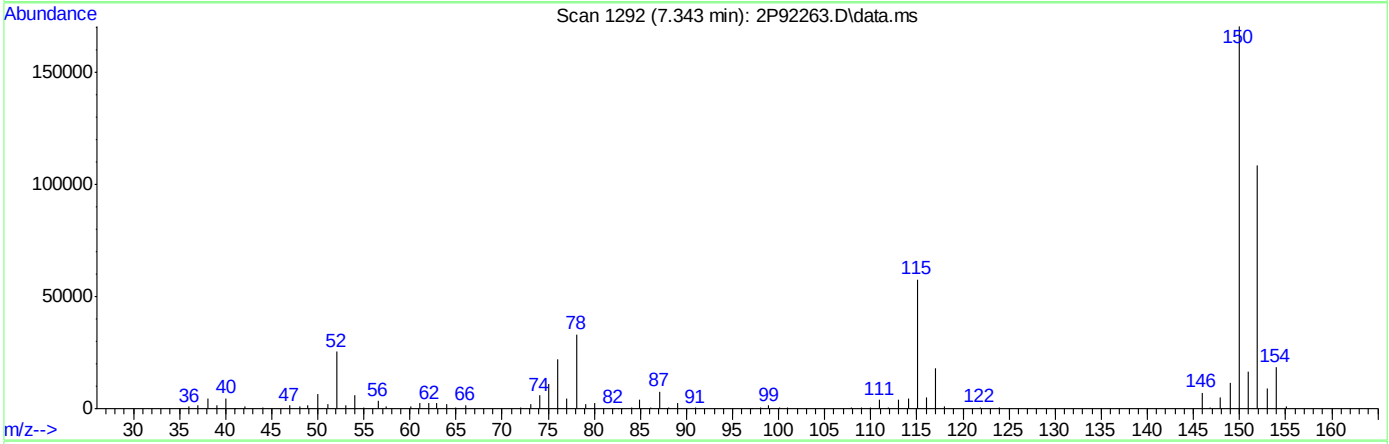
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	42.36
147.90	61.90	63.43
75.00	34.60	33.55

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (-0.003) 0.91ug/L m

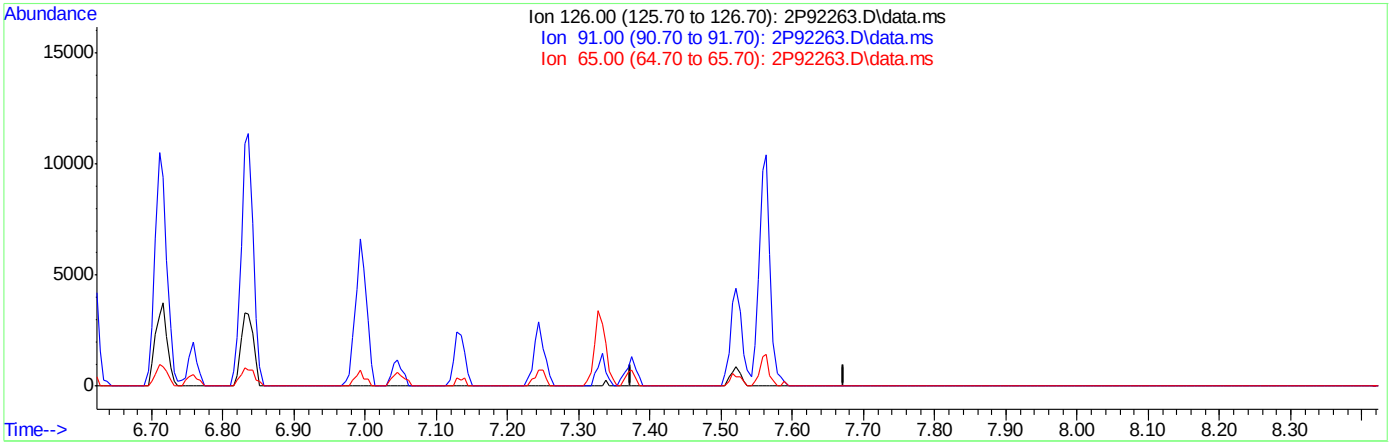
response 8240

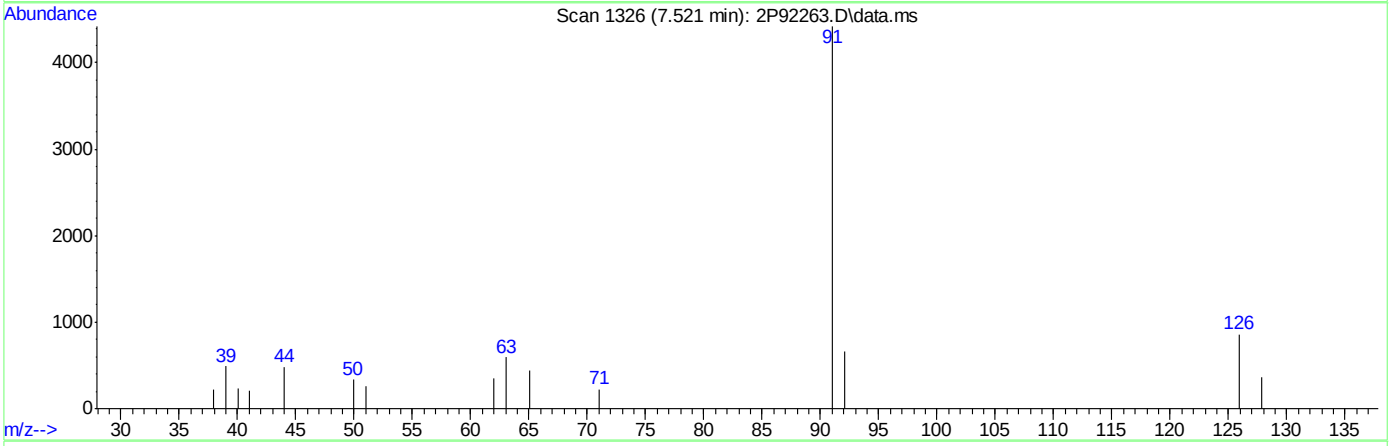
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	55.61
147.90	61.90	69.94
75.00	34.60	155.89#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.523min (-7.523) 0.00ug/L

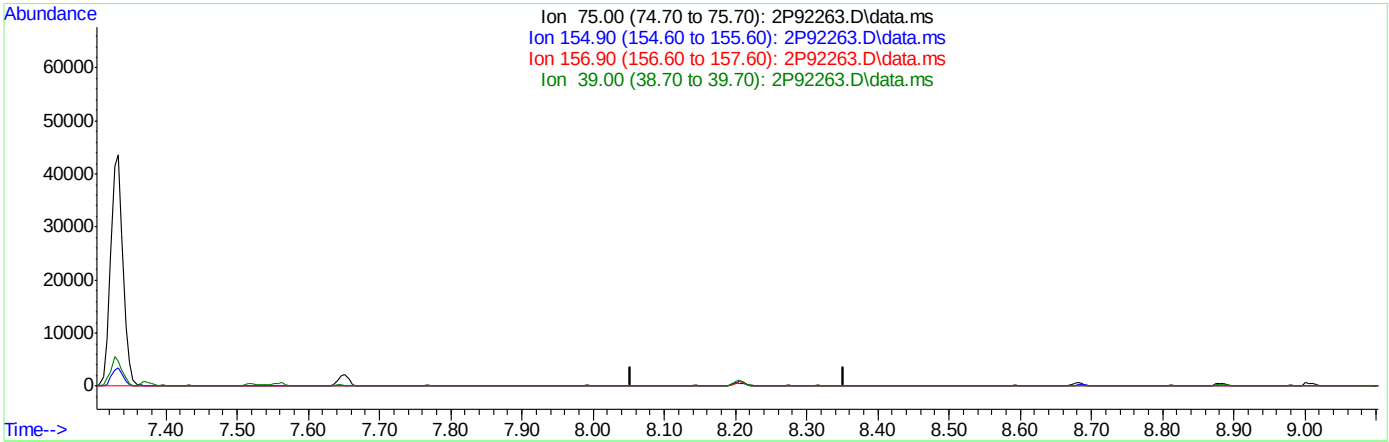
response 0

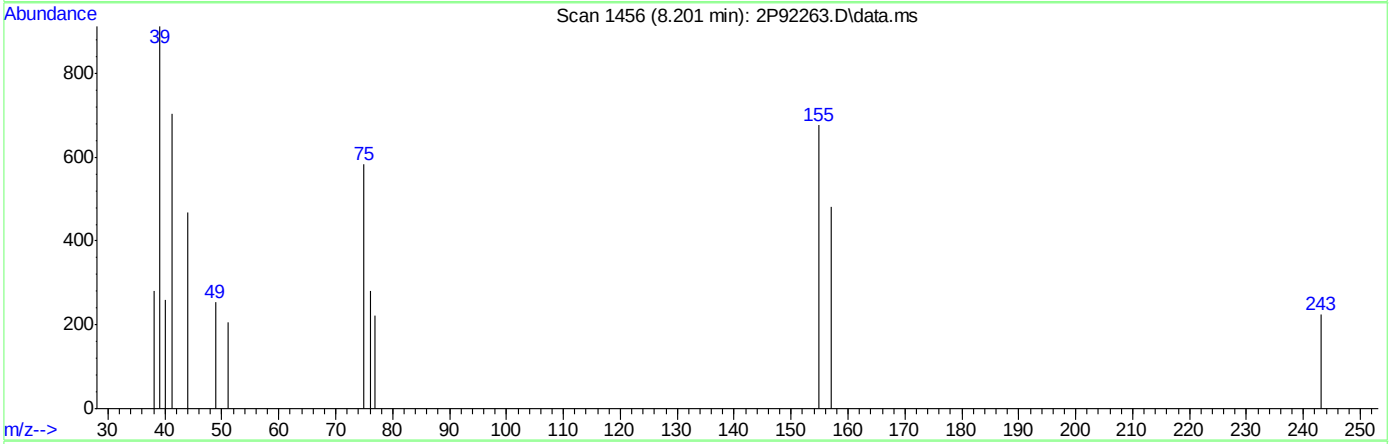
Ion	Exp%	Act%
126.00	100	0.00
91.00	524.80	0.00#
65.00	71.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.203min (-8.203) 0.00ug/L

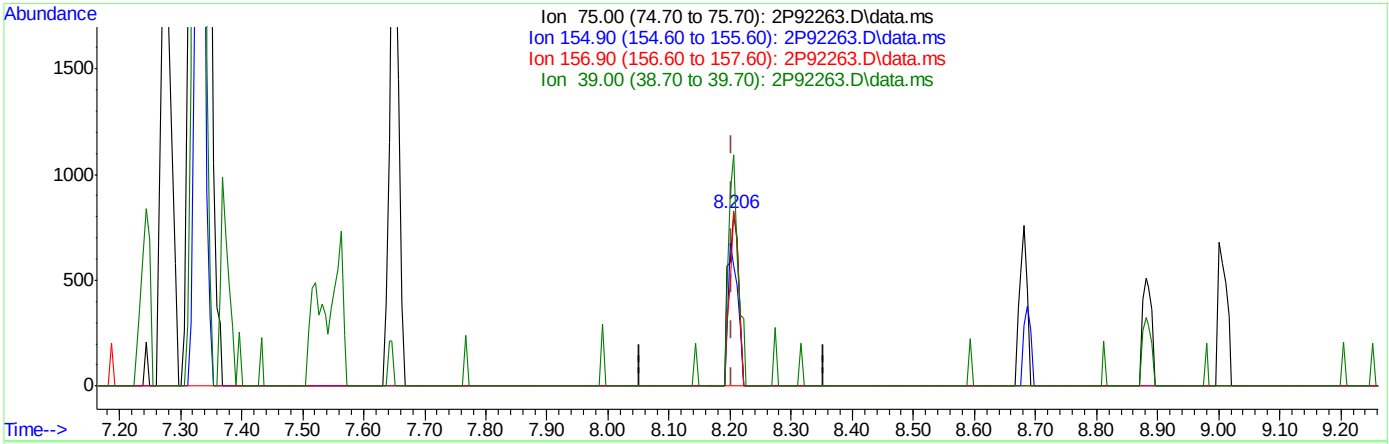
response 0

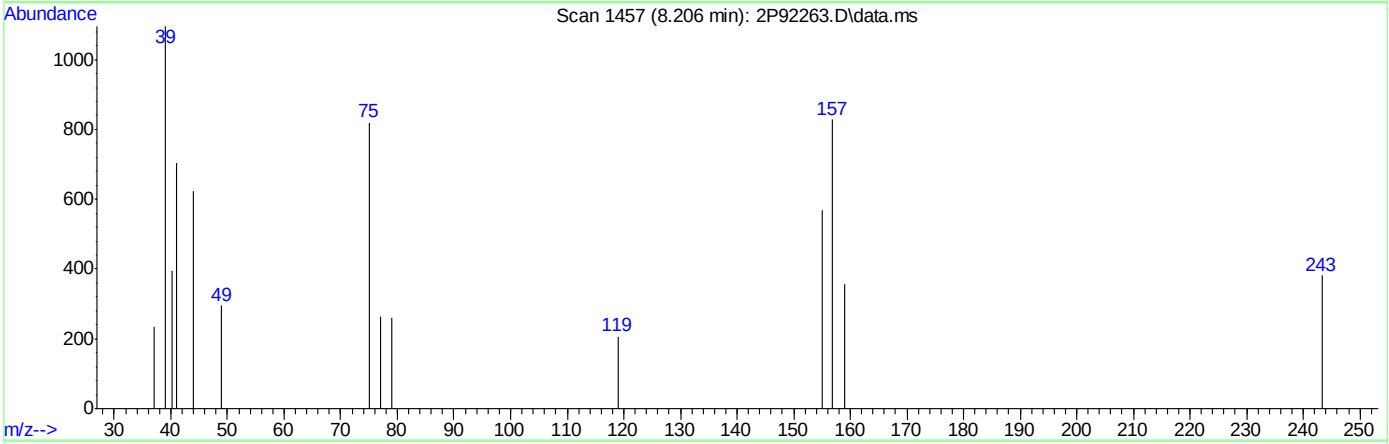
Ion	Exp%	Act%
75.00	100	0.00
154.90	74.10	0.00#
156.90	85.50	0.00#
39.00	122.20	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.206min (+0.003) 0.74ug/L m

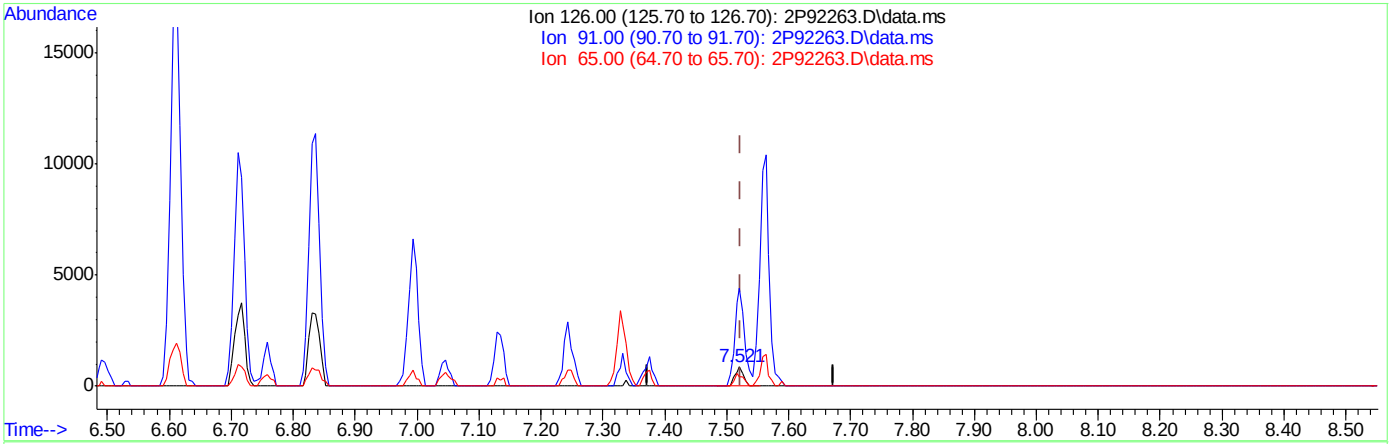
response 932

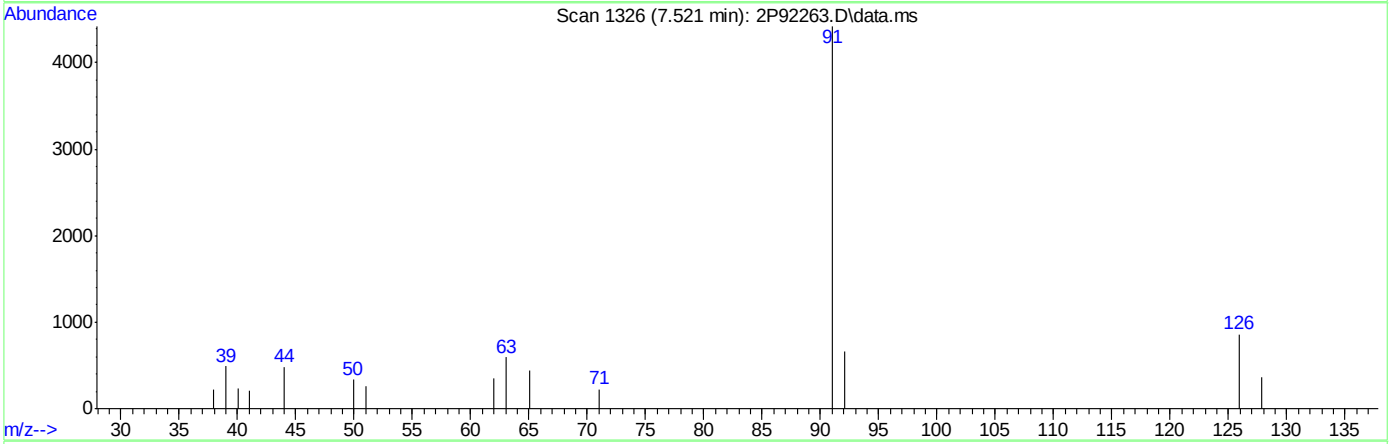
Ion	Exp%	Act%
75.00	100	100
154.90	74.10	69.60
156.90	85.50	101.10
39.00	122.20	133.70

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.521min (-0.002) 0.62ug/L m

response 838

Ion	Exp%	Act%
126.00	100	100
91.00	524.80	516.36
65.00	71.60	51.29#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.725	96	1290577	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	897703	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	403198	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	270124	46.32	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 92.64%				
49) 1,2-Dichloroethane-d4	3.552	65	378774	41.67	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.34%				
63) Toluene-d8	4.650	98	1230359	51.41	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.82%				
86) 4-Bromofluorobenzene	6.496	174	310144	46.27	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 92.54%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	18173	3.75	ug/L		98
3) Chloromethane	1.252	50	20517	2.85	ug/L		93
4) 1,3-butadiene	1.320	39	20772	3.23	ug/L		91
5) Vinyl Chloride	1.310	62	24345	3.77	ug/L		95
6) Bromomethane	1.513	94	16922	6.70	ug/L		99
7) Chloroethane	1.587	64	11544	5.19	ug/L		94
8) Trichlorofluoromethane	1.686	101	30131	5.23	ug/L		97
9) Ethyl Ether	1.879	59	24918	4.14	ug/L		85
10) Ethanol	1.947	45	15329	64.84	ug/L		88
11) 1,2-Dichlorotrifluoroe...	1.979	67	22588	4.31	ug/L		87
12) 1,1-Dichloroethene	1.989	61	32739	3.91	ug/L		89
13) Freon 113	2.021	101	20226	4.68	ug/L		97
14) Carbon Disulfide	2.010	76	47300	4.68	ug/L		83
15) Iodomethane	2.062	142	7787	1.32	ug/L		88
16) Acrolein	2.156	56	44147	21.20	ug/L		96
17) Allyl chloride	2.251	41	22787	3.00	ug/L		93
18) Methylene Chloride	2.303	49	45580	3.80	ug/L		78
19) Acetone	2.319	43	83434	18.37	ug/L		91
20) Methyl acetate	2.397	43	158182	15.51	ug/L		88
21) trans-1,2-Dichloroethene	2.407	61	33592	3.93	ug/L		81
22) Hexane	2.475	56	14894	3.36	ug/L	#	88
23) Methyl Tert Butyl Ether	2.470	73	73173	4.62	ug/L		89
24) Tert Butyl Alcohol	2.502	59	91250	38.36	ug/L		95
25) Acetonitrile	2.554	41	59508	35.06	ug/L		94
26) Di-isopropyl ether	2.690	45	70813	3.36	ug/L		92
27) Chloroprene	2.732	53	99184	2.97	ug/L		90
28) 1,1-Dichloroethane	2.732	63	43072	4.05	ug/L		92
29) Acrylonitrile	2.732	52	79032	18.31	ug/L		81
30) ETBE	2.883	59	80478	3.95	ug/L		91
31) Vinyl acetate	2.862	43	272570	17.81	ug/L		100
32) cis-1,2-Dichloroethene	3.024	96	26847	5.23	ug/L	#	82
33) 2,2-Dichloropropane	3.092	77	31037	4.57	ug/L		98
34) Bromochloromethane	3.129	128	12004	5.24	ug/L	#	65
35) Cyclohexane	3.165	56	38906	3.56	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	44643	4.76	ug/L		94
37) Ethyl acetate	3.228	43	211307	17.08	ug/L		94
38) Tetrahydrofuran	3.260	42	16825	3.25	ug/L		91
40) Carbon Tetrachloride	3.270	117	25941m	4.92	ug/L		
41) 1,1,1-Trichloroethane	3.296	97	35376	4.71	ug/L		96
42) 2-Butanone	3.317	43	144027	19.16	ug/L		79
43) 1,1-Dichloropropene	3.369	75	32613	4.64	ug/L		82
44) tert-Butyl formate	3.411	59	77006	21.61	ug/L		90
45) Propionitrile	3.458	54	90503	39.92	ug/L		97
46) Methacrylonitrile	3.484	41	235404	33.00	ug/L		98
47) Benzene	3.495	78	104936	4.83	ug/L		73
48) TAME	3.568	73	72443	4.73	ug/L		89
50) Isobutyl alcohol	3.584	43	88293m	63.98	ug/L		
51) 1,2-Dichloroethane	3.594	62	37281	4.04	ug/L		91
52) Tert Amyl Alcohol	3.646	59	69082	38.54	ug/L		88
53) Trichloroethene	3.829	95	26765	5.04	ug/L		93
54) Methylcyclohexane	3.850	83	33758	4.53	ug/L	#	81
55) Dibromomethane	4.054	93	14284	4.78	ug/L		97
56) 1,2-Dichloropropane	4.112	63	25411	4.24	ug/L		91
57) Bromodichloromethane	4.148	83	23490	4.69	ug/L		95
58) Methyl methacrylate	4.237	41	25850	3.13	ug/L	#	75
59) 1,4-Dioxane	4.258	88	16723	101.68	ug/L		92
60) 2-Chloroethyl vinyl ether	4.478	63	103802	21.59	ug/L		81
61) cis-1,3-Dichloropropene	4.525	75	29027	4.17	ug/L		76
64) Toluene	4.682	91	114476	5.45	ug/L		98
65) 2-Nitropropane	4.776	41	28595	12.44	ug/L		94
66) 4-Methyl-2-pentanone	4.891	43	217276	19.24	ug/L		93
67) trans-1,3-Dichloropropene	4.917	75	26173	4.40	ug/L		87
68) Tetrachloroethene	4.938	166	24044	4.72	ug/L		88
69) Ethyl methacrylate	5.032	69	37766	5.05	ug/L	#	74
70) 1,1,2-Trichloroethane	5.021	83	19526	5.27	ug/L		86
71) Dibromochloromethane	5.142	129	15708	4.86	ug/L		92
72) 1,3-Dichloropropane	5.194	76	43843	5.24	ug/L		81
73) 1,2-Dibromoethane	5.293	107	22775	5.15	ug/L		98
74) 3,3-dimethyl-1-butanol	5.414	57	431612	175.14	ug/L	#	88
75) 2-hexanone	5.429	43	244905	17.89	ug/L		84
76) 1-Chlorohexane	5.654	91	35433m	5.26	ug/L		
77) Ethylbenzene	5.685	91	124754	5.43	ug/L		95
78) Chlorobenzene	5.654	112	68797	5.56	ug/L		94
79) 1,1,1,2-Tetrachloroethane	5.696	131	19145	5.37	ug/L		92
80) m,p-Xylene	5.785	91	194619	10.72	ug/L		100
81) o-Xylene	6.077	91	95453	5.35	ug/L		98
82) Styrene	6.109	104	68945	5.15	ug/L		96
83) Bromoform	6.119	173	7924	4.47	ug/L		92
84) Isopropylbenzene	6.308	105	109252	5.32	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	11022	4.24	ug/L		92
88) n-Propylbenzene	6.611	91	129402	5.72	ug/L		98
89) Bromobenzene	6.574	156	27298	5.85	ug/L		88
90) 1,1,2,2-Tetrachloroethane	6.632	83	34540	5.59	ug/L		92
91) 1,3,5-Trimethylbenzene	6.757	105	91753	5.81	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

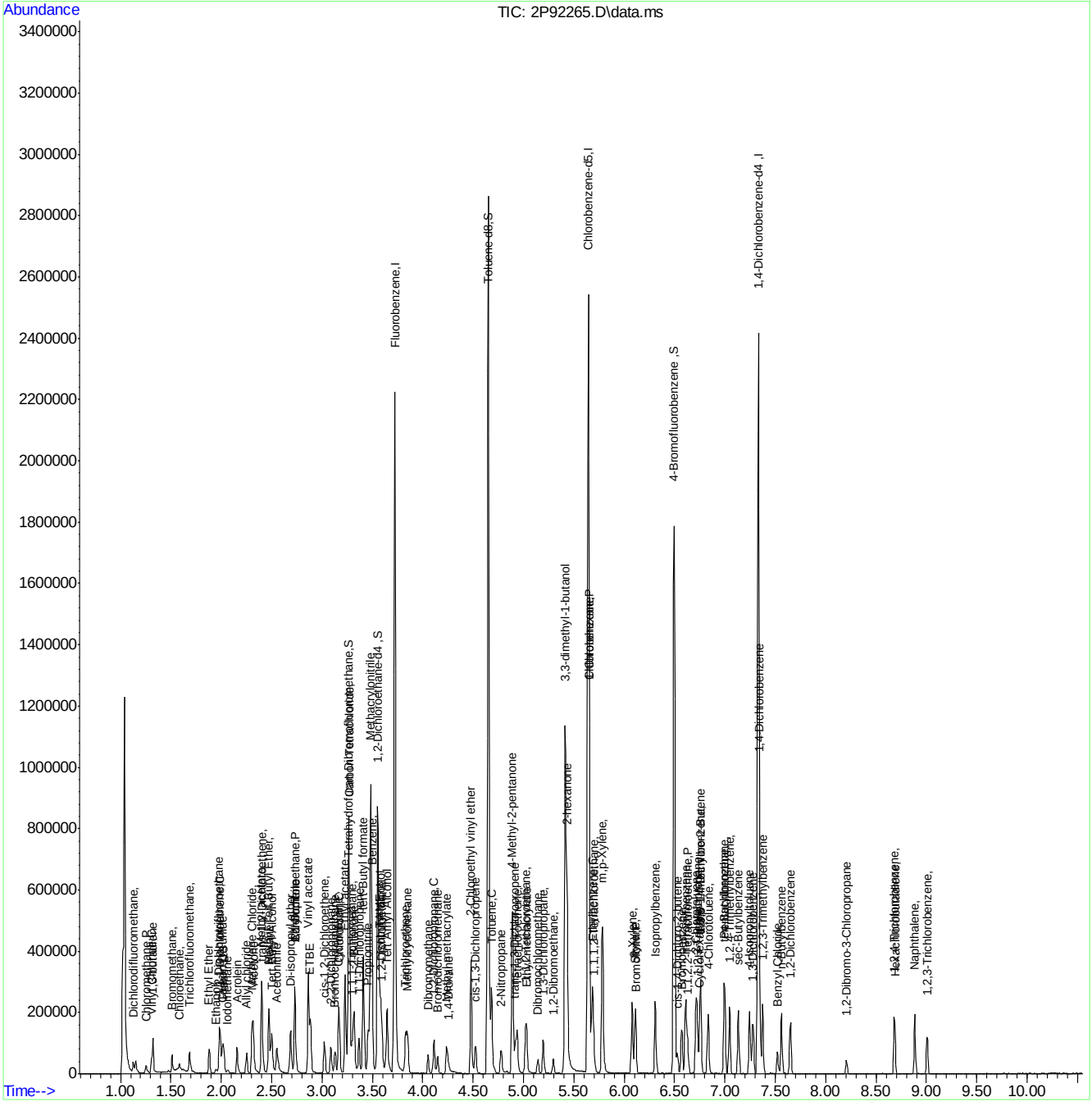
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.715	91	79896	5.82	ug/L		93
93) trans-1,4-Dichloro-2-B...	6.757	53	14007	4.15	ug/L		92
94) 1,2,3-Trichloropropane	6.726	110	12669	5.53	ug/L		83
95) Cyclohexanone	6.747	55	13270	22.45	ug/L		83
96) 4-Chlorotoluene	6.836	91	84303	5.87	ug/L		94
97) tert-Butylbenzene	6.998	91	49056	5.63	ug/L		94
99) 1,2,4-Trimethylbenzene	7.045	105	86779	5.65	ug/L		96
100) Pentachloroethane	6.992	167	9394	5.17	ug/L	#	47
101) sec-Butylbenzene	7.134	105	96243	5.71	ug/L		98
102) 4-Isopropyltoluene	7.243	119	82156	5.71	ug/L		94
103) 1,3-Dichlorobenzene	7.280	146	48323	5.71	ug/L		97
104) 1,2,3-Trimethylbenzene	7.374	105	90040	5.85	ug/L		97
105) 1,4-Dichlorobenzene	7.343	146	52295	5.78	ug/L		88
106) n-Butylbenzene	7.562	92	41492	5.71	ug/L		96
107) Benzyl Chloride	7.520	126	6116	4.36	ug/L	#	85
108) 1,2-Dichlorobenzene	7.651	146	45254	5.50	ug/L		96
109) 1,2-Dibromo-3-Chloropr...	8.205	75	6140	4.79	ug/L		87
110) Hexachlorobutadiene	8.686	225	8710	4.71	ug/L		92
111) 1,2,4-Trichlorobenzene	8.681	180	23047	5.06	ug/L		94
112) Naphthalene	8.885	128	89623	5.73	ug/L		99
113) 1,2,3-Trichlorobenzene	9.010	180	21722	5.05	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

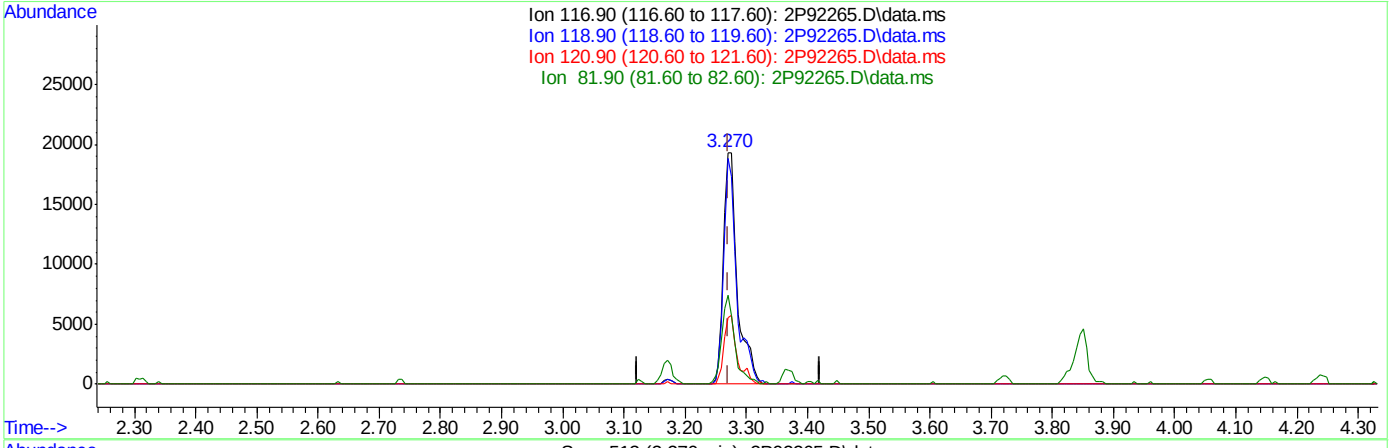
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92265.D **Analyst approved:** 08/24/22 10:38 Courtney Failla
Injection Time: 08/24/22 10:22 **Supervisor approved:** 08/25/22 11:34 Karen Watson

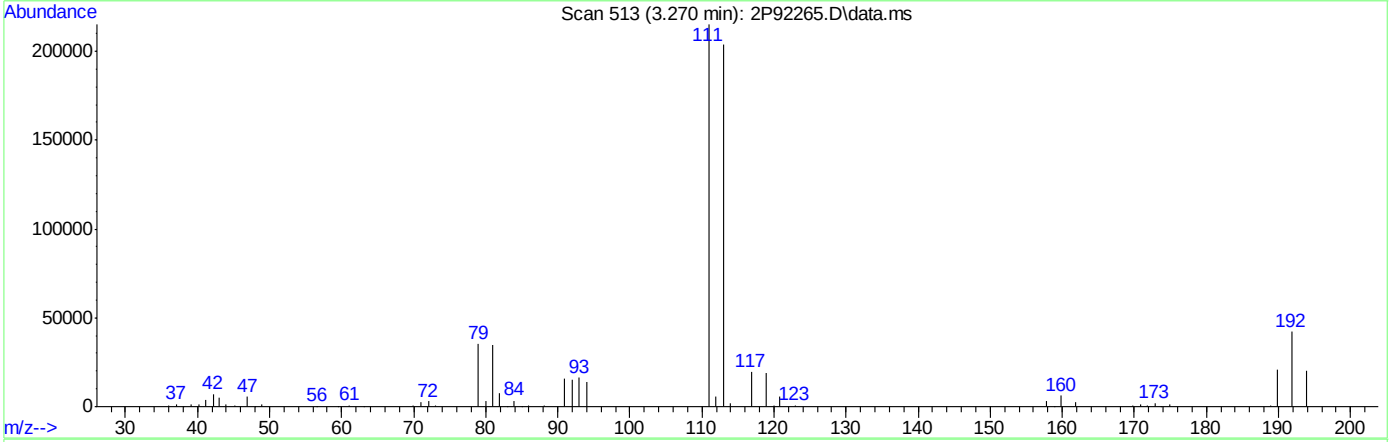
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.002) 5.66ug/L

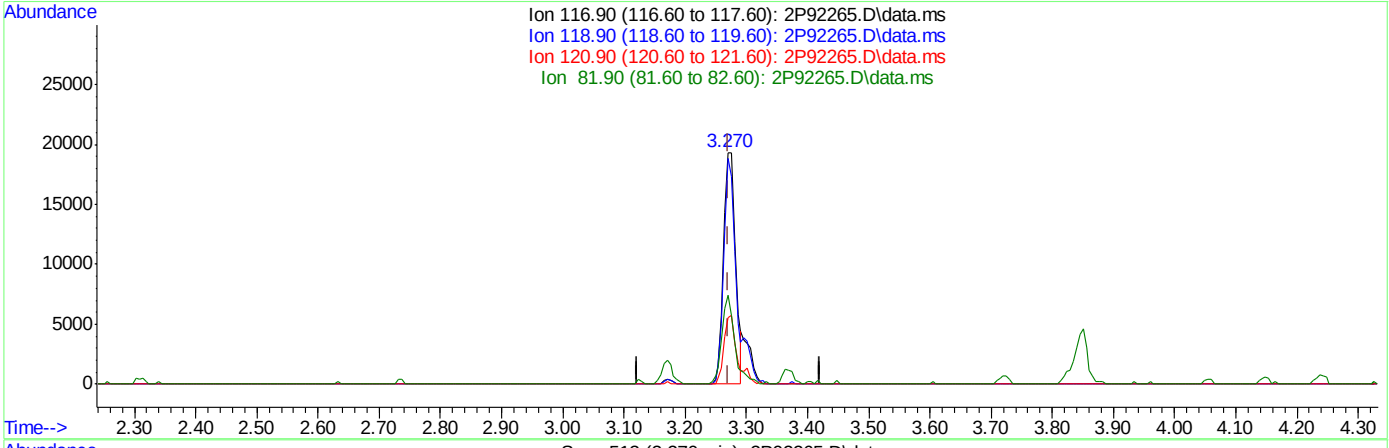
response 29823

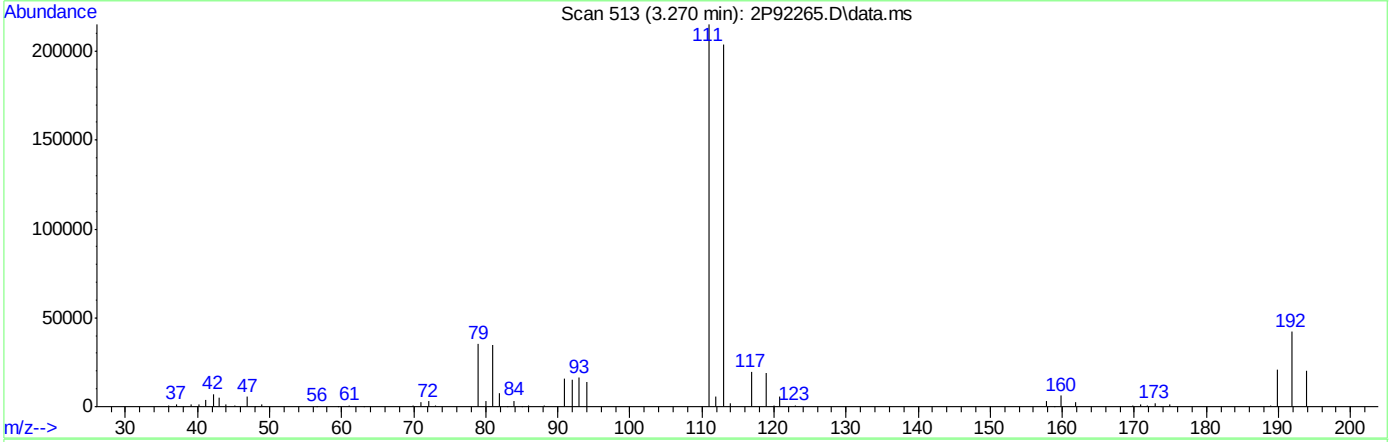
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.56
120.90	30.80	28.73
81.90	30.00	38.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.002) 4.92ug/L m

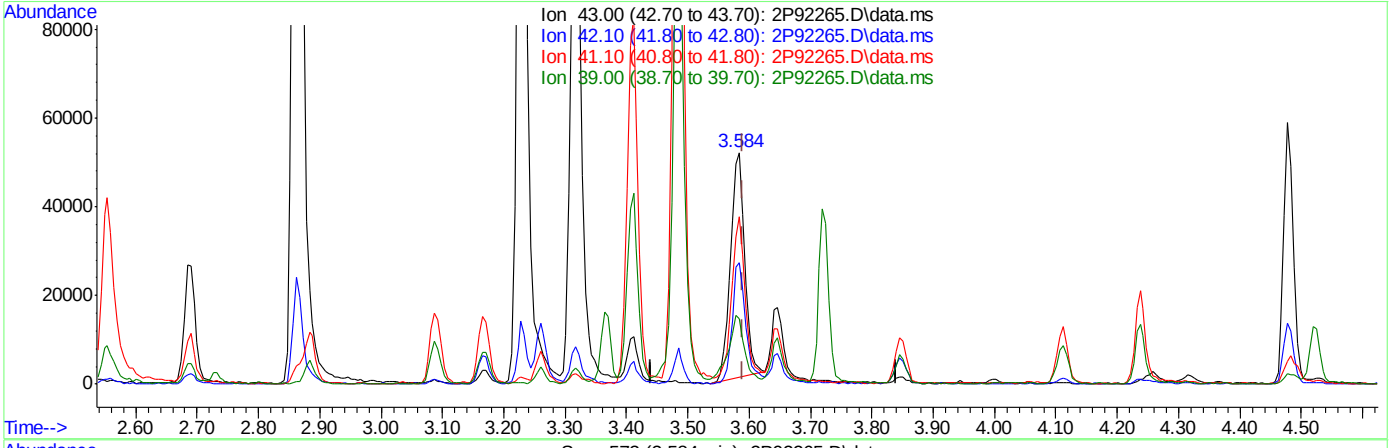
response 25941

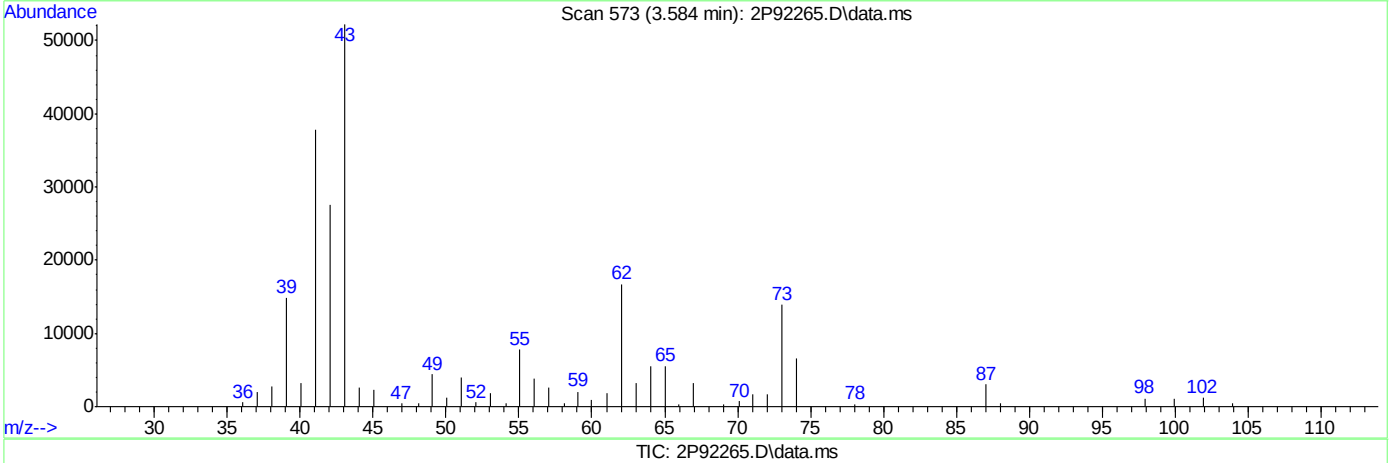
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.56
120.90	30.80	28.73
81.90	30.00	38.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 58.55ug/L

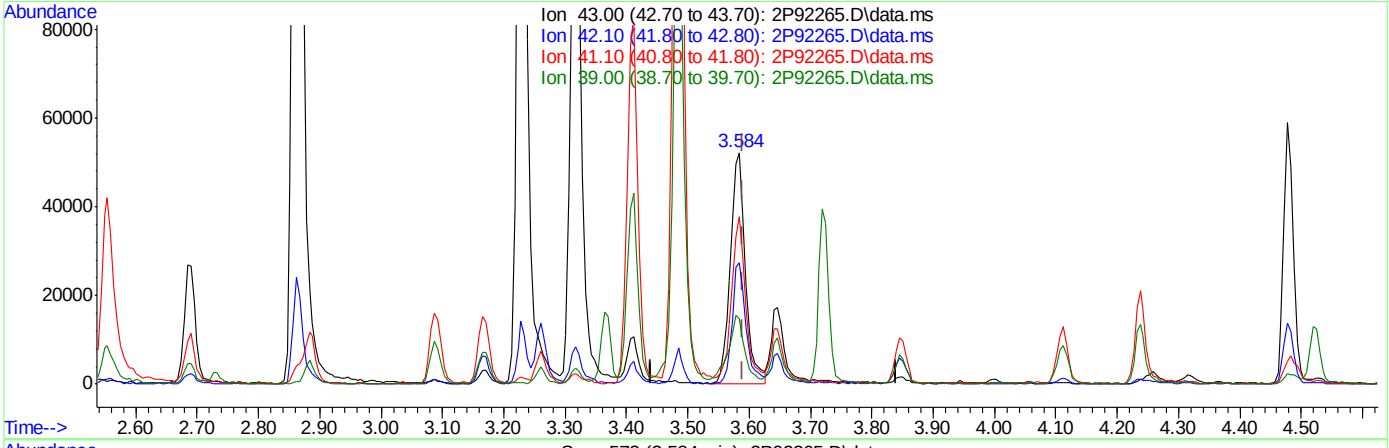
response 80799

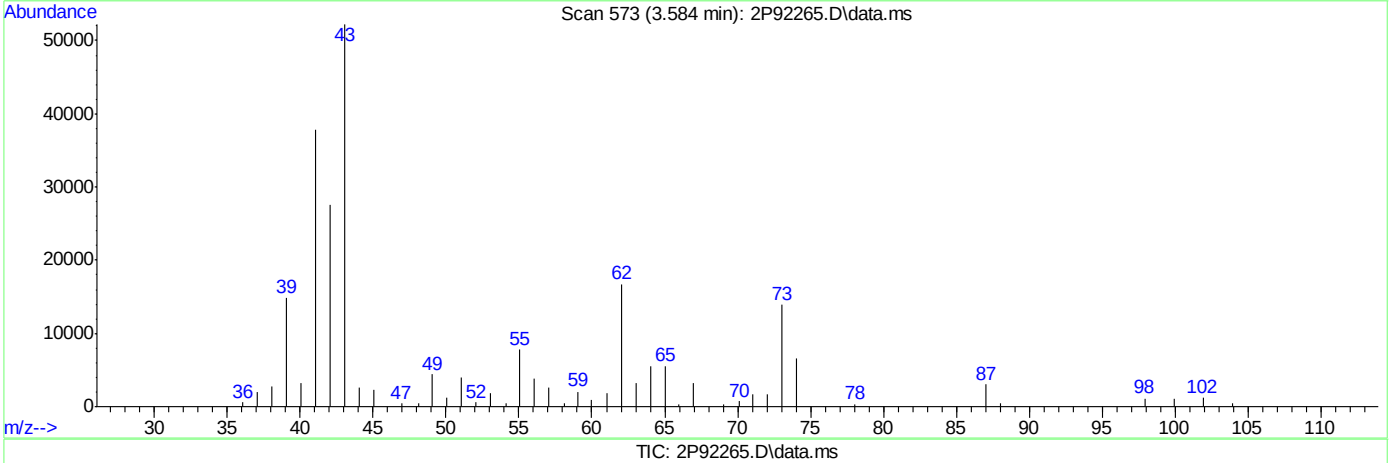
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	52.65
41.10	72.70	68.72
39.00	28.00	26.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 63.98ug/L m

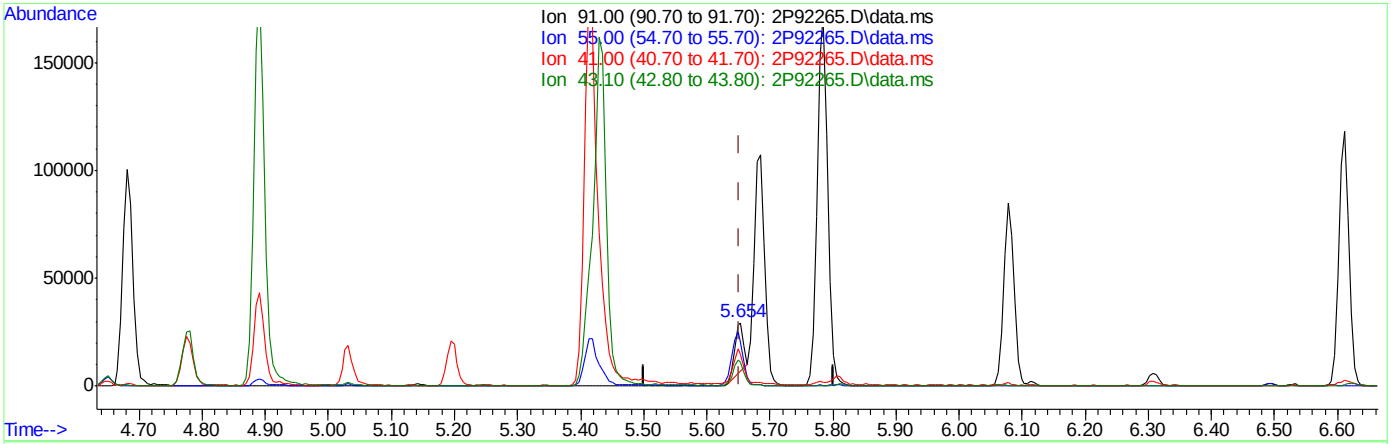
response 88293

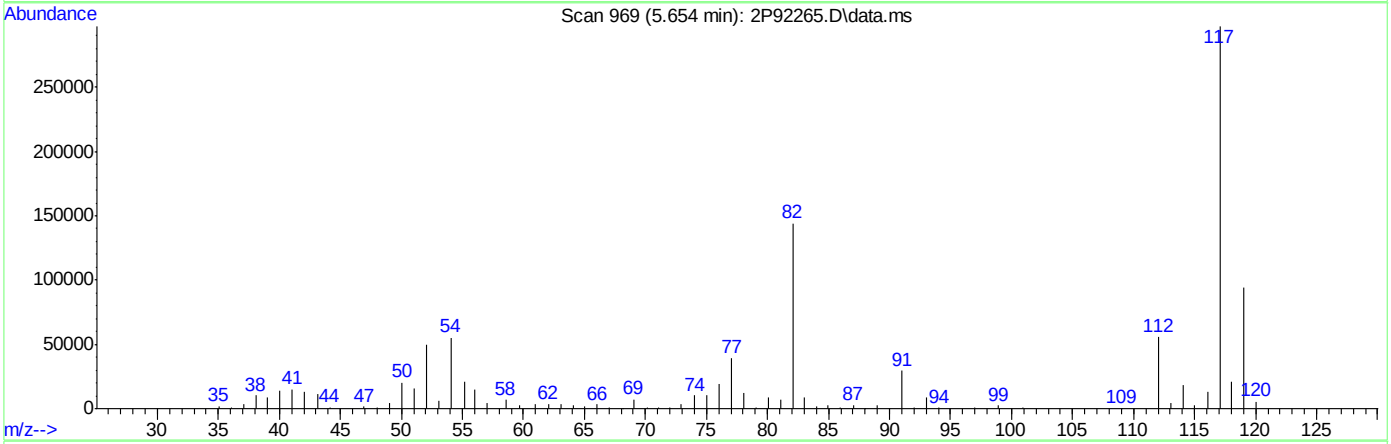
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	52.65
41.10	72.70	72.34
39.00	28.00	28.40

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.003) 3.65ug/L

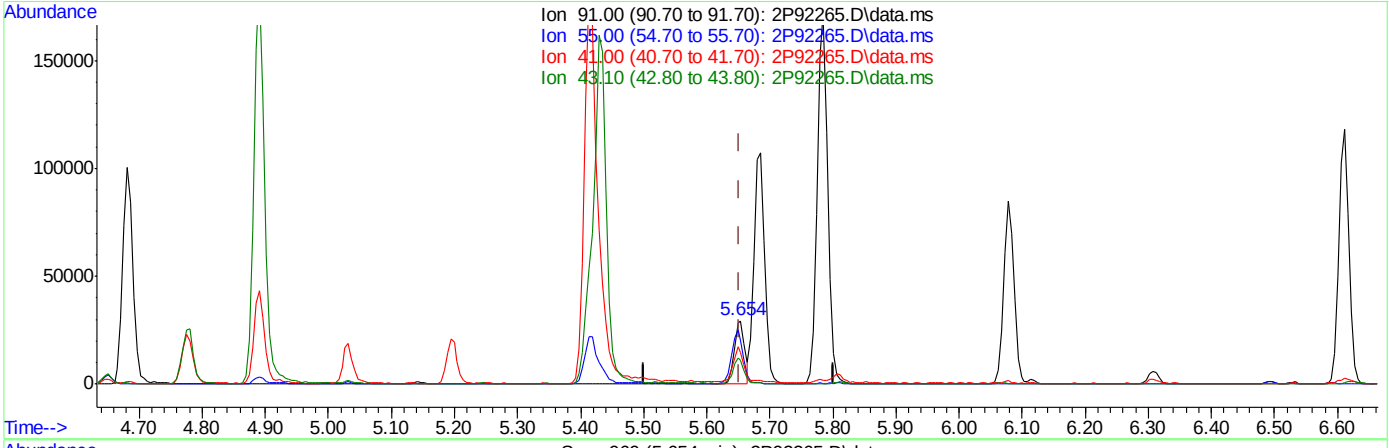
response 24624

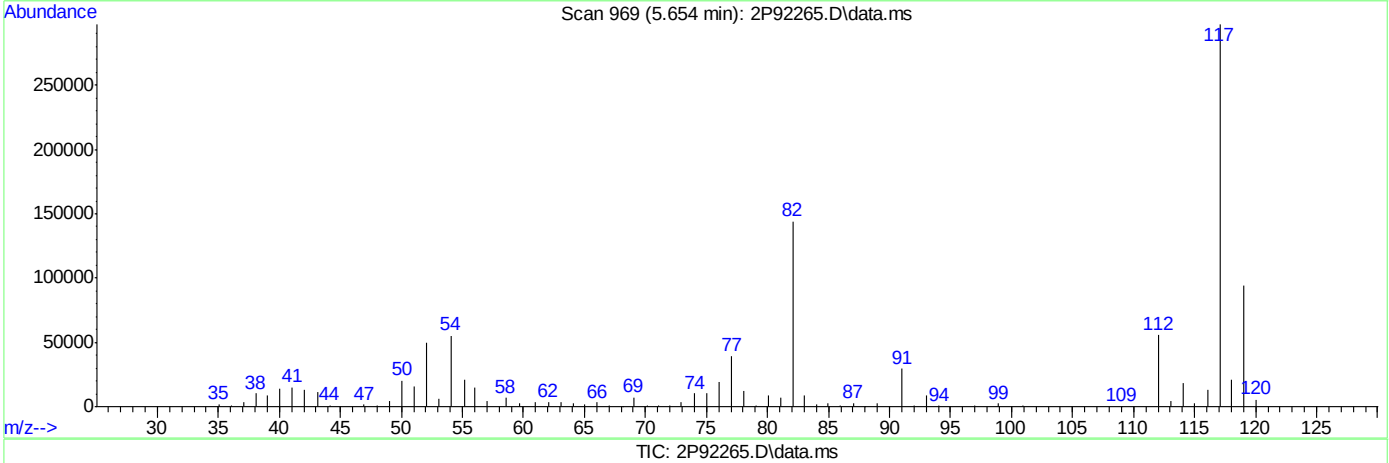
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	57.10#
41.00	83.00	45.04#
43.10	65.60	34.25#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.003) 5.26ug/L m

response 35433

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	69.86#
41.00	83.00	50.82#
43.10	65.60	38.01#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1295262	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	905061	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	411980	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	274375	46.88	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%				
49) 1,2-Dichloroethane-d4	3.553	65	384569	42.15	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 84.30%				
63) Toluene-d8	4.651	98	1246124	51.65	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.30%				
86) 4-Bromofluorobenzene	6.496	174	319677	46.68	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	31403	6.46	ug/L		100
3) Chloromethane	1.252	50	38308	5.31	ug/L		100
4) 1,3-butadiene	1.320	39	29714	4.60	ug/L		90
5) Vinyl Chloride	1.305	62	45651	7.05	ug/L		98
6) Bromomethane	1.514	94	31072	12.26	ug/L		94
7) Chloroethane	1.587	64	17033	7.63	ug/L		94
8) Trichlorofluoromethane	1.681	101	54389	9.40	ug/L		94
9) Ethyl Ether	1.880	59	42493	7.04	ug/L		84
10) Ethanol	1.953	45	22426	94.81	ug/L		100
11) 1,2-Dichlorotrifluoroe...	1.979	67	36857	7.00	ug/L		88
12) 1,1-Dichloroethene	1.984	61	52626	6.26	ug/L		92
13) Freon 113	2.021	101	31257	7.20	ug/L		91
14) Carbon Disulfide	2.005	76	81680	7.97	ug/L		91
15) Iodomethane	2.063	142	17236	2.92	ug/L		88
16) Acrolein	2.157	56	73711	35.20	ug/L		100
17) Allyl chloride	2.251	41	34244	4.50	ug/L		95
18) Methylene Chloride	2.303	49	66775	5.57	ug/L		78
19) Acetone	2.319	43	138555	30.43	ug/L		89
20) Methyl acetate	2.397	43	285484	27.88	ug/L		88
21) trans-1,2-Dichloroethene	2.408	61	56462	6.58	ug/L		78
22) Hexane	2.471	56	22860	5.14	ug/L	#	93
23) Methyl Tert Butyl Ether	2.471	73	130596	8.22	ug/L		83
24) Tert Butyl Alcohol	2.502	59	161231	67.54	ug/L		93
25) Acetonitrile	2.549	41	89361	52.71	ug/L		94
26) Di-isopropyl ether	2.690	45	121811	5.75	ug/L		92
27) Chloroprene	2.732	53	164073	4.90	ug/L		92
28) 1,1-Dichloroethane	2.732	63	74326	6.97	ug/L		91
29) Acrylonitrile	2.732	52	130970	30.23	ug/L		82
30) ETBE	2.884	59	143298	7.01	ug/L		90
31) Vinyl acetate	2.863	43	460988	30.02	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	44939	8.73	ug/L		85
33) 2,2-Dichloropropane	3.087	77	53618	7.82	ug/L		97
34) Bromochloromethane	3.129	128	21383	9.31	ug/L	#	64
35) Cyclohexane	3.166	56	64821	5.92	ug/L	#	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	76083	8.08	ug/L		93
37) Ethyl acetate	3.229	43	356460	28.72	ug/L		94
38) Tetrahydrofuran	3.260	42	27557	5.30	ug/L		82
40) Carbon Tetrachloride	3.270	117	40996m	7.75	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	59644	7.92	ug/L		93
42) 2-Butanone	3.317	43	232206	30.77	ug/L		76
43) 1,1-Dichloropropene	3.365	75	55048	7.81	ug/L		85
44) tert-Butyl formate	3.412	59	137264	37.80	ug/L		94
45) Propionitrile	3.459	54	137310	60.26	ug/L		96
46) Methacrylonitrile	3.485	41	364915	50.90	ug/L		98
47) Benzene	3.495	78	182924	8.39	ug/L	#	67
48) TAME	3.568	73	128393	8.35	ug/L		91
50) Isobutyl alcohol	3.584	43	147999m	106.86	ug/L		
51) 1,2-Dichloroethane	3.589	62	65905	7.11	ug/L		91
52) Tert Amyl Alcohol	3.647	59	128328	71.34	ug/L		92
53) Trichloroethene	3.830	95	44907	8.42	ug/L		94
54) Methylcyclohexane	3.845	83	55101	7.37	ug/L	#	83
55) Dibromomethane	4.055	93	25053	8.36	ug/L		98
56) 1,2-Dichloropropane	4.112	63	44152	7.35	ug/L		91
57) Bromodichloromethane	4.149	83	41940	8.25	ug/L		96
58) Methyl methacrylate	4.238	41	41690	5.01	ug/L	#	76
59) 1,4-Dioxane	4.259	88	30220	183.09	ug/L		80
60) 2-Chloroethyl vinyl ether	4.478	63	177220	36.61	ug/L		82
61) cis-1,3-Dichloropropene	4.525	75	54531	7.73	ug/L		79
64) Toluene	4.682	91	197103	9.31	ug/L		100
65) 2-Nitropropane	4.776	41	55377	23.57	ug/L		99
66) 4-Methyl-2-pentanone	4.891	43	365886	32.13	ug/L		91
67) trans-1,3-Dichloropropene	4.917	75	51575	8.51	ug/L		84
68) Tetrachloroethene	4.938	166	40506	7.89	ug/L		88
69) Ethyl methacrylate	5.032	69	60736	8.06	ug/L	#	78
70) 1,1,2-Trichloroethane	5.022	83	34075	9.13	ug/L		85
71) Dibromochloromethane	5.147	129	29481	8.93	ug/L		89
72) 1,3-Dichloropropane	5.194	76	73968	8.76	ug/L		82
73) 1,2-Dibromoethane	5.294	107	40675	9.13	ug/L		99
74) 3,3-dimethyl-1-butanol	5.414	57	766291	308.42	ug/L	#	87
75) 2-hexanone	5.430	43	417576	30.26	ug/L		82
76) 1-Chlorohexane	5.649	91	57928m	8.52	ug/L		
77) Ethylbenzene	5.681	91	213848	9.23	ug/L		95
78) Chlorobenzene	5.654	112	116184	9.31	ug/L		93
79) 1,1,1,2-Tetrachloroethane	5.696	131	34431	9.51	ug/L		97
80) m,p-Xylene	5.785	91	337237	18.43	ug/L		97
81) o-Xylene	6.078	91	169648	9.43	ug/L		98
82) Styrene	6.109	104	123237	9.13	ug/L		96
83) Bromoform	6.120	173	14855	8.14	ug/L		95
84) Isopropylbenzene	6.308	105	186958	9.03	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	17968	6.70	ug/L		92
88) n-Propylbenzene	6.611	91	224394	9.70	ug/L		100
89) Bromobenzene	6.575	156	47147	9.88	ug/L	#	82
90) 1,1,2,2-Tetrachloroethane	6.632	83	63942	10.13	ug/L		96
91) 1,3,5-Trimethylbenzene	6.758	105	159081	9.86	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

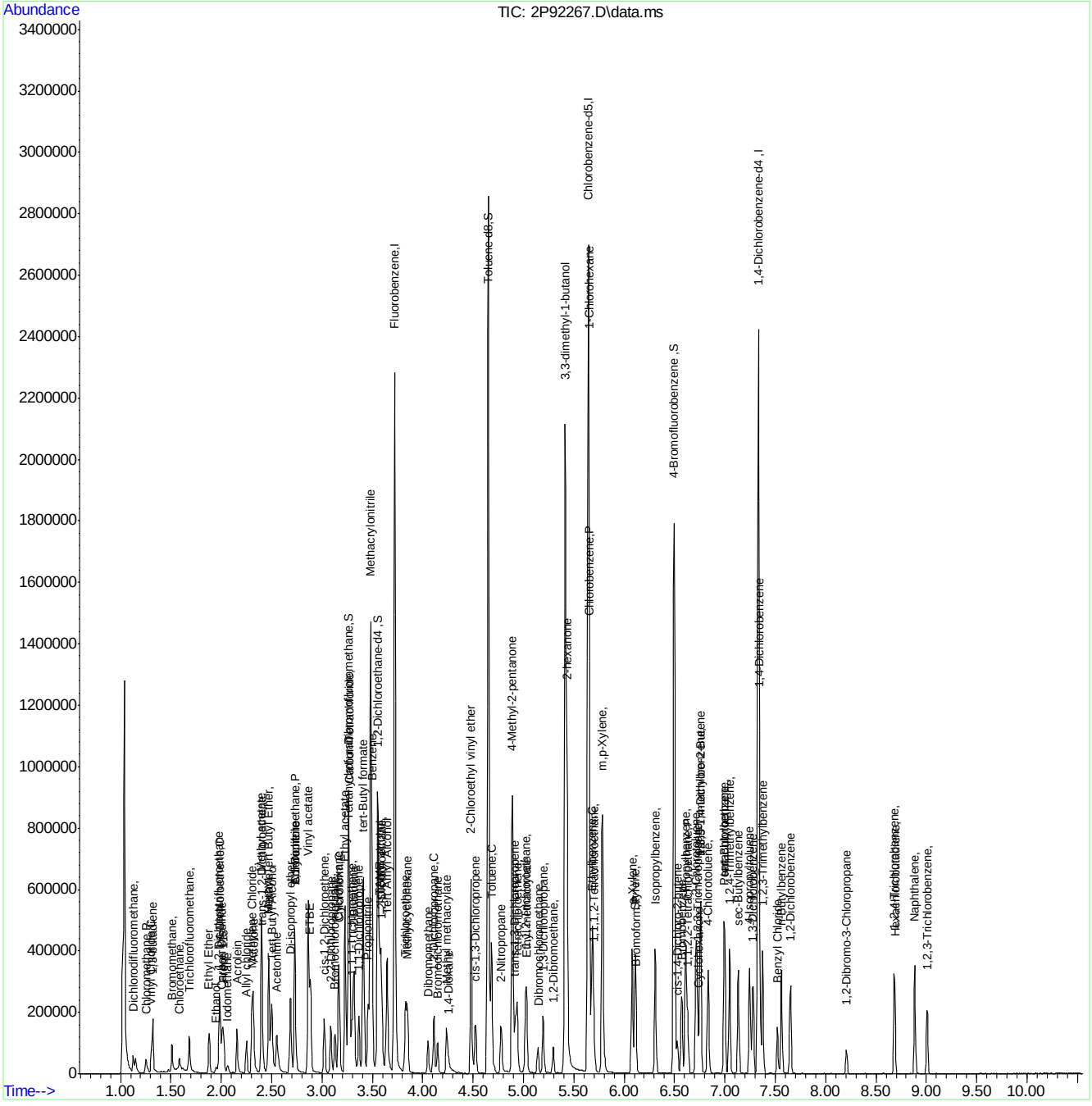
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.716	91	138409	9.86	ug/L		96
93) trans-1,4-Dichloro-2-B...	6.758	53	25118	7.23	ug/L		93
94) 1,2,3-Trichloropropane	6.726	110	24445	10.44	ug/L	#	75
95) Cyclohexanone	6.742	55	24028	39.78	ug/L		89
96) 4-Chlorotoluene	6.831	91	143924	9.80	ug/L		96
97) tert-Butylbenzene	6.993	91	87545	9.83	ug/L		91
99) 1,2,4-Trimethylbenzene	7.045	105	153377	9.78	ug/L		98
100) Pentachloroethane	6.998	167	15356	8.16	ug/L	#	48
101) sec-Butylbenzene	7.134	105	163120	9.48	ug/L		98
102) 4-Isopropyltoluene	7.244	119	145551	9.90	ug/L		97
103) 1,3-Dichlorobenzene	7.280	146	83984	9.71	ug/L		97
104) 1,2,3-Trimethylbenzene	7.374	105	157661	10.02	ug/L		97
105) 1,4-Dichlorobenzene	7.343	146	87924	9.52	ug/L		93
106) n-Butylbenzene	7.563	92	71211	9.59	ug/L		99
107) Benzyl Chloride	7.521	126	13387	9.02	ug/L		97
108) 1,2-Dichlorobenzene	7.651	146	77756	9.25	ug/L		96
109) 1,2-Dibromo-3-Chloropr...	8.206	75	12068	9.06	ug/L		81
110) Hexachlorobutadiene	8.687	225	13621	7.22	ug/L		84
111) 1,2,4-Trichlorobenzene	8.681	180	41466	8.91	ug/L		95
112) Naphthalene	8.885	128	165055	10.33	ug/L		100
113) 1,2,3-Trichlorobenzene	9.011	180	38421	8.74	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

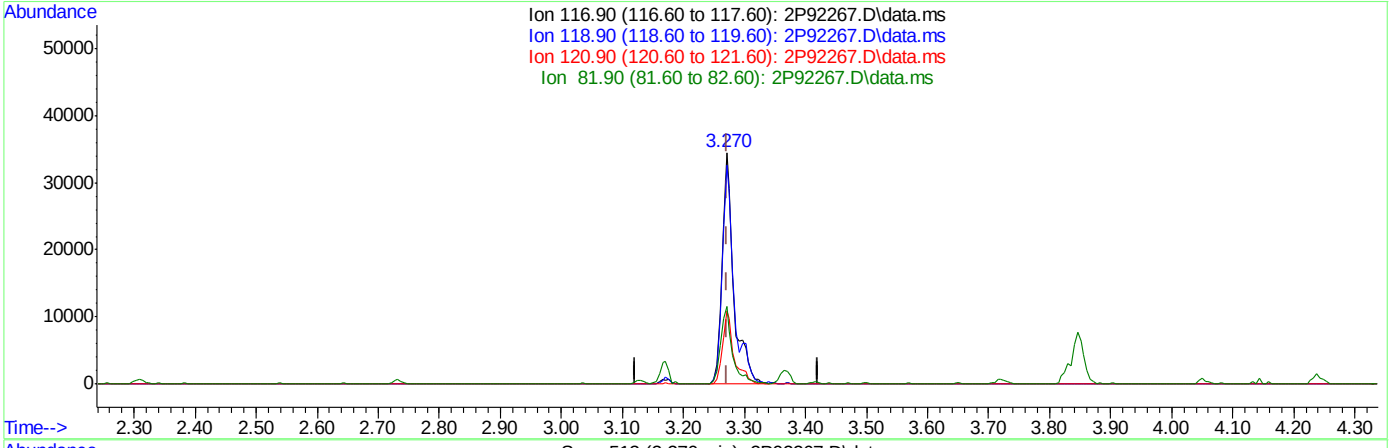
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92267.D **Analyst approved:** 08/24/22 11:11 Courtney Failla
Injection Time: 08/24/22 10:54 **Supervisor approved:** 08/25/22 11:34 Karen Watson

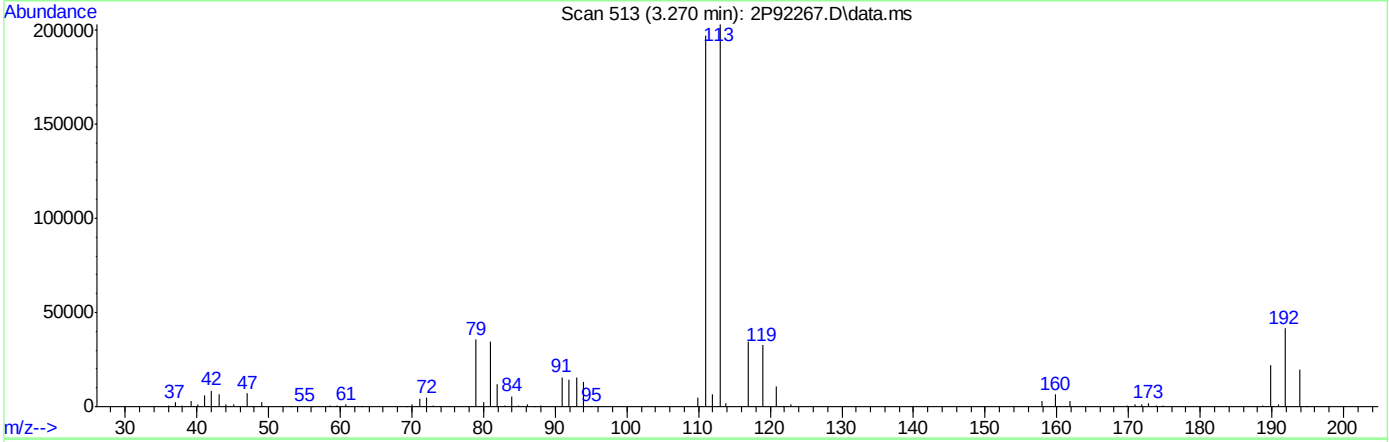
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 8.88ug/L

response 46995

Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.52
120.90	30.80	31.60
81.90	30.00	33.80

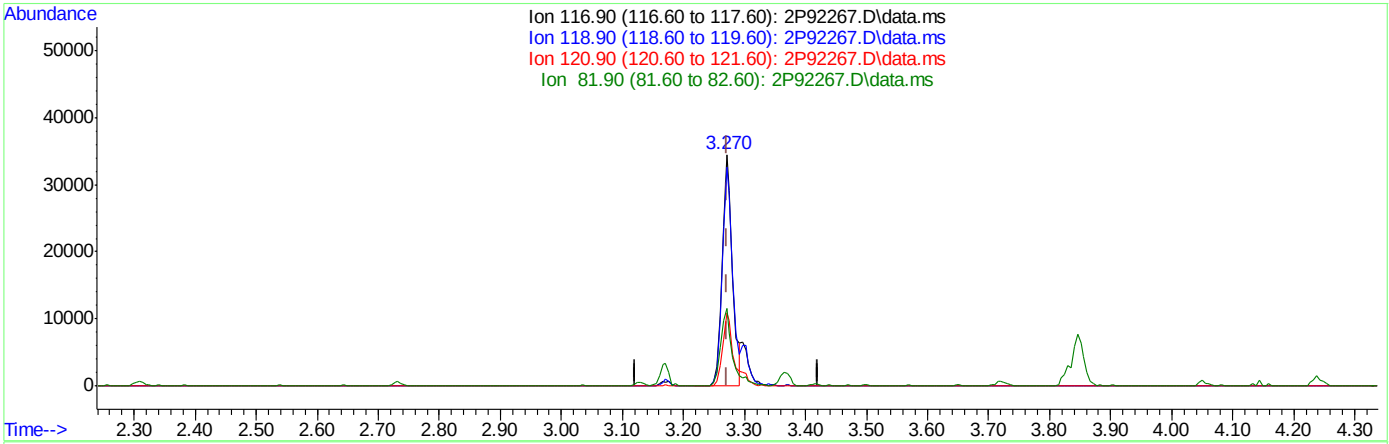
8.6.3.2

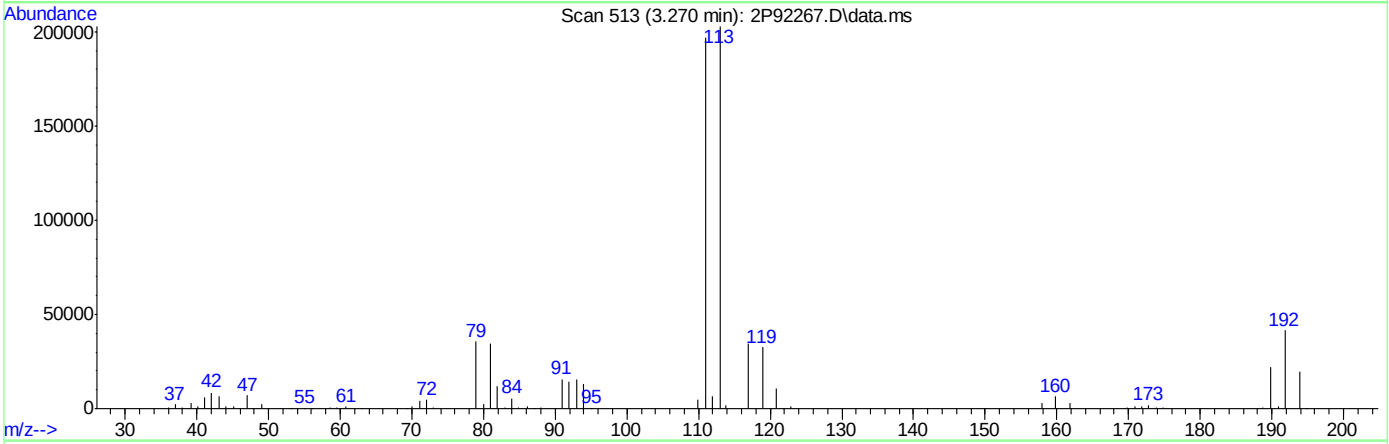
8

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 7.75ug/L m

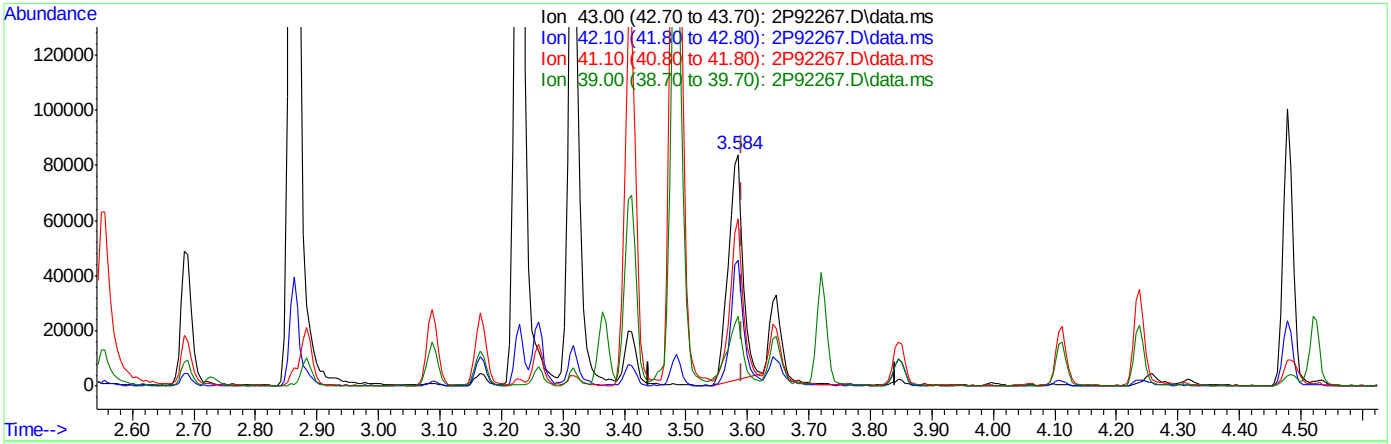
response 40996

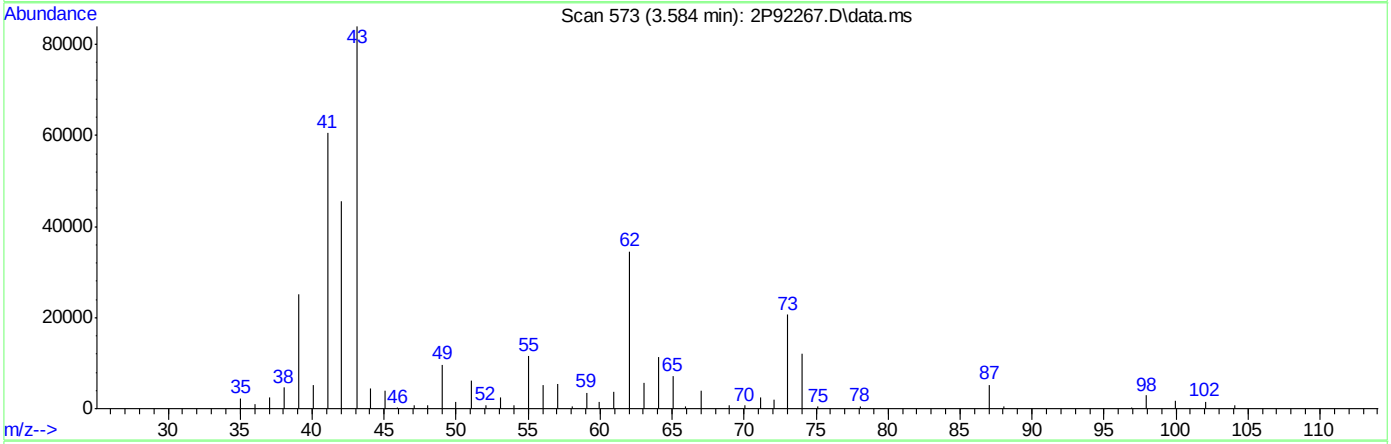
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.52
120.90	30.80	31.60
81.90	30.00	33.80

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 97.71ug/L

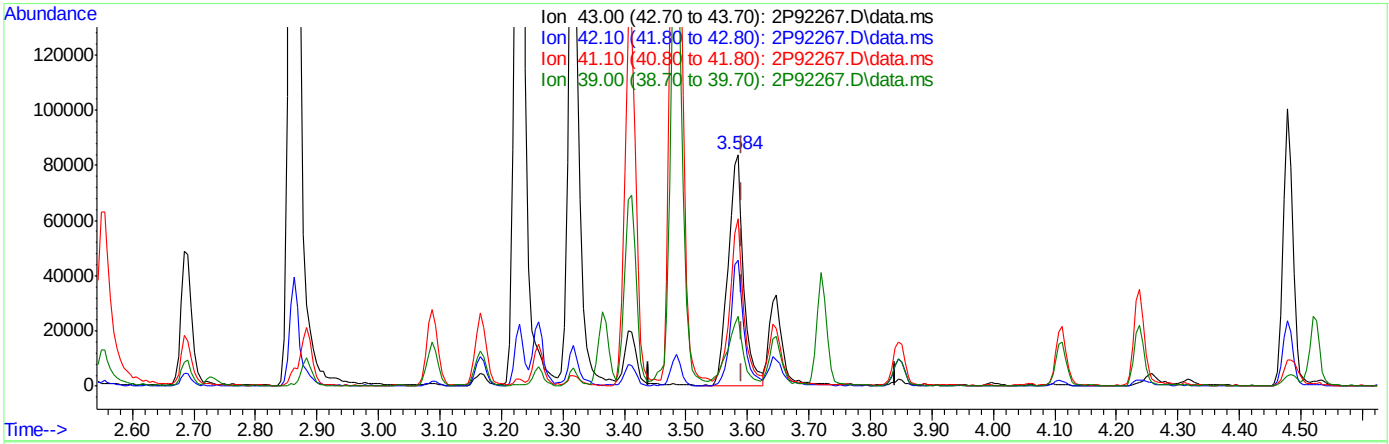
response 135320

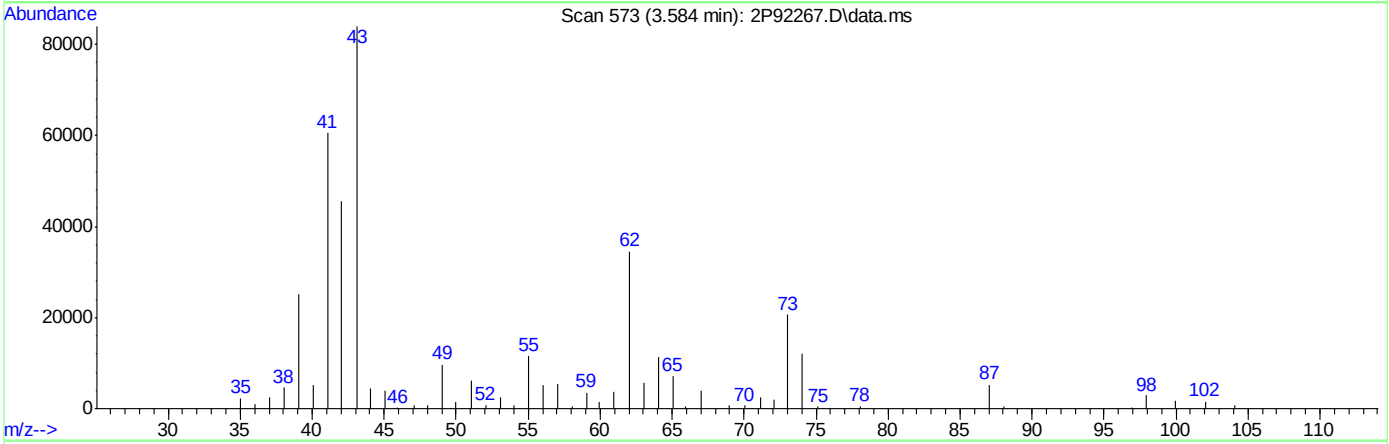
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	54.22
41.10	72.70	70.03
39.00	28.00	27.19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 106.86ug/L m

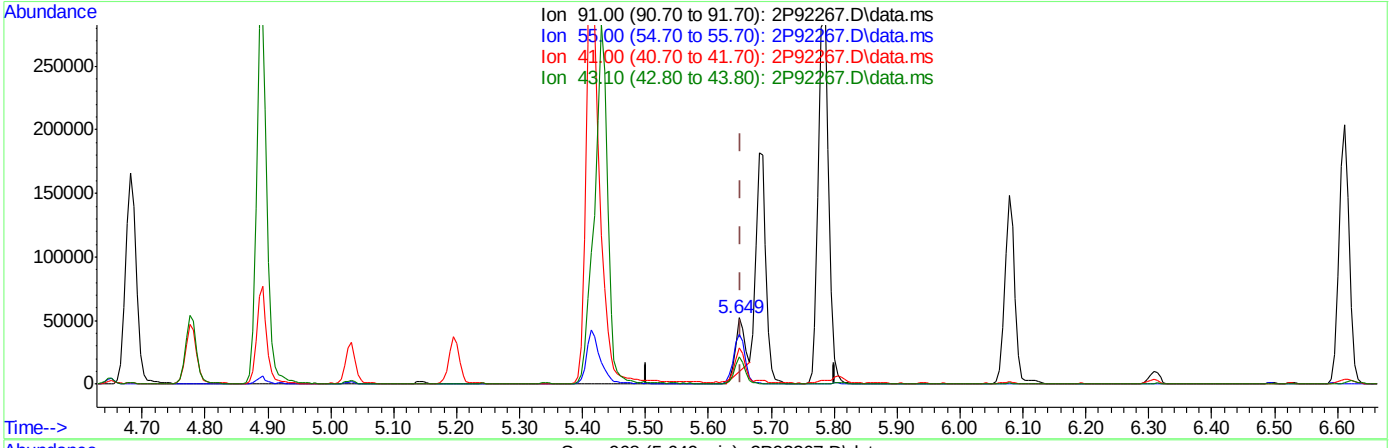
response 147999

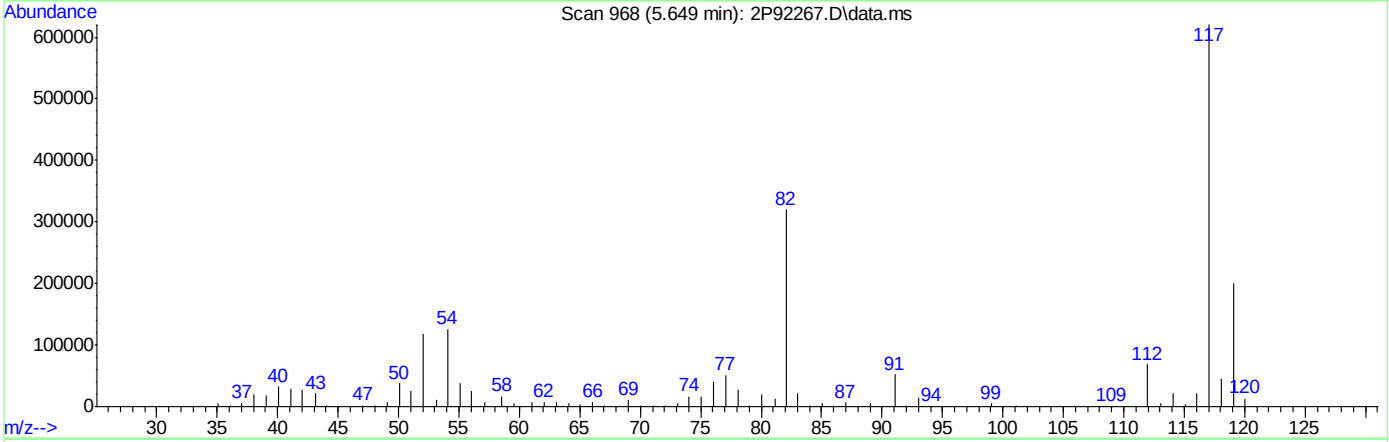
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	54.40
41.10	72.70	72.03
39.00	28.00	30.05

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 5.72ug/L

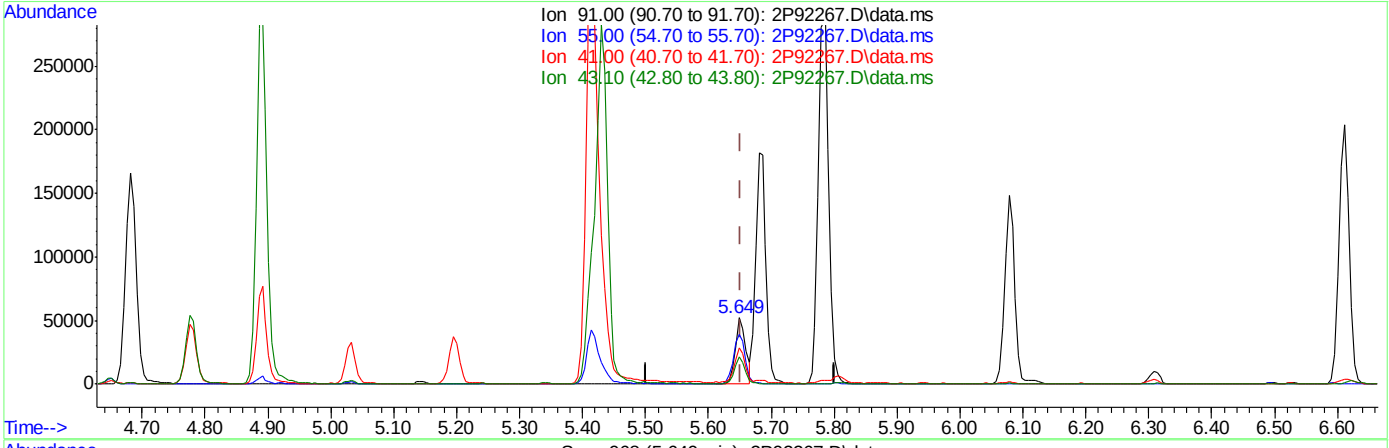
response 38889

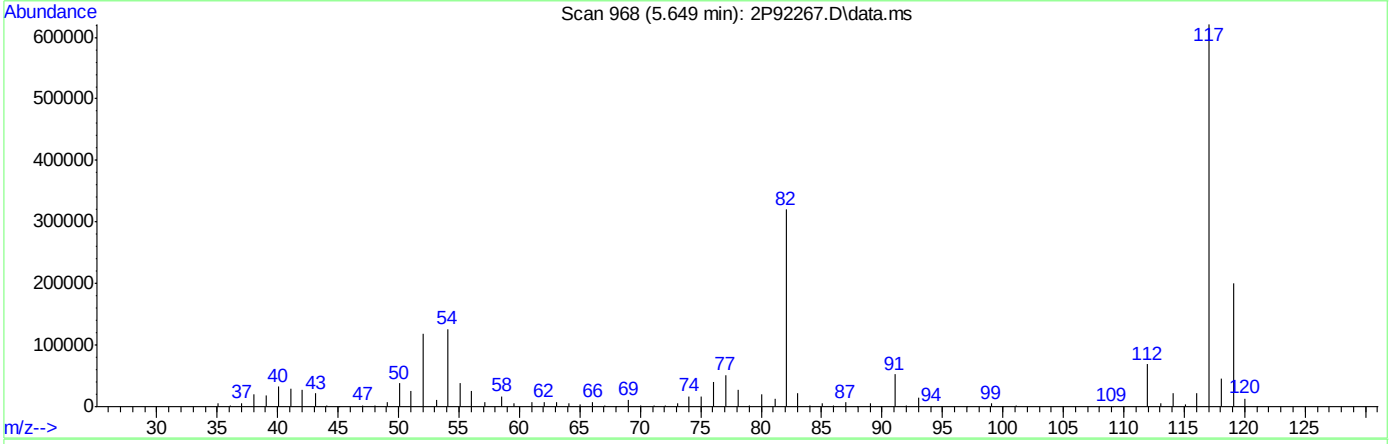
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	72.16#
41.00	83.00	51.98#
43.10	65.60	39.54#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 8.52ug/L m

response 57928

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	74.86#
41.00	83.00	55.14#
43.10	65.60	40.78#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.721	96	1325704	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	930860	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	422651	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.266	113	285574	47.67	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.34%				
49) 1,2-Dichloroethane-d4	3.554	65	393868	42.18	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 84.36%				
63) Toluene-d8	4.652	98	1284303	51.76	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.52%				
86) 4-Bromofluorobenzene	6.497	174	333389	47.45	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.90%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.128	85	77096	15.50	ug/L		98
3) Chloromethane	1.253	50	93714	12.69	ug/L		97
4) 1,3-butadiene	1.321	39	87202	13.18	ug/L		89
5) Vinyl Chloride	1.306	62	115463	17.42	ug/L		100
6) Bromomethane	1.510	94	73790	28.44	ug/L		98
7) Chloroethane	1.583	64	37143	16.25	ug/L		97
8) Trichlorofluoromethane	1.677	101	124851	21.09	ug/L		95
9) Ethyl Ether	1.881	59	109005	17.64	ug/L		84
10) Ethanol	1.959	45	69675	293.74	ug/L		96
11) 1,2-Dichlorotrifluoroe...	1.980	67	102439	19.01	ug/L		90
12) 1,1-Dichloroethene	1.985	61	151994	17.66	ug/L		90
13) Freon 113	2.017	101	90678	20.41	ug/L		95
14) Carbon Disulfide	2.006	76	244396	22.29	ug/L		89
15) Iodomethane	2.064	142	62420	10.29	ug/L		92
16) Acrolein	2.158	56	210466	97.36	ug/L		100
17) Allyl chloride	2.252	41	108742	13.96	ug/L		92
18) Methylene Chloride	2.304	49	154112	12.84	ug/L		77
19) Acetone	2.320	43	376457	81.24	ug/L		91
20) Methyl acetate	2.398	43	774276	73.89	ug/L		88
21) trans-1,2-Dichloroethene	2.404	61	154585	17.60	ug/L		82
22) Hexane	2.472	56	69763	15.32	ug/L	#	90
23) Methyl Tert Butyl Ether	2.472	73	358780	22.06	ug/L		85
24) Tert Butyl Alcohol	2.503	59	469044	191.97	ug/L		90
25) Acetonitrile	2.555	41	248077	146.67	ug/L		99
26) Di-isopropyl ether	2.686	45	322589	14.89	ug/L		92
27) Chloroprene	2.733	53	465554	13.59	ug/L		92
28) 1,1-Dichloroethane	2.733	63	203817	18.67	ug/L		95
29) Acrylonitrile	2.733	52	367659	82.91	ug/L		81
30) ETBE	2.885	59	387201	18.51	ug/L		91
31) Vinyl acetate	2.864	43	1320515	84.01	ug/L		99
32) cis-1,2-Dichloroethene	3.026	96	119758	22.72	ug/L	#	83
33) 2,2-Dichloropropane	3.088	77	154206	21.30	ug/L		98
34) Bromochloromethane	3.130	128	54354	23.11	ug/L	#	63
35) Cyclohexane	3.167	56	182281	16.26	ug/L	#	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.172	83	203626	21.14	ug/L		92
37) Ethyl acetate	3.230	43	1004635	79.07	ug/L		94
38) Tetrahydrofuran	3.261	42	76422	14.36	ug/L		88
40) Carbon Tetrachloride	3.271	117	124530m	22.99	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	174565	22.65	ug/L		94
42) 2-Butanone	3.318	43	638467	82.43	ug/L		75
43) 1,1-Dichloropropene	3.365	75	153922	21.33	ug/L		85
44) tert-Butyl formate	3.413	59	415583	105.24	ug/L		96
45) Propionitrile	3.460	54	408073	173.53	ug/L		99
46) Methacrylonitrile	3.486	41	1090165	147.60	ug/L		98
47) Benzene	3.496	78	482180	21.62	ug/L	#	68
48) TAME	3.569	73	354042	22.50	ug/L		85
50) Isobutyl alcohol	3.585	43	448045m	316.08	ug/L		
51) 1,2-Dichloroethane	3.590	62	173894	18.33	ug/L		93
52) Tert Amyl Alcohol	3.648	59	380919	206.90	ug/L		91
53) Trichloroethene	3.826	95	121308	22.23	ug/L		95
54) Methylcyclohexane	3.846	83	156889	20.51	ug/L	#	81
55) Dibromomethane	4.050	93	69383	22.61	ug/L		95
56) 1,2-Dichloropropane	4.113	63	120480	19.59	ug/L		88
57) Bromodichloromethane	4.144	83	124513	22.82	ug/L		96
58) Methyl methacrylate	4.239	41	136664	15.74	ug/L	#	76
59) 1,4-Dioxane	4.254	88	81389	481.77	ug/L		80
60) 2-Chloroethyl vinyl ether	4.479	63	496175	98.80	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	163437	21.87	ug/L		80
64) Toluene	4.683	91	521365	23.95	ug/L		100
65) 2-Nitropropane	4.777	41	202424	78.60	ug/L		97
66) 4-Methyl-2-pentanone	4.892	43	1036780	88.52	ug/L		92
67) trans-1,3-Dichloropropene	4.918	75	149978	23.29	ug/L		84
68) Tetrachloroethene	4.939	166	113299	21.46	ug/L		92
69) Ethyl methacrylate	5.028	69	188909	24.38	ug/L	#	76
70) 1,1,2-Trichloroethane	5.018	83	91877	23.92	ug/L		89
71) Dibromochloromethane	5.143	129	92491	25.87	ug/L		96
72) 1,3-Dichloropropane	5.195	76	199298	22.95	ug/L		80
73) 1,2-Dibromoethane	5.295	107	111178	24.26	ug/L		98
74) 3,3-dimethyl-1-butanol	5.415	57	2383970	932.90	ug/L	#	86
75) 2-hexanone	5.431	43	1225288	86.32	ug/L		86
76) 1-Chlorohexane	5.650	91	159255m	22.78	ug/L		
77) Ethylbenzene	5.681	91	575170	24.15	ug/L		96
78) Chlorobenzene	5.655	112	314726	24.52	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.697	131	97248	25.50	ug/L		96
80) m,p-Xylene	5.786	91	914430	48.58	ug/L		98
81) o-Xylene	6.079	91	454953	24.60	ug/L		97
82) Styrene	6.110	104	352756	25.40	ug/L		94
83) Bromoform	6.115	173	49656	24.19	ug/L		96
84) Isopropylbenzene	6.309	105	521551	24.50	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	57642	20.01	ug/L	#	80
88) n-Propylbenzene	6.612	91	621145	26.18	ug/L		100
89) Bromobenzene	6.570	156	126861	25.91	ug/L		93
90) 1,1,2,2-Tetrachloroethane	6.628	83	175535	27.11	ug/L		95
91) 1,3,5-Trimethylbenzene	6.758	105	430610	26.01	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

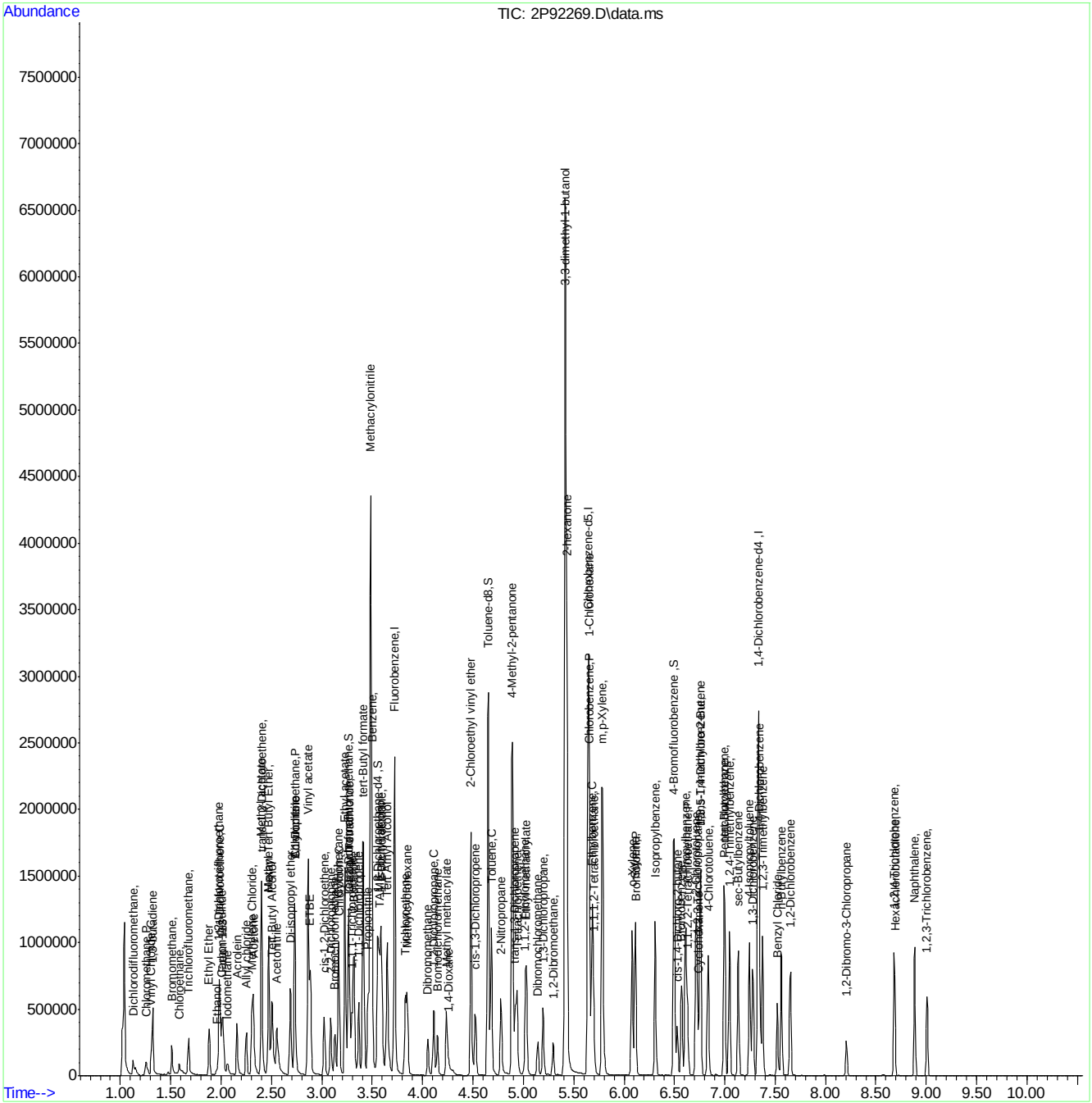
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.711	91	376298	26.13	ug/L		97
93) trans-1,4-Dichloro-2-B...	6.758	53	73989	20.12	ug/L	#	77
94) 1,2,3-Trichloropropane	6.727	110	64863	26.99	ug/L		81
95) Cyclohexanone	6.743	55	73475	118.56	ug/L		86
96) 4-Chlorotoluene	6.837	91	399875	26.55	ug/L		94
97) tert-Butylbenzene	6.994	91	239014	26.16	ug/L		93
99) 1,2,4-Trimethylbenzene	7.046	105	428428	26.62	ug/L		97
100) Pentachloroethane	6.999	167	54726	26.17	ug/L		94
101) sec-Butylbenzene	7.135	105	457520	25.91	ug/L		98
102) 4-Isopropyltoluene	7.245	119	407507	27.03	ug/L		97
103) 1,3-Dichlorobenzene	7.276	146	226641	25.54	ug/L		99
104) 1,2,3-Trimethylbenzene	7.375	105	424412	26.30	ug/L		96
105) 1,4-Dichlorobenzene	7.344	146	234307	24.72	ug/L		98
106) n-Butylbenzene	7.558	92	197921	25.99	ug/L		99
107) Benzyl Chloride	7.522	126	47558	27.49	ug/L		93
108) 1,2-Dichlorobenzene	7.652	146	215663	25.02	ug/L		97
109) 1,2-Dibromo-3-Chloropr...	8.207	75	39734	27.13	ug/L	#	77
110) Hexachlorobutadiene	8.688	225	36422	18.81	ug/L		85
111) 1,2,4-Trichlorobenzene	8.682	180	111484	23.35	ug/L		94
112) Naphthalene	8.886	128	473328	28.88	ug/L		99
113) 1,2,3-Trichlorobenzene	9.007	180	104125	23.10	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

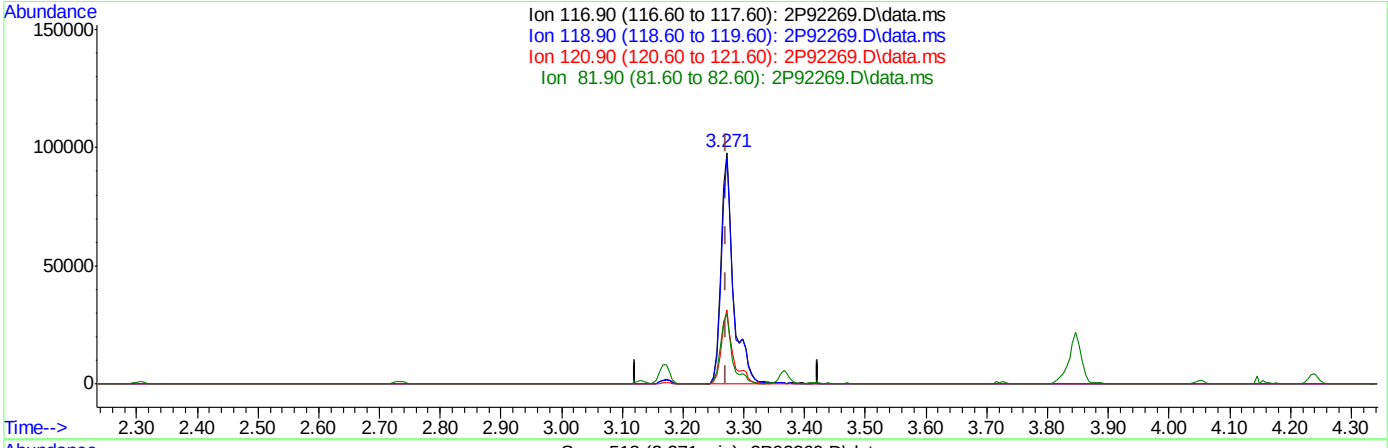
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92269.D **Analyst approved:** 08/24/22 11:42 Courtney Failla
Injection Time: 08/24/22 11:26 **Supervisor approved:** 08/25/22 11:34 Karen Watson

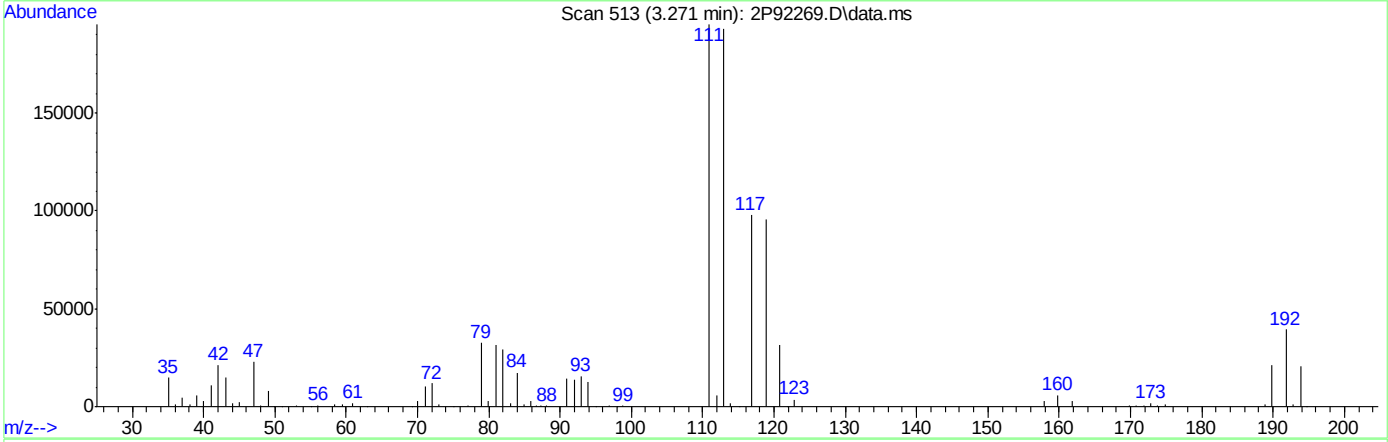
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.000) 26.06ug/L

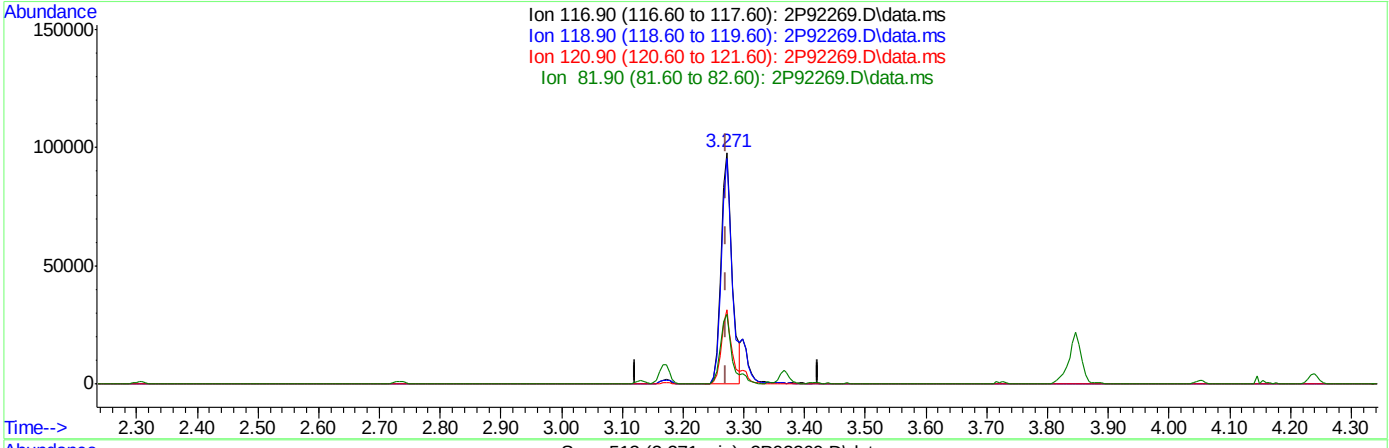
response 141131

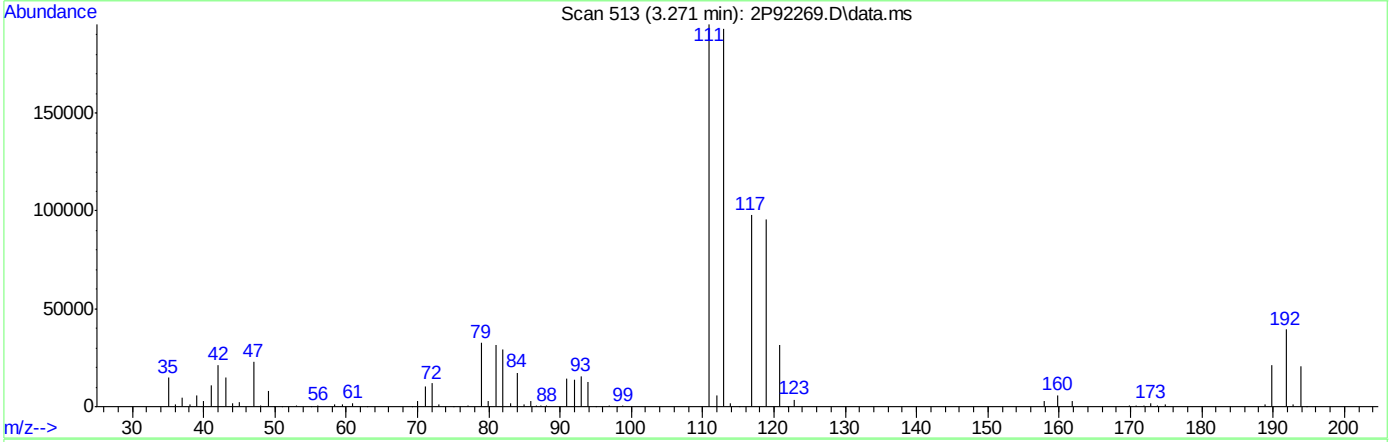
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.57
120.90	30.80	32.29
81.90	30.00	29.84

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.000) 22.99ug/L m

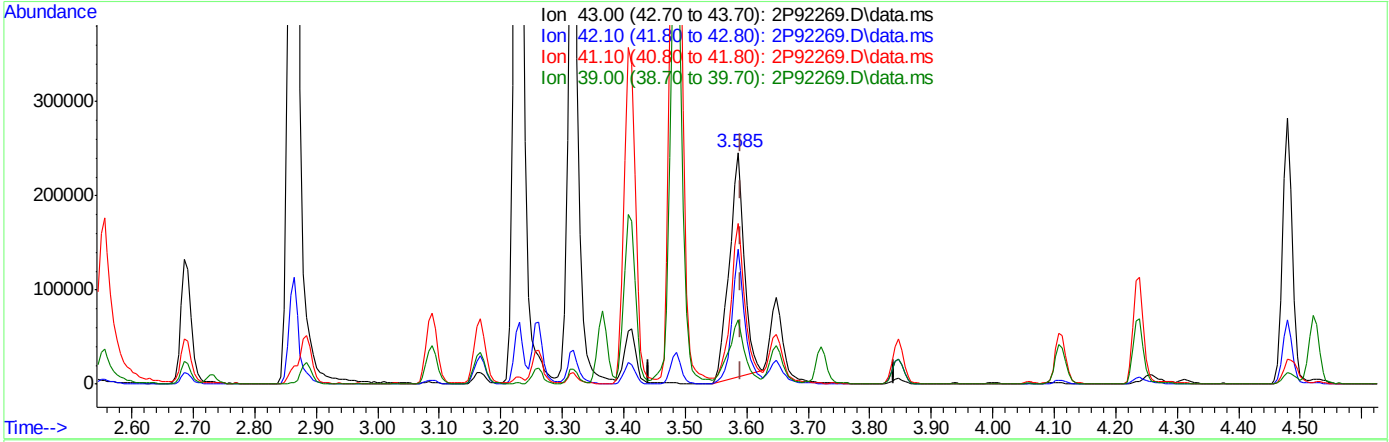
response 124530

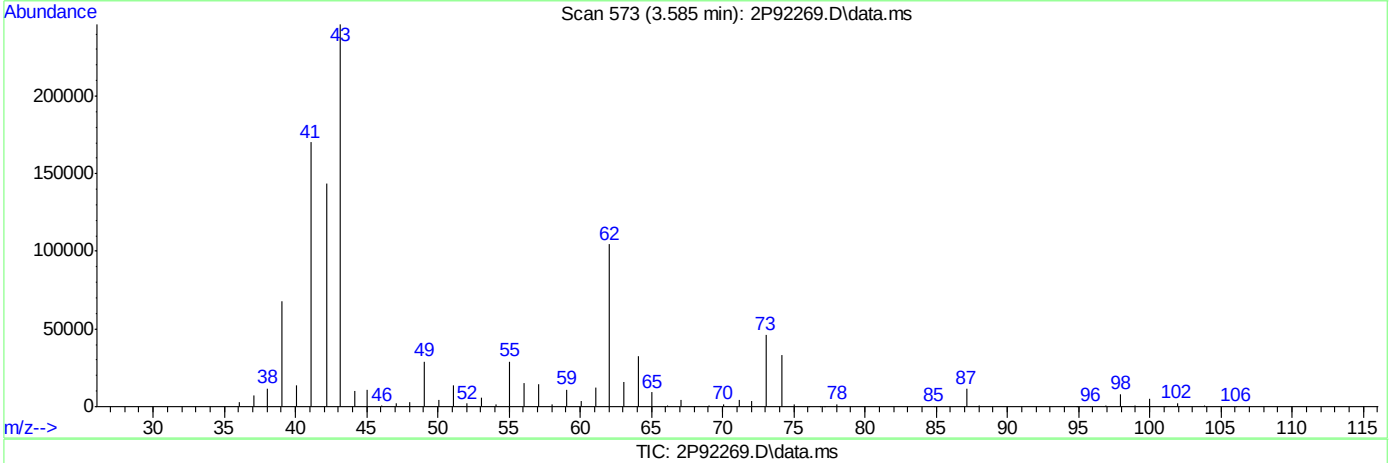
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.57
120.90	30.80	32.29
81.90	30.00	30.06

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(50) Isobutyl alcohol

3.585min (-0.006) 287.64ug/L

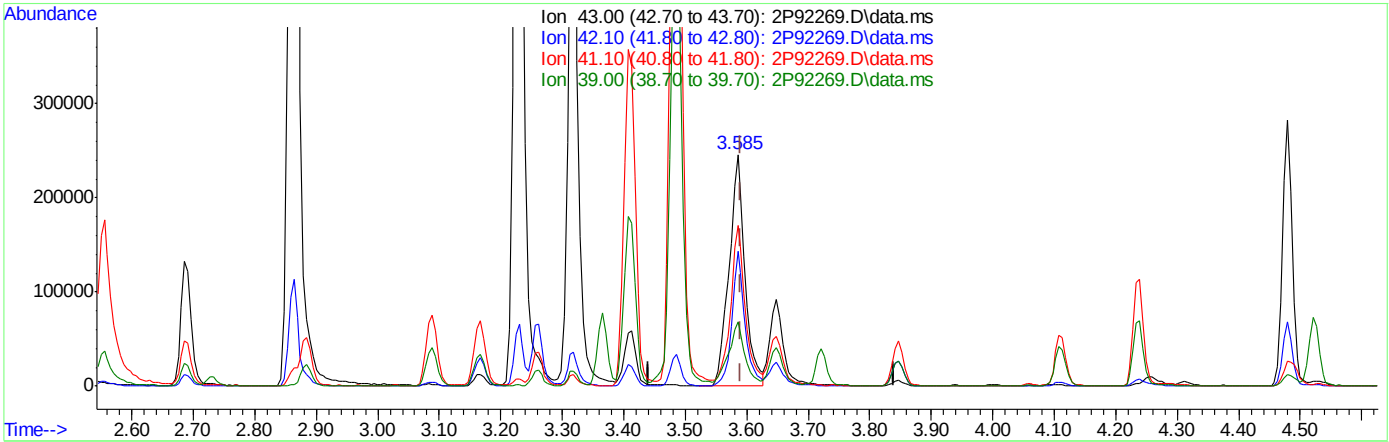
response 407736

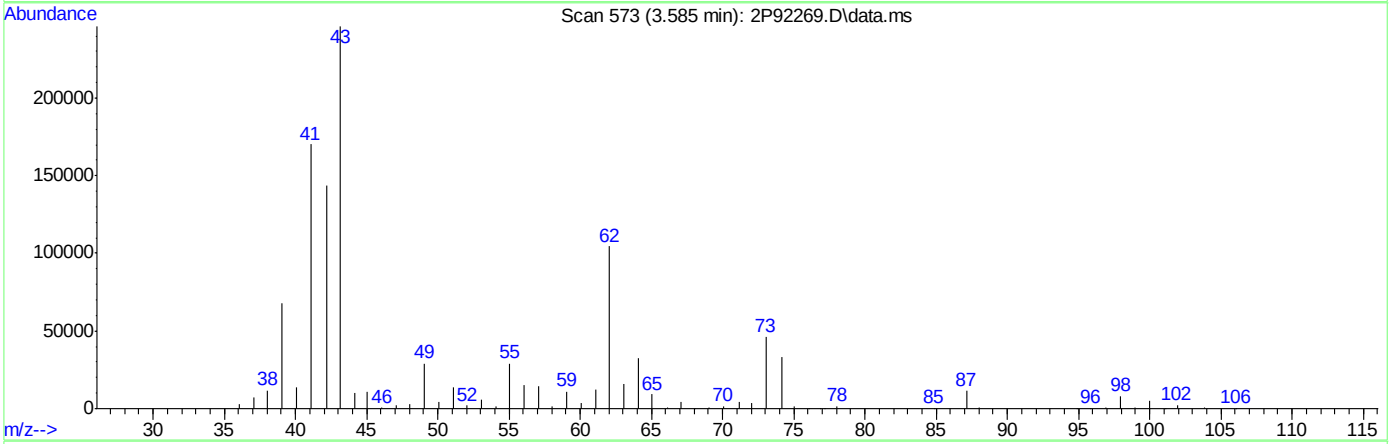
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	58.20
41.10	72.70	66.85
39.00	28.00	26.10

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(50) Isobutyl alcohol

3.585min (-0.006) 316.08ug/L m

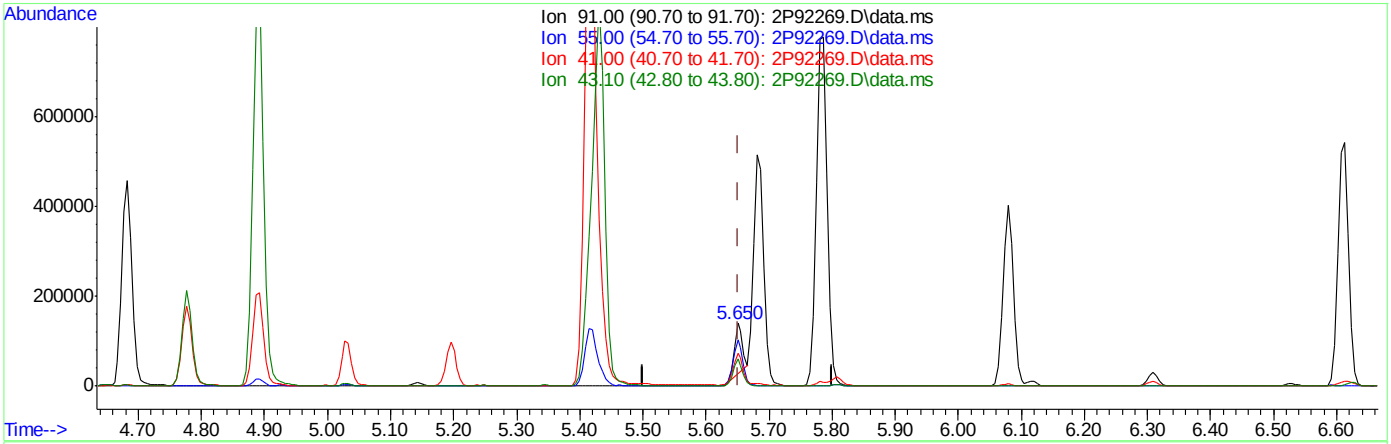
response 448045

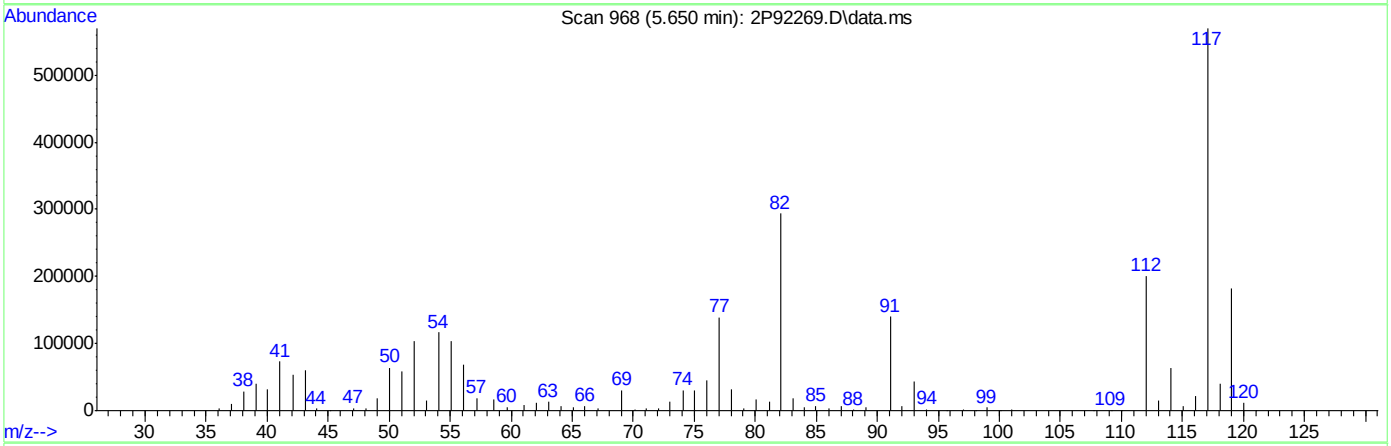
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	58.24
41.10	72.70	69.14
39.00	28.00	27.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(76) 1-Chlorohexane

5.650min (-0.001) 15.37ug/L

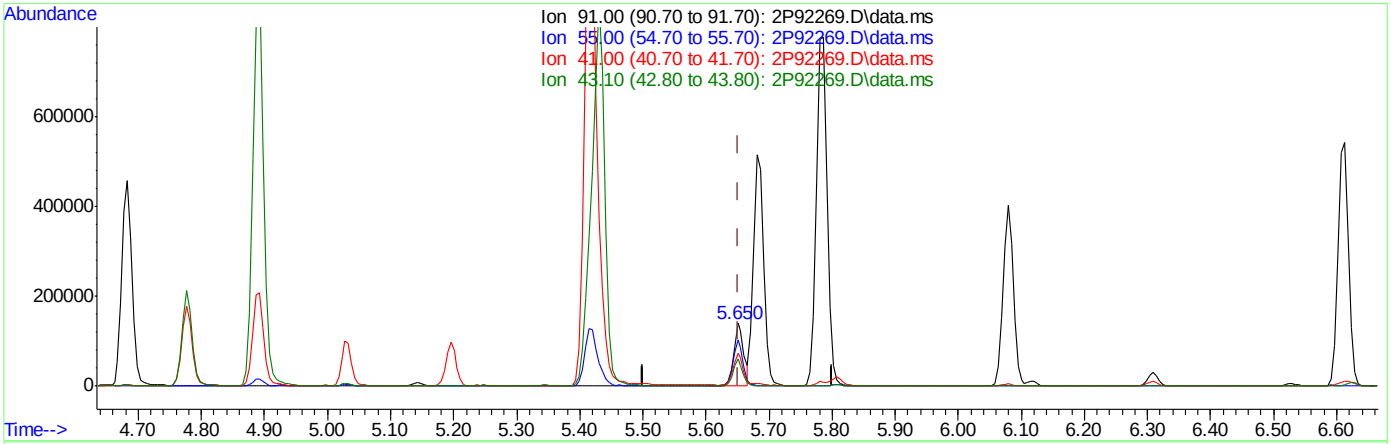
response 107400

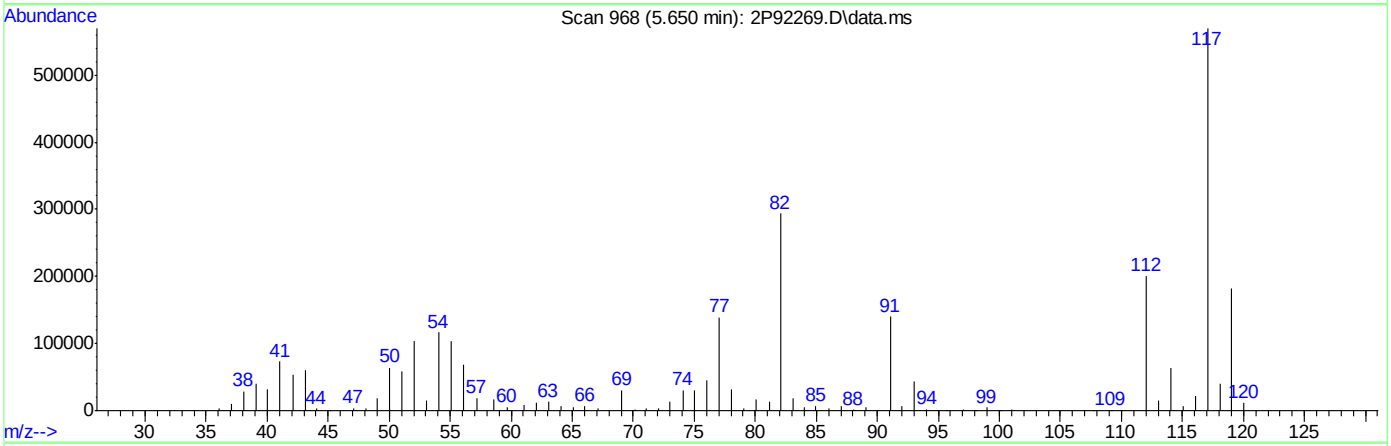
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	69.25#
41.00	83.00	49.14#
43.10	65.60	41.40#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(76) 1-Chlorohexane

5.650min (-0.001) 22.78ug/L m

response 159255

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	73.94#
41.00	83.00	52.20#
43.10	65.60	43.01#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1362226	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	951717	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	439370	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	292655	47.54	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.08%				
49) 1,2-Dichloroethane-d4	3.553	65	413626	43.11	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 86.22%				
63) Toluene-d8	4.651	98	1320237	52.04	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 104.08%				
86) 4-Bromofluorobenzene	6.496	174	339626	46.50	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.00%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	159680	31.25	ug/L		98
3) Chloromethane	1.252	50	165955	21.88	ug/L		92
4) 1,3-butadiene	1.320	39	158185	23.23	ug/L		86
5) Vinyl Chloride	1.305	62	211254	31.03	ug/L		100
6) Bromomethane	1.509	94	118429	44.42	ug/L		99
7) Chloroethane	1.582	64	60604	25.80	ug/L		97
8) Trichlorofluoromethane	1.676	101	230991	37.97	ug/L		97
9) Ethyl Ether	1.880	59	191869	30.22	ug/L		84
10) Ethanol	1.963	45	114850m	480.53	ug/L		
11) 1,2-Dichlorotrifluoroe...	1.979	67	185736	33.54	ug/L		90
12) 1,1-Dichloroethene	1.984	61	270948	30.63	ug/L		87
13) Freon 113	2.016	101	177946	38.97	ug/L		96
14) Carbon Disulfide	2.005	76	462036	39.02	ug/L		86
15) Iodomethane	2.063	142	127120	20.28	ug/L		95
16) Acrolein	2.157	56	356140	158.99	ug/L		99
17) Allyl chloride	2.251	41	195990	24.48	ug/L		91
18) Methylene Chloride	2.303	49	249008	20.69	ug/L		76
19) Acetone	2.319	43	600710	126.80	ug/L		90
20) Methyl acetate	2.397	43	1297415	120.49	ug/L		89
21) trans-1,2-Dichloroethene	2.403	61	267114	29.60	ug/L		81
22) Hexane	2.470	56	141208	30.17	ug/L		91
23) Methyl Tert Butyl Ether	2.470	73	615215	36.81	ug/L		92
24) Tert Butyl Alcohol	2.507	59	767732	305.79	ug/L		89
25) Acetonitrile	2.554	41	380436	223.64	ug/L		96
26) Di-isopropyl ether	2.690	45	566157	25.42	ug/L		92
27) Chloroprene	2.732	53	778732	22.12	ug/L		91
28) 1,1-Dichloroethane	2.732	63	354298	31.59	ug/L		96
29) Acrylonitrile	2.732	52	608025	133.44	ug/L		81
30) ETBE	2.883	59	672969	31.31	ug/L		92
31) Vinyl acetate	2.863	43	2309020	142.96	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	208708	38.54	ug/L		85
33) 2,2-Dichloropropane	3.087	77	282200	36.69	ug/L		99
34) Bromochloromethane	3.129	128	92231	38.17	ug/L	#	67
35) Cyclohexane	3.166	56	344840	29.93	ug/L	#	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	359870	36.35	ug/L		92
37) Ethyl acetate	3.229	43	1688270	129.32	ug/L		94
38) Tetrahydrofuran	3.260	42	127818	23.37	ug/L		91
40) Carbon Tetrachloride	3.270	117	226621m	40.72	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	311098	39.28	ug/L		93
42) 2-Butanone	3.317	43	1007592	126.31	ug/L		79
43) 1,1-Dichloropropene	3.364	75	271461	36.61	ug/L		84
44) tert-Butyl formate	3.412	59	790496	182.49	ug/L		93
45) Propionitrile	3.464	54	661145	271.68	ug/L		98
46) Methacrylonitrile	3.485	41	1834343	240.18	ug/L		98
47) Benzene	3.495	78	838308	36.58	ug/L		76
48) TAME	3.568	73	616154	38.11	ug/L		81
50) Isobutyl alcohol	3.584	43	731054m	501.90	ug/L		
51) 1,2-Dichloroethane	3.589	62	302289	31.01	ug/L		94
52) Tert Amyl Alcohol	3.652	59	634596	335.44	ug/L		89
53) Trichloroethene	3.830	95	211819	37.77	ug/L		93
54) Methylcyclohexane	3.845	83	308352	39.24	ug/L	#	82
55) Dibromomethane	4.049	93	120616	38.26	ug/L		93
56) 1,2-Dichloropropane	4.112	63	206603	32.69	ug/L		89
57) Bromodichloromethane	4.149	83	231330	39.22	ug/L		96
58) Methyl methacrylate	4.238	41	235387	25.91	ug/L	#	78
59) 1,4-Dioxane	4.258	88	127377	733.78	ug/L		81
60) 2-Chloroethyl vinyl ether	4.478	63	885147	168.96	ug/L		81
61) cis-1,3-Dichloropropene	4.525	75	298711	37.50	ug/L		76
64) Toluene	4.682	91	900051	40.44	ug/L		99
65) 2-Nitropropane	4.776	41	391161	139.11	ug/L		96
66) 4-Methyl-2-pentanone	4.891	43	1722379	143.84	ug/L		92
67) trans-1,3-Dichloropropene	4.922	75	275482	40.33	ug/L	#	65
68) Tetrachloroethene	4.938	166	194956	36.11	ug/L		90
69) Ethyl methacrylate	5.032	69	334716	42.26	ug/L	#	73
70) 1,1,2-Trichloroethane	5.022	83	157963	40.23	ug/L		85
71) Dibromochloromethane	5.142	129	170758	44.29	ug/L		95
72) 1,3-Dichloropropane	5.194	76	345339	38.90	ug/L		81
73) 1,2-Dibromoethane	5.294	107	194280	41.47	ug/L		92
74) 3,3-dimethyl-1-butanol	5.419	57	3980563	1523.55	ug/L	#	86
75) 2-hexanone	5.430	43	1985347	136.80	ug/L		76
76) 1-Chlorohexane	5.649	91	288409m	40.36	ug/L		
77) Ethylbenzene	5.686	91	1006237	41.32	ug/L		96
78) Chlorobenzene	5.654	112	539871	41.13	ug/L		94
79) 1,1,1,2-Tetrachloroethane	5.696	131	176443	44.04	ug/L		95
80) m,p-Xylene	5.785	91	1605683	83.44	ug/L		99
81) o-Xylene	6.078	91	790889	41.83	ug/L		99
82) Styrene	6.109	104	626072	44.09	ug/L		95
83) Bromoform	6.120	173	92559	40.56	ug/L		95
84) Isopropylbenzene	6.308	105	929375	42.70	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	104216	33.29	ug/L	#	76
88) n-Propylbenzene	6.611	91	1104132	44.76	ug/L		98
89) Bromobenzene	6.569	156	220000	43.23	ug/L		92
90) 1,1,2,2-Tetrachloroethane	6.632	83	298296	44.31	ug/L		95
91) 1,3,5-Trimethylbenzene	6.757	105	771308	44.81	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

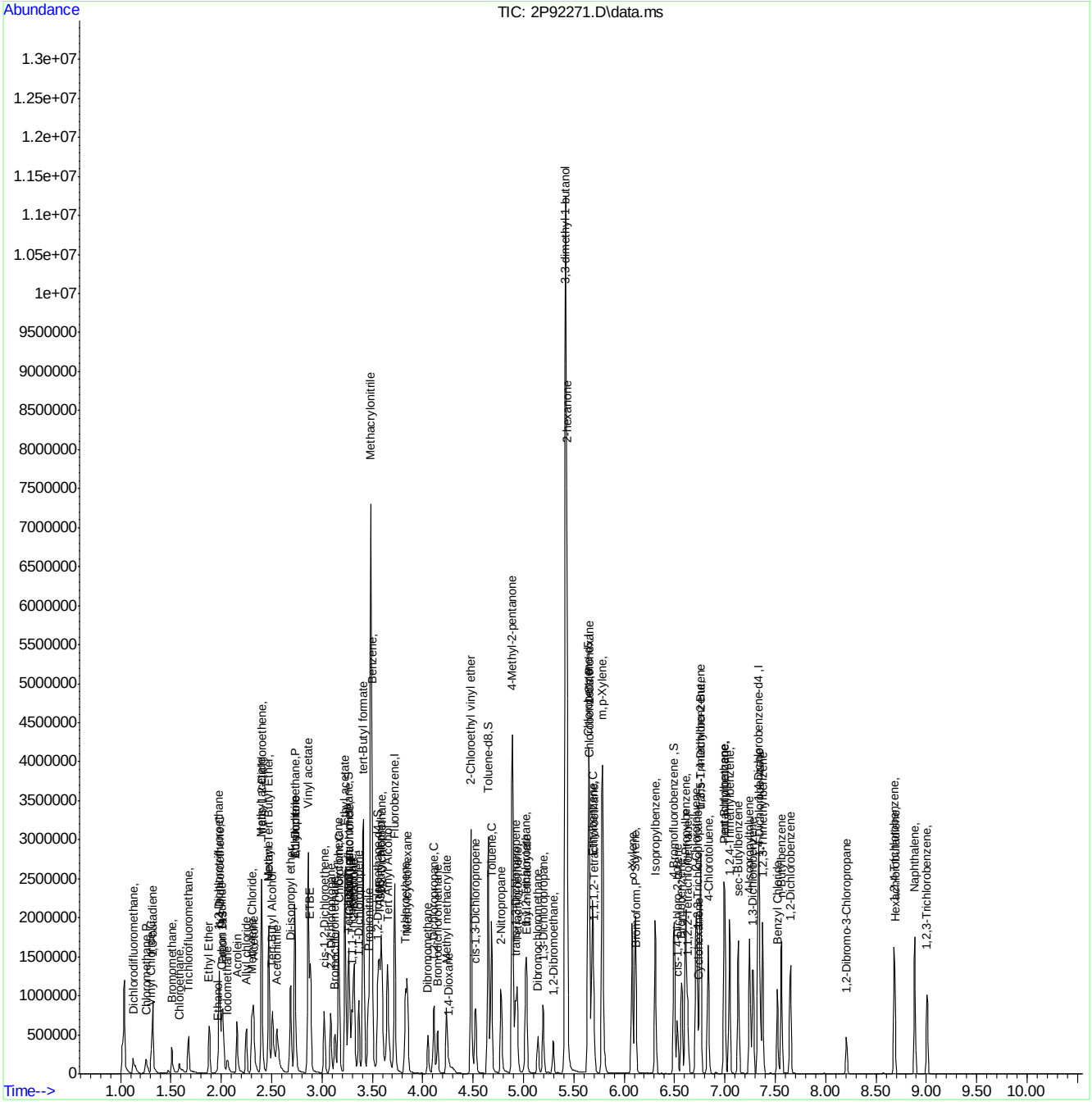
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.716	91	660067	44.09	ug/L		97
93) trans-1,4-Dichloro-2-B...	6.757	53	130821	33.18	ug/L	#	73
94) 1,2,3-Trichloropropane	6.726	110	109718	43.92	ug/L		80
95) Cyclohexanone	6.742	55	115127	178.71	ug/L		89
96) 4-Chlorotoluene	6.836	91	684076	43.68	ug/L		93
97) tert-Butylbenzene	6.993	91	422484	44.48	ug/L		93
99) 1,2,4-Trimethylbenzene	7.045	105	748777	44.76	ug/L		98
100) Pentachloroethane	6.998	167	97587	42.03	ug/L	#	89
101) sec-Butylbenzene	7.134	105	829266	45.17	ug/L		98
102) 4-Isopropyltoluene	7.244	119	732772	46.76	ug/L		97
103) 1,3-Dichlorobenzene	7.280	146	390179	42.30	ug/L		96
104) 1,2,3-Trimethylbenzene	7.374	105	747003	44.53	ug/L		97
105) 1,4-Dichlorobenzene	7.343	146	411435	41.76	ug/L		98
106) n-Butylbenzene	7.563	92	360016	45.48	ug/L		98
107) Benzyl Chloride	7.521	126	99212	48.53	ug/L	#	91
108) 1,2-Dichlorobenzene	7.651	146	370843	41.39	ug/L		98
109) 1,2-Dibromo-3-Chloropr...	8.206	75	70256	43.50	ug/L	#	77
110) Hexachlorobutadiene	8.687	225	70656	35.09	ug/L		93
111) 1,2,4-Trichlorobenzene	8.681	180	201331	40.56	ug/L		93
112) Naphthalene	8.885	128	836609	49.10	ug/L		99
113) 1,2,3-Trichlorobenzene	9.005	180	185569	39.60	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

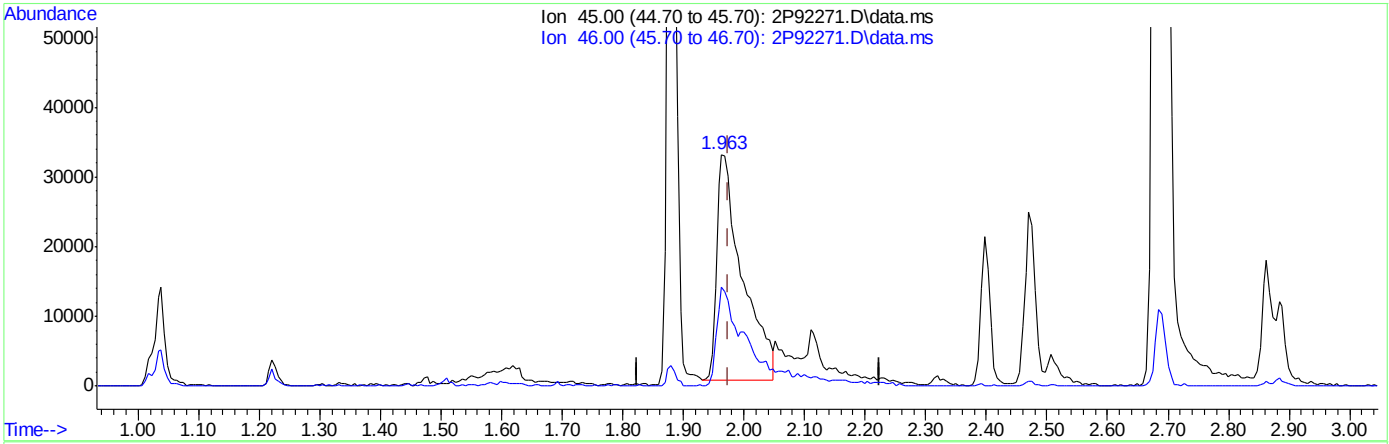
Sample Number: V2P3560-ICC3560 **Method:** SW846 8260D
Lab FileID: 2P92271.D **Analyst approved:** 08/24/22 12:17 Courtney Failla
Injection Time: 08/24/22 11:59 **Supervisor approved:** 08/25/22 11:34 Karen Watson

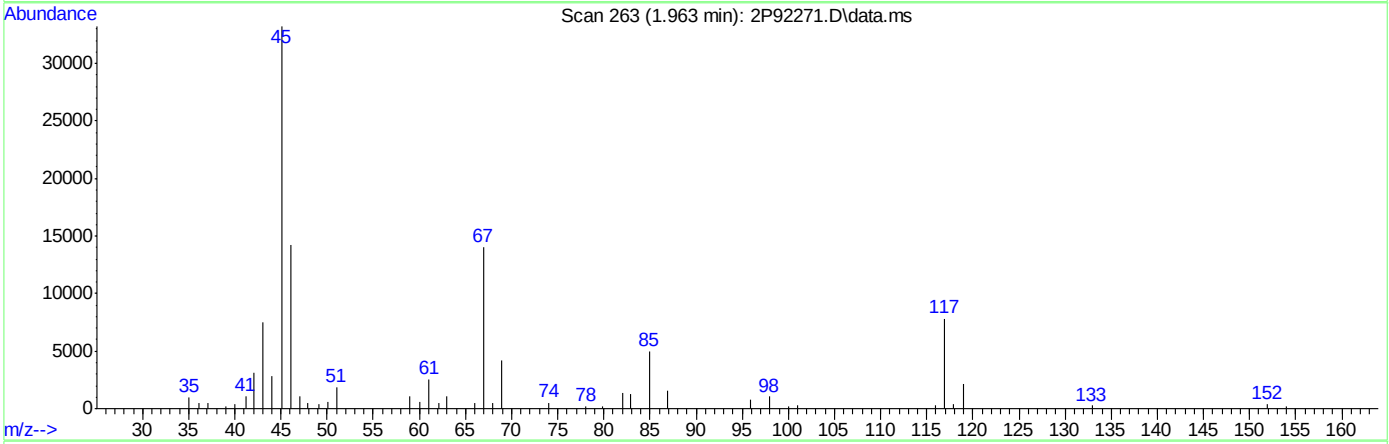
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.96	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(10) Ethanol

1.963min (-0.011) 391.35ug/L

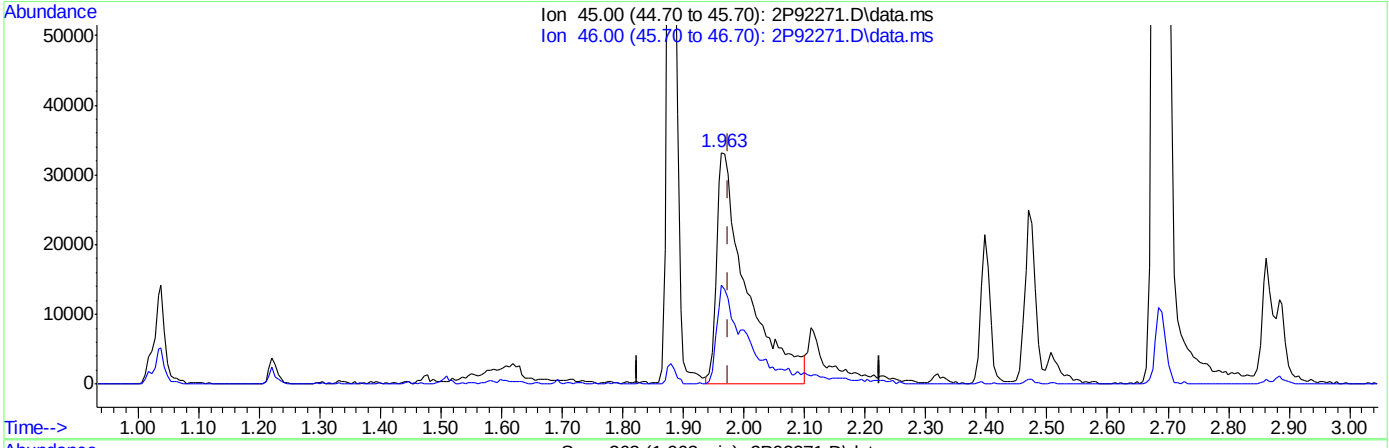
response 94418

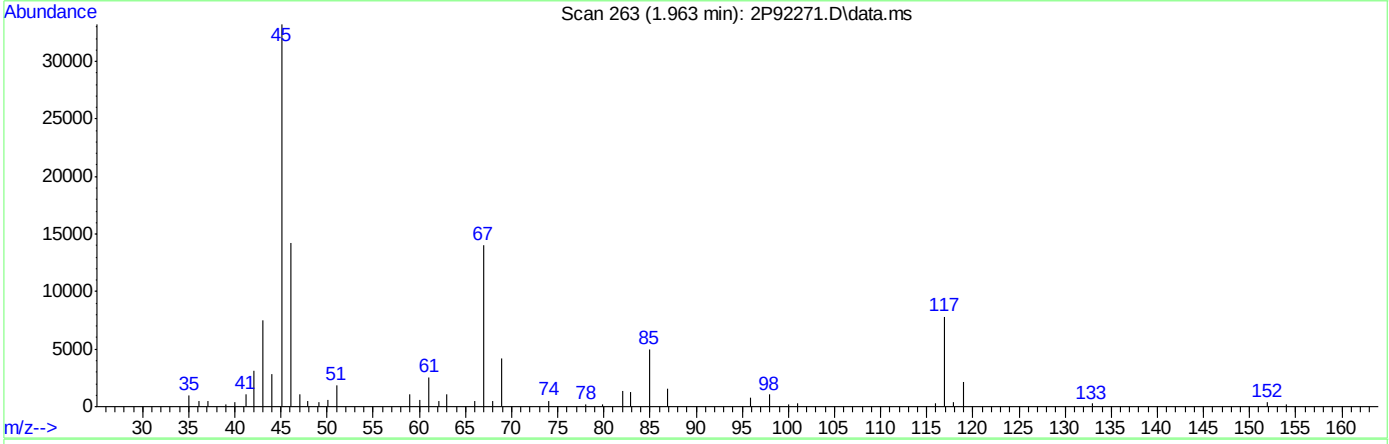
Ion	Exp%	Act%
45.00	100	100
46.00	41.80	43.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(10) Ethanol

1.963min (-0.011) 480.53ug/L m

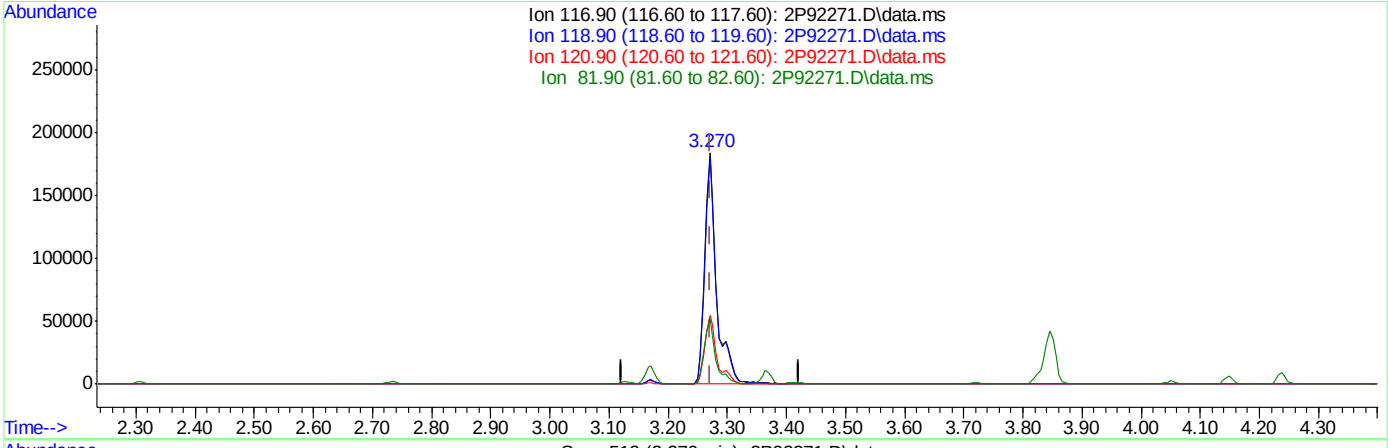
response 114850

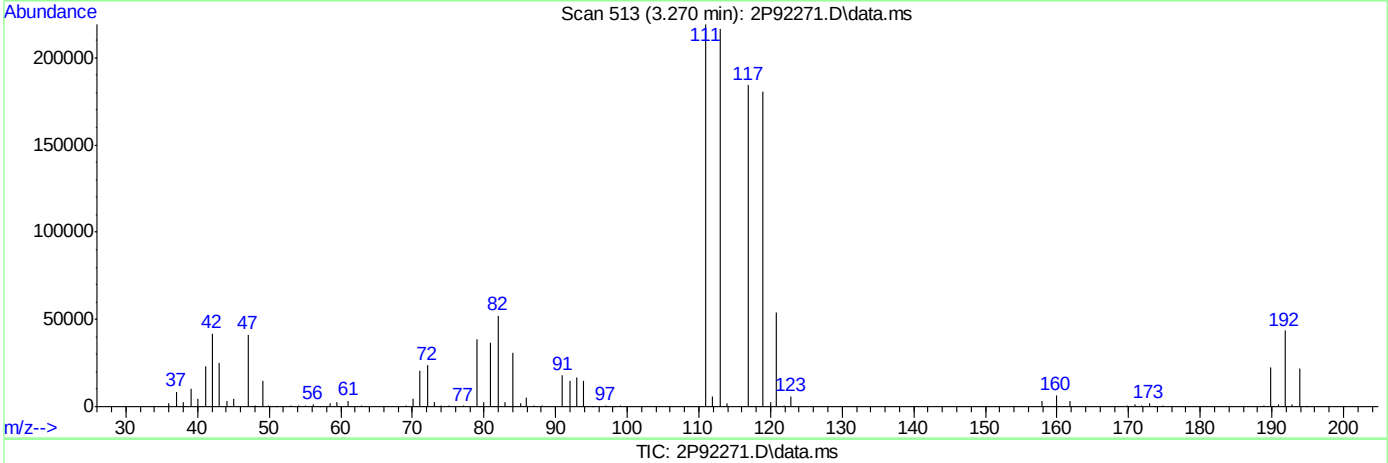
Ion	Exp%	Act%
45.00	100	100
46.00	41.80	42.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 46.91ug/L

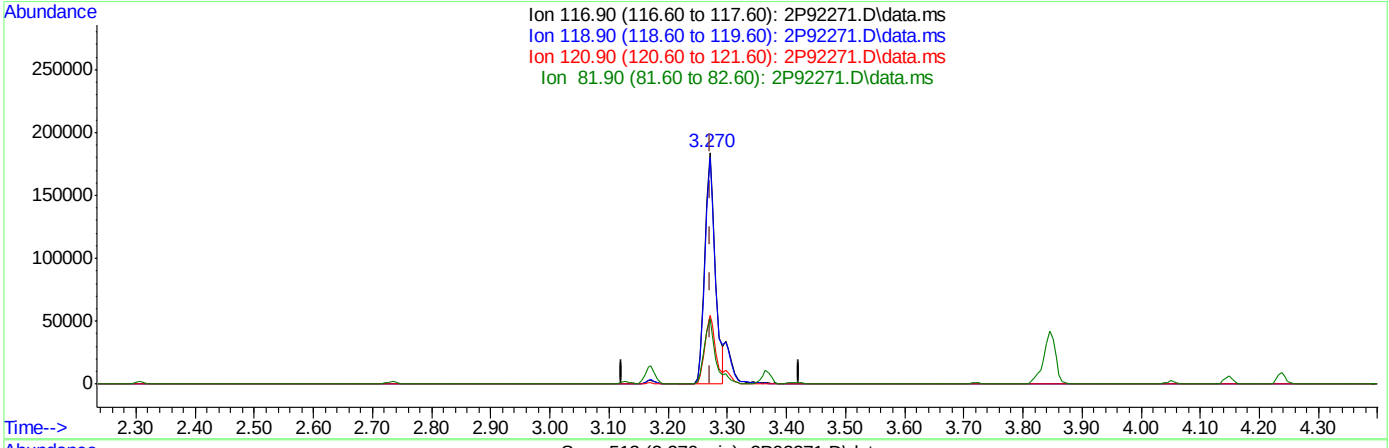
response 261066

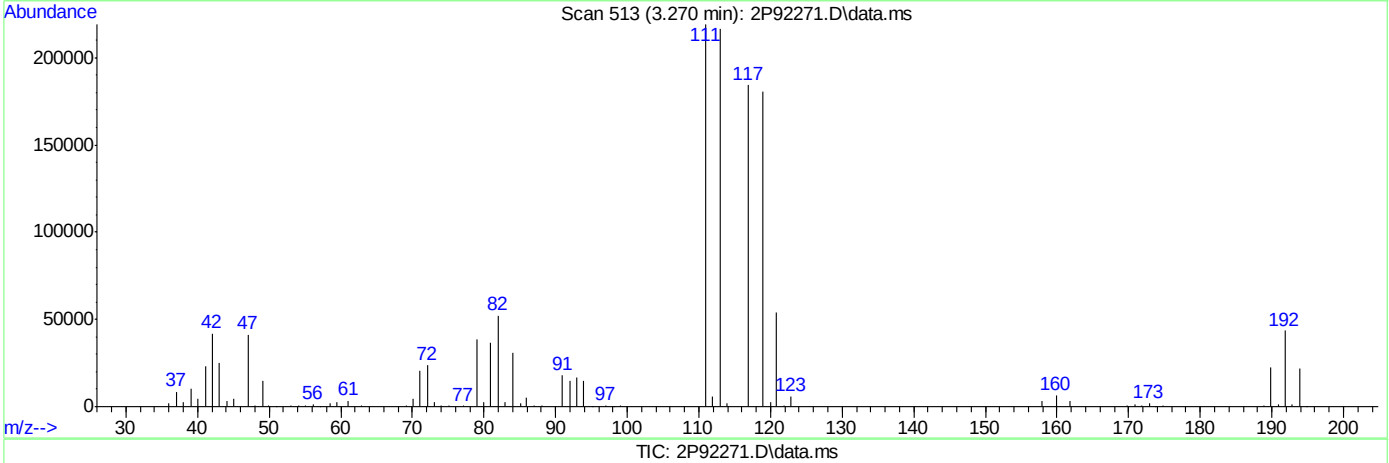
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.02
120.90	30.80	29.46
81.90	30.00	28.10

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 40.72ug/L m

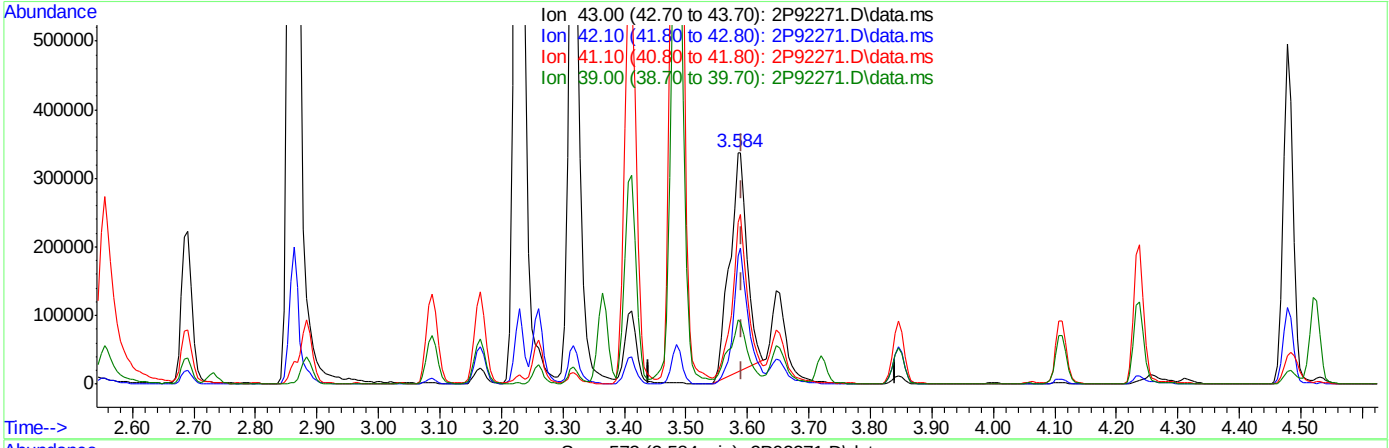
response 226621

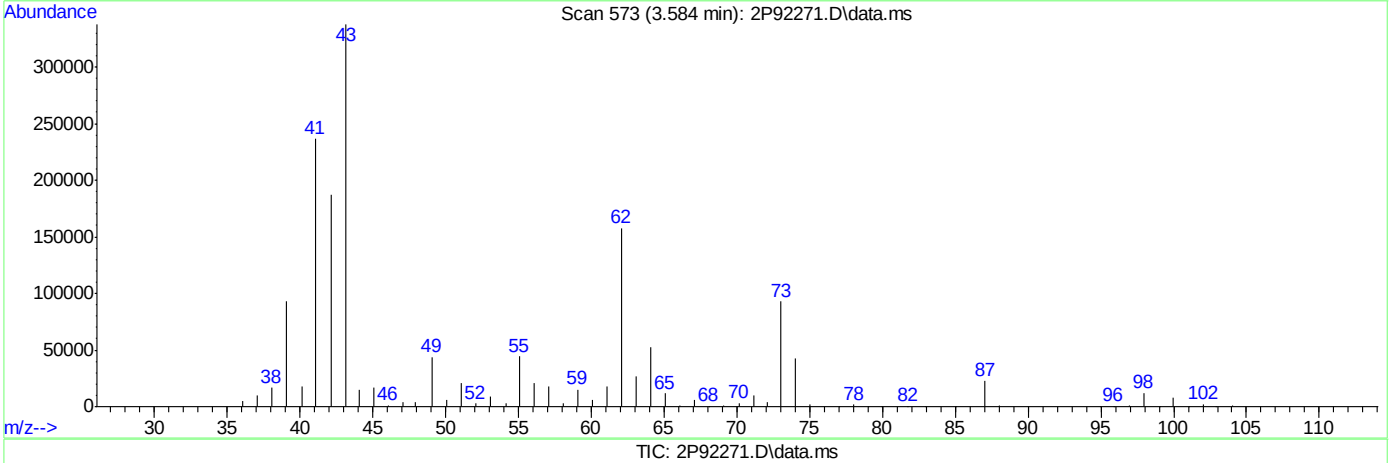
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.02
120.90	30.80	29.46
81.90	30.00	28.29

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 433.71ug/L

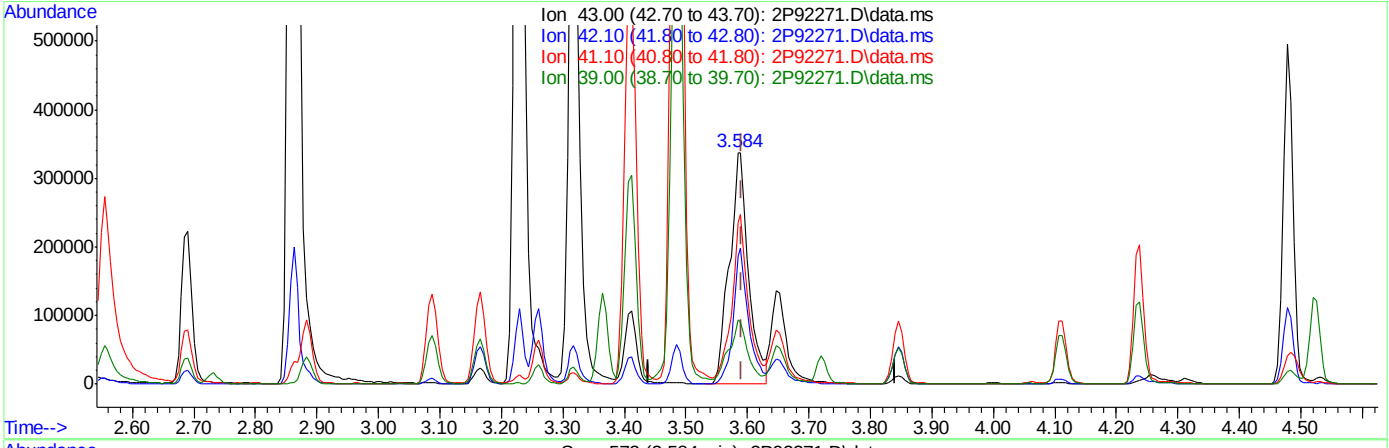
response 631729

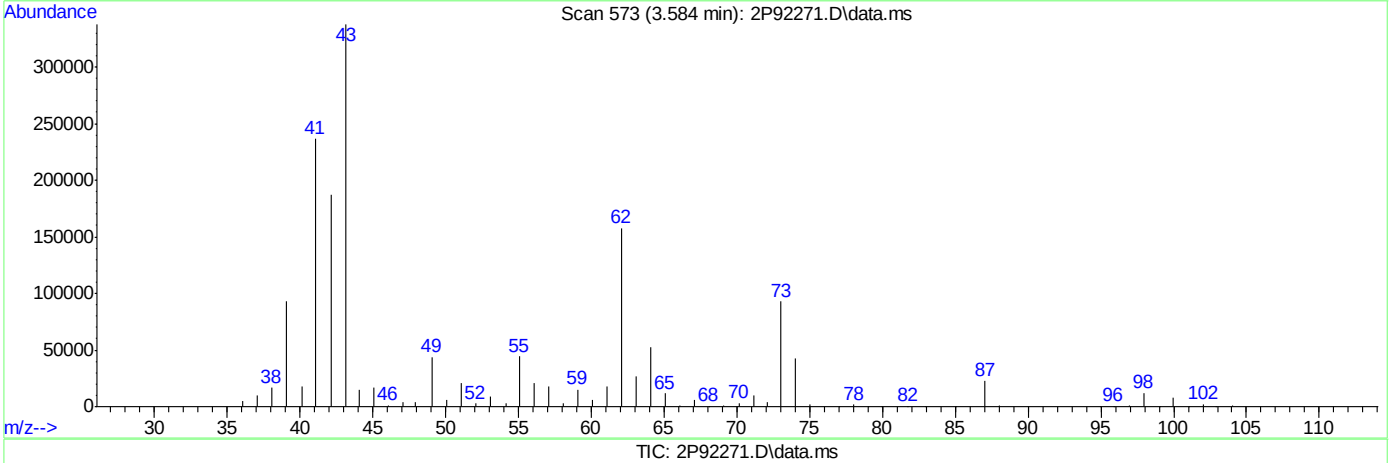
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	55.31
41.10	72.70	67.60
39.00	28.00	25.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 501.90ug/L m

response 731054

Ion	Exp%	Act%
43.00	100	100
42.10	59.70	55.40
41.10	72.70	69.96
39.00	28.00	27.52

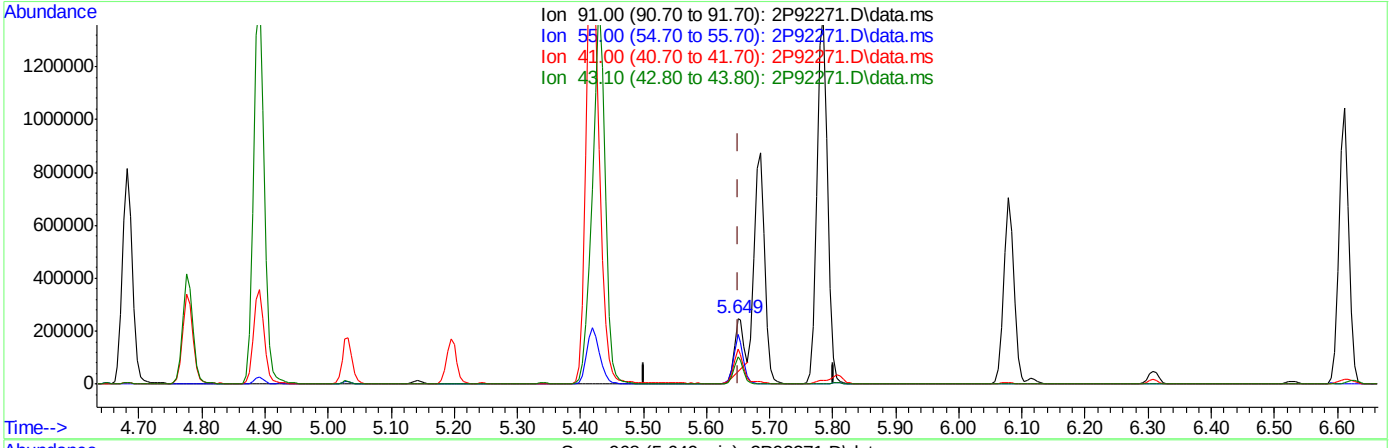
8.6.5.7

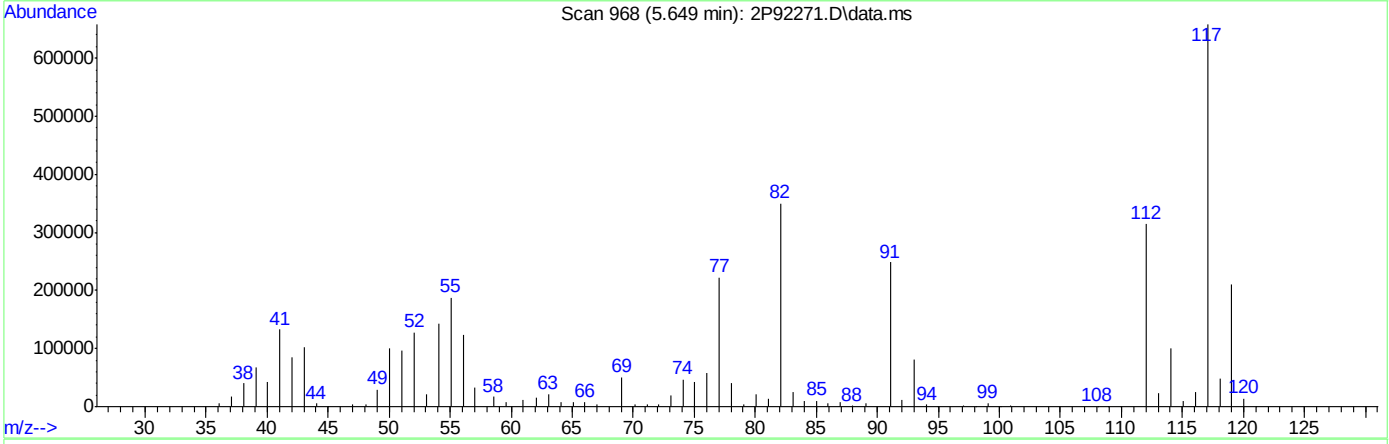
8

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 28.43ug/L

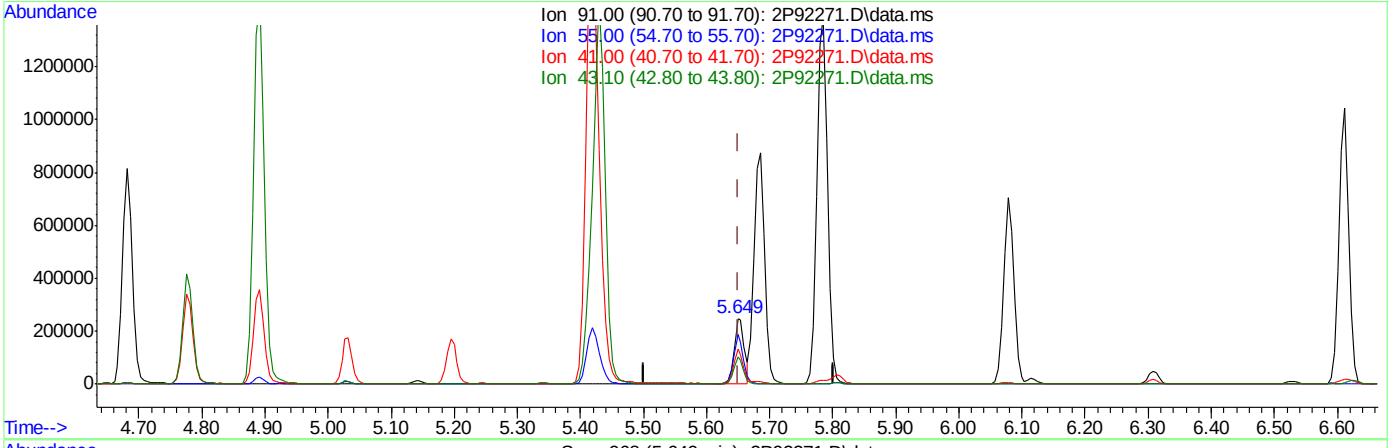
response 203197

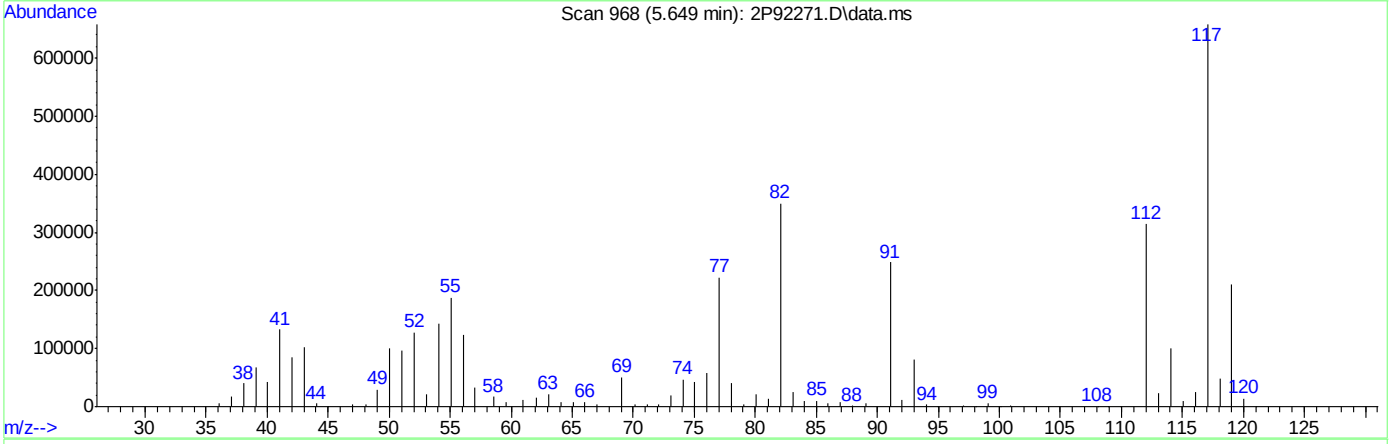
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	73.27#
41.00	83.00	51.28#
43.10	65.60	40.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 40.36ug/L m

response 288409

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	75.64#
41.00	83.00	53.42#
43.10	65.60	41.26#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.722	96	1407409	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	1001645	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	454388	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.267	113	304281	47.84	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.68%				
49) 1,2-Dichloroethane-d4	3.554	65	407999	41.16	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 82.32%				
63) Toluene-d8	4.652	98	1355682	50.77	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.54%				
86) 4-Bromofluorobenzene	6.498	174	355278	47.03	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.123	85	278687	52.79	ug/L		94
3) Chloromethane	1.254	50	322422	41.14	ug/L		96
4) 1,3-butadiene	1.322	39	304455	43.11	ug/L		84
5) Vinyl Chloride	1.306	62	395255	56.19	ug/L		99
6) Bromomethane	1.510	94	208960	75.86	ug/L		98
7) Chloroethane	1.583	64	112565	46.38	ug/L		96
8) Trichlorofluoromethane	1.672	101	286225	45.54	ug/L		97
9) Ethyl Ether	1.881	59	383465	58.47	ug/L		82
10) Ethanol	1.981	45	179945	750.13	ug/L		99
11) 1,2-Dichlorotrifluoroe...	1.975	67	353484	61.79	ug/L		93
12) 1,1-Dichloroethene	1.981	61	525897	57.54	ug/L		89
13) Freon 113	2.012	101	326364	69.18	ug/L		95
14) Carbon Disulfide	1.996	76	929994	69.82	ug/L		91
15) Iodomethane	2.059	142	254172	38.88	ug/L		94
16) Acrolein	2.158	56	686082	291.20	ug/L		99
17) Allyl chloride	2.247	41	382785	46.28	ug/L		93
18) Methylene Chloride	2.305	49	467880	40.01	ug/L		73
19) Acetone	2.320	43	1136836	235.13	ug/L		91
20) Methyl acetate	2.399	43	2487846	223.62	ug/L		88
21) trans-1,2-Dichloroethene	2.404	61	527592	56.58	ug/L		78
22) Hexane	2.467	56	276353	57.15	ug/L	#	87
23) Methyl Tert Butyl Ether	2.472	73	1214409	70.33	ug/L		82
24) Tert Butyl Alcohol	2.519	59	1439064	554.79	ug/L		85
25) Acetonitrile	2.556	41	649984	387.71	ug/L		97
26) Di-isopropyl ether	2.692	45	1119409	48.65	ug/L		92
27) Chloroprene	2.733	53	1486197	40.86	ug/L		92
28) 1,1-Dichloroethane	2.728	63	688488	59.42	ug/L		96
29) Acrylonitrile	2.733	52	1157234	245.82	ug/L		81
30) ETBE	2.885	59	1323562	59.59	ug/L		91
31) Vinyl acetate	2.864	43	4429124	265.41	ug/L		99
32) cis-1,2-Dichloroethene	3.021	96	402612	71.96	ug/L		88
33) 2,2-Dichloropropane	3.089	77	568040	67.12	ug/L		98
34) Bromochloromethane	3.131	128	177311	71.02	ug/L	#	64
35) Cyclohexane	3.162	56	653455	54.89	ug/L	#	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.167	83	699841	68.42	ug/L		93
37) Ethyl acetate	3.230	43	3259262	241.63	ug/L		94
38) Tetrahydrofuran	3.261	42	245157	43.38	ug/L		89
40) Carbon Tetrachloride	3.272	117	440807m	76.66	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	602475	73.63	ug/L		92
42) 2-Butanone	3.319	43	1940078	234.09	ug/L		79
43) 1,1-Dichloropropene	3.366	75	518814	67.72	ug/L	#	79
44) tert-Butyl formate	3.413	59	1640040	327.56	ug/L		91
45) Propionitrile	3.465	54	1256296	491.90	ug/L		99
46) Methacrylonitrile	3.486	41	3515554	439.61	ug/L		96
47) Benzene	3.497	78	1644409	69.45	ug/L		78
48) TAME	3.570	73	1227634	73.49	ug/L		78
50) Isobutyl alcohol	3.596	43	1301441m	864.82	ug/L		
51) 1,2-Dichloroethane	3.591	62	580216	57.60	ug/L		93
52) Tert Amyl Alcohol	3.654	59	1226464	627.48	ug/L		86
53) Trichloroethene	3.826	95	413948	71.44	ug/L		95
54) Methylcyclohexane	3.847	83	589336	72.59	ug/L	#	80
55) Dibromomethane	4.051	93	236702	72.67	ug/L		94
56) 1,2-Dichloropropane	4.108	63	405831	62.15	ug/L		89
57) Bromodichloromethane	4.145	83	474801	71.10	ug/L		97
58) Methyl methacrylate	4.239	41	465072	47.71	ug/L	#	77
59) 1,4-Dioxane	4.265	88	229020	1276.96	ug/L		79
60) 2-Chloroethyl vinyl ether	4.480	63	1726933	309.73	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	615066	69.59	ug/L		78
64) Toluene	4.683	91	1767972	75.48	ug/L		100
65) 2-Nitropropane	4.778	41	858325	257.87	ug/L		97
66) 4-Methyl-2-pentanone	4.893	43	3330202	264.25	ug/L		91
67) trans-1,3-Dichloropropene	4.919	75	556698	72.51	ug/L		78
68) Tetrachloroethene	4.940	166	377812	66.50	ug/L		92
69) Ethyl methacrylate	5.034	69	661650	79.37	ug/L	#	72
70) 1,1,2-Trichloroethane	5.023	83	309443	74.88	ug/L		83
71) Dibromochloromethane	5.144	129	356313	79.81	ug/L		95
72) 1,3-Dichloropropane	5.196	76	678805	72.66	ug/L		80
73) 1,2-Dibromoethane	5.295	107	390890	79.28	ug/L		100
74) 3,3-dimethyl-1-butanol	5.426	57	7575345	2754.92	ug/L	#	86
75) 2-hexanone	5.431	43	3689641	241.56	ug/L	#	39
76) 1-Chlorohexane	5.651	91	574578m	76.40	ug/L		
77) Ethylbenzene	5.687	91	1966345	76.72	ug/L		96
78) Chlorobenzene	5.656	112	1070579	77.50	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.698	131	360610	81.15	ug/L		96
80) m,p-Xylene	5.781	91	3165996	156.32	ug/L		98
81) o-Xylene	6.079	91	1567775	78.78	ug/L		99
82) Styrene	6.111	104	1264188	84.59	ug/L		95
83) Bromoform	6.121	173	205699	73.70	ug/L		97
84) Isopropylbenzene	6.309	105	1828395	79.82	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	217724	61.57	ug/L	#	66
88) n-Propylbenzene	6.613	91	2184607	85.64	ug/L		99
89) Bromobenzene	6.571	156	433440	82.36	ug/L		88
90) 1,1,2,2-Tetrachloroethane	6.628	83	579536	83.25	ug/L		96
91) 1,3,5-Trimethylbenzene	6.759	105	1524602	85.64	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

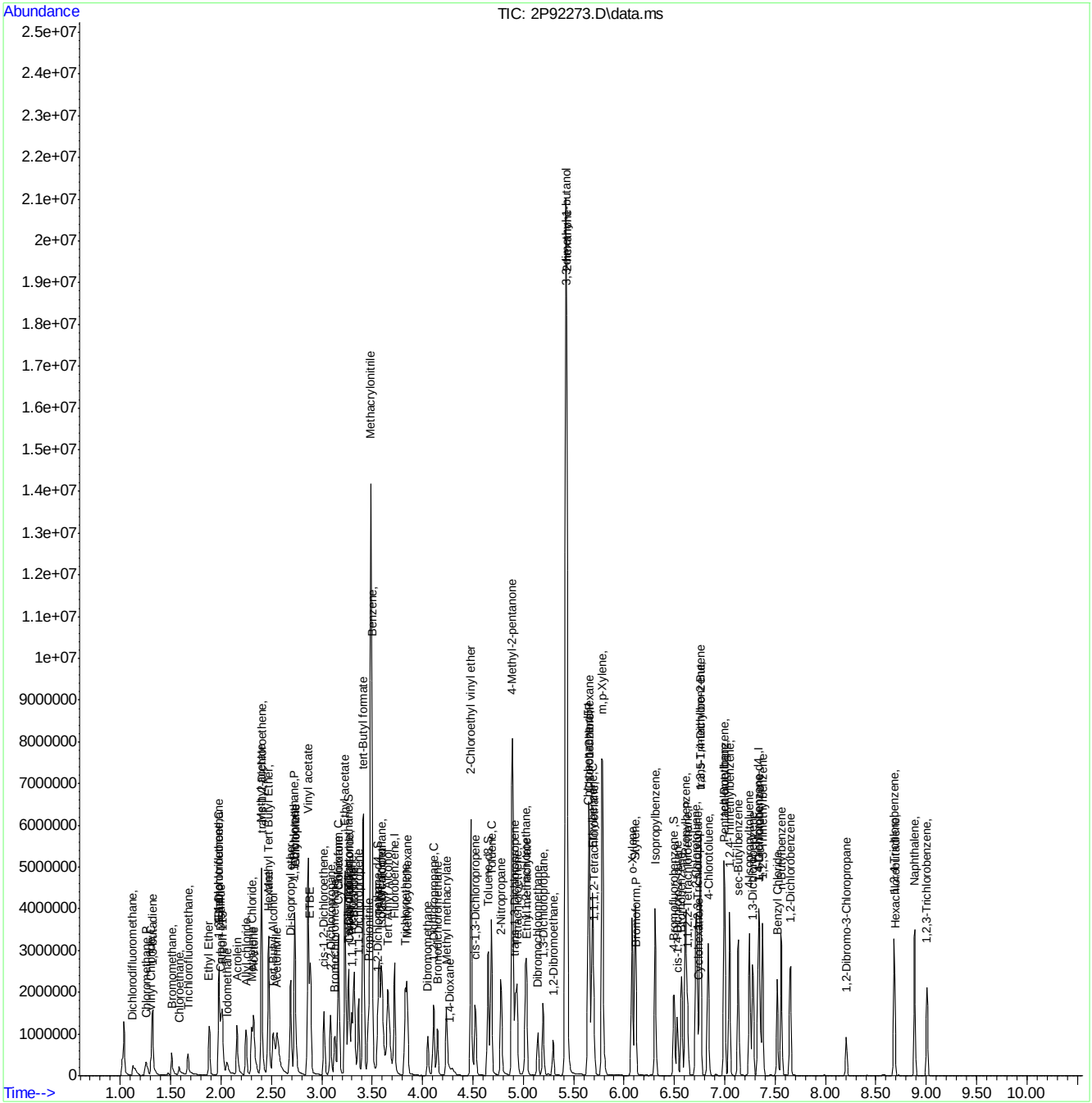
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.712	91	1301038	84.03	ug/L		98
93) trans-1,4-Dichloro-2-B...	6.759	53	263986	60.86	ug/L	#	61
94) 1,2,3-Trichloropropane	6.728	110	213857	82.77	ug/L	#	78
95) Cyclohexanone	6.743	55	213329	320.20	ug/L		88
96) 4-Chlorotoluene	6.837	91	1366925	84.41	ug/L		94
97) tert-Butylbenzene	6.994	91	846098	86.13	ug/L		93
99) 1,2,4-Trimethylbenzene	7.047	105	1490286	86.13	ug/L		97
100) Pentachloroethane	6.999	167	201602	74.35	ug/L		96
101) sec-Butylbenzene	7.135	105	1629742	85.84	ug/L		98
102) 4-Isopropyltoluene	7.245	119	1449961	89.46	ug/L		96
103) 1,3-Dichlorobenzene	7.277	146	777359	81.49	ug/L		98
104) 1,2,3-Trimethylbenzene	7.376	105	1476951	85.13	ug/L		97
105) 1,4-Dichlorobenzene	7.345	146	793210	77.85	ug/L		98
106) n-Butylbenzene	7.559	92	709933	86.72	ug/L		98
107) Benzyl Chloride	7.522	126	220570	85.96	ug/L	#	86
108) 1,2-Dichlorobenzene	7.653	146	728220	78.58	ug/L		98
109) 1,2-Dibromo-3-Chloropr...	8.207	75	149907	79.68	ug/L	#	70
110) Hexachlorobutadiene	8.688	225	136790	65.70	ug/L		94
111) 1,2,4-Trichlorobenzene	8.683	180	396197	77.18	ug/L		94
112) Naphthalene	8.887	128	1702790	96.64	ug/L		99
113) 1,2,3-Trichlorobenzene	9.007	180	368584	76.06	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

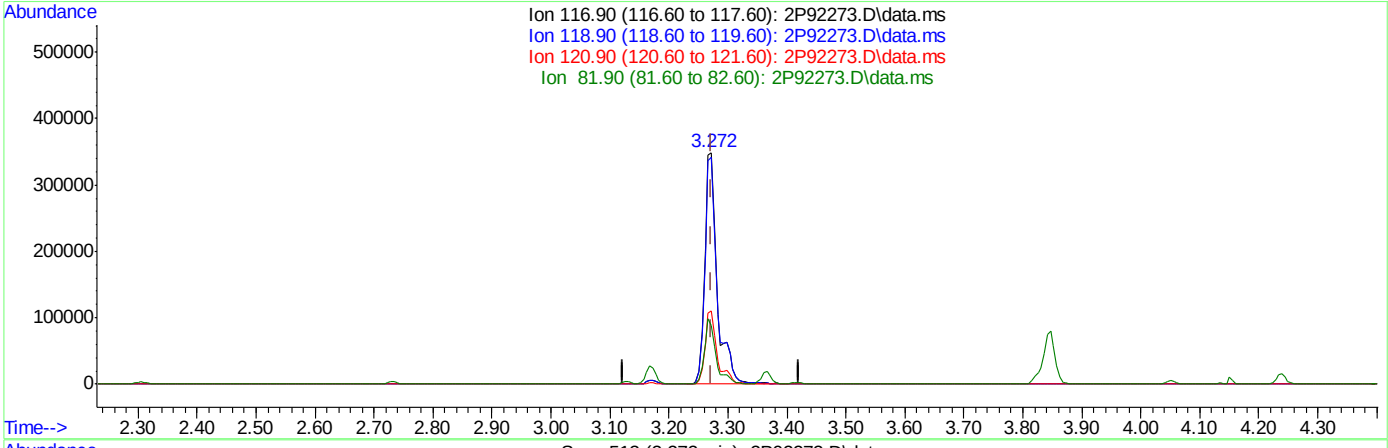
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92273.D **Analyst approved:** 08/24/22 12:44 Courtney Failla
Injection Time: 08/24/22 12:31 **Supervisor approved:** 08/25/22 11:34 Karen Watson

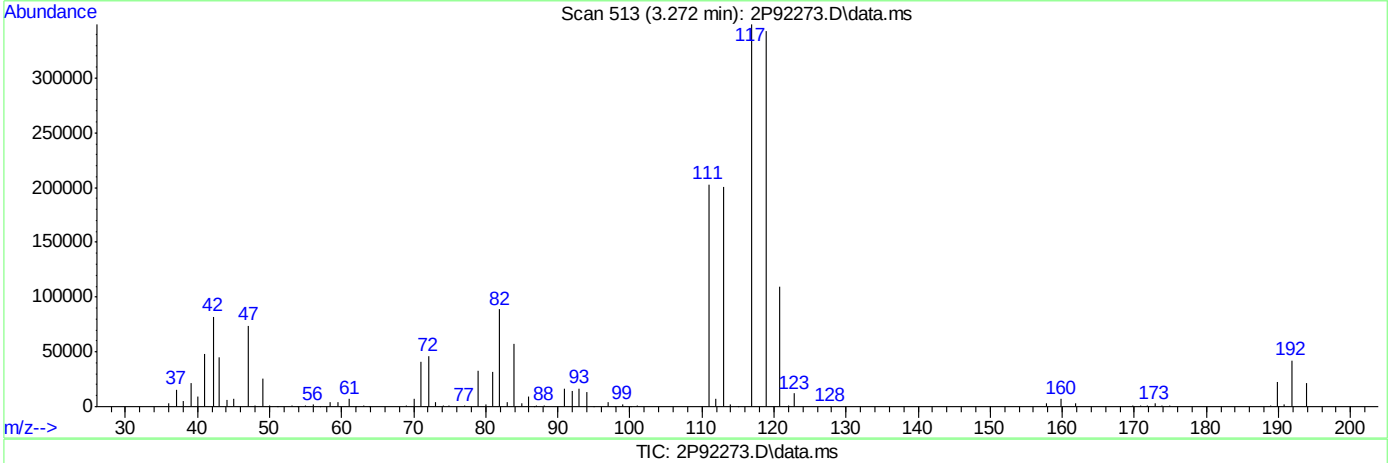
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.000) 89.96ug/L

response 517268

Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.11
120.90	30.80	31.45
81.90	30.00	25.31

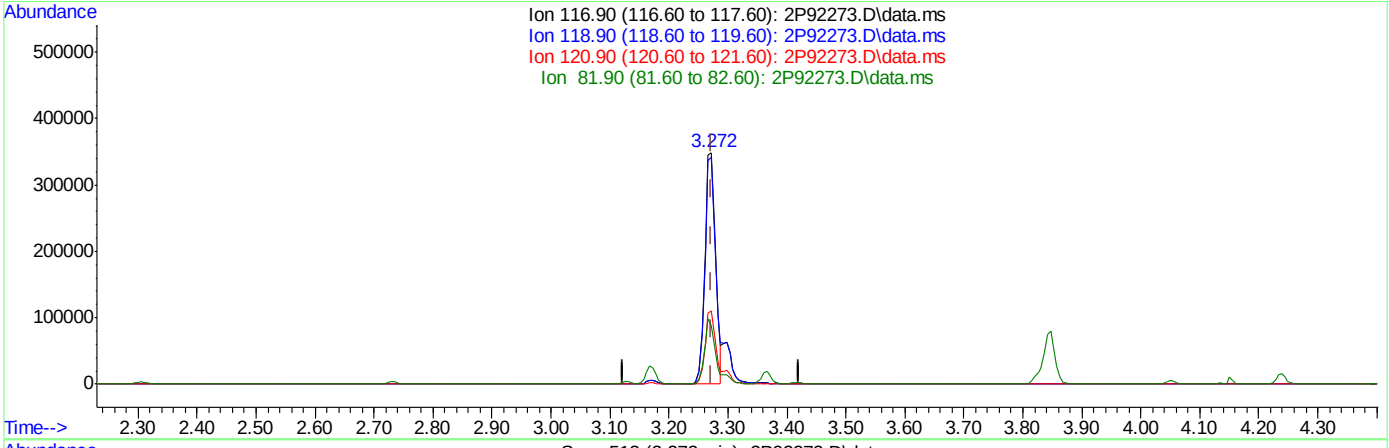
8.6.6.2

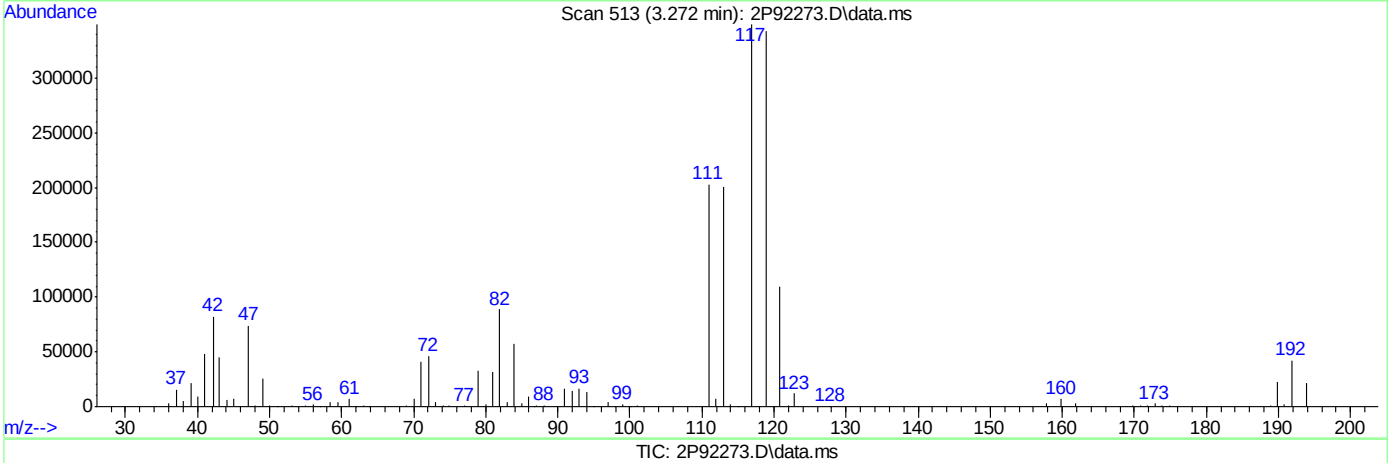
8

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.000) 76.66ug/L m

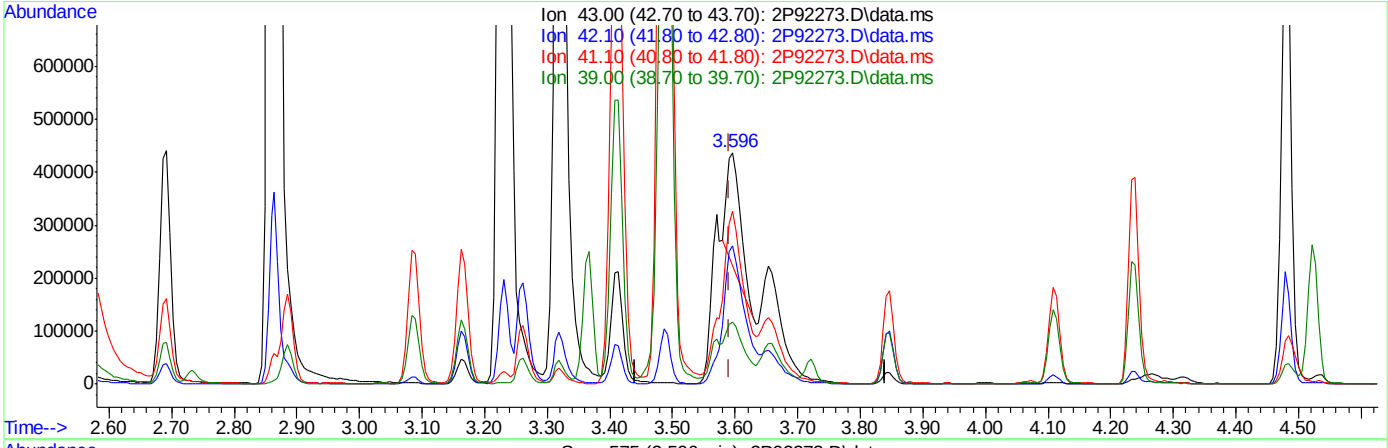
response 440807

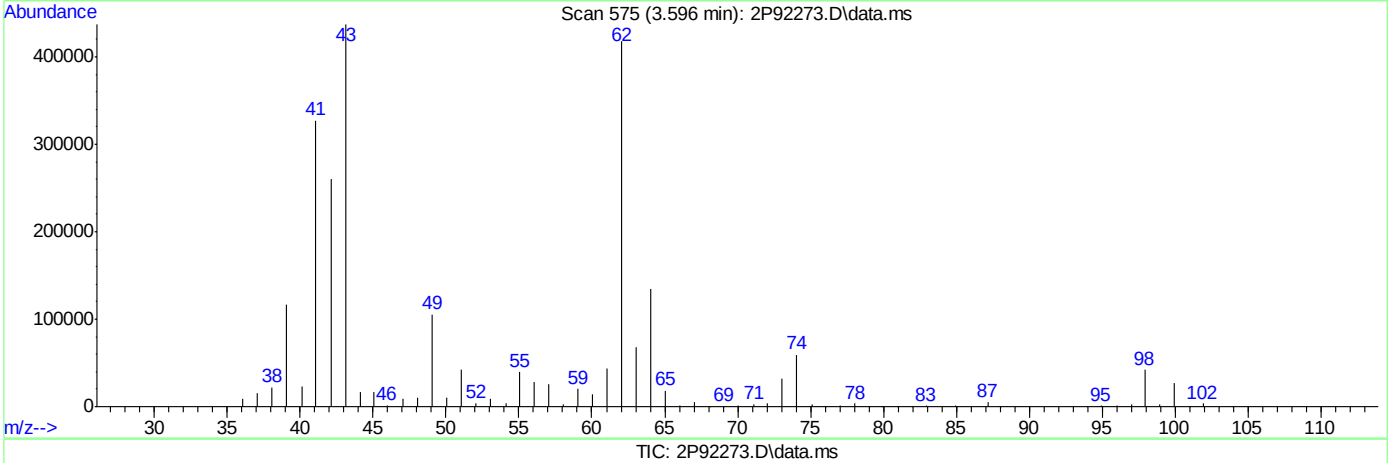
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.11
120.90	30.80	31.45
81.90	30.00	25.43

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(50) Isobutyl alcohol

3.596min (+0.005) 191.12ug/L

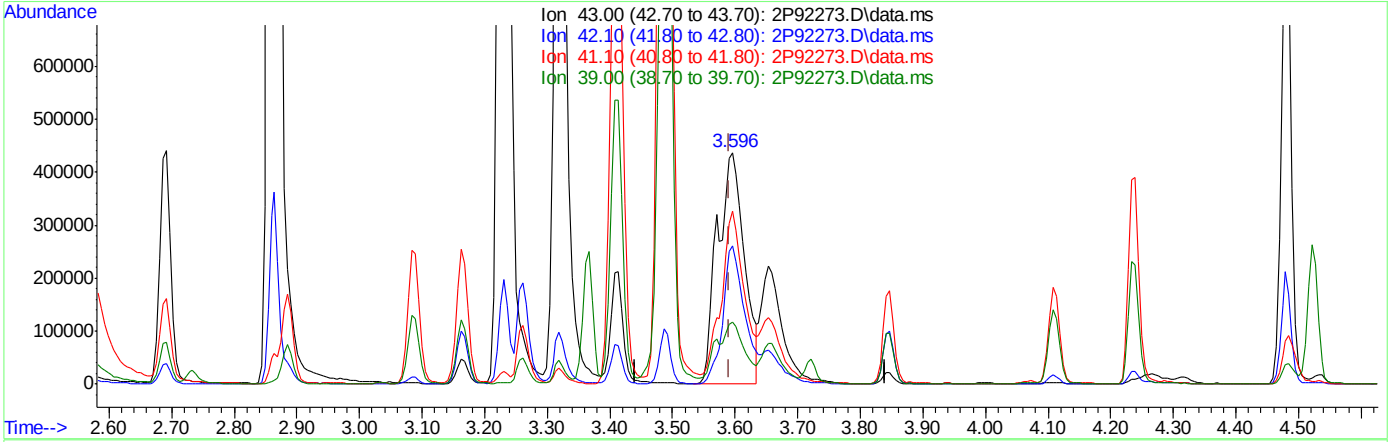
response 287609

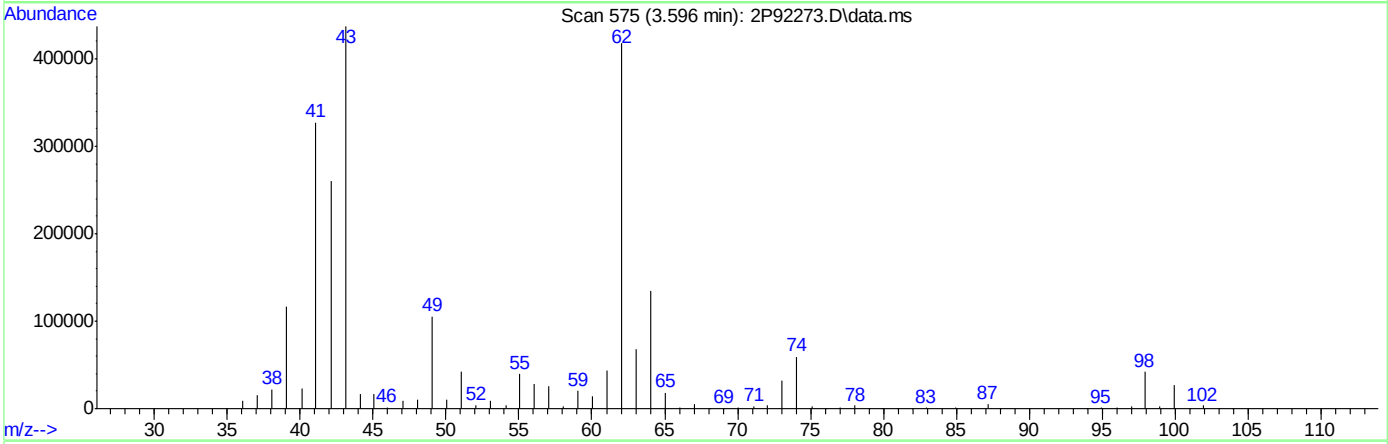
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	60.60
41.10	72.70	74.53
39.00	28.00	25.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(50) Isobutyl alcohol

3.596min (+0.005) 864.82ug/L m

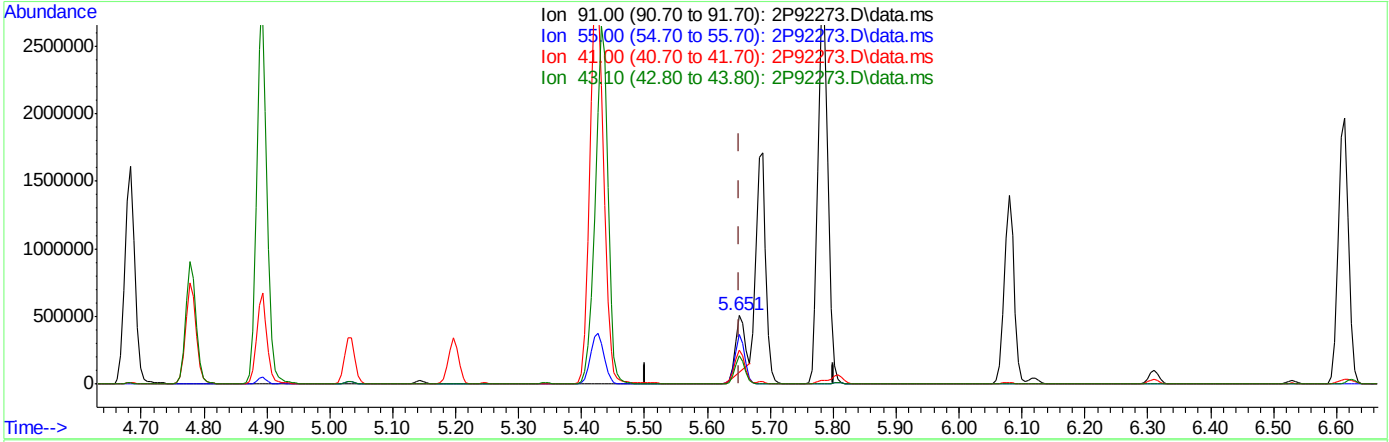
response 1301441

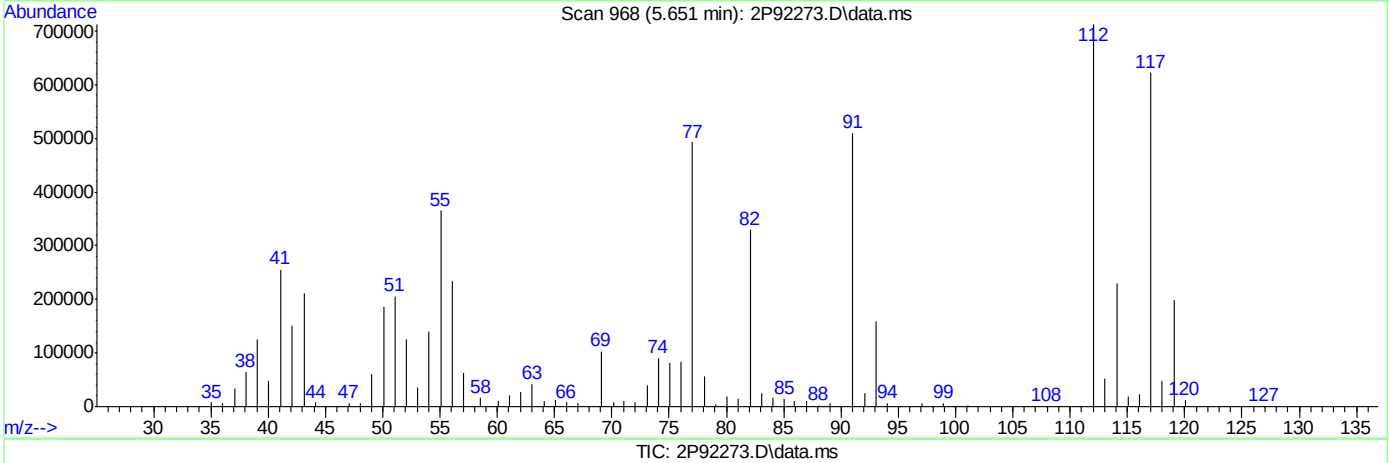
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	59.63
41.10	72.70	74.81
39.00	28.00	26.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(76) 1-Chlorohexane

5.651min (-0.001) 53.23ug/L

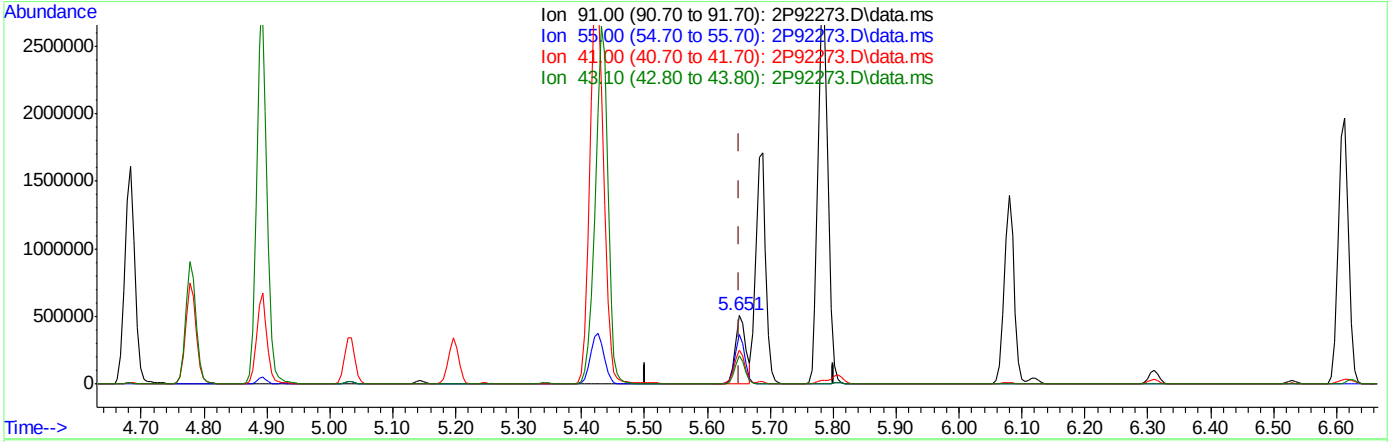
response 400352

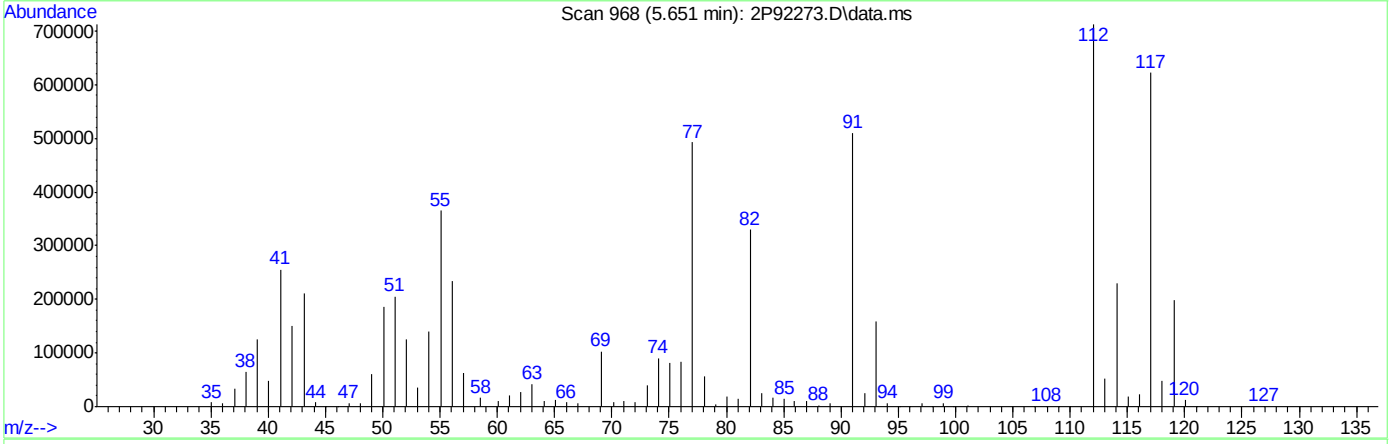
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	70.56#
41.00	83.00	48.82#
43.10	65.60	40.84#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(76) 1-Chlorohexane

5.651min (-0.001) 76.40ug/L m

response 574578

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	71.59#
41.00	83.00	49.96#
43.10	65.60	41.20#

2P92275.D

Manual Integrations APPROVED (compounds with "m" flag)

Karen Watson 08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.721	96	1448604	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	1030693	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	456458	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.266	113	316577	48.36	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.72%				
49) 1,2-Dichloroethane-d4	3.554	65	423799	41.54	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.08%				
63) Toluene-d8	4.652	98	1416932	51.57	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.14%				
86) 4-Bromofluorobenzene	6.497	174	362690	47.80	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.123	85	403369	74.24	ug/L		96
3) Chloromethane	1.259	50	464809	57.62	ug/L		97
4) 1,3-butadiene	1.316	39	428849	58.83	ug/L		88
5) Vinyl Chloride	1.306	62	578889	79.95	ug/L		99
6) Bromomethane	1.510	94	289893	102.25	ug/L		98
7) Chloroethane	1.583	64	157131	62.90	ug/L		97
8) Trichlorofluoromethane	1.667	101	289930	44.82	ug/L		96
9) Ethyl Ether	1.881	59	487397	72.20	ug/L		77
10) Ethanol	1.996	45	234484	973.37	ug/L		91
11) 1,2-Dichlorotrifluoroe...	1.975	67	524281	89.03	ug/L		89
12) 1,1-Dichloroethene	1.975	61	783609	83.31	ug/L		88
13) Freon 113	2.006	101	487596	100.42	ug/L		97
14) Carbon Disulfide	1.991	76	1427913	97.12	ug/L		89
15) Iodomethane	2.059	142	363343	53.59	ug/L		94
16) Acrolein	2.158	56	991894	403.00	ug/L		99
17) Allyl chloride	2.247	41	582060	68.37	ug/L		92
18) Methylene Chloride	2.299	49	638185	55.95	ug/L		76
19) Acetone	2.325	43	1566267	317.71	ug/L		90
20) Methyl acetate	2.399	43	3497839	305.46	ug/L		88
21) trans-1,2-Dichloroethene	2.399	61	785353	81.83	ug/L		84
22) Hexane	2.467	56	418082	84.01	ug/L	#	83
23) Methyl Tert Butyl Ether	2.477	73	1750100	98.47	ug/L	#	56
24) Tert Butyl Alcohol	2.524	59	1960321	734.25	ug/L		81
25) Acetonitrile	2.561	41	1476501	1071.79	ug/L		97
26) Di-isopropyl ether	2.691	45	1612917	68.11	ug/L		92
27) Chloroprene	2.733	53	2133138	56.98	ug/L		92
28) 1,1-Dichloroethane	2.728	63	1002856	84.09	ug/L		96
29) Acrylonitrile	2.733	52	1659961	342.58	ug/L		80
30) ETBE	2.885	59	1914010	83.73	ug/L		91
31) Vinyl acetate	2.864	43	6405963	372.95	ug/L		98
32) cis-1,2-Dichloroethene	3.021	96	587168	101.97	ug/L		88
33) 2,2-Dichloropropane	3.083	77	855049	93.26	ug/L		99
34) Bromochloromethane	3.130	128	251747	97.97	ug/L	#	63
35) Cyclohexane	3.162	56	1001171	81.71	ug/L	#	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.167	83	1022546	97.13	ug/L		94
37) Ethyl acetate	3.230	43	4648141	334.80	ug/L		93
38) Tetrahydrofuran	3.261	42	347454	59.73	ug/L		90
40) Carbon Tetrachloride	3.266	117	688315m	116.30	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	903166	107.24	ug/L		92
42) 2-Butanone	3.319	43	2737606	319.53	ug/L		82
43) 1,1-Dichloropropene	3.366	75	775619	98.37	ug/L		81
44) tert-Butyl formate	3.413	59	2463630	441.32	ug/L		90
45) Propionitrile	3.470	54	1863638	698.74	ug/L		93
46) Methacrylonitrile	3.491	41	4992432	600.10	ug/L		93
47) Benzene	3.496	78	2410543	98.90	ug/L		86
48) TAME	3.570	73	1770465	102.97	ug/L		76
50) Isobutyl alcohol	3.601	43	1778010m	1147.90	ug/L		
51) 1,2-Dichloroethane	3.591	62	835675	80.60	ug/L		93
52) Tert Amyl Alcohol	3.659	59	1695550	842.81	ug/L		85
53) Trichloroethene	3.826	95	614815	103.09	ug/L		95
54) Methylcyclohexane	3.847	83	910970	109.01	ug/L	#	80
55) Dibromomethane	4.051	93	341144	101.76	ug/L		93
56) 1,2-Dichloropropane	4.108	63	594664	88.48	ug/L		89
57) Bromodichloromethane	4.145	83	707970	96.33	ug/L		95
58) Methyl methacrylate	4.239	41	692154	66.81	ug/L	#	79
59) 1,4-Dioxane	4.265	88	308127	1669.18	ug/L		79
60) 2-Chloroethyl vinyl ether	4.479	63	2513613	427.56	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	894613	93.54	ug/L		78
64) Toluene	4.683	91	2598286	107.80	ug/L		98
65) 2-Nitropropane	4.777	41	1254422	340.12	ug/L		96
66) 4-Methyl-2-pentanone	4.892	43	4677949	360.73	ug/L		90
67) trans-1,3-Dichloropropene	4.918	75	811103	97.78	ug/L		83
68) Tetrachloroethene	4.939	166	550983	94.24	ug/L		92
69) Ethyl methacrylate	5.033	69	974966	113.66	ug/L	#	72
70) 1,1,2-Trichloroethane	5.023	83	438235	103.06	ug/L		84
71) Dibromochloromethane	5.143	129	523793	106.67	ug/L		95
72) 1,3-Dichloropropane	5.196	76	975960	101.52	ug/L		79
73) 1,2-Dibromoethane	5.295	107	554857	109.36	ug/L		99
74) 3,3-dimethyl-1-butanol	5.426	57	10279666	3633.04	ug/L	#	85
75) 2-hexanone	5.436	43	4950878	314.99	ug/L	#	44
76) 1-Chlorohexane	5.656	91	852517m	110.16	ug/L		
77) Ethylbenzene	5.687	91	2890719	109.61	ug/L		96
78) Chlorobenzene	5.656	112	1561418	109.85	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.697	131	523351	110.08	ug/L		96
80) m,p-Xylene	5.786	91	4637003	222.49	ug/L		99
81) o-Xylene	6.079	91	2290163	111.83	ug/L		98
82) Styrene	6.110	104	1813515	117.93	ug/L		95
83) Bromoform	6.121	173	302716	96.26	ug/L		98
84) Isopropylbenzene	6.309	105	2696969	114.43	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	323231	85.03	ug/L	#	67
88) n-Propylbenzene	6.612	91	3191996	124.56	ug/L		99
89) Bromobenzene	6.571	156	614502	116.23	ug/L		94
90) 1,1,2,2-Tetrachloroethane	6.633	83	815986	116.68	ug/L		95
91) 1,3,5-Trimethylbenzene	6.759	105	2231418	124.78	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

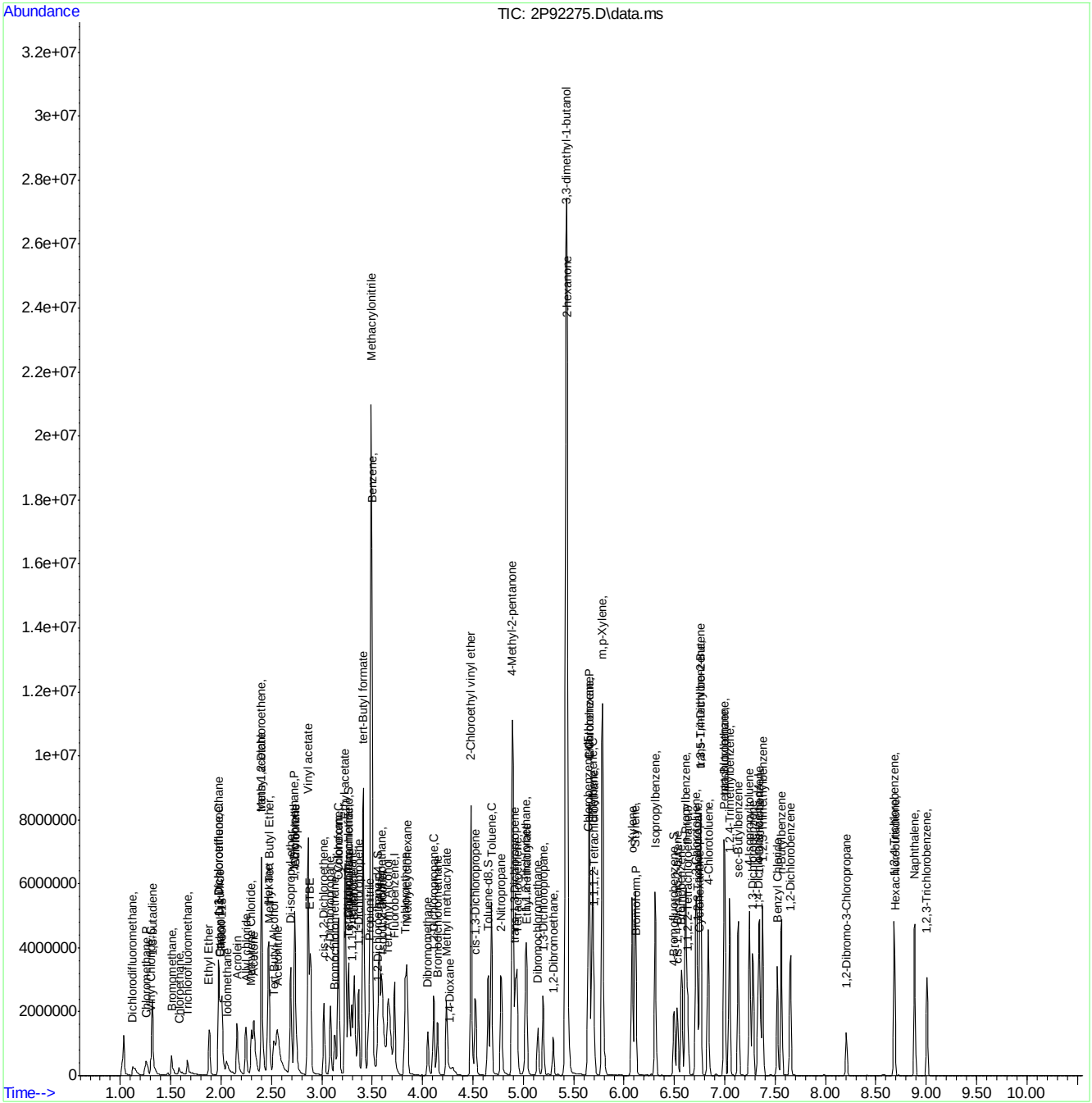
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.712	91	1892504	121.68	ug/L		100
93) trans-1,4-Dichloro-2-B...	6.759	53	369178	81.16	ug/L	#	63
94) 1,2,3-Trichloropropane	6.727	110	296210	114.13	ug/L	#	79
95) Cyclohexanone	6.748	55	288162	430.56	ug/L		87
96) 4-Chlorotoluene	6.837	91	1978875	121.64	ug/L		93
97) tert-Butylbenzene	6.994	91	1246847	126.34	ug/L		90
99) 1,2,4-Trimethylbenzene	7.046	105	2155567	124.02	ug/L		99
100) Pentachloroethane	6.999	167	301098	100.99	ug/L		97
101) sec-Butylbenzene	7.135	105	2391039	125.36	ug/L		98
102) 4-Isopropyltoluene	7.245	119	2141309	131.52	ug/L		97
103) 1,3-Dichlorobenzene	7.276	146	1099976	114.79	ug/L		98
104) 1,2,3-Trimethylbenzene	7.376	105	2134898	122.50	ug/L		98
105) 1,4-Dichlorobenzene	7.344	146	1126792	110.09	ug/L		98
106) n-Butylbenzene	7.564	92	1037609	126.17	ug/L		98
107) Benzyl Chloride	7.522	126	325644	112.38	ug/L		93
108) 1,2-Dichlorobenzene	7.653	146	1027230	110.35	ug/L		97
109) 1,2-Dibromo-3-Chloropr...	8.207	75	215439	105.53	ug/L	#	70
110) Hexachlorobutadiene	8.688	225	203747	97.41	ug/L		95
111) 1,2,4-Trichlorobenzene	8.683	180	571214	110.76	ug/L		94
112) Naphthalene	8.886	128	2395122	135.32	ug/L		99
113) 1,2,3-Trichlorobenzene	9.007	180	523527	107.54	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

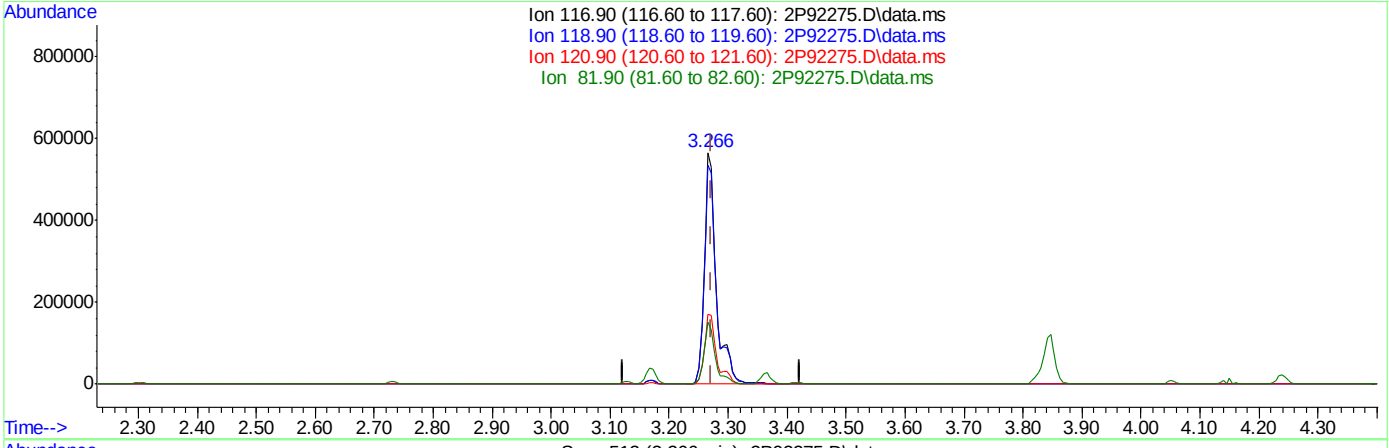
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92275.D **Analyst approved:** 08/24/22 13:21 Courtney Failla
Injection Time: 08/24/22 13:04 **Supervisor approved:** 08/25/22 11:34 Karen Watson

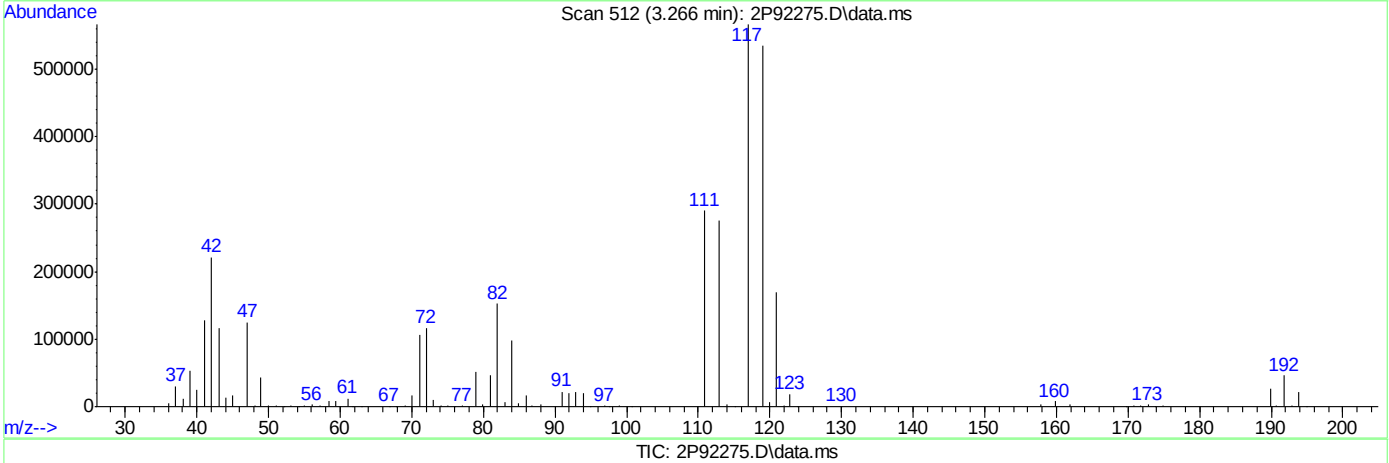
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.66	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(40) Carbon Tetrachloride ( )

3.266min (-0.005) 135.06ug/L

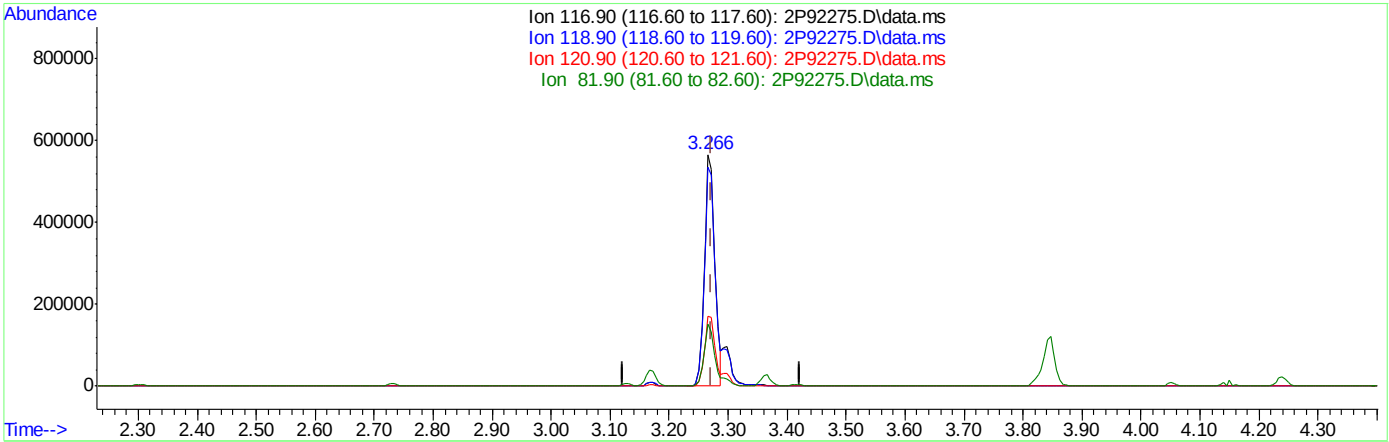
response 799364

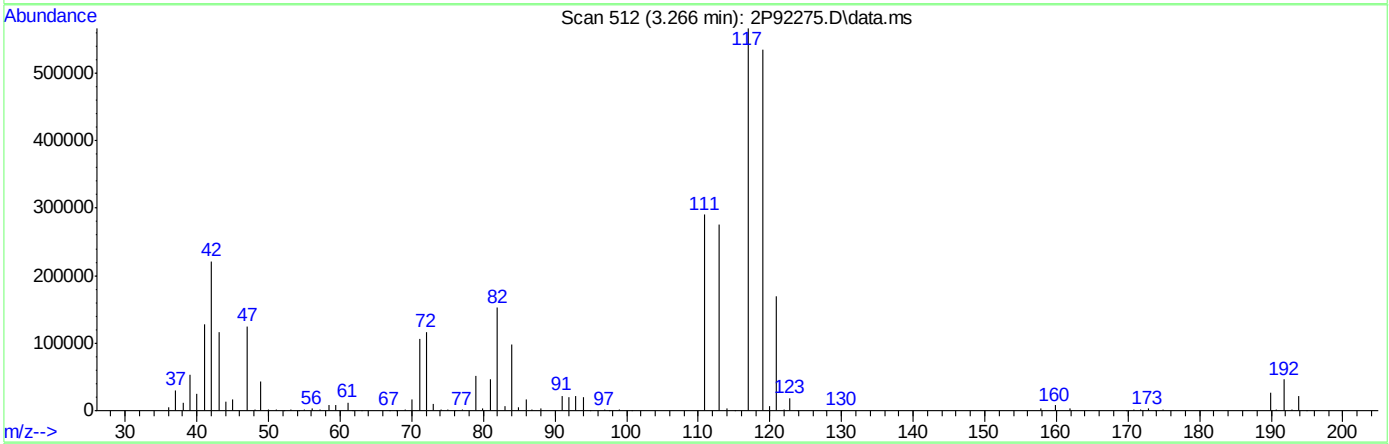
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.38
120.90	30.80	30.01
81.90	30.00	26.86

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(40) Carbon Tetrachloride ( )

3.266min (-0.005) 116.30ug/L m

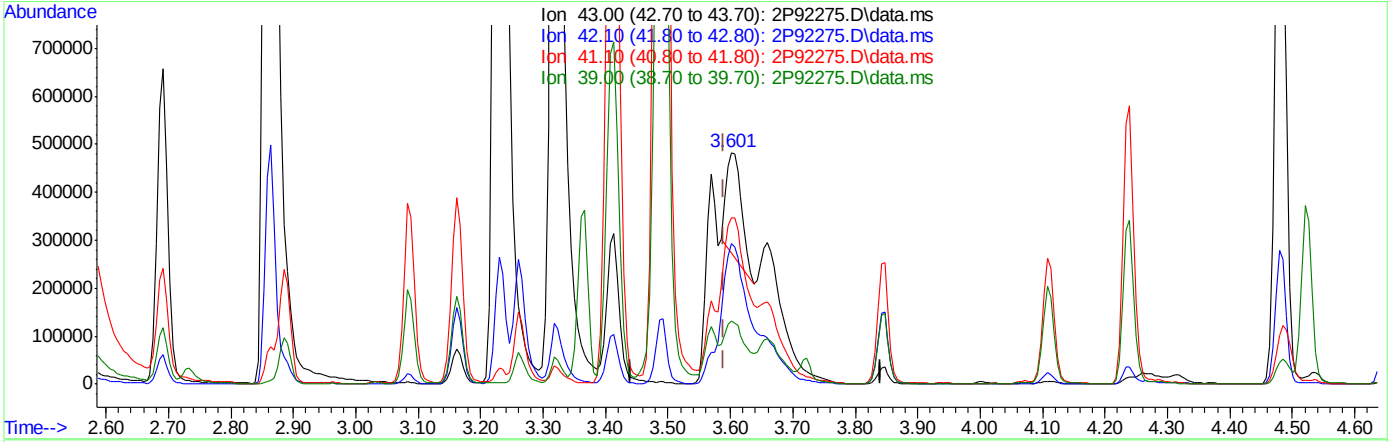
response 688315

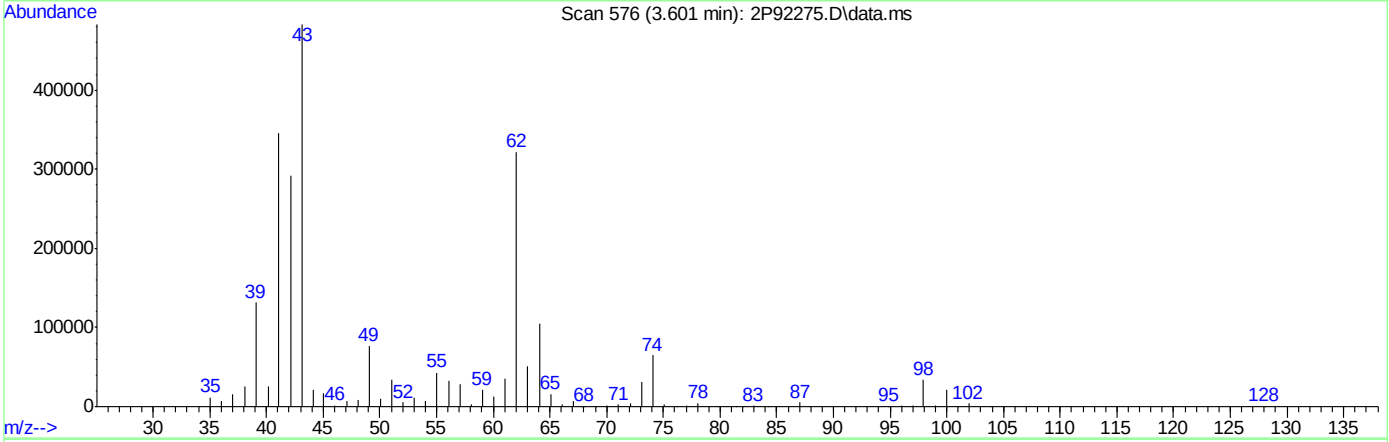
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.38
120.90	30.80	30.01
81.90	30.00	26.93

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(50) Isobutyl alcohol

3.601min (+0.010) 229.58ug/L

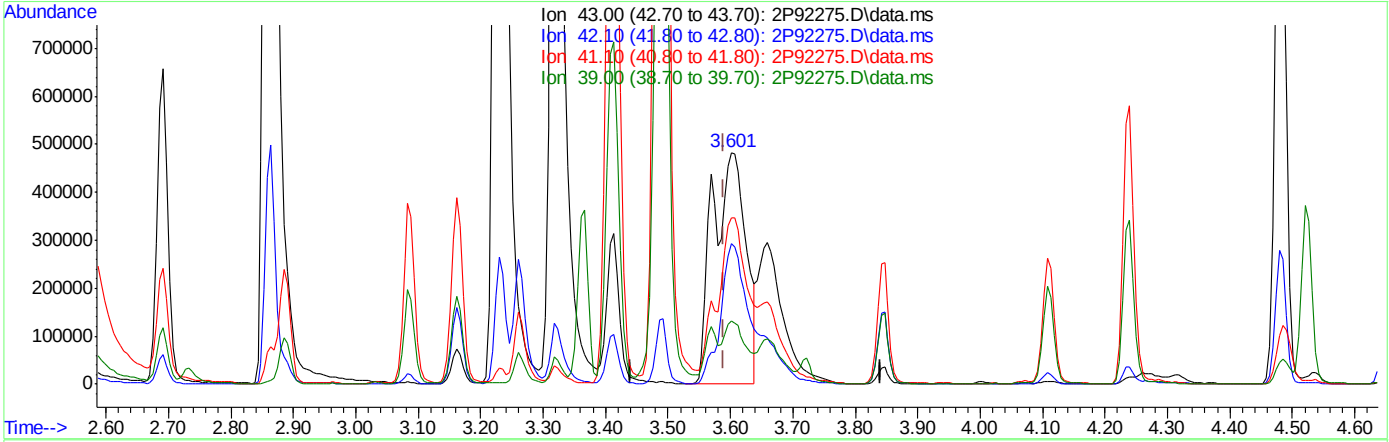
response 355600

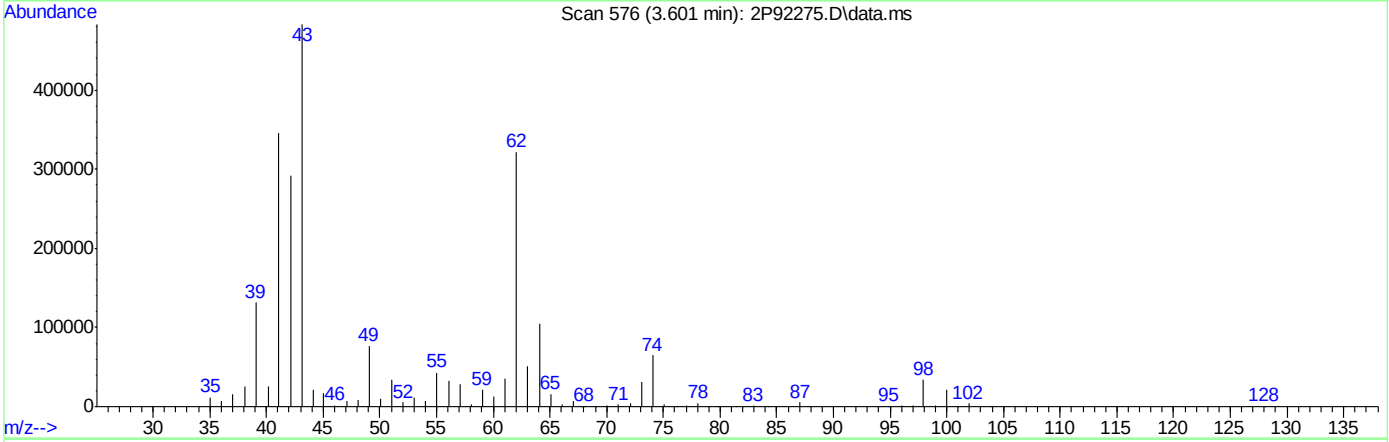
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	64.21
41.10	72.70	66.08
39.00	28.00	24.34

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(50) Isobutyl alcohol

3.601min (+0.010) 1147.90ug/L m

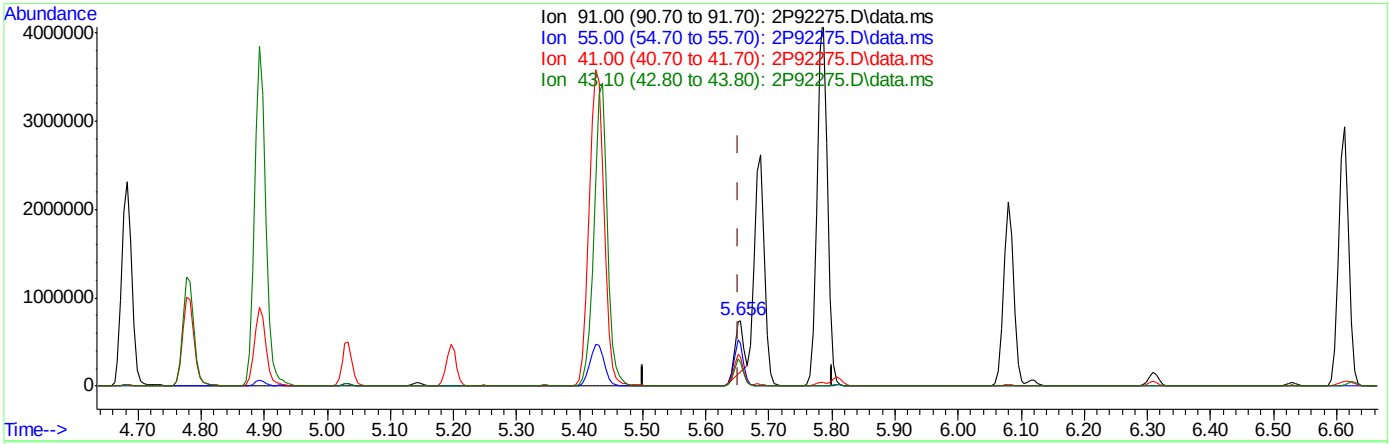
response 1778010

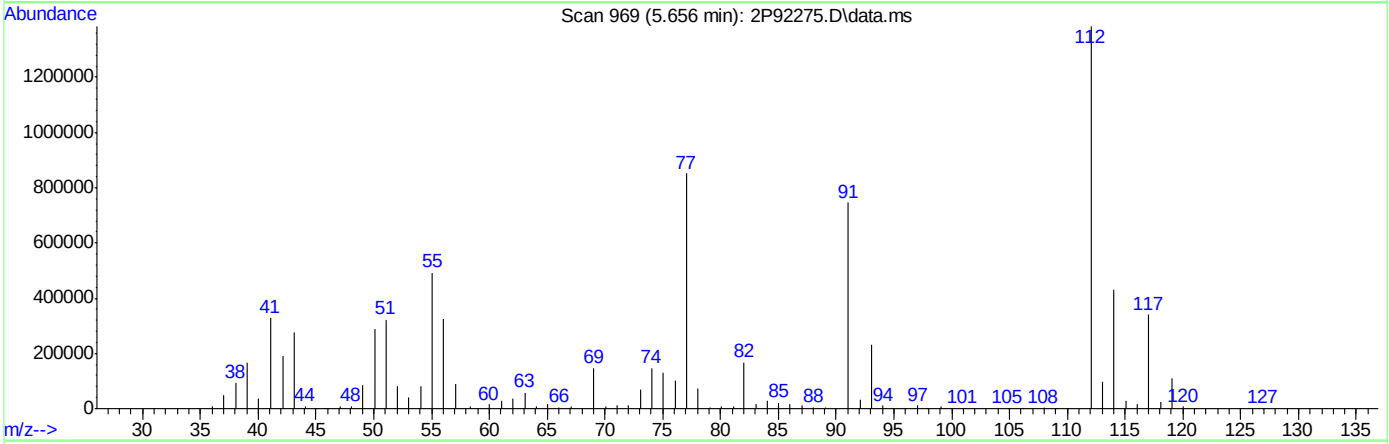
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	60.47
41.10	72.70	71.64
39.00	28.00	27.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(76) 1-Chlorohexane

5.656min (+0.004) 78.56ug/L

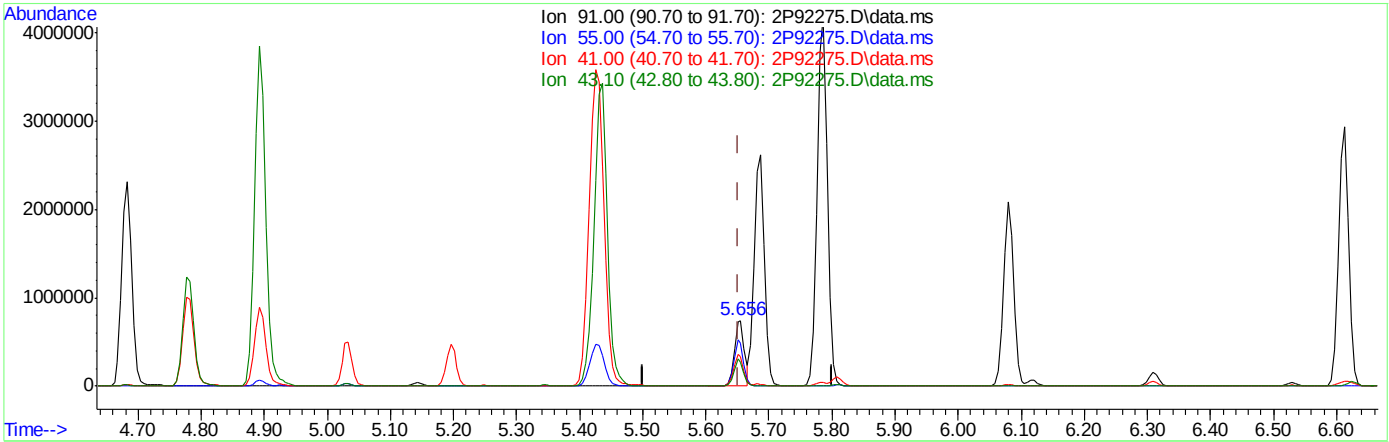
response 607981

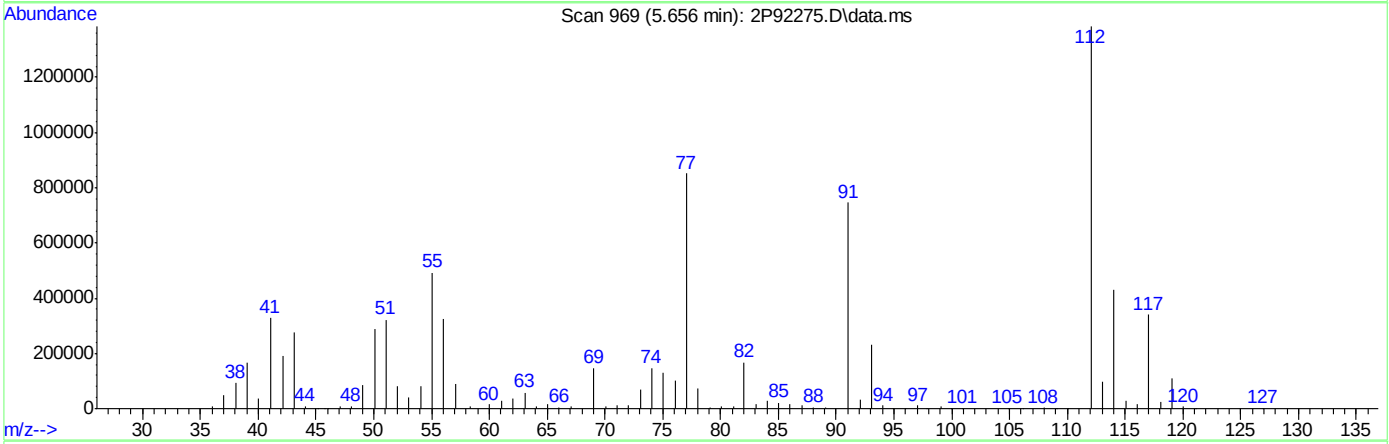
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	64.37#
41.00	83.00	42.39#
43.10	65.60	35.78#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(76) 1-Chlorohexane

5.656min (+0.004) 110.16ug/L m

response 852517

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	66.08#
41.00	83.00	44.08#
43.10	65.60	36.96#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1393141	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.643	117	987081	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	446303	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	302671	51.12	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.24%			
49) 1,2-Dichloroethane-d4	3.552	65	425650	51.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.52%			
63) Toluene-d8	4.650	98	1358611	50.02	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.04%			
86) 4-Bromofluorobenzene	6.496	174	348971	50.13	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.26%			
Target Compounds						Qvalue
3) Chloromethane	1.252	50	153007	36.01	ug/L	97
4) 1,3-butadiene	1.320	39	147719	37.41	ug/L	96
5) Vinyl Chloride	1.304	62	188259	36.35	ug/L	98
6) Bromomethane	1.508	94	108687	33.91	ug/L	98
7) Chloroethane	1.581	64	58476	34.86	ug/L	97
8) Trichlorofluoromethane	1.670	101	195785	36.72	ug/L	99
9) Ethyl Ether	1.879	59	185108	38.19	ug/L	98
10) Ethanol	1.979	45	98674	698.39	ug/L	98
11) 1,2-Dichlorotrifluoroe...	1.979	67	194448	42.88	ug/L	97
12) 1,1-Dichloroethene	1.979	61	268516	40.55	ug/L	97
13) Freon 113	2.015	101	155540	36.93	ug/L	97
14) Carbon Disulfide	2.000	76	383036	34.35	ug/L	97
16) Acrolein	2.156	56	299581	169.00	ug/L	99
17) Allyl chloride	2.245	41	220442	46.28	ug/L	97
18) Methylene Chloride	2.303	49	230001	32.47	ug/L	100
19) Acetone	2.318	43	637443	200.83	ug/L	97
20) Methyl acetate	2.397	43	1272345	196.29	ug/L	100
21) trans-1,2-Dichloroethene	2.402	61	265616	39.59	ug/L	98
22) Hexane	2.470	56	141138	41.52	ug/L	92
23) Methyl Tert Butyl Ether	2.475	73	709564	46.41	ug/L	75
24) Tert Butyl Alcohol	2.512	59	687470	363.53	ug/L	98
25) Acetonitrile	2.554	41	344037	320.72	ug/L	99
26) Di-isopropyl ether	2.690	45	567187	39.95	ug/L	99
27) Chloroprene	2.731	53	1026922	50.78	ug/L	93
28) 1,1-Dichloroethane	2.731	63	360738	40.89	ug/L	100
29) Acrylonitrile	2.731	52	670568	209.71	ug/L	83
30) ETBE	2.883	59	612179	36.80	ug/L	97
31) Vinyl acetate	2.862	43	2320171	202.80	ug/L	100
32) cis-1,2-Dichloroethene	3.024	96	203500	38.68	ug/L	98
33) 2,2-Dichloropropane	3.087	77	260497	37.19	ug/L	98
34) Bromochloromethane	3.129	128	87073	36.61	ug/L	97
35) Cyclohexane	3.165	56	310530	37.16	ug/L	99
36) Chloroform	3.171	83	345092	38.98	ug/L	98
37) Ethyl acetate	3.228	43	1705507	197.09	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Tetrahydrofuran	3.259	42	126514	38.29	ug/L	98
40) Carbon Tetrachloride	3.270	117	224473m	40.01	ug/L	
41) 1,1,1-Trichloroethane	3.296	97	297110	38.42	ug/L	99
42) 2-Butanone	3.317	43	1075112	199.87	ug/L	99
43) 1,1-Dichloropropene	3.364	75	255267	38.43	ug/L	98
44) tert-Butyl formate	3.411	59	672736	175.63	ug/L	99
45) Propionitrile	3.463	54	636097	373.49	ug/L	99
46) Methacrylonitrile	3.484	41	1759385	386.73	ug/L	99
47) Benzene	3.495	78	808049	38.11	ug/L	99
48) TAME	3.568	73	801478	53.00	ug/L	96
50) Isobutyl alcohol	3.589	43	742060m	851.71	ug/L	
51) 1,2-Dichloroethane	3.589	62	291680	38.43	ug/L	99
52) Tert Amyl Alcohol	3.652	59	561158	350.61	ug/L	98
53) Trichloroethene	3.824	95	205446	37.64	ug/L	93
54) Methylcyclohexane	3.845	83	285620	38.56	ug/L	99
55) Dibromomethane	4.054	93	112770	37.62	ug/L	90
56) 1,2-Dichloropropane	4.112	63	192709	37.41	ug/L	99
57) Bromodichloromethane	4.148	83	227821	39.63	ug/L	99
58) Methyl methacrylate	4.237	41	226759	38.54	ug/L	97
59) 1,4-Dioxane	4.263	88	127118	785.27	ug/L	95
60) 2-Chloroethyl vinyl ether	4.478	63	875983	204.42	ug/L	100
61) cis-1,3-Dichloropropene	4.525	75	290458	39.10	ug/L	98
64) Toluene	4.681	91	880532	37.78	ug/L	99
65) 2-Nitropropane	4.776	41	363441	191.13	ug/L	97
66) 4-Methyl-2-pentanone	4.891	43	1777459	197.71	ug/L	99
67) trans-1,3-Dichloropropene	4.922	75	281243	40.81	ug/L	84
68) Tetrachloroethene	4.938	166	189515	38.29	ug/L	98
69) Ethyl methacrylate	5.032	69	321629	38.36	ug/L	99
70) 1,1,2-Trichloroethane	5.021	83	151033	37.88	ug/L	98
71) Dibromochloromethane	5.142	129	158020	37.41	ug/L	96
72) 1,3-Dichloropropane	5.194	76	315917	35.65	ug/L	99
73) 1,2-Dibromoethane	5.293	107	192087	39.86	ug/L	91
74) 3,3-dimethyl-1-butanol	5.419	57	3829342	1907.86	ug/L	100
75) 2-hexanone	5.429	43	1976136	195.78	ug/L	90
76) 1-Chlorohexane	5.654	91	271934m	36.59	ug/L	
77) Ethylbenzene	5.685	91	968546	37.90	ug/L	100
78) Chlorobenzene	5.654	112	530424	38.01	ug/L	98
79) 1,1,1,2-Tetrachloroethane	5.696	131	171197	38.35	ug/L	98
80) m,p-Xylene	5.785	91	1535822	75.99	ug/L	99
81) o-Xylene	6.077	91	789768	39.70	ug/L	99
82) Styrene	6.109	104	605490	39.79	ug/L	98
83) Bromoform	6.119	173	88356	38.19	ug/L	99
84) Isopropylbenzene	6.307	105	899592	39.19	ug/L	99
87) cis-1,4-Dichloro-2-butene	6.527	53	98546	37.92	ug/L	94
88) n-Propylbenzene	6.611	91	1065654	38.92	ug/L	99
89) Bromobenzene	6.574	156	204252	36.89	ug/L	91
90) 1,1,2,2-Tetrachloroethane	6.632	83	290152	39.28	ug/L	98
91) 1,3,5-Trimethylbenzene	6.757	105	736217	38.62	ug/L	100
92) 2-Chlorotoluene	6.715	91	645623	39.07	ug/L	99
93) trans-1,4-Dichloro-2-B...	6.757	53	108937	34.41	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

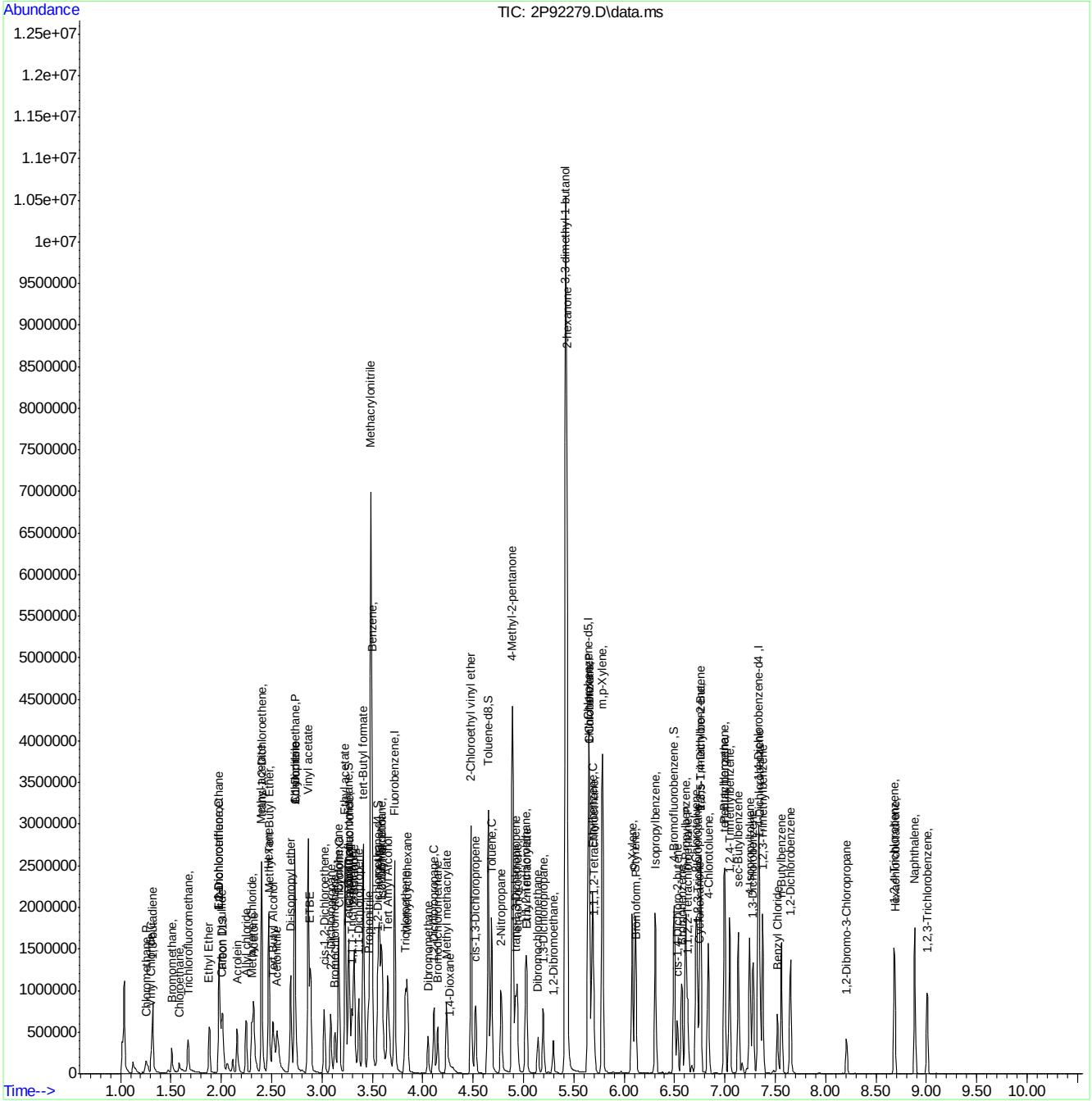
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	1,2,3-Trichloropropane	6.726	110	100012	36.30	ug/L	96
95)	Cyclohexanone	6.747	55	120517	208.91	ug/L	97
96)	4-Chlorotoluene	6.835	91	674992	38.75	ug/L	100
97)	tert-Butylbenzene	6.992	91	411422	39.30	ug/L	97
99)	1,2,4-Trimethylbenzene	7.045	105	731537	39.34	ug/L	99
100)	Pentachloroethane	6.997	167	100173	41.24	ug/L	96
101)	sec-Butylbenzene	7.133	105	829710	40.93	ug/L	99
102)	4-Isopropyltoluene	7.248	119	738675	40.15	ug/L	99
103)	1,3-Dichlorobenzene	7.280	146	389064	39.12	ug/L	98
104)	1,2,3-Trimethylbenzene	7.374	105	753617	40.40	ug/L	100
105)	1,4-Dichlorobenzene	7.343	146	395450	38.05	ug/L	97
106)	n-Butylbenzene	7.562	92	327645	36.65	ug/L	97
107)	Benzyl Chloride	7.520	126	65808	29.88	ug/L	93
108)	1,2-Dichlorobenzene	7.651	146	360833	38.65	ug/L	99
109)	1,2-Dibromo-3-Chloropr...	8.205	75	63487	36.46	ug/L	98
110)	Hexachlorobutadiene	8.686	225	65921	38.08	ug/L	97
111)	1,2,4-Trichlorobenzene	8.681	180	191794	38.62	ug/L	97
112)	Naphthalene	8.885	128	826973	39.13	ug/L	99
113)	1,2,3-Trichlorobenzene	9.010	180	177347	38.05	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration



Manual Integration Approval Summary

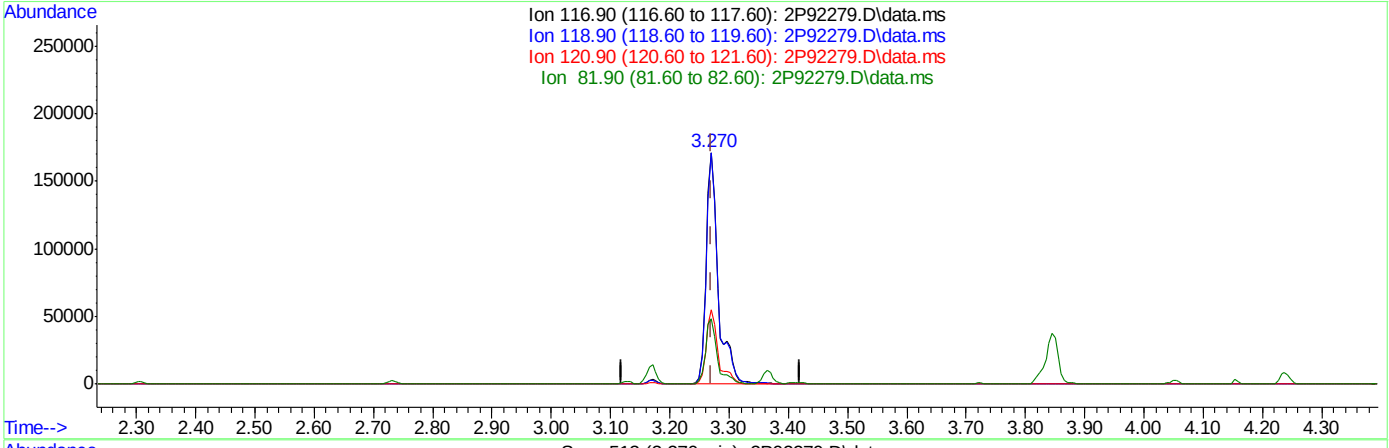
Sample Number: V2P3560-ICV3560 **Method:** SW846 8260D
Lab FileID: 2P92279.D **Analyst approved:** 08/24/22 15:20 Courtney Failla
Injection Time: 08/24/22 14:09 **Supervisor approved:** 08/25/22 11:34 Karen Watson

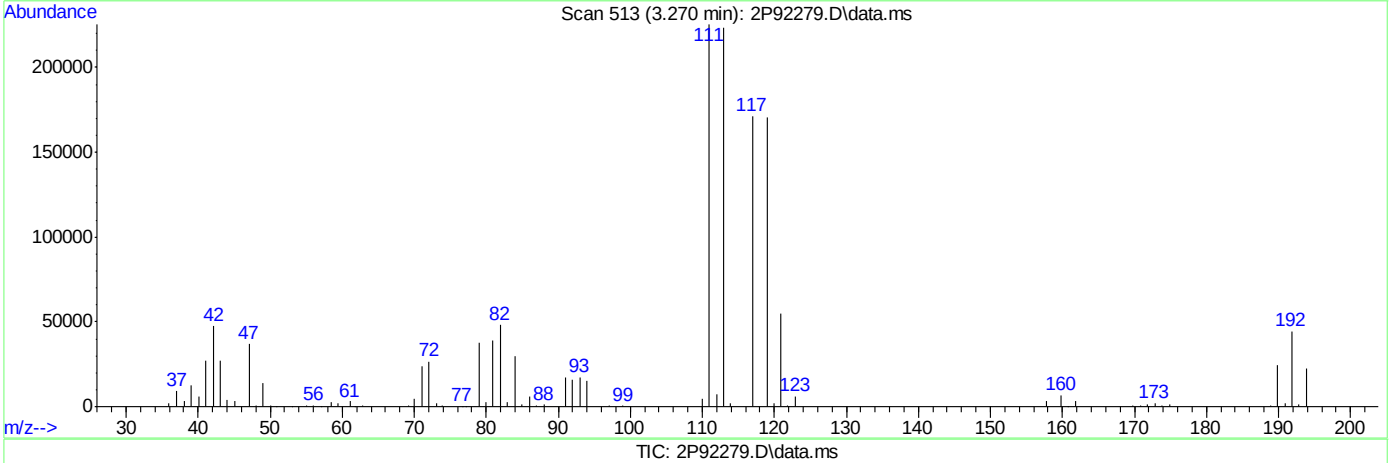
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 43.45ug/L

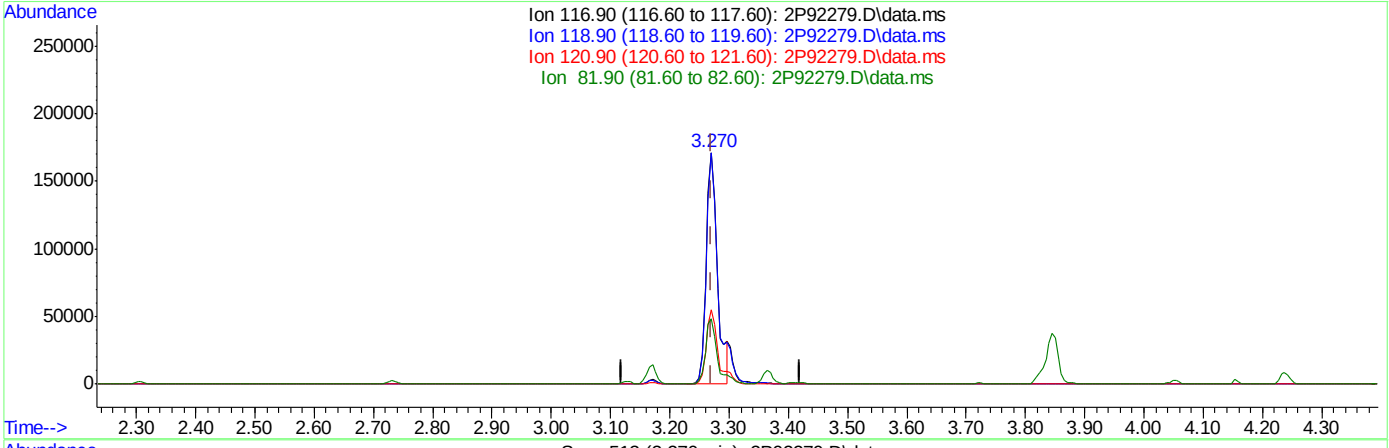
response 246422

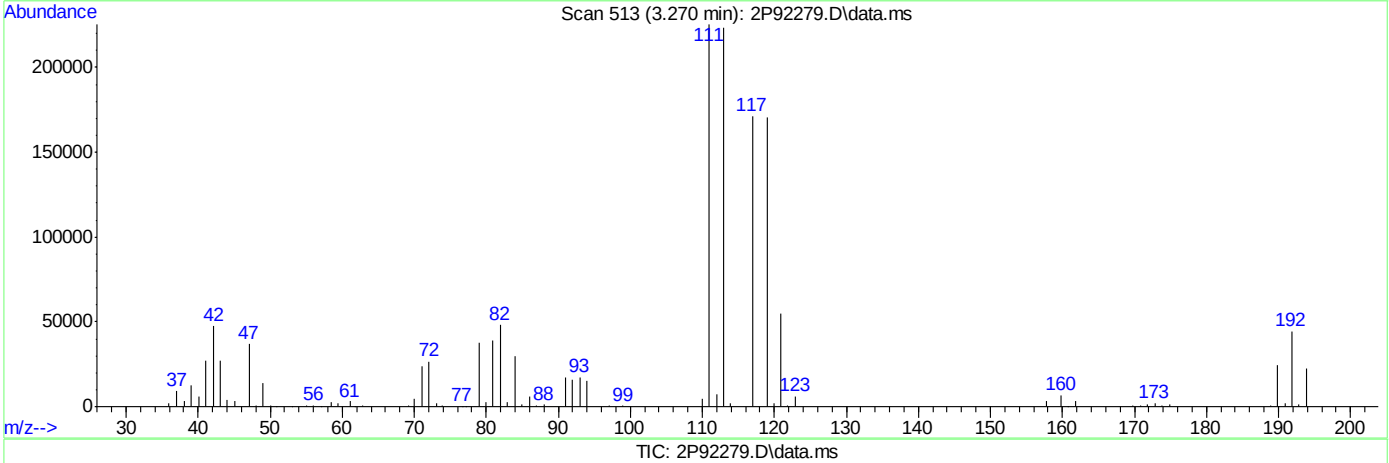
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	99.63
120.90	29.50	32.05
81.90	28.30	27.98

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 40.01ug/L m

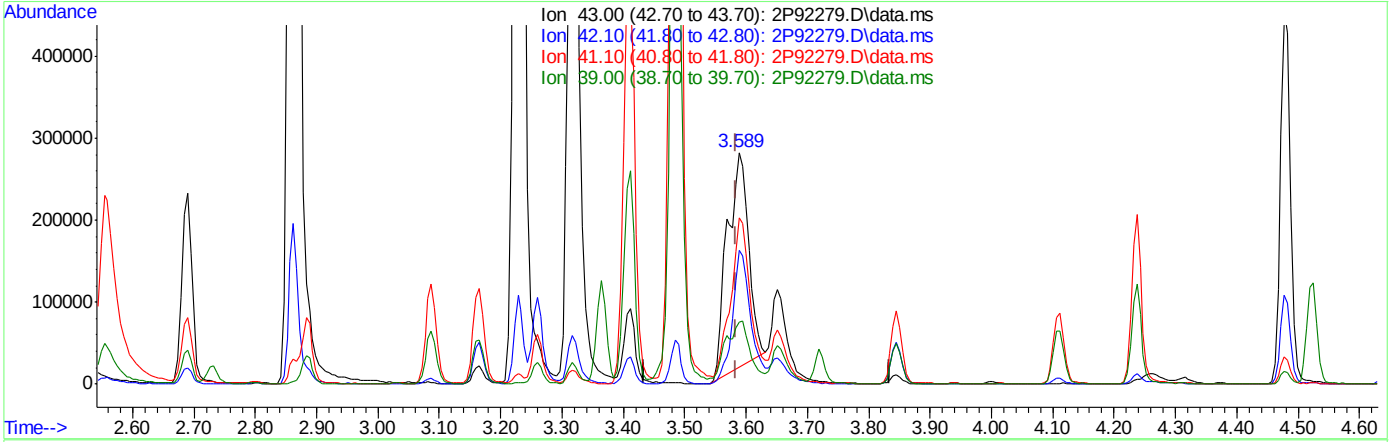
response 224473

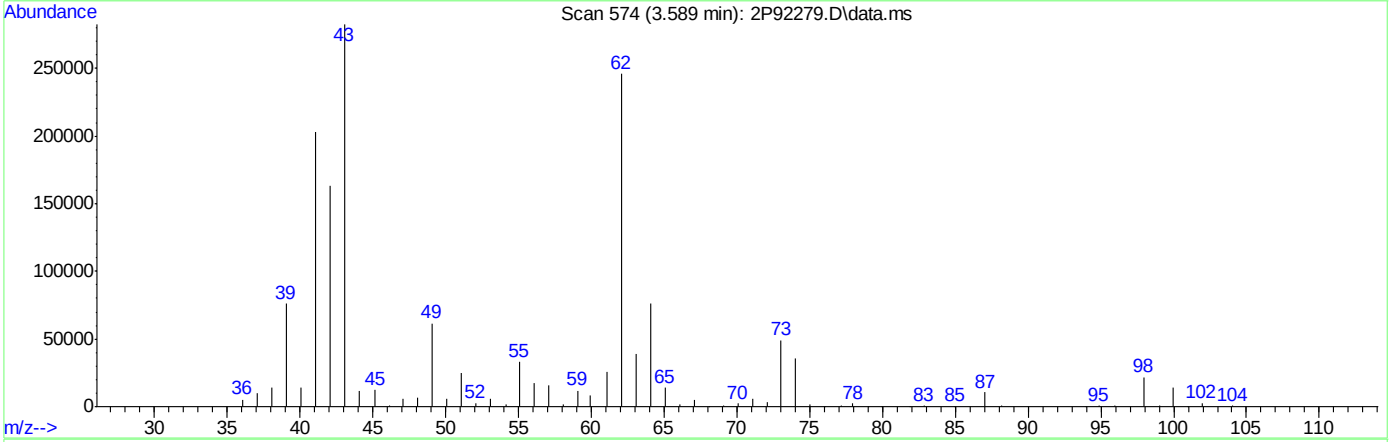
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	99.63
120.90	29.50	32.05
81.90	28.30	28.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 732.74ug/L

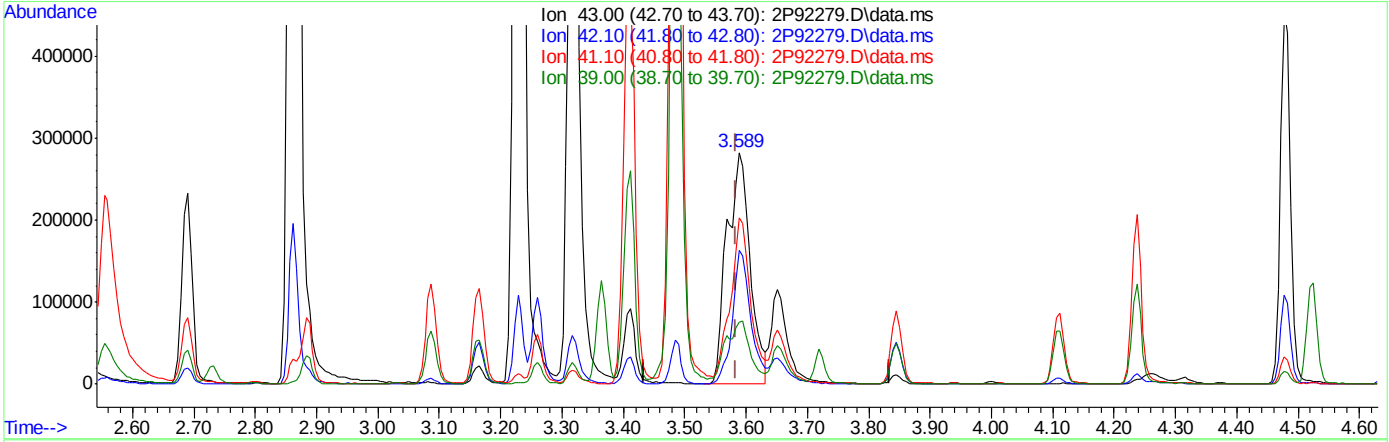
response 638409

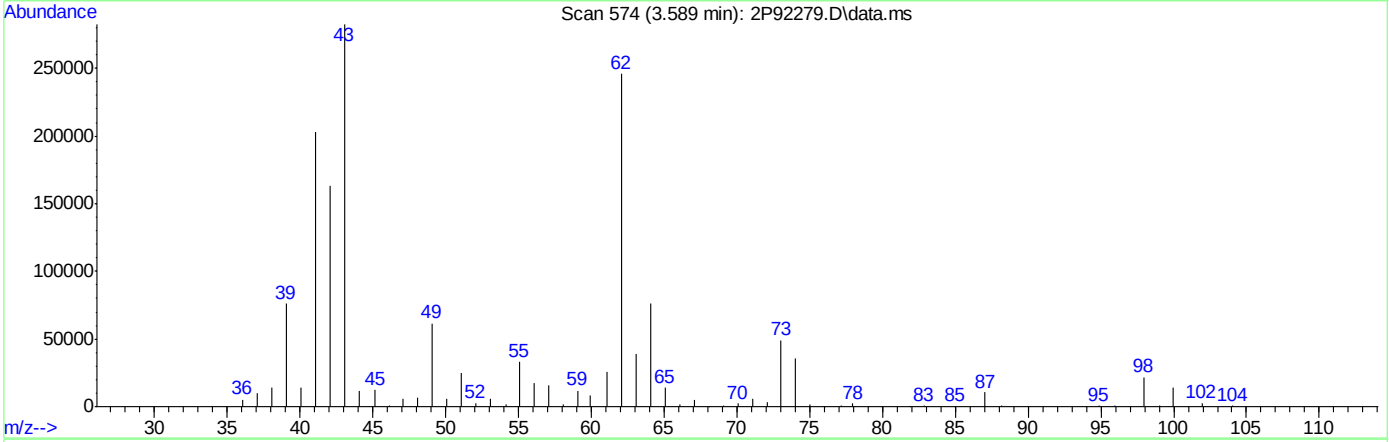
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.73
41.10	70.00	68.58
39.00	27.50	24.47

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 851.71ug/L m

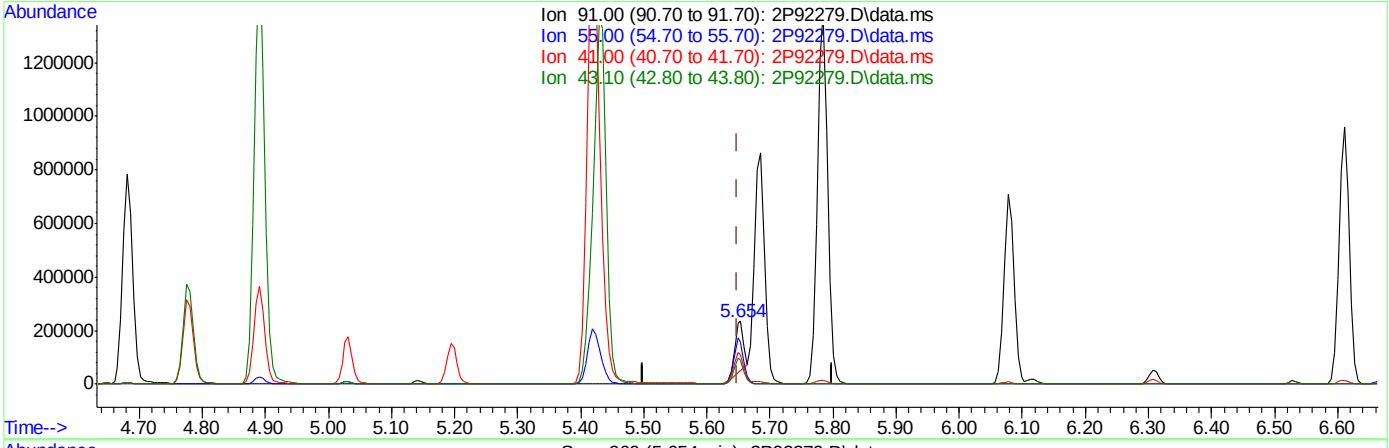
response 742060

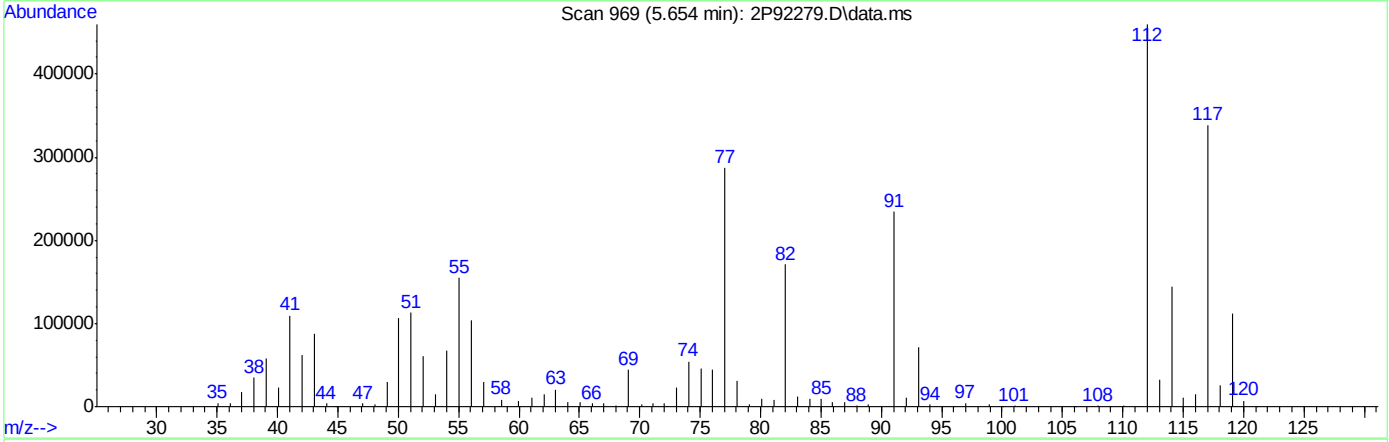
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.75
41.10	70.00	71.88
39.00	27.50	26.89

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.005) 26.16ug/L

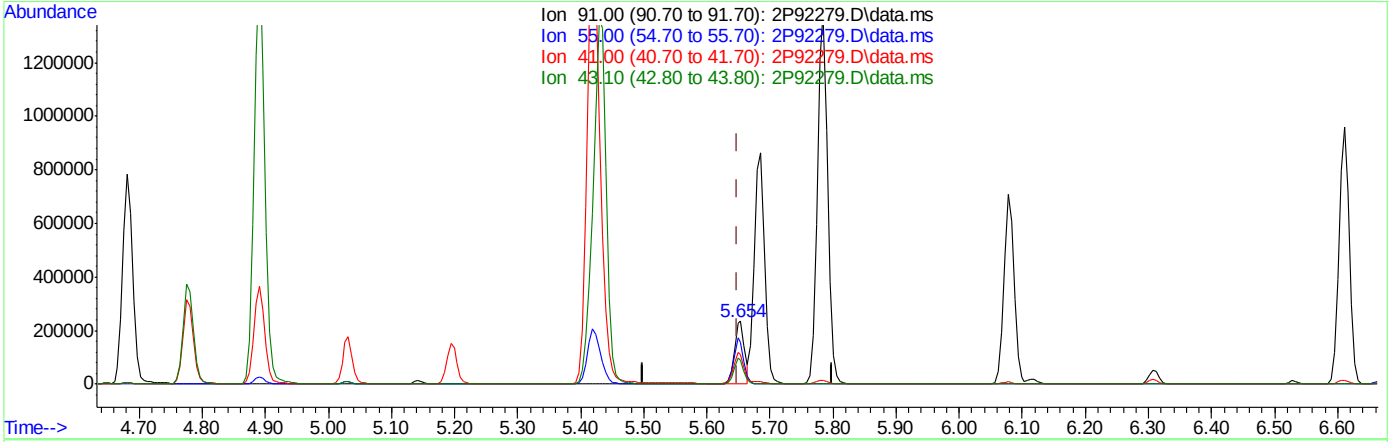
response 194418

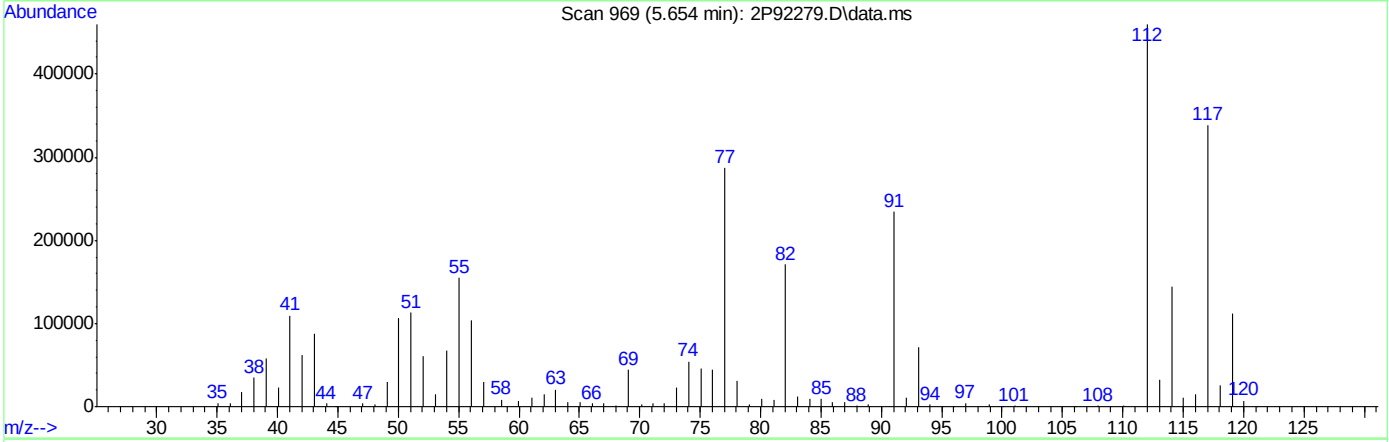
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	62.64
41.00	53.40	44.49
43.10	41.30	35.83

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.005) 36.59ug/L m

response 271934

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.03
41.00	53.40	46.92
43.10	41.30	37.42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92281.D
Acq On : 24 Aug 2022 2:41 pm
Operator : courtnef
Sample : ICV3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Aug 24 15:19:03 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1387054	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	968239	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	448068	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	297557	50.47	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.94%			
49) 1,2-Dichloroethane-d4	3.553	65	415478	50.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.48%			
63) Toluene-d8	4.650	98	1333699	50.06	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.12%			
86) 4-Bromofluorobenzene	6.496	174	341929	48.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.86%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.122	85	79604	21.31	ug/L	95
15) Iodomethane	2.057	142	62007	22.82	ug/L	99

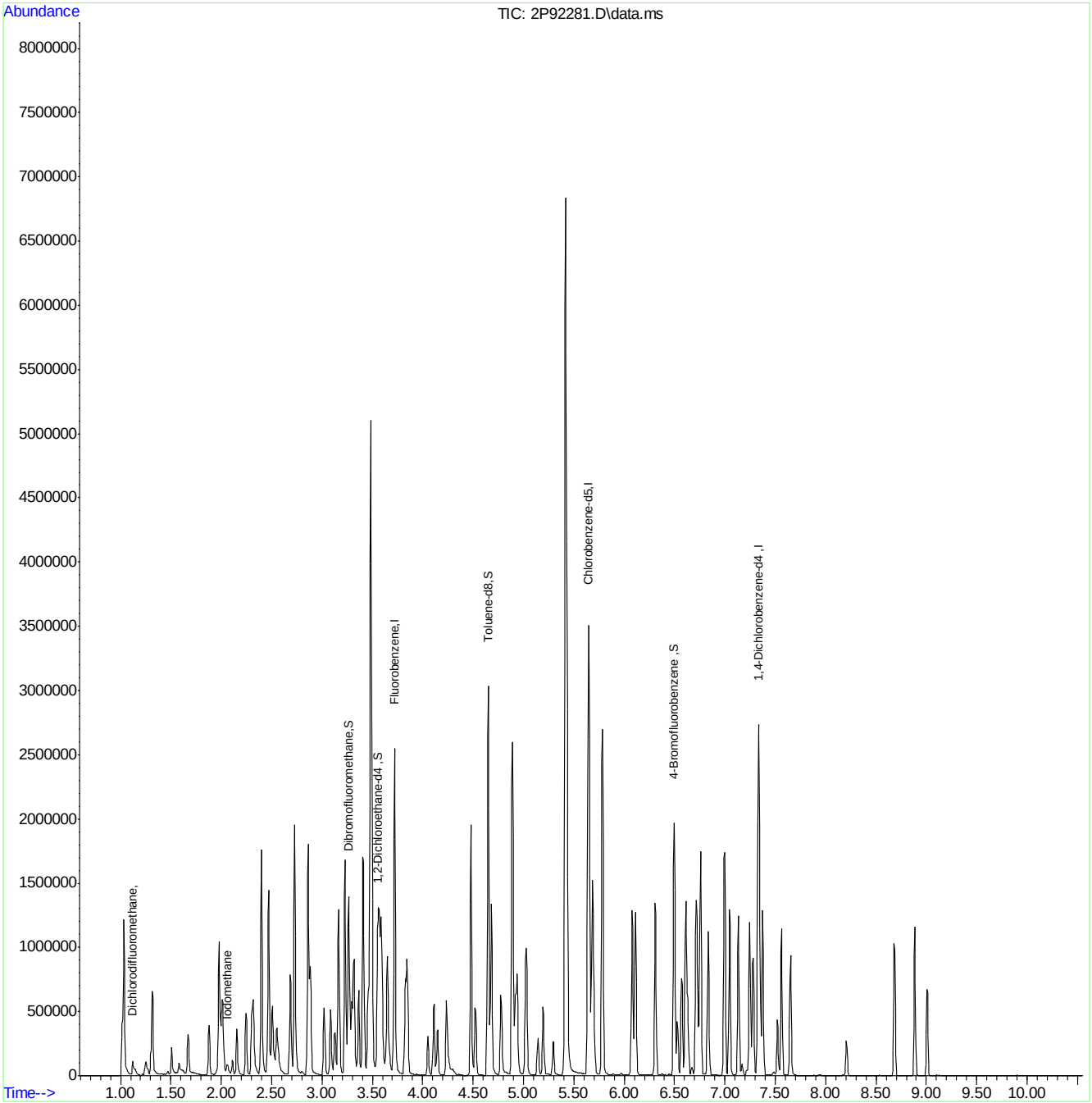
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8.6.9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92281.D
Acq On : 24 Aug 2022 2:41 pm
Operator : courtnef
Sample : ICV3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Aug 24 15:19:03 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1124849	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	869549	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	414062	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	239762	50.15	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.30%			
49) 1,2-Dichloroethane-d4	3.553	65	305181	45.96	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 91.92%			
63) Toluene-d8	4.646	98	1127517	47.12	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 94.24%			
86) 4-Bromofluorobenzene	6.497	174	313421	48.53	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.06%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.122	85	142650	45.94	ug/L	98
3) Chloromethane	1.248	50	162760	47.44	ug/L	98
4) 1,3-butadiene	1.316	39	104759	32.86	ug/L	99
5) Vinyl Chloride	1.300	62	194579	46.54	ug/L	98
6) Bromomethane	1.504	94	100176	38.71	ug/L	99
7) Chloroethane	1.582	64	57946	43.41	ug/L	95
8) Trichlorofluoromethane	1.666	101	203010	53.95	ug/L	98
9) Ethyl Ether	1.880	59	179130	45.78	ug/L	98
10) Ethanol	1.969	45	106058	968.41	ug/L	97
11) 1,2-Dichlorotrifluoroe...	1.975	67	200937	54.88	ug/L	99
12) 1,1-Dichloroethene	1.980	61	238761	44.65	ug/L	99
13) Freon 113	2.011	101	155281	44.91	ug/L	97
14) Carbon Disulfide	2.001	76	359193	39.17	ug/L	99
15) Iodomethane	2.058	142	139850	55.41	ug/L	100
16) Acrolein	2.152	56	312323	218.21	ug/L	99
17) Allyl chloride	2.246	41	163430	42.50	ug/L	94
18) Methylene Chloride	2.299	49	223618	39.72	ug/L	98
19) Acetone	2.314	43	533247	208.29	ug/L	98
20) Methyl acetate	2.398	43	1214660	232.08	ug/L	98
21) trans-1,2-Dichloroethene	2.403	61	245822	45.38	ug/L	95
22) Hexane	2.466	56	131741	47.06	ug/L	95
23) Methyl Tert Butyl Ether	2.471	73	598919	48.51	ug/L	85
24) Tert Butyl Alcohol	2.508	59	729172	477.55	ug/L	97
25) Acetonitrile	2.555	41	357126	412.33	ug/L	98
26) Di-isopropyl ether	2.686	45	546553	47.68	ug/L	97
27) Chloroprene	2.727	53	717705	43.96	ug/L	98
28) 1,1-Dichloroethane	2.727	63	329734	46.29	ug/L	98
29) Acrylonitrile	2.727	52	559203	216.60	ug/L	98
30) ETBE	2.884	59	636647	47.40	ug/L	98
31) Vinyl acetate	2.858	43	2027836	219.52	ug/L	98
32) cis-1,2-Dichloroethene	3.020	96	193466	45.54	ug/L	95
33) 2,2-Dichloropropane	3.088	77	253061	43.84	ug/L	98
34) Bromochloromethane	3.125	128	86180	44.88	ug/L	95
35) Cyclohexane	3.161	56	296841	43.29	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Chloroform	3.167	83	331179	46.33	ug/L	99
37) Ethyl acetate	3.229	43	1554323	222.46	ug/L	99
38) Tetrahydrofuran	3.255	42	129992	48.73	ug/L	97
40) Carbon Tetrachloride	3.271	117	196250m	42.93	ug/L	
41) 1,1,1-Trichloroethane	3.297	97	281237	44.43	ug/L	99
42) 2-Butanone	3.313	43	910233	209.68	ug/L	98
43) 1,1-Dichloropropene	3.365	75	246322	45.92	ug/L	95
44) tert-Butyl formate	3.407	59	726049	225.40	ug/L	98
45) Propionitrile	3.459	54	623566	453.47	ug/L	98
46) Methacrylonitrile	3.485	41	1603882	436.63	ug/L	97
47) Benzene	3.496	78	794120	46.38	ug/L	85
48) TAME	3.569	73	580637	47.55	ug/L	98
50) Isobutyl alcohol	3.590	43	673510m	957.41	ug/L	
51) 1,2-Dichloroethane	3.590	62	268736	43.85	ug/L	98
52) Tert Amyl Alcohol	3.653	59	622757	477.43	ug/L	98
53) Trichloroethene	3.825	95	200006	45.39	ug/L	97
54) Methylcyclohexane	3.846	83	276229	45.21	ug/L	98
55) Dibromomethane	4.050	93	112963	46.67	ug/L	95
56) 1,2-Dichloropropane	4.108	63	199809	48.04	ug/L	96
57) Bromodichloromethane	4.144	83	208605	44.22	ug/L	99
58) Methyl methacrylate	4.233	41	201066	41.97	ug/L	97
59) 1,4-Dioxane	4.259	88	122026	933.61	ug/L	98
60) 2-Chloroethyl vinyl ether	4.479	63	760883	219.91	ug/L	98
61) cis-1,3-Dichloropropene	4.521	75	279050	45.58	ug/L	97
64) Toluene	4.683	91	862030	41.99	ug/L	100
65) 2-Nitropropane	4.777	41	339695	200.78	ug/L	98
66) 4-Methyl-2-pentanone	4.887	43	1579663	199.46	ug/L	99
67) trans-1,3-Dichloropropene	4.918	75	256383	42.09	ug/L	87
68) Tetrachloroethene	4.939	166	202982	46.55	ug/L	97
69) Ethyl methacrylate	5.028	69	299045	40.31	ug/L	94
70) 1,1,2-Trichloroethane	5.017	83	151715	43.20	ug/L	94
71) Dibromochloromethane	5.143	129	160886	42.46	ug/L	97
72) 1,3-Dichloropropane	5.195	76	328834	42.12	ug/L	96
73) 1,2-Dibromoethane	5.294	107	187475	44.17	ug/L	91
74) 3,3-dimethyl-1-butanol	5.420	57	3670750	2074.70	ug/L	99
75) 2-hexanone	5.430	43	1811918	203.77	ug/L	89
76) 1-Chlorohexane	5.650	91	279491m	42.69	ug/L	
77) Ethylbenzene	5.681	91	954505	42.40	ug/L	99
78) Chlorobenzene	5.655	112	531082	43.20	ug/L	97
79) 1,1,1,2-Tetrachloroethane	5.697	131	171730	43.16	ug/L	97
80) m,p-Xylene	5.781	91	1516058	85.15	ug/L	100
81) o-Xylene	6.079	91	748148	42.69	ug/L	98
82) Styrene	6.110	104	595204	44.40	ug/L	99
83) Bromoform	6.115	173	87143	41.98	ug/L	97
84) Isopropylbenzene	6.309	105	886877	43.86	ug/L	98
87) cis-1,4-Dichloro-2-butene	6.528	53	85027	35.58	ug/L	97
88) n-Propylbenzene	6.612	91	1051023	41.37	ug/L	98
89) Bromobenzene	6.570	156	218122	42.47	ug/L	95
90) 1,1,2,2-Tetrachloroethane	6.633	83	289214	42.20	ug/L	96
91) 1,3,5-Trimethylbenzene	6.758	105	732711	41.43	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

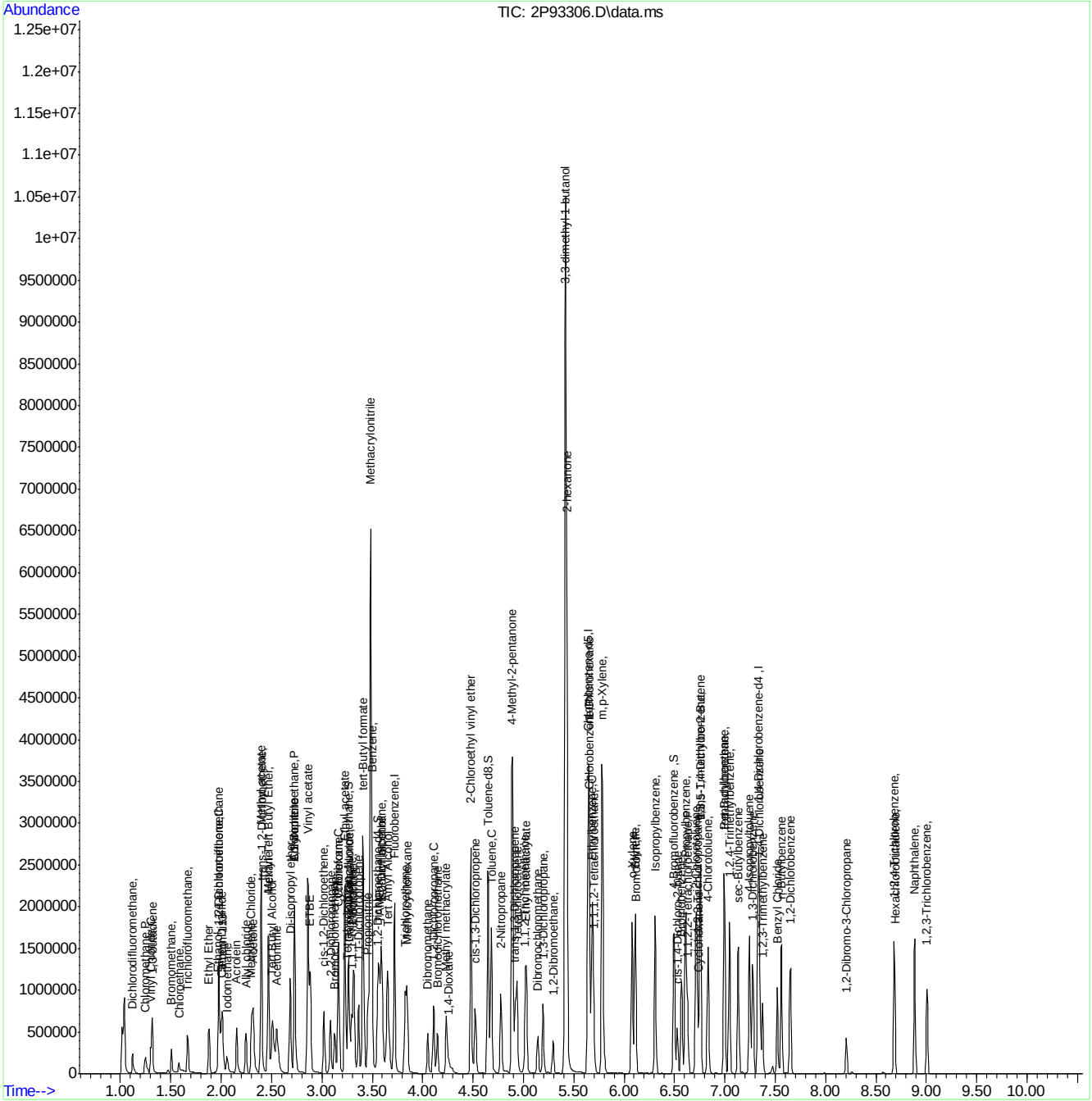
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	628698	41.01	ug/L		98
93)	trans-1,4-Dichloro-2-B...	6.758	53	105242	35.83	ug/L		92
94)	1,2,3-Trichloropropane	6.727	110	106542	41.68	ug/L		93
95)	Cyclohexanone	6.742	55	114761	214.42	ug/L		96
96)	4-Chlorotoluene	6.831	91	658271	40.73	ug/L		97
97)	tert-Butylbenzene	6.993	91	394678	40.64	ug/L		98
99)	1,2,4-Trimethylbenzene	7.046	105	711817	41.26	ug/L		99
100)	Pentachloroethane	6.993	167	83451	37.59	ug/L	#	64
101)	sec-Butylbenzene	7.135	105	791824	42.10	ug/L		99
102)	4-Isopropyltoluene	7.244	119	713772	41.66	ug/L		99
103)	1,3-Dichlorobenzene	7.276	146	390794	42.35	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	354995	20.51	ug/L		99
105)	1,4-Dichlorobenzene	7.344	146	396827	41.16	ug/L		98
106)	n-Butylbenzene	7.563	92	339941	40.60	ug/L		96
107)	Benzyl Chloride	7.521	126	83760	38.57	ug/L		95
108)	1,2-Dichlorobenzene	7.652	146	366219	42.28	ug/L		98
109)	1,2-Dibromo-3-Chloropr...	8.206	75	65635	40.06	ug/L		89
110)	Hexachlorobutadiene	8.687	225	66911	41.31	ug/L		95
111)	1,2,4-Trichlorobenzene	8.682	180	197982	42.97	ug/L		96
112)	Naphthalene	8.886	128	809618	41.11	ug/L		100
113)	1,2,3-Trichlorobenzene	9.006	180	185670	42.93	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

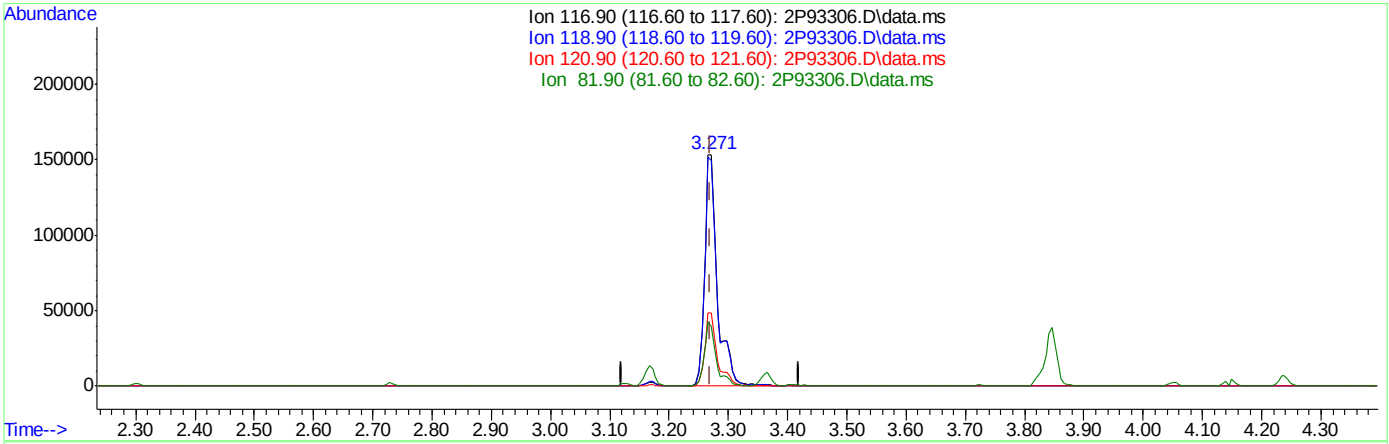
Sample Number: V2P3586-CC3560 **Method:** SW846 8260D
Lab FileID: 2P93306.D **Analyst approved:** 09/26/22 11:58 Karen Watson
Injection Time: 09/23/22 11:41 **Supervisor approved:** 09/26/22 12:39 Karen Watson

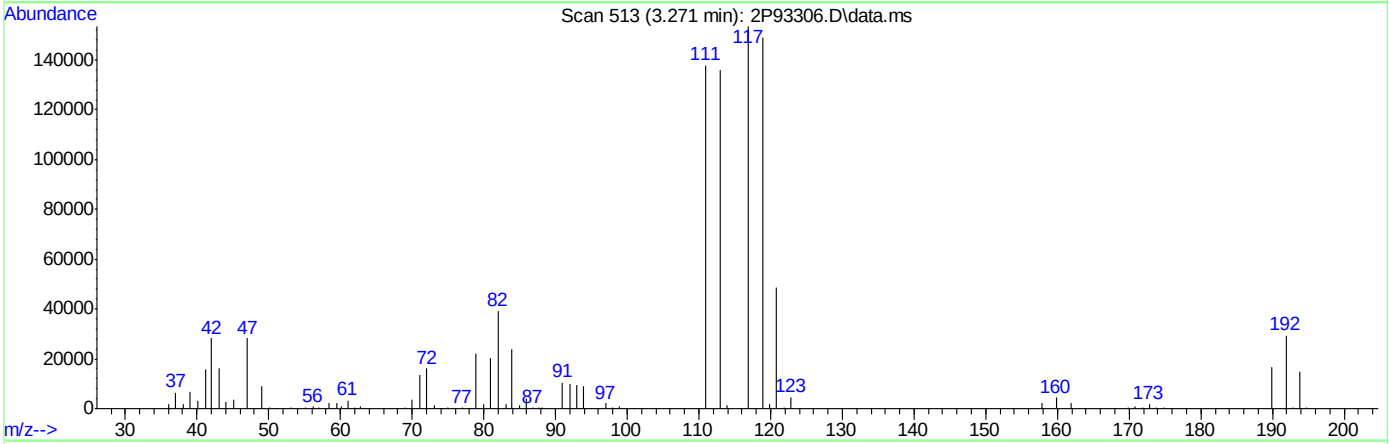
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 49.50ug/L

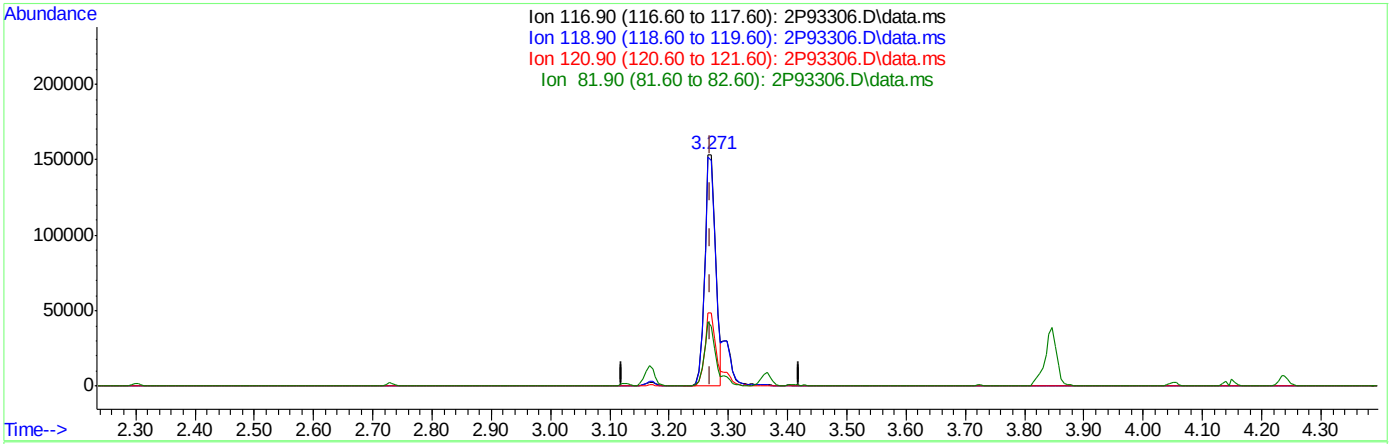
response 230963

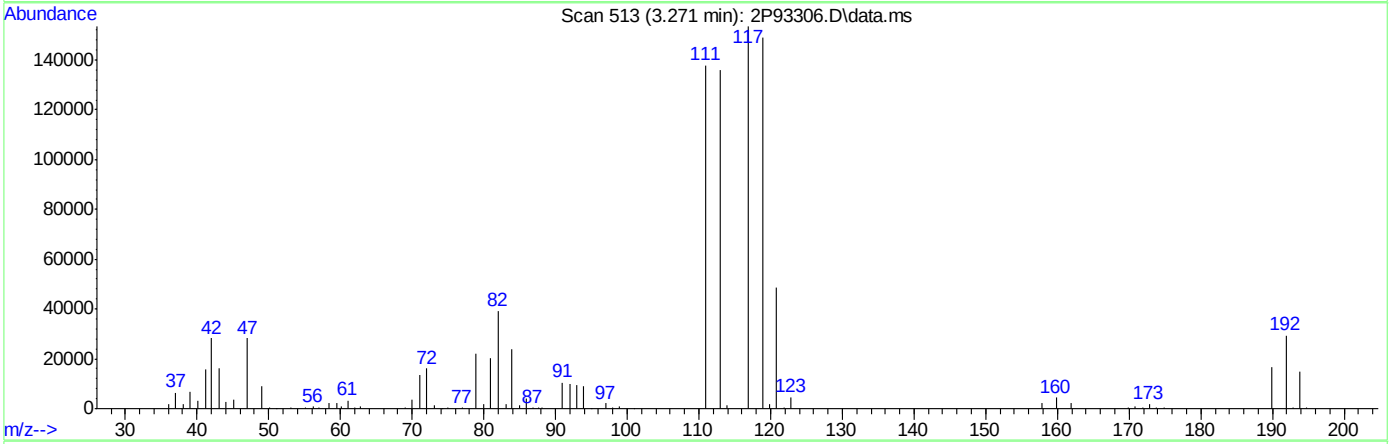
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.42

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 42.93ug/L m

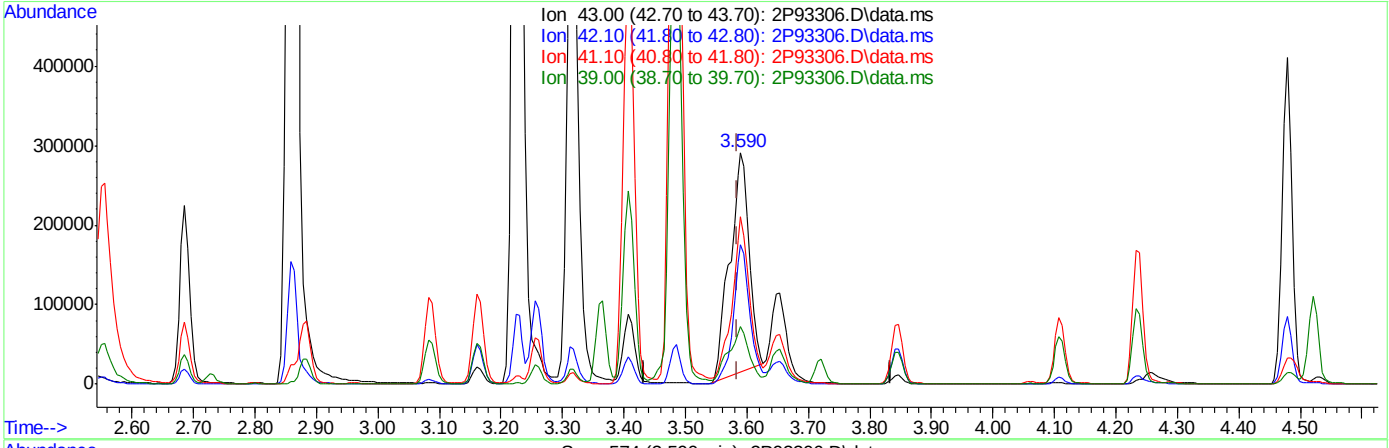
response 196250

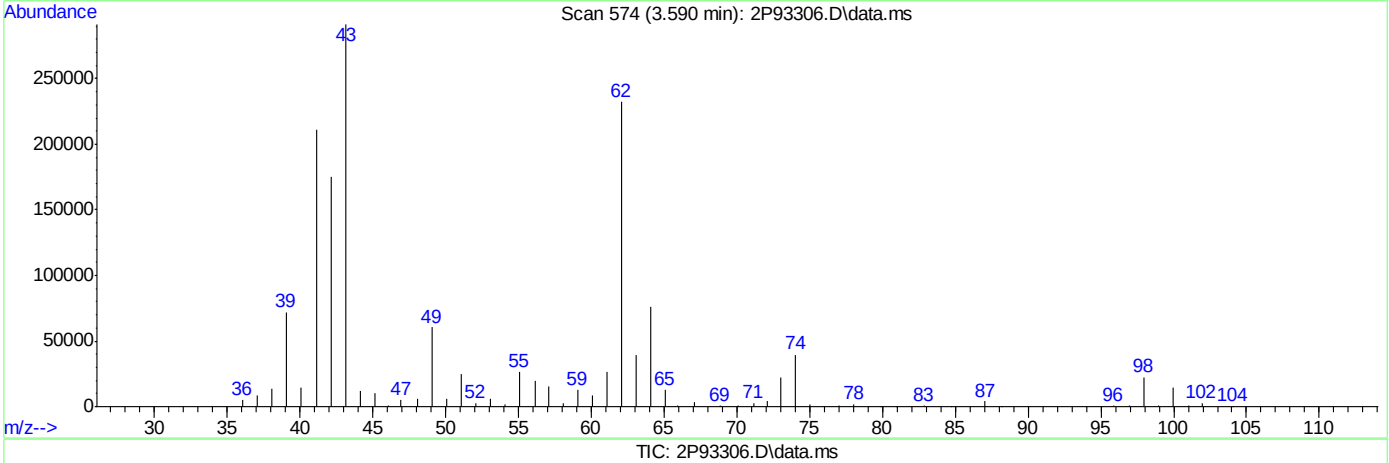
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.66

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 857.25ug/L

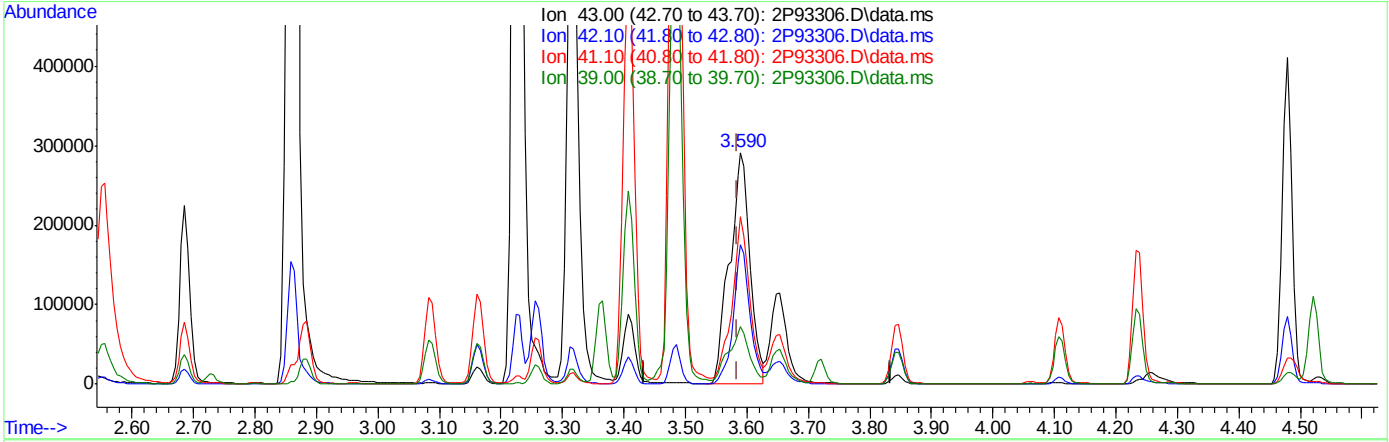
response 603049

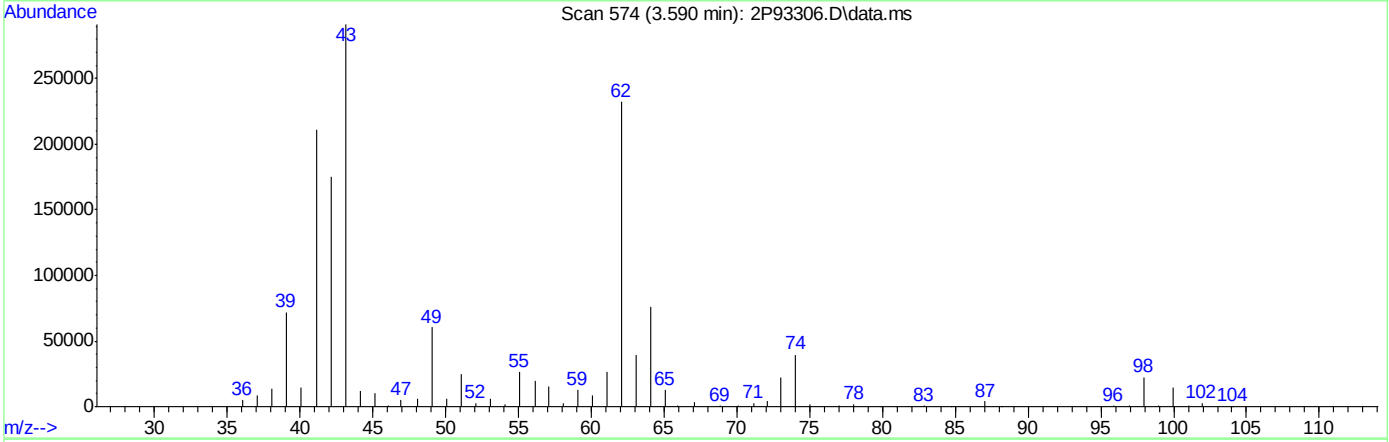
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.32
41.10	70.00	70.12
39.00	27.50	23.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 957.41ug/L m

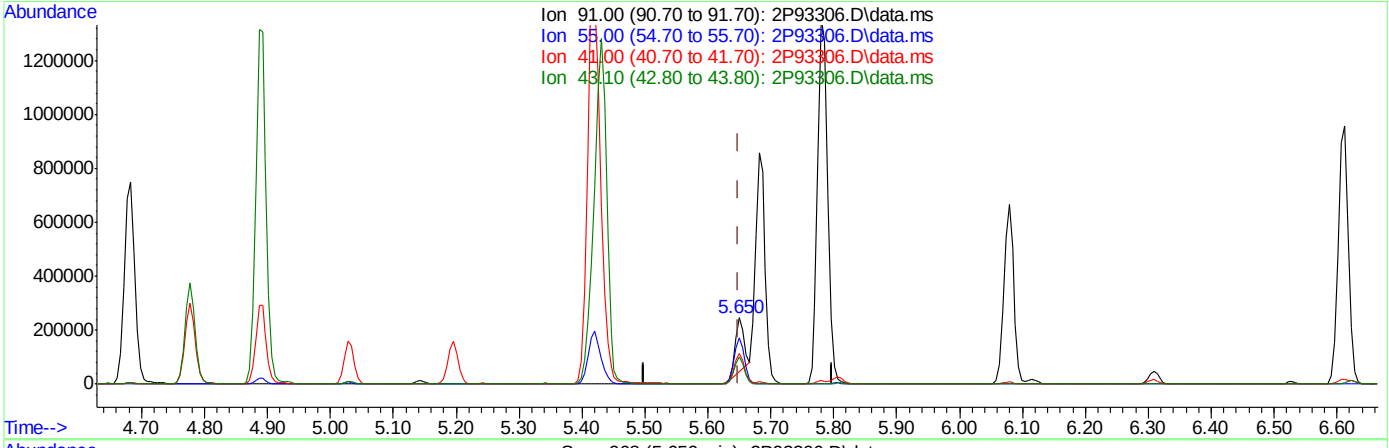
response 673510

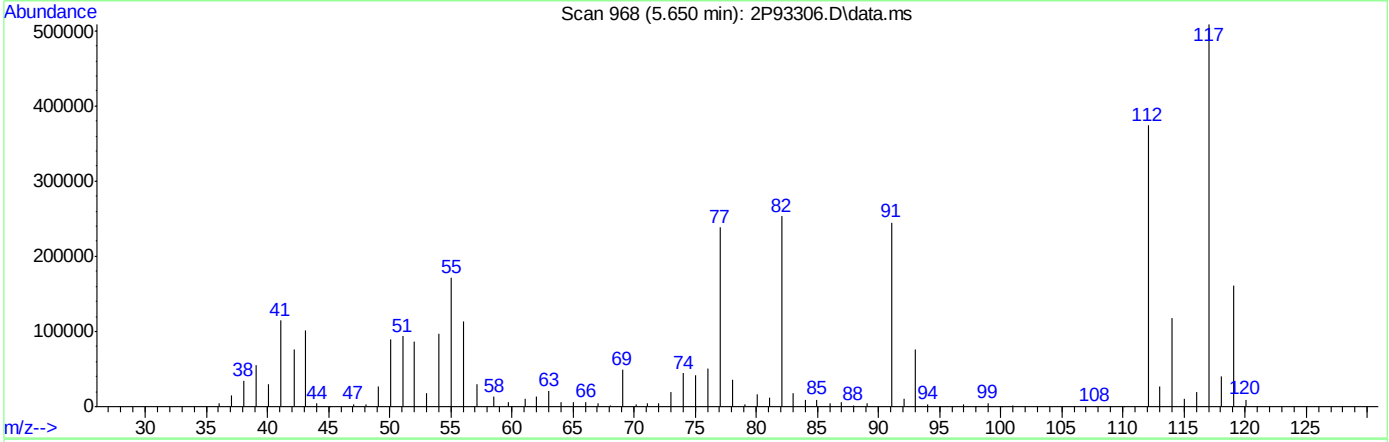
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.18
41.10	70.00	72.37
39.00	27.50	24.69

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 28.77ug/L

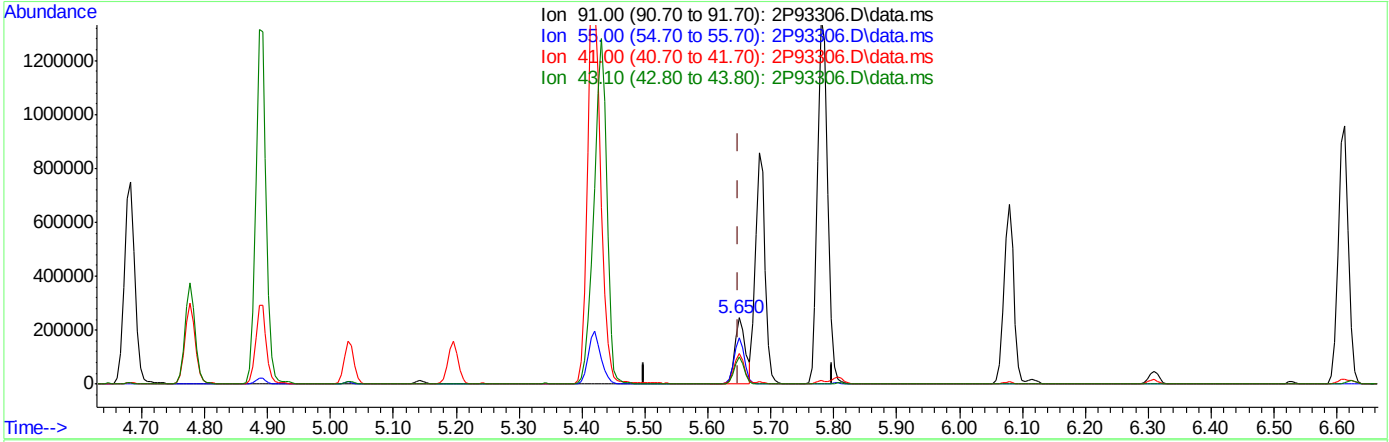
response 188381

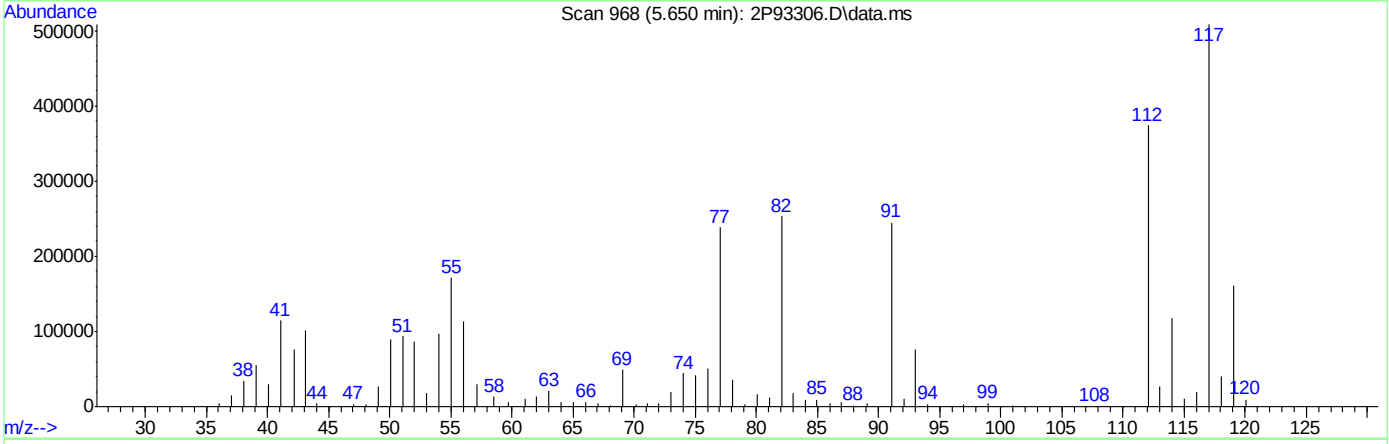
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	68.79
41.00	53.40	45.28
43.10	41.30	41.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 42.69ug/L m

response 279491

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.94
41.00	53.40	46.67
43.10	41.30	41.65

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1159066	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.646	117	895884	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	428166	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	244758	49.68	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	99.36%		
49) 1,2-Dichloroethane-d4	3.555	65	323117	47.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery =	94.44%		
63) Toluene-d8	4.652	98	1155700	46.88	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery =	93.76%		
86) 4-Bromofluorobenzene	6.498	174	327441	49.03	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	98.06%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.129	85	138190	43.19	ug/L	99
3) Chloromethane	1.254	50	157899	44.66	ug/L	98
4) 1,3-butadiene	1.327	39	129413	39.39	ug/L	95
5) Vinyl Chloride	1.312	62	190985	44.33	ug/L	100
6) Bromomethane	1.516	94	77644	29.12	ug/L	99
7) Chloroethane	1.589	64	57362	41.58	ug/L	95
8) Trichlorofluoromethane	1.678	101	203795	51.51	ug/L	99
9) Ethyl Ether	1.887	59	184390	45.73	ug/L	98
10) Ethanol	1.971	45	105631m	930.61	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.981	67	199645	52.92	ug/L	99
12) 1,1-Dichloroethene	1.986	61	235672	42.78	ug/L	96
13) Freon 113	2.023	101	151175	42.63	ug/L	94
14) Carbon Disulfide	2.007	76	356820	37.94	ug/L	99
15) Iodomethane	2.065	142	124851	49.20	ug/L	98
16) Acrolein	2.159	56	266446	180.66	ug/L	99
17) Allyl chloride	2.253	41	154878	39.08	ug/L	93
18) Methylene Chloride	2.305	49	225896	38.87	ug/L	98
19) Acetone	2.321	43	548391	207.87	ug/L	98
20) Methyl acetate	2.399	43	1258477	233.35	ug/L	100
21) trans-1,2-Dichloroethene	2.404	61	243904	43.70	ug/L	97
22) Hexane	2.472	56	119027	42.02	ug/L	95
23) Methyl Tert Butyl Ether	2.472	73	598427	47.04	ug/L	92
24) Tert Butyl Alcohol	2.509	59	772687	491.11	ug/L	97
25) Acetonitrile	2.556	41	357440	400.51	ug/L	98
26) Di-isopropyl ether	2.692	45	551982	46.73	ug/L	98
27) Chloroprene	2.734	53	733637	43.60	ug/L	97
28) 1,1-Dichloroethane	2.734	63	323506	44.08	ug/L	100
29) Acrylonitrile	2.734	52	575066	216.17	ug/L	99
30) ETBE	2.885	59	640208	46.26	ug/L	100
31) Vinyl acetate	2.865	43	1723063	181.02	ug/L	97
32) cis-1,2-Dichloroethene	3.027	96	192196	43.90	ug/L	99
33) 2,2-Dichloropropane	3.089	77	198382	34.35	ug/L	99
34) Bromochloromethane	3.131	128	85147	43.03	ug/L	98
35) Cyclohexane	3.168	56	296305	42.07	ug/L	97
36) Chloroform	3.173	83	326527	44.33	ug/L	99
37) Ethyl acetate	3.230	43	1568049	217.80	ug/L	98
38) Tetrahydrofuran	3.262	42	125736	45.74	ug/L	96
40) Carbon Tetrachloride	3.272	117	199573m	42.43	ug/L	
41) 1,1,1-Trichloroethane	3.298	97	273348	42.13	ug/L	99
42) 2-Butanone	3.319	43	917660	205.11	ug/L	99
43) 1,1-Dichloropropene	3.366	75	241375	43.67	ug/L	95
44) tert-Butyl formate	3.413	59	631873	195.11	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.461	54	635915	448.79	ug/L		97
46) Methacrylonitrile	3.487	41	1628797	430.33	ug/L		98
47) Benzene	3.497	78	779523	44.19	ug/L		93
48) TAME	3.570	73	580659	46.15	ug/L		98
50) Isobutyl alcohol	3.591	43	679168m	936.95	ug/L		
51) 1,2-Dichloroethane	3.591	62	270818	42.89	ug/L		97
52) Tert Amyl Alcohol	3.649	59	626378	466.41	ug/L		99
53) Trichloroethene	3.826	95	199682	43.98	ug/L		98
54) Methylcyclohexane	3.847	83	266114	42.62	ug/L		99
55) Dibromomethane	4.051	93	114177	45.78	ug/L		97
56) 1,2-Dichloropropane	4.109	63	200073	46.68	ug/L		95
57) Bromodichloromethane	4.145	83	206114	42.64	ug/L		99
58) Methyl methacrylate	4.234	41	207012	41.94	ug/L		95
59) 1,4-Dioxane	4.260	88	115303	856.13	ug/L		96
60) 2-Chloroethyl vinyl ether	4.480	63	764370	214.39	ug/L		97
61) cis-1,3-Dichloropropene	4.522	75	266208	42.60	ug/L		98
64) Toluene	4.684	91	853322	40.34	ug/L		99
65) 2-Nitropropane	4.778	41	340120	196.07	ug/L		99
66) 4-Methyl-2-pentanone	4.893	43	1608850	197.18	ug/L		97
67) trans-1,3-Dichloropropene	4.919	75	243919	39.17	ug/L		86
68) Tetrachloroethene	4.940	166	266200	59.26	ug/L		97
69) Ethyl methacrylate	5.029	69	300151	39.35	ug/L		94
70) 1,1,2-Trichloroethane	5.018	83	149451	41.30	ug/L		95
71) Dibromochloromethane	5.144	129	158664	40.88	ug/L		99
72) 1,3-Dichloropropane	5.196	76	333354	41.44	ug/L		95
73) 1,2-Dibromoethane	5.296	107	188021	42.99	ug/L		92
74) 3,3-dimethyl-1-butanol	5.421	57	3654864	2005.53	ug/L		98
75) 2-hexanone	5.431	43	1810510	197.63	ug/L		85
76) 1-Chlorohexane	5.651	91	268665m	39.83	ug/L		
77) Ethylbenzene	5.682	91	935665	40.34	ug/L		99
78) Chlorobenzene	5.656	112	520968	41.13	ug/L		95
79) 1,1,1,2-Tetrachloroethane	5.698	131	168902	41.38	ug/L		99
80) m,p-Xylene	5.782	91	1487061	81.06	ug/L		99
81) o-Xylene	6.080	91	747564	41.40	ug/L		99
82) Styrene	6.111	104	570920m	41.34	ug/L		
83) Bromoform	6.116	173	84325	39.84	ug/L		97
84) Isopropylbenzene	6.310	105	869324	41.73	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	57489	24.34	ug/L		94
88) n-Propylbenzene	6.608	91	1027125	39.10	ug/L		99
89) Bromobenzene	6.571	156	213594	40.22	ug/L		94
90) 1,1,2,2-Tetrachloroethane	6.629	83	285621	40.30	ug/L		99
91) 1,3,5-Trimethylbenzene	6.759	105	714244	39.05	ug/L		98
92) 2-Chlorotoluene	6.712	91	616308	38.87	ug/L		100
93) trans-1,4-Dichloro-2-B...	6.759	53	79254	26.09	ug/L		96
94) 1,2,3-Trichloropropane	6.723	110	108872	41.19	ug/L		98
95) Cyclohexanone	6.744	55	113587	205.24	ug/L		96
96) 4-Chlorotoluene	6.833	91	643463	38.51	ug/L		96
97) tert-Butylbenzene	6.995	91	386675	38.50	ug/L		100
99) 1,2,4-Trimethylbenzene	7.047	105	705213	39.53	ug/L		98
100) Pentachloroethane	6.995	167	30699	14.76	ug/L	#	1
101) sec-Butylbenzene	7.131	105	771323	39.66	ug/L		99
102) 4-Isopropyltoluene	7.246	119	694973	39.45	ug/L		98
103) 1,3-Dichlorobenzene	7.277	146	383194	40.16	ug/L		99
104) 1,2,3-Trimethylbenzene	7.371	105	349905	19.55	ug/L		98
105) 1,4-Dichlorobenzene	7.345	146	392083	39.33	ug/L		98
106) n-Butylbenzene	7.559	92	331265	38.45	ug/L		97
107) Benzyl Chloride	7.523	126	52622	25.68	ug/L		94
108) 1,2-Dichlorobenzene	7.653	146	358396	40.02	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.208	75	64132	38.14	ug/L	86
110) Hexachlorobutadiene	8.689	225	64985	39.03	ug/L	94
111) 1,2,4-Trichlorobenzene	8.683	180	192059	40.31	ug/L	98
112) Naphthalene	8.882	128	804811	39.65	ug/L	100
113) 1,2,3-Trichlorobenzene	9.007	180	180854	40.44	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

8.6.11

8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

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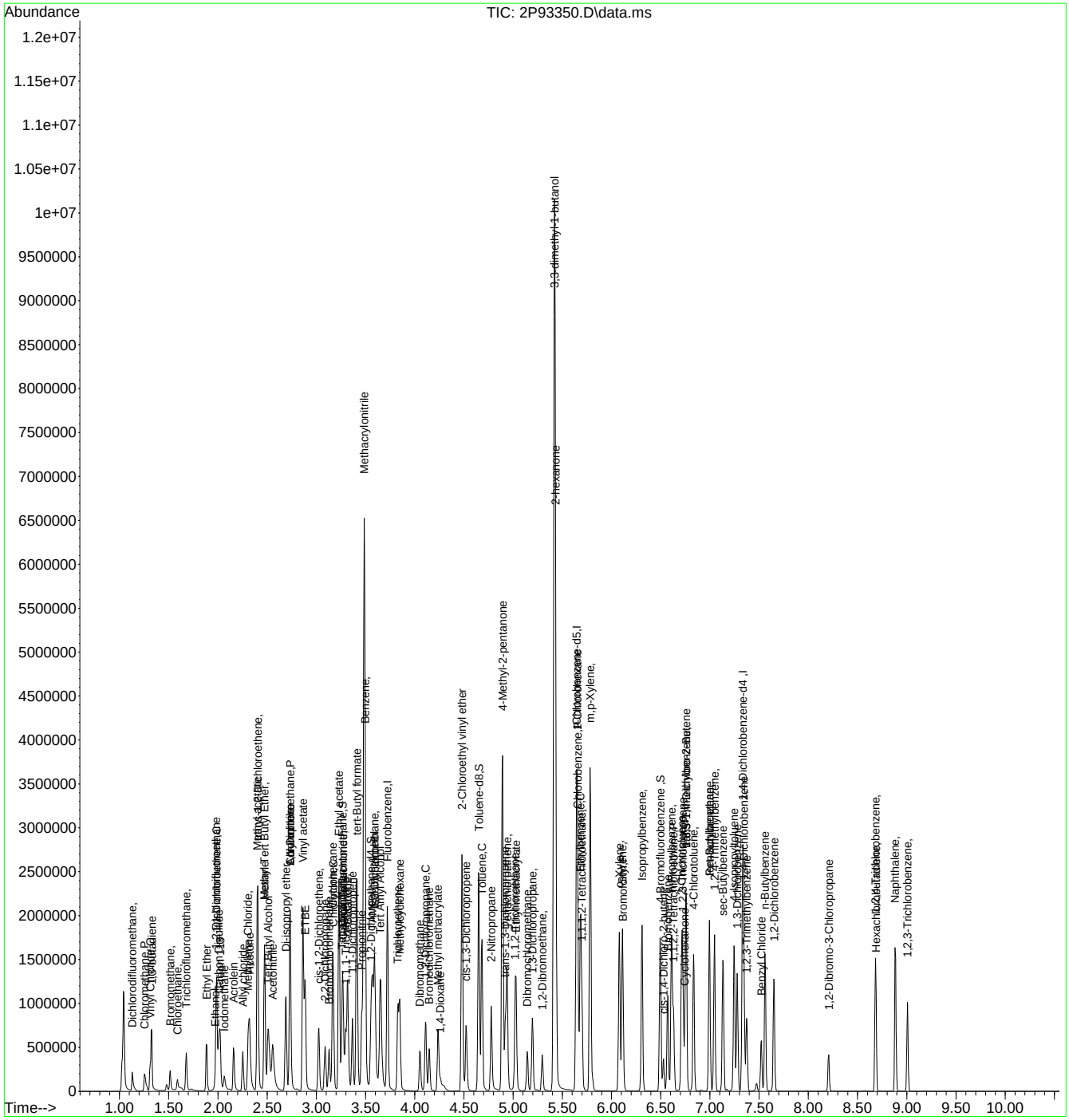
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

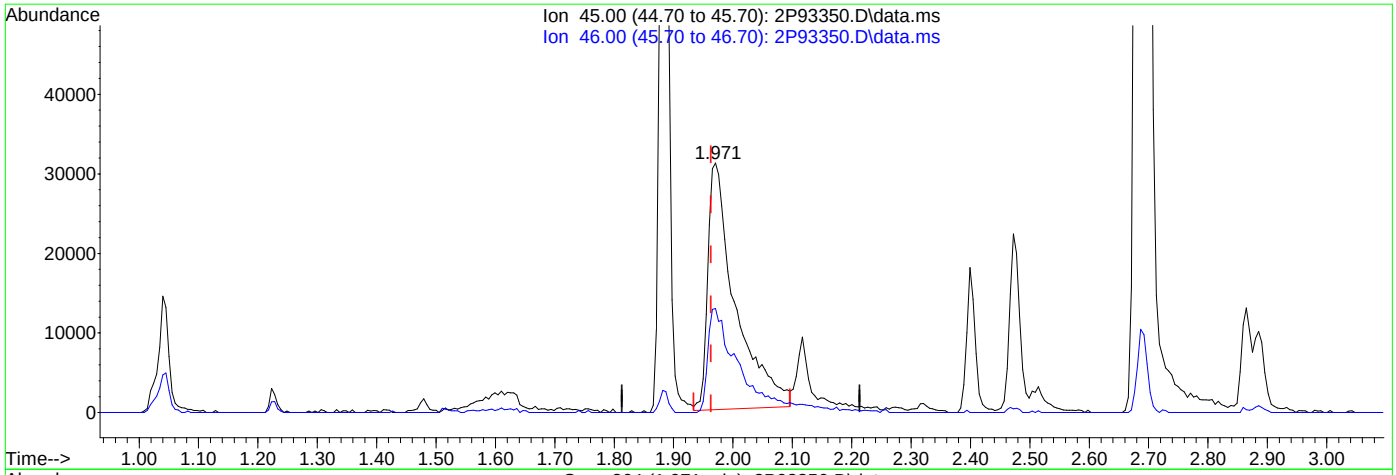
Sample Number: V2P3586-ECC3560 **Method:** SW846 8260D
Lab FileID: 2P93350.D **Analyst approved:** 09/25/22 22:24 Antonette Clutario
Injection Time: 09/23/22 23:34 **Supervisor approved:** 09/26/22 12:39 Karen Watson

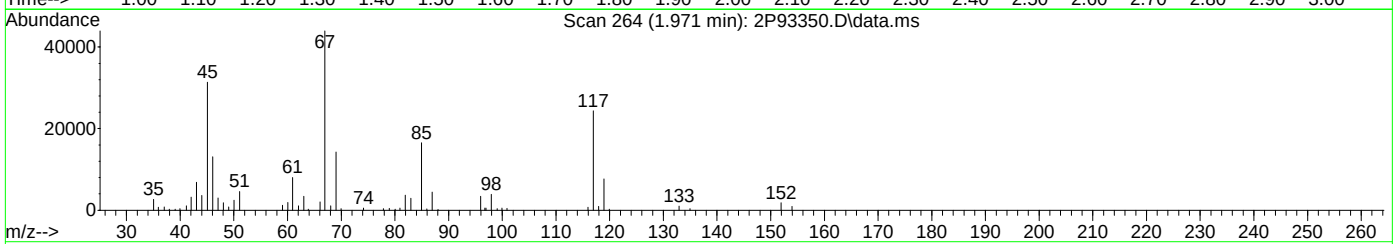
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.97	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

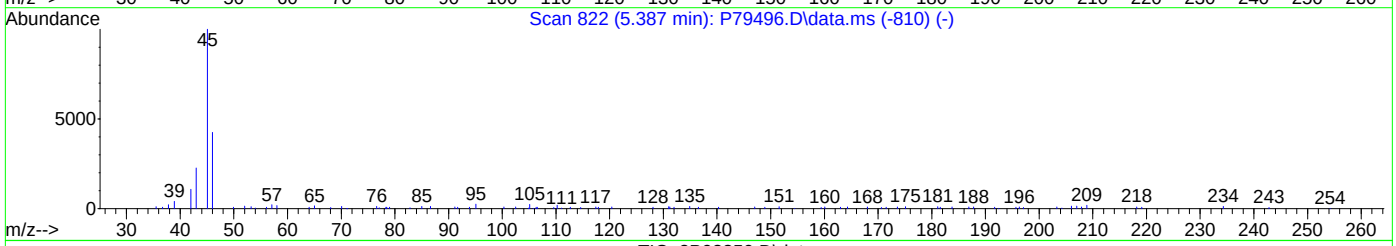
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(10) Ethanol

1.971min (+0.008) 880.75ug/L

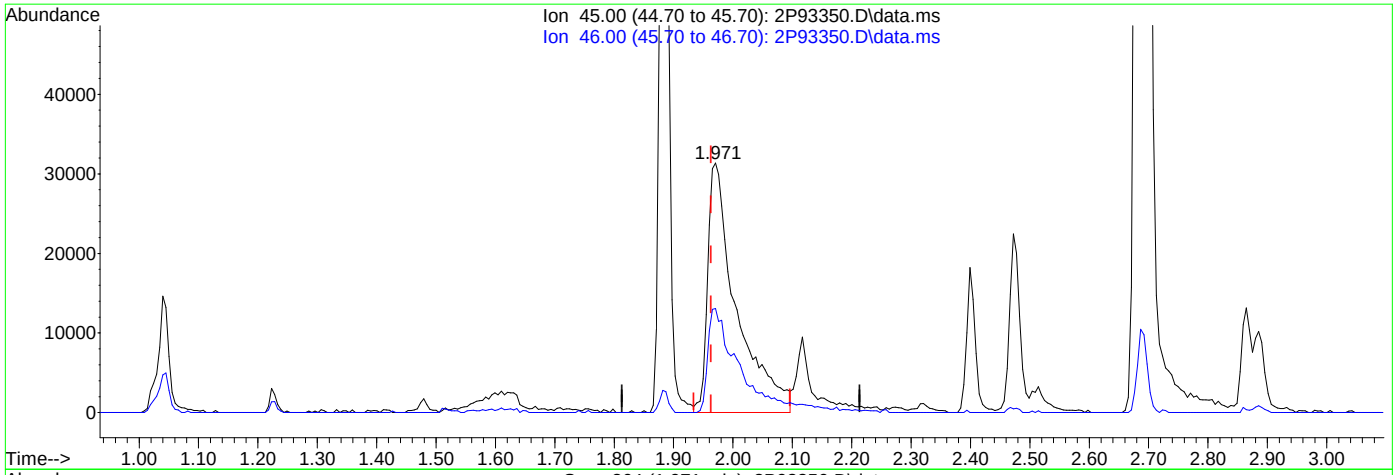
response 100735

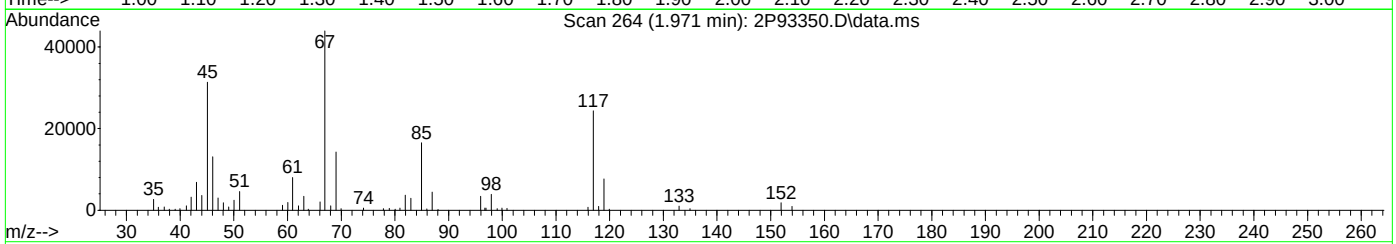
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	42.72
0.00	0.00	0.00
0.00	0.00	0.00

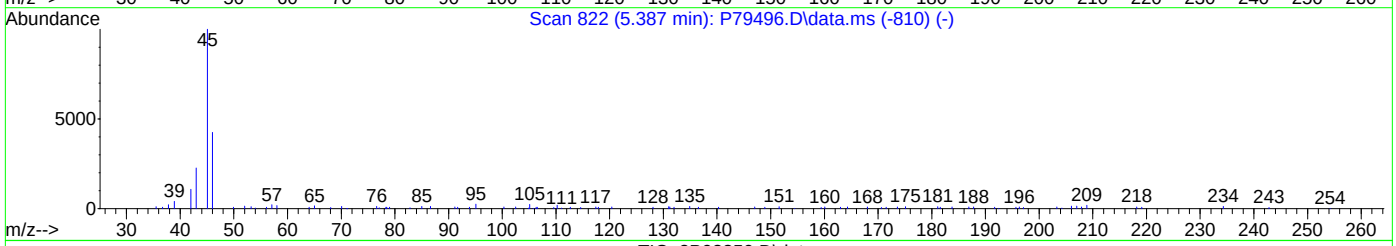
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(10) Ethanol

1.971min (+0.008) 930.61ug/L m

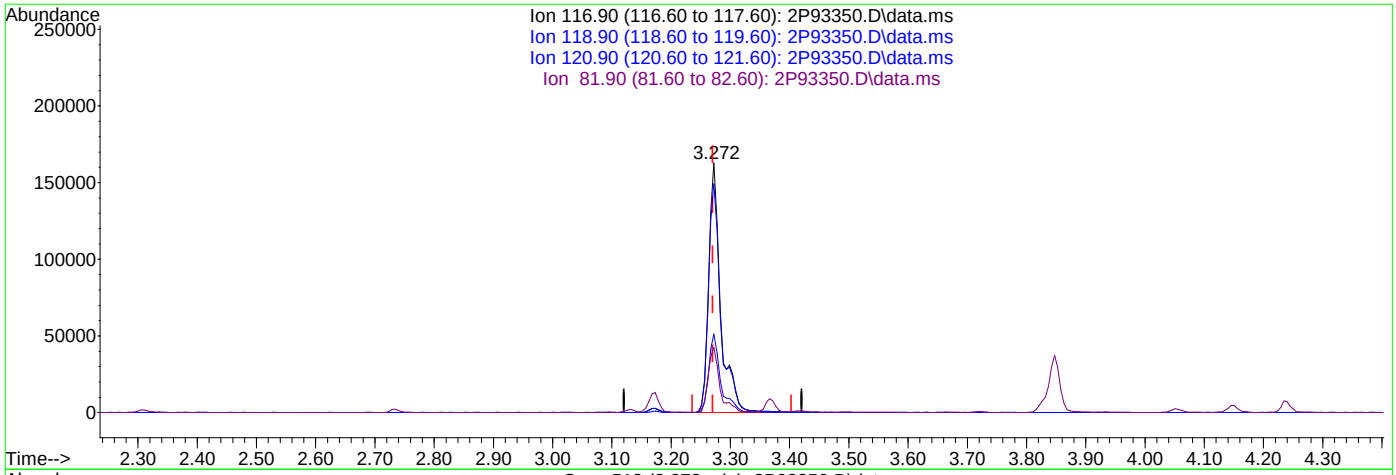
response 105631

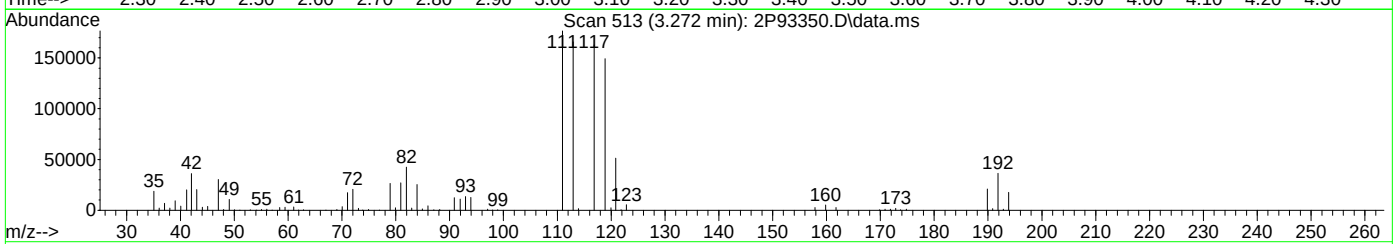
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	41.71
0.00	0.00	0.00
0.00	0.00	0.00

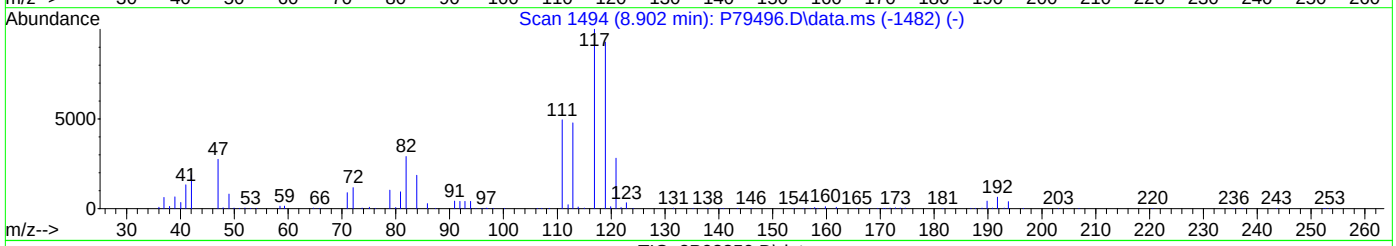
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 47.83ug/L

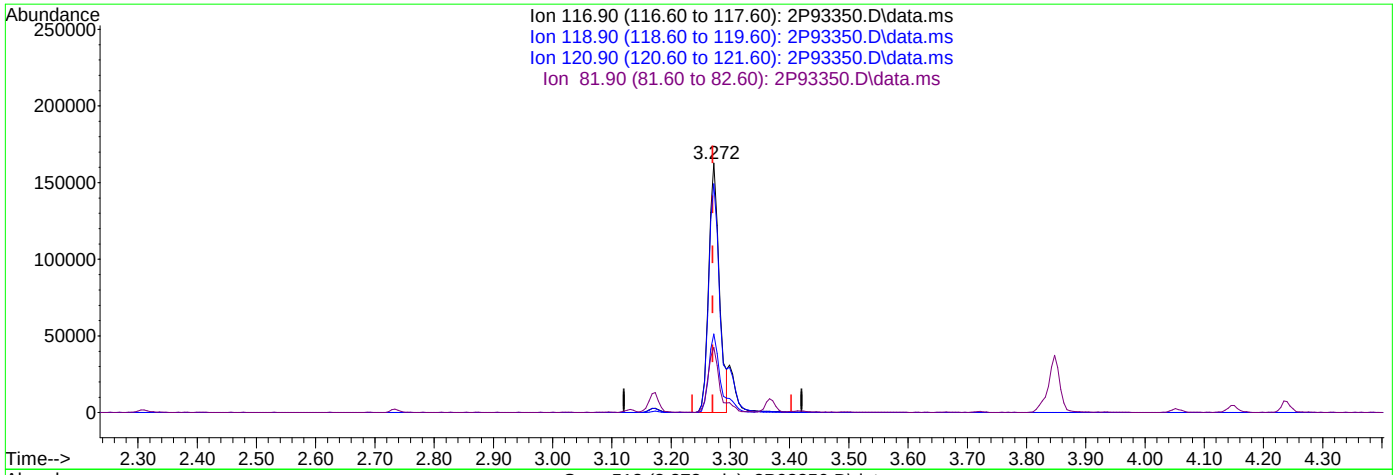
response 228794

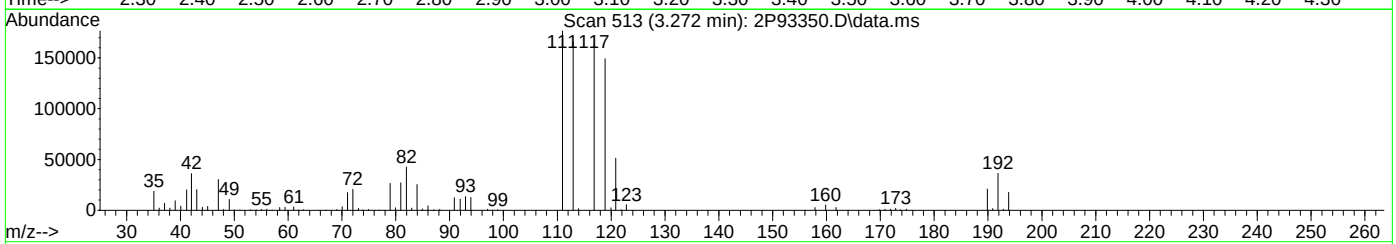
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.63
120.90	29.50	31.52
81.90	28.30	25.91

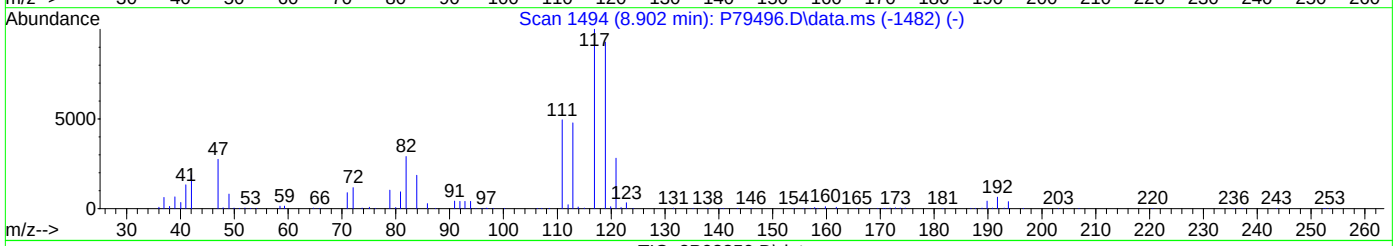
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 42.43ug/L m

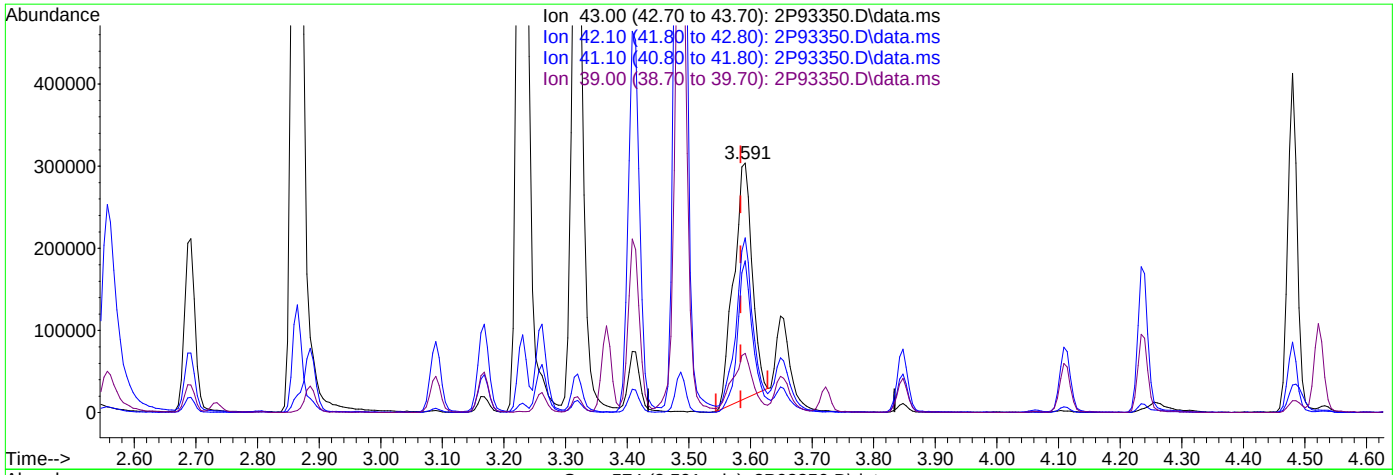
response 199573

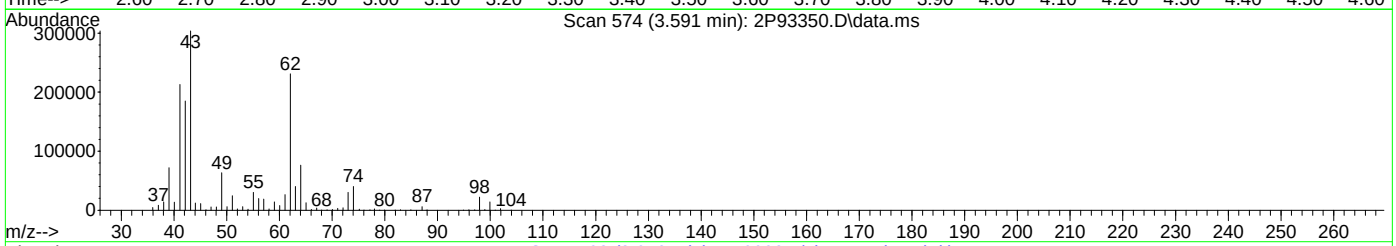
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.63
120.90	29.50	31.52
81.90	28.30	26.08

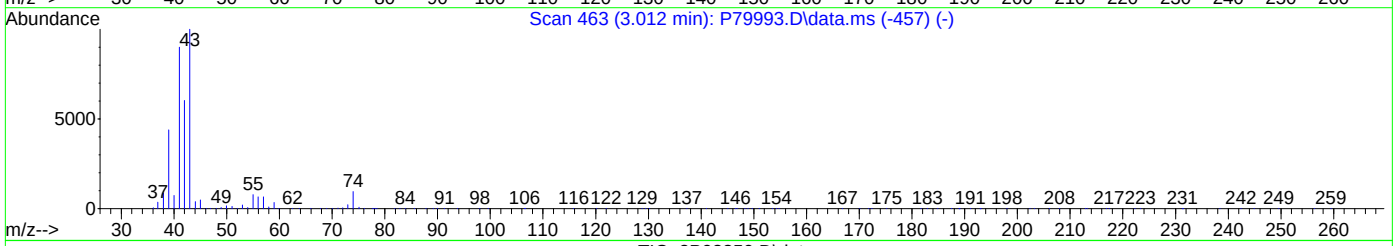
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.007) 830.85ug/L

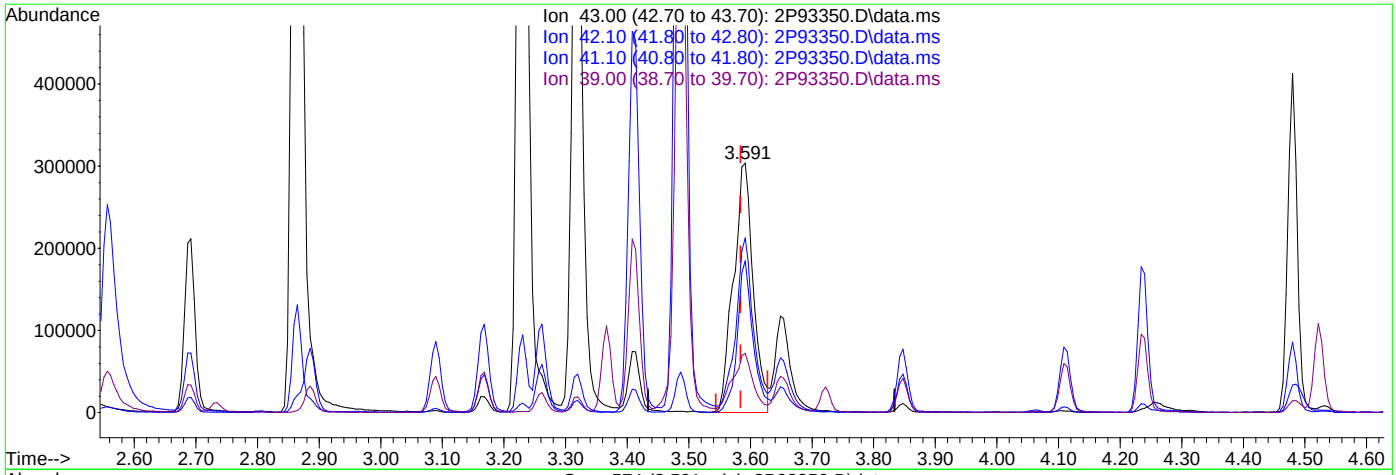
response 602258

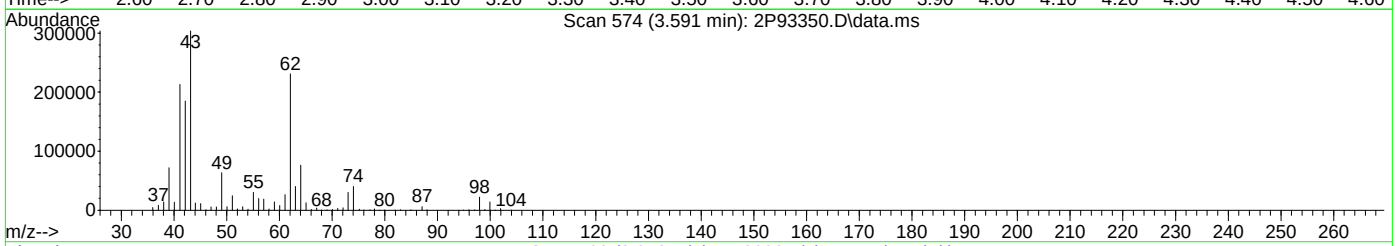
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.88
41.10	70.00	67.80
39.00	27.50	22.14

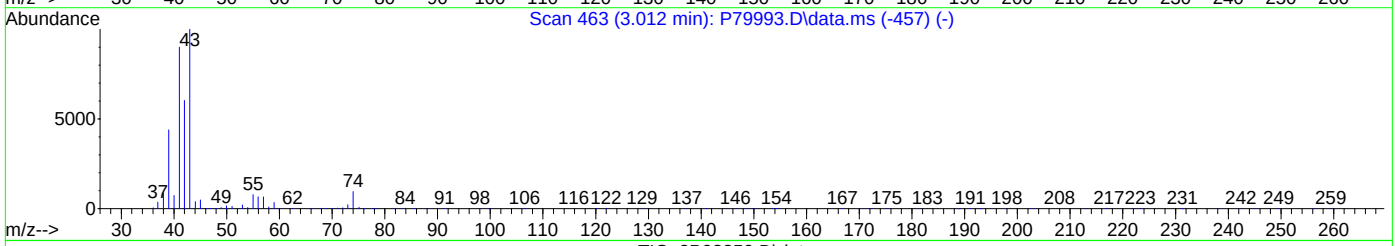
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.007) 936.95ug/L m

response 679168

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.80
41.10	70.00	70.02
39.00	27.50	23.72

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

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QLast Update : Wed Aug 24 14:29:43 2022
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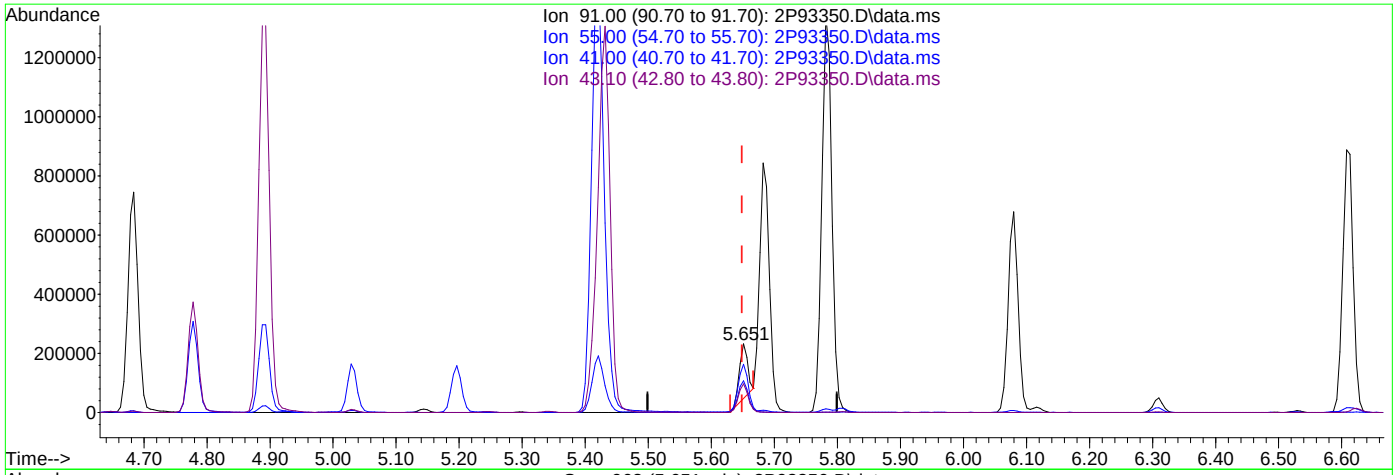

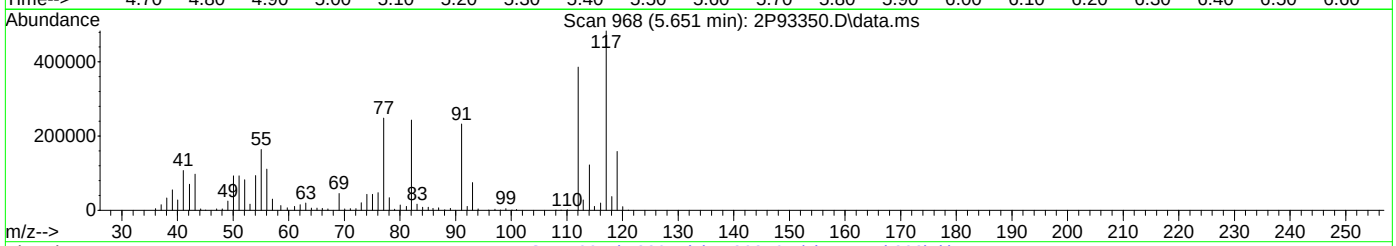

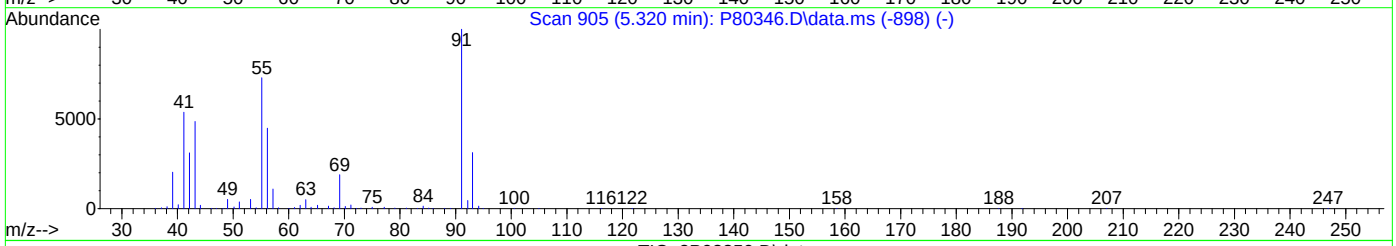

TIC: 2P93350.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 26.14ug/L

response 176347

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.10
41.00	53.40	44.67
43.10	41.30	41.06

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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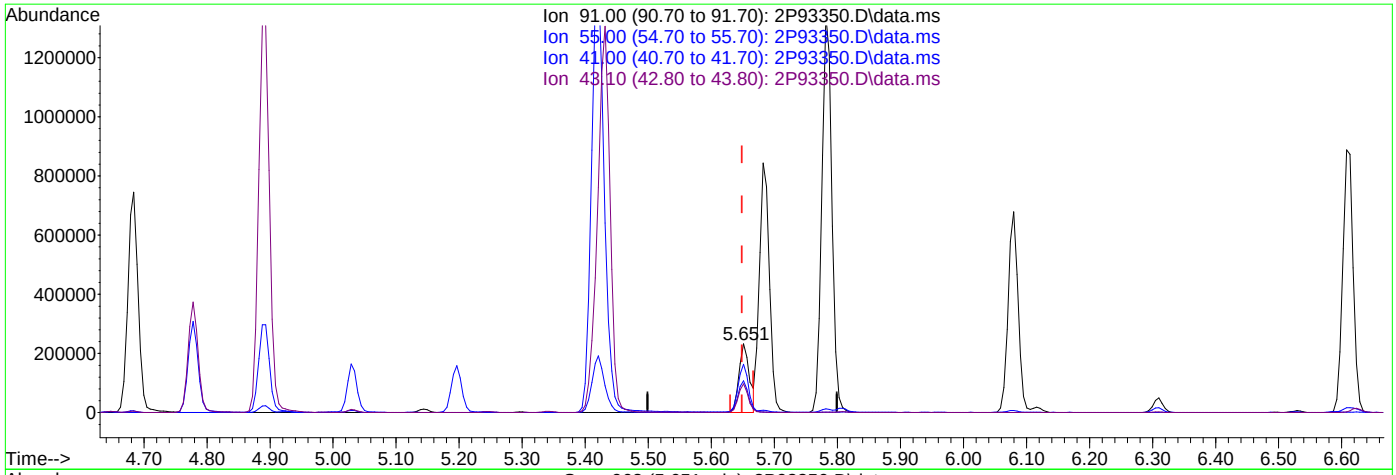
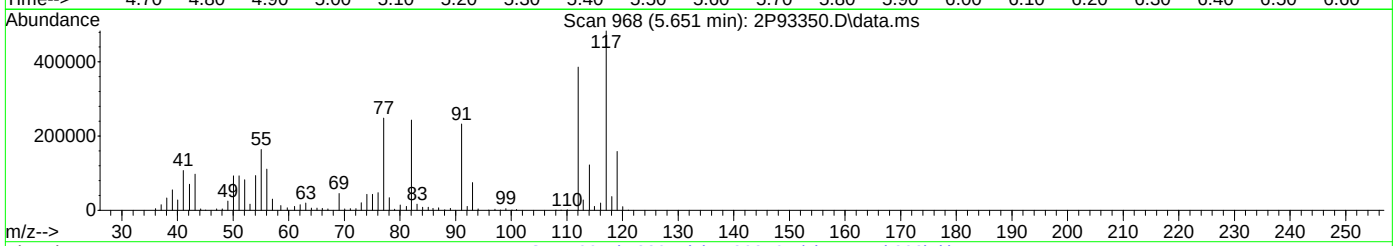
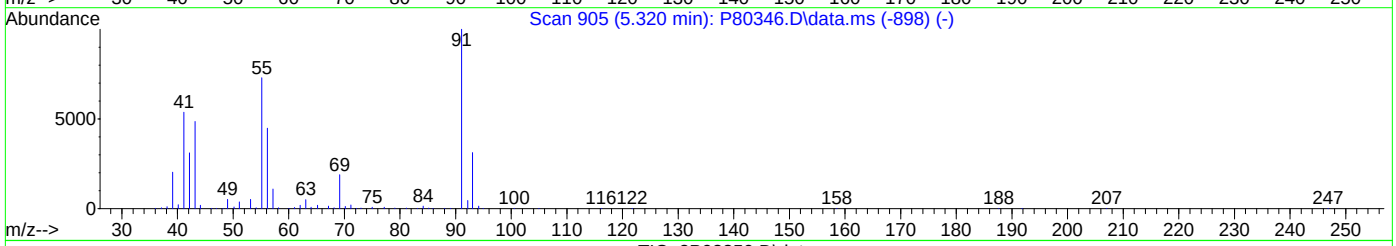






TIC: 2P93350.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 39.83ug/L m

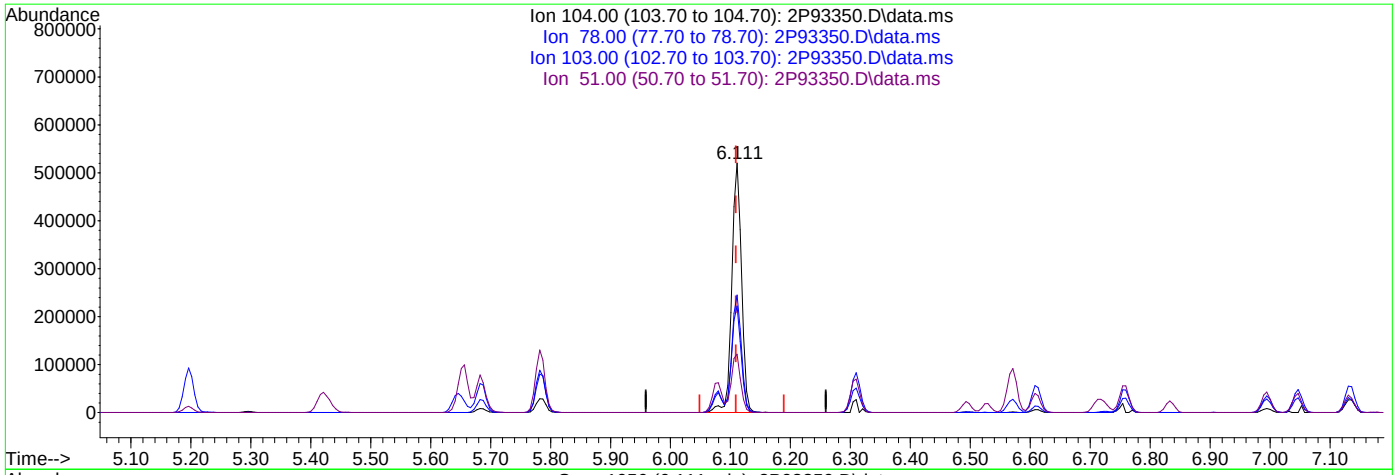
response 268665

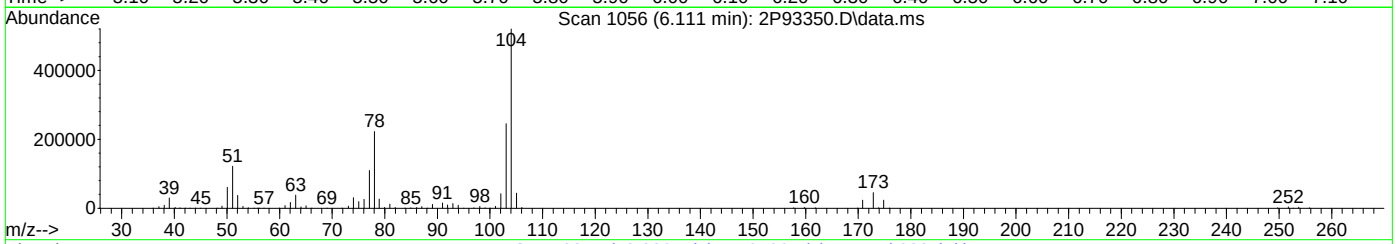
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	70.33
41.00	53.40	46.02
43.10	41.30	41.60

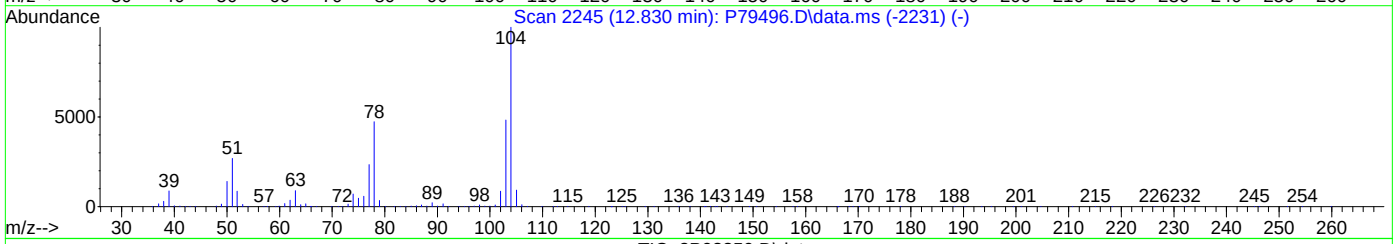
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 42.68ug/L

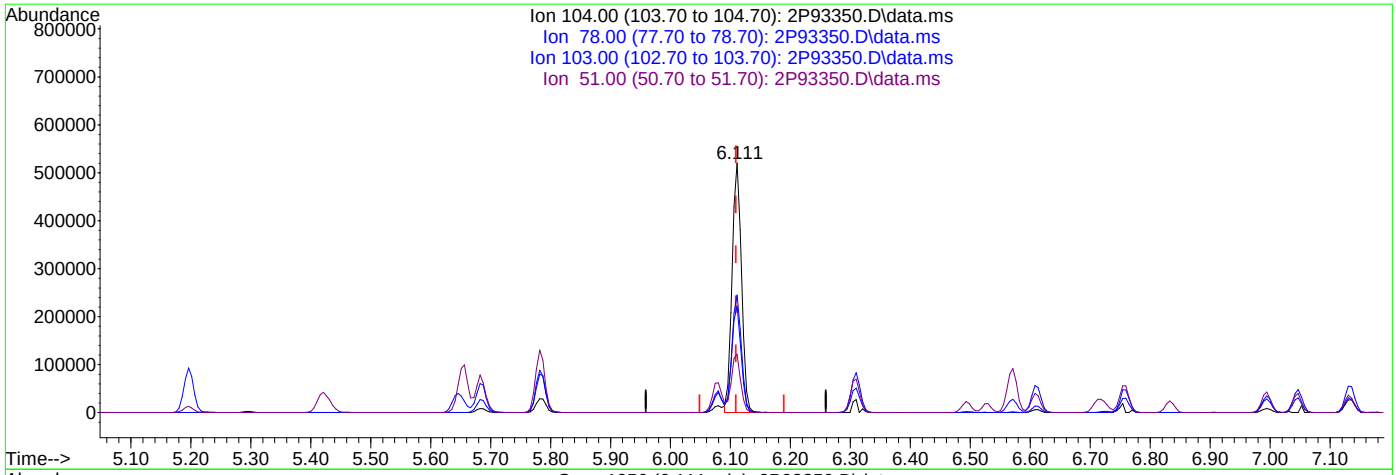
response 589410

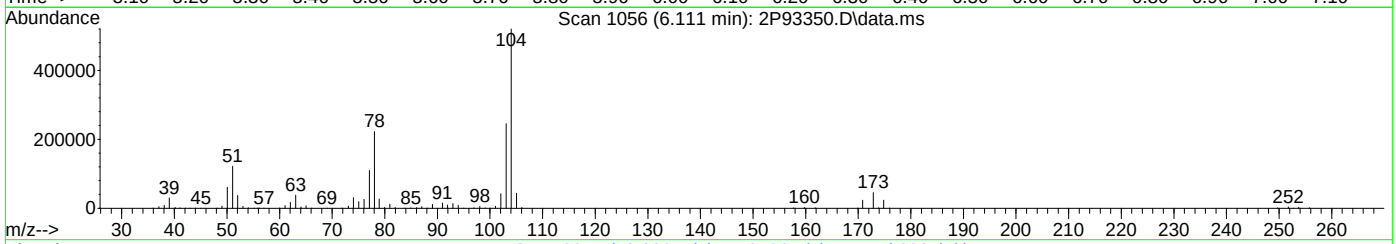
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.75
103.00	48.00	47.12
51.00	24.10	23.40

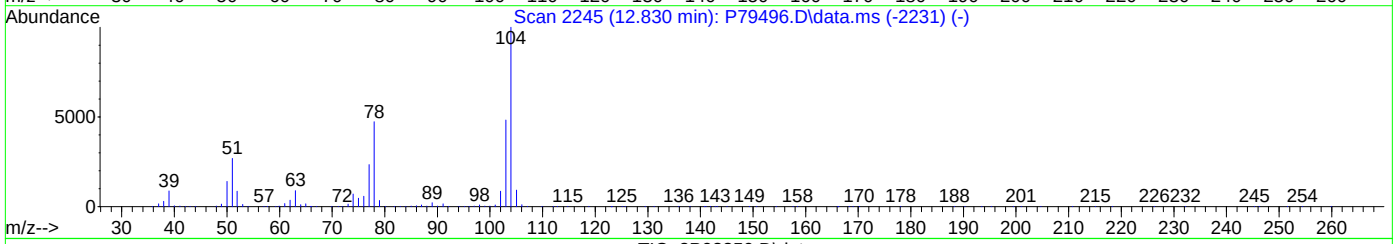
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 41.34ug/L m

response 570920

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.75
103.00	48.00	47.12
51.00	24.10	23.40

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:46:02 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1118901	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	791878	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	361407	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.266	113	224569	47.22	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.44%				
49) 1,2-Dichloroethane-d4	3.553	65	319378	48.35	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 96.70%				
63) Toluene-d8	4.651	98	1076739	49.42	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.84%				
86) 4-Bromofluorobenzene	6.497	174	274977	48.78	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.56%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	4244	1.37	ug/L		95
3) Chloromethane	1.258	50	4156	1.22	ug/L		90
4) 1,3-butadiene	1.321	39	4023	1.27	ug/L		98
5) Vinyl Chloride	1.305	62	4222	1.02	ug/L		93
6) Bromomethane	1.514	94	3468	1.35	ug/L		96
7) Chloroethane	1.587	64	1629	1.14	ug/L	#	48
8) Trichlorofluoromethane	1.687	101	4955	0.92	ug/L		90
9) Ethyl Ether	1.880	59	4867	1.25	ug/L		92
10) Ethanol	1.948	45	2949	23.63	ug/L		83
11) 1,2-Dichlorotrifluoroe...	1.980	67	5446	1.50	ug/L		91
12) 1,1-Dichloroethene	1.990	61	5565	1.05	ug/L		95
13) Freon 113	2.021	101	4161	1.33	ug/L		95
14) Carbon Disulfide	2.006	76	7945	1.02	ug/L		93
15) Iodomethane	2.063	142	1014	0.51	ug/L		83
16) Acrolein	2.157	56	10477	7.36	ug/L		97
17) Allyl chloride	2.251	41	3826	1.00	ug/L		89
18) Methylene Chloride	2.304	49	25022	4.15	ug/L		97
19) Acetone	2.314	43	16074	6.14	ug/L		99
20) Methyl acetate	2.398	43	30896	5.93	ug/L		96
21) trans-1,2-Dichloroethene	2.408	61	5754	1.07	ug/L		91
22) Hexane	2.476	56	3121	1.34	ug/L	#	91
23) Methyl Tert Butyl Ether	2.471	73	13612	1.11	ug/L		95
24) Tert Butyl Alcohol	2.502	59	17049	11.23	ug/L	#	71
25) Acetonitrile	2.555	41	11962	13.88	ug/L		97
26) Di-isopropyl ether	2.685	45	12916	1.13	ug/L		90
27) Chloroprene	2.732	53	15111	0.93	ug/L		98
28) 1,1-Dichloroethane	2.732	63	8025	1.13	ug/L		95
29) Acrylonitrile	2.732	52	11857	4.62	ug/L		98
30) ETBE	2.884	59	14234	1.07	ug/L		95
31) Vinyl acetate	2.863	43	34137	3.72	ug/L		97
32) cis-1,2-Dichloroethene	3.025	96	4803	1.14	ug/L		95
33) 2,2-Dichloropropane	3.088	77	4892	0.98	ug/L		90
34) Bromochloromethane	3.130	128	2261	1.18	ug/L		89
35) Cyclohexane	3.166	56	6689	1.10	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:46:02 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.172	83	7652	1.08	ug/L		97
37) Ethyl acetate	3.229	43	32145	4.63	ug/L		98
38) Tetrahydrofuran	3.260	42	3630	1.37	ug/L		96
40) Carbon Tetrachloride	3.271	117	4184m	1.06	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	5930	1.04	ug/L		95
42) 2-Butanone	3.318	43	23295	5.34	ug/L		99
43) 1,1-Dichloropropene	3.365	75	5768	1.08	ug/L		90
44) tert-Butyl formate	3.412	59	16636	6.30	ug/L	#	77
45) Propionitrile	3.459	54	16615	12.15	ug/L		97
46) Methacrylonitrile	3.485	41	38869	10.64	ug/L		99
47) Benzene	3.496	78	20586	1.21	ug/L		76
48) TAME	3.569	73	12499	1.03	ug/L		86
50) Isobutyl alcohol	3.579	43	13998m	20.00	ug/L		
51) 1,2-Dichloroethane	3.590	62	7385	1.21	ug/L		99
52) Tert Amyl Alcohol	3.647	59	12111	9.66	ug/L		82
53) Trichloroethene	3.830	95	5232	1.19	ug/L		96
54) Methylcyclohexane	3.846	83	6534	1.25	ug/L		92
55) Dibromomethane	4.050	93	2773	1.15	ug/L		89
56) 1,2-Dichloropropane	4.113	63	4825	1.17	ug/L		86
57) Bromodichloromethane	4.149	83	3697	0.93	ug/L		97
58) Methyl methacrylate	4.238	41	4172	0.97	ug/L		92
59) 1,4-Dioxane	4.259	88	3344	25.72	ug/L		99
60) 2-Chloroethyl vinyl ether	4.479	63	21076	6.12	ug/L		96
61) cis-1,3-Dichloropropene	4.526	75	4642	0.89	ug/L		90
64) Toluene	4.682	91	23556	1.26	ug/L		96
65) 2-Nitropropane	4.777	41	4720	3.84	ug/L		90
66) 4-Methyl-2-pentanone	4.892	43	33227	4.61	ug/L		97
67) trans-1,3-Dichloropropene	4.918	75	3939	0.80	ug/L	#	69
68) Tetrachloroethene	4.939	166	4760	1.20	ug/L		92
69) Ethyl methacrylate	5.033	69	5098	0.83	ug/L		89
70) 1,1,2-Trichloroethane	5.022	83	3516	1.10	ug/L		82
71) Dibromochloromethane	5.143	129	2218	0.75	ug/L		97
72) 1,3-Dichloropropane	5.195	76	7715	1.09	ug/L		97
73) 1,2-Dibromoethane	5.294	107	3905	1.01	ug/L		91
74) 3,3-dimethyl-1-butanol	5.414	57	95782	59.91	ug/L		97
75) 2-hexanone	5.430	43	44056	5.44	ug/L	#	78
76) 1-Chlorohexane	5.650	91	7402m	1.24	ug/L		
77) Ethylbenzene	5.681	91	22979	1.12	ug/L		99
78) Chlorobenzene	5.655	112	12889	1.15	ug/L		86
79) 1,1,1,2-Tetrachloroethane	5.697	131	3086	0.95	ug/L		96
80) m,p-Xylene	5.786	91	35009	2.16	ug/L		99
81) o-Xylene	6.078	91	16602	1.04	ug/L		98
82) Styrene	6.110	104	9991	0.82	ug/L		94
83) Bromoform	6.115	173	1198	0.79	ug/L		80
84) Isopropylbenzene	6.308	105	18536	1.01	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	1570	0.87	ug/L	#	67
88) n-Propylbenzene	6.606	91	21390	0.96	ug/L		98
89) Bromobenzene	6.570	156	5173	1.15	ug/L		88
90) 1,1,2,2-Tetrachloroethane	6.627	83	6366	1.06	ug/L		91
91) 1,3,5-Trimethylbenzene	6.758	105	14789	0.96	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:46:02 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

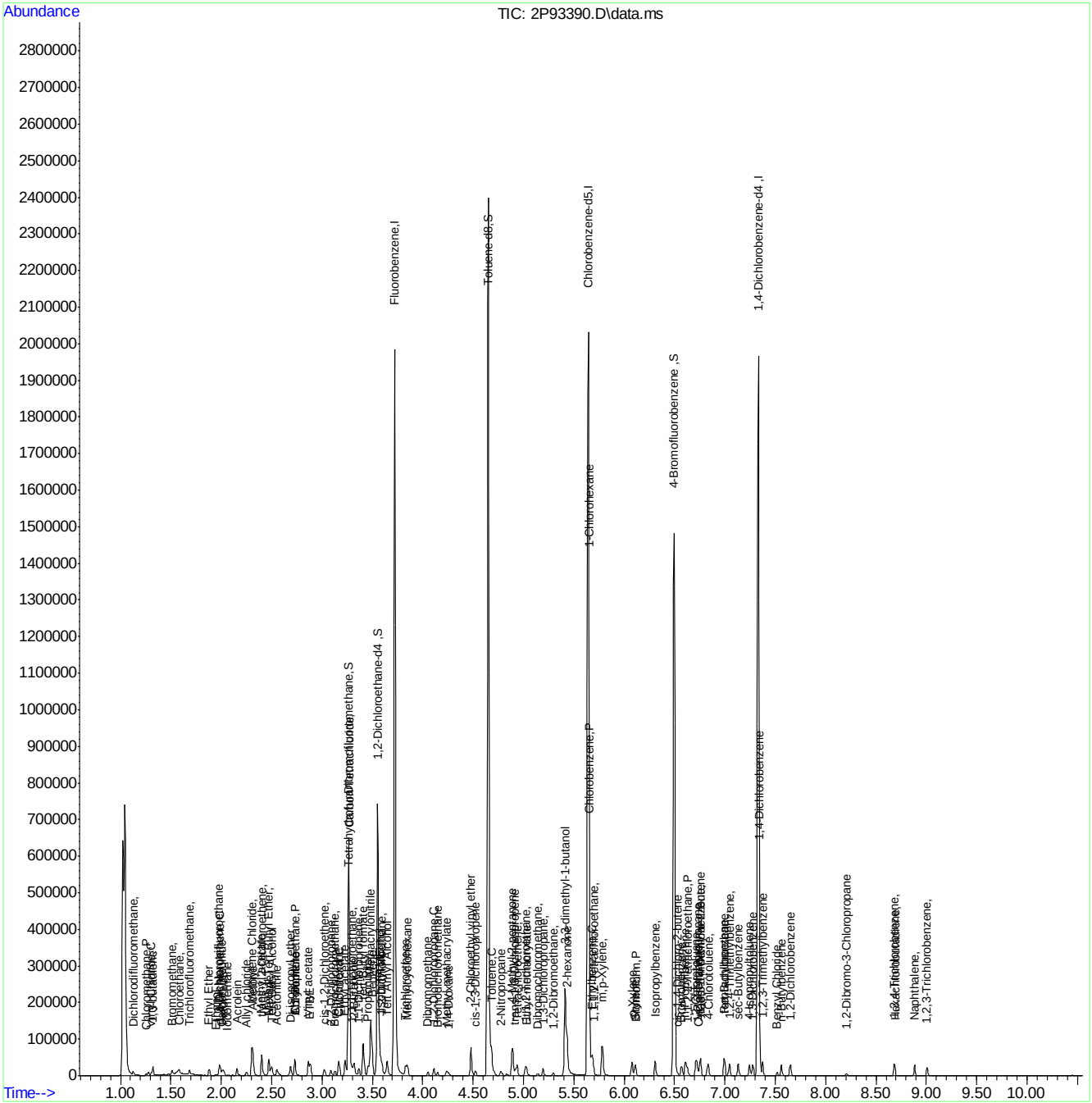
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.716	91	14093	1.05	ug/L		97
93) trans-1,4-Dichloro-2-B...	6.753	53	1970	0.77	ug/L	#	61
94) 1,2,3-Trichloropropane	6.727	110	2752	1.23	ug/L		91
95) Cyclohexanone	6.742	55	2250	4.82	ug/L	#	83
96) 4-Chlorotoluene	6.836	91	14491	1.03	ug/L		95
97) tert-Butylbenzene	6.993	91	8557	1.01	ug/L		98
99) 1,2,4-Trimethylbenzene	7.045	105	13377	0.89	ug/L		94
100) Pentachloroethane	6.993	167	1176	0.72	ug/L	#	55
101) sec-Butylbenzene	7.134	105	16957	1.03	ug/L		96
102) 4-Isopropyltoluene	7.244	119	13173	0.98	ug/L		91
103) 1,3-Dichlorobenzene	7.276	146	8596	1.07	ug/L		92
104) 1,2,3-Trimethylbenzene	7.375	105	15460	1.02	ug/L		94
105) 1,4-Dichlorobenzene	7.343	146	10453m	1.24	ug/L		
106) n-Butylbenzene	7.558	92	6659	1.01	ug/L		84
107) Benzyl Chloride	7.516	126	657m	0.47	ug/L		
108) 1,2-Dichlorobenzene	7.652	146	8417	1.11	ug/L		92
109) 1,2-Dibromo-3-Chloropr...	8.206	75	1004	0.83	ug/L	#	67
110) Hexachlorobutadiene	8.687	225	1556	1.23	ug/L		87
111) 1,2,4-Trichlorobenzene	8.682	180	4327	1.08	ug/L		92
112) Naphthalene	8.886	128	13736	0.88	ug/L		94
113) 1,2,3-Trichlorobenzene	9.006	180	4548	1.20	ug/L		90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:46:02 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

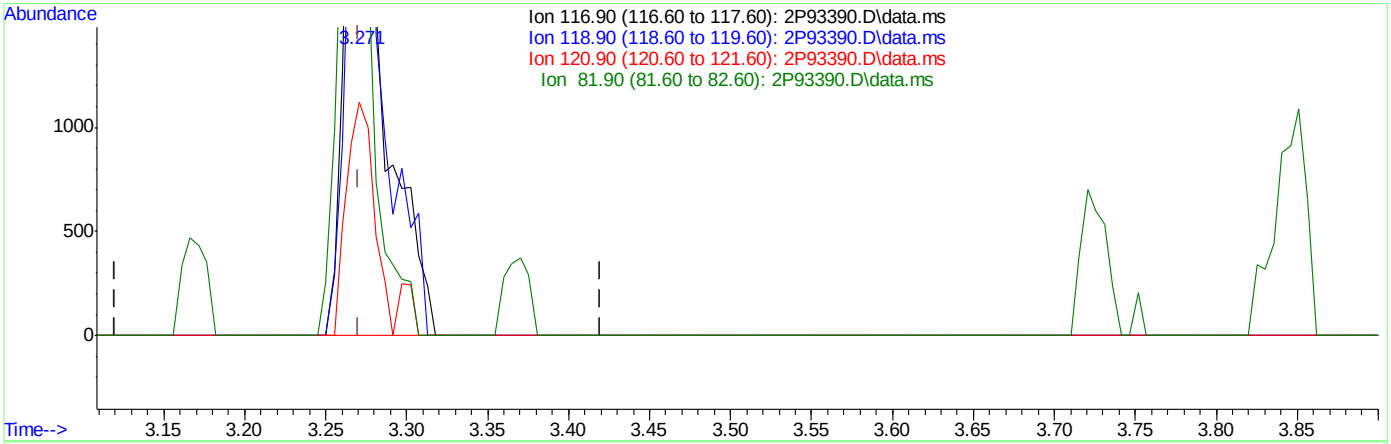
Sample Number: V2P3589-IC3589 **Method:** SW846 8260D
Lab FileID: 2P93390.D **Analyst approved:** 09/26/22 16:01 Courtney Failla
Injection Time: 09/26/22 12:30 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

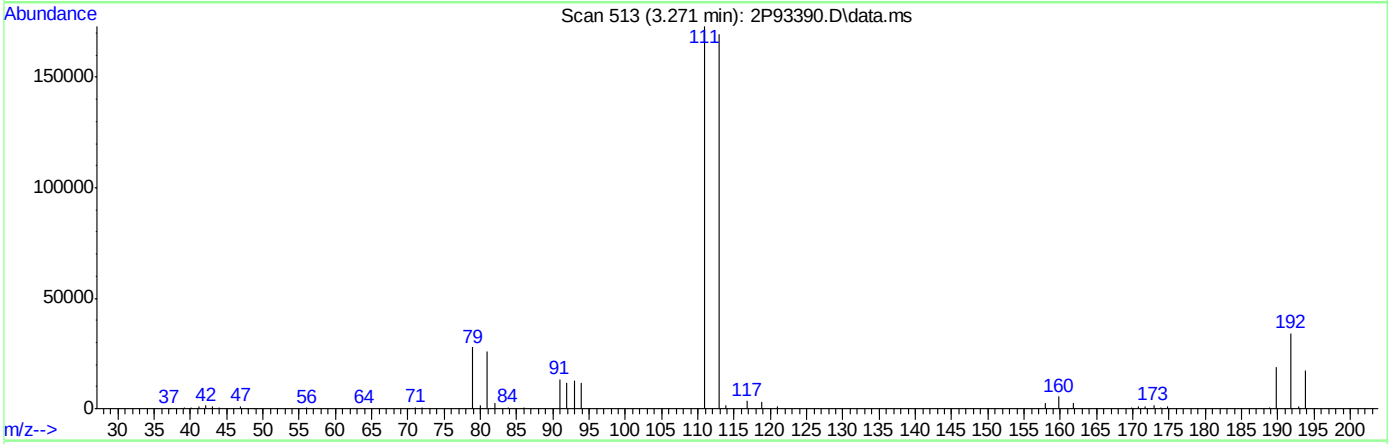
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
1,4-Dichlorobenzene	106-46-7		7.34	Missed peak
Benzyl Chloride	100-44-7		7.52	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 1.29ug/L

response 5082

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.16
120.90	29.50	31.59
81.90	28.30	75.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
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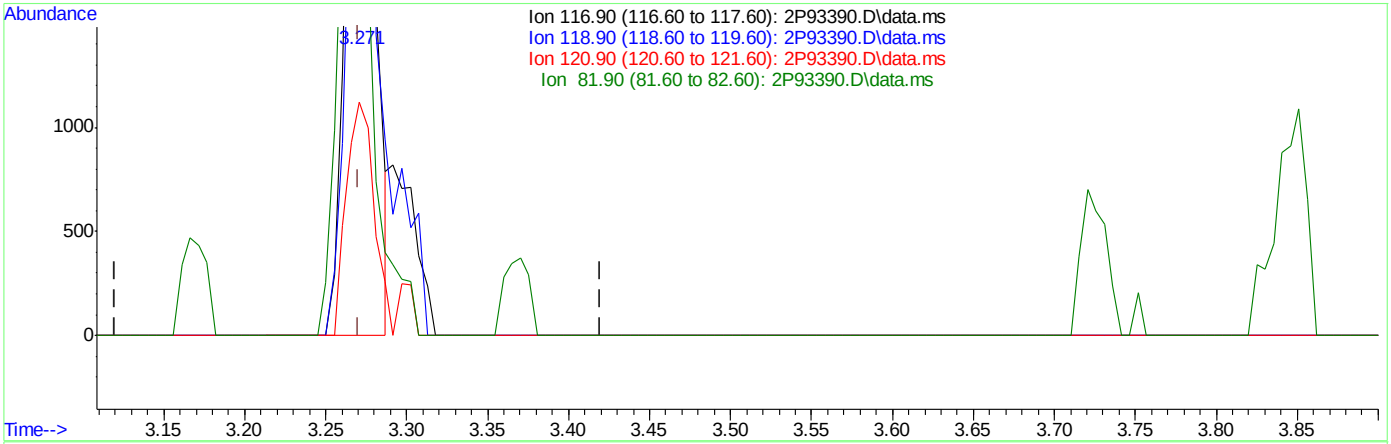
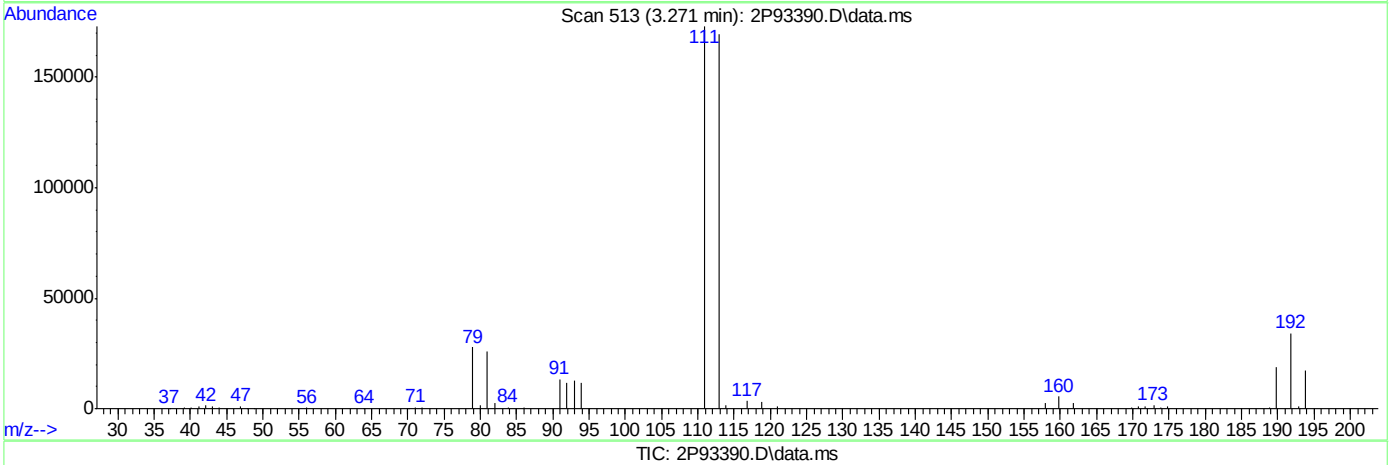




TIC: 2P93390.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 1.06ug/L m

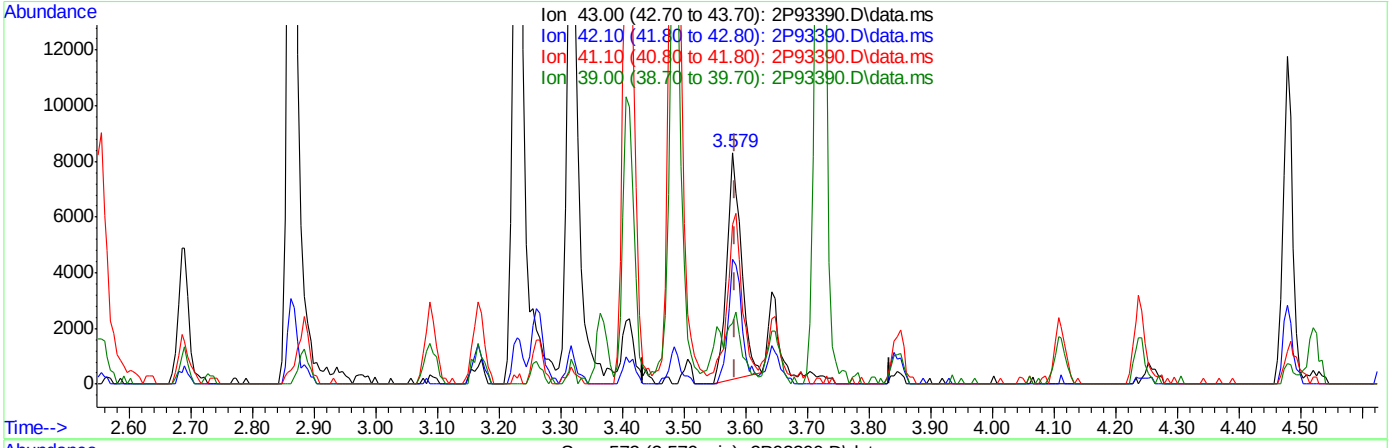
response 4184

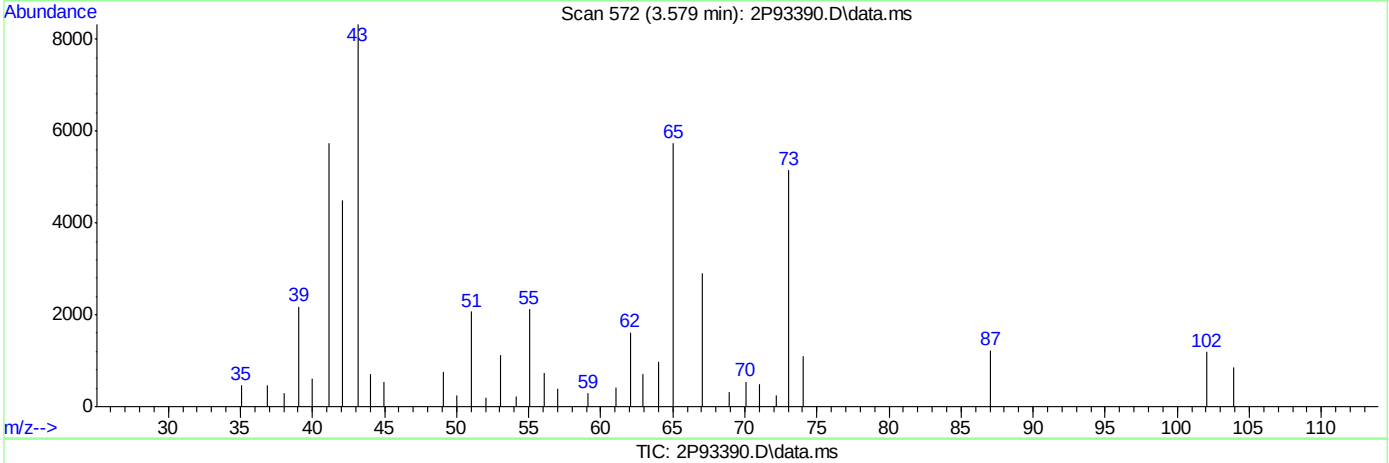
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.16
120.90	29.50	31.59
81.90	28.30	75.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.005) 18.81ug/L

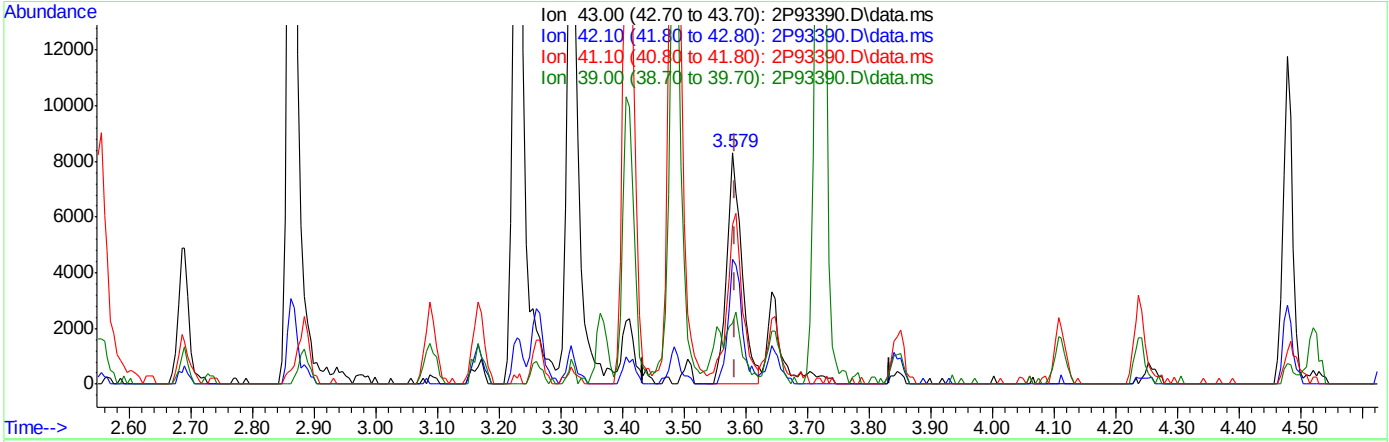
response 13164

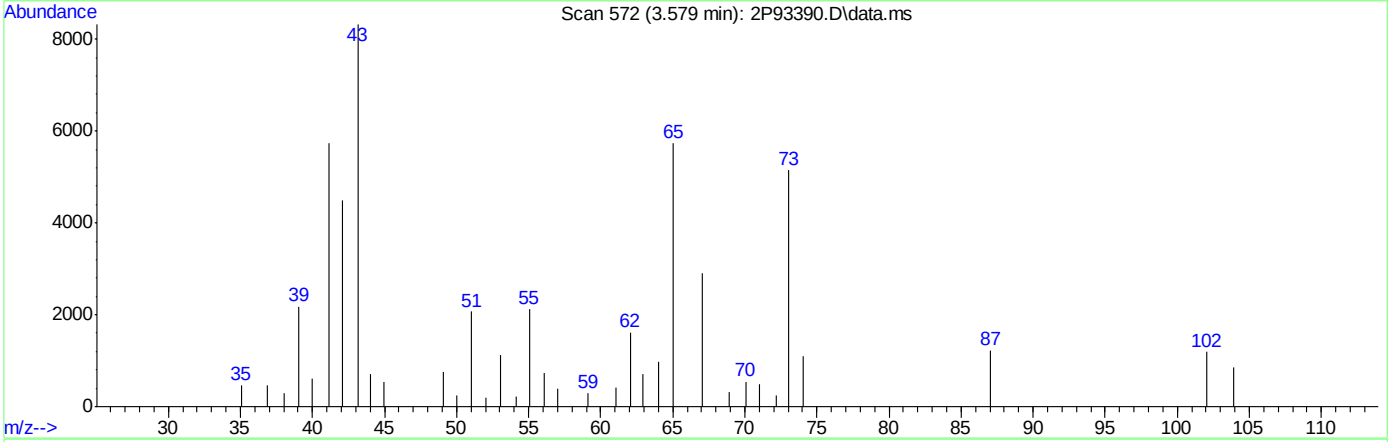
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	54.11
41.10	70.00	64.09
39.00	27.50	22.44

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.005) 20.00ug/L m

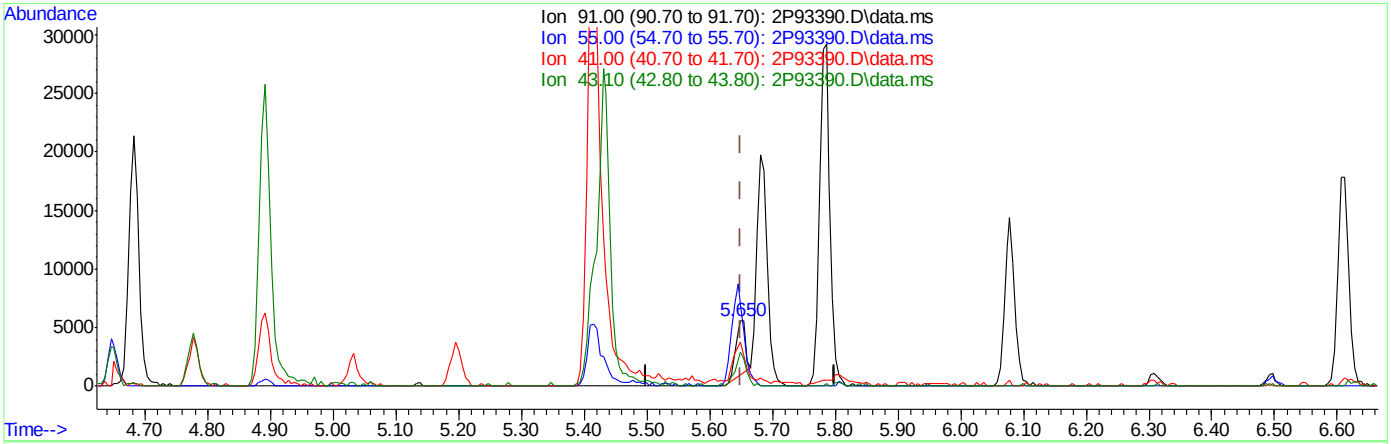
response 13998

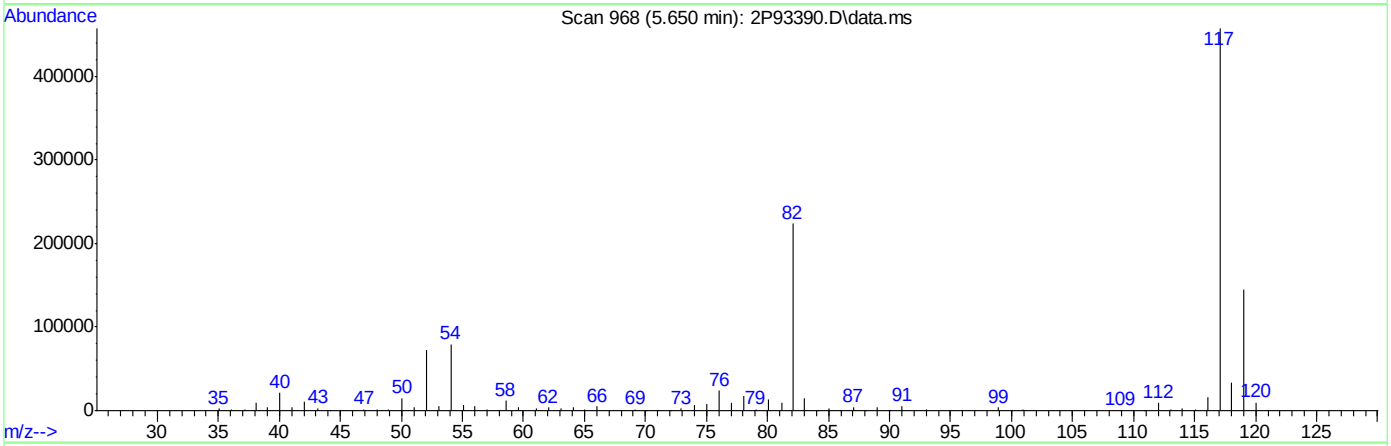
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	54.11
41.10	70.00	69.01
39.00	27.50	26.15

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 0.91ug/L

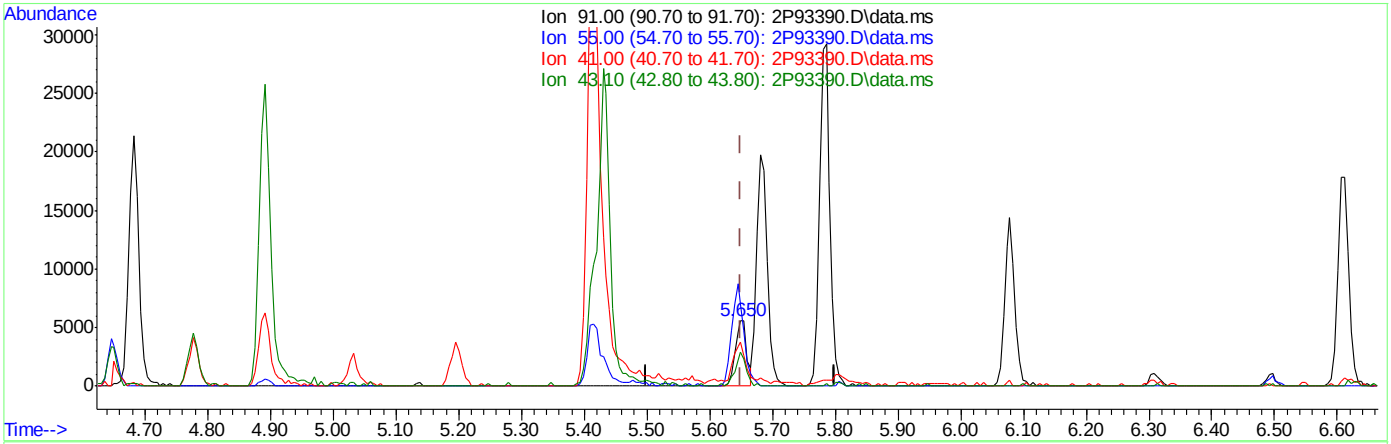
response 5399

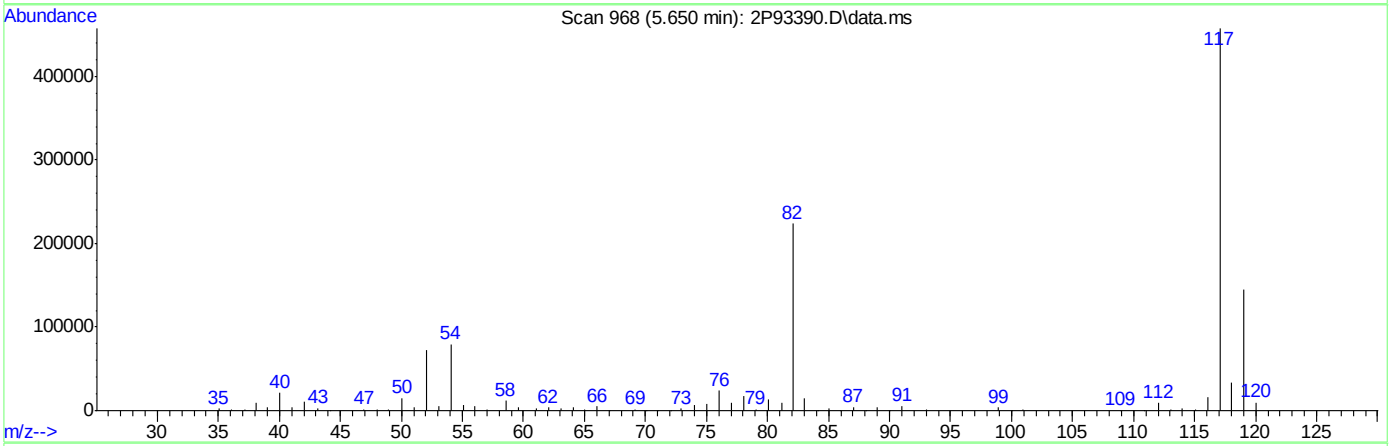
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	117.99#
41.00	53.40	59.61
43.10	41.30	51.85

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 1.24ug/L m

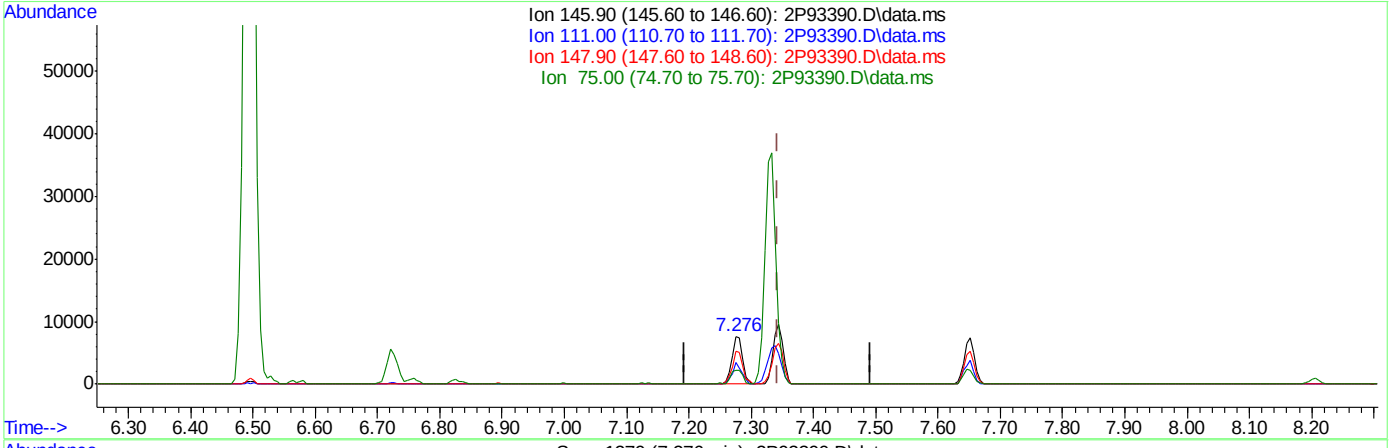
response 7402

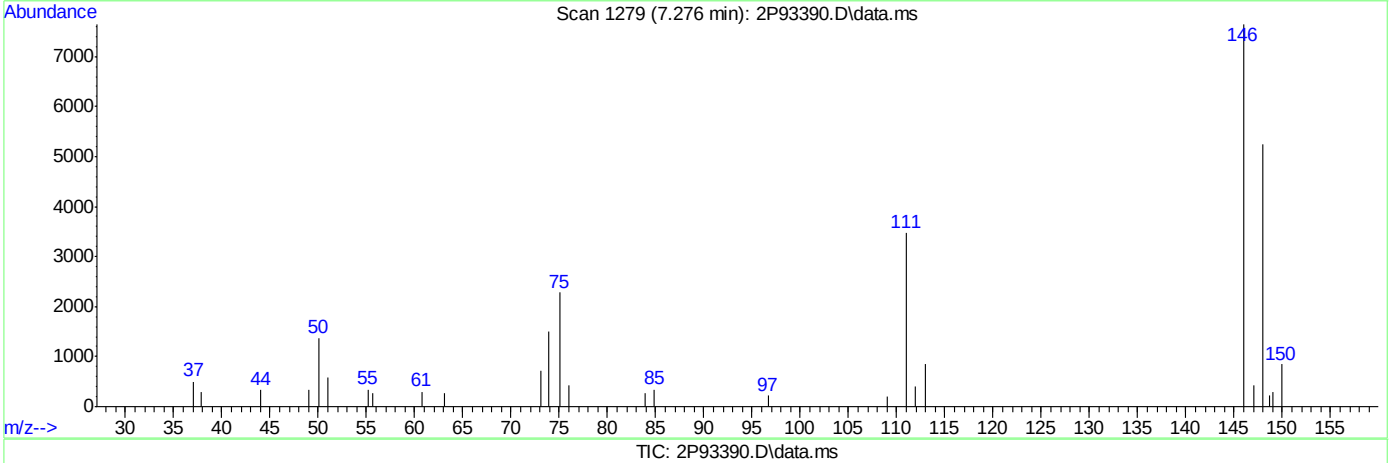
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	125.80#
41.00	53.40	67.69
43.10	41.30	51.85

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(105) 1,4-Dichlorobenzene

7.276min (-0.067) 1.02ug/L

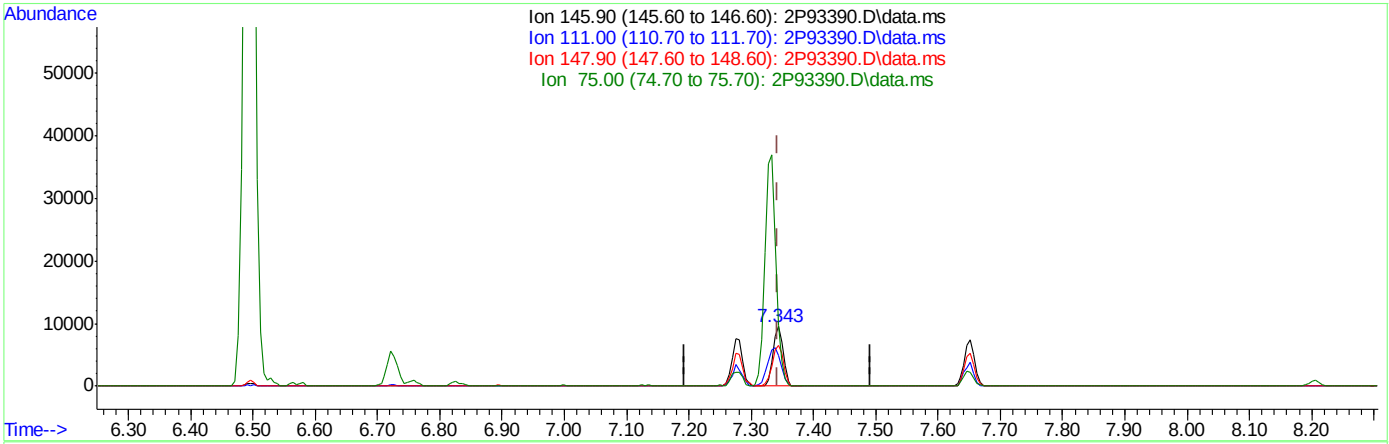
response 8596

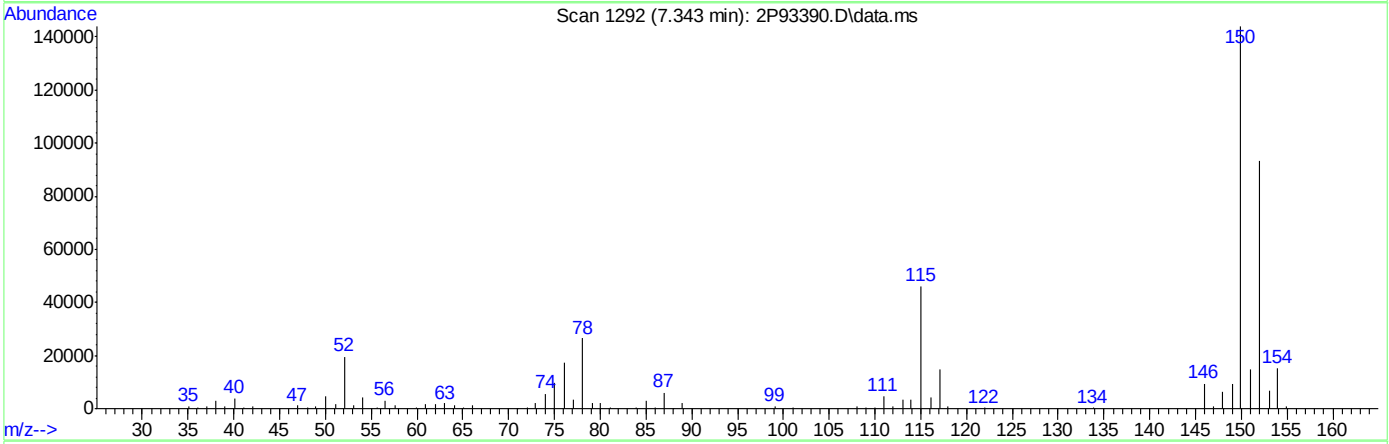
Ion	Exp%	Act%
145.90	100	100
111.00	40.10	45.37
147.90	63.20	68.52
75.00	36.60	27.17

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (+0.000) 1.24ug/L m

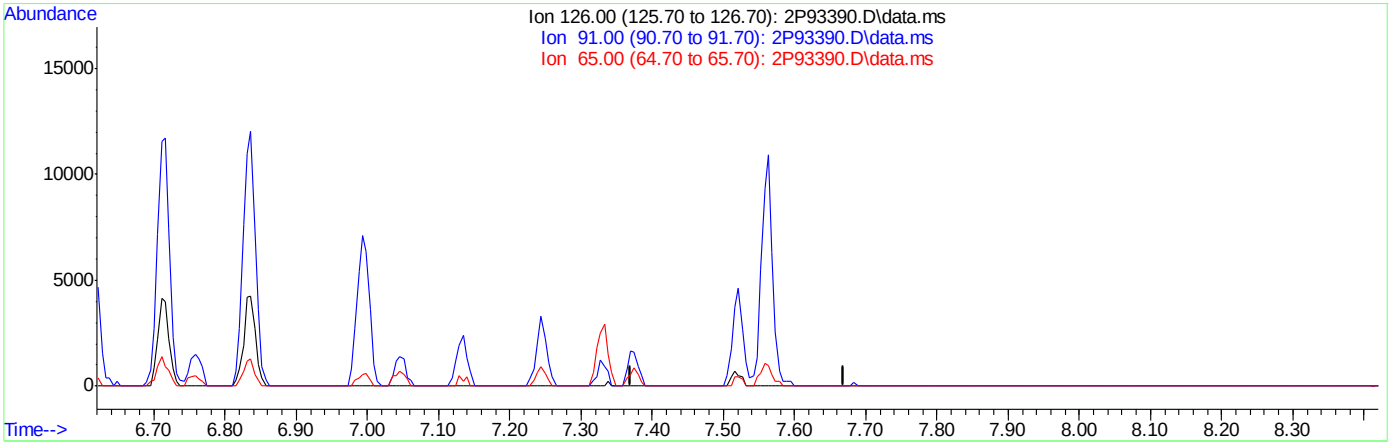
response 10453

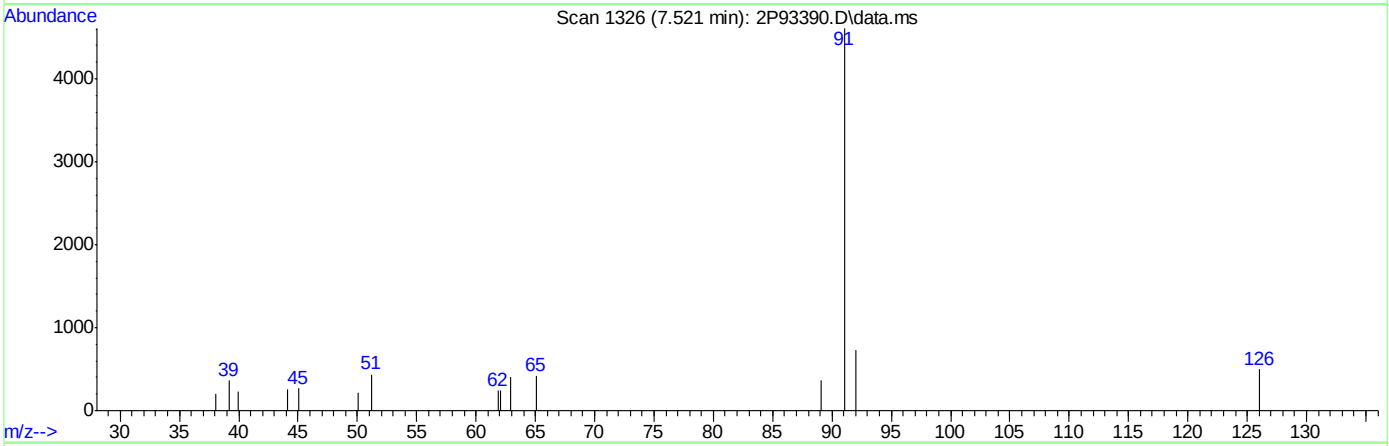
Ion	Exp%	Act%
145.90	100	100
111.00	40.10	51.16
147.90	63.20	68.12
75.00	36.60	102.84#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93390.D\data.ms

(107) Benzyl Chloride

7.520min (-7.520) 0.00ug/L

response 0

Ion	Exp%	Act%
126.00	100	0.00
91.00	500.60	0.00#
65.00	60.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93390.D
Acq On : 26 Sep 2022 12:30 pm
Operator : courtnef
Sample : IC3589-1
Misc : MS52362,V2P3589,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 26 13:44:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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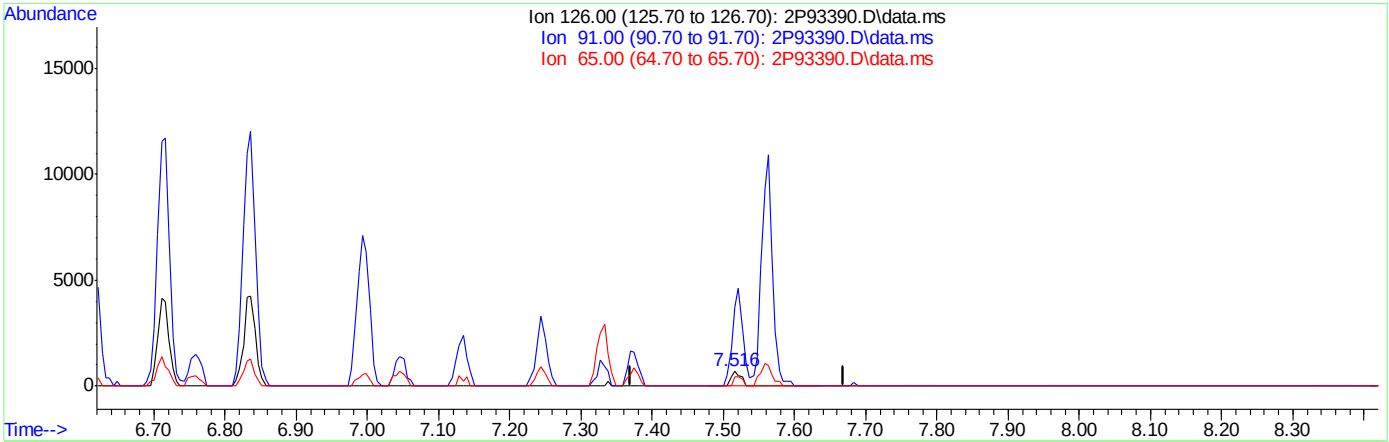
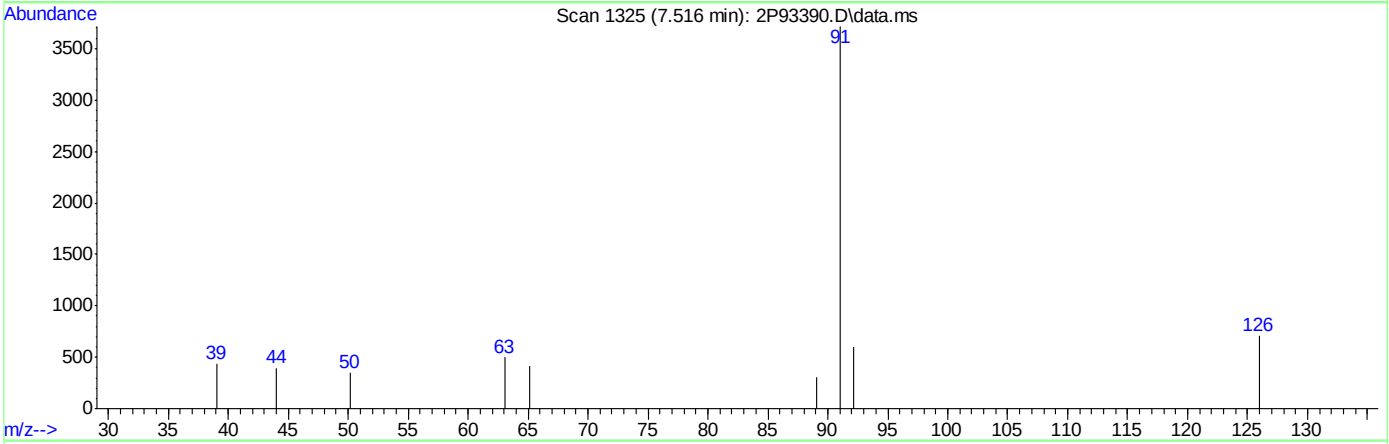




TIC: 2P93390.D\data.ms

(107) Benzyl Chloride

7.516min (-0.004) 0.47ug/L m

response 657

Ion	Exp%	Act%
126.00	100	100
91.00	500.60	524.86#
65.00	60.50	59.04
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:47:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1129152	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	795834	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	370069	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	232470	48.44	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.88%			
49) 1,2-Dichloroethane-d4	3.553	65	321766	48.27	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 96.54%			
63) Toluene-d8	4.651	98	1083724	49.49	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.98%			
86) 4-Bromofluorobenzene	6.496	174	283819	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.127	85	18750	6.02	ug/L	98
3) Chloromethane	1.252	50	18886	5.48	ug/L	99
4) 1,3-butadiene	1.320	39	16142	5.04	ug/L	99
5) Vinyl Chloride	1.310	62	21523	5.13	ug/L	98
6) Bromomethane	1.514	94	12847	4.95	ug/L	99
7) Chloroethane	1.587	64	6948	4.87	ug/L	89
8) Trichlorofluoromethane	1.686	101	24526	4.60	ug/L	94
9) Ethyl Ether	1.880	59	19504	4.97	ug/L	96
10) Ethanol	1.948	45	12128	97.25	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.979	67	21401	5.82	ug/L	96
12) 1,1-Dichloroethene	1.990	61	25002	4.66	ug/L	99
13) Freon 113	2.021	101	15520	4.87	ug/L	95
14) Carbon Disulfide	2.005	76	31898	4.00	ug/L	95
15) Iodomethane	2.068	142	4358	2.17	ug/L	94
16) Acrolein	2.157	56	34423	23.96	ug/L	97
17) Allyl chloride	2.251	41	15120	3.92	ug/L	93
18) Methylene Chloride	2.303	49	46334	7.66	ug/L	95
19) Acetone	2.319	43	64187	24.36	ug/L	100
20) Methyl acetate	2.397	43	126732	24.12	ug/L	99
21) trans-1,2-Dichloroethene	2.408	61	24796	4.56	ug/L	98
22) Hexane	2.476	56	12209	5.10	ug/L	90
23) Methyl Tert Butyl Ether	2.471	73	59418	4.79	ug/L	92
24) Tert Butyl Alcohol	2.502	59	69831	45.56	ug/L	100
25) Acetonitrile	2.554	41	48232	55.48	ug/L	98
26) Di-isopropyl ether	2.690	45	54649	4.75	ug/L	98
27) Chloroprene	2.732	53	75453	4.60	ug/L	99
28) 1,1-Dichloroethane	2.732	63	32619	4.56	ug/L	96
29) Acrylonitrile	2.732	52	58485	22.57	ug/L	99
30) ETBE	2.884	59	61832	4.59	ug/L	96
31) Vinyl acetate	2.863	43	191760	20.68	ug/L	98
32) cis-1,2-Dichloroethene	3.025	96	20702	4.85	ug/L	96
33) 2,2-Dichloropropane	3.087	77	22491	4.41	ug/L	99
34) Bromochloromethane	3.129	128	9889	5.13	ug/L	89
35) Cyclohexane	3.166	56	28785	4.65	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:47:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	34137	4.76	ug/L		95
37) Ethyl acetate	3.229	43	160554	22.89	ug/L		99
38) Tetrahydrofuran	3.260	42	13661	5.10	ug/L		95
40) Carbon Tetrachloride	3.270	117	18600m	4.61	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	27046	4.67	ug/L		99
42) 2-Butanone	3.318	43	105071	23.89	ug/L		96
43) 1,1-Dichloropropene	3.370	75	25617	4.76	ug/L		94
44) tert-Butyl formate	3.412	59	65551	24.17	ug/L	#	87
45) Propionitrile	3.459	54	68706	49.77	ug/L		98
46) Methacrylonitrile	3.485	41	176280	47.81	ug/L		98
47) Benzene	3.495	78	82137	4.78	ug/L		91
48) TAME	3.568	73	56228	4.59	ug/L		94
50) Isobutyl alcohol	3.584	43	65143m	92.25	ug/L		
51) 1,2-Dichloroethane	3.589	62	28906	4.70	ug/L		96
52) Tert Amyl Alcohol	3.647	59	53063	41.86	ug/L		87
53) Trichloroethene	3.830	95	20808	4.70	ug/L		96
54) Methylcyclohexane	3.846	83	26589	4.97	ug/L		94
55) Dibromomethane	4.049	93	10959	4.51	ug/L		94
56) 1,2-Dichloropropane	4.112	63	19563	4.69	ug/L		96
57) Bromodichloromethane	4.149	83	16964	4.17	ug/L		94
58) Methyl methacrylate	4.238	41	18577	4.26	ug/L		96
59) 1,4-Dioxane	4.259	88	12166	92.73	ug/L		88
60) 2-Chloroethyl vinyl ether	4.478	63	80402	23.15	ug/L		97
61) cis-1,3-Dichloropropene	4.525	75	22408	4.19	ug/L		96
64) Toluene	4.682	91	91537	4.87	ug/L		98
65) 2-Nitropropane	4.776	41	20785	16.55	ug/L		96
66) 4-Methyl-2-pentanone	4.891	43	173118	23.88	ug/L		97
67) trans-1,3-Dichloropropene	4.923	75	19984	3.99	ug/L		86
68) Tetrachloroethene	4.938	166	20934	5.25	ug/L		96
69) Ethyl methacrylate	5.032	69	26422	4.23	ug/L		97
70) 1,1,2-Trichloroethane	5.022	83	15129	4.71	ug/L		97
71) Dibromochloromethane	5.142	129	11813	3.94	ug/L		95
72) 1,3-Dichloropropane	5.194	76	32902	4.60	ug/L		99
73) 1,2-Dibromoethane	5.294	107	18178	4.68	ug/L		91
74) 3,3-dimethyl-1-butanol	5.414	57	368094	228.95	ug/L		97
75) 2-hexanone	5.430	43	202398	24.87	ug/L	#	71
76) 1-Chlorohexane	5.649	91	27563m	4.60	ug/L		
77) Ethylbenzene	5.686	91	96812	4.70	ug/L		100
78) Chlorobenzene	5.654	112	54686	4.86	ug/L		97
79) 1,1,1,2-Tetrachloroethane	5.696	131	15048	4.56	ug/L		92
80) m,p-Xylene	5.785	91	151136	9.27	ug/L		98
81) o-Xylene	6.078	91	73414	4.58	ug/L		96
82) Styrene	6.109	104	51147	4.17	ug/L		99
83) Bromoform	6.115	173	6003	3.86	ug/L		91
84) Isopropylbenzene	6.308	105	82838	4.48	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	7536	4.03	ug/L	#	75
88) n-Propylbenzene	6.611	91	101130	4.45	ug/L		98
89) Bromobenzene	6.569	156	22190	4.83	ug/L		95
90) 1,1,2,2-Tetrachloroethane	6.632	83	28187	4.60	ug/L		95
91) 1,3,5-Trimethylbenzene	6.758	105	70107	4.43	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:47:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

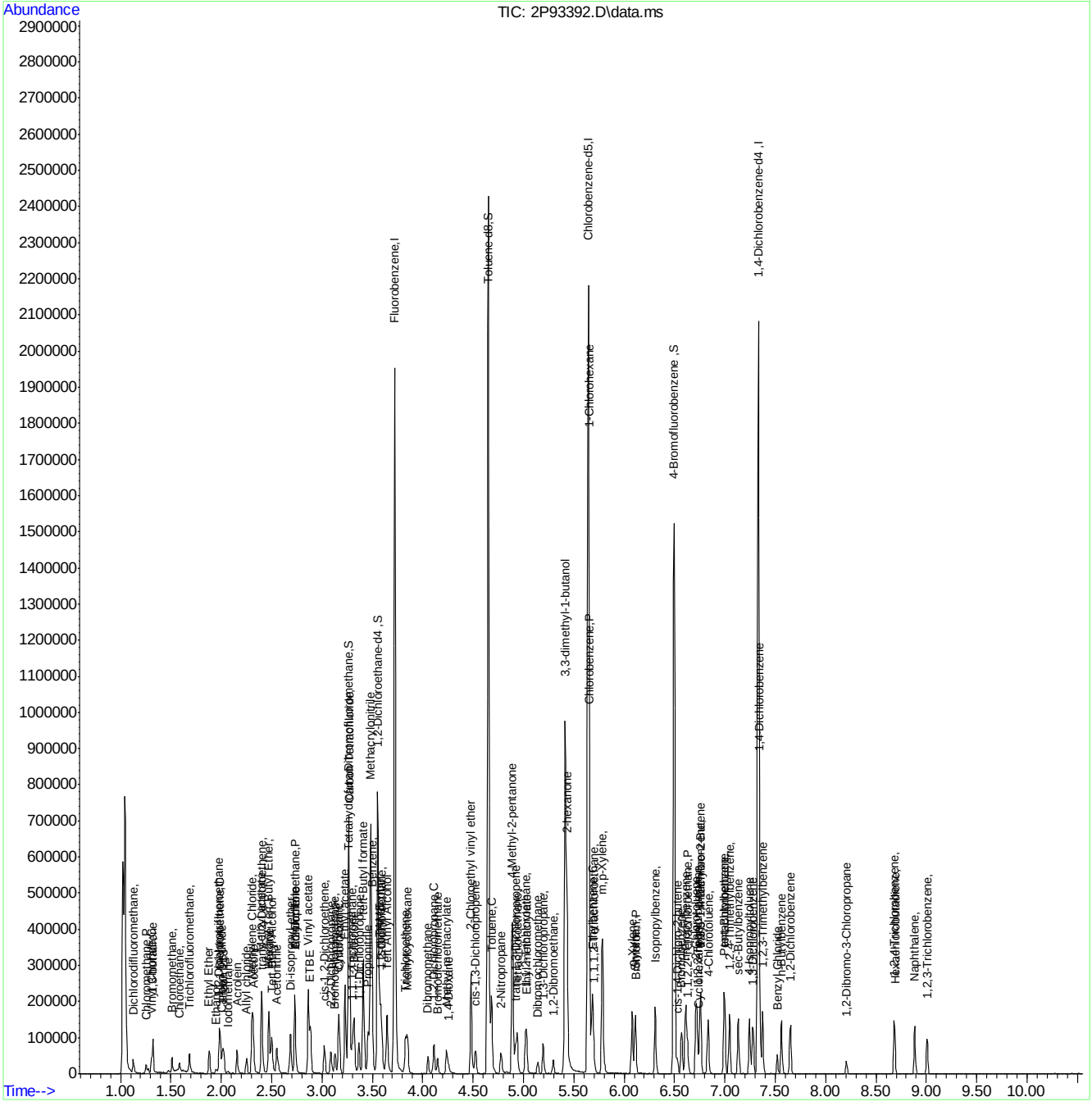
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.716	91	62842	4.59	ug/L		97
93)	trans-1,4-Dichloro-2-B...	6.758	53	8822	3.36	ug/L		84
94)	1,2,3-Trichloropropane	6.726	110	10742	4.70	ug/L		94
95)	Cyclohexanone	6.742	55	11102	23.21	ug/L		97
96)	4-Chlorotoluene	6.836	91	63855	4.42	ug/L		97
97)	tert-Butylbenzene	6.993	91	37669	4.34	ug/L		95
99)	1,2,4-Trimethylbenzene	7.045	105	66527	4.31	ug/L		99
100)	Pentachloroethane	6.998	167	6789	3.97	ug/L	#	65
101)	sec-Butylbenzene	7.134	105	74706	4.44	ug/L		99
102)	4-Isopropyltoluene	7.244	119	63248	4.56	ug/L		95
103)	1,3-Dichlorobenzene	7.280	146	38861	4.71	ug/L		97
104)	1,2,3-Trimethylbenzene	7.374	105	67850	4.39	ug/L		99
105)	1,4-Dichlorobenzene	7.343	146	42067	4.88	ug/L		87
106)	n-Butylbenzene	7.563	92	32482	4.74	ug/L		91
107)	Benzyl Chloride	7.521	126	4147	2.82	ug/L	#	66
108)	1,2-Dichlorobenzene	7.652	146	36814	4.76	ug/L		96
109)	1,2-Dibromo-3-Chloropr...	8.206	75	4640	3.68	ug/L		90
110)	Hexachlorobutadiene	8.687	225	6595	5.03	ug/L		95
111)	1,2,4-Trichlorobenzene	8.681	180	18773	4.56	ug/L		99
112)	Naphthalene	8.885	128	65823	4.08	ug/L		94
113)	1,2,3-Trichlorobenzene	9.011	180	17617	4.56	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:47:15 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

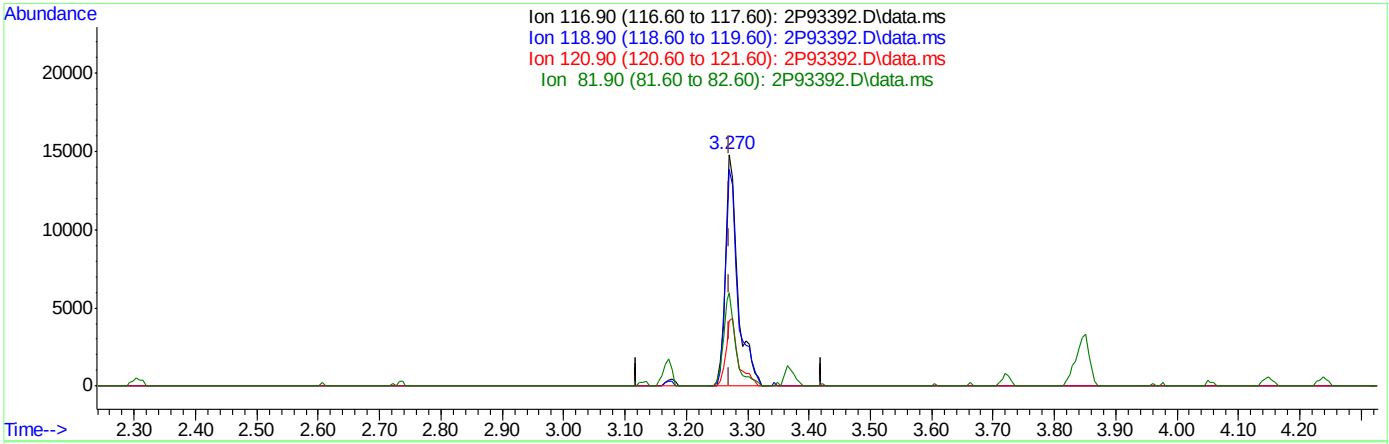
Sample Number:	V2P3589-IC3589	**Method:**	SW846 8260D
Lab FileID:	2P93392.D	**Analyst approved:**	09/26/22 16:01 Courtney Failla
Injection Time:	09/26/22 13:03	**Supervisor approved:**	09/27/22 11:25 Lindsay Ritner

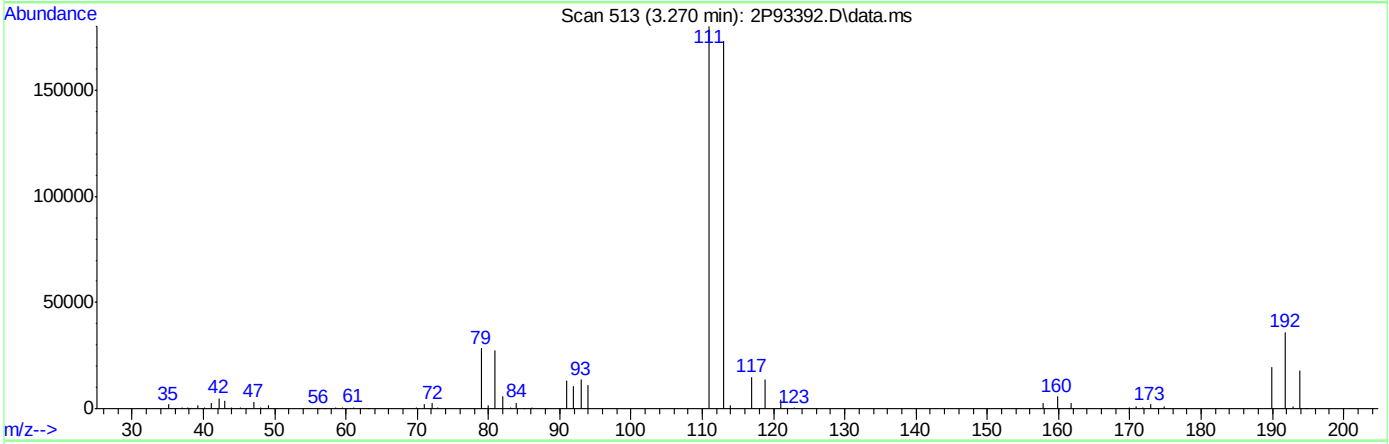
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93392.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 5.26ug/L

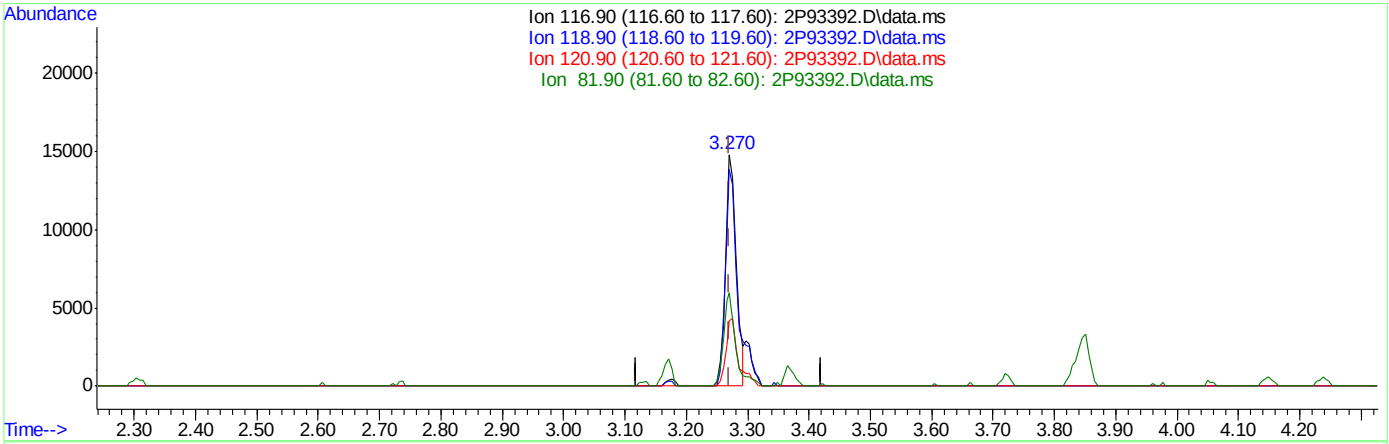
response 21295

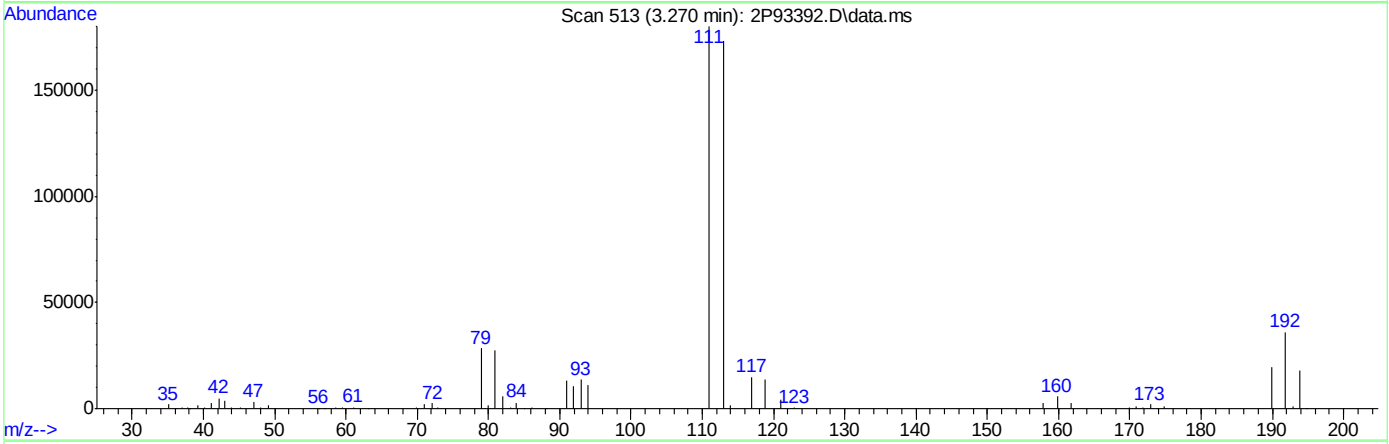
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	93.42
120.90	29.50	28.29
81.90	28.30	40.56

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93392.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 4.61ug/L m

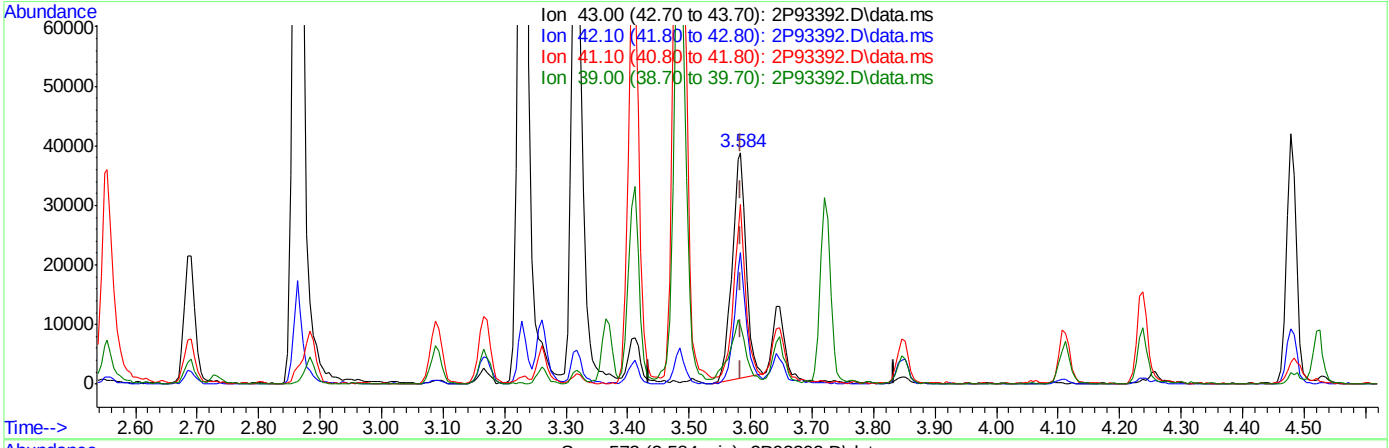
response 18600

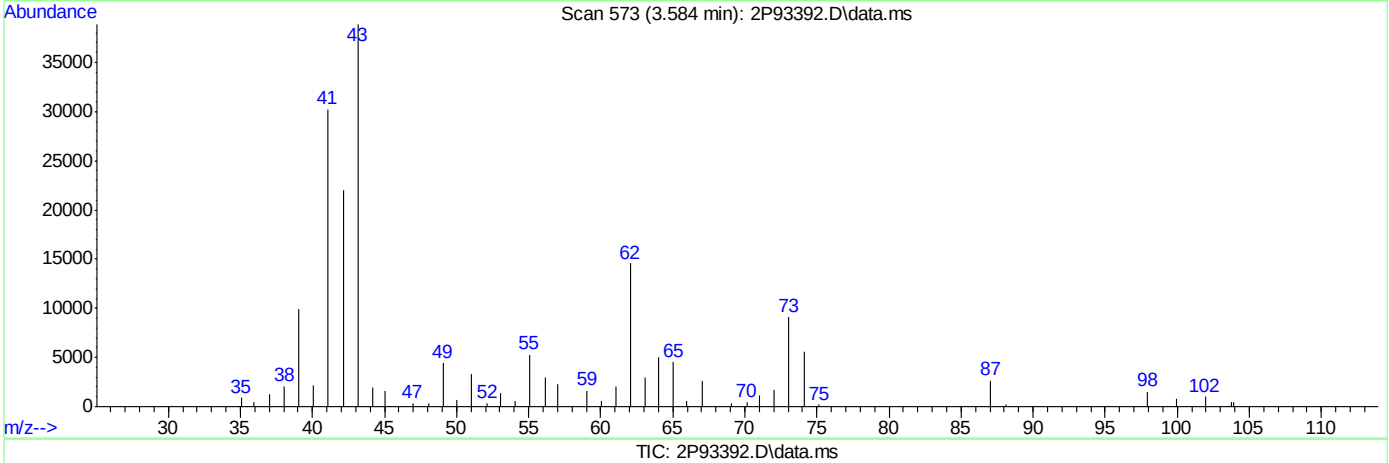
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	93.42
120.90	29.50	28.29
81.90	28.30	40.56

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93392.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 86.15ug/L

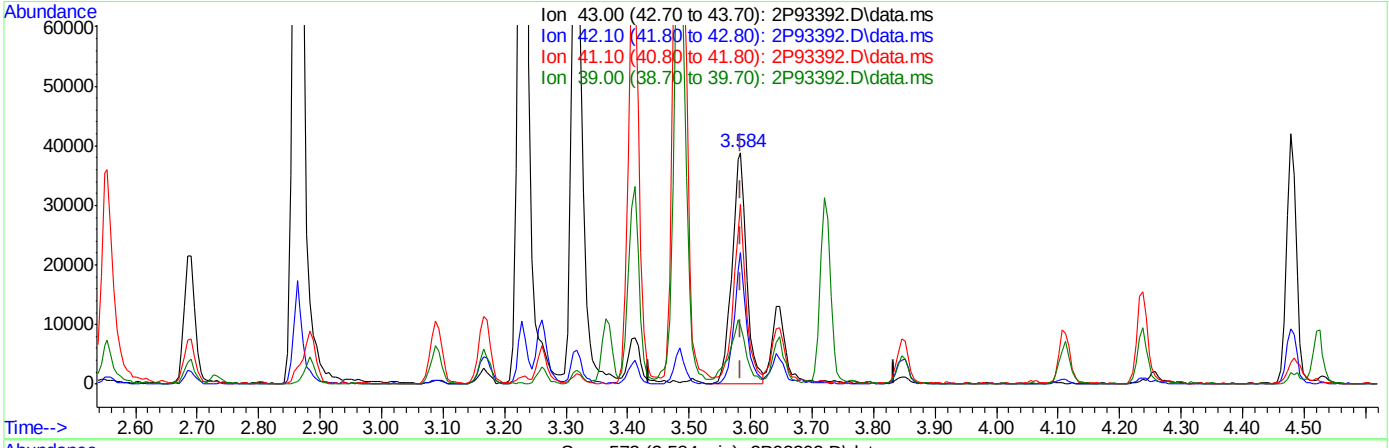
response 60833

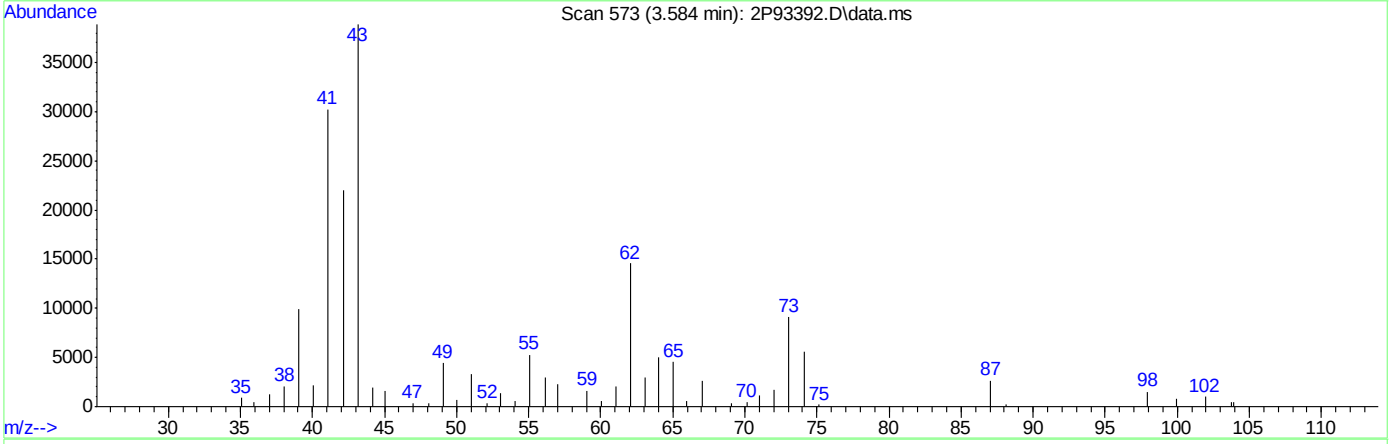
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.72
41.10	70.00	75.20
39.00	27.50	23.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93392.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 92.25ug/L m

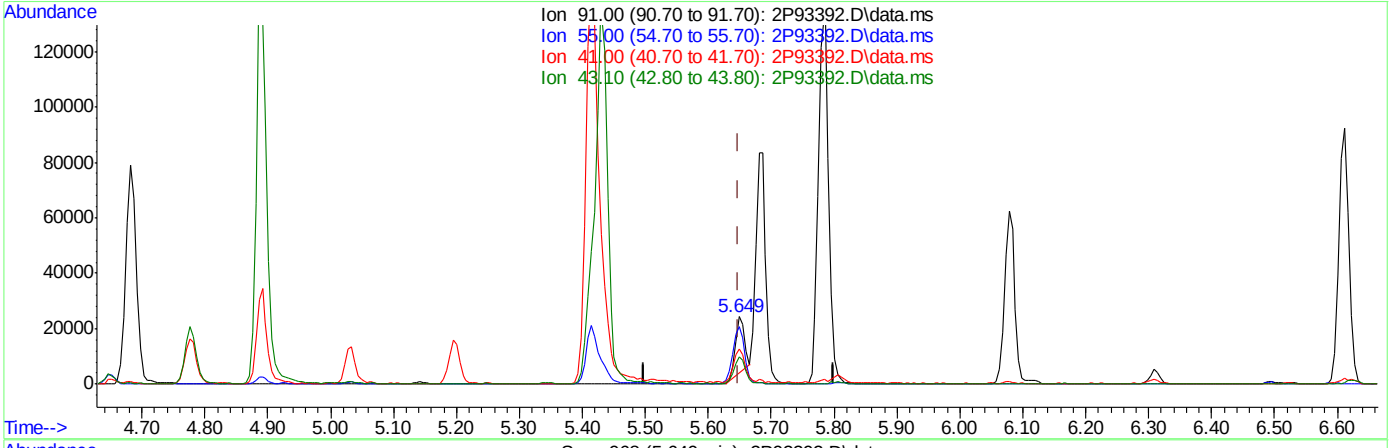
response 65143

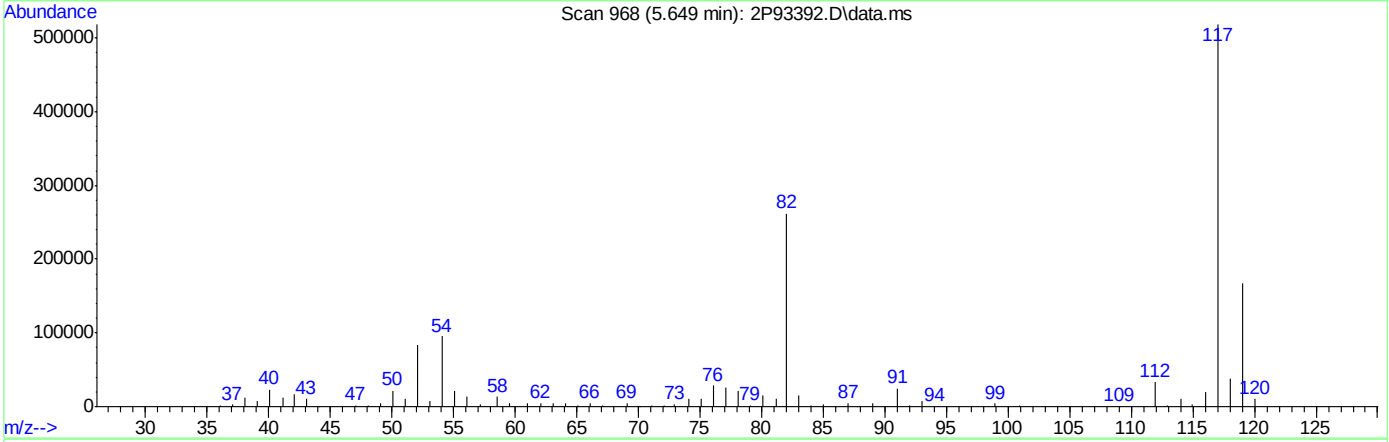
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.72
41.10	70.00	77.73
39.00	27.50	25.39

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93392.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 3.29ug/L

response 19704

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	80.74
41.00	53.40	47.51
43.10	41.30	39.55

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93392.D
Acq On : 26 Sep 2022 1:03 pm
Operator : courtnef
Sample : IC3589-2
Misc : MS52362,V2P3589,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 26 13:46:21 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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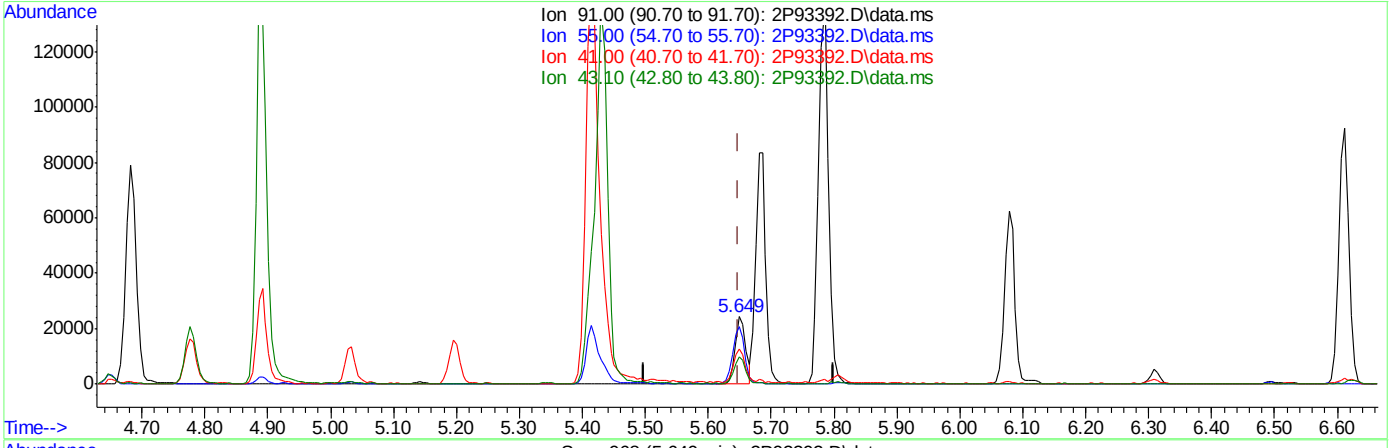
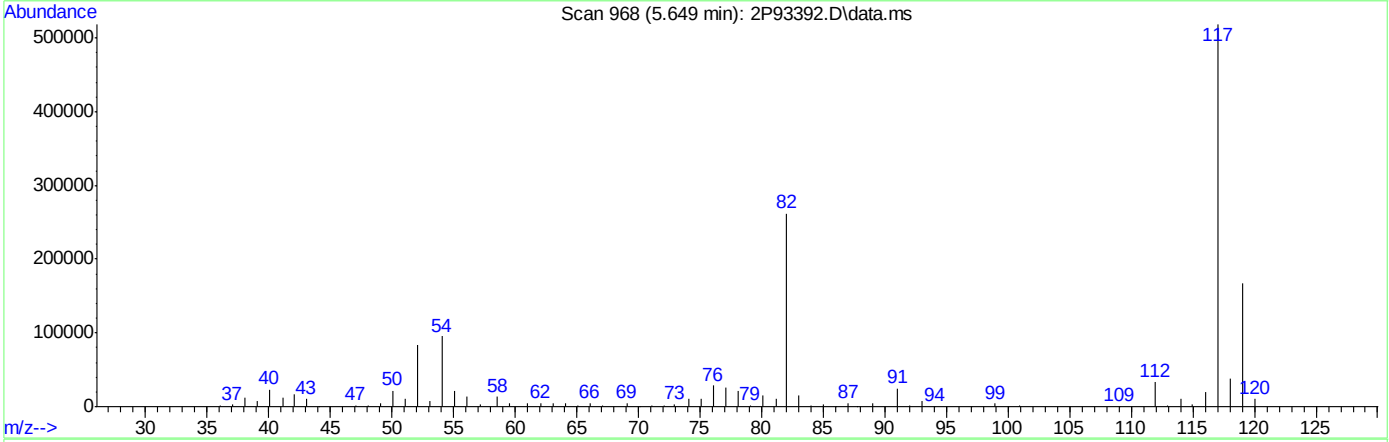




TIC: 2P93392.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 4.60ug/L m

response 27563

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	85.71
41.00	53.40	51.47
43.10	41.30	40.90

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:48:38 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.723	96	1156528	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.642	117	813839	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.330	152	386254	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.268	113	239832	48.79	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.58%			
49) 1,2-Dichloroethane-d4	3.556	65	326661	47.85	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 95.70%			
63) Toluene-d8	4.649	98	1114630	49.77	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.54%			
86) 4-Bromofluorobenzene	6.494	174	292606	48.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.125	85	41909	13.13	ug/L	99
3) Chloromethane	1.250	50	43311	12.28	ug/L	91
4) 1,3-butadiene	1.323	39	38223	11.66	ug/L	97
5) Vinyl Chloride	1.308	62	49412	11.49	ug/L	95
6) Bromomethane	1.512	94	28265	10.62	ug/L	99
7) Chloroethane	1.585	64	14781	10.19	ug/L	88
8) Trichlorofluoromethane	1.679	101	55183	10.46	ug/L	99
9) Ethyl Ether	1.883	59	42778	10.63	ug/L	99
10) Ethanol	1.951	45	28332	225.76	ug/L	93
11) 1,2-Dichlorotrifluoroe...	1.982	67	46256	12.29	ug/L	97
12) 1,1-Dichloroethene	1.987	61	54231	9.86	ug/L	97
13) Freon 113	2.019	101	34675	10.50	ug/L	95
14) Carbon Disulfide	2.008	76	73109	8.77	ug/L	95
15) Iodomethane	2.066	142	16357	7.74	ug/L	99
16) Acrolein	2.155	56	76040	51.67	ug/L	100
17) Allyl chloride	2.249	41	36773	9.30	ug/L	95
18) Methylene Chloride	2.306	49	71254	11.60	ug/L	94
19) Acetone	2.317	43	135645	50.44	ug/L	99
20) Methyl acetate	2.400	43	277316	51.53	ug/L	98
21) trans-1,2-Dichloroethene	2.406	61	57874	10.39	ug/L	96
22) Hexane	2.474	56	26242	10.47	ug/L	94
23) Methyl Tert Butyl Ether	2.474	73	136469	10.75	ug/L	92
24) Tert Butyl Alcohol	2.500	59	158276	100.82	ug/L	94
25) Acetonitrile	2.552	41	101928	114.46	ug/L	98
26) Di-isopropyl ether	2.688	45	123198	10.45	ug/L	99
27) Chloroprene	2.730	53	167157	9.96	ug/L	99
28) 1,1-Dichloroethane	2.735	63	75714	10.34	ug/L	98
29) Acrylonitrile	2.730	52	130551	49.18	ug/L	99
30) ETBE	2.887	59	142387	10.31	ug/L	96
31) Vinyl acetate	2.861	43	451313	47.52	ug/L	99
32) cis-1,2-Dichloroethene	3.023	96	45499	10.42	ug/L	98
33) 2,2-Dichloropropane	3.091	77	54260	10.19	ug/L	99
34) Bromochloromethane	3.127	128	21168	10.72	ug/L	95
35) Cyclohexane	3.169	56	64177	9.96	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:48:38 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.169	83	77480	10.54	ug/L		98
37) Ethyl acetate	3.226	43	354089	49.29	ug/L		99
38) Tetrahydrofuran	3.258	42	29690	10.82	ug/L		93
40) Carbon Tetrachloride	3.274	117	42540m	10.09	ug/L		
41) 1,1,1-Trichloroethane	3.300	97	62870	10.46	ug/L		95
42) 2-Butanone	3.315	43	229365	50.98	ug/L		98
43) 1,1-Dichloropropene	3.368	75	56947	10.33	ug/L		97
44) tert-Butyl formate	3.409	59	160469	56.06	ug/L		93
45) Propionitrile	3.462	54	153676	108.69	ug/L		98
46) Methacrylonitrile	3.483	41	397805	105.33	ug/L		97
47) Benzene	3.498	78	185085	10.51	ug/L		79
48) TAME	3.566	73	128811	10.26	ug/L		95
50) Isobutyl alcohol	3.582	43	154558m	213.69	ug/L		
51) 1,2-Dichloroethane	3.592	62	65401	10.38	ug/L		98
52) Tert Amyl Alcohol	3.645	59	128269	98.37	ug/L		92
53) Trichloroethene	3.828	95	47227	10.42	ug/L		96
54) Methylcyclohexane	3.849	83	60739	10.85	ug/L		99
55) Dibromomethane	4.053	93	25707	10.33	ug/L		90
56) 1,2-Dichloropropane	4.110	63	45147	10.56	ug/L		98
57) Bromodichloromethane	4.147	83	42094	9.87	ug/L		99
58) Methyl methacrylate	4.235	41	42844	9.46	ug/L		97
59) 1,4-Dioxane	4.256	88	27348	203.50	ug/L		99
60) 2-Chloroethyl vinyl ether	4.481	63	183884	51.69	ug/L		97
61) cis-1,3-Dichloropropene	4.523	75	55398	9.91	ug/L		98
64) Toluene	4.685	91	204089	10.62	ug/L		100
65) 2-Nitropropane	4.779	41	57490	43.31	ug/L		96
66) 4-Methyl-2-pentanone	4.889	43	388911	52.47	ug/L		99
67) trans-1,3-Dichloropropene	4.920	75	52890	10.14	ug/L		86
68) Tetrachloroethene	4.941	166	46548	11.41	ug/L		91
69) Ethyl methacrylate	5.030	69	65340	10.08	ug/L		95
70) 1,1,2-Trichloroethane	5.020	83	34730	10.57	ug/L		96
71) Dibromochloromethane	5.145	129	31461	10.02	ug/L		99
72) 1,3-Dichloropropane	5.197	76	76471	10.47	ug/L		95
73) 1,2-Dibromoethane	5.297	107	42002	10.57	ug/L		89
74) 3,3-dimethyl-1-butanol	5.417	57	855263	519.61	ug/L		98
75) 2-hexanone	5.433	43	456889	54.90	ug/L	#	61
76) 1-Chlorohexane	5.652	91	66069m	10.78	ug/L		
77) Ethylbenzene	5.684	91	225883	10.72	ug/L		98
78) Chlorobenzene	5.657	112	124922	10.86	ug/L		95
79) 1,1,1,2-Tetrachloroethane	5.699	131	36237	10.57	ug/L		97
80) m,p-Xylene	5.783	91	342975	20.58	ug/L		98
81) o-Xylene	6.081	91	170890	10.42	ug/L		98
82) Styrene	6.112	104	125853	10.03	ug/L		99
83) Bromoform	6.118	173	15346	9.36	ug/L		92
84) Isopropylbenzene	6.311	105	194245	10.26	ug/L		97
87) cis-1,4-Dichloro-2-butene	6.525	53	16426	8.25	ug/L	#	82
88) n-Propylbenzene	6.609	91	237120	10.01	ug/L		98
89) Bromobenzene	6.572	156	49830	10.40	ug/L		93
90) 1,1,2,2-Tetrachloroethane	6.630	83	65266	10.21	ug/L		98
91) 1,3,5-Trimethylbenzene	6.755	105	165481	10.03	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:48:38 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

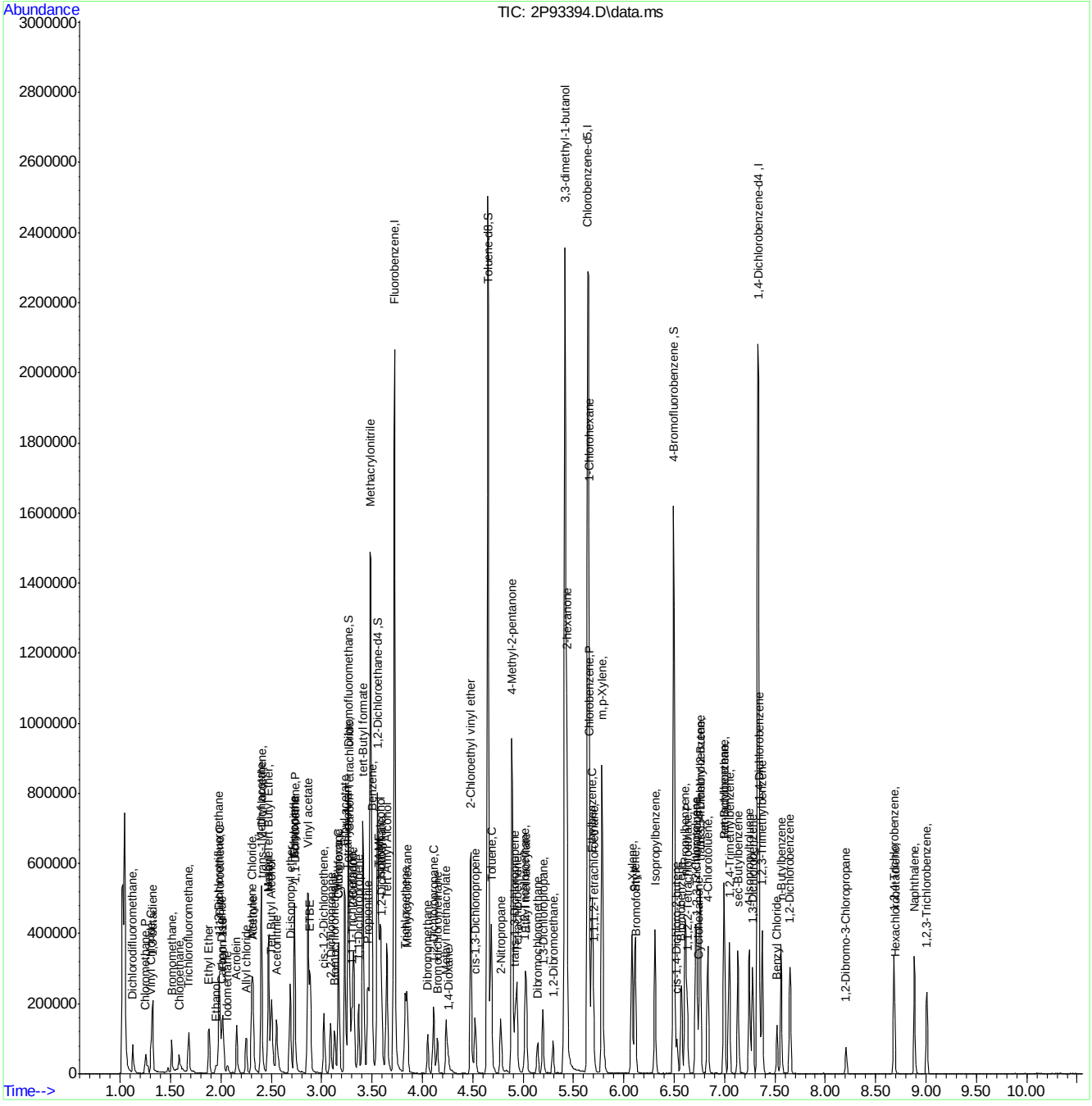
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.714	91	142700	9.98	ug/L		100
93)	trans-1,4-Dichloro-2-B...	6.761	53	22187	8.10	ug/L		83
94)	1,2,3-Trichloropropane	6.724	110	23840	10.00	ug/L		94
95)	Cyclohexanone	6.745	55	24328	48.73	ug/L		94
96)	4-Chlorotoluene	6.834	91	150167	9.96	ug/L		98
97)	tert-Butylbenzene	6.996	91	87935	9.71	ug/L		92
99)	1,2,4-Trimethylbenzene	7.048	105	159061	9.88	ug/L		96
100)	Pentachloroethane	6.996	167	17950	9.79	ug/L	#	64
101)	sec-Butylbenzene	7.132	105	176324	10.05	ug/L		99
102)	4-Isopropyltoluene	7.247	119	153214	10.41	ug/L		97
103)	1,3-Dichlorobenzene	7.278	146	89334	10.38	ug/L		95
104)	1,2,3-Trimethylbenzene	7.372	105	161472	10.00	ug/L		97
105)	1,4-Dichlorobenzene	7.346	146	94187	10.47	ug/L		97
106)	n-Butylbenzene	7.561	92	74342	10.25	ug/L		97
107)	Benzyl Chloride	7.519	126	11681	7.32	ug/L	#	70
108)	1,2-Dichlorobenzene	7.649	146	84283	10.43	ug/L		98
109)	1,2-Dibromo-3-Chloropr...	8.204	75	12071	8.97	ug/L		91
110)	Hexachlorobutadiene	8.690	225	15961	11.45	ug/L		88
111)	1,2,4-Trichlorobenzene	8.685	180	43167	10.04	ug/L		98
112)	Naphthalene	8.883	128	165170	9.67	ug/L		99
113)	1,2,3-Trichlorobenzene	9.009	180	42202	10.46	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:48:38 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

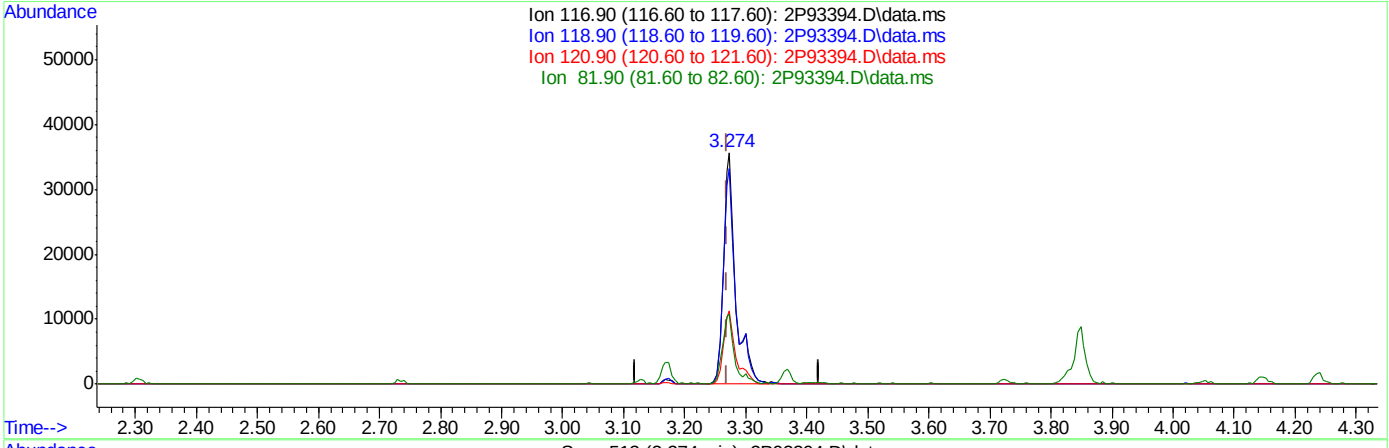
Sample Number: V2P3589-IC3589 **Method:** SW846 8260D
Lab FileID: 2P93394.D **Analyst approved:** 09/26/22 16:01 Courtney Failla
Injection Time: 09/26/22 13:35 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

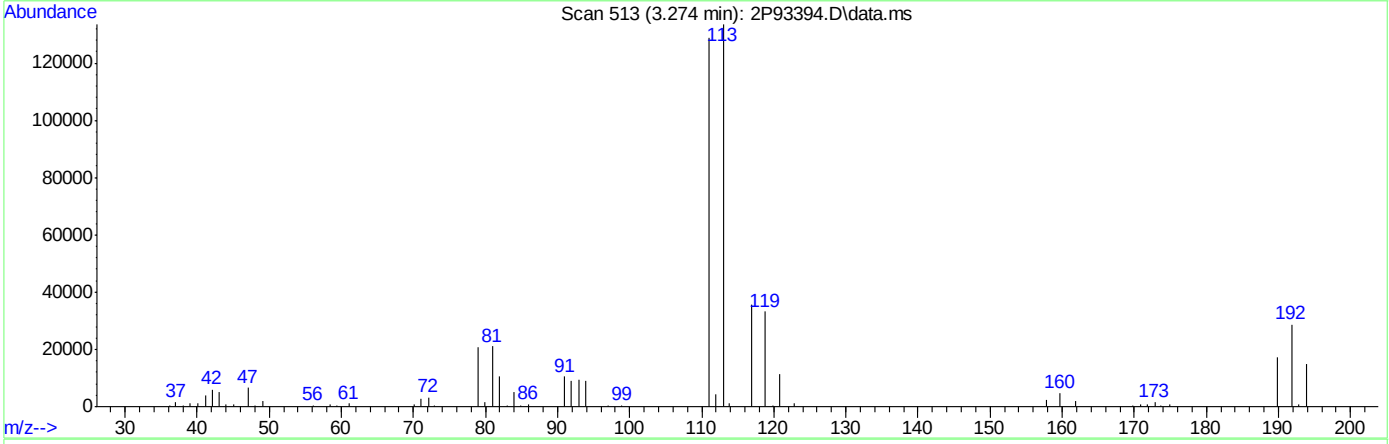
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93394.D\data.ms

(40) Carbon Tetrachloride ( )

3.274min (+0.004) 11.84ug/L

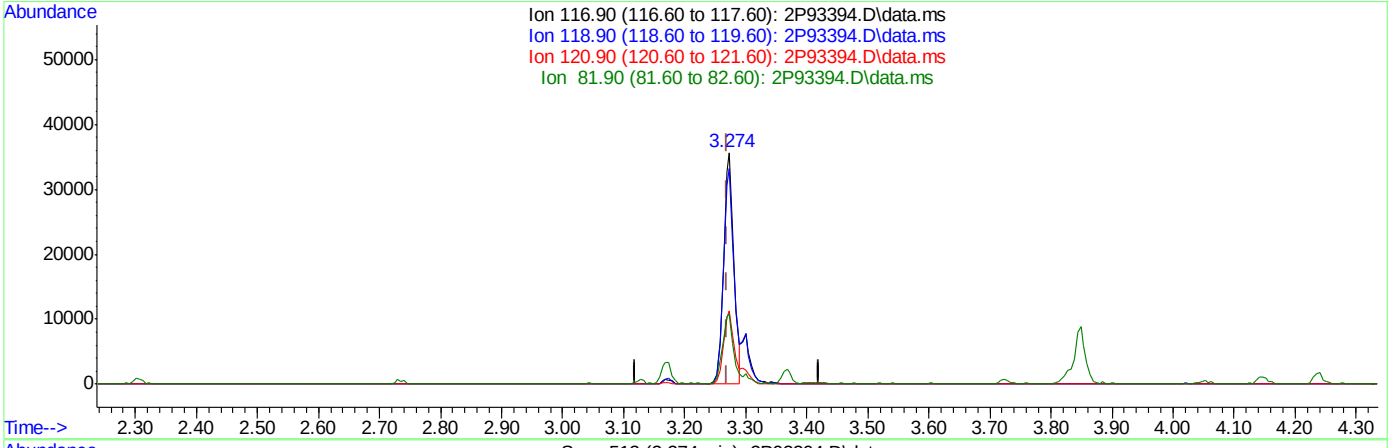
response 50199

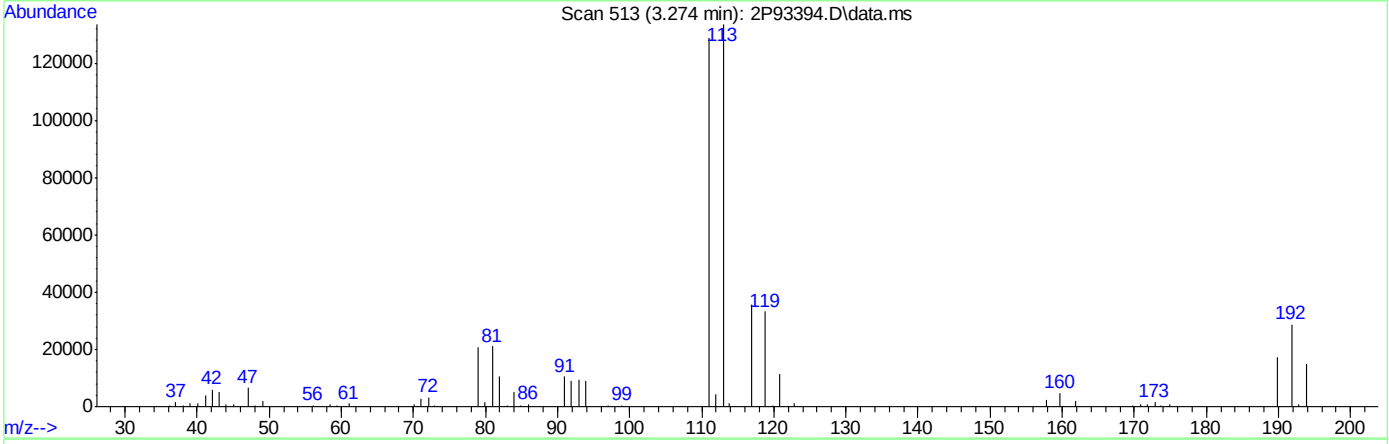
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.85
120.90	29.50	31.86
81.90	28.30	30.04

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93394.D\data.ms

(40) Carbon Tetrachloride ( )

3.274min (+0.004) 10.09ug/L m

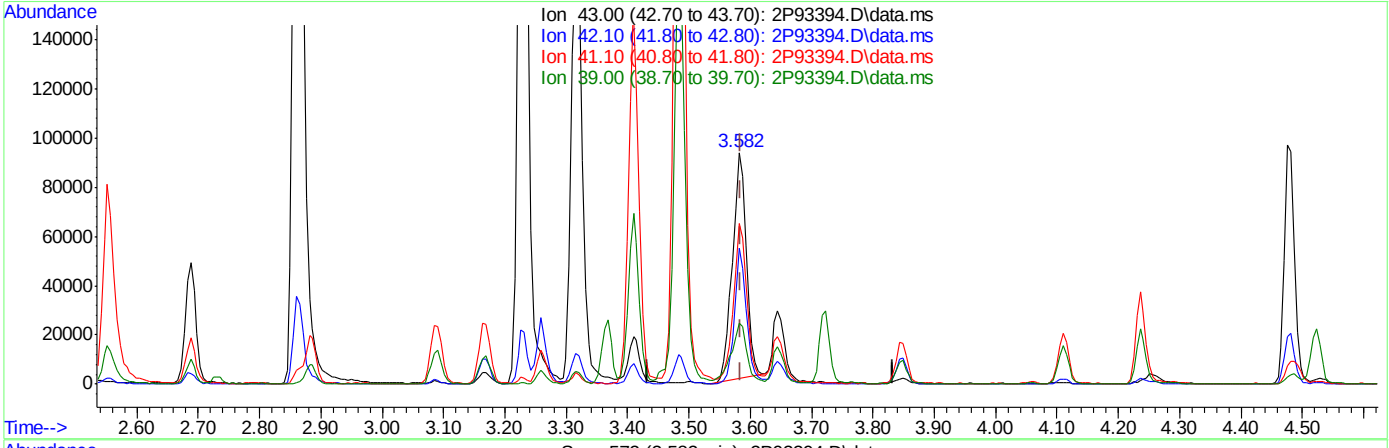
response 42540

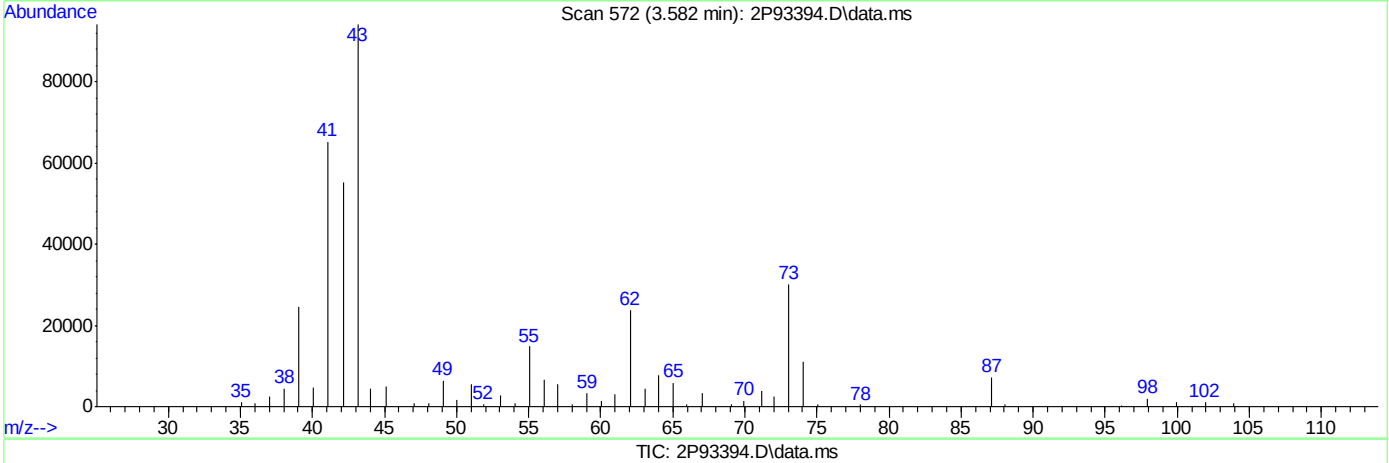
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.85
120.90	29.50	31.86
81.90	28.30	30.04

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93394.D\data.ms

(50) Isobutyl alcohol

3.582min (-0.002) 198.71ug/L

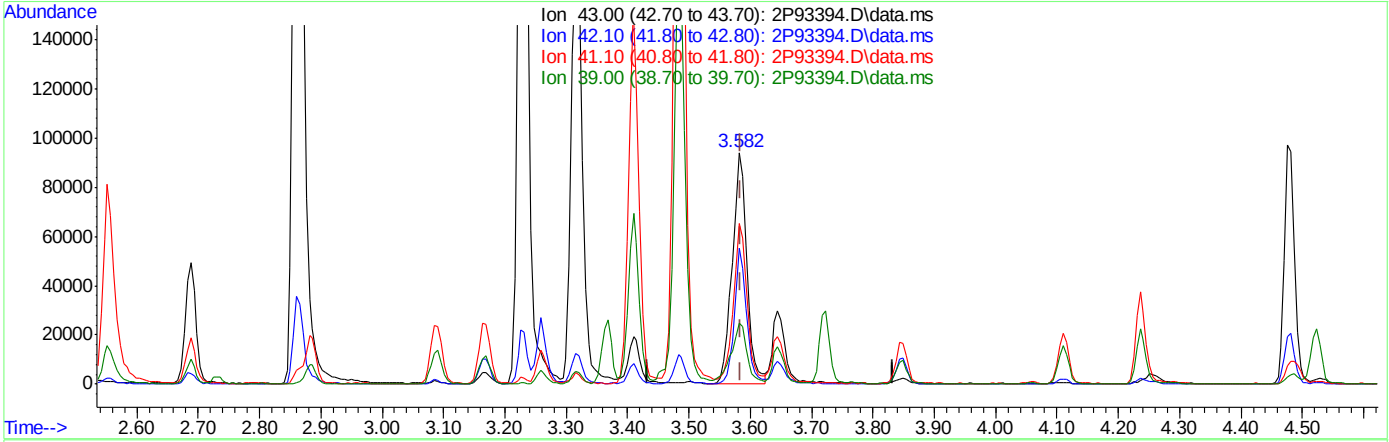
response 143725

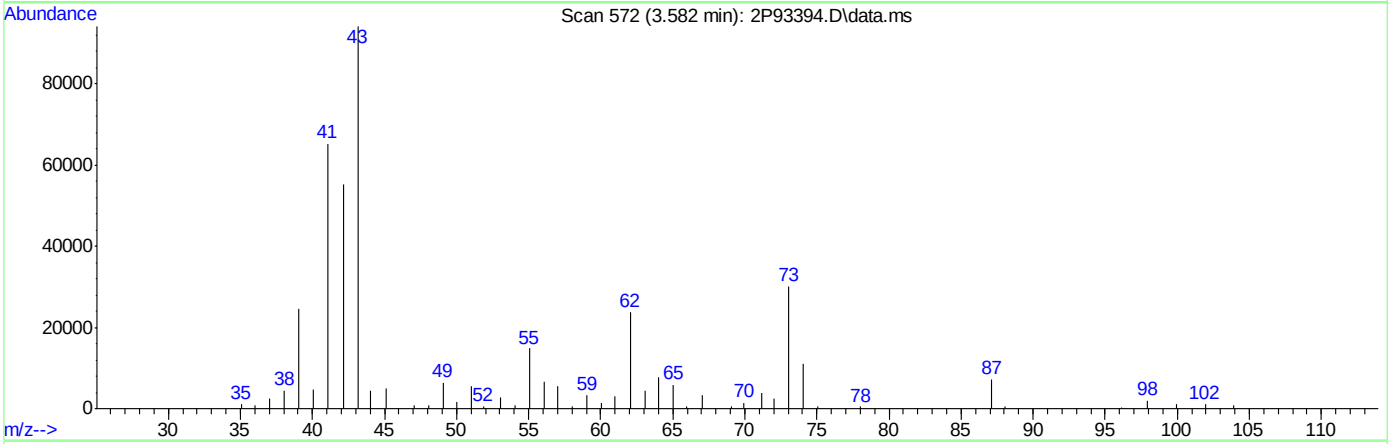
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.48
41.10	70.00	66.21
39.00	27.50	24.82

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93394.D\data.ms

(50) Isobutyl alcohol

3.582min (-0.002) 213.69ug/L m

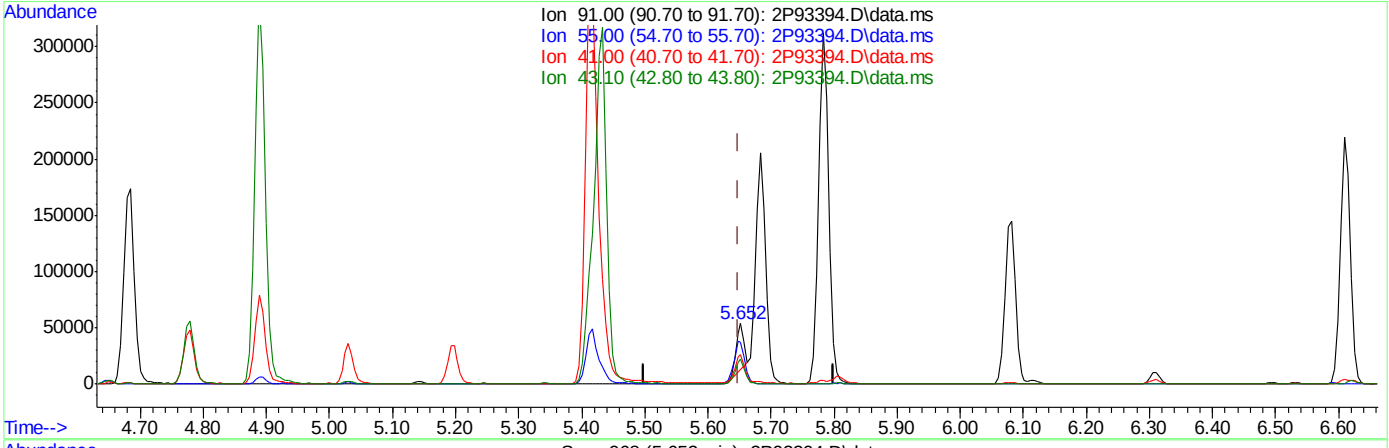
response 154558

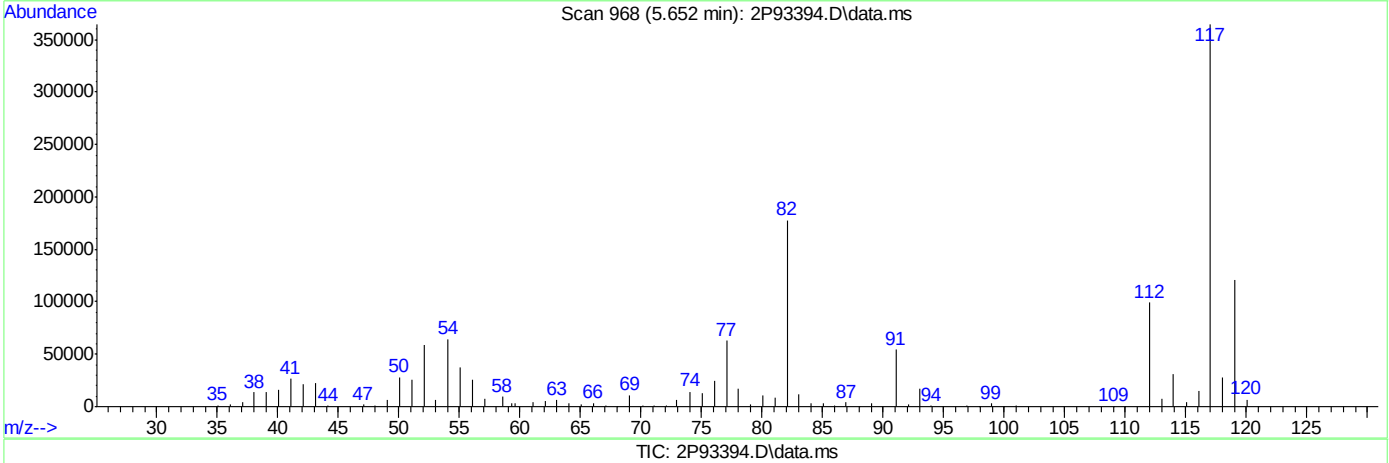
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.73
41.10	70.00	69.23
39.00	27.50	26.19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93394.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.003) 6.46ug/L

response 39562

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	63.44
41.00	53.40	45.78
43.10	41.30	39.74

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93394.D
Acq On : 26 Sep 2022 1:35 pm
Operator : courtnef
Sample : IC3589-3
Misc : MS52362,V2P3589,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Sep 26 13:47:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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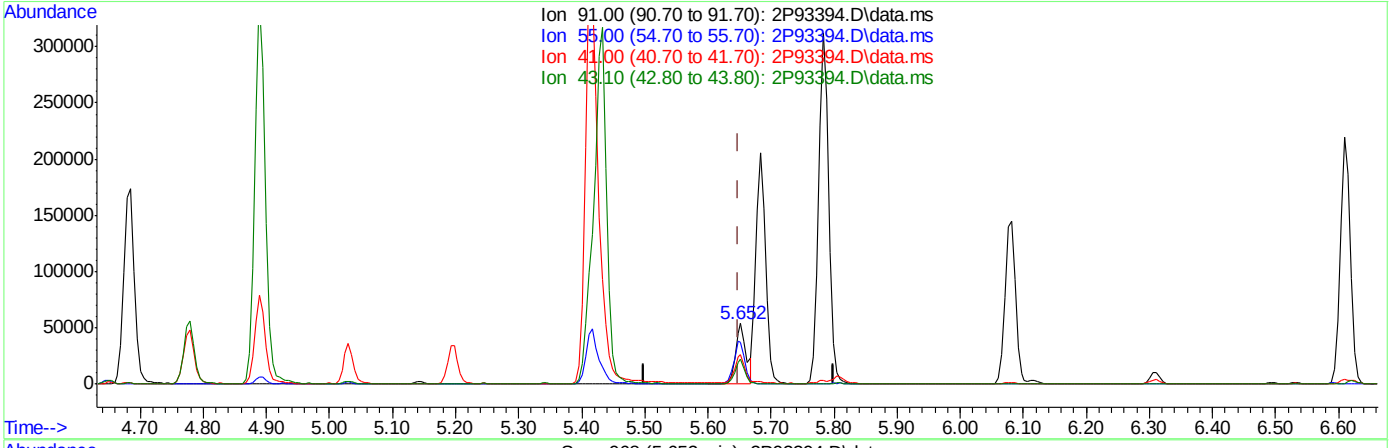
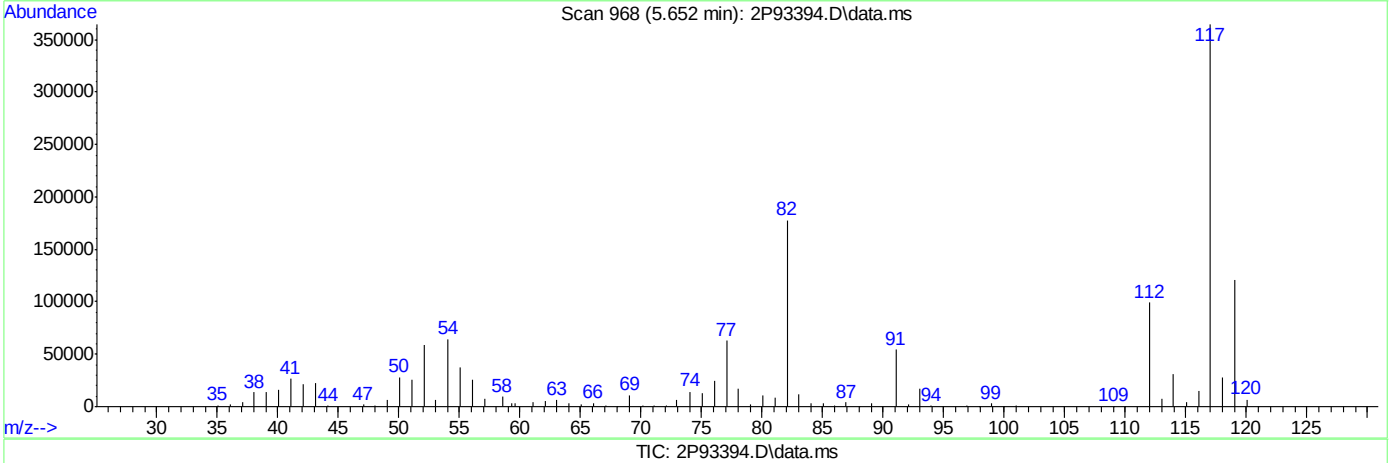




TIC: 2P93394.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.003) 10.78ug/L m

response 66069

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	68.95
41.00	53.40	48.98
43.10	41.30	40.75

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner 09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:39:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1194794	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	852347	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	405296	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	252545	49.73	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.46%			
49) 1,2-Dichloroethane-d4	3.553	65	335954	47.63	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 95.26%			
63) Toluene-d8	4.651	98	1148053	48.95	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.90%			
86) 4-Bromofluorobenzene	6.496	174	306189	48.44	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.88%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.122	85	117412	35.60	ug/L	99
3) Chloromethane	1.248	50	110786	30.40	ug/L	99
4) 1,3-butadiene	1.321	39	98003	28.94	ug/L	95
5) Vinyl Chloride	1.305	62	130869	29.47	ug/L	98
6) Bromomethane	1.509	94	62867	22.87	ug/L	98
7) Chloroethane	1.582	64	38288	26.24	ug/L	99
8) Trichlorofluoromethane	1.676	101	134447	27.56	ug/L	99
9) Ethyl Ether	1.880	59	109180	26.27	ug/L	98
10) Ethanol	1.964	45	65432	526.60	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.979	67	123915	31.87	ug/L	97
12) 1,1-Dichloroethene	1.985	61	146491	25.79	ug/L	98
13) Freon 113	2.016	101	100014	28.20	ug/L	97
14) Carbon Disulfide	2.000	76	215865	23.56	ug/L	98
15) Iodomethane	2.063	142	71082	29.49	ug/L	99
16) Acrolein	2.157	56	177996	117.08	ug/L	99
17) Allyl chloride	2.251	41	100537	24.61	ug/L	93
18) Methylene Chloride	2.304	49	146184	23.61	ug/L	95
19) Acetone	2.319	43	332974	121.00	ug/L	97
20) Methyl acetate	2.398	43	710348	127.78	ug/L	99
21) trans-1,2-Dichloroethene	2.403	61	148943	25.89	ug/L	98
22) Hexane	2.471	56	79126	28.48	ug/L	96
23) Methyl Tert Butyl Ether	2.471	73	358217	27.32	ug/L	94
24) Tert Butyl Alcohol	2.507	59	417773	257.59	ug/L	98
25) Acetonitrile	2.555	41	239785	260.64	ug/L	99
26) Di-isopropyl ether	2.685	45	328511	26.98	ug/L	97
27) Chloroprene	2.727	53	429916	24.79	ug/L	98
28) 1,1-Dichloroethane	2.732	63	197143	26.06	ug/L	98
29) Acrylonitrile	2.732	52	336188	122.59	ug/L	97
30) ETBE	2.884	59	380425	26.67	ug/L	97
31) Vinyl acetate	2.863	43	1209083	123.23	ug/L	98
32) cis-1,2-Dichloroethene	3.025	96	116893	25.90	ug/L	97
33) 2,2-Dichloropropane	3.088	77	151458	26.12	ug/L	98
34) Bromochloromethane	3.130	128	52767	25.87	ug/L	91
35) Cyclohexane	3.166	56	181175	26.04	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:39:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	200873	26.46	ug/L		98
37) Ethyl acetate	3.229	43	921084	124.11	ug/L		98
38) Tetrahydrofuran	3.255	42	69862	24.65	ug/L		99
40) Carbon Tetrachloride	3.271	117	122493m	26.59	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	170542	26.43	ug/L		98
42) 2-Butanone	3.318	43	567458	122.53	ug/L		98
43) 1,1-Dichloropropene	3.365	75	151057	26.51	ug/L		96
44) tert-Butyl formate	3.412	59	403453	127.91	ug/L		98
45) Propionitrile	3.459	54	393873	269.66	ug/L		97
46) Methacrylonitrile	3.485	41	1010001	258.86	ug/L		99
47) Benzene	3.496	78	480478	26.42	ug/L		88
48) TAME	3.569	73	343200	26.46	ug/L		98
50) Isobutyl alcohol	3.584	43	407295m	545.08	ug/L		
51) 1,2-Dichloroethane	3.590	62	163300	25.09	ug/L		96
52) Tert Amyl Alcohol	3.647	59	348894	255.96	ug/L		98
53) Trichloroethene	3.825	95	121392	25.94	ug/L		98
54) Methylcyclohexane	3.846	83	164512	26.91	ug/L		97
55) Dibromomethane	4.050	93	67522	26.26	ug/L		94
56) 1,2-Dichloropropane	4.112	63	117585	26.62	ug/L		94
57) Bromodichloromethane	4.149	83	119254	25.47	ug/L		98
58) Methyl methacrylate	4.238	41	124306	25.46	ug/L		97
59) 1,4-Dioxane	4.259	88	70936	510.95	ug/L		99
60) 2-Chloroethyl vinyl ether	4.478	63	445949	121.34	ug/L		97
61) cis-1,3-Dichloropropene	4.520	75	160004	26.20	ug/L		97
64) Toluene	4.682	91	525412	26.11	ug/L		99
65) 2-Nitropropane	4.776	41	181535	119.44	ug/L		99
66) 4-Methyl-2-pentanone	4.891	43	985649	126.97	ug/L		97
67) trans-1,3-Dichloropropene	4.918	75	147247	25.78	ug/L		86
68) Tetrachloroethene	4.938	166	119310	27.92	ug/L		97
69) Ethyl methacrylate	5.027	69	183988	26.12	ug/L		93
70) 1,1,2-Trichloroethane	5.022	83	91604	26.61	ug/L		98
71) Dibromochloromethane	5.142	129	92067	26.29	ug/L		98
72) 1,3-Dichloropropane	5.195	76	199395	26.06	ug/L		95
73) 1,2-Dibromoethane	5.294	107	110956	26.67	ug/L		94
74) 3,3-dimethyl-1-butanol	5.419	57	2109875	1220.60	ug/L		98
75) 2-hexanone	5.430	43	1109702	127.32	ug/L	#	77
76) 1-Chlorohexane	5.649	91	164308m	25.60	ug/L		
77) Ethylbenzene	5.681	91	578186	26.20	ug/L		99
78) Chlorobenzene	5.655	112	321033	26.64	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.697	131	100205	26.76	ug/L		98
80) m,p-Xylene	5.785	91	909835	52.13	ug/L		98
81) o-Xylene	6.078	91	446961	26.02	ug/L		98
82) Styrene	6.110	104	353766	26.92	ug/L		97
83) Bromoform	6.115	173	47623	25.42	ug/L		94
84) Isopropylbenzene	6.308	105	534472	26.97	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.528	53	49869	22.47	ug/L		87
88) n-Propylbenzene	6.611	91	630582	25.36	ug/L		98
89) Bromobenzene	6.570	156	130689	25.99	ug/L		96
90) 1,1,2,2-Tetrachloroethane	6.627	83	173355	25.84	ug/L		97
91) 1,3,5-Trimethylbenzene	6.758	105	446871	25.81	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:39:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

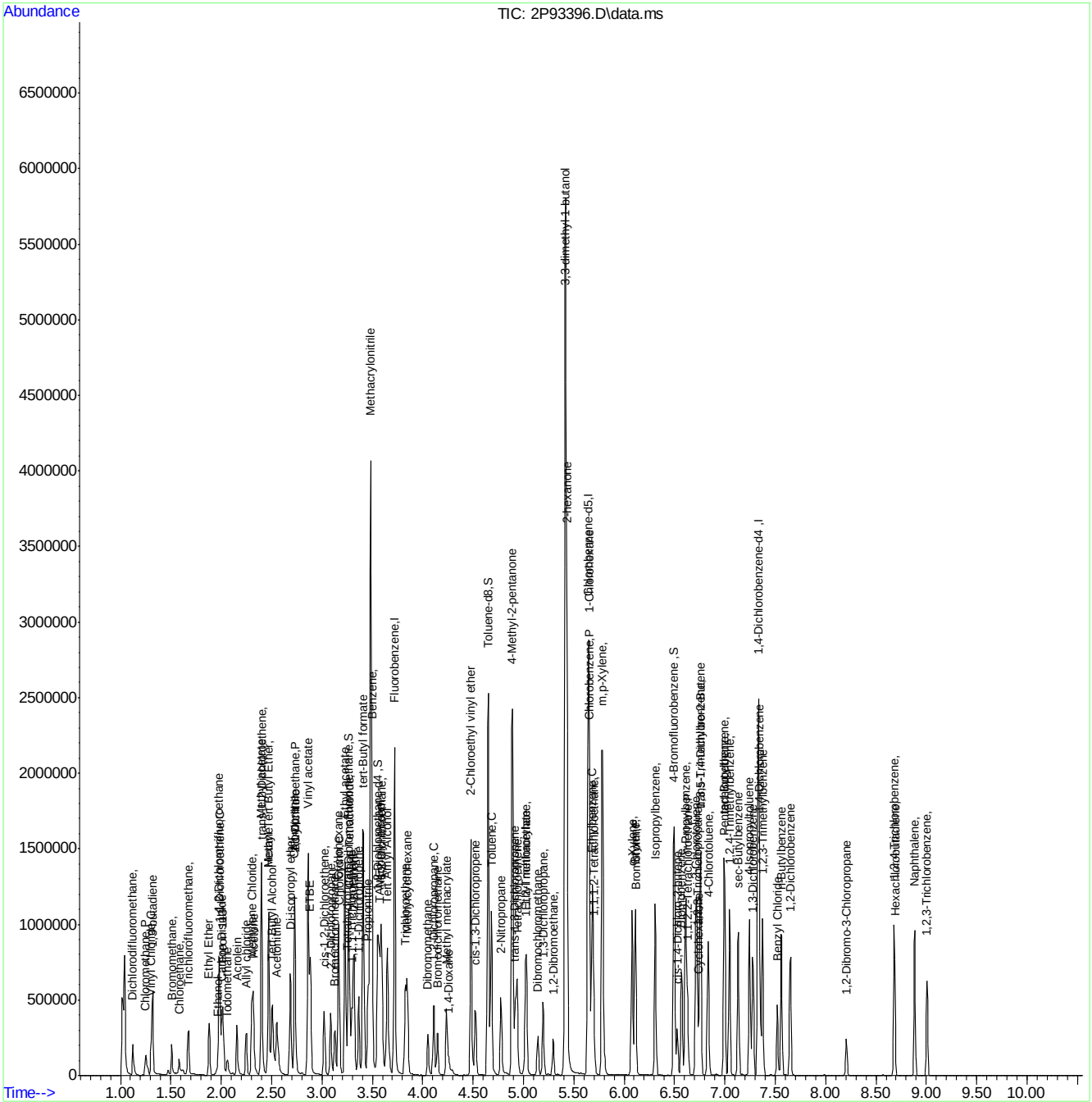
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	377057	25.12	ug/L		99
93)	trans-1,4-Dichloro-2-B...	6.758	53	61715	21.47	ug/L		95
94)	1,2,3-Trichloropropane	6.726	110	64373	25.73	ug/L		95
95)	Cyclohexanone	6.742	55	69063	131.83	ug/L		93
96)	4-Chlorotoluene	6.836	91	394866	24.96	ug/L		98
97)	tert-Butylbenzene	6.993	91	240162	25.26	ug/L		97
99)	1,2,4-Trimethylbenzene	7.045	105	430762	25.51	ug/L		97
100)	Pentachloroethane	6.998	167	51186	24.86	ug/L	#	82
101)	sec-Butylbenzene	7.134	105	483460	26.26	ug/L		99
102)	4-Isopropyltoluene	7.244	119	426287	26.44	ug/L		99
103)	1,3-Dichlorobenzene	7.275	146	236185	26.15	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	428176	25.28	ug/L		99
105)	1,4-Dichlorobenzene	7.343	146	244983	25.96	ug/L		97
106)	n-Butylbenzene	7.558	92	206249	26.06	ug/L		99
107)	Benzyl Chloride	7.521	126	43457	22.88	ug/L		94
108)	1,2-Dichlorobenzene	7.652	146	222854	26.29	ug/L		96
109)	1,2-Dibromo-3-Chloropr...	8.206	75	36301	24.12	ug/L		92
110)	Hexachlorobutadiene	8.687	225	42993	28.08	ug/L		93
111)	1,2,4-Trichlorobenzene	8.682	180	119602	26.52	ug/L		99
112)	Naphthalene	8.886	128	474856	25.52	ug/L		99
113)	1,2,3-Trichlorobenzene	9.006	180	113853	26.90	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:39:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

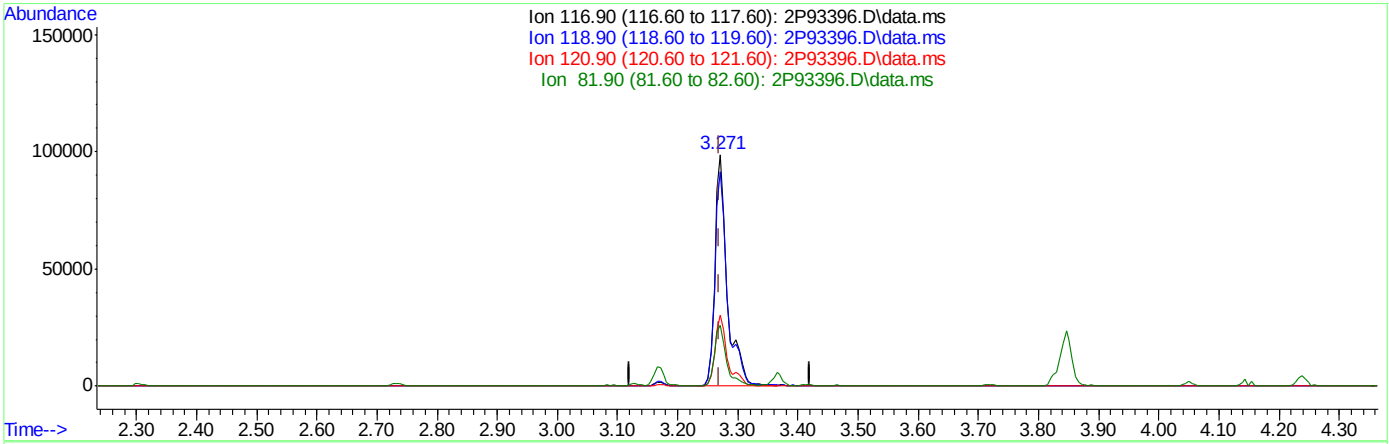
Sample Number: V2P3589-IC3589 **Method:** SW846 8260D
Lab FileID: 2P93396.D **Analyst approved:** 09/26/22 16:01 Courtney Failla
Injection Time: 09/26/22 14:07 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

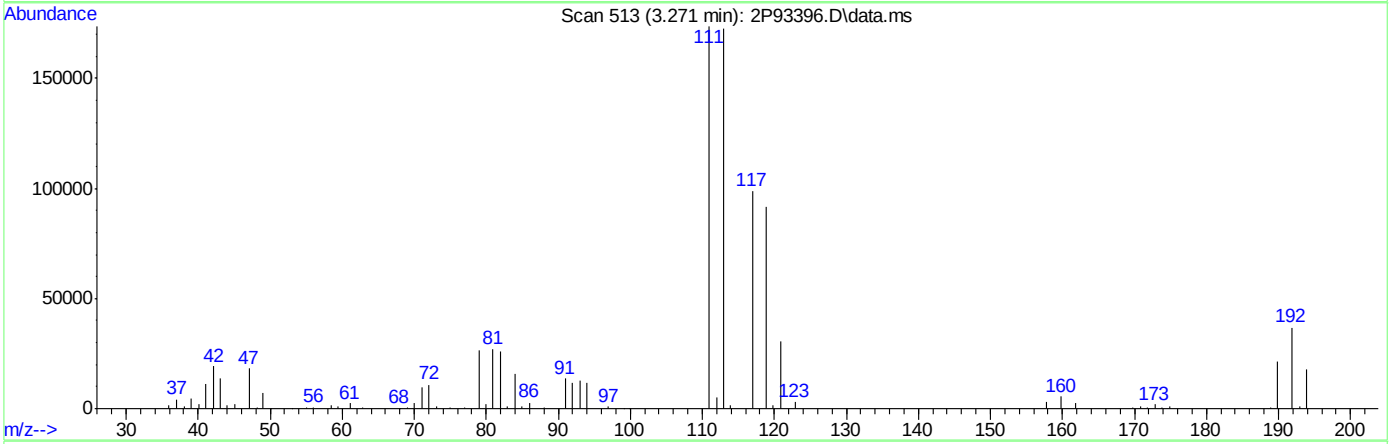
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93396.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 30.06ug/L

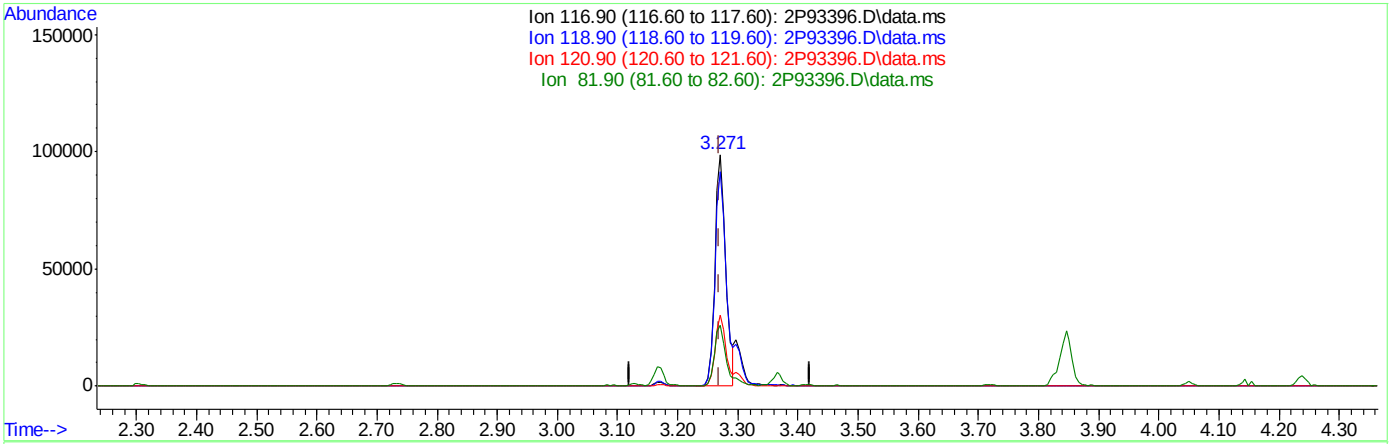
response 140031

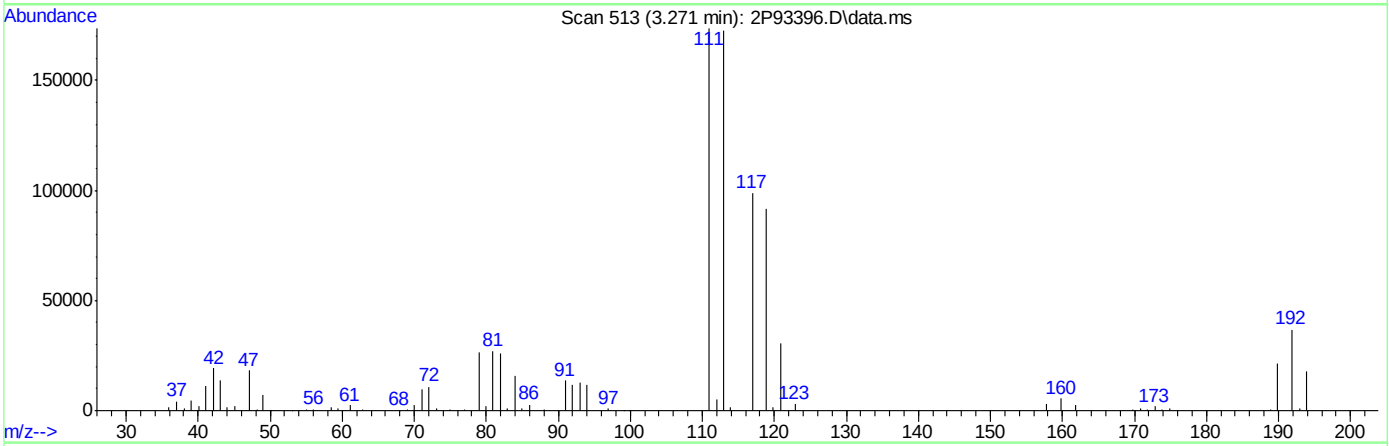
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.76
120.90	29.50	30.89
81.90	28.30	26.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93396.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 26.59ug/L m

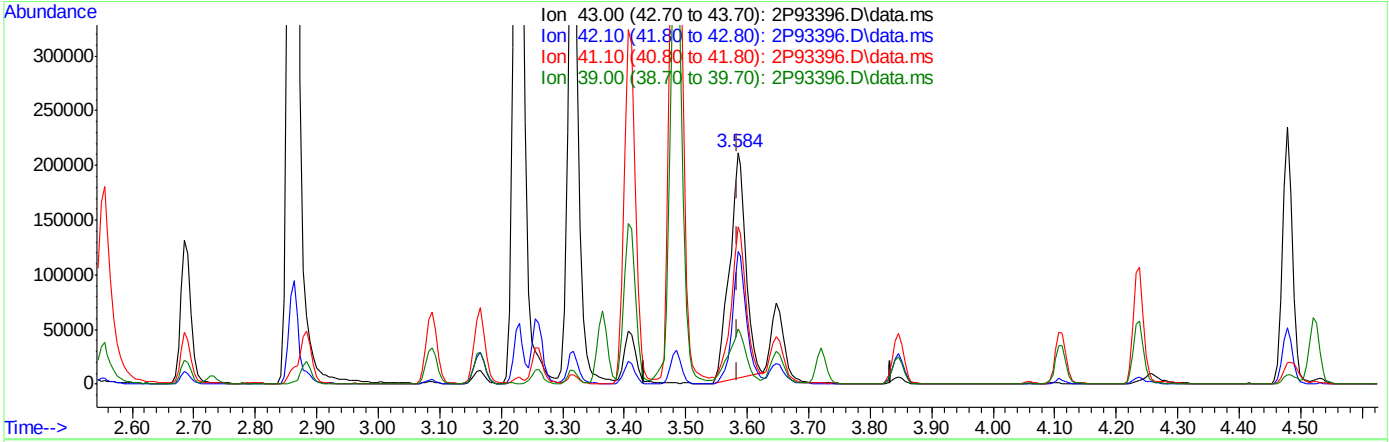
response 122493

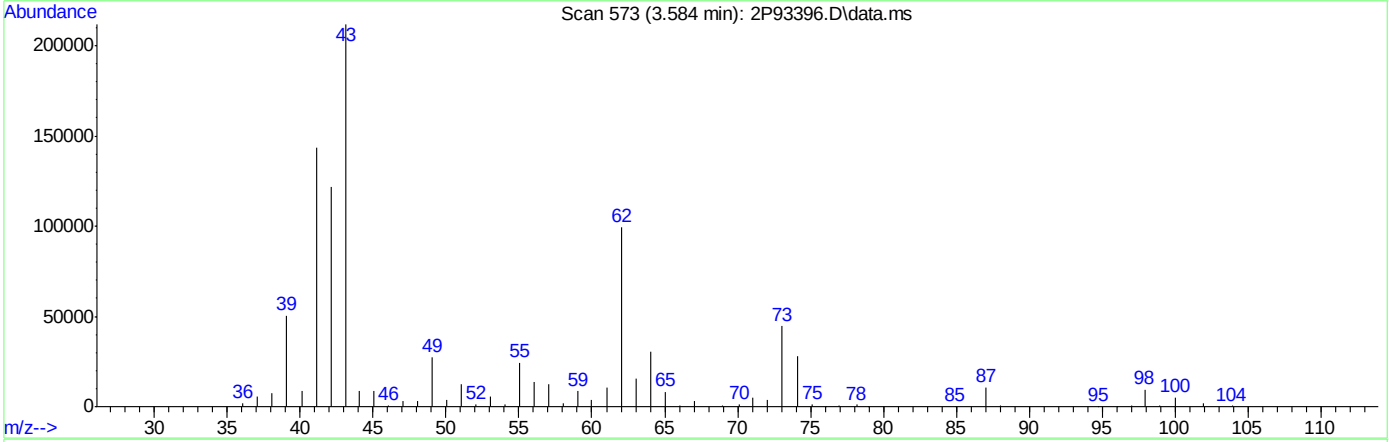
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.76
120.90	29.50	30.89
81.90	28.30	26.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93396.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 508.04ug/L

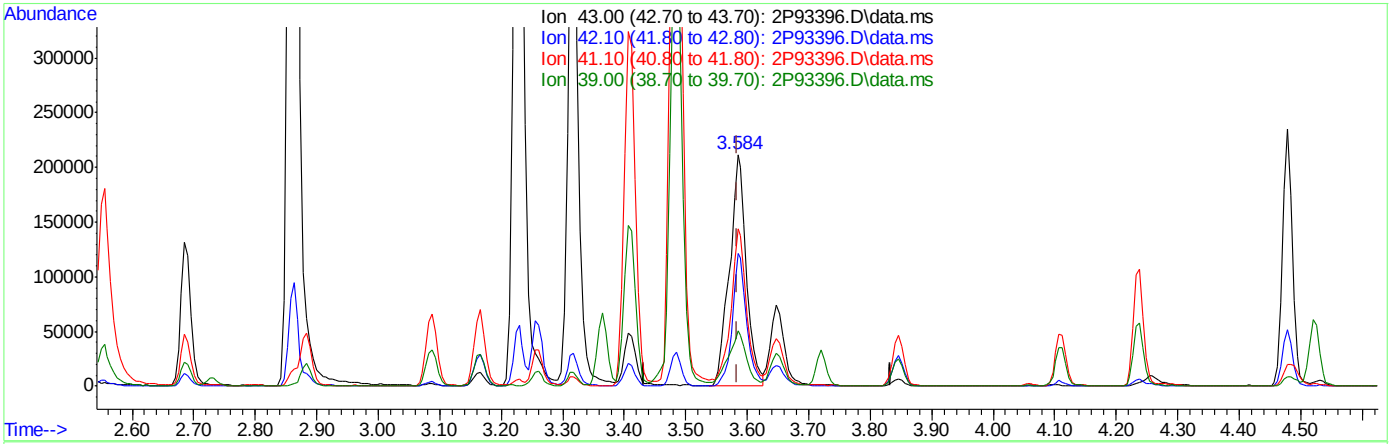
response 379614

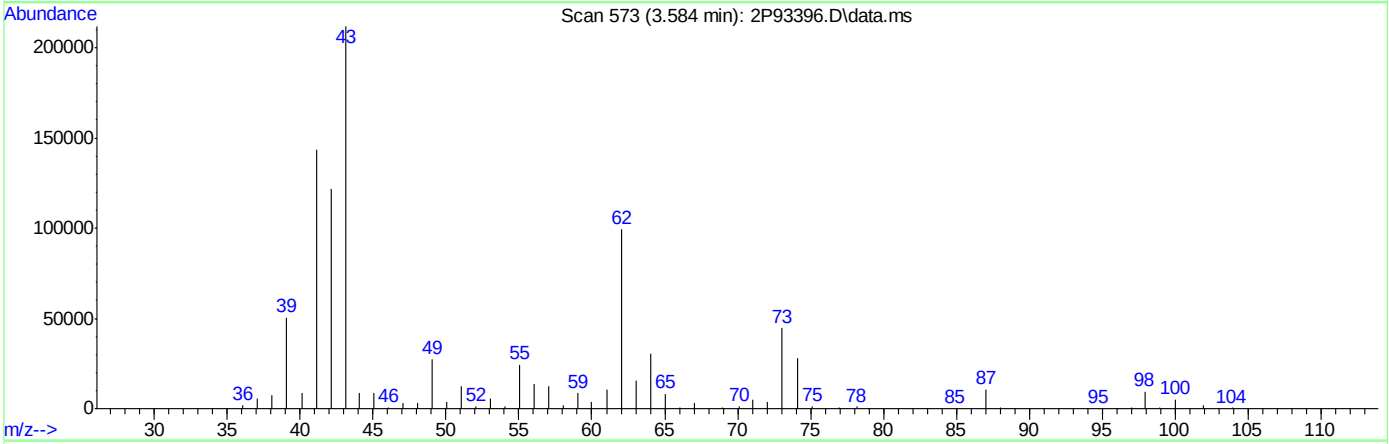
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.37
41.10	70.00	65.24
39.00	27.50	22.19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93396.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 545.08ug/L m

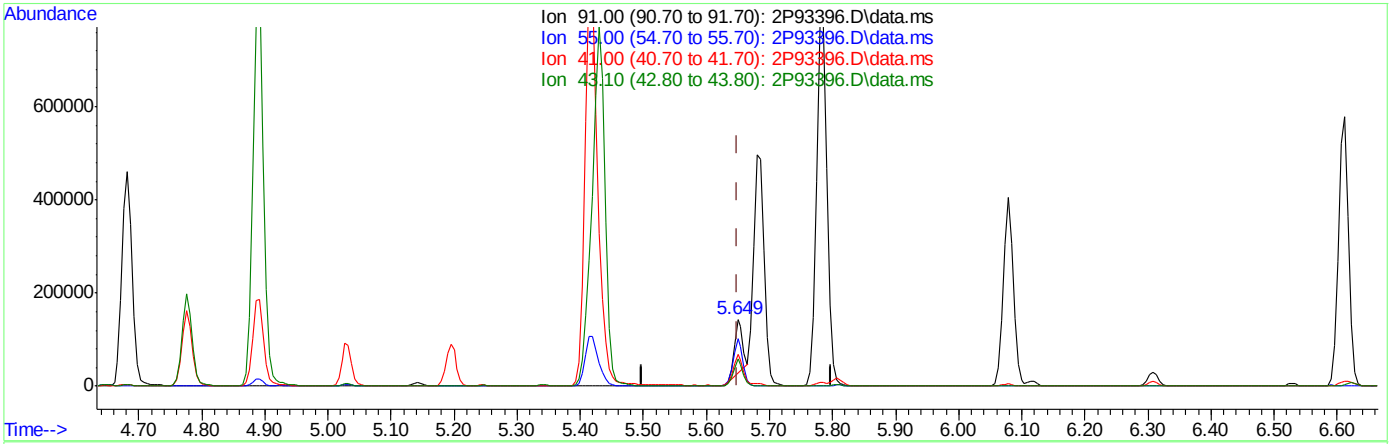
response 407295

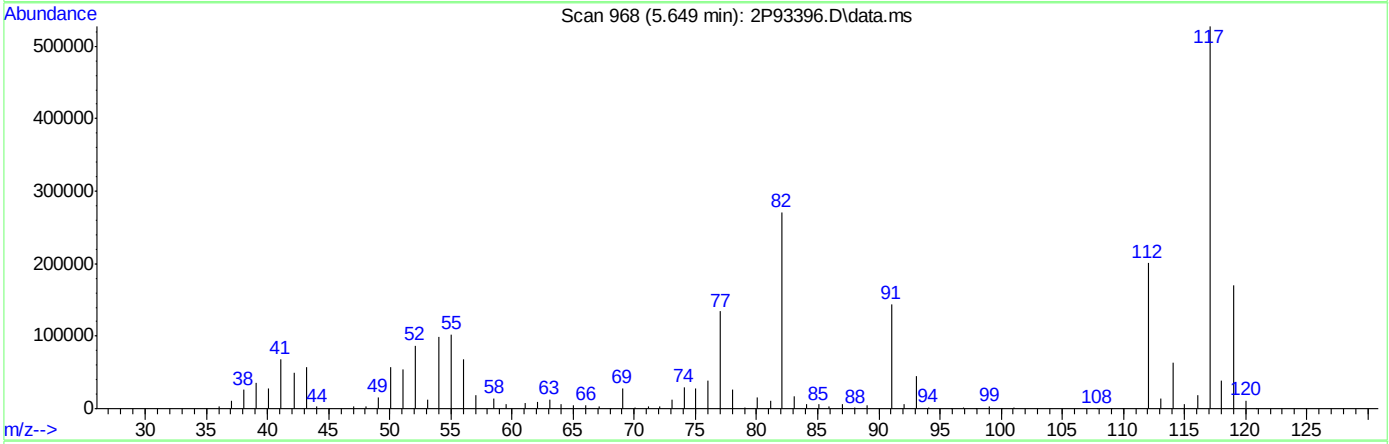
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.37
41.10	70.00	67.82
39.00	27.50	23.89

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93396.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 17.66ug/L

response 113362

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.71
41.00	53.40	44.70
43.10	41.30	38.28

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93396.D
Acq On : 26 Sep 2022 2:07 pm
Operator : courtnef
Sample : IC3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 26 14:37:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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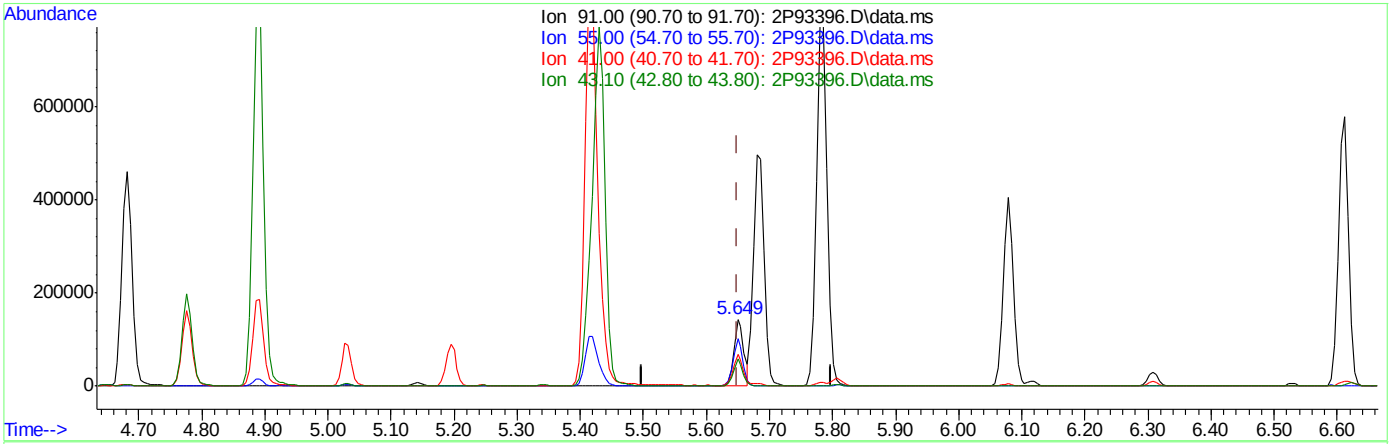
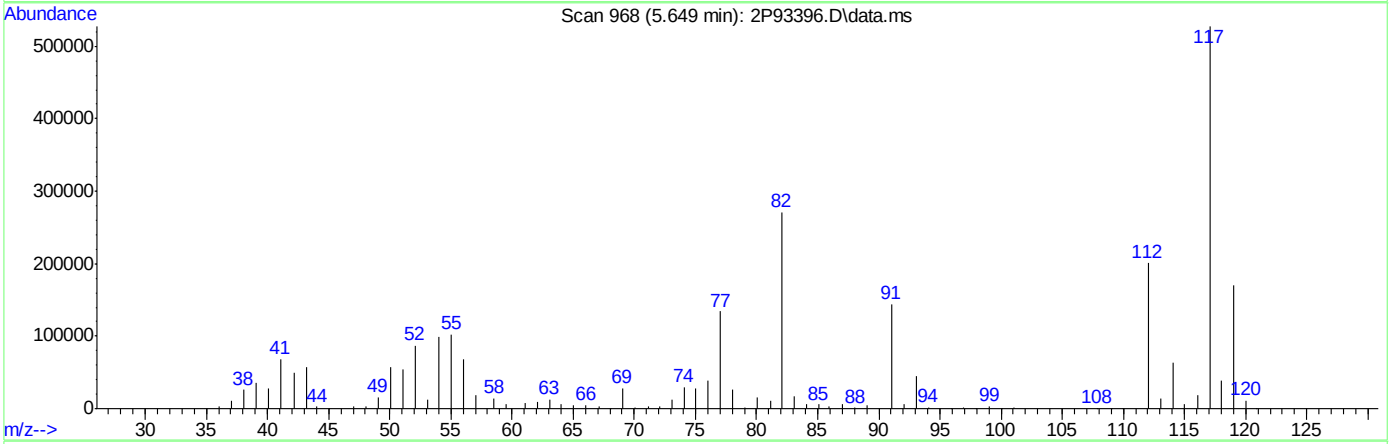




TIC: 2P93396.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 25.60ug/L m

response 164308

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	71.17
41.00	53.40	47.69
43.10	41.30	39.92

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner 09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:56:24 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.719	96	1233954	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.643	117	883171	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	418365	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.264	113	258729	49.33	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.66%			
49) 1,2-Dichloroethane-d4	3.552	65	352114	48.34	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 96.68%			
63) Toluene-d8	4.650	98	1189731	48.96	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.92%			
86) 4-Bromofluorobenzene	6.495	174	318853	48.86	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.121	85	195024	57.25	ug/L	100
3) Chloromethane	1.252	50	181722	48.28	ug/L	98
4) 1,3-butadiene	1.320	39	154721	44.24	ug/L	92
5) Vinyl Chloride	1.304	62	211258	46.06	ug/L	98
6) Bromomethane	1.508	94	98866	34.83	ug/L	97
7) Chloroethane	1.581	64	61225	41.69	ug/L	97
8) Trichlorofluoromethane	1.670	101	205538	47.09	ug/L	98
9) Ethyl Ether	1.879	59	176190	41.04	ug/L	97
10) Ethanol	1.973	45	109660	903.75	ug/L	100
11) 1,2-Dichlorotrifluoroe...	1.978	67	193943	48.29	ug/L	96
12) 1,1-Dichloroethene	1.978	61	239477	40.83	ug/L	97
13) Freon 113	2.015	101	156123	41.45	ug/L	96
14) Carbon Disulfide	1.999	76	371347	37.19	ug/L	99
15) Iodomethane	2.062	142	132164	48.96	ug/L	97
16) Acrolein	2.156	56	302193	192.46	ug/L	100
17) Allyl chloride	2.245	41	173737	41.18	ug/L	93
18) Methylene Chloride	2.303	49	233962	37.72	ug/L	96
19) Acetone	2.318	43	525985	186.73	ug/L	97
20) Methyl acetate	2.397	43	1136974	198.03	ug/L	98
21) trans-1,2-Dichloroethene	2.402	61	241170	40.59	ug/L	96
22) Hexane	2.470	56	132960	43.80	ug/L	95
23) Methyl Tert Butyl Ether	2.470	73	584869	43.19	ug/L	95
24) Tert Butyl Alcohol	2.512	59	675830	403.48	ug/L	95
25) Acetonitrile	2.553	41	374591	394.25	ug/L	98
26) Di-isopropyl ether	2.684	45	529788	42.13	ug/L	95
27) Chloroprene	2.731	53	698367	38.99	ug/L	99
28) 1,1-Dichloroethane	2.731	63	321778	41.18	ug/L	100
29) Acrylonitrile	2.731	52	546353	192.91	ug/L	98
30) ETBE	2.883	59	616555	41.85	ug/L	99
31) Vinyl acetate	2.862	43	1981587	195.55	ug/L	98
32) cis-1,2-Dichloroethene	3.024	96	189584	40.68	ug/L	97
33) 2,2-Dichloropropane	3.087	77	254301	40.56	ug/L	98
34) Bromochloromethane	3.129	128	83568	39.67	ug/L	94
35) Cyclohexane	3.165	56	301206	40.35	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:56:24 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Chloroform	3.170	83	324252	41.35	ug/L	98
37) Ethyl acetate	3.228	43	1490127	194.42	ug/L	99
38) Tetrahydrofuran	3.259	42	115534	39.48	ug/L	95
40) Carbon Tetrachloride	3.270	117	194624m	39.26	ug/L	
41) 1,1,1-Trichloroethane	3.296	97	273836	39.85	ug/L	98
42) 2-Butanone	3.317	43	912729	191.49	ug/L	99
43) 1,1-Dichloropropene	3.364	75	244394	41.54	ug/L	95
44) tert-Butyl formate	3.411	59	727097	208.58	ug/L	98
45) Propionitrile	3.463	54	635205	421.09	ug/L	98
46) Methacrylonitrile	3.484	41	1627419	403.87	ug/L	98
47) Benzene	3.495	78	768806	40.93	ug/L	95
48) TAME	3.568	73	563761	42.09	ug/L	97
50) Isobutyl alcohol	3.589	43	671445m	870.08	ug/L	
51) 1,2-Dichloroethane	3.589	62	262581	39.06	ug/L	99
52) Tert Amyl Alcohol	3.651	59	562582	395.53	ug/L	98
53) Trichloroethene	3.824	95	193613	40.05	ug/L	96
54) Methylcyclohexane	3.845	83	278415	41.97	ug/L	98
55) Dibromomethane	4.049	93	109185	41.12	ug/L	96
56) 1,2-Dichloropropane	4.106	63	192096	42.10	ug/L	96
57) Bromodichloromethane	4.148	83	204410	40.08	ug/L	99
58) Methyl methacrylate	4.237	41	210240	40.18	ug/L	96
59) 1,4-Dioxane	4.258	88	115387	804.75	ug/L	98
60) 2-Chloroethyl vinyl ether	4.477	63	751967	198.11	ug/L	97
61) cis-1,3-Dichloropropene	4.524	75	272397	41.14	ug/L	95
64) Toluene	4.681	91	841859	40.38	ug/L	100
65) 2-Nitropropane	4.775	41	322201	189.66	ug/L	98
66) 4-Methyl-2-pentanone	4.890	43	1593549	198.11	ug/L	98
67) trans-1,3-Dichloropropene	4.922	75	247921	40.27	ug/L	89
68) Tetrachloroethene	4.937	166	195567	44.16	ug/L	99
69) Ethyl methacrylate	5.032	69	311269	41.23	ug/L	94
70) 1,1,2-Trichloroethane	5.021	83	146591	41.10	ug/L	98
71) Dibromochloromethane	5.141	129	156497	40.89	ug/L	98
72) 1,3-Dichloropropane	5.194	76	323473	40.79	ug/L	95
73) 1,2-Dibromoethane	5.293	107	183174	42.49	ug/L	93
74) 3,3-dimethyl-1-butanol	5.418	57	3541955	1971.81	ug/L	98
75) 2-hexanone	5.429	43	1768517	195.83	ug/L	97
76) 1-Chlorohexane	5.648	91	262190m	39.43	ug/L	
77) Ethylbenzene	5.685	91	933773	40.84	ug/L	98
78) Chlorobenzene	5.654	112	515267	41.27	ug/L	98
79) 1,1,1,2-Tetrachloroethane	5.696	131	168792	41.90	ug/L	98
80) m,p-Xylene	5.784	91	1474736	81.55	ug/L	99
81) o-Xylene	6.077	91	736688	41.39	ug/L	100
82) Styrene	6.109	104	584542	42.93	ug/L	98
83) Bromoform	6.119	173	85390	40.74	ug/L	96
84) Isopropylbenzene	6.307	105	874239	42.57	ug/L	99
87) cis-1,4-Dichloro-2-butene	6.527	53	85309	35.37	ug/L	97
88) n-Propylbenzene	6.610	91	1028717	40.08	ug/L	98
89) Bromobenzene	6.574	156	210057	40.48	ug/L	87
90) 1,1,2,2-Tetrachloroethane	6.631	83	281361	40.63	ug/L	98
91) 1,3,5-Trimethylbenzene	6.757	105	727065	40.68	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:56:24 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

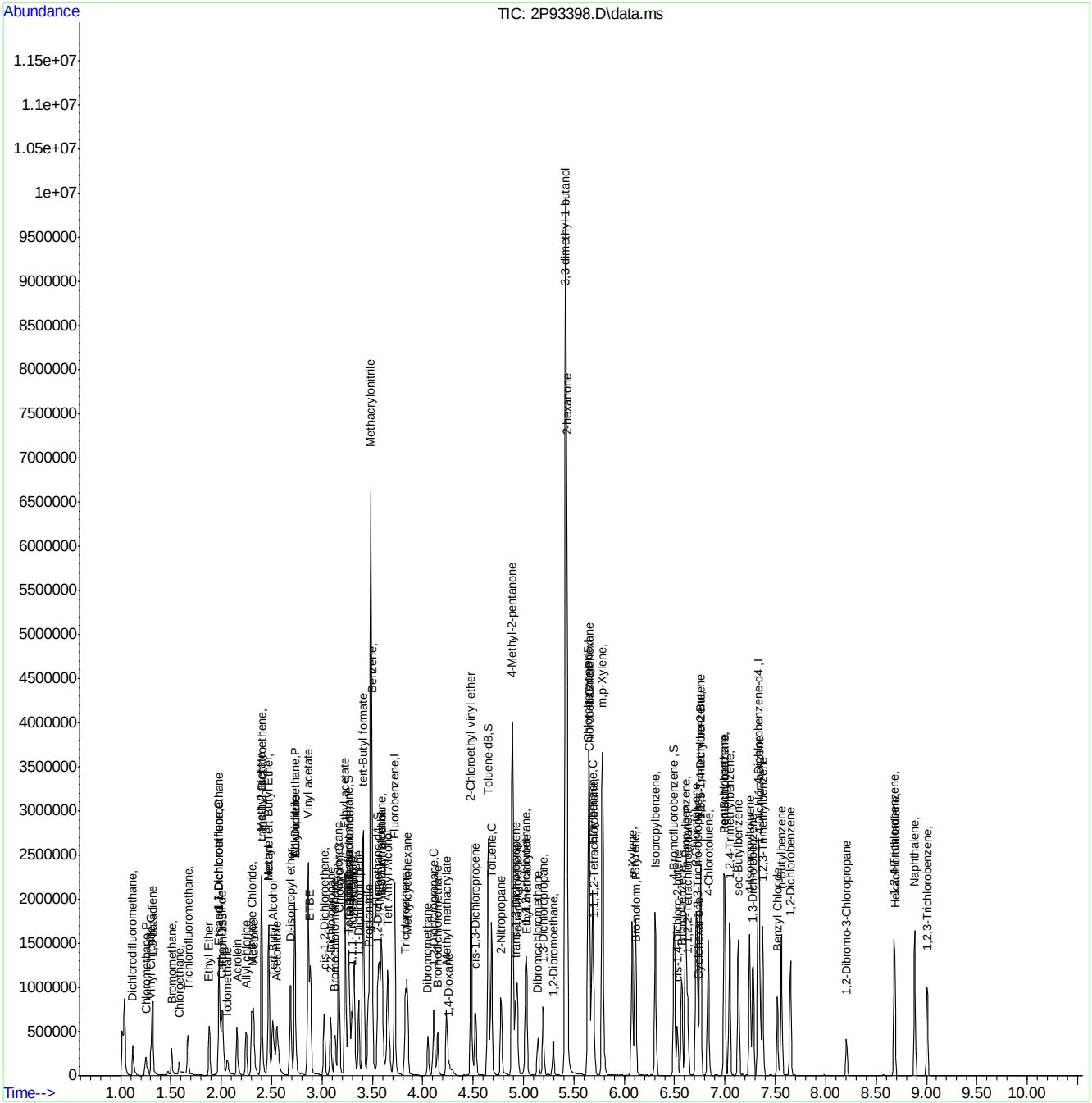
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	2-Chlorotoluene	6.715	91	616673	39.81	ug/L	99
93)	trans-1,4-Dichloro-2-B...	6.757	53	98108	33.06	ug/L	97
94)	1,2,3-Trichloropropane	6.725	110	103827	40.20	ug/L	95
95)	Cyclohexanone	6.741	55	112712	208.43	ug/L	96
96)	4-Chlorotoluene	6.835	91	642149	39.33	ug/L	98
97)	tert-Butylbenzene	6.992	91	391836	39.93	ug/L	99
99)	1,2,4-Trimethylbenzene	7.044	105	702453	40.30	ug/L	99
100)	Pentachloroethane	6.997	167	92558	40.74	ug/L	97
101)	sec-Butylbenzene	7.133	105	792433	41.70	ug/L	98
102)	4-Isopropyltoluene	7.248	119	703800	40.75	ug/L	97
103)	1,3-Dichlorobenzene	7.280	146	384135	41.20	ug/L	99
104)	1,2,3-Trimethylbenzene	7.374	105	699986	40.03	ug/L	99
105)	1,4-Dichlorobenzene	7.342	146	392555	40.30	ug/L	98
106)	n-Butylbenzene	7.562	92	342101	40.45	ug/L	99
107)	Benzyl Chloride	7.520	126	81283	37.35	ug/L	96
108)	1,2-Dichlorobenzene	7.651	146	361840	41.35	ug/L	98
109)	1,2-Dibromo-3-Chloropr...	8.205	75	63277	38.46	ug/L	95
110)	Hexachlorobutadiene	8.686	225	71561	43.48	ug/L	96
111)	1,2,4-Trichlorobenzene	8.681	180	198066	42.55	ug/L	99
112)	Naphthalene	8.885	128	798785	40.22	ug/L	99
113)	1,2,3-Trichlorobenzene	9.010	180	187747	42.97	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:56:24 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

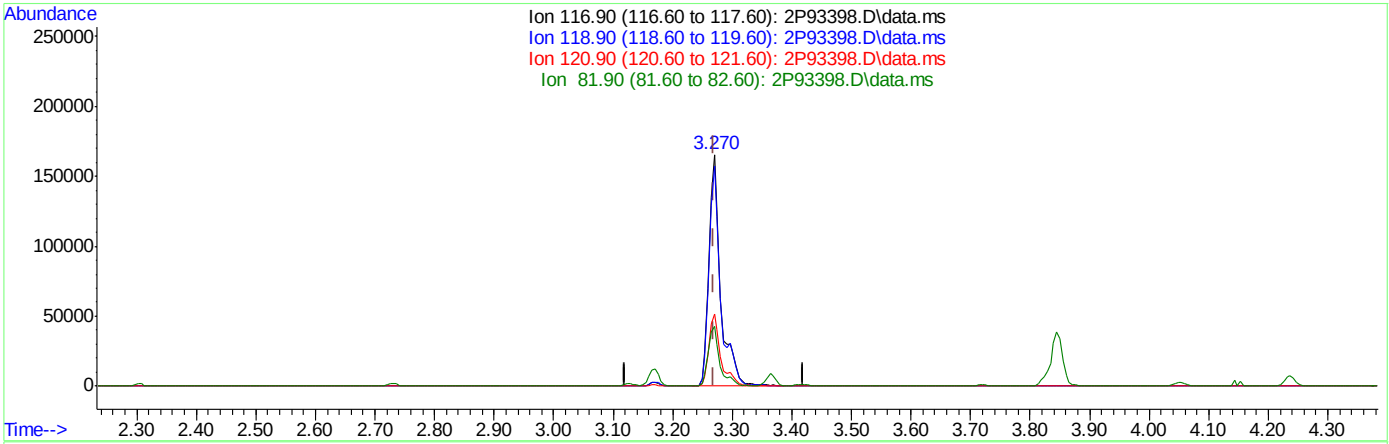
Sample Number: V2P3589-ICC3589 **Method:** SW846 8260D
Lab FileID: 2P93398.D **Analyst approved:** 09/26/22 16:02 Courtney Failla
Injection Time: 09/26/22 14:39 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

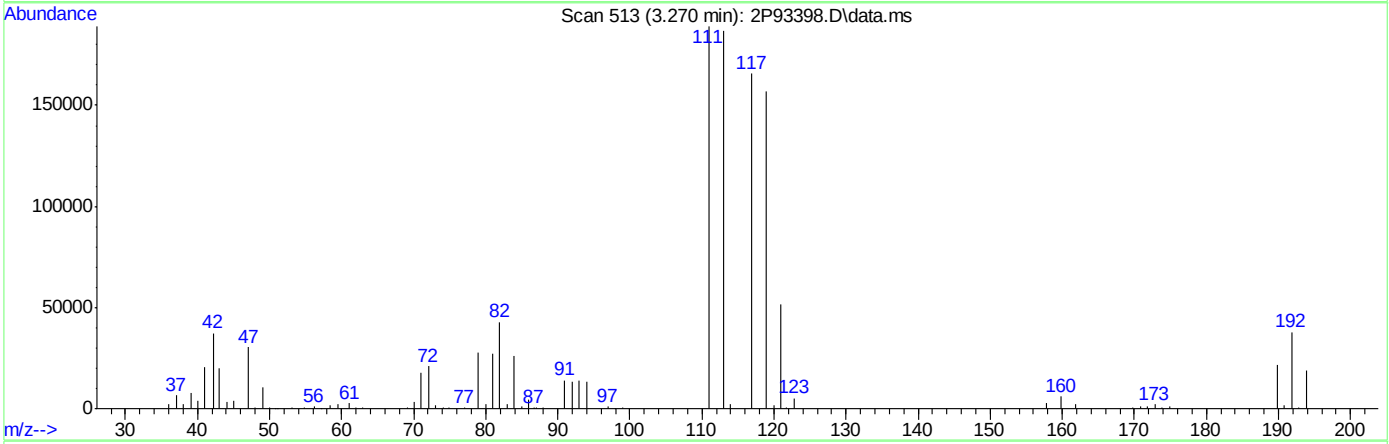
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 45.99ug/L

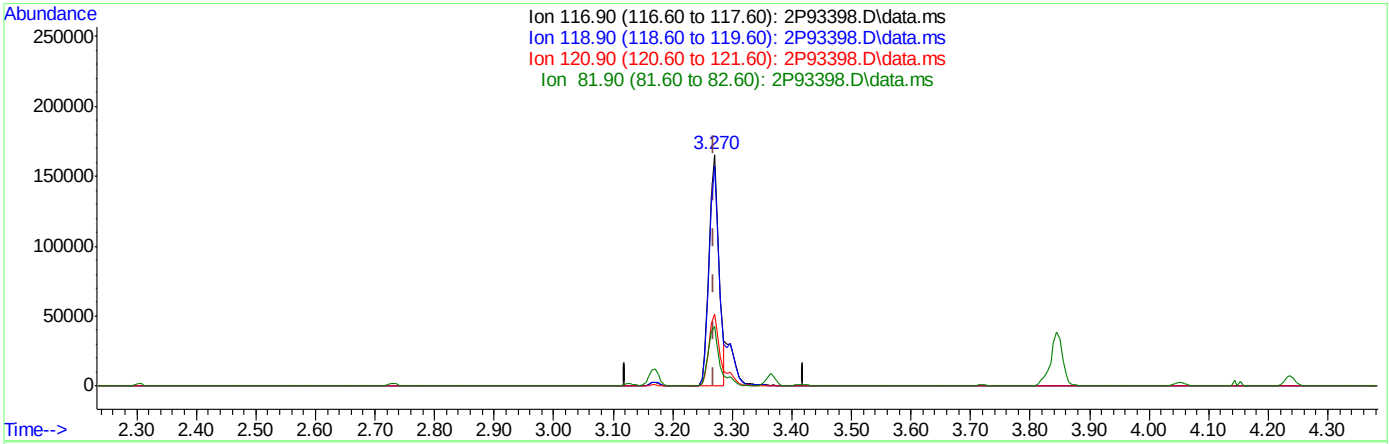
response 232872

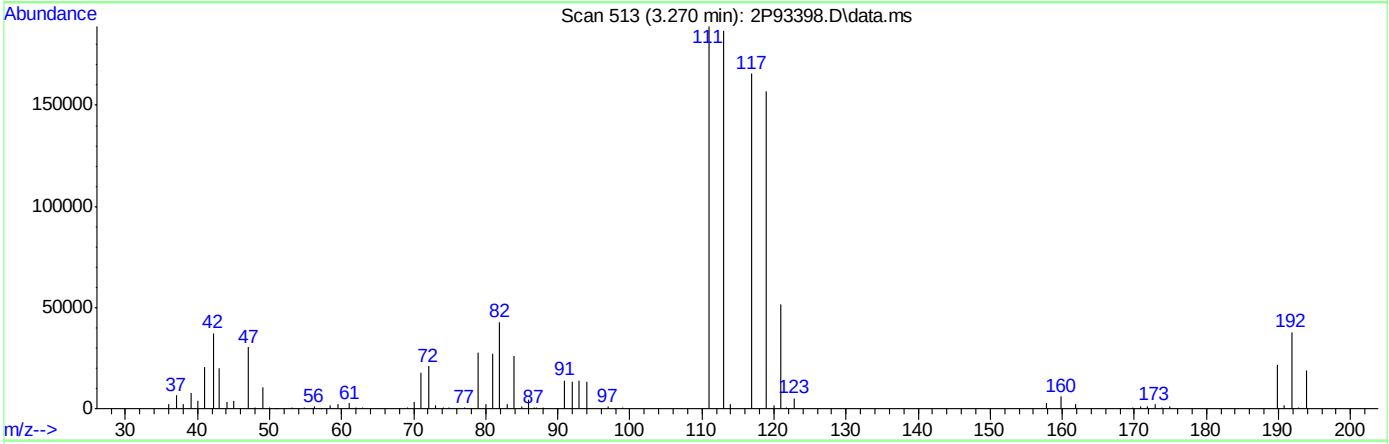
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	94.82
120.90	29.50	31.26
81.90	28.30	25.60

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 39.26ug/L m

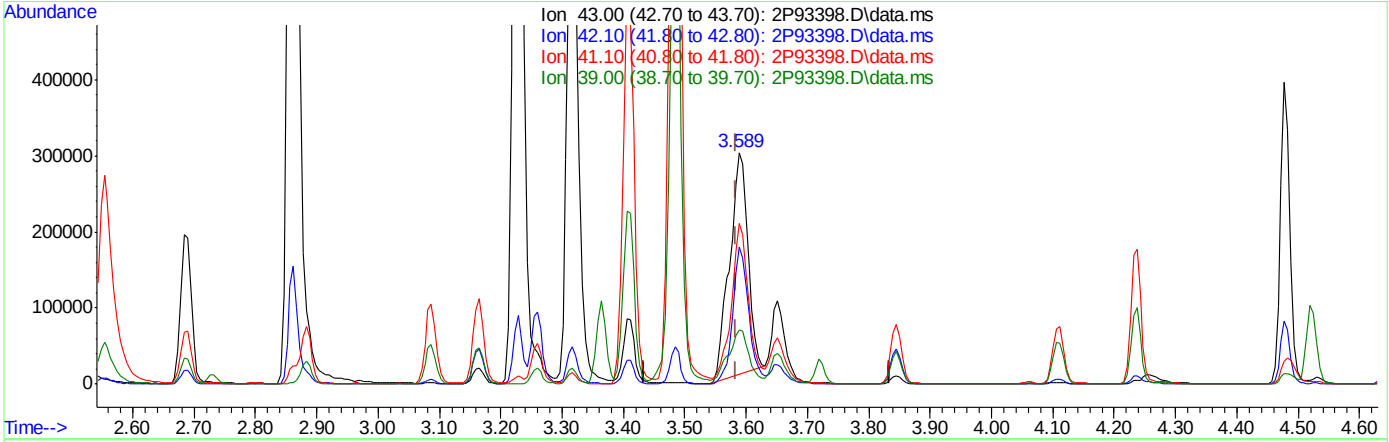
response 194624

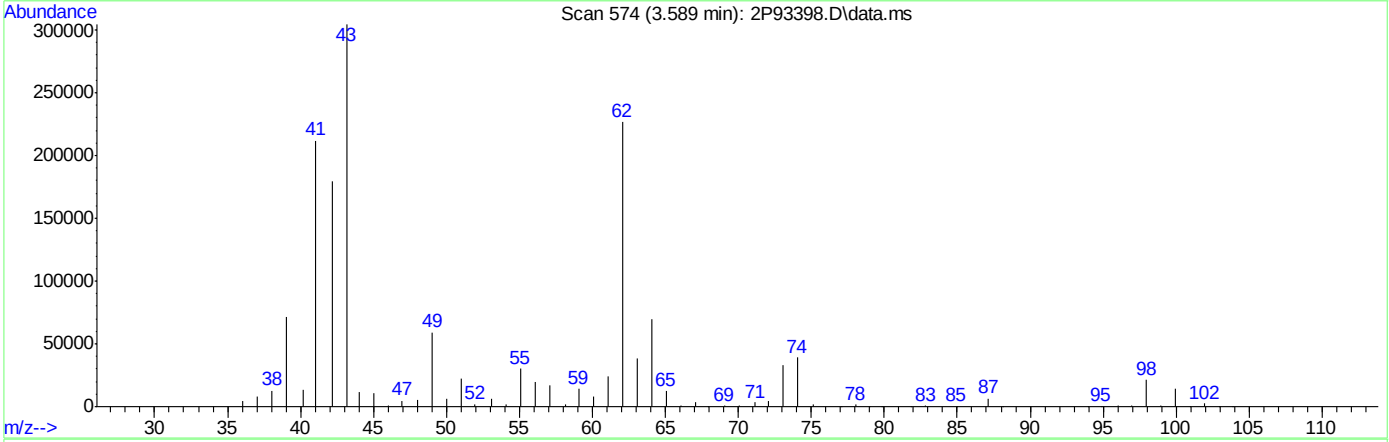
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	94.82
120.90	29.50	31.26
81.90	28.30	25.78

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 783.11ug/L

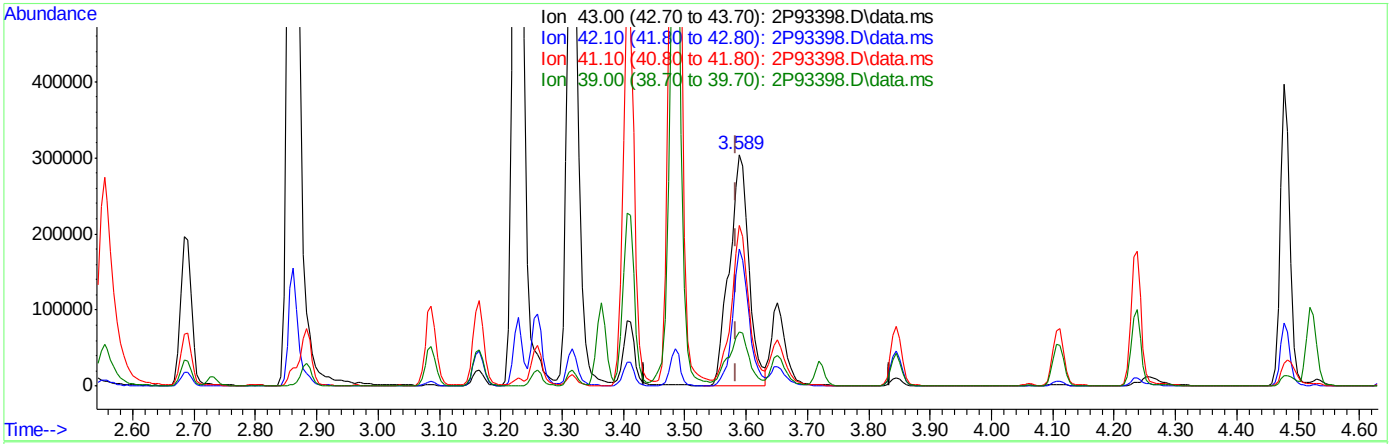
response 604330

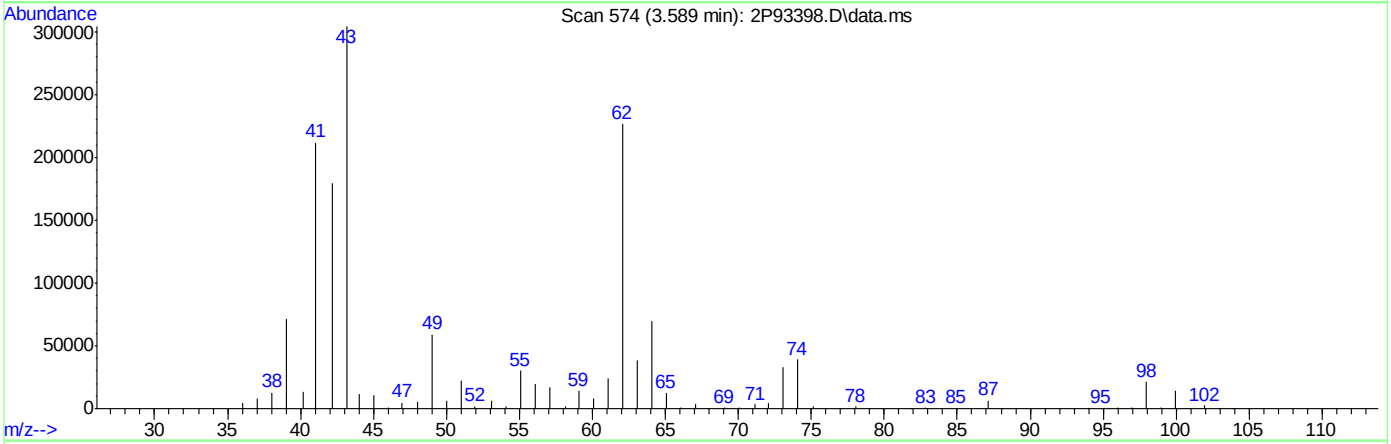
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	59.02
41.10	70.00	67.36
39.00	27.50	21.85

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 870.08ug/L m

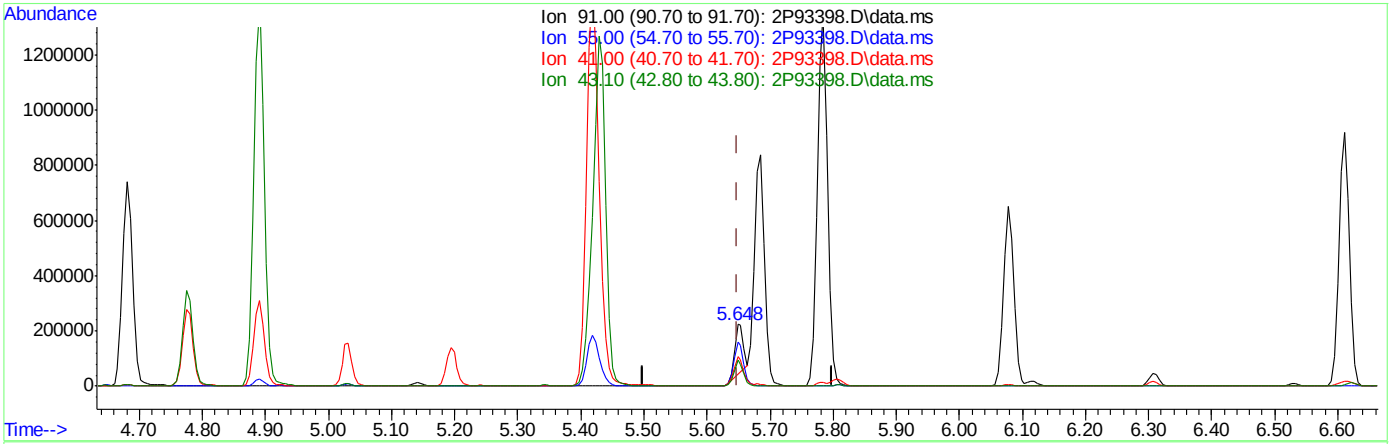
response 671445

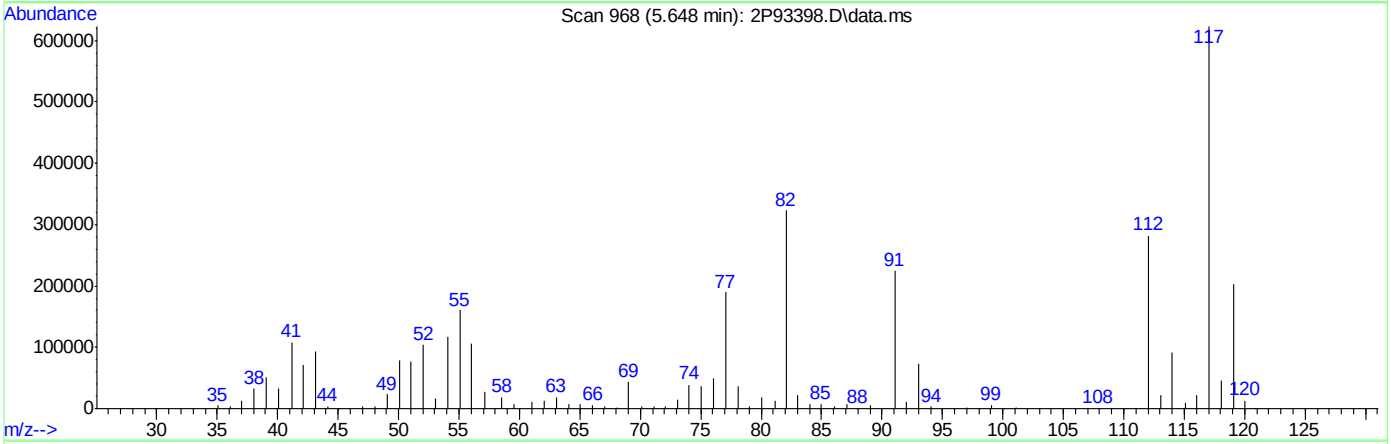
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	59.02
41.10	70.00	69.61
39.00	27.50	23.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(76) 1-Chlorohexane

5.648min (-0.001) 27.99ug/L

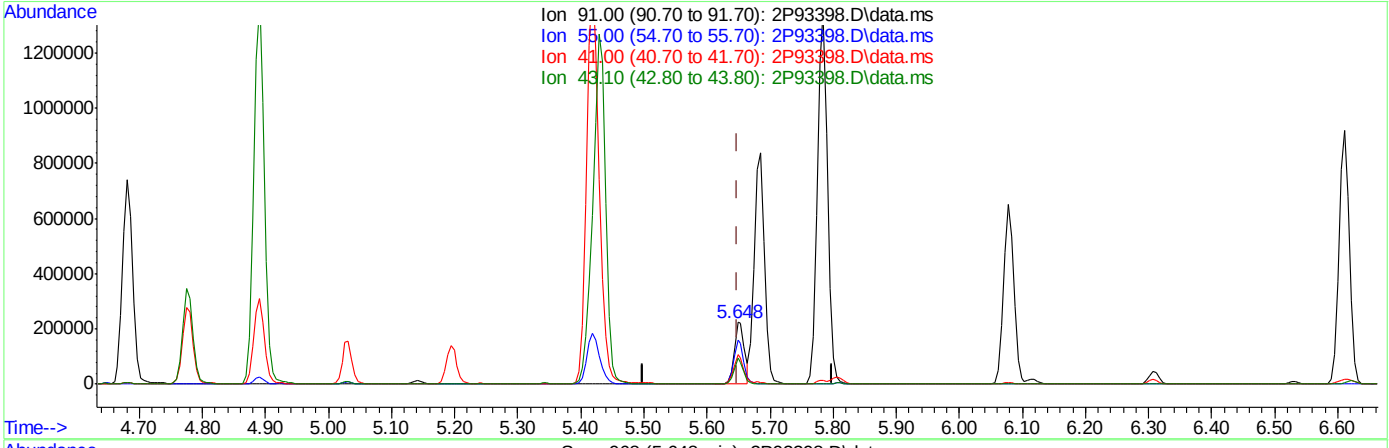
response 186135

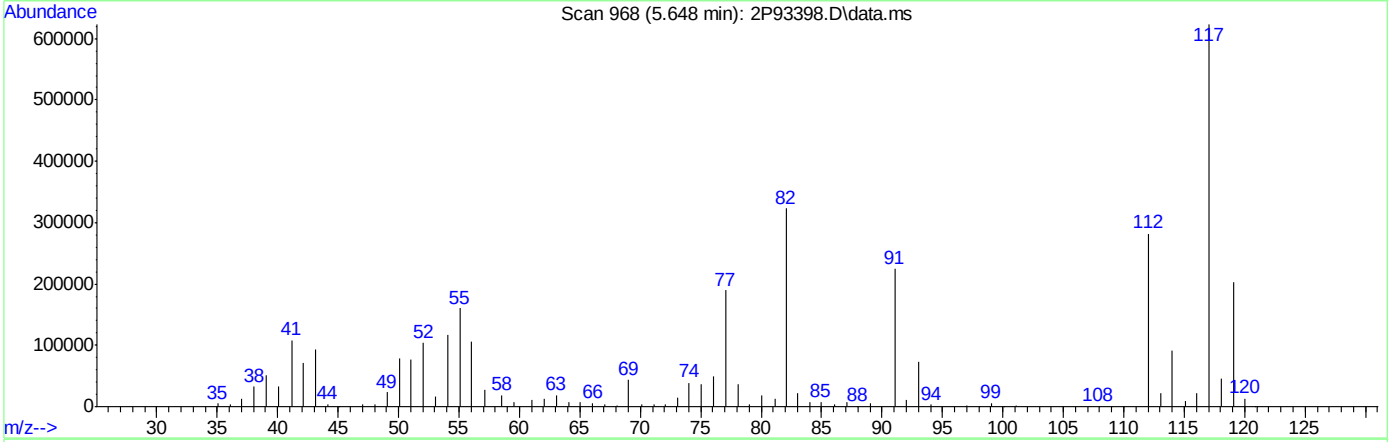
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.14
41.00	53.40	45.97
43.10	41.30	40.31

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93398.D
Acq On : 26 Sep 2022 2:39 pm
Operator : courtnef
Sample : ICC3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Sep 26 14:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93398.D\data.ms

(76) 1-Chlorohexane

5.648min (-0.001) 39.43ug/L m

response 262190

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	71.66
41.00	53.40	48.25
43.10	41.30	41.78

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner 09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
Acq On : 26 Sep 2022 3:11 pm
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:25:09 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1296506	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.646	117	935650	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.335	152	428238	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.268	113	272788	49.50	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.00%			
49) 1,2-Dichloroethane-d4	3.555	65	349534	45.67	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 91.34%			
63) Toluene-d8	4.648	98	1253185	48.68	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.36%			
86) 4-Bromofluorobenzene	6.498	174	334922	50.14	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.28%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.129	85	365928	102.24	ug/L	97
3) Chloromethane	1.255	50	336057	84.98	ug/L	96
4) 1,3-butadiene	1.323	39	277412	75.49	ug/L	100
5) Vinyl Chloride	1.307	62	390902	81.11	ug/L	99
6) Bromomethane	1.511	94	176626	59.22	ug/L	95
7) Chloroethane	1.584	64	105533	72.13	ug/L	95
8) Trichlorofluoromethane	1.673	101	198807	41.53	ug/L	97
9) Ethyl Ether	1.887	59	320695	71.10	ug/L	96
10) Ethanol	1.987	45	167490	1428.08	ug/L	100
11) 1,2-Dichlorotrifluoroe...	1.982	67	362202	85.83	ug/L	98
12) 1,1-Dichloroethene	1.982	61	447460	72.61	ug/L	99
13) Freon 113	2.018	101	301023	71.59	ug/L	95
14) Carbon Disulfide	2.002	76	750537	64.72	ug/L	99
15) Iodomethane	2.060	142	246741	77.96	ug/L	98
16) Acrolein	2.159	56	560032	339.47	ug/L	100
17) Allyl chloride	2.248	41	312754	70.56	ug/L	92
18) Methylene Chloride	2.306	49	392805	63.92	ug/L	94
19) Acetone	2.327	43	949020	326.93	ug/L	95
20) Methyl acetate	2.400	43	2073032	343.65	ug/L	99
21) trans-1,2-Dichloroethene	2.405	61	454049	72.72	ug/L	98
22) Hexane	2.473	56	259183	73.48	ug/L	92
23) Methyl Tert Butyl Ether	2.478	73	1077399	75.71	ug/L	75
24) Tert Butyl Alcohol	2.525	59	1181901	671.57	ug/L	95
25) Acetonitrile	2.562	41	612793	613.84	ug/L	100
26) Di-isopropyl ether	2.693	45	971621	73.54	ug/L	98
27) Chloroprene	2.734	53	1258732	66.88	ug/L	98
28) 1,1-Dichloroethane	2.734	63	588762	71.72	ug/L	99
29) Acrylonitrile	2.734	52	971190	326.37	ug/L	99
30) ETBE	2.886	59	1129827	72.98	ug/L	98
31) Vinyl acetate	2.865	43	3588942	337.08	ug/L	97
32) cis-1,2-Dichloroethene	3.027	96	353520	72.20	ug/L	96
33) 2,2-Dichloropropane	3.090	77	480696	67.39	ug/L	99
34) Bromochloromethane	3.132	128	148481	67.08	ug/L	95
35) Cyclohexane	3.168	56	564936	67.30	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
Acq On : 26 Sep 2022 3:11 pm
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:25:09 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.168	83	595004	72.22	ug/L		99
37) Ethyl acetate	3.231	43	2673551	331.99	ug/L		97
38) Tetrahydrofuran	3.262	42	208183	67.71	ug/L		94
40) Carbon Tetrachloride	3.273	117	399823m	69.93	ug/L		
41) 1,1,1-Trichloroethane	3.299	97	516740	67.37	ug/L		97
42) 2-Butanone	3.320	43	1650823	331.97	ug/L		98
43) 1,1-Dichloropropene	3.367	75	455623	73.70	ug/L		92
44) tert-Butyl formate	3.414	59	1407051	345.68	ug/L		96
45) Propionitrile	3.466	54	1110094	700.39	ug/L		98
46) Methacrylonitrile	3.487	41	2798178	660.91	ug/L		97
47) Benzene	3.498	78	1412743	71.59	ug/L		97
48) TAME	3.571	73	1044441	74.21	ug/L		92
50) Isobutyl alcohol	3.602	43	1151870m	1420.62	ug/L		
51) 1,2-Dichloroethane	3.592	62	469132	66.42	ug/L		99
52) Tert Amyl Alcohol	3.660	59	1007729	661.39	ug/L		97
53) Trichloroethene	3.827	95	362903	71.45	ug/L		98
54) Methylcyclohexane	3.848	83	536939	70.58	ug/L		97
55) Dibromomethane	4.052	93	203757	73.03	ug/L		94
56) 1,2-Dichloropropane	4.109	63	355057	74.06	ug/L		95
57) Bromodichloromethane	4.146	83	392883	66.94	ug/L		98
58) Methyl methacrylate	4.235	41	360828	62.23	ug/L		96
59) 1,4-Dioxane	4.261	88	188274	1249.74	ug/L		99
60) 2-Chloroethyl vinyl ether	4.480	63	1399147	350.83	ug/L		95
61) cis-1,3-Dichloropropene	4.522	75	521993	68.94	ug/L		96
64) Toluene	4.684	91	1552256	70.27	ug/L		100
65) 2-Nitropropane	4.778	41	626269	309.47	ug/L		97
66) 4-Methyl-2-pentanone	4.894	43	2840708	333.35	ug/L		95
67) trans-1,3-Dichloropropene	4.920	75	472320	67.48	ug/L		92
68) Tetrachloroethene	4.941	166	359998	76.73	ug/L		96
69) Ethyl methacrylate	5.029	69	553604	65.68	ug/L		93
70) 1,1,2-Trichloroethane	5.019	83	270562	71.60	ug/L		96
71) Dibromochloromethane	5.144	129	310007	69.43	ug/L		99
72) 1,3-Dichloropropane	5.197	76	589487	70.17	ug/L		93
73) 1,2-Dibromoethane	5.296	107	342473	74.98	ug/L		93
74) 3,3-dimethyl-1-butanol	5.422	57	6216172	3250.33	ug/L		100
75) 2-hexanone	5.432	43	3009948	314.59	ug/L		79
76) 1-Chlorohexane	5.652	91	514599m	73.04	ug/L		
77) Ethylbenzene	5.683	91	1705898	70.42	ug/L		99
78) Chlorobenzene	5.657	112	947291	71.61	ug/L		94
79) 1,1,1,2-Tetrachloroethane	5.699	131	312770	68.77	ug/L		99
80) m,p-Xylene	5.782	91	2725855	142.28	ug/L		100
81) o-Xylene	6.080	91	1354548	71.83	ug/L		99
82) Styrene	6.112	104	1090165	75.58	ug/L		97
83) Bromoform	6.117	173	177022	69.91	ug/L		98
84) Isopropylbenzene	6.310	105	1625179	74.70	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.525	53	156037	58.04	ug/L	#	90
88) n-Propylbenzene	6.608	91	1899100	72.28	ug/L		99
89) Bromobenzene	6.572	156	388400	73.12	ug/L		90
90) 1,1,2,2-Tetrachloroethane	6.629	83	504081	71.11	ug/L		98
91) 1,3,5-Trimethylbenzene	6.760	105	1332320	72.83	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
Acq On : 26 Sep 2022 3:11 pm
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:25:09 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

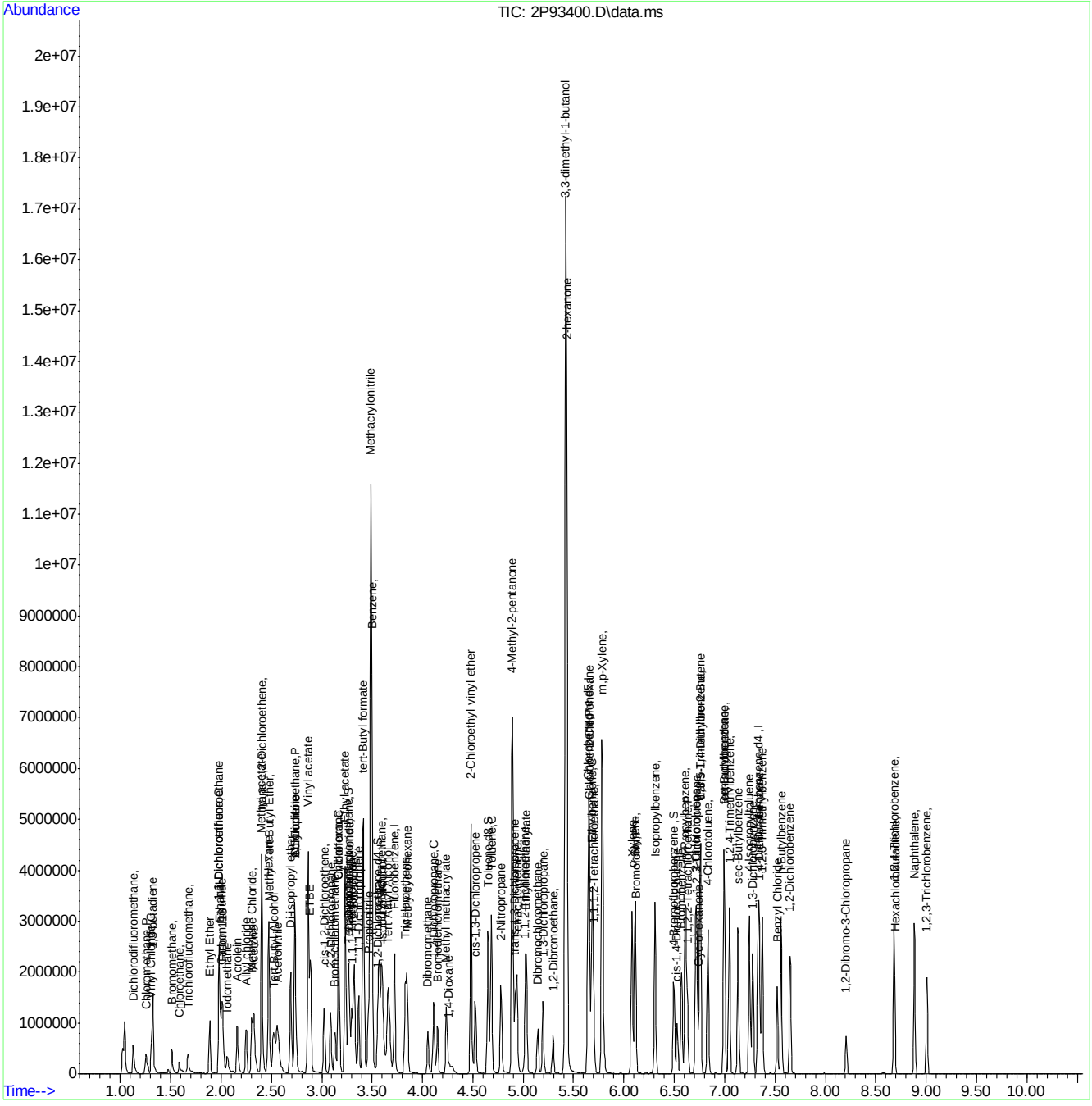
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	2-Chlorotoluene	6.713	91	1123564	70.86	ug/L	99
93)	trans-1,4-Dichloro-2-B...	6.760	53	177142	58.31	ug/L	82
94)	1,2,3-Trichloropropane	6.723	110	183046	69.24	ug/L	95
95)	Cyclohexanone	6.744	55	190163	343.54	ug/L	93
96)	4-Chlorotoluene	6.833	91	1162365	69.55	ug/L	96
97)	tert-Butylbenzene	6.995	91	722827	71.96	ug/L	96
99)	1,2,4-Trimethylbenzene	7.047	105	1298569	72.77	ug/L	99
100)	Pentachloroethane	6.995	167	171620	66.73	ug/L	94
101)	sec-Butylbenzene	7.131	105	1481003	76.13	ug/L	99
102)	4-Isopropyltoluene	7.246	119	1301466	68.72	ug/L	98
103)	1,3-Dichlorobenzene	7.277	146	693863	72.71	ug/L	98
104)	1,2,3-Trimethylbenzene	7.372	105	1283847	71.73	ug/L	99
105)	1,4-Dichlorobenzene	7.345	146	710754	71.28	ug/L	96
106)	n-Butylbenzene	7.560	92	636066	68.85	ug/L	94
107)	Benzyl Chloride	7.523	126	172784	65.14	ug/L	95
108)	1,2-Dichlorobenzene	7.649	146	656640	73.31	ug/L	99
109)	1,2-Dibromo-3-Chloropr...	8.203	75	123333	66.15	ug/L	94
110)	Hexachlorobutadiene	8.689	225	132984	73.27	ug/L	92
111)	1,2,4-Trichlorobenzene	8.684	180	375394	78.78	ug/L	96
112)	Naphthalene	8.882	128	1502393	69.38	ug/L	99
113)	1,2,3-Trichlorobenzene	9.008	180	347927	77.79	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
Acq On : 26 Sep 2022 3:11 pm
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:25:09 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: V2P3589-IC3589 **Method:** SW846 8260D
Lab FileID: 2P93400.D **Analyst approved:** 09/26/22 16:02 Courtney Failla
Injection Time: 09/26/22 15:11 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

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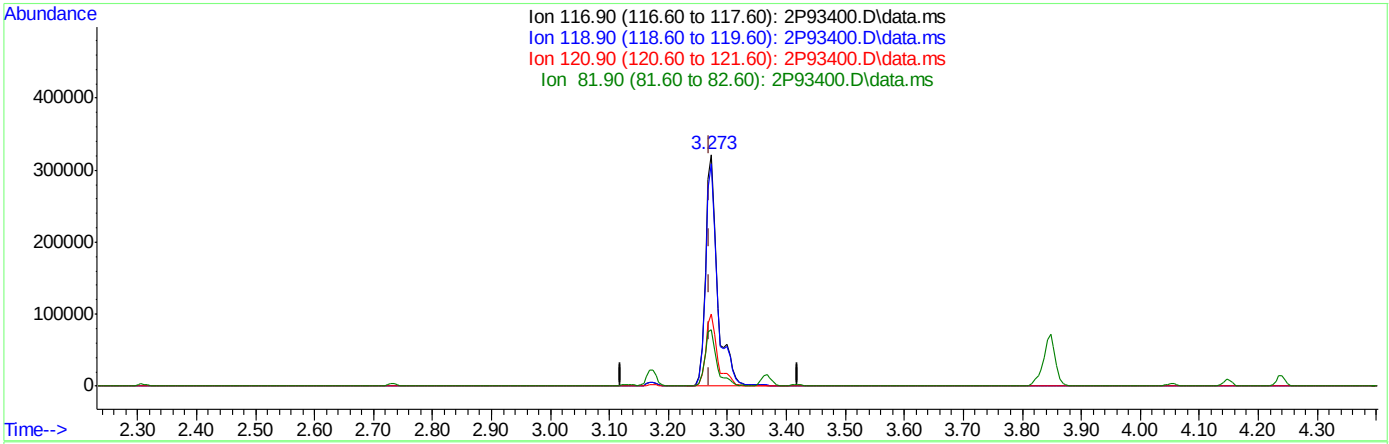
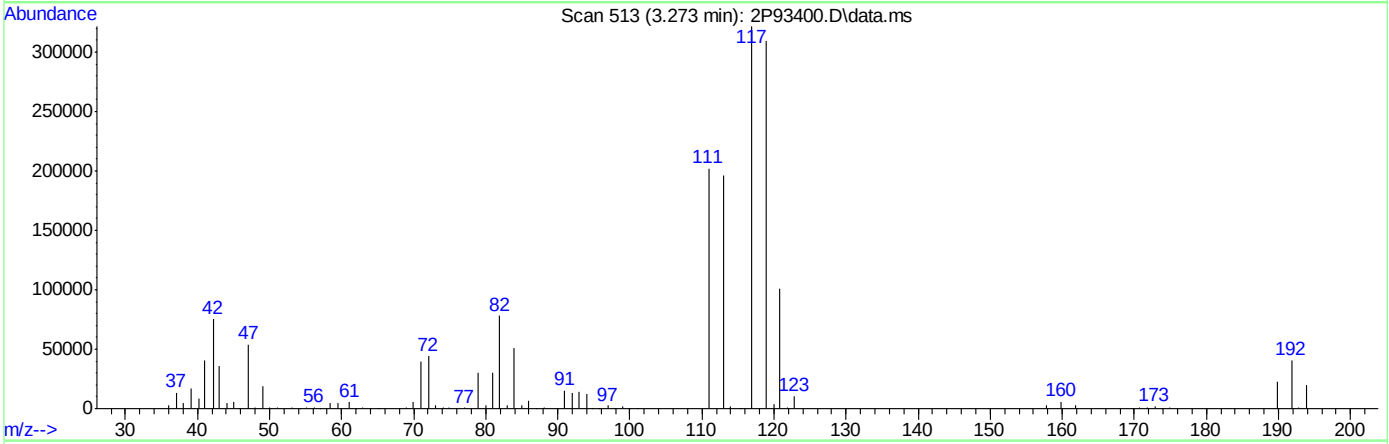
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:24:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93400.D\data.ms

(40) Carbon Tetrachloride ( )

3.273min (+0.003) 77.38ug/L

response 452034

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	96.10
120.90	29.50	31.38
81.90	28.30	24.12

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
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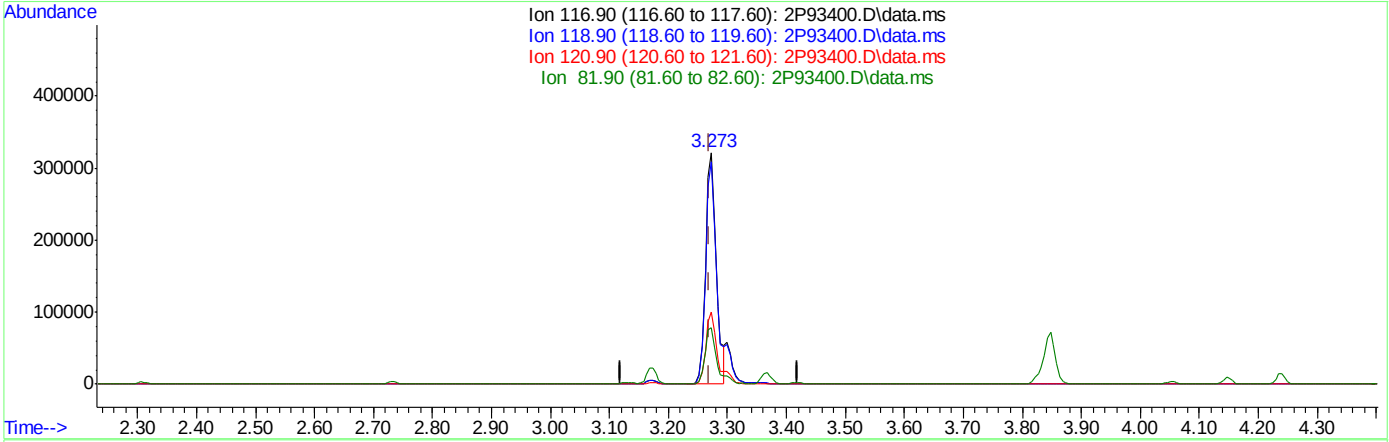
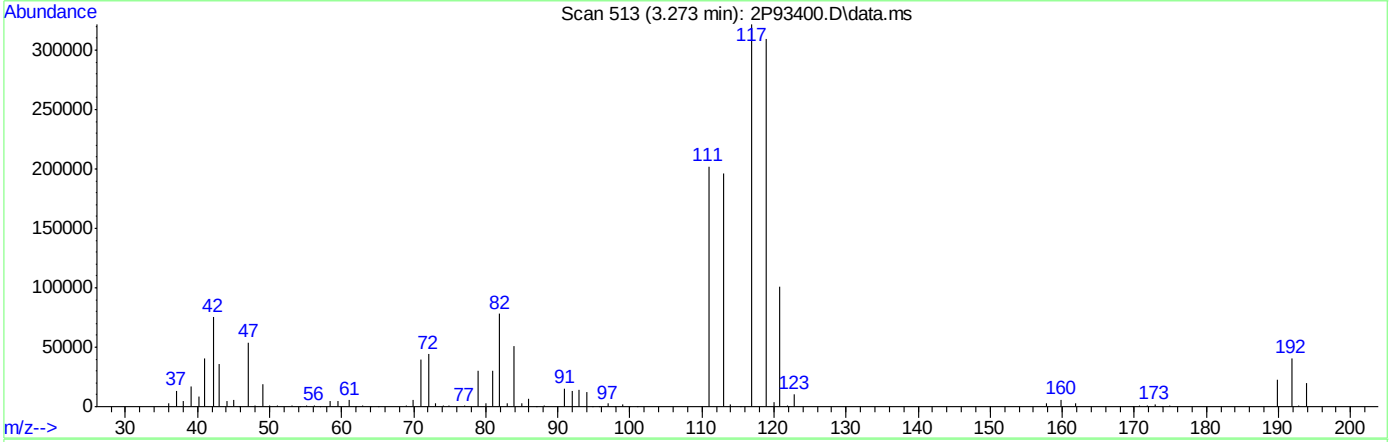
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:24:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93400.D\data.ms

(40) Carbon Tetrachloride ( )

3.273min (+0.003) 69.93ug/L m

response 399823

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	96.10
120.90	29.50	31.38
81.90	28.30	24.23

Quantitation Report (Qedit)

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ALS Vial : 57 Sample Multiplier: 1

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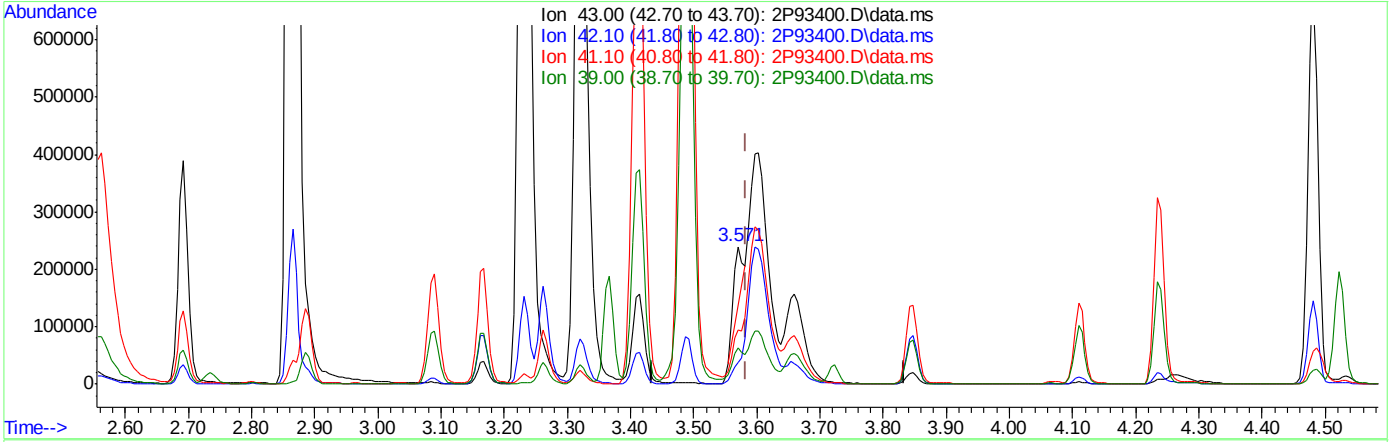

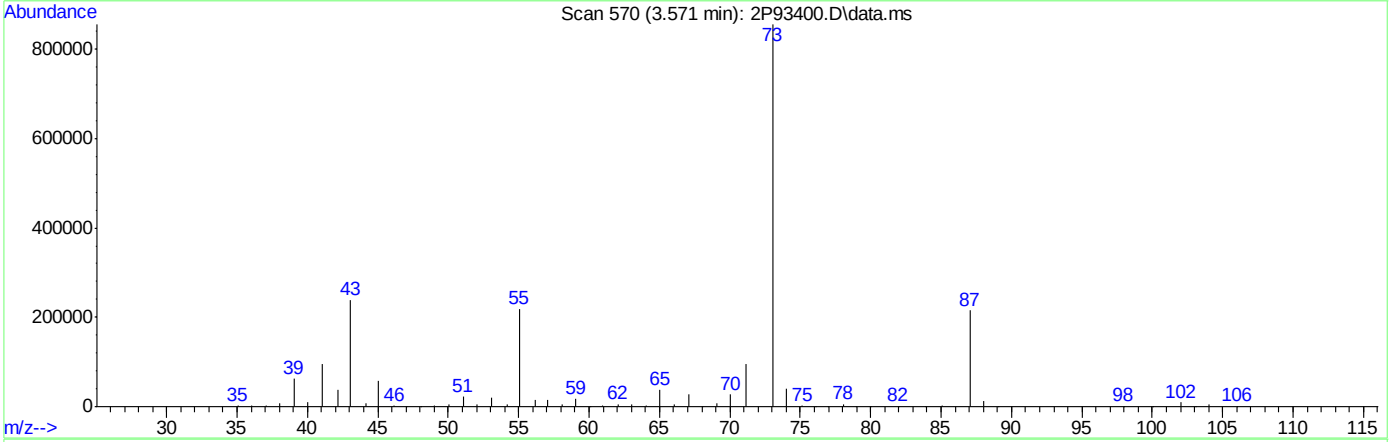

TIC: 2P93400.D\data.ms

(50) Isobutyl alcohol

3.571min (-0.013) 153.94ug/L

response 124816

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	15.12
41.10	70.00	35.52
39.00	27.50	22.48

8.6.17.4

8

Quantitation Report (Qedit)

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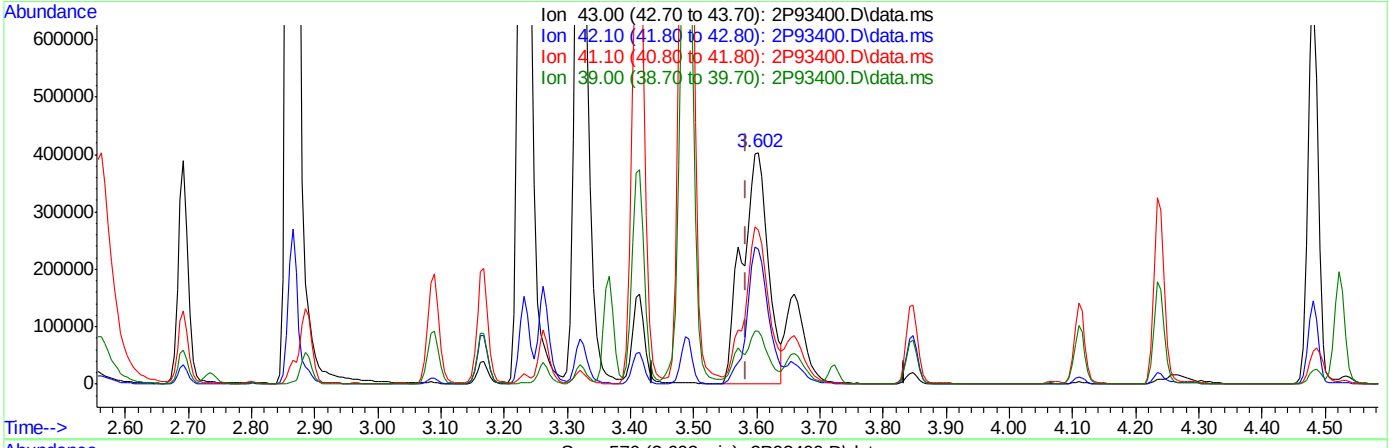

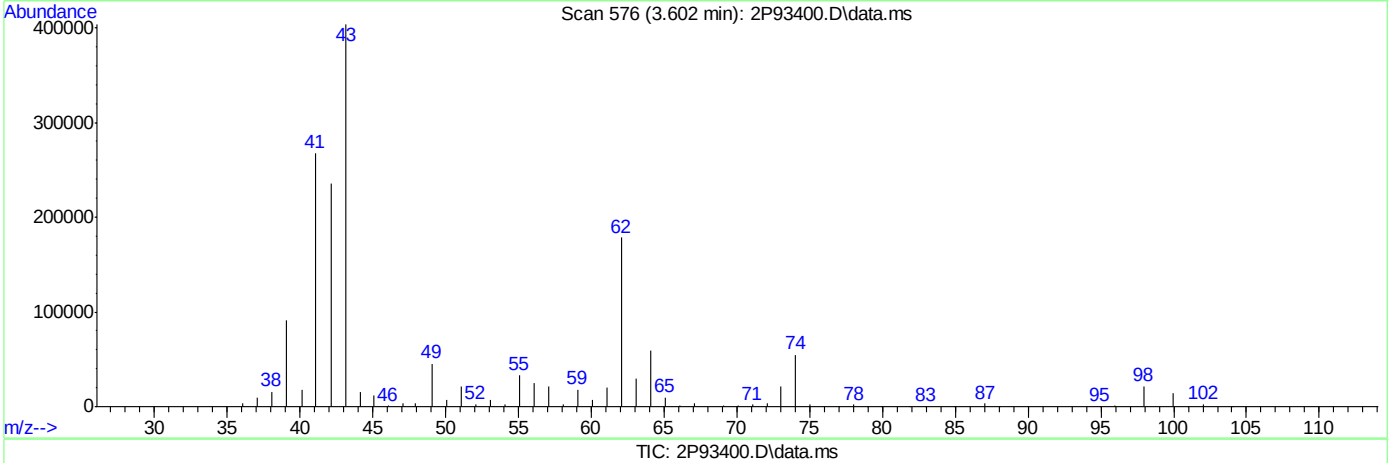

TIC: 2P93400.D\data.ms

(50) Isobutyl alcohol

3.602min (+0.018) 1420.62ug/L m

response 1151870

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.44
41.10	70.00	66.35
39.00	27.50	22.73

8.6.17.5

8

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
Acq On : 26 Sep 2022 3:11 pm
Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:24:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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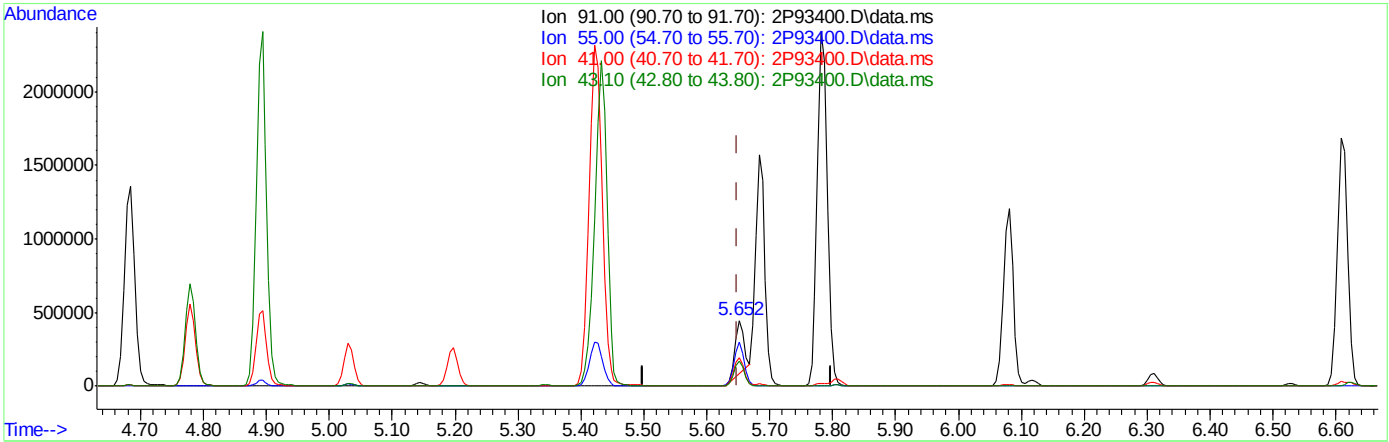

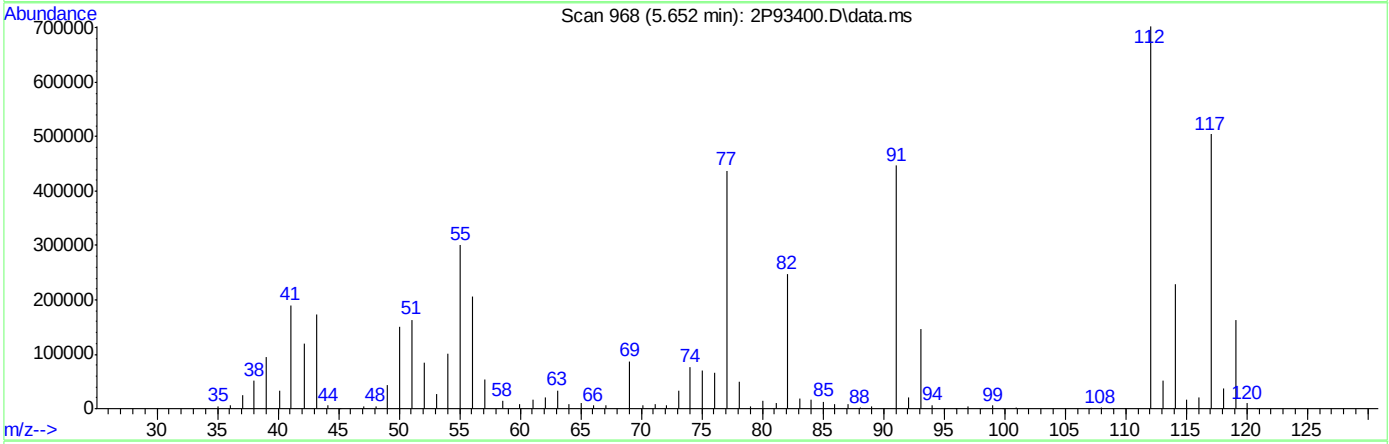

TIC: 2P93400.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.002) 49.12ug/L

response 346024

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.32
41.00	53.40	41.61
43.10	41.30	38.29

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93400.D
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Operator : courtnef
Sample : IC3589-6
Misc : MS52362,V2P3589,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Sep 26 15:24:05 2022
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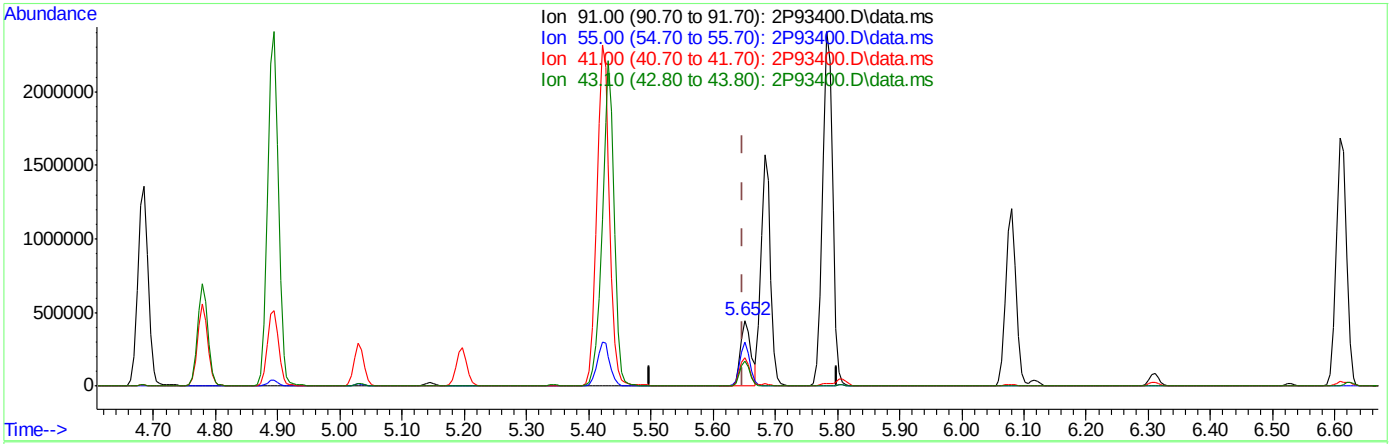

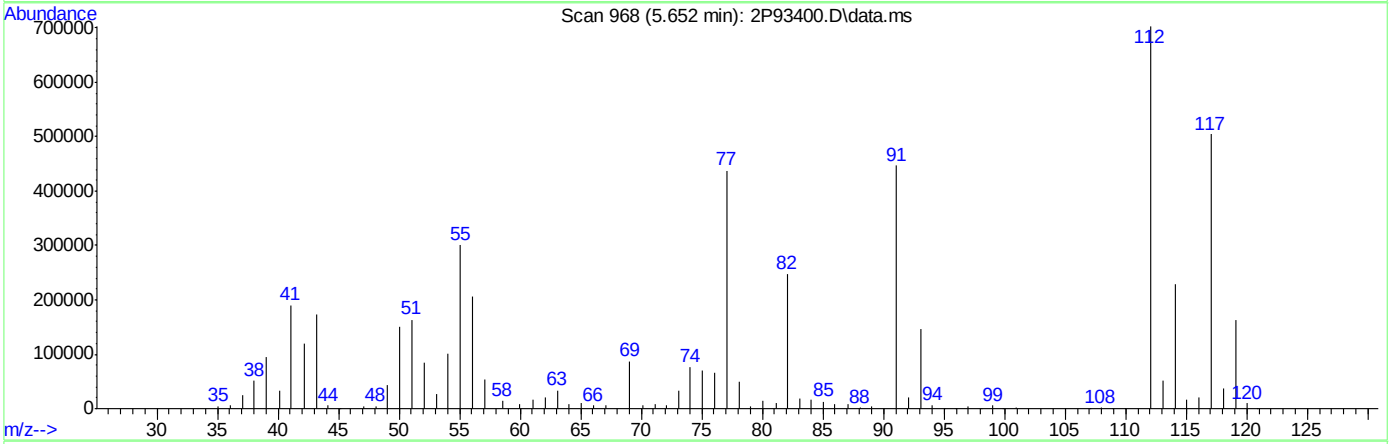

TIC: 2P93400.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.002) 73.04ug/L m

response 514599

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	67.30
41.00	53.40	42.51
43.10	41.30	38.67

2P93402.D

Manual Integrations APPROVED (compounds with "m" flag)

Lindsay Ritner 09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1331510	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	955872	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	434588	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	284301	50.24	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.48%				
49) 1,2-Dichloroethane-d4	3.553	65	354360	45.08	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 90.16%				
63) Toluene-d8	4.651	98	1302342	49.52	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.04%				
86) 4-Bromofluorobenzene	6.496	174	345547	50.98	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.96%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	522728	142.21	ug/L		99
3) Chloromethane	1.258	50	491967	121.13	ug/L		94
4) 1,3-butadiene	1.321	39	389838	103.29	ug/L		96
5) Vinyl Chloride	1.310	62	578819	116.95	ug/L		99
6) Bromomethane	1.514	94	239461	78.17	ug/L		99
7) Chloroethane	1.587	64	151485	107.69	ug/L		95
8) Trichlorofluoromethane	1.671	101	246571	56.62	ug/L		99
9) Ethyl Ether	1.890	59	471729	101.84	ug/L		95
10) Ethanol	2.005	45	225028	2104.49	ug/L		94
11) 1,2-Dichlorotrifluoroe...	1.979	67	542506	125.18	ug/L		99
12) 1,1-Dichloroethene	1.979	61	656405	103.71	ug/L		97
13) Freon 113	2.011	101	437197	96.53	ug/L		97
14) Carbon Disulfide	1.995	76	1149051	89.00	ug/L		99
15) Iodomethane	2.058	142	337497	97.16	ug/L		99
16) Acrolein	2.162	56	845529	499.05	ug/L		99
17) Allyl chloride	2.251	41	452485	99.39	ug/L		90
18) Methylene Chloride	2.303	49	565015	96.91	ug/L		97
19) Acetone	2.330	43	1383532	473.78	ug/L		95
20) Methyl acetate	2.403	43	3071976	495.85	ug/L		97
21) trans-1,2-Dichloroethene	2.403	61	675420	105.34	ug/L		98
22) Hexane	2.471	56	378516	97.09	ug/L	#	86
23) Methyl Tert Butyl Ether	2.481	73	1599025	109.42	ug/L	#	56
24) Tert Butyl Alcohol	2.539	59	1777185	983.27	ug/L		93
25) Acetonitrile	2.565	41	1403737	1369.17	ug/L		97
26) Di-isopropyl ether	2.696	45	1436136	105.84	ug/L		97
27) Chloroprene	2.737	53	1857497	96.10	ug/L		97
28) 1,1-Dichloroethane	2.732	63	873667	103.62	ug/L		100
29) Acrylonitrile	2.737	52	1432185	468.64	ug/L		98
30) ETBE	2.889	59	1677479	105.51	ug/L		97
31) Vinyl acetate	2.863	43	5148798	470.87	ug/L		98
32) cis-1,2-Dichloroethene	3.025	96	527574	104.91	ug/L		98
33) 2,2-Dichloropropane	3.088	77	728162	92.70	ug/L		98
34) Bromochloromethane	3.129	128	222668	97.96	ug/L		96
35) Cyclohexane	3.166	56	827859	90.83	ug/L		98

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Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	879380	103.93	ug/L		98
37) Ethyl acetate	3.234	43	3883084	469.50	ug/L		97
38) Tetrahydrofuran	3.265	42	300209	95.07	ug/L		96
40) Carbon Tetrachloride	3.271	117	599764m	95.16	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	769146	92.66	ug/L		98
42) 2-Butanone	3.323	43	2416071	476.57	ug/L		97
43) 1,1-Dichloropropene	3.365	75	677172	106.66	ug/L		92
44) tert-Butyl formate	3.412	59	2161695	473.07	ug/L		94
45) Propionitrile	3.469	54	1607280	987.42	ug/L		99
46) Methacrylonitrile	3.490	41	3882474	892.90	ug/L		95
47) Benzene	3.495	78	2114546	104.34	ug/L		83
48) TAME	3.574	73	1552418	107.40	ug/L		91
50) Isobutyl alcohol	3.610	43	1671680m	2007.50	ug/L		
51) 1,2-Dichloroethane	3.595	62	682052	94.02	ug/L		99
52) Tert Amyl Alcohol	3.668	59	1514241	948.09	ug/L		94
53) Trichloroethene	3.830	95	537725	103.09	ug/L		96
54) Methylcyclohexane	3.846	83	777331	93.28	ug/L		97
55) Dibromomethane	4.055	93	301879	105.36	ug/L		90
56) 1,2-Dichloropropane	4.112	63	526523	106.94	ug/L		95
57) Bromodichloromethane	4.149	83	603183	92.43	ug/L		99
58) Methyl methacrylate	4.238	41	549133	87.13	ug/L		95
59) 1,4-Dioxane	4.269	88	288910	1867.34	ug/L		97
60) 2-Chloroethyl vinyl ether	4.484	63	2075864	506.84	ug/L		93
61) cis-1,3-Dichloropropene	4.525	75	791496	94.68	ug/L		93
64) Toluene	4.682	91	2332189	103.34	ug/L		99
65) 2-Nitropropane	4.782	41	949037	417.42	ug/L		97
66) 4-Methyl-2-pentanone	4.891	43	4060757	466.44	ug/L		95
67) trans-1,3-Dichloropropene	4.923	75	707173	92.96	ug/L		89
68) Tetrachloroethene	4.938	166	543934	113.48	ug/L		97
69) Ethyl methacrylate	5.032	69	818355	90.38	ug/L		93
70) 1,1,2-Trichloroethane	5.022	83	399445	103.47	ug/L		98
71) Dibromochloromethane	5.148	129	471714	95.42	ug/L		99
72) 1,3-Dichloropropane	5.195	76	866546	100.97	ug/L		94
73) 1,2-Dibromoethane	5.299	107	506902	108.63	ug/L		93
74) 3,3-dimethyl-1-butanol	5.425	57	8795146	4480.28	ug/L		98
75) 2-hexanone	5.435	43	4069428	416.33	ug/L	#	62
76) 1-Chlorohexane	5.655	91	733118m	101.86	ug/L		
77) Ethylbenzene	5.686	91	2564680	103.63	ug/L		99
78) Chlorobenzene	5.655	112	1421132	105.16	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.702	131	472589	95.79	ug/L		98
80) m,p-Xylene	5.785	91	4074516	208.18	ug/L		99
81) o-Xylene	6.078	91	2045401	106.17	ug/L		99
82) Styrene	6.109	104	1629307	110.57	ug/L		97
83) Bromoform	6.120	173	272000	95.05	ug/L		99
84) Isopropylbenzene	6.308	105	2436427	109.62	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.528	53	234476	79.73	ug/L		89
88) n-Propylbenzene	6.611	91	2850952	106.92	ug/L		99
89) Bromobenzene	6.575	156	576409	106.92	ug/L	#	84
90) 1,1,2,2-Tetrachloroethane	6.632	83	731727	101.72	ug/L		98
91) 1,3,5-Trimethylbenzene	6.758	105	1982406	106.79	ug/L		99

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Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

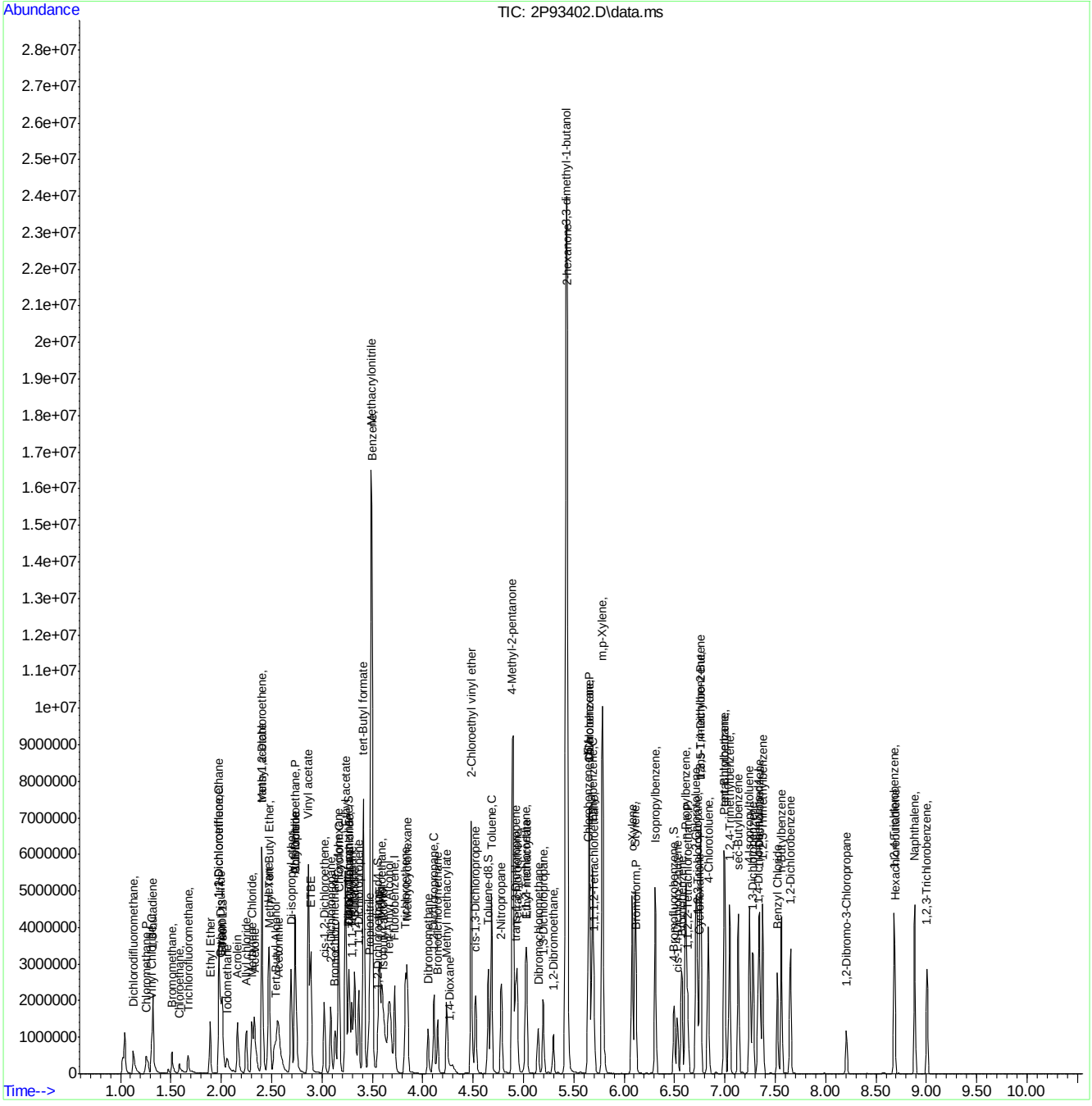
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.716	91	1671834	103.89	ug/L		98
93)	trans-1,4-Dichloro-2-B...	6.758	53	263276	85.40	ug/L	#	81
94)	1,2,3-Trichloropropane	6.726	110	269126	100.31	ug/L		94
95)	Cyclohexanone	6.747	55	281850	501.74	ug/L		93
96)	4-Chlorotoluene	6.836	91	1742032	102.71	ug/L		99
97)	tert-Butylbenzene	6.993	91	1078738	105.82	ug/L		98
99)	1,2,4-Trimethylbenzene	7.045	105	1916386	105.83	ug/L		98
100)	Pentachloroethane	6.998	167	252402	89.29	ug/L		94
101)	sec-Butylbenzene	7.134	105	2185647	110.72	ug/L		99
102)	4-Isopropyltoluene	7.244	119	1954632	95.60	ug/L		99
103)	1,3-Dichlorobenzene	7.281	146	1026311	105.98	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	1894750	104.32	ug/L		99
105)	1,4-Dichlorobenzene	7.343	146	1047335	103.50	ug/L		96
106)	n-Butylbenzene	7.563	92	935055	94.40	ug/L		96
107)	Benzyl Chloride	7.521	126	272664	89.03	ug/L		95
108)	1,2-Dichlorobenzene	7.652	146	954313	104.98	ug/L		98
109)	1,2-Dibromo-3-Chloropr...	8.206	75	190007	92.07	ug/L		88
110)	Hexachlorobutadiene	8.687	225	197140	100.46	ug/L		95
111)	1,2,4-Trichlorobenzene	8.682	180	558076	115.41	ug/L		98
112)	Naphthalene	8.886	128	2256309	97.04	ug/L		100
113)	1,2,3-Trichlorobenzene	9.006	180	524298	115.51	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

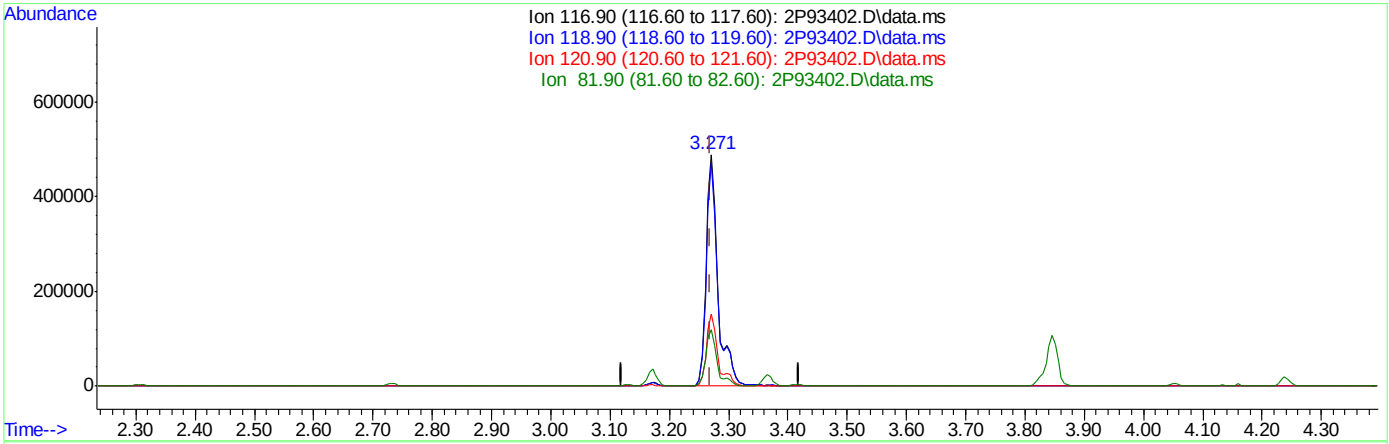
Sample Number: V2P3589-IC3589 **Method:** SW846 8260D
Lab FileID: 2P93402.D **Analyst approved:** 09/26/22 16:02 Courtney Failla
Injection Time: 09/26/22 15:43 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

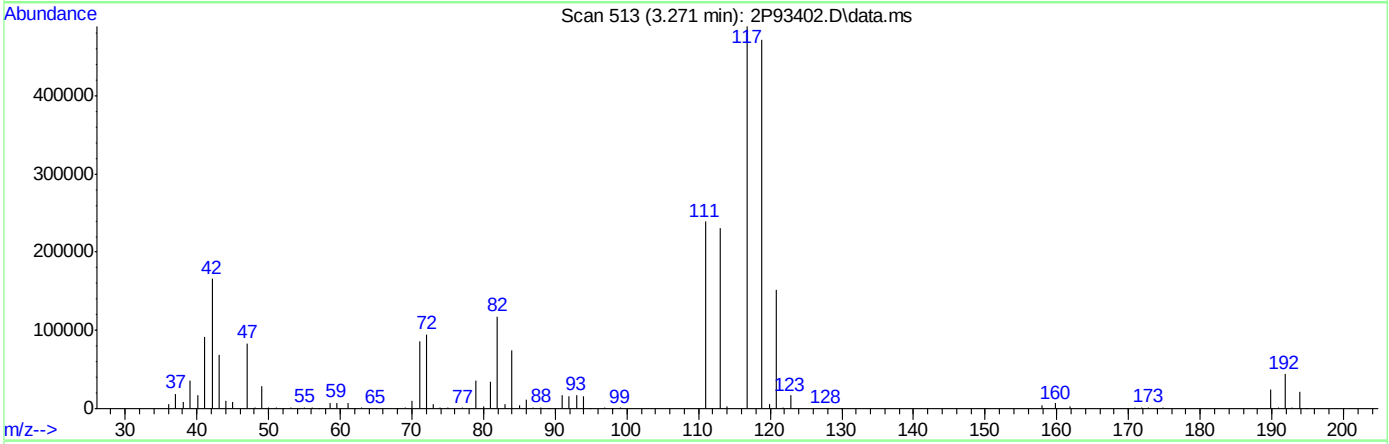
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.61	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:17 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93402.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 105.55ug/L

response 683911

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	96.35
120.90	29.50	31.06
81.90	28.30	24.02

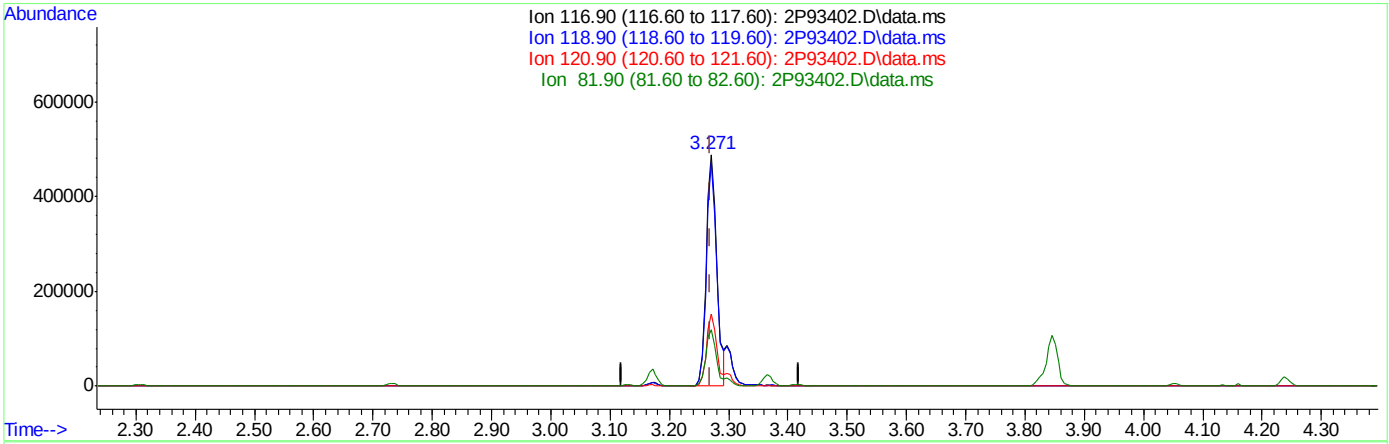
8.6.18.2

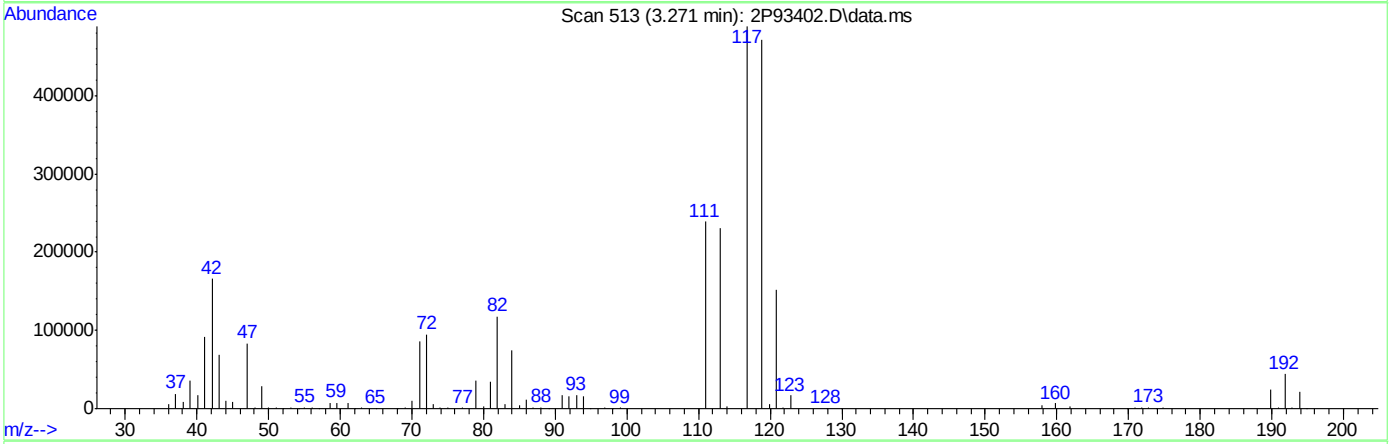
8

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:17 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93402.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 95.16ug/L m

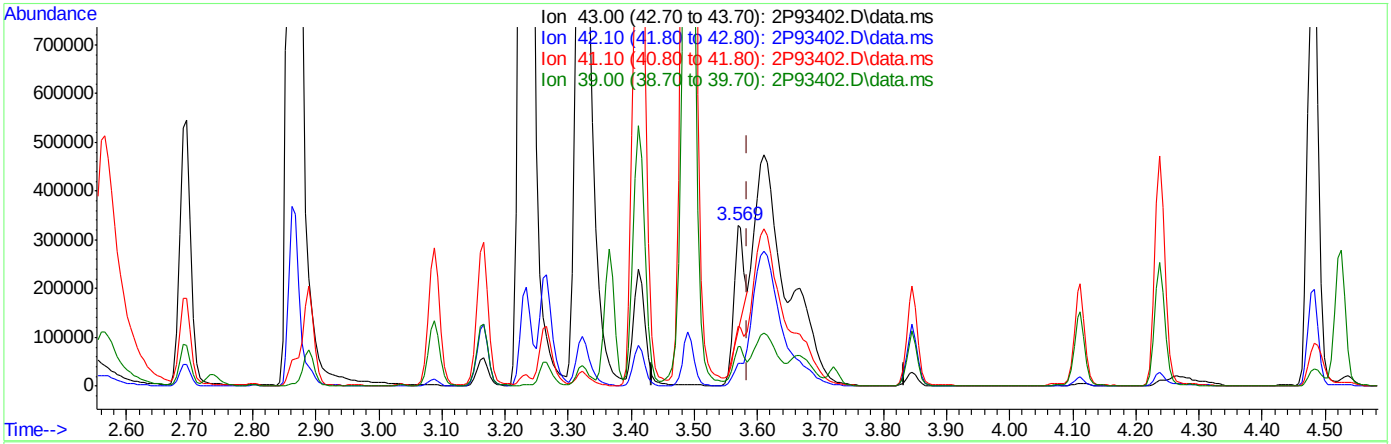
response 599764

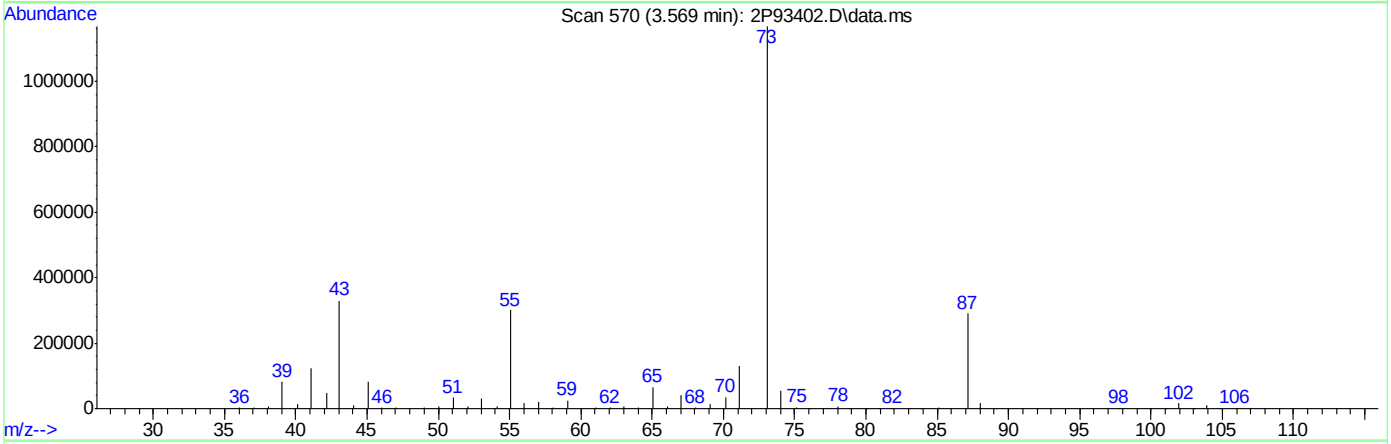
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	96.35
120.90	29.50	31.06
81.90	28.30	24.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:17 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93402.D\data.ms

(50) Isobutyl alcohol

3.569min (-0.015) 285.20ug/L

response 237491

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	14.13
41.10	70.00	33.10
39.00	27.50	21.95

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
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Operator : courtnef
Sample : IC3589-7
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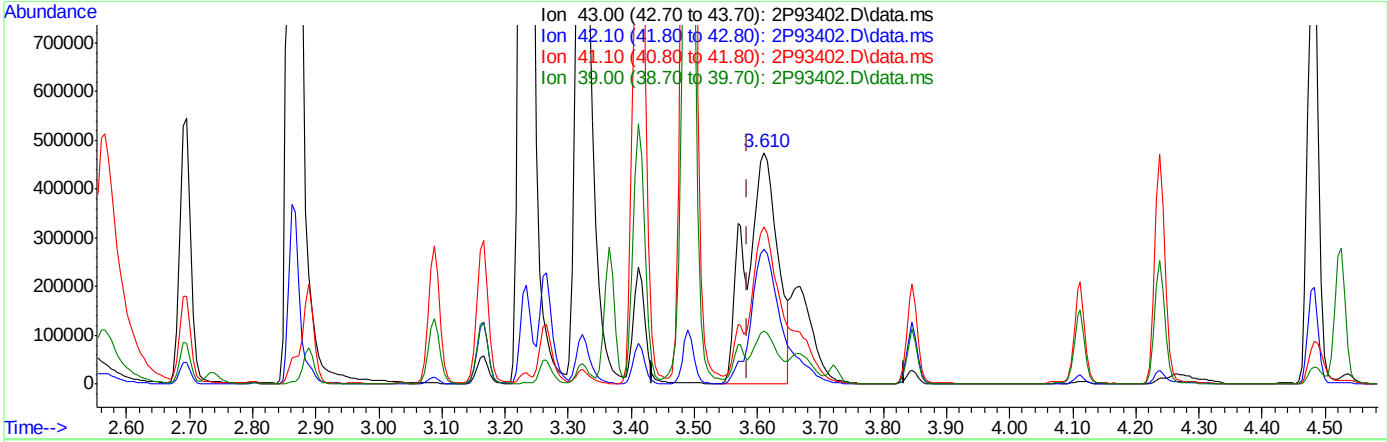
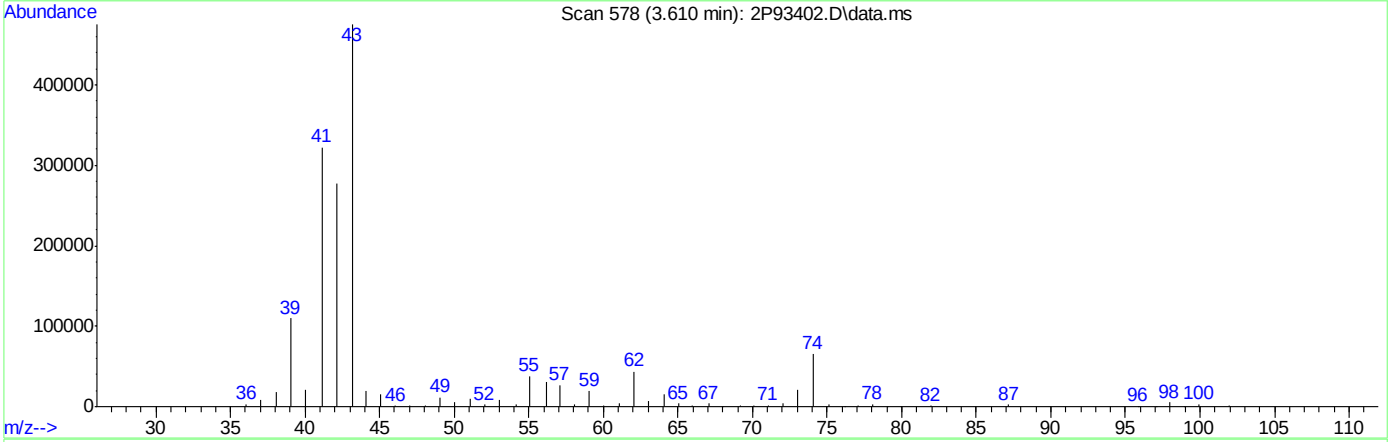
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93402.D\data.ms

(50) Isobutyl alcohol

3.610min (+0.026) 2007.50ug/L m

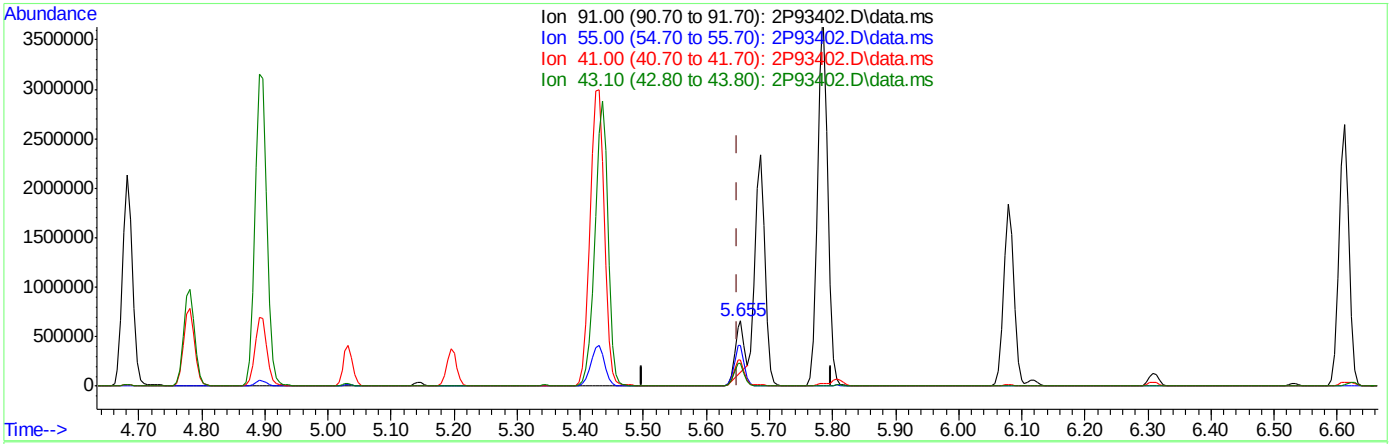
response 1671680

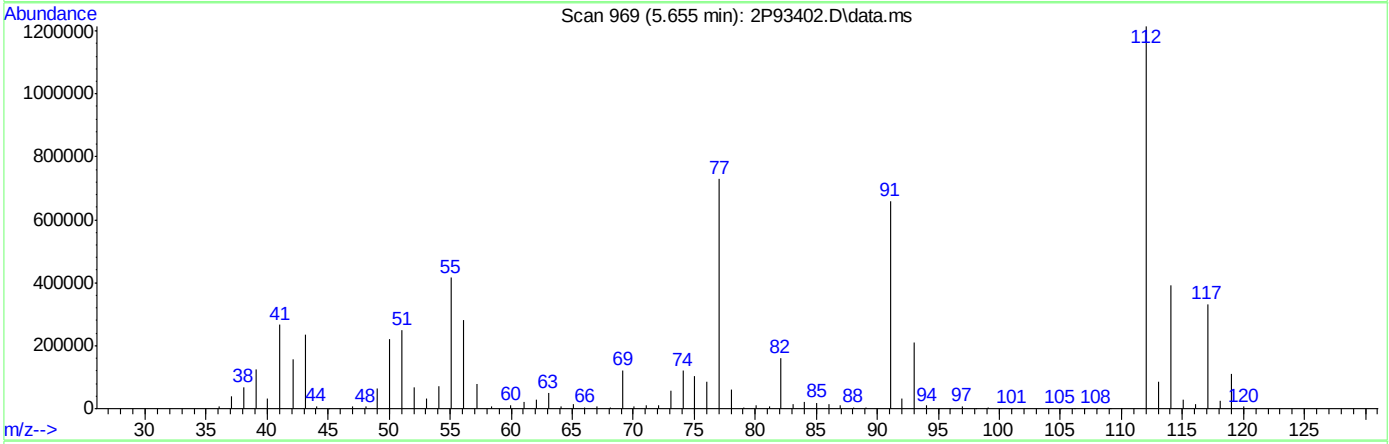
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.38
41.10	70.00	67.89
39.00	27.50	23.04

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:17 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93402.D\data.ms

(76) 1-Chlorohexane

5.655min (+0.006) 71.94ug/L

response 517771

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	61.35
41.00	53.40	39.14
43.10	41.30	34.96

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93402.D
Acq On : 26 Sep 2022 3:43 pm
Operator : courtnef
Sample : IC3589-7
Misc : MS52362,V2P3589,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Sep 26 15:54:17 2022
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Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
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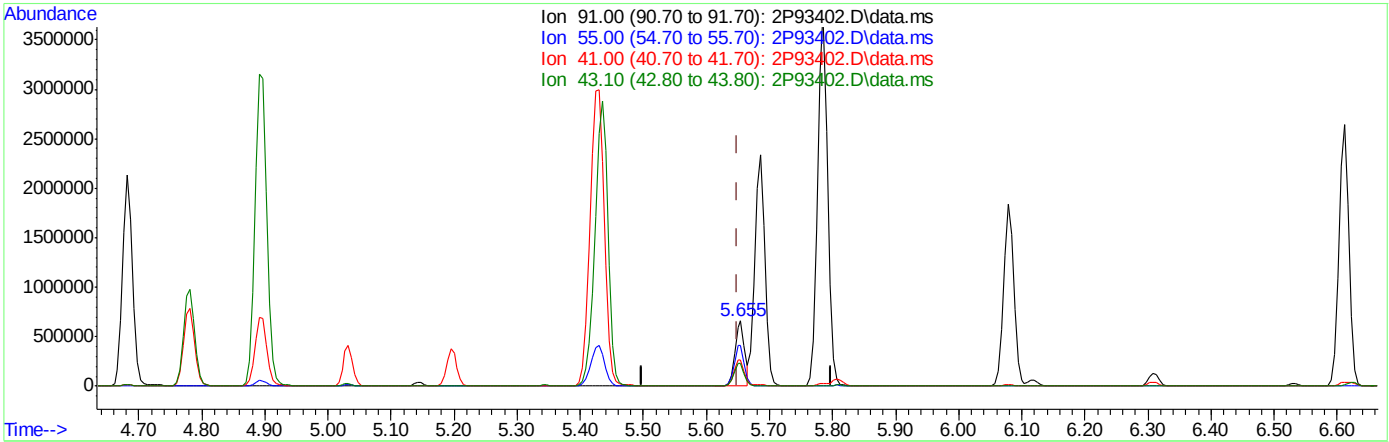

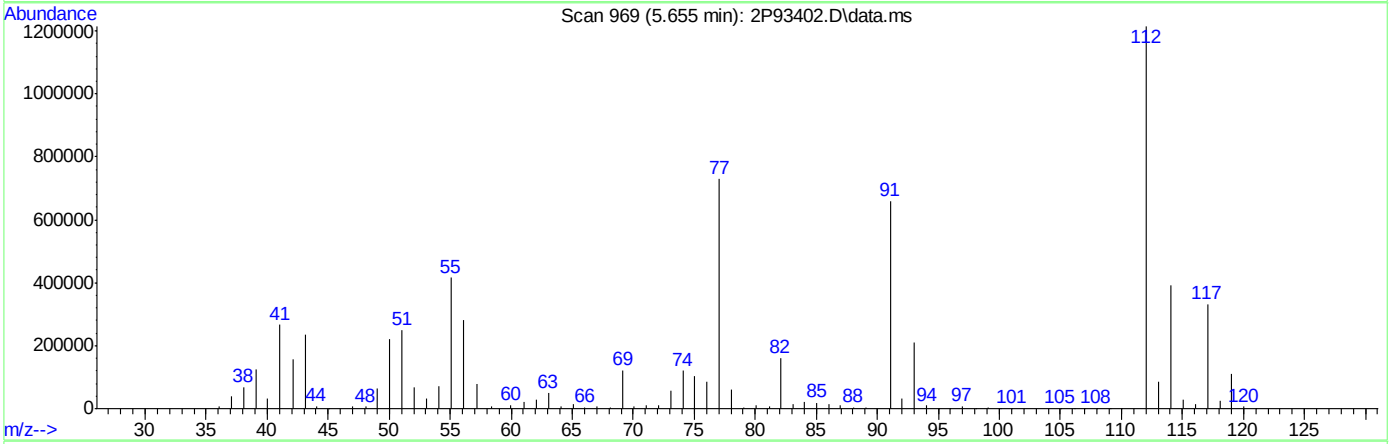

TIC: 2P93402.D\data.ms

(76) 1-Chlorohexane

5.655min (+0.006) 101.86ug/L m

response 733118

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	62.99
41.00	53.40	40.38
43.10	41.30	35.81

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/27/22 11:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:57:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.723	96	1279594	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.641	117	922019	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.335	152	433040	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.268	113	272529	51.09	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.18%			
49) 1,2-Dichloroethane-d4	3.555	65	362145	50.66	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.32%			
63) Toluene-d8	4.648	98	1242002	49.70	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.40%			
86) 4-Bromofluorobenzene	6.499	174	335614	50.42	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.84%			
Target Compounds						Qvalue
3) Chloromethane	1.255	50	175653	37.55	ug/L	100
4) 1,3-butadiene	1.323	39	169142	41.76	ug/L	96
5) Vinyl Chloride	1.307	62	196447	36.84	ug/L	98
6) Bromomethane	1.511	94	95374	35.36	ug/L	99
7) Chloroethane	1.584	64	56962	35.46	ug/L	98
9) Ethyl Ether	1.888	59	156994	33.28	ug/L	98
10) Ethanol	1.987	45	101141	734.15	ug/L	97
11) 1,2-Dichlorotrifluoroe...	1.982	67	191367	36.35	ug/L	99
12) 1,1-Dichloroethene	1.982	61	236090	38.32	ug/L	98
13) Freon 113	2.013	101	143050	34.66	ug/L	95
14) Carbon Disulfide	2.003	76	311610	33.61	ug/L	98
15) Iodomethane	2.065	142	80921	24.24	ug/L	99
16) Acrolein	2.160	56	285595	180.47	ug/L	99
17) Allyl chloride	2.248	41	208918	47.38	ug/L	98
18) Methylene Chloride	2.306	49	222377	36.42	ug/L	99
19) Acetone	2.322	43	581001	198.36	ug/L	99
20) Methyl acetate	2.400	43	1234913	202.54	ug/L	99
21) trans-1,2-Dichloroethene	2.405	61	243702	38.66	ug/L	98
22) Hexane	2.473	56	132127	39.58	ug/L	98
23) Methyl Tert Butyl Ether	2.478	73	643253	42.80	ug/L	73
24) Tert Butyl Alcohol	2.520	59	702940	403.34	ug/L	99
25) Acetonitrile	2.557	41	355715	356.77	ug/L	97
26) Di-isopropyl ether	2.693	45	526797	38.37	ug/L	98
28) 1,1-Dichloroethane	2.735	63	333410	39.94	ug/L	100
29) Acrylonitrile	2.735	52	634009	228.10	ug/L	86
30) ETBE	2.886	59	585506	37.13	ug/L	99
31) Vinyl acetate	2.865	43	1961499	204.51	ug/L	100
32) cis-1,2-Dichloroethene	3.022	96	197698	39.32	ug/L	95
33) 2,2-Dichloropropane	3.090	77	244698	39.33	ug/L	99
34) Bromochloromethane	3.132	128	86487	38.25	ug/L	94
35) Cyclohexane	3.163	56	291470	38.67	ug/L	98
36) Chloroform	3.169	83	328160	38.99	ug/L	100
37) Ethyl acetate	3.231	43	1554879	205.03	ug/L	99
38) Tetrahydrofuran	3.263	42	118093	37.00	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:57:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Carbon Tetrachloride	3.273	117	200297m	39.61	ug/L	
41) 1,1,1-Trichloroethane	3.299	97	282891	40.45	ug/L	98
42) 2-Butanone	3.320	43	971484	199.66	ug/L	99
43) 1,1-Dichloropropene	3.367	75	240361	37.86	ug/L	97
44) tert-Butyl formate	3.414	59	611102	166.60	ug/L	98
45) Propionitrile	3.467	54	645784	389.65	ug/L	98
46) Methacrylonitrile	3.487	41	1634818	393.74	ug/L	99
47) Benzene	3.498	78	775687	37.87	ug/L	96
50) Isobutyl alcohol	3.597	43	711011m	865.32	ug/L	
51) 1,2-Dichloroethane	3.592	62	260311	37.03	ug/L	97
52) Tert Amyl Alcohol	3.655	59	576197	410.06	ug/L	100
53) Trichloroethene	3.827	95	199349	38.31	ug/L	97
54) Methylcyclohexane	3.848	83	279285	39.47	ug/L	99
55) Dibromomethane	4.052	93	110676	38.74	ug/L	94
56) 1,2-Dichloropropane	4.110	63	189647	37.90	ug/L	99
57) Bromodichloromethane	4.146	83	214125	43.48	ug/L	98
58) Methyl methacrylate	4.235	41	216394	43.45	ug/L	94
59) 1,4-Dioxane	4.261	88	128231	852.09	ug/L	99
60) 2-Chloroethyl vinyl ether	4.481	63	791013	196.43	ug/L	97
61) cis-1,3-Dichloropropene	4.523	75	280742	40.83	ug/L	100
64) Toluene	4.685	91	871694	37.94	ug/L	100
65) 2-Nitropropane	4.779	41	342775	213.86	ug/L	98
66) 4-Methyl-2-pentanone	4.894	43	1605152	196.26	ug/L	99
67) trans-1,3-Dichloropropene	4.920	75	277783	43.72	ug/L	98
68) Tetrachloroethene	4.941	166	199079	38.45	ug/L	96
69) Ethyl methacrylate	5.030	69	307214	41.97	ug/L	96
70) 1,1,2-Trichloroethane	5.019	83	153358	39.78	ug/L	95
71) Dibromochloromethane	5.145	129	159680	40.00	ug/L	97
72) 1,3-Dichloropropane	5.197	76	311459	36.95	ug/L	98
73) 1,2-Dibromoethane	5.296	107	187441	39.99	ug/L	97
74) 3,3-dimethyl-1-butanol	5.422	57	3499806	1885.11	ug/L	100
75) 2-hexanone	5.432	43	1760200	189.12	ug/L	89
76) 1-Chlorohexane	5.652	91	300615m	41.46	ug/L	
77) Ethylbenzene	5.683	91	981427	39.73	ug/L	97
78) Chlorobenzene	5.657	112	541703	39.41	ug/L	95
79) 1,1,1,2-Tetrachloroethane	5.699	131	174252	42.22	ug/L	97
80) m,p-Xylene	5.783	91	1521068	78.82	ug/L	99
81) o-Xylene	6.081	91	785016	41.30	ug/L	97
82) Styrene	6.112	104	608228	42.85	ug/L	99
83) Bromoform	6.117	173	92162	42.36	ug/L	96
84) Isopropylbenzene	6.311	105	920727	41.55	ug/L	98
87) cis-1,4-Dichloro-2-butene	6.525	53	82665	40.14	ug/L	95
88) n-Propylbenzene	6.609	91	1080098	40.80	ug/L	100
89) Bromobenzene	6.572	156	211784	37.67	ug/L	95
90) 1,1,2,2-Tetrachloroethane	6.629	83	288218	39.71	ug/L	97
91) 1,3,5-Trimethylbenzene	6.755	105	738885	39.91	ug/L	99
92) 2-Chlorotoluene	6.713	91	643931	40.05	ug/L	99
93) trans-1,4-Dichloro-2-B...	6.760	53	96455	39.09	ug/L	95
94) 1,2,3-Trichloropropane	6.724	110	100067	36.39	ug/L	97
95) Cyclohexanone	6.744	55	108705	195.66	ug/L	97

Quantitation Report (QT Reviewed)

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Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
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Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

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Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

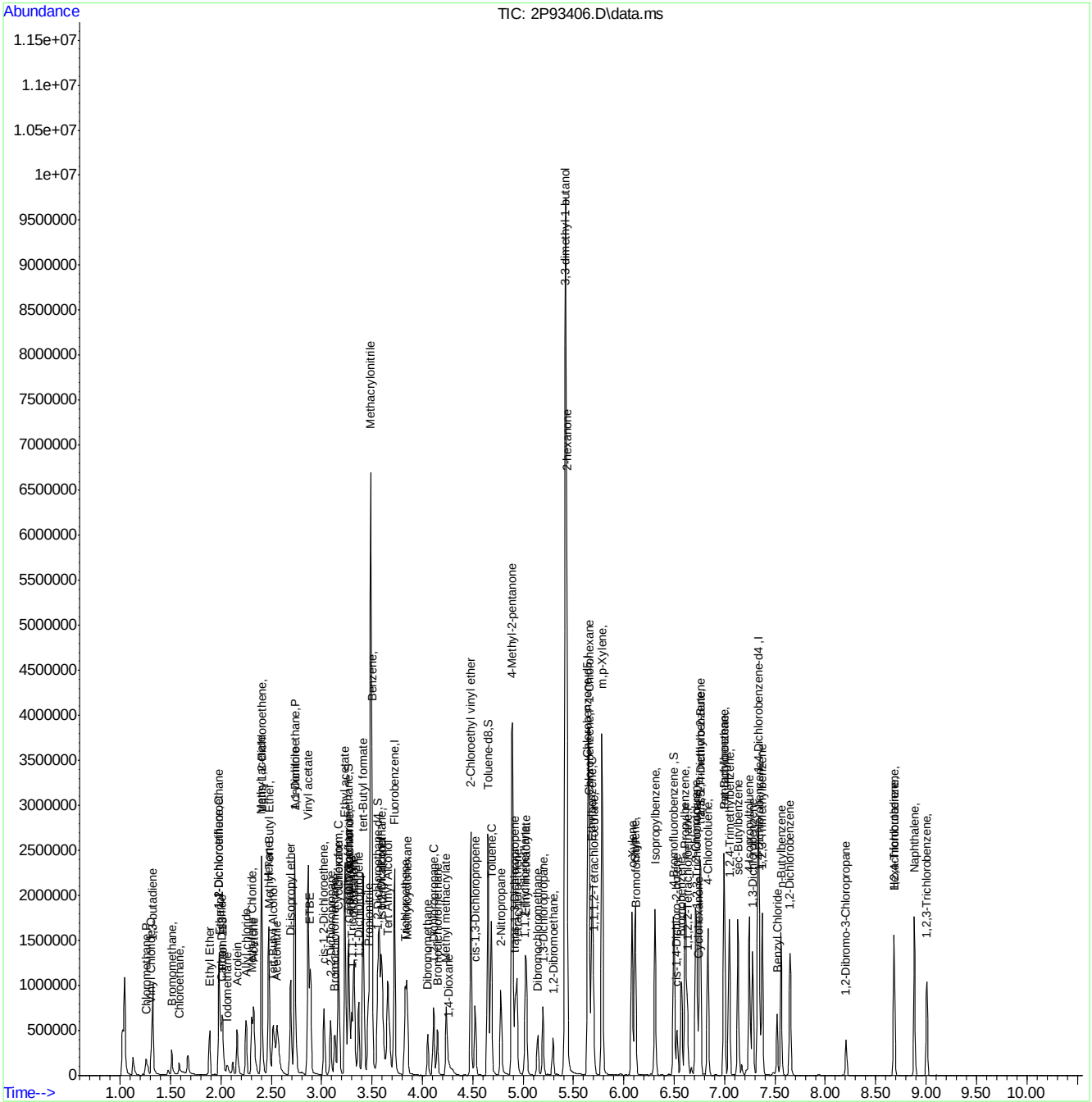
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96) 4-Chlorotoluene	6.833	91	676253	40.53	ug/L		100
97) tert-Butylbenzene	6.995	91	407372	40.44	ug/L		95
99) 1,2,4-Trimethylbenzene	7.048	105	729555	41.23	ug/L		98
100) Pentachloroethane	6.995	167	99429	43.46	ug/L		93
101) sec-Butylbenzene	7.131	105	866570	42.75	ug/L		98
102) 4-Isopropyltoluene	7.246	119	771319	44.09	ug/L		99
103) 1,3-Dichlorobenzene	7.278	146	406421	40.82	ug/L		98
104) 1,2,3-Trimethylbenzene	7.372	105	758537	42.03	ug/L		99
105) 1,4-Dichlorobenzene	7.346	146	408479	38.50	ug/L		95
106) n-Butylbenzene	7.560	92	333990	38.91	ug/L		98
107) Benzyl Chloride	7.523	126	66574	34.61	ug/L	#	91
108) 1,2-Dichlorobenzene	7.649	146	373798	39.63	ug/L		96
109) 1,2-Dibromo-3-Chloropr...	8.203	75	63085	39.66	ug/L		98
110) Hexachlorobutadiene	8.684	225	70389	38.58	ug/L		94
111) 1,2,4-Trichlorobenzene	8.684	180	204817	40.23	ug/L		95
112) Naphthalene	8.883	128	845596	43.67	ug/L		100
113) 1,2,3-Trichlorobenzene	9.008	180	196138	40.05	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:57:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration



Manual Integration Approval Summary

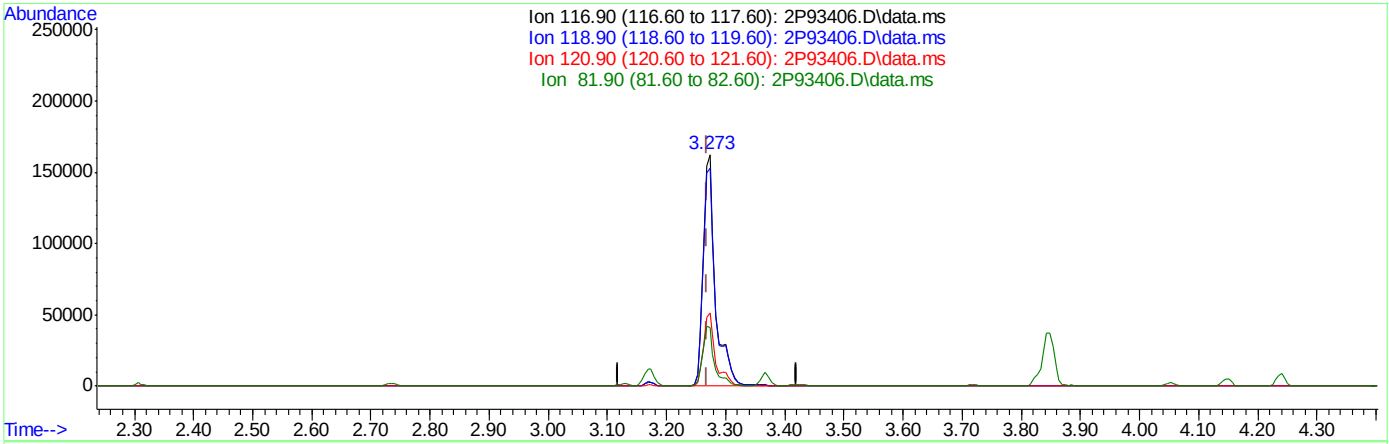
Sample Number: V2P3589-ICV3589 **Method:** SW846 8260D
Lab FileID: 2P93406.D **Analyst approved:** 09/27/22 11:00 Courtney Failla
Injection Time: 09/26/22 16:48 **Supervisor approved:** 09/27/22 11:25 Lindsay Ritner

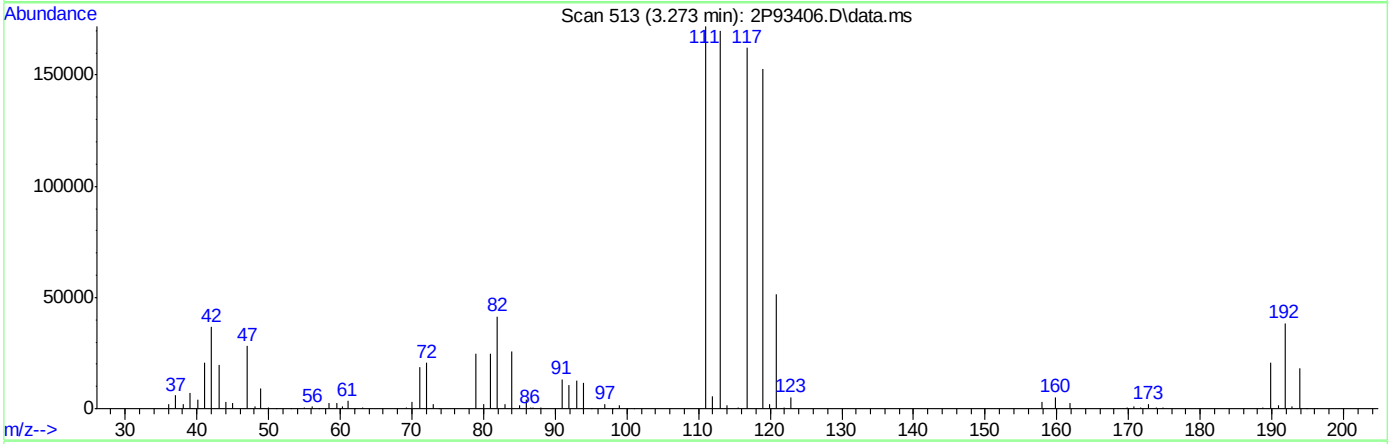
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(40) Carbon Tetrachloride ( )

3.273min (+0.003) 46.63ug/L

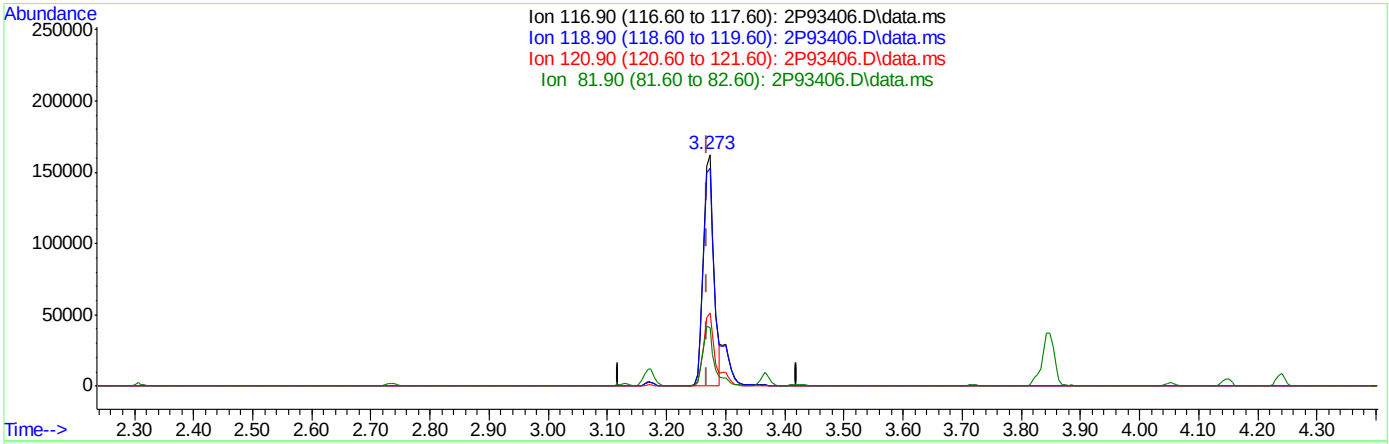
response 235798

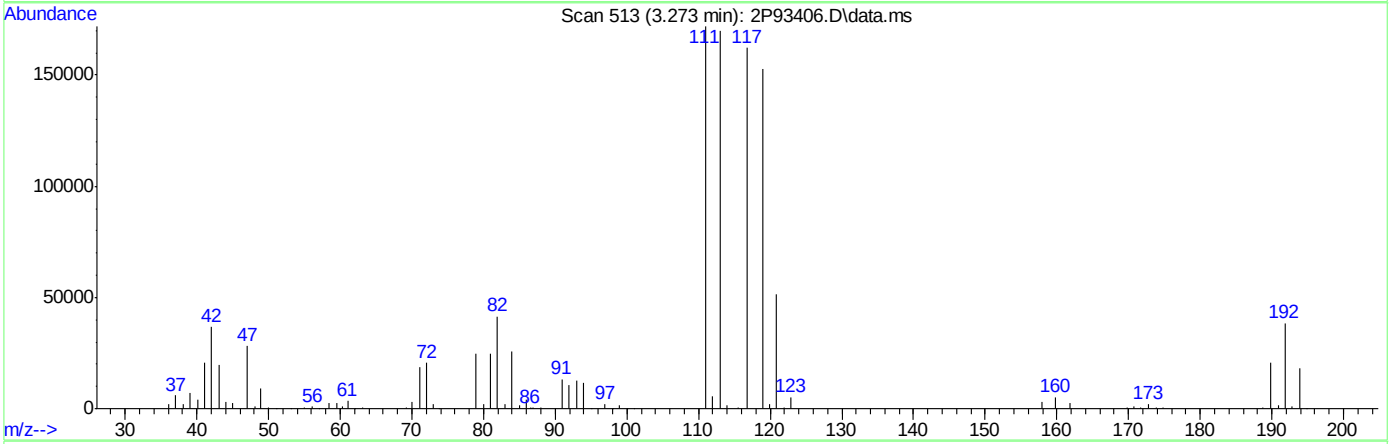
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	93.93
120.90	31.30	31.82
81.90	25.80	25.37

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(40) Carbon Tetrachloride ( )

3.273min (+0.003) 39.61ug/L m

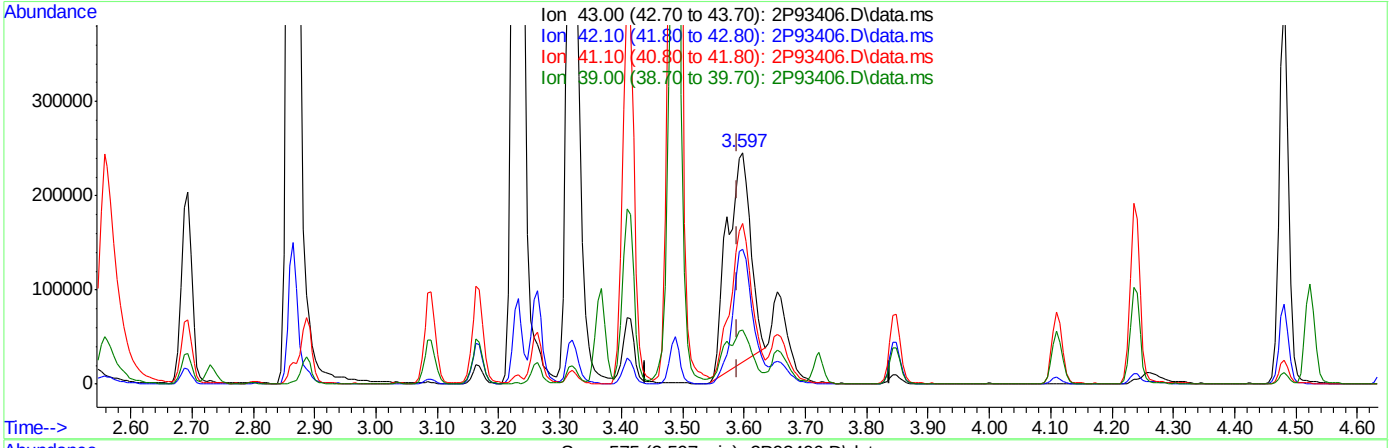
response 200297

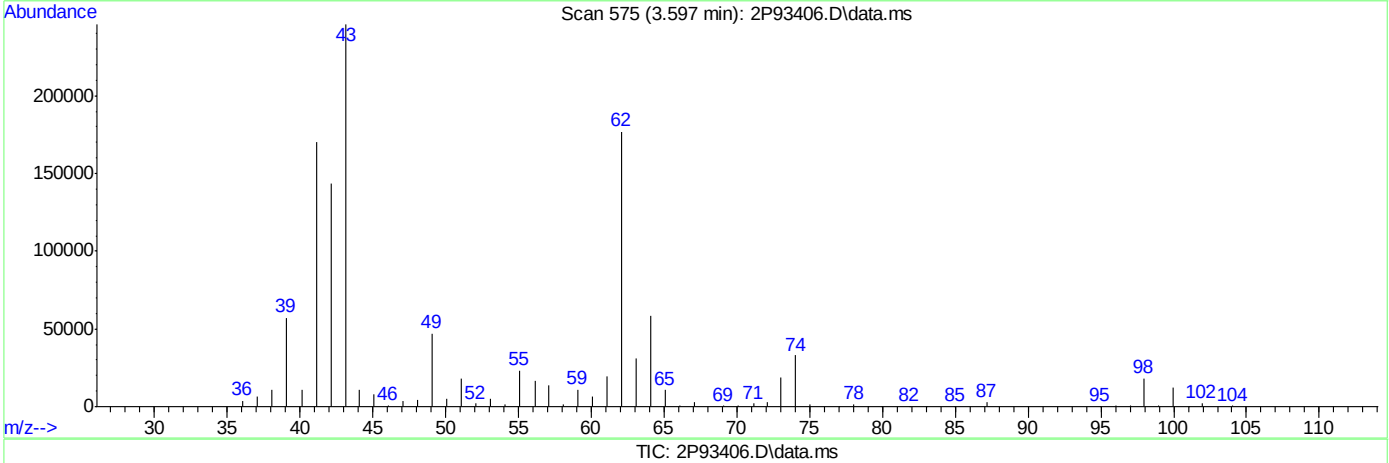
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	93.93
120.90	31.30	31.82
81.90	25.80	25.57

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(50) Isobutyl alcohol

3.597min (+0.009) 733.93ug/L

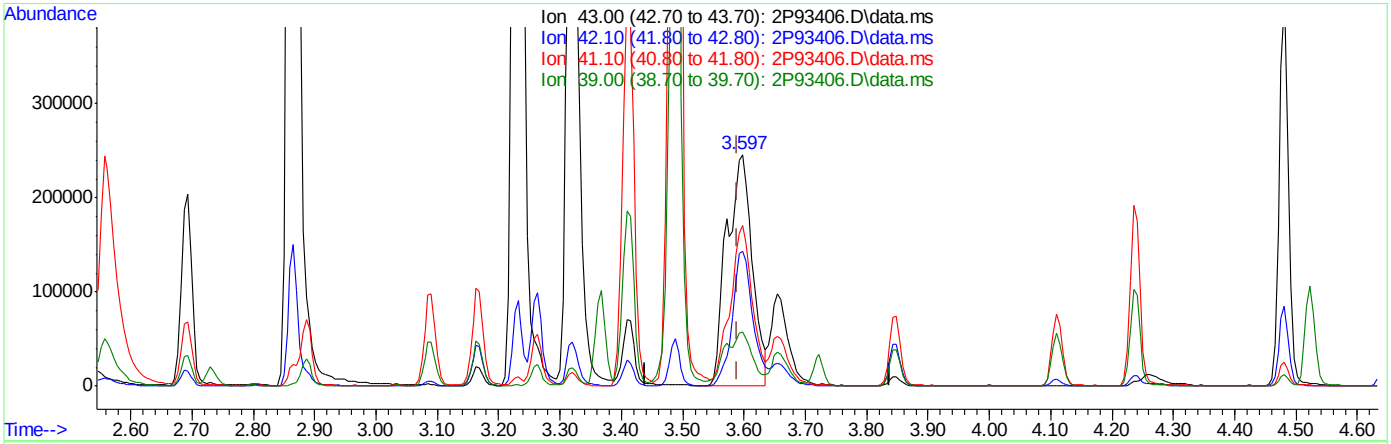
response 603053

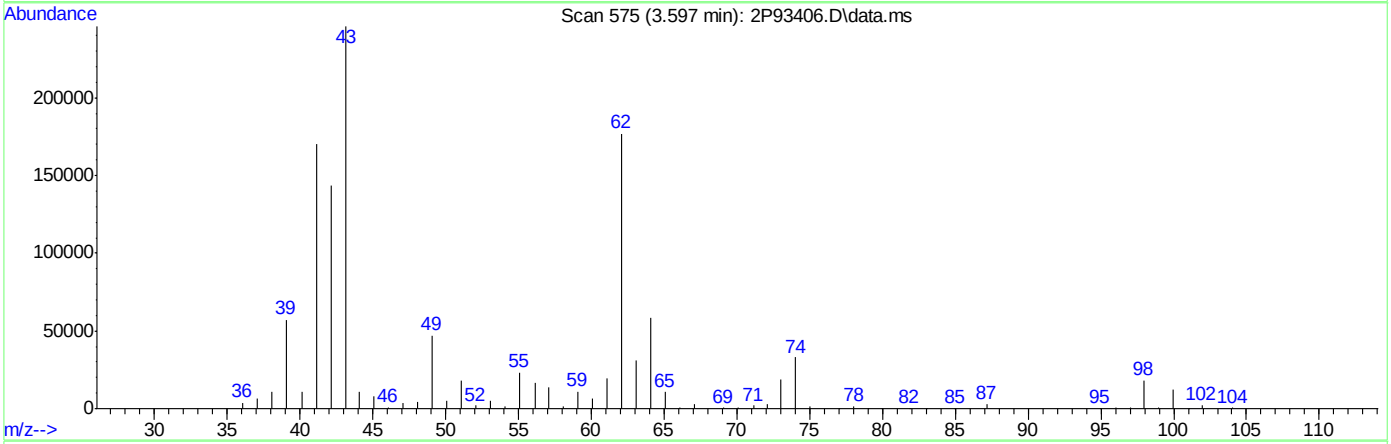
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.43
41.10	69.60	66.90
39.00	23.50	20.93

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(50) Isobutyl alcohol

3.597min (+0.009) 865.32ug/L m

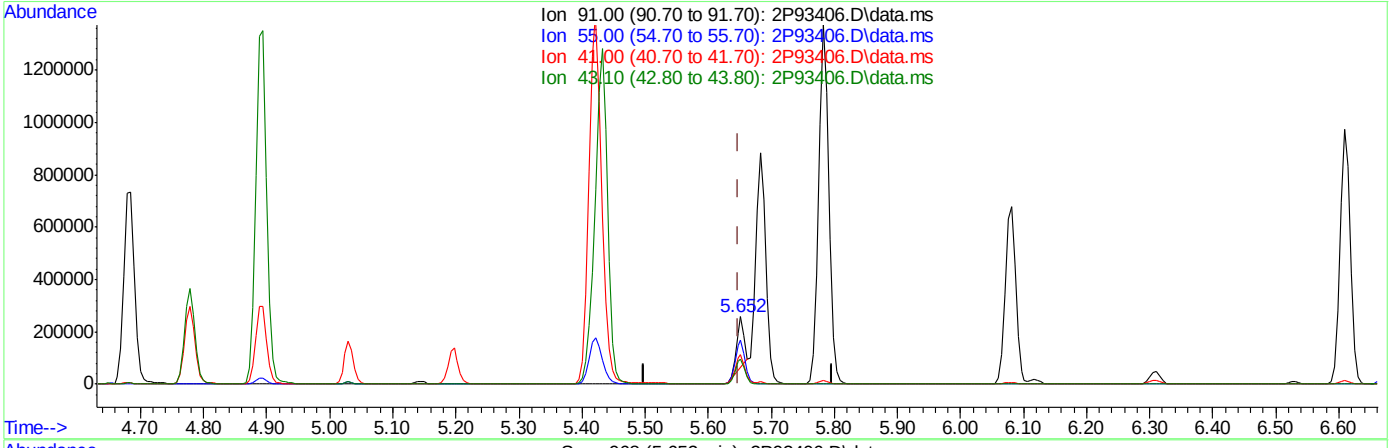
response 711011

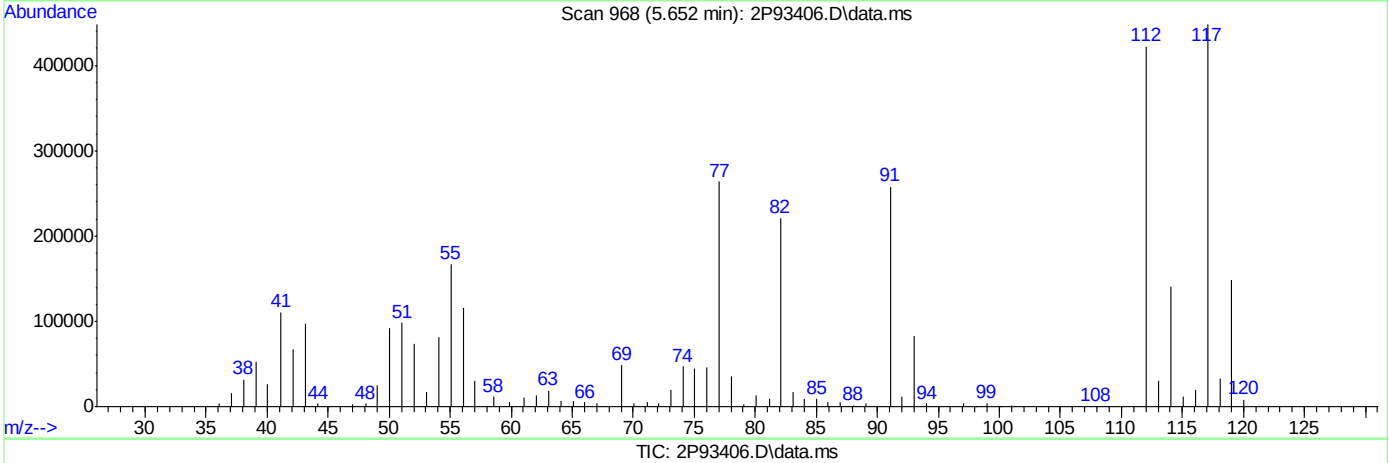
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.31
41.10	69.60	69.29
39.00	23.50	23.23

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.003) 24.26ug/L

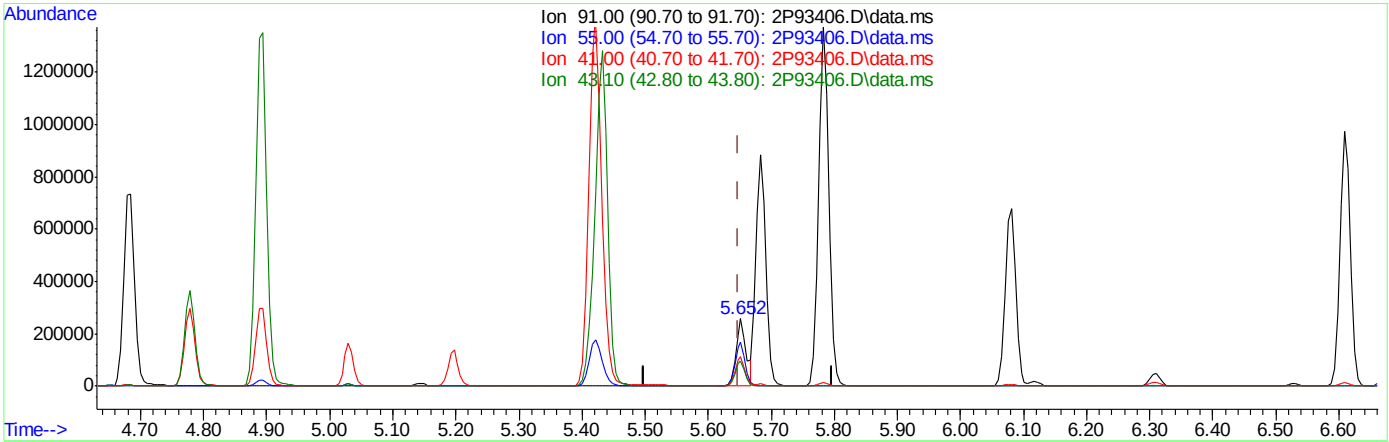
response 175951

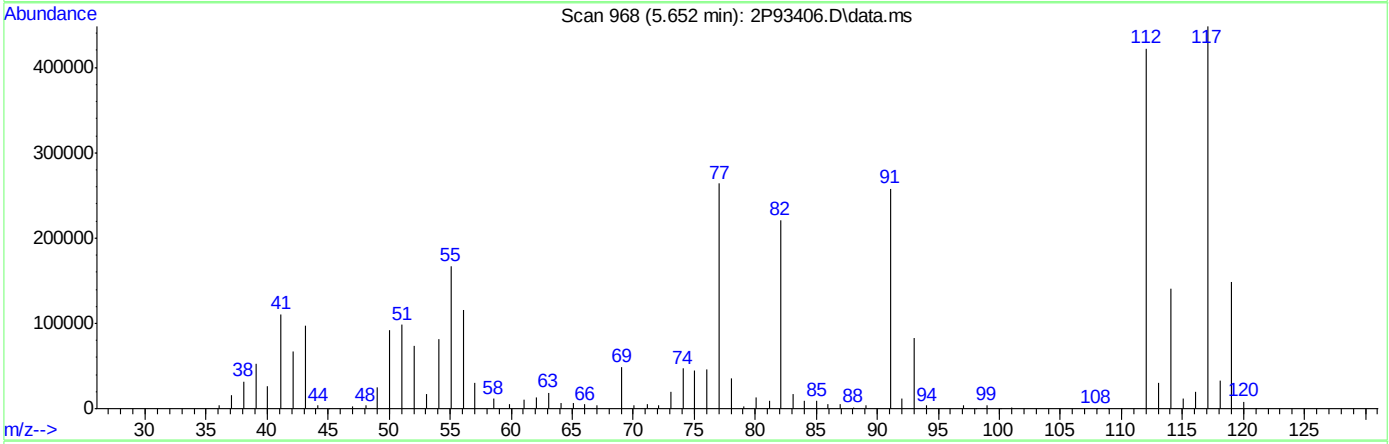
Ion	Exp%	Act%
91.00	100	100
55.00	71.70	63.25
41.00	48.20	41.86
43.10	41.80	36.87

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93406.D
Acq On : 26 Sep 2022 4:48 pm
Operator : courtnef
Sample : ICV3589-5
Misc : MS52362,V2P3589,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Sep 27 10:56:44 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93406.D\data.ms

(76) 1-Chlorohexane

5.652min (+0.003) 41.46ug/L m

response 300615

Ion	Exp%	Act%
91.00	100	100
55.00	71.70	64.74
41.00	48.20	42.94
43.10	41.80	37.46

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93408.D
Acq On : 26 Sep 2022 5:20 pm
Operator : courtnef
Sample : ICV3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Sep 27 10:58:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

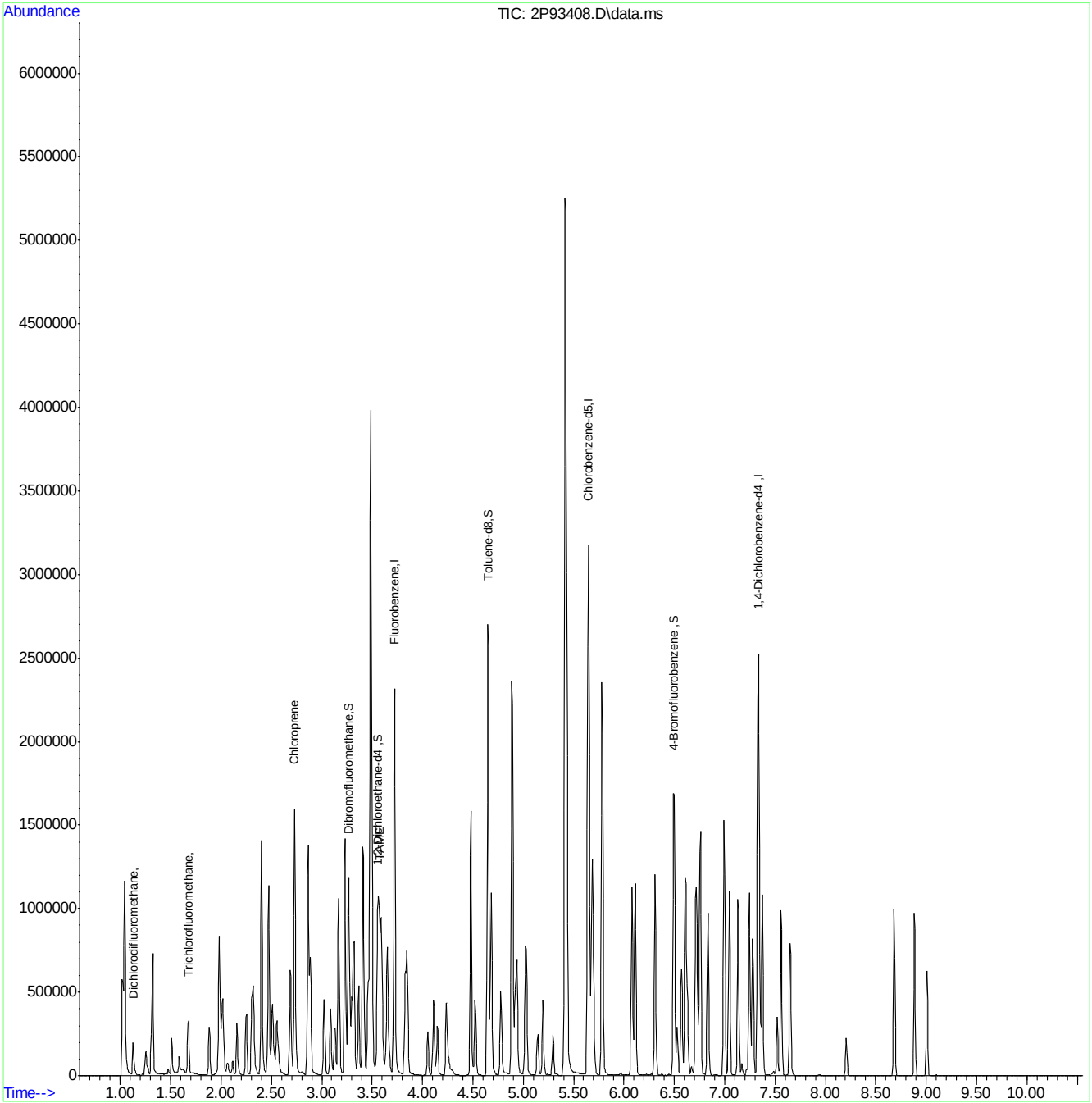
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1279621	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.646	117	912083	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.335	152	428551	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	270601	50.73	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.46%			
49) 1,2-Dichloroethane-d4	3.555	65	353348	49.43	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.86%			
63) Toluene-d8	4.648	98	1240007	50.16	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.32%			
86) 4-Bromofluorobenzene	6.498	174	330784	50.21	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.42%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.129	85	118846	24.46	ug/L	98
8) Trichlorofluoromethane	1.678	101	154378	28.24	ug/L	98
27) Chloroprene	2.729	53	577859	32.36	ug/L	91
48) TAME	3.571	73	446580	31.18	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-26\
Data File : 2P93408.D
Acq On : 26 Sep 2022 5:20 pm
Operator : courtnef
Sample : ICV3589-4
Misc : MS52362,V2P3589,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Sep 27 10:58:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner 09/30/22 12:15

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : CC3589-5
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:18:34 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1261898	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.641	117	917251	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.335	152	421154	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.262	113	269191	51.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.36%			
49) 1,2-Dichloroethane-d4	3.549	65	356125	50.52	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.04%			
63) Toluene-d8	4.647	98	1223219	49.20	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.40%			
86) 4-Bromofluorobenzene	6.498	174	329722	50.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.86%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.124	85	216256	45.14	ug/L	99
3) Chloromethane	1.249	50	191653	41.54	ug/L	99
4) 1,3-butadiene	1.317	39	151558	37.94	ug/L	98
5) Vinyl Chloride	1.301	62	222573	42.32	ug/L	97
6) Bromomethane	1.505	94	119059	45.89	ug/L	97
7) Chloroethane	1.579	64	60781	38.37	ug/L	96
8) Trichlorofluoromethane	1.667	101	220331	Below Cal		99
9) Ethyl Ether	1.877	59	174583	37.53	ug/L	98
10) Ethanol	1.971	45	103040	762.17	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.976	67	203495	39.19	ug/L	98
12) 1,1-Dichloroethene	1.981	61	246920	40.64	ug/L	95
13) Freon 113	2.012	101	164941	40.52	ug/L	98
14) Carbon Disulfide	2.002	76	396403	43.35	ug/L	95
15) Iodomethane	2.059	142	109103	33.19	ug/L	97
16) Acrolein	2.154	56	314773	201.46	ug/L	99
17) Allyl chloride	2.248	41	173838	39.91	ug/L	96
18) Methylene Chloride	2.300	49	220755	36.68	ug/L	97
19) Acetone	2.316	43	546143	189.08	ug/L	98
20) Methyl acetate	2.394	43	1155175	192.12	ug/L	100
21) trans-1,2-Dichloroethene	2.399	61	247834	39.86	ug/L	98
22) Hexane	2.467	56	133431	40.53	ug/L	98
23) Methyl Tert Butyl Ether	2.473	73	596365	40.24	ug/L	90
24) Tert Butyl Alcohol	2.509	59	689444	401.14	ug/L	99
25) Acetonitrile	2.551	41	370706	380.66	ug/L	99
26) Di-isopropyl ether	2.687	45	533396	39.40	ug/L	96
27) Chloroprene	2.729	53	712210	40.44	ug/L	97
28) 1,1-Dichloroethane	2.729	63	330390	40.13	ug/L	99
29) Acrylonitrile	2.729	52	555294	202.58	ug/L	96
30) ETBE	2.880	59	622290	40.02	ug/L	99
31) Vinyl acetate	2.859	43	2001586	211.62	ug/L	100
32) cis-1,2-Dichloroethene	3.021	96	200673	40.47	ug/L	98
33) 2,2-Dichloropropane	3.084	77	269049	43.85	ug/L	98
34) Bromochloromethane	3.126	128	85035	38.13	ug/L	94
35) Cyclohexane	3.163	56	305238	41.06	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : CC3589-5
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:18:34 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Chloroform	3.168	83	337782	40.70	ug/L	99
37) Ethyl acetate	3.225	43	1507303	201.54	ug/L	99
38) Tetrahydrofuran	3.257	42	120803	38.38	ug/L	99
40) Carbon Tetrachloride	3.267	117	211303m	42.37	ug/L	
41) 1,1,1-Trichloroethane	3.293	97	290313	42.10	ug/L	99
42) 2-Butanone	3.314	43	939035	195.70	ug/L	100
43) 1,1-Dichloropropene	3.366	75	254997	40.73	ug/L	97
44) tert-Butyl formate	3.408	59	746514	206.37	ug/L	97
45) Propionitrile	3.461	54	635228	388.65	ug/L	99
46) Methacrylonitrile	3.482	41	1607405	392.57	ug/L	100
47) Benzene	3.492	78	802477	39.72	ug/L	90
48) TAME	3.565	73	571065	40.43	ug/L	98
50) Isobutyl alcohol	3.591	43	649255m	801.24	ug/L	
51) 1,2-Dichloroethane	3.591	62	265706	38.33	ug/L	98
52) Tert Amyl Alcohol	3.649	59	577171	416.52	ug/L	99
53) Trichloroethene	3.827	95	200610	39.09	ug/L	92
54) Methylcyclohexane	3.847	83	287247	41.17	ug/L	98
55) Dibromomethane	4.051	93	113482	40.28	ug/L	93
56) 1,2-Dichloropropane	4.109	63	197660	40.05	ug/L	99
57) Bromodichloromethane	4.145	83	214721	44.21	ug/L	99
58) Methyl methacrylate	4.234	41	205090	41.76	ug/L	98
59) 1,4-Dioxane	4.260	88	117235	789.94	ug/L	98
60) 2-Chloroethyl vinyl ether	4.480	63	760491	191.50	ug/L	97
61) cis-1,3-Dichloropropene	4.522	75	284913	41.92	ug/L	99
64) Toluene	4.679	91	873886	38.24	ug/L	98
65) 2-Nitropropane	4.778	41	351299	219.60	ug/L	99
66) 4-Methyl-2-pentanone	4.888	43	1637337	201.23	ug/L	99
67) trans-1,3-Dichloropropene	4.919	75	258516	41.06	ug/L	99
68) Tetrachloroethene	4.935	166	198225	38.48	ug/L	96
69) Ethyl methacrylate	5.029	69	311606	42.80	ug/L	95
70) 1,1,2-Trichloroethane	5.019	83	150436	39.23	ug/L	94
71) Dibromochloromethane	5.144	129	168542	42.21	ug/L	99
72) 1,3-Dichloropropane	5.196	76	332922	39.71	ug/L	97
73) 1,2-Dibromoethane	5.296	107	191109	40.99	ug/L	99
74) 3,3-dimethyl-1-butanol	5.421	57	3565920	1930.71	ug/L	99
75) 2-hexanone	5.432	43	1779570	192.19	ug/L	83
76) 1-Chlorohexane	5.651	91	288491m	39.99	ug/L	
77) Ethylbenzene	5.683	91	968827	39.42	ug/L	97
78) Chlorobenzene	5.656	112	537318	39.30	ug/L	95
79) 1,1,1,2-Tetrachloroethane	5.698	131	176424	42.97	ug/L	100
80) m,p-Xylene	5.782	91	1530346	79.71	ug/L	98
81) o-Xylene	6.080	91	763164	40.35	ug/L	99
82) Styrene	6.111	104	611178	43.28	ug/L	98
83) Bromoform	6.116	173	90616	41.93	ug/L	98
84) Isopropylbenzene	6.310	105	903924	41.01	ug/L	99
87) cis-1,4-Dichloro-2-butene	6.529	53	87457	43.67	ug/L	89
88) n-Propylbenzene	6.608	91	1066835	41.44	ug/L	100
89) Bromobenzene	6.571	156	223081	40.80	ug/L	99
90) 1,1,2,2-Tetrachloroethane	6.629	83	282509	40.02	ug/L	98
91) 1,3,5-Trimethylbenzene	6.759	105	748437	41.57	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : CC3589-5
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:18:34 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.712	91	632501	40.45	ug/L		98
93)	trans-1,4-Dichloro-2-B...	6.759	53	102104	42.55	ug/L		92
94)	1,2,3-Trichloropropane	6.723	110	106311	39.75	ug/L		96
95)	Cyclohexanone	6.744	55	115250	213.29	ug/L		98
96)	4-Chlorotoluene	6.833	91	663282	40.88	ug/L		98
97)	tert-Butylbenzene	6.995	91	406058	41.44	ug/L		98
99)	1,2,4-Trimethylbenzene	7.047	105	726699	42.22	ug/L		99
100)	Pentachloroethane	6.995	167	96366	43.33	ug/L	#	81
101)	sec-Butylbenzene	7.131	105	823921	41.79	ug/L		98
102)	4-Isopropyltoluene	7.246	119	726032	42.67	ug/L		98
103)	1,3-Dichlorobenzene	7.277	146	394971	40.79	ug/L		99
104)	1,2,3-Trimethylbenzene	7.371	105	716094	40.79	ug/L		99
105)	1,4-Dichlorobenzene	7.345	146	405530	39.30	ug/L		96
106)	n-Butylbenzene	7.559	92	353453	42.34	ug/L		96
107)	Benzyl Chloride	7.523	126	89678	44.81	ug/L	#	91
108)	1,2-Dichlorobenzene	7.648	146	365385	39.83	ug/L		96
109)	1,2-Dibromo-3-Chloropr...	8.202	75	66854	42.76	ug/L		96
110)	Hexachlorobutadiene	8.689	225	74484	41.98	ug/L		91
111)	1,2,4-Trichlorobenzene	8.683	180	206180	41.64	ug/L		98
112)	Naphthalene	8.882	128	825133	43.82	ug/L		100
113)	1,2,3-Trichlorobenzene	9.008	180	189341	39.76	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

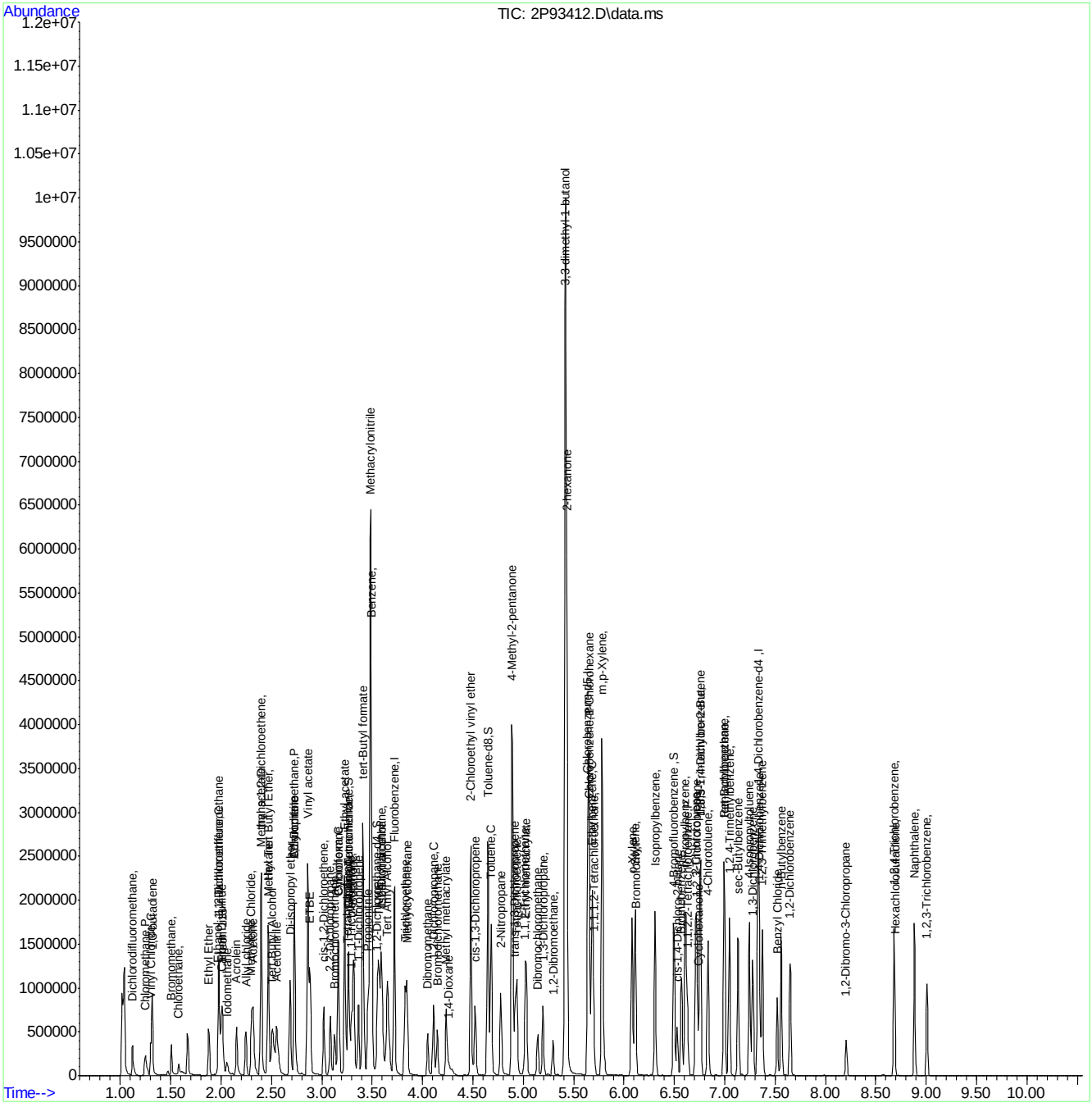
8.6.21

8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : CC3589-5
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:18:34 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration



Manual Integration Approval Summary

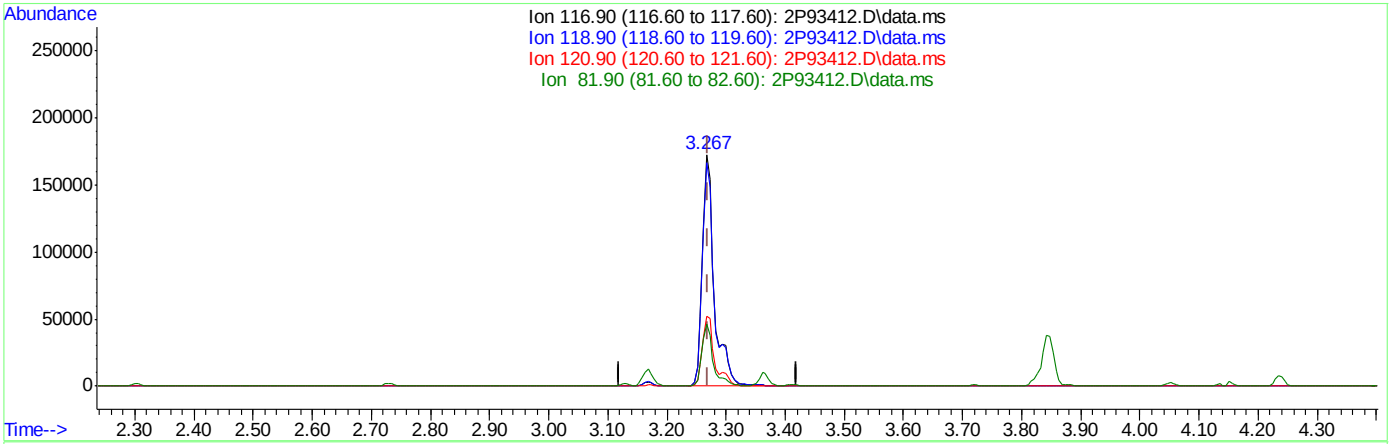
Sample Number: V2P3590-CC3589
Lab FileID: 2P93412.D
Injection Time: 09/27/22 10:53
Method: SW846 8260D
Analyst approved: 09/30/22 12:08 Lindsay Ritner
Supervisor approved: 09/30/22 12:15 Lindsay Ritner

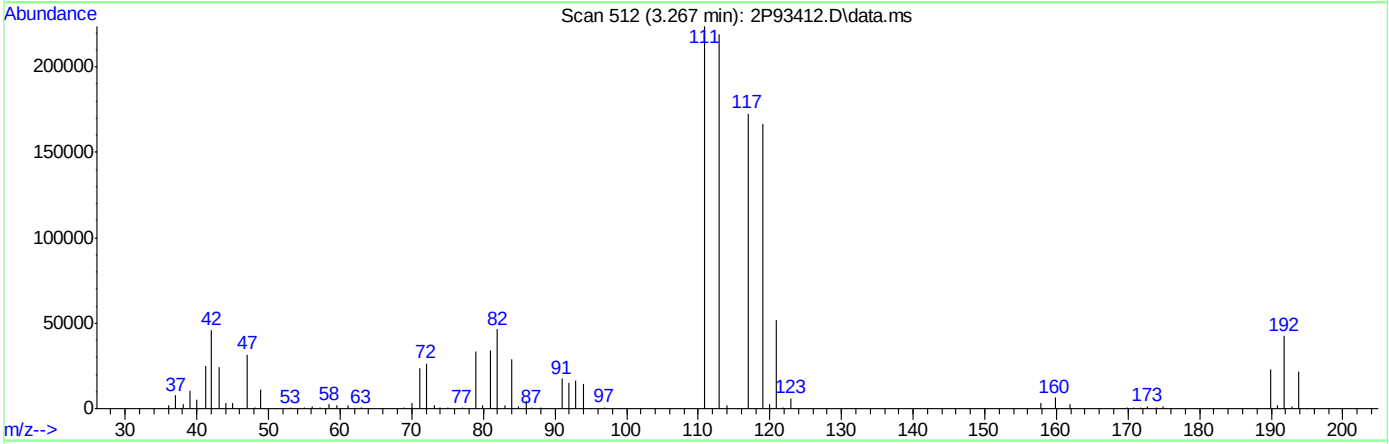
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(40) Carbon Tetrachloride ( )

3.267min (-0.003) 49.19ug/L

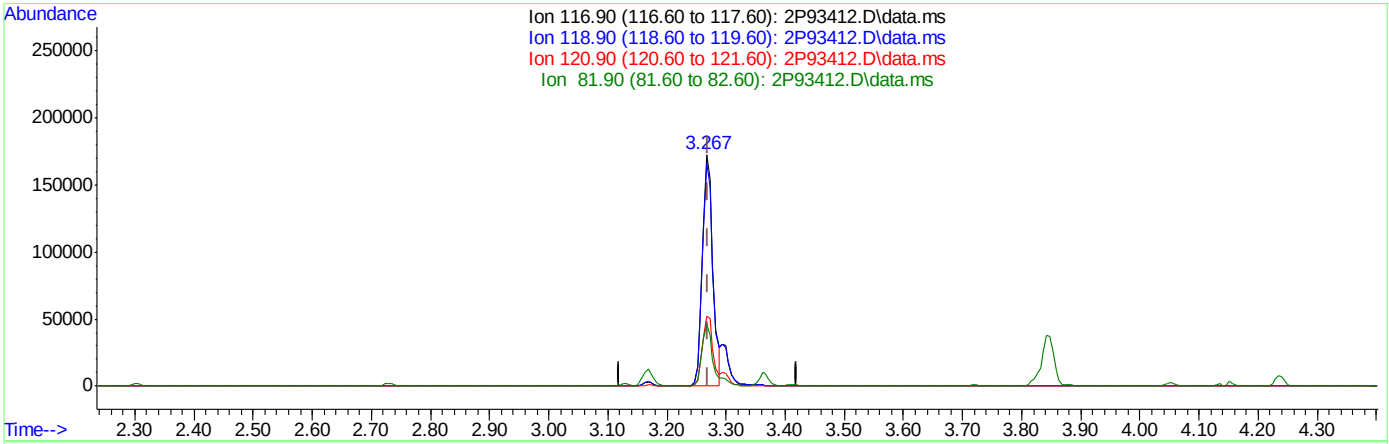
response 245326

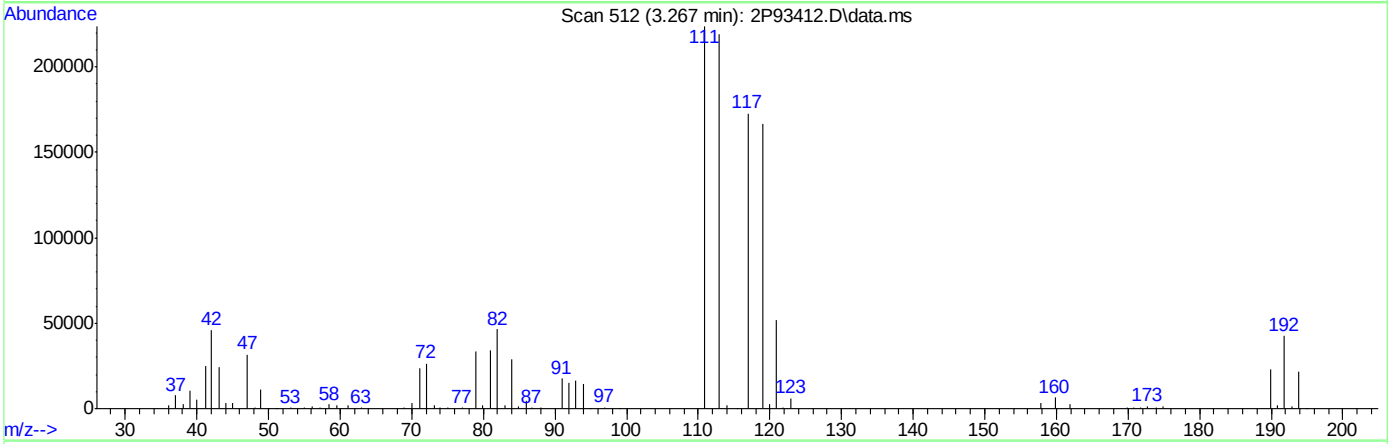
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	96.48
120.90	31.30	30.14
81.90	25.80	26.83

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(40) Carbon Tetrachloride ( )

3.267min (-0.003) 42.37ug/L m

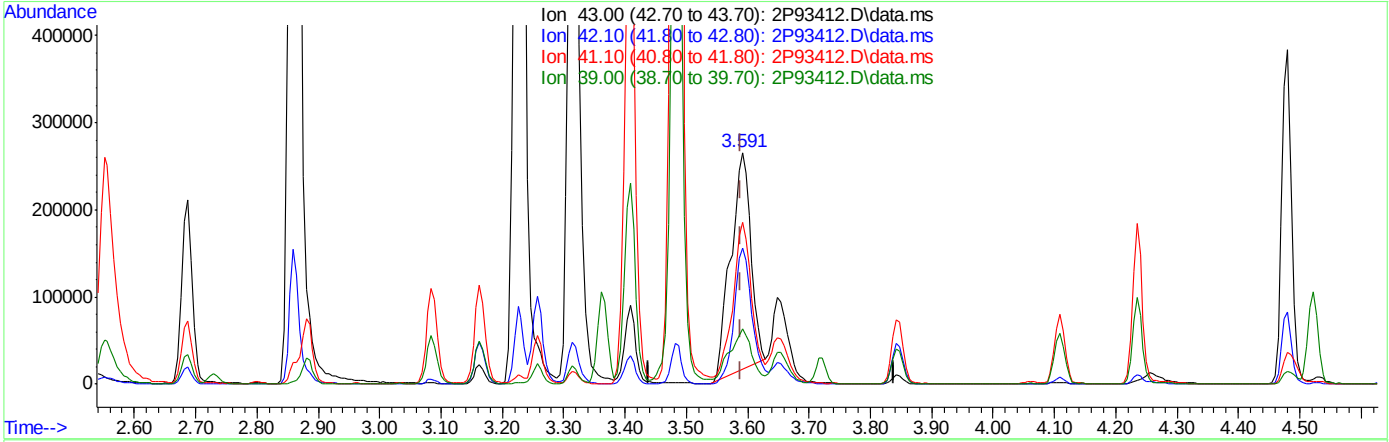
response 211303

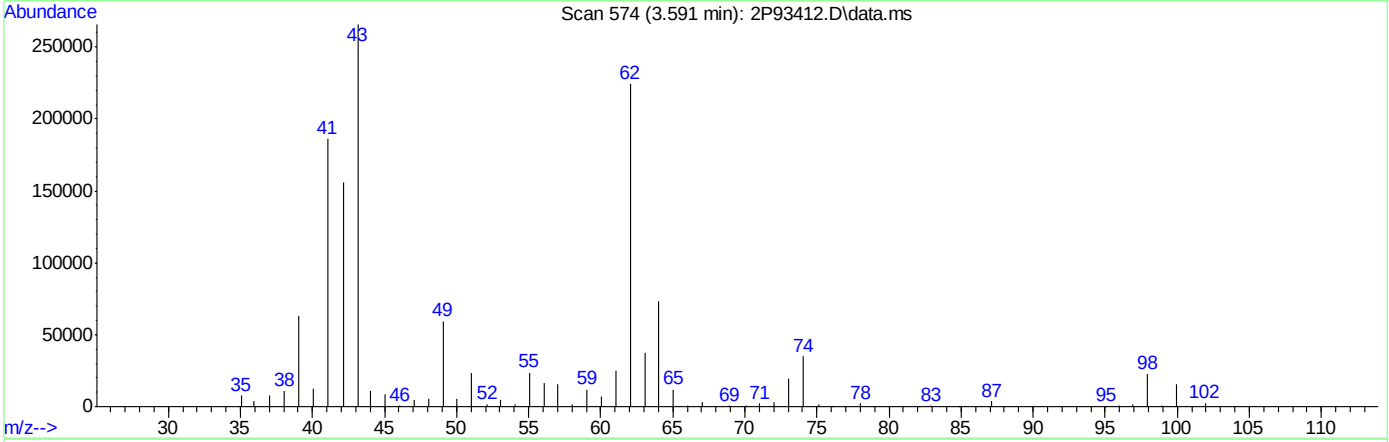
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	96.48
120.90	31.30	30.14
81.90	25.80	26.95

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.003) 705.18ug/L

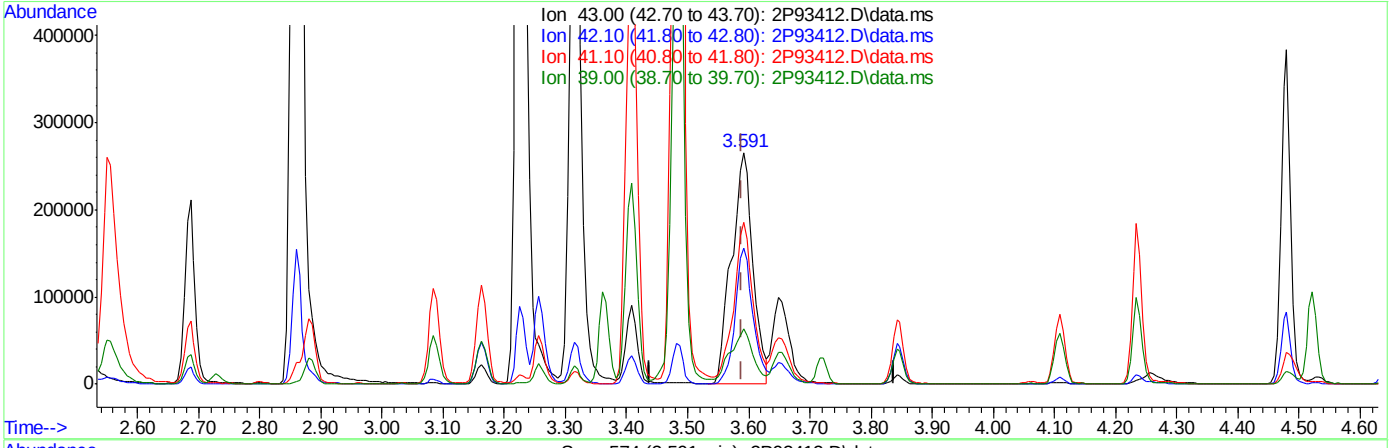
response 571416

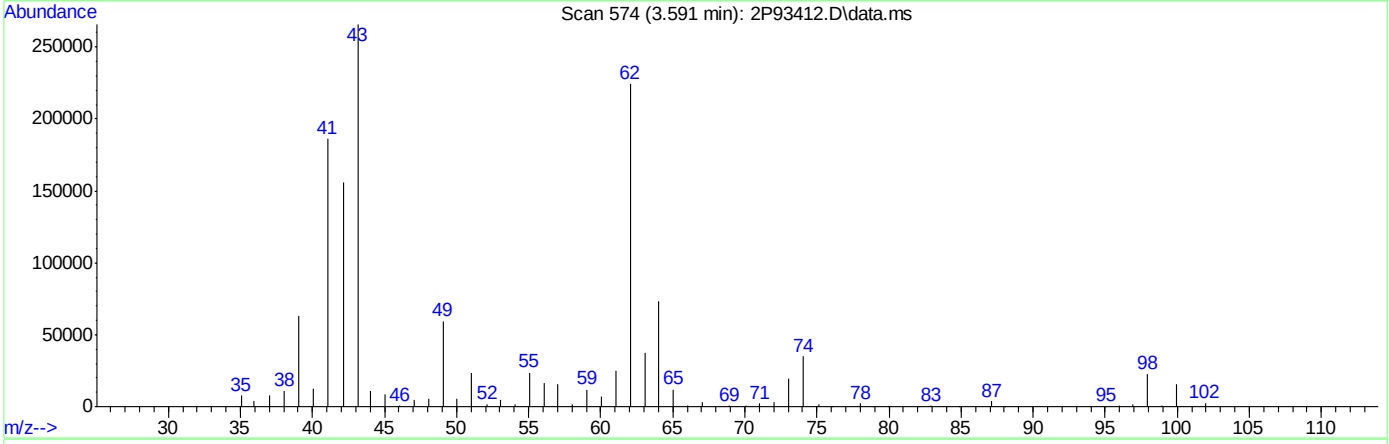
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.76
41.10	69.60	67.07
39.00	23.50	21.73

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.003) 801.24ug/L m

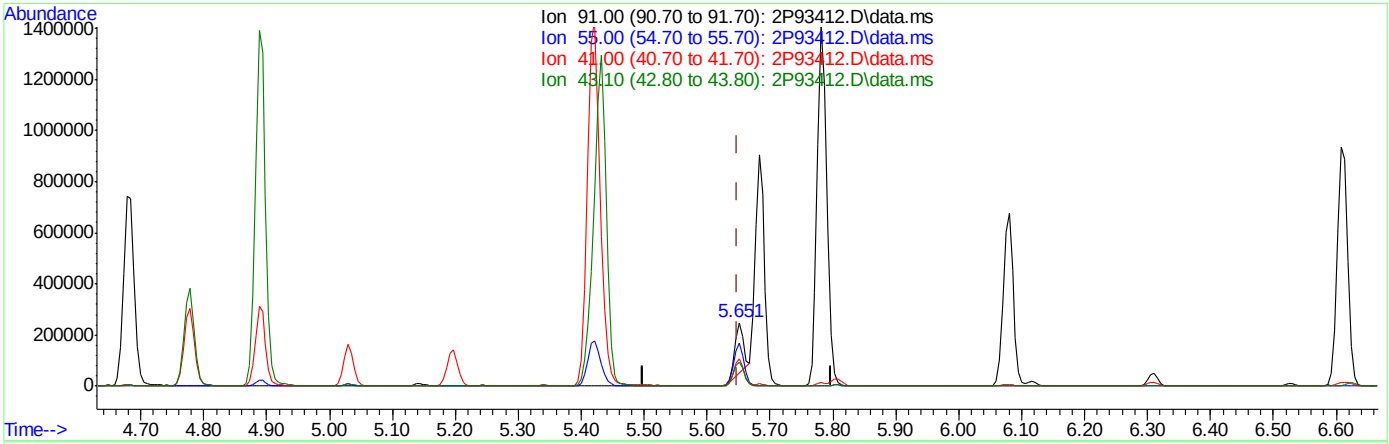
response 649255

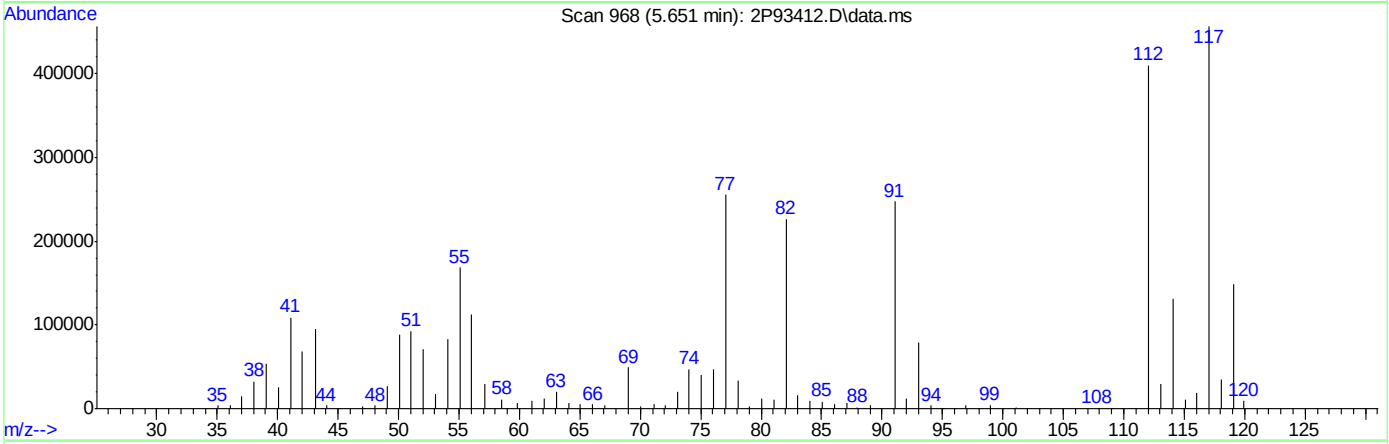
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	58.80
41.10	69.60	70.02
39.00	23.50	23.77

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.003) 25.81ug/L

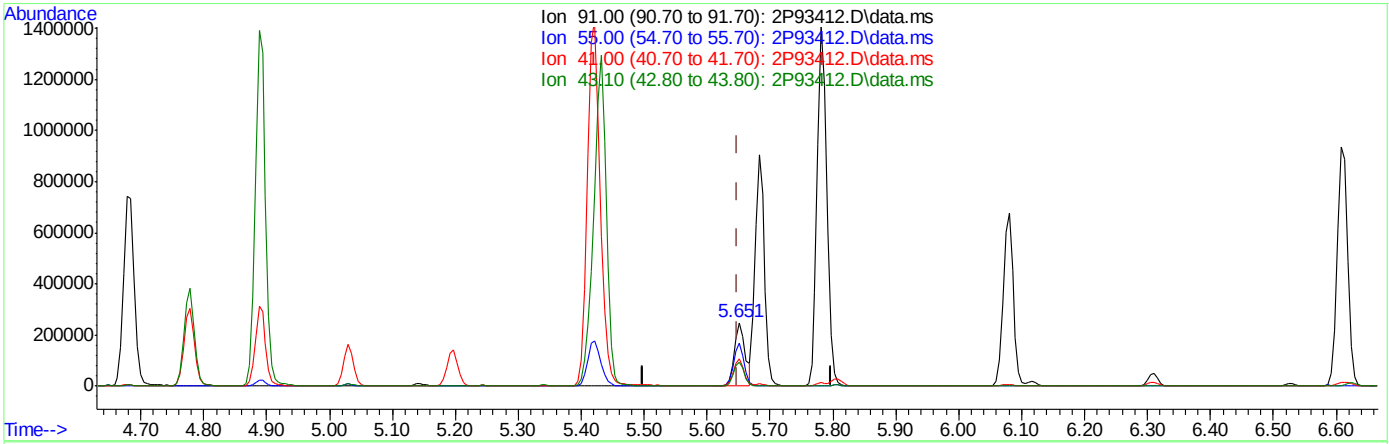
response 186211

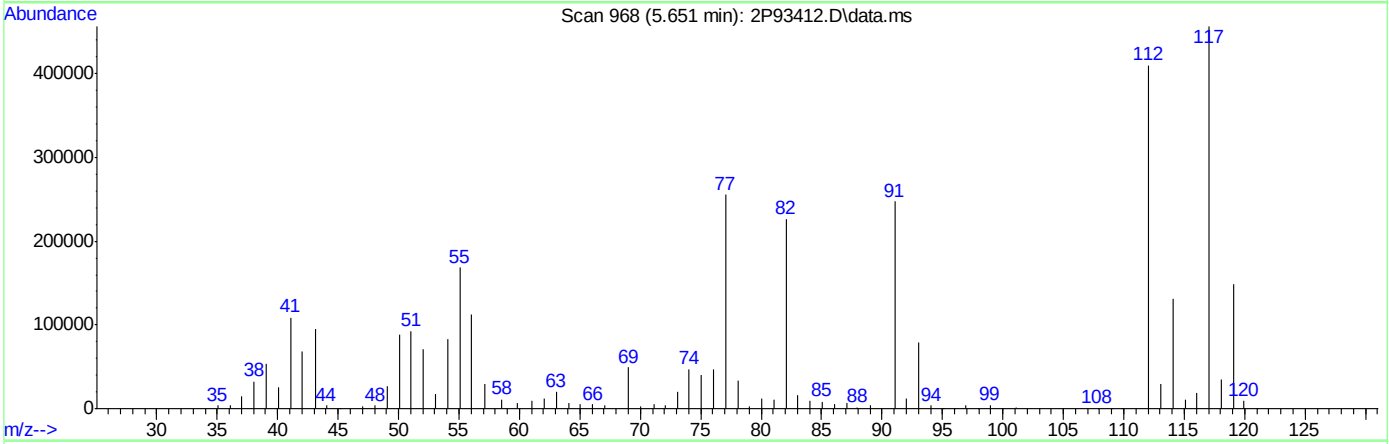
Ion	Exp%	Act%
91.00	100	100
55.00	71.70	66.37
41.00	48.20	42.64
43.10	41.80	37.92

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-27\
Data File : 2P93412.D
Acq On : 27 Sep 2022 10:53 am
Operator : courtnef
Sample : BFB
Misc : MS52362,V2P3590,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 27 11:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93412.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.003) 39.99ug/L m

response 288491

Ion	Exp%	Act%
91.00	100	100
55.00	71.70	68.02
41.00	48.20	43.92
43.10	41.80	38.40

Manual Integrations APPROVED (compounds with "m" flag)
Lindsay Ritner
09/30/22 12:15

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:36:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1209565	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	870727	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	397648	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	255443	50.66	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.32%			
49) 1,2-Dichloroethane-d4	3.554	65	334665	49.53	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.06%			
63) Toluene-d8	4.647	98	1183208	50.13	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.26%			
86) 4-Bromofluorobenzene	6.497	174	311808	51.01	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.02%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.123	85	174244	37.94	ug/L	100
3) Chloromethane	1.249	50	177700	40.18	ug/L	98
4) 1,3-butadiene	1.317	39	166566	43.50	ug/L	92
5) Vinyl Chloride	1.306	62	201488	39.97	ug/L	100
6) Bromomethane	1.510	94	90804	35.64	ug/L	98
7) Chloroethane	1.583	64	57295	37.73	ug/L	100
8) Trichlorofluoromethane	1.672	101	193045	46.82	ug/L	99
9) Ethyl Ether	1.881	59	171404	38.44	ug/L	97
10) Ethanol	1.970	45	105431	822.33	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.975	67	190212	38.22	ug/L	94
12) 1,1-Dichloroethene	1.980	61	231181	39.69	ug/L	97
13) Freon 113	2.012	101	151310	38.78	ug/L	93
14) Carbon Disulfide	2.001	76	355152	40.52	ug/L	98
15) Iodomethane	2.059	142	122821	39.01	ug/L	97
16) Acrolein	2.158	56	271421	181.44	ug/L	98
17) Allyl chloride	2.247	41	164604	39.42	ug/L	98
18) Methylene Chloride	2.305	49	218407	37.95	ug/L	99
19) Acetone	2.315	43	544753	196.75	ug/L	99
20) Methyl acetate	2.399	43	1197017	207.69	ug/L	100
21) trans-1,2-Dichloroethene	2.404	61	238488	40.02	ug/L	99
22) Hexane	2.467	56	118104	37.43	ug/L	99
23) Methyl Tert Butyl Ether	2.472	73	566784	39.90	ug/L	90
24) Tert Butyl Alcohol	2.514	59	683150	414.68	ug/L	99
25) Acetonitrile	2.556	41	365866	394.08	ug/L	98
26) Di-isopropyl ether	2.686	45	528764	40.75	ug/L	98
27) Chloroprene	2.728	53	701763	41.57	ug/L	99
28) 1,1-Dichloroethane	2.728	63	318483	40.36	ug/L	98
29) Acrylonitrile	2.728	52	543400	206.82	ug/L	96
30) ETBE	2.885	59	604766	40.57	ug/L	99
31) Vinyl acetate	2.859	43	1667411	183.92	ug/L	100
32) cis-1,2-Dichloroethene	3.021	96	187162	39.38	ug/L	94
33) 2,2-Dichloropropane	3.089	77	213605	36.32	ug/L	97
34) Bromochloromethane	3.131	128	80928	37.86	ug/L	99
35) Cyclohexane	3.162	56	287649	40.37	ug/L	97
36) Chloroform	3.167	83	315788	39.69	ug/L	98
37) Ethyl acetate	3.230	43	1470475	205.13	ug/L	99
38) Tetrahydrofuran	3.256	42	119525	39.62	ug/L	96
40) Carbon Tetrachloride	3.272	117	191946m	40.15	ug/L	
41) 1,1,1-Trichloroethane	3.298	97	272286	41.19	ug/L	100
42) 2-Butanone	3.314	43	930927	202.40	ug/L	99
43) 1,1-Dichloropropene	3.366	75	236996	39.49	ug/L	97
44) tert-Butyl formate	3.408	59	635460	183.27	ug/L	99

8.6.22
8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:36:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45)	Propionitrile	3.460	54	619548	395.46	ug/L		99
46)	Methacrylonitrile	3.486	41	1583542	403.47	ug/L		99
47)	Benzene	3.497	78	759104	39.20	ug/L		91
48)	TAME	3.570	73	547544	40.45	ug/L		98
50)	Isobutyl alcohol	3.591	43	643938m	829.07	ug/L		
51)	1,2-Dichloroethane	3.591	62	251730	37.88	ug/L		97
52)	Tert Amyl Alcohol	3.653	59	562493	423.49	ug/L		99
53)	Trichloroethene	3.826	95	192878	39.21	ug/L		98
54)	Methylcyclohexane	3.847	83	259540	38.81	ug/L		98
55)	Dibromomethane	4.051	93	107303	39.74	ug/L		96
56)	1,2-Dichloropropane	4.108	63	189952	40.16	ug/L		98
57)	Bromodichloromethane	4.145	83	196201	42.15	ug/L		97
58)	Methyl methacrylate	4.234	41	197229	41.89	ug/L		94
59)	1,4-Dioxane	4.260	88	113401	797.17	ug/L		97
60)	2-Chloroethyl vinyl ether	4.479	63	720025	189.15	ug/L		98
61)	cis-1,3-Dichloropropene	4.521	75	261778	40.32	ug/L		98
64)	Toluene	4.683	91	823994	37.98	ug/L		99
65)	2-Nitropropane	4.777	41	305035	202.80	ug/L		99
66)	4-Methyl-2-pentanone	4.887	43	1600848	207.26	ug/L		99
67)	trans-1,3-Dichloropropene	4.919	75	233981	39.25	ug/L		98
68)	Tetrachloroethene	4.940	166	247520	50.62	ug/L		97
69)	Ethyl methacrylate	5.028	69	294951	42.67	ug/L		95
70)	1,1,2-Trichloroethane	5.018	83	144254	39.62	ug/L		95
71)	Dibromochloromethane	5.143	129	150385	39.91	ug/L		97
72)	1,3-Dichloropropane	5.196	76	313299	39.36	ug/L		98
73)	1,2-Dibromoethane	5.295	107	177533	40.11	ug/L		98
74)	3,3-dimethyl-1-butanol	5.421	57	3577890	2040.70	ug/L		100
75)	2-hexanone	5.431	43	1785388	203.13	ug/L		87
76)	1-Chlorohexane	5.651	91	235456m	34.38	ug/L		
77)	Ethylbenzene	5.682	91	899932	38.58	ug/L		99
78)	Chlorobenzene	5.656	112	502159	38.69	ug/L		96
79)	1,1,1,2-Tetrachloroethane	5.698	131	161936	41.55	ug/L		97
80)	m,p-Xylene	5.781	91	1436374	78.82	ug/L		99
81)	o-Xylene	6.079	91	716053	39.89	ug/L		99
82)	Styrene	6.111	104	548509m	40.92	ug/L		
83)	Bromoform	6.116	173	73362	36.55	ug/L		96
84)	Isopropylbenzene	6.309	105	845988	40.43	ug/L		99
87)	cis-1,4-Dichloro-2-butene	6.529	53	59125	31.27	ug/L		97
88)	n-Propylbenzene	6.607	91	984905	40.52	ug/L		97
89)	Bromobenzene	6.571	156	207203	40.14	ug/L		93
90)	1,1,2,2-Tetrachloroethane	6.628	83	264031	39.62	ug/L		98
91)	1,3,5-Trimethylbenzene	6.759	105	693304	40.78	ug/L		98
92)	2-Chlorotoluene	6.712	91	597806	40.49	ug/L		99
93)	trans-1,4-Dichloro-2-B...	6.759	53	75740	33.43	ug/L		97
94)	1,2,3-Trichloropropane	6.728	110	98712	39.09	ug/L		97
95)	Cyclohexanone	6.743	55	111100	217.77	ug/L		97
96)	4-Chlorotoluene	6.832	91	618047	40.34	ug/L		99
97)	tert-Butylbenzene	6.994	91	370667	40.07	ug/L		98
99)	1,2,4-Trimethylbenzene	7.046	105	677670	41.70	ug/L		99
100)	Pentachloroethane	6.994	167	43061	21.50	ug/L	#	1
101)	sec-Butylbenzene	7.135	105	752429	40.42	ug/L		99
102)	4-Isopropyltoluene	7.245	119	663348	41.29	ug/L		99
103)	1,3-Dichlorobenzene	7.276	146	363477	39.76	ug/L		99
104)	1,2,3-Trimethylbenzene	7.376	105	672791	40.59	ug/L		99
105)	1,4-Dichlorobenzene	7.344	146	375010	38.50	ug/L		96
106)	n-Butylbenzene	7.559	92	314808	39.94	ug/L		96
107)	Benzyl Chloride	7.522	126	56116	32.28	ug/L		97
108)	1,2-Dichlorobenzene	7.648	146	345407	39.87	ug/L		97

8.6.22
8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:36:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration

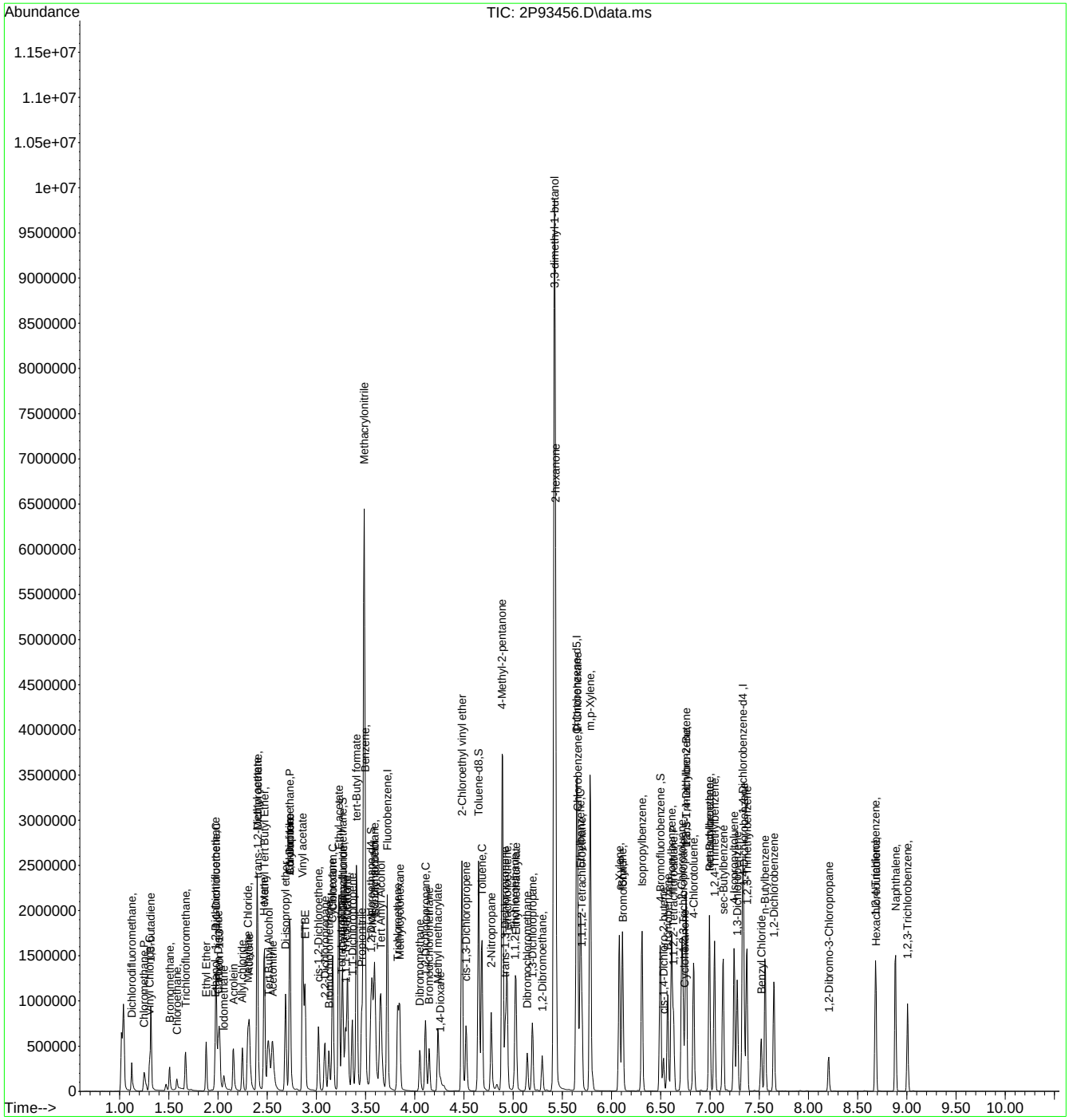
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.207	75	58022	39.71	ug/L	92
110) Hexachlorobutadiene	8.688	225	64446	38.47	ug/L	96
111) 1,2,4-Trichlorobenzene	8.683	180	183045	39.15	ug/L	96
112) Naphthalene	8.887	128	759143	42.70	ug/L	99
113) 1,2,3-Trichlorobenzene	9.007	180	178757	39.75	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:36:36 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration



Manual Integration Approval Summary

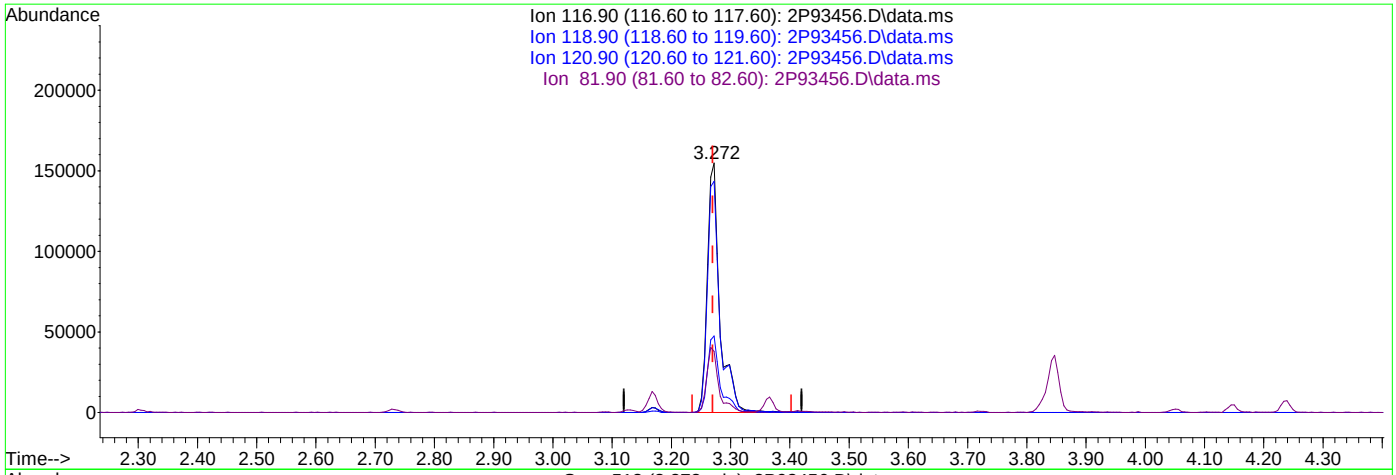
Sample Number: V2P3590-ECC3589 **Method:** SW846 8260D
Lab FileID: 2P93456.D **Analyst approved:** 09/28/22 02:59 Antonette Clutario
Injection Time: 09/27/22 22:43 **Supervisor approved:** 09/30/22 12:15 Lindsay Ritner

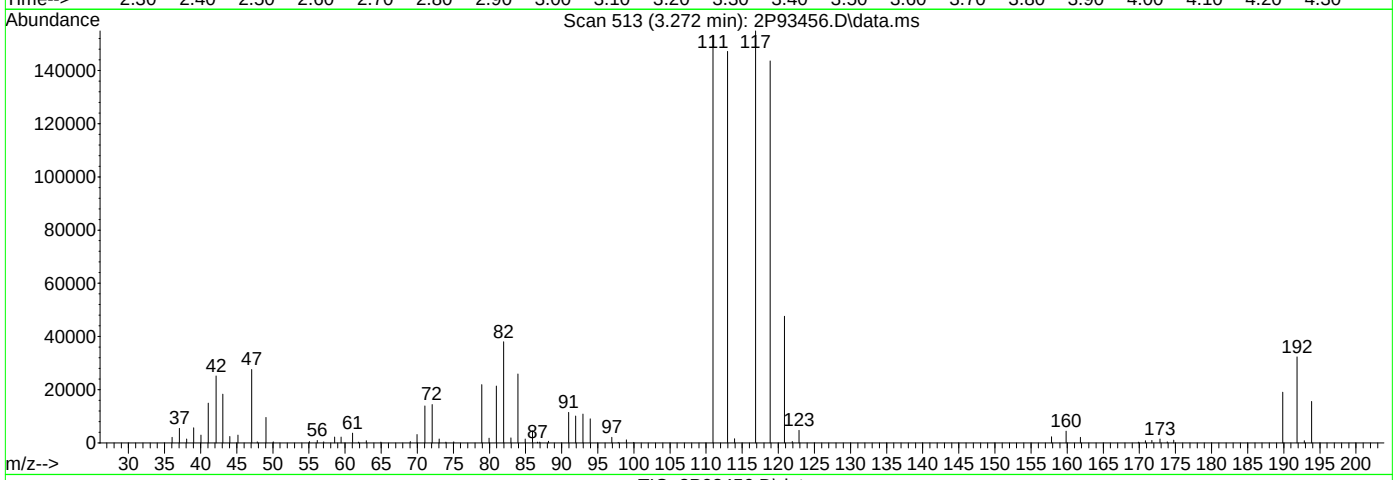
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 47.35ug/L

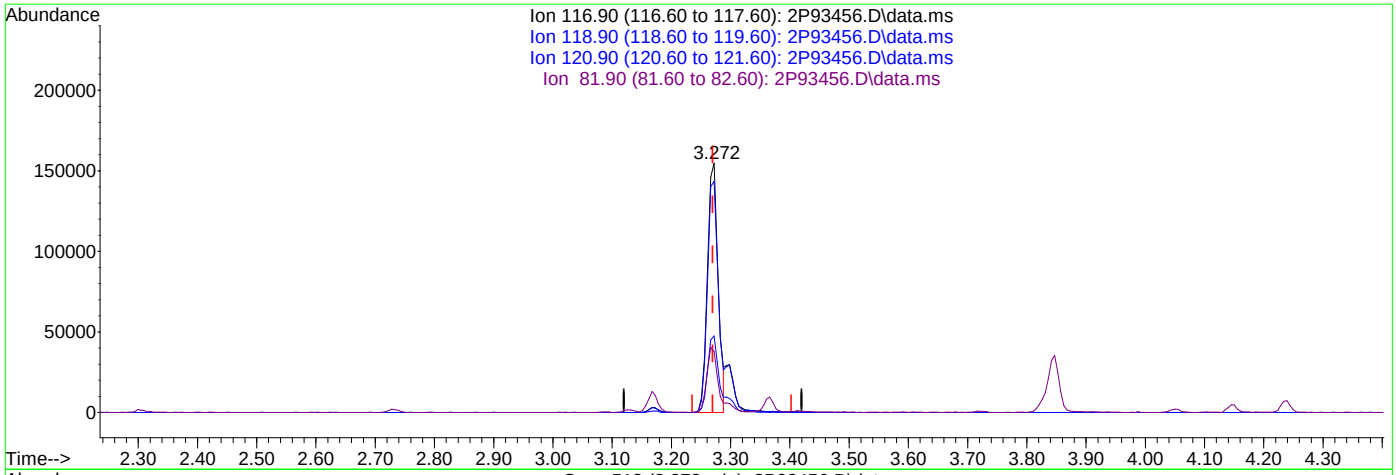
response 226375

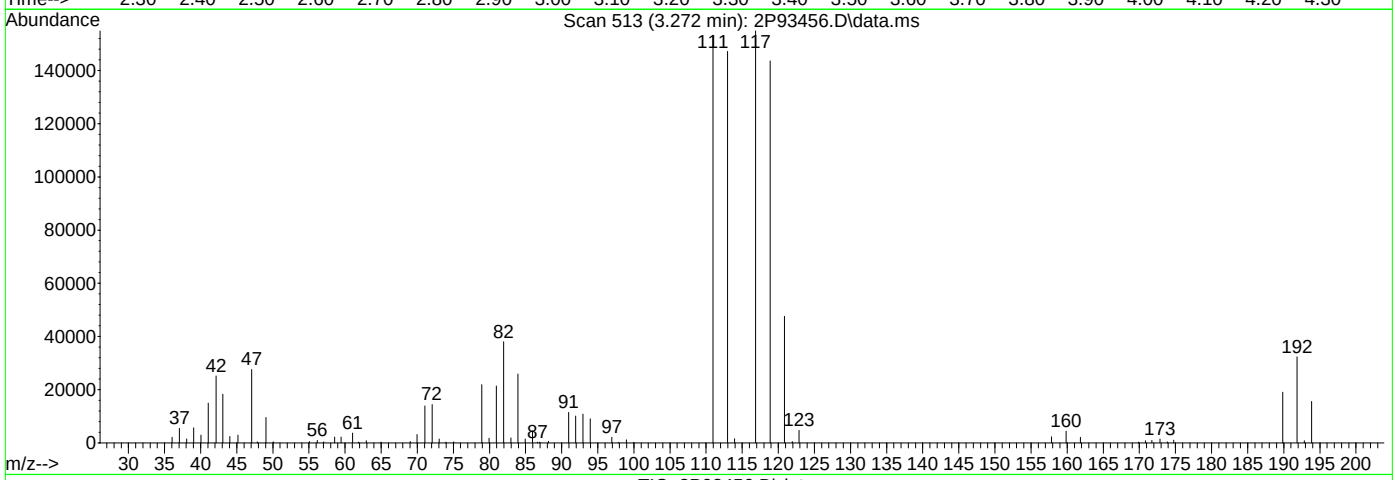
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	92.69
120.90	31.30	30.69
81.90	25.80	24.33

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 40.15ug/L m

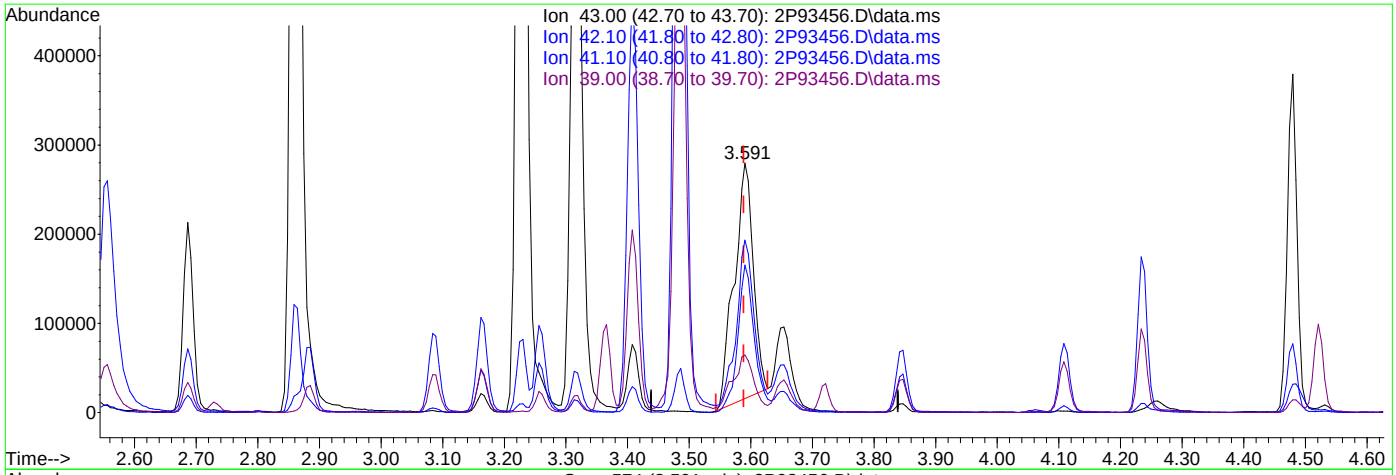
response 191946

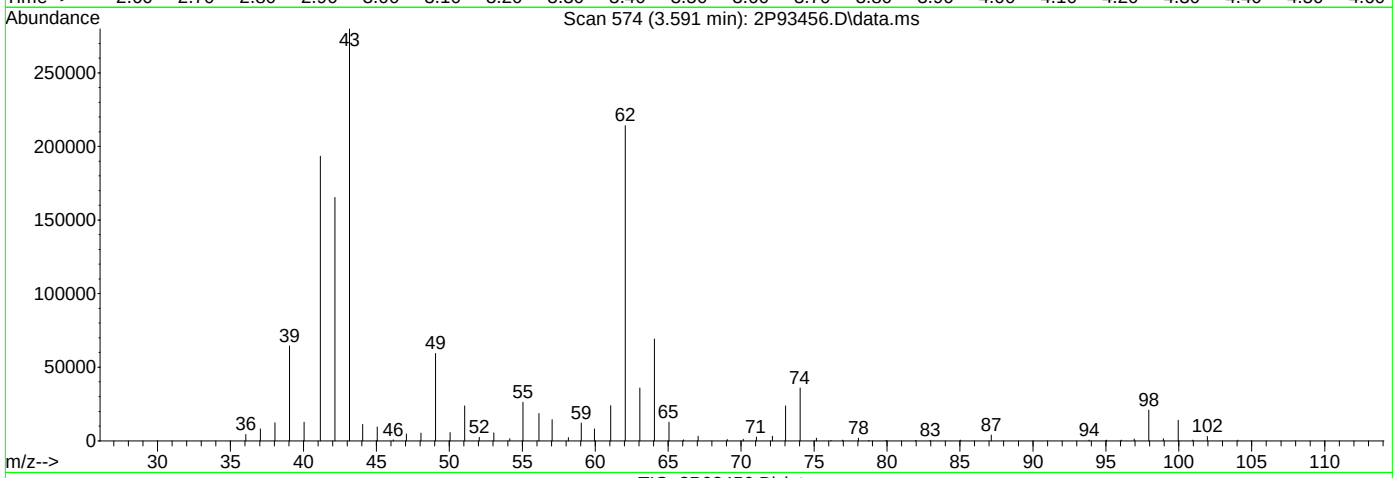
Ion	Exp%	Act%
116.90	100	100
118.90	94.80	92.69
120.90	31.30	30.69
81.90	25.80	24.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.002) 737.31ug/L

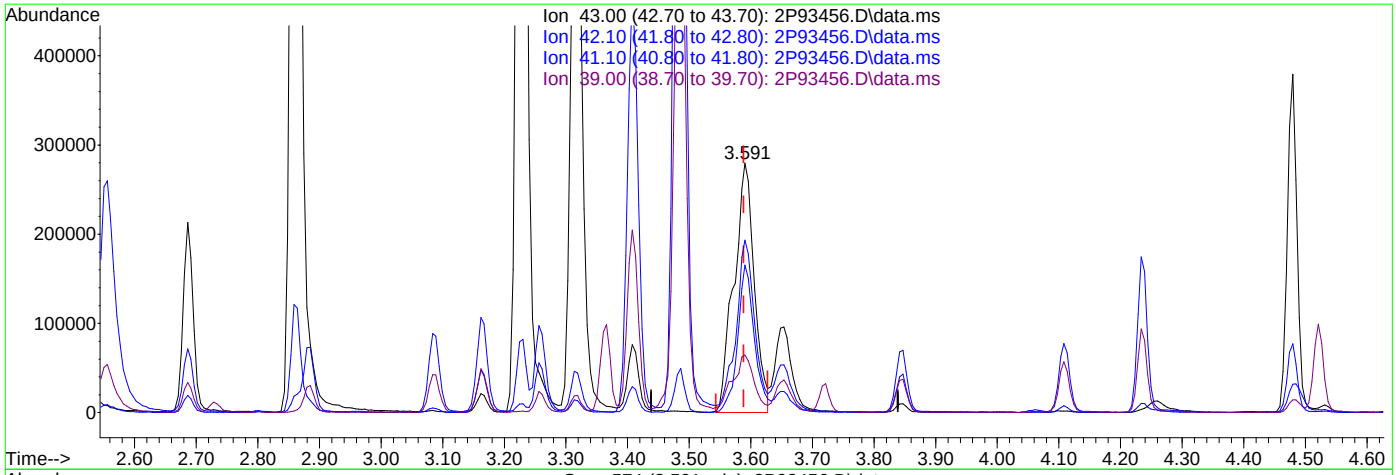
response 572669

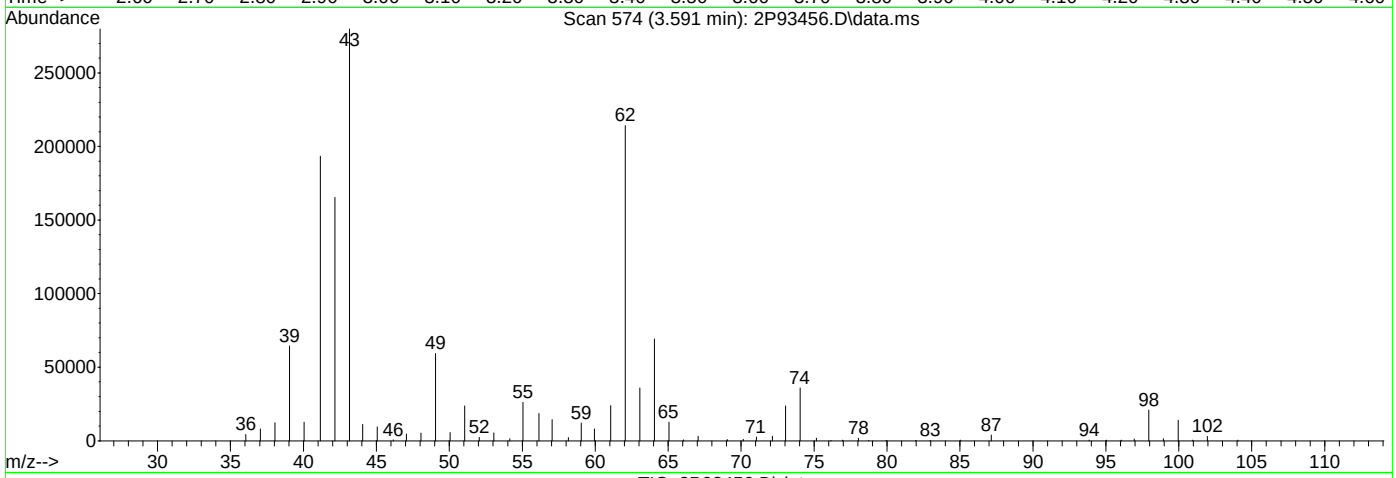
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	59.25
41.10	69.60	66.66
39.00	23.50	21.12

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.002) 829.07ug/L m

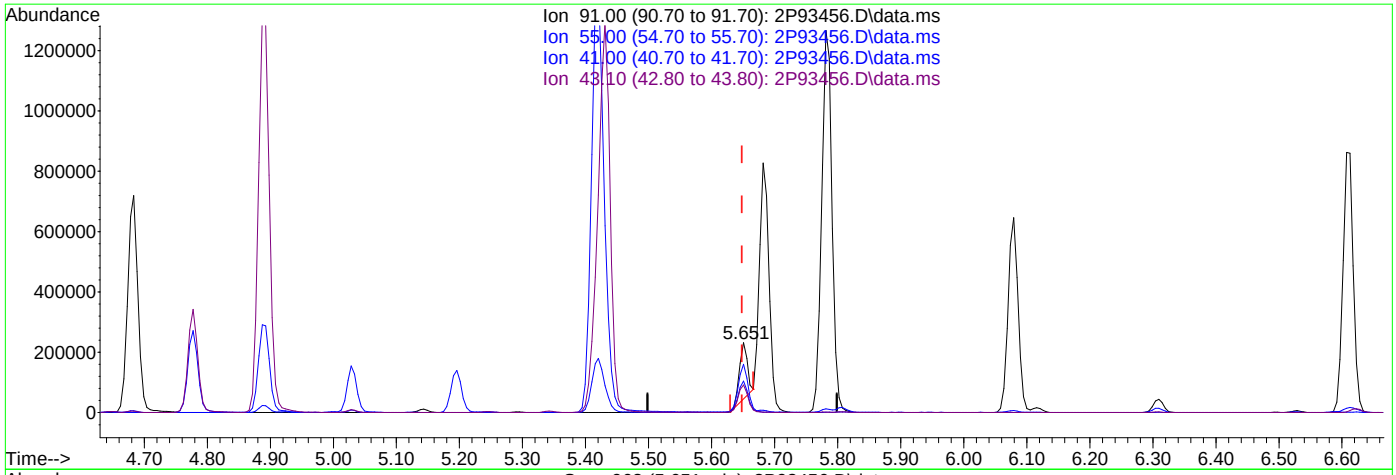
response 643938

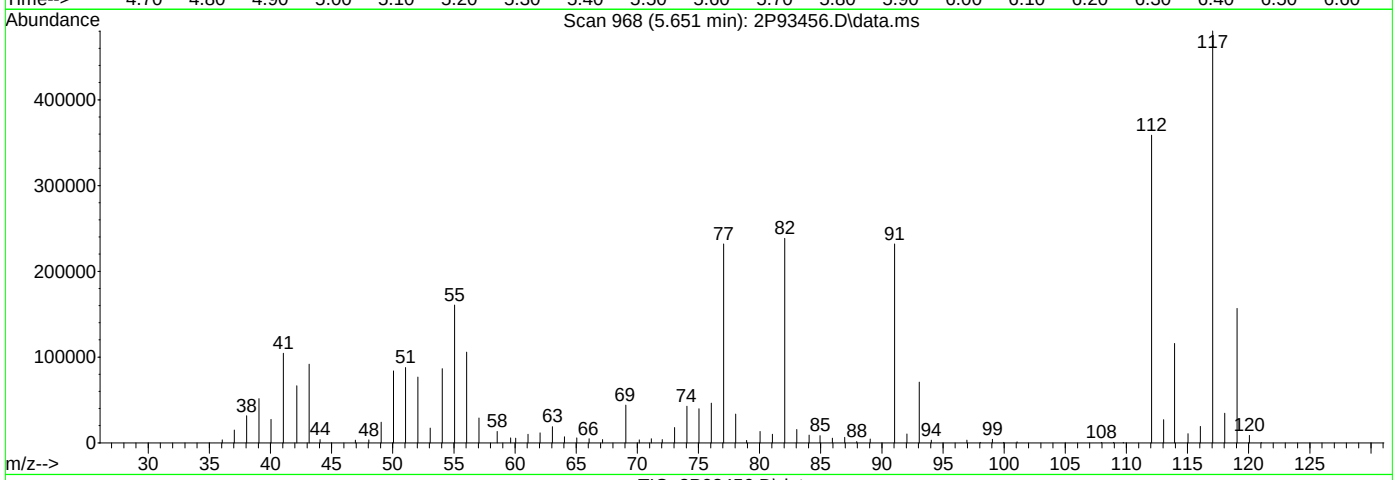
Ion	Exp%	Act%
43.00	100	100
42.10	59.00	59.10
41.10	69.60	69.11
39.00	23.50	23.01

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 25.21ug/L

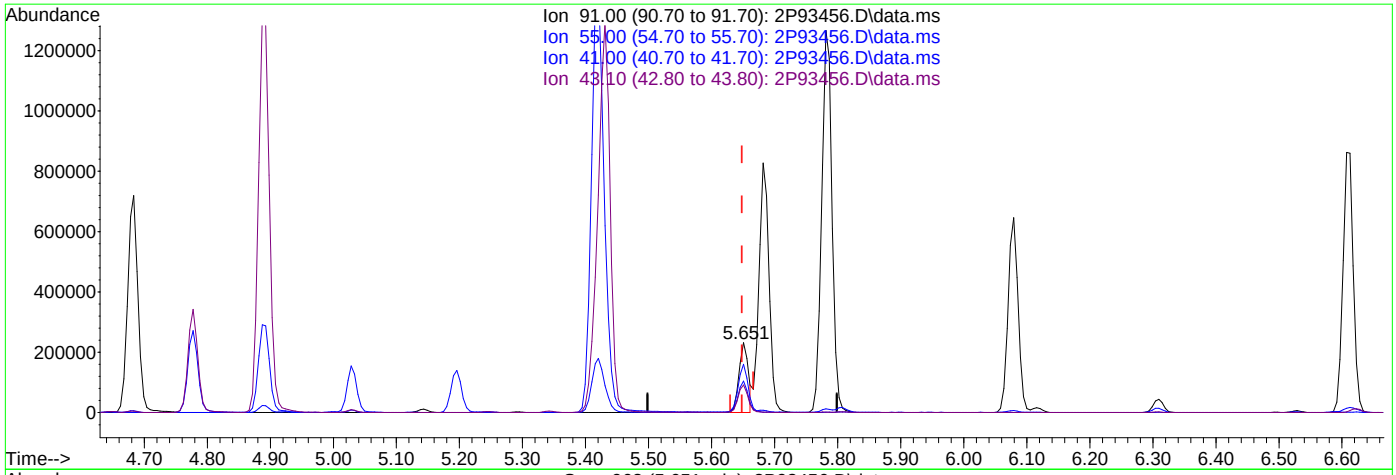
response 172601

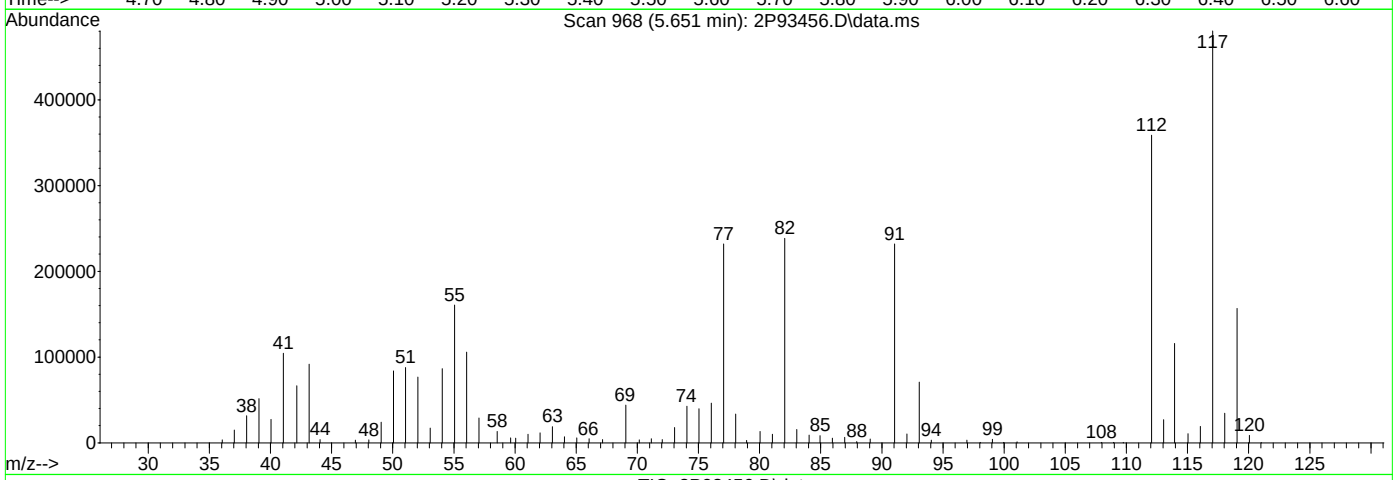
Ion	Exp%	Act%
91.00	100	100
55.00	71.70	67.85
41.00	48.20	43.70
43.10	41.80	38.90

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 34.38ug/L m

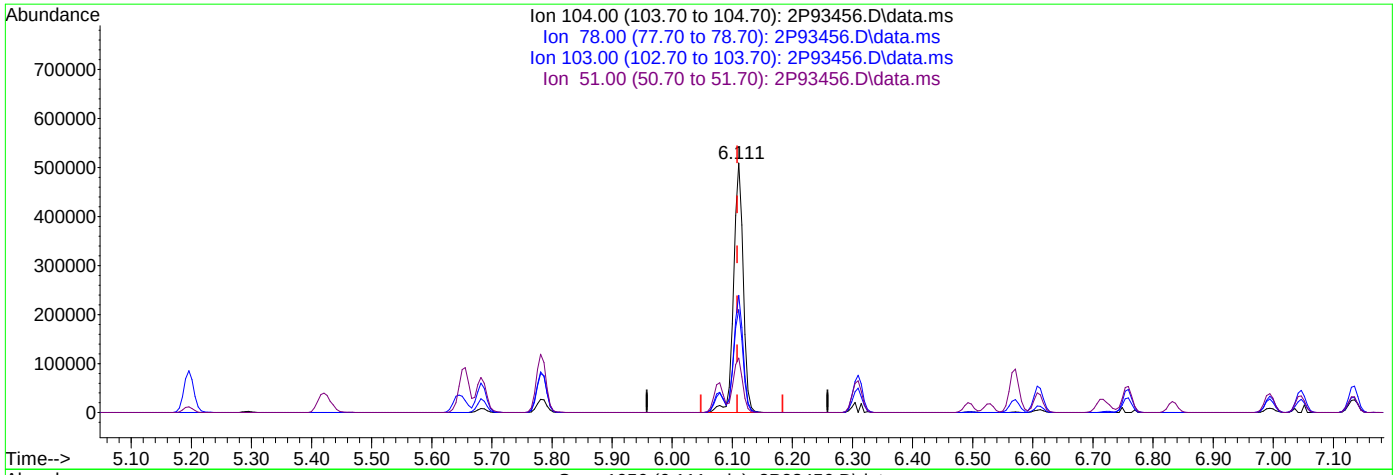
response 235456

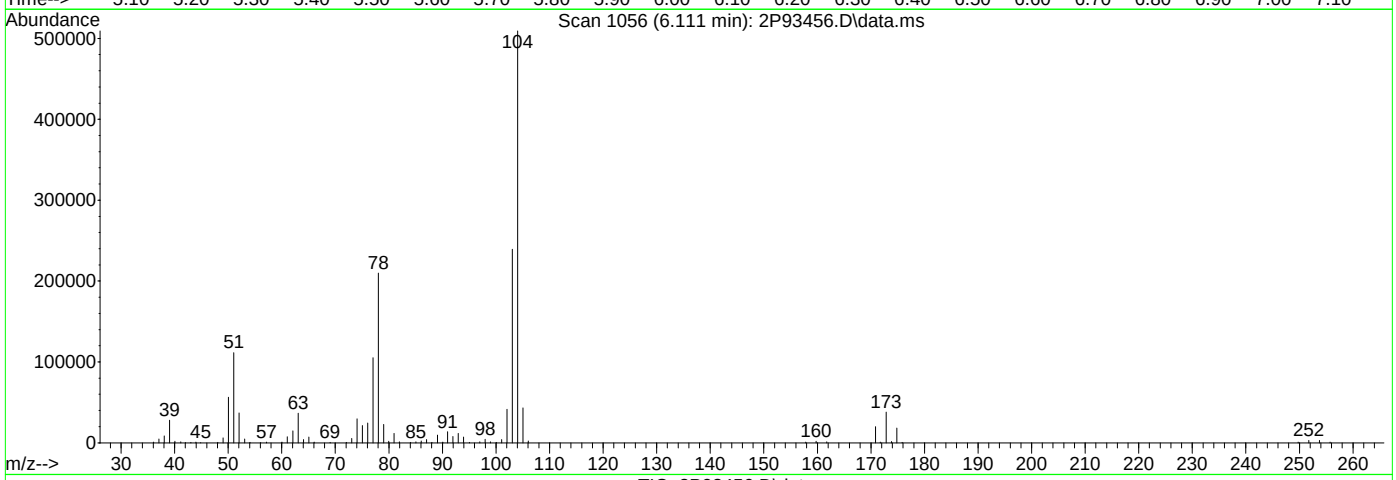
Ion	Exp%	Act%
91.00	100	100
55.00	71.70	69.29
41.00	48.20	45.03
43.10	41.80	39.57

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 42.28ug/L

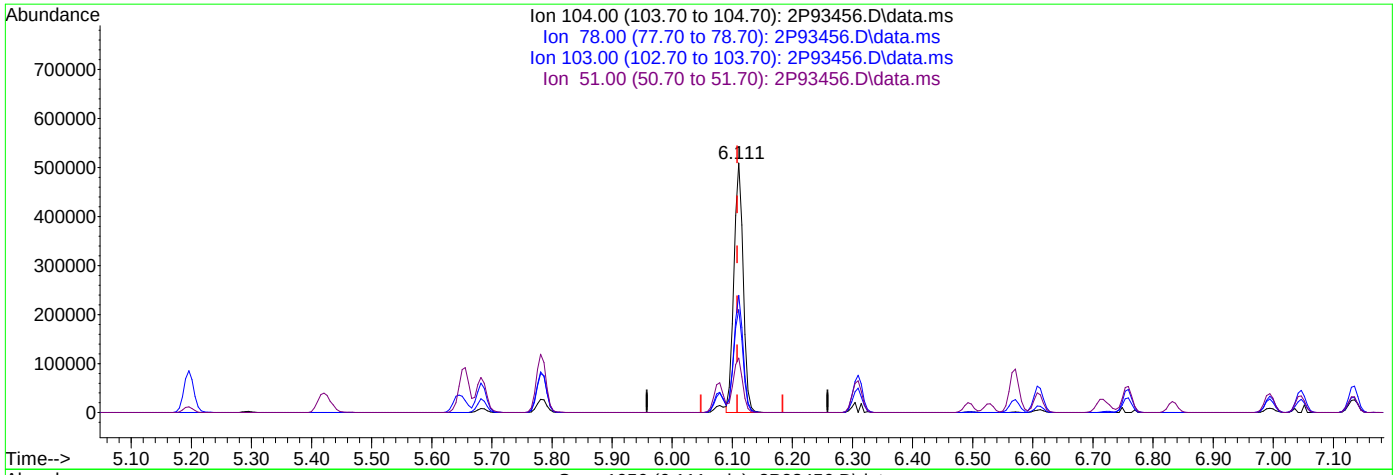
response 566796

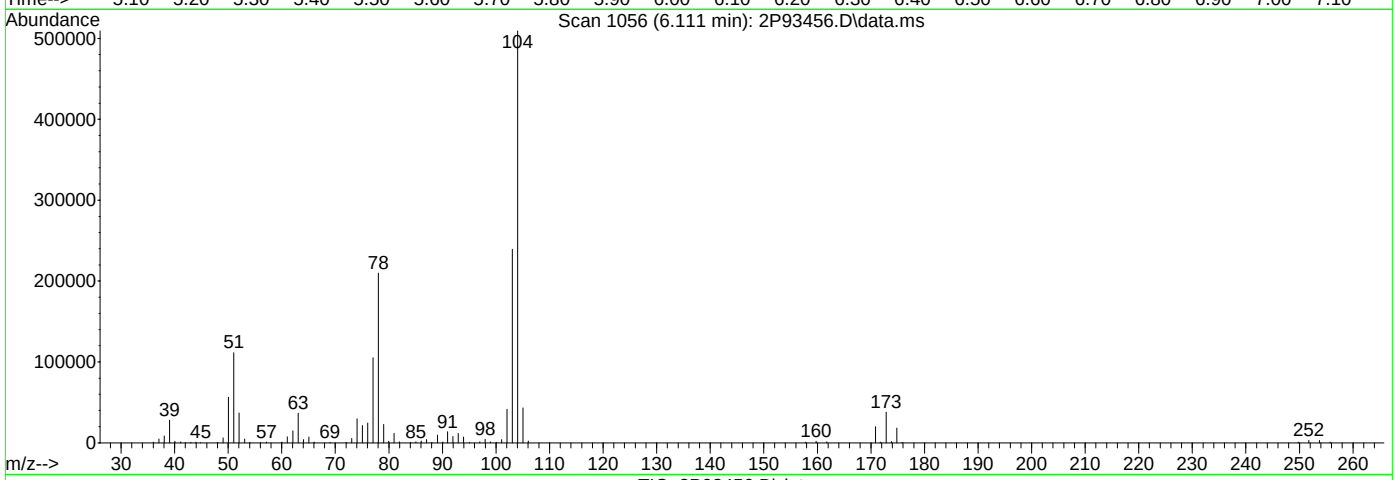
Ion	Exp%	Act%
104.00	100	100
78.00	42.20	41.22
103.00	46.80	46.97
51.00	22.50	21.87

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-28-2022\V2P3590-91\
Data File : 2P93456.D
Acq On : 27 Sep 2022 10:43 pm
Operator : courtnef
Sample : ECC3589-5
Misc : MS52449,V2P3590,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 27 23:21:43 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-09-26.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Tue Sep 27 10:56:19 2022
Response via : Initial Calibration





TIC: 2P93456.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 40.92ug/L m

response 548509

Ion	Exp%	Act%
104.00	100	100
78.00	42.20	41.22
103.00	46.80	46.97
51.00	22.50	21.87

SGS -ORLANDO

MSVOA13-P-ANALYSIS LOG

DATE:	8/24/2022
COLUMN TYPE:	RTXVMS
DETECTOR:	5973MSD
INSTRUMENT:	MSVOA13-P
PURGE PRESSURE:	1.4PSI
PURGE VOLUME:	5mL
ANALYST: Courtney F	

METHODS:	8260
METHOD FILE:	V2P_2022-08-24.M
CALIB. DATE:	8/24/2022
EM VOLTAGE:	1529V
ACQ. METHOD:	RTXFAST
BFB RESPONSE:	2016445
V2P3560	

BFB: VS2392
ICAL/CC: VS2375, VS2376, VS2387
VS2386, VS2383, VS2393
ISTD/SUR: VS2392
ICV/QC: VS2349, VS2350, VS2394,
VS2389, VS2388, VS2385, VS2397
DATA REVIEWED BY: Courtney F / Antonette C

PH LOT: 1-12pH 212820
0-3pH 230320
KI PAPER LOT: 022018
AFA: VS2248B
SAMPLE ID VERIFIED BY:
Courtney F
Date: 8/24/2022

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
2P92261	BLANK	-	-	W	51	8260		-	-	-	Passed autofind ✓
2P92263	BFB/IC3560-1	-	-	W	52	8260		-	-	-	Passed autofind; 1uL→ 100mL ✓
2P92265	IC3560-2	-	-	W	53	8260		-	-	-	5uL→ 100mL ✓
2P92267	IC3560-3	-	-	W	54	8260		-	-	-	10uL→ 100mL ✓
2P92269	IC3560-4	-	-	W	55	8260		-	-	-	25uL→ 100mL ✓
2P92271	IC3560-5	-	-	W	56	8260		-	-	-	40uL→ 100mL ✓
2P92273	IC3560-6	-	-	W	57	8260		-	-	-	70uL→ 100mL ✓
2P92275	IC3560-7	-	-	W	58	8260		-	-	-	100uL→ 100mL ✓
2P92277	BLANK	-	-	W	59	8260		-	-	-	✓
2P92279A	ICV3560-5/CC3560-5	-	-	W	60	8260		-	-	-	50uL→ 100mL ✓
2P92281A	ICV3560-4/BS	-	-	W	61	8260		-	-	-	12.5uL→ 100mL ✓
2P92283	CC3560-1	-	-	W	62	8260	all low peaks present	-	-	-	1uL→ 100mL ✓
2P92285	MB	-	-	W	63	8260		-	-	-	ND ✓
2P92287	**FA98234-4**	1x	5	W	64	8260		1	N	1x	**MTBE hit (BS ↑)**
2P92289	FA98234-5	1x	5	W	65	8260		1	N	-	ND ✓
2P92291	**FA98234-6**	1x	5	W	66	8260		1	N	1x	**TAME and MTBE hits (ICV, CCV, BS ↑)**
2P92293	FA98234-7	20x	5	W	67	8260	2.5mL(-)50mL	1	N	-	✓
2P92295	**FA98234-8**	100x	5	W	68	8260	500uL(-)50mL	1	N	100x	**MTBE hit (BS ↑)**
2P92297	**FA98234-9**	20x	5	W	69	8260	2.5mL(-)50mL	1	N	20x	**MTBE hit (BS ↑)**
2P92299	FA98234-10	1x	5	W	70	8260		1	N	-	ND ✓
2P92301	**FA98254-8**	1x	5	W	71	8260		1	N	1x	**MTBE hit (BS ↑)**
2P92303	FA98254-9	5x	5	W	72	8260	10mL(-)50mL	1	N	-	✓
2P92305	FA98254-10	1x	5	W	73	8260		1	N	-	✓
2P92307	FA98254-9MS	5x	5	W	74	8260	20mL(-)100mL	1	N	-	12.5uL→ 100mL ✓
2P92309	FA98254-9MSD	5x	5	W	75	8260	20mL(-)100mL	1	N	-	12.5uL→ 100mL ✓
2P92311	ECC3560-5	-	-	W	76	8260		-	-	-	40uL→ 100mL ✓

8/25/22

* For NELAC purposes, Method 8260 includes anlytes by SOP MS005 Matrix. Designate "W" for Water "S" for Soil, "O" for Oil, "Liq" for Non-aquous Liquid, and "TCLP" or "SPLP" for Leachate

Manual Integration Rational SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor

Analyst's Signature:

SGS -ORLANDO

MSVOA13-2P ANALYSIS LOG

Date:	09/23/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-08-24.M
Calibration Date:	08/24/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	1980145
Run ID:	**V2P3586-87**

BFB:	VS2448
ICAL/CC:	VS2444, VS2442, VS2420
VS2418, VS2440, VS2459	
ICV/QC:	VS2425, VS2426, VS2462
VS2422, VS2441, VS2451, VS2460	
ISTD/Surr.:	VS2448

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	**Antonette C**
Sample ID Ver. by:	Courtney F
Date Verified:	09/23/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93304	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93306	BFB/CC3560-5	-	-	Water	52	-	-	-	-	Passed autofind; 40uL (-) 100mL ✓
2P93308	BS	-	-	Water	53	-	-	-	-	12.5uL (-) 40mL ✓
2P93310	CC3560-1	-	-	Water	54	-	-	-	-	1uL (-) 100mL; all CCV low peaks present ✓
2P93312	MB	-	-	Water	55	-	-	-	-	ND ✓
2P93314	FA98824-9	1x	1	Water	56	MS52433	1	N	-	ND ✓
2P93316	FA98960-3	1x	3	Water	57	MS52418	1	N	-	MC only ✓
2P93318	FA98833-15	1x	3	Water	58	MS52418	1	N	-	CF ✓
2P93320	FA98813-11	1x	2	Water	59	MS52419	1	N	-	CF ✓
2P93322	FA98813-12	1x	2	Water	60	MS52419	1	N	-	CF ✓
2P93324	FA98732-4	5000x	1	Water	61	MS52395	1	N	-	10uL(-)50mL ; CF ✓
2P93326	FA98732-5	2500x	1	Water	62	MS52395	1	N	-	20uL(-)50mL; CF ✓
2P93328	FA98918-5	50x	9	Water	63	MS52399	6	N	-	1mL(-)50mL; CTC, cis1,4, trans1,4, MB, MC, MI only ✓
2P93330	**FA98833-29**	100x	2	Water	64	MS52426	1	N	**200x**	500uL(-)50mL; **TCE high**
2P93332	FA98833-30	5x	1	Water	65	MS52426	1	N	-	10mL(-)50mL: CF ✓
2P93334	FA98820-1A	1x	3	Water	66	MS52433	1	N	-	✓
2P93336	FA98820-2A	1x	5	Water	67	MS52433	1	N	-	✓
2P93338	FA98924-39	1x	4	Water	68	MS52433	1	N	-	✓
2P93340	**FA98819-1**	20x	2	Water	69	MS52434	1	N	**1x**	2.5mL(-)50mL; **target compounds low**
2P93342	FA98819-1MS	20x	2	Water	70	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93344	FA98819-MSD	20x	2	Water	71	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93346	FA98918-5MS	50x	9	Water	72	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93348	FA98918-5MSD	50x	9	Water	73	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93350	ECC3560-5	-	-	Water	74	-	-	-	-	40uL (-) 100mL ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

SGS -ORLANDO

MSVOA13-2P ANALYSIS LOG

Date:	09/23/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-08-24.M
Calibration Date:	08/24/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	1980145
Run ID:	**V2P3586-87**

BFB:	VS2448
ICAL/CC:	VS2444, VS2442, VS2420
VS2418, VS2440, VS2459	
ICV/QC:	VS2425, VS2426, VS2462
VS2422, VS2441, VS2451, VS2460	
ISTD/Surr.:	VS2448

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	**Antonette C**
Sample ID Ver. by:	Courtney F
Date Verified:	09/23/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93304	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93306	BFB/CC3560-5	-	-	Water	52	-	-	-	-	Passed autofind; 40uL (-) 100mL ✓
2P93308	BS	-	-	Water	53	-	-	-	-	12.5uL (-) 40mL ✓
2P93310	CC3560-1	-	-	Water	54	-	-	-	-	1uL (-) 100mL; all CCV low peaks present ✓
2P93312	MB	-	-	Water	55	-	-	-	-	ND ✓
2P93314	FA98824-9	1x	1	Water	56	MS52433	1	N	-	ND ✓
2P93316	FA98960-3	1x	3	Water	57	MS52418	1	N	-	MC only ✓
2P93318	FA98833-15	1x	3	Water	58	MS52418	1	N	-	CF ✓
2P93320	FA98813-11	1x	2	Water	59	MS52419	1	N	-	CF ✓
2P93322	FA98813-12	1x	2	Water	60	MS52419	1	N	-	CF ✓
2P93324	FA98732-4	5000x	1	Water	61	MS52395	1	N	-	10uL(-)50mL ; CF ✓
2P93326	FA98732-5	2500x	1	Water	62	MS52395	1	N	-	20uL(-)50mL; CF ✓
2P93328	FA98918-5	50x	9	Water	63	MS52399	6	N	-	1mL(-)50mL; CTC, cis1,4, trans1,4, MB, MC, MI only ✓
2P93330	**FA98833-29**	100x	2	Water	64	MS52426	1	N	**200x**	500uL(-)50mL; **TCE high**
2P93332	FA98833-30	5x	1	Water	65	MS52426	1	N	-	10mL(-)50mL: CF ✓
2P93334	FA98820-1A	1x	3	Water	66	MS52433	1	N	-	✓
2P93336	FA98820-2A	1x	5	Water	67	MS52433	1	N	-	✓
2P93338	FA98924-39	1x	4	Water	68	MS52433	1	N	-	✓
2P93340	**FA98819-1**	20x	2	Water	69	MS52434	1	N	**1x**	2.5mL(-)50mL; **target compounds low**
2P93342	FA98819-1MS	20x	2	Water	70	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93344	FA98819-MSD	20x	2	Water	71	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93346	FA98918-5MS	50x	9	Water	72	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93348	FA98918-5MSD	50x	9	Water	73	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93350	ECC3560-5	-	-	Water	74	-	-	-	-	40uL (-) 100mL ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

SGS -ORLANDO

MSVOA13-2P ANALYSIS LOG

Date:	09/26/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-09-26.M
Calibration Date:	09/26/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	1703353
Run ID:	**V2P3589**

BFB:	VS2479
ICAL/CC:	VS2444, VS2442, VS2461
VS2465, VS2463, VS2480	
ICV/QC:	VS2425, VS2426, VS2462
VS2466, VS2464, VS2481, VS2471	
ISTD/Surr.:	VS2479

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	Courtney F
Sample ID Ver. by:	Courtney F
Date Verified:	09/26/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93388	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93390	IC3589-1/BFB	-	-	Water	52	-	-	-	-	Passed autofind; 1uL(-)100mL ✓
2P93392	IC3589-2	-	-	Water	53	-	-	-	-	5uL(-)100mL ✓
2P93394	IC3589-3	-	-	Water	54	-	-	-	-	10uL(-)100mL ✓
2P93396	IC3589-4	-	-	Water	55	-	-	-	-	25uL(-)100mL ✓
2P93398	ICC3589-5	-	-	Water	56	-	-	-	-	40uL(-)100mL ✓
2P93400	IC3589-6	-	-	Water	57	-	-	-	-	70uL(-)100mL ✓
2P93402	IC3589-7	-	-	Water	58	-	-	-	-	100uL(-)100mL ✓
2P93404	BLANK	-	-	Water	59	-	-	-	-	✓
2P93406	ICV3589-5	-	-	Water	60	-	-	-	-	50uL (-) 100mL ✓
2P93408	ICV3589-4	-	-	Water	61	-	-	-	-	12.5uL (-) 40mL; DCFM, TCFM, CP, TAME only ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

SGS -ORLANDO

MSVOA13-2P ANALYSIS LOG

Date:	09/27/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-09-26.M
Calibration Date:	09/26/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	2021414
Run ID:	**V2P3590-91**

BFB:	VS2479
ICAL/CC:	VS2444, VS2442, VS2461
VS2465, VS2463, VS2480	
ICV/QC:	VS2425, VS2426, VS2462
VS2466, VS2464, VS2481, VS2471	
ISTD/Surr.:	VS2479

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	Courtney F/Antonette C
Sample ID Ver. by:	Courtney F
Date Verified:	09/27/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93410	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93412	BFB/CC3589-5	-	-	Water	52	-	-	-	-	Passed autofind; 40uL(-)100mL ✓
2P93414	BS	-	-	Water	53	-	-	-	-	12.5uL(-)100mL ✓
2P93416	CC3589-1	-	-	Water	54	-	-	-	-	1uL(-)100mL ✓
2P93418	MB	-	-	Water	55	-	-	-	-	AFA, ND ✓
2P93420	FA98887-2	1x	1	Water	56	MS52449	1	N	-	bubble > 6mm; ND ✓
2P93422	FA98819-1	1x	3	Water	57	MS52434	1	N	-	No MS/MSD available for this run
2P93424	FA98968-3	1x	2	Water	58	MS52449	1	N	-	ND ✓
2P93426	FA98968-4	1x	2	Water	59	MS52449	1	N	-	✓
2P93428	**FA98968-5**	1x	2	Water	60	MS52449	1	N	**5x**	**Sample foamed, no data collected**
2P93430	FA98968-6	1x	2	Water	61	MS52449	1	N	-	✓
2P93432	FA98968-7	1x	2	Water	62	MS52449	1	N	-	✓
2P93434	FA98968-8	1x	2	Water	63	MS52449	1	N	-	✓
2P93436	FA98970-1	1x	2	Water	64	MS52449	1	N	-	ND ✓
2P93438	FA98970-2	1x	2	Water	65	MS52449	1	N	-	ND ✓
2P93440	FA98973-1	1x	3	Water	66	MS52449	1	N	-	ND ✓
2P93442	FA98973-2	1x	2	Water	67	MS52449	1	N	-	AFA, ✓
2P93444	FA98973-3	1x	2	Water	68	MS52449	1	N	-	AFA, ✓
2P93446	FA98973-4	1x	2	Water	69	MS52449	1	N	-	ND ✓
2P93448	FA98973-5	1x	2	Water	70	MS52449	1	N	-	ND ✓
2P93450	FA98973-6	1x	2	Water	71	MS52449	1	N	-	ND ✓
2P93452	FA98968-3MS	5x	2	Water	72	MS52449	1	N	-	20mL(-)100mL; 12.5uL (-) 40mL ✓
2P93454	FA98968-3MSD	5x	2	Water	73	MS52449	1	N	-	20mL(-)100mL; 12.5uL (-) 40mL ✓
2P93456	ECC3589-5	-	-	Water	74	-	-	-	-	40uL (-) 100mL ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

SGS -ORLANDO

MSVOA13-2P ANALYSIS LOG

Date:	09/27/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-09-26.M
Calibration Date:	09/26/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	2021414
Run ID:	**V2P3590-91**

BFB:	VS2479
ICAL/CC:	VS2444, VS2442, VS2461
VS2465, VS2463, VS2480	
ICV/QC:	VS2425, VS2426, VS2462
VS2466, VS2464, VS2481, VS2471	
ISTD/Surr.:	VS2479

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	Courtney F/Antonette C
Sample ID Ver. by:	Courtney F
Date Verified:	09/27/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93410	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93412	BFB/CC3589-5	-	-	Water	52	-	-	-	-	Passed autofind; 40uL(-)100mL ✓
2P93414	BS	-	-	Water	53	-	-	-	-	12.5uL(-)100mL ✓
2P93416	CC3589-1	-	-	Water	54	-	-	-	-	1uL(-)100mL ✓
2P93418	MB	-	-	Water	55	-	-	-	-	AFA, ND ✓
2P93420	FA98887-2	1x	1	Water	56	MS52449	1	N	-	bubble > 6mm; ND ✓
2P93422	FA98819-1	1x	3	Water	57	MS52434	1	N	-	No MS/MSD available for this run; CF ✓
2P93424	FA98968-3	1x	2	Water	58	MS52449	1	N	-	ND ✓
2P93426	FA98968-4	1x	2	Water	59	MS52449	1	N	-	✓
2P93428	**FA98968-5**	1x	2	Water	60	MS52449	1	N	**5x**	**Sample foamed, no data collected**
2P93430	FA98968-6	1x	2	Water	61	MS52449	1	N	-	✓
2P93432	FA98968-7	1x	2	Water	62	MS52449	1	N	-	✓
2P93434	FA98968-8	1x	2	Water	63	MS52449	1	N	-	✓
2P93436	FA98970-1	1x	2	Water	64	MS52449	1	N	-	ND ✓
2P93438	FA98970-2	1x	2	Water	65	MS52449	1	N	-	ND ✓
2P93440	FA98973-1	1x	3	Water	66	MS52449	1	N	-	ND ✓
2P93442	FA98973-2	1x	2	Water	67	MS52449	1	N	-	AFA, ✓
2P93444	FA98973-3	1x	2	Water	68	MS52449	1	N	-	AFA, ✓
2P93446	FA98973-4	1x	2	Water	69	MS52449	1	N	-	ND ✓
2P93448	FA98973-5	1x	2	Water	70	MS52449	1	N	-	ND ✓
2P93450	FA98973-6	1x	2	Water	71	MS52449	1	N	-	ND ✓
2P93452	FA98968-3MS	5x	2	Water	72	MS52449	1	N	-	20mL(-)100mL; 12.5uL (-) 40mL ✓
2P93454	FA98968-3MSD	5x	2	Water	73	MS52449	1	N	-	20mL(-)100mL; 12.5uL (-) 40mL ✓
2P93456	ECC3589-5	-	-	Water	74	-	-	-	-	40uL (-) 100mL ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MB	6F15636.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	5.0	0.59	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.63	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.84	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.74	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.56	ug/l	
	3&4-Methylphenol	ND	5.0	0.98	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.85	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.0	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.74	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.75	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.63	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.64	ug/l	
62-53-3	Aniline	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	0.80	ug/l	
92-87-5	Benzidine	ND	25	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.76	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.78	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.78	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.82	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.86	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	0.61	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	5.0	0.85	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	1.0	ug/l	
86-74-8	Carbazole	ND	5.0	0.60	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.81	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.73	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	0.76	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	5.0	0.54	ug/l	
218-01-9	Chrysene	ND	5.0	0.85	ug/l	

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MB	6F15636.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.80	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.60	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.64	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	1.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	1.0	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	5.0	1.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.81	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.71	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.55	ug/l	
86-73-7	Fluorene	ND	5.0	0.70	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.69	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.8	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.71	ug/l	
78-59-1	Isophorone	ND	5.0	0.78	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.60	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.8	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.88	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.93	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	5.0	0.67	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.81	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.86	ug/l	
129-00-0	Pyrene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.1	ug/l	

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MB	6F15636.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	14-67%
4165-62-2	Phenol-d5	37%	10-50%
118-79-6	2,4,6-Tribromophenol	92%	33-118%
4165-60-0	Nitrobenzene-d5	76%	42-108%
321-60-8	2-Fluorobiphenyl	77%	40-106%
1718-51-0	Terphenyl-d14	92%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-BS	6F15615.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	46.8	47	10-69
59-50-7	4-Chloro-3-methyl Phenol	50	47.1	94	54-103
95-57-8	2-Chlorophenol	50	40.8	82	52-98
120-83-2	2,4-Dichlorophenol	50	46.6	93	53-103
105-67-9	2,4-Dimethylphenol	50	41.4	83	43-90
51-28-5	2,4-Dinitrophenol	100	101	101	44-112
534-52-1	4,6-Dinitro-o-cresol	100	112	112	66-121
95-48-7	2-Methylphenol	50	37.6	75	43-90
	3&4-Methylphenol	100	75.0	75	36-88
88-75-5	2-Nitrophenol	50	47.1	94	53-102
100-02-7	4-Nitrophenol	100	48.7	49	18-62
87-86-5	Pentachlorophenol	100	109	109	61-115
108-95-2	Phenol	50	24.7	49	19-56
95-95-4	2,4,5-Trichlorophenol	50	54.7	109	62-109
88-06-2	2,4,6-Trichlorophenol	50	56.0	112*	59-107
83-32-9	Acenaphthene	50	46.1	92	61-107
208-96-8	Acenaphthylene	50	48.2	96	60-104
62-53-3	Aniline	50	29.2	58	47-100
120-12-7	Anthracene	50	48.0	96	65-108
92-87-5	Benzidine	50	34.4	69	25-99
56-55-3	Benzo(a)anthracene	50	54.7	109	66-111
50-32-8	Benzo(a)pyrene	50	53.8	108*	62-107
205-99-2	Benzo(b)fluoranthene	50	52.1	104	65-114
191-24-2	Benzo(g,h,i)perylene	50	50.9	102	66-116
207-08-9	Benzo(k)fluoranthene	50	55.8	112	65-114
100-51-6	Benzyl Alcohol	50	40.7	81	46-94
101-55-3	4-Bromophenyl Phenyl Ether	50	51.2	102	65-109
85-68-7	Butyl Benzyl Phthalate	50	56.7	113*	65-112
86-74-8	Carbazole	50	47.2	94	59-113
106-47-8	4-Chloroaniline	50	37.9	76	49-105
111-91-1	bis(2-Chloroethoxy)methane	50	47.2	94	51-102
111-44-4	bis(2-Chloroethyl)ether	50	46.5	93	53-100
108-60-1	2,2'-Oxybis(1-chloropropane)	50	54.5	109*	45-106
91-58-7	2-Chloronaphthalene	50	48.8	98	57-103
7005-72-3	4-Chlorophenyl Phenyl Ether	50	51.3	103	62-105
218-01-9	Chrysene	50	54.6	109	66-111

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-BS	6F15615.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	50	52.4	105	66-119
132-64-9	Dibenzofuran	50	46.2	92	61-106
95-50-1	1,2-Dichlorobenzene	50	41.8	84	48-97
541-73-1	1,3-Dichlorobenzene	50	40.6	81	45-95
106-46-7	1,4-Dichlorobenzene	50	40.7	81	45-98
91-94-1	3,3'-Dichlorobenzidine	50	58.0	116	46-117
84-66-2	Diethyl Phthalate	50	52.7	105	64-108
131-11-3	Dimethyl Phthalate	50	50.1	100	63-106
84-74-2	Di-n-butyl Phthalate	50	52.2	104	65-107
117-84-0	Di-n-octyl Phthalate	50	57.4	115	62-118
121-14-2	2,4-Dinitrotoluene	50	55.3	111*	61-110
606-20-2	2,6-Dinitrotoluene	50	50.6	101	63-108
117-81-7	bis(2-Ethylhexyl)phthalate	50	56.1	112	61-117
206-44-0	Fluoranthene	50	51.9	104	63-106
86-73-7	Fluorene	50	50.7	101	62-108
118-74-1	Hexachlorobenzene	50	48.5	97	63-108
87-68-3	Hexachlorobutadiene	50	46.6	93	42-102
77-47-4	Hexachlorocyclopentadiene	50	47.8	96	39-102
67-72-1	Hexachloroethane	50	43.6	87	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	55.9	112	64-119
78-59-1	Isophorone	50	47.1	94*	43-87
90-12-0	1-Methylnaphthalene	50	45.8	92	53-102
91-57-6	2-Methylnaphthalene	50	47.7	95	51-102
91-20-3	Naphthalene	50	41.2	82	47-100
88-74-4	2-Nitroaniline	50	52.6	105	54-128
99-09-2	3-Nitroaniline	50	49.1	98	56-106
100-01-6	4-Nitroaniline	50	47.5	95	55-120
98-95-3	Nitrobenzene	50	46.4	93	50-104
62-75-9	N-Nitrosodimethylamine	50	26.8	54	28-78
621-64-7	N-Nitrosodi-n-propylamine	50	48.9	98	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.8	88	64-108
85-01-8	Phenanthrene	50	49.3	99	66-110
129-00-0	Pyrene	50	54.6	109	64-113
120-82-1	1,2,4-Trichlorobenzene	50	46.5	93	45-97

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-BS	6F15615.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	53%	14-67%
4165-62-2	Phenol-d5	41%	10-50%
118-79-6	2,4,6-Tribromophenol	95%	33-118%
4165-60-0	Nitrobenzene-d5	82%	42-108%
321-60-8	2-Fluorobiphenyl	82%	40-106%
1718-51-0	Terphenyl-d14	94%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MS	6F15642.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
OP93036-MSD	6F15643.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
FA98756-2	6F15640.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	FA98756-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		196	88.6	45	196	95.4	49	7	10-69/39
59-50-7	4-Chloro-3-methyl Phenol	ND		98	90.4	92	98	89.4	91	1	54-103/23
95-57-8	2-Chlorophenol	ND		98	83.1	85	98	79.4	81	5	52-98/25
120-83-2	2,4-Dichlorophenol	ND		98	93.4	95	98	90.4	92	3	53-103/26
105-67-9	2,4-Dimethylphenol	ND		98	81.7	83	98	80.3	82	2	43-90/27
51-28-5	2,4-Dinitrophenol	ND		196	191	97	196	187	95	2	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		196	208	106	196	207	106	0	66-121/23
95-48-7	2-Methylphenol	ND		98	73.8	75	98	73.8	75	0	43-90/28
	3&4-Methylphenol	ND		196	145	74	196	147	75	1	36-88/28
88-75-5	2-Nitrophenol	ND		98	95.0	97	98	90.3	92	5	53-102/29
100-02-7	4-Nitrophenol	ND		196	88.8	45	196	95.5	49	7	18-62/33
87-86-5	Pentachlorophenol	ND		196	198	101	196	196	100	1	61-115/26
108-95-2	Phenol	ND		98	48.2	49	98	50.3	51	4	19-56/35
95-95-4	2,4,5-Trichlorophenol	ND		98	105	107	98	102	104	3	62-109/22
88-06-2	2,4,6-Trichlorophenol	ND		98	107	109*	98	104	106	3	59-107/23
83-32-9	Acenaphthene	ND		98	88.7	90	98	86.8	89	2	61-107/22
208-96-8	Acenaphthylene	ND		98	93.1	95	98	90.0	92	3	60-104/22
62-53-3	Aniline	ND		98	59.7	61	98	60.6	62	1	47-100/30
120-12-7	Anthracene	ND		98	88.7	90	98	88.6	90	0	65-108/20
92-87-5	Benzidine	ND		98	61.0	62	98	59.5	61	2	25-99/31
56-55-3	Benzo(a)anthracene	ND		98	102	104	98	101	103	1	66-111/22
50-32-8	Benzo(a)pyrene	ND		98	101	103	98	100	102	1	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		98	103	105	98	103	105	0	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		98	95.2	97	98	94.8	97	0	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		98	98.5	100	98	99.0	101	1	65-114/24
100-51-6	Benzyl Alcohol	ND		98	79.4	81	98	80.3	82	1	46-94/27
101-55-3	4-Bromophenyl Phenyl Ether	ND		98	95.8	98	98	95.5	97	0	65-109/23
85-68-7	Butyl Benzyl Phthalate	ND		98	106	108	98	104	106	2	65-112/24
86-74-8	Carbazole	ND		98	88.3	90	98	87.2	89	1	59-113/21
106-47-8	4-Chloroaniline	ND		98	71.6	73	98	73.3	75	2	49-105/27
111-91-1	bis(2-Chloroethoxy)methane	ND		98	95.0	97	98	91.9	94	3	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		98	96.1	98	98	90.3	92	6	53-100/27
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		98	109	111*	98	103	105	6	45-106/26
91-58-7	2-Chloronaphthalene	ND		98	95.6	98	98	91.5	93	4	57-103/23
7005-72-3	4-Chlorophenyl Phenyl Ether	ND		98	99.0	101	98	96.9	99	2	62-105/20
218-01-9	Chrysene	ND		98	103	105	98	101	103	2	66-111/22

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MS	6F15642.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
OP93036-MSD	6F15643.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
FA98756-2	6F15640.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Compound	FA98756-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
53-70-3	Dibenzo(a,h)anthracene	ND		98	97.9	100	98	98.5	100	1	66-119/24
132-64-9	Dibenzofuran	ND		98	90.1	92	98	85.9	88	5	61-106/21
95-50-1	1,2-Dichlorobenzene	ND		98	87.6	89	98	82.2	84	6	48-97/24
541-73-1	1,3-Dichlorobenzene	ND		98	85.0	87	98	80.1	82	6	45-95/25
106-46-7	1,4-Dichlorobenzene	ND		98	86.1	88	98	79.8	81	8	45-98/25
91-94-1	3,3'-Dichlorobenzidine	ND		98	99.8	102	98	99.5	101	0	46-117/29
84-66-2	Diethyl Phthalate	ND		98	101	103	98	97.6	100	3	64-108/21
131-11-3	Dimethyl Phthalate	ND		98	94.4	96	98	92.7	95	2	63-106/22
84-74-2	Di-n-butyl Phthalate	ND		98	95.6	98	98	95.8	98	0	65-107/21
117-84-0	Di-n-octyl Phthalate	ND		98	107	109	98	107	109	0	62-118/24
121-14-2	2,4-Dinitrotoluene	ND		98	104	106	98	100	102	4	61-110/21
606-20-2	2,6-Dinitrotoluene	ND		98	96.4	98	98	94.1	96	2	63-108/21
117-81-7	bis(2-Ethylhexyl)phthalate	ND		98	106	108	98	104	106	2	61-117/23
206-44-0	Fluoranthene	ND		98	94.7	97	98	95.1	97	0	63-106/21
86-73-7	Fluorene	ND		98	97.3	99	98	94.5	96	3	62-108/20
118-74-1	Hexachlorobenzene	ND		98	91.3	93	98	90.0	92	1	63-108/22
87-68-3	Hexachlorobutadiene	ND		98	96.9	99	98	90.9	93	6	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		98	93.9	96	98	92.8	95	1	39-102/29
67-72-1	Hexachloroethane	ND		98	90.6	92	98	84.4	86	7	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		98	103	105	98	103	105	0	64-119/24
78-59-1	Isophorone	ND		98	92.2	94*	98	89.5	91*	3	43-87/25
90-12-0	1-Methylnaphthalene	ND		98	91.6	93	98	88.6	90	3	53-102/27
91-57-6	2-Methylnaphthalene	ND		98	95.3	97	98	91.0	93	5	51-102/26
91-20-3	Naphthalene	ND		98	83.5	85	98	80.0	82	4	47-100/29
88-74-4	2-Nitroaniline	ND		98	100	102	98	96.1	98	4	54-128/24
99-09-2	3-Nitroaniline	ND		98	90.2	92	98	88.9	91	1	56-106/27
100-01-6	4-Nitroaniline	ND		98	89.2	91	98	87.1	89	2	55-120/24
98-95-3	Nitrobenzene	ND		98	93.8	96	98	89.8	92	4	50-104/28
62-75-9	N-Nitrosodimethylamine	ND		98	55.5	57	98	58.4	60	5	28-78/30
621-64-7	N-Nitrosodi-n-propylamine	ND		98	97.1	99	98	92.7	95	5	52-104/25
86-30-6	N-Nitrosodiphenylamine	ND		98	82.4	84	98	81.3	83	1	64-108/23
85-01-8	Phenanthrene	ND		98	91.7	94	98	90.4	92	1	66-110/21
129-00-0	Pyrene	ND		98	103	105	98	101	103	2	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		98	95.8	98*	98	91.0	93	5	45-97/28

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93036-MS	6F15642.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
OP93036-MSD	6F15643.D	1	09/13/22	KA	09/13/22	OP93036	S6F586
FA98756-2	6F15640.D	1	09/13/22	KA	09/13/22	OP93036	S6F586

The QC reported here applies to the following samples: **Method:** EPA 625.1

FA98819-1

CAS No.	Surrogate Recoveries	MS	MSD	FA98756-2	Limits
367-12-4	2-Fluorophenol	55%	55%	32%	14-67%
4165-62-2	Phenol-d5	40%	43%	21%	10-50%
118-79-6	2,4,6-Tribromophenol	89%	89%	92%	33-118%
4165-60-0	Nitrobenzene-d5	85%	80%	79%	42-108%
321-60-8	2-Fluorobiphenyl	83%	80%	76%	40-106%
1718-51-0	Terphenyl-d14	91%	89%	78%	39-121%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-DFTPP
Lab File ID: 6F15130.D
Instrument ID: GCMS6F
Injection Date: 07/21/22
Injection Time: 11:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	128683	31.7		Pass
68	Less than 2.0% of mass 69	818	0.20	(0.53) [a]	Pass
69	Mass 69 relative abundance	153104	37.7		Pass
70	Less than 2.0% of mass 69	765	0.19	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	190699	47.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	405973	100.0		Pass
199	5.0 - 9.0% of mass 198	27901	6.87		Pass
275	10.0 - 30.0% of mass 198	104104	25.6		Pass
365	1.0 - 100.0% of mass 198	13443	3.31		Pass
441	Present, but less than mass 443	60600	14.9	(77.5) [b]	Pass
442	40.0 - 100.0% of mass 198	396011	97.5		Pass
443	17.0 - 23.0% of mass 442	78221	19.3	(19.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
S6F563-IC563	6F15131.D	07/21/22	12:11	00:17	Initial cal 1
S6F563-IC563	6F15132.D	07/21/22	12:38	00:44	Initial cal 5
S6F563-IC563	6F15133.D	07/21/22	13:04	01:10	Initial cal 10
S6F563-IC563	6F15134.D	07/21/22	13:31	01:37	Initial cal 25
S6F563-ICC563	6F15135.D	07/21/22	13:58	02:04	Initial cal 50
S6F563-IC563	6F15136.D	07/21/22	14:25	02:31	Initial cal 60
S6F563-IC563	6F15137.D	07/21/22	14:52	02:58	Initial cal 75
S6F563-IC563	6F15138.D	07/21/22	15:19	03:25	Initial cal 100
S6F563-ICV563	6F15139.D	07/21/22	15:46	03:52	Initial cal verification 50
S6F563-ICV563	6F15140.D	07/21/22	16:13	04:19	Initial cal verification 50
S6F563-ICV563	6F15141.D	07/21/22	16:40	04:46	Initial cal verification 50
S6F563-ICV563	6F15142.D	07/21/22	17:07	05:13	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-DFTPP
Lab File ID: 6F15612.D
Instrument ID: GCMS6F
Injection Date: 09/13/22
Injection Time: 13:02

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	64284	35.0		Pass
68	Less than 2.0% of mass 69	1058	0.58	(1.42) [a]	Pass
69	Mass 69 relative abundance	74376	40.5		Pass
70	Less than 2.0% of mass 69	436	0.24	(0.59) [a]	Pass
127	40.0 - 60.0% of mass 198	86045	46.8		Pass
197	Less than 1.0% of mass 198	1028	0.56		Pass
198	Base peak, 100% relative abundance	183680	100.0		Pass
199	5.0 - 9.0% of mass 198	12298	6.70		Pass
275	10.0 - 30.0% of mass 198	41701	22.7		Pass
365	1.0 - 100.0% of mass 198	5128	2.79		Pass
441	Present, but less than mass 443	18867	10.3	(75.0) [b]	Pass
442	40.0 - 100.0% of mass 198	128475	69.9		Pass
443	17.0 - 23.0% of mass 442	25155	13.7	(19.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
S6F586-CC563	6F15613.D	09/13/22	13:19	00:17	Continuing cal 50
OP93036-BS	6F15615.D	09/13/22	14:13	01:11	Blank Spike
OP93036-MB	6F15636.D	09/13/22	14:39	01:37	Method Blank
ZZZZZZ	6F15637.D	09/13/22	15:07	02:05	(unrelated sample)
ZZZZZZ	6F15638.D	09/13/22	15:34	02:32	(unrelated sample)
FA98756-2	6F15640.D	09/13/22	16:28	03:26	(used for QC only; not part of job FA98819)
FA98819-1	6F15641.D	09/13/22	16:55	03:53	EFFLUENT
OP93036-MS	6F15642.D	09/13/22	17:22	04:20	Matrix Spike
OP93036-MSD	6F15643.D	09/13/22	17:49	04:47	Matrix Spike Duplicate
S6F586-ECC563	6F15644.D	09/13/22	18:16	05:14	Ending cal 50

Internal Standard Area Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	S6F586-CC563	**Injection Date:**	09/13/22
Lab File ID:	6F15613.D	**Injection Time:**	13:19
Instrument ID:	GCMS6F	**Method:**	EPA 625.1

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	494378	4.71	1816675	6.12	1001409	8.14	1682608	9.87	1341600	12.96	1263356	14.76
Check Std [b]	629948	4.56	2589344	5.97	1506079	7.99	2645398	9.71	2135633	12.80	1858456	14.54
Upper Limit [c]	1259896	4.73	5178688	6.14	3012158	8.16	5290796	9.88	4271266	12.97	3716912	14.71
Lower Limit [d]	314974	4.39	1294672	5.80	753040	7.82	1322699	9.54	1067817	12.63	929228	14.37

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP93036-BS	494183	4.56	1930365	5.97	1079760	7.98	1912219	9.71	1462467	12.79	1341246	14.53
OP93036-MB	478101	4.56	1972163	5.96	1118462	7.98	1991827	9.70	1532313	12.79	1447489	14.53
ZZZZZZ	550477	4.56	2192876	5.97	1207181	7.98	2115538	9.70	1636138	12.79	1539474	14.53
ZZZZZZ	483726	4.56	1875352	5.97	1055307	7.98	1866072	9.70	1409459	12.79	1319488	14.53
FA98756-2	475487	4.56	1914525	5.97	1116951	7.98	1998406	9.70	1522319	12.79	1398122	14.53
FA98819-1	480396	4.56	1935857	5.97	1121803	7.98	2023954	9.70	1549563	12.79	1340612	14.53
OP93036-MS	508748	4.56	1983716	5.97	1116061	7.98	2014365	9.71	1505376	12.80	1400607	14.54
OP93036-MSD	515810	4.56	2001092	5.97	1127047	7.98	2002816	9.71	1520813	12.80	1389152	14.54
S6F586-ECC563	961289	4.56	3848040	5.98	2223019	7.99	3845439	9.71	2939389	12.81	2584618	14.55

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: S6F563-ICC563 6F15135.D 07/21/22 13:58
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Method: EPA 625.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA98819-1	6F15641.D	26	17	83	66	67	78
OP93036-BS	6F15615.D	53	41	95	82	82	94
OP93036-MB	6F15636.D	46	37	92	76	77	92
OP93036-MS	6F15642.D	55	40	89	85	83	91
OP93036-MSD	6F15643.D	55	43	89	80	80	89

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	14-67%
S2 = Phenol-d5	10-50%
S3 = 2,4,6-Tribromophenol	33-118%
S4 = Nitrobenzene-d5	42-108%
S5 = 2-Fluorobiphenyl	40-106%
S6 = Terphenyl-d14	39-121%

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICC563
Lab FileID: 6F15135.D

Response Factor Report MSBNA10

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Fri Jul 22 11:24:12 2022
Response via : Initial Calibration

Calibration Files
5 =6F15132.D 10 =6F15133.D 25 =6F15134.D 50 =6F15135.D
60 =6F15136.D 75 =6F15137.D 100 =6F15138.D 1 =6F15131.D

Compound	5	10	25	50	60	75	100	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane									0.000	-1.00
3) N-nitrosodim	0.509	0.543	0.552	0.545	0.553	0.556	0.551	0.796	0.576	15.72
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.54966 *A + 0.00107 *A^2									
4) Pyridine	0.943	0.998	1.074	1.157	1.128	1.111	1.166	1.108	1.086	7.20
5) Benzaldehyde	0.983	0.995	0.941	0.718				0.879	0.903	12.49
6) Aniline	1.718	1.801	1.737	1.740	1.739	1.737	1.723	1.619	1.727	2.92
7) 2-Fluorophen	1.115	1.154	1.186	1.199	1.199	1.190	1.181	0.970	1.149	6.76
8) bis(2-Chloro	1.195	1.222	1.191	1.173	1.154	1.139	1.112	1.124	1.164	3.27
9) Phenol-d5	1.374	1.421	1.413	1.384	1.377	1.366	1.341	1.247	1.365	3.96
10) Phenol	1.452	1.372	1.431	1.421	1.405	1.388	1.374	1.278	1.390	3.82
11) 2-Chlorophen	1.252	1.278	1.282	1.251	1.241	1.213	1.208	1.164	1.236	3.17
12) 1,3-Dichloro	1.389	1.404	1.374	1.353	1.341	1.332	1.318	1.438	1.369	2.96
13) 1,4-Dichloro	1.410	1.443	1.417	1.375	1.358	1.343	1.320	1.431	1.387	3.22
14) 1,2-Dichloro	1.347	1.369	1.344	1.308	1.287	1.271	1.257	1.357	1.317	3.22
15) Benzyl alcoh	0.658	0.718	0.757	0.772	0.769	0.773	0.777	0.519	0.718	12.55
16) bis(2-chloro	1.474	1.482	1.428	1.355	1.326	1.304	1.271	1.525	1.395	6.74
17) 2-Methylphen	1.056	1.098	1.103	1.070	1.063	1.058	1.060	0.965	1.059	3.98
18) Acetophenone	1.694	1.643	1.641	1.595	1.596	1.560	1.567	1.531	1.603	3.32
19) Hexachloroet	0.528	0.546	0.533	0.521	0.514	0.502	0.477	0.534	0.519	4.20
20) N-Nitroso-di	0.794	0.819	0.801	0.786	0.768	0.747	0.710	0.788	0.777	4.40
21) 3&4-Methylph	1.091	1.151	1.168	1.150	1.134	1.131	1.119	0.972	1.115	5.59
22) I Naphthalene-d8	----------ISTD----------									
23) Nitrobenzene	0.331	0.332	0.334	0.331	0.329	0.328	0.325	0.321	0.329	1.20
24) Nitrobenzene	0.312	0.313	0.318	0.306	0.307	0.303	0.298	0.266	0.303	5.27
25) Isophorone	0.566	0.595	0.592	0.579	0.576	0.575	0.578	0.569	0.579	1.76
26) 2-Nitropheno	0.164	0.179	0.183	0.187	0.182	0.182	0.181	0.144	0.175	8.12
27) 2,4-Dimethyl	0.296	0.309	0.307	0.305	0.300	0.300	0.295	0.269	0.298	4.27
28) O,O,O-Trieth	0.161	0.161	0.159	0.157	0.154	0.153	0.152	0.144	0.155	3.63
29) bis(2-Chloro	0.365	0.372	0.365	0.356	0.353	0.341	0.325	0.365	0.355	4.38
30) Benzoic Acid	0.147	0.175	0.216	0.243	0.251	0.254	0.261	0.135	0.210	24.22
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982									
	Response Ratio = 0.00000 + 0.19716 *A + 0.02865 *A^2									
31) 2,4-Dichloro	0.259	0.280	0.278	0.277	0.271	0.272	0.265	0.217	0.265	7.74
32) 1,2,4-Trichl	0.286	0.291	0.284	0.281	0.275	0.271	0.269	0.292	0.281	3.10
33) alpha-Terpin									0.000	-1.00
34) Naphthalene	1.008	0.994	0.961	0.917	0.890	0.875	0.835	1.068	0.944	8.28
35) 4-Chloroanil	0.405	0.419	0.412	0.395	0.381	0.376	0.366	0.369	0.390	5.20
36) 2,6-Dichloro	0.272	0.280	0.278	0.273	0.270	0.267	0.266	0.286	0.274	2.48
37) Hexachlorobu	0.154	0.161	0.157	0.155	0.152	0.152	0.149	0.163	0.156	3.01
38) Caprolactam	0.098	0.103	0.107	0.101	0.099	0.099	0.100	0.073	0.097	10.58
39) 4-Chloro-3-m	0.247	0.263	0.268	0.268	0.263	0.263	0.260	0.214	0.256	7.04

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICC563
Lab FileID: 6F15135.D

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40) 2-Methylnaph 0.540 0.547 0.532 0.511 0.498 0.488 0.477 0.538 0.516   5.12
41) 1-Methylnaph 0.608 0.617 0.602 0.570 0.554 0.550 0.528 0.636 0.583   6.51
42) 1,2,4,5-Tetr 0.311 0.305 0.294 0.286 0.279 0.275 0.267 0.322 0.293   6.48

43) I   Acenaphthene-d10      ----------------ISTD--------------------
44) Hexachlorocy 0.126 0.180 0.241 0.275 0.284 0.288 0.295 0.031 0.215  44.29
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9971
              Response Ratio = 0.00000 + 0.21093 *A + 0.03858 *A^2

45) 2,4,6-Trichl 0.287 0.305 0.329 0.326 0.329 0.330 0.328 0.249 0.310   9.42
46) 2,4,5-Trichl 0.315 0.335 0.352 0.355 0.355 0.355 0.355 0.305 0.341   6.00
47) 2-Fluorobiph 1.356 1.348 1.304 1.239 1.230 1.198 1.154 1.398 1.278   6.72
48) 1,1'-Bipheny 1.497 1.432 1.373 1.267 1.225 1.186 1.098 1.412 1.311  10.54
49) 2-Chloronaph 1.096 1.071 1.029 0.970 0.938 0.913 0.871 1.125 1.002   9.22
50) 2-Nitroanili 0.261 0.291 0.302 0.298 0.299 0.294 0.290 0.237 0.284   8.13
51) p-Dinitroben 0.143 0.170 0.185 0.191 0.192 0.191 0.191 0.159 0.178  10.44
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.17831 *A + 0.00640 *A^2

52) Acenaphthyle 1.678 1.703 1.688 1.607 1.569 1.522 1.459 1.620 1.606   5.36
53) Dimethylphth 1.197 1.212 1.185 1.170 1.162 1.143 1.131 1.203 1.176   2.45
54) m-Dinitroben 0.193 0.209 0.217 0.216 0.213 0.206 0.200 0.145 0.200  11.74
55) 2,6-Dinitrot 0.285 0.294 0.294 0.287 0.290 0.286 0.281 0.250 0.283   5.05
56) o-Dinitroben 0.136 0.138 0.138 0.132 0.131 0.131 0.126 0.131 0.133   3.09
57) Acenaphthene 1.113 1.104 1.070 1.010 0.988 0.955 0.922 1.147 1.039   7.85
58) 3-Nitroanili 0.300 0.317 0.327 0.320 0.317 0.309 0.300 0.250 0.305   7.93
59) 2,4-Dinitrop 0.082 0.110 0.144 0.161 0.171 0.176 0.183       0.147  25.73
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9981
              Response Ratio = 0.00000 + 0.12500 *A + 0.02546 *A^2

60) Dibenzofuran 1.529 1.536 1.489 1.436 1.411 1.383 1.330 1.548 1.458   5.50
61) 2,4-Dinitrot 0.335 0.370 0.376 0.375 0.376 0.371 0.367 0.272 0.355  10.24
62) 4-Nitropheno 0.111 0.126 0.149 0.157 0.158 0.158 0.161 0.047 0.134  29.43
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 0.13764 *A + 0.01072 *A^2

63) 2,3,5,6-Tetr 0.187 0.225 0.251 0.262 0.262 0.260 0.263 0.117 0.228  22.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.23711 *A + 0.01230 *A^2

64) 2,3,4,6-Tetr 0.246 0.260 0.278 0.278 0.278 0.278 0.276 0.202 0.262  10.23
65) Fluorene     1.222 1.235 1.199 1.133 1.111 1.071 0.999 1.207 1.147   7.29
66) 4-Chlorophen 0.570 0.577 0.566 0.551 0.542 0.534 0.519 0.576 0.554   3.86
67) Diethylphtha 1.151 1.174 1.151 1.108 1.088 1.056 1.007 1.114 1.106   5.01
68) Thionazin    0.257 0.260 0.255 0.253 0.253 0.249 0.246 0.212 0.248   6.09
69) 4-Nitroanili 0.281 0.302 0.322 0.324 0.325 0.322 0.325 0.190 0.299  15.58
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.32052 *A + 0.00174 *A^2


70) I   Phenanthrene-d10      ----------------ISTD--------------------
71) 4,6-Dinitro- 0.082 0.100 0.116 0.125 0.128 0.127 0.128 0.029 0.105  33.06
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.10836 *A + 0.00948 *A^2

72) n-Nitrosodip 0.510 0.518 0.506 0.589 0.484 0.472 0.541 0.605 0.528   8.99
73) Diphenylamin 0.613 0.621 0.607 0.589 0.580 0.567 0.541 0.605 0.590   4.54
74) 1,2-Diphenyl 0.640 0.652 0.703 0.679 0.678 0.657 0.633 0.627 0.659   3.98
75) 2,4,6-Tribro 0.103 0.106 0.109 0.108 0.109 0.107 0.105 0.091 0.105   5.70
76) Sulfotep     0.110 0.111 0.111 0.108 0.108 0.105 0.102 0.097 0.106   4.59
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Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICC563
Lab FileID: 6F15135.D

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 77) Phorate       0.373 0.384 0.384 0.377 0.374 0.368 0.356 0.309 0.366   6.72
 78) 4-Bromopheny 0.195 0.200 0.197 0.191 0.193 0.189 0.183 0.194 0.193   2.78
 79) Hexachlorobe 0.215 0.220 0.214 0.206 0.210 0.204 0.200 0.229 0.212   4.41
 80) Dimethoate    0.246 0.258 0.266 0.257 0.257 0.248 0.240 0.186 0.245  10.31
 81) Simazine      0.039 0.040 0.042 0.042 0.042 0.043 0.042 0.033 0.041   7.80
 82) Atrazine      0.205 0.205 0.211 0.205 0.206 0.209 0.204 0.168 0.202   6.95
 83) Pentachlorop 0.062 0.075 0.096 0.103 0.108 0.105 0.106 0.029 0.085  33.06
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9975
               Response Ratio = 0.00000 + 0.08810 *A + 0.00863 *A^2

 84) Phenanthrene 0.998 1.000 0.968 0.914 0.912 0.883 0.847 1.081 0.950   7.97
 85) Anthracene    0.979 1.017 0.985 0.928 0.912 0.882 0.824 0.973 0.937   6.78
 86) Disulfoton    0.401 0.406 0.404 0.377 0.373 0.356 0.332 0.344 0.374   7.63
 87) Carbazole     0.931 0.949 0.951 0.905 0.903 0.879 0.854 0.896 0.909   3.71
 88) Methyl Parat 0.191 0.209 0.224 0.221 0.222 0.212 0.201 0.125 0.201  16.24
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.22614 *A + -0.00820 *A^2

 89) Di-n-butylph 1.033 1.096 1.108 1.078 1.075 1.041 0.995 0.955 1.047   5.02
 90) Ethyl Parath 0.112 0.122 0.133 0.136 0.136 0.133 0.130 0.069 0.121  18.66
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 0.13116 *A + 0.00058 *A^2

 91) Fluoranthene 0.971 1.010 0.998 0.959 0.951 0.924 0.887 0.933 0.954   4.20

 92) I   Chrysene-d12          ----------------ISTD--------------------
 93) Benzidine     0.575 0.660 0.716 0.598 0.520             0.471 0.590  15.18
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9950
               Response Ratio = 0.00000 + 0.72442 *A + -0.11912 *A^2

 94) Pyrene        1.261 1.294 1.271 1.214 1.211 1.209 1.193 1.216 1.234   2.95
 95) Terphenyl-d1 1.007 1.013 0.999 0.981 0.971 0.971 0.965 1.029 0.992   2.35
 96) Famphur       0.380 0.389 0.363 0.297                   0.280 0.342  14.63
 97) Butylbenzylp 0.501 0.545 0.576 0.582 0.584 0.585 0.580 0.405 0.545  11.67
 98) 3,3'-Dichlor 0.377 0.407 0.426 0.404 0.394 0.378 0.355 0.314 0.382   9.20
 99) Benzo[a]anth 1.069 1.087 1.087 1.075 1.067 1.055 1.053 1.140 1.079   2.56
100) Chrysene      1.061 1.085 1.065 1.005 1.003 1.006 0.968 1.146 1.042   5.50
101) bis(2-Ethylh 0.657 0.727 0.775 0.797 0.794 0.791 0.787 0.513 0.730  13.70

102) I   Perylene-d12          ----------------ISTD--------------------
103) Di-n-octylph 0.918 1.071 1.219 1.323 1.352 1.359 1.369 0.653 1.158  22.45
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 1.15246 *A + 0.10103 *A^2

104) Benzo[b]fluo 0.966 1.045 1.035 1.112 1.077 1.105 1.101 0.827 1.034   9.33
105) Benzo[k]fluo 1.048 1.083 1.109 1.038 1.067 1.021 1.001 1.009 1.047   3.58
106) Benzo[a]pyre 0.834 0.902 0.949 0.953 0.954 0.958 0.947 0.690 0.898  10.49
107) Indeno[1,2,3 0.586 0.632 0.687 0.707 0.717 0.727 0.743 0.506 0.663  12.43
108) Dibenz[a,h]a 0.690 0.751 0.774 0.782 0.785 0.796 0.803 0.645 0.753   7.50
109) Benzo[g,h,i] 0.770 0.816 0.818 0.820 0.829 0.834 0.843 0.685 0.802   6.47
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          8270D6F072122.m        Fri Jul 22 11:35:33 2022
```

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15139.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F563\6F15139.D Vial: 10
Acq On : 21 Jul 2022 3:46 pm Operator: williamh
Sample : icv563-50,A Inst : MSBNA10
Misc : op91638,S6F563,30,,,1,1,soil Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	94	0.00	4.71
2		1,4-Dioxane		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
3		N-nitrosodimethylamine	50.000	50.510	-1.0	96	0.00	1.80
		---------- Amount	Calc.	%Drift	----------			
4		Pyridine		----------NA----------				
5	P	Benzaldehyde	50.000	51.288	-2.6	121	0.00	4.24
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	52.098	-4.2	97	0.00	4.48
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	51.169	-2.3	94	0.00	4.42
11	P	2-Chlorophenol	50.000	52.240	-4.5	97	0.00	4.49
12		1,3-Dichlorobenzene	50.000	50.530	-1.1	96	0.00	4.64
13		1,4-Dichlorobenzene	50.000	50.294	-0.6	96	0.00	4.73
14		1,2-Dichlorobenzene	50.000	49.742	0.5	94	0.00	4.88
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	51.301	-2.6	99	0.00	5.07
17	P	2-Methylphenol	50.000	47.491	5.0	88	0.00	5.07
18	P	Acetophenone	50.000	49.391	1.2	93	0.00	5.19
19	P	Hexachloroethane	50.000	50.861	-1.7	95	0.00	5.23
20	P	N-Nitroso-di-n-propylamin	50.000	49.719	0.6	92	0.00	5.22
21	P	3&4-Methylphenol	100.000	98.656	1.3	93	0.00	5.27
22	I	Naphthalene-d8	40.000	40.000	0.0	93	0.00	6.12
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	51.334	-2.7	94	0.00	5.36
25	P	Isophorone	50.000	49.517	1.0	92	0.00	5.65
26	P	2-Nitrophenol	50.000	53.629	-7.3	93	0.00	5.72
27	P	2,4-Dimethylphenol		----------NA----------				
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan	50.000	49.957	0.1	92	0.00	5.94
		---------- Amount	Calc.	%Drift	----------			
30		Benzoic Acid	100.000	96.268	3.7	91	0.06	6.14
		---------- Amount	Calc.	%Drift	----------			
31	P	2,4-Dichlorophenol	50.000	52.714	-5.4	93	0.00	6.01
32		1,2,4-Trichlorobenzene	50.000	50.659	-1.3	94	0.00	6.07
33		alpha-Terpineol		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15139.D

34	P	Naphthalene	50.000	47.959	4.1	92	0.00	6.14
35	P	4-Chloroaniline		----------NA----------				
36		2,6-Dichlorophenol	50.000	48.507	3.0	90	0.00	6.25
37	P	Hexachlorobutadiene	50.000	49.362	1.3	92	0.00	6.30
38	P	Caprolactam	50.000	51.246	-2.5	92	0.00	6.74
39	P	4-Chloro-3-methylphenol	50.000	50.925	-1.8	90	0.00	6.89
40	P	2-Methylnaphthalene		----------NA----------				
41		1-Methylnaphthalene	50.000	47.904	4.2	91	0.00	7.05
42	P	1,2,4,5-Tetrachlorobenzen	50.000	46.766	6.5	89	0.00	7.14
43	I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00	8.14
		---------- Amount	Calc.	%Drift	----------			
44	P	Hexachlorocyclopentadiene	50.000	52.483	-5.0	90	0.00	7.13
		---------- Amount	Calc.	%Drift	----------			
45	P	2,4,6-Trichlorophenol	50.000	52.649	-5.3	90	0.00	7.31
46	P	2,4,5-Trichlorophenol	50.000	53.569	-7.1	93	0.00	7.36
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl	50.000	49.012	2.0	91	0.00	7.51
49	P	2-Chloronaphthalene	50.000	49.326	1.3	92	0.00	7.50
50	P	2-Nitroaniline		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
51		p-Dinitrobenzene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
52	P	Acenaphthylene	50.000	50.230	-0.5	90	0.00	7.97
53	P	Dimethylphthalate	50.000	50.917	-1.8	92	-0.01	7.93
54		m-Dinitrobenzene		----------NA----------				
55	P	2,6-Dinitrotoluene	50.000	49.938	0.1	89	0.00	7.99
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene	50.000	48.799	2.4	90	0.00	8.18
58	P	3-Nitroaniline		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
59	P	2,4-Dinitrophenol	100.000	94.182	5.8	86	0.00	8.30
		---------- Amount	Calc.	%Drift	----------			
60	P	Dibenzofuran		----------NA----------				
61	P	2,4-Dinitrotoluene	50.000	54.265	-8.5	93	0.00	8.45
		---------- Amount	Calc.	%Drift	----------			
62	P	4-Nitrophenol	100.000	82.834	17.2	74	0.00	8.46
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
64	P	2,3,4,6-Tetrachlorophenol	50.000	49.531	0.9	84	0.00	8.56
65	P	Fluorene	50.000	51.146	-2.3	93	0.00	8.79
66	P	4-Chlorophenyl-phenylethe	50.000	51.012	-2.0	93	0.00	8.83
67	P	Diethylphthalate	50.000	52.385	-4.8	94	0.00	8.77
68		Thionazin		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
69	P	4-Nitroaniline		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
70	I	Phenanthrene-d10	40.000	40.000	0.0	88	0.00	9.86

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15139.D

			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno	100.000	109.359	-9.4	101	0.00	8.93
			Amount	Calc.	%Drift			
72	P	n-Nitrosodiphenylamine		NA				
73		Diphenylamine		NA				
74		1,2-Diphenylhydrazine	50.000	51.323	-2.6	88	0.00	9.01
75	S	2,4,6-Tribromophenol		NA				
76		Sulfotep		NA				
77		Phorate		NA				
78	P	4-Bromophenyl-phenylether	50.000	53.648	-7.3	96	0.00	9.39
79	P	Hexachlorobenzene	50.000	48.948	2.1	89	0.00	9.41
80		Dimethoate		NA				
81		Simazine		NA				
82	P	Atrazine	50.000	53.760	-7.5	93	-0.01	9.67
			Amount	Calc.	%Drift			
83	P	Pentachlorophenol	100.000	105.892	-5.9	97	0.00	9.68
			Amount	Calc.	%Drift			
84	P	Phenanthrene	50.000	50.121	-0.2	92	0.00	9.89
85	P	Anthracene	50.000	48.310	3.4	86	0.00	9.95
86		Disulfoton		NA				
87	P	Carbazole		NA				
			Amount	Calc.	%Drift			
88		Methyl Parathion		NA				
			Amount	Calc.	%Drift			
89	P	Di-n-butylphthalate	50.000	53.585	-7.2	92	0.00	10.70
			Amount	Calc.	%Drift			
90		Ethyl Parathion		NA				
			Amount	Calc.	%Drift			
91	P	Fluoranthene	50.000	50.479	-1.0	89	0.00	11.27
92	I	Chrysene-d12	40.000	40.000	0.0	88	0.00	12.96
			Amount	Calc.	%Drift			
93		Benzidine		NA				
			Amount	Calc.	%Drift			
94	P	Pyrene	50.000	51.164	-2.3	92	0.00	11.52
95	S	Terphenyl-d14		NA				
			Amount	Calc.	%Drift			
96		Famphur		NA				
			Amount	Calc.	%Drift			
97	P	Butylbenzylphthalate	50.000	55.780	-11.6	92	0.00	12.44
98	P	3,3'-Dichlorobenzidine		NA				
99	P	Benzo[a]anthracene	50.000	50.870	-1.7	90	0.00	12.95
100	P	Chrysene	50.000	51.392	-2.8	94	0.00	12.99
101	P	bis(2-Ethylhexyl)phthalat	50.000	56.443	-12.9	91	0.00	13.17
102	I	Perylene-d12	40.000	40.000	0.0	90	0.00	14.76
			Amount	Calc.	%Drift			
103	P	Di-n-octylphthalate	50.000	53.467	-6.9	94	0.00	14.00

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15139.D

			Amount	Calc.	%Drift			
104	P	Benzo[b]fluoranthene	50.000	51.427	-2.9	86	0.00	14.27
105	P	Benzo[k]fluoranthene	50.000	53.738	-7.5	97	0.00	14.31
106	P	Benzo[a]pyrene	50.000	51.959	-3.9	88	0.00	14.68
107	P	Indeno[1,2,3-cd]pyrene	50.000	59.809	-19.6	101	0.00	16.32
108	P	Dibenz[a,h]anthracene	50.000	54.901	-9.8	95	0.00	16.39
109	P	Benzo[g,h,i]perylene	50.000	53.802	-7.6	95	0.00	16.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Mon Aug 01 11:39:39 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15140.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F563\6F15140.D Vial: 11
Acq On : 21 Jul 2022 4:13 pm Operator: williamh
Sample : icv563-50,B Inst : MSBNA10
Misc : op91638,S6F563,30,,,1,1,soil Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	92	0.00	4.71
2		1,4-Dioxane		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
3		N-nitrosodimethylamine		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
4		Pyridine	50.000	60.724	-21.4#	105	-0.01	1.80
5	P	Benzaldehyde		----------NA----------				
6		Aniline	50.000	54.050	-8.1	99	0.00	4.36
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether		----------NA----------				
9	S	Phenol-d5		----------NA----------				
10	P	Phenol		----------NA----------				
11	P	2-Chlorophenol		----------NA----------				
12		1,3-Dichlorobenzene		----------NA----------				
13		1,4-Dichlorobenzene		----------NA----------				
14		1,2-Dichlorobenzene		----------NA----------				
15		Benzyl alcohol	50.000	55.738	-11.5	96	0.00	4.91
16	P	bis(2-chloroisopropyl)eth		----------NA----------				
17	P	2-Methylphenol		----------NA----------				
18	P	Acetophenone		----------NA----------				
19	P	Hexachloroethane		----------NA----------				
20	P	N-Nitroso-di-n-propylamin		----------NA----------				
21	P	3&4-Methylphenol		----------NA----------				
22	I	Naphthalene-d8	40.000	40.000	0.0	96	0.00	6.12
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene		----------NA----------				
25	P	Isophorone		----------NA----------				
26	P	2-Nitrophenol		----------NA----------				
27	P	2,4-Dimethylphenol		----------NA----------				
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
30		Benzoic Acid		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
31	P	2,4-Dichlorophenol		----------NA----------				
32		1,2,4-Trichlorobenzene		----------NA----------				
33		alpha-Terpineol		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15140.D

34	P	Naphthalene		----------NA----------				
35	P	4-Chloroaniline	50.000	54.281	-8.6	103	0.00	6.26
36		2,6-Dichlorophenol		----------NA----------				
37	P	Hexachlorobutadiene		----------NA----------				
38	P	Caprolactam		----------NA----------				
39	P	4-Chloro-3-methylphenol		----------NA----------				
40	P	2-Methylnaphthalene	50.000	51.806	-3.6	100	0.00	6.95
41		1-Methylnaphthalene		----------NA----------				
42	P	1,2,4,5-Tetrachlorobenzen		----------NA----------				
43	I	Acenaphthene-d10	40.000	40.000	0.0	97	0.00	8.14
		---------- Amount	Calc.	%Drift	----------			
44	P	Hexachlorocyclopentadiene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
45	P	2,4,6-Trichlorophenol		----------NA----------				
46	P	2,4,5-Trichlorophenol		----------NA----------				
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl		----------NA----------				
49	P	2-Chloronaphthalene		----------NA----------				
50	P	2-Nitroaniline	50.000	55.605	-11.2	103	0.00	7.67
		---------- Amount	Calc.	%Drift	----------			
51		p-Dinitrobenzene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
52	P	Acenaphthylene		----------NA----------				
53	P	Dimethylphthalate		----------NA----------				
54		m-Dinitrobenzene	50.000	55.054	-10.1	99	-0.01	7.95
55	P	2,6-Dinitrotoluene		----------NA----------				
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene		----------NA----------				
58	P	3-Nitroaniline	50.000	57.660	-15.3	106	0.00	8.17
		---------- Amount	Calc.	%Drift	----------			
59	P	2,4-Dinitrophenol		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
60	P	Dibenzofuran	50.000	50.660	-1.3	100	0.00	8.38
61	P	2,4-Dinitrotoluene		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
62	P	4-Nitrophenol		----------NA----------				
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
64	P	2,3,4,6-Tetrachlorophenol		----------NA----------				
65	P	Fluorene		----------NA----------				
66	P	4-Chlorophenyl-phenylethe		----------NA----------				
67	P	Diethylphthalate		----------NA----------				
68		Thionazin		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
69	P	4-Nitroaniline	50.000	51.163	-2.3	99	-0.02	8.88
		---------- Amount	Calc.	%Drift	----------			
70	I	Phenanthrene-d10	40.000	40.000	0.0	97	0.00	9.86

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15140.D

			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
			Amount	Calc.	%Drift			
72	P	n-Nitrosodiphenylamine	50.000	56.370	-12.7	98	-0.01	8.98
73		Diphenylamine	50.000	50.426	-0.9	98	-0.01	8.98
74		1,2-Diphenylhydrazine		----------NA----------				
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
78	P	4-Bromophenyl-phenylether		----------NA----------				
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
			Amount	Calc.	%Drift			
83	P	Pentachlorophenol		----------NA----------				
			Amount	Calc.	%Drift			
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
86		Disulfoton		----------NA----------				
87	P	Carbazole	50.000	52.180	-4.4	102	0.00	10.19
			Amount	Calc.	%Drift			
88		Methyl Parathion		----------NA----------				
			Amount	Calc.	%Drift			
89	P	Di-n-butylphthalate		----------NA----------				
			Amount	Calc.	%Drift			
90		Ethyl Parathion		----------NA----------				
			Amount	Calc.	%Drift			
91	P	Fluoranthene		----------NA----------				
92	I	Chrysene-d12	40.000	40.000	0.0	99	0.00	12.96
			Amount	Calc.	%Drift			
93		Benzidine	50.000	77.070	-54.1#	127	0.00	11.51
			Amount	Calc.	%Drift			
94	P	Pyrene		----------NA----------				
95	S	Terphenyl-d14		----------NA----------				
			Amount	Calc.	%Drift			
96		Famphur		----------NA----------				
			Amount	Calc.	%Drift			
97	P	Butylbenzylphthalate		----------NA----------				
98	P	3,3'-Dichlorobenzidine	50.000	58.823	-17.6	110	0.00	12.98
99	P	Benzo[a]anthracene		----------NA----------				
100	P	Chrysene		----------NA----------				
101	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
102	I	Perylene-d12	40.000	40.000	0.0	98	0.00	14.75
			Amount	Calc.	%Drift			
103	P	Di-n-octylphthalate		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15140.D

			Amount	Calc.	%Drift
104	P	Benzo[b]fluoranthene			NA
105	P	Benzo[k]fluoranthene			NA
106	P	Benzo[a]pyrene			NA
107	P	Indeno[1,2,3-cd]pyrene			NA
108	P	Dibenz[a,h]anthracene			NA
109	P	Benzo[g,h,i]perylene			NA

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Mon Aug 01 11:39:42 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15141.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F563\6F15141.D Vial: 12
Acq On : 21 Jul 2022 4:40 pm Operator: williamh
Sample : icv563-50,C Inst : MSBNA10
Misc : op91638,S6F563,30,,,1,1,soil Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	95	0.00	4.71
2		1,4-Dioxane		NA				
		Amount	Calc.	%Drift				
3		N-nitrosodimethylamine		NA				
		Amount	Calc.	%Drift				
4		Pyridine		NA				
5	P	Benzaldehyde		NA				
6		Aniline		NA				
7	S	2-Fluorophenol		NA				
8	P	bis(2-Chloroethyl)ether		NA				
9	S	Phenol-d5		NA				
10	P	Phenol		NA				
11	P	2-Chlorophenol		NA				
12		1,3-Dichlorobenzene		NA				
13		1,4-Dichlorobenzene		NA				
14		1,2-Dichlorobenzene		NA				
15		Benzyl alcohol		NA				
16	P	bis(2-chloroisopropyl)eth		NA				
17	P	2-Methylphenol		NA				
18	P	Acetophenone		NA				
19	P	Hexachloroethane		NA				
20	P	N-Nitroso-di-n-propylamin		NA				
21	P	3&4-Methylphenol		NA				
22	I	Naphthalene-d8	40.000	40.000	0.0	99	0.00	6.12
23	S	Nitrobenzene-d5		NA				
24	P	Nitrobenzene		NA				
25	P	Isophorone		NA				
26	P	2-Nitrophenol		NA				
27	P	2,4-Dimethylphenol		NA				
28		O,O,O-Triethylphosphoroth	50.000	53.355	-6.7	104	-0.01	5.90
29	P	bis(2-Chloroethoxy)methan		NA				
		Amount	Calc.	%Drift				
30		Benzoic Acid		NA				
		Amount	Calc.	%Drift				
31	P	2,4-Dichlorophenol		NA				
32		1,2,4-Trichlorobenzene		NA				
33		alpha-Terpineol		NA				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15141.D

34	P	Naphthalene			----------NA----------			
35	P	4-Chloroaniline			----------NA----------			
36		2,6-Dichlorophenol			----------NA----------			
37	P	Hexachlorobutadiene			----------NA----------			
38	P	Caprolactam			----------NA----------			
39	P	4-Chloro-3-methylphenol			----------NA----------			
40	P	2-Methylnaphthalene			----------NA----------			
41		1-Methylnaphthalene			----------NA----------			
42	P	1,2,4,5-Tetrachlorobenzen			----------NA----------			
43	I	Acenaphthene-d10	40.000	40.000	0.0	101	0.00	8.14
		---------- Amount	Calc.	%Drift	----------			
44	P	Hexachlorocyclopentadiene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
45	P	2,4,6-Trichlorophenol			----------NA----------			
46	P	2,4,5-Trichlorophenol			----------NA----------			
47	S	2-Fluorobiphenyl			----------NA----------			
48	P	1,1'-Biphenyl			----------NA----------			
49	P	2-Chloronaphthalene			----------NA----------			
50	P	2-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
51		p-Dinitrobenzene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
52	P	Acenaphthylene			----------NA----------			
53	P	Dimethylphthalate			----------NA----------			
54		m-Dinitrobenzene			----------NA----------			
55	P	2,6-Dinitrotoluene			----------NA----------			
56		o-Dinitrobenzene			----------NA----------			
57	P	Acenaphthene			----------NA----------			
58	P	3-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
59	P	2,4-Dinitrophenol			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
60	P	Dibenzofuran			----------NA----------			
61	P	2,4-Dinitrotoluene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
62	P	4-Nitrophenol			----------NA----------			
63		2,3,5,6-Tetrachlorophenol			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
64	P	2,3,4,6-Tetrachlorophenol			----------NA----------			
65	P	Fluorene			----------NA----------			
66	P	4-Chlorophenyl-phenylethe			----------NA----------			
67	P	Diethylphthalate			----------NA----------			
68		Thionazin	50.000	53.625	-7.2	106	-0.01	8.84
		---------- Amount	Calc.	%Drift	----------			
69	P	4-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
70	I	Phenanthrene-d10	40.000	40.000	0.0	102	0.00	9.86

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15141.D

			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
			Amount	Calc.	%Drift			
72	P	n-Nitrosodiphenylamine		----------NA----------				
73		Diphenylamine		----------NA----------				
74		1,2-Diphenylhydrazine		----------NA----------				
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep	50.000	53.484	-7.0	108	0.00	9.24
77		Phorate	50.000	55.665	-11.3	110	0.00	9.34
78	P	4-Bromophenyl-phenylether		----------NA----------				
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate	50.000	58.932	-17.9	114	0.00	9.55
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
			Amount	Calc.	%Drift			
83	P	Pentachlorophenol		----------NA----------				
			Amount	Calc.	%Drift			
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
86		Disulfoton	50.000	46.883	6.2	95	0.00	9.96
87	P	Carbazole		----------NA----------				
			Amount	Calc.	%Drift			
88		Methyl Parathion	50.000	55.507	-11.0	110	0.00	10.39
			Amount	Calc.	%Drift			
89	P	Di-n-butylphthalate		----------NA----------				
			Amount	Calc.	%Drift			
90		Ethyl Parathion	50.000	54.248	-8.5	107	0.00	10.87
			Amount	Calc.	%Drift			
91	P	Fluoranthene		----------NA----------				
92	I	Chrysene-d12	40.000	40.000	0.0	104	0.00	12.96
			Amount	Calc.	%Drift			
93		Benzidine		----------NA----------				
			Amount	Calc.	%Drift			
94	P	Pyrene		----------NA----------				
95	S	Terphenyl-d14		----------NA----------				
			Amount	Calc.	%Drift			
96		Famphur	50.000	67.296	-34.6#	162	0.00	12.35
			Amount	Calc.	%Drift			
97	P	Butylbenzylphthalate		----------NA----------				
98	P	3,3'-Dichlorobenzidine		----------NA----------				
99	P	Benzo[a]anthracene		----------NA----------				
100	P	Chrysene		----------NA----------				
101	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
102	I	Perylene-d12	40.000	40.000	0.0	103	0.00	14.75
			Amount	Calc.	%Drift			
103	P	Di-n-octylphthalate		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15141.D

			Amount	Calc.	%Drift
104	P	Benzo[b]fluoranthene		NA	
105	P	Benzo[k]fluoranthene		NA	
106	P	Benzo[a]pyrene		NA	
107	P	Indeno[1,2,3-cd]pyrene		NA	
108	P	Dibenz[a,h]anthracene		NA	
109	P	Benzo[g,h,i]perylene		NA	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Mon Aug 01 11:39:45 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15142.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F563\6F15142.D Vial: 13
Acq On : 21 Jul 2022 5:07 pm Operator: williamh
Sample : icv563-50,F Inst : MSBNA10
Misc : op91638,S6F563,30,,,1,1,soil Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	90	0.00	4.71
2		1,4-Dioxane		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
3		N-nitrosodimethylamine		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
4		Pyridine		----------NA----------				
5	P	Benzaldehyde		----------NA----------				
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether		----------NA----------				
9	S	Phenol-d5		----------NA----------				
10	P	Phenol		----------NA----------				
11	P	2-Chlorophenol		----------NA----------				
12		1,3-Dichlorobenzene		----------NA----------				
13		1,4-Dichlorobenzene		----------NA----------				
14		1,2-Dichlorobenzene		----------NA----------				
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth		----------NA----------				
17	P	2-Methylphenol		----------NA----------				
18	P	Acetophenone		----------NA----------				
19	P	Hexachloroethane		----------NA----------				
20	P	N-Nitroso-di-n-propylamin		----------NA----------				
21	P	3&4-Methylphenol		----------NA----------				
22	I	Naphthalene-d8	40.000	40.000	0.0	93	0.00	6.12
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene		----------NA----------				
25	P	Isophorone		----------NA----------				
26	P	2-Nitrophenol		----------NA----------				
27	P	2,4-Dimethylphenol	50.000	49.301	1.4	90	0.00	5.83
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
30		Benzoic Acid		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
31	P	2,4-Dichlorophenol		----------NA----------				
32		1,2,4-Trichlorobenzene		----------NA----------				
33		alpha-Terpineol		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15142.D

34	P	Naphthalene			----------NA----------			
35	P	4-Chloroaniline			----------NA----------			
36		2,6-Dichlorophenol			----------NA----------			
37	P	Hexachlorobutadiene			----------NA----------			
38	P	Caprolactam			----------NA----------			
39	P	4-Chloro-3-methylphenol			----------NA----------			
40	P	2-Methylnaphthalene			----------NA----------			
41		1-Methylnaphthalene			----------NA----------			
42	P	1,2,4,5-Tetrachlorobenzen			----------NA----------			
43	I	Acenaphthene-d10	40.000	40.000	0.0	98	0.00	8.14
		---------- Amount	Calc.	%Drift	----------			
44	P	Hexachlorocyclopentadiene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
45	P	2,4,6-Trichlorophenol			----------NA----------			
46	P	2,4,5-Trichlorophenol			----------NA----------			
47	S	2-Fluorobiphenyl			----------NA----------			
48	P	1,1'-Biphenyl			----------NA----------			
49	P	2-Chloronaphthalene			----------NA----------			
50	P	2-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
51		p-Dinitrobenzene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
52	P	Acenaphthylene			----------NA----------			
53	P	Dimethylphthalate			----------NA----------			
54		m-Dinitrobenzene			----------NA----------			
55	P	2,6-Dinitrotoluene			----------NA----------			
56		o-Dinitrobenzene			----------NA----------			
57	P	Acenaphthene			----------NA----------			
58	P	3-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
59	P	2,4-Dinitrophenol			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
60	P	Dibenzofuran			----------NA----------			
61	P	2,4-Dinitrotoluene			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
62	P	4-Nitrophenol			----------NA----------			
63		2,3,5,6-Tetrachlorophenol			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
64	P	2,3,4,6-Tetrachlorophenol			----------NA----------			
65	P	Fluorene			----------NA----------			
66	P	4-Chlorophenyl-phenylethe			----------NA----------			
67	P	Diethylphthalate			----------NA----------			
68		Thionazin			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
69	P	4-Nitroaniline			----------NA----------			
		---------- Amount	Calc.	%Drift	----------			
70	I	Phenanthrene-d10	40.000	40.000	0.0	99	0.00	9.86

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15142.D

			Amount	Calc.	%Drift		
71	P	4,6-Dinitro-2-methylpheno		NA			
			Amount	Calc.	%Drift		
72	P	n-Nitrosodiphenylamine		NA			
73		Diphenylamine		NA			
74		1,2-Diphenylhydrazine		NA			
75	S	2,4,6-Tribromophenol		NA			
76		Sulfotep		NA			
77		Phorate		NA			
78	P	4-Bromophenyl-phenylether		NA			
79	P	Hexachlorobenzene		NA			
80		Dimethoate		NA			
81		Simazine		NA			
82	P	Atrazine		NA			
			Amount	Calc.	%Drift		
83	P	Pentachlorophenol		NA			
			Amount	Calc.	%Drift		
84	P	Phenanthrene		NA			
85	P	Anthracene		NA			
86		Disulfoton		NA			
87	P	Carbazole		NA			
			Amount	Calc.	%Drift		
88		Methyl Parathion		NA			
			Amount	Calc.	%Drift		
89	P	Di-n-butylphthalate		NA			
			Amount	Calc.	%Drift		
90		Ethyl Parathion		NA			
			Amount	Calc.	%Drift		
91	P	Fluoranthene		NA			
92	I	Chrysene-d12	40.000	40.000	0.0	101	0.00 12.96
			Amount	Calc.	%Drift		
93		Benzidine		NA			
			Amount	Calc.	%Drift		
94	P	Pyrene		NA			
95	S	Terphenyl-d14		NA			
			Amount	Calc.	%Drift		
96		Famphur		NA			
			Amount	Calc.	%Drift		
97	P	Butylbenzylphthalate		NA			
98	P	3,3'-Dichlorobenzidine		NA			
99	P	Benzo[a]anthracene		NA			
100	P	Chrysene		NA			
101	P	bis(2-Ethylhexyl)phthalat		NA			
102	I	Perylene-d12	40.000	40.000	0.0	99	0.00 14.75
			Amount	Calc.	%Drift		
103	P	Di-n-octylphthalate		NA			

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F563-ICV563
Lab FileID: 6F15142.D

			Amount	Calc.	%Drift
104	P	Benzo[b]fluoranthene		----------	NA----------
105	P	Benzo[k]fluoranthene		----------	NA----------
106	P	Benzo[a]pyrene		----------	NA----------
107	P	Indeno[1,2,3-cd]pyrene		----------	NA----------
108	P	Dibenz[a,h]anthracene		----------	NA----------
109	P	Benzo[g,h,i]perylene		----------	NA----------

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Mon Aug 01 11:39:48 2022

9.7.5

9

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-CC563
Lab FileID: 6F15613.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F586\6F15613.D Vial: 2
Acq On : 13 Sep 2022 1:19 pm Operator: karena
Sample : cc563-50 Inst : MSBNA10
Misc : op92994,S6F586,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	127	-0.06	4.56
2		1,4-Dioxane	----------NA----------					
			Amount	Calc.	%Drift			
3		N-nitrosodimethylamine	50.000	59.178	-18.4	153	-0.07	1.64
			AvgRF	CCRF	%Dev			
4		Pyridine	1.086	1.255	-15.6	138	-0.07	1.65
5	P	Benzaldehyde	0.903	1.072	-18.7	190	-0.06	4.09
6		Aniline	1.727	1.996	-15.6	146	-0.05	4.22
7	S	2-Fluorophenol	1.149	1.355	-17.9	144	-0.06	3.20
8	P	bis(2-Chloroethyl)ether	1.164	1.408	-21.0#	153	-0.06	4.33
9	S	Phenol-d5	1.365	1.589	-16.4	146	-0.02	4.31
10	P	Phenol	1.390	1.743	-25.4#	156	-0.02	4.32
11	P	2-Chlorophenol	1.236	1.400	-13.3	143	-0.05	4.35
12		1,3-Dichlorobenzene	1.369	1.508	-10.2	142	-0.07	4.48
13		1,4-Dichlorobenzene	1.387	1.542	-11.2	143	-0.06	4.58
14		1,2-Dichlorobenzene	1.317	1.462	-11.0	142	-0.06	4.73
15		Benzyl alcohol	0.718	0.923	-28.6#	152	-0.04	4.79
16	P	bis(2-chloroisopropyl)eth	1.395	1.811	-29.8#	170	-0.05	4.92
17	P	2-Methylphenol	1.059	1.250	-18.0	149	0.00	4.97
18	P	Acetophenone	1.603	1.838	-14.7	147	-0.05	5.04
19	P	Hexachloroethane	0.519	0.606	-16.8	148	-0.05	5.08
20	P	N-Nitroso-di-n-propylamin	0.777	0.945	-21.6#	153	-0.04	5.08
21	P	3&4-Methylphenol	1.115	1.316	-18.0	146	-0.01	5.15
22	I	Naphthalene-d8	1.000	1.000	0.0	143	-0.06	5.97
23	S	Nitrobenzene-d5	0.329	0.350	-6.4	151	-0.06	5.20
24	P	Nitrobenzene	0.303	0.334	-10.2	156	-0.06	5.22
25	P	Isophorone	0.579	0.627	-8.3	154	-0.06	5.51
26	P	2-Nitrophenol	0.175	0.196	-12.0	149	-0.06	5.57
27	P	2,4-Dimethylphenol	0.298	0.317	-6.4	148	-0.03	5.72
28		O,O,O-Triethylphosphoroth	0.155	0.175	-12.9	159	-0.05	5.77
29	P	bis(2-Chloroethoxy)methan	0.355	0.377	-6.2	151	-0.05	5.80
			Amount	Calc.	%Drift			
30		Benzoic Acid	50.000	47.880	4.2	130	0.00	5.98
			AvgRF	CCRF	%Dev			
31	P	2,4-Dichlorophenol	0.265	0.292	-10.2	150	-0.04	5.88
32		1,2,4-Trichlorobenzene	0.281	0.312	-11.0	158	-0.06	5.92
33		alpha-Terpineol	0.000	0.000	0.0	0#	-0.02	6.12

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-CC563
Lab FileID: 6F15613.D

34	P	Naphthalene	0.944	0.928	1.7	144	-0.06	5.99
35	P	4-Chloroaniline	0.390	0.432	-10.8	156	-0.05	6.12
36		2,6-Dichlorophenol	0.274	0.293	-6.9	153	-0.05	6.12
37	P	Hexachlorobutadiene	0.156	0.179	-14.7	164	-0.06	6.16
38	P	Caprolactam	0.097	0.103	-6.2	146	-0.02	6.63
39	P	4-Chloro-3-methylphenol	0.256	0.282	-10.2	150	0.00	6.78
40	P	2-Methylnaphthalene	0.516	0.568	-10.1	159	-0.05	6.80
41		1-Methylnaphthalene	0.583	0.607	-4.1	152	-0.05	6.90
42	P	1,2,4,5-Tetrachlorobenzen	0.293	0.331	-13.0	165	-0.04	6.99
43	I	Acenaphthene-d10	1.000	1.000	0.0	150	-0.06	7.99
			Amount	Calc.	%Drift			
44	P	Hexachlorocyclopentadiene	50.000	60.218	-20.4#	177	-0.07	6.98
			AvgRF	CCRF	%Dev			
45	P	2,4,6-Trichlorophenol	0.310	0.372	-20.0	172	-0.05	7.18
46	P	2,4,5-Trichlorophenol	0.341	0.394	-15.5	167	-0.04	7.24
47	S	2-Fluorobiphenyl	1.278	1.255	1.8	152	-0.06	7.26
48	P	1,1'-Biphenyl	1.311	1.335	-1.8	158	-0.07	7.36
49	P	2-Chloronaphthalene	1.002	1.040	-3.8	161	-0.06	7.35
50	P	2-Nitroaniline	0.284	0.312	-9.9	158	-0.05	7.54
			Amount	Calc.	%Drift			
51		p-Dinitrobenzene	50.000	57.108	-14.2	169	-0.05	7.74
			AvgRF	CCRF	%Dev			
52	P	Acenaphthylene	1.606	1.616	-0.6	151	-0.06	7.82
53	P	Dimethylphthalate	1.176	1.196	-1.7	154	-0.05	7.80
54		m-Dinitrobenzene	0.200	0.231	-15.5	161	-0.05	7.82
55	P	2,6-Dinitrotoluene	0.283	0.301	-6.4	158	-0.05	7.85
56		o-Dinitrobenzene	0.133	0.148	-11.3	168	-0.04	7.90
57	P	Acenaphthene	1.039	1.052	-1.3	157	-0.06	8.03
58	P	3-Nitroaniline	0.305	0.342	-12.1	160	-0.04	8.04
			Amount	Calc.	%Drift			
59	P	2,4-Dinitrophenol	50.000	58.877	-17.8	178	-0.04	8.17
			AvgRF	CCRF	%Dev			
60	P	Dibenzofuran	1.458	1.465	-0.5	153	-0.06	8.24
61	P	2,4-Dinitrotoluene	0.355	0.395	-11.3	158	-0.04	8.32
			Amount	Calc.	%Drift			
62	P	4-Nitrophenol	50.000	54.921	-9.8	160	0.00	8.36
63		2,3,5,6-Tetrachlorophenol	50.000	57.448	-14.9	168	-0.04	8.37
			AvgRF	CCRF	%Dev			
64	P	2,3,4,6-Tetrachlorophenol	0.262	0.324	-23.7#	175	-0.04	8.42
65	P	Fluorene	1.147	1.173	-2.3	156	-0.05	8.63
66	P	4-Chlorophenyl-phenylethe	0.554	0.592	-6.9	162	-0.05	8.68
67	P	Diethylphthalate	1.106	1.163	-5.2	158	-0.04	8.63
68		Thionazin	0.248	0.274	-10.5	163	-0.04	8.71
			Amount	Calc.	%Drift			
69	P	4-Nitroaniline	50.000	52.674	-5.3	158	-0.02	8.77
			AvgRF	CCRF	%Dev			
70	I	Phenanthrene-d10	1.000	1.000	0.0	157	-0.06	9.71

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-CC563
Lab FileID: 6F15613.D

			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno	50.000	57.396	-14.8	176	-0.05	8.79
			AvgRF	CCRF	%Dev			
72	P	n-Nitrosodiphenylamine	0.528	0.581	-10.0	155	-0.06	8.85
73		Diphenylamine	0.590	0.581	1.5	155	-0.06	8.85
74		1,2-Diphenylhydrazine	0.659	0.708	-7.4	164	-0.06	8.86
75	S	2,4,6-Tribromophenol	0.105	0.112	-6.7	162	-0.06	8.93
76		Sulfotep	0.106	0.112	-5.7	164	-0.05	9.10
77		Phorate	0.366	0.409	-11.7	170	-0.05	9.20
78	P	4-Bromophenyl-phenylether	0.193	0.205	-6.2	169	-0.06	9.24
79	P	Hexachlorobenzene	0.212	0.221	-4.2	169	-0.07	9.25
80		Dimethoate	0.245	0.274	-11.8	167	-0.05	9.41
81		Simazine	0.041	0.060	-46.3#	222#	-0.04	9.50
82	P	Atrazine	0.202	0.225	-11.4	172	-0.05	9.54
			Amount	Calc.	%Drift			
83	P	Pentachlorophenol	50.000	57.237	-14.5	176	-0.05	9.54
			AvgRF	CCRF	%Dev			
84	P	Phenanthrene	0.950	0.968	-1.9	167	-0.06	9.74
85	P	Anthracene	0.937	0.978	-4.4	166	-0.06	9.80
86		Disulfoton	0.374	0.413	-10.4	173	-0.05	9.81
87	P	Carbazole	0.909	0.920	-1.2	160	-0.05	10.04
			Amount	Calc.	%Drift			
88		Methyl Parathion	50.000	55.546	-11.1	170	-0.05	10.24
			AvgRF	CCRF	%Dev			
89	P	Di-n-butylphthalate	1.047	1.099	-5.0	160	-0.05	10.55
			Amount	Calc.	%Drift			
90		Ethyl Parathion	50.000	54.666	-9.3	166	-0.04	10.72
			AvgRF	CCRF	%Dev			
91	P	Fluoranthene	0.954	1.023	-7.2	168	-0.05	11.11
92	I	Chrysene-d12	1.000	1.000	0.0	159	-0.06	12.80
			Amount	Calc.	%Drift			
93		Benzidine	50.000	-40.000	180.0#	202	-0.06	11.36
			AvgRF	CCRF	%Dev			
94	P	Pyrene	1.234	1.268	-2.8	166	-0.08	11.36
95	S	Terphenyl-d14	0.992	0.998	-0.6	162	-0.07	11.64
			Amount	Calc.	%Drift			
96		Famphur	50.000	58.719	-17.4	179	-0.06	12.19
			AvgRF	CCRF	%Dev			
97	P	Butylbenzylphthalate	0.545	0.590	-8.3	162	-0.06	12.29
98	P	3,3'-Dichlorobenzidine	0.382	0.424	-11.0	167	-0.06	12.83
99	P	Benzo[a]anthracene	1.079	1.147	-6.3	170	-0.07	12.79
100	P	Chrysene	1.042	1.053	-1.1	167	-0.07	12.83
101	P	bis(2-Ethylhexyl)phthalat	0.730	0.791	-8.4	158	-0.06	13.02
102	I	Perylene-d12	1.000	1.000	0.0	147	-0.08	14.54
			Amount	Calc.	%Drift			
103	P	Di-n-octylphthalate	50.000	56.926	-13.9	164	-0.06	13.82

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-CC563
Lab FileID: 6F15613.D

			AvgRF	CCRF	%Dev			
104	P	Benzo[b]fluoranthene	1.034	1.186	-14.7	157	-0.07	14.07
105	P	Benzo[k]fluoranthene	1.047	1.094	-4.5	155	-0.07	14.11
106	P	Benzo[a]pyrene	0.898	1.007	-12.1	155	-0.08	14.47
107	P	Indeno[1,2,3-cd]pyrene	0.663	0.761	-14.8	158	-0.13	16.02
108	P	Dibenz[a,h]anthracene	0.753	0.813	-8.0	153	-0.12	16.10
109	P	Benzo[g,h,i]perylene	0.802	0.846	-5.5	152	-0.11	16.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Wed Sep 14 09:13:12 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-ECC563
Lab FileID: 6F15644.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\S6F586\6F15644.D Vial: 2
Acq On : 13 Sep 2022 6:16 pm Operator: karena
Sample : ecc563-50 Inst : MSBNA10
Misc : op92994,S6F586,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\met...\8270D6F072122.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Aug 01 11:11:48 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	194	-0.05	4.56
2		1,4-Dioxane		----------NA----------				
			Amount	Calc.	%Drift			
3		N-nitrosodimethylamine	50.000	58.006	-16.0	228	-0.06	1.65
			AvgRF	CCRF	%Dev			
4		Pyridine	1.086	1.243	-14.5	209#	-0.06	1.65
5	P	Benzaldehyde	0.903	1.029	-14.0	279#	-0.06	4.10
6		Aniline	1.727	1.963	-13.7	219#	-0.05	4.23
7	S	2-Fluorophenol	1.149	1.353	-17.8	219#	-0.06	3.21
8	P	bis(2-Chloroethyl)ether	1.164	1.378	-18.4	228#	-0.05	4.34
9	S	Phenol-d5	1.365	1.560	-14.3	219#	-0.01	4.32
10	P	Phenol	1.390	1.706	-22.7	233#	-0.01	4.33
11	P	2-Chlorophenol	1.236	1.398	-13.1	217#	-0.04	4.36
12		1,3-Dichlorobenzene	1.369	1.496	-9.3	215#	-0.06	4.49
13		1,4-Dichlorobenzene	1.387	1.520	-9.6	215#	-0.06	4.58
14		1,2-Dichlorobenzene	1.317	1.458	-10.7	217#	-0.05	4.73
15		Benzyl alcohol	0.718	0.926	-29.0	233#	-0.03	4.80
16	P	bis(2-chloroisopropyl)eth	1.395	1.744	-25.0	250#	-0.04	4.93
17	P	2-Methylphenol	1.059	1.236	-16.7	225#	0.00	4.97
18	P	Acetophenone	1.603	1.798	-12.2	219#	-0.04	5.05
19	P	Hexachloroethane	0.519	0.600	-15.6	224#	-0.05	5.08
20	P	N-Nitroso-di-n-propylamin	0.777	0.904	-16.3	224#	-0.02	5.10
21	P	3&4-Methylphenol	1.115	1.307	-17.2	221#	0.00	5.15
22	I	Naphthalene-d8	1.000	1.000	0.0	212#	-0.05	5.98
23	S	Nitrobenzene-d5	0.329	0.350	-6.4	224#	-0.06	5.20
24	P	Nitrobenzene	0.303	0.333	-9.9	231#	-0.05	5.23
25	P	Isophorone	0.579	0.635	-9.7	232#	-0.05	5.52
26	P	2-Nitrophenol	0.175	0.200	-14.3	226#	-0.05	5.58
27	P	2,4-Dimethylphenol	0.298	0.323	-8.4	224#	-0.02	5.73
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan	0.355	0.384	-8.2	229#	-0.05	5.81
			Amount	Calc.	%Drift			
30		Benzoic Acid	50.000	43.030	13.9	171	0.03	6.02
			AvgRF	CCRF	%Dev			
31	P	2,4-Dichlorophenol	0.265	0.298	-12.5	228#	-0.04	5.89
32		1,2,4-Trichlorobenzene	0.281	0.318	-13.2	240#	-0.05	5.93
33		alpha-Terpineol		----------NA----------				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-ECC563
Lab FileID: 6F15644.D

34	P	Naphthalene	0.944	0.909	3.7	210#	-0.05	6.00
35	P	4-Chloroaniline	0.390	0.414	-6.2	222#	-0.04	6.13
36		2,6-Dichlorophenol	0.274	0.294	-7.3	229#	-0.04	6.12
37	P	Hexachlorobutadiene	0.156	0.180	-15.4	247#	-0.06	6.16
38	P	Caprolactam	0.097	0.105	-8.2	220#	0.02	6.66
39	P	4-Chloro-3-methylphenol	0.256	0.282	-10.2	223#	0.00	6.79
40	P	2-Methylnaphthalene	0.516	0.555	-7.6	230#	-0.05	6.80
41		1-Methylnaphthalene	0.583	0.600	-2.9	223#	-0.04	6.91
42	P	1,2,4,5-Tetrachlorobenzen	0.293	0.328	-11.9	243#	-0.04	7.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	222#	-0.05	7.99
			Amount	Calc.	%Drift			
44	P	Hexachlorocyclopentadiene	50.000	59.039	-18.1	255	-0.07	6.98
			AvgRF	CCRF	%Dev			
45	P	2,4,6-Trichlorophenol	0.310	0.381	-22.9	260#	-0.05	7.18
46	P	2,4,5-Trichlorophenol	0.341	0.398	-16.7	249#	-0.04	7.25
47	S	2-Fluorobiphenyl	1.278	1.241	2.9	222#	-0.05	7.27
48	P	1,1'-Biphenyl	1.311	1.280	2.4	224#	-0.06	7.36
49	P	2-Chloronaphthalene	1.002	1.013	-1.1	232#	-0.06	7.36
50	P	2-Nitroaniline	0.284	0.317	-11.6	236#	-0.04	7.55
			Amount	Calc.	%Drift			
51		p-Dinitrobenzene		----------NA----------				
			AvgRF	CCRF	%Dev			
52	P	Acenaphthylene	1.606	1.561	2.8	216#	-0.06	7.82
53	P	Dimethylphthalate	1.176	1.188	-1.0	225#	-0.03	7.81
54		m-Dinitrobenzene	0.200	0.228	-14.0	234#	-0.03	7.84
55	P	2,6-Dinitrotoluene	0.283	0.302	-6.7	233#	-0.03	7.87
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene	1.039	1.012	2.6	222#	-0.05	8.04
58	P	3-Nitroaniline	0.305	0.333	-9.2	231#	-0.03	8.05
			Amount	Calc.	%Drift			
59	P	2,4-Dinitrophenol	50.000	60.020	-20.0	269	-0.04	8.18
			AvgRF	CCRF	%Dev			
60	P	Dibenzofuran	1.458	1.443	1.0	223#	-0.05	8.24
61	P	2,4-Dinitrotoluene	0.355	0.393	-10.7	233#	-0.03	8.33
			Amount	Calc.	%Drift			
62	P	4-Nitrophenol	50.000	0.314	99.4#	1	-0.03	8.33
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
			AvgRF	CCRF	%Dev			
64	P	2,3,4,6-Tetrachlorophenol	0.262	0.324	-23.7	258#	-0.03	8.43
65	P	Fluorene	1.147	1.123	2.1	220#	-0.05	8.64
66	P	4-Chlorophenyl-phenylethe	0.554	0.585	-5.6	236#	-0.05	8.68
67	P	Diethylphthalate	1.106	1.127	-1.9	226#	-0.03	8.64
68		Thionazin		----------NA----------				
			Amount	Calc.	%Drift			
69	P	4-Nitroaniline	50.000	53.187	-6.4	235	0.00	8.79
			AvgRF	CCRF	%Dev			
70	I	Phenanthrene-d10	1.000	1.000	0.0	229#	-0.06	9.71

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-ECC563
Lab FileID: 6F15644.D

			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno	50.000	57.722	-15.4	257	-0.04	8.81
			AvgRF	CCRF	%Dev			
72	P	n-Nitrosodiphenylamine	0.528	0.574	-8.7	223#	-0.05	8.85
73		Diphenylamine	0.590	0.574	2.7	223#	-0.05	8.85
74		1,2-Diphenylhydrazine	0.659	0.693	-5.2	233#	-0.06	8.87
75	S	2,4,6-Tribromophenol	0.105	0.111	-5.7	236#	-0.06	8.94
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
78	P	4-Bromophenyl-phenylether	0.193	0.205	-6.2	246#	-0.05	9.25
79	P	Hexachlorobenzene	0.212	0.218	-2.8	242#	-0.06	9.26
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine	0.202	0.225	-11.4	251#	-0.03	9.56
			Amount	Calc.	%Drift			
83	P	Pentachlorophenol	50.000	58.369	-16.7	261	-0.04	9.55
			AvgRF	CCRF	%Dev			
84	P	Phenanthrene	0.950	0.942	0.8	235#	-0.05	9.74
85	P	Anthracene	0.937	0.948	-1.2	233#	-0.05	9.80
86		Disulfoton		----------NA----------				
87	P	Carbazole	0.909	0.899	1.1	227#	-0.04	10.05
			Amount	Calc.	%Drift			
88		Methyl Parathion		----------NA----------				
			AvgRF	CCRF	%Dev			
89	P	Di-n-butylphthalate	1.047	1.072	-2.4	227#	-0.04	10.55
			Amount	Calc.	%Drift			
90		Ethyl Parathion		----------NA----------				
			AvgRF	CCRF	%Dev			
91	P	Fluoranthene	0.954	0.991	-3.9	236#	-0.04	11.12
92	I	Chrysene-d12	1.000	1.000	0.0	219#	-0.06	12.81
			Amount	Calc.	%Drift			
93		Benzidine	50.000	75.326	-50.7#	253	-0.06	11.36
			AvgRF	CCRF	%Dev			
94	P	Pyrene	1.234	1.288	-4.4	232#	-0.08	11.37
95	S	Terphenyl-d14	0.992	1.020	-2.8	228#	-0.06	11.64
			Amount	Calc.	%Drift			
96		Famphur		----------NA----------				
			AvgRF	CCRF	%Dev			
97	P	Butylbenzylphthalate	0.545	0.610	-11.9	230#	-0.06	12.29
98	P	3,3'-Dichlorobenzidine	0.382	0.407	-6.5	220#	-0.06	12.83
99	P	Benzo[a]anthracene	1.079	1.165	-8.0	237#	-0.06	12.79
100	P	Chrysene	1.042	1.039	0.3	227#	-0.06	12.84
101	P	bis(2-Ethylhexyl)phthalat	0.730	0.826	-13.2	227#	-0.06	13.02
102	I	Perylene-d12	1.000	1.000	0.0	205#	-0.07	14.55
			Amount	Calc.	%Drift			
103	P	Di-n-octylphthalate	50.000	58.066	-16.1	233	-0.05	13.82

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: S6F586-ECC563
Lab FileID: 6F15644.D

			AvgRF	CCRF	%Dev		
104	P	Benzo[b]fluoranthene	1.034	1.172	-13.3	216# -0.06	14.08
105	P	Benzo[k]fluoranthene	1.047	1.075	-2.7	212# -0.07	14.11
106	P	Benzo[a]pyrene	0.898	1.006	-12.0	216# -0.08	14.47
107	P	Indeno[1,2,3-cd]pyrene	0.663	0.804	-21.3	233# -0.12	16.04
108	P	Dibenz[a,h]anthracene	0.753	0.839	-11.4	219# -0.11	16.11
109	P	Benzo[g,h,i]perylene	0.802	0.882	-10.0	220# -0.09	16.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6F15135.D 8270D6F072122.m Wed Sep 14 09:34:41 2022

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: S6F563 **Method:** SW846 8270E **Instrument ID:** GCMS6F

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S6F563-DFTPP	6F15130.D	07/21/22 11:54	n/a	DFTPP Tune
S6F563-IC563	6F15131.D	07/21/22 12:11	n/a	Initial cal 1
S6F563-IC563	6F15132.D	07/21/22 12:38	n/a	Initial cal 5
S6F563-IC563	6F15133.D	07/21/22 13:04	n/a	Initial cal 10
S6F563-IC563	6F15134.D	07/21/22 13:31	n/a	Initial cal 25
S6F563-ICC563	6F15135.D	07/21/22 13:58	n/a	Initial cal 50
S6F563-IC563	6F15136.D	07/21/22 14:25	n/a	Initial cal 60
S6F563-IC563	6F15137.D	07/21/22 14:52	n/a	Initial cal 75
S6F563-IC563	6F15138.D	07/21/22 15:19	n/a	Initial cal 100
S6F563-ICV563	6F15139.D	07/21/22 15:46	n/a	Initial cal verification 50
S6F563-ICV563	6F15140.D	07/21/22 16:13	n/a	Initial cal verification 50
S6F563-ICV563	6F15141.D	07/21/22 16:40	n/a	Initial cal verification 50
S6F563-ICV563	6F15142.D	07/21/22 17:07	n/a	Initial cal verification 50

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: S6F586	**Method:** EPA 625.1	**Instrument ID:** GCMS6F

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S6F586-DFTPP	6F15612.D	09/13/22 13:02	n/a	DFTPP Tune
S6F586-CC563	6F15613.D	09/13/22 13:19	n/a	Continuing cal 50
OP93036-BS	6F15615.D	09/13/22 14:13	OP93036	Blank Spike
OP93036-MB	6F15636.D	09/13/22 14:39	OP93036	Method Blank
ZZZZZZ	6F15637.D	09/13/22 15:07	OP93036	(unrelated sample)
ZZZZZZ	6F15638.D	09/13/22 15:34	OP93036	(unrelated sample)
FA98756-2	6F15640.D	09/13/22 16:28	OP93036	(used for QC only; not part of job FA98819)
FA98819-1	6F15641.D	09/13/22 16:55	OP93036	EFFLUENT
OP93036-MS	6F15642.D	09/13/22 17:22	OP93036	Matrix Spike
OP93036-MSD	6F15643.D	09/13/22 17:49	OP93036	Matrix Spike Duplicate
S6F586-ECC563	6F15644.D	09/13/22 18:16	n/a	Ending cal 50

MS Semi-volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15641.D
Acq On : 13 Sep 2022 4:55 pm
Operator : karena
Sample : fa98819-1
Misc : op93036,S6F586,1010,,,1,1,water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 14 09:04:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

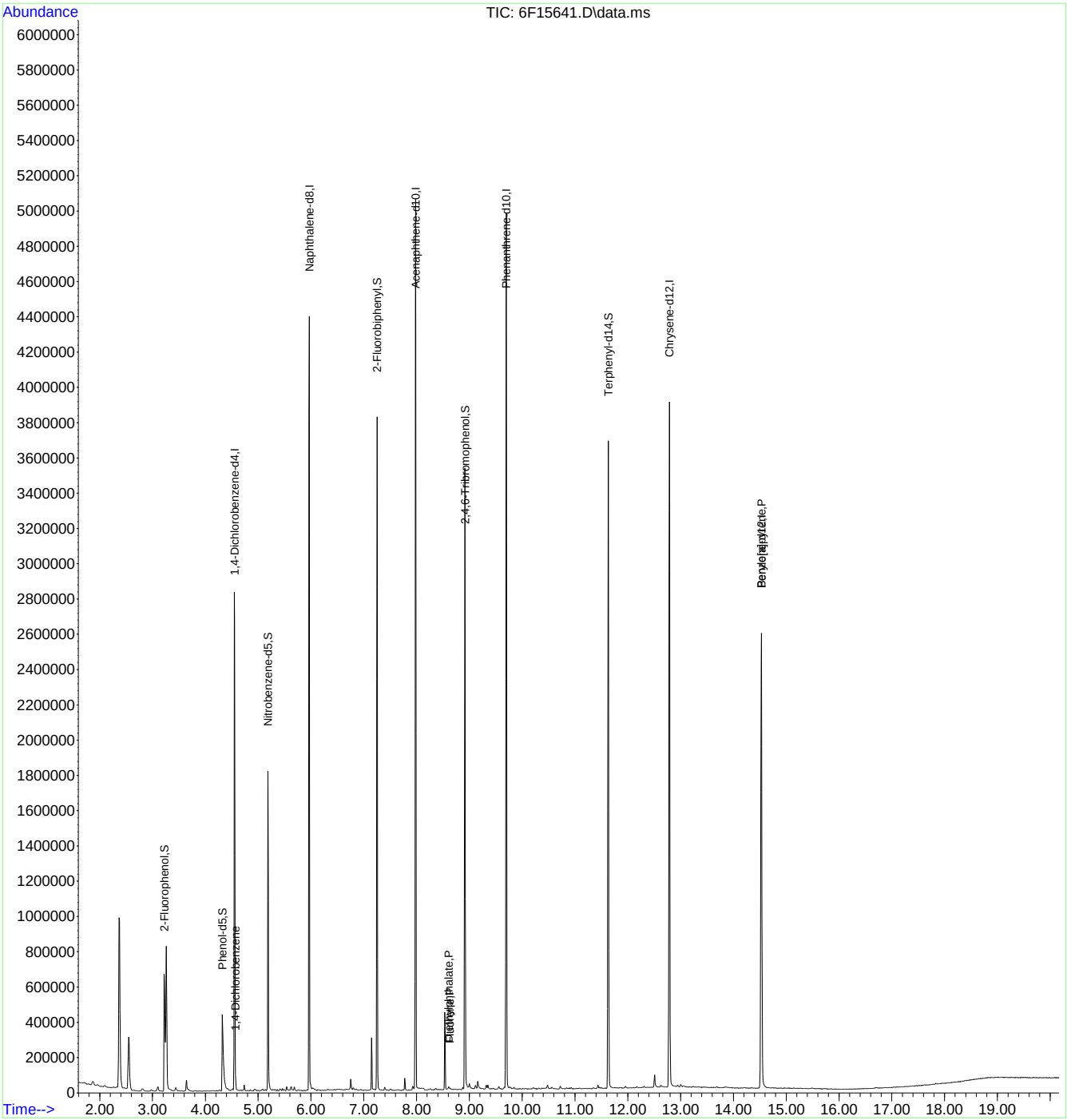
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.555	152	480396	40.00	ppm	-0.06
22) Naphthalene-d8	5.967	136	1935857	40.00	ppm	-0.06
43) Acenaphthene-d10	7.984	164	1121803	40.00	ppm	-0.06
70) Phenanthrene-d10	9.701	188	2023954	40.00	ppm	-0.07
92) Chrysene-d12	12.787	240	1549563	40.00	ppm	-0.08
102) Perylene-d12	14.531	264	1340612	40.00	ppm	-0.09
System Monitoring Compounds						
7) 2-Fluorophenol	3.224	112	354379	25.67	ppm	-0.04
Spiked Amount 100.000	Range 14 - 67		Recovery = 25.67%			
9) Phenol-d5	4.320	99	280979	17.14	ppm	-0.01
Spiked Amount 100.000	Range 10 - 50		Recovery = 17.14%			
23) Nitrobenzene-d5	5.186	82	522112	32.81	ppm	-0.08
Spiked Amount 50.000	Range 42 - 108		Recovery = 65.62%			
47) 2-Fluorobiphenyl	7.251	172	1194432	33.32	ppm	-0.07
Spiked Amount 50.000	Range 40 - 106		Recovery = 66.64%			
75) 2,4,6-Tribromophenol	8.920	330	439473	82.99	ppm	-0.07
Spiked Amount 100.000	Range 33 - 118		Recovery = 82.99%			
95) Terphenyl-d14	11.632	244	1494249	38.88	ppm	-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery = 77.76%			
Target Compounds						Qvalue
13) 1,4-Dichlorobenzene	4.571	146	7929	0.48	ppm	95
65) Fluorene	8.626	166	1516	0.05	ppm	81
67) Diethylphthalate	8.610	149	6507	0.21	ppm	100
106) Benzo[a]pyrene	14.531	252	4580	0.15	ppm	84

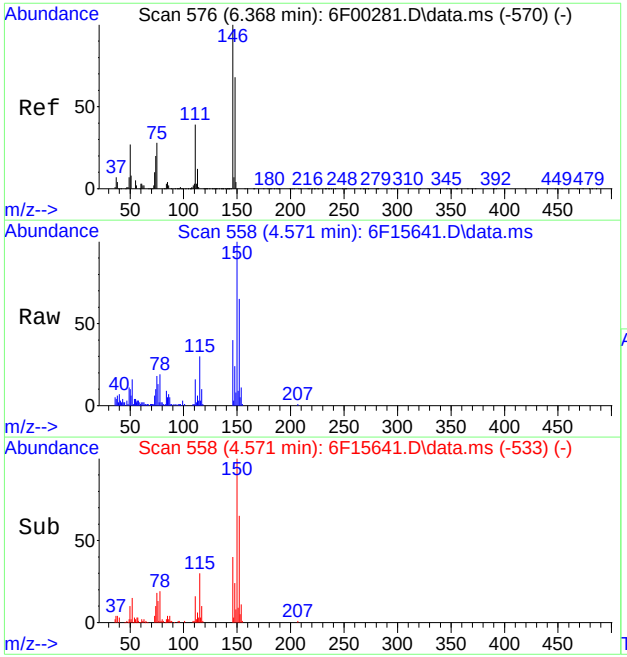
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15641.D
Acq On : 13 Sep 2022 4:55 pm
Operator : karena
Sample : fa98819-1
Misc : op93036,S6F586,1010,,,1,1,water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 14 09:04:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

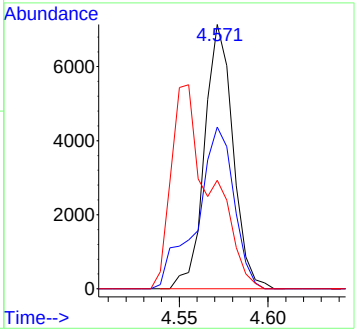


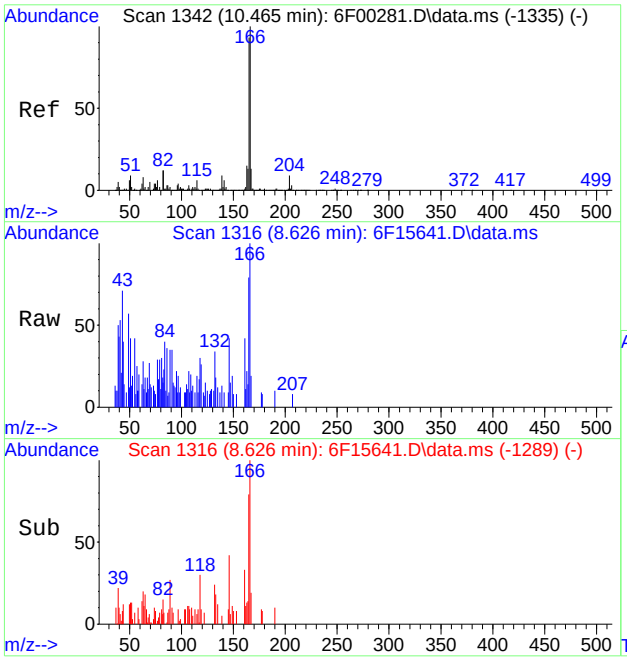


#13
1,4-Dichlorobenzene
Concen: 0.48 ppm
RT: 4.571 min Scan# 558
Delta R.T. -0.064 min
Lab File: 6F15641.D
Acq: 13 Sep 2022 4:55 pm

Tgt Ion:146 Resp: 7929

Ion	Ratio	Lower	Upper
146	100		
148	60.4	33.9	93.9
111	37.7	10.6	70.6

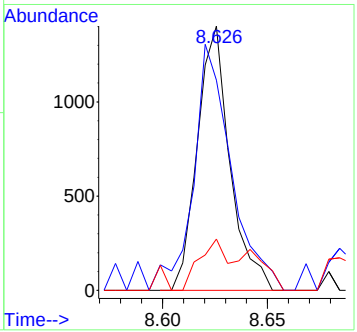


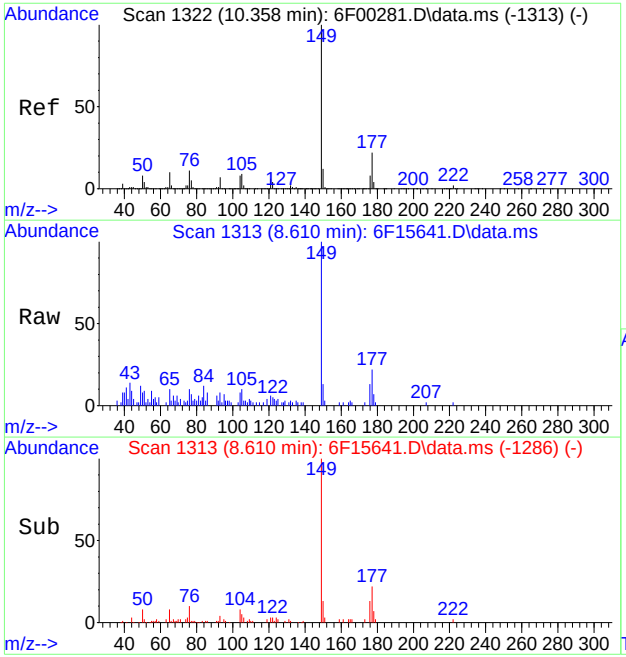


#65
Fluorene
Concen: 0.05 ppm
RT: 8.626 min Scan# 1316
Delta R.T. -0.057 min
Lab File: 6F15641.D
Acq: 13 Sep 2022 4:55 pm

Tgt Ion:166 Resp: 1516

Ion	Ratio	Lower	Upper
166	100		
165	74.7	65.3	125.3
167	14.6	0.0	43.8

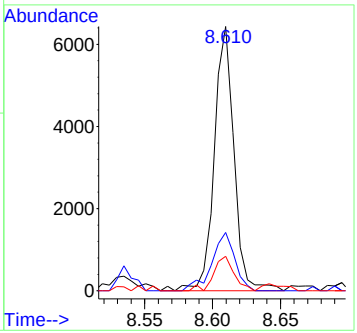


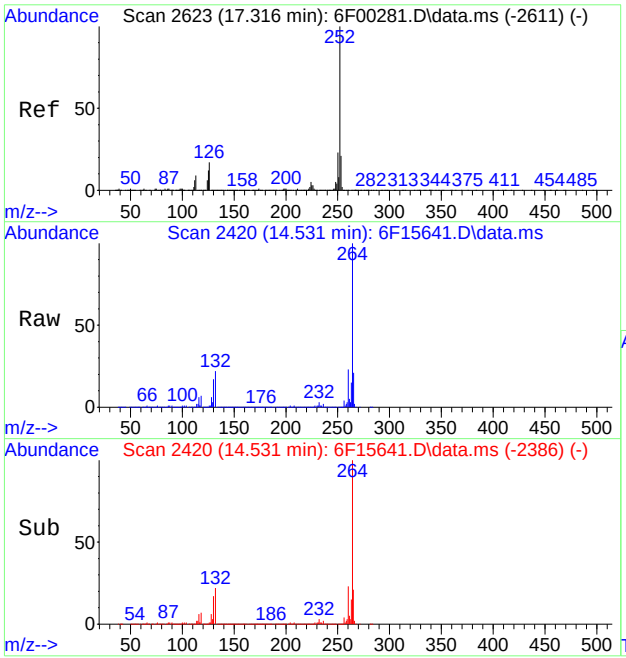


#67
Diethylphthalate
Concen: 0.21 ppm
RT: 8.610 min Scan# 1313
Delta R.T. -0.057 min
Lab File: 6F15641.D
Acq: 13 Sep 2022 4:55 pm

Tgt Ion:149 Resp: 6507

Ion	Ratio	Lower	Upper
149	100		
177	22.1	0.0	52.2
150	12.2	0.0	42.0

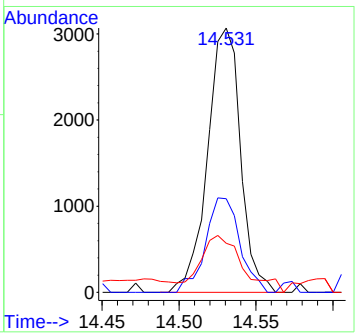




#106
Benzo[a]pyrene
Concen: 0.15 ppm
RT: 14.531 min Scan# 2420
Delta R.T. -0.016 min
Lab File: 6F15641.D
Acq: 13 Sep 2022 4:55 pm

Tgt Ion:252 Resp: 4580

Ion	Ratio	Lower	Upper
252	100		
253	33.6	0.0	50.9
125	16.4	0.0	45.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15636.D
Acq On : 13 Sep 2022 2:39 pm
Operator : karena
Sample : op93036-mb
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 13 15:26:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

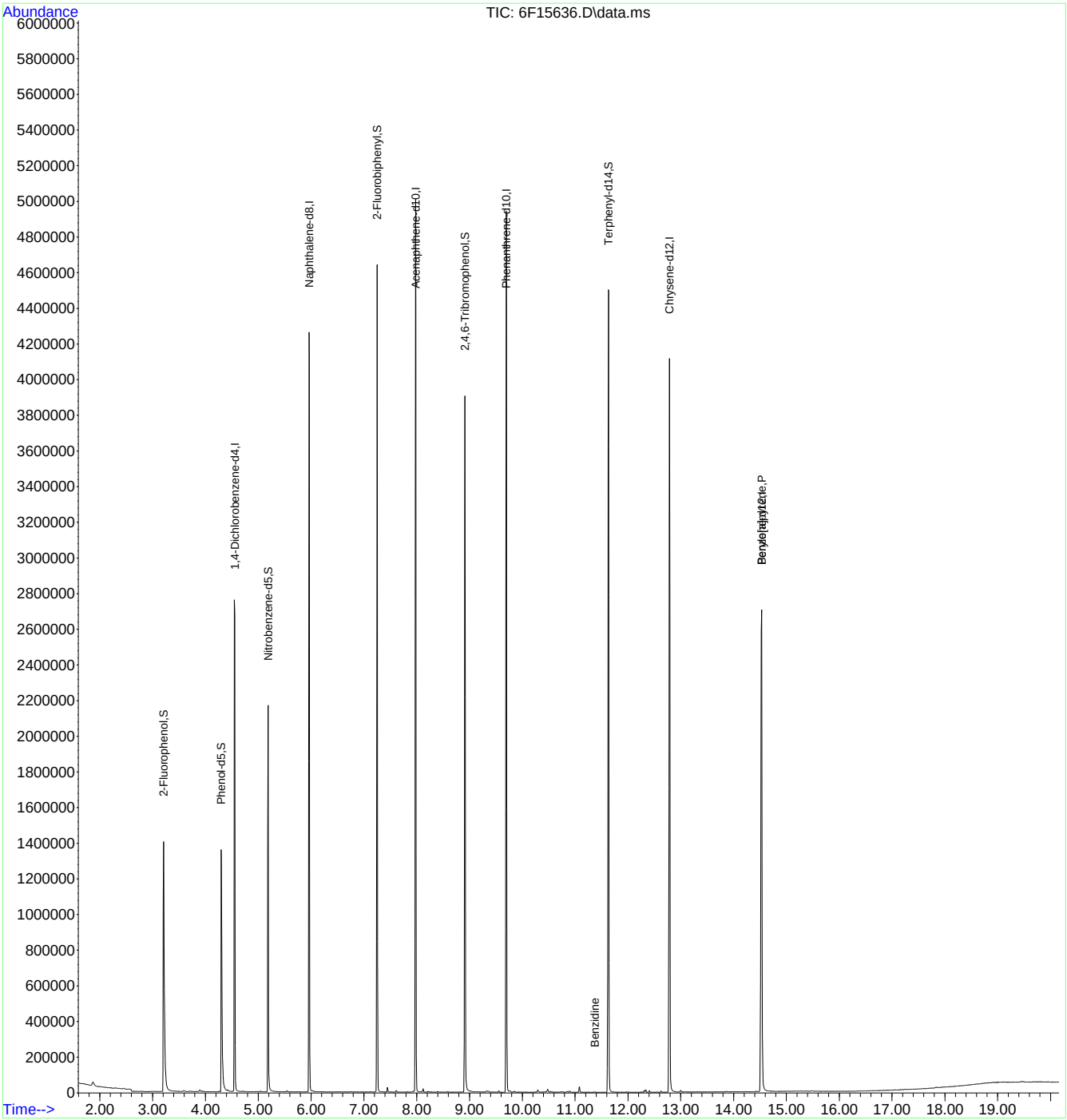
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.555	152	478101	40.00	ppm	-0.06
22) Naphthalene-d8	5.962	136	1972163	40.00	ppm	-0.07
43) Acenaphthene-d10	7.979	164	1118462	40.00	ppm	-0.07
70) Phenanthrene-d10	9.695	188	1991827	40.00	ppm	-0.07
92) Chrysene-d12	12.787	240	1532313	40.00	ppm	-0.08
102) Perylene-d12	14.531	264	1447489	40.00	ppm	-0.09
System Monitoring Compounds						
7) 2-Fluorophenol	3.208	112	632628	46.05	ppm	-0.06
Spiked Amount 100.000	Range 14 - 67		Recovery = 46.05%			
9) Phenol-d5	4.299	99	608670	37.30	ppm	-0.03
Spiked Amount 100.000	Range 10 - 50		Recovery = 37.30%			
23) Nitrobenzene-d5	5.187	82	614108	37.88	ppm	-0.08
Spiked Amount 50.000	Range 42 - 108		Recovery = 75.76%			
47) 2-Fluorobiphenyl	7.251	172	1375934	38.50	ppm	-0.07
Spiked Amount 50.000	Range 40 - 106		Recovery = 77.00%			
75) 2,4,6-Tribromophenol	8.915	330	478807	91.87	ppm	-0.08
Spiked Amount 100.000	Range 33 - 118		Recovery = 91.87%			
95) Terphenyl-d14	11.632	244	1744655	45.91	ppm	-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery = 91.82%			
Target Compounds						Qvalue
93) Benzidine	11.370	184	1878	0.06	ppm	90
106) Benzo[a]pyrene	14.531	252	5094	0.16	ppm	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

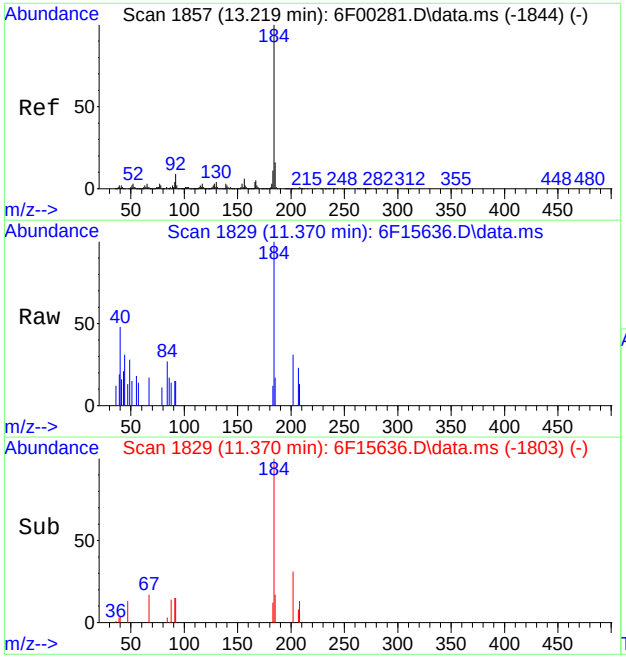
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15636.D
Acq On : 13 Sep 2022 2:39 pm
Operator : karena
Sample : op93036-mb
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 13 15:26:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



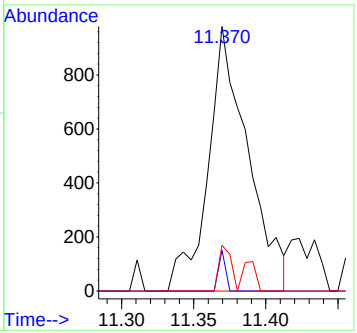
8270D6F072122.m Wed Sep 14 09:56:09 2022 Page: 2

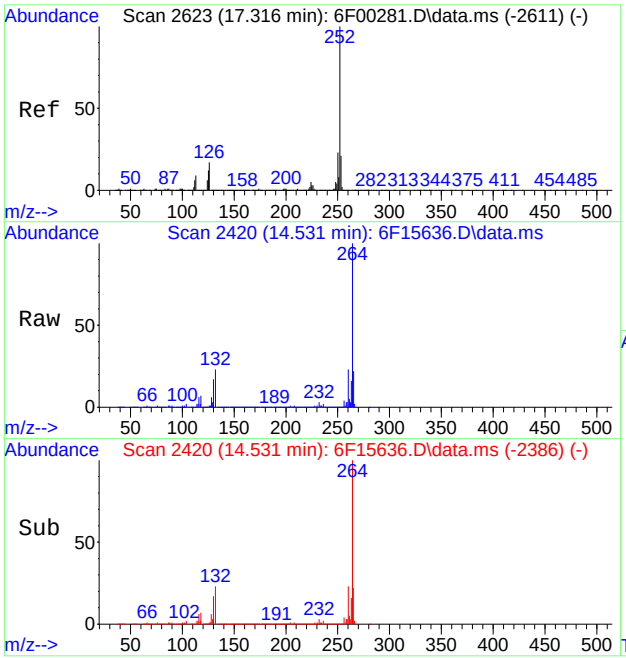


#93
Benzidine
Concen: 0.06 ppm
RT: 11.370 min Scan# 1829
Delta R.T. -0.059 min
Lab File: 6F15636.D
Acq: 13 Sep 2022 2:39 pm

Tgt Ion:184 Resp: 1878

Ion	Ratio	Lower	Upper
184	100		
92	16.5	0.0	42.0
185	18.5	0.0	44.6

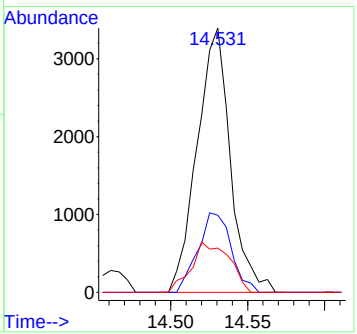




#106
Benzo[a]pyrene
Concen: 0.16 ppm
RT: 14.531 min Scan# 2420
Delta R.T. -0.016 min
Lab File: 6F15636.D
Acq: 13 Sep 2022 2:39 pm

Tgt Ion:252 Resp: 5094

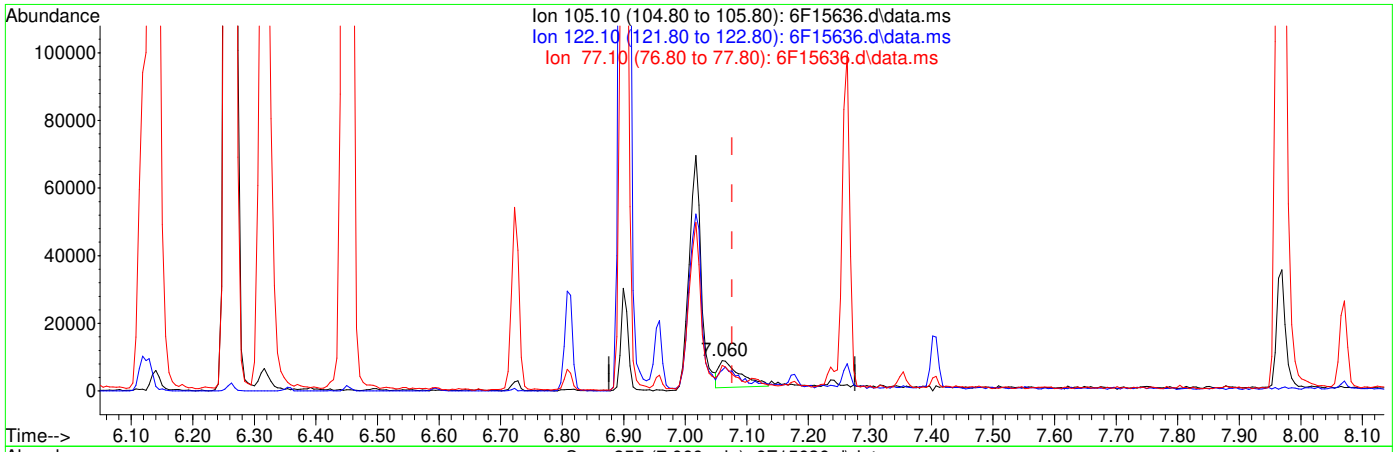
Ion	Ratio	Lower	Upper
252	100		
253	29.2	0.0	50.9
125	16.8	0.0	45.6

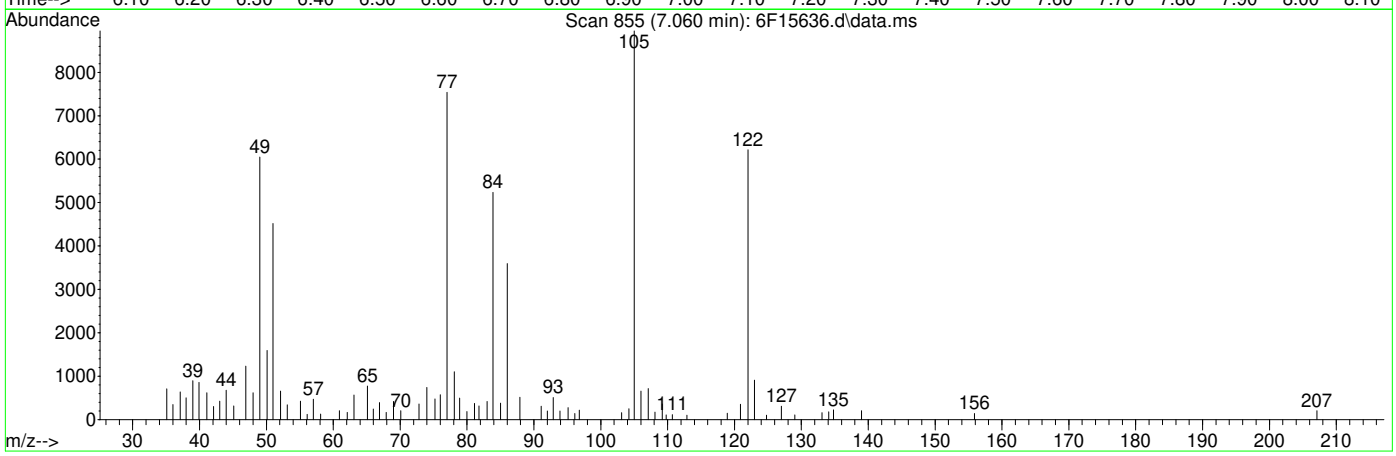


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\anndg\12-15\s6f465\
Data File : 6F15636.d
Acq On : 14 Dec 2021 10:16 pm
Operator : williamh
Sample : ecc444-50 Inst : MSBNA10
Misc : op88766,S6F464,100,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\msdchem\1\methods\8270D6F110521.m
Quant Results File: 8270D6F110521.RES
Quant Time: Dec 15 00:40:47 2021
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Nov 05 16:22:06 2021
Response via : Initial Calibration





TIC: 6F15636.d\data.ms

(30) Benzoic Acid

7.060min (-0.016) 2.60ppm

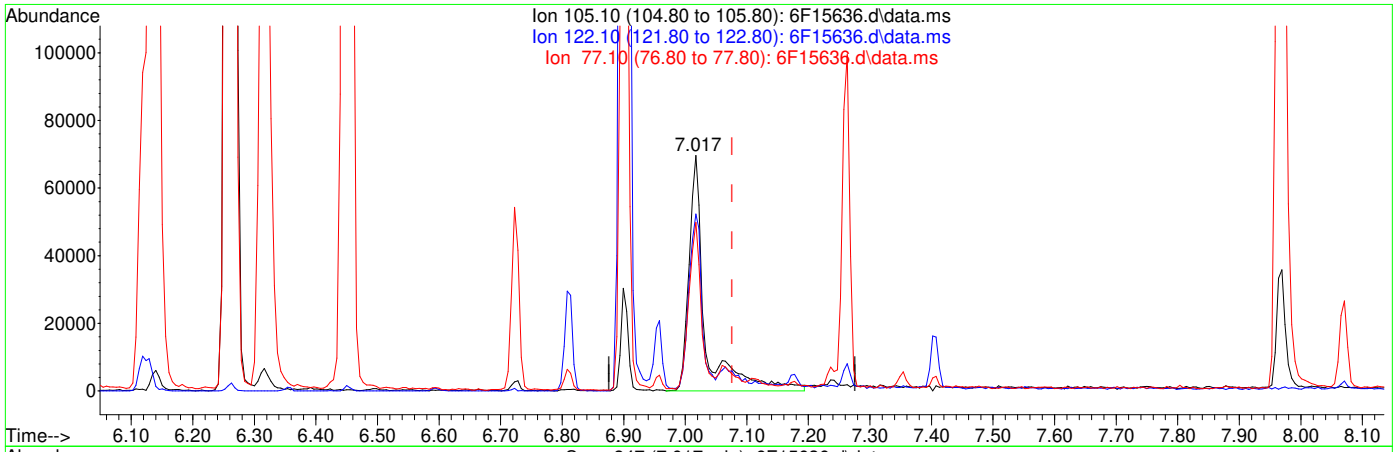
response 19318

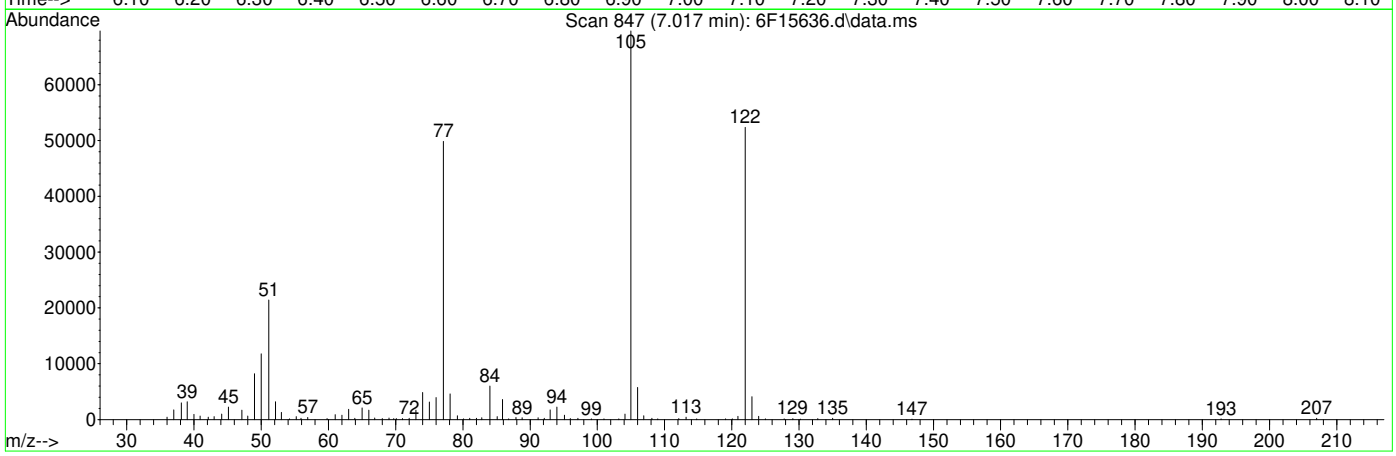
Ion	Exp%	Act%
105.10	100	100
122.10	80.50	67.30
77.10	73.60	88.36
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\anndg\12-15\s6f465\
Data File : 6F15636.d
Acq On : 14 Dec 2021 10:16 pm
Operator : williamh
Sample : ecc444-50 Inst : MSBNA10
Misc : op88766,S6F464,100,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\msdchem\1\methods\8270D6F110521.m
Quant Results File: 8270D6F110521.RES
Quant Time: Dec 15 00:40:47 2021
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Nov 05 16:22:06 2021
Response via : Initial Calibration





TIC: 6F15636.d\data.ms

(30) Benzoic Acid

7.017min (-0.059) 14.64ppm m

response 129709

Ion	Exp%	Act%
105.10	100	100
122.10	80.50	75.17
77.10	73.60	71.53
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/14/22 11:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15615.D
Acq On : 13 Sep 2022 2:13 pm
Operator : karena
Sample : op93036-bs
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 13 15:25:33 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.555	152	494183	40.00	ppm		-0.06
22) Naphthalene-d8	5.967	136	1930365	40.00	ppm		-0.06
43) Acenaphthene-d10	7.984	164	1079760	40.00	ppm		-0.06
70) Phenanthrene-d10	9.706	188	1912219	40.00	ppm		-0.06
92) Chrysene-d12	12.792	240	1462467	40.00	ppm		-0.07
102) Perylene-d12	14.531	264	1341246	40.00	ppm		-0.09
System Monitoring Compounds							
7) 2-Fluorophenol	3.213	112	757769	53.37	ppm		-0.05
Spiked Amount 100.000	Range 14 - 67		Recovery = 53.37%				
9) Phenol-d5	4.304	99	687970	40.79	ppm		-0.03
Spiked Amount 100.000	Range 10 - 50		Recovery = 40.79%				
23) Nitrobenzene-d5	5.192	82	648052	40.84	ppm		-0.07
Spiked Amount 50.000	Range 42 - 108		Recovery = 81.68%				
47) 2-Fluorobiphenyl	7.256	172	1413755	40.98	ppm		-0.06
Spiked Amount 50.000	Range 40 - 106		Recovery = 81.96%				
75) 2,4,6-Tribromophenol	8.920	330	477794	95.49	ppm		-0.07
Spiked Amount 100.000	Range 33 - 118		Recovery = 95.49%				
95) Terphenyl-d14	11.632	244	1707239	47.07	ppm		-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery = 94.14%				
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.635	42	182060	26.77	ppm		99
4) Pyridine	1.656	79	255584	19.05	ppm		100
5) Benzaldehyde	4.090	106	512267	45.90	ppm		99
6) Aniline	4.224	93	623656	29.24	ppm		97
8) bis(2-Chloroethyl)ether	4.325	93	668851	46.52	ppm		95
10) Phenol	4.320	94	424315	24.71	ppm	#	69
11) 2-Chlorophenol	4.352	128	622474	40.76	ppm		98
12) 1,3-Dichlorobenzene	4.480	146	686176	40.58	ppm		98
13) 1,4-Dichlorobenzene	4.571	146	697020	40.67	ppm		98
14) 1,2-Dichlorobenzene	4.727	146	679913	41.77	ppm		97
15) Benzyl alcohol	4.775	108	360556	40.66	ppm		98
16) bis(2-chloroisopropyl)...	4.924	45	939302	54.48	ppm	#	64
17) 2-Methylphenol	4.962	108	491652	37.57	ppm		93
18) Acetophenone	5.037	105	911791	46.03	ppm		98
19) Hexachloroethane	5.085	117	279567	43.58	ppm		89
20) N-Nitroso-di-n-propyla...	5.080	70	469436	48.93	ppm		85
21) 3&4-Methylphenol	5.144	108	1033165	75.03	ppm		100
24) Nitrobenzene	5.213	77	677973	46.38	ppm		99
25) Isophorone	5.502	82	1316663	47.13	ppm		95
26) 2-Nitrophenol	5.566	139	398356	47.07	ppm		98
27) 2,4-Dimethylphenol	5.711	107	595185	41.44	ppm		99
29) bis(2-Chloroethoxy)met...	5.791	93	808396	47.17	ppm		99
30) Benzoic Acid	5.978	105	520628	46.77	ppm		98
31) 2,4-Dichlorophenol	5.882	162	595879	46.59	ppm		94
32) 1,2,4-Trichlorobenzene	5.919	180	631056	46.54	ppm		98
34) Naphthalene	5.994	128	1874190	41.16	ppm		99
35) 4-Chloroaniline	6.122	127	714287	37.90	ppm		98
36) 2,6-Dichlorophenol	6.117	162	587189	44.44	ppm		96
37) Hexachlorobutadiene	6.155	225	349504	46.57	ppm		99
38) Caprolactam	6.561	113	43707	9.29	ppm		89
39) 4-Chloro-3-methylphenol	6.764	107	581609	47.10	ppm		97
40) 2-Methylnaphthalene	6.796	141	1188207	47.67	ppm		99
41) 1-Methylnaphthalene	6.903	142	1288899	45.80	ppm		99
42) 1,2,4,5-Tetrachloroben...	6.989	216	664602	47.08	ppm		98
44) Hexachlorocyclopentadiene	6.978	237	331724	47.81	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15615.D
Acq On : 13 Sep 2022 2:13 pm
Operator : karena
Sample : op93036-bs
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 13 15:25:33 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

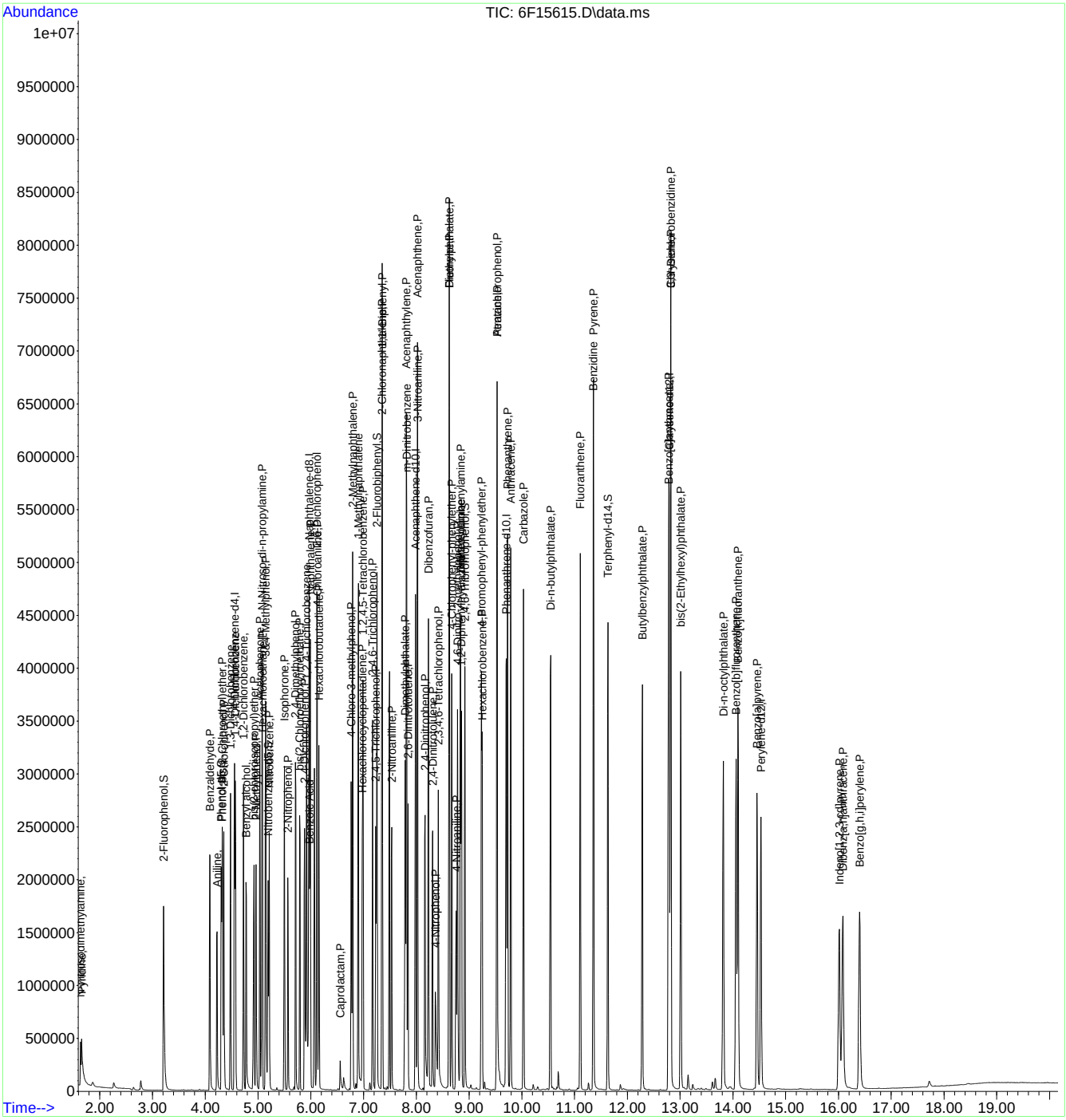
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45)	2,4,6-Trichlorophenol	7.171	196	469271	56.03	ppm		99
46)	2,4,5-Trichlorophenol	7.230	196	503434	54.71	ppm		98
48)	1,1'-Biphenyl	7.358	154	1632235	46.11	ppm		99
49)	2-Chloronaphthalene	7.347	162	1319202	48.78	ppm		95
50)	2-Nitroaniline	7.535	65	402961	52.57	ppm		87
52)	Acenaphthylene	7.813	152	2090177	48.23	ppm		99
53)	Dimethylphthalate	7.791	163	1590437	50.12	ppm		99
54)	m-Dinitrobenzene	7.818	168	286793	53.19	ppm		94
55)	2,6-Dinitrotoluene	7.845	165	387250	50.63	ppm	#	72
57)	Acenaphthene	8.021	153	1293404	46.13	ppm		99
58)	3-Nitroaniline	8.027	138	404472	49.13	ppm		91
59)	2,4-Dinitrophenol	8.166	184	517465	101.20	ppm		82
60)	Dibenzofuran	8.230	168	1818515	46.21	ppm		100
61)	2,4-Dinitrotoluene	8.310	165	530749	55.33	ppm		83
62)	4-Nitrophenol	8.364	109	197959m	48.67	ppm		
64)	2,3,4,6-Tetrachlorophenol	8.417	232	379323	53.63	ppm		96
65)	Fluorene	8.626	166	1570700	50.73	ppm		97
66)	4-Chlorophenyl-phenyle...	8.674	204	768087	51.32	ppm		95
67)	Diethylphthalate	8.626	149	1572839	52.67	ppm		100
69)	4-Nitroaniline	8.759	138	413926	47.53	ppm		91
71)	4,6-Dinitro-2-methylph...	8.781	198	724991	112.35	ppm		96
72)	n-Nitrosodiphenylamine	8.840	169	1106077	43.81	ppm		99
73)	Diphenylamine	8.840	169	1106077	39.19	ppm		99
74)	1,2-Diphenylhydrazine	8.856	77	1592759	50.58	ppm		95
78)	4-Bromophenyl-phenylether	9.235	248	471945	51.24	ppm		99
79)	Hexachlorobenzene	9.251	284	491836	48.52	ppm		90
82)	Atrazine	9.530	200	532404	55.21	ppm		89
83)	Pentachlorophenol	9.530	266	584275	109.41	ppm		98
84)	Phenanthrene	9.733	178	2240435	49.31	ppm		99
85)	Anthracene	9.792	178	2152112	48.02	ppm		99
87)	Carbazole	10.032	167	2049180	47.18	ppm		99
89)	Di-n-butylphthalate	10.546	149	2612713	52.18	ppm		100
91)	Fluoranthene	11.107	202	2366893	51.88	ppm		97
93)	Benzidine	11.353	184	784052	34.44	ppm		96
94)	Pyrene	11.359	202	2460823	54.56	ppm		96
97)	Butylbenzylphthalate	12.284	149	1130177	56.74	ppm		95
98)	3,3'-Dichlorobenzidine	12.824	252	810200	58.04	ppm		99
99)	Benzo[a]anthracene	12.782	228	2158446	54.71	ppm		99
100)	Chrysene	12.824	228	2079419	54.57	ppm		99
101)	bis(2-Ethylhexyl)phtha...	13.012	149	1496688	56.08	ppm		99
103)	Di-n-octylphthalate	13.819	149	2498256	57.42	ppm		99
104)	Benzo[b]fluoranthene	14.060	252	1804882	52.08	ppm		99
105)	Benzo[k]fluoranthene	14.097	252	1959149	55.80	ppm		99
106)	Benzo[a]pyrene	14.456	252	1620581	53.80	ppm		98
107)	Indeno[1,2,3-cd]pyrene	16.017	276	1242778	55.89	ppm		98
108)	Dibenz[a,h]anthracene	16.087	278	1322725	52.36	ppm		98
109)	Benzo[g,h,i]perylene	16.403	276	1368869	50.92	ppm		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15615.D
Acq On : 13 Sep 2022 2:13 pm
Operator : karena
Sample : op93036-bs
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 13 15:25:33 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



Manual Integration Approval Summary

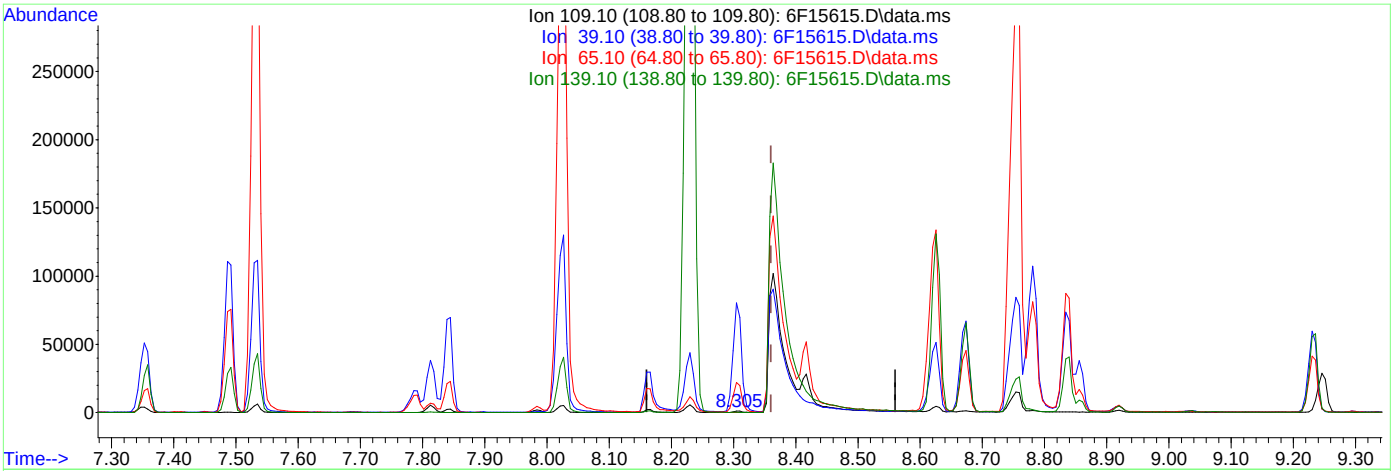
Sample Number:	OP93036-BS	**Method:**	EPA 625.1
Lab FileID:	6F15615.D	**Analyst approved:**	09/14/22 09:44 Karen Avila
Injection Time:	09/13/22 14:13	**Supervisor approved:**	09/14/22 11:01 Naresh Jiawan

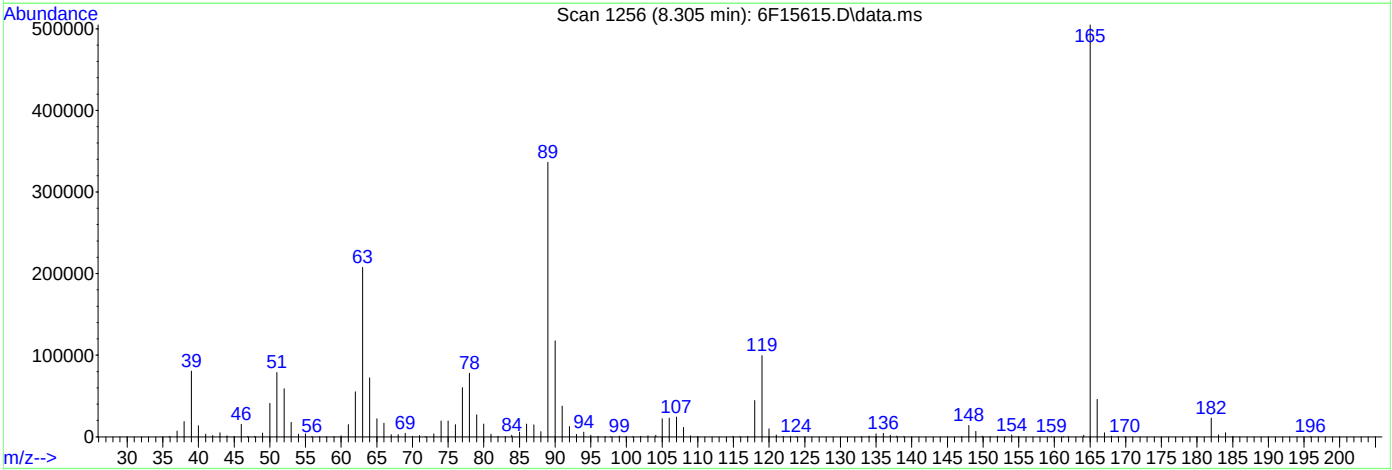
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-Nitrophenol	100-02-7		8.36	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15615.D
Acq On : 13 Sep 2022 2:13 pm
Operator : karena
Sample : op93036-bs
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 13 15:17:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15615.D\data.ms

(62) 4-Nitrophenol (P)

8.305min (-0.055) 0.36ppm

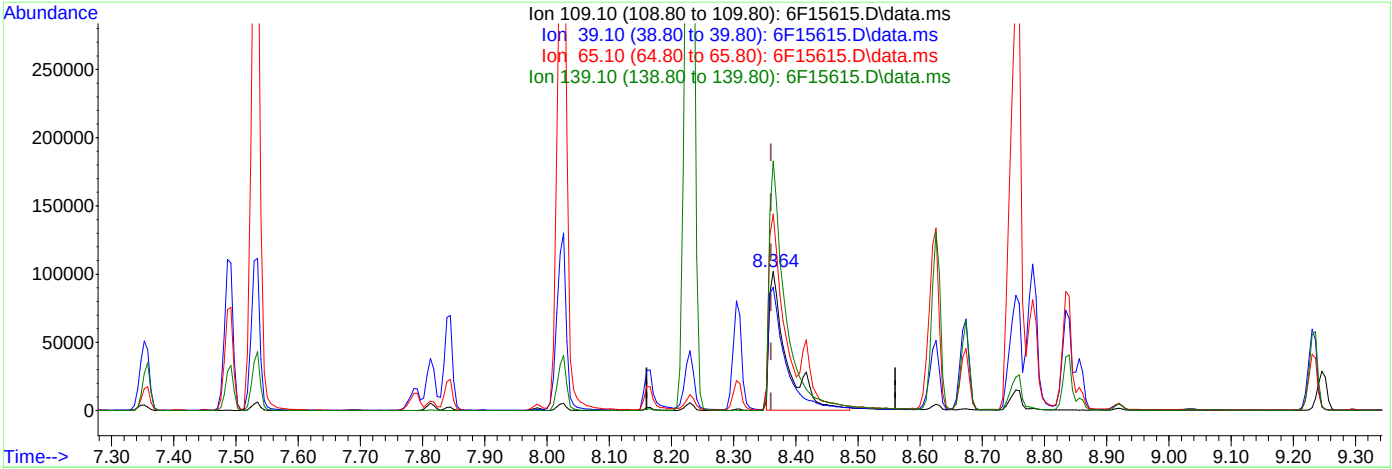
response 1321

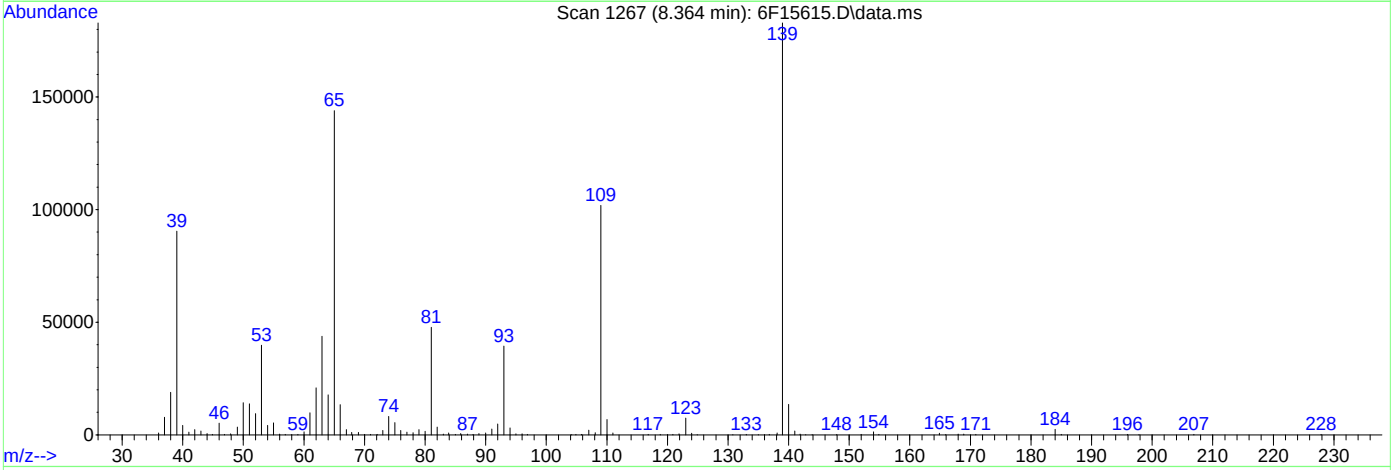
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	7056.06#
65.10	172.20	1905.22#
139.10	175.30	7.43#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15615.D
Acq On : 13 Sep 2022 2:13 pm
Operator : karena
Sample : op93036-bs
Misc : op93036,S6F586,1000,,,1,1,water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 13 15:17:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15615.D\data.ms

(62) 4-Nitrophenol (P)

8.364min (+0.003) 48.67ppm m

response 197959

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	88.79#
65.10	172.20	141.34#
139.10	175.30	179.60

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/14/22 11:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15642.D
Acq On : 13 Sep 2022 5:22 pm
Operator : karena
Sample : op93036-ms
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 14 10:28:16 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.555	152	508748	40.00	ppm		-0.06
22) Naphthalene-d8	5.967	136	1983716	40.00	ppm		-0.06
43) Acenaphthene-d10	7.984	164	1116061	40.00	ppm		-0.06
70) Phenanthrene-d10	9.706	188	2014365	40.00	ppm		-0.06
92) Chrysene-d12	12.798	240	1505376	40.00	ppm		-0.07
102) Perylene-d12	14.536	264	1400607	40.00	ppm		-0.09
System Monitoring Compounds							
7) 2-Fluorophenol	3.213	112	800998	54.80	ppm		-0.05
Spiked Amount 100.000	Range 14 - 67		Recovery = 54.80%				
9) Phenol-d5	4.309	99	696206	40.10	ppm		-0.02
Spiked Amount 100.000	Range 10 - 50		Recovery = 40.10%				
23) Nitrobenzene-d5	5.192	82	690686	42.35	ppm		-0.07
Spiked Amount 50.000	Range 42 - 108		Recovery = 84.70%				
47) 2-Fluorobiphenyl	7.256	172	1480886	41.53	ppm		-0.06
Spiked Amount 50.000	Range 40 - 106		Recovery = 83.06%				
75) 2,4,6-Tribromophenol	8.925	330	470017	89.18	ppm		-0.07
Spiked Amount 100.000	Range 33 - 118		Recovery = 89.18%				
95) Terphenyl-d14	11.632	244	1701433	45.58	ppm		-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery = 91.16%				
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.635	42	198034	28.29	ppm		97
4) Pyridine	1.656	79	294816	21.35	ppm		97
5) Benzaldehyde	4.090	106	548619	47.75	ppm		99
6) Aniline	4.224	93	668748	30.45	ppm		99
8) bis(2-Chloroethyl)ether	4.331	93	725326	49.01	ppm		92
10) Phenol	4.320	94	434857	24.59	ppm		71
11) 2-Chlorophenol	4.352	128	666099	42.37	ppm		98
12) 1,3-Dichlorobenzene	4.480	146	754496	43.34	ppm		98
13) 1,4-Dichlorobenzene	4.571	146	775052	43.93	ppm		98
14) 1,2-Dichlorobenzene	4.726	146	748302	44.66	ppm		98
15) Benzyl alcohol	4.780	108	369785	40.50	ppm		97
16) bis(2-chloroisopropyl)...	4.924	45	983952	55.44	ppm	#	64
17) 2-Methylphenol	4.967	108	506683	37.61	ppm		93
18) Acetophenone	5.037	105	965766	47.36	ppm		98
19) Hexachloroethane	5.085	117	305246	46.22	ppm		89
20) N-Nitroso-di-n-propyla...	5.079	70	488979	49.51	ppm		83
21) 3&4-Methylphenol	5.149	108	1050173	74.08	ppm		97
24) Nitrobenzene	5.213	77	718803	47.85	ppm		99
25) Isophorone	5.502	82	1349354	47.00	ppm		96
26) 2-Nitrophenol	5.572	139	421416	48.46	ppm		92
27) 2,4-Dimethylphenol	5.716	107	615226	41.69	ppm		99
29) bis(2-Chloroethoxy)met...	5.796	93	853427	48.46	ppm		99
30) Benzoic Acid	5.983	105	514653	45.21	ppm		89
31) 2,4-Dichlorophenol	5.882	162	626375	47.65	ppm		95
32) 1,2,4-Trichlorobenzene	5.919	180	680814	48.86	ppm		99
34) Naphthalene	5.994	128	1993667	42.61	ppm		99
35) 4-Chloroaniline	6.122	127	706758	36.49	ppm		98
36) 2,6-Dichlorophenol	6.117	162	617771	45.50	ppm		97
37) Hexachlorobutadiene	6.155	225	381257	49.43	ppm		98
38) Caprolactam	6.566	113	43375	8.97	ppm		87
39) 4-Chloro-3-methylphenol	6.770	107	585083	46.11	ppm		95
40) 2-Methylnaphthalene	6.796	141	1244666	48.60	ppm		99
41) 1-Methylnaphthalene	6.903	142	1351508	46.73	ppm		99
42) 1,2,4,5-Tetrachloroben...	6.994	216	696935	48.04	ppm		99
44) Hexachlorocyclopentadiene	6.978	237	343484	47.88	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15642.D
Acq On : 13 Sep 2022 5:22 pm
Operator : karena
Sample : op93036-ms
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 14 10:28:16 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

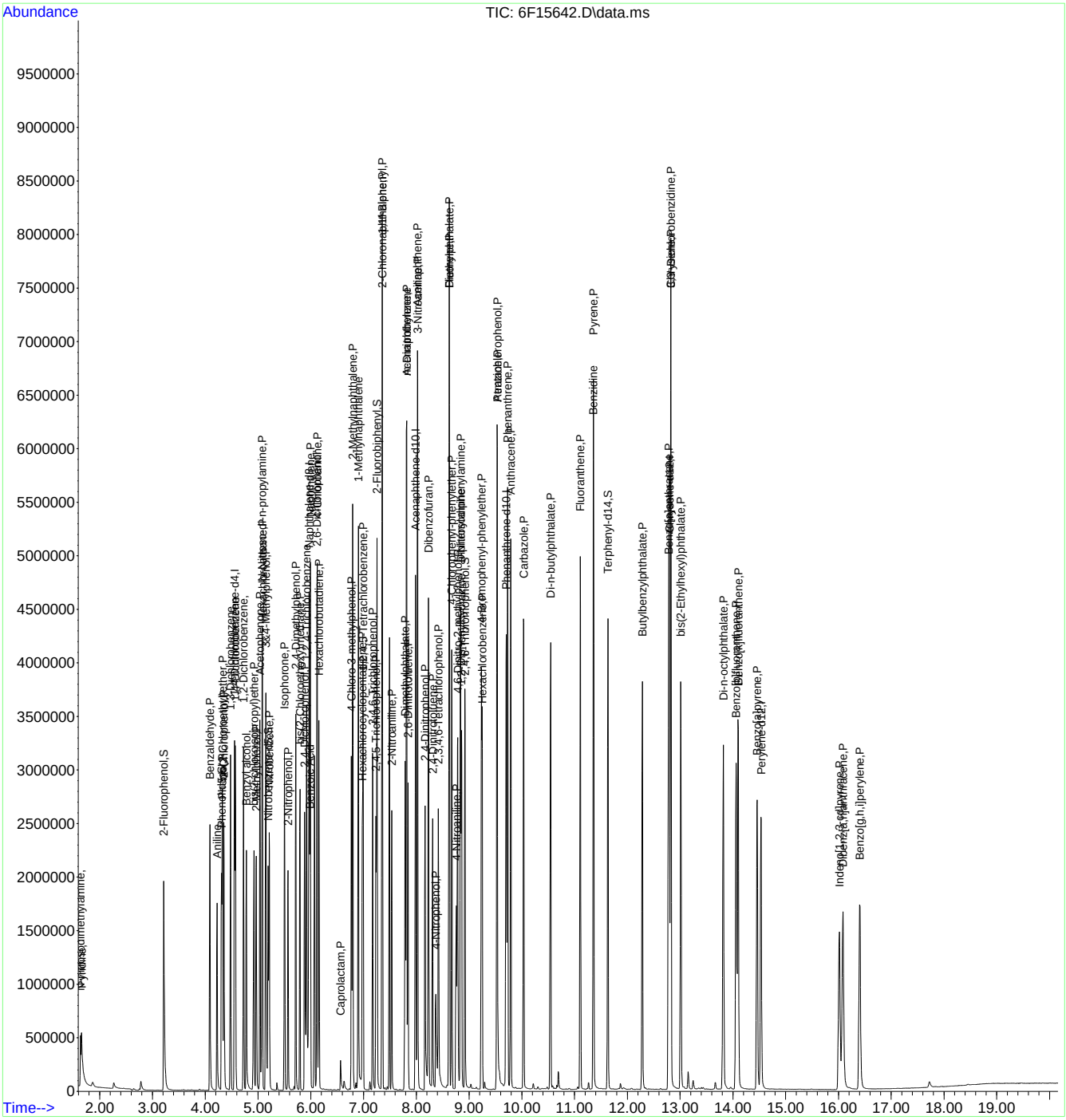
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45)	2,4,6-Trichlorophenol	7.176	196	472255	54.55	ppm	98
46)	2,4,5-Trichlorophenol	7.235	196	507718	53.38	ppm	97
48)	1,1'-Biphenyl	7.358	154	1697463	46.39	ppm	98
49)	2-Chloronaphthalene	7.353	162	1363048	48.77	ppm	96
50)	2-Nitroaniline	7.534	65	403986	50.99	ppm	91
52)	Acenaphthylene	7.818	152	2127815	47.50	ppm	100
53)	Dimethylphthalate	7.791	163	1579216	48.15	ppm	100
54)	m-Dinitrobenzene	7.818	168	287449	51.58	ppm	89
55)	2,6-Dinitrotoluene	7.845	165	388879	49.19	ppm	78
57)	Acenaphthene	8.021	153	1311172	45.24	ppm	100
58)	3-Nitroaniline	8.027	138	391337	45.99	ppm	92
59)	2,4-Dinitrophenol	8.166	184	507130	97.25	ppm	89
60)	Dibenzofuran	8.230	168	1869660	45.96	ppm	99
61)	2,4-Dinitrotoluene	8.310	165	528085	53.26	ppm	84
62)	4-Nitrophenol	8.369	109	189307m	45.30	ppm	
64)	2,3,4,6-Tetrachlorophenol	8.417	232	368522	50.41	ppm	97
65)	Fluorene	8.626	166	1588821	49.65	ppm	98
66)	4-Chlorophenyl-phenyle...	8.674	204	780978	50.48	ppm	96
67)	Diethylphthalate	8.626	149	1588785	51.47	ppm	99
69)	4-Nitroaniline	8.759	138	409434	45.50	ppm	92
71)	4,6-Dinitro-2-methylph...	8.786	198	712280	105.97	ppm	91
72)	n-Nitrosodiphenylamine	8.840	169	1117176	42.01	ppm	100
73)	Diphenylamine	8.840	169	1117176	37.58	ppm	100
74)	1,2-Diphenylhydrazine	8.856	77	1588294	47.88	ppm	96
78)	4-Bromophenyl-phenylether	9.235	248	474233	48.88	ppm	99
79)	Hexachlorobenzene	9.251	284	496970	46.54	ppm	91
82)	Atrazine	9.535	200	521764	51.36	ppm	86
83)	Pentachlorophenol	9.535	266	558913	101.00	ppm	98
84)	Phenanthrene	9.733	178	2239542	46.79	ppm	99
85)	Anthracene	9.792	178	2135259	45.23	ppm	99
87)	Carbazole	10.038	167	2059593	45.01	ppm	99
89)	Di-n-butylphthalate	10.546	149	2570791	48.74	ppm	100
91)	Fluoranthene	11.107	202	2321330	48.30	ppm	97
93)	Benzidine	11.353	184	744906	31.12	ppm	97
94)	Pyrene	11.359	202	2432871	52.40	ppm	96
97)	Butylbenzylphthalate	12.284	149	1110491	54.16	ppm	95
98)	3,3'-Dichlorobenzidine	12.824	252	731506	50.91	ppm	99
99)	Benzo[a]anthracene	12.781	228	2121020	52.23	ppm	99
100)	Chrysene	12.824	228	2069114	52.75	ppm	99
101)	bis(2-Ethylhexyl)phtha...	13.011	149	1481276	53.92	ppm	98
103)	Di-n-octylphthalate	13.819	149	2469529	54.65	ppm	99
104)	Benzo[b]fluoranthene	14.060	252	1899524	52.49	ppm	99
105)	Benzo[k]fluoranthene	14.103	252	1841078	50.21	ppm	97
106)	Benzo[a]pyrene	14.461	252	1613475	51.29	ppm	97
107)	Indeno[1,2,3-cd]pyrene	16.017	276	1223620	52.70	ppm	98
108)	Dibenz[a,h]anthracene	16.087	278	1317755	49.95	ppm	98
109)	Benzo[g,h,i]perylene	16.403	276	1362793	48.54	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15642.D
Acq On : 13 Sep 2022 5:22 pm
Operator : karena
Sample : op93036-ms
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 14 10:28:16 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



Manual Integration Approval Summary

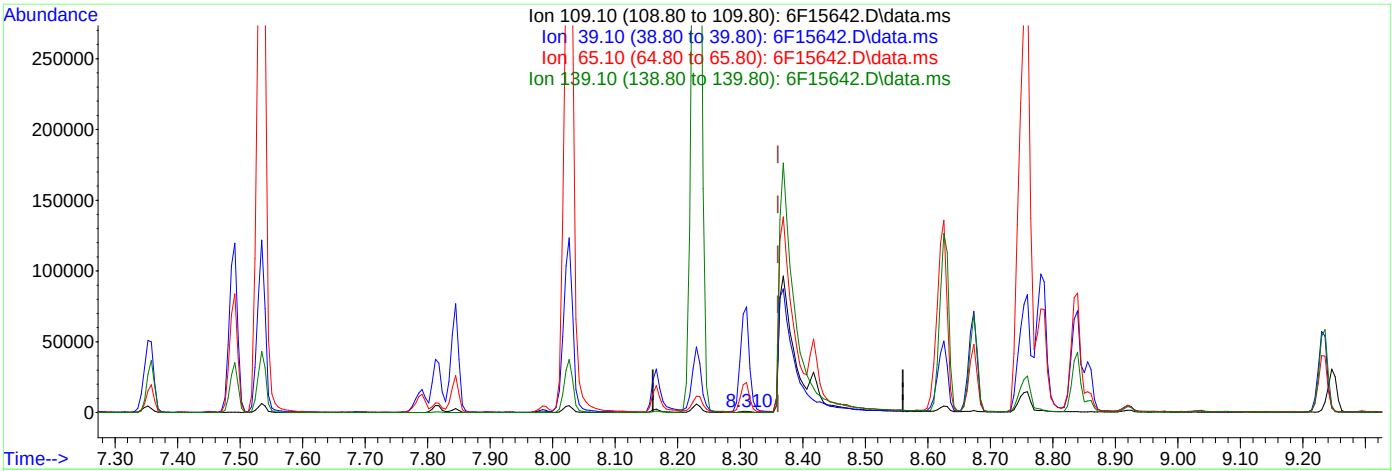
Sample Number:	OP93036-MS	**Method:**	EPA 625.1
Lab FileID:	6F15642.D	**Analyst approved:**	09/14/22 10:31 Karen Avila
Injection Time:	09/13/22 17:22	**Supervisor approved:**	09/14/22 11:01 Naresh Jiawan

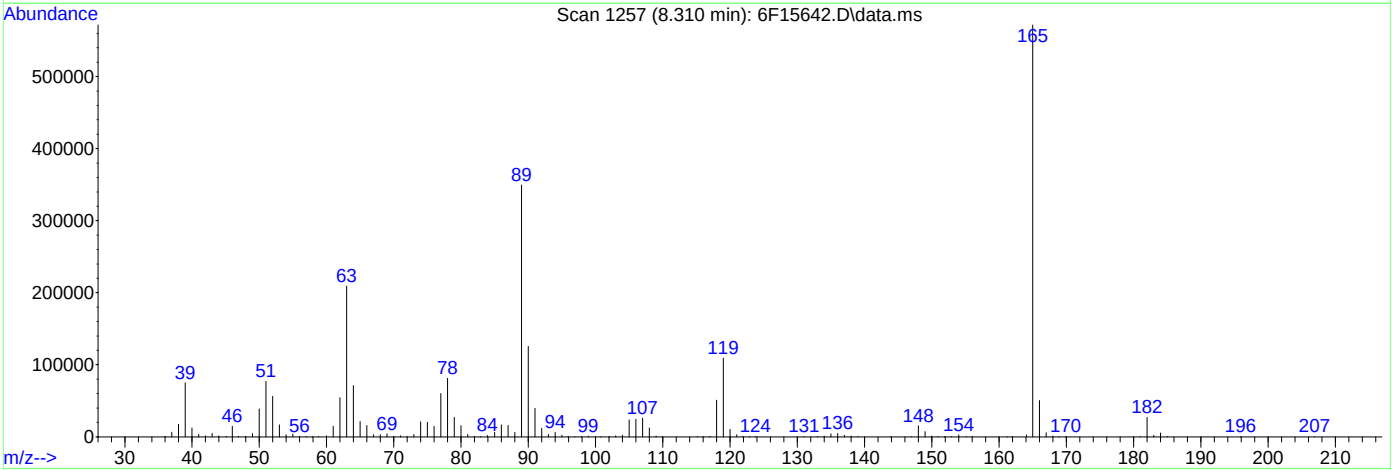
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-Nitrophenol	100-02-7		8.37	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15642.D
Acq On : 13 Sep 2022 5:22 pm
Operator : karena
Sample : op93036-ms
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 14 09:06:36 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15642.D\data.ms

(62) 4-Nitrophenol (P)

8.310min (-0.050) 0.34ppm

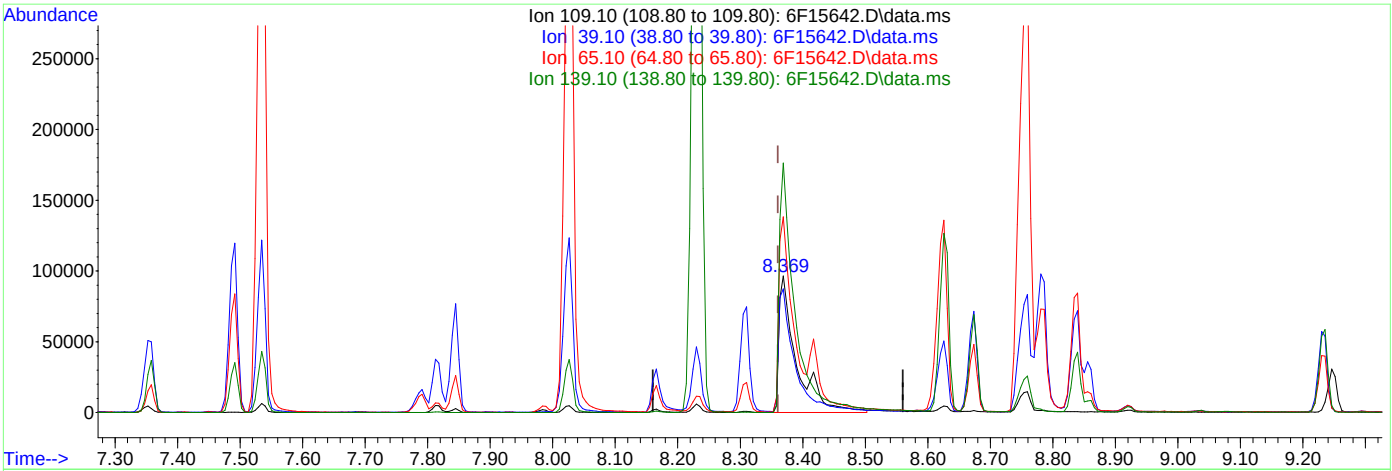
response 1302

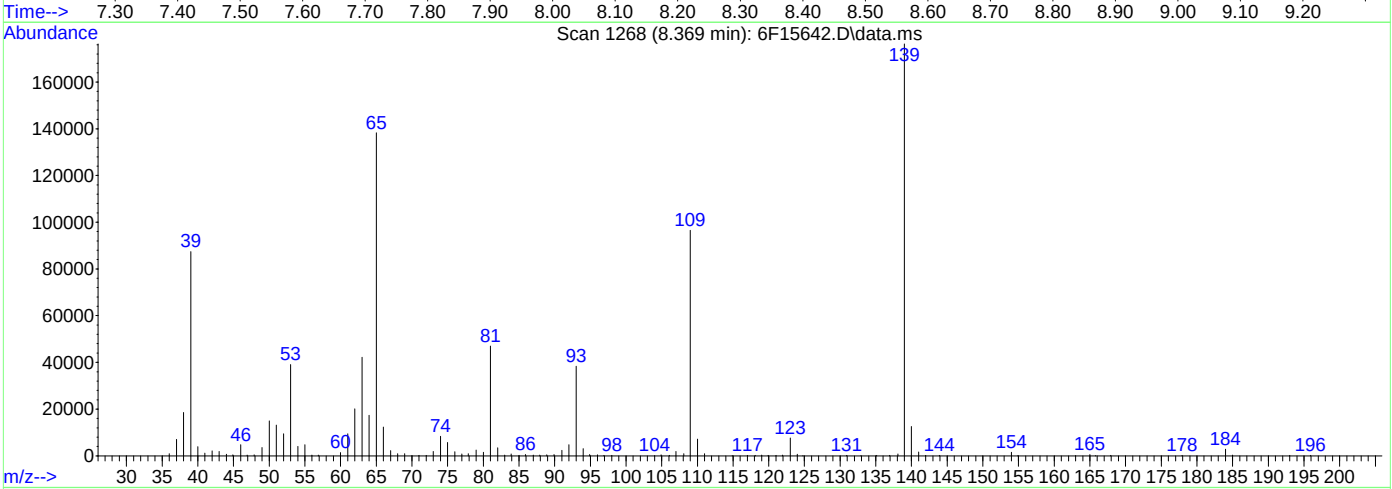
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	8044.55#
65.10	172.20	2249.61#
139.10	175.30	10.41#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15642.D
Acq On : 13 Sep 2022 5:22 pm
Operator : karena
Sample : op93036-ms
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 14 09:06:36 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15642.D\data.ms

(62) 4-Nitrophenol (P)

8.369min (+0.009) 45.30ppm m

response 189307

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	90.59#
65.10	172.20	143.21
139.10	175.30	182.73

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/14/22 11:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15643.D
Acq On : 13 Sep 2022 5:49 pm
Operator : karena
Sample : op93036-msd
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 10:28:34 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.555	152	515810	40.00	ppm		-0.06
22) Naphthalene-d8	5.967	136	2001092	40.00	ppm		-0.06
43) Acenaphthene-d10	7.984	164	1127047	40.00	ppm		-0.06
70) Phenanthrene-d10	9.706	188	2002816	40.00	ppm		-0.06
92) Chrysene-d12	12.797	240	1520813	40.00	ppm		-0.07
102) Perylene-d12	14.536	264	1389152	40.00	ppm		-0.09
System Monitoring Compounds							
7) 2-Fluorophenol	3.213	112	810986	54.72	ppm		-0.05
Spiked Amount 100.000	Range 14 - 67		Recovery = 54.72%				
9) Phenol-d5	4.304	99	754193	42.84	ppm		-0.03
Spiked Amount 100.000	Range 10 - 50		Recovery = 42.84%				
23) Nitrobenzene-d5	5.192	82	659933	40.12	ppm		-0.07
Spiked Amount 50.000	Range 42 - 108		Recovery = 80.24%				
47) 2-Fluorobiphenyl	7.256	172	1444875	40.12	ppm		-0.06
Spiked Amount 50.000	Range 40 - 106		Recovery = 80.24%				
75) 2,4,6-Tribromophenol	8.925	330	465522	88.83	ppm		-0.07
Spiked Amount 100.000	Range 33 - 118		Recovery = 88.83%				
95) Terphenyl-d14	11.631	244	1686858	44.73	ppm		-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery = 89.46%				
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.635	42	211365	29.78	ppm		98
4) Pyridine	1.651	79	316203	22.59	ppm		97
5) Benzaldehyde	4.090	106	520749	44.71	ppm		99
6) Aniline	4.224	93	687827	30.89	ppm		99
8) bis(2-Chloroethyl)ether	4.330	93	690834	46.04	ppm		92
10) Phenol	4.320	94	459637	25.64	ppm		75
11) 2-Chlorophenol	4.352	128	645365	40.49	ppm		98
12) 1,3-Dichlorobenzene	4.480	146	721332	40.87	ppm		98
13) 1,4-Dichlorobenzene	4.571	146	728249	40.71	ppm		99
14) 1,2-Dichlorobenzene	4.726	146	712431	41.93	ppm		98
15) Benzyl alcohol	4.780	108	378983	40.94	ppm		97
16) bis(2-chloroisopropyl)...	4.924	45	941858	52.34	ppm	#	63
17) 2-Methylphenol	4.967	108	513891	37.63	ppm		93
18) Acetophenone	5.037	105	929221	44.94	ppm		98
19) Hexachloroethane	5.085	117	288310	43.06	ppm		90
20) N-Nitroso-di-n-propyla...	5.079	70	473398	47.27	ppm		83
21) 3&4-Methylphenol	5.149	108	1074266	74.75	ppm		96
24) Nitrobenzene	5.213	77	694184	45.81	ppm		99
25) Isophorone	5.502	82	1322448	45.66	ppm		96
26) 2-Nitrophenol	5.571	139	403814	46.03	ppm		96
27) 2,4-Dimethylphenol	5.716	107	609590	40.95	ppm		97
29) bis(2-Chloroethoxy)met...	5.796	93	832996	46.89	ppm		98
30) Benzoic Acid	5.983	105	564414	48.63	ppm		90
31) 2,4-Dichlorophenol	5.882	162	611006	46.08	ppm		97
32) 1,2,4-Trichlorobenzene	5.919	180	652669	46.43	ppm		99
34) Naphthalene	5.994	128	1926472	40.81	ppm		99
35) 4-Chloroaniline	6.122	127	730618	37.40	ppm		99
36) 2,6-Dichlorophenol	6.117	162	595580	43.49	ppm		96
37) Hexachlorobutadiene	6.154	225	360758	46.37	ppm		98
38) Caprolactam	6.566	113	49957	10.24	ppm		83
39) 4-Chloro-3-methylphenol	6.769	107	583636	45.59	ppm		94
40) 2-Methylnaphthalene	6.796	141	1199386	46.42	ppm		98
41) 1-Methylnaphthalene	6.903	142	1318908	45.21	ppm		98
42) 1,2,4,5-Tetrachloroben...	6.994	216	682607	46.64	ppm		100
44) Hexachlorocyclopentadiene	6.978	237	342034	47.31	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15643.D
Acq On : 13 Sep 2022 5:49 pm
Operator : karena
Sample : op93036-msd
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 10:28:34 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

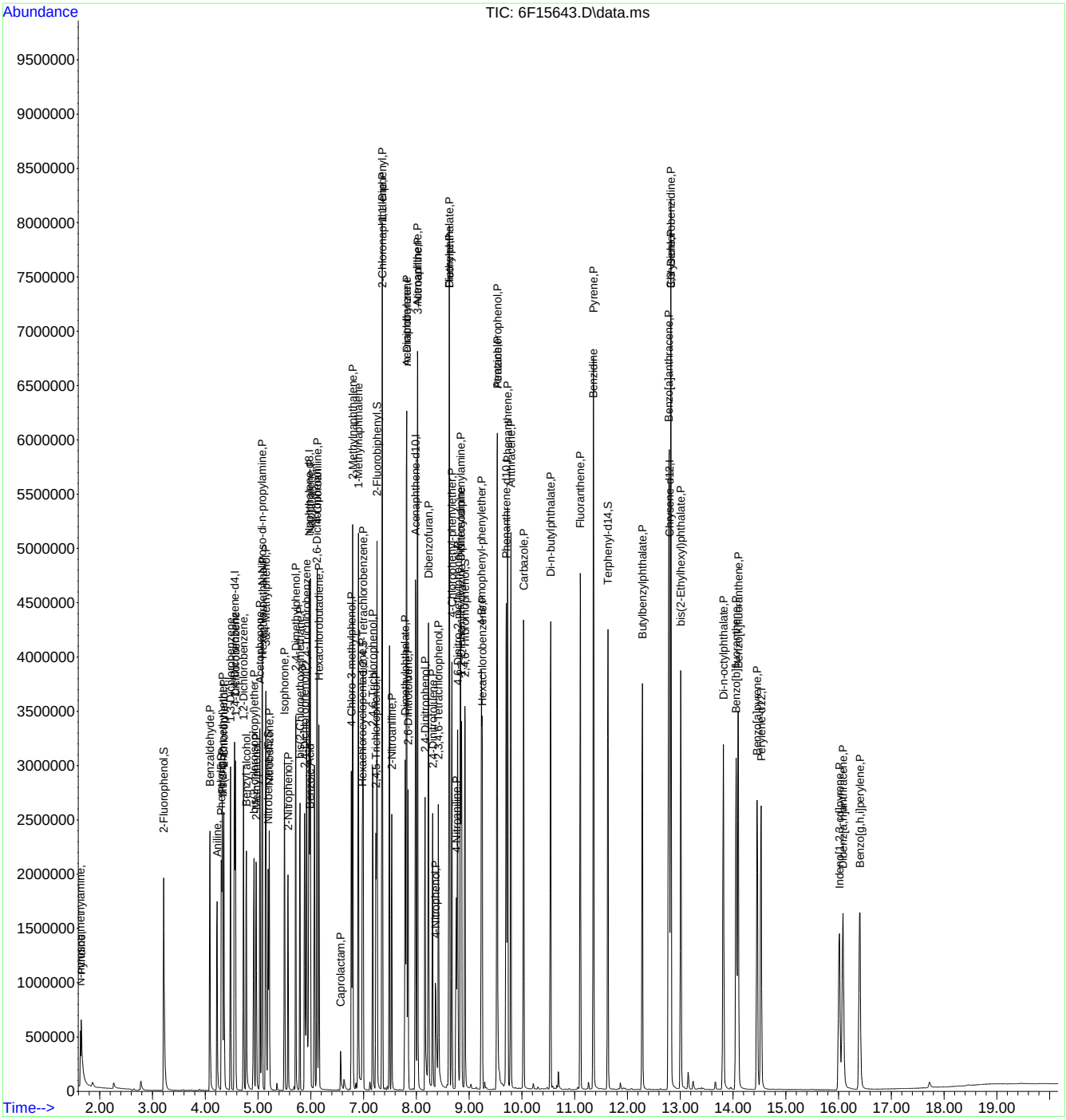
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) 2,4,6-Trichlorophenol	7.176	196	465491	53.24	ppm	97
46) 2,4,5-Trichlorophenol	7.235	196	499369	51.99	ppm	97
48) 1,1'-Biphenyl	7.358	154	1645637	44.54	ppm	99
49) 2-Chloronaphthalene	7.352	162	1317065	46.66	ppm	96
50) 2-Nitroaniline	7.534	65	392133	49.01	ppm	91
52) Acenaphthylene	7.818	152	2076587	45.90	ppm	100
53) Dimethylphthalate	7.791	163	1565257	47.26	ppm	100
54) m-Dinitrobenzene	7.818	168	282310	50.16	ppm	90
55) 2,6-Dinitrotoluene	7.845	165	383014	47.97	ppm	79
57) Acenaphthene	8.021	153	1296344	44.29	ppm	99
58) 3-Nitroaniline	8.026	138	389461	45.32	ppm	92
59) 2,4-Dinitrophenol	8.165	184	500740	95.62	ppm	89
60) Dibenzofuran	8.230	168	1800603	43.83	ppm	99
61) 2,4-Dinitrotoluene	8.310	165	512720	51.21	ppm	85
62) 4-Nitrophenol	8.363	109	206919m	48.73	ppm	
64) 2,3,4,6-Tetrachlorophenol	8.417	232	362423	49.09	ppm	98
65) Fluorene	8.625	166	1557903	48.21	ppm	98
66) 4-Chlorophenyl-phenyle...	8.674	204	771774	49.40	ppm	96
67) Diethylphthalate	8.625	149	1551483	49.77	ppm	99
69) 4-Nitroaniline	8.759	138	403575	44.42	ppm	93
71) 4,6-Dinitro-2-methylph...	8.786	198	705839	105.67	ppm	91
72) n-Nitrosodiphenylamine	8.839	169	1096738	41.48	ppm	100
73) Diphenylamine	8.839	169	1096738	37.10	ppm	100
74) 1,2-Diphenylhydrazine	8.855	77	1563038	47.39	ppm	95
78) 4-Bromophenyl-phenylether	9.235	248	469697	48.69	ppm	99
79) Hexachlorobenzene	9.251	284	487148	45.88	ppm	89
82) Atrazine	9.535	200	515495	51.04	ppm	86
83) Pentachlorophenol	9.535	266	549194	100.01	ppm	98
84) Phenanthrene	9.733	178	2194221	46.11	ppm	99
85) Anthracene	9.791	178	2121659	45.20	ppm	99
87) Carbazole	10.038	167	2024285	44.49	ppm	99
89) Di-n-butylphthalate	10.546	149	2561664	48.84	ppm	100
91) Fluoranthene	11.107	202	2317961	48.51	ppm	98
93) Benzidine	11.353	184	736965	30.33	ppm	97
94) Pyrene	11.359	202	2411695	51.42	ppm	96
97) Butylbenzylphthalate	12.284	149	1096387	52.93	ppm	94
98) 3,3'-Dichlorobenzidine	12.824	252	736337	50.72	ppm	100
99) Benzo[a]anthracene	12.787	228	2106522	51.34	ppm	99
100) Chrysene	12.824	228	2042893	51.55	ppm	99
101) bis(2-Ethylhexyl)phtha...	13.011	149	1470164	52.97	ppm	99
103) Di-n-octylphthalate	13.819	149	2449399	54.65	ppm	99
104) Benzo[b]fluoranthene	14.060	252	1877934	52.32	ppm	99
105) Benzo[k]fluoranthene	14.102	252	1836179	50.49	ppm	97
106) Benzo[a]pyrene	14.461	252	1591003	51.00	ppm	97
107) Indeno[1,2,3-cd]pyrene	16.017	276	1208543	52.48	ppm	99
108) Dibenz[a,h]anthracene	16.087	278	1314780	50.25	ppm	98
109) Benzo[g,h,i]perylene	16.408	276	1346274	48.35	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15643.D
Acq On : 13 Sep 2022 5:49 pm
Operator : karena
Sample : op93036-msd
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 10:28:34 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



8270D6F072122.m Wed Sep 14 10:28:59 2022 Page: 3

Manual Integration Approval Summary

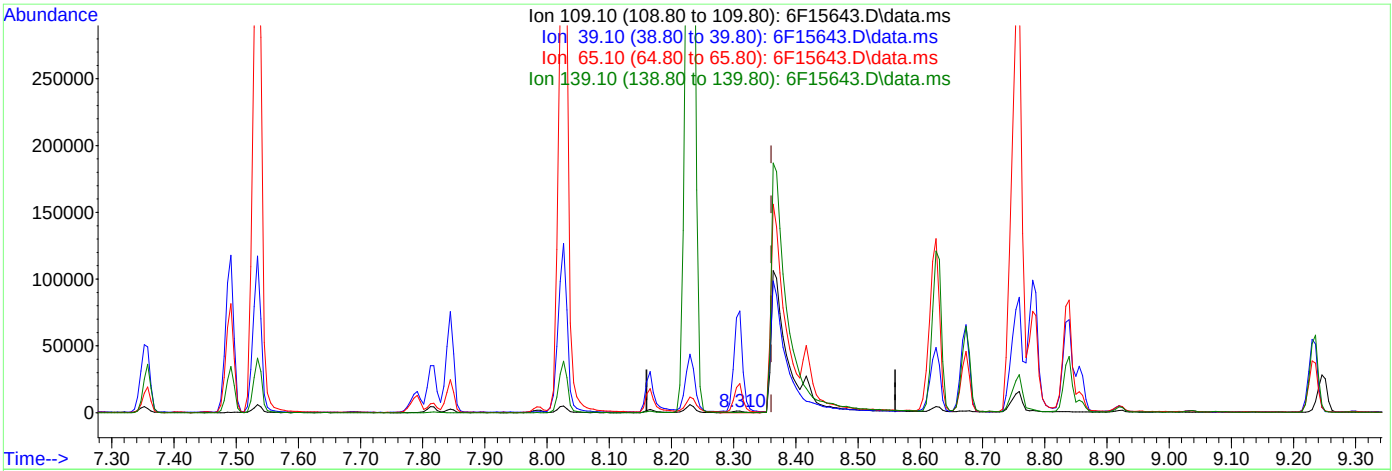
Sample Number:	OP93036-MSD	**Method:**	EPA 625.1
Lab FileID:	6F15643.D	**Analyst approved:**	09/14/22 10:31 Karen Avila
Injection Time:	09/13/22 17:49	**Supervisor approved:**	09/14/22 11:01 Naresh Jiawan

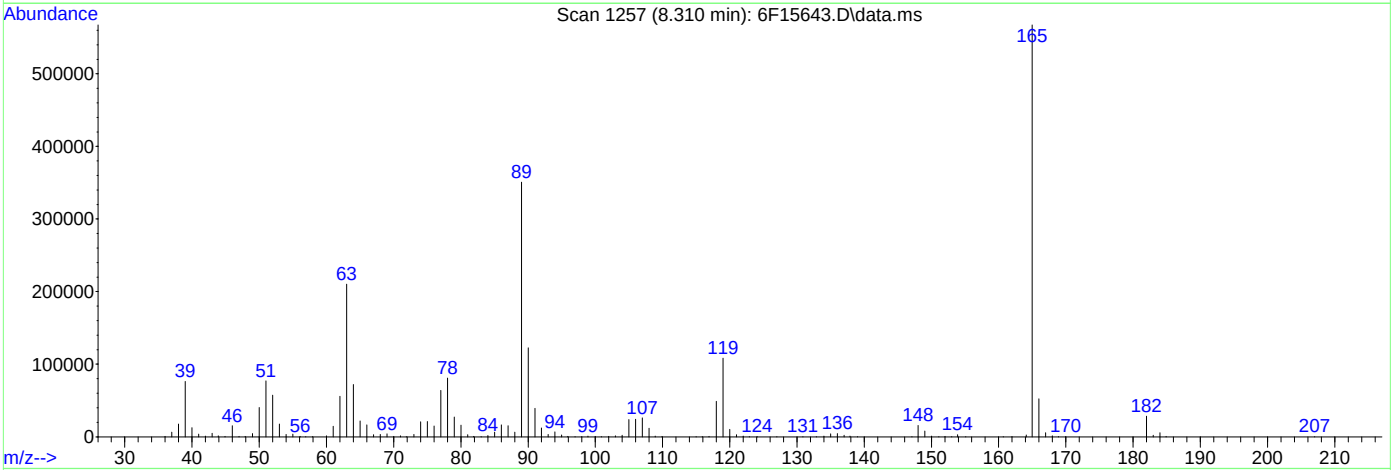
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-Nitrophenol	100-02-7		8.36	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15643.D
Acq On : 13 Sep 2022 5:49 pm
Operator : karena
Sample : op93036-msd
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 09:07:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15643.D\data.ms

(62) 4-Nitrophenol (P)

8.310min (-0.050) 0.39ppm

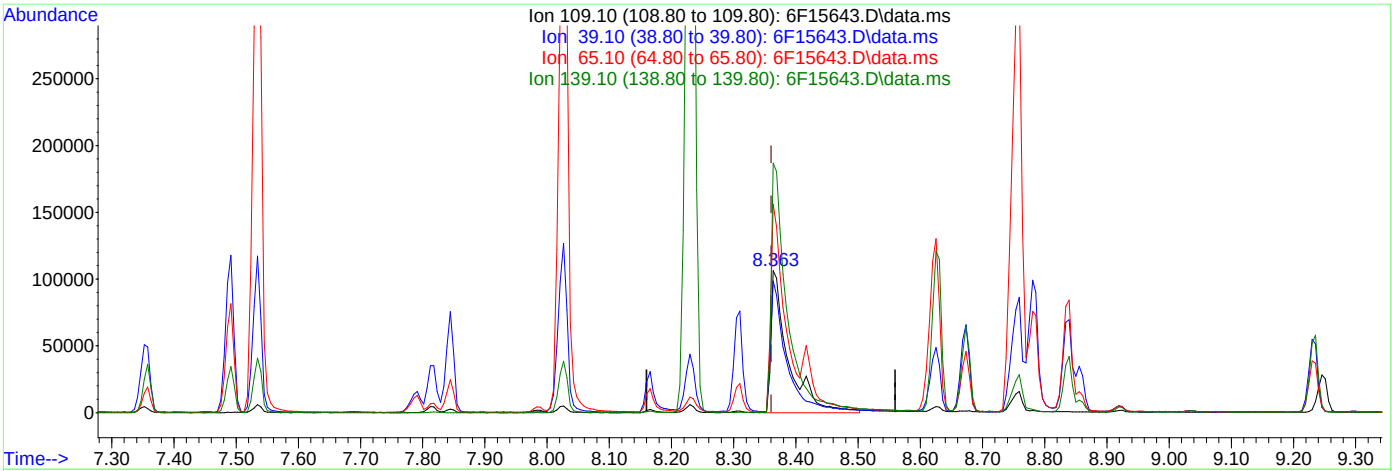
response 1506

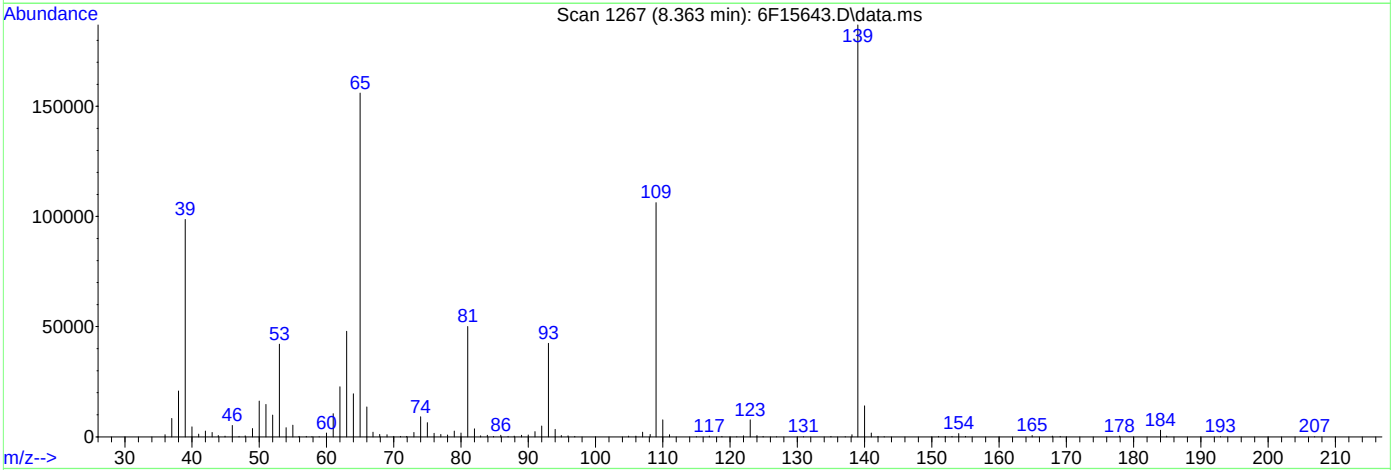
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	6445.93#
65.10	172.20	1813.67#
139.10	175.30	2.61#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15643.D
Acq On : 13 Sep 2022 5:49 pm
Operator : karena
Sample : op93036-msd
Misc : op93036,S6F586,510,,,1,1,water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 09:07:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15643.D\data.ms

(62) 4-Nitrophenol (P)

8.363min (+0.003) 48.73ppm m

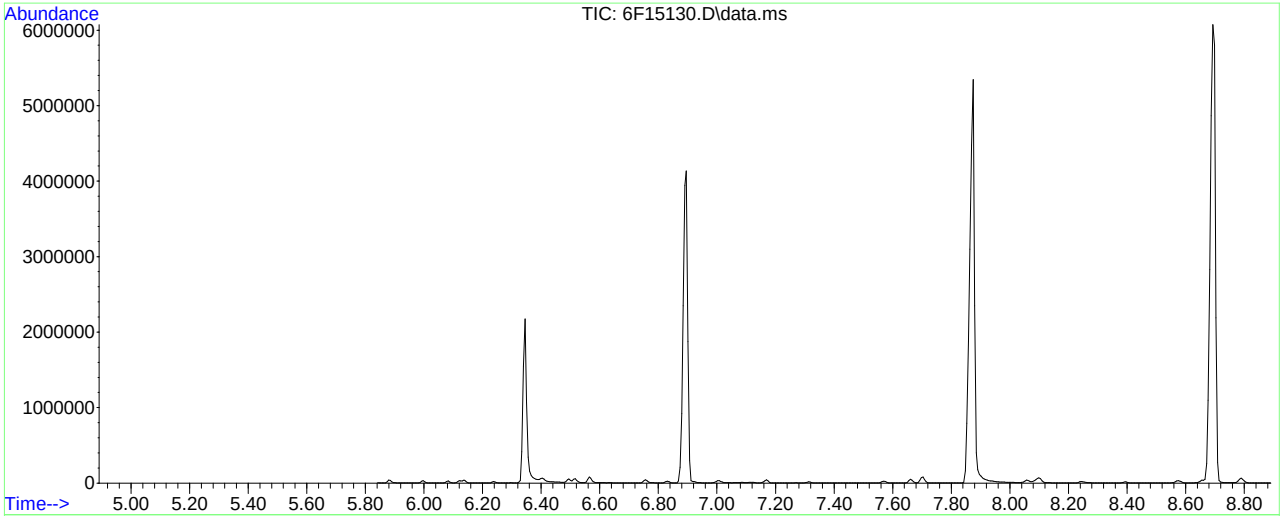
response 206919

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	92.80#
65.10	172.20	146.80
139.10	175.30	175.94

SW-846 Method 8270

Data File : C:\msdchem\1\data\S6F563\6F15130.D Vial: 1
Acq On : 21 Jul 2022 11:54 am Operator: williamh
Sample : DFTPP Inst : MSBNA10
Misc : op91638,S6F563,30,,,1,1,soil Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP.m (RTE Integrator)
Title : Tune Evaluation



AutoFind: Scans 196, 197, 198; Background Corrected with Scan 190

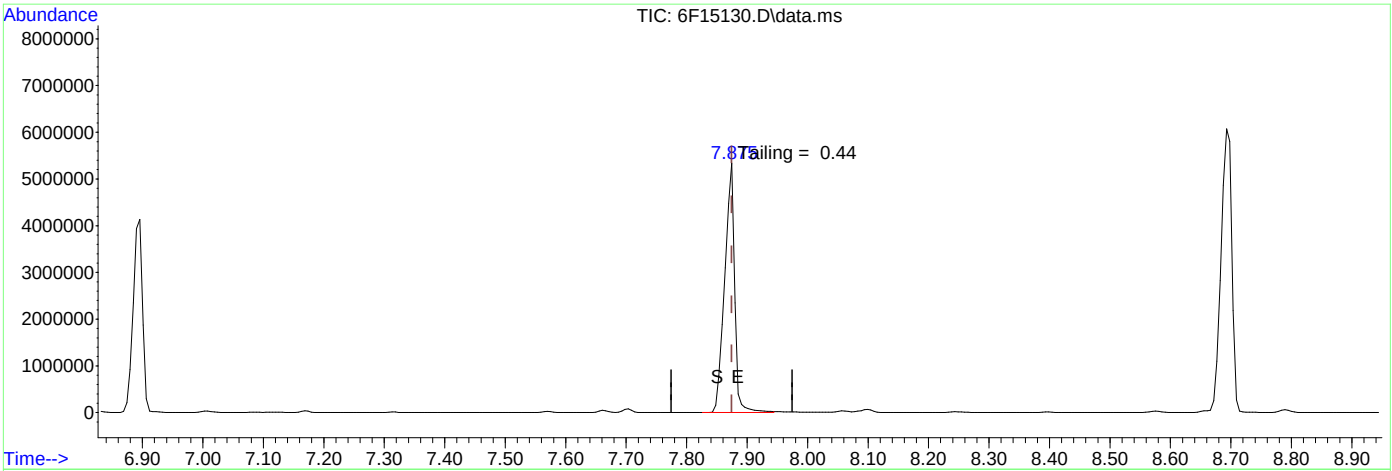
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.7	128683	PASS
68	69	0.00	2	0.5	818	PASS
69	198	0.00	100	37.7	153104	PASS
70	69	0.00	2	0.5	765	PASS
127	198	40	60	47.0	190699	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	405973	PASS
199	198	5	9	6.9	27901	PASS
275	198	10	30	25.6	104104	PASS
365	198	1	100	3.3	13443	PASS
441	443	0.01	100	77.5	60600	PASS
442	198	40	100	97.5	396011	PASS
443	442	17	23	19.8	78221	PASS

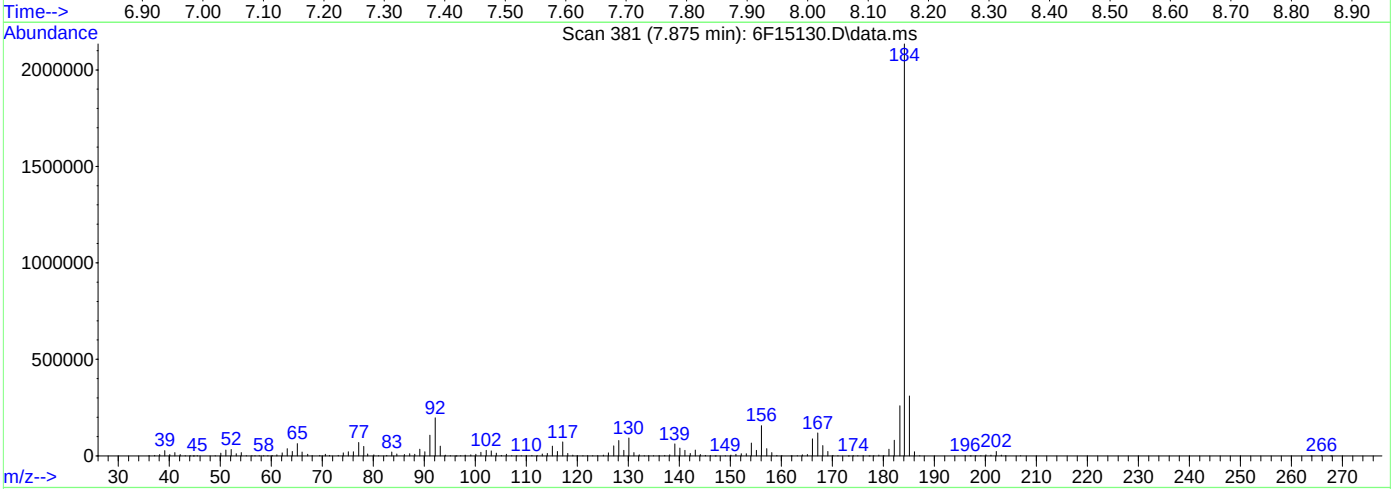
6F15130.D DFTPP.m Fri Jul 22 13:03:48 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15130.D
Acq On : 21 Jul 2022 11:54 am
Operator : williamh
Sample : DFTPP
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 22 11:54:43 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration





TIC: 6F15130.D\data.ms

(3) Benzidine

7.875min (0.000) 145.38

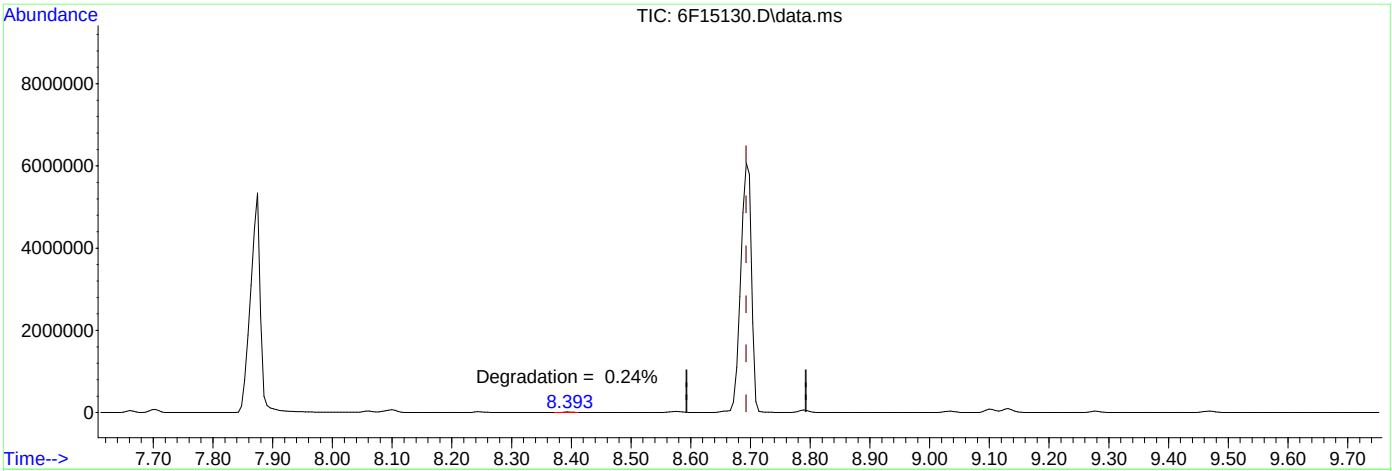
response 6166333

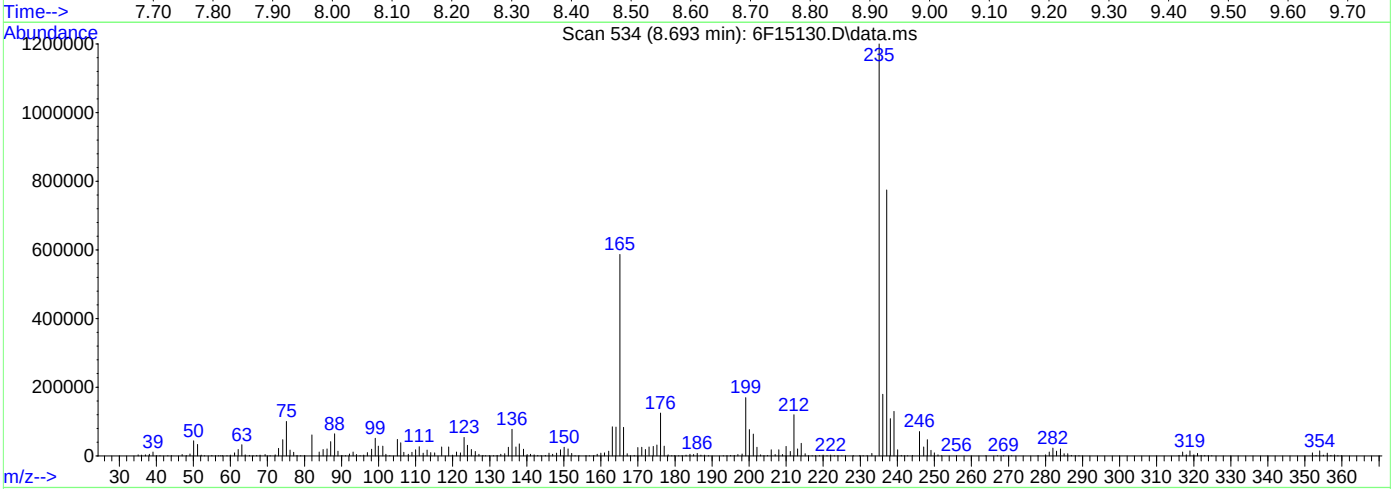
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15130.D
Acq On : 21 Jul 2022 11:54 am
Operator : williamh
Sample : DFTPP
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 22 11:54:43 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration





TIC: 6F15130.D\data.ms

(4) DDT

8.693min (0.000) 216.85

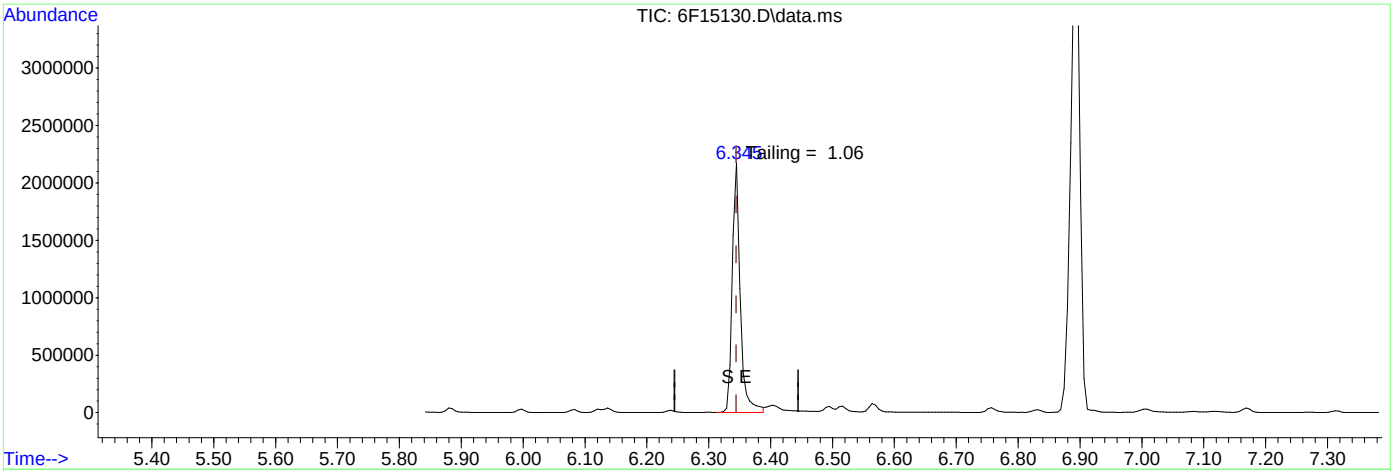
response 7569838

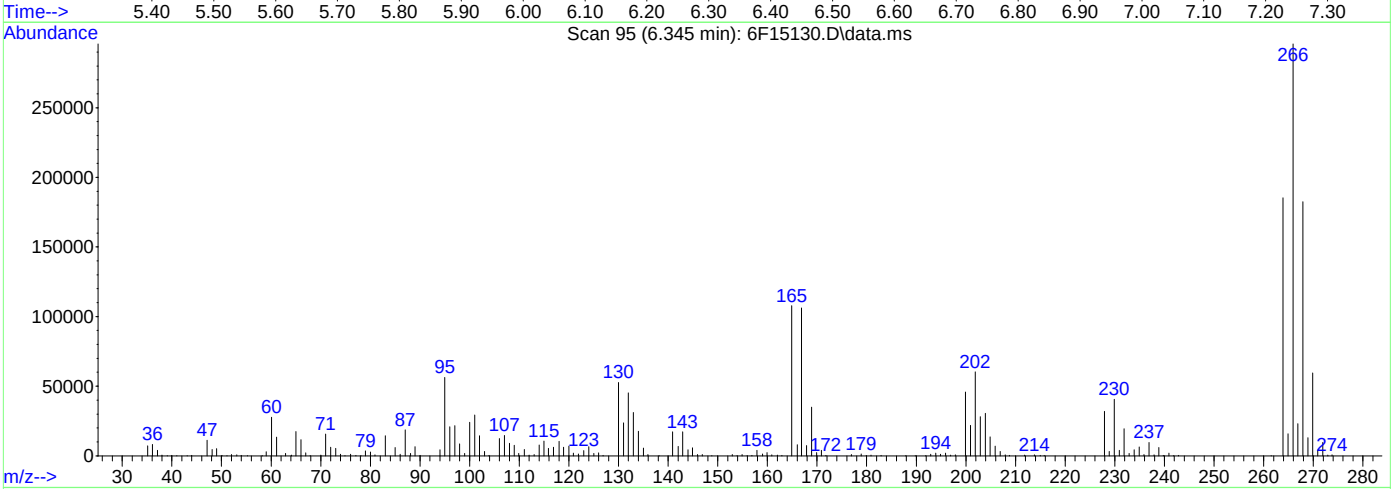
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15130.D
Acq On : 21 Jul 2022 11:54 am
Operator : williamh
Sample : DFTPP
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 22 11:54:43 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration





TIC: 6F15130.D\data.ms

(1) Pentachlorophenol

6.345min (0.000) 81.59

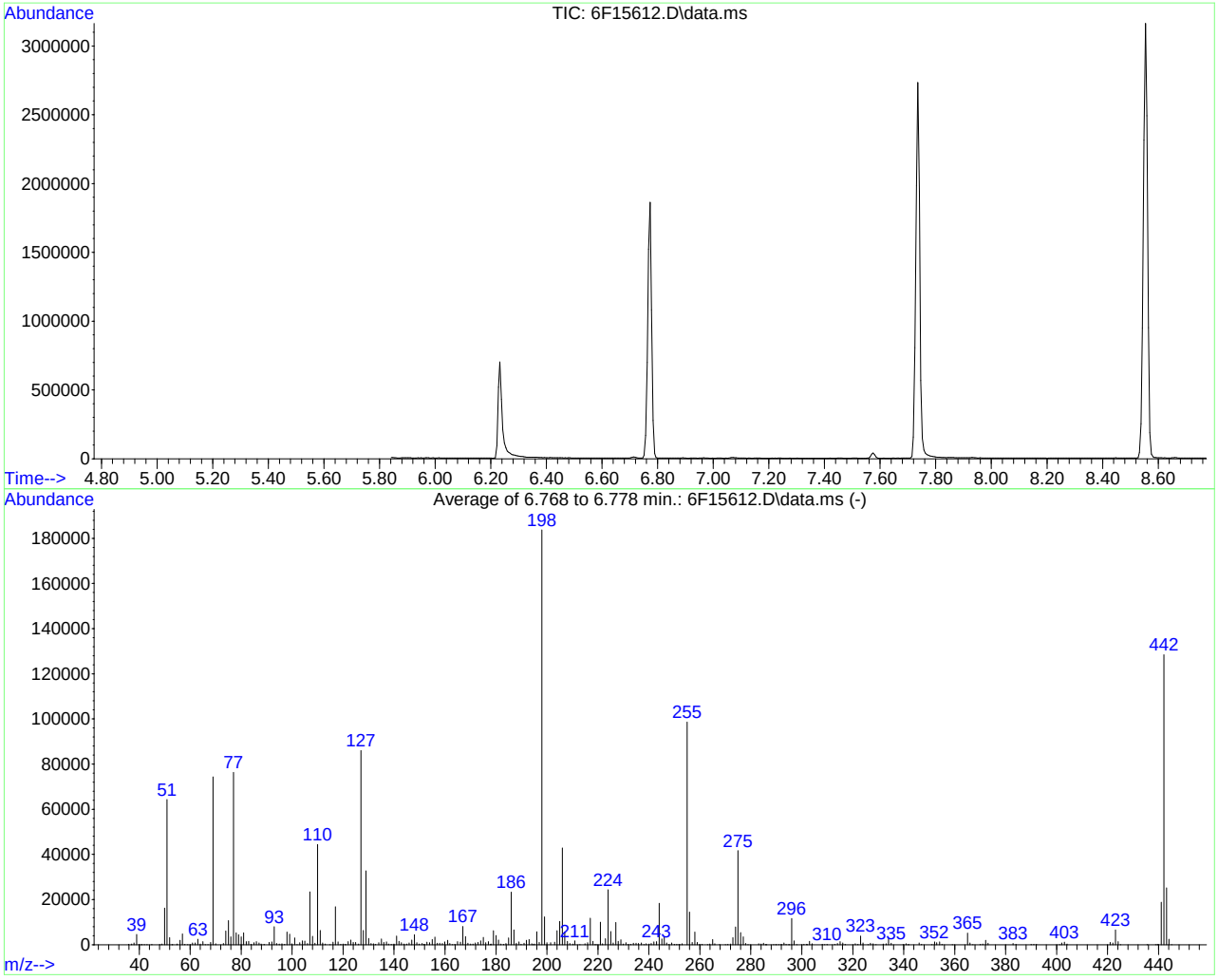
response 1951565

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

SW-846 Method 8270

Data File : C:\msdchem\1\data\S6F586\6F15612.D Vial: 1
Acq On : 13 Sep 2022 1:02 pm Operator: karena
Sample : DFTPP Inst : MSBNA10
Misc : op92994,S6F586,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\methods\DFTPP.m (RTE Integrator)
Title : Tune Evaluation



AutoFind: Scans 174, 175, 176; Background Corrected with Scan 168

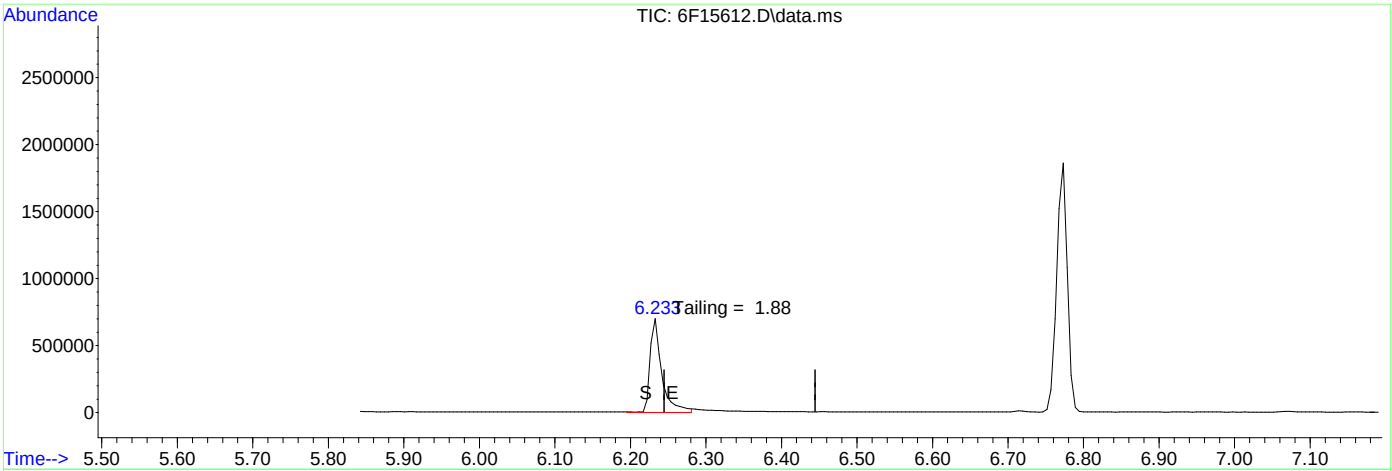
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.0	64284	PASS
68	69	0.00	2	1.4	1058	PASS
69	198	0.00	100	40.5	74376	PASS
70	69	0.00	2	0.6	436	PASS
127	198	40	60	46.8	86045	PASS
197	198	0.00	1	0.6	1028	PASS
198	198	100	100	100.0	183680	PASS
199	198	5	9	6.7	12298	PASS
275	198	10	30	22.7	41701	PASS
365	198	1	100	2.8	5128	PASS
441	443	0.01	100	75.0	18867	PASS
442	198	40	100	69.9	128475	PASS
443	442	17	23	19.6	25155	PASS

6F15612.D DFTPP.m Wed Sep 14 09:18:14 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15612.D
Acq On : 13 Sep 2022 1:02 pm
Operator : karena
Sample : DFTPP
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 13:14:16 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration



TIC: 6F15612.D\data.ms

(1) Pentachlorophenol

6.345min (-6.345) 0.00

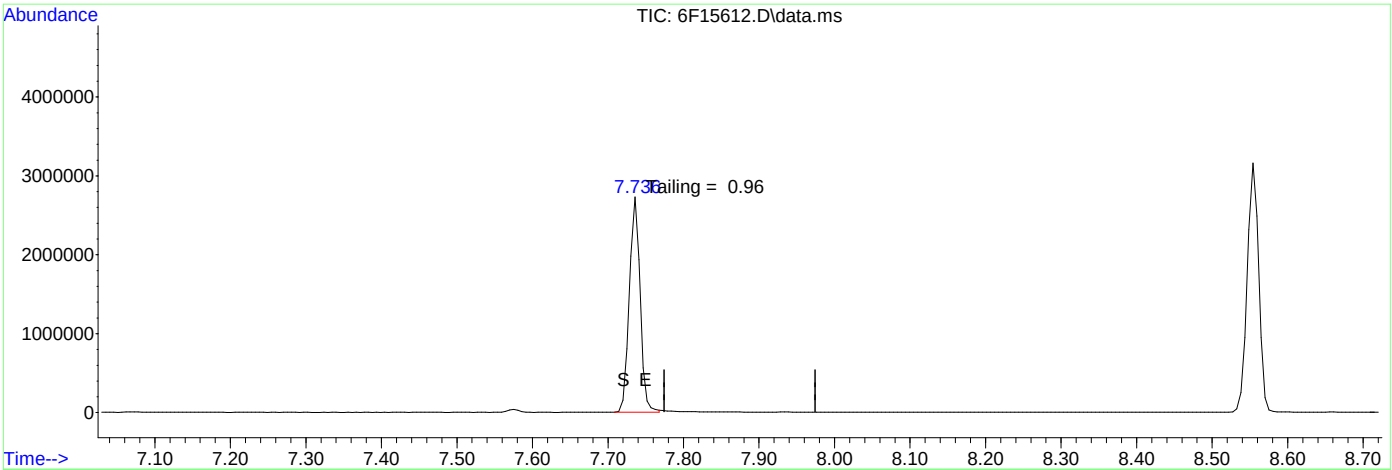
response 0

Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15612.D
Acq On : 13 Sep 2022 1:02 pm
Operator : karena
Sample : DFTPP
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 13:14:16 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration



TIC: 6F15612.D\data.ms

(3) Benzidine

7.875min 0.00 d

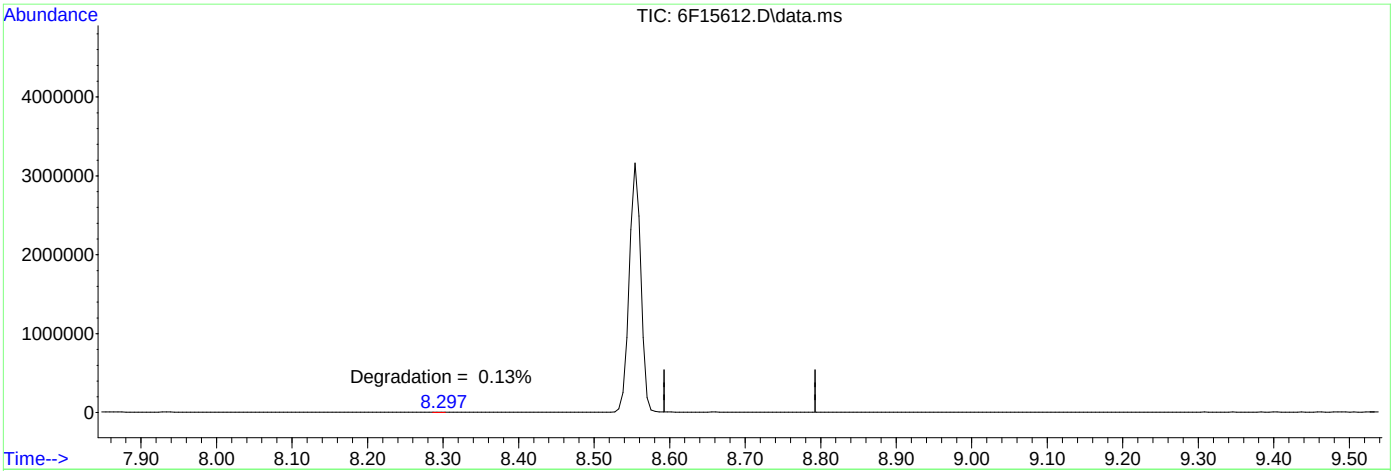
response 0

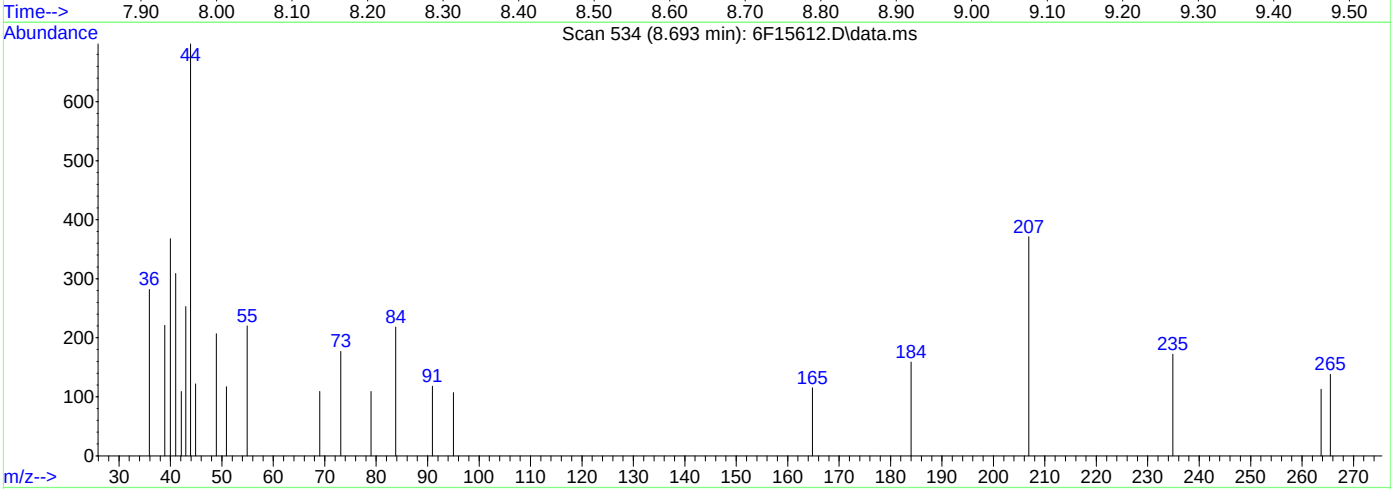
Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15612.D
Acq On : 13 Sep 2022 1:02 pm
Operator : karena
Sample : DFTPP
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 13:14:16 2022
Quant Method : C:\msdchem\1\methods\DFTPP.m
Quant Title : Tune Evaluation
QLast Update : Fri Jul 22 11:54:28 2022
Response via : Initial Calibration





TIC: 6F15612.D\data.ms

(4) DDT

8.693min 0.00 d

response 0

Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.704	152	434047	40.00	ppm		0.00
22) Naphthalene-d8	6.116	136	1643430	40.00	ppm		0.00
43) Acenaphthene-d10	8.137	164	939653	40.00	ppm		0.00
70) Phenanthrene-d10	9.860	188	1599761	40.00	ppm		0.00
92) Chrysene-d12	12.957	240	1296980	40.00	ppm		0.00
102) Perylene-d12	14.748	264	1249559	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	3.367	112	21058	1.54	ppm		0.03
Spiked Amount 100.000	Range 40 - 102		Recovery =	1.54%#			
9) Phenol-d5	4.426	99	27065	1.57	ppm		0.02
Spiked Amount 100.000	Range 41 - 100		Recovery =	1.57%#			
23) Nitrobenzene-d5	5.346	82	13208	0.83	ppm		0.00
Spiked Amount 50.000	Range 40 - 105		Recovery =	1.66%#			
47) 2-Fluorobiphenyl	7.405	172	32832	1.11	ppm		0.00
Spiked Amount 50.000	Range 43 - 107		Recovery =	2.22%#			
75) 2,4,6-Tribromophenol	9.068	330	7265	1.89	ppm		-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery =	1.89%#			
95) Terphenyl-d14	11.791	244	33362	1.02	ppm		0.00
Spiked Amount 50.000	Range 45 - 119		Recovery =	2.04%#			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.858	42	8642m	1.54	ppm		
4) Pyridine	2.061	79	12021m	0.77	ppm		
5) Benzaldehyde	4.265	106	9543	0.82	ppm		96
6) Aniline	4.383	93	17563	0.80	ppm		94
8) bis(2-Chloroethyl)ether	4.479	93	12197	0.80	ppm		94
10) Phenol	4.442	94	13871	0.78	ppm		99
11) 2-Chlorophenol	4.506	128	12636	0.93	ppm		96
12) 1,3-Dichlorobenzene	4.634	146	15609	1.05	ppm		96
13) 1,4-Dichlorobenzene	4.725	146	15530	1.03	ppm		94
14) 1,2-Dichlorobenzene	4.886	146	14723	1.03	ppm		94
15) Benzyl alcohol	4.950	108	5631	0.62	ppm	#	50
16) bis(2-chloroisopropyl)...	5.067	45	16549	0.96	ppm	#	65
17) 2-Methylphenol	5.089	108	10470	0.81	ppm		81
18) Acetophenone	5.190	105	16610	0.86	ppm		98
19) Hexachloroethane	5.233	117	5794	0.95	ppm		92
20) N-Nitroso-di-n-propyla...	5.206	70	8547	0.80	ppm		89
21) 3&4-Methylphenol	5.297	108	10543	0.79	ppm		94
24) Nitrobenzene	5.367	77	10949	0.76	ppm		96
25) Isophorone	5.640	82	23389	0.81	ppm		93
26) 2-Nitrophenol	5.731	139	5932	0.86	ppm		87
27) 2,4-Dimethylphenol	5.843	107	11042	0.81	ppm		97
28) O,O,O-Triethylphosphor...	5.902	198	5915	0.91	ppm		98
29) bis(2-Chloroethoxy)met...	5.934	93	14985	0.87	ppm		96
30) Benzoic Acid	6.121	105	5547m	0.69	ppm		
31) 2,4-Dichlorophenol	6.046	162	8931	0.83	ppm		90
32) 1,2,4-Trichlorobenzene	6.073	180	11983	1.03	ppm		98
34) Naphthalene	6.137	128	43888	1.15	ppm		93
35) 4-Chloroaniline	6.271	127	15167	0.92	ppm		99
36) 2,6-Dichlorophenol	6.260	162	11730	1.06	ppm		92
37) Hexachlorobutadiene	6.303	225	6704	1.07	ppm		96
38) Caprolactam	6.656	113	2998	0.67	ppm		90
39) 4-Chloro-3-methylphenol	6.907	107	8803	0.74	ppm		95
40) 2-Methylnaphthalene	6.950	141	22119	1.04	ppm		97
41) 1-Methylnaphthalene	7.052	142	26140	1.08	ppm		98
42) 1,2,4,5-Tetrachloroben...	7.143	216	13240	1.10	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	Hexachlorocyclopentadiene	7.127	237	737m	0.16	ppm		
45)	2,4,6-Trichlorophenol	7.325	196	5843	0.79	ppm		96
46)	2,4,5-Trichlorophenol	7.399	196	7163m	0.87	ppm		
48)	1,1'-Biphenyl	7.506	154	33166	1.08	ppm		99
49)	2-Chloronaphthalene	7.506	162	26433	1.11	ppm		95
50)	2-Nitroaniline	7.683	65	5558	0.73	ppm		94
51)	p-Dinitrobenzene	7.891	75	3741m	0.77	ppm		
52)	Acenaphthylene	7.972	152	38047	0.99	ppm		99
53)	Dimethylphthalate	7.924	163	28265	1.01	ppm		99
54)	m-Dinitrobenzene	7.972	168	3415	0.73	ppm	#	26
55)	2,6-Dinitrotoluene	7.982	165	5866	0.88	ppm		87
56)	o-Dinitrobenzene	8.025	50	3068	0.98	ppm		91
57)	Acenaphthene	8.175	153	26953	1.11	ppm		98
58)	3-Nitroaniline	8.180	138	5870	0.81	ppm		87
60)	Dibenzofuran	8.384	168	36376	1.06	ppm		97
61)	2,4-Dinitrotoluene	8.464	165	6385	0.76	ppm		89
62)	4-Nitrophenol	8.581	109	1102m	0.35	ppm		
63)	2,3,5,6-Tetrachlorophenol	8.523	232	2751	0.53	ppm		94
64)	2,3,4,6-Tetrachlorophenol	8.576	232	4755m	0.81	ppm		
65)	Fluorene	8.779	166	28344	1.02	ppm		98
66)	4-Chlorophenyl-phenyle...	8.827	204	13538	1.03	ppm		99
67)	Diethylphthalate	8.753	149	26159	0.93	ppm		99
68)	Thionazin	8.838	97	4990	0.70	ppm		92
69)	4-Nitroaniline	8.892	138	4474	0.59	ppm		96
71)	4,6-Dinitro-2-methylph...	8.940	198	1175	0.34	ppm	#	61
72)	n-Nitrosodiphenylamine	8.977	169	24177	1.15	ppm		98
73)	Diphenylamine	8.977	169	24177	1.03	ppm		98
74)	1,2-Diphenylhydrazine	9.004	77	25087	0.81	ppm		89
76)	Sulfotep	9.229	97	3882	0.77	ppm		93
77)	Phorate	9.336	75	12359	0.66	ppm		93
78)	4-Bromophenyl-phenylether	9.389	248	7748	1.01	ppm		98
79)	Hexachlorobenzene	9.405	284	9161	1.10	ppm		93
80)	Dimethoate	9.534	87	7434	0.60	ppm		89
81)	Simazine	9.619	201	1337	0.80	ppm		97
82)	Atrazine	9.662	200	6701	0.82	ppm		98
83)	Pentachlorophenol	9.699	266	1149	0.40	ppm		99
84)	Phenanthrene	9.886	178	43252	1.12	ppm		98
85)	Anthracene	9.945	178	38898	1.02	ppm		98
86)	Disulfoton	9.956	88	13748	0.75	ppm		99
87)	Carbazole	10.186	167	35836	0.97	ppm		99
88)	Methyl Parathion	10.389	109	4998	0.55	ppm		95
89)	Di-n-butylphthalate	10.689	149	38178	0.86	ppm		99
90)	Ethyl Parathion	10.865	97	2763	0.49	ppm		90
91)	Fluoranthene	11.272	202	37332	0.94	ppm		97
93)	Benzidine	11.518	184	15261	0.59	ppm		97
94)	Pyrene	11.523	202	39414	0.94	ppm		96
96)	Famphur	12.336	218	9087	0.65	ppm		79
97)	Butylbenzylphthalate	12.438	149	13130	0.69	ppm		93
98)	3,3'-Dichlorobenzidine	12.989	252	10167	0.76	ppm		90
99)	Benzo[a]anthracene	12.946	228	36968	1.02	ppm		98
100)	Chrysene	12.983	228	37144	1.09	ppm		98
101)	bis(2-Ethylhexyl)phtha...	13.171	149	16631	0.64	ppm		97
103)	Di-n-octylphthalate	14.000	149	20412	0.47	ppm		98
104)	Benzo[b]fluoranthene	14.267	252	25834	0.74	ppm		97
105)	Benzo[k]fluoranthene	14.299	252	31531	0.89	ppm		96
106)	Benzo[a]pyrene	14.679	252	21547	0.69	ppm		100
107)	Indeno[1,2,3-cd]pyrene	16.321	276	15800	0.67	ppm		96
108)	Dibenz[a,h]anthracene	16.385	278	20139	0.78	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration

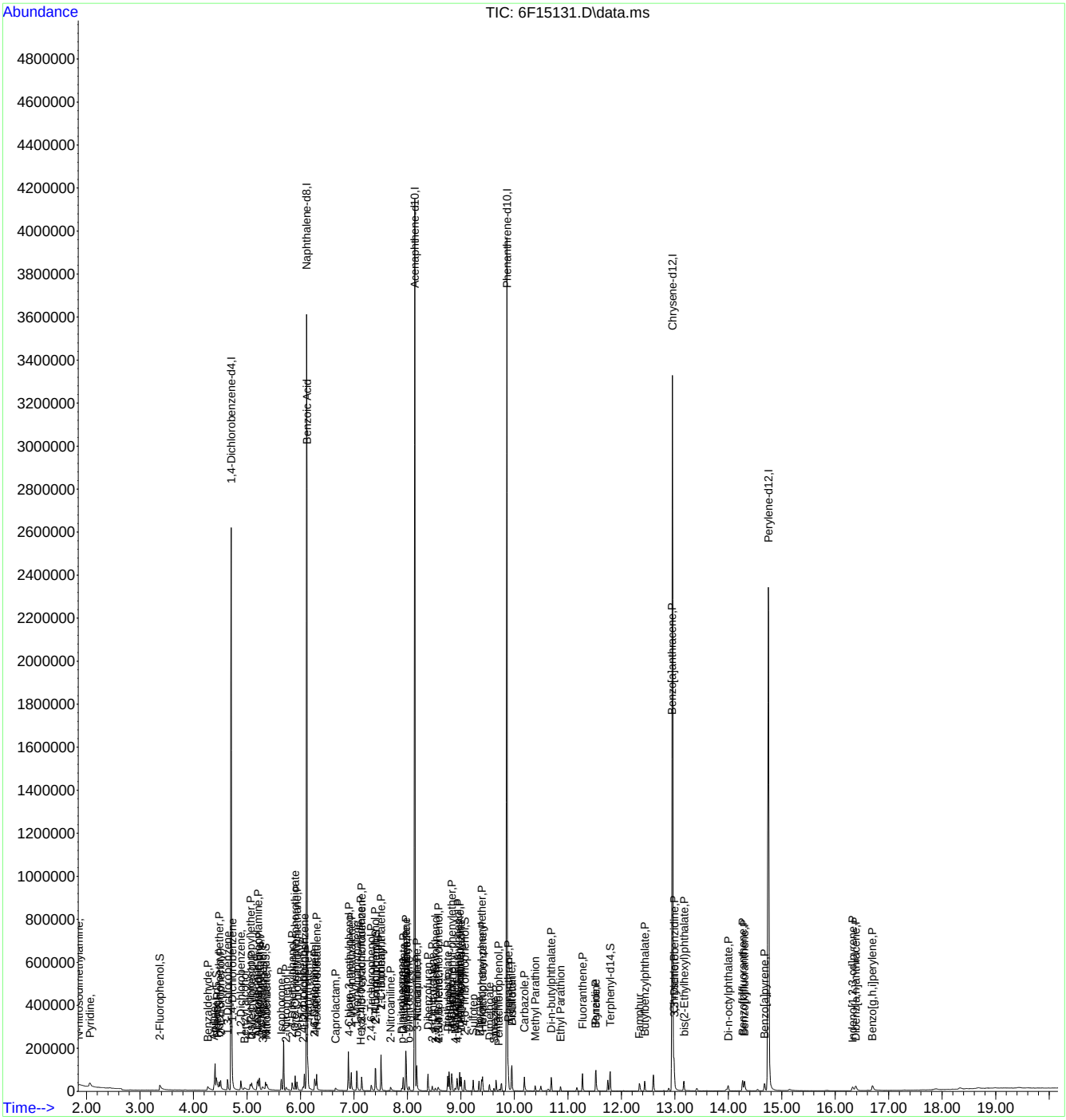
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) Benzo[g,h,i]perylene	16.695	276	21409	0.77	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration



Manual Integration Approval Summary

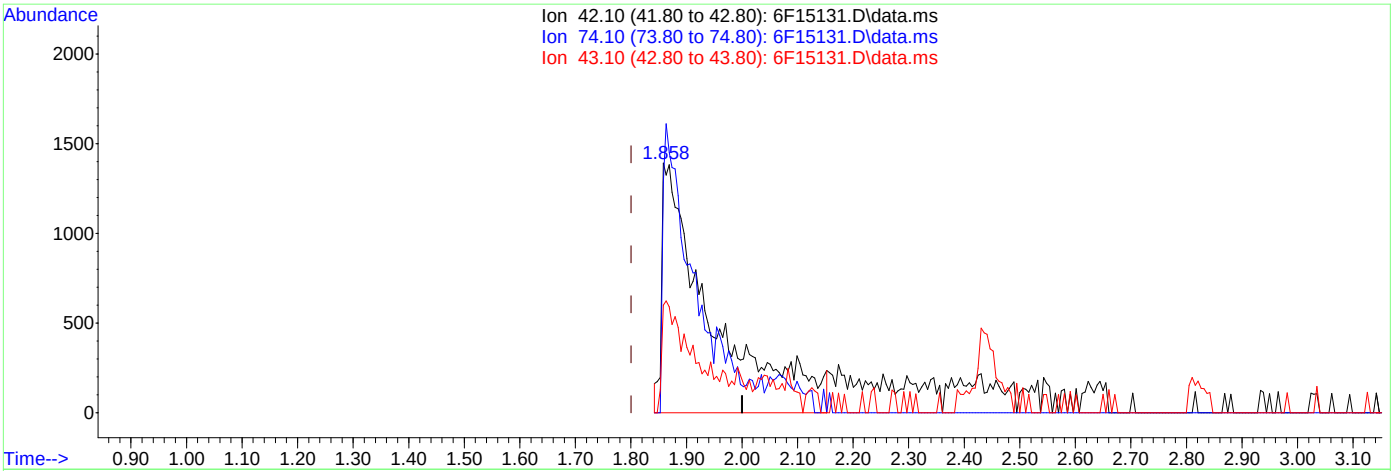
Sample Number: S6F563-IC563
Lab FileID: 6F15131.D
Injection Time: 07/21/22 12:11
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

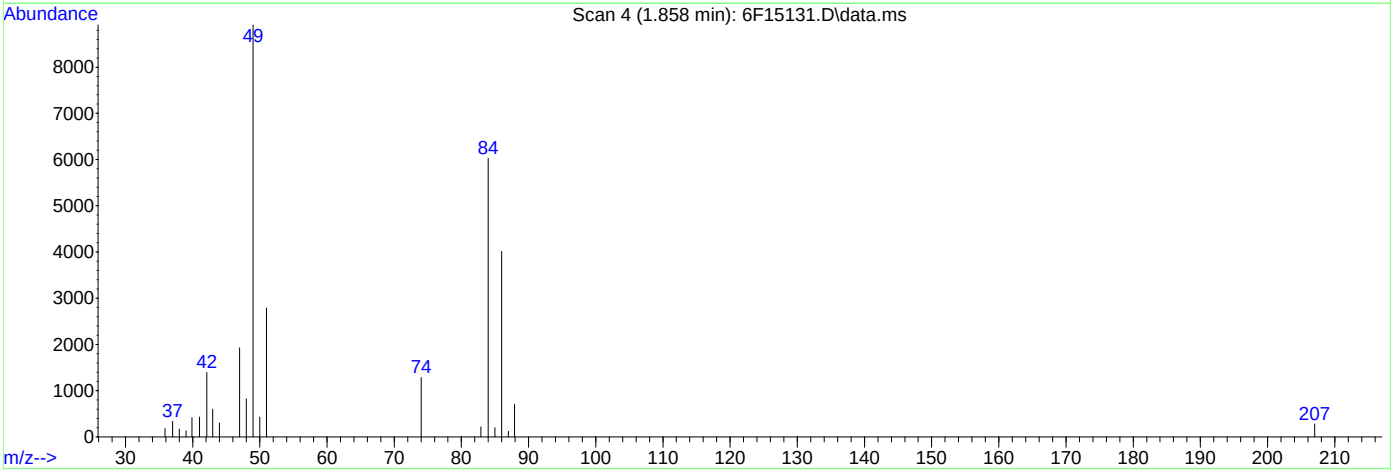
Parameter	CAS	Sig#	R.T. (min.)	Reason
N-Nitrosodimethylamine	62-75-9		1.86	Poor instrument integration
Pyridine	110-86-1		2.06	Poor instrument integration
Benzoic Acid	65-85-0		6.12	Poor instrument integration
Hexachlorocyclopentadiene	77-47-4		7.13	Poor instrument integration
2,4,5-Trichlorophenol	95-95-4		7.40	Poor instrument integration
p-Dinitrobenzene	100-25-4		7.89	Poor instrument integration
4-Nitrophenol	100-02-7		8.58	Poor instrument integration
2,3,4,6-Tetrachlorophenol	58-90-2		8.58	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(3) N-nitrosodimethylamine ( )

1.858min (+0.057) 1.54ppm m

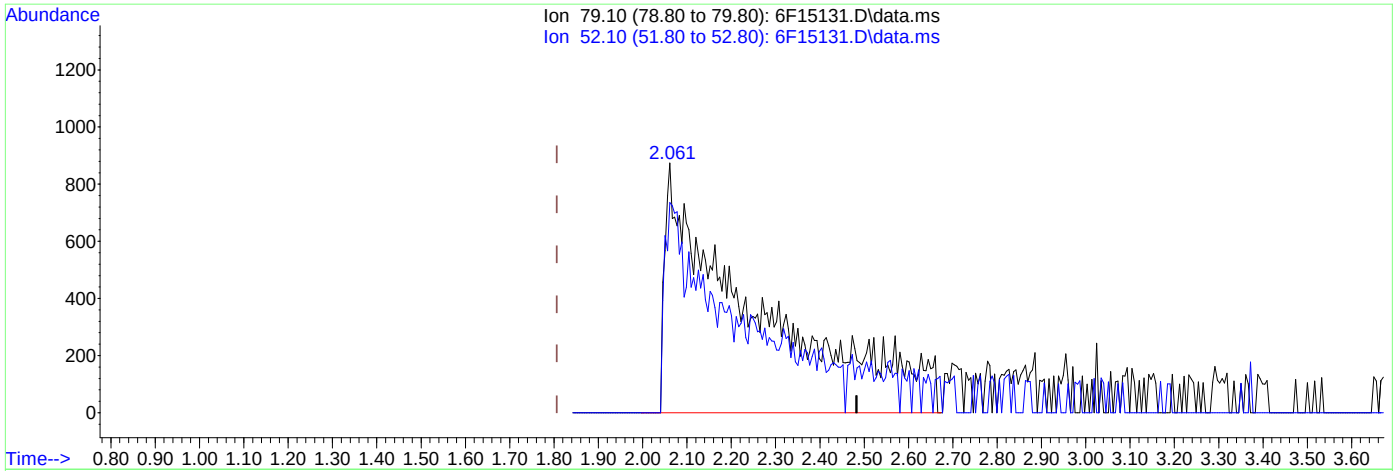
response 8642

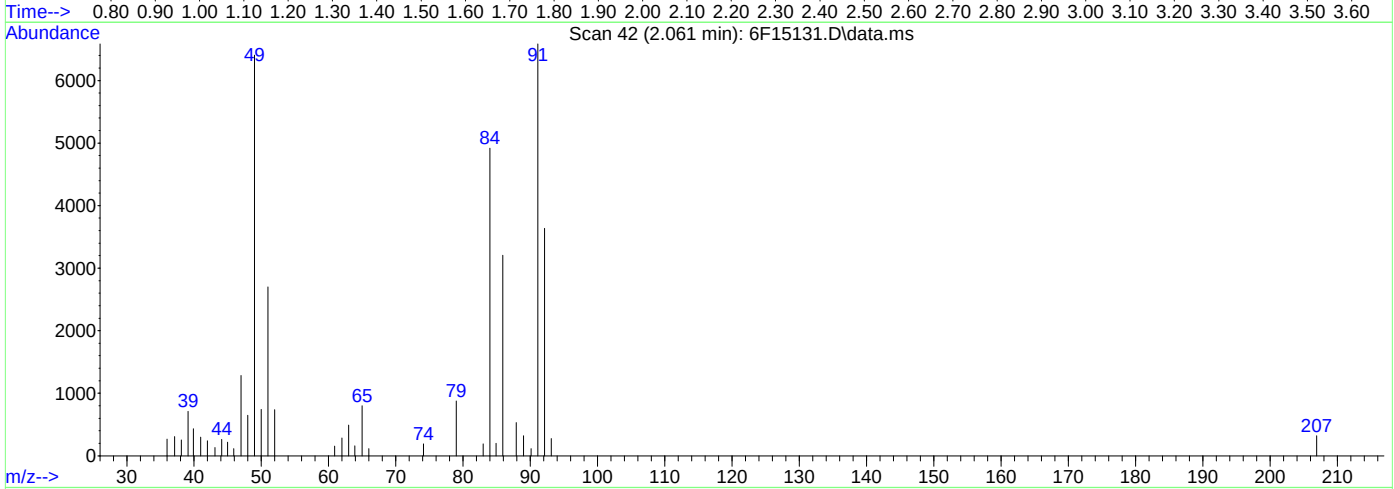
Ion	Exp%	Act%
42.10	100	100
74.10	132.00	92.39#
43.10	42.20	43.03
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(4) Pyridine ( )

2.061min (+0.255) 0.77ppm m

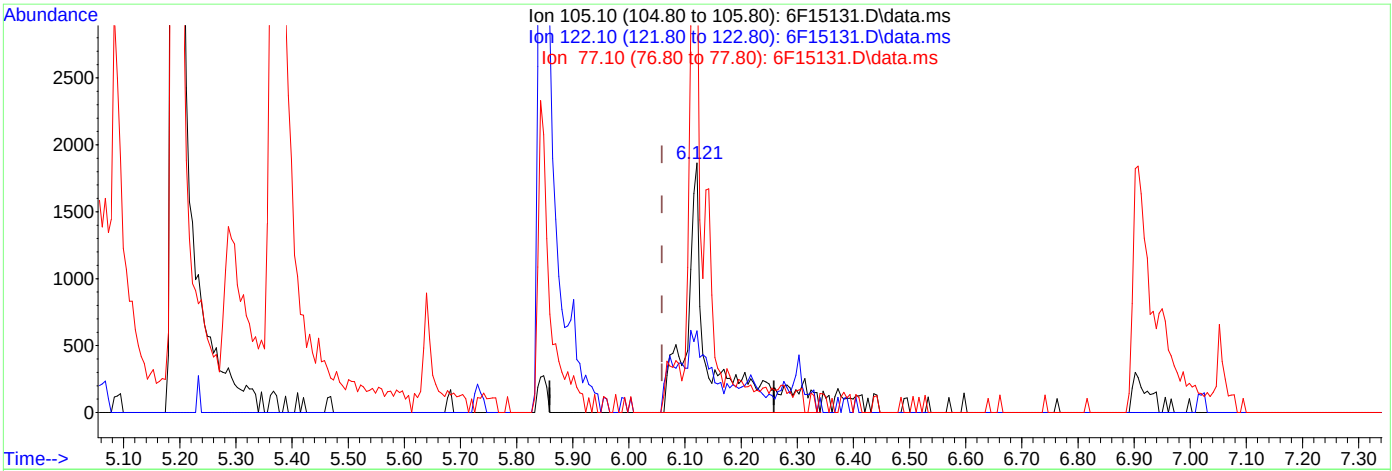
response 12021

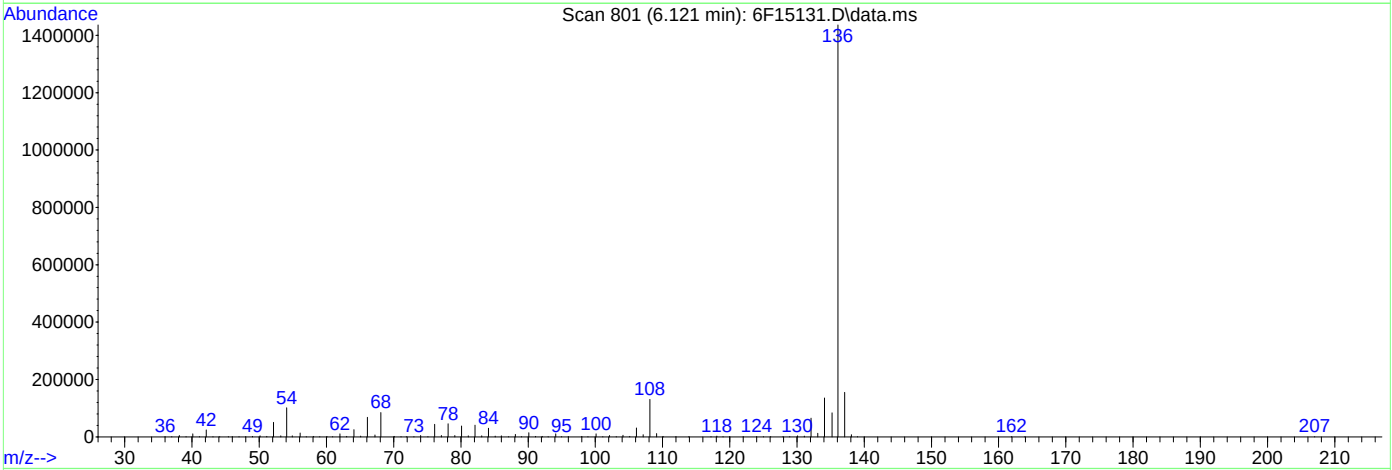
Ion	Exp%	Act%
79.10	100	100
52.10	71.80	84.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(30) Benzoic Acid

6.121min (+0.062) 0.69ppm m

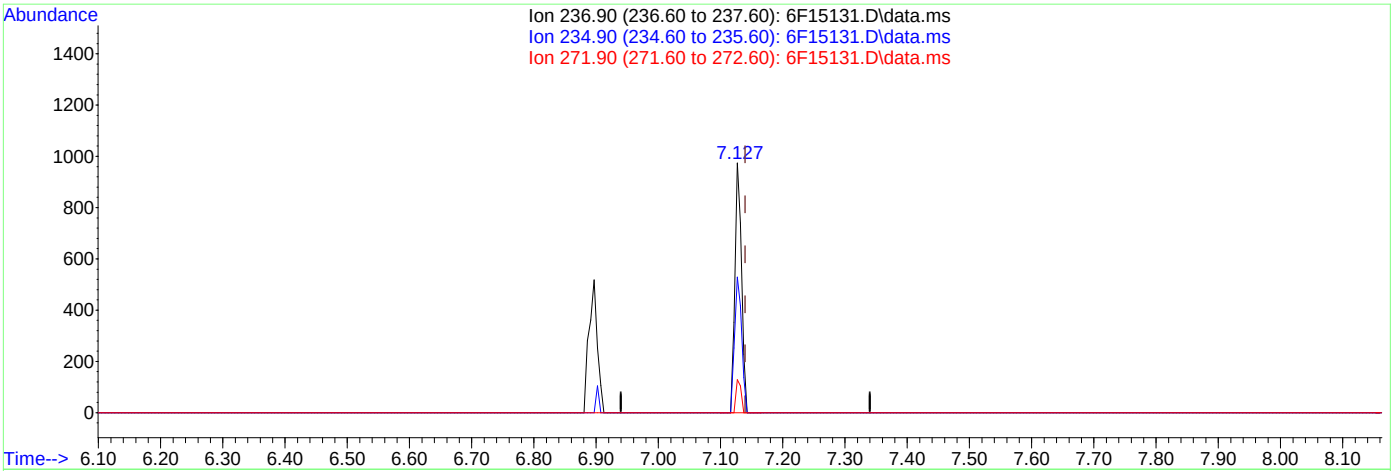
response 5547

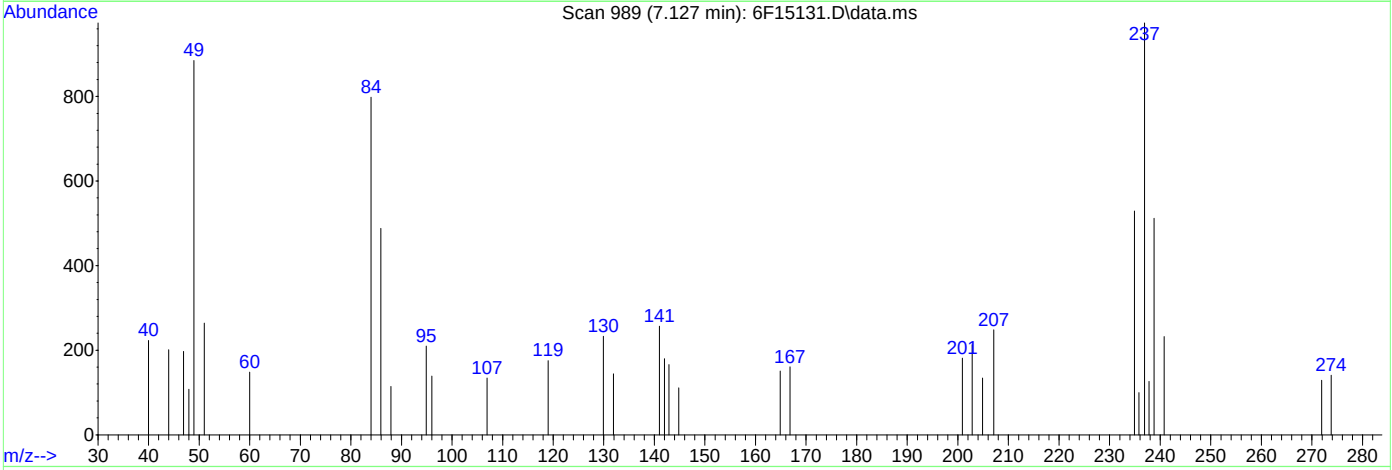
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	32.65#
77.10	74.10	216.14#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(44) Hexachlorocyclopentadiene (P)

7.127min (-0.013) 0.16ppm m

response 737

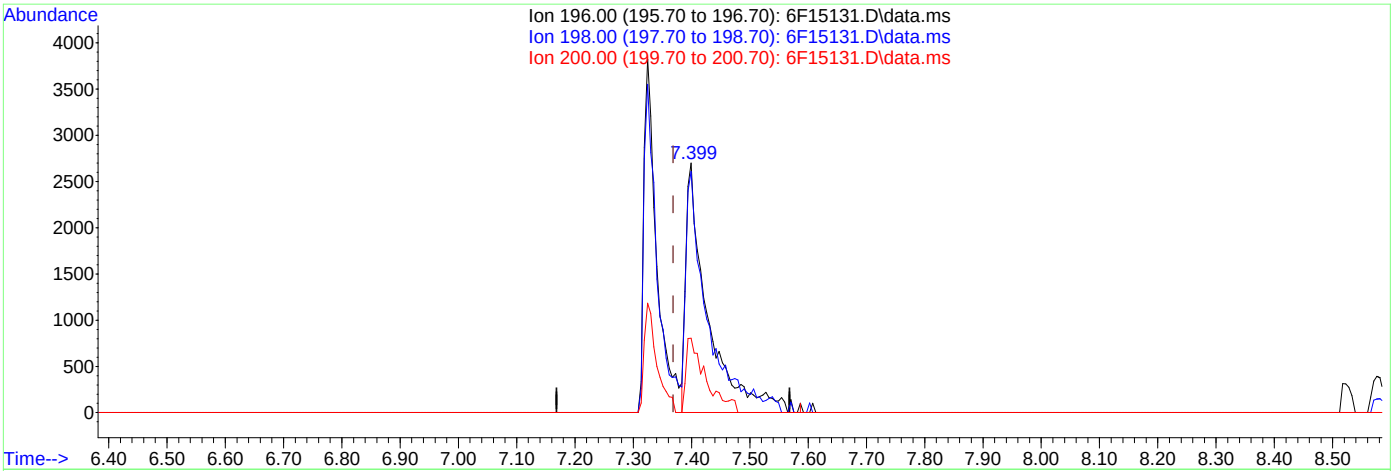
Ion	Exp%	Act%
236.90	100	100
234.90	62.00	54.31
271.90	14.00	13.24
0.00	0.00	0.00

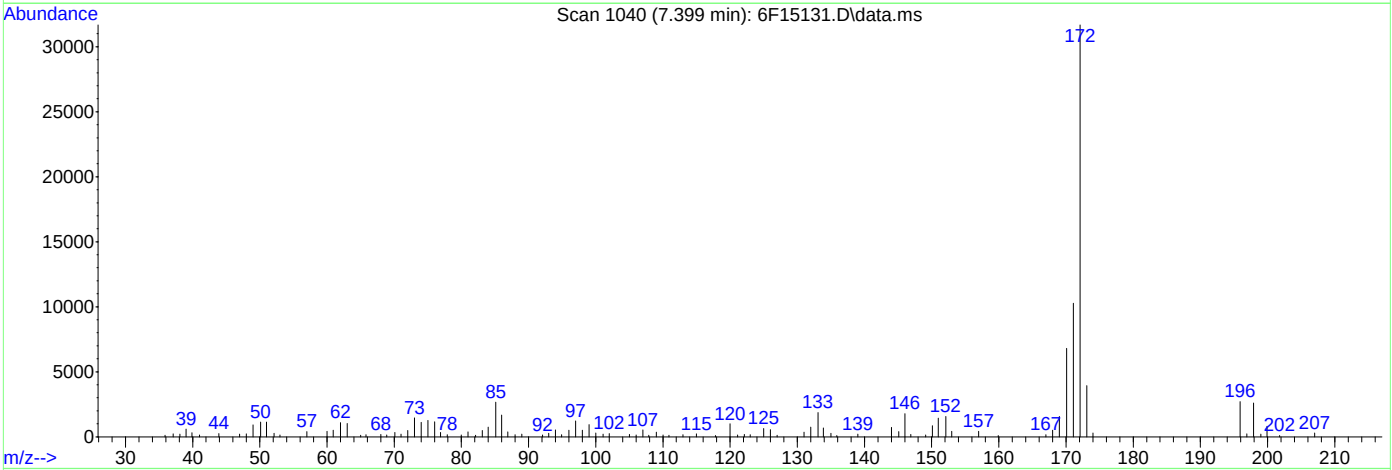
10.6.1.5 10

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(46) 2,4,5-Trichlorophenol (P)

7.399min (+0.031) 0.87ppm m

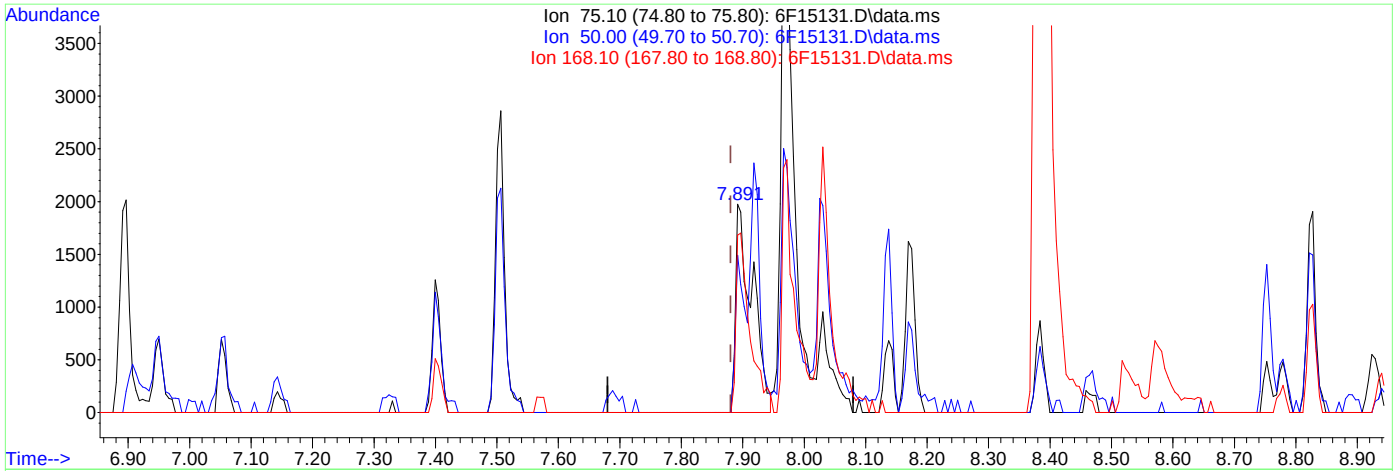
response 7163

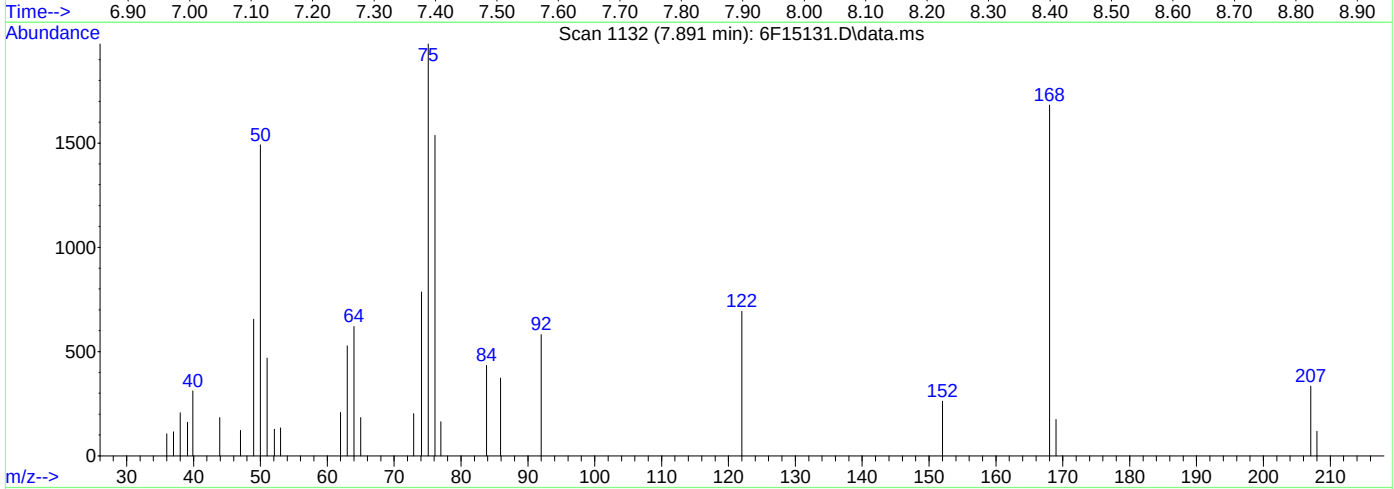
Ion	Exp%	Act%
196.00	100	100
198.00	95.90	96.59
200.00	30.20	29.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(51) p-Dinitrobenzene

7.891min (+0.011) 0.77ppm m

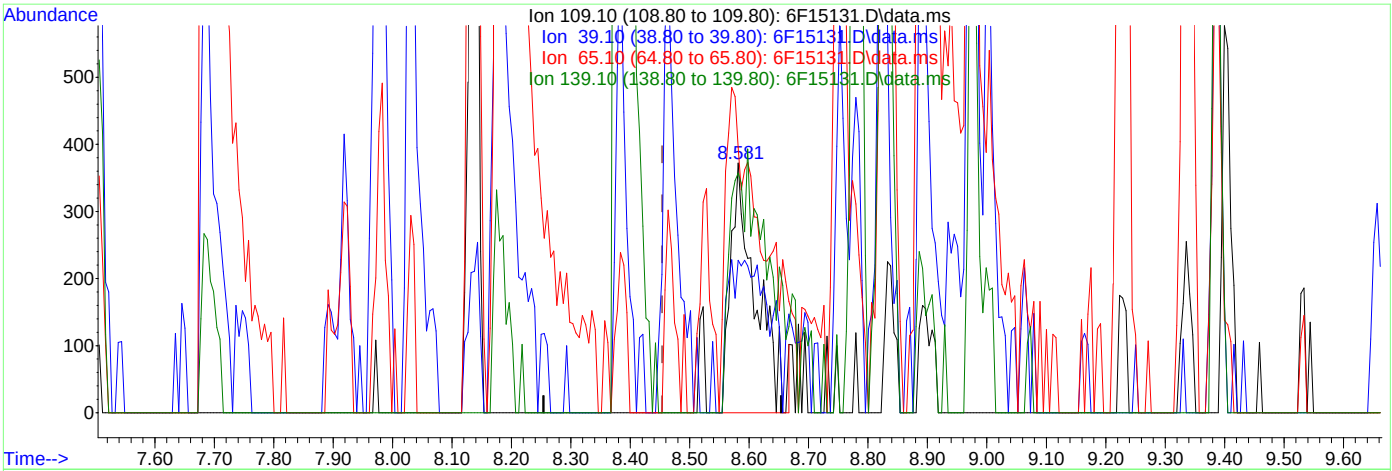
response 3741

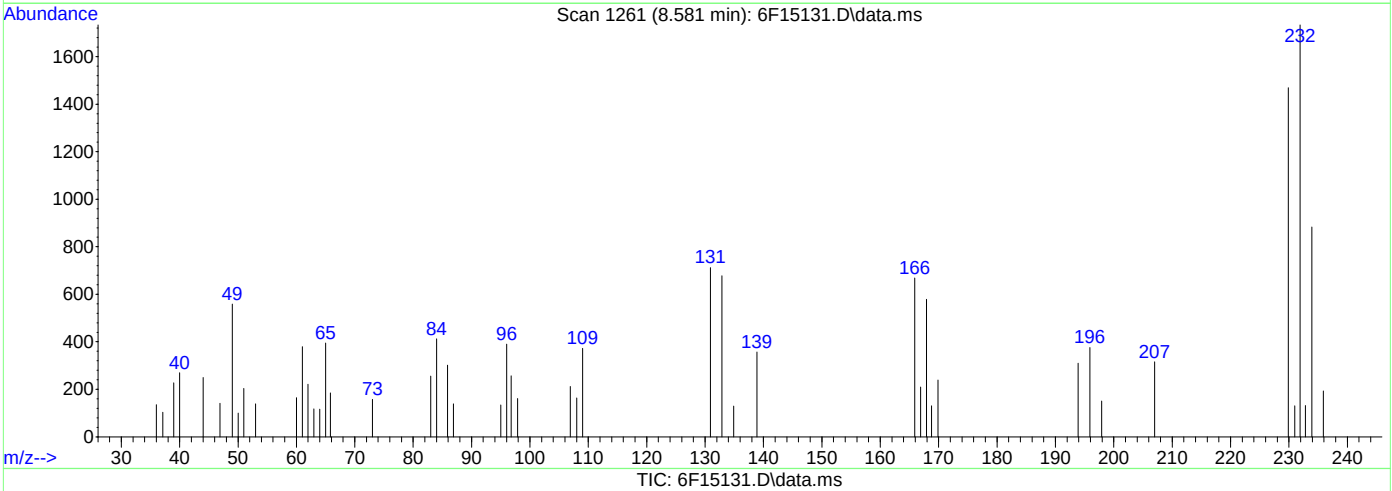
Ion	Exp%	Act%
75.10	100	100
50.00	61.90	75.46
168.10	91.40	85.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(62) 4-Nitrophenol (P)

8.581min (+0.127) 0.35ppm m

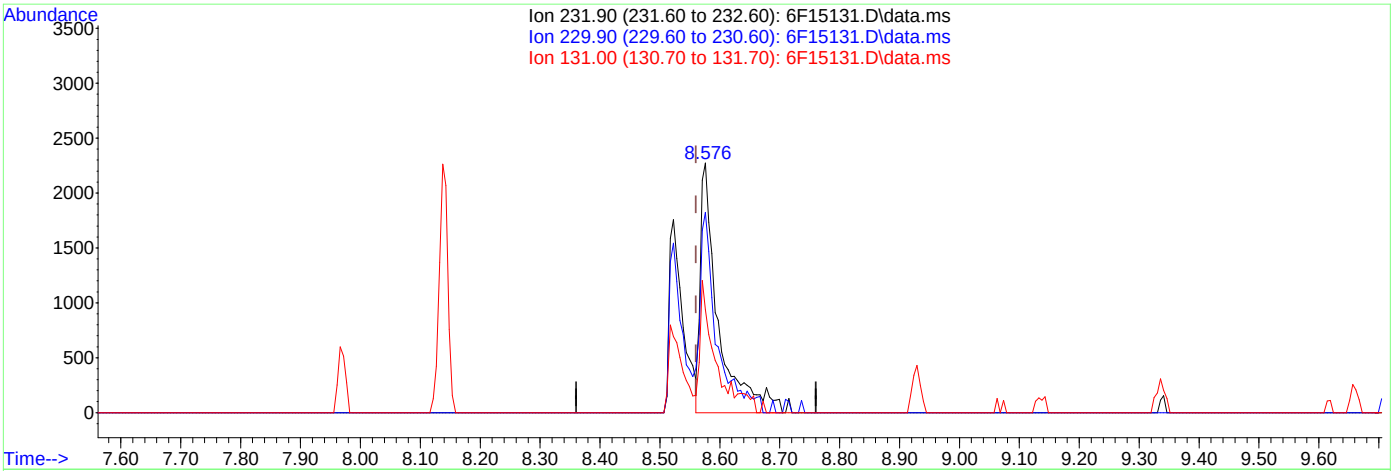
response 1102

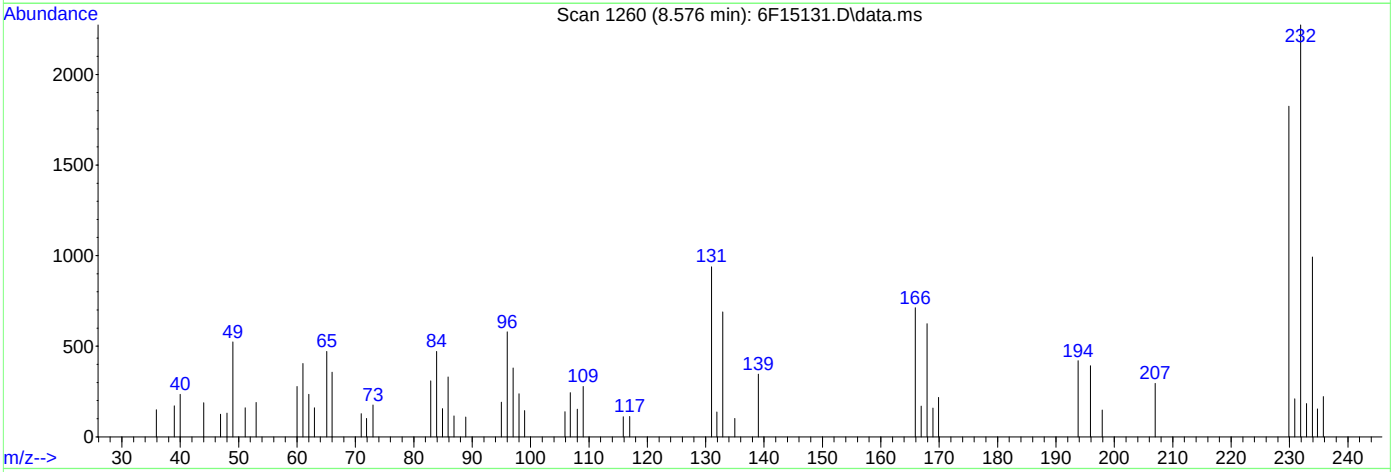
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	61.02#
65.10	172.20	106.18#
139.10	175.30	95.97#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15131.D
Acq On : 21 Jul 2022 12:11 pm
Operator : williamh
Sample : ic563-1
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 22 10:55:11 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 10:51:52 2022
Response via : Initial Calibration





TIC: 6F15131.D\data.ms

(64) 2,3,4,6-Tetrachlorophenol (P)

8.576min (+0.015) 0.81ppm m

response 4755

Ion	Exp%	Act%
231.90	100	100
229.90	78.90	80.21
131.00	49.40	41.29
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 22 10:56:58 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.705	152	469486	40.00	ppm		0.00
22) Naphthalene-d8	6.117	136	1770971	40.00	ppm		0.00
43) Acenaphthene-d10	8.139	164	993786	40.00	ppm		0.00
70) Phenanthrene-d10	9.861	188	1685442	40.00	ppm		0.00
92) Chrysene-d12	12.958	240	1371335	40.00	ppm		0.00
102) Perylene-d12	14.750	264	1315886	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	3.341	112	130898	8.84	ppm		0.00
Spiked Amount 100.000	Range 40 - 102		Recovery =	8.84%#			
9) Phenol-d5	4.406	99	161284	8.62	ppm		0.00
Spiked Amount 100.000	Range 41 - 100		Recovery =	8.62%#			
23) Nitrobenzene-d5	5.336	82	73191	4.25	ppm		-0.01
Spiked Amount 50.000	Range 40 - 105		Recovery =	8.50%#			
47) 2-Fluorobiphenyl	7.401	172	168451	5.39	ppm		-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery =	10.78%#			
75) 2,4,6-Tribromophenol	9.070	330	43212	10.68	ppm		-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery =	10.68%#			
95) Terphenyl-d14	11.787	244	172690	4.98	ppm		-0.01
Spiked Amount 50.000	Range 45 - 119		Recovery =	9.96%#			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.812	42	29872	4.94	ppm		93
4) Pyridine	1.870	79	55354m	3.29	ppm		
5) Benzaldehyde	4.245	106	57680	4.58	ppm		98
6) Aniline	4.368	93	100848	4.22	ppm		98
8) bis(2-Chloroethyl)ether	4.470	93	70128	4.26	ppm		94
10) Phenol	4.422	94	85200	4.43	ppm		95
11) 2-Chlorophenol	4.491	128	73484	4.98	ppm		95
12) 1,3-Dichlorobenzene	4.636	146	81518	5.08	ppm		97
13) 1,4-Dichlorobenzene	4.721	146	82743	5.07	ppm		97
14) 1,2-Dichlorobenzene	4.876	146	79069	5.11	ppm		98
15) Benzyl alcohol	4.919	108	38599	3.91	ppm		82
16) bis(2-chloroisopropyl)...	5.063	45	86512	4.62	ppm	#	69
17) 2-Methylphenol	5.074	108	61987	4.45	ppm		89
18) Acetophenone	5.181	105	99412	4.74	ppm		96
19) Hexachloroethane	5.235	117	30961	4.70	ppm		99
20) N-Nitroso-di-n-propyla...	5.203	70	46594	4.04	ppm		89
21) 3&4-Methylphenol	5.261	108	64044	4.43	ppm		98
24) Nitrobenzene	5.358	77	69079	4.46	ppm		94
25) Isophorone	5.636	82	125361	4.01	ppm		95
26) 2-Nitrophenol	5.716	139	36329	4.88	ppm		99
27) 2,4-Dimethylphenol	5.834	107	65519	4.45	ppm		95
28) O,O,O-Triethylphosphor...	5.903	198	35618	5.11	ppm		97
29) bis(2-Chloroethoxy)met...	5.930	93	80755	4.35	ppm		99
30) Benzoic Acid	6.010	105	32518m	3.73	ppm		
31) 2,4-Dichlorophenol	6.016	162	57360	4.93	ppm		96
32) 1,2,4-Trichlorobenzene	6.069	180	63299	5.06	ppm		98
34) Naphthalene	6.139	128	223149	5.43	ppm		99
35) 4-Chloroaniline	6.256	127	89611	5.06	ppm		100
36) 2,6-Dichlorophenol	6.251	162	60149	5.03	ppm		97
37) Hexachlorobutadiene	6.304	225	34167	5.06	ppm		96
38) Caprolactam	6.652	113	21721	4.52	ppm		90
39) 4-Chloro-3-methylphenol	6.887	107	54744	4.29	ppm		94
40) 2-Methylnaphthalene	6.946	141	119626	5.22	ppm		98
41) 1-Methylnaphthalene	7.053	142	134614	5.18	ppm		98
42) 1,2,4,5-Tetrachloroben...	7.139	216	68825	5.28	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 22 10:56:58 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	Hexachlorocyclopentadiene	7.128	237	15710	3.23	ppm	99
45)	2,4,6-Trichlorophenol	7.315	196	35657	4.57	ppm	100
46)	2,4,5-Trichlorophenol	7.369	196	39146	4.52	ppm	98
48)	1,1'-Biphenyl	7.502	154	186000	5.72	ppm	99
49)	2-Chloronaphthalene	7.502	162	136114	5.41	ppm	97
50)	2-Nitroaniline	7.674	65	32364	4.04	ppm	86
51)	p-Dinitrobenzene	7.877	75	17738	3.47	ppm	87
52)	Acenaphthylene	7.968	152	208426	5.14	ppm	99
53)	Dimethylphthalate	7.920	163	148695	5.01	ppm	100
54)	m-Dinitrobenzene	7.957	168	23949	4.86	ppm	95
55)	2,6-Dinitrotoluene	7.978	165	35414	5.04	ppm	82
56)	o-Dinitrobenzene	8.021	50	16893	5.09	ppm	93
57)	Acenaphthene	8.171	153	138263	5.37	ppm	99
58)	3-Nitroaniline	8.160	138	37253	4.87	ppm	93
59)	2,4-Dinitrophenol	8.326	184	10158m	4.20	ppm	
60)	Dibenzofuran	8.380	168	189913	5.23	ppm	100
61)	2,4-Dinitrotoluene	8.449	165	41609	4.67	ppm	91
62)	4-Nitrophenol	8.508	109	13831m	4.11	ppm	
63)	2,3,5,6-Tetrachlorophenol	8.513	232	23251	4.22	ppm	99
64)	2,3,4,6-Tetrachlorophenol	8.561	232	30527	4.95	ppm	97
65)	Fluorene	8.775	166	151792	5.16	ppm	98
66)	4-Chlorophenyl-phenyle...	8.824	204	70842	5.08	ppm	98
67)	Diethylphthalate	8.754	149	142994	4.82	ppm	99
68)	Thionazin	8.840	97	31969	4.24	ppm	92
69)	4-Nitroaniline	8.872	138	34858	4.32	ppm	94
71)	4,6-Dinitro-2-methylph...	8.920	198	17287	4.62	ppm	95
72)	n-Nitrosodiphenylamine	8.973	169	129054	5.81	ppm	99
73)	Diphenylamine	8.973	169	129054	5.20	ppm	99
74)	1,2-Diphenylhydrazine	9.000	77	134860	4.16	ppm	97
76)	Sulfotep	9.230	97	23117	4.34	ppm	87
77)	Phorate	9.337	75	78667	4.01	ppm	94
78)	4-Bromophenyl-phenylether	9.385	248	41047	5.08	ppm	91
79)	Hexachlorobenzene	9.401	284	45205	5.14	ppm	99
80)	Dimethoate	9.530	87	51759	3.95	ppm	95
81)	Simazine	9.615	201	8214	4.67	ppm	99
82)	Atrazine	9.658	200	43290	5.03	ppm	98
83)	Pentachlorophenol	9.685	266	13047	4.25	ppm	93
84)	Phenanthrene	9.883	178	210226	5.18	ppm	99
85)	Anthracene	9.947	178	206291	5.12	ppm	99
86)	Disulfoton	9.952	88	84472	4.35	ppm	97
87)	Carbazole	10.182	167	196061	5.06	ppm	99
88)	Methyl Parathion	10.385	109	40279	4.20	ppm	91
89)	Di-n-butylphthalate	10.690	149	217612	4.65	ppm	99
90)	Ethyl Parathion	10.861	97	23598	3.99	ppm	97
91)	Fluoranthene	11.268	202	204607	4.91	ppm	97
93)	Benzidine	11.509	184	98617	3.60	ppm	97
94)	Pyrene	11.519	202	216111	4.87	ppm	96
96)	Famphur	12.338	218	65147	4.48	ppm	98
97)	Butylbenzylphthalate	12.434	149	85884	4.24	ppm	98
98)	3,3'-Dichlorobenzidine	12.979	252	64585	4.56	ppm	99
99)	Benzo[a]anthracene	12.947	228	183275	4.81	ppm	99
100)	Chrysene	12.985	228	181817	5.06	ppm	100
101)	bis(2-Ethylhexyl)phtha...	13.167	149	112562	4.09	ppm	100
103)	Di-n-octylphthalate	13.996	149	151003	3.28	ppm	99
104)	Benzo[b]fluoranthene	14.258	252	158927	4.31	ppm	100
105)	Benzo[k]fluoranthene	14.295	252	172337	4.61	ppm	99
106)	Benzo[a]pyrene	14.670	252	137215	4.19	ppm	98
107)	Indeno[1,2,3-cd]pyrene	16.312	276	96368	3.88	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 22 10:56:58 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.370	278	113574	4.17	ppm	98
109) Benzo[g,h,i]perylene	16.681	276	126594	4.35	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
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Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
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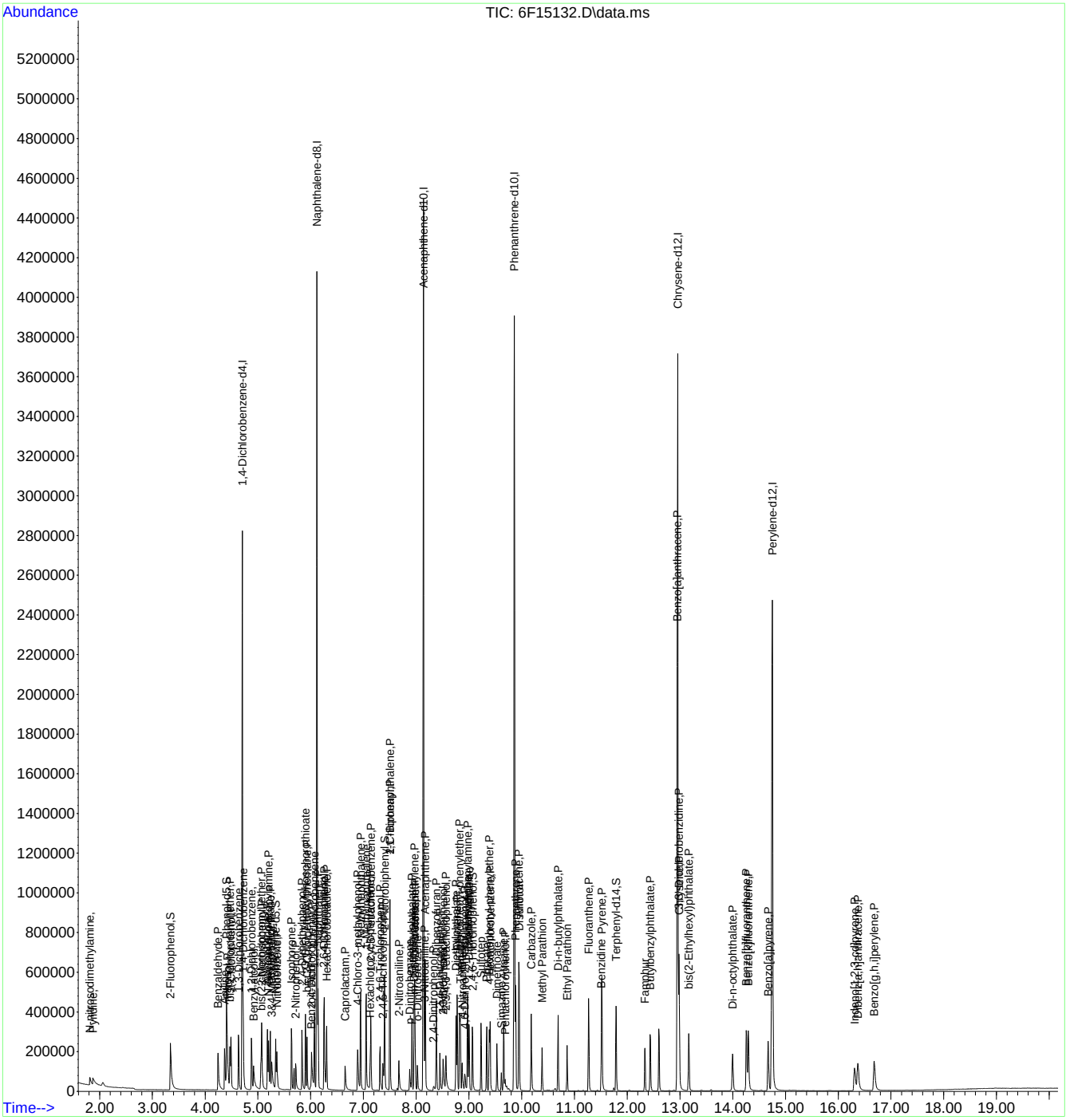

Manual Integration Approval Summary

Sample Number: S6F563-IC563
Lab FileID: 6F15132.D
Injection Time: 07/21/22 12:38
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyridine	110-86-1		1.87	Poor instrument integration
Benzoic Acid	65-85-0		6.01	Poor instrument integration
2,4-Dinitrophenol	51-28-5		8.33	Poor instrument integration
4-Nitrophenol	100-02-7		8.51	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
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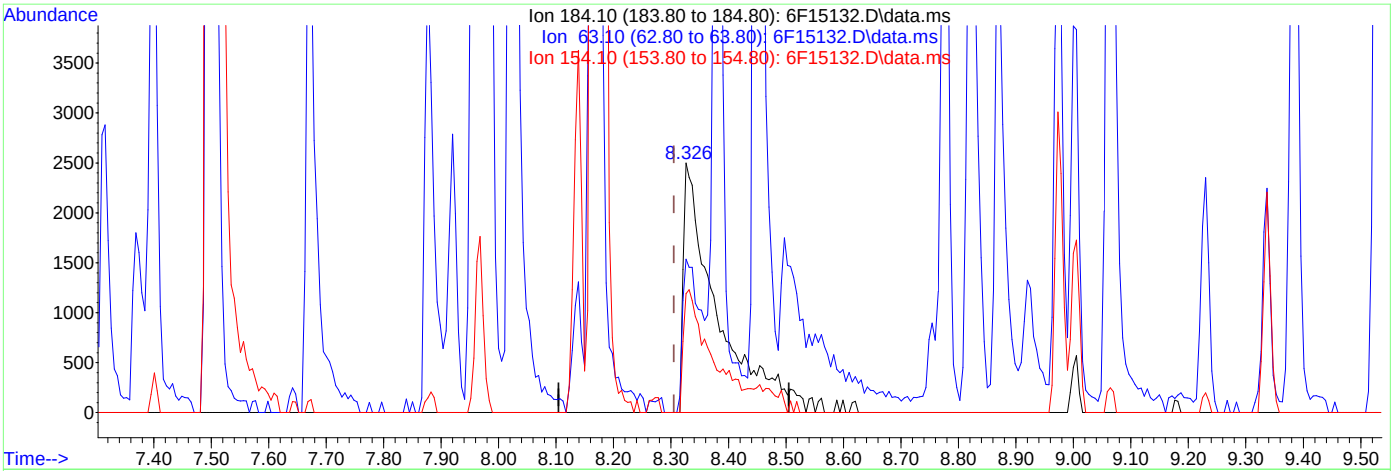
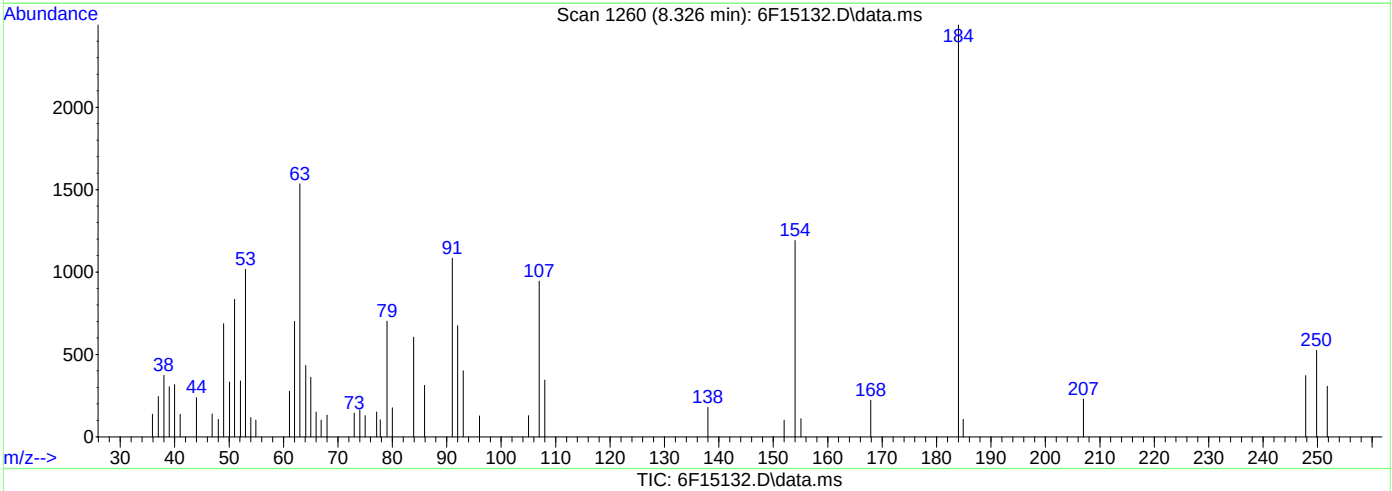
Response via : Initial Calibration





TIC: 6F15132.D\data.ms

(59) 2,4-Dinitrophenol (P)

8.326min (+0.021) 4.20ppm m

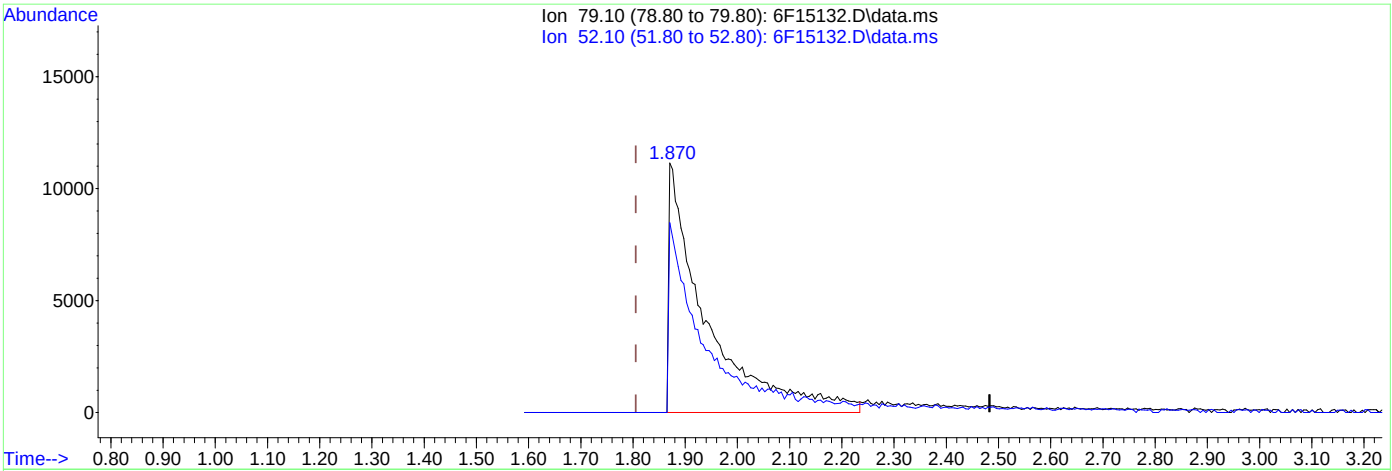
response 10158

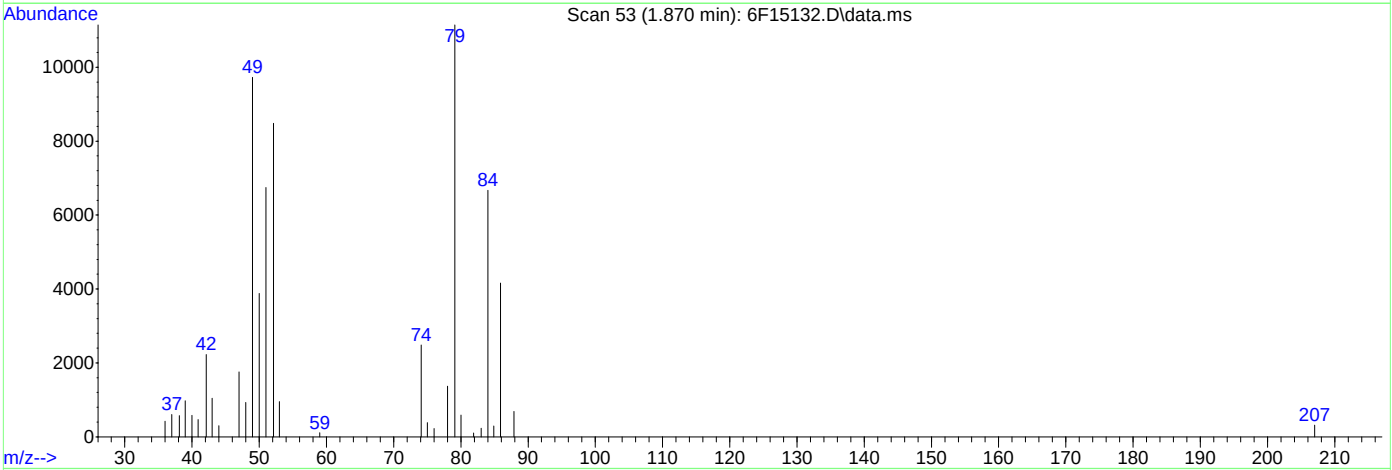
Ion	Exp%	Act%
184.10	100	100
63.10	62.70	61.40
154.10	48.20	47.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 22 10:56:58 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15132.D\data.ms

(4) Pyridine ( )

1.870min (+0.064) 3.29ppm m

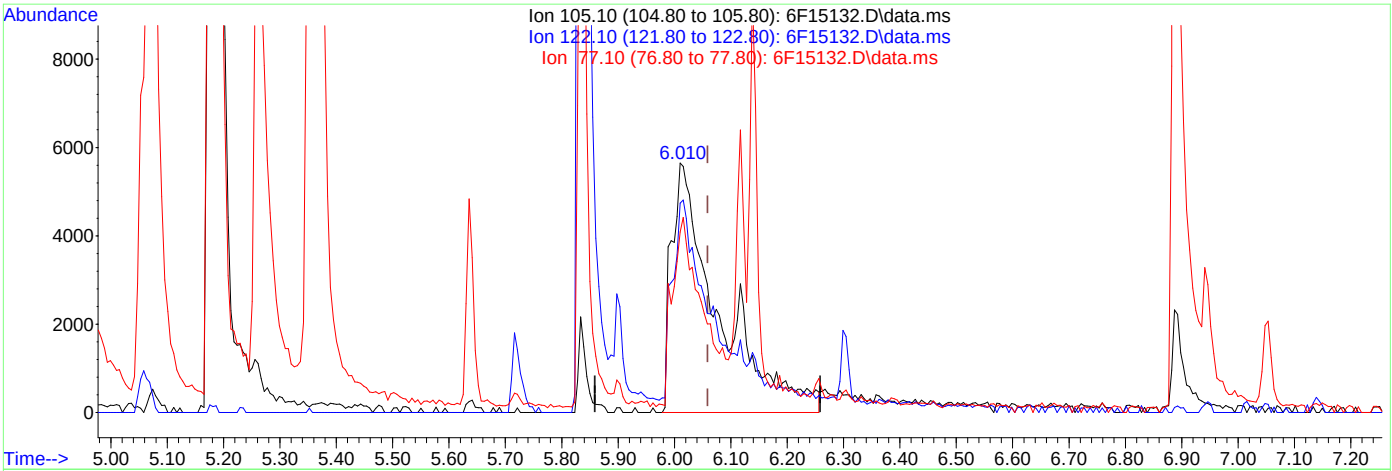
response 55354

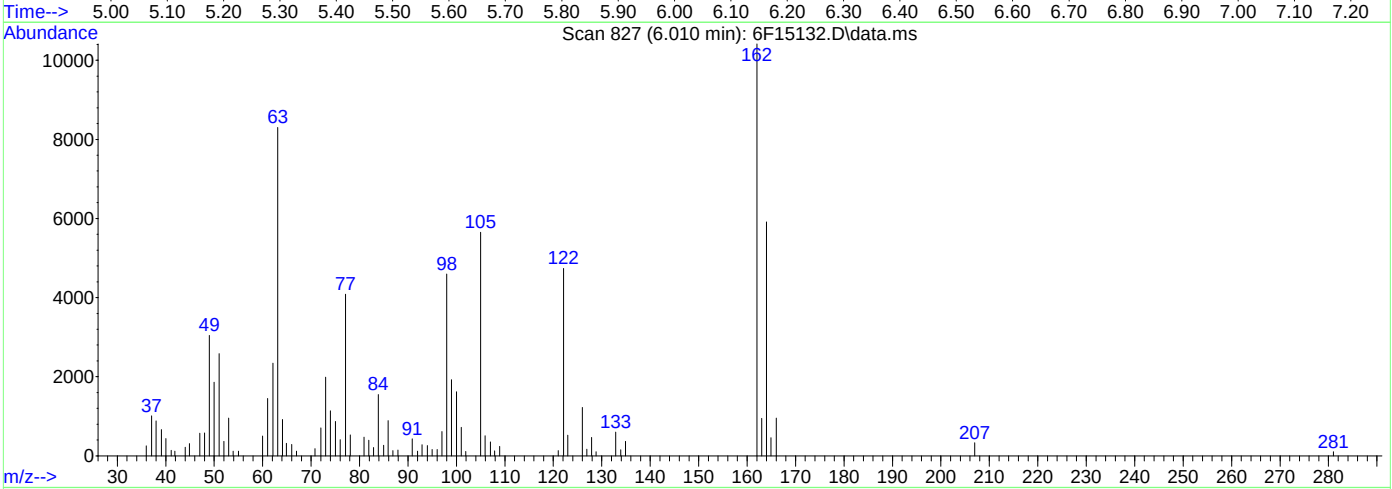
Ion	Exp%	Act%
79.10	100	100
52.10	71.80	76.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15132.D
Acq On : 21 Jul 2022 12:38 pm
Operator : williamh
Sample : ic563-5
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 22 10:56:58 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15132.D\data.ms

(30) Benzoic Acid

6.010min (-0.049) 3.73ppm m

response 32518

Ion	Exp%	Act%
105.10	100	100
122.10	79.50	83.84
77.10	74.10	72.31
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.705	152	466496	40.00	ppm	0.00
22) Naphthalene-d8	6.117	136	1756809	40.00	ppm	0.00
43) Acenaphthene-d10	8.139	164	978829	40.00	ppm	0.00
70) Phenanthrene-d10	9.861	188	1654401	40.00	ppm	0.00
92) Chrysene-d12	12.958	240	1348070	40.00	ppm	0.00
102) Perylene-d12	14.750	264	1299166	40.00	ppm	0.00
System Monitoring Compounds						
7) 2-Fluorophenol	3.336	112	269086	18.29	ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 18.29%#			
9) Phenol-d5	4.400	99	331448	17.83	ppm	0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 17.83%#			
23) Nitrobenzene-d5	5.336	82	145734	8.54	ppm	-0.01
Spiked Amount 50.000	Range 40 - 105		Recovery = 17.08%#			
47) 2-Fluorobiphenyl	7.401	172	329781	10.72	ppm	-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 21.44%#			
75) 2,4,6-Tribromophenol	9.069	330	87443	22.02	ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 22.02%#			
95) Terphenyl-d14	11.787	244	341238	10.01	ppm	-0.01
Spiked Amount 50.000	Range 45 - 119		Recovery = 20.02%#			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.801	42	63277	10.52	ppm	95
4) Pyridine	1.838	79	116336	6.95	ppm	97
5) Benzaldehyde	4.240	106	115999	9.27	ppm	99
6) Aniline	4.363	93	209989	8.85	ppm	98
8) bis(2-Chloroethyl)ether	4.470	93	142545	8.71	ppm	94
10) Phenol	4.416	94	160045	8.37	ppm	96
11) 2-Chlorophenol	4.486	128	149023	10.16	ppm	98
12) 1,3-Dichlorobenzene	4.630	146	163761	10.28	ppm	99
13) 1,4-Dichlorobenzene	4.721	146	168301	10.38	ppm	97
14) 1,2-Dichlorobenzene	4.876	146	159665	10.38	ppm	98
15) Benzyl alcohol	4.914	108	83779	8.55	ppm	91
16) bis(2-chloroisopropyl)...	5.063	45	172808	9.29	ppm	85
17) 2-Methylphenol	5.069	108	128082	9.25	ppm	97
18) Acetophenone	5.181	105	191559	9.20	ppm	97
19) Hexachloroethane	5.234	117	63669	9.74	ppm	96
20) N-Nitroso-di-n-propyla...	5.208	70	95488	8.32	ppm	90
21) 3&4-Methylphenol	5.256	108	134249	9.34	ppm	98
24) Nitrobenzene	5.357	77	137566	8.95	ppm	92
25) Isophorone	5.636	82	261438	8.42	ppm	95
26) 2-Nitrophenol	5.716	139	78568	10.65	ppm	97
27) 2,4-Dimethylphenol	5.834	107	135669	9.29	ppm	96
28) O,O,O-Triethylphosphor...	5.903	198	70559	10.21	ppm	95
29) bis(2-Chloroethoxy)met...	5.930	93	163259	8.87	ppm	99
30) Benzoic Acid	5.999	105	76976m	8.74	ppm	
31) 2,4-Dichlorophenol	6.010	162	123109	10.67	ppm	96
32) 1,2,4-Trichlorobenzene	6.069	180	127808	10.31	ppm	97
34) Naphthalene	6.138	128	436749	10.71	ppm	98
35) 4-Chloroaniline	6.256	127	184210	10.49	ppm	98
36) 2,6-Dichlorophenol	6.251	162	122778	10.36	ppm	97
37) Hexachlorobutadiene	6.304	225	70674	10.56	ppm	99
38) Caprolactam	6.668	113	45452	9.54	ppm	96
39) 4-Chloro-3-methylphenol	6.887	107	115664	9.14	ppm	92
40) 2-Methylnaphthalene	6.946	141	240108	10.57	ppm	99
41) 1-Methylnaphthalene	7.053	142	271114	10.51	ppm	97
42) 1,2,4,5-Tetrachloroben...	7.139	216	133844	10.36	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	Hexachlorocyclopentadiene	7.128	237	44130	8.93	ppm		95
45)	2,4,6-Trichlorophenol	7.315	196	74674	9.72	ppm		98
46)	2,4,5-Trichlorophenol	7.363	196	81886	9.60	ppm		98
48)	1,1'-Biphenyl	7.502	154	350497	10.94	ppm		99
49)	2-Chloronaphthalene	7.497	162	262163	10.57	ppm		98
50)	2-Nitroaniline	7.668	65	71325	9.04	ppm		94
51)	p-Dinitrobenzene	7.871	75	41628	8.22	ppm		93
52)	Acenaphthylene	7.968	152	416732	10.43	ppm		100
53)	Dimethylphthalate	7.925	163	296579	10.14	ppm		99
54)	m-Dinitrobenzene	7.952	168	51046	10.52	ppm	#	81
55)	2,6-Dinitrotoluene	7.978	165	72027	10.41	ppm		87
56)	o-Dinitrobenzene	8.026	50	33689	10.30	ppm		92
57)	Acenaphthene	8.171	153	270264	10.65	ppm		99
58)	3-Nitroaniline	8.160	138	77483	10.29	ppm		92
59)	2,4-Dinitrophenol	8.315	184	26881m	10.80	ppm		
60)	Dibenzofuran	8.379	168	375975	10.51	ppm		98
61)	2,4-Dinitrotoluene	8.449	165	90597	10.33	ppm		85
62)	4-Nitrophenol	8.481	109	30912m	9.33	ppm		
63)	2,3,5,6-Tetrachlorophenol	8.508	232	55095	10.05	ppm		98
64)	2,3,4,6-Tetrachlorophenol	8.561	232	63641	10.47	ppm		94
65)	Fluorene	8.781	166	302302	10.44	ppm		97
66)	4-Chlorophenyl-phenyle...	8.823	204	141215	10.28	ppm		99
67)	Diethylphthalate	8.759	149	287401	9.84	ppm		100
68)	Thionazin	8.839	97	63641	8.57	ppm		95
69)	4-Nitroaniline	8.872	138	73959	9.32	ppm		93
71)	4,6-Dinitro-2-methylph...	8.920	198	41387	11.03	ppm		95
72)	n-Nitrosodiphenylamine	8.979	169	256967	11.79	ppm		99
73)	Diphenylamine	8.979	169	256967	10.56	ppm		99
74)	1,2-Diphenylhydrazine	9.005	77	269590	8.46	ppm		89
76)	Sulfotep	9.230	97	45794	8.76	ppm		88
77)	Phorate	9.337	75	158780	8.24	ppm		95
78)	4-Bromophenyl-phenylether	9.385	248	82791	10.45	ppm		94
79)	Hexachlorobenzene	9.401	284	90791	10.53	ppm		99
80)	Dimethoate	9.529	87	106722	8.30	ppm		95
81)	Simazine	9.615	201	16596	9.61	ppm		98
82)	Atrazine	9.663	200	84979	10.06	ppm		94
83)	Pentachlorophenol	9.679	266	31212	10.20	ppm		98
84)	Phenanthrene	9.888	178	413413	10.38	ppm		100
85)	Anthracene	9.947	178	420650	10.64	ppm		99
86)	Disulfoton	9.952	88	167910	8.81	ppm		98
87)	Carbazole	10.182	167	392704	10.32	ppm		99
88)	Methyl Parathion	10.385	109	86381	9.17	ppm		88
89)	Di-n-butylphthalate	10.690	149	453223	9.86	ppm		99
90)	Ethyl Parathion	10.861	97	50369	8.67	ppm		97
91)	Fluoranthene	11.268	202	417807	10.22	ppm		98
93)	Benzidine	11.508	184	222285	8.25	ppm		96
94)	Pyrene	11.519	202	436226	10.01	ppm		97
96)	Famphur	12.337	218	131151	9.41	ppm		97
97)	Butylbenzylphthalate	12.434	149	183528	9.22	ppm		98
98)	3,3'-Dichlorobenzidine	12.979	252	137300	9.85	ppm		98
99)	Benzo[a]anthracene	12.947	228	366193	9.77	ppm		100
100)	Chrysene	12.985	228	365644	10.35	ppm		99
101)	bis(2-Ethylhexyl)phtha...	13.166	149	244993	9.05	ppm		100
103)	Di-n-octylphthalate	14.001	149	347833	7.66	ppm		99
104)	Benzo[b]fluoranthene	14.258	252	339251	9.33	ppm		98
105)	Benzo[k]fluoranthene	14.295	252	351762	9.52	ppm		98
106)	Benzo[a]pyrene	14.669	252	292990	9.07	ppm		98
107)	Indeno[1,2,3-cd]pyrene	16.306	276	205181	8.36	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.370	278	244074	9.09	ppm	99
109) Benzo[g,h,i]perylene	16.681	276	264906	9.21	ppm	99

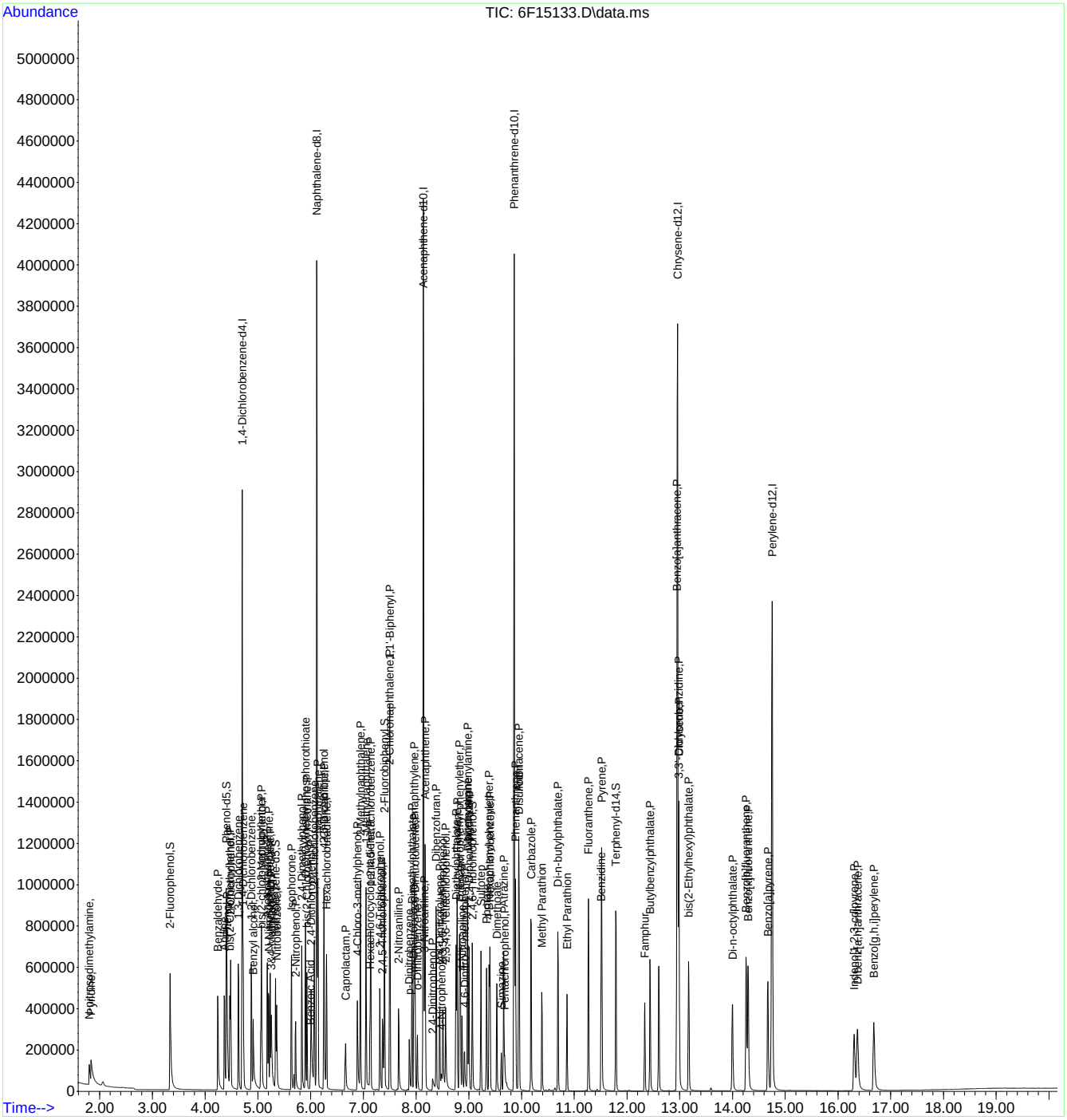
(#) = qualifier out of range (m) = manual integration (+) = signals summed

10.6.3 10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

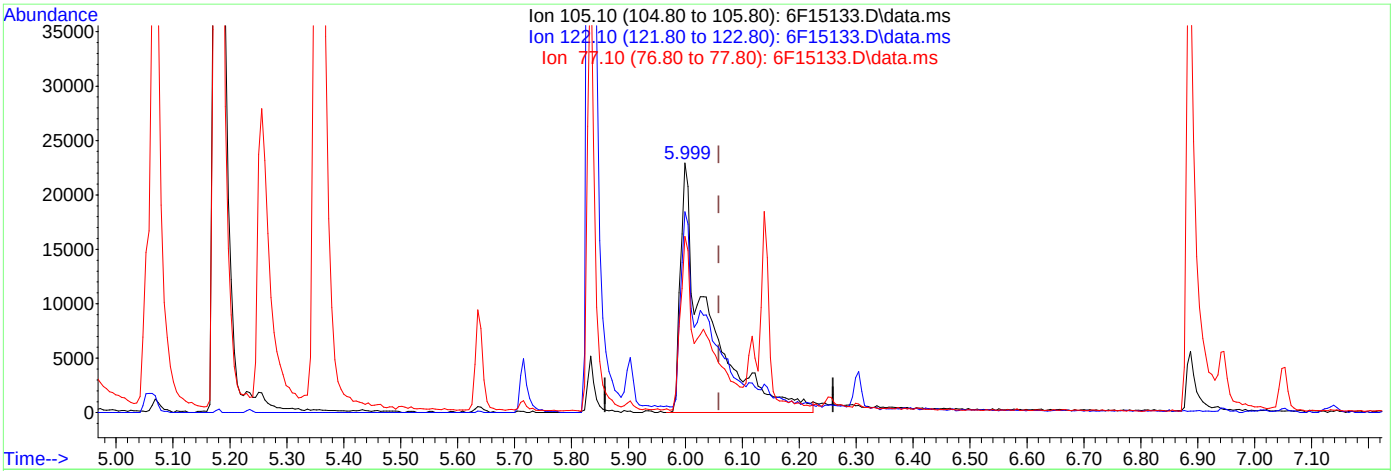
Sample Number:	S6F563-IC563	**Method:**	SW846 8270E
Lab FileID:	6F15133.D	**Analyst approved:**	07/22/22 13:13 William Hustedde
Injection Time:	07/21/22 13:04	**Supervisor approved:**	07/22/22 15:25 Naresh Jiawan

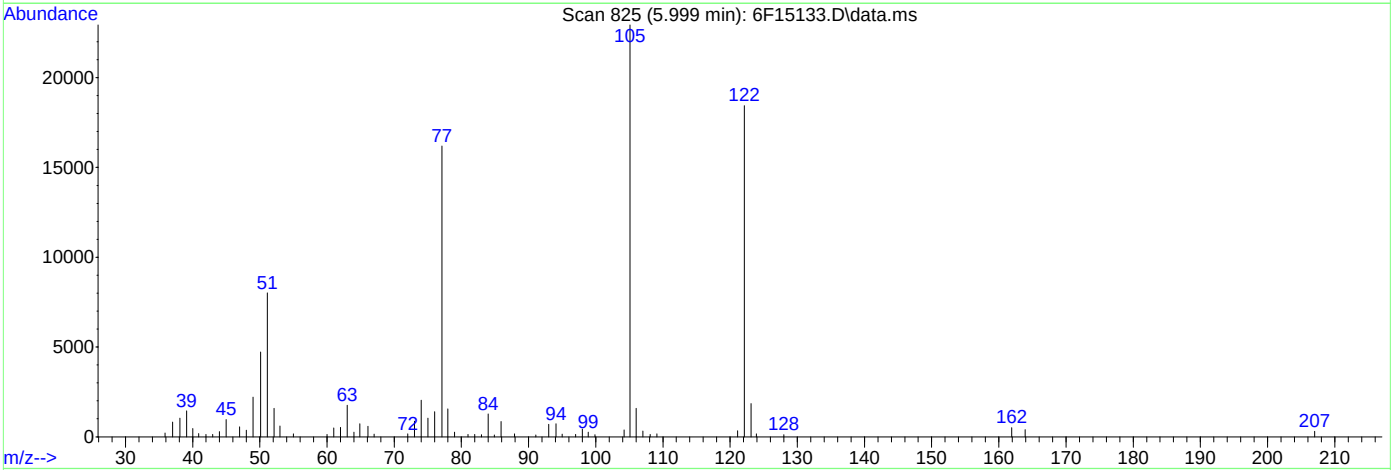
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		6.00	Poor instrument integration
2,4-Dinitrophenol	51-28-5		8.32	Poor instrument integration
4-Nitrophenol	100-02-7		8.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15133.D\data.ms

(30) Benzoic Acid

5.999min (-0.060) 8.74ppm m

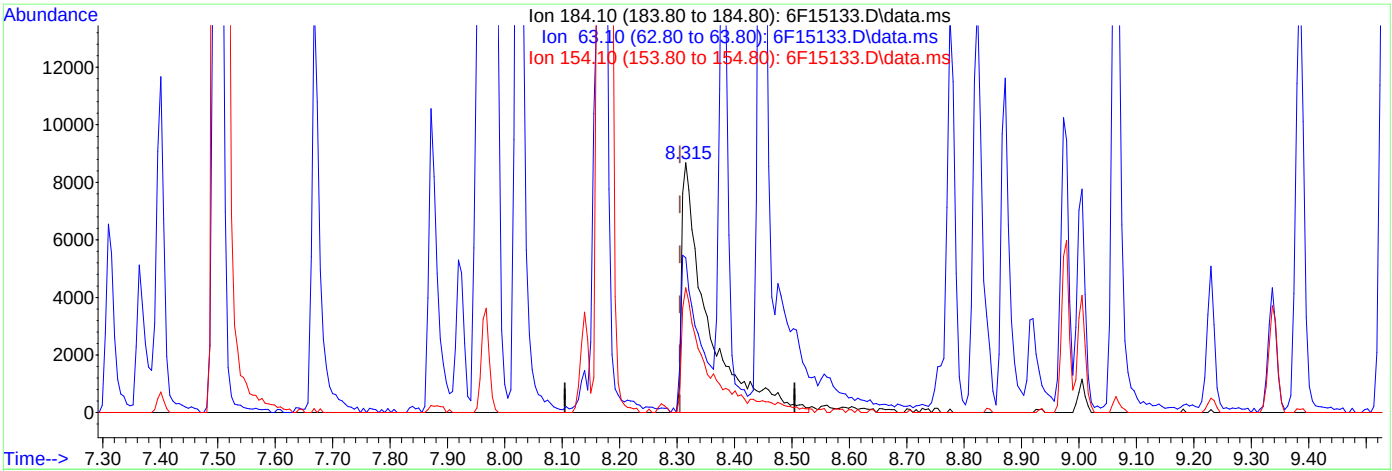
response 76976

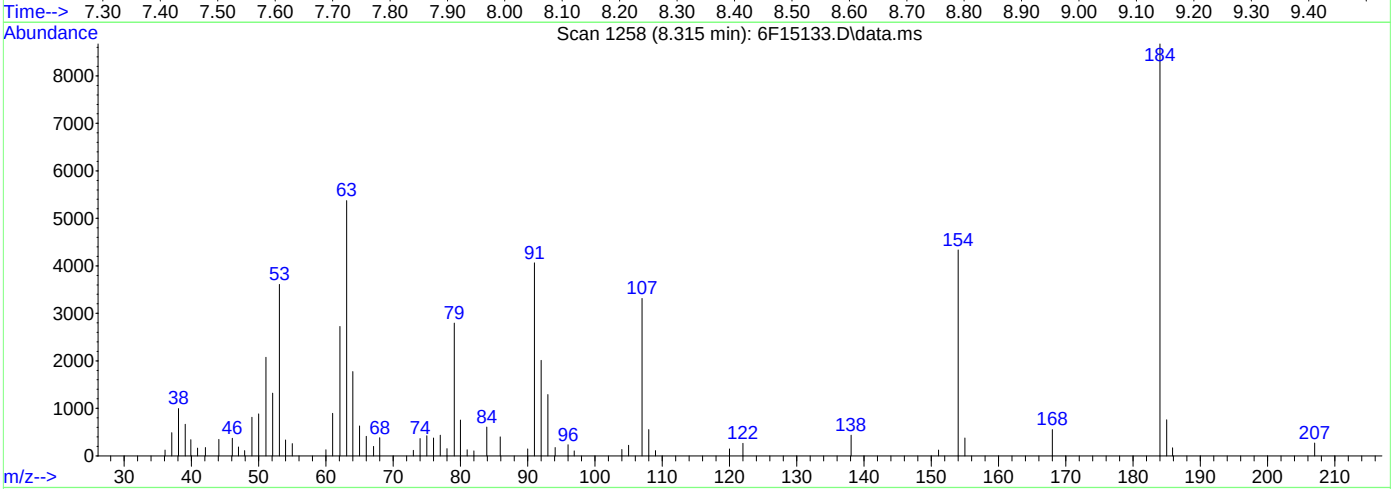
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	80.37
77.10	74.10	70.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15133.D\data.ms

(59) 2,4-Dinitrophenol (P)

8.315min (+0.010) 10.80ppm m

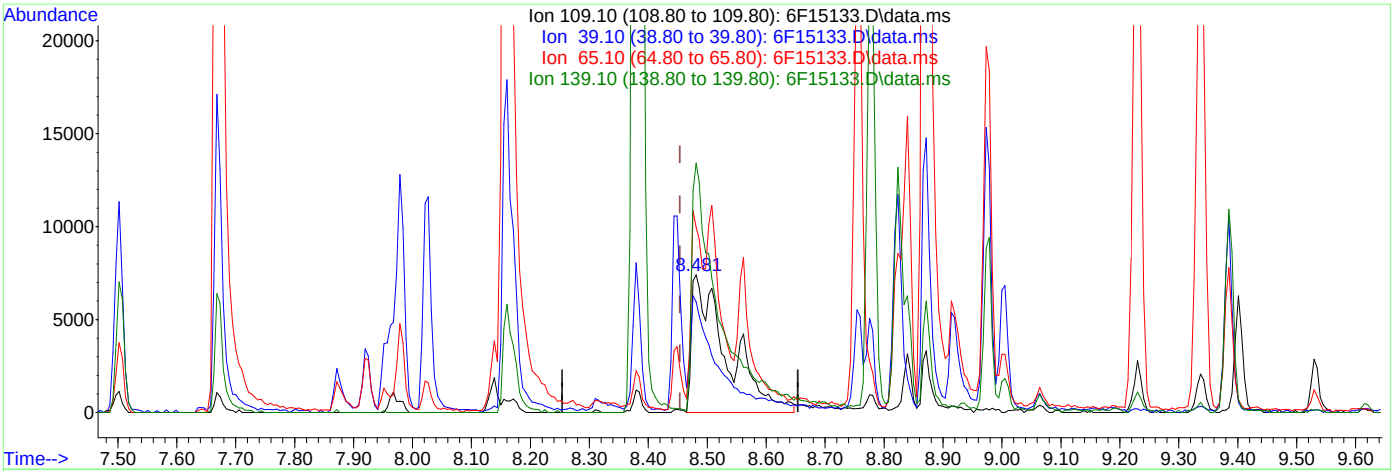
response 26881

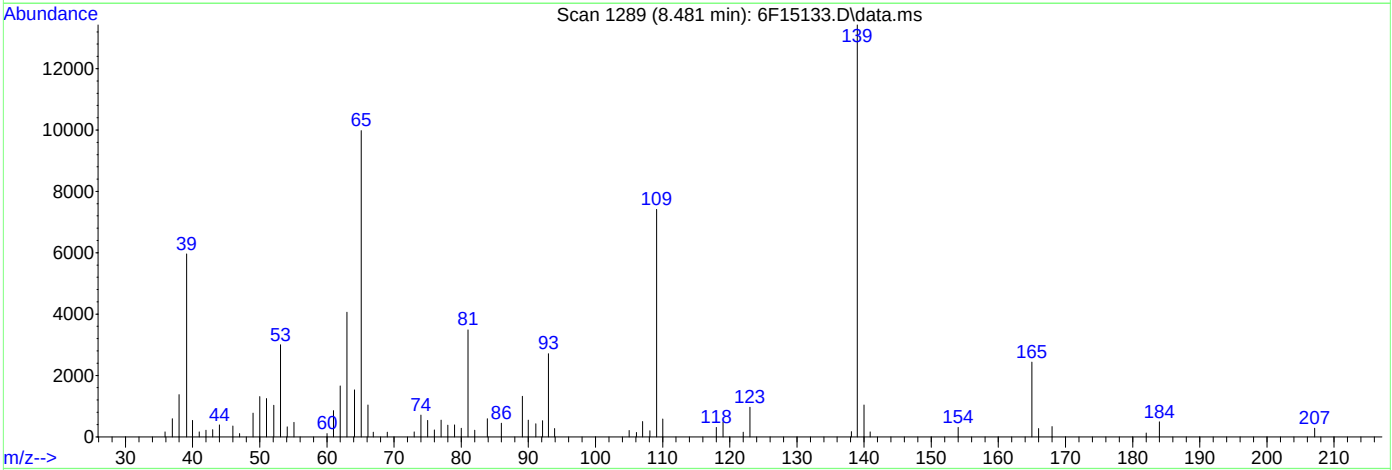
Ion	Exp%	Act%
184.10	100	100
63.10	62.70	61.97
154.10	48.20	49.96
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15133.D
Acq On : 21 Jul 2022 1:04 pm
Operator : williamh
Sample : ic563-10
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 22 10:58:24 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15133.D\data.ms

(62) 4-Nitrophenol (P)

8.481min (+0.027) 9.33ppm m

response 30912

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	80.43#
65.10	172.20	134.60#
139.10	175.30	181.17

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.705	152	473718	40.00	ppm		0.00
22) Naphthalene-d8	6.122	136	1757089	40.00	ppm		0.00
43) Acenaphthene-d10	8.139	164	970472	40.00	ppm		0.00
70) Phenanthrene-d10	9.861	188	1635570	40.00	ppm		0.00
92) Chrysene-d12	12.963	240	1331433	40.00	ppm		0.00
102) Perylene-d12	14.750	264	1286951	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	3.330	112	702481	47.02	ppm		0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 47.02%				
9) Phenol-d5	4.406	99	836546	44.32	ppm		0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 44.32%				
23) Nitrobenzene-d5	5.336	82	366883	21.49	ppm		-0.01
Spiked Amount 50.000	Range 40 - 105		Recovery = 42.98%				
47) 2-Fluorobiphenyl	7.401	172	790905	25.93	ppm		-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 51.86%				
75) 2,4,6-Tribromophenol	9.070	330	222724	56.74	ppm		-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 56.74%				
95) Terphenyl-d14	11.792	244	831076	24.68	ppm		0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 49.36%				
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.795	42	163427	26.76	ppm		98
4) Pyridine	1.817	79	317966	18.71	ppm		99
5) Benzaldehyde	4.240	106	278638	21.92	ppm		98
6) Aniline	4.363	93	514134	21.33	ppm		96
8) bis(2-Chloroethyl)ether	4.475	93	352488	21.20	ppm		99
10) Phenol	4.416	94	423793	21.83	ppm		96
11) 2-Chlorophenol	4.486	128	379452	25.49	ppm		95
12) 1,3-Dichlorobenzene	4.630	146	406775	25.14	ppm		97
13) 1,4-Dichlorobenzene	4.721	146	419544	25.48	ppm		98
14) 1,2-Dichlorobenzene	4.876	146	397827	25.48	ppm		98
15) Benzyl alcohol	4.914	108	224069	22.51	ppm		90
16) bis(2-chloroisopropyl)...	5.058	45	422752	22.39	ppm	#	65
17) 2-Methylphenol	5.069	108	326505	23.21	ppm		97
18) Acetophenone	5.181	105	485904	22.97	ppm		98
19) Hexachloroethane	5.235	117	157840	23.77	ppm		96
20) N-Nitroso-di-n-propyla...	5.213	70	237017	20.35	ppm		92
21) 3&4-Methylphenol	5.251	108	345909	23.71	ppm		95
24) Nitrobenzene	5.358	77	349053	22.70	ppm		95
25) Isophorone	5.641	82	650601	20.96	ppm		95
26) 2-Nitrophenol	5.716	139	200596	27.18	ppm		93
27) 2,4-Dimethylphenol	5.834	107	337480	23.10	ppm		97
28) O,O,O-Triethylphosphor...	5.908	198	174780	25.28	ppm		99
29) bis(2-Chloroethoxy)met...	5.935	93	400631	21.77	ppm		97
30) Benzoic Acid	6.032	105	237029m	25.42	ppm		
31) 2,4-Dichlorophenol	6.010	162	305451	26.47	ppm		94
32) 1,2,4-Trichlorobenzene	6.069	180	311449	25.11	ppm		97
34) Naphthalene	6.144	128	1055370	25.88	ppm		98
35) 4-Chloroaniline	6.256	127	452799	25.79	ppm		99
36) 2,6-Dichlorophenol	6.251	162	305559	25.77	ppm		97
37) Hexachlorobutadiene	6.304	225	172639	25.79	ppm		99
38) Caprolactam	6.700	113	117218	24.60	ppm		94
39) 4-Chloro-3-methylphenol	6.887	107	294044	23.23	ppm		94
40) 2-Methylnaphthalene	6.946	141	584113	25.70	ppm		99
41) 1-Methylnaphthalene	7.053	142	660622	25.61	ppm		99
42) 1,2,4,5-Tetrachloroben...	7.144	216	323109	25.00	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44) Hexachlorocyclopentadiene	7.128	237	146394	27.24	ppm		100
45) 2,4,6-Trichlorophenol	7.310	196	199468	26.18	ppm		98
46) 2,4,5-Trichlorophenol	7.363	196	213572	25.25	ppm		98
48) 1,1'-Biphenyl	7.508	154	832971	26.23	ppm		99
49) 2-Chloronaphthalene	7.502	162	624298	25.39	ppm		100
50) 2-Nitroaniline	7.674	65	182911	23.39	ppm		87
51) p-Dinitrobenzene	7.871	75	112303	22.10	ppm		89
52) Acenaphthylene	7.968	152	1024068	25.84	ppm		100
53) Dimethylphthalate	7.930	163	718797	24.79	ppm		100
54) m-Dinitrobenzene	7.957	168	131647	27.37	ppm	#	70
55) 2,6-Dinitrotoluene	7.984	165	178080	25.95	ppm		77
56) o-Dinitrobenzene	8.032	50	83566	25.77	ppm		94
57) Acenaphthene	8.176	153	648974	25.80	ppm		99
58) 3-Nitroaniline	8.160	138	198319	26.56	ppm		96
59) 2,4-Dinitrophenol	8.305	184	87519	31.39	ppm		89
60) Dibenzofuran	8.385	168	903395	25.46	ppm		98
61) 2,4-Dinitrotoluene	8.449	165	228273	26.25	ppm		89
62) 4-Nitrophenol	8.460	109	90539m	27.58	ppm		
63) 2,3,5,6-Tetrachlorophenol	8.508	232	152012	27.21	ppm		99
64) 2,3,4,6-Tetrachlorophenol	8.561	232	168894	28.03	ppm		96
65) Fluorene	8.781	166	727242	25.34	ppm		97
66) 4-Chlorophenyl-phenyle...	8.823	204	343537	25.21	ppm		98
67) Diethylphthalate	8.765	149	698362	24.12	ppm		100
68) Thionazin	8.845	97	154795	21.02	ppm		94
69) 4-Nitroaniline	8.882	138	195462	24.89	ppm		92
71) 4,6-Dinitro-2-methylph...	8.920	198	118524	30.02	ppm		97
72) n-Nitrosodiphenylamine	8.979	169	620563	28.80	ppm		99
73) Diphenylamine	8.979	169	620563	25.79	ppm		99
74) 1,2-Diphenylhydrazine	9.005	77	718871	22.83	ppm		94
76) Sulfotep	9.235	97	113959	22.05	ppm	#	72
77) Phorate	9.337	75	392199	20.58	ppm		95
78) 4-Bromophenyl-phenylether	9.390	248	201432	25.71	ppm		99
79) Hexachlorobenzene	9.406	284	218577	25.63	ppm		94
80) Dimethoate	9.540	87	272150	21.42	ppm		93
81) Simazine	9.626	201	43114	25.25	ppm		99
82) Atrazine	9.669	200	215760	25.84	ppm		98
83) Pentachlorophenol	9.679	266	97753	30.67	ppm		98
84) Phenanthrene	9.888	178	989646	25.13	ppm		99
85) Anthracene	9.947	178	1006898	25.76	ppm		100
86) Disulfoton	9.957	88	412992	21.92	ppm		95
87) Carbazole	10.182	167	972060	25.85	ppm		100
88) Methyl Parathion	10.385	109	229287	24.63	ppm		91
89) Di-n-butylphthalate	10.690	149	1132628	24.92	ppm		100
90) Ethyl Parathion	10.861	97	135751	23.63	ppm		98
91) Fluoranthene	11.273	202	1020451	25.26	ppm		96
93) Benzidine	11.509	184	595913	22.38	ppm		97
94) Pyrene	11.519	202	1057952	24.58	ppm		97
96) Famphur	12.338	218	302300	23.71	ppm		96
97) Butylbenzylphthalate	12.439	149	479487	24.40	ppm		94
98) 3,3'-Dichlorobenzidine	12.985	252	354153	25.73	ppm		99
99) Benzo[a]anthracene	12.947	228	904650	24.43	ppm		99
100) Chrysene	12.990	228	885916	25.39	ppm		100
101) bis(2-Ethylhexyl)phtha...	13.167	149	644800	24.13	ppm		100
103) Di-n-octylphthalate	14.001	149	980180	21.79	ppm		100
104) Benzo[b]fluoranthene	14.263	252	832594	23.11	ppm		100
105) Benzo[k]fluoranthene	14.300	252	892370	24.38	ppm		98
106) Benzo[a]pyrene	14.670	252	763479	23.85	ppm		99
107) Indeno[1,2,3-cd]pyrene	16.306	276	552959	22.75	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

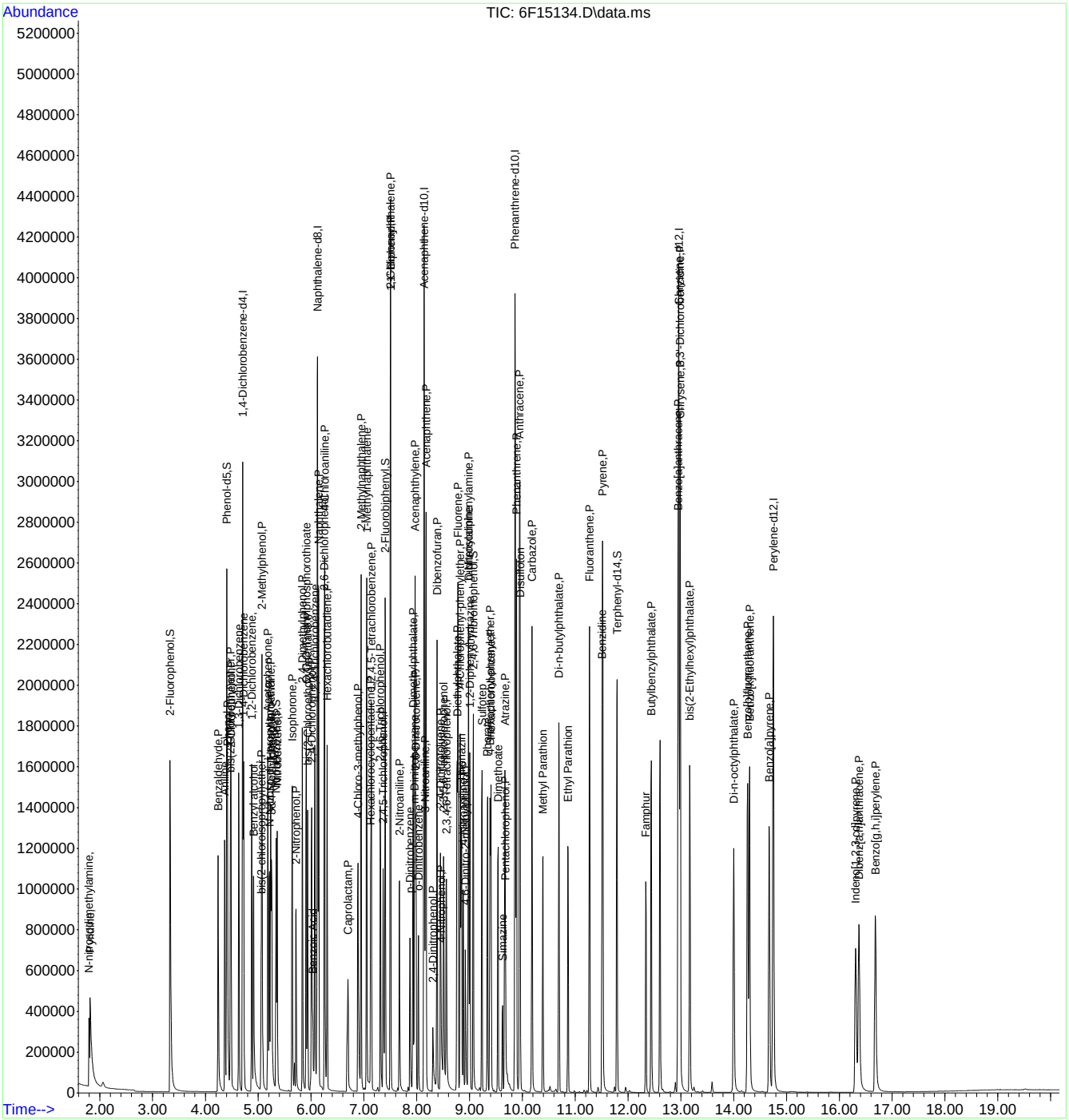
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.370	278	622623	23.40	ppm	99
109) Benzo[g,h,i]perylene	16.686	276	657729	23.08	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

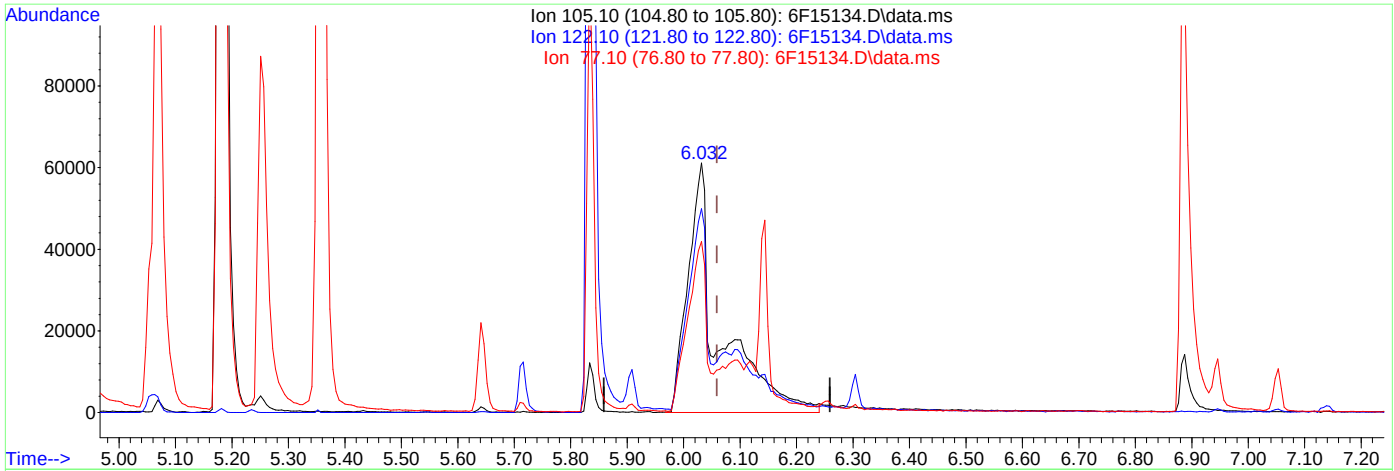
Sample Number:	S6F563-IC563	**Method:**	SW846 8270E
Lab FileID:	6F15134.D	**Analyst approved:**	07/22/22 13:13 William Hustedde
Injection Time:	07/21/22 13:31	**Supervisor approved:**	07/22/22 15:25 Naresh Jiawan

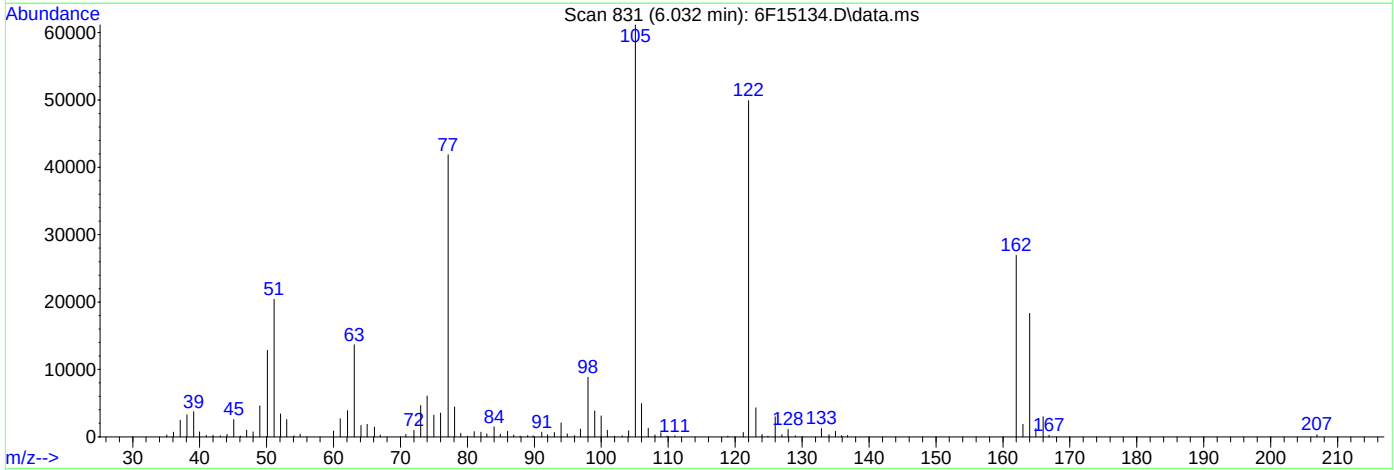
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		6.03	Poor instrument integration
4-Nitrophenol	100-02-7		8.46	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15134.D\data.ms

(30) Benzoic Acid

6.032min (-0.027) 25.42ppm m

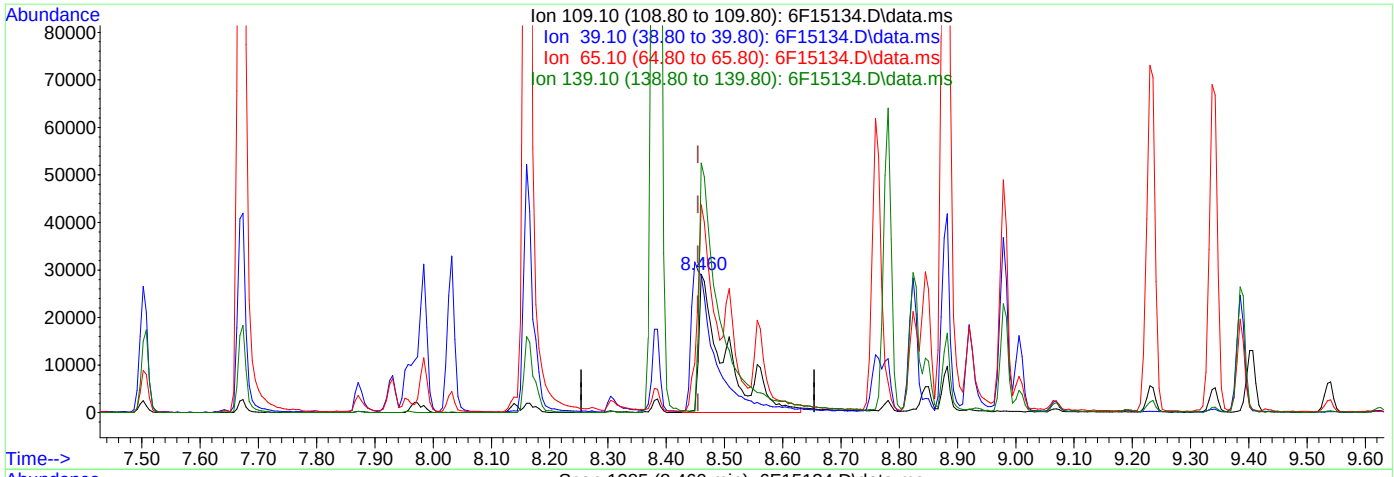
response 237029

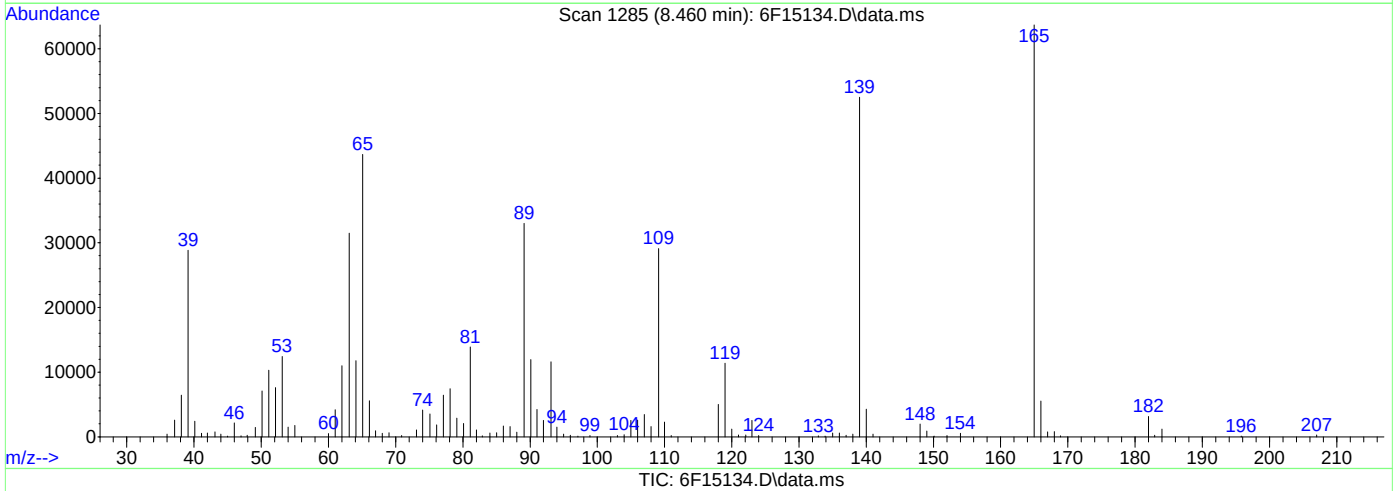
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	81.63
77.10	74.10	68.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15134.D
Acq On : 21 Jul 2022 1:31 pm
Operator : williamh
Sample : ic563-25
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 22 11:00:27 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15134.D\data.ms

(62) 4-Nitrophenol (P)

8.460min (+0.006) 27.58ppm m

response 90539

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	99.07#
65.10	172.20	150.03
139.10	175.30	180.38

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.705	152	494378	40.00	ppm	0.00
22) Naphthalene-d8	6.123	136	1816675	40.00	ppm	0.00
43) Acenaphthene-d10	8.144	164	1001409	40.00	ppm	0.00
70) Phenanthrene-d10	9.867	188	1682608	40.00	ppm	0.00
92) Chrysene-d12	12.963	240	1341600	40.00	ppm	0.00
102) Perylene-d12	14.755	264	1263356	40.00	ppm	0.00
System Monitoring Compounds						
7) 2-Fluorophenol	3.331	112	1481419	95.02	ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 95.02%			
9) Phenol-d5	4.416	99	1709976	86.81	ppm	0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 86.81%			
23) Nitrobenzene-d5	5.342	82	750810	42.53	ppm	0.00
Spiked Amount 50.000	Range 40 - 105		Recovery = 85.06%			
47) 2-Fluorobiphenyl	7.406	172	1550705	49.28	ppm	0.00
Spiked Amount 50.000	Range 43 - 107		Recovery = 98.56%			
75) 2,4,6-Tribromophenol	9.080	330	454916	112.64	ppm	0.00
Spiked Amount 100.000	Range 42 - 108		Recovery = 112.64%#			
95) Terphenyl-d14	11.792	244	1645390	48.50	ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 97.00%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.796	42	336758	52.84	ppm	99
4) Pyridine	1.812	79	715298	40.37	ppm	99
5) Benzaldehyde	4.240	106	443857	33.46	ppm	100
6) Aniline	4.368	93	1075424	42.75	ppm	95
8) bis(2-Chloroethyl)ether	4.481	93	724667	41.77	ppm	91
10) Phenol	4.427	94	878009	43.33	ppm	98
11) 2-Chlorophenol	4.486	128	773241	49.76	ppm	98
12) 1,3-Dichlorobenzene	4.636	146	836094	49.50	ppm	98
13) 1,4-Dichlorobenzene	4.727	146	849527	49.45	ppm	97
14) 1,2-Dichlorobenzene	4.876	146	808253	49.60	ppm	98
15) Benzyl alcohol	4.919	108	476962	45.92	ppm	90
16) bis(2-chloroisopropyl)...	5.069	45	837311	42.49	ppm	95
17) 2-Methylphenol	5.074	108	661227	45.04	ppm	84
18) Acetophenone	5.192	105	985778	44.66	ppm	97
19) Hexachloroethane	5.235	117	321689	46.42	ppm	92
20) N-Nitroso-di-n-propyla...	5.224	70	485769	39.96	ppm	94
21) 3&4-Methylphenol	5.261	108	710531	46.66	ppm	94
24) Nitrobenzene	5.363	77	693998	43.65	ppm	95
25) Isophorone	5.652	82	1314978	40.97	ppm	93
26) 2-Nitrophenol	5.716	139	424829	55.67	ppm	98
27) 2,4-Dimethylphenol	5.839	107	693076	45.88	ppm	96
28) O,O,O-Triethylphosphor...	5.914	198	357043	49.96	ppm	98
29) bis(2-Chloroethoxy)met...	5.941	93	808830	42.52	ppm	97
30) Benzoic Acid	6.080	105	552028m	52.50	ppm	
31) 2,4-Dichlorophenol	6.016	162	629841	52.78	ppm	94
32) 1,2,4-Trichlorobenzene	6.074	180	637918	49.74	ppm	98
34) Naphthalene	6.144	128	2081365	49.37	ppm	99
35) 4-Chloroaniline	6.262	127	896675	49.40	ppm	99
36) 2,6-Dichlorophenol	6.256	162	618901	50.48	ppm	96
37) Hexachlorobutadiene	6.310	225	351901	50.85	ppm	97
38) Caprolactam	6.743	113	229092	46.51	ppm	93
39) 4-Chloro-3-methylphenol	6.893	107	609017	46.53	ppm	94
40) 2-Methylnaphthalene	6.952	141	1159589	49.35	ppm	99
41) 1-Methylnaphthalene	7.059	142	1295179	48.56	ppm	99
42) 1,2,4,5-Tetrachloroben...	7.144	216	649686	48.62	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	Hexachlorocyclopentadiene	7.133	237	344060	54.81	ppm	98
45)	2,4,6-Trichlorophenol	7.315	196	407595	51.84	ppm	99
46)	2,4,5-Trichlorophenol	7.369	196	444169	50.90	ppm	99
48)	1,1'-Biphenyl	7.513	154	1586378	48.40	ppm	99
49)	2-Chloronaphthalene	7.503	162	1214703	47.88	ppm	99
50)	2-Nitroaniline	7.679	65	372734	46.20	ppm	85
51)	p-Dinitrobenzene	7.877	75	238978	44.68	ppm	88
52)	Acenaphthylene	7.973	152	2011850	49.20	ppm	99
53)	Dimethylphthalate	7.941	163	1464655	48.95	ppm	100
54)	m-Dinitrobenzene	7.963	168	270177	54.43	ppm	83
55)	2,6-Dinitrotoluene	7.995	165	359708	50.80	ppm	78
56)	o-Dinitrobenzene	8.043	50	165267	49.38	ppm	94
57)	Acenaphthene	8.182	153	1264469	48.71	ppm	99
58)	3-Nitroaniline	8.171	138	401146	52.06	ppm	92
59)	2,4-Dinitrophenol	8.310	184	202050	60.42	ppm	89
60)	Dibenzofuran	8.390	168	1797502	49.10	ppm	98
61)	2,4-Dinitrotoluene	8.460	165	469651	52.34	ppm	87
62)	4-Nitrophenol	8.460	109	196594m	58.03	ppm	
63)	2,3,5,6-Tetrachlorophenol	8.513	232	327887	54.53	ppm	99
64)	2,3,4,6-Tetrachlorophenol	8.562	232	348206	56.00	ppm	99
65)	Fluorene	8.786	166	1417649	47.87	ppm	99
66)	4-Chlorophenyl-phenyle...	8.829	204	689390	49.03	ppm	99
67)	Diethylphthalate	8.770	149	1387301	46.43	ppm	99
68)	Thionazin	8.850	97	316090	41.60	ppm	91
69)	4-Nitroaniline	8.899	138	405673	50.22	ppm	92
71)	4,6-Dinitro-2-methylph...	8.931	198	263398	59.31	ppm	99
72)	n-Nitrosodiphenylamine	8.989	169	1239793	55.93	ppm	99
73)	Diphenylamine	8.989	169	1239793	50.09	ppm	99
74)	1,2-Diphenylhydrazine	9.011	77	1429034	44.12	ppm	92
76)	Sulfotep	9.235	97	226301	42.56	ppm	91
77)	Phorate	9.342	75	793804	40.49	ppm	94
78)	4-Bromophenyl-phenylether	9.391	248	401016	49.76	ppm	94
79)	Hexachlorobenzene	9.412	284	433301	49.39	ppm	95
80)	Dimethoate	9.551	87	541072	41.40	ppm	93
81)	Simazine	9.637	201	89158	50.75	ppm	97
82)	Atrazine	9.685	200	431484	50.24	ppm	87
83)	Pentachlorophenol	9.685	266	216491	61.37	ppm	99
84)	Phenanthrene	9.893	178	1922482	47.46	ppm	99
85)	Anthracene	9.952	178	1951213	48.53	ppm	99
86)	Disulfoton	9.958	88	792379	40.88	ppm	99
87)	Carbazole	10.188	167	1904255	49.22	ppm	99
88)	Methyl Parathion	10.391	109	465287	48.59	ppm	88
89)	Di-n-butylphthalate	10.696	149	2267857	48.50	ppm	100
90)	Ethyl Parathion	10.867	97	286641	48.51	ppm	100
91)	Fluoranthene	11.273	202	2017615	48.54	ppm	98
93)	Benzidine	11.514	184	1003314	37.40	ppm	97
94)	Pyrene	11.530	202	2036634	46.95	ppm	95
96)	Famphur	12.343	218	497350	43.57	ppm	96
97)	Butylbenzylphthalate	12.439	149	975410	49.25	ppm	95
98)	3,3'-Dichlorobenzidine	12.990	252	678004	48.89	ppm	98
99)	Benzo[a]anthracene	12.953	228	1802294	48.30	ppm	99
100)	Chrysene	12.996	228	1685047	47.93	ppm	99
101)	bis(2-Ethylhexyl)phtha...	13.172	149	1335766	49.60	ppm	98
103)	Di-n-octylphthalate	14.006	149	2089160	47.31	ppm	99
104)	Benzo[b]fluoranthene	14.269	252	1755787	49.65	ppm	99
105)	Benzo[k]fluoranthene	14.311	252	1639441	45.63	ppm	99
106)	Benzo[a]pyrene	14.680	252	1505572	47.91	ppm	100
107)	Indeno[1,2,3-cd]pyrene	16.317	276	1116609	46.80	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.381	278	1235422	47.30	ppm	99
109) Benzo[g,h,i]perylene	16.697	276	1294770	46.29	ppm	99

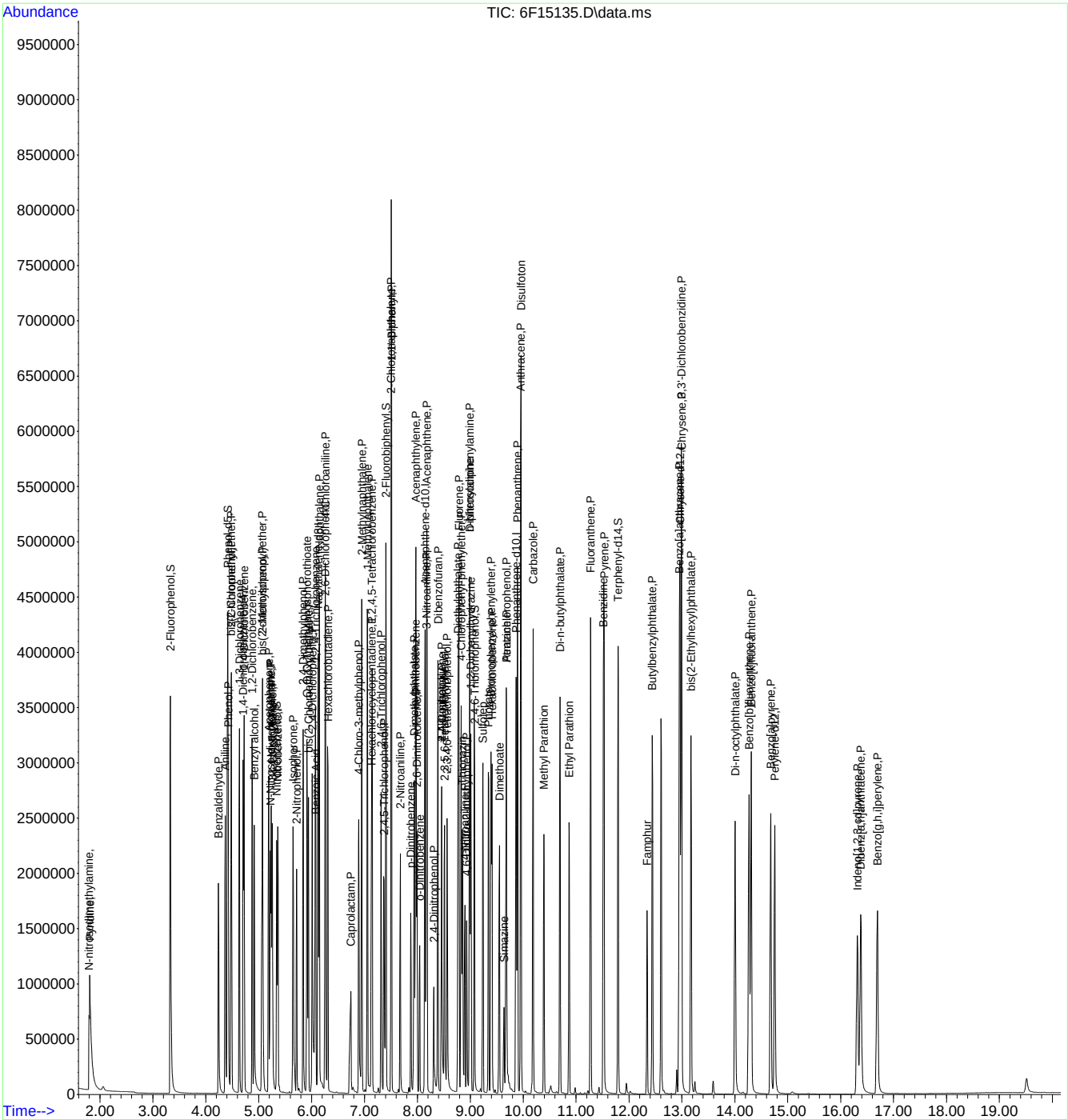
(#) = qualifier out of range (m) = manual integration (+) = signals summed

10.6.5 10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

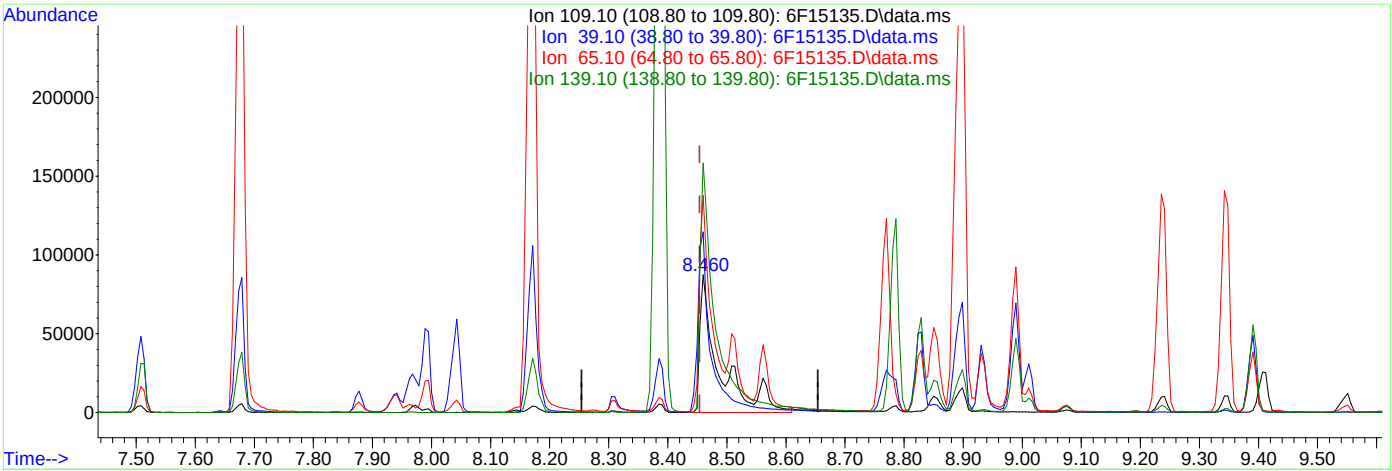
Sample Number: S6F563-ICC563
Lab FileID: 6F15135.D
Injection Time: 07/21/22 13:58
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

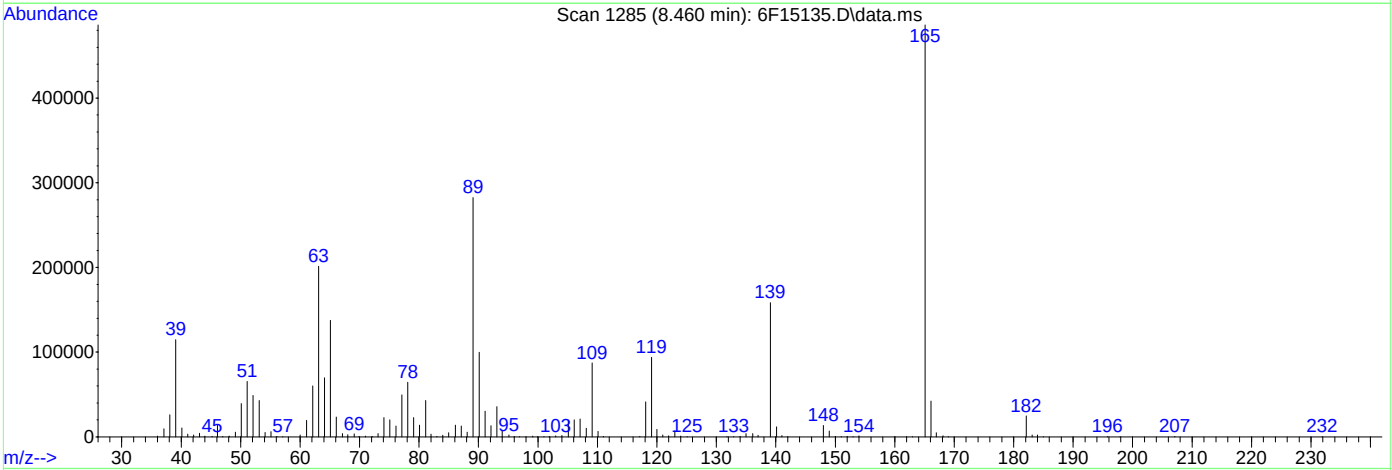
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		6.08	Poor instrument integration
4-Nitrophenol	100-02-7		8.46	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15135.D\data.ms

(62) 4-Nitrophenol (P)

8.460min (+0.006) 58.03ppm m

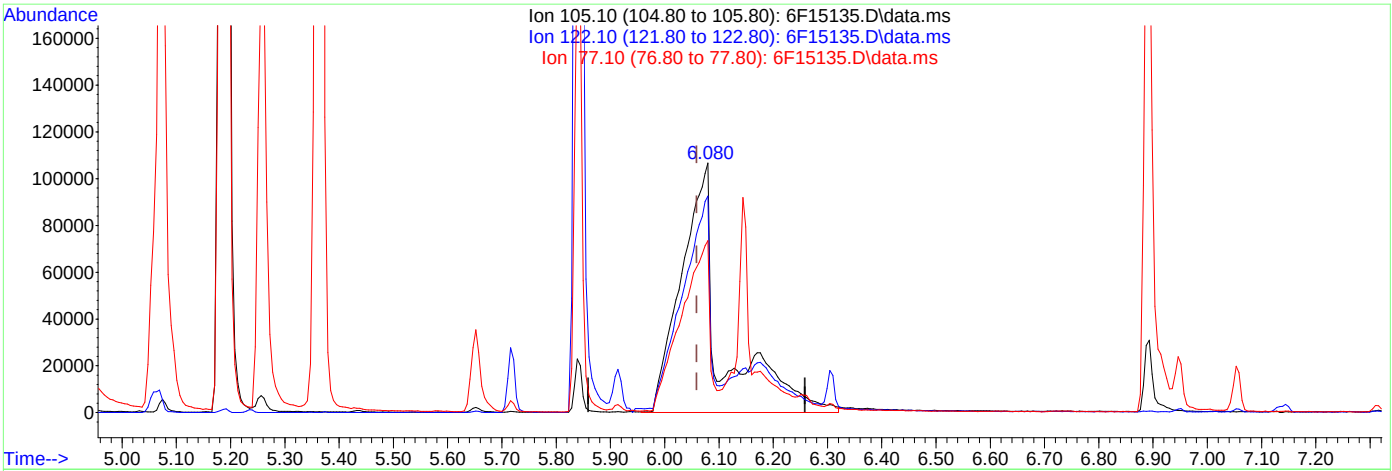
response 196594

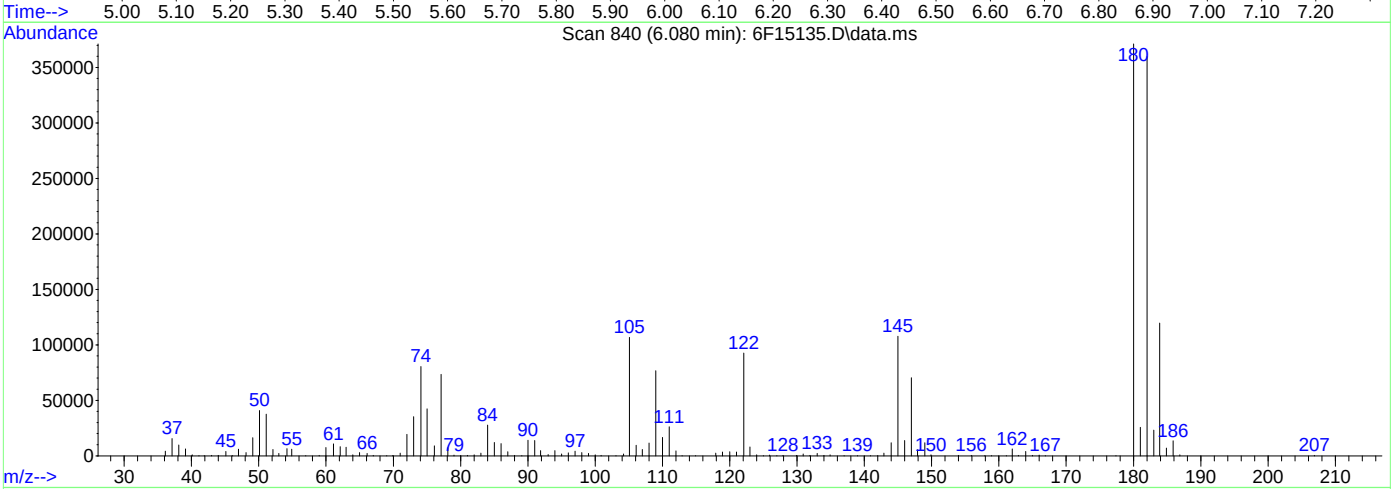
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	131.13
65.10	172.20	157.57
139.10	175.30	181.30

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15135.D
Acq On : 21 Jul 2022 1:58 pm
Operator : williamh
Sample : icc563-50
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 22 11:01:35 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15135.D\data.ms

(30) Benzoic Acid

6.080min (+0.021) 52.50ppm m

response 552028

Ion	Exp%	Act%
105.10	100	100
122.10	79.50	86.68
77.10	74.10	68.84
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 13:24:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.705	152	493393	40.00	ppm		0.00
22) Naphthalene-d8	6.122	136	1820578	40.00	ppm		0.00
43) Acenaphthene-d10	8.144	164	995174	40.00	ppm		0.00
70) Phenanthrene-d10	9.866	188	1660181	40.00	ppm		0.00
92) Chrysene-d12	12.969	240	1323622	40.00	ppm		0.00
102) Perylene-d12	14.755	264	1230511	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	3.330	112	1775376	114.10	ppm		0.00
Spiked Amount 100.000	Range 40 - 102		Recovery =	114.10%#			
9) Phenol-d5	4.416	99	2038294	103.69	ppm		0.00
Spiked Amount 100.000	Range 41 - 100		Recovery =	103.69%#			
23) Nitrobenzene-d5	5.347	82	897685	50.74	ppm		0.00
Spiked Amount 50.000	Range 40 - 105		Recovery =	101.48%			
47) 2-Fluorobiphenyl	7.411	172	1835624	58.69	ppm		0.00
Spiked Amount 50.000	Range 43 - 107		Recovery =	117.38%#			
75) 2,4,6-Tribromophenol	9.080	330	540831	135.73	ppm		0.00
Spiked Amount 100.000	Range 42 - 108		Recovery =	135.73%#			
95) Terphenyl-d14	11.797	244	1926986	57.57	ppm		0.00
Spiked Amount 50.000	Range 45 - 119		Recovery =	115.14%			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.801	42	409293	64.35	ppm		100
4) Pyridine	1.806	79	835046	47.24	ppm		100
5) Benzaldehyde	4.240	106	459795	34.73	ppm		100
6) Aniline	4.368	93	1287173	51.27	ppm		93
8) bis(2-Chloroethyl)ether	4.480	93	854386	49.34	ppm		90
10) Phenol	4.427	94	1039653	51.41	ppm		95
11) 2-Chlorophenol	4.486	128	918269	59.21	ppm		98
12) 1,3-Dichlorobenzene	4.636	146	992684	58.89	ppm		98
13) 1,4-Dichlorobenzene	4.726	146	1005186	58.62	ppm		97
14) 1,2-Dichlorobenzene	4.882	146	952245	58.56	ppm		97
15) Benzyl alcohol	4.919	108	568894	54.88	ppm		95
16) bis(2-chloroisopropyl)...	5.058	45	981034	49.89	ppm	#	64
17) 2-Methylphenol	5.074	108	786807	53.71	ppm		97
18) Acetophenone	5.192	105	1181212	53.62	ppm		97
19) Hexachloroethane	5.240	117	380457	55.01	ppm		96
20) N-Nitroso-di-n-propyla...	5.224	70	568444	46.85	ppm		93
21) 3&4-Methylphenol	5.261	108	839561	55.25	ppm		96
24) Nitrobenzene	5.368	77	837694	52.57	ppm		93
25) Isophorone	5.657	82	1572540	48.89	ppm		92
26) 2-Nitrophenol	5.721	139	496954	64.99	ppm		93
27) 2,4-Dimethylphenol	5.844	107	818630	54.08	ppm		97
28) O,O,O-Triethylphosphor...	5.919	198	421854	58.90	ppm		98
29) bis(2-Chloroethoxy)met...	5.941	93	964726	50.61	ppm		95
30) Benzoic Acid	6.090	105	685222m	63.00	ppm		
31) 2,4-Dichlorophenol	6.015	162	741154	61.98	ppm		96
32) 1,2,4-Trichlorobenzene	6.074	180	751293	58.46	ppm		98
34) Naphthalene	6.149	128	2430750	57.53	ppm		99
35) 4-Chloroaniline	6.267	127	1041270	57.25	ppm		98
36) 2,6-Dichlorophenol	6.256	162	737507	60.03	ppm		97
37) Hexachlorobutadiene	6.310	225	415738	59.95	ppm		98
38) Caprolactam	6.759	113	269950	54.68	ppm		95
39) 4-Chloro-3-methylphenol	6.893	107	719005	54.81	ppm		95
40) 2-Methylnaphthalene	6.951	141	1360019	57.76	ppm		99
41) 1-Methylnaphthalene	7.058	142	1511539	56.55	ppm		100
42) 1,2,4,5-Tetrachloroben...	7.149	216	762140	56.91	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 13:24:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Hexachlorocyclopentadiene	7.133	237	423644	65.07	ppm	100
45) 2,4,6-Trichlorophenol	7.315	196	490875	62.82	ppm	99
46) 2,4,5-Trichlorophenol	7.369	196	530121	61.13	ppm	99
48) 1,1'-Biphenyl	7.513	154	1827937	56.12	ppm	99
49) 2-Chloronaphthalene	7.508	162	1399885	55.53	ppm	98
50) 2-Nitroaniline	7.679	65	446828	55.73	ppm	90
51) p-Dinitrobenzene	7.882	75	286949	53.57	ppm	84
52) Acenaphthylene	7.973	152	2341473	57.62	ppm	99
53) Dimethylphthalate	7.946	163	1734737	58.33	ppm	99
54) m-Dinitrobenzene	7.968	168	317497	64.36	ppm	95
55) 2,6-Dinitrotoluene	7.994	165	433004	61.53	ppm	85
56) o-Dinitrobenzene	8.048	50	195005	58.63	ppm	93
57) Acenaphthene	8.187	153	1474742	57.17	ppm	99
58) 3-Nitroaniline	8.176	138	473064	61.78	ppm	89
59) 2,4-Dinitrophenol	8.310	184	254535	72.42	ppm	95
60) Dibenzofuran	8.390	168	2106379	57.90	ppm	99
61) 2,4-Dinitrotoluene	8.460	165	561592	62.98	ppm	92
62) 4-Nitrophenol	8.460	109	235999m	70.09	ppm	
63) 2,3,5,6-Tetrachlorophenol	8.513	232	391334	64.52	ppm	98
64) 2,3,4,6-Tetrachlorophenol	8.567	232	414421	67.06	ppm	96
65) Fluorene	8.786	166	1658114	56.34	ppm	98
66) 4-Chlorophenyl-phenyle...	8.829	204	808968	57.90	ppm	98
67) Diethylphthalate	8.775	149	1624423	54.70	ppm	100
68) Thionazin	8.856	97	377399	49.98	ppm	91
69) 4-Nitroaniline	8.904	138	485396	60.54	ppm	94
71) 4,6-Dinitro-2-methylph...	8.936	198	318093	70.33	ppm	98
72) n-Nitrosodiphenylamine	8.995	169	1445406	66.08	ppm	99
73) Diphenylamine	8.995	169	1445406	59.18	ppm	99
74) 1,2-Diphenylhydrazine	9.016	77	1687601	52.80	ppm	89
76) Sulfotep	9.241	97	268313	51.14	ppm	78
77) Phorate	9.348	75	931802	48.18	ppm	93
78) 4-Bromophenyl-phenylether	9.396	248	481533	60.56	ppm	99
79) Hexachlorobenzene	9.412	284	521841	60.28	ppm	96
80) Dimethoate	9.556	87	641236	49.72	ppm	92
81) Simazine	9.642	201	104767	60.44	ppm	99
82) Atrazine	9.685	200	513473	60.59	ppm	94
83) Pentachlorophenol	9.685	266	269095	74.97	ppm	97
84) Phenanthrene	9.899	178	2271229	56.82	ppm	99
85) Anthracene	9.957	178	2271268	57.26	ppm	99
86) Disulfoton	9.963	88	927720	48.51	ppm	96
87) Carbazole	10.193	167	2248939	58.92	ppm	99
88) Methyl Parathion	10.396	109	551943	58.41	ppm	83
89) Di-n-butylphthalate	10.696	149	2676311	58.01	ppm	100
90) Ethyl Parathion	10.872	97	337469	57.88	ppm	94
91) Fluoranthene	11.279	202	2368581	57.76	ppm	97
93) Benzidine	11.514	184	1033298	39.04	ppm	97
94) Pyrene	11.530	202	2404698	56.19	ppm	97
96) Famphur	12.343	218	542837	50.36	ppm	95
97) Butylbenzylphthalate	12.445	149	1160429	59.39	ppm	94
98) 3,3'-Dichlorobenzidine	12.990	252	782293	57.17	ppm	99
99) Benzo[a]anthracene	12.953	228	2118942	57.56	ppm	99
100) Chrysene	13.001	228	1992141	57.43	ppm	100
101) bis(2-Ethylhexyl)phtha...	13.172	149	1576541	59.33	ppm	99
103) Di-n-octylphthalate	14.006	149	2495649	58.03	ppm	99
104) Benzo[b]fluoranthene	14.274	252	1988551	57.73	ppm	99
105) Benzo[k]fluoranthene	14.311	252	1968779	56.26	ppm	100
106) Benzo[a]pyrene	14.680	252	1760076	57.51	ppm	99
107) Indeno[1,2,3-cd]pyrene	16.322	276	1323723	56.96	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 13:24:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

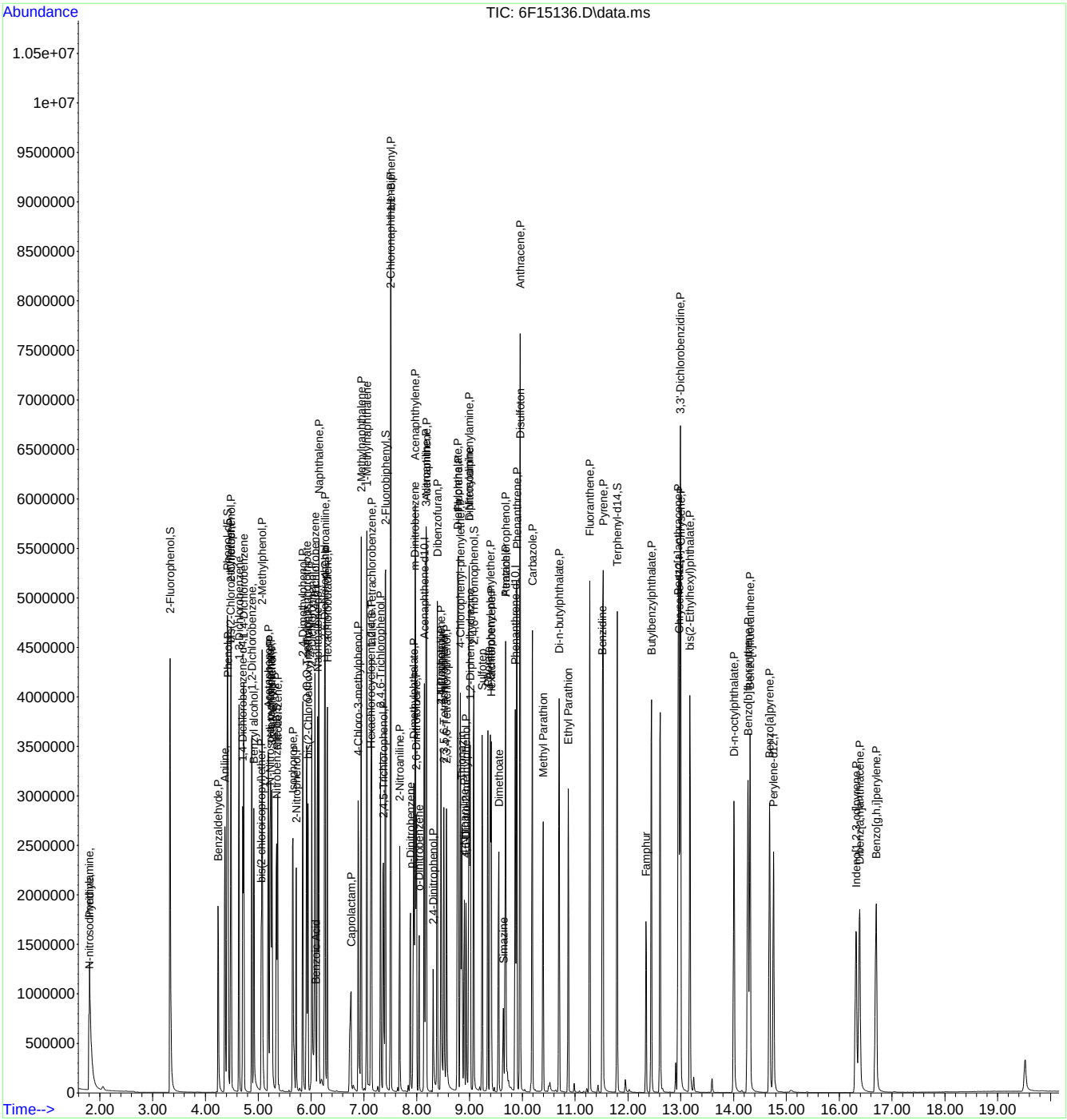
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.386	278	1448955	56.96	ppm	98
109) Benzo[g,h,i]perylene	16.702	276	1529783	56.15	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 13:24:54 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

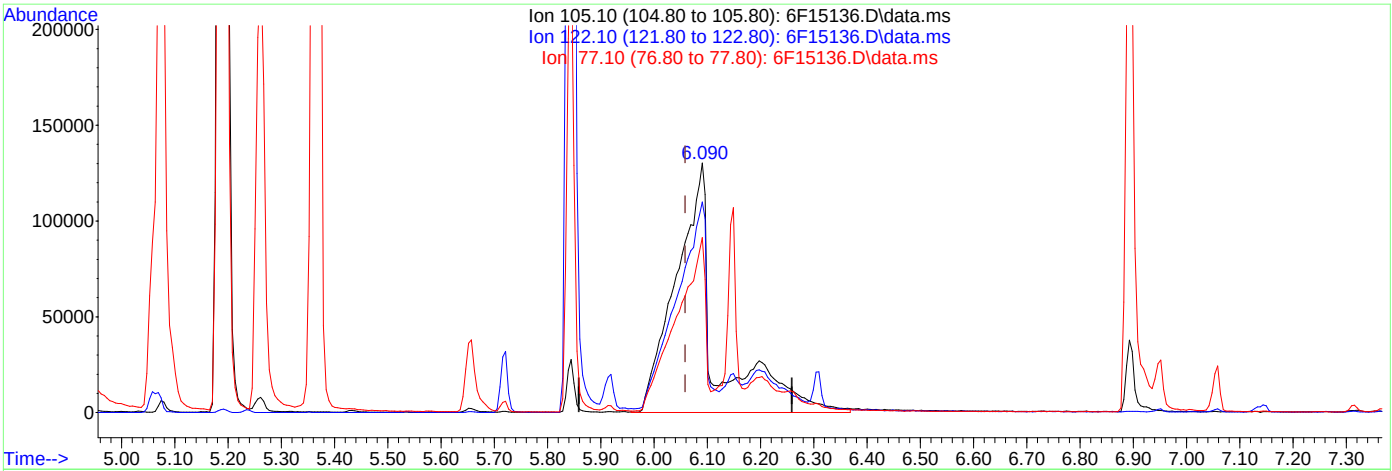
Sample Number: S6F563-IC563
Lab FileID: 6F15136.D
Injection Time: 07/21/22 14:25
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

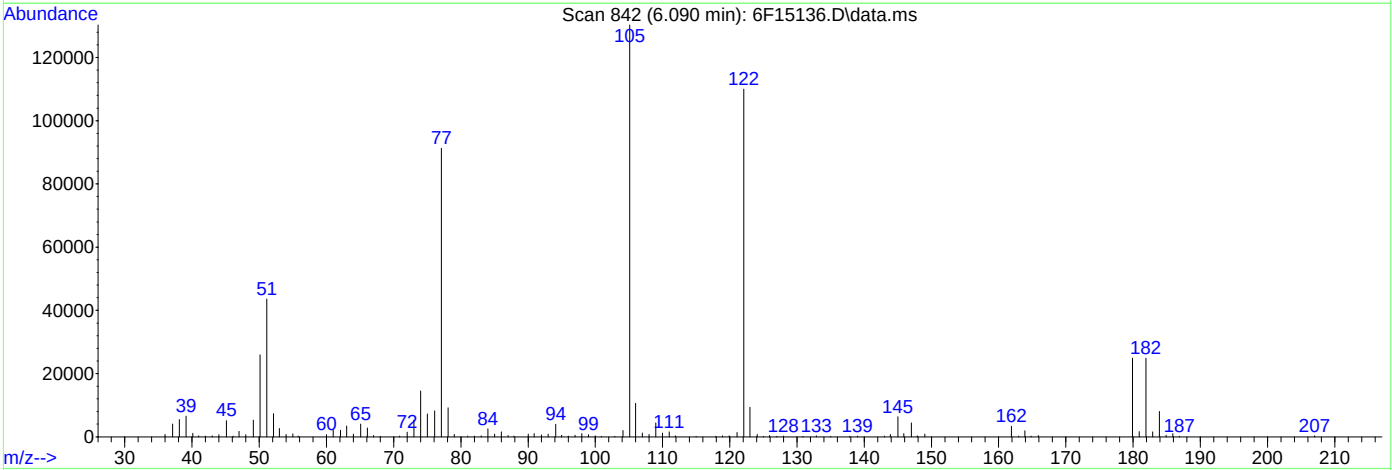
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		6.09	Poor instrument integration
4-Nitrophenol	100-02-7		8.46	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 11:02:43 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15136.D\data.ms

(30) Benzoic Acid

6.090min (+0.031) 63.00ppm m

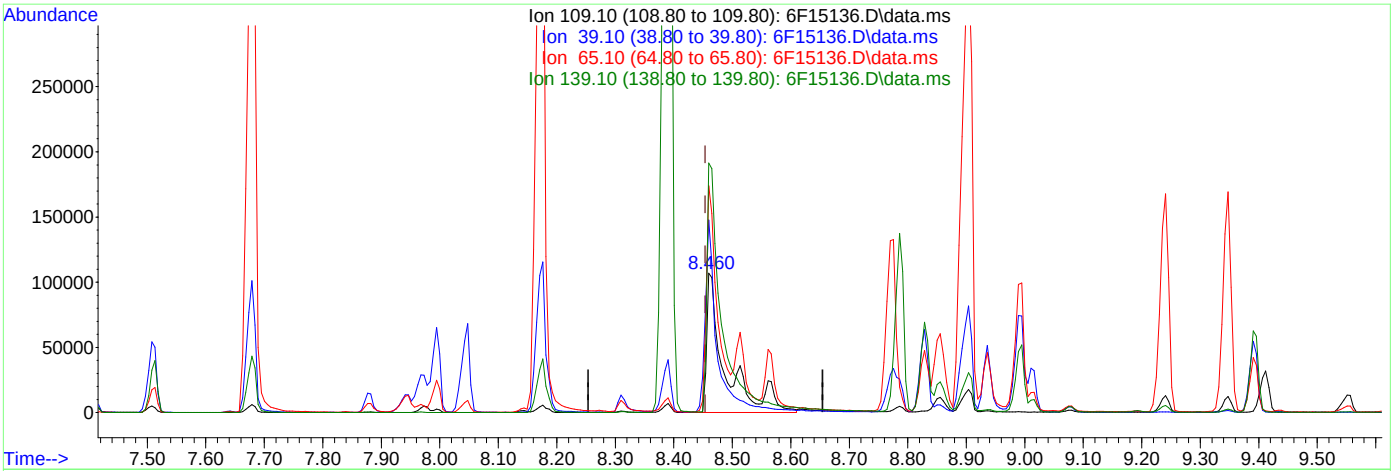
response 685222

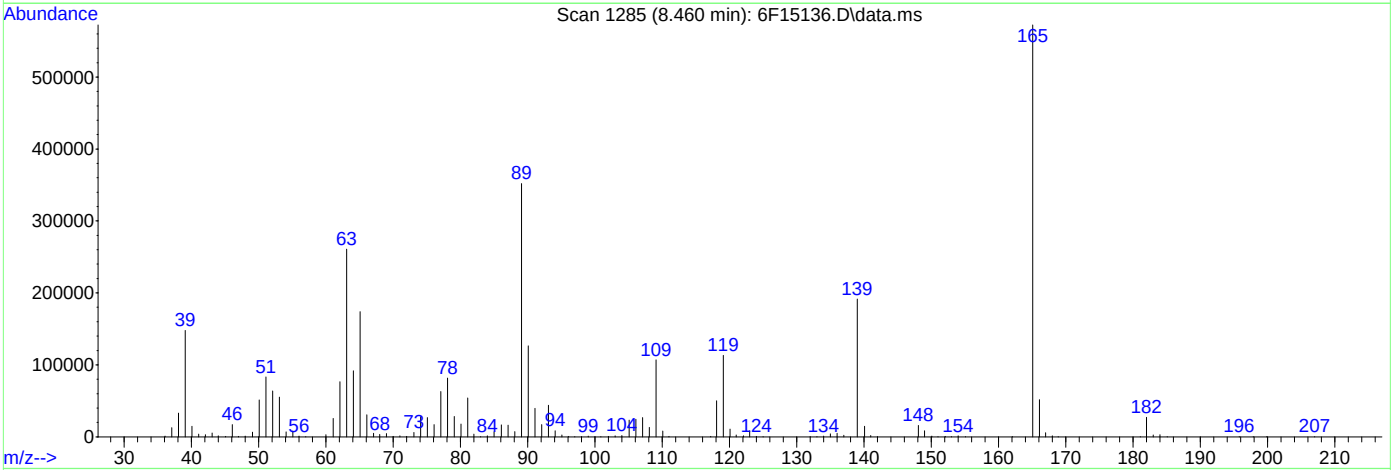
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	84.39
77.10	74.10	70.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15136.D
Acq On : 21 Jul 2022 2:25 pm
Operator : williamh
Sample : ic563-60
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 22 11:02:43 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15136.D\data.ms

(62) 4-Nitrophenol (P)

8.460min (+0.006) 70.09ppm m

response 235999

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	138.17
65.10	172.20	162.51
139.10	175.30	178.96

6F15137.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.710	152	489938	40.00	ppm	0.00
22) Naphthalene-d8	6.122	136	1799618	40.00	ppm	0.00
43) Acenaphthene-d10	8.144	164	987045	40.00	ppm	0.00
70) Phenanthrene-d10	9.867	188	1658782	40.00	ppm	0.00
92) Chrysene-d12	12.969	240	1289320	40.00	ppm	0.00
102) Perylene-d12	14.755	264	1197023	40.00	ppm	0.00
System Monitoring Compounds						
7) 2-Fluorophenol	3.330	112	2186589	141.52	ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery =	141.52%#		
9) Phenol-d5	4.422	99	2508927	128.53	ppm	0.01
Spiked Amount 100.000	Range 41 - 100		Recovery =	128.53%#		
23) Nitrobenzene-d5	5.347	82	1106443	63.27	ppm	0.00
Spiked Amount 50.000	Range 40 - 105		Recovery =	126.54%#		
47) 2-Fluorobiphenyl	7.411	172	2216314	71.45	ppm	0.00
Spiked Amount 50.000	Range 43 - 107		Recovery =	142.90%#		
75) 2,4,6-Tribromophenol	9.086	330	666399	167.38	ppm	0.00
Spiked Amount 100.000	Range 42 - 108		Recovery =	167.38%#		
95) Terphenyl-d14	11.797	244	2348100	72.02	ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery =	144.04%#		
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.801	42	510462	80.82	ppm	97
4) Pyridine	1.811	79	1020856	58.18	ppm	100
5) Benzaldehyde	4.240	106	445546	33.89	ppm	99
6) Aniline	4.373	93	1595577	64.00	ppm	90
8) bis(2-Chloroethyl)ether	4.486	93	1046067	60.84	ppm	86
10) Phenol	4.432	94	1274825	63.48	ppm	95
11) 2-Chlorophenol	4.486	128	1114398	72.37	ppm	100
12) 1,3-Dichlorobenzene	4.636	146	1223570	73.10	ppm	98
13) 1,4-Dichlorobenzene	4.726	146	1233657	72.45	ppm	98
14) 1,2-Dichlorobenzene	4.882	146	1167482	72.30	ppm	98
15) Benzyl alcohol	4.924	108	710434	69.02	ppm	92
16) bis(2-chloroisopropyl)...	5.069	45	1197944	61.35	ppm	79
17) 2-Methylphenol	5.079	108	972092	66.82	ppm	93
18) Acetophenone	5.197	105	1432795	65.50	ppm	96
19) Hexachloroethane	5.240	117	461291	67.16	ppm	100
20) N-Nitroso-di-n-propyla...	5.229	70	686517	56.98	ppm	95
21) 3&4-Methylphenol	5.267	108	1038927	68.85	ppm	95
24) Nitrobenzene	5.374	77	1022607	64.92	ppm	89
25) Isophorone	5.657	82	1941529	61.06	ppm	93
26) 2-Nitrophenol	5.721	139	615176	81.38	ppm	97
27) 2,4-Dimethylphenol	5.850	107	1010652	67.54	ppm	97
28) O,O,O-Triethylphosphor...	5.919	198	515397	72.80	ppm	97
29) bis(2-Chloroethoxy)met...	5.946	93	1150233	61.04	ppm	96
30) Benzoic Acid	6.112	105	856045m	76.54	ppm	
31) 2,4-Dichlorophenol	6.015	162	916897	77.57	ppm	98
32) 1,2,4-Trichlorobenzene	6.074	180	914237	71.97	ppm	97
34) Naphthalene	6.149	128	2951995	70.68	ppm	100
35) 4-Chloroaniline	6.267	127	1269268	70.59	ppm	99
36) 2,6-Dichlorophenol	6.256	162	899956	74.10	ppm	98
37) Hexachlorobutadiene	6.310	225	513244	74.87	ppm	99
38) Caprolactam	6.775	113	333775	68.40	ppm	95
39) 4-Chloro-3-methylphenol	6.898	107	886208	68.34	ppm	96
40) 2-Methylnaphthalene	6.951	141	1647113	70.77	ppm	100
41) 1-Methylnaphthalene	7.058	142	1857123	70.29	ppm	99
42) 1,2,4,5-Tetrachloroben...	7.149	216	929316	70.21	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	Hexachlorocyclopentadiene	7.133	237	533521	78.39	ppm		98
45)	2,4,6-Trichlorophenol	7.315	196	610263	78.75	ppm		97
46)	2,4,5-Trichlorophenol	7.369	196	657854	76.48	ppm		99
48)	1,1'-Biphenyl	7.513	154	2194078	67.92	ppm		98
49)	2-Chloronaphthalene	7.508	162	1690493	67.61	ppm		99
50)	2-Nitroaniline	7.684	65	544416	68.46	ppm		89
51)	p-Dinitrobenzene	7.882	75	352994	65.76	ppm		89
52)	Acenaphthylene	7.978	152	2816261	69.88	ppm		99
53)	Dimethylphthalate	7.952	163	2116284	71.75	ppm		100
54)	m-Dinitrobenzene	7.973	168	380881	77.84	ppm	#	82
55)	2,6-Dinitrotoluene	8.000	165	528508	75.72	ppm		83
56)	o-Dinitrobenzene	8.053	50	241533	73.22	ppm		94
57)	Acenaphthene	8.187	153	1768346	69.11	ppm		99
58)	3-Nitroaniline	8.182	138	571155	75.20	ppm		88
59)	2,4-Dinitrophenol	8.315	184	325633	87.43	ppm		91
60)	Dibenzofuran	8.390	168	2560319	70.96	ppm		98
61)	2,4-Dinitrotoluene	8.465	165	685937	77.56	ppm		94
62)	4-Nitrophenol	8.465	109	291926m	87.42	ppm		
63)	2,3,5,6-Tetrachlorophenol	8.519	232	480932	78.34	ppm		99
64)	2,3,4,6-Tetrachlorophenol	8.567	232	514212	83.90	ppm		99
65)	Fluorene	8.791	166	1982223	67.90	ppm		99
66)	4-Chlorophenyl-phenyle...	8.834	204	987898	71.29	ppm		98
67)	Diethylphthalate	8.781	149	1954758	66.37	ppm		100
68)	Thionazin	8.856	97	460562	61.50	ppm		93
69)	4-Nitroaniline	8.914	138	596324	75.11	ppm		93
71)	4,6-Dinitro-2-methylph...	8.941	198	396402	84.38	ppm		99
72)	n-Nitrosodiphenylamine	9.000	169	1762400	80.64	ppm		99
73)	Diphenylamine	9.000	169	1762400	72.22	ppm		99
74)	1,2-Diphenylhydrazine	9.016	77	2044062	64.01	ppm		91
76)	Sulfotep	9.246	97	326605	62.31	ppm	#	66
77)	Phorate	9.348	75	1143687	59.18	ppm		95
78)	4-Bromophenyl-phenylether	9.396	248	587273	73.92	ppm		96
79)	Hexachlorobenzene	9.417	284	633913	73.29	ppm		94
80)	Dimethoate	9.562	87	771212	59.85	ppm		94
81)	Simazine	9.647	201	133261	76.95	ppm		90
82)	Atrazine	9.690	200	650779	76.86	ppm		94
83)	Pentachlorophenol	9.685	266	326351	88.36	ppm		97
84)	Phenanthrene	9.899	178	2747402	68.80	ppm		98
85)	Anthracene	9.957	178	2742284	69.19	ppm		99
86)	Disulfoton	9.963	88	1106964	57.93	ppm		99
87)	Carbazole	10.193	167	2734023	71.68	ppm		99
88)	Methyl Parathion	10.396	109	658160	69.71	ppm		87
89)	Di-n-butylphthalate	10.701	149	3237246	70.22	ppm		100
90)	Ethyl Parathion	10.872	97	414891	71.22	ppm		97
91)	Fluoranthene	11.284	202	2872957	70.11	ppm		96
93)	Benzidine	11.514	184	1062835	41.22	ppm		97
94)	Pyrene	11.530	202	2921834	70.09	ppm		98
96)	Famphur	12.348	218	597330	61.32	ppm		96
97)	Butylbenzylphthalate	12.445	149	1414265	74.31	ppm		95
98)	3,3'-Dichlorobenzidine	12.995	252	912924	68.50	ppm		97
99)	Benzo[a]anthracene	12.958	228	2549736	71.11	ppm		99
100)	Chrysene	13.001	228	2432339	71.99	ppm		100
101)	bis(2-Ethylhexyl)phtha...	13.172	149	1911070	73.84	ppm		98
103)	Di-n-octylphthalate	14.006	149	3049655	72.89	ppm		99
104)	Benzo[b]fluoranthene	14.274	252	2480283	74.02	ppm		99
105)	Benzo[k]fluoranthene	14.317	252	2292424	67.34	ppm		99
106)	Benzo[a]pyrene	14.686	252	2150049	72.21	ppm		99
107)	Indeno[1,2,3-cd]pyrene	16.328	276	1632126	72.19	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.392	278	1786593	72.19	ppm	99
109) Benzo[g,h,i]perylene	16.707	276	1872519	70.65	ppm	99

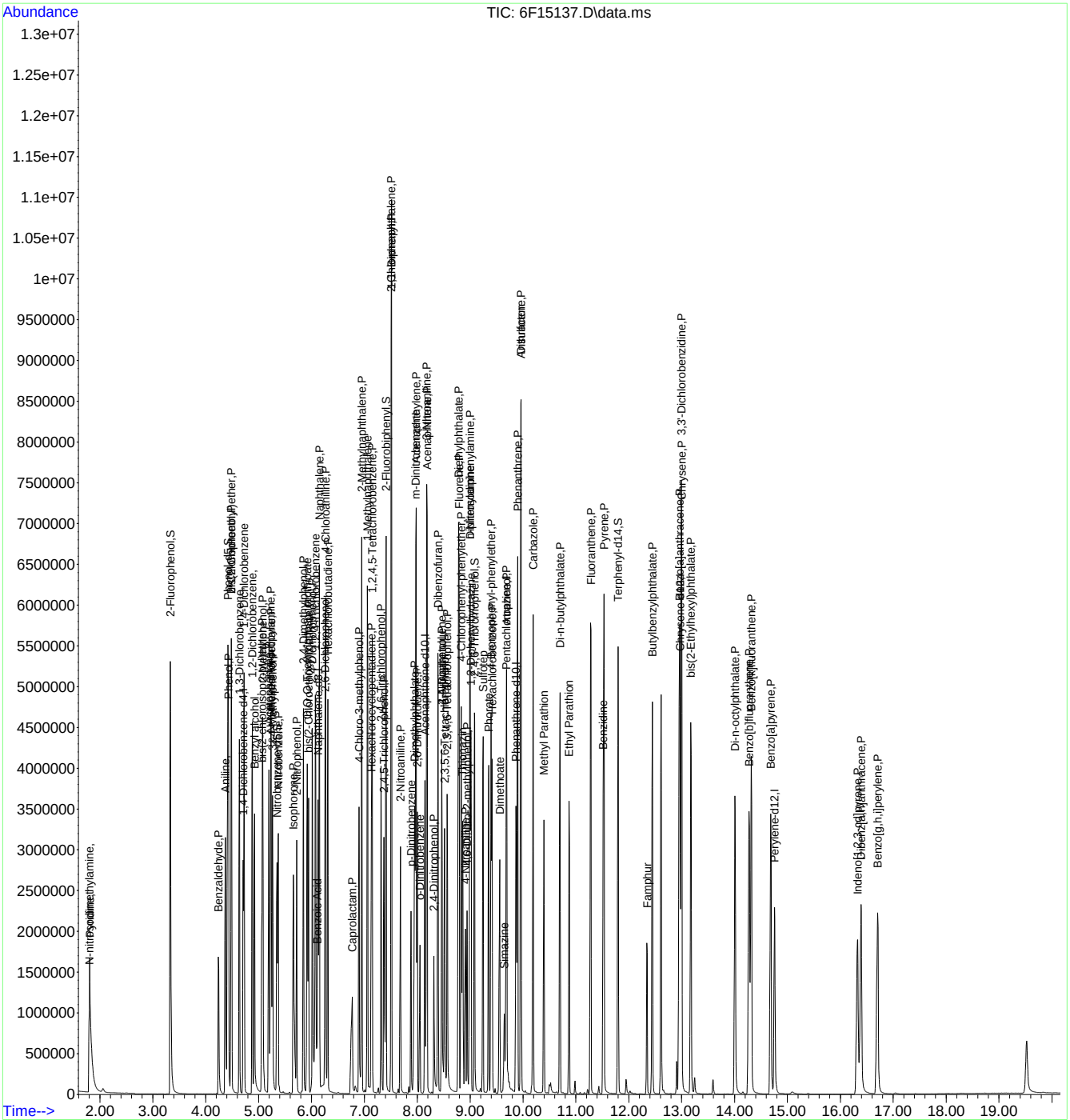
(#) = qualifier out of range (m) = manual integration (+) = signals summed

10.6.7 10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

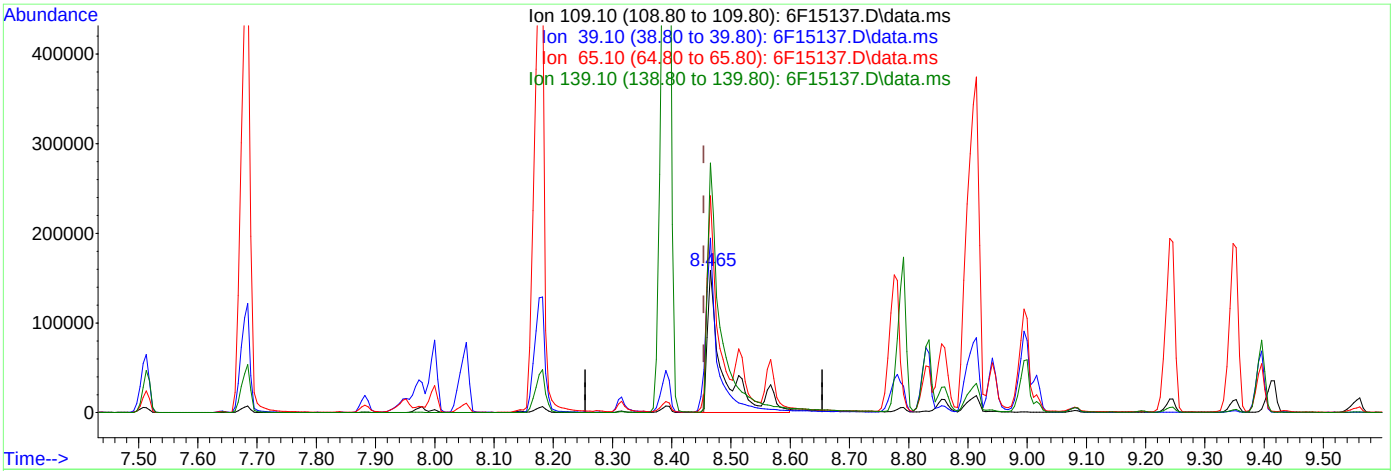
Sample Number: S6F563-IC563
Lab FileID: 6F15137.D
Injection Time: 07/21/22 14:52
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

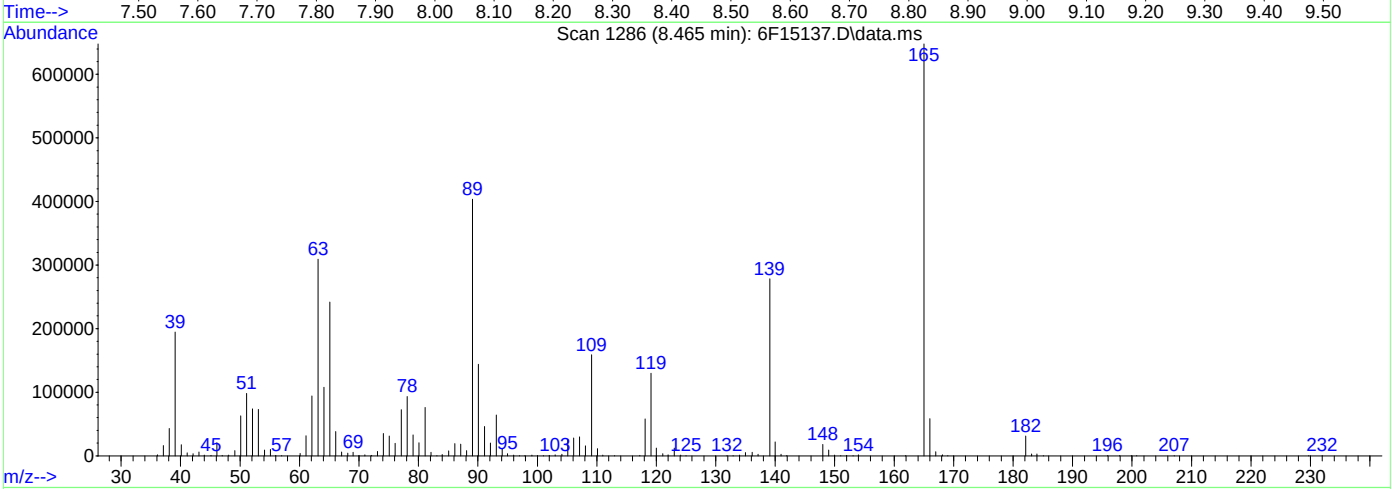
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		6.11	Poor instrument integration
4-Nitrophenol	100-02-7		8.47	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15137.D\data.ms

(62) 4-Nitrophenol (P)

8.465min (+0.011) 87.42ppm m

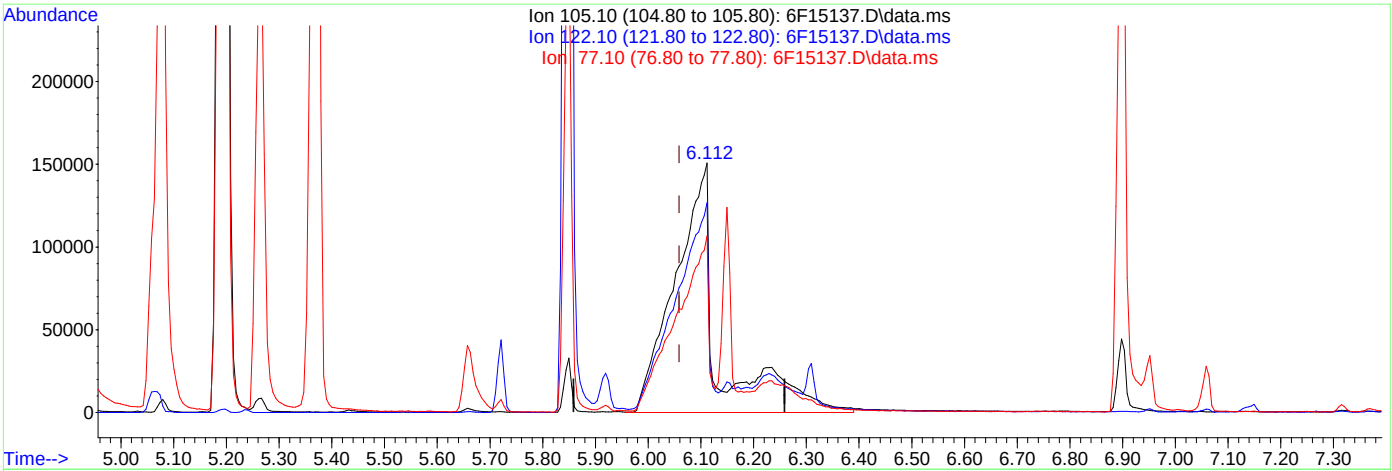
response 291926

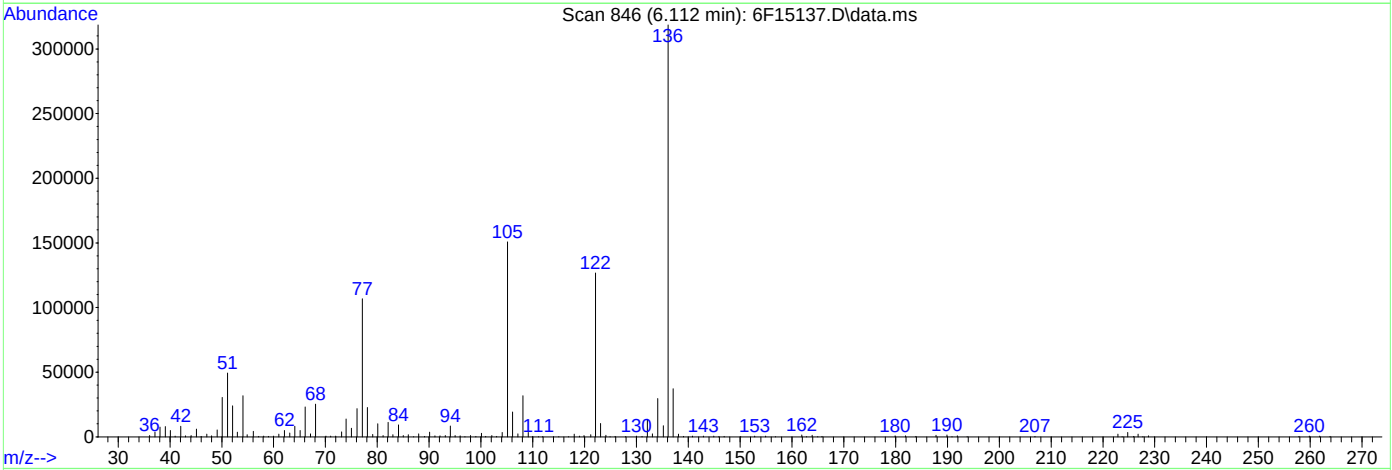
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	122.49
65.10	172.20	152.32
139.10	175.30	175.41

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15137.D
Acq On : 21 Jul 2022 2:52 pm
Operator : williamh
Sample : ic563-75
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 22 11:04:18 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15137.D\data.ms

(30) Benzoic Acid

6.112min (+0.053) 76.54ppm m

response 856045

Ion	Exp%	Act%
105.10	100	100
122.10	79.50	84.05
77.10	74.10	70.79
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.710	152	491354	40.00	ppm		0.00
22) Naphthalene-d8	6.128	136	1808587	40.00	ppm		0.00
43) Acenaphthene-d10	8.150	164	997243	40.00	ppm		0.00
70) Phenanthrene-d10	9.872	188	1693941	40.00	ppm		0.00
92) Chrysene-d12	12.974	240	1276861	40.00	ppm		0.00
102) Perylene-d12	14.761	264	1182900	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	3.336	112	2901174	187.23	ppm		0.00
Spiked Amount 100.000	Range 40 - 102		Recovery =	187.23%#			
9) Phenol-d5	4.427	99	3293703	168.25	ppm		0.02
Spiked Amount 100.000	Range 41 - 100		Recovery =	168.25%#			
23) Nitrobenzene-d5	5.352	82	1471625	83.73	ppm		0.00
Spiked Amount 50.000	Range 40 - 105		Recovery =	167.46%#			
47) 2-Fluorobiphenyl	7.417	172	2876377	91.78	ppm		0.00
Spiked Amount 50.000	Range 43 - 107		Recovery =	183.56%#			
75) 2,4,6-Tribromophenol	9.091	330	892622	219.55	ppm		0.00
Spiked Amount 100.000	Range 42 - 108		Recovery =	219.55%#			
95) Terphenyl-d14	11.803	244	3080876	95.41	ppm		0.00
Spiked Amount 50.000	Range 45 - 119		Recovery =	190.82%#			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.801	42	676847	106.86	ppm		97
4) Pyridine	1.806	79	1432036	81.45	ppm		100
5) Benzaldehyde	4.245	106	429421	32.57	ppm		98
6) Aniline	4.374	93	2116022	84.64	ppm		90
8) bis(2-Chloroethyl)ether	4.491	93	1366037	79.22	ppm		86
10) Phenol	4.443	94	1688131	83.82	ppm		98
11) 2-Chlorophenol	4.491	128	1484165	96.10	ppm		97
12) 1,3-Dichlorobenzene	4.641	146	1619081	96.45	ppm		99
13) 1,4-Dichlorobenzene	4.732	146	1621404	94.95	ppm		97
14) 1,2-Dichlorobenzene	4.882	146	1544507	95.37	ppm		98
15) Benzyl alcohol	4.930	108	954447	92.46	ppm		92
16) bis(2-chloroisopropyl)...	5.064	45	1560681	79.69	ppm	#	65
17) 2-Methylphenol	5.085	108	1301756	89.23	ppm		92
18) Acetophenone	5.203	105	1924937	87.74	ppm		97
19) Hexachloroethane	5.240	117	585353	84.98	ppm		98
20) N-Nitroso-di-n-propyla...	5.240	70	872596	72.22	ppm		94
21) 3&4-Methylphenol	5.272	108	1374328	90.81	ppm		95
24) Nitrobenzene	5.374	77	1348758	85.21	ppm		93
25) Isophorone	5.668	82	2612084	81.75	ppm		93
26) 2-Nitrophenol	5.727	139	820595	108.02	ppm		95
27) 2,4-Dimethylphenol	5.855	107	1334861	88.76	ppm		97
28) O,O,O-Triethylphosphor...	5.925	198	689476	96.90	ppm		99
29) bis(2-Chloroethoxy)met...	5.951	93	1467627m	77.50	ppm		
30) Benzoic Acid	6.139	105	1180807m	98.78	ppm		
31) 2,4-Dichlorophenol	6.026	162	1198072	100.85	ppm		94
32) 1,2,4-Trichlorobenzene	6.080	180	1215131	95.18	ppm		97
34) Naphthalene	6.155	128	3774953	89.93	ppm		100
35) 4-Chloroaniline	6.272	127	1654761	91.58	ppm		99
36) 2,6-Dichlorophenol	6.262	162	1201923	98.48	ppm		96
37) Hexachlorobutadiene	6.310	225	674979	97.97	ppm		100
38) Caprolactam	6.802	113	451698	92.11	ppm		96
39) 4-Chloro-3-methylphenol	6.909	107	1176481	90.28	ppm		95
40) 2-Methylnaphthalene	6.957	141	2158806	92.29	ppm		98
41) 1-Methylnaphthalene	7.064	142	2388316	89.94	ppm		100
42) 1,2,4,5-Tetrachloroben...	7.155	216	1209419	90.91	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	Hexachlorocyclopentadiene	7.133	237	736684	99.19	ppm		98
45)	2,4,6-Trichlorophenol	7.321	196	818568	104.55	ppm		98
46)	2,4,5-Trichlorophenol	7.374	196	885112	101.85	ppm		99
48)	1,1'-Biphenyl	7.519	154	2738210	83.90	ppm		97
49)	2-Chloronaphthalene	7.513	162	2171164	85.94	ppm		99
50)	2-Nitroaniline	7.690	65	724031	90.11	ppm		89
51)	p-Dinitrobenzene	7.888	75	477135	86.45	ppm		89
52)	Acenaphthylene	7.984	152	3636570	89.31	ppm		99
53)	Dimethylphthalate	7.962	163	2820861	94.66	ppm		99
54)	m-Dinitrobenzene	7.984	168	497896	100.72	ppm	#	77
55)	2,6-Dinitrotoluene	8.011	165	701086	99.42	ppm		75
56)	o-Dinitrobenzene	8.064	50	314521	94.37	ppm		93
57)	Acenaphthene	8.192	153	2298229	88.90	ppm		99
58)	3-Nitroaniline	8.187	138	748823	97.58	ppm		90
59)	2,4-Dinitrophenol	8.321	184	456694	110.51	ppm		93
60)	Dibenzofuran	8.396	168	3314887	90.93	ppm		97
61)	2,4-Dinitrotoluene	8.476	165	916143	102.53	ppm		89
62)	4-Nitrophenol	8.476	109	402110m	119.18	ppm		
63)	2,3,5,6-Tetrachlorophenol	8.524	232	656171	102.25	ppm		97
64)	2,3,4,6-Tetrachlorophenol	8.572	232	687283	110.99	ppm		98
65)	Fluorene	8.797	166	2489656	84.41	ppm		99
66)	4-Chlorophenyl-phenyle...	8.834	204	1294744	92.47	ppm		98
67)	Diethylphthalate	8.786	149	2510253	84.36	ppm		100
68)	Thionazin	8.866	97	614033	81.15	ppm		91
69)	4-Nitroaniline	8.931	138	810082	101.31	ppm		94
71)	4,6-Dinitro-2-methylph...	8.957	198	543293	106.76	ppm		89
72)	n-Nitrosodiphenylamine	9.005	169	2290879	102.65	ppm		99
73)	Diphenylamine	9.005	169	2290879	91.93	ppm		99
74)	1,2-Diphenylhydrazine	9.021	77	2681480	82.23	ppm		90
76)	Sulfotep	9.246	97	432048	80.71	ppm		85
77)	Phorate	9.358	75	1508608	76.44	ppm		91
78)	4-Bromophenyl-phenylether	9.401	248	773411	95.33	ppm		97
79)	Hexachlorobenzene	9.423	284	846860	95.88	ppm		92
80)	Dimethoate	9.567	87	1015989	77.21	ppm		94
81)	Simazine	9.663	201	179245	101.35	ppm		95
82)	Atrazine	9.701	200	862134	99.70	ppm		92
83)	Pentachlorophenol	9.690	266	448306	112.87	ppm		98
84)	Phenanthrene	9.904	178	3586167	87.93	ppm		98
85)	Anthracene	9.963	178	3489904	86.22	ppm		98
86)	Disulfoton	9.968	88	1404489	71.97	ppm		99
87)	Carbazole	10.198	167	3618426	92.90	ppm		98
88)	Methyl Parathion	10.401	109	851452	88.32	ppm		84
89)	Di-n-butylphthalate	10.701	149	4211791	89.47	ppm		99
90)	Ethyl Parathion	10.877	97	549249	92.33	ppm		95
91)	Fluoranthene	11.284	202	3756479	89.77	ppm		98
93)	Benzidine	11.519	184	1145977	44.88	ppm		96
94)	Pyrene	11.535	202	3809416	92.28	ppm		97
96)	Famphur	12.348	218	692786	91.08	ppm		96
97)	Butylbenzylphthalate	12.450	149	1852588	98.29	ppm		94
98)	3,3'-Dichlorobenzidine	12.996	252	1133848	85.90	ppm		99
99)	Benzo[a]anthracene	12.958	228	3362299	94.68	ppm		98
100)	Chrysene	13.006	228	3090707	92.37	ppm		99
101)	bis(2-Ethylhexyl)phtha...	13.177	149	2512518	98.02	ppm		97
103)	Di-n-octylphthalate	14.012	149	4047728	97.91	ppm		99
104)	Benzo[b]fluoranthene	14.285	252	3256140	98.34	ppm		99
105)	Benzo[k]fluoranthene	14.327	252	2960366	88.01	ppm		99
106)	Benzo[a]pyrene	14.696	252	2799161	95.14	ppm		99
107)	Indeno[1,2,3-cd]pyrene	16.333	276	2196095	98.30	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration

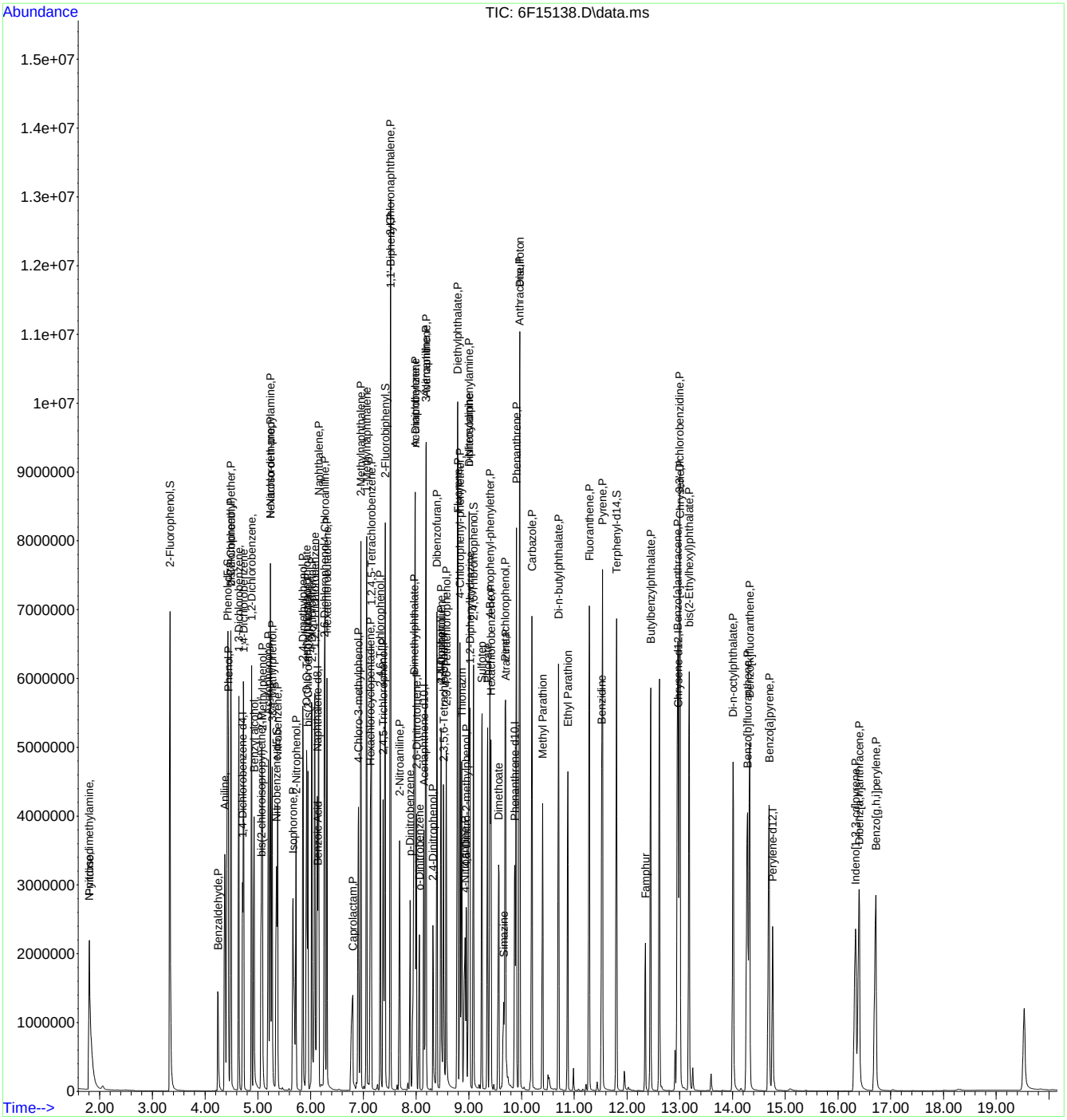
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.403	278	2375728	97.15	ppm	99
109) Benzo[g,h,i]perylene	16.718	276	2493037	95.19	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration



Manual Integration Approval Summary

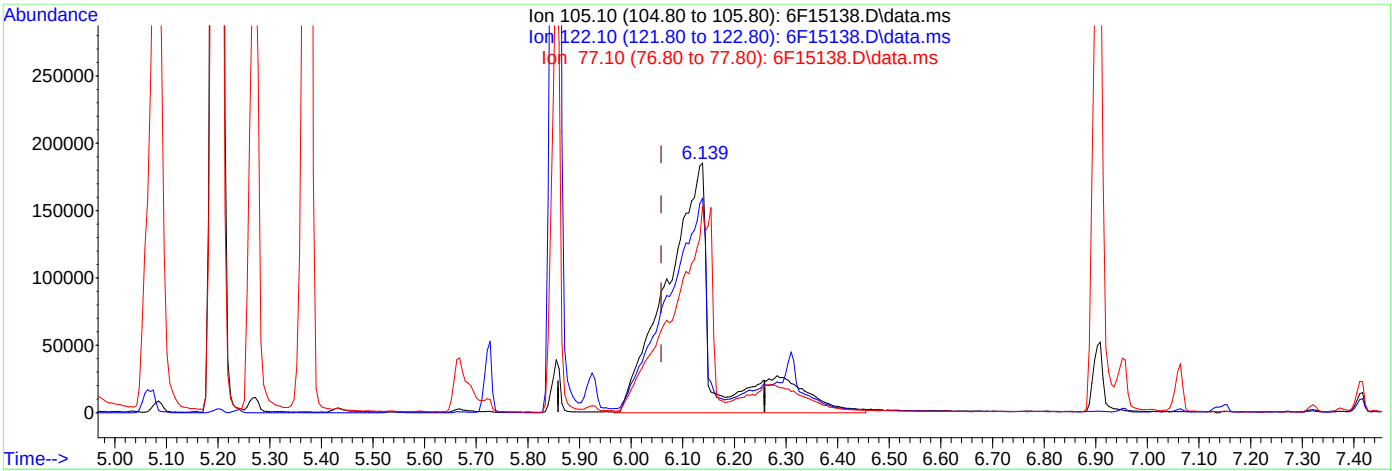
Sample Number: S6F563-IC563
Lab FileID: 6F15138.D
Injection Time: 07/21/22 15:19
Method: SW846 8270E
Analyst approved: 07/22/22 13:13 William Hustedde
Supervisor approved: 07/22/22 15:25 Naresh Jiawan

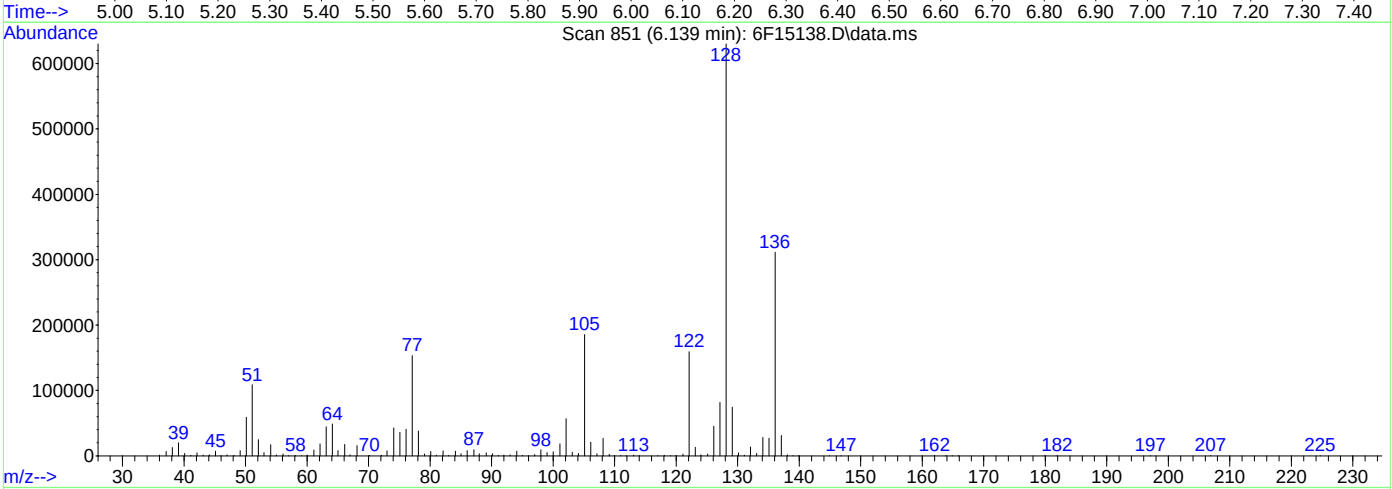
Parameter	CAS	Sig#	R.T. (min.)	Reason
bis(2-Chloroethoxy)methane	111-91-1		5.95	Poor instrument integration
Benzoic Acid	65-85-0		6.14	Poor instrument integration
4-Nitrophenol	100-02-7		8.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15138.D\data.ms

(30) Benzoic Acid

6.139min (+0.080) 98.78ppm m

response 1180807

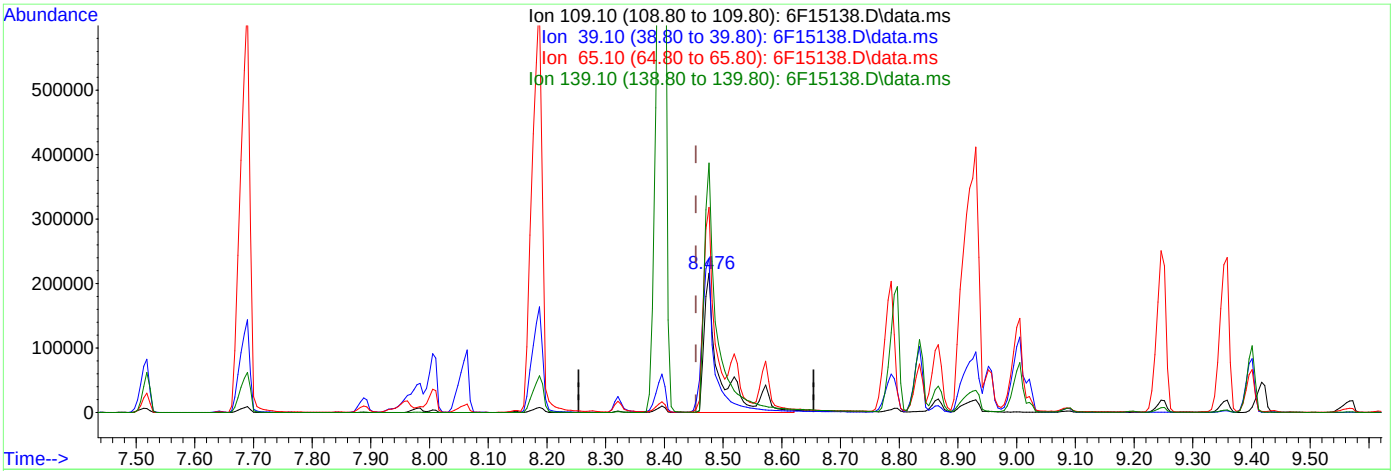
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	85.88
77.10	74.10	82.67
0.00	0.00	0.00

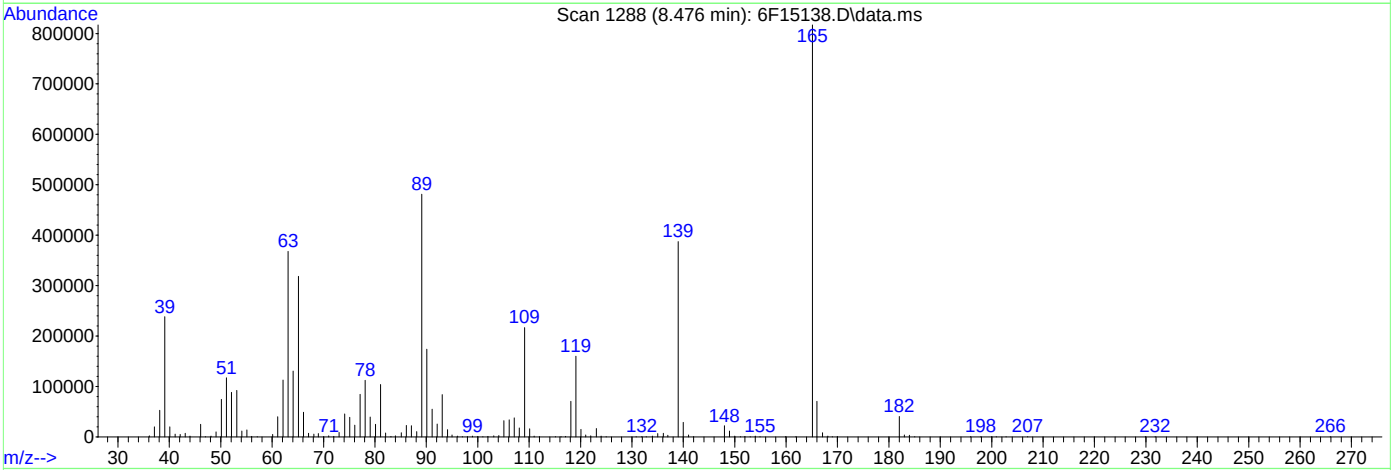
FA98819

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15138.D
Acq On : 21 Jul 2022 3:19 pm
Operator : williamh
Sample : ic563-100
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 22 11:05:37 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Wed Jun 15 11:47:27 2022
Response via : Initial Calibration





TIC: 6F15138.D\data.ms

(62) 4-Nitrophenol (P)

8.476min (+0.022) 119.18ppm m

response 402110

Ion	Exp%	Act%
109.10	100	100
39.10	151.00	110.24#
65.10	172.20	147.04
139.10	175.30	178.93

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
07/22/22 15:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15139.D
Acq On : 21 Jul 2022 3:46 pm
Operator : williamh
Sample : icv563-50,A
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 22 15:11:45 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:13:10 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.705	152	465283	40.00	ppm		0.00
22) Naphthalene-d8	6.122	136	1684084	40.00	ppm		0.00
43) Acenaphthene-d10	8.139	164	901822	40.00	ppm		0.00
70) Phenanthrene-d10	9.861	188	1487625	40.00	ppm		0.00
92) Chrysene-d12	12.963	240	1182801	40.00	ppm		0.00
102) Perylene-d12	14.755	264	1135505	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	0.000	112	0d	0.00	ppm		
Spiked Amount 100.000	Range 40 - 102		Recovery =	0.00%#			
9) Phenol-d5	0.000	99	0d	0.00	ppm		
Spiked Amount 100.000	Range 41 - 100		Recovery =	0.00%#			
23) Nitrobenzene-d5	0.000	82	0d	0.00	ppm		
Spiked Amount 50.000	Range 40 - 105		Recovery =	0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount 50.000	Range 43 - 107		Recovery =	0.00%#			
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 100.000	Range 42 - 108		Recovery =	0.00%#			
95) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000	Range 45 - 119		Recovery =	0.00%#			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.801	42	323741	50.51	ppm		99
5) Benzaldehyde	4.240	106	538877	51.29	ppm		99
8) bis(2-Chloroethyl)ether	4.475	93	705212	52.10	ppm		96
10) Phenol	4.422	94	827437	51.17	ppm		97
11) 2-Chlorophenol	4.486	128	751180	52.24	ppm		96
12) 1,3-Dichlorobenzene	4.636	146	804502	50.53	ppm		98
13) 1,4-Dichlorobenzene	4.726	146	811501	50.29	ppm		97
14) 1,2-Dichlorobenzene	4.876	146	762279	49.74	ppm		99
16) bis(2-chloroisopropyl)...	5.069	45	832747	51.30	ppm		87
17) 2-Methylphenol	5.074	108	585093	47.49	ppm		98
18) Acetophenone	5.186	105	921119	49.39	ppm		98
19) Hexachloroethane	5.235	117	307190	50.86	ppm		92
20) N-Nitroso-di-n-propyla...	5.219	70	449132	49.72	ppm		92
21) 3&4-Methylphenol	5.267	108	1279013	98.66	ppm		92
24) Nitrobenzene	5.363	77	654688	51.33	ppm		90
25) Isophorone	5.646	82	1206886	49.52	ppm		94
26) 2-Nitrophenol	5.716	139	395952	53.63	ppm		98
29) bis(2-Chloroethoxy)met...	5.935	93	746924m	49.96	ppm		
30) Benzoic Acid	6.144	105	1078536	96.27	ppm	#	74
31) 2,4-Dichlorophenol	6.010	162	588246	52.71	ppm		97
32) 1,2,4-Trichlorobenzene	6.074	180	599309	50.66	ppm		99
34) Naphthalene	6.144	128	1905128	47.96	ppm		100
36) 2,6-Dichlorophenol	6.251	162	559101	48.51	ppm		97
37) Hexachlorobutadiene	6.304	225	323222	49.36	ppm		99
38) Caprolactam	6.738	113	210327m	51.25	ppm		
39) 4-Chloro-3-methylphenol	6.887	107	548602	50.93	ppm		99
41) 1-Methylnaphthalene	7.053	142	1176239	47.90	ppm		98
42) 1,2,4,5-Tetrachloroben...	7.144	216	575966	46.77	ppm		100
44) Hexachlorocyclopentadiene	7.128	237	309481	52.48	ppm		97
45) 2,4,6-Trichlorophenol	7.310	196	368312	52.65	ppm		96
46) 2,4,5-Trichlorophenol	7.363	196	411725	53.57	ppm		98
48) 1,1'-Biphenyl	7.508	154	1449005	49.01	ppm		98
49) 2-Chloronaphthalene	7.502	162	1114025	49.33	ppm		100
52) Acenaphthylene	7.968	152	1818311	50.23	ppm		100
53) Dimethylphthalate	7.930	163	1349465	50.92	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15139.D
Acq On : 21 Jul 2022 3:46 pm
Operator : williamh
Sample : icv563-50,A
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 22 15:11:45 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:13:10 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	2,6-Dinitrotoluene	7.989	165	319036	49.94	ppm	86
57)	Acenaphthene	8.176	153	1142856	48.80	ppm	97
59)	2,4-Dinitrophenol	8.305	184	392720	94.18	ppm	96
61)	2,4-Dinitrotoluene	8.454	165	434752	54.26	ppm	92
62)	4-Nitrophenol	8.460	109	298521m	82.83	ppm	
64)	2,3,4,6-Tetrachlorophenol	8.561	232	292574	49.53	ppm	98
65)	Fluorene	8.786	166	1322590	51.15	ppm	98
66)	4-Chlorophenyl-phenyle...	8.829	204	637696	51.01	ppm	98
67)	Diethylphthalate	8.770	149	1306536	52.38	ppm	99
71)	4,6-Dinitro-2-methylph...	8.925	198	546135	109.36	ppm	98
74)	1,2-Diphenylhydrazine	9.011	77	1257368	51.32	ppm	92
78)	4-Bromophenyl-phenylether	9.390	248	384390	53.65	ppm	97
79)	Hexachlorobenzene	9.407	284	385999	48.95	ppm	98
82)	Atrazine	9.674	200	403301	53.76	ppm	92
83)	Pentachlorophenol	9.679	266	436921	105.89	ppm	98
84)	Phenanthrene	9.893	178	1771583	50.12	ppm	98
85)	Anthracene	9.952	178	1684244	48.31	ppm	100
89)	Di-n-butylphthalate	10.696	149	2087444	53.59	ppm	100
91)	Fluoranthene	11.273	202	1791515	50.48	ppm	98
94)	Pyrene	11.525	202	1866505	51.16	ppm	98
97)	Butylbenzylphthalate	12.439	149	898557	55.78	ppm	95
99)	Benzo[a]anthracene	12.953	228	1623232	50.87	ppm	99
100)	Chrysene	12.990	228	1583925	51.39	ppm	99
101)	bis(2-Ethylhexyl)phtha...	13.172	149	1218298	56.44	ppm	98
103)	Di-n-octylphthalate	14.001	149	1954174	53.47	ppm	99
104)	Benzo[b]fluoranthene	14.268	252	1508815	51.43	ppm	99
105)	Benzo[k]fluoranthene	14.311	252	1597347	53.74	ppm	98
106)	Benzo[a]pyrene	14.680	252	1325027	51.96	ppm	100
107)	Indeno[1,2,3-cd]pyrene	16.317	276	1125859	59.81	ppm	99
108)	Dibenz[a,h]anthracene	16.386	278	1174218	54.90	ppm	100
109)	Benzo[g,h,i]perylene	16.697	276	1224585	53.80	ppm	99

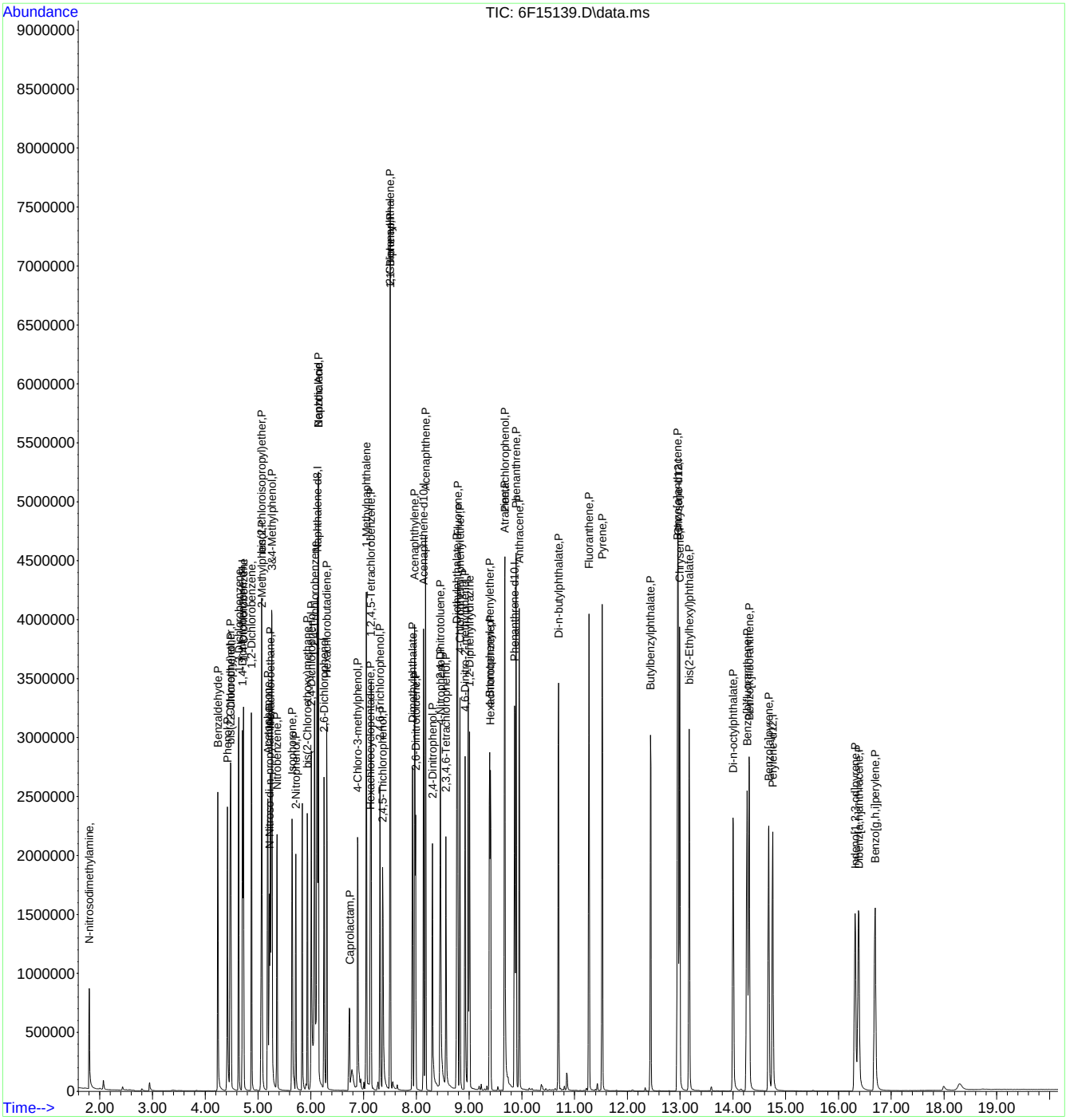
(#) = qualifier out of range (m) = manual integration (+) = signals summed

10.6.9 10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15139.D
Acq On : 21 Jul 2022 3:46 pm
Operator : williamh
Sample : icv563-50,A
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 22 15:11:45 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:13:10 2022
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	S6F563-ICV563	**Method:**	SW846 8270E
Lab FileID:	6F15139.D	**Analyst approved:**	07/22/22 13:13 William Hustedde
Injection Time:	07/21/22 15:46	**Supervisor approved:**	07/22/22 15:25 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
bis(2-Chloroethoxy)methane	111-91-1		5.94	Poor instrument integration
Caprolactam	105-60-2		6.74	Poor instrument integration
4-Nitrophenol	100-02-7		8.46	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15140.D
Acq On : 21 Jul 2022 4:13 pm
Operator : williamh
Sample : icv563-50,B
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 22 11:22:34 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:21:10 2022
Response via : Initial Calibration

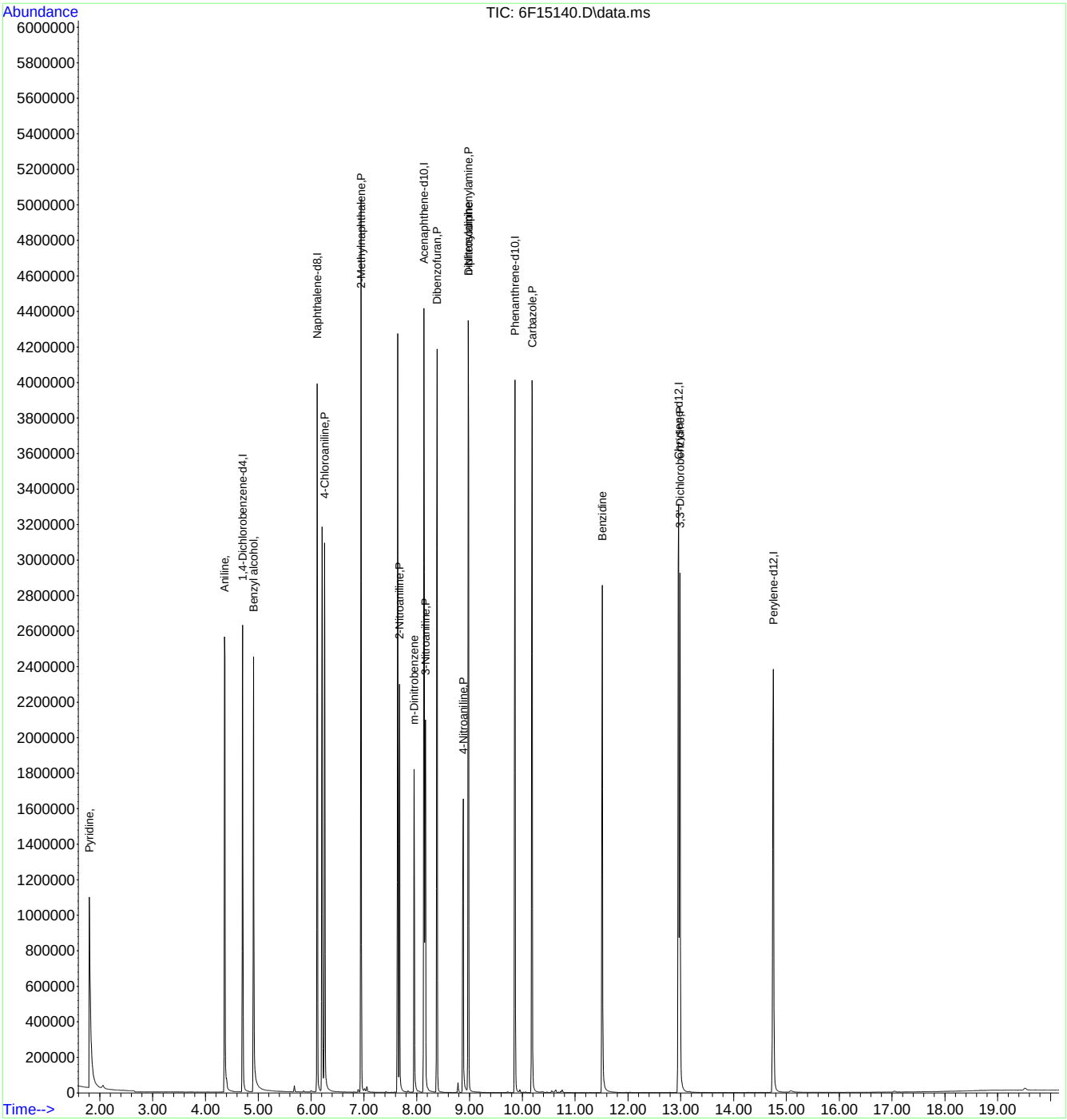
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.705	152	456067	40.00	ppm		0.00
22) Naphthalene-d8	6.117	136	1740571	40.00	ppm		0.00
43) Acenaphthene-d10	8.139	164	971655	40.00	ppm		0.00
70) Phenanthrene-d10	9.861	188	1635216	40.00	ppm		0.00
92) Chrysene-d12	12.958	240	1333661	40.00	ppm		0.00
102) Perylene-d12	14.750	264	1237272	40.00	ppm		0.00
System Monitoring Compounds							
7) 2-Fluorophenol	0.000	112	0	0.00	ppm		
Spiked Amount 100.000	Range 40 - 102		Recovery =	0.00%#			
9) Phenol-d5	0.000	99	0	0.00	ppm		
Spiked Amount 100.000	Range 41 - 100		Recovery =	0.00%#			
23) Nitrobenzene-d5	0.000	82	0	0.00	ppm		
Spiked Amount 50.000	Range 40 - 105		Recovery =	0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm		
Spiked Amount 50.000	Range 43 - 107		Recovery =	0.00%#			
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 100.000	Range 42 - 108		Recovery =	0.00%#			
95) Terphenyl-d14	0.000	244	0	0.00	ppm		
Spiked Amount 50.000	Range 45 - 119		Recovery =	0.00%#			
Target Compounds							Qvalue
4) Pyridine	1.801	79	751670	60.72	ppm		100
6) Aniline	4.363	93	1064051	54.05	ppm		96
15) Benzyl alcohol	4.914	108	456190	55.74	ppm		94
35) 4-Chloroaniline	6.256	127	922363	54.28	ppm		100
40) 2-Methylnaphthalene	6.946	141	1164227	51.81	ppm		100
50) 2-Nitroaniline	7.674	65	383577	55.60	ppm		91
54) m-Dinitrobenzene	7.952	168	267107	55.05	ppm	#	78
58) 3-Nitroaniline	8.166	138	427141	57.66	ppm		96
60) Dibenzofuran	8.385	168	1794106	50.66	ppm		100
69) 4-Nitroaniline	8.882	138	401118	51.16	ppm		93
72) n-Nitrosodiphenylamine	8.979	169	1217003	56.37	ppm		99
73) Diphenylamine	8.979	169	1217003	50.43	ppm		99
87) Carbazole	10.187	167	1938219	52.18	ppm		99
93) Benzidine	11.514	184	1271743	77.07	ppm		97
98) 3,3'-Dichlorobenzidine	12.985	252	748819	58.82	ppm		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15140.D
Acq On : 21 Jul 2022 4:13 pm
Operator : williamh
Sample : icv563-50,B
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 22 11:22:34 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:21:10 2022
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15141.D
Acq On : 21 Jul 2022 4:40 pm
Operator : williamh
Sample : icv563-50,C
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 22 15:14:12 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:24:12 2022
Response via : Initial Calibration

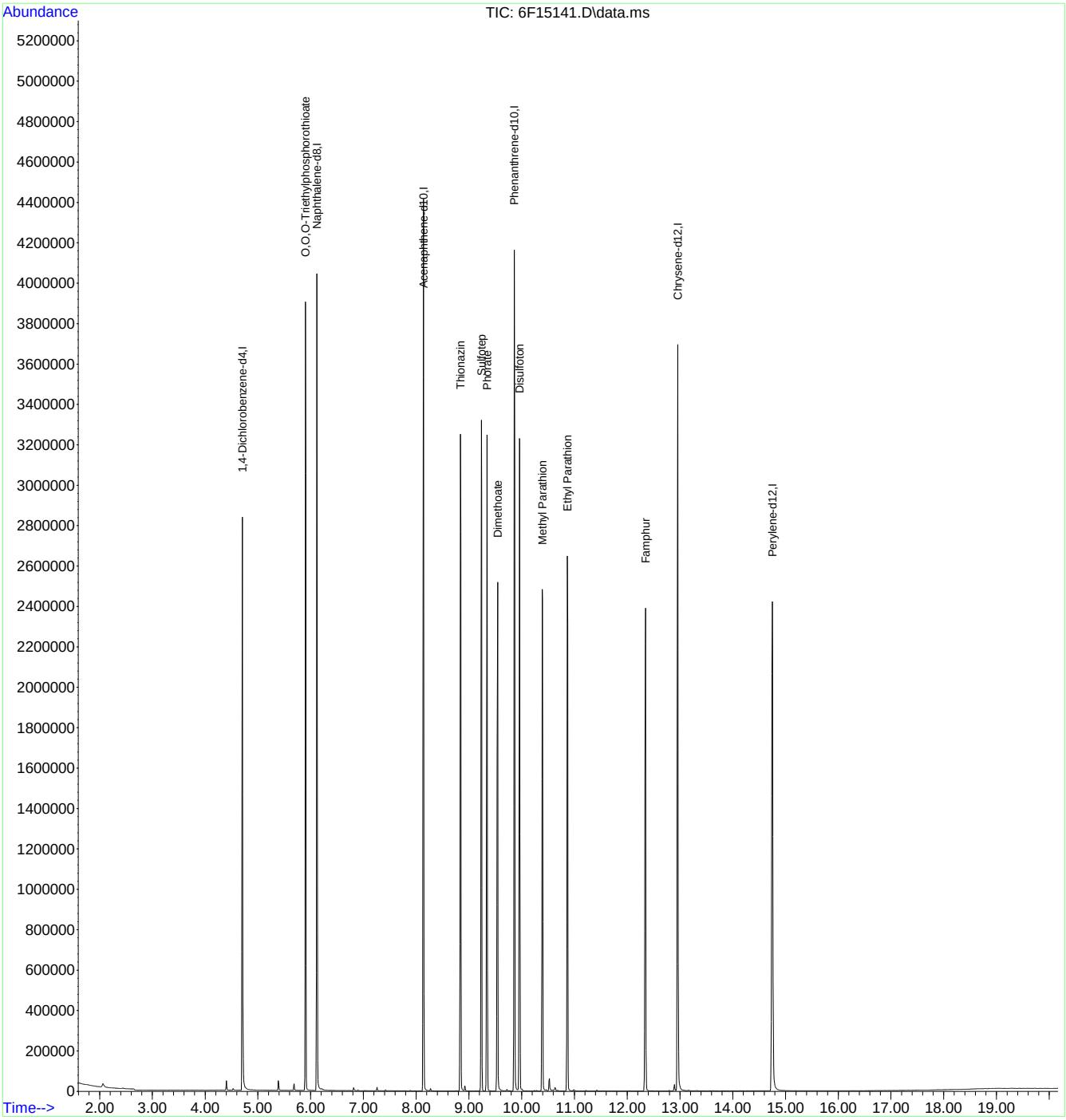
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.705	152	470304	40.00	ppm	0.00
22) Naphthalene-d8	6.117	136	1792224	40.00	ppm	0.00
43) Acenaphthene-d10	8.139	164	1008115	40.00	ppm	0.00
70) Phenanthrene-d10	9.861	188	1711733	40.00	ppm	0.00
92) Chrysene-d12	12.958	240	1399758	40.00	ppm	0.00
102) Perylene-d12	14.750	264	1307285	40.00	ppm	0.00
System Monitoring Compounds						
7) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 100.000	Range 40 - 102		Recovery =	0.00%#		
9) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 100.000	Range 41 - 100		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 40 - 105		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 43 - 107		Recovery =	0.00%#		
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 100.000	Range 42 - 108		Recovery =	0.00%#		
95) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 45 - 119		Recovery =	0.00%#		
Target Compounds						Qvalue
28) O,O,O-Triethylphosphor...	5.903	198	371025	53.36	ppm	93
68) Thionazin	8.840	97	335435	53.63	ppm	94
76) Sulfotep	9.235	97	243571	53.48	ppm	84
77) Phorate	9.342	75	871110	55.66	ppm	95
80) Dimethoate	9.546	87	617377	58.93	ppm	93
86) Disulfoton	9.957	88	750221	46.88	ppm	94
88) Methyl Parathion	10.391	109	510124	55.51	ppm	90
90) Ethyl Parathion	10.867	97	306323	54.25	ppm	96
96) Famphur	12.348	218	805063	67.30	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15141.D
Acq On : 21 Jul 2022 4:40 pm
Operator : williamh
Sample : icv563-50,C
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 22 15:14:12 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:24:12 2022
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15142.D
Acq On : 21 Jul 2022 5:07 pm
Operator : williamh
Sample : icv563-50,F
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 22 11:27:13 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:13:10 2022
Response via : Initial Calibration

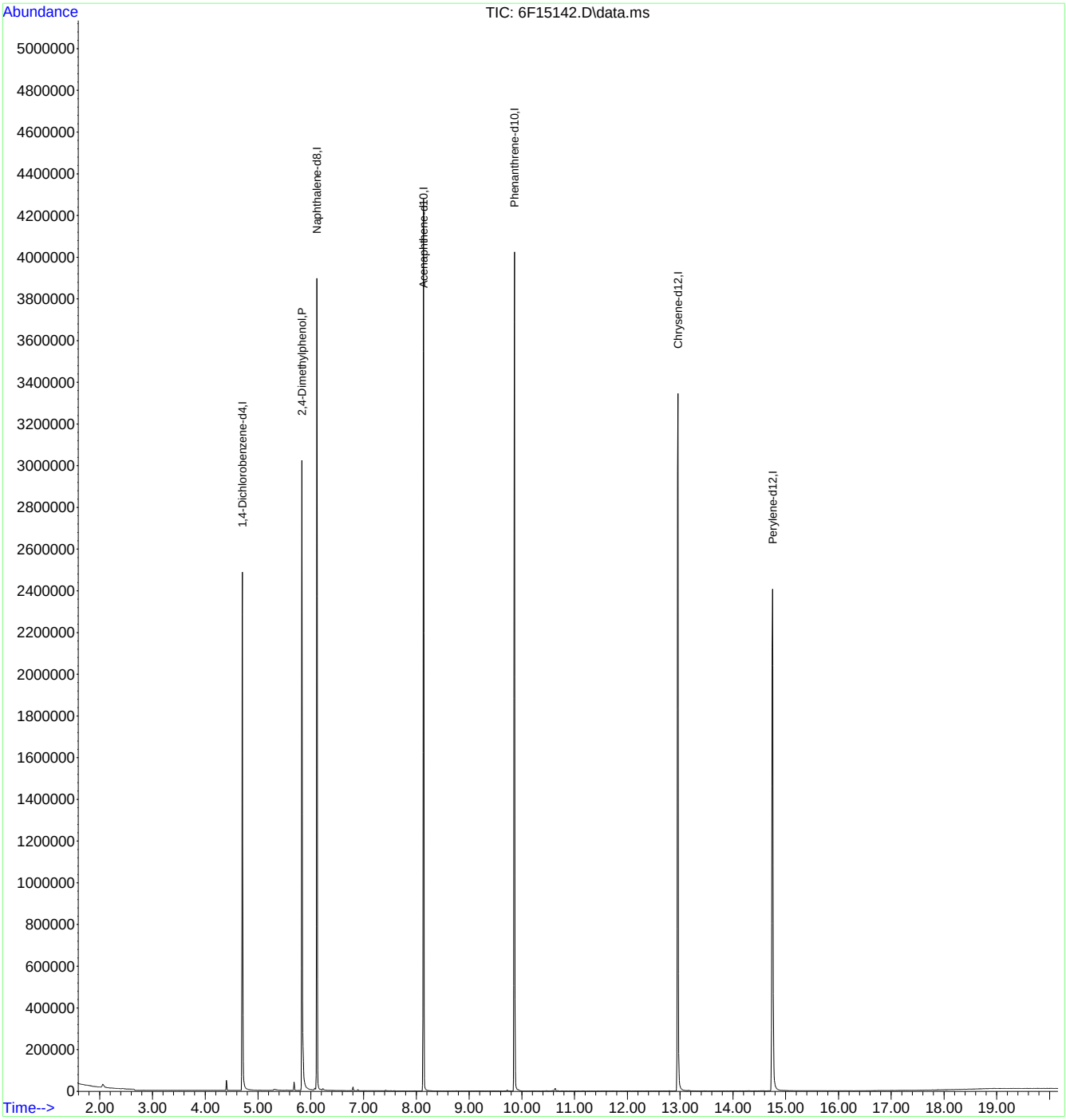
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.705	152	443098	40.00	ppm	0.00
22) Naphthalene-d8	6.117	136	1691361	40.00	ppm	0.00
43) Acenaphthene-d10	8.139	164	976513	40.00	ppm	0.00
70) Phenanthrene-d10	9.861	188	1664008	40.00	ppm	0.00
92) Chrysene-d12	12.958	240	1353950	40.00	ppm	0.00
102) Perylene-d12	14.750	264	1254663	40.00	ppm	0.00
System Monitoring Compounds						
7) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 100.000	Range 40 - 102		Recovery =	0.00%#		
9) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 100.000	Range 41 - 100		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 40 - 105		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 43 - 107		Recovery =	0.00%#		
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 100.000	Range 42 - 108		Recovery =	0.00%#		
95) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 45 - 119		Recovery =	0.00%#		
Target Compounds						Qvalue
27) 2,4-Dimethylphenol	5.834	107	620354	49.30	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F563\
Data File : 6F15142.D
Acq On : 21 Jul 2022 5:07 pm
Operator : williamh
Sample : icv563-50,F
Misc : op91638,S6F563,30,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 22 11:27:13 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Fri Jul 22 11:13:10 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/14/22 11:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:40:19 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.555	152	629948	40.00	ppm		-0.06
22) Naphthalene-d8	5.973	136	2589344	40.00	ppm		-0.06
43) Acenaphthene-d10	7.989	164	1506079	40.00	ppm		-0.06
70) Phenanthrene-d10	9.706	188	2645398	40.00	ppm		-0.06
92) Chrysene-d12	12.803	240	2135633	40.00	ppm		-0.06
102) Perylene-d12	14.541	264	1858456	40.00	ppm		-0.08
System Monitoring Compounds							
7) 2-Fluorophenol	3.202	112	2133526	117.87	ppm		-0.06
Spiked Amount 100.000	Range 14 - 67		Recovery =	117.87%#			
9) Phenol-d5	4.309	99	2502654	116.40	ppm		-0.02
Spiked Amount 100.000	Range 10 - 50		Recovery =	116.40%#			
23) Nitrobenzene-d5	5.197	82	1131577	53.16	ppm		-0.06
Spiked Amount 50.000	Range 42 - 108		Recovery =	106.32%			
47) 2-Fluorobiphenyl	7.262	172	2363324	49.11	ppm		-0.06
Spiked Amount 50.000	Range 40 - 106		Recovery =	98.22%			
75) 2,4,6-Tribromophenol	8.931	330	738537	106.70	ppm		-0.06
Spiked Amount 100.000	Range 33 - 118		Recovery =	106.70%			
95) Terphenyl-d14	11.637	244	2664986	50.32	ppm		-0.07
Spiked Amount 50.000	Range 39 - 121		Recovery =	100.64%			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.640	42	513746	59.18	ppm		99
4) Pyridine	1.646	79	988124	57.79	ppm		97
5) Benzaldehyde	4.090	106	843991	59.33	ppm		98
6) Aniline	4.224	93	1571743	57.80	ppm		99
8) bis(2-Chloroethyl)ether	4.331	93	1108466	60.48	ppm		94
10) Phenol	4.320	94	1372821	62.70	ppm		91
11) 2-Chlorophenol	4.352	128	1102475	56.63	ppm		98
12) 1,3-Dichlorobenzene	4.481	146	1187085	55.07	ppm		98
13) 1,4-Dichlorobenzene	4.577	146	1214347	55.59	ppm		98
14) 1,2-Dichlorobenzene	4.727	146	1151045	55.48	ppm		99
15) Benzyl alcohol	4.785	108	726586	64.27	ppm		96
16) bis(2-chloroisopropyl)...	4.924	45	1426272	64.90	ppm	#	64
17) 2-Methylphenol	4.967	108	984113	59.00	ppm		90
18) Acetophenone	5.042	105	1447482	57.33	ppm		98
19) Hexachloroethane	5.085	117	477287	58.37	ppm		96
20) N-Nitroso-di-n-propyla...	5.085	70	744044	60.84	ppm		84
21) 3&4-Methylphenol	5.149	108	1036596	59.06	ppm		95
24) Nitrobenzene	5.219	77	1082237	55.19	ppm		98
25) Isophorone	5.507	82	2029504	54.16	ppm		95
26) 2-Nitrophenol	5.572	139	634827	55.92	ppm		99
27) 2,4-Dimethylphenol	5.721	107	1025278	53.22	ppm		97
28) O,O,O-Triethylphosphor...	5.775	198	565959	56.33	ppm		94
29) bis(2-Chloroethoxy)met...	5.802	93	1218817	53.02	ppm		98
30) Benzoic Acid	5.984	105	717361m	47.88	ppm		
31) 2,4-Dichlorophenol	5.882	162	946327	55.15	ppm		95
32) 1,2,4-Trichlorobenzene	5.925	180	1010199	55.54	ppm		99
34) Naphthalene	5.994	128	3003496	49.18	ppm		100
35) 4-Chloroaniline	6.123	127	1398655	55.33	ppm		99
36) 2,6-Dichlorophenol	6.117	162	949585	53.58	ppm		96
37) Hexachlorobutadiene	6.160	225	577839	57.39	ppm		98
38) Caprolactam	6.625	113	333930	52.92	ppm		88
39) 4-Chloro-3-methylphenol	6.780	107	911181	55.01	ppm		86
40) 2-Methylnaphthalene	6.796	141	1839155	55.01	ppm		97
41) 1-Methylnaphthalene	6.903	142	1965458	52.06	ppm		99
42) 1,2,4,5-Tetrachloroben...	6.994	216	1072377	56.63	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:40:19 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	Hexachlorocyclopentadiene	6.978	237	609939	60.22	ppm	99
45)	2,4,6-Trichlorophenol	7.176	196	700382	59.95	ppm	99
46)	2,4,5-Trichlorophenol	7.240	196	741427	57.76	ppm	97
48)	1,1'-Biphenyl	7.358	154	2513176	50.90	ppm	99
49)	2-Chloronaphthalene	7.353	162	1958594	51.93	ppm	97
50)	2-Nitroaniline	7.540	65	587179	54.92	ppm	88
51)	p-Dinitrobenzene	7.738	75	403057	57.11	ppm	90
52)	Acenaphthylene	7.818	152	3041491	50.31	ppm	99
53)	Dimethylphthalate	7.802	163	2251657	50.87	ppm	99
54)	m-Dinitrobenzene	7.823	168	434980	57.84	ppm	96
55)	2,6-Dinitrotoluene	7.850	165	566974	53.14	ppm	80
56)	o-Dinitrobenzene	7.904	50	277769	55.61	ppm	93
57)	Acenaphthene	8.027	153	1979801	50.62	ppm	99
58)	3-Nitroaniline	8.037	138	643420	56.03	ppm	89
59)	2,4-Dinitrophenol	8.171	184	360182	58.88	ppm	82
60)	Dibenzofuran	8.235	168	2758315	50.25	ppm	100
61)	2,4-Dinitrotoluene	8.316	165	743759	55.59	ppm	87
62)	4-Nitrophenol	8.364	109	315068m	54.92	ppm	
63)	2,3,5,6-Tetrachlorophenol	8.369	232	551063	57.45	ppm	99
64)	2,3,4,6-Tetrachlorophenol	8.422	232	609902	61.83	ppm	95
65)	Fluorene	8.631	166	2209100	51.15	ppm	98
66)	4-Chlorophenyl-phenyle...	8.679	204	1114941	53.40	ppm	93
67)	Diethylphthalate	8.631	149	2189843	52.57	ppm	100
68)	Thionazin	8.706	97	515791	55.19	ppm	95
69)	4-Nitroaniline	8.770	138	640225	52.67	ppm	91
71)	4,6-Dinitro-2-methylph...	8.792	198	462966	57.40	ppm	97
72)	n-Nitrosodiphenylamine	8.845	169	1921053	55.00	ppm	99
73)	Diphenylamine	8.845	169	1921053	49.20	ppm	99
74)	1,2-Diphenylhydrazine	8.861	77	2340222	53.72	ppm	90
76)	Sulfotep	9.096	97	371377	52.77	ppm	69
77)	Phorate	9.198	75	1351335	55.87	ppm	96
78)	4-Bromophenyl-phenylether	9.241	248	677423	53.17	ppm	99
79)	Hexachlorobenzene	9.252	284	732288	52.22	ppm	97
80)	Dimethoate	9.407	87	905227	55.91	ppm	97
81)	Simazine	9.503	201	197795	73.77	ppm	94
82)	Atrazine	9.540	200	743018	55.70	ppm	95
83)	Pentachlorophenol	9.540	266	380232	57.24	ppm	99
84)	Phenanthrene	9.738	178	3201297	50.93	ppm	99
85)	Anthracene	9.797	178	3235204	52.18	ppm	99
86)	Disulfoton	9.808	88	1367137	55.28	ppm	96
87)	Carbazole	10.038	167	3043586	50.65	ppm	100
88)	Methyl Parathion	10.241	109	788896	55.55	ppm	90
89)	Di-n-butylphthalate	10.546	149	3632668	52.44	ppm	100
90)	Ethyl Parathion	10.717	97	477077	54.67	ppm	99
91)	Fluoranthene	11.113	202	3381839	53.59	ppm	97
93)	Benzidine	11.364	184	2023958	Below Cal		96
94)	Pyrene	11.364	202	3384101	51.38	ppm	97
96)	Famphur	12.188	218	890226	58.72	ppm	98
97)	Butylbenzylphthalate	12.290	149	1576052	54.19	ppm	94
98)	3,3'-Dichlorobenzidine	12.830	252	1131261	55.49	ppm	99
99)	Benzo[a]anthracene	12.787	228	3061523	53.14	ppm	99
100)	Chrysene	12.830	228	2811965	50.53	ppm	99
101)	bis(2-Ethylhexyl)phtha...	13.017	149	2111277	54.17	ppm	97
103)	Di-n-octylphthalate	13.819	149	3428421	56.93	ppm	98
104)	Benzo[b]fluoranthene	14.065	252	2755427	57.38	ppm	99
105)	Benzo[k]fluoranthene	14.108	252	2541445	52.24	ppm	98
106)	Benzo[a]pyrene	14.466	252	2338644	56.03	ppm	97
107)	Indeno[1,2,3-cd]pyrene	16.023	276	1768129	57.39	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:40:19 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

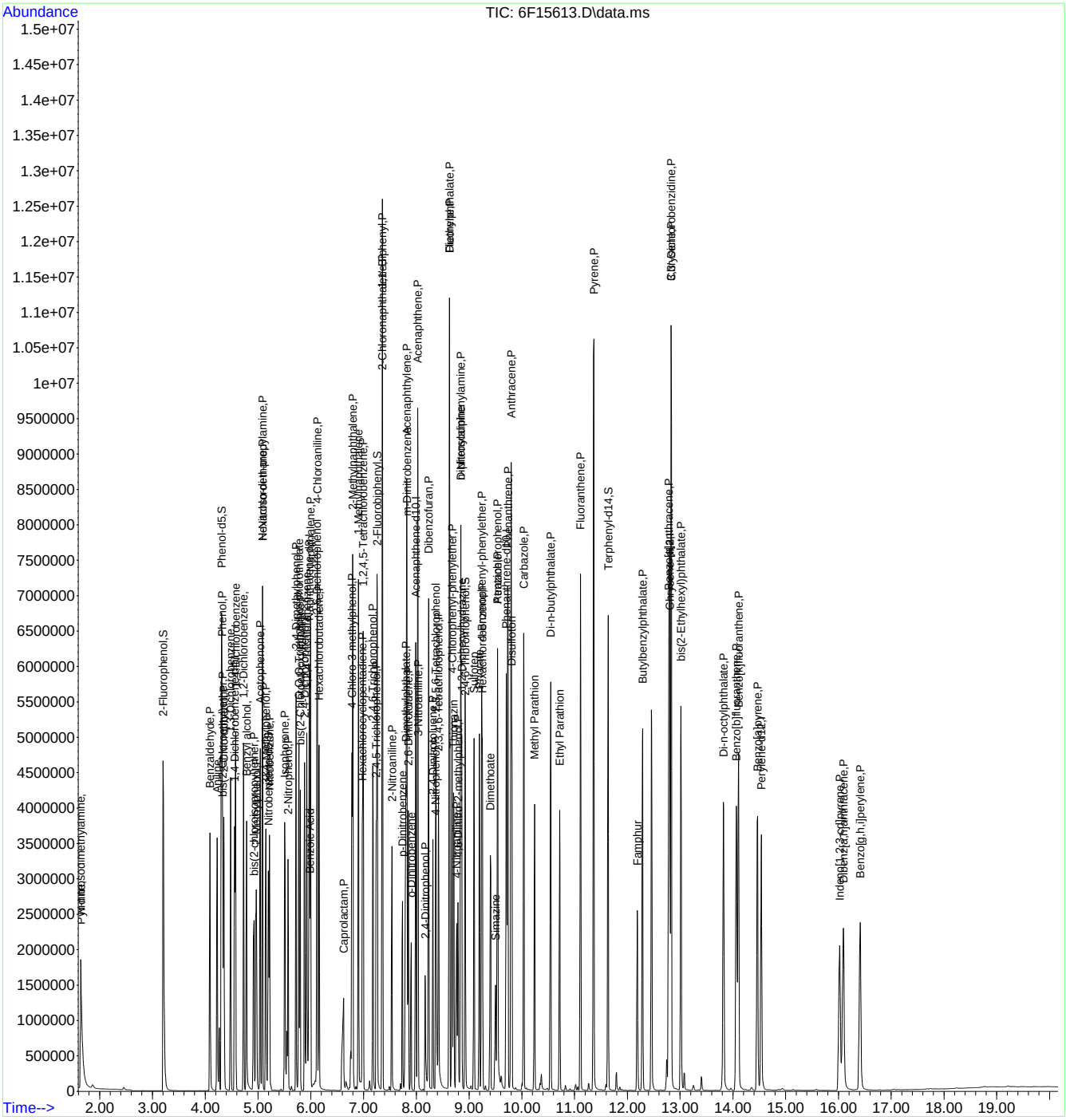
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) Dibenz[a,h]anthracene	16.098	278	1889369	53.97	ppm	98
109) Benzo[g,h,i]perylene	16.413	276	1965182	52.75	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:40:19 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



Manual Integration Approval Summary

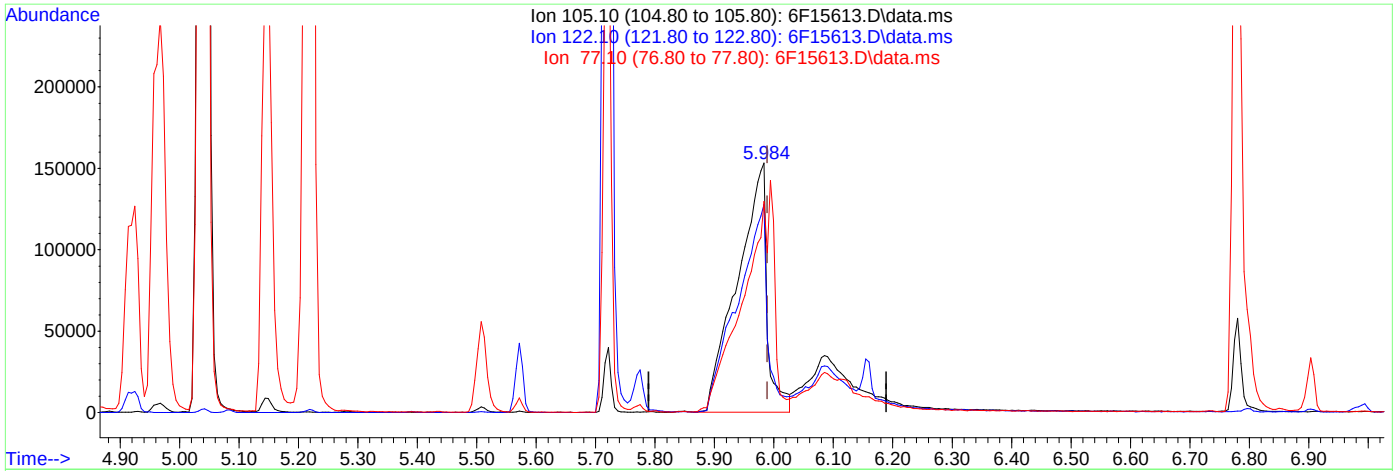
Sample Number:	S6F586-CC563	**Method:**	SW846 8270E
Lab FileID:	6F15613.D	**Analyst approved:**	09/14/22 09:44 Karen Avila
Injection Time:	09/13/22 13:19	**Supervisor approved:**	09/14/22 11:01 Naresh Jiawan

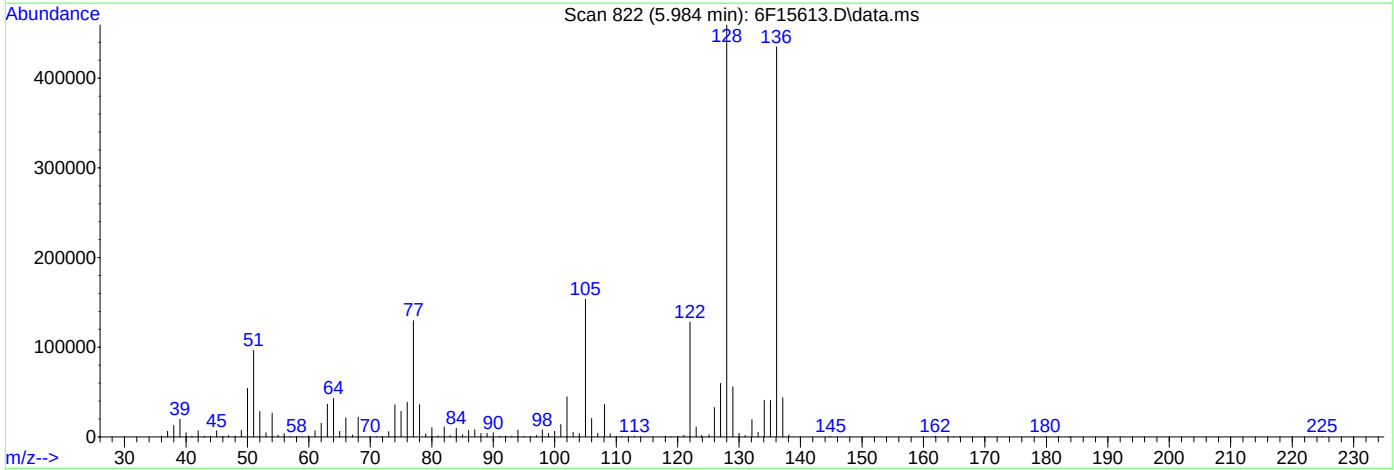
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		5.98	Poor instrument integration
4-Nitrophenol	100-02-7		8.36	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:39:41 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15613.D\data.ms

(30) Benzoic Acid

5.984min (-0.006) 36.63ppm

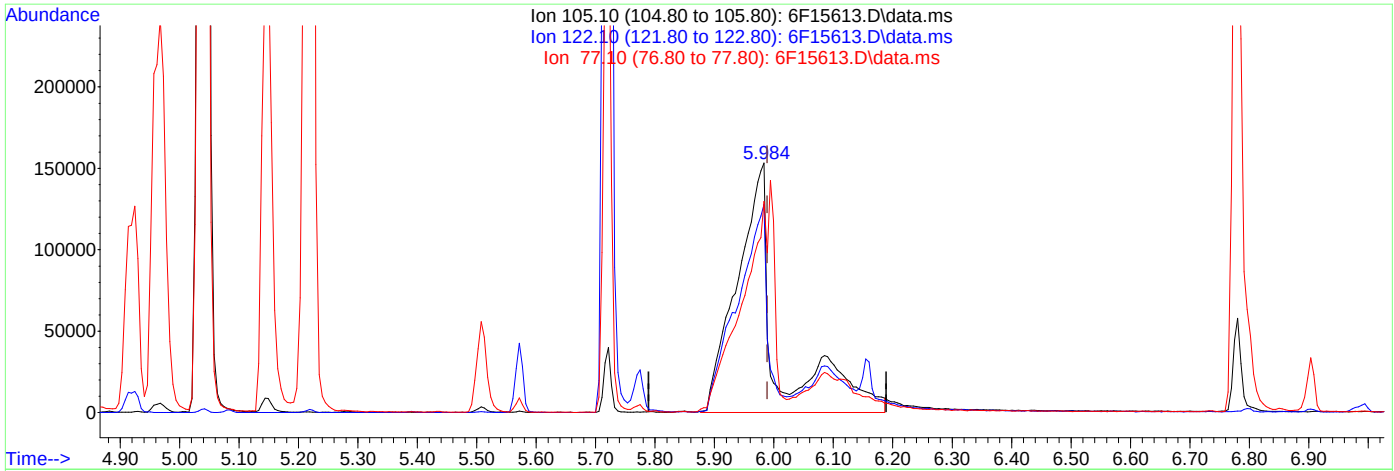
response 529716

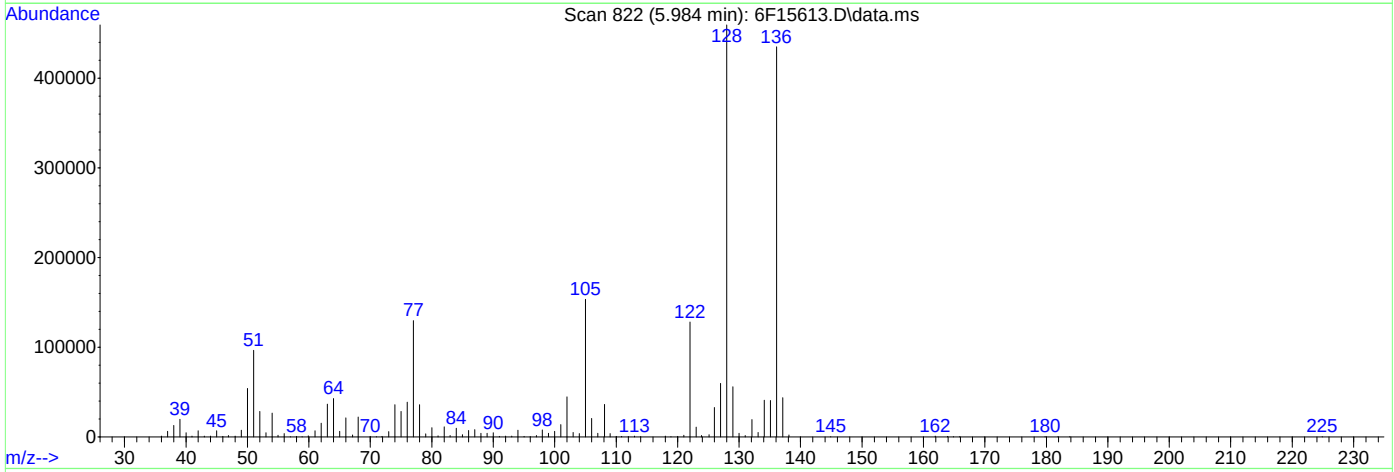
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	83.17
77.10	74.10	84.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:39:41 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15613.D\data.ms

(30) Benzoic Acid

5.984min (-0.006) 47.88ppm m

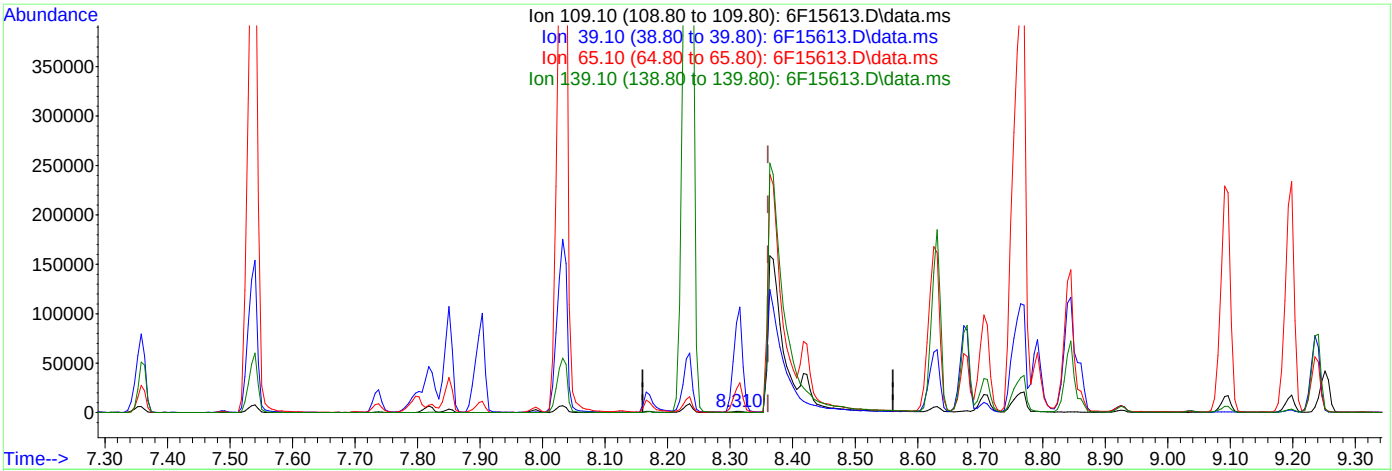
response 717361

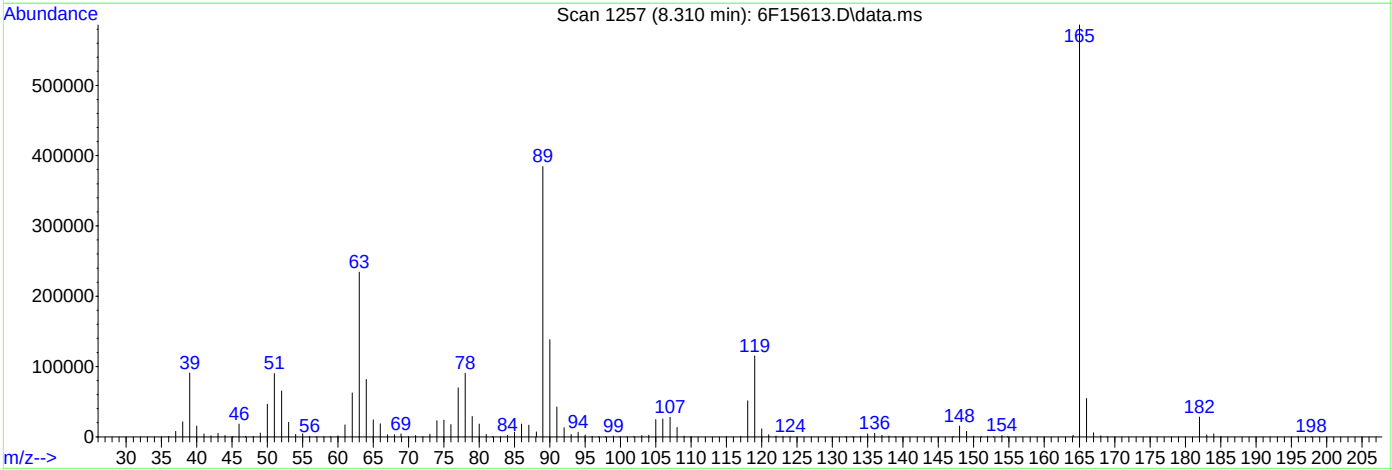
Ion	Exp%	Act%
105.10	100	100
122.10	79.50	83.39
77.10	74.10	84.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:39:41 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15613.D\data.ms

(62) 4-Nitrophenol (P)

8.310min (-0.050) 0.31ppm

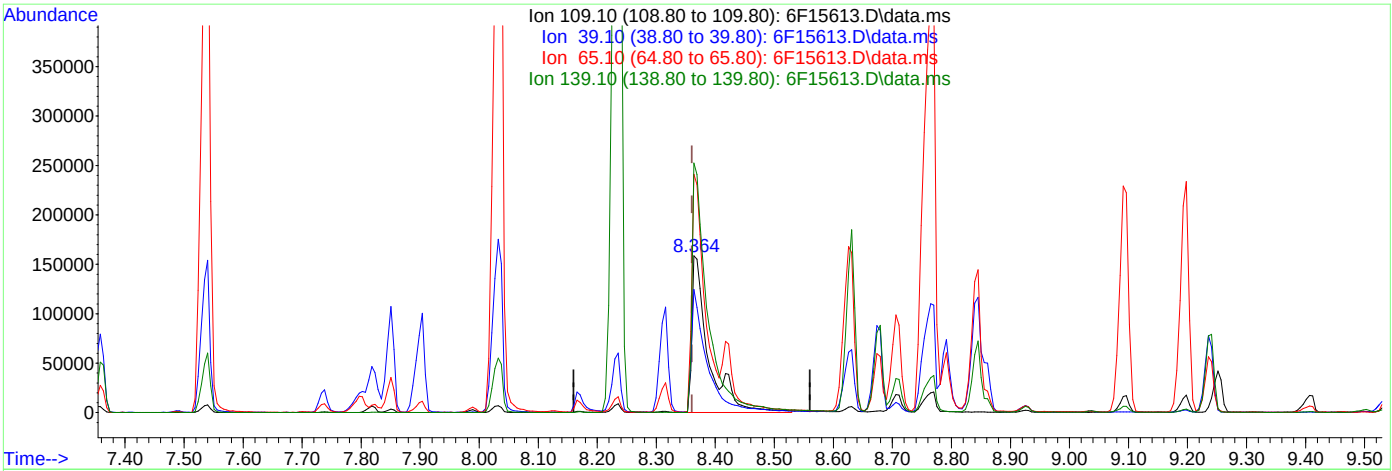
response 1587

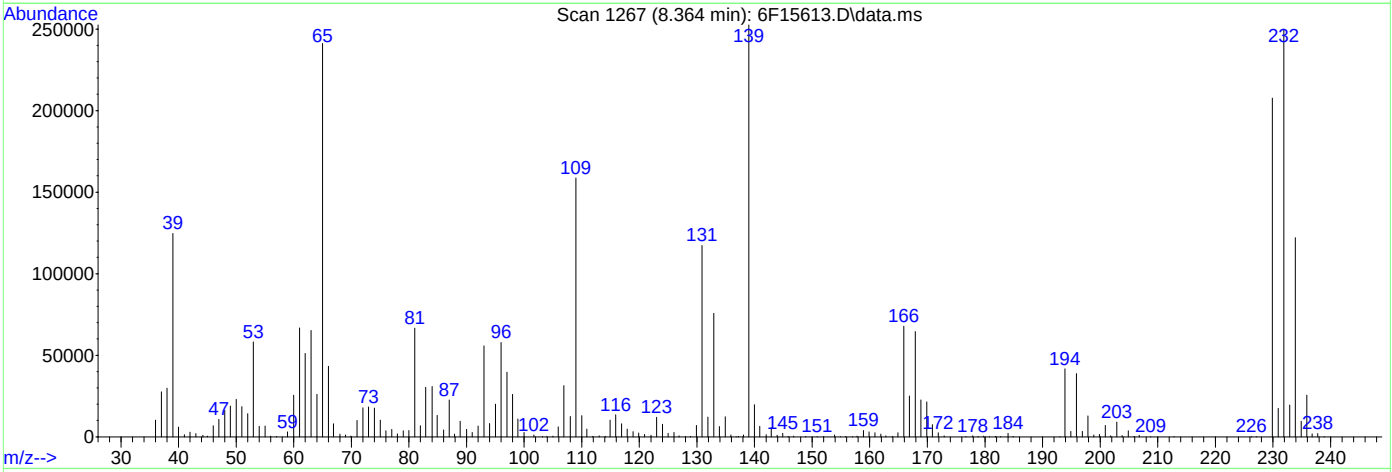
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	7893.24#
65.10	172.20	2068.35#
139.10	175.30	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:39:41 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15613.D\data.ms

(62) 4-Nitrophenol (P)

8.364min (+0.003) 54.92ppm m

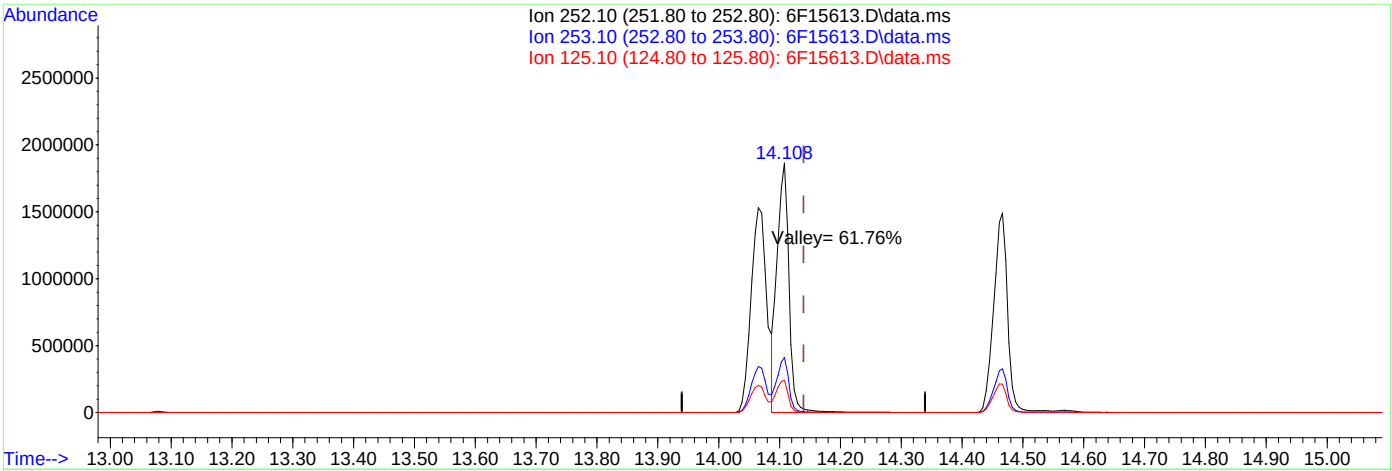
response 315068

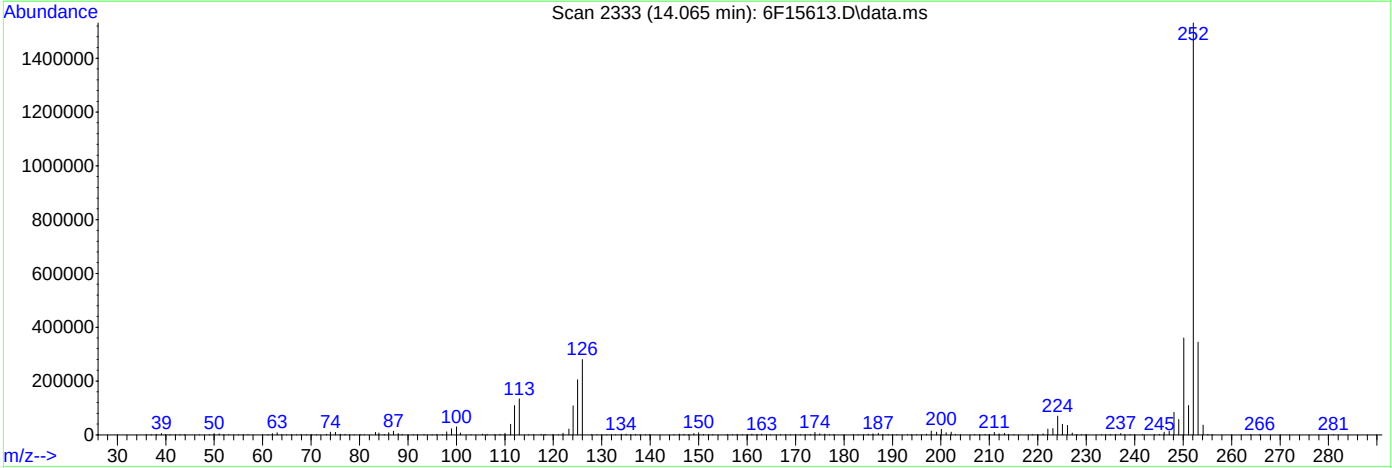
Ion	Exp%	Act%
109.10	100	100
39.10	151.00	78.52#
65.10	172.20	151.94
139.10	175.30	159.15

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15613.D
Acq On : 13 Sep 2022 1:19 pm
Operator : karena
Sample : cc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 13:40:19 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration





TIC: 6F15613.D\data.ms

(104) Benzo[b]fluoranthene (P)

14.065min (-0.075) 57.38ppm

response 2755427

Ion	Exp%	Act%
252.10	100	100
253.10	22.00	22.50
125.10	14.10	13.28
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15644.D
Acq On : 13 Sep 2022 6:16 pm
Operator : karena
Sample : ecc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 09:09:30 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.561	152	961289	40.00	ppm		-0.05
22) Naphthalene-d8	5.978	136	3848040	40.00	ppm		-0.05
43) Acenaphthene-d10	7.994	164	2223019	40.00	ppm		-0.05
70) Phenanthrene-d10	9.711	188	3845439	40.00	ppm		-0.06
92) Chrysene-d12	12.808	240	2939389	40.00	ppm		-0.06
102) Perylene-d12	14.547	264	2584618	40.00	ppm		-0.07
System Monitoring Compounds							
7) 2-Fluorophenol	3.207	112	3251714	117.73	ppm		-0.06
Spiked Amount 100.000	Range 14 - 67		Recovery =	117.73%#			
9) Phenol-d5	4.320	99	3748151	114.24	ppm		-0.01
Spiked Amount 100.000	Range 10 - 50		Recovery =	114.24%#			
23) Nitrobenzene-d5	5.202	82	1684617	53.25	ppm		-0.06
Spiked Amount 50.000	Range 42 - 108		Recovery =	106.50%			
47) 2-Fluorobiphenyl	7.267	172	3447579	48.54	ppm		-0.05
Spiked Amount 50.000	Range 40 - 106		Recovery =	97.08%			
75) 2,4,6-Tribromophenol	8.936	330	1071661	106.51	ppm		-0.06
Spiked Amount 100.000	Range 33 - 118		Recovery =	106.51%			
95) Terphenyl-d14	11.642	244	3747878	51.42	ppm		-0.06
Spiked Amount 50.000	Range 39 - 121		Recovery =	102.84%			
Target Compounds							Qvalue
3) N-nitrosodimethylamine	1.646	42	768399	58.01	ppm		93
4) Pyridine	1.651	79	1493933	57.26	ppm		99
5) Benzaldehyde	4.095	106	1236918	56.98	ppm		99
6) Aniline	4.229	93	2358589	56.84	ppm		99
8) bis(2-Chloroethyl)ether	4.341	93	1655521	59.20	ppm		94
10) Phenol	4.331	94	2049873	61.36	ppm		89
11) 2-Chlorophenol	4.357	128	1680339	56.56	ppm		96
12) 1,3-Dichlorobenzene	4.486	146	1797118	54.63	ppm		99
13) 1,4-Dichlorobenzene	4.577	146	1827040	54.81	ppm		98
14) 1,2-Dichlorobenzene	4.732	146	1752088	55.34	ppm		98
15) Benzyl alcohol	4.796	108	1113191	64.53	ppm		96
16) bis(2-chloroisopropyl)...	4.930	45	2096100	62.50	ppm	#	65
17) 2-Methylphenol	4.967	108	1485054	58.34	ppm		92
18) Acetophenone	5.047	105	2160630	56.08	ppm		98
19) Hexachloroethane	5.085	117	721029	57.78	ppm		99
20) N-Nitroso-di-n-propyla...	5.101	70	1085753	58.18	ppm		89
21) 3&4-Methylphenol	5.154	108	1570719	58.64	ppm		98
24) Nitrobenzene	5.229	77	1601896	54.97	ppm		96
25) Isophorone	5.518	82	3054375	54.84	ppm		95
26) 2-Nitrophenol	5.577	139	960673	56.95	ppm		98
27) 2,4-Dimethylphenol	5.732	107	1551784	54.21	ppm		98
29) bis(2-Chloroethoxy)met...	5.807	93	1848908	54.12	ppm		96
30) Benzoic Acid	6.021	105	943715	43.03	ppm		96
31) 2,4-Dichlorophenol	5.887	162	1434034	56.24	ppm		96
32) 1,2,4-Trichlorobenzene	5.930	180	1529107	56.57	ppm		99
34) Naphthalene	6.005	128	4373715	48.19	ppm		100
35) 4-Chloroaniline	6.133	127	1989415	52.96	ppm		98
36) 2,6-Dichlorophenol	6.122	162	1416057	53.77	ppm		96
37) Hexachlorobutadiene	6.160	225	867957	58.01	ppm		99
38) Caprolactam	6.663	113	503329	53.67	ppm		88
39) 4-Chloro-3-methylphenol	6.791	107	1356969	55.13	ppm	#	21
40) 2-Methylnaphthalene	6.802	141	2669686	53.73	ppm		97
41) 1-Methylnaphthalene	6.909	142	2886256	51.44	ppm		99
42) 1,2,4,5-Tetrachloroben...	7.000	216	1579779	56.14	ppm		98
44) Hexachlorocyclopentadiene	6.984	237	878936	59.04	ppm		99

10.6.14 10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15644.D
Acq On : 13 Sep 2022 6:16 pm
Operator : karena
Sample : ecc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 09:09:30 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration

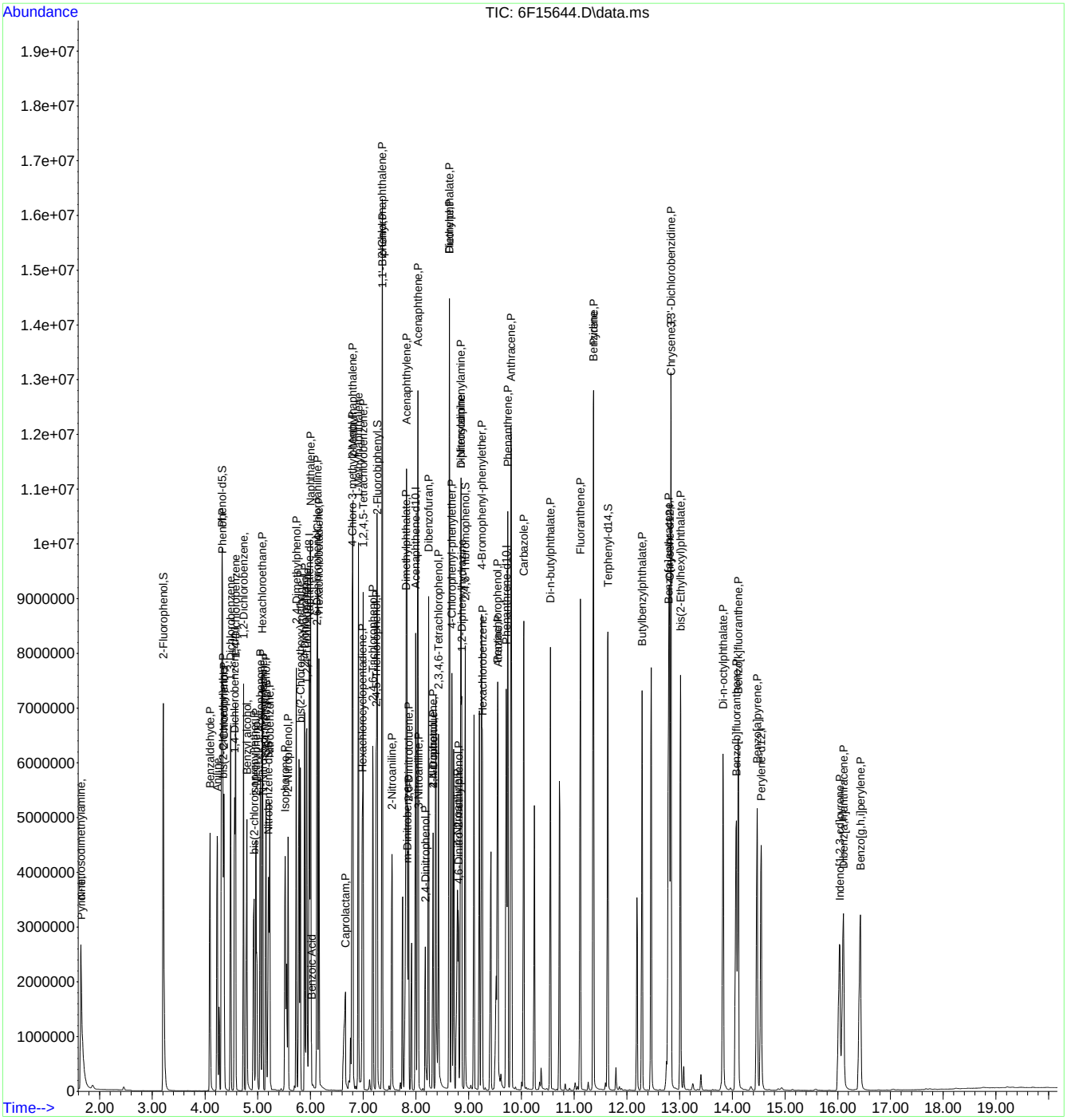
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) 2,4,6-Trichlorophenol	7.181	196	1057733	61.34	ppm		99
46) 2,4,5-Trichlorophenol	7.246	196	1106999	58.43	ppm		98
48) 1,1'-Biphenyl	7.363	154	3556095	48.80	ppm		98
49) 2-Chloronaphthalene	7.358	162	2813920	50.54	ppm		98
50) 2-Nitroaniline	7.545	65	880280	55.78	ppm		90
52) Acenaphthylene	7.823	152	4336303	48.60	ppm		99
53) Dimethylphthalate	7.813	163	3301324	50.53	ppm		100
54) m-Dinitrobenzene	7.839	168	632294	56.96	ppm	#	66
55) 2,6-Dinitrotoluene	7.866	165	838851	53.27	ppm		71
57) Acenaphthene	8.037	153	2811425	48.70	ppm		100
58) 3-Nitroaniline	8.048	138	924704	54.56	ppm		89
59) 2,4-Dinitrophenol	8.176	184	544388	60.02	ppm		88
60) Dibenzofuran	8.240	168	4010706	49.50	ppm		97
61) 2,4-Dinitrotoluene	8.326	165	1092643	55.33	ppm		89
62) 4-Nitrophenol	8.326	109	2402	0.31	ppm	#	1
64) 2,3,4,6-Tetrachlorophenol	8.428	232	898991	61.74	ppm		96
65) Fluorene	8.636	166	3120180	48.95	ppm		98
66) 4-Chlorophenyl-phenyle...	8.679	204	1626090	52.77	ppm		97
67) Diethylphthalate	8.636	149	3131217	50.93	ppm		98
69) 4-Nitroaniline	8.786	138	954257	53.19	ppm		94
71) 4,6-Dinitro-2-methylph...	8.807	198	677234	57.72	ppm		88
72) n-Nitrosodiphenylamine	8.850	169	2759997	54.36	ppm		99
73) Diphenylamine	8.850	169	2759997	48.63	ppm		99
74) 1,2-Diphenylhydrazine	8.866	77	3332403	52.62	ppm		92
78) 4-Bromophenyl-phenylether	9.246	248	987789	53.33	ppm		99
79) Hexachlorobenzene	9.262	284	1046754	51.35	ppm		90
82) Atrazine	9.556	200	1081560	55.77	ppm		94
83) Pentachlorophenol	9.546	266	565027	58.37	ppm		98
84) Phenanthrene	9.743	178	4526202	49.54	ppm		97
85) Anthracene	9.802	178	4555343	50.55	ppm		98
87) Carbazole	10.048	167	4321192	49.47	ppm		99
89) Di-n-butylphthalate	10.551	149	5155224	51.19	ppm		99
91) Fluoranthene	11.118	202	4763164	51.92	ppm		97
93) Benzidine	11.364	184	2538642	75.33	ppm		96
94) Pyrene	11.369	202	4733318	52.21	ppm		97
97) Butylbenzylphthalate	12.289	149	2241090	55.98	ppm		96
98) 3,3'-Dichlorobenzidine	12.835	252	1493739	53.24	ppm		98
99) Benzo[a]anthracene	12.792	228	4279115	53.96	ppm		99
100) Chrysene	12.840	228	3819190	49.86	ppm		98
101) bis(2-Ethylhexyl)phtha...	13.017	149	3036338	56.61	ppm		98
103) Di-n-octylphthalate	13.824	149	4874238	58.07	ppm		98
104) Benzo[b]fluoranthene	14.076	252	3784994	56.68	ppm		99
105) Benzo[k]fluoranthene	14.113	252	3473540	51.34	ppm		98
106) Benzo[a]pyrene	14.472	252	3251296	56.01	ppm		98
107) Indeno[1,2,3-cd]pyrene	16.039	276	2596667	60.60	ppm		97
108) Dibenz[a,h]anthracene	16.108	278	2709274	55.65	ppm		97
109) Benzo[g,h,i]perylene	16.429	276	2850626	55.02	ppm		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\S6F586\
Data File : 6F15644.D
Acq On : 13 Sep 2022 6:16 pm
Operator : karena
Sample : ecc563-50
Misc : op92994,S6F586,1000,,,1,1,water
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 09:09:30 2022
Quant Method : C:\msdchem\1\methods\8270D6F072122.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Aug 01 11:11:48 2022
Response via : Initial Calibration



8270D6F072122.m Wed Sep 14 09:34:40 2022 Page: 3

SGS-ORLANDO MS BNA10-6F **ANALYSIS LOG**

DATE	7/21/2022	**METHODS**	8270D	**IC/ICC STD LOT**	s6750
COLUMN TYPE	DB-5MS	**ACQ. METHOD**	ACQ_BNA2	**ICV STD LOT**	E7146A
AMOUNT INJ	2	**PROC. METHOD**	8270D6F072122.M	**DFTPP**	s6733
INSTRUMENT	MSBNA10 - 6F	**CALIB. DATE**	7/21/2022	**EM VOLTAGE**	1729V
ANALYST	WFH	**RUN BATCH**	S6F563	**ISTD LOT**	s6735

ICV(A) 10869G ICV(B) 10315B + 9868 + 10638F ICV(C)(OP) 10250A ICV(F) 9040A

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
6F15115	1	CS	8270	1	op91638,S6F563,30,,,1,1,soil	
6F15116	1	DFTPP	DFTPP	1	op91638,S6F563,30,,,1,1,soil	pass
6F15117	2	ic563-1	8270	2+2/400	op91638,S6F563,30,,,1,1,soil	no dioxane cal
6F15118	3	ic563-5	8270	10+10/400	op91638,S6F563,30,,,1,1,soil	\
6F15119	4	ic563-10	8270	20+20/400	op91638,S6F563,30,,,1,1,soil	\
6F15120	5	ic563-25	8270	50+50/400	op91638,S6F563,30,,,1,1,soil	\
6F15121	6	icc563-50	8270	100+100/400	op91638,S6F563,30,,,1,1,soil	\
6F15122	7	ic563-60	8270	120+120/400	op91638,S6F563,30,,,1,1,soil	drop benzaldehyde,famphur
6F15123	8	ic563-75	8270	150+150/400	op91638,S6F563,30,,,1,1,soil	drop benzaldehyde,famphur,benzidine
6F15124	9	ic563-100	8270	200+200/400	op91638,S6F563,30,,,1,1,soil	drop benzaldehyde,famphur,benzidine
6F15125	10	icv563-50,A	8270	2x	op91638,S6F563,30,,,1,1,soil	pass
6F15126	11	icv563-50,B	8270	20+20+10/400	op91638,S6F563,30,,,1,1,soil	93-FH 4-FH DOD
6F15127	12	icv563-50,C	8270	10/400	op91638,S6F563,30,,,1,1,soil	96-FH
6F15128	13	icv563-50,F	8270	20/400	op91638,S6F563,30,,,1,1,soil	pass

SGS-ORLANDO MS BNA10-6F **ANALYSIS LOG**

DATE	9/13/2022	**METHODS**	8270D	**IC/ICC STD LOT**	s6750
COLUMN TYPE	DB-5MS	**ACQ. METHOD**	ACQ_BNA2	**ICV STD LOT**	E7146A
AMOUNT INJ	2	**PROC. METHOD**	8270D6F072122.M	**DFTPP**	s6733
INSTRUMENT	MSBNA10 - 6F	**CALIB. DATE**	7/21/2022	**EM VOLTAGE**	1729V
ANALYST	KA	**RUN BATCH**	S6F586	**ISTD LOT**	s6735

ICV(A) 10869G ICV(B) 10315B + 9868 + 10638F ICV(C)(OP) 10250A ICV(F) 9040A

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
6F15611	51	CS	8270	1	op92994,S6F586,1000,,,1,1,water	-
6F15612	1	DFTPP	DFTPP	1	op92994,S6F586,1000,,,1,1,water	pass
6F15613	2	cc563-50	8270	1	op92994,S6F586,1000,,,1,1,water	pass, 8/10/15/16/20/44/64/81/93 FH
6F15614	4	fa98565-1	8270	1	op93006,S6F586,30,,,1,1,soil	report, acids nd
6F15615	5	op93036-bs	8270	1	op93036,S6F586,1000,,,1,1,water	ok
6F15636	6	op93036-mb	8270	1	op93036,S6F586,1000,,,1,1,water	nd
6F15637	7	fa98752-1	8270	1	op93036,S6F586,960,,,1,1,water	nd
6F15638	8	fa98741-1	8270	50/250	op93036,S6F586,100,,,1,5,water	rr50x benzoic acid
6F15639	9	fa98773-1	8270	1	op93036,S6F586,1000,,,1,1,water	rr2x #8 cc failure matrix
6F15640	10	fa98756-2	8270	1	op93036,S6F586,1030,,,1,1,water	nd
6F15641	11	fa98819-1	8270	1	op93036,S6F586,1010,,,1,1,water	nd
6F15642	12	op93036-ms	8270	1	op93036,S6F586,510,,,1,1,water	ok
6F15643	13	op93036-msd	8270	1	op93036,S6F586,510,,,1,1,water	ok
6F15644	2	ecc563-50	8270	1	op92994,S6F586,1000,,,1,1,water	pass as ecc

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: Started: 9/13/2022 6:45 (mm/dd/yy 24:00)

Date/Time: Finished: 9/13/22 8:30 (mm/dd/yy 24:00)

Prep Method: 3510C ✓ 3580A ____

Analytical Method: 625

Batch#: **OP93036** Ext. By: JC,VK / PM Conc. By: PM Vialed By: PM

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP93036-MB	-	1000	6	<2>11	0.5		1.0mL	
OP93036-BS	-	1000	6	<2>11	0.5	0.5+0.5	↓	
FA98752-1	6	960	↓	↓	↓		↓	
FA98741-1	17	100/1000	↓	↓	↓		↓	Bad sample
FA98773-1	16	1000	↓	↓	↓		↓	
FA98756-2	8	1030	↓	↓	↓		↓	
FA98819-1	12	1010	↓	↓	↓		↓	
FA98756-2MS	9	510	6	<2>11	0.5	0.5+0.5	1.0mL	
FA98756-2MSD	9	510	↓	↓	0.5	0.5+0.5	↓	
DUP								

Comments: FA98741-1 STRONG ODOR

Surr ID: E7207B Conc: 100/200 ppm Exp. Date: 7/20/23 Inj. By: PM Ver. By: VK

Spk ID: E7222A Conc: 100 ppm Exp. Date: 2/10/23 Inj. By: PM Ver. By: VK

Spk ID: 11253H Conc: Various Exp. Date: 1/31/23 Inj. By: PM Ver. By: VK

Initial Bath Temp (Therm ID): IV 16,17 Exchange Bath/N-Evap Temp (Therm ID): —

Observed Temp °C: 45 Observed Temp °C: — Corr. Temp °C: —

CH2CL2 Lot# 220958 Hexane Lot # X H2SO4 Lot# 2203E51

Syr Filter Lot# X pH Paper # 226621 NaOH Lot # 33539

Copper Lot # X If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: Patrick Marchello Date: 9/13/22

Accepted By: KA Date: 9/13/22

625aq_rev 02232021_SH

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GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93037-MB	ST163769.D	1	09/20/22	EM	09/13/22	OP93037	GST3992

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.025	0.0025	ug/l	
319-84-6	alpha-BHC	ND	0.025	0.0025	ug/l	
319-85-7	beta-BHC	ND	0.025	0.0029	ug/l	
319-86-8	delta-BHC	ND	0.025	0.0025	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.025	0.0025	ug/l	
12789-03-6	Chlordane	ND	0.25	0.10	ug/l	
5103-71-9	alpha-Chlordane	ND	0.025	0.0025	ug/l	
5103-74-2	gamma-Chlordane	ND	0.025	0.0027	ug/l	
60-57-1	Dieldrin	ND	0.025	0.0025	ug/l	
72-54-8	4,4'-DDD	ND	0.050	0.0050	ug/l	
72-55-9	4,4'-DDE	ND	0.050	0.0050	ug/l	
50-29-3	4,4'-DDT	ND	0.050	0.0050	ug/l	
72-20-8	Endrin	ND	0.050	0.0025	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.050	0.0025	ug/l	
7421-93-4	Endrin aldehyde	ND	0.050	0.0025	ug/l	
53494-70-5	Endrin ketone	ND	0.050	0.0025	ug/l	
959-98-8	Endosulfan-I	ND	0.025	0.0025	ug/l	
33213-65-9	Endosulfan-II	ND	0.025	0.0025	ug/l	
76-44-8	Heptachlor	ND	0.025	0.0025	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.025	0.0025	ug/l	
72-43-5	Methoxychlor	ND	0.050	0.0050	ug/l	
8001-35-2	Toxaphene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	73%	42-127%
2051-24-3	Decachlorobiphenyl	81%	27-127%

Method Blank Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93038-MB	XX081786.D	1	09/21/22	EM	09/13/22	OP93038	GXX1548

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	0.10	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	0.10	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	0.10	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	0.10	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	0.10	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	0.10	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	42-127%
2051-24-3	Decachlorobiphenyl	69%	27-127%

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93037-BS	ST163767.D	1	09/20/22	EM	09/13/22	OP93037	GST3992

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
309-00-2	Aldrin	0.25	0.21	84	61-126
319-84-6	alpha-BHC	0.25	0.21	84	66-129
319-85-7	beta-BHC	0.25	0.22	88	66-132
319-86-8	delta-BHC	0.25	0.20	80	41-142
58-89-9	gamma-BHC (Lindane)	0.25	0.22	88	68-132
5103-71-9	alpha-Chlordane	0.25	0.23	92	66-131
5103-74-2	gamma-Chlordane	0.25	0.23	92	68-128
60-57-1	Dieldrin	0.25	0.22	88	66-138
72-54-8	4,4'-DDD	0.25	0.21	84	63-138
72-55-9	4,4'-DDE	0.25	0.22	88	59-133
50-29-3	4,4'-DDT	0.25	0.23	92	55-145
72-20-8	Endrin	0.25	0.21	84	71-147
1031-07-8	Endosulfan sulfate	0.25	0.20	80	64-128
7421-93-4	Endrin aldehyde	0.25	0.18	72	60-130
53494-70-5	Endrin ketone	0.25	0.22	88	66-137
959-98-8	Endosulfan-I	0.25	0.23	92	66-133
33213-65-9	Endosulfan-II	0.25	0.23	92	65-133
76-44-8	Heptachlor	0.25	0.21	84	63-130
1024-57-3	Heptachlor epoxide	0.25	0.22	88	67-129
72-43-5	Methoxychlor	0.25	0.22	88	60-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	86%	42-127%
2051-24-3	Decachlorobiphenyl	84%	27-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93037-BS2	ST163768.D	1	09/20/22	EM	09/13/22	OP93037	GST3992

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12789-03-6	Chlordane	1.25	1.5	120	57-151
8001-35-2	Toxaphene	2.5	3.0	120	57-151

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	76%	42-127%
2051-24-3	Decachlorobiphenyl	83%	27-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93038-BS	XX081785.D	1	09/21/22	EM	09/13/22	OP93038	GXX1548

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.8	90	57-122
11096-82-5	Aroclor 1260	2	1.6	80	45-130

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	90%	42-127%
2051-24-3	Decachlorobiphenyl	76%	27-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93037-MS	ST163774.D	1	09/20/22	EM	09/13/22	OP93037	GST3992
OP93037-MSD	ST163775.D	1	09/20/22	EM	09/13/22	OP93037	GST3992
FA98756-2 [a]	ST163772.D	1	09/20/22	EM	09/13/22	OP93037	GST3992

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	FA98756-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		0.481	0.35	73	0.481	0.38	79	8	61-126/21
319-84-6	alpha-BHC	ND		0.481	0.35	73	0.481	0.38	79	8	66-129/23
319-85-7	beta-BHC	ND		0.481	0.37	77	0.481	0.40	83	8	66-132/23
319-86-8	delta-BHC	ND		0.481	0.35	73	0.481	0.37	77	6	41-142/27
58-89-9	gamma-BHC (Lindane)	ND		0.481	0.37	77	0.481	0.39	81	5	68-132/22
5103-71-9	alpha-Chlordane	ND		0.481	0.40	83	0.481	0.42	87	5	66-131/24
5103-74-2	gamma-Chlordane	ND		0.481	0.40	83	0.481	0.43	89	7	68-128/21
60-57-1	Dieldrin	ND		0.481	0.38	79	0.481	0.42	87	10	66-138/22
72-54-8	4,4'-DDD	ND		0.481	0.55	114	0.481	0.54	112	2	63-138/24
72-55-9	4,4'-DDE	ND		0.481	0.40	83	0.481	0.42	87	5	59-133/23
50-29-3	4,4'-DDT	ND		0.481	0.46	96	0.481	0.48	100	4	55-145/27
72-20-8	Endrin	ND		0.481	0.38	79	0.481	0.41	85	8	71-147/23
1031-07-8	Endosulfan sulfate	ND		0.481	0.41	85	0.481	0.41	85	0	64-128/26
7421-93-4	Endrin aldehyde	ND		0.481	0.37	77	0.481	0.37	77	0	60-130/22
53494-70-5	Endrin ketone	ND		0.481	0.47	98	0.481	0.47	98	0	66-137/25
959-98-8	Endosulfan-I	ND		0.481	0.38	79	0.481	0.41	85	8	66-133/21
33213-65-9	Endosulfan-II	ND		0.481	0.42	87	0.481	0.43	89	2	65-133/22
76-44-8	Heptachlor	ND		0.481	0.38	79	0.481	0.39	81	3	63-130/23
1024-57-3	Heptachlor epoxide	ND		0.481	0.37	77	0.481	0.40	83	8	67-129/23
72-43-5	Methoxychlor	0.035	J	0.481	0.44	84	0.481	0.45	86	2	60-136/25

CAS No.	Surrogate Recoveries	MS	MSD	FA98756-2	Limits
877-09-8	Tetrachloro-m-xylene	74%	78%	74%	42-127%
2051-24-3	Decachlorobiphenyl	81%	85%	77%	27-127%

(a) All hits confirmed by dual column analysis.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP93038-MS	XX081789.D	1	09/21/22	EM	09/13/22	OP93038	GXX1548
OP93038-MSD	XX081790.D	1	09/21/22	EM	09/13/22	OP93038	GXX1548
FA98756-3 [a]	XX081793.D	1	09/21/22	EM	09/13/22	OP93038	GXX1548

The QC reported here applies to the following samples: **Method:** EPA 608.3

FA98819-1

CAS No.	Compound	FA98756-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		3.85	3.9	101	3.85	3.7	96	5	57-122/18
11096-82-5	Aroclor 1260	2.6		3.85	6.8	109	3.85	5.5	75	21	45-130/24

CAS No.	Surrogate Recoveries	MS	MSD	FA98756-3	Limits
877-09-8	Tetrachloro-m-xylene	97%	96%	89%	42-127%
2051-24-3	Decachlorobiphenyl	88%	86%	83%	27-127%

(a) All hits confirmed by dual column analysis.

* = Outside of Control Limits.

DDT/Endrin Breakdown Check

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample:	GST3992-DDT	**Injection Date:**	09/20/22
Lab File ID:	ST163740.D	**Injection Time:**	10:30
Instrument ID:	GCST		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	66739	6980
4,4'-DDE	148679	26224
4,4'-DDT	3664256	862987
DDT Breakdown [a]	5.6 %	3.7 %
Endrin aldehyde	28917	3105
Endrin ketone	22626	4280
Endrin	5730542	1180233
Endrin Breakdown [b]	0.9 %	0.6 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GST3992-IC3992	ST163741.D	09/20/22	10:47	00:17	Initial cal 2
GST3992-IC3992	ST163742.D	09/20/22	11:03	00:33	Initial cal 5
GST3992-IC3992	ST163743.D	09/20/22	11:21	00:51	Initial cal 20
GST3992-ICC3992	ST163744.D	09/20/22	11:38	01:08	Initial cal 40
GST3992-IC3992	ST163745.D	09/20/22	11:56	01:26	Initial cal 60
GST3992-IC3992	ST163746.D	09/20/22	12:13	01:43	Initial cal 80
GST3992-IC3992	ST163747.D	09/20/22	12:31	02:01	Initial cal 120
GST3992-ICV3992	ST163748.D	09/20/22	12:48	02:18	Initial cal verification 20
GST3992-IC3992	ST163749.D	09/20/22	13:05	02:35	Initial cal 20
GST3992-IC3992	ST163750.D	09/20/22	13:22	02:52	Initial cal 50
GST3992-IC3992	ST163751.D	09/20/22	13:40	03:10	Initial cal 200
GST3992-IC3992	ST163752.D	09/20/22	13:57	03:27	Initial cal 400
GST3992-IC3992	ST163753.D	09/20/22	14:15	03:45	Initial cal 600
GST3992-IC3992	ST163754.D	09/20/22	14:32	04:02	Initial cal 1000
GST3992-ICV3992	ST163755.D	09/20/22	14:51	04:21	Initial cal verification 200
GST3992-IC3992	ST163756.D	09/20/22	15:08	04:38	Initial cal 100
GST3992-IC3992	ST163757.D	09/20/22	15:26	04:56	Initial cal 200
GST3992-IC3992	ST163758.D	09/20/22	15:43	05:13	Initial cal 500
GST3992-IC3992	ST163759.D	09/20/22	16:01	05:31	Initial cal 750
GST3992-IC3992	ST163760.D	09/20/22	16:18	05:48	Initial cal 1000
GST3992-IC3992	ST163761.D	09/20/22	16:35	06:05	Initial cal 2000
GST3992-ICV3992	ST163762.D	09/20/22	16:52	06:22	Initial cal verification 500

DDT/Endrin Breakdown Check

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-DDT
Lab File ID: ST163763.D
Instrument ID: GCST
Injection Date: 09/20/22
Injection Time: 17:08

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	232028	38505
4,4'-DDE	304892	46268
4,4'-DDT	3757394	858448
DDT Breakdown [a]	12.5 %	9 %
Endrin aldehyde	107116	28473
Endrin ketone	115881	16820
Endrin	5795238	1142289
Endrin Breakdown [b]	3.7 %	3.8 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GST3992-CC3992	ST163764.D	09/20/22	17:25	00:17	Continuing cal 40
GST3992-CC3992	ST163765.D	09/20/22	17:41	00:33	Continuing cal 200
GST3992-CC3992	ST163766.D	09/20/22	17:59	00:51	Continuing cal 500
OP93037-BS	ST163767.D	09/20/22	18:15	01:07	Blank Spike
OP93037-BS2	ST163768.D	09/20/22	18:32	01:24	Blank Spike
OP93037-MB	ST163769.D	09/20/22	18:49	01:41	Method Blank
ZZZZZZ	ST163770.D	09/20/22	19:05	01:57	(unrelated sample)
ZZZZZZ	ST163771.D	09/20/22	19:23	02:15	(unrelated sample)
FA98756-2	ST163772.D	09/20/22	19:39	02:31	(used for QC only; not part of job FA98819)
FA98819-1	ST163773.D	09/20/22	19:57	02:49	EFFLUENT
OP93037-MS	ST163774.D	09/20/22	20:13	03:05	Matrix Spike
OP93037-MSD	ST163775.D	09/20/22	20:30	03:22	Matrix Spike Duplicate
GST3992-ECC3992	ST163776.D	09/20/22	20:47	03:39	Ending cal 40
GST3992-ECC3992	ST163777.D	09/20/22	21:03	03:55	Ending cal 200
GST3992-ECC3992	ST163778.D	09/20/22	21:19	04:11	Ending cal 500

Surrogate Recovery Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Method: EPA 608.3 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
FA98819-1	ST163773.D	73	79
FA98819-1	XX081794.D	97	76
OP93037-BS	ST163767.D	86	84
OP93037-BS2	ST163768.D	76	83
OP93037-MB	ST163769.D	73	81
OP93037-MS	ST163774.D	74	81
OP93037-MSD	ST163775.D	78	85
OP93038-BS	XX081785.D	90	76
OP93038-MB	XX081786.D	83	69
OP93038-MS	XX081789.D	97	88
OP93038-MSD	XX081790.D	96	86

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	42-127%
S2 = Decachlorobiphenyl	27-127%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	GST3992-CC3992	**Injection Date:**	09/20/22
Lab File ID:	ST163764.D	**Injection Time:**	17:25
Instrument ID:	GCST	**Method:**	EPA 608.3

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.31	3.43	7.25	7.47

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP93037-BS	ST163767.D	09/20/22	18:15	3.31		7.25	
OP93037-BS2	ST163768.D	09/20/22	18:32	3.32		7.25	
OP93037-MB	ST163769.D	09/20/22	18:49	3.32		7.25	
ZZZZZZ	ST163770.D	09/20/22	19:05		3.45		7.47
ZZZZZZ	ST163771.D	09/20/22	19:23	3.31		7.25	
FA98756-2	ST163772.D	09/20/22	19:39	3.31		7.25	
FA98819-1	ST163773.D	09/20/22	19:57	3.31		7.25	
OP93037-MS	ST163774.D	09/20/22	20:13	3.31		7.25	
OP93037-MSD	ST163775.D	09/20/22	20:30	3.31		7.25	
GST3992-ECC3992	ST163776.D	09/20/22	20:47	3.31	3.43	7.25	7.47
GST3992-ECC3992	ST163777.D	09/20/22	21:03	0.00	0.00	0.00	0.00
GST3992-ECC3992	ST163778.D	09/20/22	21:19	0.00	0.00	0.00	0.00

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	GXX1548-CC1547	**Injection Date:**	09/21/22
Lab File ID:	XX081780.D	**Injection Time:**	11:09
Instrument ID:	GCXX	**Method:**	EPA 608.3

	S1 [a] RT	S2 [a] RT
Check Std	3.15	6.31

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP93038-BS	XX081785.D	09/21/22	12:12	3.15	6.31
OP93038-MB	XX081786.D	09/21/22	12:25	3.15	6.31
ZZZZZZ	XX081788.D	09/21/22	12:50	3.15	6.31
OP93038-MS	XX081789.D	09/21/22	13:03	3.15	6.31
OP93038-MSD	XX081790.D	09/21/22	13:15	3.15	6.31
ZZZZZZ	XX081792.D	09/21/22	13:41	3.15	6.31
FA98756-3	XX081793.D	09/21/22	13:54	3.15	6.31
FA98819-1	XX081794.D	09/21/22	14:06	3.15	6.31

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Sample: GST3992-ICC3992
Lab FileID: ST163744.D

Response Factor Report ECD 3

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Calibration Files
2 =ST163756.D 5 =ST163757.D 20 =ST163758.D 40 =ST163759.D
60 =ST163760.D 80 =ST163761.D 120 =ST163747.D

Compound	2	5	20	40	60	80	120	Avg	%RSD
1)S Tetrachloro-m-xyl	1.224	1.074	1.212	1.130	1.137	1.114	1.073	1.138 E5	5.31
2) alpha-BHC	1.780	1.638	1.826	1.737	1.778	1.742	1.662	1.738 E5	3.86
3) gamma-BHC (Lindan	1.561	1.471	1.640	1.595	1.615	1.568	1.540	1.570 E5	3.53
4) beta-BHC	8.167	7.373	7.487	6.958	7.132	7.010	6.959	7.298 E4	5.96
5) delta-BHC	1.831	1.693	1.783	1.706	1.713	1.659	1.613	1.714 E5	4.26
6) Heptachlor	1.365	1.284	1.376	1.330	1.371	1.320	1.285	1.333 E5	2.94
7) Aldrin	1.633	1.497	1.564	1.523	1.523	1.466	1.410	1.517 E5	4.68
8) Heptachlor Epoxid	1.549	1.435	1.477	1.388	1.436	1.376	1.336	1.428 E5	4.94
9) gamma-Chlordane	1.493	1.454	1.449	1.455	1.432	1.384	1.380	1.435 E5	2.84
10) alpha-Chlordane	1.336	1.347	1.423	1.368	1.376	1.335	1.339	1.360 E5	2.36
11) 4,4'-DDE	1.403	1.388	1.412	1.355	1.434	1.389	1.330	1.387 E5	2.53
12) Endosulfan I	1.322	1.248	1.283	1.254	1.261	1.254	1.339	1.280 E5	2.85
13) Dieldrin	1.537	1.515	1.552	1.481	1.506	1.486	1.477	1.508 E5	1.93
14) Endrin	1.451	1.388	1.457	1.400	1.440	1.385	1.337	1.408 E5	3.07
15) 4,4'-DDD	1.328	1.243	1.237	1.179	1.175	1.160	1.173	1.214 E5	4.97
16) Endosulfan II	1.370	1.339	1.330	1.335	1.325	1.278	1.272	1.321 E5	2.62
17) 4,4'-DDT	0.234	0.359	0.784	0.893	0.988	1.012	1.067	0.763 E5	43.69
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9974									
Response Ratio = 0.00000 + 75137.99286 *A + 288.69080 *A^2									
18) Endrin Aldehyde	1.034	1.053	1.037	1.005	1.020	0.984	0.950	1.012 E5	3.52
19) Methoxychlor	3.107	3.752	5.061	5.369	5.575	5.435	5.463	4.823 E4	20.38
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990									
Response Ratio = 0.00000 + 50855.42276 *A + 38.93332 *A^2									
20) Endosulfan Sulfat	1.297	1.233	1.178	1.176	1.130	1.149	1.129	1.185 E5	5.15
21) Endrin Ketone	1.105	1.208	1.286	1.295	1.327	1.296	1.304	1.260 E5	6.16
22)L1Chlordane-A	4.437	4.181	4.136	3.683	3.827	3.812		4.013 E3	7.10
23)L1Chlordane-B	6.905	6.268	6.311	5.798	6.294	6.190		6.294 E3	5.64
24)L1Chlordane-C	4.560	4.044	3.699	3.342	3.415	3.339		3.733 E3	13.08
25)L1Chlordane-D	1.782	1.680	1.639	1.490	1.565	1.503		1.610 E4	6.98
26)L1Chlordane-E	2.047	1.893	1.871	1.649	1.717	1.715		1.815 E4	8.18
27)L1Chlordane-F	1.586	1.712	2.624	2.797	3.467	3.592		2.630 E3	32.20
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9963									
Response Ratio = 0.00000 + 2365.80081 *A + 1.31999 *A^2									
28)L2Toxaphene-A	1.792	1.669	1.584	1.562	1.362	1.496		1.577 E4	9.30
29)L2Toxaphene-B	2.027	2.376	2.333	2.267	2.487	2.690		2.363 E4	9.38
30)L2Toxaphene-C	4.160	4.672	4.442	4.630	4.818	4.858		4.597 E4	5.66
31)L2Toxaphene-D	2.541	2.914	3.004	2.704	3.022	2.845		2.838 E4	6.55
32)L2Toxaphene-E	2.187	2.553	2.633	2.820	2.806	2.890		2.648 E4	9.78
33)S Decachlorobipheny	1.026	0.969	0.938	0.928	0.887	0.878	0.864	0.927 E5	6.19

Signal #2

1)S Tetrachloro-m-xyl	1.547	1.449	1.705	1.632	1.715	1.686	1.650	1.626 E4	5.95
2) alpha-BHC	1.804	1.867	2.585	2.678	2.747	2.728	2.688	2.443 E4	17.12

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICC3992
Lab FileID: ST163744.D

3)	gamma-BHC (Lindan	2.039	2.031	2.605	2.648	2.722	2.712	2.610	2.481	E4	12.41
4)	beta-BHC	1.373	1.302	1.393	1.359	1.378	1.349	1.296	1.350	E4	2.77
5)	delta-BHC	2.330	2.399	3.015	3.026	3.131	3.011	3.008	2.846	E4	11.67
6)	Heptachlor	2.020	1.990	2.372	2.374	2.419	2.344	2.292	2.259	E4	7.87
7)	Aldrin	2.083	2.140	2.696	2.725	2.805	2.780	2.679	2.558	E4	12.07
8)	Heptachlor Epoxid	3.036	2.626	2.849	2.763	2.826	2.752	2.643	2.785	E4	4.98
9)	gamma-Chlordane	2.508	2.472	2.865	2.821	2.868	2.842	2.765	2.734	E4	6.25
10)	alpha-Chlordane	2.507	2.548	2.837	2.783	2.840	2.795	2.701	2.716	E4	5.04
11)	4,4'-DDE	2.281	2.395	2.900	2.877	2.901	2.863	2.800	2.717	E4	9.68
12)	Endosulfan I	2.199	2.268	2.607	2.578	2.631	2.599	2.492	2.482	E4	7.10
13)	Dieldrin	2.654	2.621	3.061	3.021	3.084	3.040	2.968	2.921	E4	6.76
14)	Endrin	2.351	2.408	2.798	2.788	2.792	2.789	2.685	2.659	E4	7.35
15)	4,4'-DDD	2.084	2.183	2.464	2.445	2.507	2.430	2.371	2.355	E4	6.76
16)	Endosulfan II	3.098	2.785	2.806	2.724	2.731	2.710	2.658	2.787	E4	5.21
17)	4,4'-DDT	0.960	1.235	1.932	2.174	2.270	2.276	2.311	1.880	E4	29.52

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982
Response Ratio = 0.00000 + 19500.37806 *A + 34.66042 *A^2

18)	Endrin Aldehyde	2.114	2.121	2.244	2.218	2.193	2.170	2.149	2.173	E4	2.24
19)	Methoxychlor	0.854	1.093	1.177	1.211	1.233	1.228	1.210	1.144	E4	11.94
20)	Endosulfan Sulfat	2.303	2.423	2.557	2.540	2.490	2.465	2.444	2.460	E4	3.44
21)	Endrin Ketone	2.271	2.492	2.776	2.831	2.842	2.776	2.712	2.671	E4	7.96
22)L1Chlordane-A		5.649	5.390	6.104	5.771	6.382	6.366		5.944	E2	6.81
23)L1Chlordane-B		0.937	0.891	1.004	0.950	1.058	1.069		0.985	E3	7.19
24)L1Chlordane-C		7.418	7.692	7.475	6.727	7.179	6.979		7.245	E2	4.88
25)L1Chlordane-D		2.769	2.780	2.965	2.719	2.939	2.886		2.843	E3	3.54
26)L1Chlordane-E		2.419	2.419	2.514	2.350	2.500	2.424		2.438	E3	2.47
27)L1Chlordane-F		1.028	0.774	0.698	0.701	0.784	0.811		0.799	E3	15.16
28)L2Toxaphene-A		3.777	3.696	4.913	3.971	4.363	3.255		3.996	E3	14.43
29)L2Toxaphene-B		6.967	8.327	7.092	6.398	7.017	6.021		6.970	E3	11.27
30)L2Toxaphene-C		5.636	6.387	5.217	5.565	5.458	4.973		5.539	E3	8.69
31)L2Toxaphene-D		4.139	4.213	3.931	4.799	5.026	3.735		4.307	E3	11.68
32)L2Toxaphene-E		7.148	9.378	8.909	9.251	9.495	9.987		9.028	E3	10.92
33)S Decachlorobipheny		2.872	2.504	2.197	2.057	2.020	1.988	1.943	2.226	E4	15.37

(#) = Out of Range

GST3992_092022.M Tue Sep 20 17:04:51 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163748.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163748.D\ECD1A.CH Vial: 11
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163748.D\ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm Operator: eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	----------NA----------					
2		alpha-BHC	20.000	16.411	17.9	78	0.00	3.54- 3.74
3		gamma-BHC (Lindane)	20.000	16.731	16.3	80	0.00	3.78- 3.98
4		beta-BHC	20.000	16.774	16.1	82	0.00	3.95- 4.15
5		delta-BHC	20.000	16.366	18.2	79	0.00	4.11- 4.31
6		Heptachlor	20.000	16.558	17.2	80	0.00	4.18- 4.38
7		Aldrin	20.000	17.364	13.2	84	0.00	4.41- 4.61
8		Heptachlor Epoxide	20.000	17.552	12.2	85	0.00	4.72- 4.92
9		gamma-Chlordane	20.000	17.968	10.2	89	0.00	4.90- 5.10
10		alpha-Chlordane	20.000	18.175	9.1	87	0.00	4.95- 5.15
11		4,4'-DDE	20.000	17.935	10.3	88	0.00	5.10- 5.30
12		Endosulfan I	20.000	18.323	8.4	91	0.00	4.98- 5.18
13		Dieldrin	20.000	17.597	12.0	85	0.00	5.18- 5.38
14		Endrin	20.000	17.697	11.5	86	0.00	5.33- 5.53
15		4,4'-DDD	20.000	18.011	9.9	88	0.00	5.47- 5.67
16		Endosulfan II	20.000	17.987	10.1	89	0.00	5.50- 5.70
		----------	Amount	Calc.	%Drift	----------		
17		4,4'-DDT	20.000	16.142	19.3	82	0.00	5.69- 5.89
		----------	Amount	Calc.	%Drift	----------		
18		Endrin Aldehyde	20.000	18.197	9.0	89	0.00	5.60- 5.80
		----------	Amount	Calc.	%Drift	----------		
19		Methoxychlor	20.000	17.037	14.8	87	0.00	6.05- 6.25
		----------	Amount	Calc.	%Drift	----------		
20		Endosulfan Sulfate	20.000	18.003	10.0	91	0.00	5.76- 5.96
21		Endrin Ketone	20.000	18.139	9.3	89	0.00	6.10- 6.30
22	L1	Chlordane-A	----------NA----------					
23	L1	Chlordane-B	----------NA----------					
24	L1	Chlordane-C	----------NA----------					
25	L1	Chlordane-D	----------NA----------					
26	L1	Chlordane-E	----------NA----------					
		----------	Amount	Calc.	%Drift	----------		
27	L1	Chlordane-F	----------NA----------					
		----------	Amount	Calc.	%Drift	----------		
28	L2	Toxaphene-A	----------NA----------					
29	L2	Toxaphene-B	----------NA----------					

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163748.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC	20.000	16.893	15.5	80	0.00	3.74- 3.94	
3		gamma-BHC (Lindane)	20.000	16.281	18.6	78	0.00	4.00- 4.20	
4		beta-BHC	20.000	16.305	18.5	79	0.00	4.23- 4.43	
5		delta-BHC	20.000	16.588	17.1	78	0.00	4.41- 4.61	
6		Heptachlor	20.000	16.460	17.7	78	0.00	4.28- 4.48	
7		Aldrin	20.000	17.521	12.4	83	0.00	4.50- 4.70	
8		Heptachlor Epoxide	20.000	16.539	17.3	81	0.00	4.87- 5.07	
9		gamma-Chlordane	20.000	17.527	12.4	84	0.00	5.06- 5.26	
10		alpha-Chlordane	20.000	17.670	11.6	85	0.00	5.11- 5.31	
11		4,4'-DDE	20.000	17.229	13.9	81	0.00	5.25- 5.45	
12		Endosulfan I	20.000	17.640	11.8	84	0.00	5.15- 5.35	
13		Dieldrin	20.000	17.466	12.7	83	0.00	5.35- 5.55	
14		Endrin	20.000	17.502	12.5	83	0.00	5.56- 5.76	
15		4,4'-DDD	20.000	17.668	11.7	84	0.00	5.66- 5.86	
16		Endosulfan II	20.000	17.086	14.6	85	0.00	5.77- 5.97	
		----------	Amount	Calc.	%Drift			----------	
17		4,4'-DDT	20.000	16.034	19.8	83	0.00	5.85- 6.05	
		----------	Amount	Calc.	%Drift			----------	
18		Endrin Aldehyde	20.000	18.264	8.7	88	0.00	5.90- 6.10	
19		Methoxychlor	20.000	17.435	12.8	85	0.00	6.28- 6.48	
20		Endosulfan Sulfate	20.000	17.678	11.6	85	0.00	6.07- 6.27	
21		Endrin Ketone	20.000	18.103	9.5	87	0.00	6.46- 6.66	
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163758.D GST3992_092022.M Tue Sep 20 16:56:09 2022

11.7.2 11

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163755.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163755.D\ECD1A.CH Vial: 18
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163755.D\ECD2B.CH
Acq On : 20 Sep 2022 2:51 pm Operator: eduardom
Sample : icv3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		4,4'-DDE		----------NA----------				
12		Endosulfan I		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
17		4,4'-DDT		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
18		Endrin Aldehyde		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
19		Methoxychlor		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
20		Endosulfan Sulfate		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	183.035	8.5	89	0.00	4.03- 4.23
23	L1	Chlordane-B	200.000	116.757	41.6#	58	0.00	4.18- 4.38
24	L1	Chlordane-C	200.000	241.638	-20.8#	122	0.00	4.41- 4.61
25	L1	Chlordane-D	200.000	193.299	3.4	95	0.00	4.90- 5.10
26	L1	Chlordane-E	200.000	201.681	-0.8	98	0.00	4.95- 5.15
		----------	Amount	Calc.	%Drift	----------		
27	L1	Chlordane-F	200.000	301.165	-50.6#	159	0.00	5.54- 5.74
		----------	Amount	Calc.	%Drift	----------		
28	L2	Toxaphene-A		----------NA----------				
29	L2	Toxaphene-B		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163755.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC			----------NA----------				
3		gamma-BHC (Lindane)			----------NA----------				
4		beta-BHC			----------NA----------				
5		delta-BHC			----------NA----------				
6		Heptachlor			----------NA----------				
7		Aldrin			----------NA----------				
8		Heptachlor Epoxide			----------NA----------				
9		gamma-Chlordane			----------NA----------				
10		alpha-Chlordane			----------NA----------				
11		4,4'-DDE			----------NA----------				
12		Endosulfan I			----------NA----------				
13		Dieldrin			----------NA----------				
14		Endrin			----------NA----------				
15		4,4'-DDD			----------NA----------				
16		Endosulfan II			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17		4,4'-DDT			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
18		Endrin Aldehyde			----------NA----------				
19		Methoxychlor			----------NA----------				
20		Endosulfan Sulfate			----------NA----------				
21		Endrin Ketone			----------NA----------				
22	L1	Chlordane-A	200.000	181.081	9.5	88	0.00	4.14-	4.34
23	L1	Chlordane-B	200.000	112.032	44.0#	55	0.00	4.28-	4.48
24	L1	Chlordane-C	200.000	252.425	-26.2#	122	0.00	4.58-	4.78
25	L1	Chlordane-D	200.000	204.559	-2.3	98	0.01	5.07-	5.27
26	L1	Chlordane-E	200.000	204.036	-2.0	99	0.00	5.11-	5.31
27	L1	Chlordane-F	200.000	240.795	-20.4#	138	0.00	5.78-	5.98
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163758.D GST3992_092022.M Tue Sep 20 16:56:11 2022

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163762.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163762.D\ECD1A.CH Vial: 25
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163762.D\ECD2B.CH
Acq On : 20 Sep 2022 4:52 pm Operator: eduardom
Sample : icv3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2		alpha-BHC		----------NA----------			
3		gamma-BHC (Lindane)		----------NA----------			
4		beta-BHC		----------NA----------			
5		delta-BHC		----------NA----------			
6		Heptachlor		----------NA----------			
7		Aldrin		----------NA----------			
8		Heptachlor Epoxide		----------NA----------			
9		gamma-Chlordane		----------NA----------			
10		alpha-Chlordane		----------NA----------			
11		4,4'-DDE		----------NA----------			
12		Endosulfan I		----------NA----------			
13		Dieldrin		----------NA----------			
14		Endrin		----------NA----------			
15		4,4'-DDD		----------NA----------			
16		Endosulfan II		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
17		4,4'-DDT		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
18		Endrin Aldehyde		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
19		Methoxychlor		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
20		Endosulfan Sulfate		----------NA----------			
21		Endrin Ketone		----------NA----------			
22	L1	Chlordane-A		----------NA----------			
23	L1	Chlordane-B		----------NA----------			
24	L1	Chlordane-C		----------NA----------			
25	L1	Chlordane-D		----------NA----------			
26	L1	Chlordane-E		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
27	L1	Chlordane-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
28	L2	Toxaphene-A	500.000	444.980	11.0	89 0.00	5.11- 5.31
29	L2	Toxaphene-B	500.000	417.102	16.6	85 0.00	5.47- 5.67

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ICV3992
Lab FileID: ST163762.D

30	L2	Toxaphene-C	500.000	490.594	1.9	102	0.00	5.53-	5.73
31	L2	Toxaphene-D	500.000	511.523	-2.3	97	0.00	5.69-	5.89
32	L2	Toxaphene-E	500.000	478.134	4.4	96	0.00	6.05-	6.25
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC			----------NA----------				
3		gamma-BHC (Lindane)			----------NA----------				
4		beta-BHC			----------NA----------				
5		delta-BHC			----------NA----------				
6		Heptachlor			----------NA----------				
7		Aldrin			----------NA----------				
8		Heptachlor Epoxide			----------NA----------				
9		gamma-Chlordane			----------NA----------				
10		alpha-Chlordane			----------NA----------				
11		4,4'-DDE			----------NA----------				
12		Endosulfan I			----------NA----------				
13		Dieldrin			----------NA----------				
14		Endrin			----------NA----------				
15		4,4'-DDD			----------NA----------				
16		Endosulfan II			----------NA----------				
		---------- Amount Calc. %Drift ----------							
17		4,4'-DDT			----------NA----------				
		---------- Amount Calc. %Drift ----------							
18		Endrin Aldehyde			----------NA----------				
19		Methoxychlor			----------NA----------				
20		Endosulfan Sulfate			----------NA----------				
21		Endrin Ketone			----------NA----------				
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	L2	Toxaphene-A	500.000	492.584	1.5	80	0.00	5.32-	5.52
29	L2	Toxaphene-B	500.000	420.089	16.0	83	0.00	5.74-	5.94
30	L2	Toxaphene-C	500.000	449.867	10.0	96	0.00	5.80-	6.00
31	L2	Toxaphene-D	500.000	489.005	2.2	107	0.00	5.94-	6.14
32	L2	Toxaphene-E	500.000	451.286	9.7	91	0.00	6.38-	6.58
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163758.D GST3992_092022.M Tue Sep 20 17:04:34 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163764.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163764.D\ECD1A.CH Vial: 7
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163764.D\ECD2B.CH
Acq On : 20 Sep 2022 5:25 pm Operator: eduardom
Sample : cc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	34.963	12.6	88	0.00	3.21- 3.41
2		alpha-BHC	40.000	36.622	8.4	92	0.00	3.54- 3.74
3		gamma-BHC (Lindane)	40.000	37.523	6.2	92	0.00	3.78- 3.98
4		beta-BHC	40.000	36.183	9.5	95	0.00	3.95- 4.15
5		delta-BHC	40.000	33.862	15.3	85	0.00	4.11- 4.31
6		Heptachlor	40.000	36.121	9.7	91	0.00	4.18- 4.38
7		Aldrin	40.000	39.181	2.0	98	0.00	4.41- 4.61
8		Heptachlor Epoxide	40.000	39.266	1.8	101	0.00	4.72- 4.92
9		gamma-Chlordane	40.000	40.029	-0.1	99	0.00	4.90- 5.10
10		alpha-Chlordane	40.000	40.427	-1.1	100	0.00	4.95- 5.15
11		4,4'-DDE	40.000	37.657	5.9	96	0.00	5.10- 5.30
12		Endosulfan I	40.000	39.976	0.1	102	0.00	4.98- 5.18
13		Dieldrin	40.000	39.856	0.4	101	0.00	5.18- 5.38
14		Endrin	40.000	38.755	3.1	97	0.00	5.33- 5.53
15		4,4'-DDD	40.000	37.050	7.4	95	0.00	5.47- 5.67
16		Endosulfan II	40.000	41.806	-4.5	103	0.00	5.50- 5.70
		----------	Amount	Calc.	%Drift	----------		
17		4,4'-DDT	40.000	40.852	-2.1	99	0.00	5.69- 5.89
		----------	Amount	Calc.	%Drift	----------		
18		Endrin Aldehyde	40.000	39.879	0.3	100	0.00	5.60- 5.80
		----------	Amount	Calc.	%Drift	----------		
19		Methoxychlor	40.000	39.440	1.4	96	0.00	6.05- 6.25
		----------	Amount	Calc.	%Drift	----------		
20		Endosulfan Sulfate	40.000	38.948	2.6	98	0.00	5.76- 5.96
21		Endrin Ketone	40.000	41.716	-4.3	101	0.00	6.10- 6.30
22	L1	Chlordane-A	----------NA----------					
23	L1	Chlordane-B	----------NA----------					
24	L1	Chlordane-C	----------NA----------					
25	L1	Chlordane-D	----------NA----------					
26	L1	Chlordane-E	----------NA----------					
		----------	Amount	Calc.	%Drift	----------		
27	L1	Chlordane-F	----------NA----------					
		----------	Amount	Calc.	%Drift	----------		
28	L2	Toxaphene-A	----------NA----------					
29	L2	Toxaphene-B	----------NA----------					

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163764.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl	40.000	39.882	0.3	100	0.00	7.15-	7.35
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	40.000	36.241	9.4	90	0.00	3.32-	3.52
2		alpha-BHC	40.000	39.684	0.8	90	0.00	3.74-	3.94
3		gamma-BHC (Lindane)	40.000	39.497	1.3	93	0.00	4.00-	4.20
4		beta-BHC	40.000	37.418	6.5	93	0.00	4.23-	4.43
5		delta-BHC	40.000	38.049	4.9	89	0.00	4.41-	4.61
6		Heptachlor	40.000	39.283	1.8	93	0.00	4.28-	4.48
7		Aldrin	40.000	41.843	-4.6	98	0.00	4.50-	4.70
8		Heptachlor Epoxide	40.000	38.537	3.7	97	0.00	4.87-	5.07
9		gamma-Chlordane	40.000	40.749	-1.9	99	0.00	5.06-	5.26
10		alpha-Chlordane	40.000	40.504	-1.3	99	0.00	5.11-	5.31
11		4,4'-DDE	40.000	39.524	1.2	93	0.00	5.25-	5.45
12		Endosulfan I	40.000	41.070	-2.7	99	0.00	5.15-	5.35
13		Dieldrin	40.000	40.680	-1.7	98	0.00	5.35-	5.55
14		Endrin	40.000	40.767	-1.9	97	0.00	5.56-	5.76
15		4,4'-DDD	40.000	40.467	-1.2	97	0.00	5.66-	5.86
16		Endosulfan II	40.000	39.255	1.9	100	0.00	5.77-	5.97
		---------- Amount		Calc.	%Drift		----------		
17		4,4'-DDT	40.000	39.119	2.2	94	0.00	5.85-	6.05
		---------- Amount		Calc.	%Drift		----------		
18		Endrin Aldehyde	40.000	40.566	-1.4	99	0.00	5.90-	6.10
19		Methoxychlor	40.000	39.522	1.2	93	0.00	6.28-	6.48
20		Endosulfan Sulfate	40.000	39.241	1.9	95	0.00	6.07-	6.27
21		Endrin Ketone	40.000	42.267	-5.7	100	0.00	6.46-	6.66
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl	40.000	38.795	3.0	105	0.00	7.37-	7.57

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163759.D GST3992_092022.M Wed Sep 21 09:45:58 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163765.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163765.D\ECD1A.CH Vial: 14
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163765.D\ECD2B.CH
Acq On : 20 Sep 2022 5:41 pm Operator: eduardom
Sample : cc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2		alpha-BHC		----------NA----------			
3		gamma-BHC (Lindane)		----------NA----------			
4		beta-BHC		----------NA----------			
5		delta-BHC		----------NA----------			
6		Heptachlor		----------NA----------			
7		Aldrin		----------NA----------			
8		Heptachlor Epoxide		----------NA----------			
9		gamma-Chlordane		----------NA----------			
10		alpha-Chlordane		----------NA----------			
11		4,4'-DDE		----------NA----------			
12		Endosulfan I		----------NA----------			
13		Dieldrin		----------NA----------			
14		Endrin		----------NA----------			
15		4,4'-DDD		----------NA----------			
16		Endosulfan II		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
17		4,4'-DDT		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
18		Endrin Aldehyde		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
19		Methoxychlor		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
20		Endosulfan Sulfate		----------NA----------			
21		Endrin Ketone		----------NA----------			
22	L1	Chlordane-A	200.000	198.693	0.7	96 0.00	4.03- 4.23
23	L1	Chlordane-B	200.000	195.800	2.1	98 0.00	4.18- 4.38
24	L1	Chlordane-C	200.000	200.024	-0.0	101 0.00	4.41- 4.61
25	L1	Chlordane-D	200.000	200.567	-0.3	99 0.00	4.90- 5.10
26	L1	Chlordane-E	200.000	191.338	4.3	93 0.00	4.95- 5.15
		----------	Amount	Calc.	%Drift	----------	
27	L1	Chlordane-F	200.000	239.165	-19.6	122 0.00	5.54- 5.74
		----------	Amount	Calc.	%Drift	----------	
28	L2	Toxaphene-A		----------NA----------			
29	L2	Toxaphene-B		----------NA----------			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163765.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC			----------NA----------				
3		gamma-BHC (Lindane)			----------NA----------				
4		beta-BHC			----------NA----------				
5		delta-BHC			----------NA----------				
6		Heptachlor			----------NA----------				
7		Aldrin			----------NA----------				
8		Heptachlor Epoxide			----------NA----------				
9		gamma-Chlordane			----------NA----------				
10		alpha-Chlordane			----------NA----------				
11		4,4'-DDE			----------NA----------				
12		Endosulfan I			----------NA----------				
13		Dieldrin			----------NA----------				
14		Endrin			----------NA----------				
15		4,4'-DDD			----------NA----------				
16		Endosulfan II			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17		4,4'-DDT			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
18		Endrin Aldehyde			----------NA----------				
19		Methoxychlor			----------NA----------				
20		Endosulfan Sulfate			----------NA----------				
21		Endrin Ketone			----------NA----------				
22	L1	Chlordane-A	200.000	199.629	0.2	97	0.00	4.14-	4.34
23	L1	Chlordane-B	200.000	190.975	4.5	94	0.00	4.28-	4.48
24	L1	Chlordane-C	200.000	200.942	-0.5	97	0.00	4.58-	4.78
25	L1	Chlordane-D	200.000	208.012	-4.0	100	0.00	5.07-	5.27
26	L1	Chlordane-E	200.000	201.585	-0.8	98	0.00	5.11-	5.31
27	L1	Chlordane-F	200.000	174.074	13.0	100	0.00	5.78-	5.98
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ST163758.D GST3992_092022.M Wed Sep 21 09:46:20 2022

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163766.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163766.D\ECD1A.CH Vial: 21
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163766.D\ECD2B.CH
Acq On : 20 Sep 2022 5:59 pm Operator: eduardom
Sample : cc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2		alpha-BHC		----------NA----------			
3		gamma-BHC (Lindane)		----------NA----------			
4		beta-BHC		----------NA----------			
5		delta-BHC		----------NA----------			
6		Heptachlor		----------NA----------			
7		Aldrin		----------NA----------			
8		Heptachlor Epoxide		----------NA----------			
9		gamma-Chlordane		----------NA----------			
10		alpha-Chlordane		----------NA----------			
11		4,4'-DDE		----------NA----------			
12		Endosulfan I		----------NA----------			
13		Dieldrin		----------NA----------			
14		Endrin		----------NA----------			
15		4,4'-DDD		----------NA----------			
16		Endosulfan II		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
17		4,4'-DDT		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
18		Endrin Aldehyde		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
19		Methoxychlor		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
20		Endosulfan Sulfate		----------NA----------			
21		Endrin Ketone		----------NA----------			
22	L1	Chlordane-A		----------NA----------			
23	L1	Chlordane-B		----------NA----------			
24	L1	Chlordane-C		----------NA----------			
25	L1	Chlordane-D		----------NA----------			
26	L1	Chlordane-E		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
27	L1	Chlordane-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
28	L2	Toxaphene-A	500.000	460.344	7.9	92 0.00	5.11- 5.31
29	L2	Toxaphene-B	500.000	518.640	-3.7	105 0.00	5.47- 5.67

11.7.7 11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-CC3992
Lab FileID: ST163766.D

30	L2	Toxaphene-C	500.000	509.911	-2.0	106	0.00	5.53-	5.73
31	L2	Toxaphene-D	500.000	504.348	-0.9	95	0.00	5.69-	5.89
32	L2	Toxaphene-E	500.000	498.155	0.4	100	0.00	6.05-	6.25
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC			----------NA----------				
3		gamma-BHC (Lindane)			----------NA----------				
4		beta-BHC			----------NA----------				
5		delta-BHC			----------NA----------				
6		Heptachlor			----------NA----------				
7		Aldrin			----------NA----------				
8		Heptachlor Epoxide			----------NA----------				
9		gamma-Chlordane			----------NA----------				
10		alpha-Chlordane			----------NA----------				
11		4,4'-DDE			----------NA----------				
12		Endosulfan I			----------NA----------				
13		Dieldrin			----------NA----------				
14		Endrin			----------NA----------				
15		4,4'-DDD			----------NA----------				
16		Endosulfan II			----------NA----------				
		---------- Amount Calc. %Drift ----------							
17		4,4'-DDT			----------NA----------				
		---------- Amount Calc. %Drift ----------							
18		Endrin Aldehyde			----------NA----------				
19		Methoxychlor			----------NA----------				
20		Endosulfan Sulfate			----------NA----------				
21		Endrin Ketone			----------NA----------				
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	L2	Toxaphene-A	500.000	456.728	8.7	74	0.00	5.32-	5.52
29	L2	Toxaphene-B	500.000	521.117	-4.2	102	0.00	5.74-	5.94
30	L2	Toxaphene-C	500.000	518.231	-3.6	110	0.00	5.80-	6.00
31	L2	Toxaphene-D	500.000	447.812	10.4	98	0.00	5.94-	6.14
32	L2	Toxaphene-E	500.000	452.645	9.5	92	0.00	6.38-	6.58
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ST163758.D GST3992_092022.M Wed Sep 21 09:46:23 2022

11.7.7

11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ECC3992
Lab FileID: ST163776.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GS...2\ST163776.D\ECD1A.CH Vial: 7
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163776.D\ECD2B.CH
Acq On : 20 Sep 2022 8:47 pm Operator: eduardom
Sample : ecc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	36.959	7.6	93	0.00	3.21- 3.41
2		alpha-BHC	40.000	38.609	3.5	97	0.00	3.54- 3.74
3		gamma-BHC (Lindane)	40.000	40.966	-2.4	101	0.00	3.78- 3.98
4		beta-BHC	40.000	38.557	3.6	101	0.00	3.95- 4.15
5		delta-BHC	40.000	36.224	9.4	91	0.00	4.11- 4.31
6		Heptachlor	40.000	40.128	-0.3	101	0.00	4.18- 4.38
7		Aldrin	40.000	40.710	-1.8	101	0.00	4.41- 4.61
8		Heptachlor Epoxide	40.000	40.232	-0.6	103	0.00	4.72- 4.92
9		gamma-Chlordane	40.000	40.541	-1.4	100	0.00	4.90- 5.10
10		alpha-Chlordane	40.000	41.944	-4.9	104	0.00	4.95- 5.15
11		4,4'-DDE	40.000	38.294	4.3	98	0.00	5.10- 5.30
12		Endosulfan I	40.000	44.578	-11.4	114	-0.03	4.98- 5.18
13		Dieldrin	40.000	41.297	-3.2	105	0.00	5.18- 5.38
14		Endrin	40.000	41.988	-5.0	106	0.00	5.33- 5.53
15		4,4'-DDD	40.000	37.891	5.3	97	0.00	5.47- 5.67
16		Endosulfan II	40.000	41.724	-4.3	103	0.00	5.50- 5.70
		---------- Amount Calc. %Drift ----------						
17		4,4'-DDT	40.000	42.251	-5.6	103	0.00	5.69- 5.89
		---------- Amount Calc. %Drift ----------						
18		Endrin Aldehyde	40.000	39.735	0.7	100	0.00	5.60- 5.80
		---------- Amount Calc. %Drift ----------						
19		Methoxychlor	40.000	41.022	-2.6	100	0.00	6.05- 6.25
		---------- Amount Calc. %Drift ----------						
20		Endosulfan Sulfate	40.000	39.058	2.4	98	0.00	5.76- 5.96
21		Endrin Ketone	40.000	42.652	-6.6	104	0.00	6.10- 6.30
22	L1	Chlordane-A	----------NA----------					
23	L1	Chlordane-B	----------NA----------					
24	L1	Chlordane-C	----------NA----------					
25	L1	Chlordane-D	----------NA----------					
26	L1	Chlordane-E	----------NA----------					
		---------- Amount Calc. %Drift ----------						
27	L1	Chlordane-F	----------NA----------					
		---------- Amount Calc. %Drift ----------						
28	L2	Toxaphene-A	----------NA----------					
29	L2	Toxaphene-B	----------NA----------					

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ECC3992
Lab FileID: ST163776.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl	40.000	39.071	2.3	98	0.00	7.15-	7.35
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	40.000	38.953	2.6	97	0.00	3.32-	3.52
2		alpha-BHC	40.000	42.280	-5.7	96	0.00	3.74-	3.94
3		gamma-BHC (Lindane)	40.000	43.041	-7.6	101	0.00	4.00-	4.20
4		beta-BHC	40.000	39.335	1.7	98	0.00	4.23-	4.43
5		delta-BHC	40.000	40.316	-0.8	95	0.00	4.41-	4.61
6		Heptachlor	40.000	41.940	-4.8	100	0.00	4.28-	4.48
7		Aldrin	40.000	43.775	-9.4	103	0.00	4.50-	4.70
8		Heptachlor Epoxide	40.000	40.448	-1.1	102	0.00	4.87-	5.07
9		gamma-Chlordane	40.000	42.612	-6.5	103	0.00	5.06-	5.26
10		alpha-Chlordane	40.000	42.426	-6.1	103	0.00	5.11-	5.31
11		4,4'-DDE	40.000	41.357	-3.4	98	0.00	5.25-	5.45
12		Endosulfan I	40.000	42.851	-7.1	103	0.00	5.15-	5.35
13		Dieldrin	40.000	42.833	-7.1	104	0.00	5.35-	5.55
14		Endrin	40.000	43.054	-7.6	103	0.00	5.56-	5.76
15		4,4'-DDD	40.000	41.179	-2.9	99	0.00	5.66-	5.86
16		Endosulfan II	40.000	40.287	-0.7	103	0.00	5.77-	5.97
		---------- Amount	Calc.	%Drift	----------				
17		4,4'-DDT	40.000	40.766	-1.9	98	0.00	5.85-	6.05
		---------- Amount	Calc.	%Drift	----------				
18		Endrin Aldehyde	40.000	41.710	-4.3	102	0.00	5.90-	6.10
19		Methoxychlor	40.000	41.319	-3.3	98	0.00	6.28-	6.48
20		Endosulfan Sulfate	40.000	40.322	-0.8	98	0.00	6.07-	6.27
21		Endrin Ketone	40.000	44.445	-11.1	105	0.00	6.46-	6.66
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl	40.000	39.817	0.5	108	0.00	7.37-	7.57

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163759.D GST3992_092022.M Wed Sep 21 09:46:00 2022

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ECC3992
Lab FileID: ST163777.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\GS...2\ST163777.D\ECD1A.CH Vial: 14
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163777.D\ECD2B.CH
Acq On    : 20 Sep 2022   9:03 pm                    Operator: eduardom
Sample    : ecc3992-200 CHL                          Inst    : ECD 3
Misc      : OP93001,GST3992,250,,,5,1,Water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title        : Pesticides by 8081B
Last Update  : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.20min
Max. RRF Dev :  20%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2		alpha-BHC		----------NA----------			
3		gamma-BHC (Lindane)		----------NA----------			
4		beta-BHC		----------NA----------			
5		delta-BHC		----------NA----------			
6		Heptachlor		----------NA----------			
7		Aldrin		----------NA----------			
8		Heptachlor Epoxide		----------NA----------			
9		gamma-Chlordane		----------NA----------			
10		alpha-Chlordane		----------NA----------			
11		4,4'-DDE		----------NA----------			
12		Endosulfan I		----------NA----------			
13		Dieldrin		----------NA----------			
14		Endrin		----------NA----------			
15		4,4'-DDD		----------NA----------			
16		Endosulfan II		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
17		4,4'-DDT		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
18		Endrin Aldehyde		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
19		Methoxychlor		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
20		Endosulfan Sulfate		----------NA----------			
21		Endrin Ketone		----------NA----------			
22	L1	Chlordane-A	200.000	194.838	2.6	95 0.00	4.03- 4.23
23	L1	Chlordane-B	200.000	194.734	2.6	97 0.00	4.18- 4.38
24	L1	Chlordane-C	200.000	195.183	2.4	99 0.00	4.41- 4.61
25	L1	Chlordane-D	200.000	195.943	2.0	96 0.00	4.90- 5.10
26	L1	Chlordane-E	200.000	198.618	0.7	96 0.00	4.95- 5.15
		----------	Amount	Calc.	%Drift	----------	
27	L1	Chlordane-F	200.000	238.616	-19.3	122 0.00	5.54- 5.74
		----------	Amount	Calc.	%Drift	----------	
28	L2	Toxaphene-A		----------NA----------			
29	L2	Toxaphene-B		----------NA----------			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ECC3992
Lab FileID: ST163777.D

30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2		alpha-BHC			----------NA----------				
3		gamma-BHC (Lindane)			----------NA----------				
4		beta-BHC			----------NA----------				
5		delta-BHC			----------NA----------				
6		Heptachlor			----------NA----------				
7		Aldrin			----------NA----------				
8		Heptachlor Epoxide			----------NA----------				
9		gamma-Chlordane			----------NA----------				
10		alpha-Chlordane			----------NA----------				
11		4,4'-DDE			----------NA----------				
12		Endosulfan I			----------NA----------				
13		Dieldrin			----------NA----------				
14		Endrin			----------NA----------				
15		4,4'-DDD			----------NA----------				
16		Endosulfan II			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17		4,4'-DDT			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
18		Endrin Aldehyde			----------NA----------				
19		Methoxychlor			----------NA----------				
20		Endosulfan Sulfate			----------NA----------				
21		Endrin Ketone			----------NA----------				
22	L1	Chlordane-A	200.000	194.985	2.5	95	0.00	4.14-	4.34
23	L1	Chlordane-B	200.000	191.394	4.3	94	0.00	4.28-	4.48
24	L1	Chlordane-C	200.000	199.520	0.2	97	0.00	4.58-	4.78
25	L1	Chlordane-D	200.000	201.999	-1.0	97	0.00	5.07-	5.27
26	L1	Chlordane-E	200.000	200.589	-0.3	97	0.00	5.11-	5.31
27	L1	Chlordane-F	200.000	181.128	9.4	104	0.00	5.78-	5.98
28	L2	Toxaphene-A			----------NA----------				
29	L2	Toxaphene-B			----------NA----------				
30	L2	Toxaphene-C			----------NA----------				
31	L2	Toxaphene-D			----------NA----------				
32	L2	Toxaphene-E			----------NA----------				
33	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ST163758.D GST3992_092022.M Wed Sep 21 09:46:25 2022

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GST3992-ECC3992
Lab FileID: ST163778.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\GS...2\ST163778.D\ECD1A.CH Vial: 21
Signal #2 : C:\msdchem\1\DATA\GST3992_092022\ST163778.D\ECD2B.CH
Acq On    : 20 Sep 2022   9:19 pm                    Operator: eduardom
Sample    : ecc3992-500 Tox                          Inst    : ECD 3
Misc      : OP93001,GST3992,250,,,5,1,Water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\MET...GST3992_092022.M (Chemstation Integrator)
Title        : Pesticides by 8081B
Last Update  : Tue Sep 20 16:52:14 2022
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.20min
Max. RRF Dev :  20%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2		alpha-BHC		----------NA----------			
3		gamma-BHC (Lindane)		----------NA----------			
4		beta-BHC		----------NA----------			
5		delta-BHC		----------NA----------			
6		Heptachlor		----------NA----------			
7		Aldrin		----------NA----------			
8		Heptachlor Epoxide		----------NA----------			
9		gamma-Chlordane		----------NA----------			
10		alpha-Chlordane		----------NA----------			
11		4,4'-DDE		----------NA----------			
12		Endosulfan I		----------NA----------			
13		Dieldrin		----------NA----------			
14		Endrin		----------NA----------			
15		4,4'-DDD		----------NA----------			
16		Endosulfan II		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
17		4,4'-DDT		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
18		Endrin Aldehyde		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
19		Methoxychlor		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
20		Endosulfan Sulfate		----------NA----------			
21		Endrin Ketone		----------NA----------			
22	L1	Chlordane-A		----------NA----------			
23	L1	Chlordane-B		----------NA----------			
24	L1	Chlordane-C		----------NA----------			
25	L1	Chlordane-D		----------NA----------			
26	L1	Chlordane-E		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
27	L1	Chlordane-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
28	L2	Toxaphene-A	500.000	473.514	5.3	94 0.00	5.11- 5.31
29	L2	Toxaphene-B	500.000	521.723	-4.3	106 0.00	5.47- 5.67

11.7.10 11

Continuing Calibration Summary

Job Number: FA98819 **Sample:** GST3992-ECC3992
Account: SCMAW Sovereign Consulting **Lab FileID:** ST163778.D
Project: Shepley's Hill (SHL); Devens, MA

30	L2	Toxaphene-C	500.000	507.448	-1.5	105	0.00	5.53-	5.73
31	L2	Toxaphene-D	500.000	535.111	-7.0	101	0.00	5.69-	5.89
32	L2	Toxaphene-E	500.000	492.822	1.4	99	0.00	6.05-	6.25
33	S	Decachlorobiphenyl	----------NA----------						
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	----------NA----------						
2		alpha-BHC	----------NA----------						
3		gamma-BHC (Lindane)	----------NA----------						
4		beta-BHC	----------NA----------						
5		delta-BHC	----------NA----------						
6		Heptachlor	----------NA----------						
7		Aldrin	----------NA----------						
8		Heptachlor Epoxide	----------NA----------						
9		gamma-Chlordane	----------NA----------						
10		alpha-Chlordane	----------NA----------						
11		4,4'-DDE	----------NA----------						
12		Endosulfan I	----------NA----------						
13		Dieldrin	----------NA----------						
14		Endrin	----------NA----------						
15		4,4'-DDD	----------NA----------						
16		Endosulfan II	----------NA----------						
		---------- Amount Calc. %Drift ----------							
17		4,4'-DDT	----------NA----------						
		---------- Amount Calc. %Drift ----------							
18		Endrin Aldehyde	----------NA----------						
19		Methoxychlor	----------NA----------						
20		Endosulfan Sulfate	----------NA----------						
21		Endrin Ketone	----------NA----------						
22	L1	Chlordane-A	----------NA----------						
23	L1	Chlordane-B	----------NA----------						
24	L1	Chlordane-C	----------NA----------						
25	L1	Chlordane-D	----------NA----------						
26	L1	Chlordane-E	----------NA----------						
27	L1	Chlordane-F	----------NA----------						
28	L2	Toxaphene-A	500.000	392.564	21.5#	64	0.00	5.32-	5.52
29	L2	Toxaphene-B	500.000	433.113	13.4	85	0.00	5.74-	5.94
30	L2	Toxaphene-C	500.000	451.848	9.6	96	0.00	5.80-	6.00
31	L2	Toxaphene-D	500.000	469.428	6.1	103	0.00	5.94-	6.14
32	L2	Toxaphene-E	500.000	561.858	-12.4	114	0.00	6.38-	6.58
33	S	Decachlorobiphenyl	----------NA----------						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST163758.D GST3992_092022.M Wed Sep 21 09:46:27 2022

11.7.10 11

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Sample: GXX1547-ICC1547
Lab FileID: XX081737.D

Response Factor Report ECD 7

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:35:55 2022
Response via : Initial Calibration

Calibration Files
20 =XX081742.D 50 =XX081743.D 200 =XX081744.D 400 =XX081745.D
600 =XX081746.D 1000 =XX081747.D

		Compound	20	50	200	400	600	1000	Avg		%RSD
1)	S	Tetrachloro-m-xylen	5.345	5.662	4.934	4.621	4.233	4.414	4.868	E5	11.37
2)	L1	AR1016-A	1.235	1.076	0.975	0.886	0.880	0.856	0.985	E4	14.95
3)	L1	AR1016-B	2.018	1.886	1.666	1.519	1.472	1.438	1.666	E4	14.29
4)	L1	AR1016-C	1.051	0.934	0.868	0.807	0.791	0.781	0.872	E4	12.04
5)	L1	AR1016-D	3.767	3.323	3.155	2.888	2.930	2.936	3.166	E4	10.68
6)	L1	AR1016-E	2.020	1.814	1.703	1.577	1.597	1.577	1.715	E4	10.28
7)	L1	AR1016-F	1.705	1.540	1.462	1.370	1.395	1.402	1.479	E4	8.53
8)	L2	AR1221-A	5.229	3.416	2.609	2.293	2.218	1.947	2.952	E3	41.49
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9945									
		Response Ratio = 0.00000 + 2199.28432 *A									
9)	L2	AR1221-B	1.493	1.098	0.952	0.844	0.818	0.798	1.000	E3	26.59
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9986									
		Response Ratio = 0.00000 + 837.42762 *A									
10)	L2	AR1221-C	7.411	6.204	5.617	5.202	5.142	4.816	5.732	E3	16.59
11)	L2	AR1221-D	5.032	4.196	3.721	3.408	3.314	3.167	3.806	E3	18.47
12)	L2	AR1221-E	1.896	1.574	1.381	1.267	1.240	1.166	1.421	E4	19.19
13)	L3	AR1232-A	1.408	1.271	0.969	0.960	0.956	0.926	1.082	E4	18.91
14)	L3	AR1232-B	1.026	0.769	0.692	0.710	0.704	0.685	0.764	E4	17.24
15)	L3	AR1232-C	1.777	1.601	1.275	1.315	1.352	1.308	1.438	E4	14.18
16)	L3	AR1232-D	9.853	8.843	7.118	7.350	7.537	7.400	8.017	E3	13.57
17)	L3	AR1232-E	7.103	6.549	5.243	5.387	5.531	5.470	5.881	E3	12.91
18)	L3	AR1232-F	7.799	7.157	5.736	5.972	6.169	6.145	6.496	E3	12.35
19)	L4	AR1242-A	1.039	0.878	0.758	0.717	0.702	0.663	0.793	E4	17.82
20)	L4	AR1242-B	1.833	1.573	1.315	1.275	1.227	1.170	1.399	E4	18.16
21)	L4	AR1242-C	9.203	7.989	6.884	6.493	6.397	6.041	7.168	E3	16.76
22)	L4	AR1242-D	3.133	2.655	2.427	2.342	2.328	2.315	2.534	E4	12.64
23)	L4	AR1242-E	1.679	1.465	1.327	1.272	1.263	1.245	1.375	E4	12.30
24)	L4	AR1242-F	1.470	1.294	1.198	1.169	1.180	1.161	1.245	E4	9.64
25)	L5	AR1248-A	1.956	1.637	1.402	1.374	1.373	1.354	1.516	E4	15.83
26)	L5	AR1248-B	1.870	1.564	1.354	1.224	1.256	1.259	1.421	E4	17.77
27)	L5	AR1248-C	2.360	1.983	1.826	1.735	1.768	1.753	1.904	E4	12.65
28)	L5	AR1248-D	2.102	1.764	1.812	1.825	1.923	1.979	1.901	E4	6.63
29)	L5	AR1248-E	1.810	1.504	1.352	1.343	1.357	1.350	1.453	E4	12.77
30)	L5	AR1248-F	1.249	1.017	0.931	0.931	0.963	0.987	1.013	E4	11.86
31)	L6	AR1254-A	2.574	2.107	2.032	1.936	1.924	1.922	2.083	E4	12.10
32)	L6	AR1254-B	3.667	3.018	2.998	2.844	2.853	2.910	3.048	E4	10.22
33)	L6	AR1254-C	4.516	3.696	3.747	3.556	3.606	3.684	3.801	E4	9.40
34)	L6	AR1254-D	3.248	2.640	2.676	2.461	2.472	2.571	2.678	E4	10.92
35)	L6	AR1254-E	2.721	2.201	2.088	1.939	1.919	1.905	2.129	E4	14.67
36)	L6	AR1254-F	4.043	3.250	2.770	3.014	3.020	2.947	3.174	E4	14.27
37)	L7	AR1260-A	3.362	2.945	2.867	2.690	2.717	2.795	2.896	E4	8.53
38)	L7	AR1260-B	4.379	3.946	3.861	3.651	3.702	3.837	3.896	E4	6.68
39)	L7	AR1260-C	3.908	3.646	3.508	3.291	3.185	3.297	3.472	E4	7.81
40)	L7	AR1260-D	3.256	2.869	2.854	2.673	2.706	2.835	2.866	E4	7.25
41)	L7	AR1260-E	7.650	7.035	7.061	6.745	6.998	7.888	7.229	E4	6.08

Initial Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICC1547
Lab FileID: XX081737.D

42)	L7	AR1260-F	3.773	3.392	3.406	3.243	3.272	3.407	3.415	E4	5.53
43)	L9	AR1262-A	2.713	2.336	2.203	2.173	2.200	2.209	2.305	E4	9.01
44)	L9	AR1262-B	3.518	3.002	2.819	2.775	2.783	2.848	2.958	E4	9.70
45)	L9	AR1262-C	4.956	4.297	4.037	3.917	3.992	4.112	4.219	E4	9.09
46)	L9	AR1262-D	4.221	3.630	3.467	3.377	3.379	3.466	3.590	E4	8.98
47)	L9	AR1262-E	8.828	7.864	7.507	7.451	7.773	8.722	8.024	E4	7.51
48)	L9	AR1262-F	4.321	3.729	3.462	3.380	3.397	3.411	3.617	E4	10.19
49)	L8	AR1268-A	1.777	1.701	1.296	1.374	1.423	1.402	1.495	E4	13.05
50)	L8	AR1268-B	2.437	2.246	1.746	1.845	1.887	1.890	2.008	E4	13.45
51)	L8	AR1268-C	1.039	1.000	0.772	0.885	0.945	1.041	0.947	E5	11.03
52)	L8	AR1268-D	9.636	9.068	7.074	7.758	8.181	8.708	8.404	E4	11.02
53)	L8	AR1268-E	8.685	8.012	6.459	6.964	7.300	7.723	7.524	E4	10.51
54)	L8	AR1268-F	3.538	3.159	2.529	2.775	2.893	2.872	2.961	E4	11.76
55)	S	Decachlorobiphenyl	6.351	5.703	5.526	5.161	5.116	5.433	5.549	E5	8.14

Signal #2

1)	S	Tetrachloro-m-xylen	1.401	1.235	1.103	1.016	1.065	1.323	1.190	E6	12.91
2)	L1	AR1016-A	2.233	1.939	1.707	1.534	1.482	1.441	1.723	E4	17.99
3)	L1	AR1016-B	3.370	2.834	2.537	2.256	2.185	2.132	2.552	E4	18.77
4)	L1	AR1016-C	1.790	1.544	1.342	1.216	1.163	1.138	1.365	E4	18.74
5)	L1	AR1016-D	5.693	5.026	4.601	4.176	4.115	4.175	4.631	E4	13.54
6)	L1	AR1016-E	3.251	2.801	2.559	2.330	2.317	2.274	2.589	E4	14.71
7)	L1	AR1016-F	2.784	2.396	2.166	1.968	1.948	1.945	2.201	E4	15.25
8)	L2	AR1221-A	8.545	6.744	5.441	4.984	4.871	4.611	5.866	E3	25.82
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9985									
		Response Ratio = 0.00000 + 4900.32499 *A									
9)	L2	AR1221-B	3.163	2.553	2.095	1.880	1.803	1.722	2.203	E3	25.30
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9976									
		Response Ratio = 0.00000 + 1834.99273 *A									
10)	L2	AR1221-C	1.471	1.224	1.041	0.951	0.932	0.916	1.089	E4	20.12
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9992									
		Response Ratio = 0.00000 + 9488.19672 *A									
11)	L2	AR1221-D	9.792	8.015	6.890	6.267	6.094	5.829	7.148	E3	21.16
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9984									
		Response Ratio = 0.00000 + 6152.43993 *A									
12)	L2	AR1221-E	3.180	2.575	2.195	2.022	1.977	1.881	2.305	E4	21.41
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9986									
		Response Ratio = 0.00000 + 19856.10977 *A									
13)	L3	AR1232-A	2.467	2.171	1.631	1.628	1.610	1.533	1.840	E4	20.88
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9990									
		Response Ratio = 0.00000 + 16010.34938 *A									
14)	L3	AR1232-B	1.759	1.535	1.134	1.122	1.112	1.063	1.287	E4	22.40
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9990									
		Response Ratio = 0.00000 + 11089.98403 *A									
15)	L3	AR1232-C	2.830	2.494	1.953	1.955	1.989	1.932	2.192	E4	17.32
16)	L3	AR1232-D	1.659	1.468	1.111	1.126	1.130	1.090	1.264	E4	19.00
17)	L3	AR1232-E	1.378	1.195	0.887	0.907	0.922	0.886	1.029	E4	20.21
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9991									
		Response Ratio = 0.00000 + 9102.38930 *A									
18)	L3	AR1232-F	1.173	1.012	0.755	0.777	0.773	0.760	0.875	E4	20.14
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9993									

11.7.11

11

```
              Response Ratio = 0.00000 + 7752.76269 *A

19) L4  AR1242-A           1.939 1.587 1.297 1.224 1.198 1.143 1.398 E4  22.03
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 12019.87835 *A

20) L4  AR1242-B           2.951 2.384 2.007 1.852 1.811 1.739 2.124 E4  21.93
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 18264.04310 *A

21) L4  AR1242-C           1.621 1.312 1.084 1.000 0.971 0.931 1.153 E4  23.11
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 9817.04896 *A

22) L4  AR1242-D           4.876 4.048 3.590 3.395 3.379 3.299 3.765 E4  16.15
23) L4  AR1242-E           2.764 2.288 2.018 1.907 1.893 1.831 2.117 E4  16.81
24) L4  AR1242-F           2.477 2.046 1.774 1.698 1.669 1.667 1.889 E4  17.03
25) L5  AR1248-A           3.032 2.413 2.090 1.986 1.940 1.923 2.231 E4  19.37
26) L5  AR1248-B           3.055 2.424 2.074 1.979 1.942 1.899 2.229 E4  20.04
27) L5  AR1248-C           3.849 3.041 2.669 2.537 2.518 2.503 2.853 E4  18.52
28) L5  AR1248-D           3.531 2.893 2.834 2.809 2.816 2.898 2.964 E4   9.48
29) L5  AR1248-E           3.360 2.580 2.592 2.414 2.506 2.621 2.679 E4  12.77
30) L5  AR1248-F           1.969 1.521 1.386 1.344 1.344 1.338 1.484 E4  16.69
31) L6  AR1254-A           4.389 3.433 3.183 2.949 2.899 2.929 3.297 E4  17.36
32) L6  AR1254-B           4.713 3.760 3.579 3.288 3.236 3.307 3.647 E4  15.35
33) L6  AR1254-C           6.721 5.410 5.122 4.797 4.744 4.921 5.286 E4  14.08
34) L6  AR1254-D           4.733 3.810 3.574 3.310 3.294 3.351 3.679 E4  15.04
35) L6  AR1254-E           3.151 2.505 2.261 2.123 2.075 2.057 2.362 E4  17.83
36) L6  AR1254-F           5.456 4.377 3.873 3.732 3.715 3.846 4.167 E4  16.24
37) L7  AR1260-A           4.464 3.963 3.578 3.252 3.145 3.183 3.597 E4  14.60
38) L7  AR1260-B           5.598 4.912 4.559 4.193 4.174 4.298 4.622 E4  11.97
39) L7  AR1260-C           4.808 4.225 3.947 3.588 3.503 3.570 3.940 E4  12.87
40) L7  AR1260-D           4.504 3.921 3.657 3.309 3.303 3.369 3.677 E4  12.84
41) L7  AR1260-E           9.413 8.211 7.965 7.392 7.756 8.399 8.189 E4   8.49
42) L7  AR1260-F           4.630 4.220 3.870 3.607 3.503 3.619 3.908 E4  11.20
43) L9  AR1262-A           3.968 3.245 2.813 2.774 2.744 2.717 3.044 E4  16.22
44) L9  AR1262-B           4.540 3.710 3.361 3.240 3.239 3.245 3.556 E4  14.49
45) L9  AR1262-C           6.115 5.052 4.568 4.399 4.476 4.629 4.873 E4  13.33
46) L9  AR1262-D           5.698 4.714 4.201 4.069 4.055 4.190 4.488 E4  14.26
47) L9  AR1262-E           1.028 0.873 0.810 0.812 0.845 0.935 0.884 E5   9.57
48) L9  AR1262-F           5.647 4.692 4.221 4.189 4.265 4.327 4.557 E4  12.38
49) L8  AR1268-A           2.504 2.134 1.576 1.595 1.647 1.585 1.840 E4  21.19
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 16225.89653 *A

50) L8  AR1268-B           3.101 2.625 2.012 2.048 2.120 2.032 2.323 E4  19.19
51) L8  AR1268-C           1.118 0.927 0.827 0.893 0.933 1.039 0.956 E5  10.97
52) L8  AR1268-D           9.777 8.907 7.087 7.422 7.769 8.227 8.198 E4  12.22
53) L8  AR1268-E           9.066 8.193 6.517 6.984 7.107 7.544 7.569 E4  12.24
54) L8  AR1268-F           3.832 3.458 2.707 2.824 2.906 2.917 3.107 E4  14.14
55) S   Decachlorobiphenyl 5.998 5.198 4.837 4.517 4.392 4.616 4.926 E5  12.11
------------------------------------------------------------------------------
(#) = Out of Range

          8082DODXX091622.m        Tue Sep 20 15:39:29 2022
```

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081740.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081740.D\ECD1A.CH Vial: 9
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081740.D\ECD2B.CH
Acq On : 16-Sep-22, 16:21:43 Operator: eduardom
Sample : icv1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2	L1	AR1016-A	400.000	416.087	-4.0	116	0.00	3.34- 3.44
3	L1	AR1016-B	400.000	437.753	-9.4	120	0.00	3.55- 3.65
4	L1	AR1016-C	400.000	442.564	-10.6	120	0.00	3.67- 3.77
5	L1	AR1016-D	400.000	466.514	-16.6	128	0.00	3.82- 3.92
6	L1	AR1016-E	400.000	463.630	-15.9	126	0.00	3.90- 4.00
7	L1	AR1016-F	400.000	468.542	-17.1	126	0.00	4.12- 4.21
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B		----------NA----------				
10	L2	AR1221-C		----------NA----------				
11	L2	AR1221-D		----------NA----------				
12	L2	AR1221-E		----------NA----------				
13	L3	AR1232-A		----------NA----------				
14	L3	AR1232-B		----------NA----------				
15	L3	AR1232-C		----------NA----------				
16	L3	AR1232-D		----------NA----------				
17	L3	AR1232-E		----------NA----------				
18	L3	AR1232-F		----------NA----------				
19	L4	AR1242-A		----------NA----------				
20	L4	AR1242-B		----------NA----------				
21	L4	AR1242-C		----------NA----------				
22	L4	AR1242-D		----------NA----------				
23	L4	AR1242-E		----------NA----------				
24	L4	AR1242-F		----------NA----------				
25	L5	AR1248-A		----------NA----------				
26	L5	AR1248-B		----------NA----------				
27	L5	AR1248-C		----------NA----------				
28	L5	AR1248-D		----------NA----------				
29	L5	AR1248-E		----------NA----------				
30	L5	AR1248-F		----------NA----------				
31	L6	AR1254-A		----------NA----------				
32	L6	AR1254-B		----------NA----------				
33	L6	AR1254-C		----------NA----------				
34	L6	AR1254-D		----------NA----------				
35	L6	AR1254-E		----------NA----------				
36	L6	AR1254-F		----------NA----------				
37	L7	AR1260-A	400.000	414.825	-3.7	112	0.00	4.77- 4.87

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081740.D

38	L7	AR1260-B	400.000	415.543	-3.9	111	0.00	4.92-	5.02
39	L7	AR1260-C	400.000	407.264	-1.8	107	0.00	5.08-	5.17
40	L7	AR1260-D	400.000	419.896	-5.0	113	0.00	5.27-	5.37
41	L7	AR1260-E	400.000	421.548	-5.4	113	0.00	5.45-	5.55
42	L7	AR1260-F	400.000	419.872	-5.0	111	0.00	5.62-	5.71
43	L9	AR1262-A		----------NA----------					
44	L9	AR1262-B		----------NA----------					
45	L9	AR1262-C		----------NA----------					
46	L9	AR1262-D		----------NA----------					
47	L9	AR1262-E		----------NA----------					
48	L9	AR1262-F		----------NA----------					
49	L8	AR1268-A		----------NA----------					
50	L8	AR1268-B		----------NA----------					
51	L8	AR1268-C		----------NA----------					
52	L8	AR1268-D		----------NA----------					
53	L8	AR1268-E		----------NA----------					
54	L8	AR1268-F		----------NA----------					
55	S	Decachlorobiphenyl		----------NA----------					
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene		----------NA----------					
2	L1	AR1016-A	400.000	407.816	-2.0	114	0.00	3.73-	3.83
3	L1	AR1016-B	400.000	429.052	-7.3	121	0.00	3.96-	4.07
4	L1	AR1016-C	400.000	433.961	-8.5	122	0.00	4.11-	4.21
5	L1	AR1016-D	400.000	451.304	-12.8	125	0.00	4.22-	4.32
6	L1	AR1016-E	400.000	456.535	-14.1	127	0.00	4.30-	4.40
7	L1	AR1016-F	400.000	449.710	-12.4	126	0.00	4.56-	4.66
		---------- Amount Calc. %Drift ----------							
8	L2	AR1221-A		----------NA----------					
9	L2	AR1221-B		----------NA----------					
10	L2	AR1221-C		----------NA----------					
11	L2	AR1221-D		----------NA----------					
12	L2	AR1221-E		----------NA----------					
13	L3	AR1232-A		----------NA----------					
14	L3	AR1232-B		----------NA----------					
		---------- Amount Calc. %Drift ----------							
15	L3	AR1232-C		----------NA----------					
16	L3	AR1232-D		----------NA----------					
		---------- Amount Calc. %Drift ----------							
17	L3	AR1232-E		----------NA----------					
18	L3	AR1232-F		----------NA----------					
19	L4	AR1242-A		----------NA----------					
20	L4	AR1242-B		----------NA----------					
21	L4	AR1242-C		----------NA----------					
		---------- Amount Calc. %Drift ----------							
22	L4	AR1242-D		----------NA----------					
23	L4	AR1242-E		----------NA----------					
24	L4	AR1242-F		----------NA----------					
25	L5	AR1248-A		----------NA----------					
26	L5	AR1248-B		----------NA----------					
27	L5	AR1248-C		----------NA----------					
28	L5	AR1248-D		----------NA----------					
29	L5	AR1248-E		----------NA----------					
30	L5	AR1248-F		----------NA----------					
31	L6	AR1254-A		----------NA----------					

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081740.D

32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A	400.000	380.631	4.8	105	0.00	5.26-	5.37
38	L7	AR1260-B	400.000	395.474	1.1	109	0.00	5.38-	5.48
39	L7	AR1260-C	400.000	417.393	-4.3	115	0.00	5.59-	5.69
40	L7	AR1260-D	400.000	399.099	0.2	111	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	407.565	-1.9	113	0.00	5.97-	6.07
42	L7	AR1260-F	400.000	397.988	0.5	108	0.00	6.20-	6.30
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				

			Amount	Calc.	%Drift				
49	L8	AR1268-A			----------NA----------				

			Amount	Calc.	%Drift				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 13:54:03 2022

11.7.12

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081748.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081748.D\ECD1A.CH Vial: 16
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081748.D\ECD2B.CH
Acq On : 16-Sep-22, 18:03:15 Operator: eduardom
Sample : icv1547-400 1221 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:35:55 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	----------NA----------					
2	L1	AR1016-A	----------NA----------					
3	L1	AR1016-B	----------NA----------					
4	L1	AR1016-C	----------NA----------					
5	L1	AR1016-D	----------NA----------					
6	L1	AR1016-E	----------NA----------					
7	L1	AR1016-F	----------NA----------					
			Amount	Calc.	%Drift			
8	L2	AR1221-A	400.000	388.474	2.9	93	0.00	2.73- 2.84
9	L2	AR1221-B	400.000	391.988	2.0	97	0.00	3.01- 3.11
			Amount	Calc.	%Drift			
10	L2	AR1221-C	400.000	374.531	6.4	103	0.00	3.22- 3.32
11	L2	AR1221-D	400.000	367.479	8.1	103	0.00	3.31- 3.41
12	L2	AR1221-E	400.000	370.292	7.4	104	0.00	3.34- 3.44
13	L3	AR1232-A	----------NA----------					
14	L3	AR1232-B	----------NA----------					
15	L3	AR1232-C	----------NA----------					
16	L3	AR1232-D	----------NA----------					
17	L3	AR1232-E	----------NA----------					
18	L3	AR1232-F	----------NA----------					
19	L4	AR1242-A	----------NA----------					
20	L4	AR1242-B	----------NA----------					
21	L4	AR1242-C	----------NA----------					
22	L4	AR1242-D	----------NA----------					
23	L4	AR1242-E	----------NA----------					
24	L4	AR1242-F	----------NA----------					
25	L5	AR1248-A	----------NA----------					
26	L5	AR1248-B	----------NA----------					
27	L5	AR1248-C	----------NA----------					
28	L5	AR1248-D	----------NA----------					
29	L5	AR1248-E	----------NA----------					
30	L5	AR1248-F	----------NA----------					
31	L6	AR1254-A	----------NA----------					
32	L6	AR1254-B	----------NA----------					
33	L6	AR1254-C	----------NA----------					
34	L6	AR1254-D	----------NA----------					
35	L6	AR1254-E	----------NA----------					
36	L6	AR1254-F	----------NA----------					
37	L7	AR1260-A	----------NA----------					

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081748.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
8	L2	AR1221-A	400.000	395.552	1.1	97	0.00	3.10-	3.20	
9	L2	AR1221-B	400.000	393.404	1.6	96	0.00	3.35-	3.45	
10	L2	AR1221-C	400.000	420.274	-5.1	105	0.00	3.60-	3.70	
11	L2	AR1221-D	400.000	423.431	-5.9	104	0.00	3.69-	3.79	
12	L2	AR1221-E	400.000	427.915	-7.0	105	0.00	3.73-	3.83	
13	L3	AR1232-A			----------NA----------					
14	L3	AR1232-B			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
15	L3	AR1232-C			----------NA----------					
16	L3	AR1232-D			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
17	L3	AR1232-E			----------NA----------					
18	L3	AR1232-F			----------NA----------					
19	L4	AR1242-A			----------NA----------					
20	L4	AR1242-B			----------NA----------					
21	L4	AR1242-C			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
22	L4	AR1242-D			----------NA----------					
23	L4	AR1242-E			----------NA----------					
24	L4	AR1242-F			----------NA----------					
25	L5	AR1248-A			----------NA----------					
26	L5	AR1248-B			----------NA----------					
27	L5	AR1248-C			----------NA----------					
28	L5	AR1248-D			----------NA----------					
29	L5	AR1248-E			----------NA----------					
30	L5	AR1248-F			----------NA----------					
31	L6	AR1254-A			----------NA----------					

11.7.13

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081748.D

32	L6	AR1254-B		----------NA----------	
33	L6	AR1254-C		----------NA----------	
34	L6	AR1254-D		----------NA----------	
35	L6	AR1254-E		----------NA----------	
36	L6	AR1254-F		----------NA----------	
37	L7	AR1260-A		----------NA----------	
38	L7	AR1260-B		----------NA----------	
39	L7	AR1260-C		----------NA----------	
40	L7	AR1260-D		----------NA----------	
41	L7	AR1260-E		----------NA----------	
42	L7	AR1260-F		----------NA----------	
43	L9	AR1262-A		----------NA----------	
44	L9	AR1262-B		----------NA----------	
45	L9	AR1262-C		----------NA----------	
46	L9	AR1262-D		----------NA----------	
47	L9	AR1262-E		----------NA----------	
48	L9	AR1262-F		----------NA----------	

			Amount	Calc.	%Drift
49	L8	AR1268-A		----------NA----------	

			Amount	Calc.	%Drift
50	L8	AR1268-B		----------NA----------	
51	L8	AR1268-C		----------NA----------	
52	L8	AR1268-D		----------NA----------	
53	L8	AR1268-E		----------NA----------	
54	L8	AR1268-F		----------NA----------	
55	S	Decachlorobiphenyl		----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 15:39:44 2022

11.7.13 11

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081749.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081749.D\ECD1A.CH Vial: 17
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081749.D\ECD2B.CH
Acq On : 16-Sep-22, 18:15:57 Operator: eduardom
Sample : icv1547-400 1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:35:55 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		-----	NA -----			
2	L1	AR1016-A		-----	NA -----			
3	L1	AR1016-B		-----	NA -----			
4	L1	AR1016-C		-----	NA -----			
5	L1	AR1016-D		-----	NA -----			
6	L1	AR1016-E		-----	NA -----			
7	L1	AR1016-F		-----	NA -----			
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		-----	NA -----			
9	L2	AR1221-B		-----	NA -----			
		----------	Amount	Calc.	%Drift	----------		
10	L2	AR1221-C		-----	NA -----			
11	L2	AR1221-D		-----	NA -----			
12	L2	AR1221-E		-----	NA -----			
13	L3	AR1232-A		-----	NA -----			
14	L3	AR1232-B		-----	NA -----			
15	L3	AR1232-C		-----	NA -----			
16	L3	AR1232-D		-----	NA -----			
17	L3	AR1232-E		-----	NA -----			
18	L3	AR1232-F		-----	NA -----			
19	L4	AR1242-A		-----	NA -----			
20	L4	AR1242-B		-----	NA -----			
21	L4	AR1242-C		-----	NA -----			
22	L4	AR1242-D		-----	NA -----			
23	L4	AR1242-E		-----	NA -----			
24	L4	AR1242-F		-----	NA -----			
25	L5	AR1248-A		-----	NA -----			
26	L5	AR1248-B		-----	NA -----			
27	L5	AR1248-C		-----	NA -----			
28	L5	AR1248-D		-----	NA -----			
29	L5	AR1248-E		-----	NA -----			
30	L5	AR1248-F		-----	NA -----			
31	L6	AR1254-A	400.000	351.253	12.2	94	0.00	4.32- 4.42
32	L6	AR1254-B	400.000	358.462	10.4	96	0.00	4.45- 4.55
33	L6	AR1254-C	400.000	359.353	10.2	96	0.00	4.67- 4.77
34	L6	AR1254-D	400.000	348.731	12.8	95	0.00	4.82- 4.92
35	L6	AR1254-E	400.000	328.760	17.8	90	0.00	4.92- 5.02
36	L6	AR1254-F	400.000	349.626	12.6	92	0.00	5.08- 5.17
37	L7	AR1260-A		-----	NA -----			

11.7.14

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081749.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				
49	L8	AR1268-A			----------NA----------				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				
27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A	400.000	344.873	13.8	96	0.00	4.79-	4.89

11.7.14

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081749.D

32	L6	AR1254-B	400.000	341.669	14.6	95	0.00	4.89-	4.99
33	L6	AR1254-C	400.000	352.944	11.8	97	0.00	5.16-	5.25
34	L6	AR1254-D	400.000	347.568	13.1	97	0.00	5.28-	5.38
35	L6	AR1254-E	400.000	321.698	19.6	89	0.00	5.38-	5.48
36	L6	AR1254-F	400.000	333.013	16.7	93	0.00	5.59-	5.70
37	L7	AR1260-A	----------NA----------						
38	L7	AR1260-B	----------NA----------						
39	L7	AR1260-C	----------NA----------						
40	L7	AR1260-D	----------NA----------						
41	L7	AR1260-E	----------NA----------						
42	L7	AR1260-F	----------NA----------						
43	L9	AR1262-A	----------NA----------						
44	L9	AR1262-B	----------NA----------						
45	L9	AR1262-C	----------NA----------						
46	L9	AR1262-D	----------NA----------						
47	L9	AR1262-E	----------NA----------						
48	L9	AR1262-F	----------NA----------						

			Amount	Calc.	%Drift
49	L8	AR1268-A	----------NA----------		

			Amount	Calc.	%Drift
50	L8	AR1268-B	----------NA----------		
51	L8	AR1268-C	----------NA----------		
52	L8	AR1268-D	----------NA----------		
53	L8	AR1268-E	----------NA----------		
54	L8	AR1268-F	----------NA----------		
55	S	Decachlorobiphenyl	----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 15:39:46 2022

11.7.14 11

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081757.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081757.D\ECD1A.CH Vial: 24
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081757.D\ECD2B.CH
Acq On : 16-Sep-22, 19:57:21 Operator: eduardom
Sample : icv1547-400 1232 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2	L1	AR1016-A		----------NA----------				
3	L1	AR1016-B		----------NA----------				
4	L1	AR1016-C		----------NA----------				
5	L1	AR1016-D		----------NA----------				
6	L1	AR1016-E		----------NA----------				
7	L1	AR1016-F		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B		----------NA----------				
10	L2	AR1221-C		----------NA----------				
11	L2	AR1221-D		----------NA----------				
12	L2	AR1221-E		----------NA----------				
13	L3	AR1232-A	400.000	471.017	-17.8	133	0.00	3.34- 3.44
14	L3	AR1232-B	400.000	428.120	-7.0	115	0.00	3.55- 3.65
15	L3	AR1232-C	400.000	439.738	-9.9	120	0.00	3.82- 3.92
16	L3	AR1232-D	400.000	431.567	-7.9	118	0.00	3.89- 3.99
17	L3	AR1232-E	400.000	433.028	-8.3	118	0.00	3.93- 4.03
18	L3	AR1232-F	400.000	406.954	-1.7	111	0.00	4.11- 4.21
19	L4	AR1242-A		----------NA----------				
20	L4	AR1242-B		----------NA----------				
21	L4	AR1242-C		----------NA----------				
22	L4	AR1242-D		----------NA----------				
23	L4	AR1242-E		----------NA----------				
24	L4	AR1242-F		----------NA----------				
25	L5	AR1248-A		----------NA----------				
26	L5	AR1248-B		----------NA----------				
27	L5	AR1248-C		----------NA----------				
28	L5	AR1248-D		----------NA----------				
29	L5	AR1248-E		----------NA----------				
30	L5	AR1248-F		----------NA----------				
31	L6	AR1254-A		----------NA----------				
32	L6	AR1254-B		----------NA----------				
33	L6	AR1254-C		----------NA----------				
34	L6	AR1254-D		----------NA----------				
35	L6	AR1254-E		----------NA----------				
36	L6	AR1254-F		----------NA----------				
37	L7	AR1260-A		----------NA----------				

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081757.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
8	L2	AR1221-A			----------NA----------					
9	L2	AR1221-B			----------NA----------					
10	L2	AR1221-C			----------NA----------					
11	L2	AR1221-D			----------NA----------					
12	L2	AR1221-E			----------NA----------					
13	L3	AR1232-A	400.000	528.430	-32.1#	130	0.00	3.73-	3.83	
14	L3	AR1232-B	400.000	472.232	-18.1	117	0.00	3.96-	4.06	
		----------	Amount	Calc.	%Drift	----------				
15	L3	AR1232-C	400.000	425.561	-6.4	119	0.00	4.22-	4.32	
16	L3	AR1232-D	400.000	411.393	-2.8	116	0.00	4.30-	4.40	
		----------	Amount	Calc.	%Drift	----------				
17	L3	AR1232-E	400.000	431.497	-7.9	108	0.00	4.55-	4.66	
18	L3	AR1232-F	400.000	448.908	-12.2	112	0.00	4.63-	4.73	
19	L4	AR1242-A			----------NA----------					
20	L4	AR1242-B			----------NA----------					
21	L4	AR1242-C			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
22	L4	AR1242-D			----------NA----------					
23	L4	AR1242-E			----------NA----------					
24	L4	AR1242-F			----------NA----------					
25	L5	AR1248-A			----------NA----------					
26	L5	AR1248-B			----------NA----------					
27	L5	AR1248-C			----------NA----------					
28	L5	AR1248-D			----------NA----------					
29	L5	AR1248-E			----------NA----------					
30	L5	AR1248-F			----------NA----------					
31	L6	AR1254-A			----------NA----------					

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081757.D

32	L6	AR1254-B		----------NA----------	
33	L6	AR1254-C		----------NA----------	
34	L6	AR1254-D		----------NA----------	
35	L6	AR1254-E		----------NA----------	
36	L6	AR1254-F		----------NA----------	
37	L7	AR1260-A		----------NA----------	
38	L7	AR1260-B		----------NA----------	
39	L7	AR1260-C		----------NA----------	
40	L7	AR1260-D		----------NA----------	
41	L7	AR1260-E		----------NA----------	
42	L7	AR1260-F		----------NA----------	
43	L9	AR1262-A		----------NA----------	
44	L9	AR1262-B		----------NA----------	
45	L9	AR1262-C		----------NA----------	
46	L9	AR1262-D		----------NA----------	
47	L9	AR1262-E		----------NA----------	
48	L9	AR1262-F		----------NA----------	

			Amount	Calc.	%Drift	
49	L8	AR1268-A		----------NA----------		

			Amount	Calc.	%Drift	
50	L8	AR1268-B		----------NA----------		
51	L8	AR1268-C		----------NA----------		
52	L8	AR1268-D		----------NA----------		
53	L8	AR1268-E		----------NA----------		
54	L8	AR1268-F		----------NA----------		
55	S	Decachlorobiphenyl		----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 13:54:09 2022

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081758.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081758.D\ECD1A.CH Vial: 25
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081758.D\ECD2B.CH
Acq On : 16-Sep-22, 20:10:01 Operator: eduardom
Sample : icv1547-400 1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene			NA		
2	L1	AR1016-A			NA		
3	L1	AR1016-B			NA		
4	L1	AR1016-C			NA		
5	L1	AR1016-D			NA		
6	L1	AR1016-E			NA		
7	L1	AR1016-F			NA		
			Amount	Calc.	%Drift		
8	L2	AR1221-A			NA		
			Amount	Calc.	%Drift		
9	L2	AR1221-B			NA		
10	L2	AR1221-C			NA		
11	L2	AR1221-D			NA		
12	L2	AR1221-E			NA		
13	L3	AR1232-A			NA		
14	L3	AR1232-B			NA		
15	L3	AR1232-C			NA		
16	L3	AR1232-D			NA		
17	L3	AR1232-E			NA		
18	L3	AR1232-F			NA		
19	L4	AR1242-A			NA		
20	L4	AR1242-B			NA		
21	L4	AR1242-C			NA		
22	L4	AR1242-D			NA		
23	L4	AR1242-E			NA		
24	L4	AR1242-F			NA		
25	L5	AR1248-A			NA		
26	L5	AR1248-B			NA		
27	L5	AR1248-C			NA		
28	L5	AR1248-D			NA		
29	L5	AR1248-E			NA		
30	L5	AR1248-F			NA		
31	L6	AR1254-A			NA		
32	L6	AR1254-B			NA		
33	L6	AR1254-C			NA		
34	L6	AR1254-D			NA		
35	L6	AR1254-E			NA		
36	L6	AR1254-F			NA		
37	L7	AR1260-A			NA		

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081758.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				
49	L8	AR1268-A	400.000	389.636	2.6	106	0.00	5.13-	5.23
50	L8	AR1268-B	400.000	388.749	2.8	106	0.00	5.27-	5.37
51	L8	AR1268-C	400.000	401.462	-0.4	107	0.00	5.63-	5.73
52	L8	AR1268-D	400.000	400.741	-0.2	109	0.00	5.65-	5.75
53	L8	AR1268-E	400.000	402.672	-0.7	109	0.00	5.76-	5.87
54	L8	AR1268-F	400.000	404.786	-1.2	108	0.00	5.97-	6.07
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				
27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A			----------NA----------				

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081758.D

32	L6	AR1254-B				----------NA----------				
33	L6	AR1254-C				----------NA----------				
34	L6	AR1254-D				----------NA----------				
35	L6	AR1254-E				----------NA----------				
36	L6	AR1254-F				----------NA----------				
37	L7	AR1260-A				----------NA----------				
38	L7	AR1260-B				----------NA----------				
39	L7	AR1260-C				----------NA----------				
40	L7	AR1260-D				----------NA----------				
41	L7	AR1260-E				----------NA----------				
42	L7	AR1260-F				----------NA----------				
43	L9	AR1262-A				----------NA----------				
44	L9	AR1262-B				----------NA----------				
45	L9	AR1262-C				----------NA----------				
46	L9	AR1262-D				----------NA----------				
47	L9	AR1262-E				----------NA----------				
48	L9	AR1262-F				----------NA----------				
			Amount	Calc.	%Drift					
49	L8	AR1268-A	400.000	419.054	-4.8	107	0.00	5.64- 5.74		
			Amount	Calc.	%Drift					
50	L8	AR1268-B	400.000	371.119	7.2	105	0.00	5.83- 5.93		
51	L8	AR1268-C	400.000	394.653	1.3	106	0.00	6.19- 6.29		
52	L8	AR1268-D	400.000	389.169	2.7	107	0.00	6.22- 6.32		
53	L8	AR1268-E	400.000	393.881	1.5	107	0.00	6.38- 6.48		
54	L8	AR1268-F	400.000	398.407	0.4	110	0.00	6.55- 6.66		
55	S	Decachlorobiphenyl			----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 13:54:11 2022

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081766.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081766.D\ECD1A.CH Vial: 32
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081766.D\ECD2B.CH
Acq On : 16-Sep-22, 21:51:34 Operator: eduardom
Sample : icv1547-400 1242 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2	L1	AR1016-A		----------NA----------				
3	L1	AR1016-B		----------NA----------				
4	L1	AR1016-C		----------NA----------				
5	L1	AR1016-D		----------NA----------				
6	L1	AR1016-E		----------NA----------				
7	L1	AR1016-F		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B		----------NA----------				
10	L2	AR1221-C		----------NA----------				
11	L2	AR1221-D		----------NA----------				
12	L2	AR1221-E		----------NA----------				
13	L3	AR1232-A		----------NA----------				
14	L3	AR1232-B		----------NA----------				
15	L3	AR1232-C		----------NA----------				
16	L3	AR1232-D		----------NA----------				
17	L3	AR1232-E		----------NA----------				
18	L3	AR1232-F		----------NA----------				
19	L4	AR1242-A	400.000	386.528	3.4	107	0.00	3.34- 3.44
20	L4	AR1242-B	400.000	389.973	2.5	107	0.00	3.55- 3.65
21	L4	AR1242-C	400.000	388.340	2.9	107	0.00	3.67- 3.77
22	L4	AR1242-D	400.000	395.602	1.1	107	0.00	3.82- 3.92
23	L4	AR1242-E	400.000	400.502	-0.1	108	0.00	3.89- 3.99
24	L4	AR1242-F	400.000	387.159	3.2	103	0.00	4.11- 4.21
25	L5	AR1248-A		----------NA----------				
26	L5	AR1248-B		----------NA----------				
27	L5	AR1248-C		----------NA----------				
28	L5	AR1248-D		----------NA----------				
29	L5	AR1248-E		----------NA----------				
30	L5	AR1248-F		----------NA----------				
31	L6	AR1254-A		----------NA----------				
32	L6	AR1254-B		----------NA----------				
33	L6	AR1254-C		----------NA----------				
34	L6	AR1254-D		----------NA----------				
35	L6	AR1254-E		----------NA----------				
36	L6	AR1254-F		----------NA----------				
37	L7	AR1260-A		----------NA----------				

11.7.17
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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081766.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
8	L2	AR1221-A			----------NA----------					
9	L2	AR1221-B			----------NA----------					
10	L2	AR1221-C			----------NA----------					
11	L2	AR1221-D			----------NA----------					
12	L2	AR1221-E			----------NA----------					
13	L3	AR1232-A			----------NA----------					
14	L3	AR1232-B			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
15	L3	AR1232-C			----------NA----------					
16	L3	AR1232-D			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
17	L3	AR1232-E			----------NA----------					
18	L3	AR1232-F			----------NA----------					
19	L4	AR1242-A	400.000	438.433	-9.6	108	0.00	3.73- 3.83		
20	L4	AR1242-B	400.000	432.742	-8.2	107	0.00	3.96- 4.06		
21	L4	AR1242-C	400.000	434.596	-8.6	107	0.00	4.11- 4.21		
		----------	Amount	Calc.	%Drift	----------				
22	L4	AR1242-D	400.000	392.258	1.9	109	0.00	4.22- 4.32		
23	L4	AR1242-E	400.000	386.621	3.3	107	0.00	4.30- 4.40		
24	L4	AR1242-F	400.000	369.197	7.7	103	0.00	4.55- 4.66		
25	L5	AR1248-A			----------NA----------					
26	L5	AR1248-B			----------NA----------					
27	L5	AR1248-C			----------NA----------					
28	L5	AR1248-D			----------NA----------					
29	L5	AR1248-E			----------NA----------					
30	L5	AR1248-F			----------NA----------					
31	L6	AR1254-A			----------NA----------					

11.7.17

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081766.D

32	L6	AR1254-B			----------NA----------	
33	L6	AR1254-C			----------NA----------	
34	L6	AR1254-D			----------NA----------	
35	L6	AR1254-E			----------NA----------	
36	L6	AR1254-F			----------NA----------	
37	L7	AR1260-A			----------NA----------	
38	L7	AR1260-B			----------NA----------	
39	L7	AR1260-C			----------NA----------	
40	L7	AR1260-D			----------NA----------	
41	L7	AR1260-E			----------NA----------	
42	L7	AR1260-F			----------NA----------	
43	L9	AR1262-A			----------NA----------	
44	L9	AR1262-B			----------NA----------	
45	L9	AR1262-C			----------NA----------	
46	L9	AR1262-D			----------NA----------	
47	L9	AR1262-E			----------NA----------	
48	L9	AR1262-F			----------NA----------	

			Amount	Calc.	%Drift	
49	L8	AR1268-A			----------NA----------	

			Amount	Calc.	%Drift	
50	L8	AR1268-B			----------NA----------	
51	L8	AR1268-C			----------NA----------	
52	L8	AR1268-D			----------NA----------	
53	L8	AR1268-E			----------NA----------	
54	L8	AR1268-F			----------NA----------	
55	S	Decachlorobiphenyl			----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 13:54:13 2022

11.7.17

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081767.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\GX...2\XX081767.D\ECD1A.CH Vial: 33
Acq On : 16-Sep-22, 22:04:15 Operator: eduardom
Sample : icv1547-400 1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile : EVENTS.E

Data File : C:\msdchem\1\DATA\GXX1547_091622\XX081767.D\ECD2B.CH Vial: 0
Acq On : 16-Sep-22, 22:04:15 Operator: eduardom
Sample : icv1547-4001262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile : EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		NA			
2	L1	AR1016-A		NA			
3	L1	AR1016-B		NA			
4	L1	AR1016-C		NA			
5	L1	AR1016-D		NA			
6	L1	AR1016-E		NA			
7	L1	AR1016-F		NA			
			Amount	Calc.	%Drift		
8	L2	AR1221-A		NA			
			Amount	Calc.	%Drift		
9	L2	AR1221-B		NA			
10	L2	AR1221-C		NA			
11	L2	AR1221-D		NA			
12	L2	AR1221-E		NA			
13	L3	AR1232-A		NA			
14	L3	AR1232-B		NA			
15	L3	AR1232-C		NA			
16	L3	AR1232-D		NA			
17	L3	AR1232-E		NA			
18	L3	AR1232-F		NA			
19	L4	AR1242-A		NA			
20	L4	AR1242-B		NA			
21	L4	AR1242-C		NA			
22	L4	AR1242-D		NA			
23	L4	AR1242-E		NA			
24	L4	AR1242-F		NA			
25	L5	AR1248-A		NA			
26	L5	AR1248-B		NA			
27	L5	AR1248-C		NA			
28	L5	AR1248-D		NA			
29	L5	AR1248-E		NA			
30	L5	AR1248-F		NA			
31	L6	AR1254-A		NA			
32	L6	AR1254-B		NA			

Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081767.D

33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A			----------NA----------				
38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	347.527	13.1	92	0.00	4.77-	4.87
44	L9	AR1262-B	400.000	339.707	15.1	91	0.00	4.92-	5.01
45	L9	AR1262-C	400.000	360.567	9.9	97	0.00	4.68-	5.23
46	L9	AR1262-D	400.000	360.332	9.9	96	0.00	5.27-	5.37
47	L9	AR1262-E	400.000	364.668	8.8	98	0.00	5.45-	5.55
48	L9	AR1262-F	400.000	374.894	6.3	100	0.00	5.63-	5.72
49	L8	AR1268-A			----------NA----------				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				

			Amount	Calc.	%Drift				
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				

			Amount	Calc.	%Drift				
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				

			Amount	Calc.	%Drift				
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				

			Amount	Calc.	%Drift				
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081767.D

27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A			----------NA----------				
32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A			----------NA----------				
38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	325.742	18.6	89	0.00	5.26-	5.36
44	L9	AR1262-B	400.000	331.573	17.1	91	0.00	5.38-	5.48
45	L9	AR1262-C	400.000	349.000	12.8	97	0.00	5.64-	5.74
46	L9	AR1262-D	400.000	347.409	13.1	96	0.00	5.83-	5.92
47	L9	AR1262-E	400.000	351.025	12.2	96	0.00	5.97-	6.07
48	L9	AR1262-F	400.000	358.795	10.3	98	0.00	6.19-	6.29

			Amount	Calc.	%Drift			
49	L8	AR1268-A		----------NA----------				

			Amount	Calc.	%Drift			
50	L8	AR1268-B		----------NA----------				
51	L8	AR1268-C		----------NA----------				
52	L8	AR1268-D		----------NA----------				
53	L8	AR1268-E		----------NA----------				
54	L8	AR1268-F		----------NA----------				
55	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Tue Sep 20 13:54:15 2022

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081775.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081775.D\ECD1A.CH Vial: 40
Signal #2 : C:\msdchem\1\DATA\GXX1547_091622\XX081775.D\ECD2B.CH
Acq On : 16-Sep-22, 23:45:30 Operator: eduardom
Sample : icv1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 13:44:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2	L1	AR1016-A		----------NA----------				
3	L1	AR1016-B		----------NA----------				
4	L1	AR1016-C		----------NA----------				
5	L1	AR1016-D		----------NA----------				
6	L1	AR1016-E		----------NA----------				
7	L1	AR1016-F		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B		----------NA----------				
10	L2	AR1221-C		----------NA----------				
11	L2	AR1221-D		----------NA----------				
12	L2	AR1221-E		----------NA----------				
13	L3	AR1232-A		----------NA----------				
14	L3	AR1232-B		----------NA----------				
15	L3	AR1232-C		----------NA----------				
16	L3	AR1232-D		----------NA----------				
17	L3	AR1232-E		----------NA----------				
18	L3	AR1232-F		----------NA----------				
19	L4	AR1242-A		----------NA----------				
20	L4	AR1242-B		----------NA----------				
21	L4	AR1242-C		----------NA----------				
22	L4	AR1242-D		----------NA----------				
23	L4	AR1242-E		----------NA----------				
24	L4	AR1242-F		----------NA----------				
25	L5	AR1248-A	400.000	397.312	0.7	110	0.00	3.82- 3.92
26	L5	AR1248-B	400.000	441.518	-10.4	128	0.00	3.99- 4.09
27	L5	AR1248-C	400.000	437.061	-9.3	120	0.00	4.11- 4.21
28	L5	AR1248-D	400.000	464.176	-16.0	121	0.00	4.35- 4.45
29	L5	AR1248-E	400.000	445.431	-11.4	120	0.00	4.46- 4.56
30	L5	AR1248-F	400.000	424.824	-6.2	116	0.00	4.68- 4.78
31	L6	AR1254-A		----------NA----------				
32	L6	AR1254-B		----------NA----------				
33	L6	AR1254-C		----------NA----------				
34	L6	AR1254-D		----------NA----------				
35	L6	AR1254-E		----------NA----------				
36	L6	AR1254-F		----------NA----------				
37	L7	AR1260-A		----------NA----------				

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081775.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				
49	L8	AR1268-A			----------NA----------				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A	400.000	382.101	4.5	107	0.00	4.22-	4.32
26	L5	AR1248-B	400.000	405.041	-1.3	114	0.00	4.40-	4.50
27	L5	AR1248-C	400.000	415.787	-3.9	117	0.00	4.55-	4.66
28	L5	AR1248-D	400.000	449.000	-12.3	118	0.00	4.79-	4.89
29	L5	AR1248-E	400.000	480.317	-20.1#	133	0.00	4.93-	5.03
30	L5	AR1248-F	400.000	412.067	-3.0	114	0.00	5.16-	5.26
31	L6	AR1254-A			----------NA----------				

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Initial Calibration Verification

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1547-ICV1547
Lab FileID: XX081775.D

```
32 L6  AR1254-B                          ----------NA----------
33 L6  AR1254-C                          ----------NA----------
34 L6  AR1254-D                          ----------NA----------
35 L6  AR1254-E                          ----------NA----------
36 L6  AR1254-F                          ----------NA----------
37 L7  AR1260-A                          ----------NA----------
38 L7  AR1260-B                          ----------NA----------
39 L7  AR1260-C                          ----------NA----------
40 L7  AR1260-D                          ----------NA----------
41 L7  AR1260-E                          ----------NA----------
42 L7  AR1260-F                          ----------NA----------
43 L9  AR1262-A                          ----------NA----------
44 L9  AR1262-B                          ----------NA----------
45 L9  AR1262-C                          ----------NA----------
46 L9  AR1262-D                          ----------NA----------
47 L9  AR1262-E                          ----------NA----------
48 L9  AR1262-F                          ----------NA----------

          -------------------- Amount  Calc.    %Drift  --------------
49 L8  AR1268-A                          ----------NA----------

          -------------------- Amount  Calc.    %Drift   -------------
50 L8  AR1268-B                          ----------NA----------
51 L8  AR1268-C                          ----------NA----------
52 L8  AR1268-D                          ----------NA----------
53 L8  AR1268-E                          ----------NA----------
54 L8  AR1268-F                          ----------NA----------
55 S   Decachlorobiphenyl                ----------NA----------
------------------------------------------------------------------------------
------------------------------------------------------------------------------

   (#) = Out of Range               SPCC's out = 0  CCC's out = 0
    XX081745.D 8082DODXX091622.m       Tue Sep 20 13:54:17 2022
```

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081780.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081780.D\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081780.D\ECD2B.CH
Acq On : 21-Sep-22, 11:09:08 Operator: eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	41.037	-2.6	108	0.00	3.10- 3.20
2	L1	AR1016-A	400.000	334.317	16.4	93	0.00	3.34- 3.44
3	L1	AR1016-B	400.000	347.820	13.0	95	0.00	3.55- 3.65
4	L1	AR1016-C	400.000	347.010	13.2	94	0.00	3.67- 3.77
5	L1	AR1016-D	400.000	335.319	16.2	92	0.00	3.82- 3.92
6	L1	AR1016-E	400.000	337.446	15.6	92	0.00	3.90- 4.00
7	L1	AR1016-F	400.000	341.072	14.7	92	0.00	4.12- 4.21
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A			----------NA----------			
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B			----------NA----------			
10	L2	AR1221-C			----------NA----------			
11	L2	AR1221-D			----------NA----------			
12	L2	AR1221-E			----------NA----------			
13	L3	AR1232-A			----------NA----------			
14	L3	AR1232-B			----------NA----------			
15	L3	AR1232-C			----------NA----------			
16	L3	AR1232-D			----------NA----------			
17	L3	AR1232-E			----------NA----------			
18	L3	AR1232-F			----------NA----------			
19	L4	AR1242-A			----------NA----------			
20	L4	AR1242-B			----------NA----------			
21	L4	AR1242-C			----------NA----------			
22	L4	AR1242-D			----------NA----------			
23	L4	AR1242-E			----------NA----------			
24	L4	AR1242-F			----------NA----------			
25	L5	AR1248-A			----------NA----------			
26	L5	AR1248-B			----------NA----------			
27	L5	AR1248-C			----------NA----------			
28	L5	AR1248-D			----------NA----------			
29	L5	AR1248-E			----------NA----------			
30	L5	AR1248-F			----------NA----------			
31	L6	AR1254-A			----------NA----------			
32	L6	AR1254-B			----------NA----------			
33	L6	AR1254-C			----------NA----------			
34	L6	AR1254-D			----------NA----------			
35	L6	AR1254-E			----------NA----------			
36	L6	AR1254-F			----------NA----------			
37	L7	AR1260-A	400.000	340.879	14.8	92	0.00	4.77- 4.87

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081780.D

38	L7	AR1260-B	400.000	332.074	17.0	89	0.00	4.92-	5.02
39	L7	AR1260-C	400.000	350.907	12.3	93	0.00	5.08-	5.17
40	L7	AR1260-D	400.000	340.323	14.9	91	0.00	5.27-	5.37
41	L7	AR1260-E	400.000	297.639	25.6#	80	0.00	5.45-	5.55
42	L7	AR1260-F	400.000	304.959	23.8#	80	0.00	5.62-	5.71
43	L9	AR1262-A	----------NA----------						
44	L9	AR1262-B	----------NA----------						
45	L9	AR1262-C	----------NA----------						
46	L9	AR1262-D	----------NA----------						
47	L9	AR1262-E	----------NA----------						
48	L9	AR1262-F	----------NA----------						
49	L8	AR1268-A	----------NA----------						
50	L8	AR1268-B	----------NA----------						
51	L8	AR1268-C	----------NA----------						
52	L8	AR1268-D	----------NA----------						
53	L8	AR1268-E	----------NA----------						
54	L8	AR1268-F	----------NA----------						
55	S	Decachlorobiphenyl	40.000	33.107	17.2	89	0.00	6.26-	6.36

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	36.999	7.5	108	0.00	3.42-	3.52
2	L1	AR1016-A	400.000	371.041	7.2	104	0.00	3.73-	3.83
3	L1	AR1016-B	400.000	365.123	8.7	103	0.00	3.96-	4.07
4	L1	AR1016-C	400.000	368.612	7.8	104	0.00	4.11-	4.21
5	L1	AR1016-D	400.000	368.304	7.9	102	0.00	4.22-	4.32
6	L1	AR1016-E	400.000	370.897	7.3	103	0.00	4.30-	4.40
7	L1	AR1016-F	400.000	369.327	7.7	103	0.00	4.56-	4.66

			Amount	Calc.	%Drift				
8	L2	AR1221-A	----------NA----------						
9	L2	AR1221-B	----------NA----------						
10	L2	AR1221-C	----------NA----------						
11	L2	AR1221-D	----------NA----------						
12	L2	AR1221-E	----------NA----------						
13	L3	AR1232-A	----------NA----------						
14	L3	AR1232-B	----------NA----------						

			Amount	Calc.	%Drift				
15	L3	AR1232-C	----------NA----------						
16	L3	AR1232-D	----------NA----------						

			Amount	Calc.	%Drift				
17	L3	AR1232-E	----------NA----------						
18	L3	AR1232-F	----------NA----------						
19	L4	AR1242-A	----------NA----------						
20	L4	AR1242-B	----------NA----------						
21	L4	AR1242-C	----------NA----------						

			Amount	Calc.	%Drift				
22	L4	AR1242-D	----------NA----------						
23	L4	AR1242-E	----------NA----------						
24	L4	AR1242-F	----------NA----------						
25	L5	AR1248-A	----------NA----------						
26	L5	AR1248-B	----------NA----------						
27	L5	AR1248-C	----------NA----------						
28	L5	AR1248-D	----------NA----------						
29	L5	AR1248-E	----------NA----------						
30	L5	AR1248-F	----------NA----------						
31	L6	AR1254-A	----------NA----------						

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081780.D

32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A	400.000	386.551	3.4	107	0.00	5.26-	5.37
38	L7	AR1260-B	400.000	362.976	9.3	100	0.00	5.38-	5.48
39	L7	AR1260-C	400.000	377.197	5.7	104	0.00	5.59-	5.69
40	L7	AR1260-D	400.000	370.538	7.4	103	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	360.666	9.8	100	0.00	5.97-	6.07
42	L7	AR1260-F	400.000	385.288	3.7	104	0.00	6.20-	6.30
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				

			Amount	Calc.	%Drift				
49	L8	AR1268-A			----------NA----------				

			Amount	Calc.	%Drift				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl	40.000	36.058	9.9	98	0.00	6.99-	7.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:41 2022

11.7.20

11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081781.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081781.D\ECD1A.CH Vial: 3
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081781.D\ECD2B.CH
Acq On : 21-Sep-22, 11:21:48 Operator: eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	----------	NA	----------			
2	L1	AR1016-A	----------	NA	----------			
3	L1	AR1016-B	----------	NA	----------			
4	L1	AR1016-C	----------	NA	----------			
5	L1	AR1016-D	----------	NA	----------			
6	L1	AR1016-E	----------	NA	----------			
7	L1	AR1016-F	----------	NA	----------			
			Amount	Calc.	%Drift			
8	L2	AR1221-A	400.000	383.385	4.2	92	0.00	2.73- 2.84
			Amount	Calc.	%Drift			
9	L2	AR1221-B	400.000	348.056	13.0	96	0.00	3.01- 3.11
10	L2	AR1221-C	400.000	343.406	14.1	95	0.00	3.22- 3.32
11	L2	AR1221-D	400.000	341.082	14.7	95	0.00	3.31- 3.41
12	L2	AR1221-E	400.000	332.929	16.8	93	0.00	3.34- 3.44
13	L3	AR1232-A	----------	NA	----------			
14	L3	AR1232-B	----------	NA	----------			
15	L3	AR1232-C	----------	NA	----------			
16	L3	AR1232-D	----------	NA	----------			
17	L3	AR1232-E	----------	NA	----------			
18	L3	AR1232-F	----------	NA	----------			
19	L4	AR1242-A	----------	NA	----------			
20	L4	AR1242-B	----------	NA	----------			
21	L4	AR1242-C	----------	NA	----------			
22	L4	AR1242-D	----------	NA	----------			
23	L4	AR1242-E	----------	NA	----------			
24	L4	AR1242-F	----------	NA	----------			
25	L5	AR1248-A	----------	NA	----------			
26	L5	AR1248-B	----------	NA	----------			
27	L5	AR1248-C	----------	NA	----------			
28	L5	AR1248-D	----------	NA	----------			
29	L5	AR1248-E	----------	NA	----------			
30	L5	AR1248-F	----------	NA	----------			
31	L6	AR1254-A	400.000	347.569	13.1	93	0.00	4.32- 4.42
32	L6	AR1254-B	400.000	344.576	13.9	92	0.00	4.45- 4.55
33	L6	AR1254-C	400.000	329.243	17.7	88	0.00	4.67- 4.77
34	L6	AR1254-D	400.000	331.832	17.0	90	0.00	4.82- 4.92
35	L6	AR1254-E	400.000	333.508	16.6	92	0.00	4.92- 5.02
36	L6	AR1254-F	400.000	343.079	14.2	90	0.00	5.08- 5.17
37	L7	AR1260-A	----------	NA	----------			

11.7.21
11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081781.D

38	L7	AR1260-B				----------NA----------					
39	L7	AR1260-C				----------NA----------					
40	L7	AR1260-D				----------NA----------					
41	L7	AR1260-E				----------NA----------					
42	L7	AR1260-F				----------NA----------					
43	L9	AR1262-A				----------NA----------					
44	L9	AR1262-B				----------NA----------					
45	L9	AR1262-C				----------NA----------					
46	L9	AR1262-D				----------NA----------					
47	L9	AR1262-E				----------NA----------					
48	L9	AR1262-F				----------NA----------					
49	L8	AR1268-A				----------NA----------					
50	L8	AR1268-B				----------NA----------					
51	L8	AR1268-C				----------NA----------					
52	L8	AR1268-D				----------NA----------					
53	L8	AR1268-E				----------NA----------					
54	L8	AR1268-F				----------NA----------					
55	S	Decachlorobiphenyl				----------NA----------					
*****		Signal #2 *****									
1	S	Tetrachloro-m-xylene				----------NA----------					
2	L1	AR1016-A				----------NA----------					
3	L1	AR1016-B				----------NA----------					
4	L1	AR1016-C				----------NA----------					
5	L1	AR1016-D				----------NA----------					
6	L1	AR1016-E				----------NA----------					
7	L1	AR1016-F				----------NA----------					
		----------	Amount	Calc.		%Drift	----------				
8	L2	AR1221-A	400.000	422.247		-5.6	104	0.00		3.10-	3.20
9	L2	AR1221-B	400.000	434.342		-8.6	106	0.00		3.35-	3.45
10	L2	AR1221-C	400.000	417.474		-4.4	104	0.00		3.60-	3.70
11	L2	AR1221-D	400.000	422.335		-5.6	104	0.00		3.69-	3.79
12	L2	AR1221-E	400.000	421.465		-5.4	103	0.00		3.73-	3.83
13	L3	AR1232-A				----------NA----------					
14	L3	AR1232-B				----------NA----------					
		----------	Amount	Calc.		%Drift	----------				
15	L3	AR1232-C				----------NA----------					
16	L3	AR1232-D				----------NA----------					
		----------	Amount	Calc.		%Drift	----------				
17	L3	AR1232-E				----------NA----------					
18	L3	AR1232-F				----------NA----------					
19	L4	AR1242-A				----------NA----------					
20	L4	AR1242-B				----------NA----------					
21	L4	AR1242-C				----------NA----------					
		----------	Amount	Calc.		%Drift	----------				
22	L4	AR1242-D				----------NA----------					
23	L4	AR1242-E				----------NA----------					
24	L4	AR1242-F				----------NA----------					
25	L5	AR1248-A				----------NA----------					
26	L5	AR1248-B				----------NA----------					
27	L5	AR1248-C				----------NA----------					
28	L5	AR1248-D				----------NA----------					
29	L5	AR1248-E				----------NA----------					
30	L5	AR1248-F				----------NA----------					
31	L6	AR1254-A	400.000	363.749		9.1	102	0.00		4.79-	4.89

11.7.21

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081781.D

32	L6	AR1254-B	400.000	364.864	8.8	101	0.00	4.89-	4.99
33	L6	AR1254-C	400.000	363.729	9.1	100	0.00	5.16-	5.25
34	L6	AR1254-D	400.000	357.952	10.5	99	0.00	5.28-	5.38
35	L6	AR1254-E	400.000	361.502	9.6	101	0.00	5.38-	5.48
36	L6	AR1254-F	400.000	368.924	7.8	103	0.00	5.59-	5.70
37	L7	AR1260-A	----------NA----------						
38	L7	AR1260-B	----------NA----------						
39	L7	AR1260-C	----------NA----------						
40	L7	AR1260-D	----------NA----------						
41	L7	AR1260-E	----------NA----------						
42	L7	AR1260-F	----------NA----------						
43	L9	AR1262-A	----------NA----------						
44	L9	AR1262-B	----------NA----------						
45	L9	AR1262-C	----------NA----------						
46	L9	AR1262-D	----------NA----------						
47	L9	AR1262-E	----------NA----------						
48	L9	AR1262-F	----------NA----------						

			Amount	Calc.	%Drift	
49	L8	AR1268-A		----------NA----------		

			Amount	Calc.	%Drift	
50	L8	AR1268-B		----------NA----------		
51	L8	AR1268-C		----------NA----------		
52	L8	AR1268-D		----------NA----------		
53	L8	AR1268-E		----------NA----------		
54	L8	AR1268-F		----------NA----------		
55	S	Decachlorobiphenyl		----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:43 2022

11.7.21

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081782.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\GX...2\XX081782.D\ECD1A.CH Vial: 4
Acq On : 21-Sep-22, 11:34:35 Operator: eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile : EVENTS.E

Data File : C:\msdchem\1\DATA\GXX1548_092122\XX081782.D\ECD2B.CH Vial: 0
Acq On : 21-Sep-22, 11:34:34 Operator: eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile : EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		NA				
2	L1	AR1016-A		NA				
3	L1	AR1016-B		NA				
4	L1	AR1016-C		NA				
5	L1	AR1016-D		NA				
6	L1	AR1016-E		NA				
7	L1	AR1016-F		NA				
			Amount	Calc.	%Drift			
8	L2	AR1221-A		NA				
			Amount	Calc.	%Drift			
9	L2	AR1221-B		NA				
10	L2	AR1221-C		NA				
11	L2	AR1221-D		NA				
12	L2	AR1221-E		NA				
13	L3	AR1232-A	400.000	338.144	15.5	95	0.00	3.34- 3.44
14	L3	AR1232-B	400.000	366.066	8.5	99	0.00	3.55- 3.65
15	L3	AR1232-C	400.000	350.168	12.5	96	0.00	3.82- 3.92
16	L3	AR1232-D	400.000	337.810	15.5	92	0.00	3.89- 3.99
17	L3	AR1232-E	400.000	347.048	13.2	95	0.00	3.93- 4.03
18	L3	AR1232-F	400.000	337.467	15.6	92	0.00	4.11- 4.21
19	L4	AR1242-A		NA				
20	L4	AR1242-B		NA				
21	L4	AR1242-C		NA				
22	L4	AR1242-D		NA				
23	L4	AR1242-E		NA				
24	L4	AR1242-F		NA				
25	L5	AR1248-A		NA				
26	L5	AR1248-B		NA				
27	L5	AR1248-C		NA				
28	L5	AR1248-D		NA				
29	L5	AR1248-E		NA				
30	L5	AR1248-F		NA				
31	L6	AR1254-A		NA				
32	L6	AR1254-B		NA				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081782.D

33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A			----------NA----------				
38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				
49	L8	AR1268-A	400.000	328.368	17.9	89	0.00	5.13-	5.23
50	L8	AR1268-B	400.000	330.636	17.3	90	0.00	5.27-	5.37
51	L8	AR1268-C	400.000	341.593	14.6	91	0.00	5.63-	5.73
52	L8	AR1268-D	400.000	338.300	15.4	92	0.00	5.65-	5.75
53	L8	AR1268-E	400.000	339.605	15.1	92	0.00	5.76-	5.87
54	L8	AR1268-F	400.000	328.465	17.9	88	0.00	5.97-	6.07
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A	400.000	416.959	-4.2	102	0.00	3.73-	3.83
14	L3	AR1232-B	400.000	411.192	-2.8	102	0.00	3.96-	4.06
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C	400.000	369.964	7.5	104	0.00	4.22-	4.32
16	L3	AR1232-D	400.000	360.894	9.8	101	0.00	4.30-	4.40
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E	400.000	399.125	0.2	100	0.00	4.55-	4.66
18	L3	AR1232-F	400.000	400.019	-0.0	100	0.00	4.63-	4.73
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				

11.7.22

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081782.D

27	L5	AR1248-C			----------NA----------					
28	L5	AR1248-D			----------NA----------					
29	L5	AR1248-E			----------NA----------					
30	L5	AR1248-F			----------NA----------					
31	L6	AR1254-A			----------NA----------					
32	L6	AR1254-B			----------NA----------					
33	L6	AR1254-C			----------NA----------					
34	L6	AR1254-D			----------NA----------					
35	L6	AR1254-E			----------NA----------					
36	L6	AR1254-F			----------NA----------					
37	L7	AR1260-A			----------NA----------					
38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					

			Amount	Calc.	%Drift			
49	L8	AR1268-A	400.000	402.487	-0.6	102	0.00	5.64- 5.74

			Amount	Calc.	%Drift			
50	L8	AR1268-B	400.000	368.590	7.9	105	0.00	5.83- 5.93
51	L8	AR1268-C	400.000	381.073	4.7	102	0.00	6.19- 6.29
52	L8	AR1268-D	400.000	364.043	9.0	101	0.00	6.22- 6.32
53	L8	AR1268-E	400.000	376.627	5.8	102	0.00	6.38- 6.48
54	L8	AR1268-F	400.000	368.024	8.0	101	0.00	6.55- 6.66
55	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:45 2022

11.7.22

11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081783.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081783.D\ECD1A.CH Vial: 5
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081783.D\ECD2B.CH
Acq On : 21-Sep-22, 11:47:14 Operator: eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		-----	NA -----			
2	L1	AR1016-A		-----	NA -----			
3	L1	AR1016-B		-----	NA -----			
4	L1	AR1016-C		-----	NA -----			
5	L1	AR1016-D		-----	NA -----			
6	L1	AR1016-E		-----	NA -----			
7	L1	AR1016-F		-----	NA -----			
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A		-----	NA -----			
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B		-----	NA -----			
10	L2	AR1221-C		-----	NA -----			
11	L2	AR1221-D		-----	NA -----			
12	L2	AR1221-E		-----	NA -----			
13	L3	AR1232-A		-----	NA -----			
14	L3	AR1232-B		-----	NA -----			
15	L3	AR1232-C		-----	NA -----			
16	L3	AR1232-D		-----	NA -----			
17	L3	AR1232-E		-----	NA -----			
18	L3	AR1232-F		-----	NA -----			
19	L4	AR1242-A	400.000	350.091	12.5	97	0.00	3.34- 3.44
20	L4	AR1242-B	400.000	355.604	11.1	98	0.00	3.55- 3.65
21	L4	AR1242-C	400.000	357.325	10.7	99	0.00	3.67- 3.77
22	L4	AR1242-D	400.000	354.917	11.3	96	0.00	3.82- 3.92
23	L4	AR1242-E	400.000	360.245	9.9	97	0.00	3.89- 3.99
24	L4	AR1242-F	400.000	360.498	9.9	96	0.00	4.11- 4.21
25	L5	AR1248-A		-----	NA -----			
26	L5	AR1248-B		-----	NA -----			
27	L5	AR1248-C		-----	NA -----			
28	L5	AR1248-D		-----	NA -----			
29	L5	AR1248-E		-----	NA -----			
30	L5	AR1248-F		-----	NA -----			
31	L6	AR1254-A		-----	NA -----			
32	L6	AR1254-B		-----	NA -----			
33	L6	AR1254-C		-----	NA -----			
34	L6	AR1254-D		-----	NA -----			
35	L6	AR1254-E		-----	NA -----			
36	L6	AR1254-F		-----	NA -----			
37	L7	AR1260-A		-----	NA -----			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081783.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	356.638	10.8	95	0.00	4.77-	4.87
44	L9	AR1262-B	400.000	352.829	11.8	94	0.00	4.92-	5.01
45	L9	AR1262-C	400.000	345.947	13.5	93	0.00	4.68-	5.23
46	L9	AR1262-D	400.000	345.525	13.6	92	0.00	5.27-	5.37
47	L9	AR1262-E	400.000	337.712	15.6	91	0.00	5.45-	5.55
48	L9	AR1262-F	400.000	362.168	9.5	97	0.00	5.63-	5.72
49	L8	AR1268-A			----------NA----------				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A	400.000	417.559	-4.4	103	0.00	3.73-	3.83
20	L4	AR1242-B	400.000	415.775	-3.9	103	0.00	3.96-	4.06
21	L4	AR1242-C	400.000	423.662	-5.9	104	0.00	4.11-	4.21
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D	400.000	369.958	7.5	103	0.00	4.22-	4.32
23	L4	AR1242-E	400.000	372.161	7.0	103	0.00	4.30-	4.40
24	L4	AR1242-F	400.000	370.464	7.4	103	0.00	4.55-	4.66
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				
27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A			----------NA----------				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081783.D

32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A			----------NA----------				
38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	391.615	2.1	107	0.00	5.26-	5.36
44	L9	AR1262-B	400.000	369.518	7.6	101	0.00	5.38-	5.48
45	L9	AR1262-C	400.000	369.123	7.7	102	0.00	5.64-	5.74
46	L9	AR1262-D	400.000	370.361	7.4	102	0.00	5.83-	5.92
47	L9	AR1262-E	400.000	368.427	7.9	100	0.00	5.97-	6.07
48	L9	AR1262-F	400.000	375.496	6.1	102	0.00	6.19-	6.29

			Amount	Calc.	%Drift			
49	L8	AR1268-A		----------NA----------				

			Amount	Calc.	%Drift			
50	L8	AR1268-B		----------NA----------				
51	L8	AR1268-C		----------NA----------				
52	L8	AR1268-D		----------NA----------				
53	L8	AR1268-E		----------NA----------				
54	L8	AR1268-F		----------NA----------				
55	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:47 2022

11.7.23

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081784.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081784.D\ECD1A.CH Vial: 6
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081784.D\ECD2B.CH
Acq On : 21-Sep-22, 11:59:51 Operator: eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene			----------NA----------		
2	L1	AR1016-A			----------NA----------		
3	L1	AR1016-B			----------NA----------		
4	L1	AR1016-C			----------NA----------		
5	L1	AR1016-D			----------NA----------		
6	L1	AR1016-E			----------NA----------		
7	L1	AR1016-F			----------NA----------		
		----------	Amount	Calc.	%Drift ----------		
8	L2	AR1221-A			----------NA----------		
		----------	Amount	Calc.	%Drift ----------		
9	L2	AR1221-B			----------NA----------		
10	L2	AR1221-C			----------NA----------		
11	L2	AR1221-D			----------NA----------		
12	L2	AR1221-E			----------NA----------		
13	L3	AR1232-A			----------NA----------		
14	L3	AR1232-B			----------NA----------		
15	L3	AR1232-C			----------NA----------		
16	L3	AR1232-D			----------NA----------		
17	L3	AR1232-E			----------NA----------		
18	L3	AR1232-F			----------NA----------		
19	L4	AR1242-A			----------NA----------		
20	L4	AR1242-B			----------NA----------		
21	L4	AR1242-C			----------NA----------		
22	L4	AR1242-D			----------NA----------		
23	L4	AR1242-E			----------NA----------		
24	L4	AR1242-F			----------NA----------		
25	L5	AR1248-A	400.000	376.422	5.9	104 0.00	3.82- 3.92
26	L5	AR1248-B	400.000	392.205	1.9	114 0.00	3.99- 4.09
27	L5	AR1248-C	400.000	374.370	6.4	103 0.00	4.11- 4.21
28	L5	AR1248-D	400.000	375.516	6.1	98 0.00	4.35- 4.45
29	L5	AR1248-E	400.000	364.681	8.8	99 0.00	4.46- 4.56
30	L5	AR1248-F	400.000	341.015	14.7	93 0.00	4.68- 4.78
31	L6	AR1254-A			----------NA----------		
32	L6	AR1254-B			----------NA----------		
33	L6	AR1254-C			----------NA----------		
34	L6	AR1254-D			----------NA----------		
35	L6	AR1254-E			----------NA----------		
36	L6	AR1254-F			----------NA----------		
37	L7	AR1260-A			----------NA----------		

11.7.24
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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081784.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift ----------					
8	L2	AR1221-A			----------NA----------					
9	L2	AR1221-B			----------NA----------					
10	L2	AR1221-C			----------NA----------					
11	L2	AR1221-D			----------NA----------					
12	L2	AR1221-E			----------NA----------					
13	L3	AR1232-A			----------NA----------					
14	L3	AR1232-B			----------NA----------					
		----------	Amount	Calc.	%Drift ----------					
15	L3	AR1232-C			----------NA----------					
16	L3	AR1232-D			----------NA----------					
		----------	Amount	Calc.	%Drift ----------					
17	L3	AR1232-E			----------NA----------					
18	L3	AR1232-F			----------NA----------					
19	L4	AR1242-A			----------NA----------					
20	L4	AR1242-B			----------NA----------					
21	L4	AR1242-C			----------NA----------					
		----------	Amount	Calc.	%Drift ----------					
22	L4	AR1242-D			----------NA----------					
23	L4	AR1242-E			----------NA----------					
24	L4	AR1242-F			----------NA----------					
25	L5	AR1248-A	400.000	386.929	3.3	109	0.00	4.22- 4.32		
26	L5	AR1248-B	400.000	384.218	3.9	108	0.00	4.40- 4.50		
27	L5	AR1248-C	400.000	384.298	3.9	108	0.00	4.55- 4.66		
28	L5	AR1248-D	400.000	390.063	2.5	103	0.00	4.79- 4.89		
29	L5	AR1248-E	400.000	408.244	-2.1	113	0.00	4.93- 5.03		
30	L5	AR1248-F	400.000	379.181	5.2	105	0.00	5.16- 5.26		
31	L6	AR1254-A			----------NA----------					

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081784.D

32	L6	AR1254-B			----------NA----------	
33	L6	AR1254-C			----------NA----------	
34	L6	AR1254-D			----------NA----------	
35	L6	AR1254-E			----------NA----------	
36	L6	AR1254-F			----------NA----------	
37	L7	AR1260-A			----------NA----------	
38	L7	AR1260-B			----------NA----------	
39	L7	AR1260-C			----------NA----------	
40	L7	AR1260-D			----------NA----------	
41	L7	AR1260-E			----------NA----------	
42	L7	AR1260-F			----------NA----------	
43	L9	AR1262-A			----------NA----------	
44	L9	AR1262-B			----------NA----------	
45	L9	AR1262-C			----------NA----------	
46	L9	AR1262-D			----------NA----------	
47	L9	AR1262-E			----------NA----------	
48	L9	AR1262-F			----------NA----------	

			Amount	Calc.	%Drift	
49	L8	AR1268-A			----------NA----------	

			Amount	Calc.	%Drift	
50	L8	AR1268-B			----------NA----------	
51	L8	AR1268-C			----------NA----------	
52	L8	AR1268-D			----------NA----------	
53	L8	AR1268-E			----------NA----------	
54	L8	AR1268-F			----------NA----------	
55	S	Decachlorobiphenyl			----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:49 2022

11.7.24
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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081795.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081795.D\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081795.D\ECD2B.CH
Acq On : 21-Sep-22, 14:19:32 Operator: eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	44.109	-10.3	116	0.00	3.10- 3.20
2	L1	AR1016-A	400.000	373.535	6.6	104	0.00	3.34- 3.44
3	L1	AR1016-B	400.000	388.796	2.8	107	0.00	3.55- 3.65
4	L1	AR1016-C	400.000	390.288	2.4	105	0.00	3.67- 3.77
5	L1	AR1016-D	400.000	372.407	6.9	102	0.00	3.82- 3.92
6	L1	AR1016-E	400.000	367.817	8.0	100	0.00	3.90- 4.00
7	L1	AR1016-F	400.000	373.043	6.7	101	0.00	4.12- 4.21
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A			----------NA----------			
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B			----------NA----------			
10	L2	AR1221-C			----------NA----------			
11	L2	AR1221-D			----------NA----------			
12	L2	AR1221-E			----------NA----------			
13	L3	AR1232-A			----------NA----------			
14	L3	AR1232-B			----------NA----------			
15	L3	AR1232-C			----------NA----------			
16	L3	AR1232-D			----------NA----------			
17	L3	AR1232-E			----------NA----------			
18	L3	AR1232-F			----------NA----------			
19	L4	AR1242-A			----------NA----------			
20	L4	AR1242-B			----------NA----------			
21	L4	AR1242-C			----------NA----------			
22	L4	AR1242-D			----------NA----------			
23	L4	AR1242-E			----------NA----------			
24	L4	AR1242-F			----------NA----------			
25	L5	AR1248-A			----------NA----------			
26	L5	AR1248-B			----------NA----------			
27	L5	AR1248-C			----------NA----------			
28	L5	AR1248-D			----------NA----------			
29	L5	AR1248-E			----------NA----------			
30	L5	AR1248-F			----------NA----------			
31	L6	AR1254-A			----------NA----------			
32	L6	AR1254-B			----------NA----------			
33	L6	AR1254-C			----------NA----------			
34	L6	AR1254-D			----------NA----------			
35	L6	AR1254-E			----------NA----------			
36	L6	AR1254-F			----------NA----------			
37	L7	AR1260-A	400.000	385.667	3.6	104	0.00	4.77- 4.87

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081795.D

38	L7	AR1260-B	400.000	379.063	5.2	101	0.00	4.92-	5.02
39	L7	AR1260-C	400.000	383.777	4.1	101	0.00	5.08-	5.17
40	L7	AR1260-D	400.000	397.110	0.7	106	0.00	5.27-	5.37
41	L7	AR1260-E	400.000	375.438	6.1	101	0.00	5.45-	5.55
42	L7	AR1260-F	400.000	390.821	2.3	103	0.00	5.62-	5.71
43	L9	AR1262-A	----------NA----------						
44	L9	AR1262-B	----------NA----------						
45	L9	AR1262-C	----------NA----------						
46	L9	AR1262-D	----------NA----------						
47	L9	AR1262-E	----------NA----------						
48	L9	AR1262-F	----------NA----------						
49	L8	AR1268-A	----------NA----------						
50	L8	AR1268-B	----------NA----------						
51	L8	AR1268-C	----------NA----------						
52	L8	AR1268-D	----------NA----------						
53	L8	AR1268-E	----------NA----------						
54	L8	AR1268-F	----------NA----------						
55	S	Decachlorobiphenyl	40.000	39.884	0.3	107	0.00	6.26-	6.36

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	38.289	4.3	112	0.00	3.42-	3.52
2	L1	AR1016-A	400.000	379.916	5.0	107	0.00	3.73-	3.83
3	L1	AR1016-B	400.000	381.249	4.7	108	0.00	3.96-	4.07
4	L1	AR1016-C	400.000	393.613	1.6	111	0.00	4.11-	4.21
5	L1	AR1016-D	400.000	391.991	2.0	109	0.00	4.22-	4.32
6	L1	AR1016-E	400.000	388.439	2.9	108	0.00	4.30-	4.40
7	L1	AR1016-F	400.000	400.982	-0.2	112	0.00	4.56-	4.66

			Amount	Calc.	%Drift			
8	L2	AR1221-A	----------NA----------					
9	L2	AR1221-B	----------NA----------					
10	L2	AR1221-C	----------NA----------					
11	L2	AR1221-D	----------NA----------					
12	L2	AR1221-E	----------NA----------					
13	L3	AR1232-A	----------NA----------					
14	L3	AR1232-B	----------NA----------					

			Amount	Calc.	%Drift			
15	L3	AR1232-C	----------NA----------					
16	L3	AR1232-D	----------NA----------					

			Amount	Calc.	%Drift			
17	L3	AR1232-E	----------NA----------					
18	L3	AR1232-F	----------NA----------					
19	L4	AR1242-A	----------NA----------					
20	L4	AR1242-B	----------NA----------					
21	L4	AR1242-C	----------NA----------					

			Amount	Calc.	%Drift			
22	L4	AR1242-D	----------NA----------					
23	L4	AR1242-E	----------NA----------					
24	L4	AR1242-F	----------NA----------					
25	L5	AR1248-A	----------NA----------					
26	L5	AR1248-B	----------NA----------					
27	L5	AR1248-C	----------NA----------					
28	L5	AR1248-D	----------NA----------					
29	L5	AR1248-E	----------NA----------					
30	L5	AR1248-F	----------NA----------					
31	L6	AR1254-A	----------NA----------					

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081795.D

32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A	400.000	400.747	-0.2	111	0.00	5.26-	5.37
38	L7	AR1260-B	400.000	382.992	4.3	106	0.00	5.38-	5.48
39	L7	AR1260-C	400.000	390.473	2.4	107	0.00	5.59-	5.69
40	L7	AR1260-D	400.000	399.371	0.2	111	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	385.487	3.6	107	0.00	5.97-	6.07
42	L7	AR1260-F	400.000	395.402	1.1	107	0.00	6.20-	6.30
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				

			Amount	Calc.	%Drift				
49	L8	AR1268-A			----------NA----------				

			Amount	Calc.	%Drift				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl	40.000	39.209	2.0	107	0.00	6.99-	7.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:51 2022

11.7.25
11

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081796.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081796.D\ECD1A.CH Vial: 3
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081796.D\ECD2B.CH
Acq On : 21-Sep-22, 14:32:13 Operator: eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2	L1	AR1016-A		----------NA----------				
3	L1	AR1016-B		----------NA----------				
4	L1	AR1016-C		----------NA----------				
5	L1	AR1016-D		----------NA----------				
6	L1	AR1016-E		----------NA----------				
7	L1	AR1016-F		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
8	L2	AR1221-A	400.000	431.163	-7.8	103	0.00	2.73- 2.84
		----------	Amount	Calc.	%Drift	----------		
9	L2	AR1221-B	400.000	381.699	4.6	106	0.00	3.01- 3.11
10	L2	AR1221-C	400.000	380.118	5.0	105	0.00	3.22- 3.32
11	L2	AR1221-D	400.000	375.974	6.0	105	0.00	3.31- 3.41
12	L2	AR1221-E	400.000	367.853	8.0	103	0.00	3.34- 3.44
13	L3	AR1232-A		----------NA----------				
14	L3	AR1232-B		----------NA----------				
15	L3	AR1232-C		----------NA----------				
16	L3	AR1232-D		----------NA----------				
17	L3	AR1232-E		----------NA----------				
18	L3	AR1232-F		----------NA----------				
19	L4	AR1242-A		----------NA----------				
20	L4	AR1242-B		----------NA----------				
21	L4	AR1242-C		----------NA----------				
22	L4	AR1242-D		----------NA----------				
23	L4	AR1242-E		----------NA----------				
24	L4	AR1242-F		----------NA----------				
25	L5	AR1248-A		----------NA----------				
26	L5	AR1248-B		----------NA----------				
27	L5	AR1248-C		----------NA----------				
28	L5	AR1248-D		----------NA----------				
29	L5	AR1248-E		----------NA----------				
30	L5	AR1248-F		----------NA----------				
31	L6	AR1254-A	400.000	386.504	3.4	104	0.00	4.32- 4.42
32	L6	AR1254-B	400.000	379.910	5.0	102	0.00	4.45- 4.55
33	L6	AR1254-C	400.000	371.445	7.1	99	0.00	4.67- 4.77
34	L6	AR1254-D	400.000	368.476	7.9	100	0.00	4.82- 4.92
35	L6	AR1254-E	400.000	385.719	3.6	106	0.00	4.92- 5.02
36	L6	AR1254-F	400.000	398.417	0.4	105	0.00	5.08- 5.17
37	L7	AR1260-A		----------NA----------				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081796.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
8	L2	AR1221-A	400.000	435.410	-8.9	107	0.00	3.10-	3.20	
9	L2	AR1221-B	400.000	433.958	-8.5	106	0.00	3.35-	3.45	
10	L2	AR1221-C	400.000	439.674	-9.9	110	0.00	3.60-	3.70	
11	L2	AR1221-D	400.000	439.701	-9.9	108	0.00	3.69-	3.79	
12	L2	AR1221-E	400.000	439.633	-9.9	108	0.00	3.73-	3.83	
13	L3	AR1232-A			----------NA----------					
14	L3	AR1232-B			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
15	L3	AR1232-C			----------NA----------					
16	L3	AR1232-D			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
17	L3	AR1232-E			----------NA----------					
18	L3	AR1232-F			----------NA----------					
19	L4	AR1242-A			----------NA----------					
20	L4	AR1242-B			----------NA----------					
21	L4	AR1242-C			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
22	L4	AR1242-D			----------NA----------					
23	L4	AR1242-E			----------NA----------					
24	L4	AR1242-F			----------NA----------					
25	L5	AR1248-A			----------NA----------					
26	L5	AR1248-B			----------NA----------					
27	L5	AR1248-C			----------NA----------					
28	L5	AR1248-D			----------NA----------					
29	L5	AR1248-E			----------NA----------					
30	L5	AR1248-F			----------NA----------					
31	L6	AR1254-A	400.000	386.708	3.3	108	0.00	4.79-	4.89	

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081796.D

32	L6	AR1254-B	400.000	389.632	2.6	108	0.00	4.89-	4.99
33	L6	AR1254-C	400.000	384.813	3.8	106	0.00	5.16-	5.25
34	L6	AR1254-D	400.000	374.774	6.3	104	0.00	5.28-	5.38
35	L6	AR1254-E	400.000	383.061	4.2	107	0.00	5.38-	5.48
36	L6	AR1254-F	400.000	389.137	2.7	109	0.00	5.59-	5.70
37	L7	AR1260-A	----------NA----------						
38	L7	AR1260-B	----------NA----------						
39	L7	AR1260-C	----------NA----------						
40	L7	AR1260-D	----------NA----------						
41	L7	AR1260-E	----------NA----------						
42	L7	AR1260-F	----------NA----------						
43	L9	AR1262-A	----------NA----------						
44	L9	AR1262-B	----------NA----------						
45	L9	AR1262-C	----------NA----------						
46	L9	AR1262-D	----------NA----------						
47	L9	AR1262-E	----------NA----------						
48	L9	AR1262-F	----------NA----------						

			Amount	Calc.	%Drift	
49	L8	AR1268-A		----------NA----------		

			Amount	Calc.	%Drift	
50	L8	AR1268-B		----------NA----------		
51	L8	AR1268-C		----------NA----------		
52	L8	AR1268-D		----------NA----------		
53	L8	AR1268-E		----------NA----------		
54	L8	AR1268-F		----------NA----------		
55	S	Decachlorobiphenyl		----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:53 2022

11.7.26

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081797.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081797.D\ECD1A.CH Vial: 4
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081797.D\ECD2B.CH
Acq On : 21-Sep-22, 14:44:59 Operator: eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2	L1	AR1016-A		----------NA----------			
3	L1	AR1016-B		----------NA----------			
4	L1	AR1016-C		----------NA----------			
5	L1	AR1016-D		----------NA----------			
6	L1	AR1016-E		----------NA----------			
7	L1	AR1016-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
8	L2	AR1221-A		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
9	L2	AR1221-B		----------NA----------			
10	L2	AR1221-C		----------NA----------			
11	L2	AR1221-D		----------NA----------			
12	L2	AR1221-E		----------NA----------			
13	L3	AR1232-A	400.000	369.600	7.6	104 0.00	3.34- 3.44
14	L3	AR1232-B	400.000	398.030	0.5	107 0.00	3.55- 3.65
15	L3	AR1232-C	400.000	378.250	5.4	103 0.00	3.82- 3.92
16	L3	AR1232-D	400.000	363.481	9.1	99 0.00	3.89- 3.99
17	L3	AR1232-E	400.000	368.339	7.9	101 0.00	3.93- 4.03
18	L3	AR1232-F	400.000	352.554	11.9	96 0.00	4.11- 4.21
19	L4	AR1242-A		----------NA----------			
20	L4	AR1242-B		----------NA----------			
21	L4	AR1242-C		----------NA----------			
22	L4	AR1242-D		----------NA----------			
23	L4	AR1242-E		----------NA----------			
24	L4	AR1242-F		----------NA----------			
25	L5	AR1248-A		----------NA----------			
26	L5	AR1248-B		----------NA----------			
27	L5	AR1248-C		----------NA----------			
28	L5	AR1248-D		----------NA----------			
29	L5	AR1248-E		----------NA----------			
30	L5	AR1248-F		----------NA----------			
31	L6	AR1254-A		----------NA----------			
32	L6	AR1254-B		----------NA----------			
33	L6	AR1254-C		----------NA----------			
34	L6	AR1254-D		----------NA----------			
35	L6	AR1254-E		----------NA----------			
36	L6	AR1254-F		----------NA----------			
37	L7	AR1260-A		----------NA----------			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081797.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A			----------NA----------				
44	L9	AR1262-B			----------NA----------				
45	L9	AR1262-C			----------NA----------				
46	L9	AR1262-D			----------NA----------				
47	L9	AR1262-E			----------NA----------				
48	L9	AR1262-F			----------NA----------				
49	L8	AR1268-A	400.000	351.523	12.1	96	0.00	5.13-	5.23
50	L8	AR1268-B	400.000	367.726	8.1	100	0.00	5.27-	5.37
51	L8	AR1268-C	400.000	362.595	9.4	97	0.00	5.63-	5.73
52	L8	AR1268-D	400.000	370.597	7.4	100	0.00	5.65-	5.75
53	L8	AR1268-E	400.000	376.774	5.8	102	0.00	5.76-	5.87
54	L8	AR1268-F	400.000	350.820	12.3	94	0.00	5.97-	6.07
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A	400.000	431.720	-7.9	106	0.00	3.73-	3.83
14	L3	AR1232-B	400.000	436.033	-9.0	108	0.00	3.96-	4.06
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C	400.000	390.671	2.3	110	0.00	4.22-	4.32
16	L3	AR1232-D	400.000	375.564	6.1	105	0.00	4.30-	4.40
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E	400.000	422.033	-5.5	106	0.00	4.55-	4.66
18	L3	AR1232-F	400.000	418.142	-4.5	104	0.00	4.63-	4.73
19	L4	AR1242-A			----------NA----------				
20	L4	AR1242-B			----------NA----------				
21	L4	AR1242-C			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D			----------NA----------				
23	L4	AR1242-E			----------NA----------				
24	L4	AR1242-F			----------NA----------				
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				
27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A			----------NA----------				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081797.D

32	L6	AR1254-B				----------NA----------				
33	L6	AR1254-C				----------NA----------				
34	L6	AR1254-D				----------NA----------				
35	L6	AR1254-E				----------NA----------				
36	L6	AR1254-F				----------NA----------				
37	L7	AR1260-A				----------NA----------				
38	L7	AR1260-B				----------NA----------				
39	L7	AR1260-C				----------NA----------				
40	L7	AR1260-D				----------NA----------				
41	L7	AR1260-E				----------NA----------				
42	L7	AR1260-F				----------NA----------				
43	L9	AR1262-A				----------NA----------				
44	L9	AR1262-B				----------NA----------				
45	L9	AR1262-C				----------NA----------				
46	L9	AR1262-D				----------NA----------				
47	L9	AR1262-E				----------NA----------				
48	L9	AR1262-F				----------NA----------				
			Amount	Calc.	%Drift					
49	L8	AR1268-A	400.000	418.718	-4.7	107	0.00	5.64- 5.74		
			Amount	Calc.	%Drift					
50	L8	AR1268-B	400.000	376.844	5.8	107	0.00	5.83- 5.93		
51	L8	AR1268-C	400.000	412.779	-3.2	110	0.00	6.19- 6.29		
52	L8	AR1268-D	400.000	388.281	2.9	107	0.00	6.22- 6.32		
53	L8	AR1268-E	400.000	384.044	4.0	104	0.00	6.38- 6.48		
54	L8	AR1268-F	400.000	376.142	6.0	103	0.00	6.55- 6.66		
55	S	Decachlorobiphenyl			----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:55 2022

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081798.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081798.D\ECD1A.CH Vial: 5
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081798.D\ECD2B.CH
Acq On : 21-Sep-22, 14:57:38 Operator: eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2	L1	AR1016-A		----------NA----------			
3	L1	AR1016-B		----------NA----------			
4	L1	AR1016-C		----------NA----------			
5	L1	AR1016-D		----------NA----------			
6	L1	AR1016-E		----------NA----------			
7	L1	AR1016-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
8	L2	AR1221-A		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
9	L2	AR1221-B		----------NA----------			
10	L2	AR1221-C		----------NA----------			
11	L2	AR1221-D		----------NA----------			
12	L2	AR1221-E		----------NA----------			
13	L3	AR1232-A		----------NA----------			
14	L3	AR1232-B		----------NA----------			
15	L3	AR1232-C		----------NA----------			
16	L3	AR1232-D		----------NA----------			
17	L3	AR1232-E		----------NA----------			
18	L3	AR1232-F		----------NA----------			
19	L4	AR1242-A	400.000	370.271	7.4	102 0.00	3.34- 3.44
20	L4	AR1242-B	400.000	373.667	6.6	102 0.00	3.55- 3.65
21	L4	AR1242-C	400.000	384.587	3.9	106 0.00	3.67- 3.77
22	L4	AR1242-D	400.000	377.937	5.5	102 0.00	3.82- 3.92
23	L4	AR1242-E	400.000	372.834	6.8	101 0.00	3.89- 3.99
24	L4	AR1242-F	400.000	383.998	4.0	102 0.00	4.11- 4.21
25	L5	AR1248-A		----------NA----------			
26	L5	AR1248-B		----------NA----------			
27	L5	AR1248-C		----------NA----------			
28	L5	AR1248-D		----------NA----------			
29	L5	AR1248-E		----------NA----------			
30	L5	AR1248-F		----------NA----------			
31	L6	AR1254-A		----------NA----------			
32	L6	AR1254-B		----------NA----------			
33	L6	AR1254-C		----------NA----------			
34	L6	AR1254-D		----------NA----------			
35	L6	AR1254-E		----------NA----------			
36	L6	AR1254-F		----------NA----------			
37	L7	AR1260-A		----------NA----------			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081798.D

38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	380.447	4.9	101	0.00	4.77-	4.87
44	L9	AR1262-B	400.000	373.834	6.5	100	0.00	4.92-	5.01
45	L9	AR1262-C	400.000	371.049	7.2	100	0.00	4.68-	5.23
46	L9	AR1262-D	400.000	370.722	7.3	99	0.00	5.27-	5.37
47	L9	AR1262-E	400.000	362.138	9.5	97	0.00	5.45-	5.55
48	L9	AR1262-F	400.000	390.715	2.3	105	0.00	5.63-	5.72
49	L8	AR1268-A			----------NA----------				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene			----------NA----------				
2	L1	AR1016-A			----------NA----------				
3	L1	AR1016-B			----------NA----------				
4	L1	AR1016-C			----------NA----------				
5	L1	AR1016-D			----------NA----------				
6	L1	AR1016-E			----------NA----------				
7	L1	AR1016-F			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
8	L2	AR1221-A			----------NA----------				
9	L2	AR1221-B			----------NA----------				
10	L2	AR1221-C			----------NA----------				
11	L2	AR1221-D			----------NA----------				
12	L2	AR1221-E			----------NA----------				
13	L3	AR1232-A			----------NA----------				
14	L3	AR1232-B			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
15	L3	AR1232-C			----------NA----------				
16	L3	AR1232-D			----------NA----------				
		----------	Amount	Calc.	%Drift	----------			
17	L3	AR1232-E			----------NA----------				
18	L3	AR1232-F			----------NA----------				
19	L4	AR1242-A	400.000	430.349	-7.6	106	0.00	3.73-	3.83
20	L4	AR1242-B	400.000	437.103	-9.3	108	0.00	3.96-	4.06
21	L4	AR1242-C	400.000	447.271	-11.8	110	0.00	4.11-	4.21
		----------	Amount	Calc.	%Drift	----------			
22	L4	AR1242-D	400.000	394.299	1.4	109	0.00	4.22-	4.32
23	L4	AR1242-E	400.000	389.263	2.7	108	0.00	4.30-	4.40
24	L4	AR1242-F	400.000	391.791	2.1	109	0.00	4.55-	4.66
25	L5	AR1248-A			----------NA----------				
26	L5	AR1248-B			----------NA----------				
27	L5	AR1248-C			----------NA----------				
28	L5	AR1248-D			----------NA----------				
29	L5	AR1248-E			----------NA----------				
30	L5	AR1248-F			----------NA----------				
31	L6	AR1254-A			----------NA----------				

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081798.D

32	L6	AR1254-B			----------NA----------				
33	L6	AR1254-C			----------NA----------				
34	L6	AR1254-D			----------NA----------				
35	L6	AR1254-E			----------NA----------				
36	L6	AR1254-F			----------NA----------				
37	L7	AR1260-A			----------NA----------				
38	L7	AR1260-B			----------NA----------				
39	L7	AR1260-C			----------NA----------				
40	L7	AR1260-D			----------NA----------				
41	L7	AR1260-E			----------NA----------				
42	L7	AR1260-F			----------NA----------				
43	L9	AR1262-A	400.000	403.541	-0.9	111	0.00	5.26-	5.36
44	L9	AR1262-B	400.000	386.834	3.3	106	0.00	5.38-	5.48
45	L9	AR1262-C	400.000	393.516	1.6	109	0.00	5.64-	5.74
46	L9	AR1262-D	400.000	387.886	3.0	107	0.00	5.83-	5.92
47	L9	AR1262-E	400.000	386.342	3.4	105	0.00	5.97-	6.07
48	L9	AR1262-F	400.000	388.891	2.8	106	0.00	6.19-	6.29

			Amount	Calc.	%Drift				
49	L8	AR1268-A			----------NA----------				

			Amount	Calc.	%Drift				
50	L8	AR1268-B			----------NA----------				
51	L8	AR1268-C			----------NA----------				
52	L8	AR1268-D			----------NA----------				
53	L8	AR1268-E			----------NA----------				
54	L8	AR1268-F			----------NA----------				
55	S	Decachlorobiphenyl			----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:57 2022

11.7.28

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Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081799.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\GX...2\XX081799.D\ECD1A.CH Vial: 6
Signal #2 : C:\msdchem\1\DATA\GXX1548_092122\XX081799.D\ECD2B.CH
Acq On : 21-Sep-22, 15:10:20 Operator: eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\1\MET...082DODXX091622.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Sep 20 15:34:25 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area% Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------			
2	L1	AR1016-A		----------NA----------			
3	L1	AR1016-B		----------NA----------			
4	L1	AR1016-C		----------NA----------			
5	L1	AR1016-D		----------NA----------			
6	L1	AR1016-E		----------NA----------			
7	L1	AR1016-F		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
8	L2	AR1221-A		----------NA----------			
		----------	Amount	Calc.	%Drift	----------	
9	L2	AR1221-B		----------NA----------			
10	L2	AR1221-C		----------NA----------			
11	L2	AR1221-D		----------NA----------			
12	L2	AR1221-E		----------NA----------			
13	L3	AR1232-A		----------NA----------			
14	L3	AR1232-B		----------NA----------			
15	L3	AR1232-C		----------NA----------			
16	L3	AR1232-D		----------NA----------			
17	L3	AR1232-E		----------NA----------			
18	L3	AR1232-F		----------NA----------			
19	L4	AR1242-A		----------NA----------			
20	L4	AR1242-B		----------NA----------			
21	L4	AR1242-C		----------NA----------			
22	L4	AR1242-D		----------NA----------			
23	L4	AR1242-E		----------NA----------			
24	L4	AR1242-F		----------NA----------			
25	L5	AR1248-A	400.000	392.052	2.0	108 0.00	3.82- 3.92
26	L5	AR1248-B	400.000	386.178	3.5	112 0.00	3.99- 4.09
27	L5	AR1248-C	400.000	386.451	3.4	106 0.00	4.11- 4.21
28	L5	AR1248-D	400.000	383.331	4.2	100 0.00	4.35- 4.45
29	L5	AR1248-E	400.000	385.451	3.6	104 0.00	4.46- 4.56
30	L5	AR1248-F	400.000	350.822	12.3	95 0.00	4.68- 4.78
31	L6	AR1254-A		----------NA----------			
32	L6	AR1254-B		----------NA----------			
33	L6	AR1254-C		----------NA----------			
34	L6	AR1254-D		----------NA----------			
35	L6	AR1254-E		----------NA----------			
36	L6	AR1254-F		----------NA----------			
37	L7	AR1260-A		----------NA----------			

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081799.D

38	L7	AR1260-B			----------NA----------					
39	L7	AR1260-C			----------NA----------					
40	L7	AR1260-D			----------NA----------					
41	L7	AR1260-E			----------NA----------					
42	L7	AR1260-F			----------NA----------					
43	L9	AR1262-A			----------NA----------					
44	L9	AR1262-B			----------NA----------					
45	L9	AR1262-C			----------NA----------					
46	L9	AR1262-D			----------NA----------					
47	L9	AR1262-E			----------NA----------					
48	L9	AR1262-F			----------NA----------					
49	L8	AR1268-A			----------NA----------					
50	L8	AR1268-B			----------NA----------					
51	L8	AR1268-C			----------NA----------					
52	L8	AR1268-D			----------NA----------					
53	L8	AR1268-E			----------NA----------					
54	L8	AR1268-F			----------NA----------					
55	S	Decachlorobiphenyl			----------NA----------					
*****		Signal #2 *****								
1	S	Tetrachloro-m-xylene			----------NA----------					
2	L1	AR1016-A			----------NA----------					
3	L1	AR1016-B			----------NA----------					
4	L1	AR1016-C			----------NA----------					
5	L1	AR1016-D			----------NA----------					
6	L1	AR1016-E			----------NA----------					
7	L1	AR1016-F			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
8	L2	AR1221-A			----------NA----------					
9	L2	AR1221-B			----------NA----------					
10	L2	AR1221-C			----------NA----------					
11	L2	AR1221-D			----------NA----------					
12	L2	AR1221-E			----------NA----------					
13	L3	AR1232-A			----------NA----------					
14	L3	AR1232-B			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
15	L3	AR1232-C			----------NA----------					
16	L3	AR1232-D			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
17	L3	AR1232-E			----------NA----------					
18	L3	AR1232-F			----------NA----------					
19	L4	AR1242-A			----------NA----------					
20	L4	AR1242-B			----------NA----------					
21	L4	AR1242-C			----------NA----------					
		----------	Amount	Calc.	%Drift	----------				
22	L4	AR1242-D			----------NA----------					
23	L4	AR1242-E			----------NA----------					
24	L4	AR1242-F			----------NA----------					
25	L5	AR1248-A	400.000	405.342	-1.3	114	0.00	4.22-	4.32	
26	L5	AR1248-B	400.000	401.729	-0.4	113	0.00	4.40-	4.50	
27	L5	AR1248-C	400.000	402.547	-0.6	113	0.00	4.55-	4.66	
28	L5	AR1248-D	400.000	398.362	0.4	105	0.00	4.79-	4.89	
29	L5	AR1248-E	400.000	418.360	-4.6	116	0.00	4.93-	5.03	
30	L5	AR1248-F	400.000	396.498	0.9	109	0.00	5.16-	5.26	
31	L6	AR1254-A			----------NA----------					

Continuing Calibration Summary

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: GXX1548-CC1547
Lab FileID: XX081799.D

32	L6	AR1254-B			----------NA----------	
33	L6	AR1254-C			----------NA----------	
34	L6	AR1254-D			----------NA----------	
35	L6	AR1254-E			----------NA----------	
36	L6	AR1254-F			----------NA----------	
37	L7	AR1260-A			----------NA----------	
38	L7	AR1260-B			----------NA----------	
39	L7	AR1260-C			----------NA----------	
40	L7	AR1260-D			----------NA----------	
41	L7	AR1260-E			----------NA----------	
42	L7	AR1260-F			----------NA----------	
43	L9	AR1262-A			----------NA----------	
44	L9	AR1262-B			----------NA----------	
45	L9	AR1262-C			----------NA----------	
46	L9	AR1262-D			----------NA----------	
47	L9	AR1262-E			----------NA----------	
48	L9	AR1262-F			----------NA----------	
			---------- Amount	Calc.	%Drift	----------
49	L8	AR1268-A			----------NA----------	
			---------- Amount	Calc.	%Drift	----------
50	L8	AR1268-B			----------NA----------	
51	L8	AR1268-C			----------NA----------	
52	L8	AR1268-D			----------NA----------	
53	L8	AR1268-E			----------NA----------	
54	L8	AR1268-F			----------NA----------	
55	S	Decachlorobiphenyl			----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
XX081745.D 8082DODXX091622.m Thu Sep 22 10:03:59 2022

11.7.29

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Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: GST3992 **Method:** SW846 8081B **Instrument ID:** GCST

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GST3992-DDT	ST163740.D	09/20/22 10:30	n/a	DDT/Endrin Breakdown Check
GST3992-IC3992	ST163741.D	09/20/22 10:47	n/a	Initial cal 2
GST3992-IC3992	ST163742.D	09/20/22 11:03	n/a	Initial cal 5
GST3992-IC3992	ST163743.D	09/20/22 11:21	n/a	Initial cal 20
GST3992-ICC3992	ST163744.D	09/20/22 11:38	n/a	Initial cal 40
GST3992-IC3992	ST163745.D	09/20/22 11:56	n/a	Initial cal 60
GST3992-IC3992	ST163746.D	09/20/22 12:13	n/a	Initial cal 80
GST3992-IC3992	ST163747.D	09/20/22 12:31	n/a	Initial cal 120
GST3992-ICV3992	ST163748.D	09/20/22 12:48	n/a	Initial cal verification 20
GST3992-IC3992	ST163749.D	09/20/22 13:05	n/a	Initial cal 20
GST3992-IC3992	ST163750.D	09/20/22 13:22	n/a	Initial cal 50
GST3992-IC3992	ST163751.D	09/20/22 13:40	n/a	Initial cal 200
GST3992-IC3992	ST163752.D	09/20/22 13:57	n/a	Initial cal 400
GST3992-IC3992	ST163753.D	09/20/22 14:15	n/a	Initial cal 600
GST3992-IC3992	ST163754.D	09/20/22 14:32	n/a	Initial cal 1000
GST3992-ICV3992	ST163755.D	09/20/22 14:51	n/a	Initial cal verification 200
GST3992-IC3992	ST163756.D	09/20/22 15:08	n/a	Initial cal 100
GST3992-IC3992	ST163757.D	09/20/22 15:26	n/a	Initial cal 200
GST3992-IC3992	ST163758.D	09/20/22 15:43	n/a	Initial cal 500
GST3992-IC3992	ST163759.D	09/20/22 16:01	n/a	Initial cal 750
GST3992-IC3992	ST163760.D	09/20/22 16:18	n/a	Initial cal 1000
GST3992-IC3992	ST163761.D	09/20/22 16:35	n/a	Initial cal 2000
GST3992-ICV3992	ST163762.D	09/20/22 16:52	n/a	Initial cal verification 500
GST3992-DDT	ST163763.D	09/20/22 17:08	n/a	DDT/Endrin Breakdown Check
GST3992-CC3992	ST163764.D	09/20/22 17:25	n/a	Continuing cal 40
GST3992-CC3992	ST163765.D	09/20/22 17:41	n/a	Continuing cal 200
GST3992-CC3992	ST163766.D	09/20/22 17:59	n/a	Continuing cal 500
OP93037-BS	ST163767.D	09/20/22 18:15	OP93037	Blank Spike
OP93037-BS2	ST163768.D	09/20/22 18:32	OP93037	Blank Spike
OP93037-MB	ST163769.D	09/20/22 18:49	OP93037	Method Blank
ZZZZZZ	ST163770.D	09/20/22 19:05	OP93037	(unrelated sample)
ZZZZZZ	ST163771.D	09/20/22 19:23	OP93037	(unrelated sample)
FA98756-2	ST163772.D	09/20/22 19:39	OP93037	(used for QC only; not part of job FA98819)
FA98819-1	ST163773.D	09/20/22 19:57	OP93037	EFFLUENT
OP93037-MS	ST163774.D	09/20/22 20:13	OP93037	Matrix Spike
OP93037-MSD	ST163775.D	09/20/22 20:30	OP93037	Matrix Spike Duplicate
GST3992-ECC3992	ST163776.D	09/20/22 20:47	n/a	Ending cal 40
GST3992-ECC3992	ST163777.D	09/20/22 21:03	n/a	Ending cal 200
GST3992-ECC3992	ST163778.D	09/20/22 21:19	n/a	Ending cal 500

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: GXX1547 **Method:** SW846 8082A **Instrument ID:** GCXX

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GXX1547-IC1547	XX081734.D	09/16/22 15:05	n/a	Initial cal 20
GXX1547-IC1547	XX081735.D	09/16/22 15:18	n/a	Initial cal 50
GXX1547-IC1547	XX081736.D	09/16/22 15:31	n/a	Initial cal 200
GXX1547-ICC1547	XX081737.D	09/16/22 15:43	n/a	Initial cal 400
GXX1547-IC1547	XX081738.D	09/16/22 15:56	n/a	Initial cal 600
GXX1547-IC1547	XX081739.D	09/16/22 16:09	n/a	Initial cal 1000
GXX1547-ICV1547	XX081740.D	09/16/22 16:21	n/a	Initial cal verification 400
GXX1547-IC1547	XX081743.D	09/16/22 16:59	n/a	Initial cal 50
GXX1547-IC1547	XX081744.D	09/16/22 17:12	n/a	Initial cal 200
GXX1547-IC1547	XX081745.D	09/16/22 17:25	n/a	Initial cal 400
GXX1547-IC1547	XX081746.D	09/16/22 17:37	n/a	Initial cal 600
GXX1547-IC1547	XX081747.D	09/16/22 17:50	n/a	Initial cal 1000
GXX1547-ICV1547	XX081748.D	09/16/22 18:03	n/a	Initial cal verification 400
GXX1547-ICV1547	XX081749.D	09/16/22 18:15	n/a	Initial cal verification 400
GXX1547-IC1547	XX081751.D	09/16/22 18:41	n/a	Initial cal 20
GXX1547-IC1547	XX081752.D	09/16/22 18:54	n/a	Initial cal 50
GXX1547-IC1547	XX081753.D	09/16/22 19:06	n/a	Initial cal 200
GXX1547-IC1547	XX081754.D	09/16/22 19:19	n/a	Initial cal 400
GXX1547-IC1547	XX081755.D	09/16/22 19:32	n/a	Initial cal 600
GXX1547-IC1547	XX081756.D	09/16/22 19:44	n/a	Initial cal 1000
GXX1547-ICV1547	XX081757.D	09/16/22 19:57	n/a	Initial cal verification 400
GXX1547-ICV1547	XX081758.D	09/16/22 20:10	n/a	Initial cal verification 400
GXX1547-IC1547	XX081760.D	09/16/22 20:35	n/a	Initial cal 20
GXX1547-IC1547	XX081761.D	09/16/22 20:48	n/a	Initial cal 50
GXX1547-IC1547	XX081762.D	09/16/22 21:00	n/a	Initial cal 200
GXX1547-IC1547	XX081763.D	09/16/22 21:13	n/a	Initial cal 400
GXX1547-IC1547	XX081764.D	09/16/22 21:26	n/a	Initial cal 600
GXX1547-IC1547	XX081765.D	09/16/22 21:38	n/a	Initial cal 1000
GXX1547-ICV1547	XX081766.D	09/16/22 21:51	n/a	Initial cal verification 400
GXX1547-ICV1547	XX081767.D	09/16/22 22:04	n/a	Initial cal verification 400
GXX1547-IC1547	XX081769.D	09/16/22 22:29	n/a	Initial cal 20
GXX1547-IC1547	XX081770.D	09/16/22 22:42	n/a	Initial cal 50
GXX1547-IC1547	XX081771.D	09/16/22 22:54	n/a	Initial cal 200
GXX1547-IC1547	XX081772.D	09/16/22 23:07	n/a	Initial cal 400
GXX1547-IC1547	XX081773.D	09/16/22 23:20	n/a	Initial cal 600
GXX1547-IC1547	XX081774.D	09/16/22 23:32	n/a	Initial cal 1000
GXX1547-ICV1547	XX081775.D	09/16/22 23:45	n/a	Initial cal verification 400

Run Sequence Report

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: GXX1548 **Method:** SW846 8082A **Instrument ID:** GCXX

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GXX1548-CC1547	XX081780.D	09/21/22 11:09	n/a	Continuing cal 400
GXX1548-CC1547	XX081781.D	09/21/22 11:21	n/a	Continuing cal 400
GXX1548-CC1547	XX081782.D	09/21/22 11:34	n/a	Continuing cal 400
GXX1548-CC1547	XX081783.D	09/21/22 11:47	n/a	Continuing cal 400
GXX1548-CC1547	XX081784.D	09/21/22 11:59	n/a	Continuing cal 400
OP93038-BS	XX081785.D	09/21/22 12:12	OP93038	Blank Spike
OP93038-MB	XX081786.D	09/21/22 12:25	OP93038	Method Blank
ZZZZZZ	XX081788.D	09/21/22 12:50	OP93038	(unrelated sample)
OP93038-MS	XX081789.D	09/21/22 13:03	OP93038	Matrix Spike
OP93038-MSD	XX081790.D	09/21/22 13:15	OP93038	Matrix Spike Duplicate
ZZZZZZ	XX081792.D	09/21/22 13:41	OP93038	(unrelated sample)
FA98756-3	XX081793.D	09/21/22 13:54	OP93038	(used for QC only; not part of job FA98819)
FA98819-1	XX081794.D	09/21/22 14:06	OP93038	EFFLUENT
GXX1548-CC1547	XX081795.D	09/21/22 14:19	n/a	Continuing cal 400
GXX1548-CC1547	XX081796.D	09/21/22 14:32	n/a	Continuing cal 400
GXX1548-CC1547	XX081797.D	09/21/22 14:44	n/a	Continuing cal 400
GXX1548-CC1547	XX081798.D	09/21/22 14:57	n/a	Continuing cal 400
GXX1548-CC1547	XX081799.D	09/21/22 15:10	n/a	Continuing cal 400
OP93052-MB	XX081800.D	09/21/22 15:23	OP93052	Method Blank
ZZZZZZ	XX081801.D	09/21/22 15:35	OP93052	(unrelated sample)
ZZZZZZ	XX081802.D	09/21/22 15:48	OP93052	(unrelated sample)
ZZZZZZ	XX081803.D	09/21/22 16:01	OP93052	(unrelated sample)
ZZZZZZ	XX081804.D	09/21/22 16:13	OP93052	(unrelated sample)
ZZZZZZ	XX081805.D	09/21/22 16:26	OP93052	(unrelated sample)
GXX1548-CC1547	XX081806.D	09/21/22 16:39	n/a	Continuing cal 400
ZZZZZZ	XX081807.D	09/21/22 16:52	OP93052	(unrelated sample)
ZZZZZZ	XX081809.D	09/21/22 17:17	OP93052	(unrelated sample)
ZZZZZZ	XX081810.D	09/21/22 17:30	OP93052	(unrelated sample)
ZZZZZZ	XX081811.D	09/21/22 17:42	OP93052	(unrelated sample)
ZZZZZZ	XX081812.D	09/21/22 17:55	OP93052	(unrelated sample)
ZZZZZZ	XX081813.D	09/21/22 18:08	OP93052	(unrelated sample)
ZZZZZZ	XX081814.D	09/21/22 18:20	OP93052	(unrelated sample)
ZZZZZZ	XX081815.D	09/21/22 18:33	OP93052	(unrelated sample)
ZZZZZZ	XX081816.D	09/21/22 18:46	OP93052	(unrelated sample)
GXX1548-ECC1547	XX081817.D	09/21/22 18:58	n/a	Ending cal 400

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 7:57 pm
Operator : eduardom
Sample : FA98819-1 Inst : ECD 3
Misc : OP93037,GST3992,980,,,5,1,Water
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 21 09:40:29 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.313	3.425	4155676	639546	36.529m	39.324
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	73.06%	78.65%
33) S	Decachlor...	7.248	7.474	3647953	824033	39.346m	37.023
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	78.69%	74.05%
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Toxaphene-A			0	0	N.D.	N.D.
	Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 7:57 pm
Operator : eduardom
Sample : FA98819-1 Inst : ECD 3
Misc : OP93037,GST3992,980,,,5,1,Water
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 21 09:40:29 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

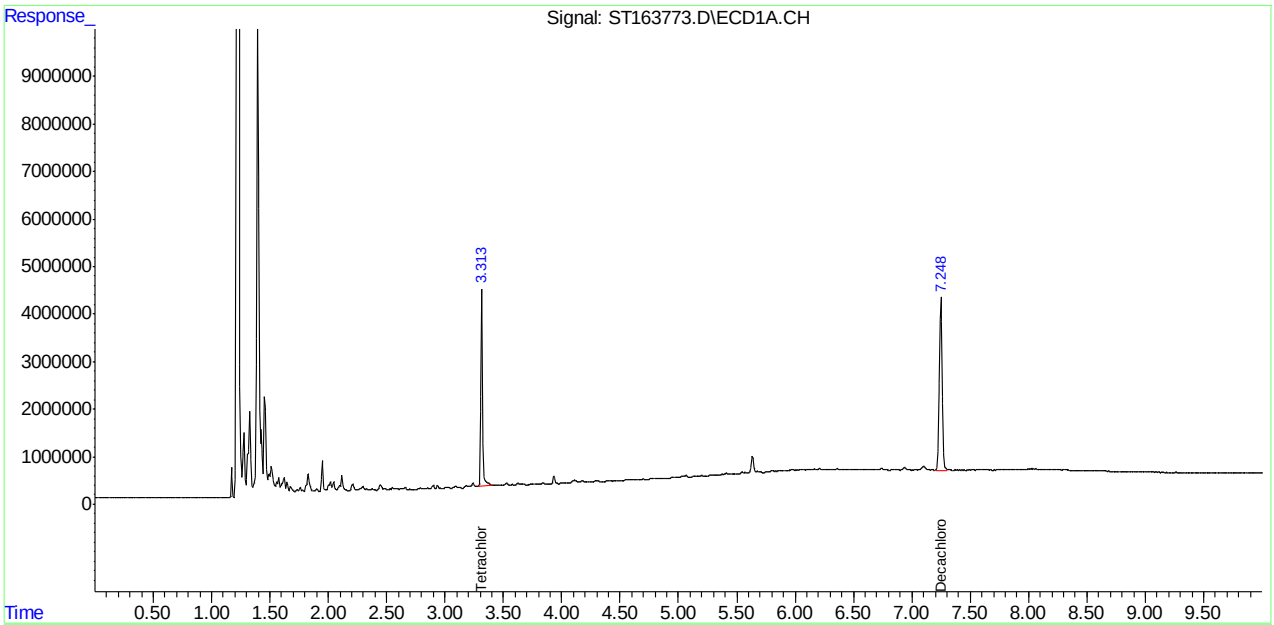
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

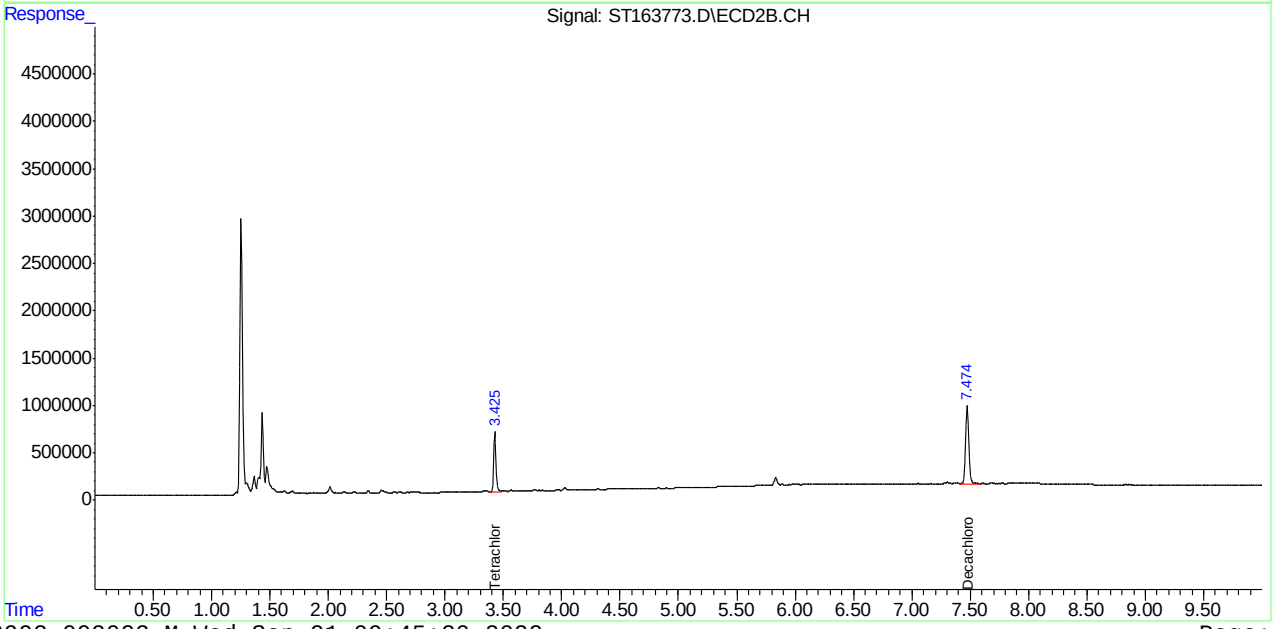
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 7:57 pm
Operator : eduardom
Sample : FA98819-1 Inst : ECD 3
Misc : OP93037,GST3992,980,,,5,1,Water
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 21 09:40:29 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	FA98819-1	**Method:**	EPA 608.3
Lab FileID:	ST163773.D	**Analyst approved:**	09/21/22 10:01 William Hustedde
Injection Time:	09/20/22 19:57	**Supervisor approved:**	09/21/22 10:51 Naresh Jiawan

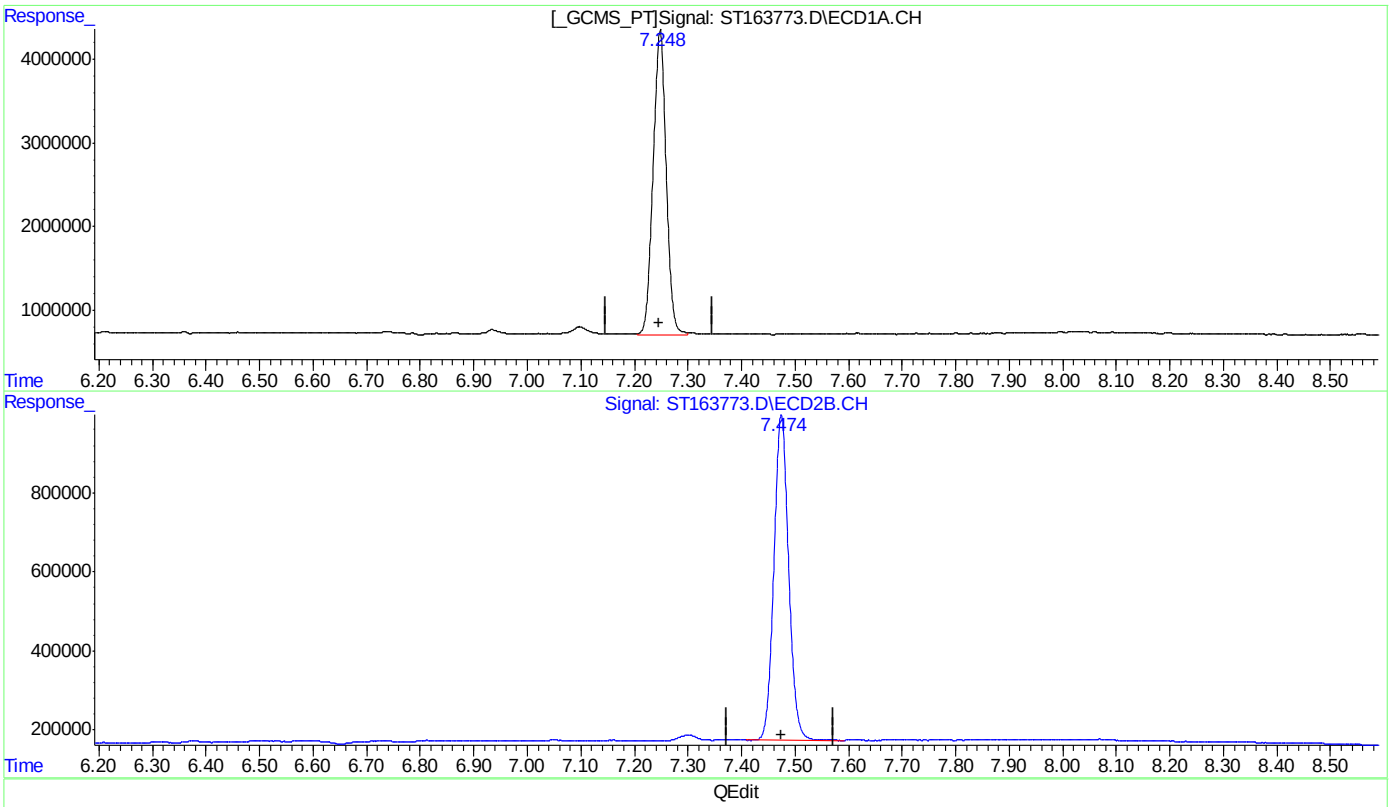
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	3.31	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	7.25	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 7:57 pm
Operator : eduardom
Sample : FA98819-1 Inst : ECD 3
Misc : OP93037,GST3992,980,,,5,1,Water
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 21 09:31:38 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(33) Decachlorobiphenyl (S)
7.248min 39.346 ppb m
response 3647953

(33) Decachlorobiphenyl #2 (S)
7.474min 37.023 ppb
response 824033

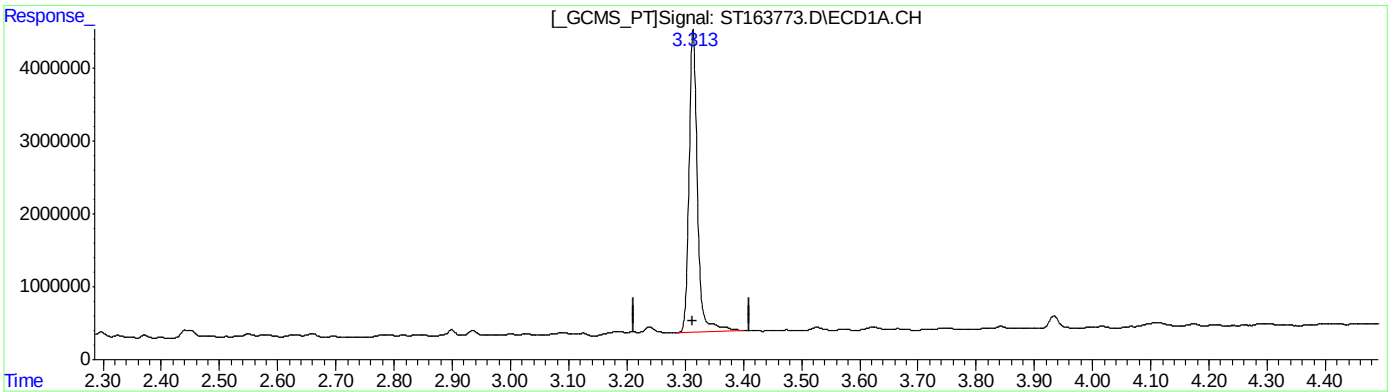
(+) = Expected Retention Time
GST3992_092022.M Wed Sep 21 09:40:22 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 7:57 pm
Operator : eduardom
Sample : FA98819-1 Inst : ECD 3
Misc : OP93037,GST3992,980,,,5,1,Water
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 21 09:31:38 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(1) Tetrachloro-m-xylene (S)

3.313min 36.529 PPB m

response 4155676

(1) Tetrachloro-m-xylene #2 (S)

3.425min 39.324 PPB

response 639546

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081794.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:06:47
Operator : eduardom
Sample : FA98819-1 Inst : ECD 7
Misc : OP93038,GXX1548,980,,,5,1,Water
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:27:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	3.155	3.472	23729803	44776307	48.745	37.612
Spiked Amount	50.000	Range 38 - 127		Recovery =	97.49%	75.22%
55) S Decachlor...	6.313	7.035	21094469	18679857	38.018	37.918
Spiked Amount	50.000	Range 25 - 137		Recovery =	76.04%	75.84%
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

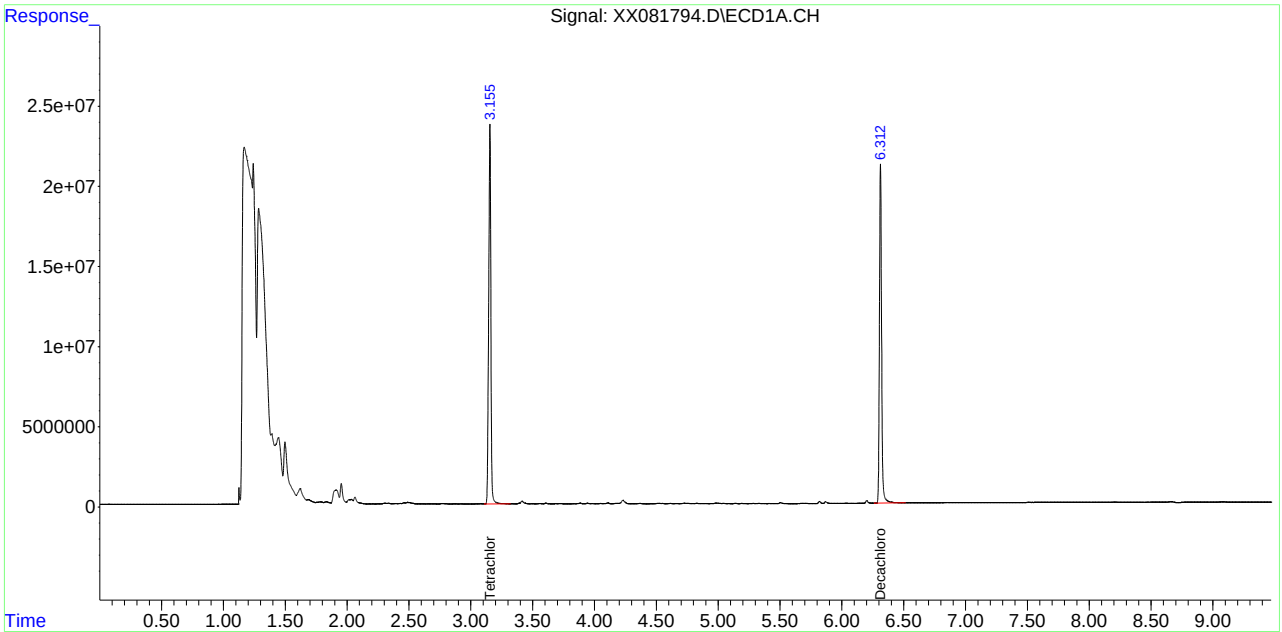
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

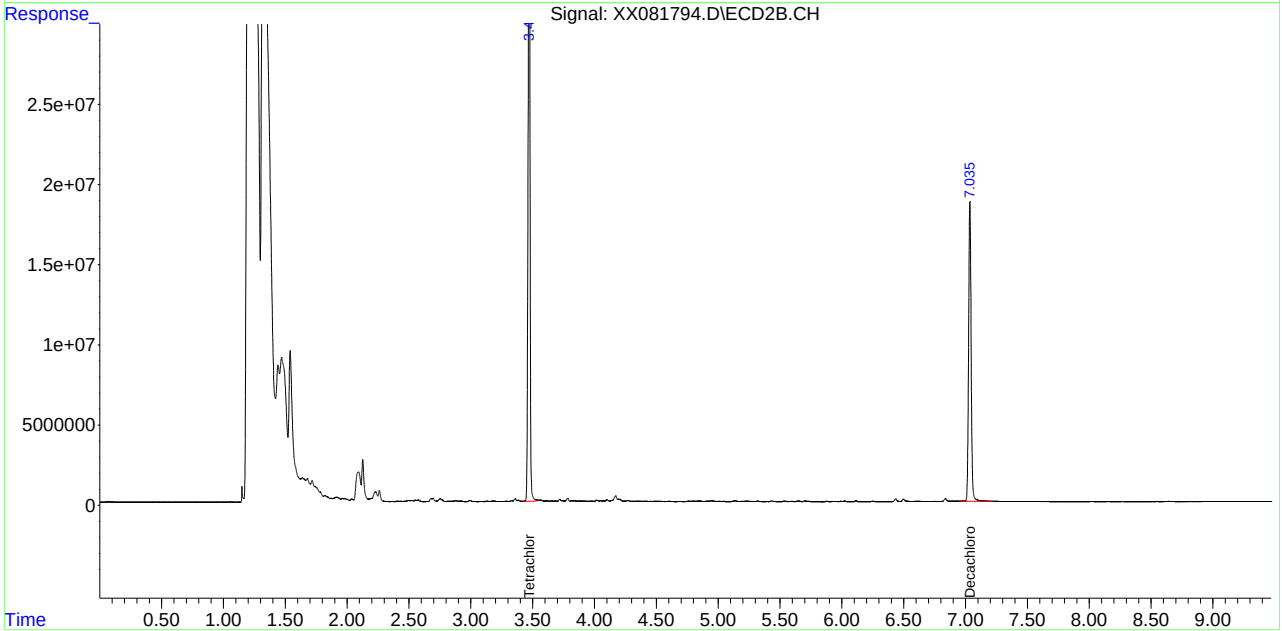
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081794.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:06:47
Operator : eduardom
Sample : FA98819-1 Inst : ECD 7
Misc : OP93038,GXX1548,980,,,5,1,Water
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:27:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163769.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:49 pm
Operator : eduardom
Sample : op93037-MB Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Sep 21 09:36:45 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.315	3.427	4137188	618611	36.366	38.037
		Spiked Amount	50.000	Range 42 - 127		Recovery =	72.73%	76.07%
33)	S	Decachlor...	7.247	7.475	3747430	865232	40.419	38.874
		Spiked Amount	50.000	Range 27 - 127		Recovery =	80.84%	77.75%
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163769.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:49 pm
Operator : eduardom
Sample : op93037-MB Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Sep 21 09:36:45 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

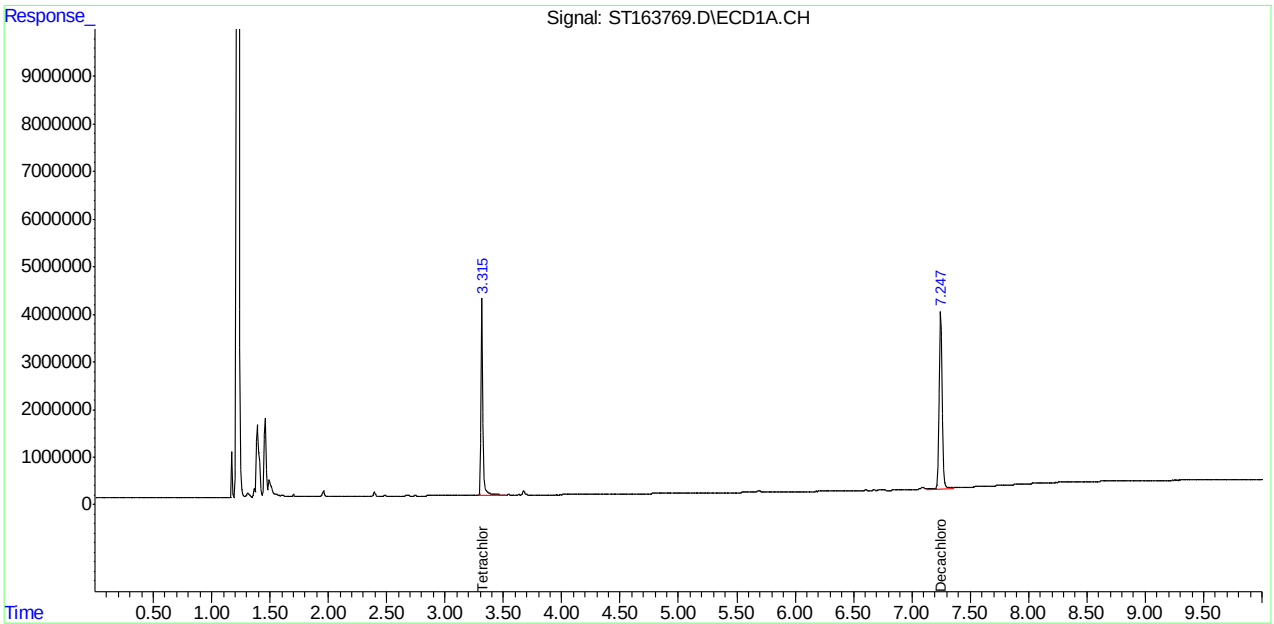
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

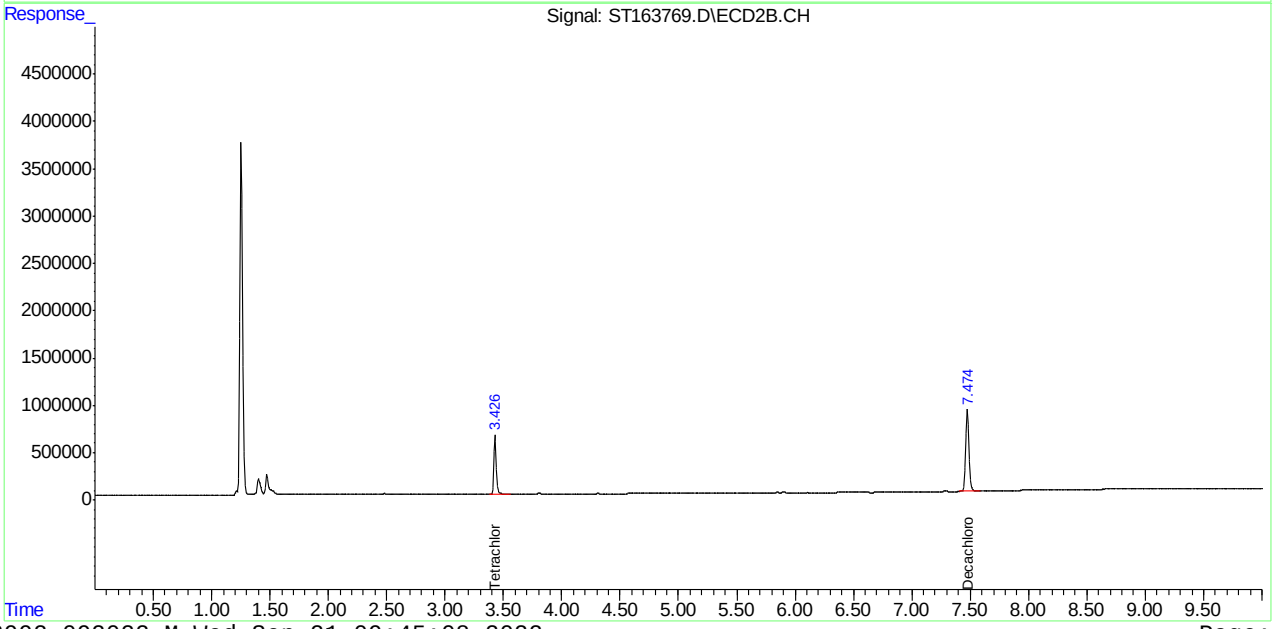
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163769.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:49 pm
Operator : eduardom
Sample : op93037-MB Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Sep 21 09:36:45 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081786.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 12:25:09
Operator : eduardom
Sample : OP93038-MB Inst : ECD 7
Misc : OP93038,GXX1548,1000,,,5,1,Water
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:46:24 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	3.154	3.471	20239387	40636191	41.575	34.135
Spiked Amount	50.000	Range 38 - 127	Recovery =		83.15%	68.27%
55) S Decachlor...	6.312	7.035	19168091	17791447	34.546	36.115
Spiked Amount	50.000	Range 25 - 137	Recovery =		69.09%	72.23%
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

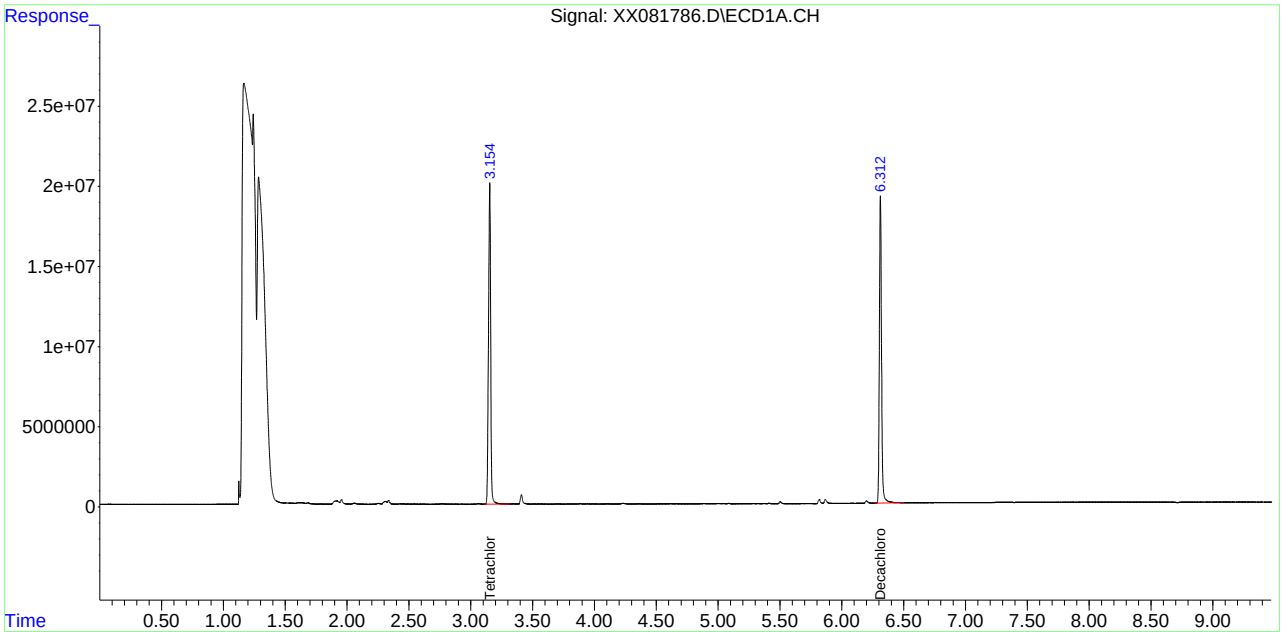
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

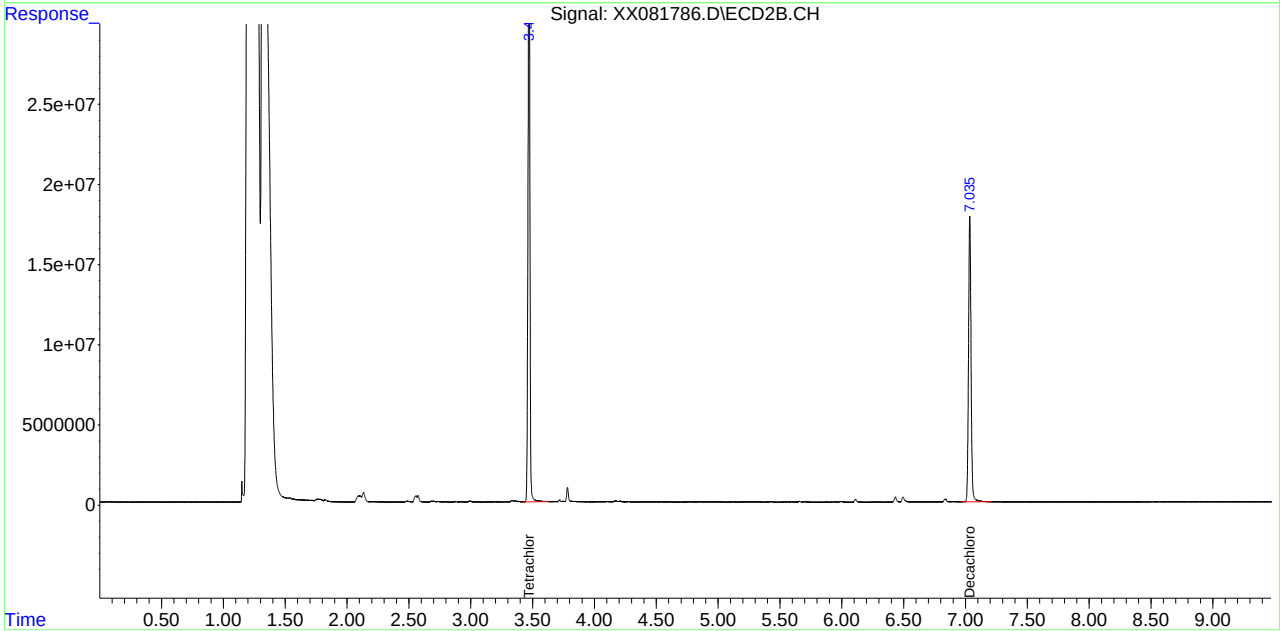
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081786.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 12:25:09
Operator : eduardom
Sample : OP93038-MB Inst : ECD 7
Misc : OP93038,GXX1548,1000,,,5,1,Water
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:46:24 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





SGS FA98819

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163767.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:15 pm
Operator : eduardom
Sample : op93037-BS Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 21 09:35:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.315	3.426	4888769	719224	42.973	44.223
		Spiked Amount	50.000	Range 42 - 127		Recovery =	85.95%	88.45%
33)	S	Decachlor...	7.247	7.474	3914099	926118	42.216	41.610
		Spiked Amount	50.000	Range 27 - 127		Recovery =	84.43%	83.22%
		Target Compounds						
2)		alpha-BHC	3.647	3.840	7306532	1151555	42.049	47.144
3)		gamma-BHC...	3.883	4.104	6924811	1137651	44.104	45.854
4)		beta-BHC	4.049	4.330	3151961	599405	43.189	44.404
5)		delta-BHC	4.211	4.514	6776434	1233990	39.539	43.363
6)		Heptachlor	4.277	4.378	5684545	1027498	42.646	45.493
7)		Aldrin	4.509	4.597	6409639	1197142	42.264	46.793
8)		Heptachlo...	4.818	4.975	6375436	1222492	44.643	43.895
9)		gamma-Chl...	4.999	5.163	6606674	1275133	46.036	46.632
10)		alpha-Chl...	5.051	5.211	6245229	1270210	45.904	46.771
11)		4,4'-DDE	5.201	5.348	5995968	1229333	43.218	45.252
12)		Endosulfa...	5.082	5.255	5808369	1134496	45.374	45.707
13)		Dieldrin	5.278	5.452	6733897	1351608	44.661	46.269
14)		Endrin	5.436	5.657	5939491	1206755	42.175	45.389
15)		4,4'-DDD	5.572	5.761	5070155	1076263	41.774	45.699
16)		Endosulfa...	5.605	5.873	5998167	1204042	45.395	43.196
17)		4,4'-DDT	5.789	5.948	4126114	958583	46.578	45.481
18)		Endrin Al...	5.701	6.005	3639651	788810	35.975	36.308
19)		Methoxychlor	6.155	6.379	2322604	524973	44.177	45.896
20)		Endosulfa...	5.867	6.171	4724582	1026035	39.884	41.703
21)		Endrin Ke...	6.200	6.565	5519673	1177728	43.799	44.088
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163767.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:15 pm
Operator : eduardom
Sample : op93037-BS Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 21 09:35:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

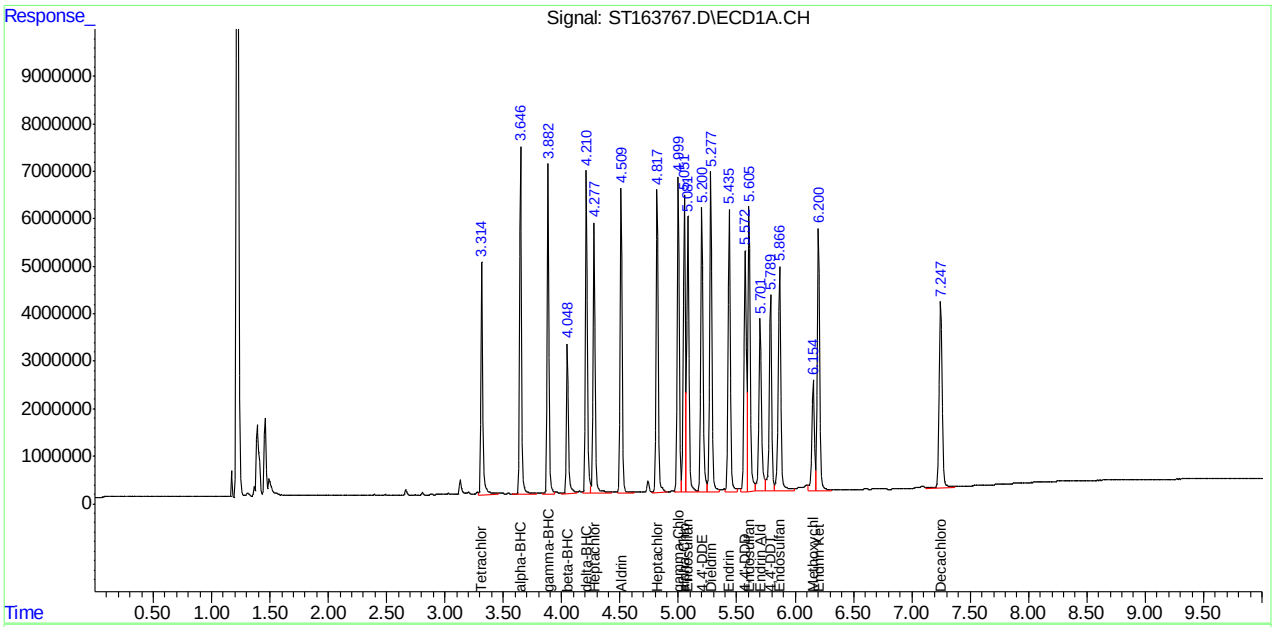
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

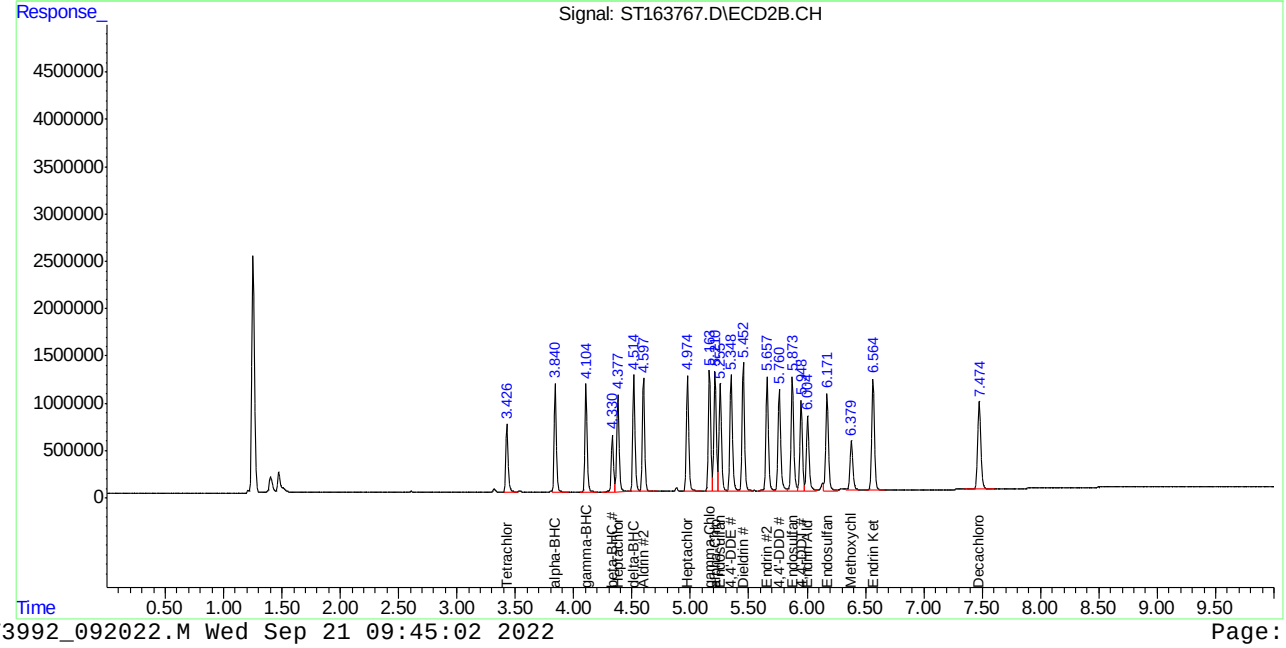
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163767.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:15 pm
Operator : eduardom
Sample : op93037-BS Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 21 09:35:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163768.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:32 pm
Operator : eduardom
Sample : op93037-BS2 Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 21 09:36:28 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.315	3.426	4300363	634139	37.801	38.991
		Spiked Amount	50.000	Range 42 - 127		Recovery =	75.60%	77.98%
33)	S	Decachlor...	7.247	7.474	3864061	892392	41.677	40.094
		Spiked Amount	50.000	Range 27 - 127		Recovery =	83.35%	80.19%
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	930392	140795	231.867	236.875
23)	L1	Chlordane-B	4.278	4.378	990643	148620	157.388	150.941
24)	L1	Chlordane-C	4.505	4.684	1104701	224941	295.924m	310.477m
25)	L1	Chlordane-D	4.999	5.180	3732550	775179	231.878m	272.668m
26)	L1	Chlordane-E	5.054	5.210	4451811	606354	245.233m	248.751m
27)	L1	Chlordane-F	5.642	5.884	2200115	254779	675.429m	318.701m#
		Sum Chlordane-A			13410213	2150667	1837.719	1538.412
		Average Chlordane-A					306.286	256.402
28)	L2	Toxaphene-A	5.214	5.420	10153539	2021250	643.711m	505.842m
29)	L2	Toxaphene-B	5.567	5.837	12263592	2488306	518.875m	356.994m
30)	L2	Toxaphene-C	5.642	5.889	40435313	2673471	879.649m	482.632m#
31)	L2	Toxaphene-D	5.790	6.035	13911292	1851137	490.100m	429.784m
32)	L2	Toxaphene-E	6.149	6.479	12165231	4388785	459.407m	486.140m
		Sum Toxaphene-A			88928966	13422950	2991.742	2261.391
		Average Toxaphene-A					598.348	452.278

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163768.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:32 pm
Operator : eduardom
Sample : op93037-BS2 Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 21 09:36:28 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

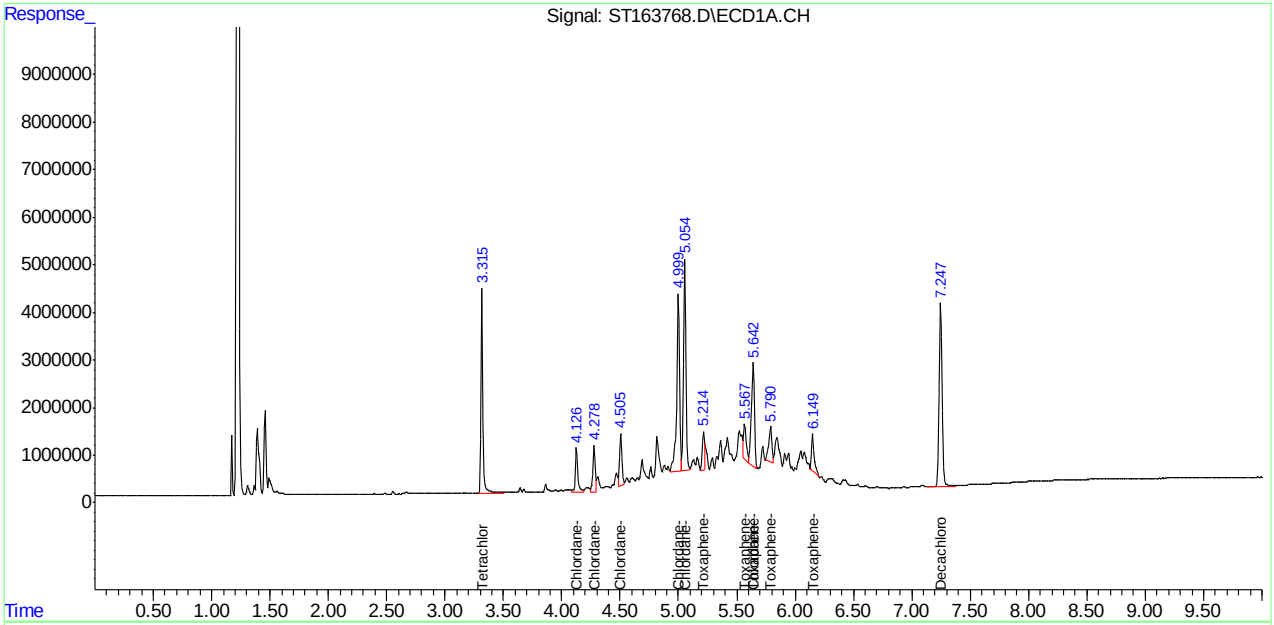
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

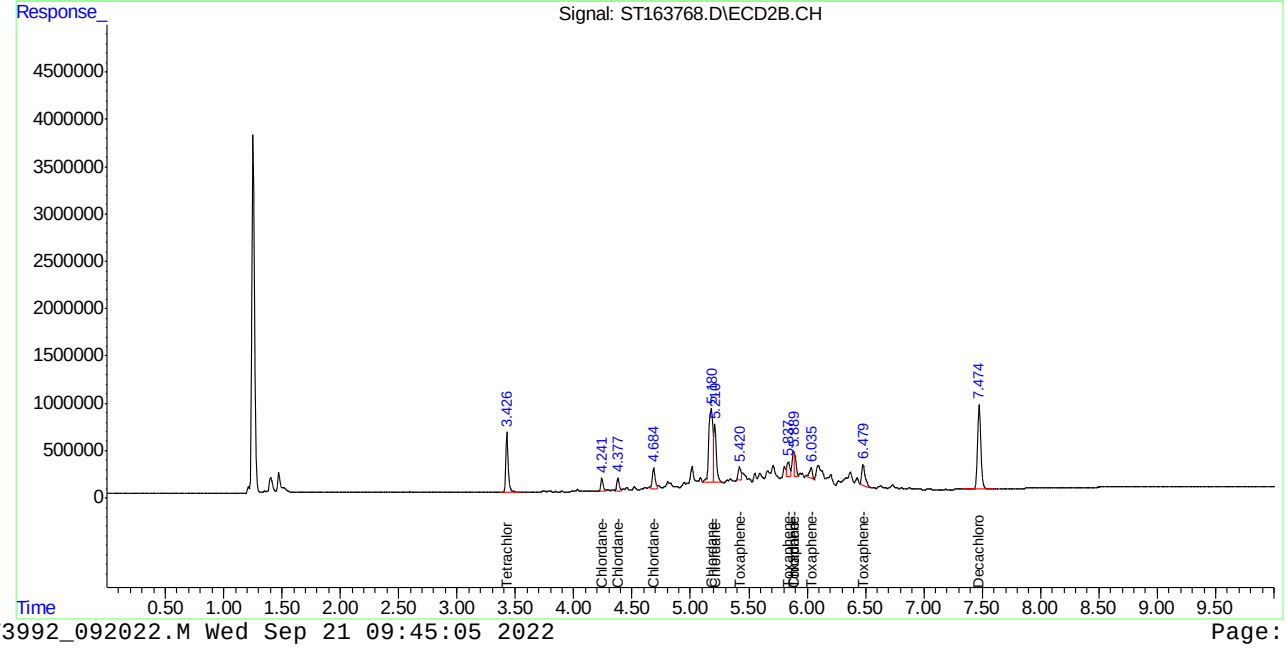
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163768.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:32 pm
Operator : eduardom
Sample : op93037-BS2 Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 21 09:36:28 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: OP93037-BS2 **Method:** EPA 608.3
Lab FileID: ST163768.D **Analyst approved:** 09/21/22 10:01 William Hustedde
Injection Time: 09/20/22 18:32 **Supervisor approved:** 09/21/22 10:51 Naresh Jiawan

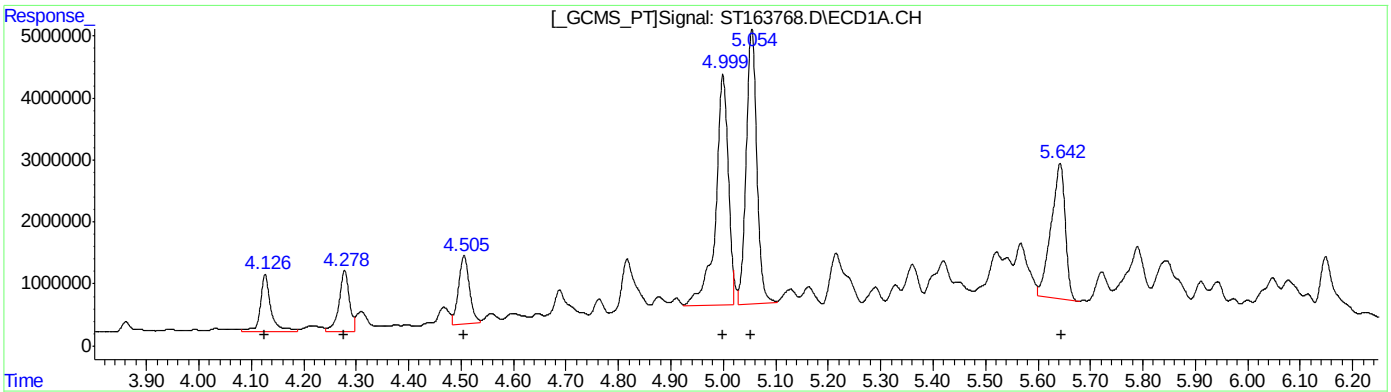
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-C		1	4.51	Poor instrument integration
Chlordane-C		2	4.68	Poor instrument integration
Chlordane-D		1	5.00	Poor instrument integration
Chlordane-E		1	5.05	Poor instrument integration
Chlordane-D		2	5.18	Poor instrument integration
Toxaphene-A		1	5.21	Poor instrument integration
Chlordane-E		2	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Chlordane-F		1	5.64	Poor instrument integration
Toxaphene-C		1	5.64	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Chlordane-F		2	5.88	Poor instrument integration
Toxaphene-C		2	5.89	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163768.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:32 pm
Operator : eduardom
Sample : op93037-BS2 Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 21 09:31:28 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(22) Chlordane-A #2 (L1)

R.T.	Response	Conc
4.13	930392	231.87
4.28	990643	157.39
4.51	1104701	295.92
5.00	3732550	231.88
5.05	4451811	245.23
5.64	2200115	675.43

(22) Chlordane-A #2 (L1)

R.T.	Response	Conc
4.24	140795	230.87
4.38	148620	150.94
4.68	224941	310.48
5.18	775179	272.67
5.21	606354	248.75
5.88	254779	318.70

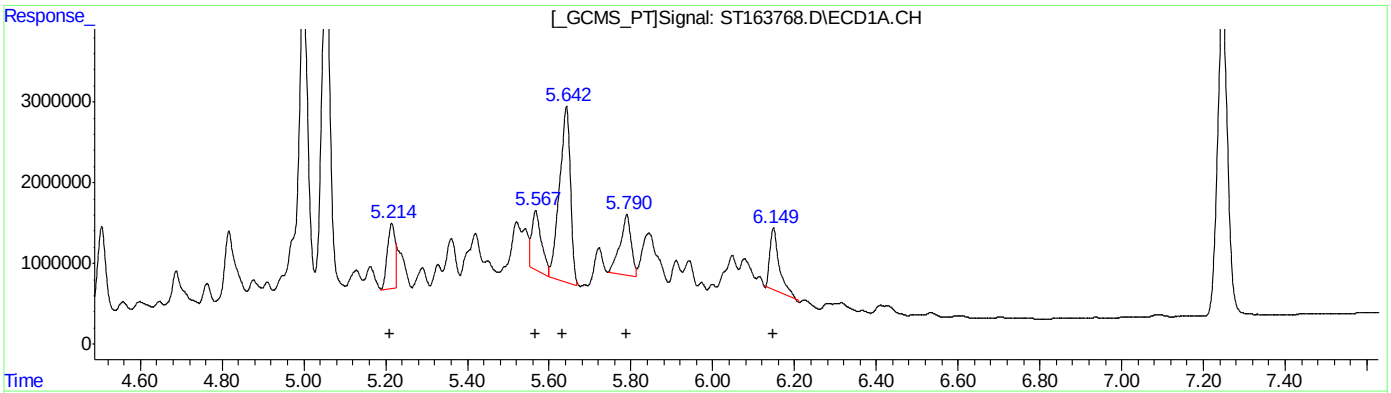
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163768.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 6:32 pm
Operator : eduardom
Sample : op93037-BS2 Inst : ECD 3
Misc : OP93037,GST3992,1000,,,5,1,Water
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 21 09:31:28 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	10153539	643.71
5.57	12263592	518.88
5.64	40435313	879.65
5.79	13911292	490.10
6.15	12165231	459.41

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	2021250	505.84
5.84	2488306	356.99
5.89	2673471	482.63
6.04	1851137	429.78
6.48	4388785	486.14

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081785.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 12:12:30
Operator : eduardom
Sample : OP93038-BS Inst : ECD 7
Misc : OP93038,GXX1548,1000,,,5,1,Water
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:44:25 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.154	3.471	22009294	45103222	45.211	37.887
	Spiked Amount	50.000	Range 38 - 127		Recovery =	90.42%	75.77%
55) S	Decachlor...	6.312	7.034	21051512	19480148	37.941	39.542
	Spiked Amount	50.000	Range 25 - 137		Recovery =	75.88%	79.08%
	Target Compounds						
2) L1	AR1016-A	3.387	3.776	3334928	5812895	338.672	337.421
3) L1	AR1016-B	3.602	4.013	6223607	9360234	373.486	366.716
4) L1	AR1016-C	3.722	4.155	3251930	5146983	372.937	376.947
5) L1	AR1016-D	3.868	4.271	11652794	17612723	368.006	380.340
6) L1	AR1016-E	3.944	4.347	6219581	9874621	362.738	381.466
7) L1	AR1016-F	4.164	4.604	5426730	8502797	366.911	386.275
	Sum AR1016-A			36109570	56310255	2182.751	2229.165
	Average AR1016-A					363.792	371.527
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
37) L7	AR1260-A	4.816	5.312	9440580	12785529	325.987	355.405
38) L7	AR1260-B	4.966	5.426	12502691	15348606	320.909	332.054
39) L7	AR1260-C	5.125	5.641	12016805	14412471	346.057	365.781
40) L7	AR1260-D	5.322	5.872	9346790	12542962	326.178	341.101
41) L7	AR1260-E	5.497	6.016	22646446	27488889	313.251	335.662
42) L7	AR1260-F	5.667	6.247	10967517	13935074	321.111	356.561
	Sum AR1260-A			76920829	96513531	1953.494	2086.564
	Average AR1260-A					325.582	347.761
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081785.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 12:12:30
Operator : eduardom
Sample : OP93038-BS Inst : ECD 7
Misc : OP93038,GXX1548,1000,,,5,1,Water
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:44:25 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

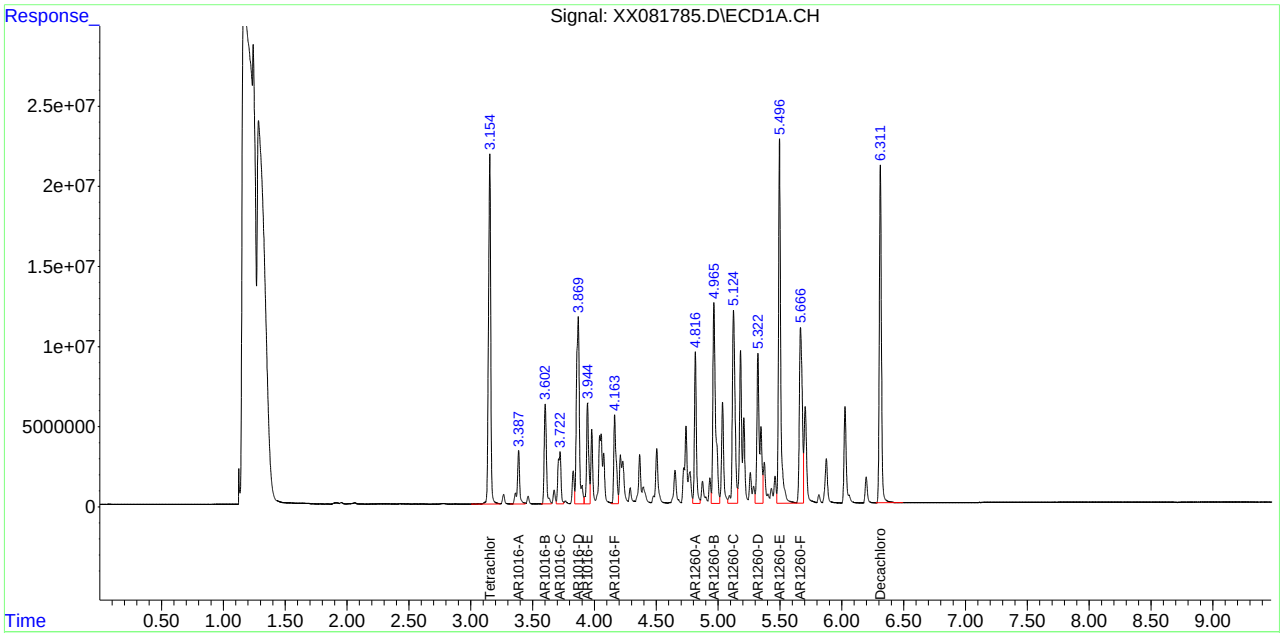
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

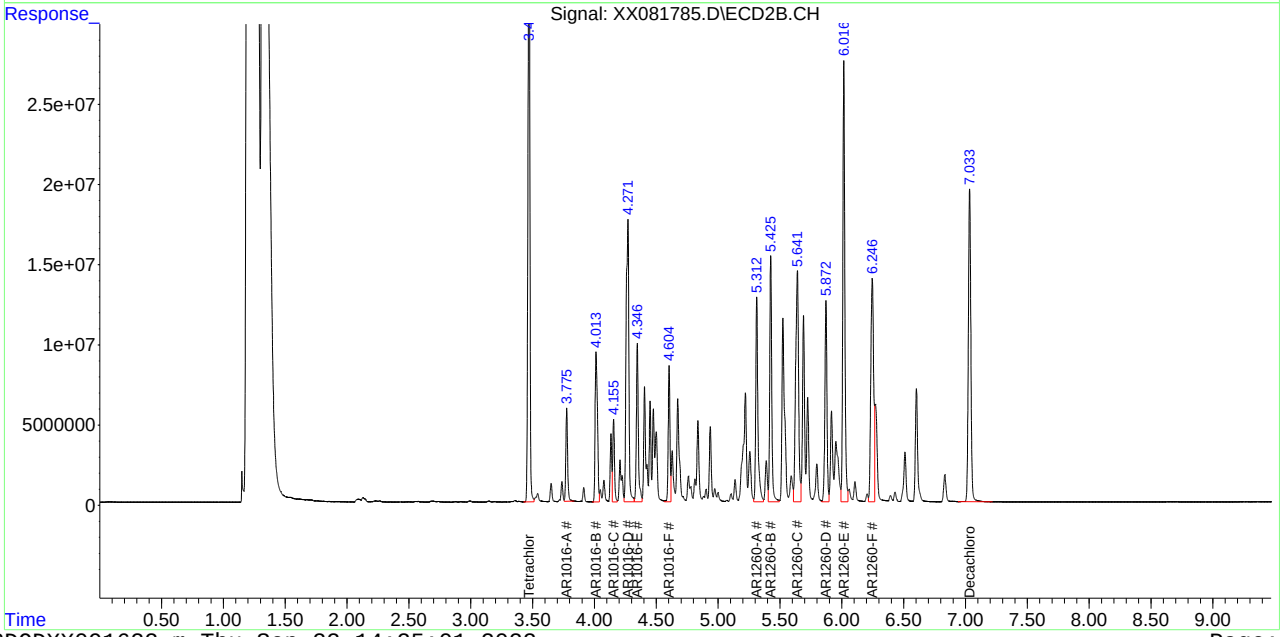
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081785.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 12:12:30
Operator : eduardom
Sample : OP93038-BS Inst : ECD 7
Misc : OP93038,GXX1548,1000,,,5,1,Water
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:44:25 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163774.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:13 pm
Operator : eduardom
Sample : op93037-MS Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Sep 21 09:41:14 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.313	3.425	4193244	639189	36.859	39.302
		Spiked Amount	50.000	Range 42 - 127		Recovery =	73.72%	78.60%
33)	S	Decachlor...	7.246	7.473	3762684	878036	40.583	39.449
		Spiked Amount	50.000	Range 27 - 127		Recovery =	81.17%	78.90%
		Target Compounds						
2)		alpha-BHC	3.646	3.839	6382821	1021012	36.733	41.800
3)		gamma-BHC...	3.881	4.103	6001169	1004385	38.221	40.483
4)		beta-BHC	4.047	4.329	2788606	523146	38.210	38.754
5)		delta-BHC	4.209	4.512	6324548	1154615	36.902	40.574
6)		Heptachlor	4.277	4.377	5200912	916963	39.018	40.599
7)		Aldrin	4.509	4.596	5588952	1021815	36.853	39.940
8)		Heptachlo...	4.817	4.974	5496154	1093529	38.486	39.265
9)		gamma-Chl...	4.998	5.163	6066105	1149431	42.270	42.035
10)		alpha-Chl...	5.050	5.210	5439433	1126387	39.982	41.475
11)		4,4'-DDE	5.199	5.347	5770858	1128078	41.595	41.525
12)		Endosulfa...	5.081	5.254	5099316	1015837	39.835	40.927
13)		Dieldrin	5.277	5.452	5941441	1362944	39.406	46.657
14)		Endrin	5.435	5.656	5563418	1214605	39.504	45.685
15)		4,4'-DDD	5.570	5.759	6996053	1002929	57.642	42.585
16)		Endosulfa...	5.604	5.872	5794273	1119529	43.852	40.164
17)		4,4'-DDT	5.787	5.947	4225879	1357436	47.553	62.637
18)		Endrin Al...	5.699	6.004	3887831	904329	38.428	41.625
19)		Methoxychlor	6.154	6.375	2434614	706946	46.237	61.806
20)		Endosulfa...	5.865	6.170	5098860	1224792	43.044	49.782
21)		Endrin Ke...	6.201	6.564	6133906	1148193	48.673	42.982
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163774.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:13 pm
Operator : eduardom
Sample : op93037-MS Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Sep 21 09:41:14 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

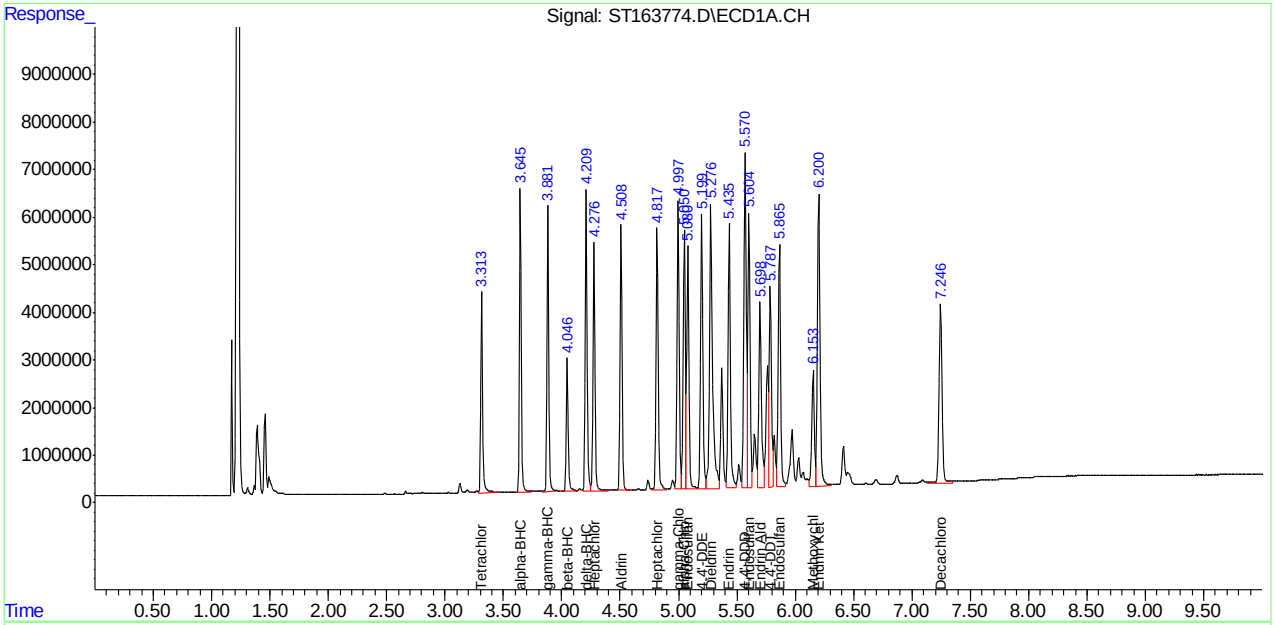
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

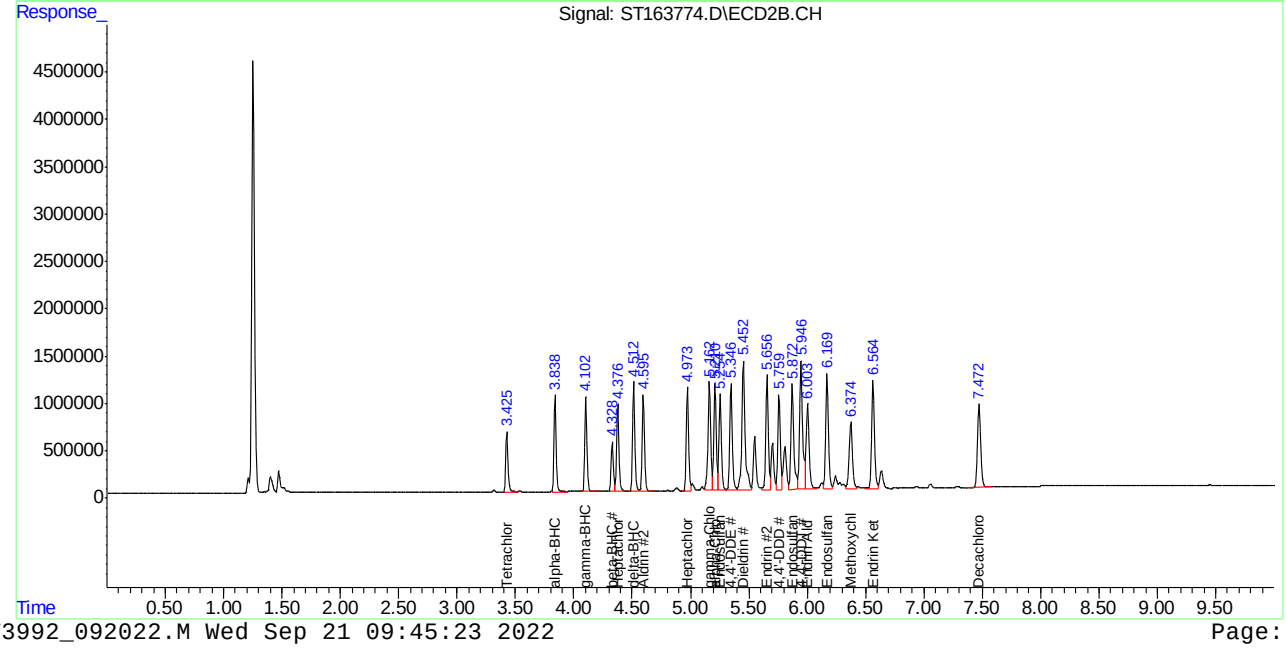
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163774.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:13 pm
Operator : eduardom
Sample : op93037-MS Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Sep 21 09:41:14 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163775.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:30 pm
Operator : eduardom
Sample : op93037-MSD Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Sep 21 09:42:24 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.315	3.426	4419289	675430	38.846	41.530
		Spiked Amount	50.000	Range 42 - 127		Recovery =	77.69%	83.06%
33)	S	Decachlor...	7.248	7.475	3940996	919407	42.507	41.308
		Spiked Amount	50.000	Range 27 - 127		Recovery =	85.01%	82.62%
		Target Compounds						
2)		alpha-BHC	3.647	3.840	6847243	1117435	39.405	45.747
3)		gamma-BHC...	3.883	4.104	6420758	1075313	40.893	43.342
4)		beta-BHC	4.048	4.330	3004123	561019	41.163	41.560
5)		delta-BHC	4.211	4.514	6586427	1223460	38.430	42.993
6)		Heptachlor	4.278	4.378	5444075	980659	40.842	43.419
7)		Aldrin	4.509	4.597	6019423	1095668	39.691	42.826
8)		Heptachlo...	4.818	4.974	5951346	1136740	41.673	40.816
9)		gamma-Chl...	4.999	5.163	6461978	1226194	45.028	44.843
10)		alpha-Chl...	5.051	5.211	5862231	1197494	43.089	44.093
11)		4,4'-DDE	5.200	5.347	6119116	1215642	44.106	44.748
12)		Endosulfa...	5.082	5.255	5491696	1068939	42.900	43.066
13)		Dieldrin	5.278	5.453	6534894	1399980	43.342	47.925
14)		Endrin	5.436	5.657	5966325	1238980	42.365	46.601
15)		4,4'-DDD	5.572	5.760	6872852	1051145	56.627	44.633
16)		Endosulfa...	5.605	5.873	5942259	1175574	44.972	42.175
17)		4,4'-DDT	5.789	5.948	4464126	1314390	49.861	60.827
18)		Endrin Al...	5.700	6.005	3875748	883982	38.308	40.688
19)		Methoxychlor	6.155	6.376	2480701	668640	47.082	58.457
20)		Endosulfa...	5.867	6.171	5088178	1222667	42.954	49.695
21)		Endrin Ke...	6.202	6.564	6144234	1192183	48.754	44.629
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163775.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:30 pm
Operator : eduardom
Sample : op93037-MSD Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Sep 21 09:42:24 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

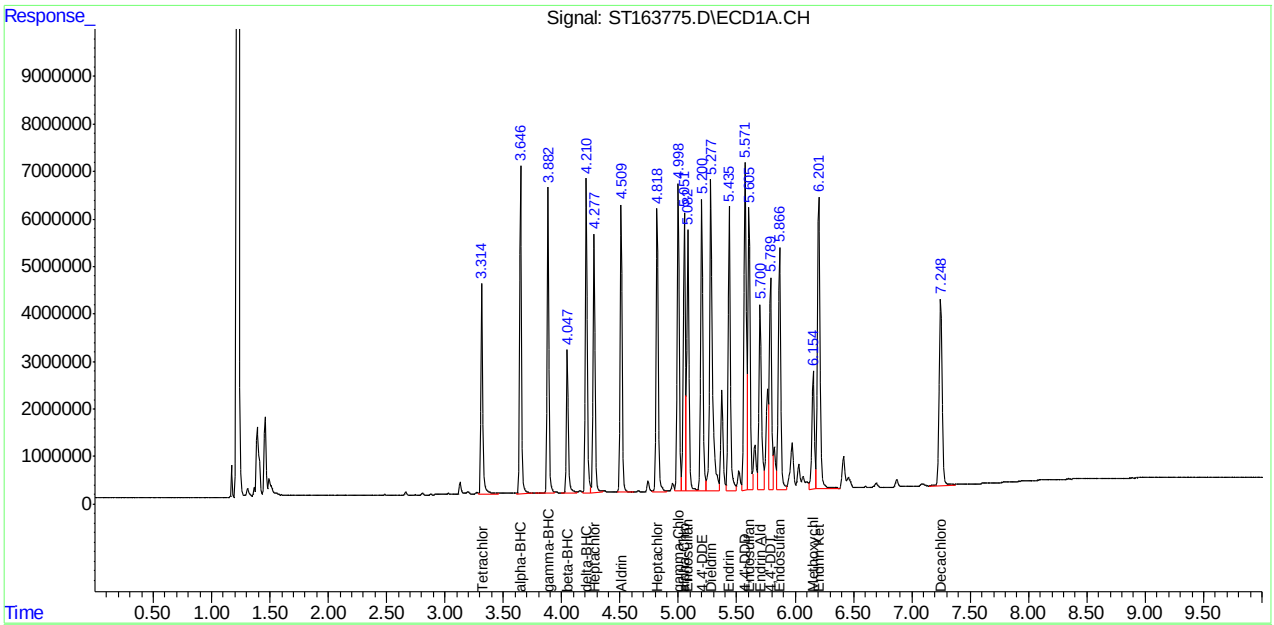
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

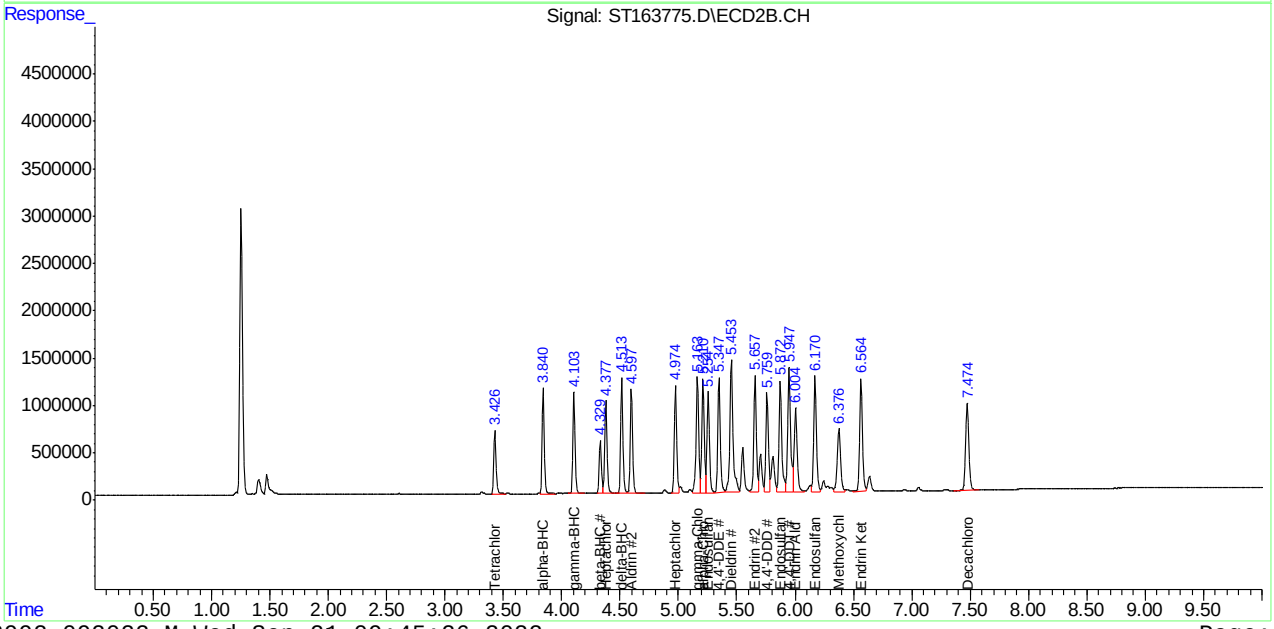
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163775.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:30 pm
Operator : eduardom
Sample : op93037-MSD Inst : ECD 3
Misc : OP93037,GST3992,520,,,5,1,Water
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Sep 21 09:42:24 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081789.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:03:21
Operator : eduardom
Sample : OP93038-MS Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:24:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	3.154	3.472	23667303	47813392	48.617	40.163
Spiked Amount	50.000 Range	38 - 127	Recovery	=	97.23%	80.33%
55) S Decachlor...	6.311	7.034	24423584	21426662	44.018	43.494
Spiked Amount	50.000 Range	25 - 137	Recovery	=	88.04%	86.99%
Target Compounds						
2) L1 AR1016-A	3.388	3.776	3496068	6514994	355.036	378.176
3) L1 AR1016-B	3.603	4.013	6937916	10397814	416.353	407.367
4) L1 AR1016-C	3.722	4.156	3583896	5662114	411.008	414.673
5) L1 AR1016-D	3.869	4.272	12711952	19163511	401.455	413.828
6) L1 AR1016-E	3.945	4.347	6818722	10732609	397.682	414.611
7) L1 AR1016-F	4.164	4.604	6910007	10192228	467.198	463.024
Sum AR1016-A			40458561	62663269	2448.731	2491.679
Average AR1016-A					408.122	415.280
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
38) L7 AR1260-B	4.965	5.426	33486899	37701954	859.515	815.649
39) L7 AR1260-C	5.123	5.641	31207329	33103447	898.701	840.148
40) L7 AR1260-D	5.321	5.872	19074772	23962299	665.659	651.646
41) L7 AR1260-E	5.495	6.016	39765942	45148673	550.053	551.303
42) L7 AR1260-F	5.664	6.247	18549252	22143215	543.091	566.585
Sum AR1260-A			142.1E6	162.1E6	3517.020	3425.330
Average AR1260-A					703.404	685.066
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081789.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:03:21
Operator : eduardom
Sample : OP93038-MS Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:24:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

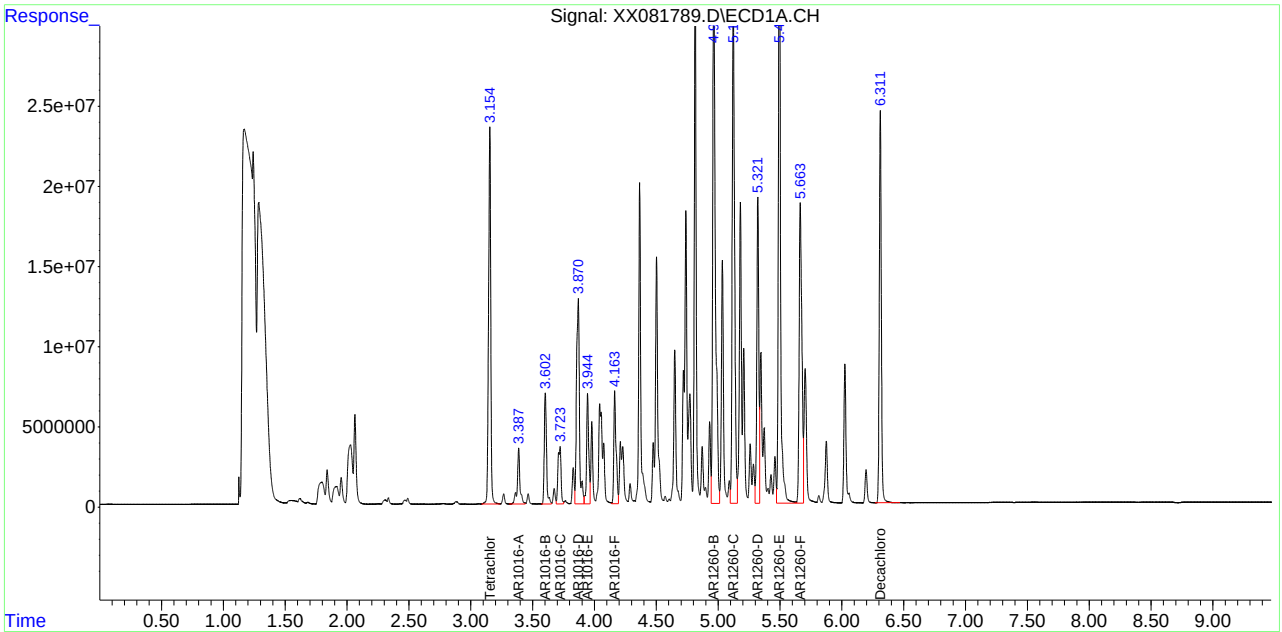
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

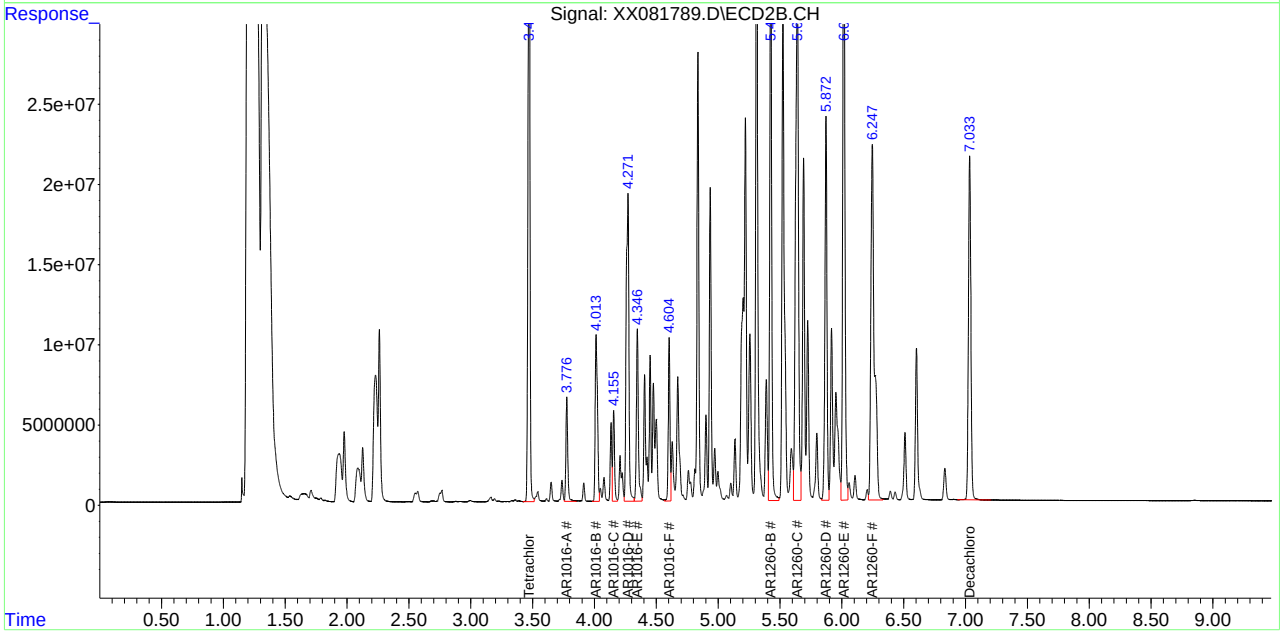
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081789.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:03:21
Operator : eduardom
Sample : OP93038-MS Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:24:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081790.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:15:58
Operator : eduardom
Sample : OP93038-MSD Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:25:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.154	3.472	23286985	46753000	47.836	39.273
	Spiked Amount	50.000	Range 38 - 127	Recovery =		95.67%	78.55%
55) S	Decachlor...	6.311	7.033	23722487	20801597	42.755	42.225
	Spiked Amount	50.000	Range 25 - 137	Recovery =		85.51%	84.45%
	Target Compounds						
2) L1	AR1016-A	3.387	3.776	3341196	6134712	339.309	356.102
3) L1	AR1016-B	3.603	4.014	6616077	9882220	397.039	387.167
4) L1	AR1016-C	3.721	4.156	3452623	5441225	395.953	398.496
5) L1	AR1016-D	3.869	4.272	12123703	18331387	382.877	395.859
6) L1	AR1016-E	3.945	4.347	6530776	10229901	380.888	395.191
7) L1	AR1016-F	4.164	4.604	6252750	9485553	422.760	430.920
	Sum AR1016-A			38317125	59504997	2318.826	2363.734
	Average AR1016-A					386.471	393.956
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
38) L7	AR1260-B	4.965	5.426	26470760	30319532	679.431	655.936
39) L7	AR1260-C	5.123	5.641	24067099	26151524	693.079	663.712
40) L7	AR1260-D	5.321	5.873	15868640	20087586	553.774	546.274
41) L7	AR1260-E	5.496	6.017	33683936	38863624	465.925	474.557
42) L7	AR1260-F	5.665	6.247	16104923	18765033	471.525	480.146
	Sum AR1260-A			116.2E6	134.2E6	2863.733	2820.626
	Average AR1260-A					572.747	564.125
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081790.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:15:58
Operator : eduardom
Sample : OP93038-MSD Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:25:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

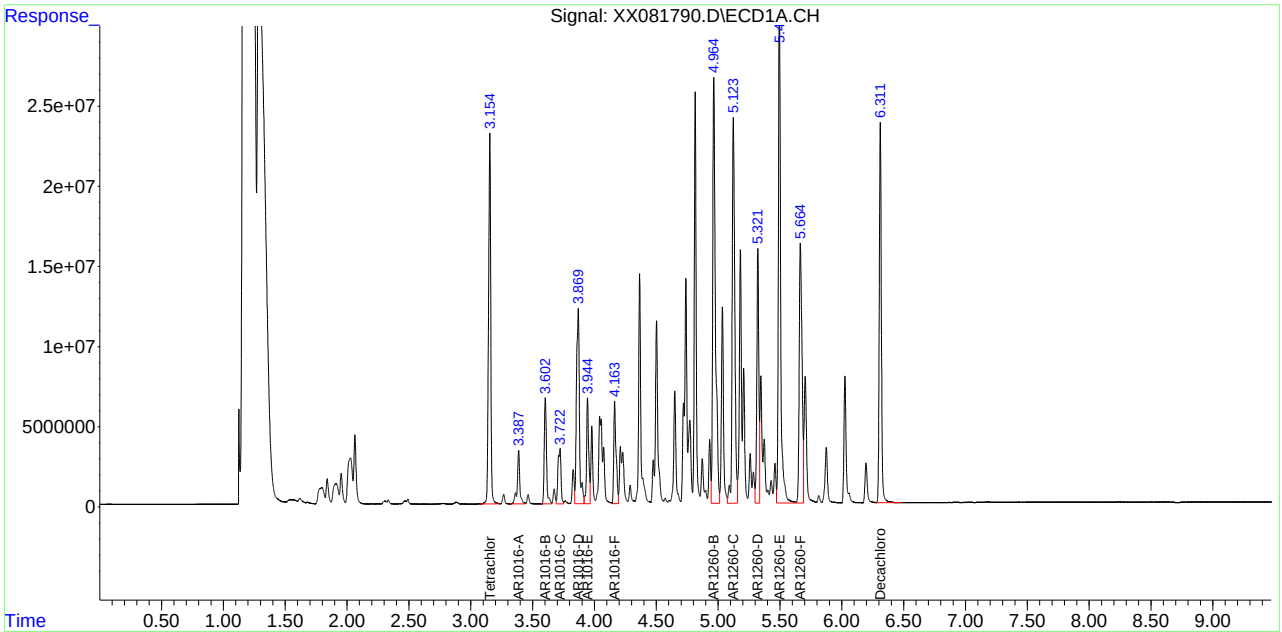
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

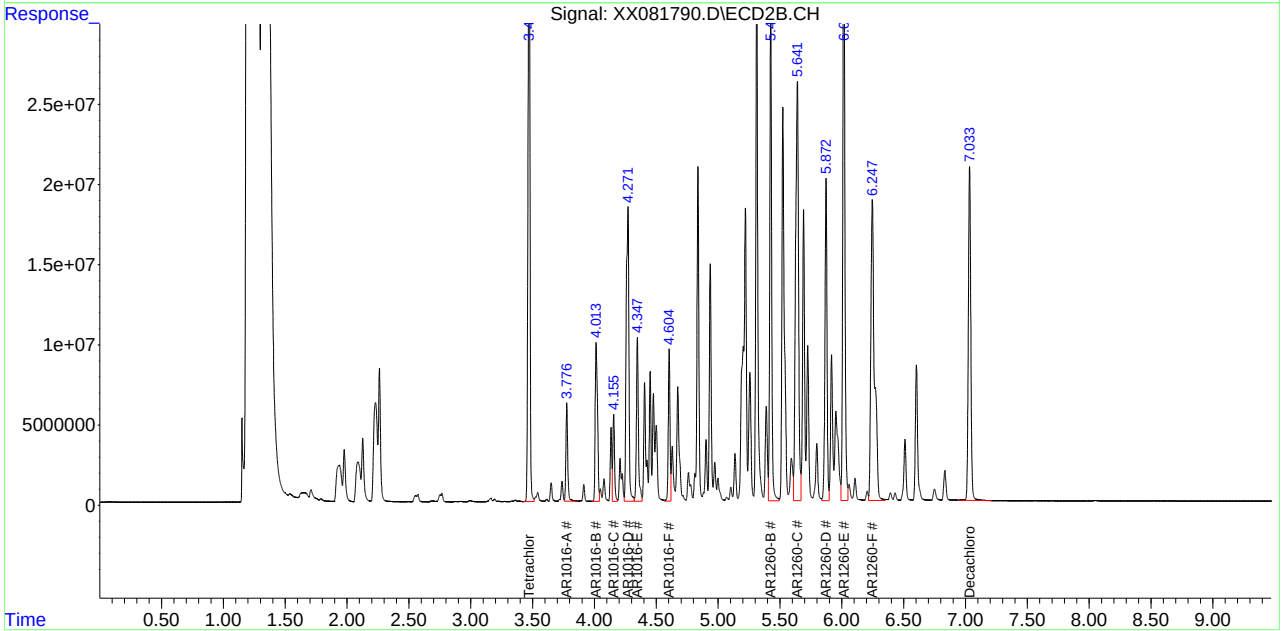
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081790.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 13:15:58
Operator : eduardom
Sample : OP93038-MSD Inst : ECD 7
Misc : OP93038,GXX1548,520,,,5,1,Water
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:25:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:40:27 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	5.197	5.346	148679	26224	1.135m	1.070
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	5.435	5.656	5730542	1180233	48.920m	53.579
15)		4,4'-DDD	5.568	5.764	66739	6980	0.579m	0.329m#
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	5.787	5.947	3664256	862987	53.856m	56.570
18)		Endrin Al...	5.715	6.002	28917	3105	0.426m	0.192m#
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	6.203	6.575	22626	4280	0.224m	0.195m
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:40:27 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

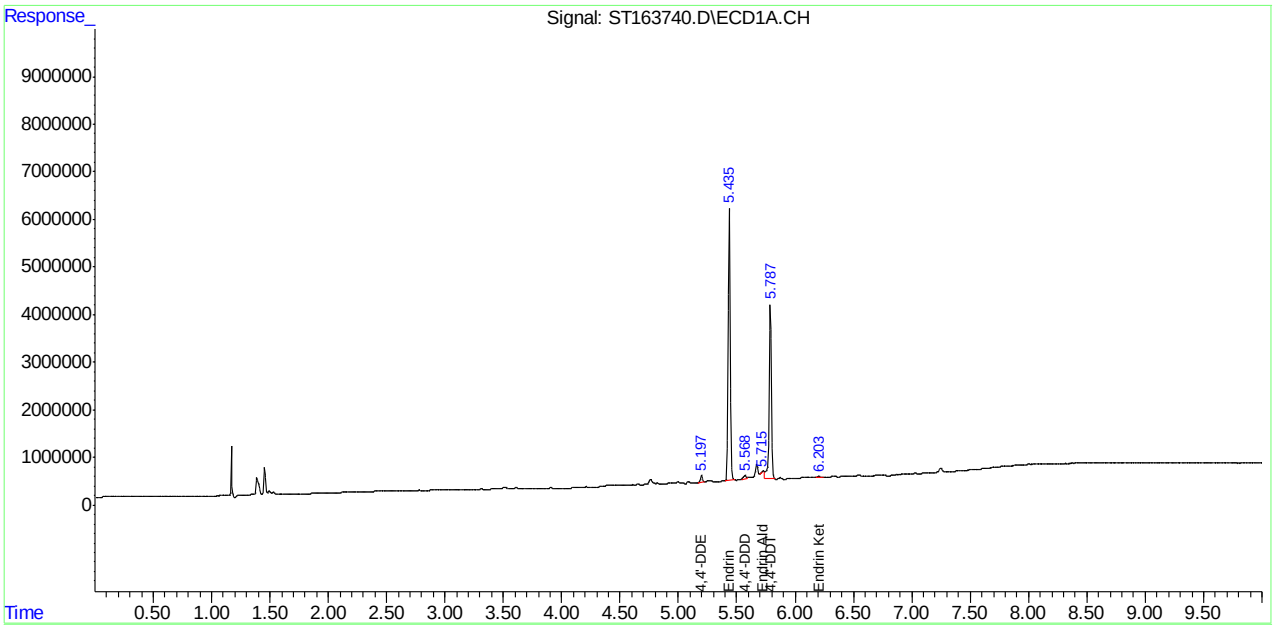
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

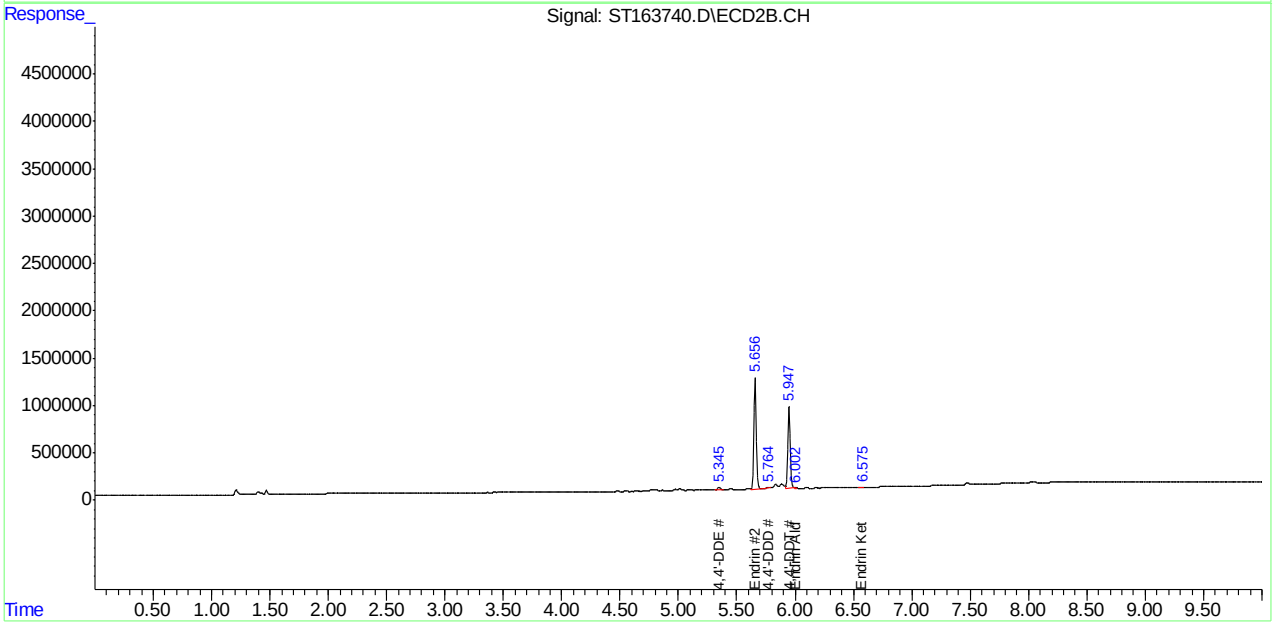
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:40:27 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-DDT
Lab FileID: ST163740.D
Injection Time: 09/20/22 10:30
Method: SW846 8081B
Analyst approved: 09/20/22 17:32 William Hustedde
Supervisor approved: 09/21/22 10:49 Naresh Jiawan

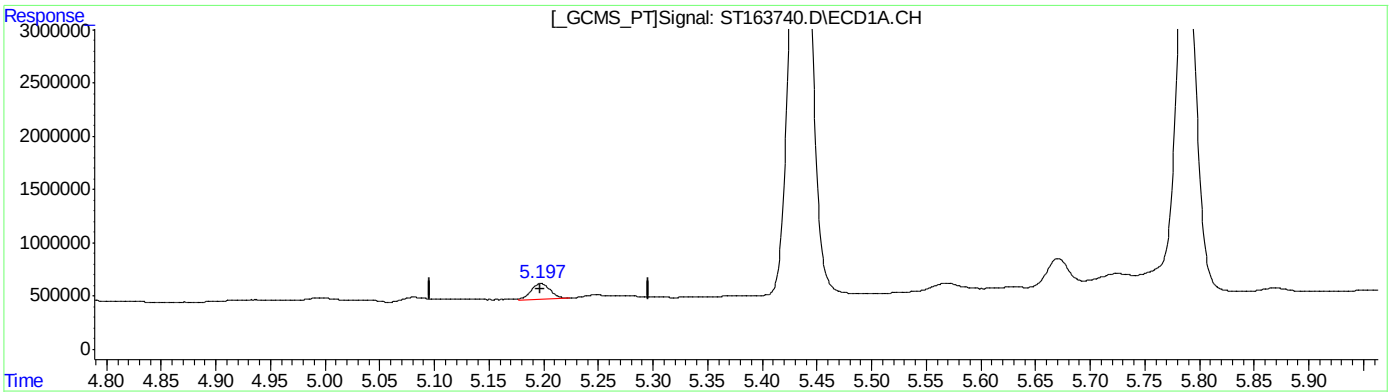
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDE	72-55-9	1	5.20	Poor instrument integration
Endrin	72-20-8	1	5.44	Poor instrument integration
4,4'-DDD	72-54-8	1	5.57	Poor instrument integration
Endrin aldehyde	7421-93-4	1	5.71	Poor instrument integration
4,4'-DDD	72-54-8	2	5.76	Poor instrument integration
4,4'-DDT	50-29-3	1	5.79	Poor instrument integration
Endrin aldehyde	7421-93-4	2	6.00	Poor instrument integration
Endrin ketone	53494-70-5	1	6.20	Poor instrument integration
Endrin ketone	53494-70-5	2	6.58	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:34:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3987_091222.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(11) 4,4'-DDE

5.197min 1.169 PPB m

response 153162

(11) 4,4'-DDE #2

5.346min 1.070 PPB

response 26224

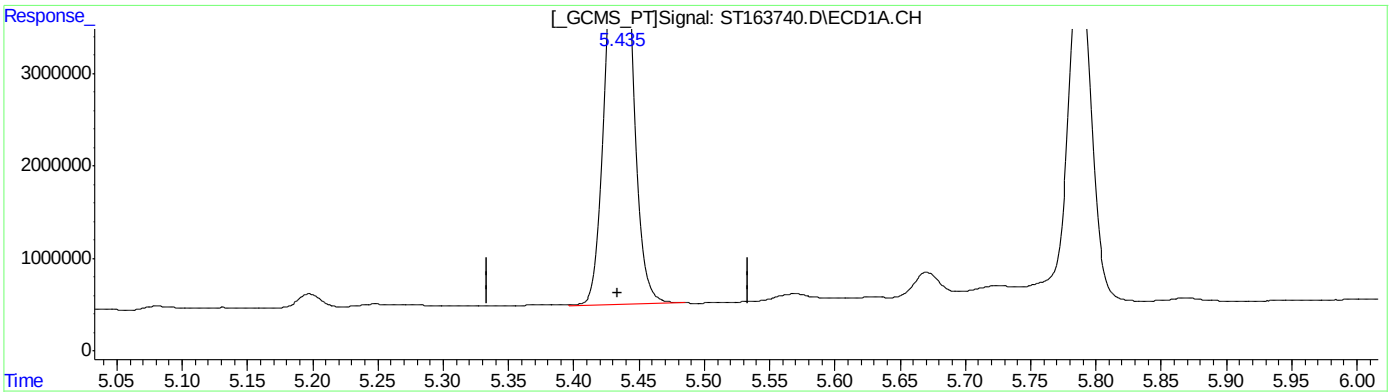
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:34:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3987_091222.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(14) Endrin ( )

5.435min 48.967 PPB m

response 5736052

(14) Endrin #2 ( )

5.656min 53.579 PPB

response 1180233

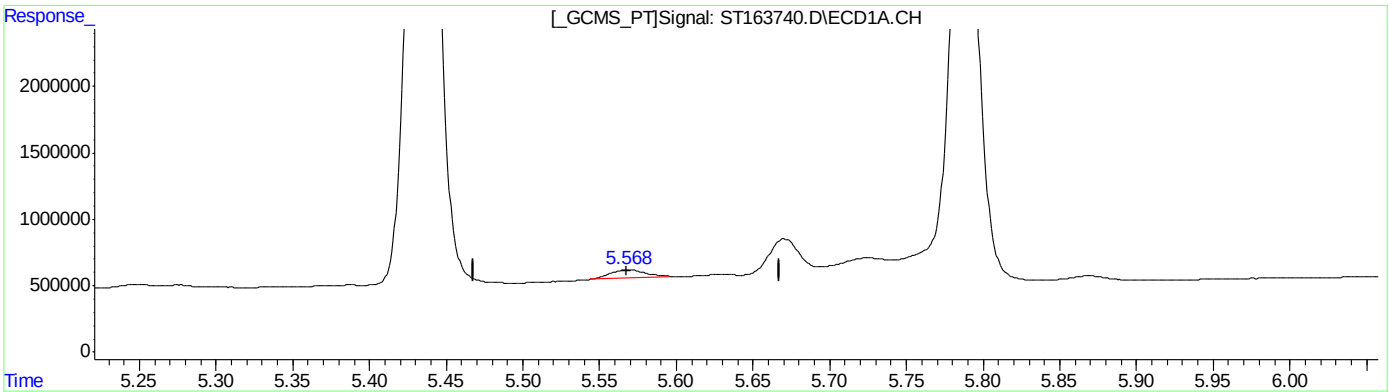
(+) = Expected Retention Time

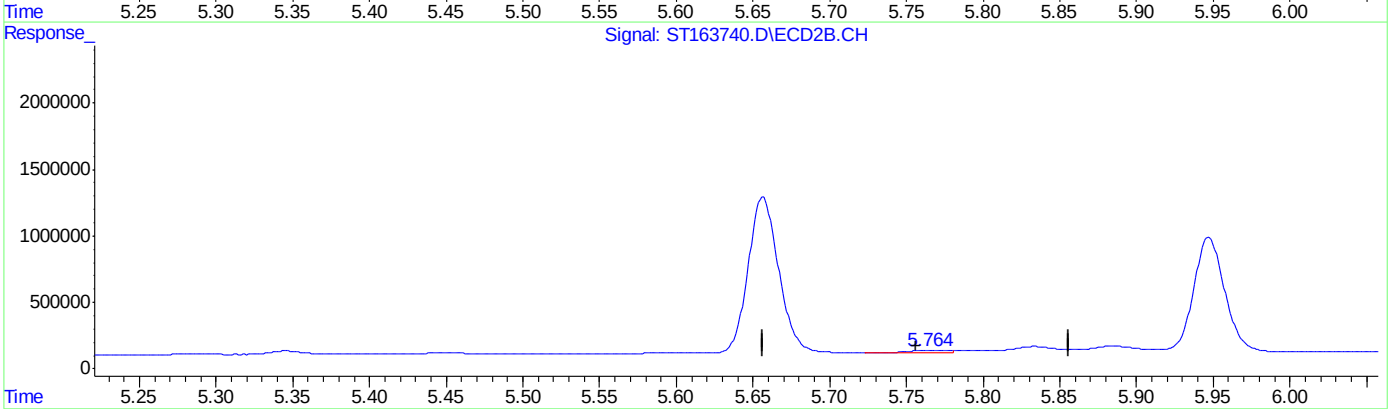
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:34:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3987_091222.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(15) 4,4'-DDD ( )
5.568min 0.550 PPB m
response 63393

(15) 4,4'-DDD #2 ( )
5.765min 0.795 PPB
response 16850

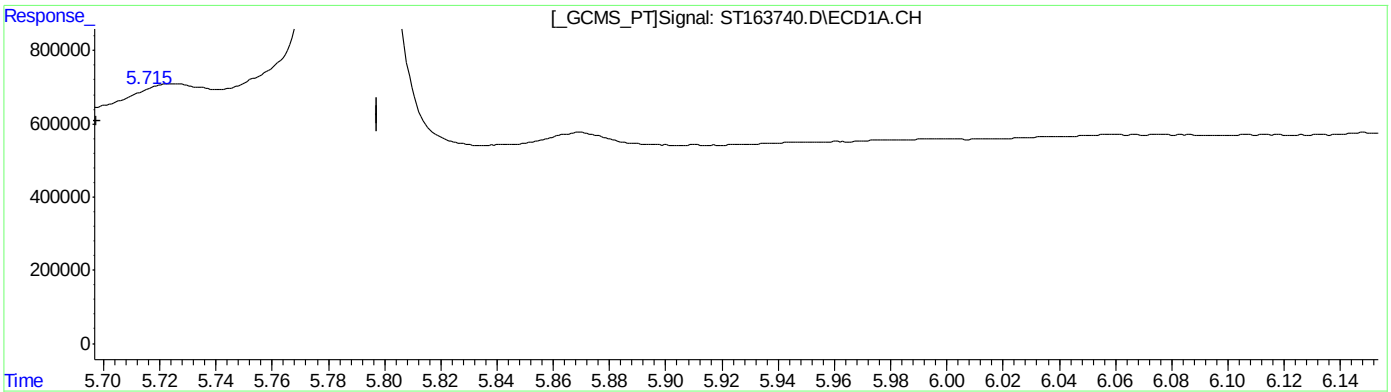
(+) = Expected Retention Time
GST3987_091222.M Tue Sep 20 11:36:02 2022 Page: 1

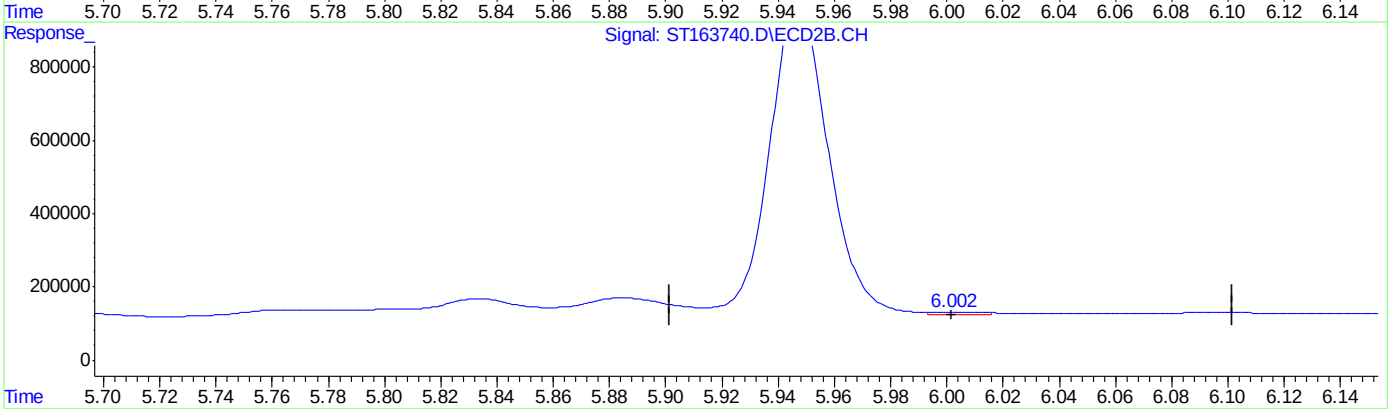
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:34:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3987_091222.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(18) Endrin Aldehyde ( )
5.715min 0.540 PPB m
response 36638

(18) Endrin Aldehyde #2 ( )
6.002min 0.397 PPB m
response 6406

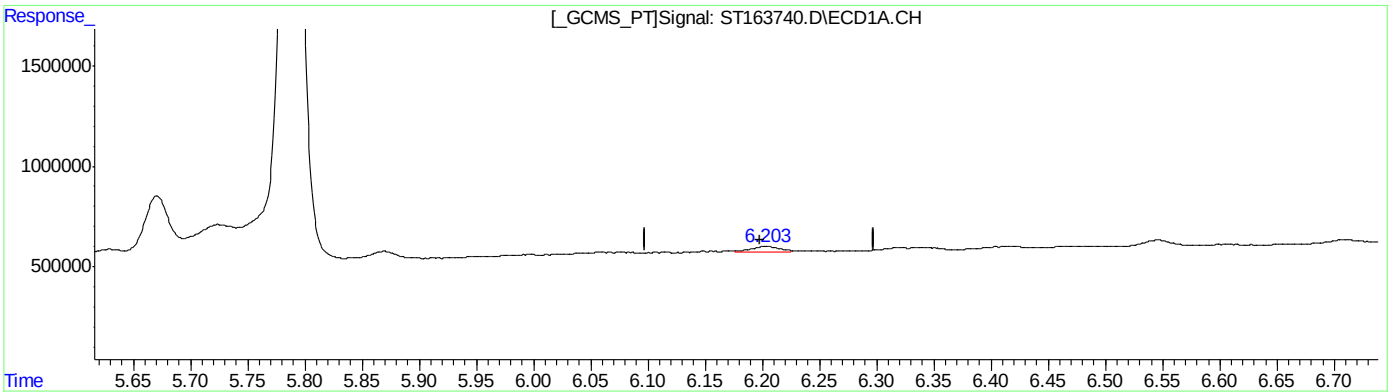
(+) = Expected Retention Time
GST3987_091222.M Tue Sep 20 11:36:22 2022

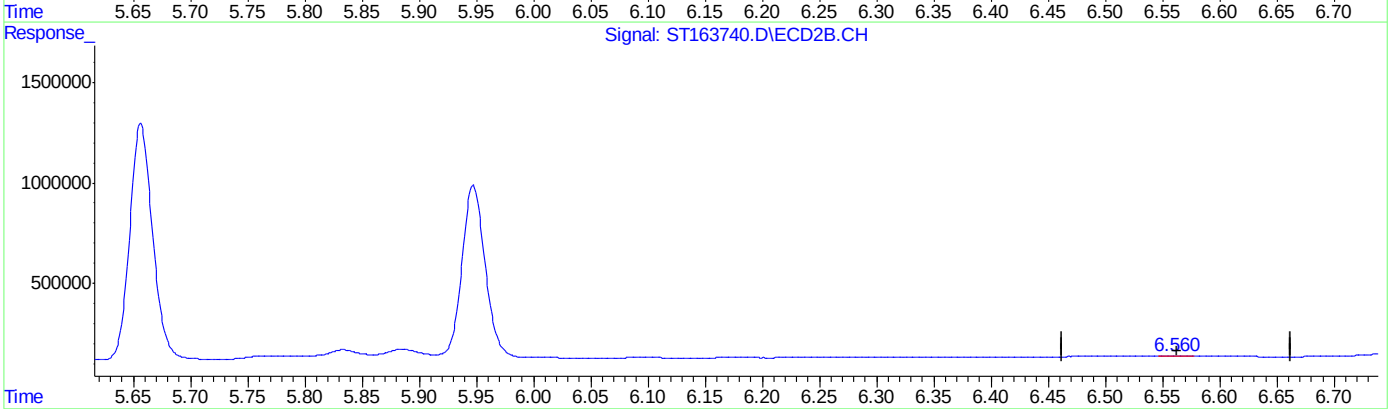
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:34:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3987_091222.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(21) Endrin Ketone ( )
6.203min 0.245 PPB m
response 24712

(21) Endrin Ketone #2 ( )
6.560min 0.167 PPB m
response 3672

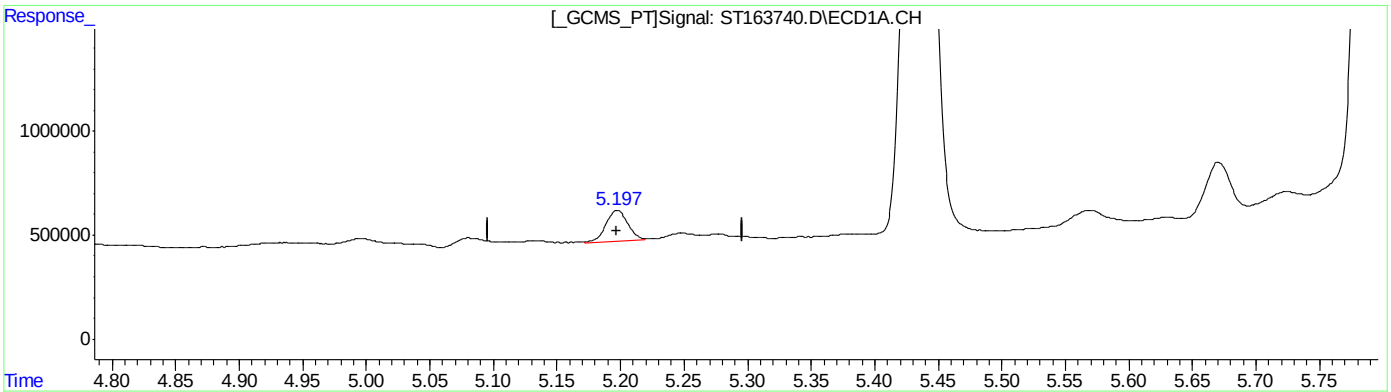
(+) = Expected Retention Time

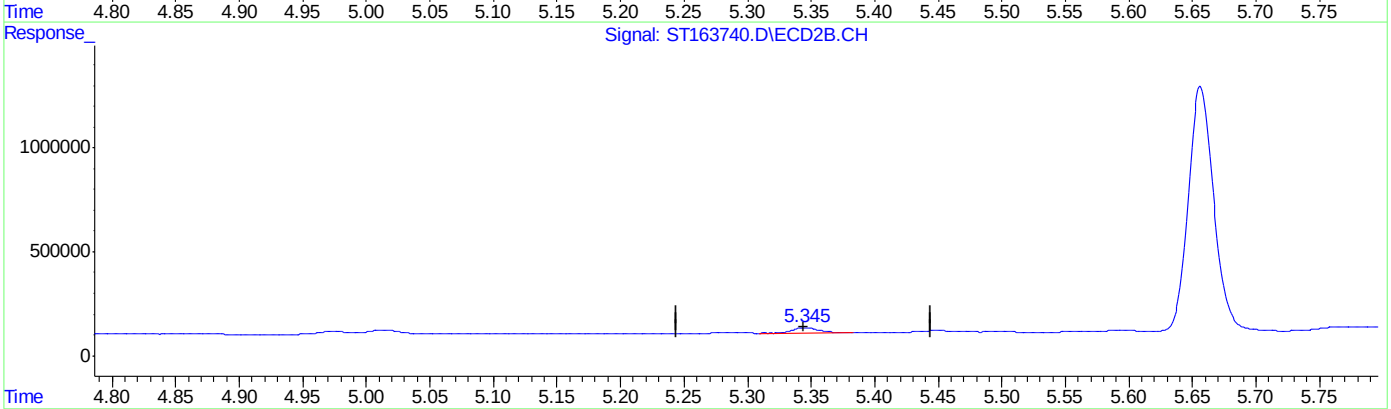
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(11) 4,4'-DDE
5.197min 1.135 PPB m
response 148679

(11) 4,4'-DDE #2
5.346min 1.070 PPB
response 26224

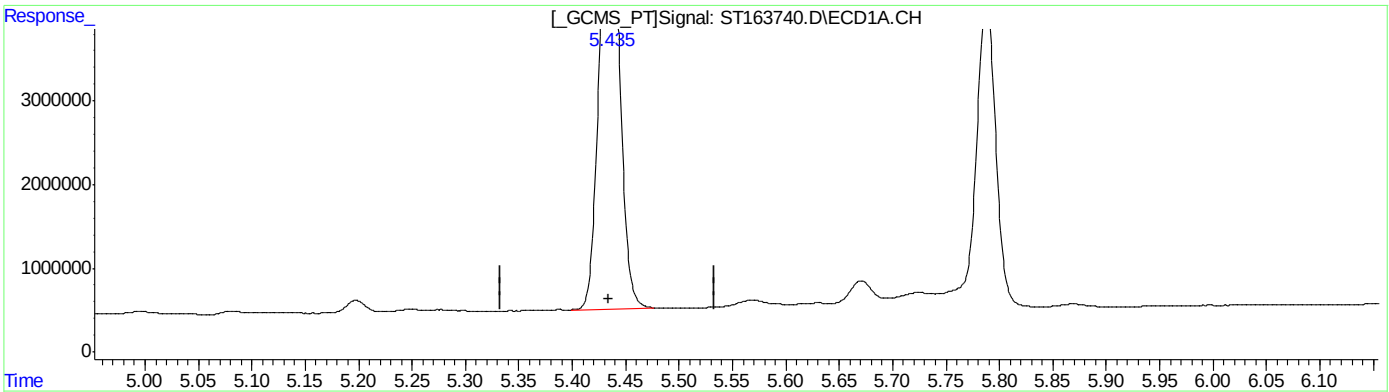
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:39:25 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(14) Endrin ( )

5.435min 48.920 PPB m

response 5730542

(14) Endrin #2 ( )

5.656min 53.579 PPB

response 1180233

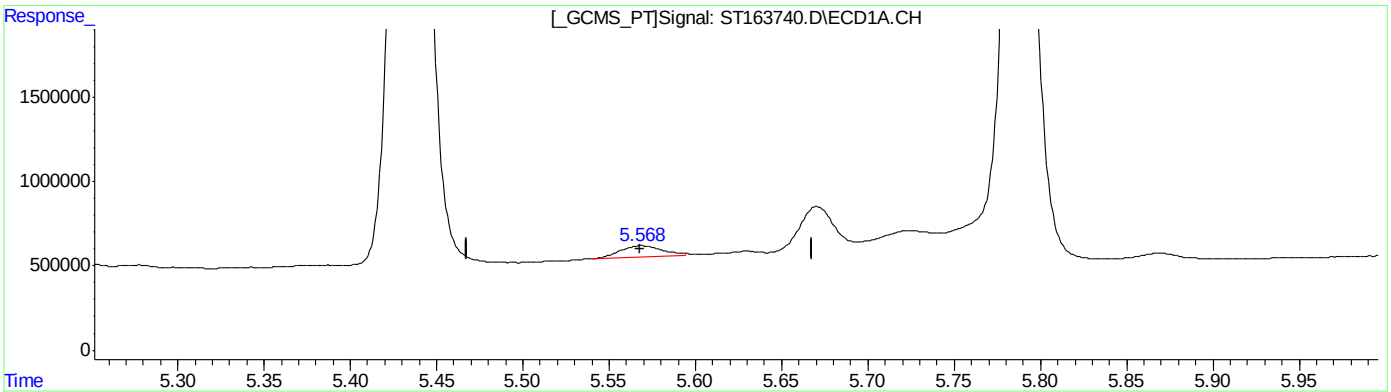
(+) = Expected Retention Time

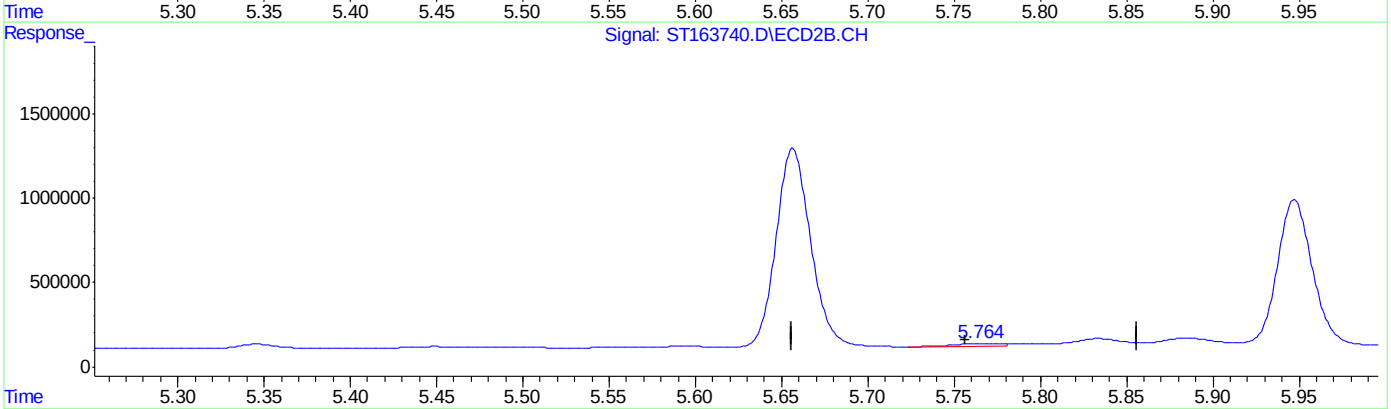
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(15) 4,4'-DDD ( )
5.568min 0.579 PPB m
response 66739

(15) 4,4'-DDD #2 ( )
5.765min 0.795 PPB
response 16850

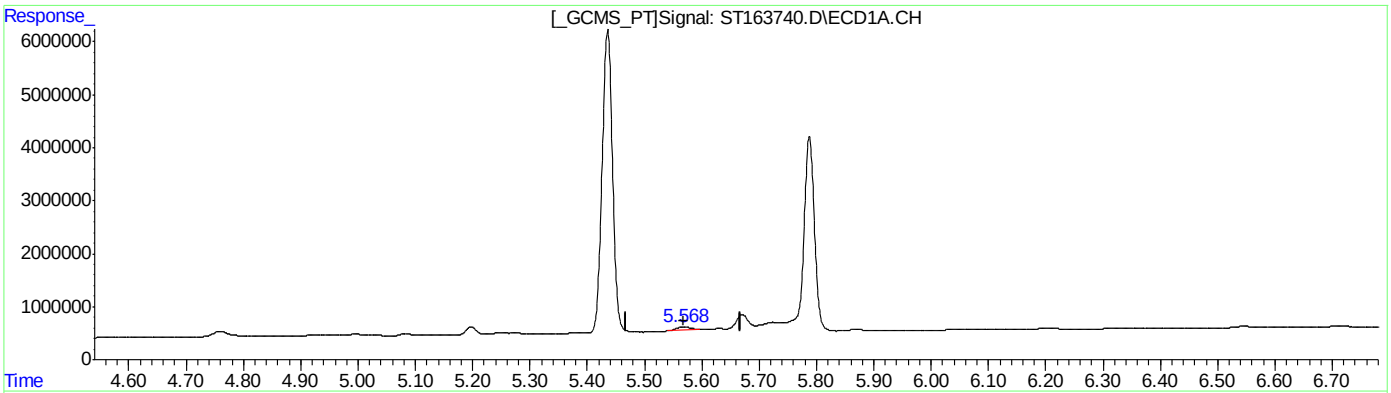
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:39:42 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(15) 4,4'-DDD ( )

5.568min 0.579 PPB m

response 66739

(15) 4,4'-DDD #2 ( )

5.764min 0.329 PPB m

response 6980

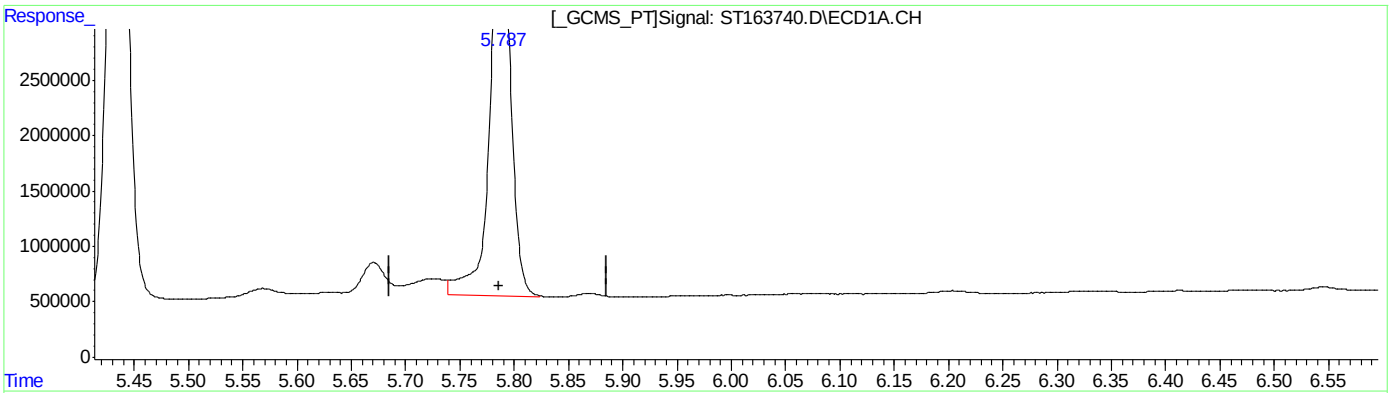
(+) = Expected Retention Time

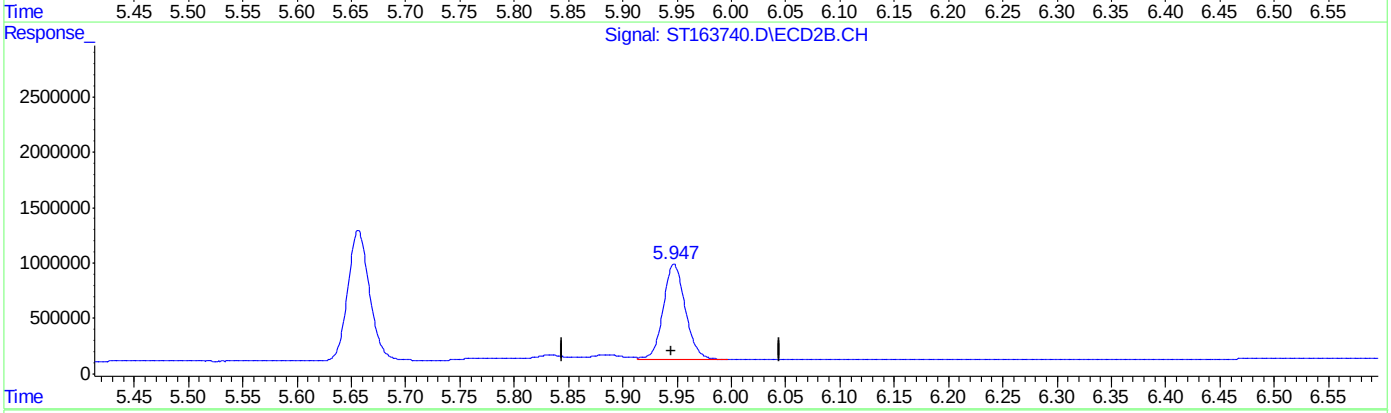
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(17) 4,4'-DDT
5.787min 53.856 ppb m
response 3664256

(17) 4,4'-DDT #2
5.947min 56.570 ppb
response 862987

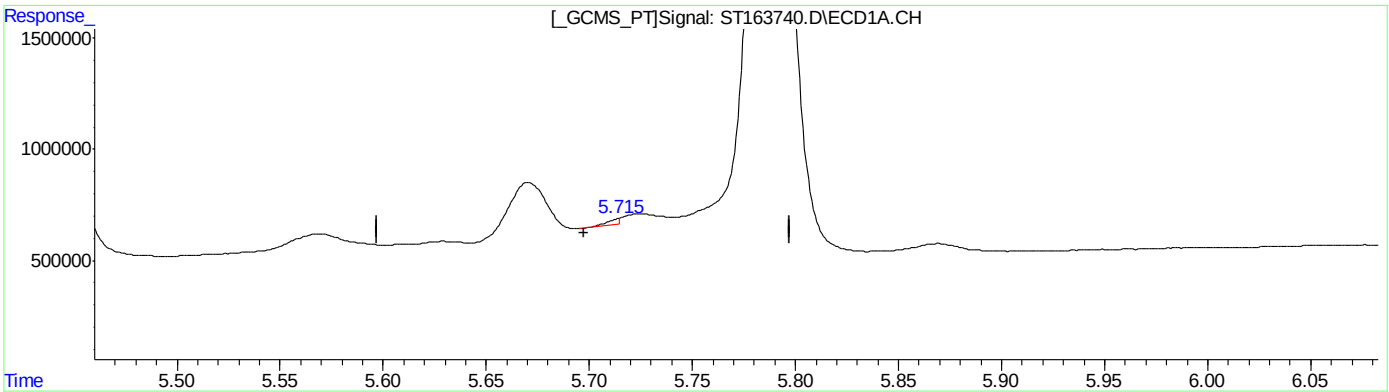
(+) = Expected Retention Time

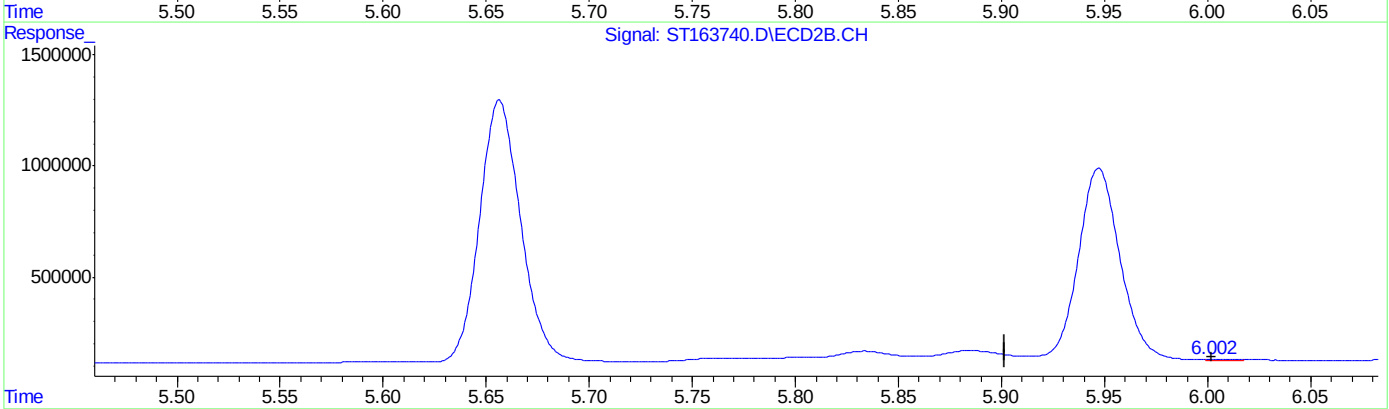
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(18) Endrin Aldehyde ( )
5.715min 0.426 PPB m
response 28917

(18) Endrin Aldehyde #2 ( )
6.002min 0.192 PPB m
response 3105

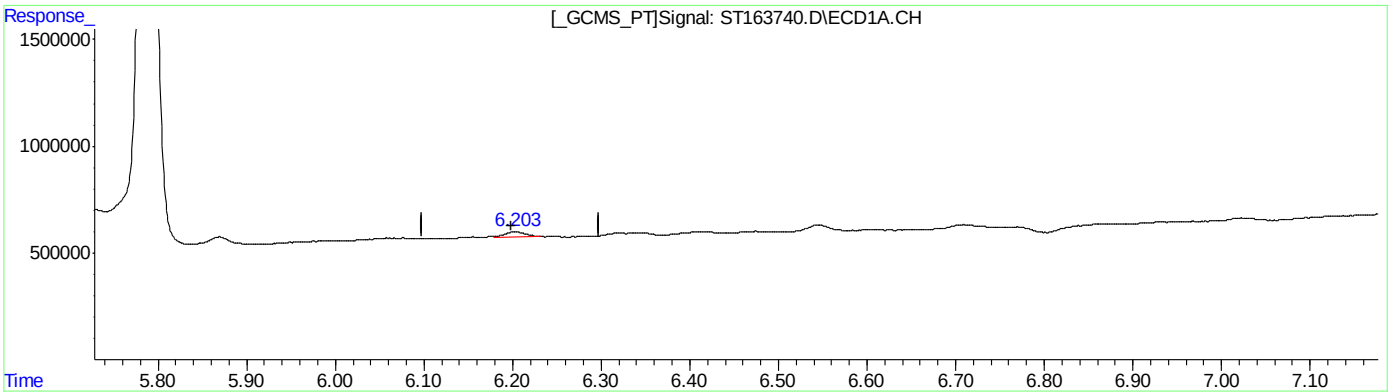
(+) = Expected Retention Time

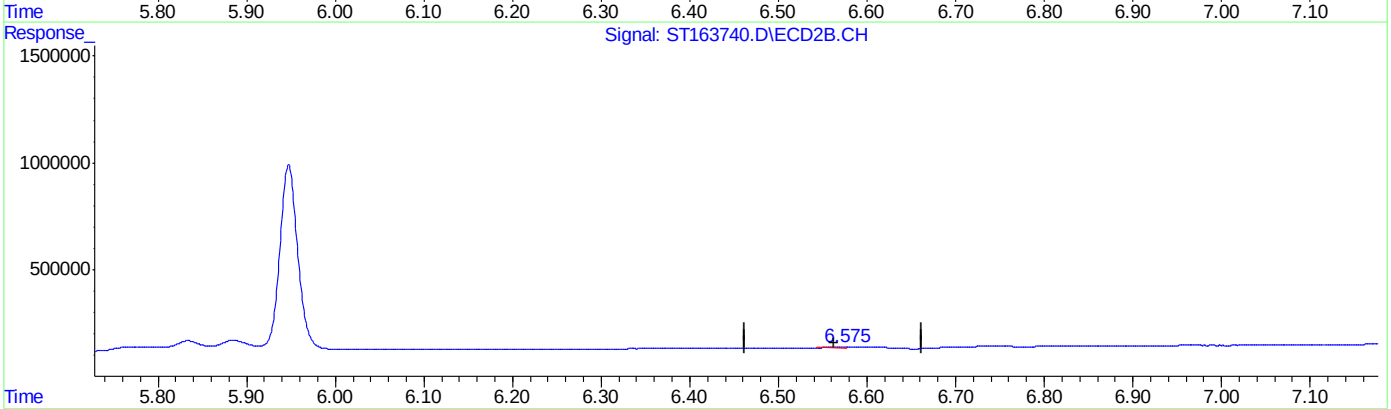
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:30 am
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 11:37:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(21) Endrin Ketone ( )
6.203min 0.224 PPB m
response 22626

(21) Endrin Ketone #2 ( )
6.575min 0.195 PPB m
response 4280

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:40:30 2022 Page: 1

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:08 pm
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 17:19:48 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	5.202	5.349	304892	46268	2.198m	1.703m
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	5.435	5.658	5795238	1142289	41.150	42.965
15)	4,4'-DDD	5.576	5.764	232028	38505	1.912m	1.635m
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	5.789	5.948	3757394	858448	42.927	41.030
18)	Endrin Al...	5.703	6.005	107116	28473	1.059m	1.311
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	6.202	6.565	115881	16820	0.920	0.630
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Toxaphene-A			0	0	N.D.	N.D.
	Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:08 pm
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 17:19:48 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

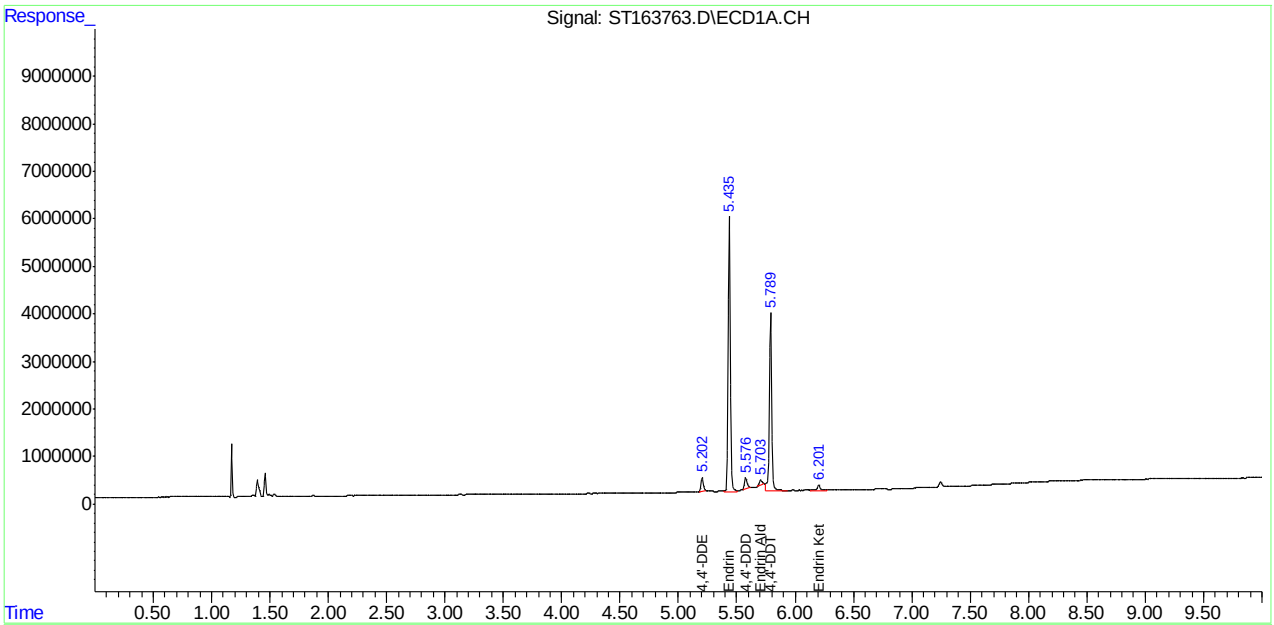
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

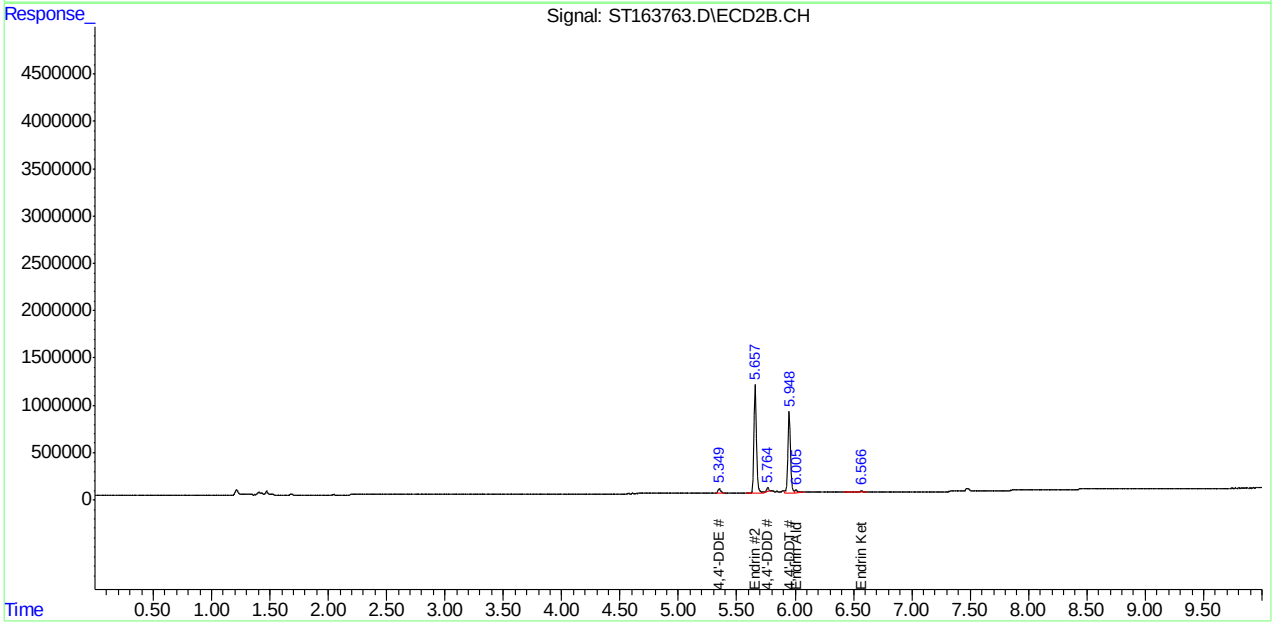
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:08 pm
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 17:19:48 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-DDT	**Method:**	SW846 8081B
Lab FileID:	ST163763.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 17:08	**Supervisor approved:**	09/21/22 10:51 Naresh Jiawan

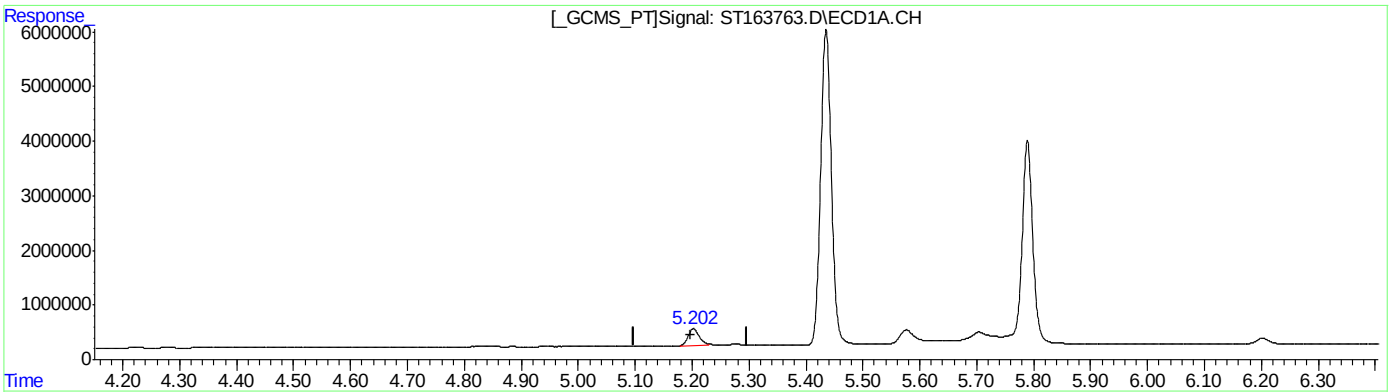
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDE	72-55-9	1	5.20	Poor instrument integration
4,4'-DDE	72-55-9	2	5.35	Poor instrument integration
4,4'-DDD	72-54-8	1	5.58	Poor instrument integration
Endrin aldehyde	7421-93-4	1	5.70	Poor instrument integration
4,4'-DDD	72-54-8	2	5.76	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:08 pm
Operator : eduardom
Sample : ddt Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 20 17:19:07 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(11) 4,4'-DDE

5.202min 2.198 ppb m

response 304892

(11) 4,4'-DDE #2

5.349min 1.703 ppb m

response 46268

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:45:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.310	3.422	244785	30934	1.950m	1.806
		Spiked Amount	50.000	Range 42 - 127		Recovery =	3.90%#	3.61%#
33)	S	Decachlor...	7.244	7.473	205199	57433	2.753m	3.241m
		Spiked Amount	50.000	Range 27 - 127		Recovery =	5.51%#	6.48%#
		Target Compounds						
2)		alpha-BHC	3.643	3.837	356012	36085	2.177m	1.571
3)		gamma-BHC...	3.879	4.101	312282	40788	2.115m	1.775
4)		beta-BHC	4.045	4.327	163330	27459	2.358	2.389
5)		delta-BHC	4.207	4.511	366120	46607	2.880	1.922
6)		Heptachlor	4.275	4.376	272993	40406	2.418	2.017
7)		Aldrin	4.506	4.595	326666	41660	2.295m	1.796
8)		Heptachlo...	4.816	4.973	309798	60716	2.374	2.514
9)		gamma-Chl...	4.995	5.162	298503	50154	2.285m	2.084
10)		alpha-Chl...	5.048	5.210	267108	50143	2.158m	2.095
11)		4,4'-DDE	5.196	5.344	280606	45617	2.141m	1.862
12)		Endosulfa...	5.079	5.254	264414	43981	2.528m	1.926
13)		Dieldrin	5.275	5.451	307470	53084	2.259m	2.067
14)		Endrin	5.433	5.655	290106	47022	2.477m	2.135
15)		4,4'-DDD	5.567	5.757	265665	41687	2.306m	1.966m
16)		Endosulfa...	5.602	5.873	274050	61954	2.365m	2.582m
17)		4,4'-DDT	5.787	5.946	46832	19193	0.817m	1.507 #
18)		Endrin Al...	5.697	6.002	206720	42274	3.045m	2.619
19)		Methoxychlor	6.151	6.377	62134	17073	1.585m	2.010
20)		Endosulfa...	5.864	6.169	259409	46069	3.324m	2.285
21)		Endrin Ke...	6.199	6.563	221083	45415	2.188m	2.065m
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:45:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:45:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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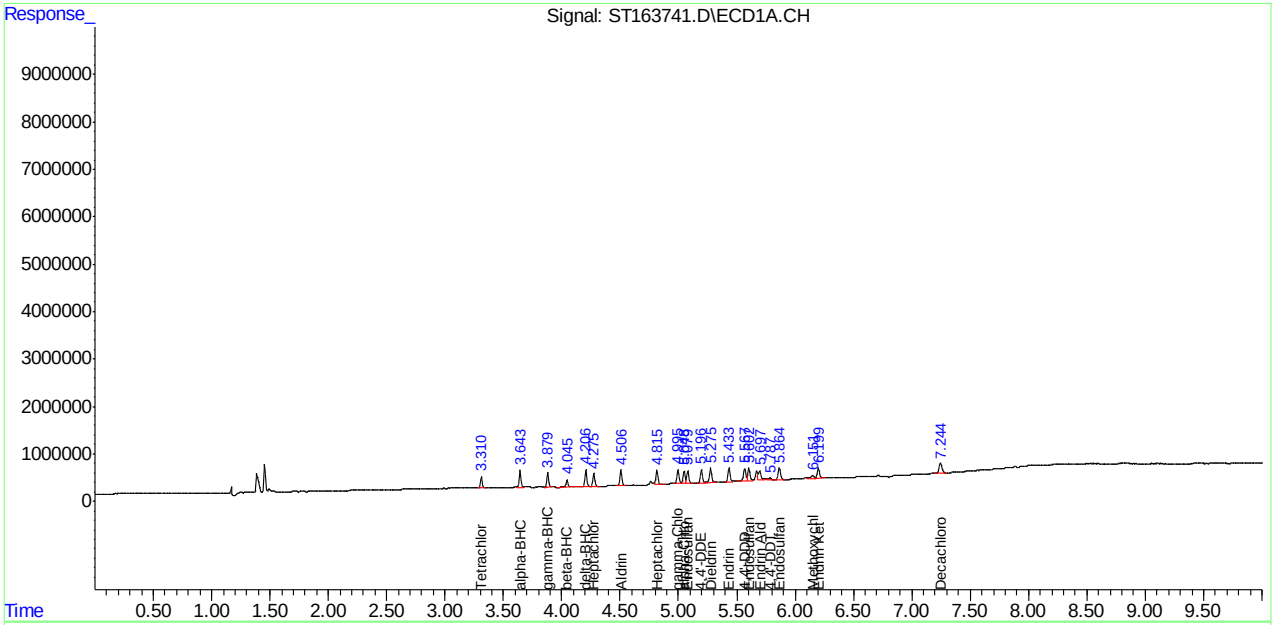
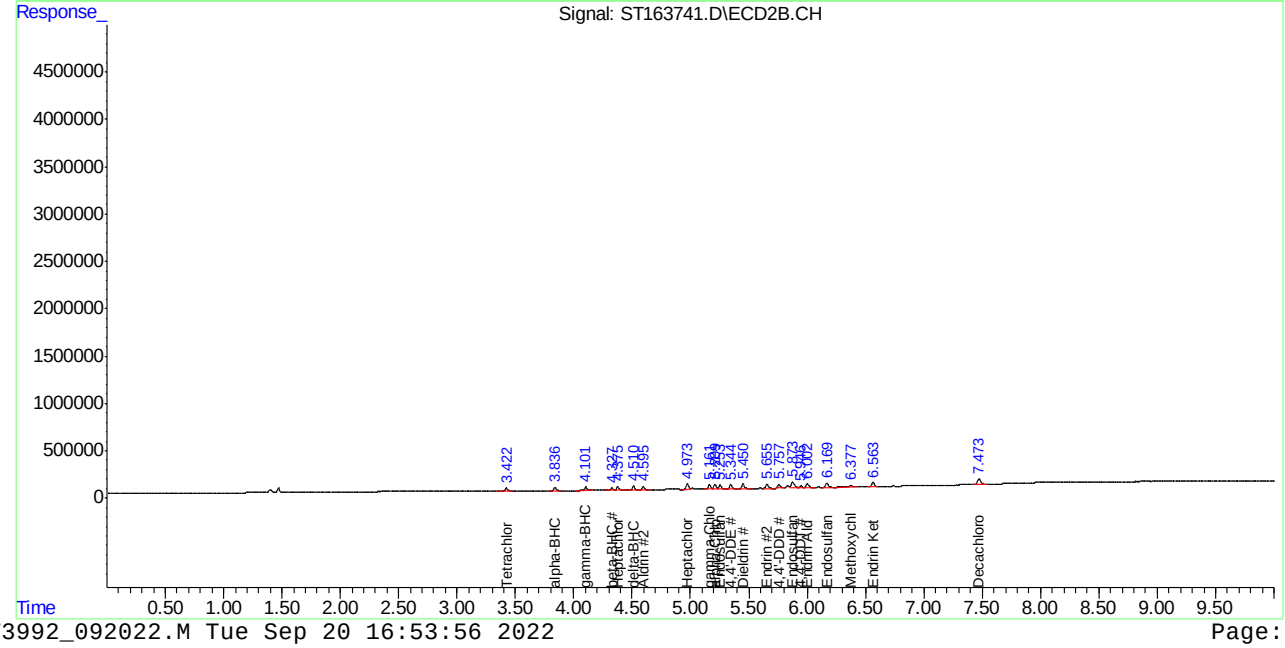
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163741.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 10:47 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	3.31	Poor instrument integration
alpha-BHC	319-84-6	1	3.64	Poor instrument integration
gamma-BHC (Lindane)	58-89-9	1	3.88	Poor instrument integration
Aldrin	309-00-2	1	4.51	Poor instrument integration
gamma-Chlordane	5103-74-2	1	5.00	Poor instrument integration
alpha-Chlordane	5103-71-9	1	5.05	Poor instrument integration
Endosulfan-I	959-98-8	1	5.08	Poor instrument integration
4,4'-DDE	72-55-9	1	5.20	Poor instrument integration
Dieldrin	60-57-1	1	5.28	Poor instrument integration
Endrin	72-20-8	1	5.43	Poor instrument integration
4,4'-DDD	72-54-8	1	5.57	Poor instrument integration
Endosulfan-II	33213-65-9	1	5.60	Poor instrument integration
Endrin aldehyde	7421-93-4	1	5.70	Poor instrument integration
4,4'-DDD	72-54-8	2	5.76	Poor instrument integration
4,4'-DDT	50-29-3	1	5.79	Poor instrument integration
Endosulfan sulfate	1031-07-8	1	5.86	Poor instrument integration
Endosulfan-II	33213-65-9	2	5.87	Poor instrument integration
Methoxychlor	72-43-5	1	6.15	Poor instrument integration
Endrin ketone	53494-70-5	1	6.20	Poor instrument integration
Endrin ketone	53494-70-5	2	6.56	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	7.24	Poor instrument integration
Decachlorobiphenyl	2051-24-3	2	7.47	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
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Sample : ic3992-2 Pest Inst : ECD 3
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Quant Time: Sep 20 11:37:15 2022
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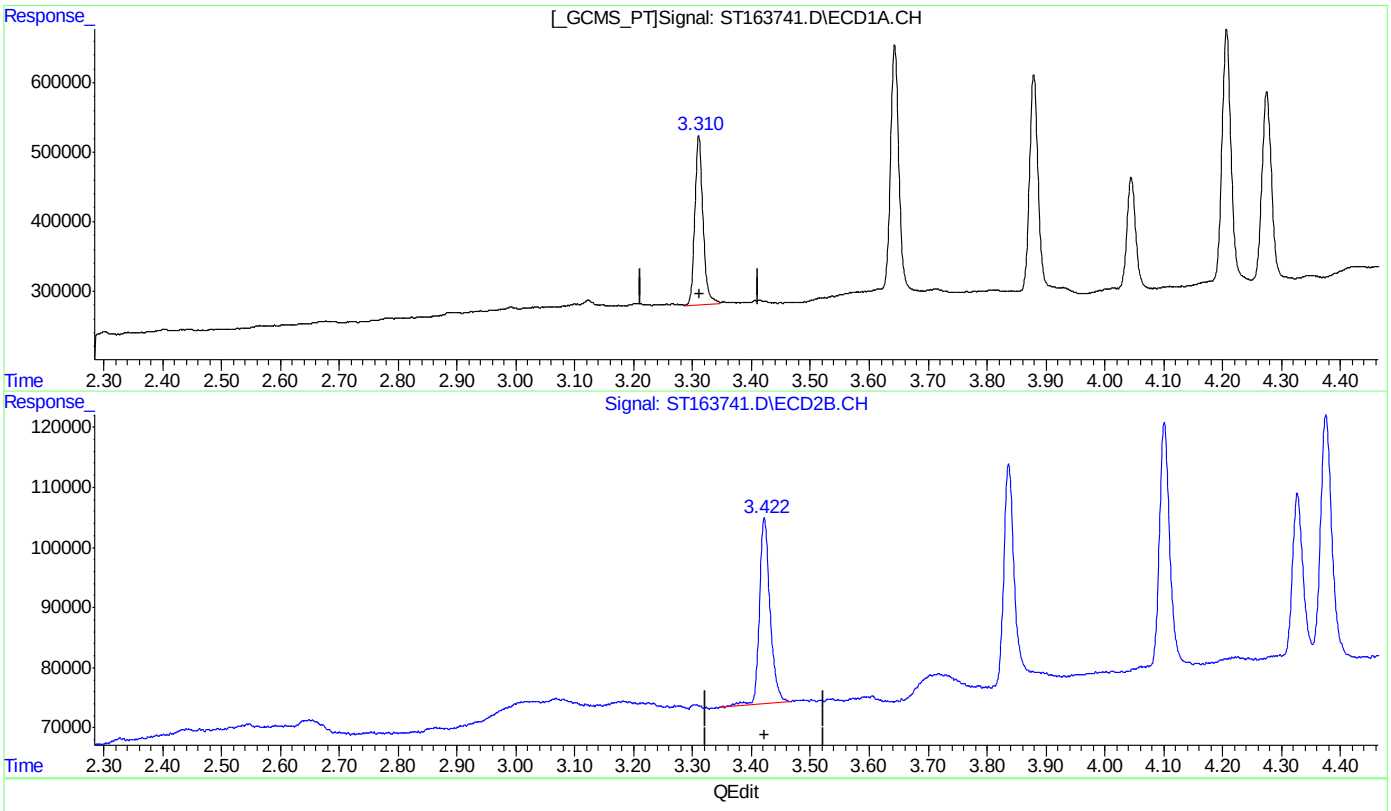
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(1) Tetrachloro-m-xylene (S)

3.310min 1.950 PPB m

response 244785

(1) Tetrachloro-m-xylene #2 (S)

3.422min 1.806 PPB

response 30934

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Operator : eduardom
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Misc : OP93001,GST3992,250,,,5,1,Water
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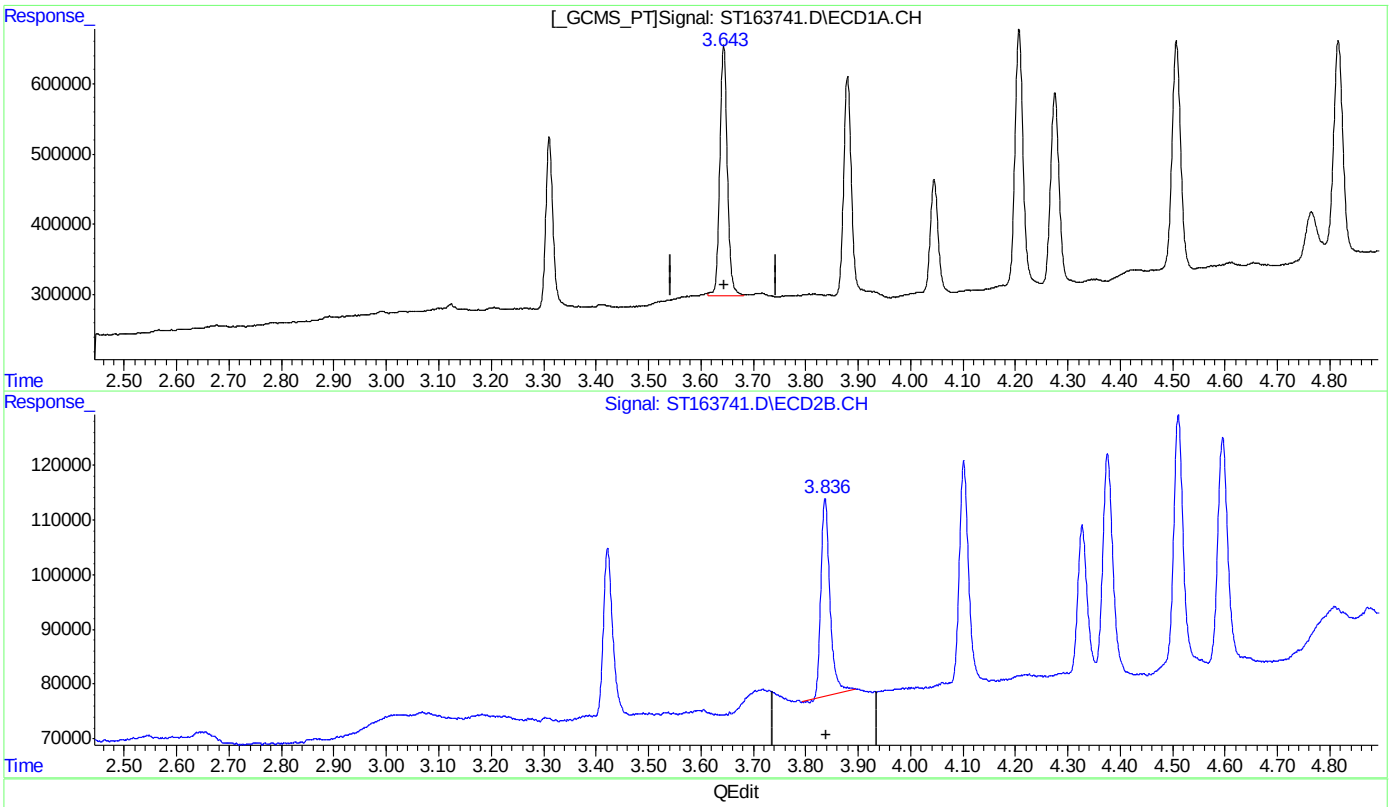
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(2) alpha-BHC ( )

3.643min 2.177 PPB m

response 356012

(2) alpha-BHC #2 ( )

3.837min 1.571 PPB

response 36085

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
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Quant Time: Sep 20 11:37:15 2022
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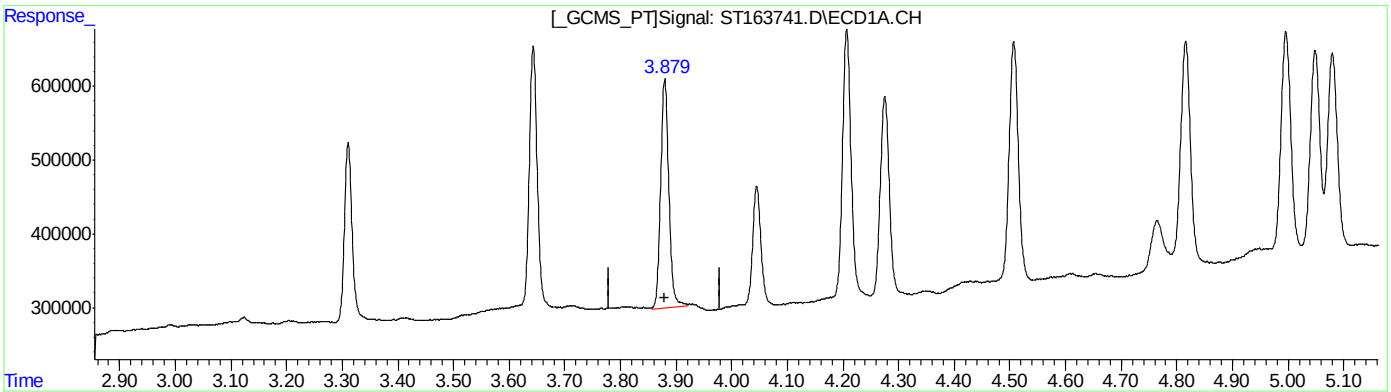
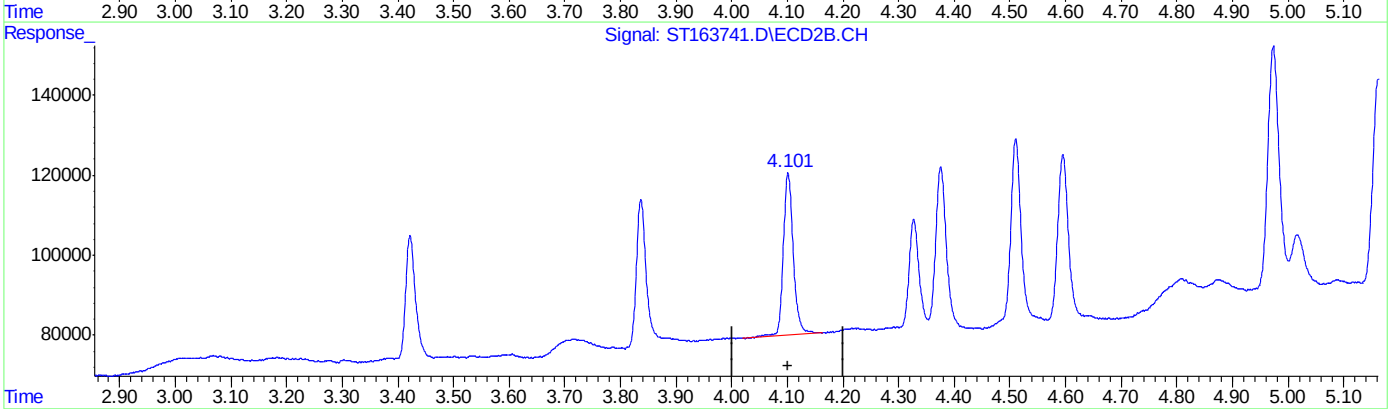
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(3) gamma-BHC (Lindane) ( )
3.879min 2.115 PPB m
response 312282

(3) gamma-BHC (Lindane) #2 ( )
4.101min 1.775 PPB
response 40788

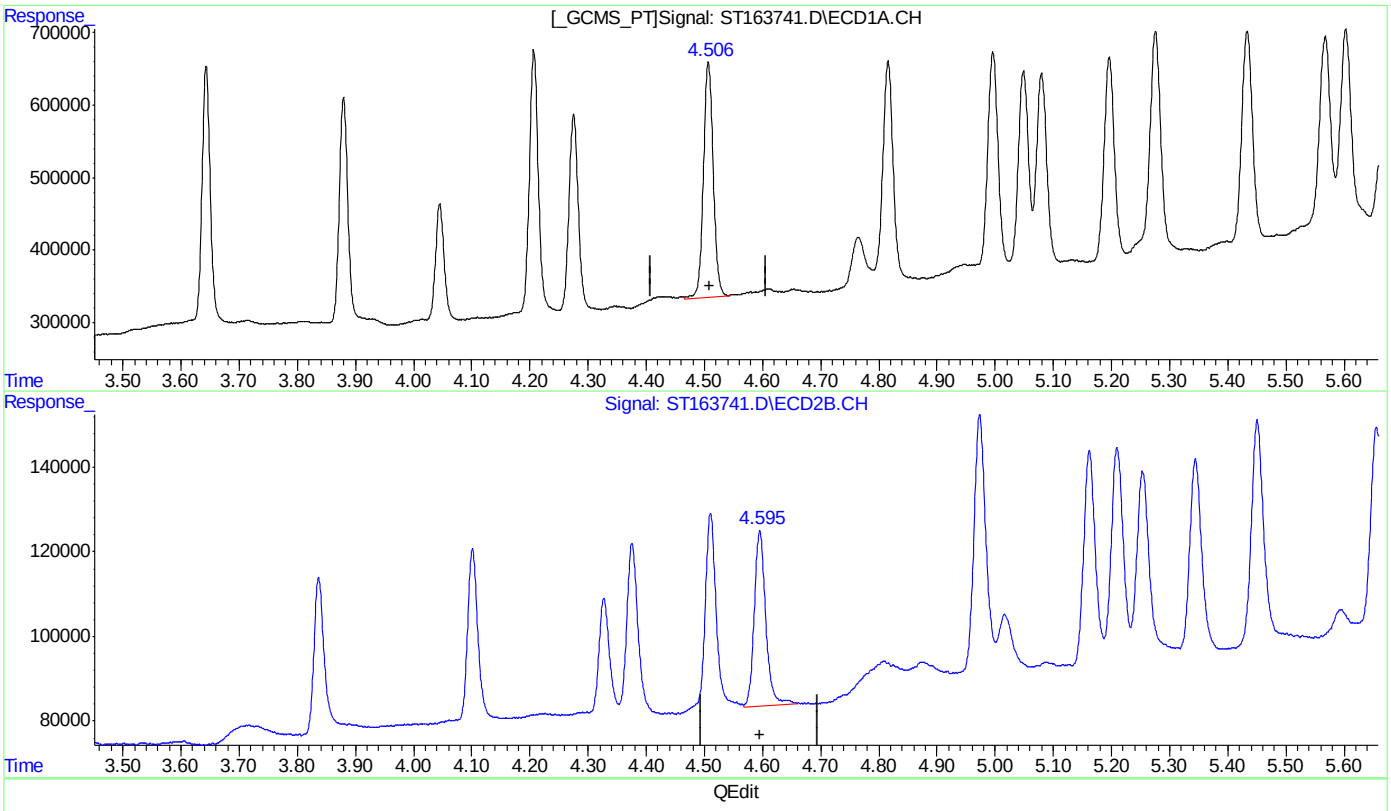
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(7) Aldrin ( )
4.506min 2.295 PPB m
response 326666

(7) Aldrin #2 ( )
4.595min 1.796 PPB
response 41660

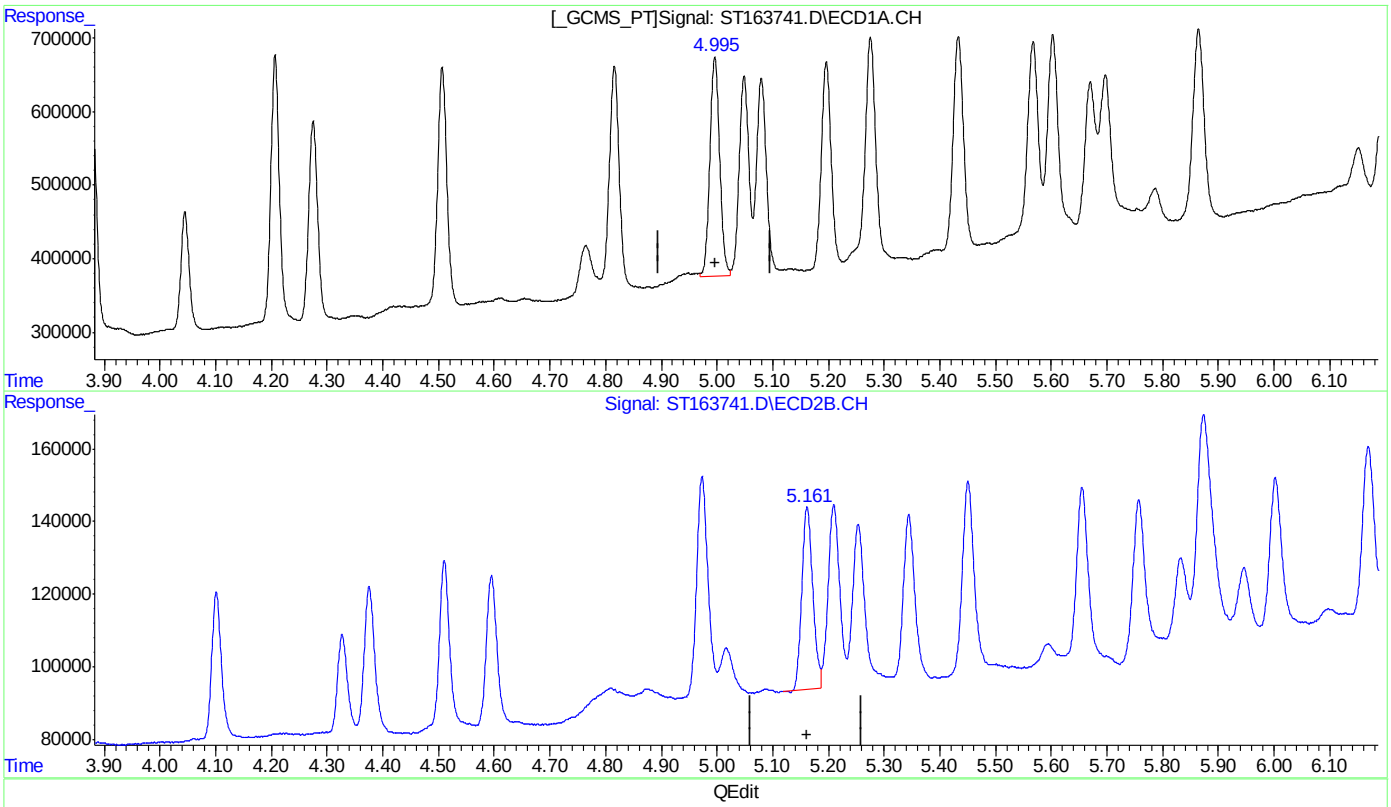
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(9) gamma-Chlordane

4.995min 2.285 PPB m

response 298503

(9) gamma-Chlordane #2

5.162min 2.084 PPB

response 50154

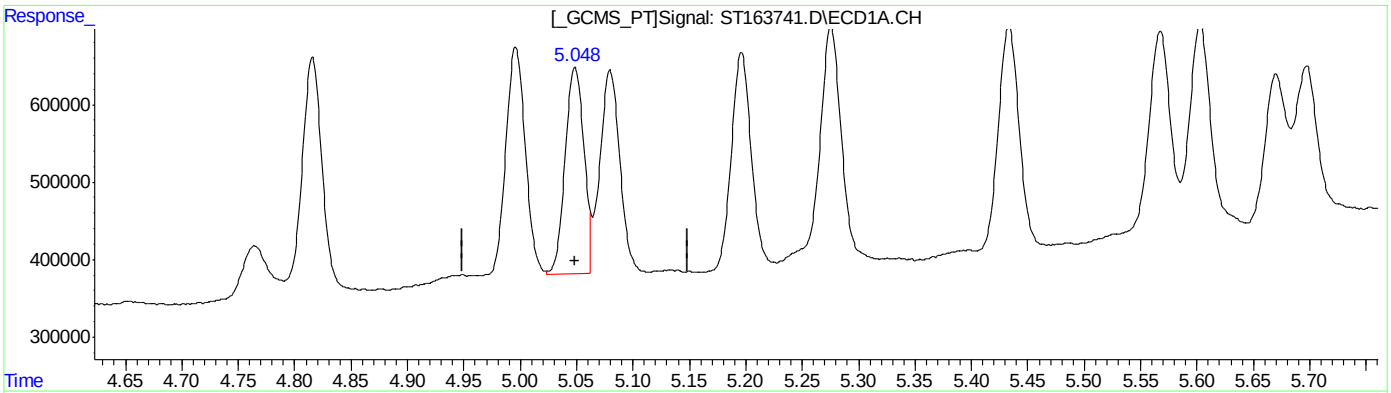
(+) = Expected Retention Time

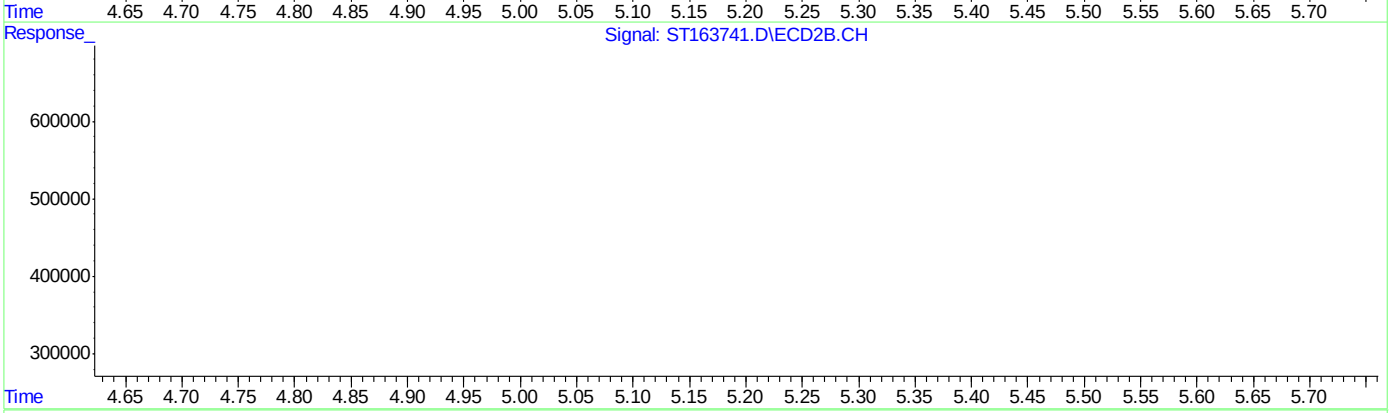
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(10) alpha-Chlordane

5.048min 2.158 PPB m

response 267108

(10) alpha-Chlordane #2

5.210min 2.095 PPB

response 50143

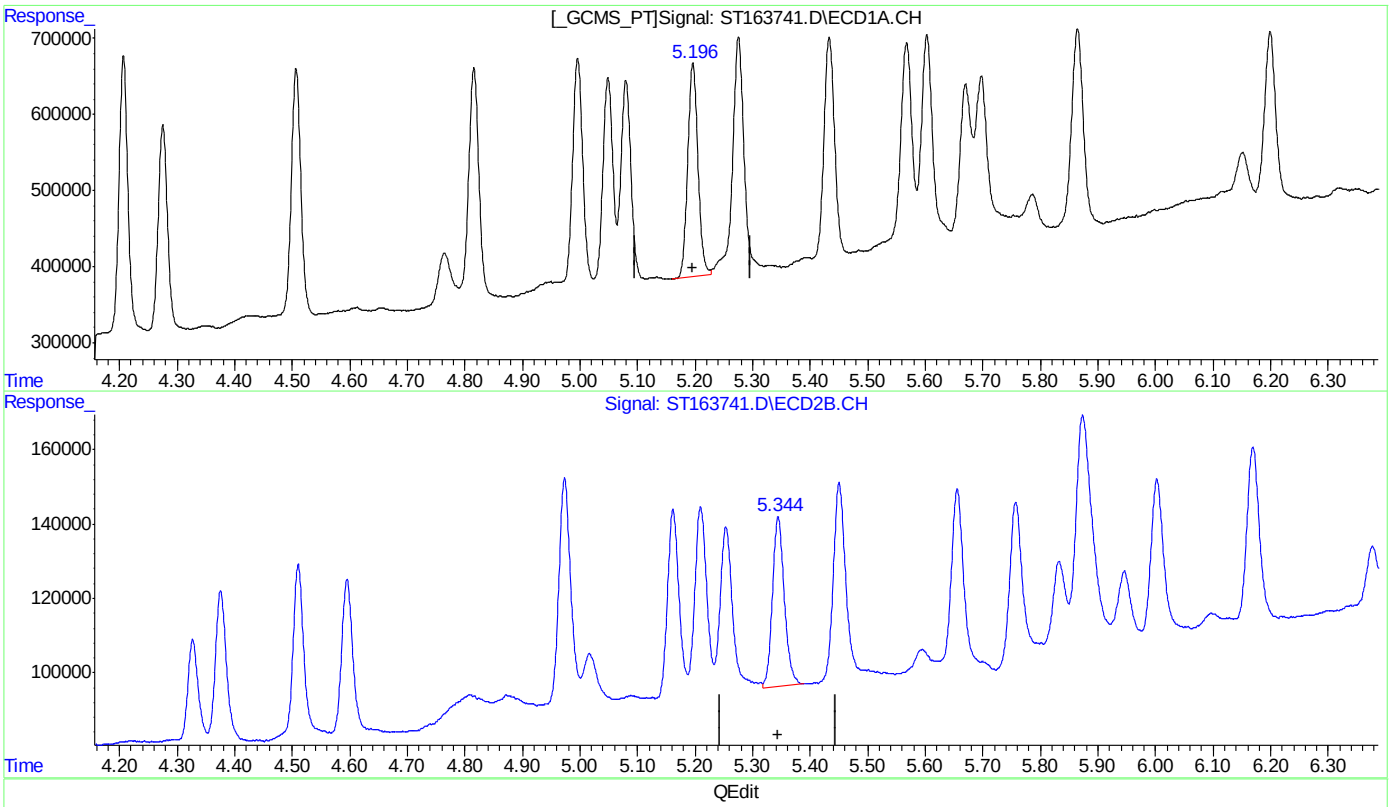
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(11) 4,4'-DDE
5.196min 2.141 PPB m
response 280606

(11) 4,4'-DDE #2
5.344min 1.862 PPB
response 45617

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:42:53 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
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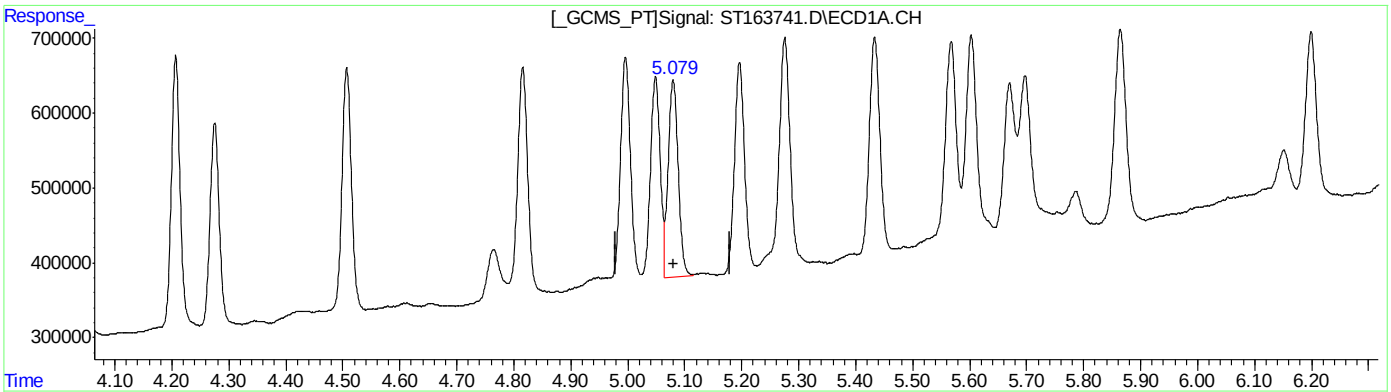
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(12) Endosulfan I ( )
5.079min 2.528 PPB m
response 264414

(12) Endosulfan I #2 ( )
5.254min 1.926 PPB
response 43981

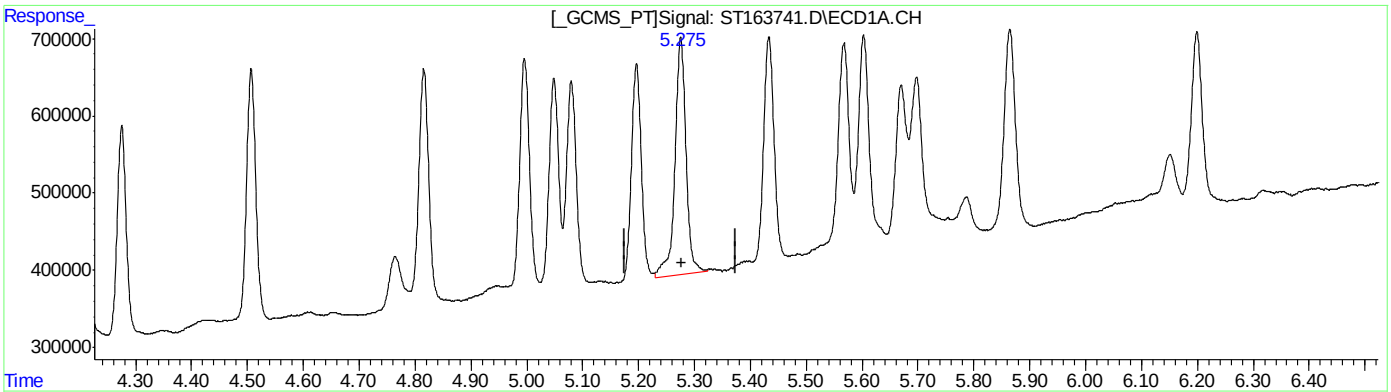
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:43:00 2022

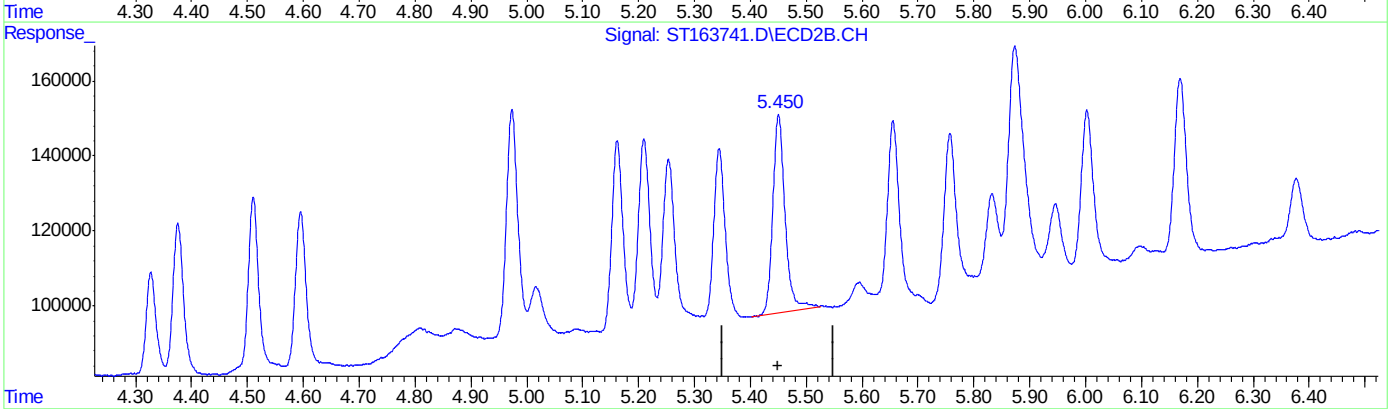
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(13) Dieldrin ( )

5.275min 2.259 PPB m

response 307470

(13) Dieldrin #2 ( )

5.451min 2.067 PPB

response 53084

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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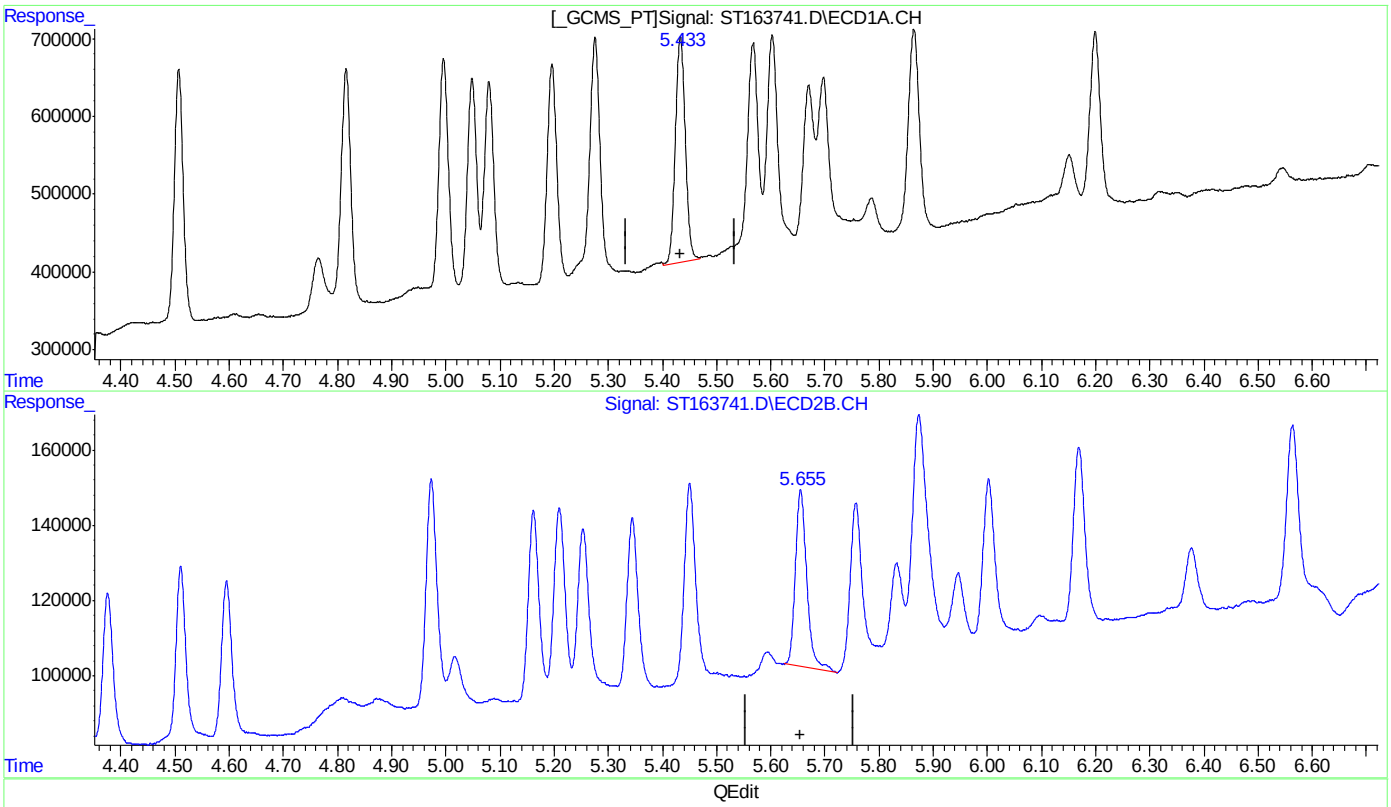
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(14) Endrin ( )
5.433min 2.477 PPB m
response 290106

(14) Endrin #2 ( )
5.655min 2.135 PPB
response 47022

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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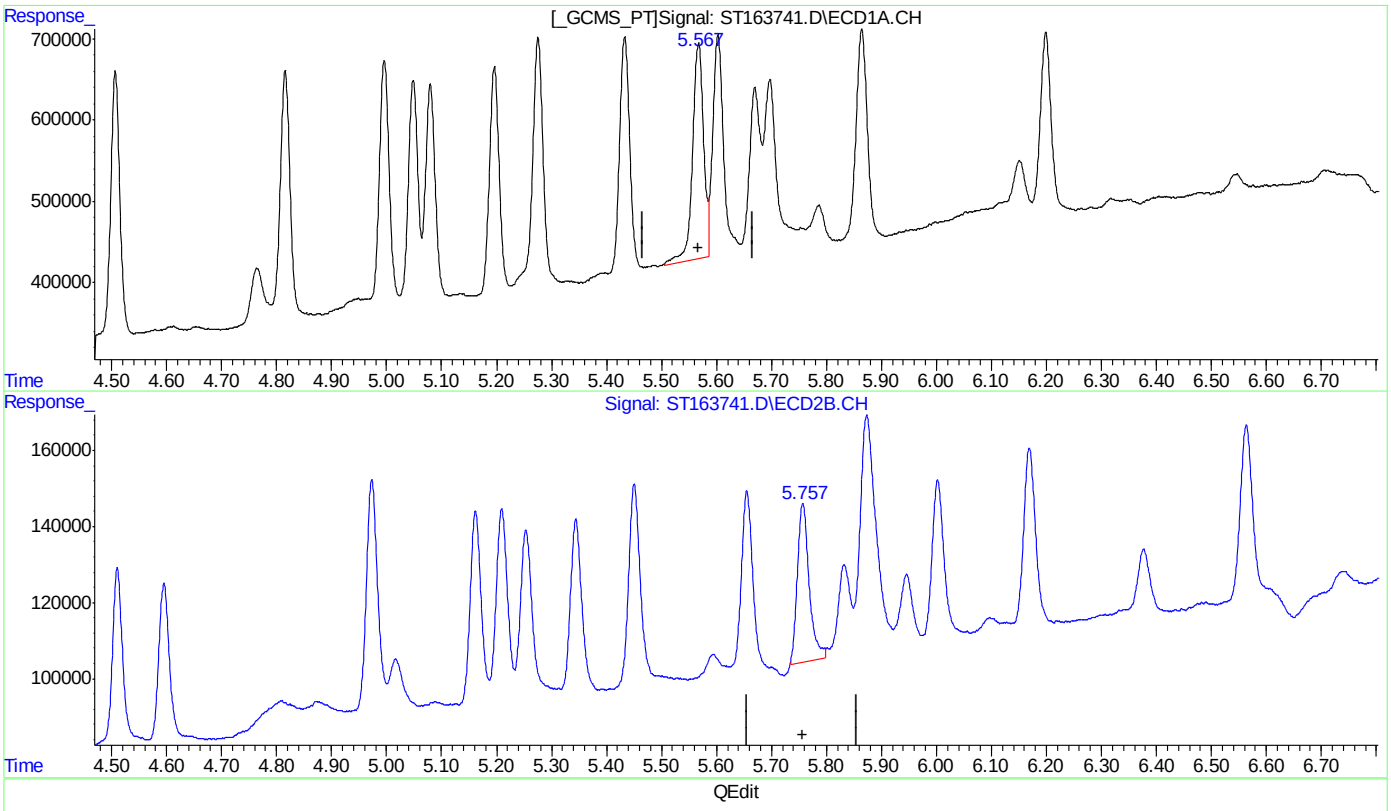
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(15) 4,4'-DDD ( )

5.567min 2.306 PPB m

response 265665

(15) 4,4'-DDD #2 ( )

5.757min 1.966 PPB m

response 41687

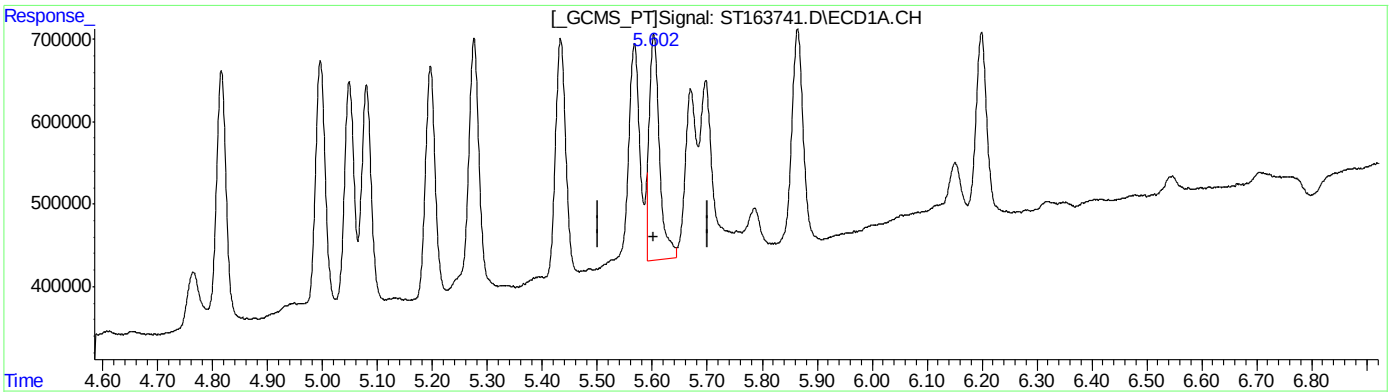
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(16) Endosulfan II ( )

5.602min 2.365 PPB m

response 274050

(16) Endosulfan II #2 ( )

5.873min 2.582 PPB m

response 61954

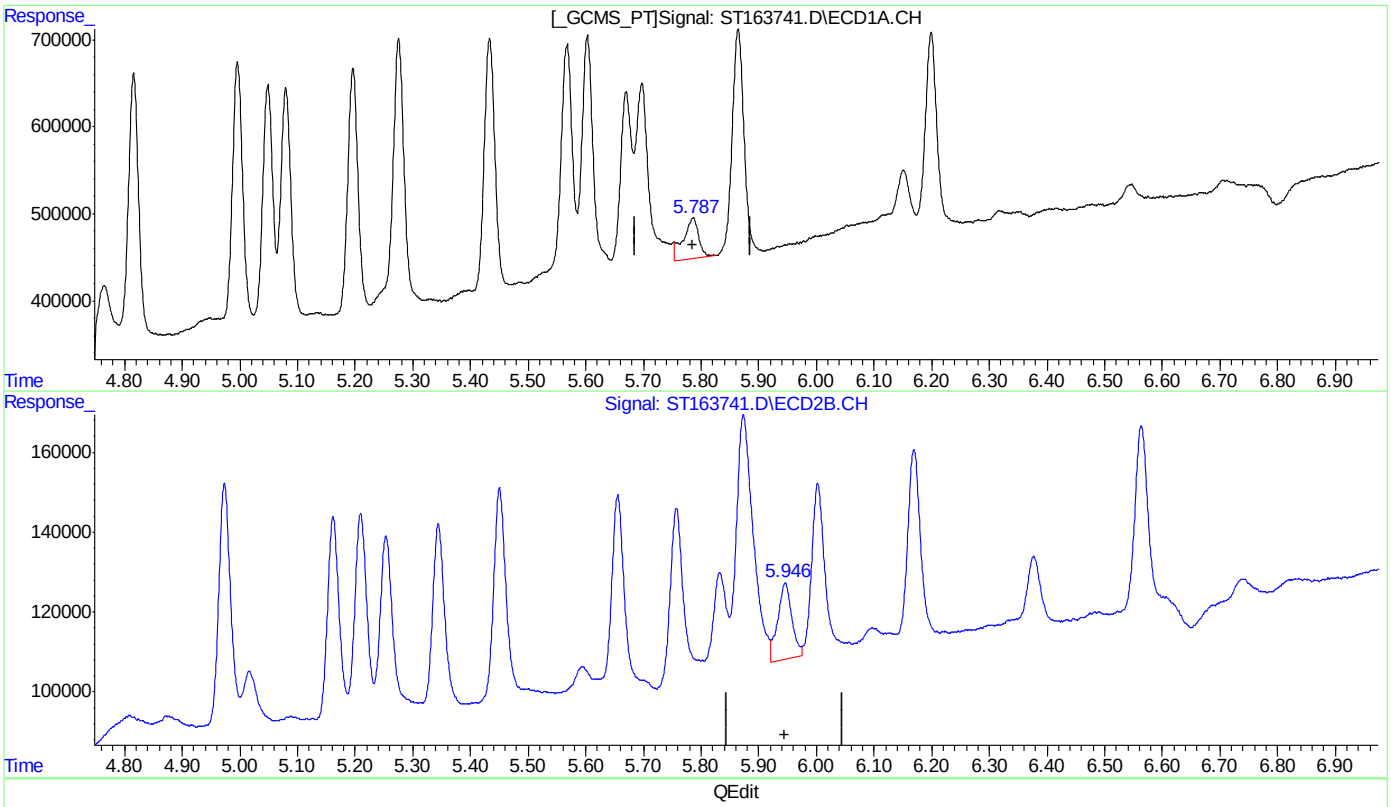
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(17) 4,4'-DDT
5.787min 0.817 ppb m
response 46832

(17) 4,4'-DDT #2
5.946min 1.507 ppb
response 19193

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:43:40 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
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Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
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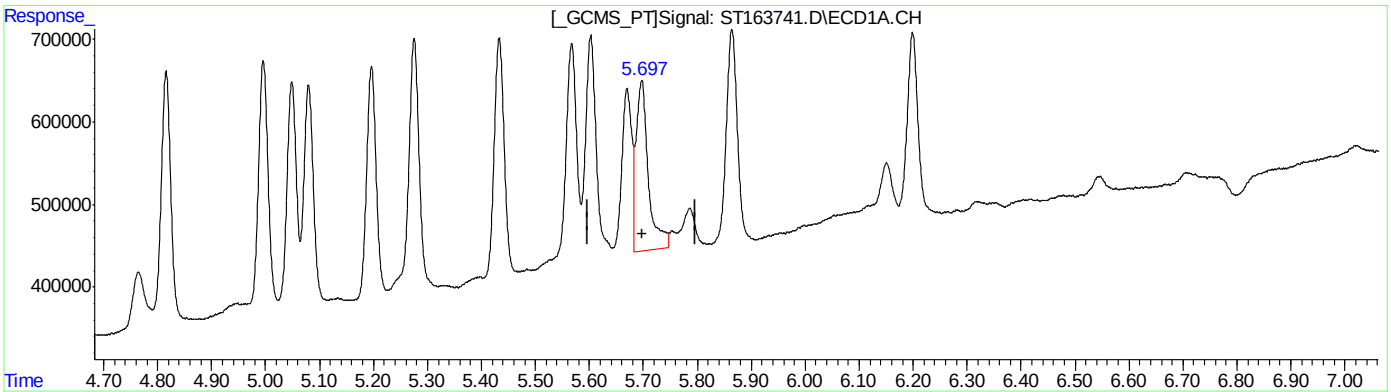
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(18) Endrin Aldehyde ( )
5.697min 3.045 PPB m
response 206720

(18) Endrin Aldehyde #2 ( )
6.002min 2.619 PPB
response 42274

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
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ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
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Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
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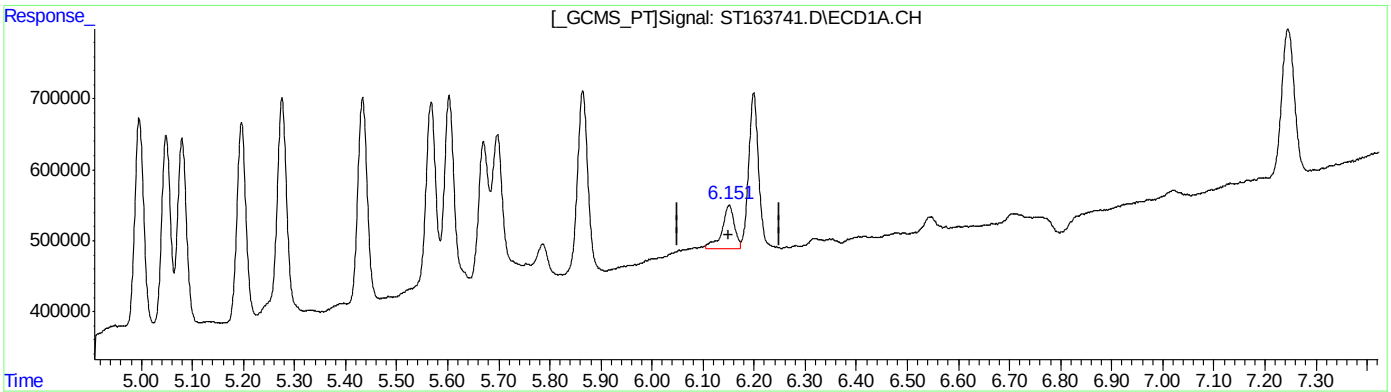
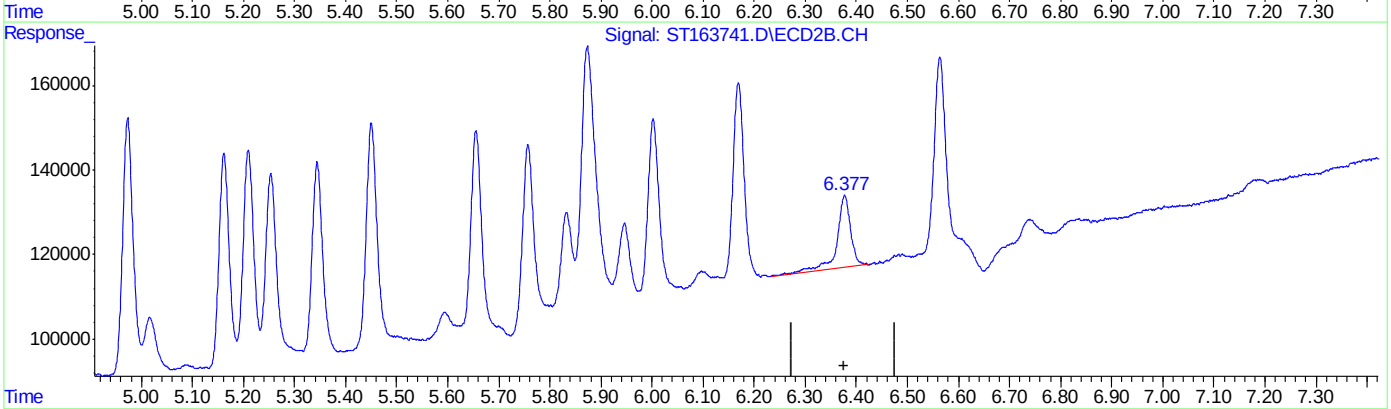
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(19) Methoxychlor
6.151min 1.585 ppb m
response 62134

(19) Methoxychlor #2
6.377min 2.010 ppb
response 17073

(+) = Expected Retention Time

12.6.1.16
12

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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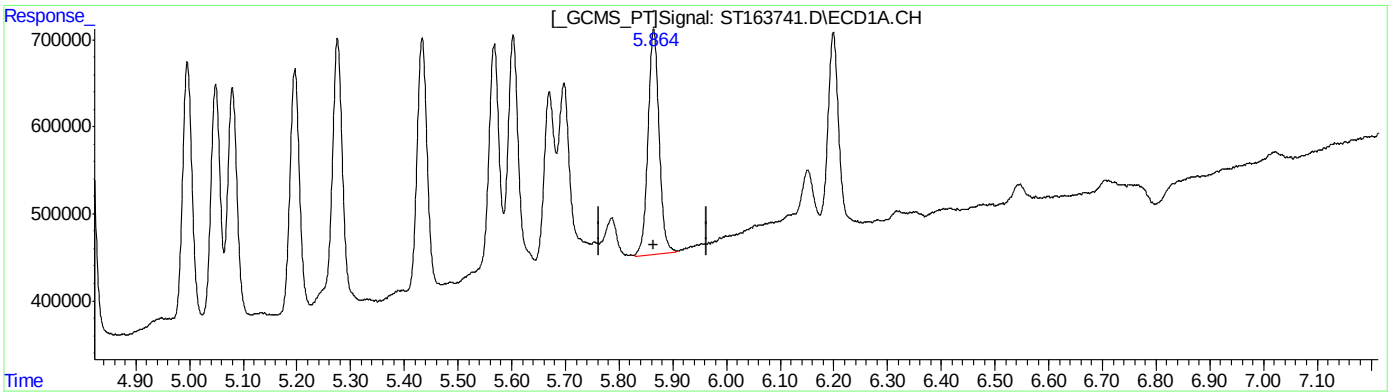
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(20) Endosulfan Sulfate ( )

5.864min 3.324 PPB m

response 259409

(20) Endosulfan Sulfate #2 ( )

6.169min 2.285 PPB

response 46069

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

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Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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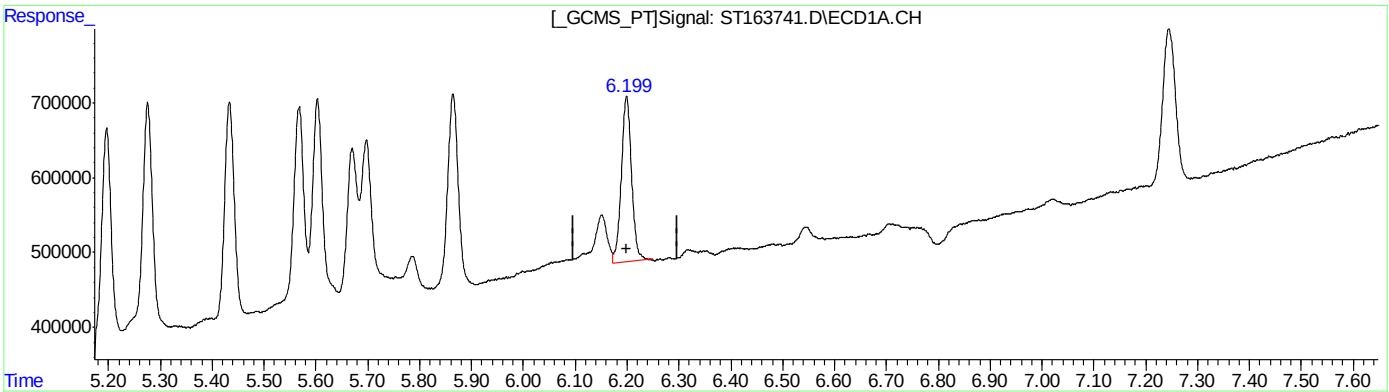
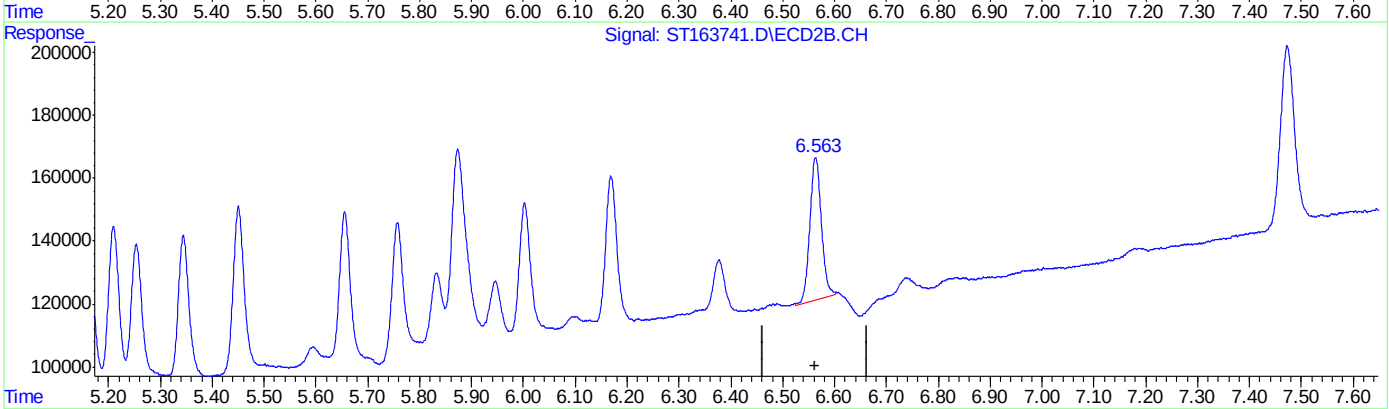
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(21) Endrin Ketone ( )
6.199min 2.188 PPB m
response 221083

(21) Endrin Ketone #2 ( )
6.563min 2.065 PPB m
response 45415

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163741.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 10:47 am
Operator : eduardom
Sample : ic3992-2 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 11:37:15 2022
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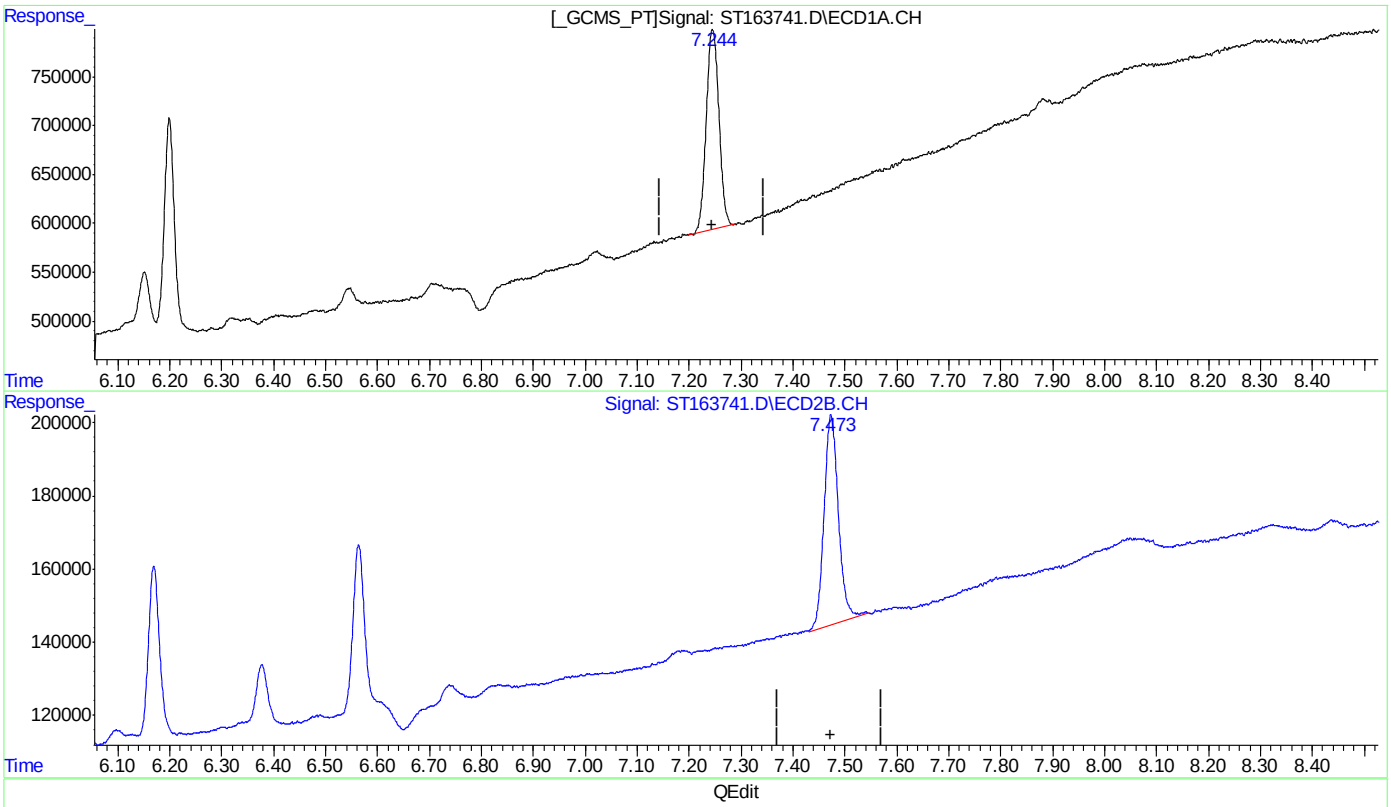
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(33) Decachlorobiphenyl (S)

7.244min 2.753 ppb m

response 205199

(33) Decachlorobiphenyl #2 (S)

7.473min 3.241 ppb m

response 57433

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:48:34 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.311	3.423	536837	72447	4.278m	4.230
		Spiked Amount	50.000	Range 42 - 127		Recovery =	8.56%#	8.46%#
33)	S	Decachlor...	7.245	7.473	484743	125183	6.503	7.065
		Spiked Amount	50.000	Range 27 - 127		Recovery =	13.01%#	14.13%#
		Target Compounds						
2)		alpha-BHC	3.644	3.838	818765	93366	5.006m	4.064
3)		gamma-BHC...	3.880	4.102	735278	101536	4.979	4.418
4)		beta-BHC	4.046	4.328	368656	65121	5.323m	5.666
5)		delta-BHC	4.208	4.511	846736	119929	6.661	4.946
6)		Heptachlor	4.276	4.376	641869	99476	5.685	4.967
7)		Aldrin	4.507	4.595	748571	107018	5.259m	4.615
8)		Heptachlo...	4.816	4.973	717311	131301	5.497	5.436
9)		gamma-Chl...	4.997	5.162	727047	123583	5.564	5.136
10)		alpha-Chl...	5.050	5.210	673545	127415	5.441	5.324
11)		4,4'-DDE	5.197	5.345	694014	119745	5.296	4.888
12)		Endosulfa...	5.081	5.254	623919	113417	5.965	4.967
13)		Dieldrin	5.276	5.451	757548	131034	5.565	5.103
14)		Endrin	5.433	5.656	694169	120382	5.926m	5.465
15)		4,4'-DDD	5.568	5.758	621604	109163	5.395m	5.148
16)		Endosulfa...	5.603	5.873	669312	139256	5.777m	5.804
17)		4,4'-DDT	5.787	5.947	179339	61729	3.104m	4.789m#
18)		Endrin Al...	5.698	6.003	526725	106055	7.758m	6.571m
19)		Methoxychlor	6.152	6.377	187593	54672	4.787m	6.437
20)		Endosulfa...	5.864	6.169	616363	121140	7.897m	6.008m
21)		Endrin Ke...	6.199	6.563	604069	124577	5.979m	5.666m
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:48:34 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
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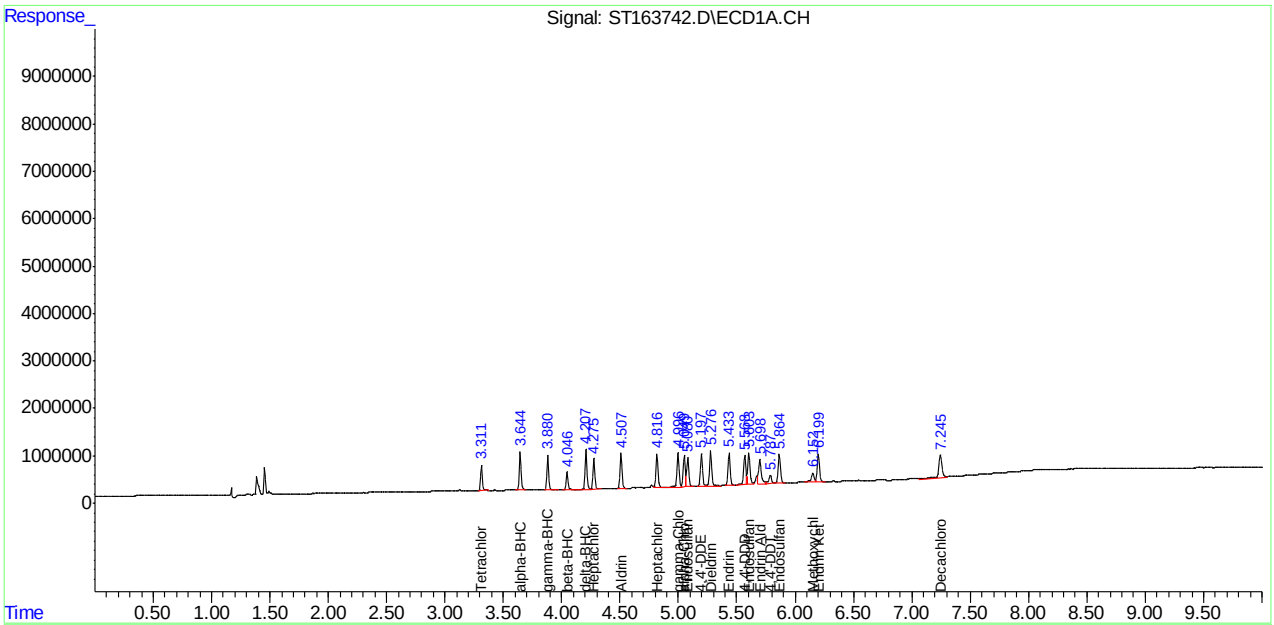

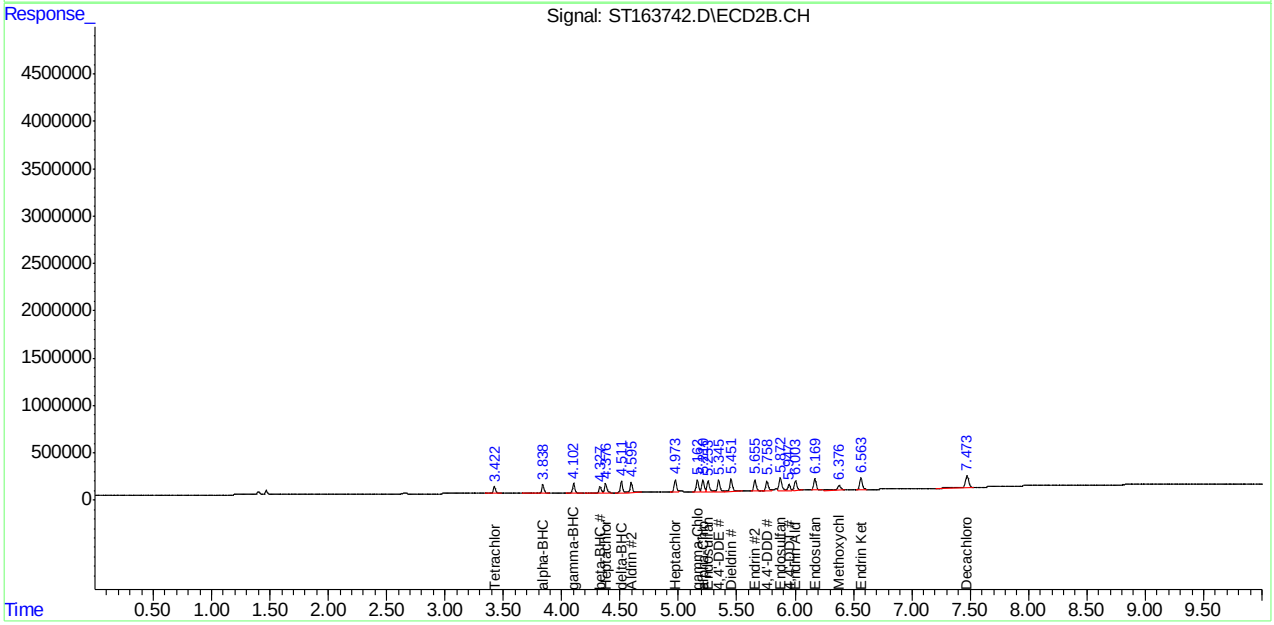

Manual Integration Approval Summary

Sample Number: GST3992-IC3992
Lab FileID: ST163742.D
Injection Time: 09/20/22 11:03
Method: SW846 8081B
Analyst approved: 09/20/22 17:32 William Hustedde
Supervisor approved: 09/21/22 10:49 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	3.31	Poor instrument integration
alpha-BHC	319-84-6	1	3.64	Poor instrument integration
beta-BHC	319-85-7	1	4.05	Poor instrument integration
Aldrin	309-00-2	1	4.51	Poor instrument integration
Endrin	72-20-8	1	5.43	Poor instrument integration
4,4'-DDD	72-54-8	1	5.57	Poor instrument integration
Endosulfan-II	33213-65-9	1	5.60	Poor instrument integration
Endrin aldehyde	7421-93-4	1	5.70	Poor instrument integration
4,4'-DDT	50-29-3	1	5.79	Poor instrument integration
Endosulfan sulfate	1031-07-8	1	5.86	Poor instrument integration
4,4'-DDT	50-29-3	2	5.95	Poor instrument integration
Endrin aldehyde	7421-93-4	2	6.00	Poor instrument integration
Methoxychlor	72-43-5	1	6.15	Poor instrument integration
Endosulfan sulfate	1031-07-8	2	6.17	Poor instrument integration
Endrin ketone	53494-70-5	1	6.20	Poor instrument integration
Endrin ketone	53494-70-5	2	6.56	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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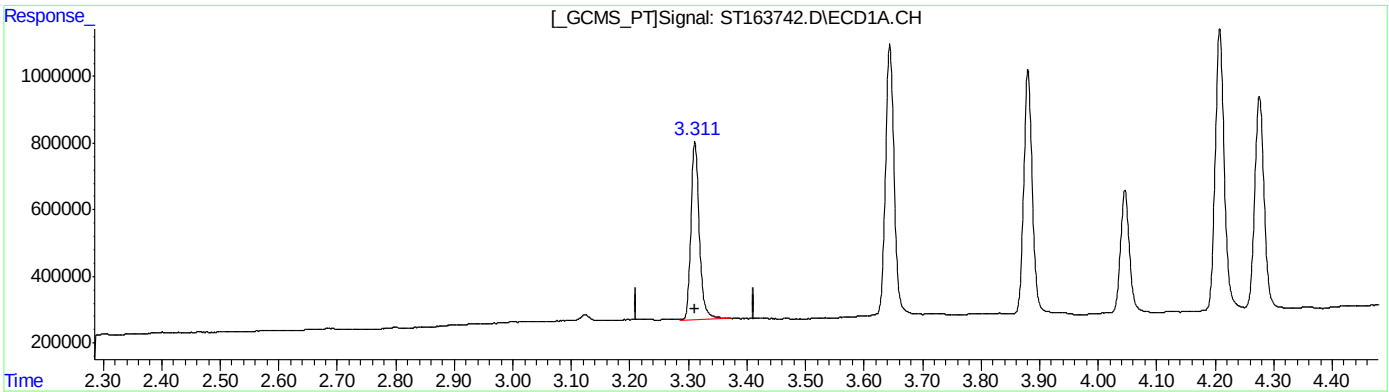

(1) Tetrachloro-m-xylene (S)

3.311min 4.278 PPB m

response 536837

(1) Tetrachloro-m-xylene #2 (S)

3.423min 4.230 PPB

response 72447

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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Misc : OP93001,GST3992,250,,,5,1,Water
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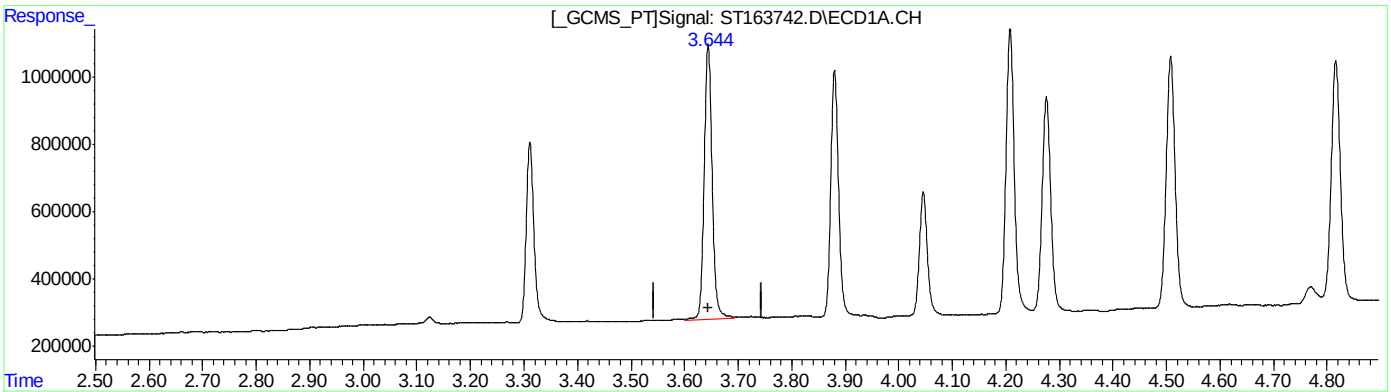
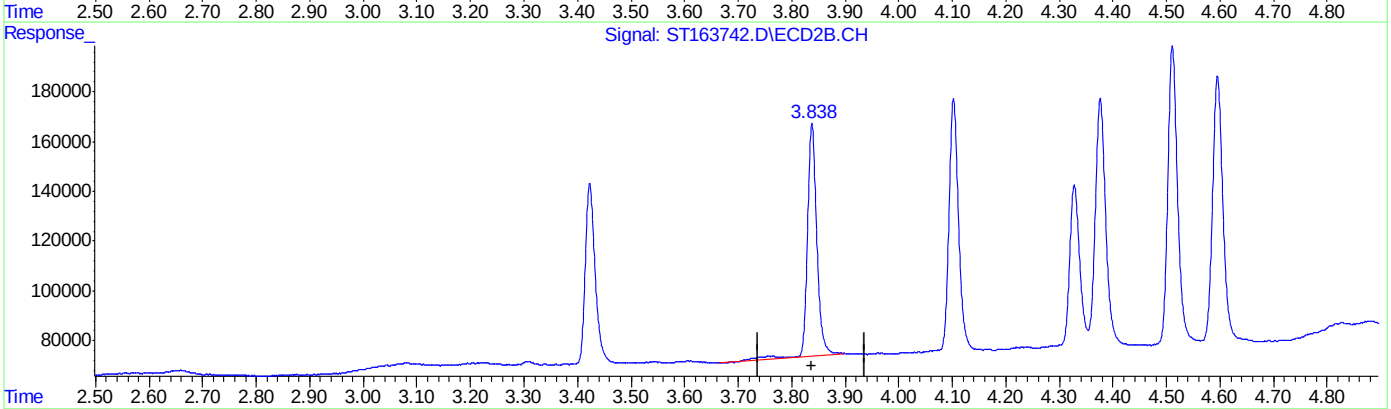




QEdit

(2) alpha-BHC ( )
3.644min 5.006 PPB m
response 818765

(2) alpha-BHC #2 ( )
3.838min 4.064 PPB
response 93366

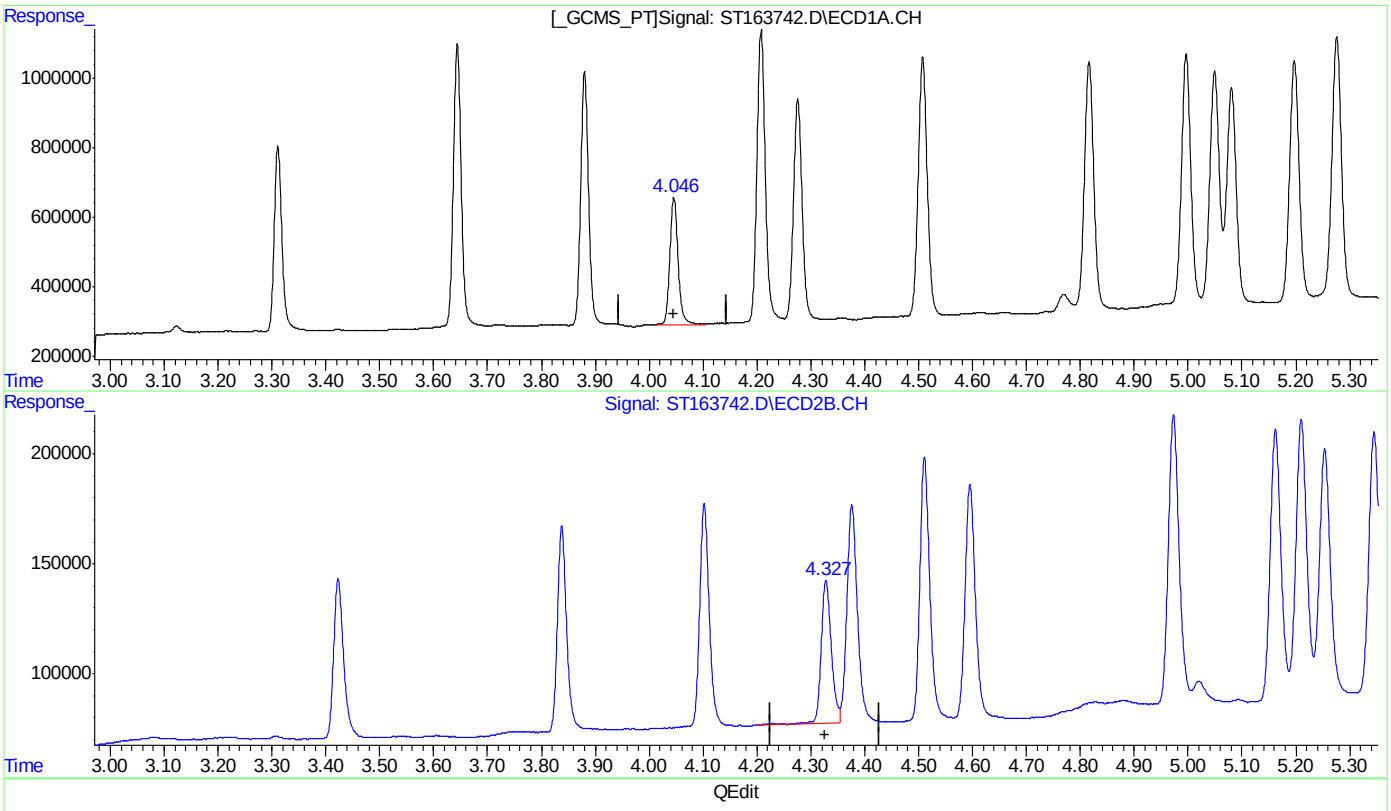
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(4) beta-BHC ( )
4.046min 5.323 PPB m
response 368656

(4) beta-BHC #2 ( )
4.328min 5.666 PPB
response 65121

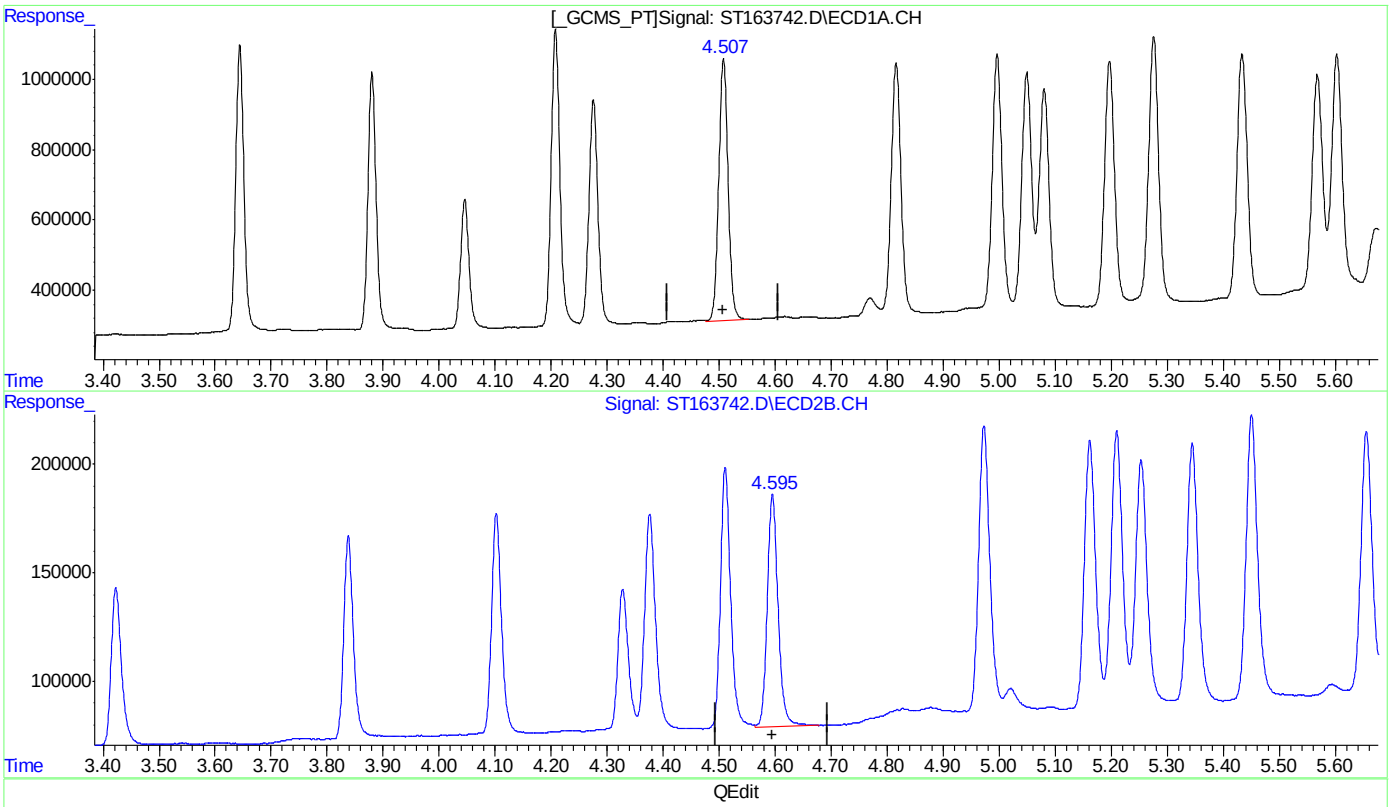
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(7) Aldrin ( )

4.507min 5.259 PPB m

response 748571

(7) Aldrin #2 ( )

4.595min 4.615 PPB

response 107018

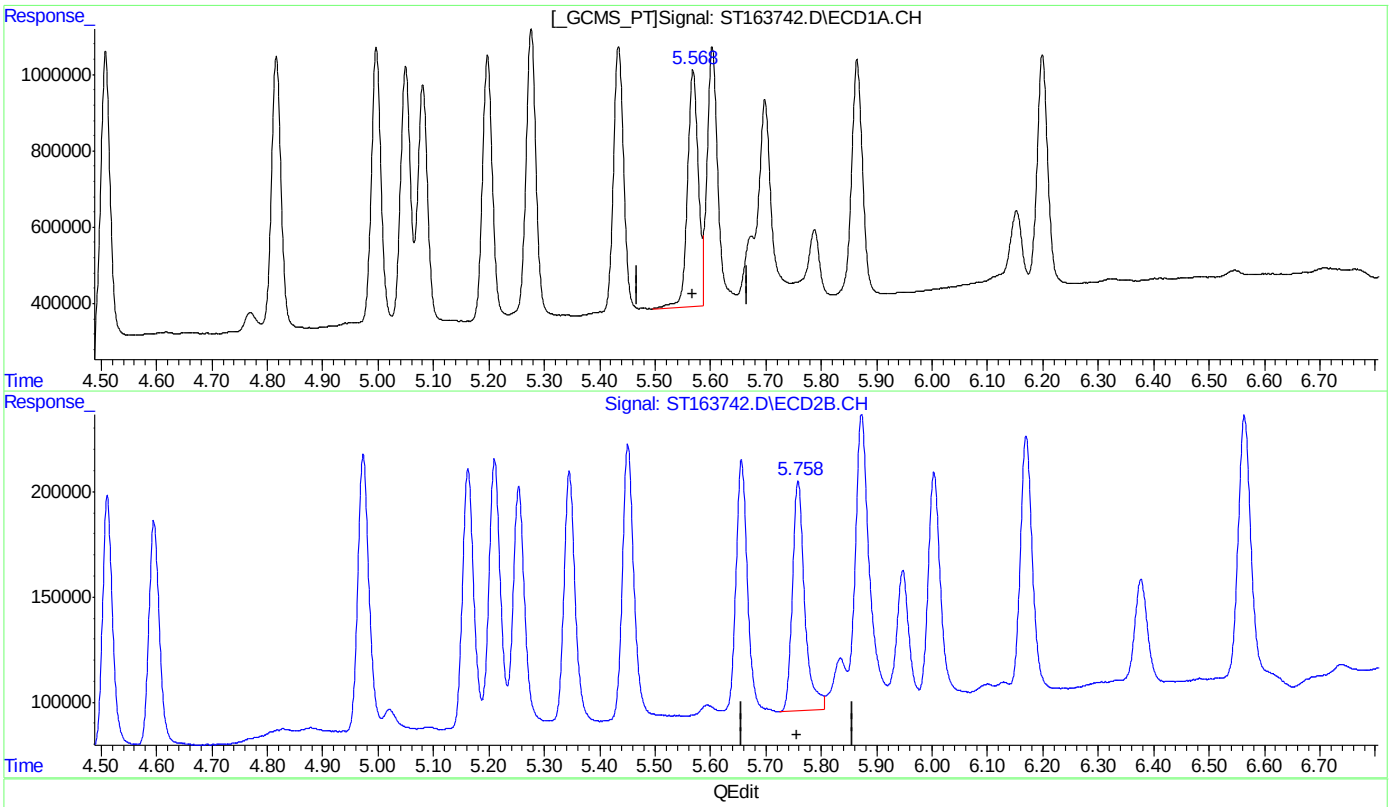
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(15) 4,4'-DDD ( )

5.568min 5.395 PPB m

response 621604

(15) 4,4'-DDD #2 ( )

5.758min 5.148 PPB

response 109163

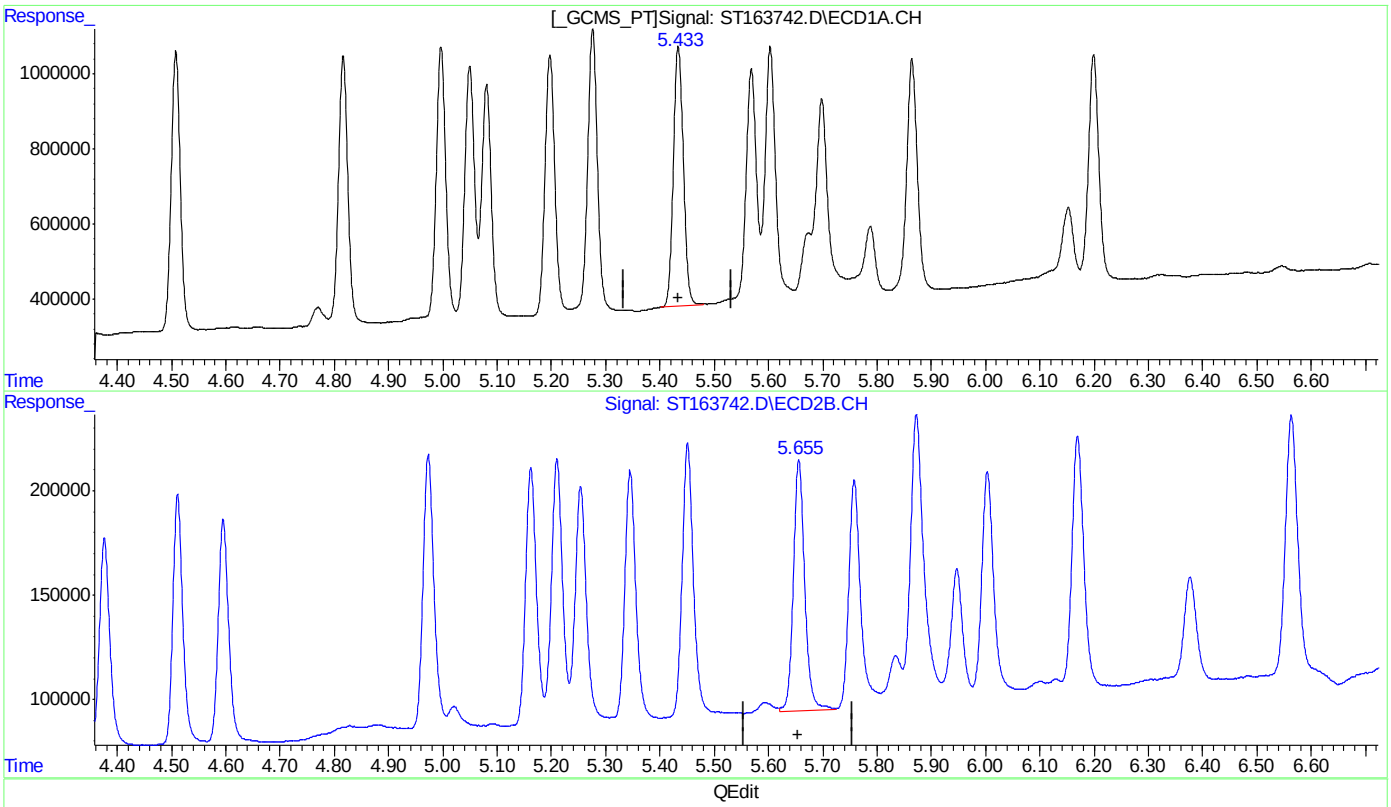
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(14) Endrin ( )

5.433min 5.926 PPB m

response 694169

(14) Endrin #2 ( )

5.656min 5.465 PPB

response 120382

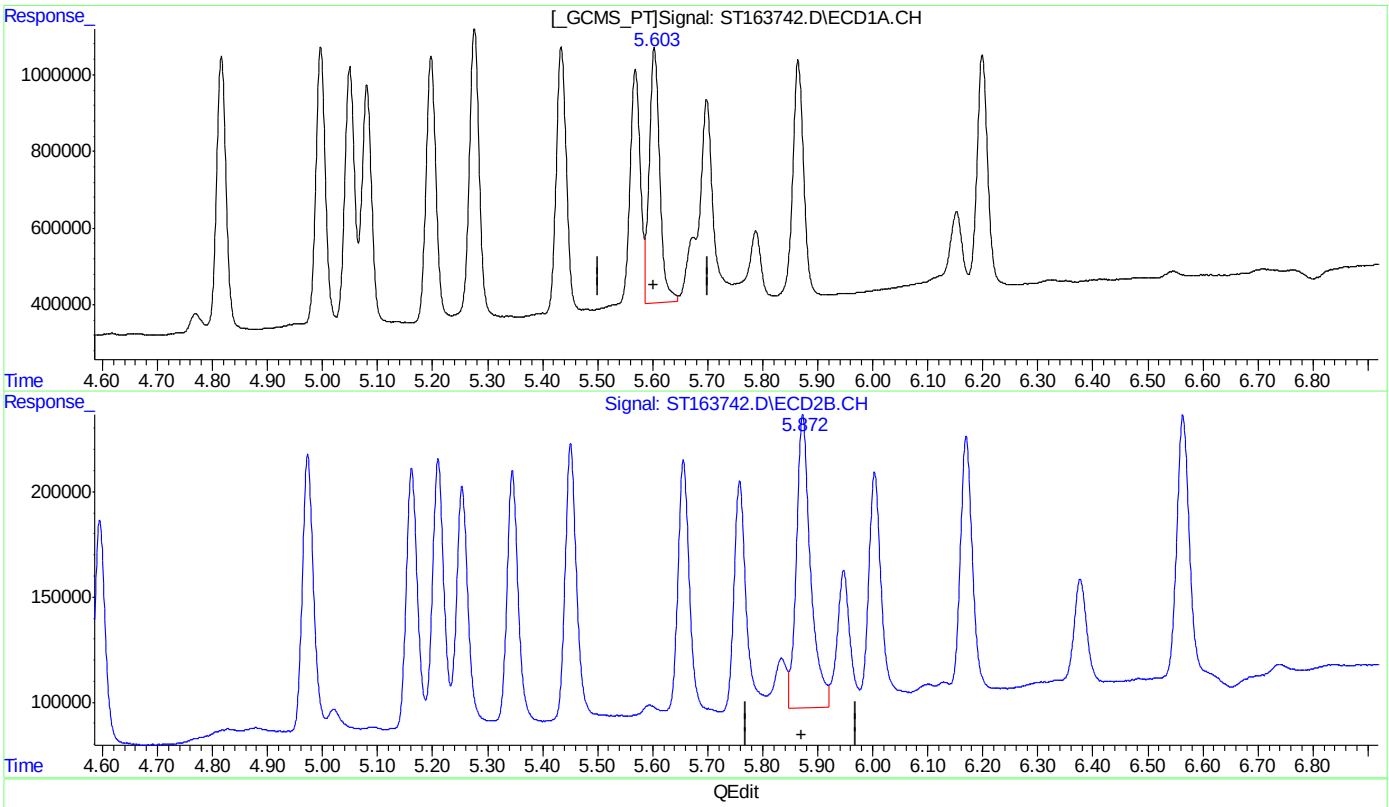
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(16) Endosulfan II ( )
5.603min 5.777 PPB m
response 669312

(16) Endosulfan II #2 ( )
5.873min 5.804 PPB
response 139256

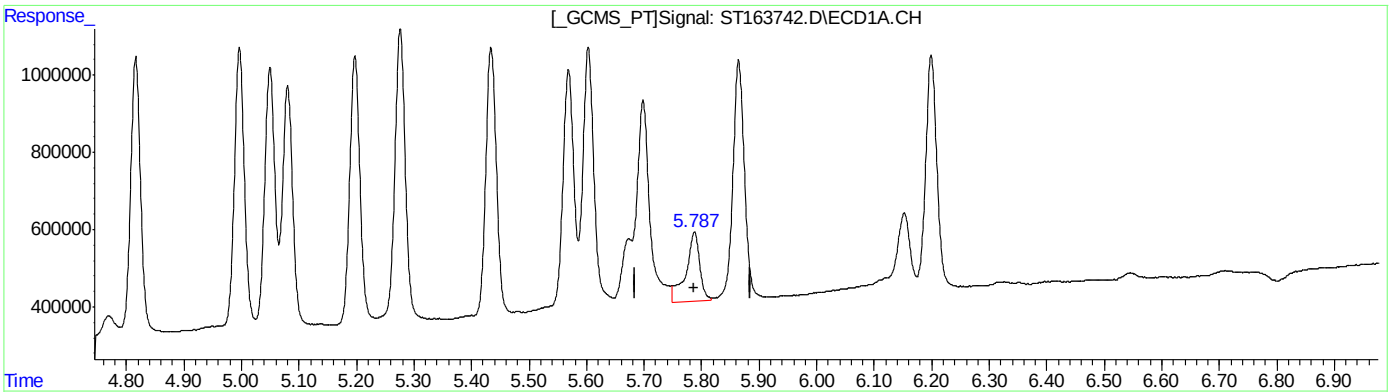
(+) = Expected Retention Time

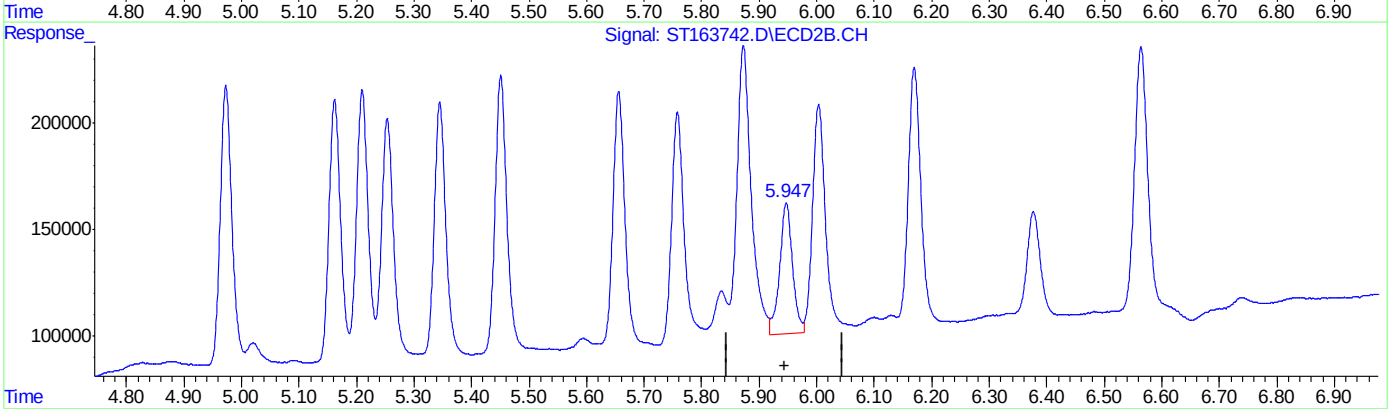
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(17) 4,4'-DDT
5.787min 3.104 ppb m
response 179339

(17) 4,4'-DDT #2
5.947min 4.789 ppb m
response 61729

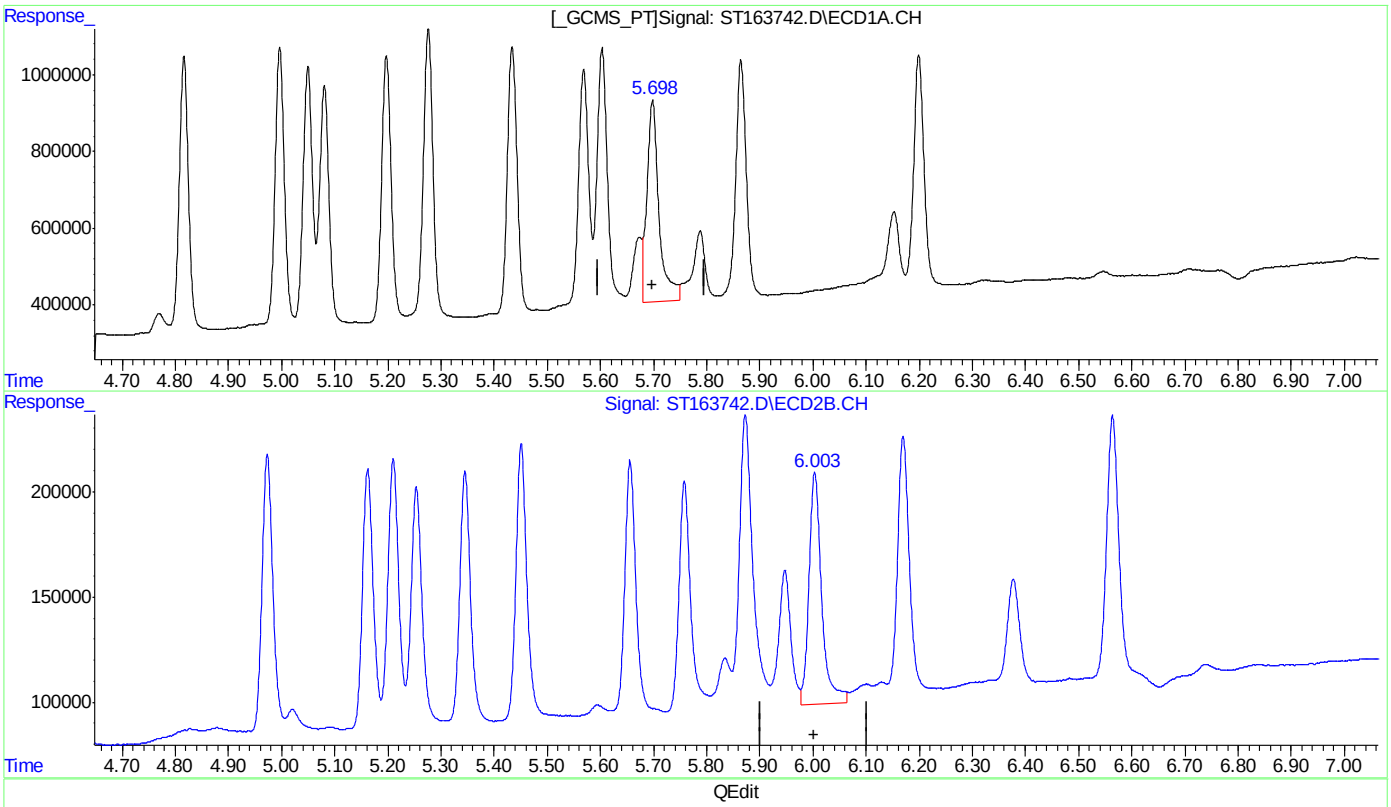
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:47:57 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(18) Endrin Aldehyde ( )
5.698min 7.758 PPB m
response 526725

(18) Endrin Aldehyde #2 ( )
6.003min 6.813 PPB
response 109964

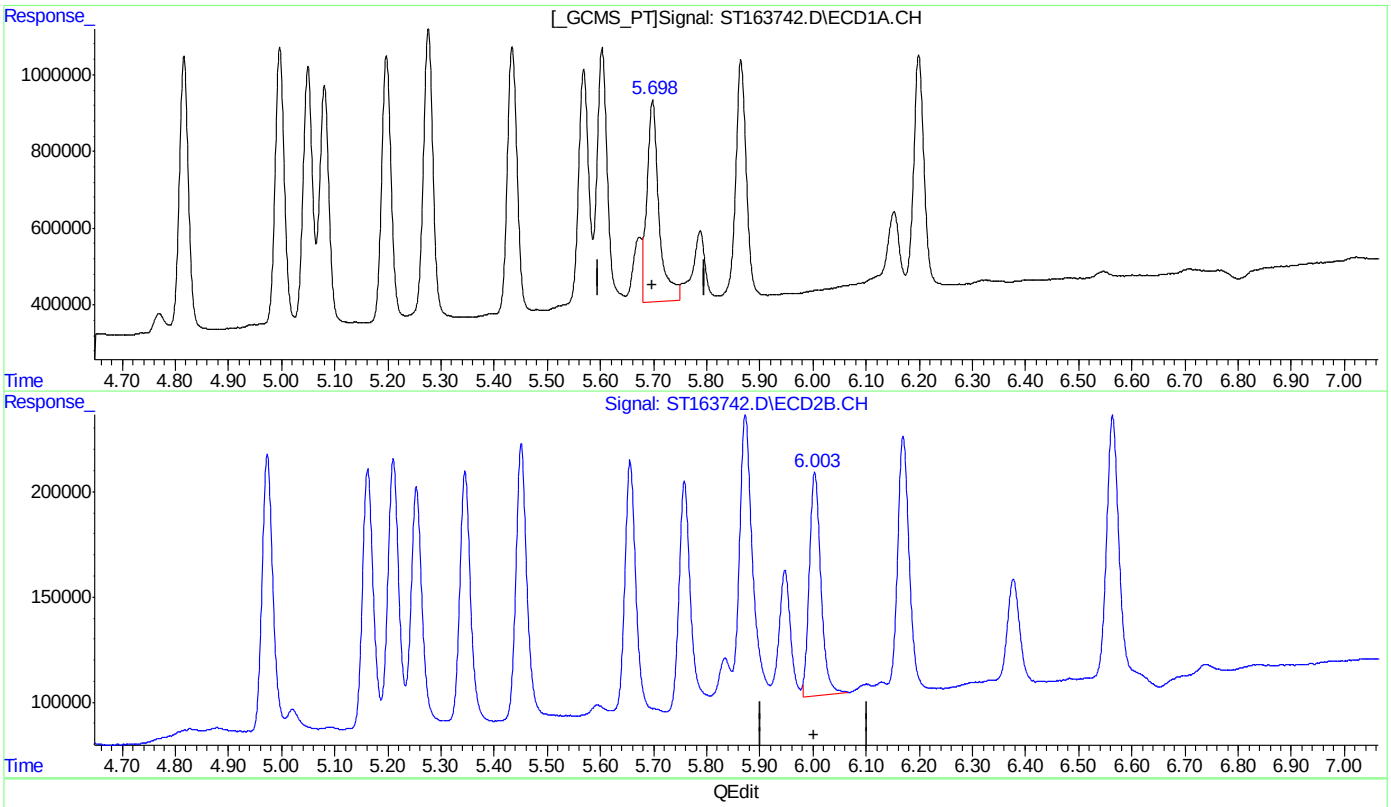
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:48:04 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(18) Endrin Aldehyde ( )
5.698min 7.758 PPB m
response 526725

(18) Endrin Aldehyde #2 ( )
6.003min 6.571 PPB m
response 106055

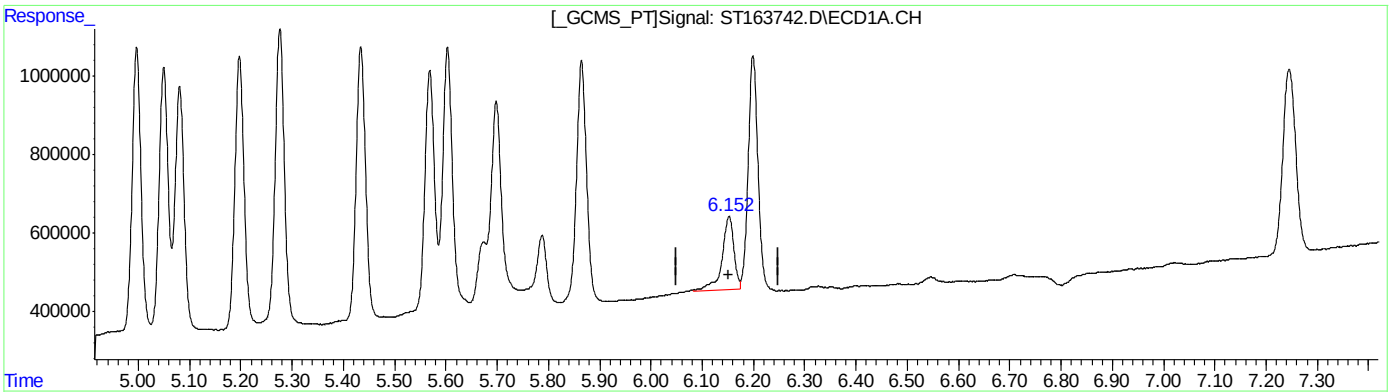
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:48:09 2022 Page: 1

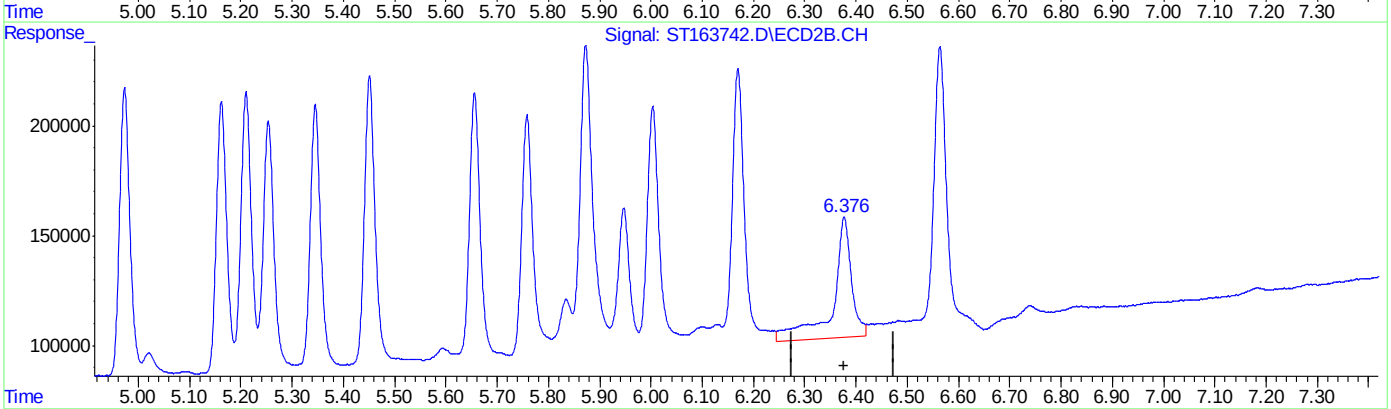
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(19) Methoxychlor
6.152min 4.787 ppb m
response 187593

(19) Methoxychlor #2
6.377min 6.437 ppb
response 54672

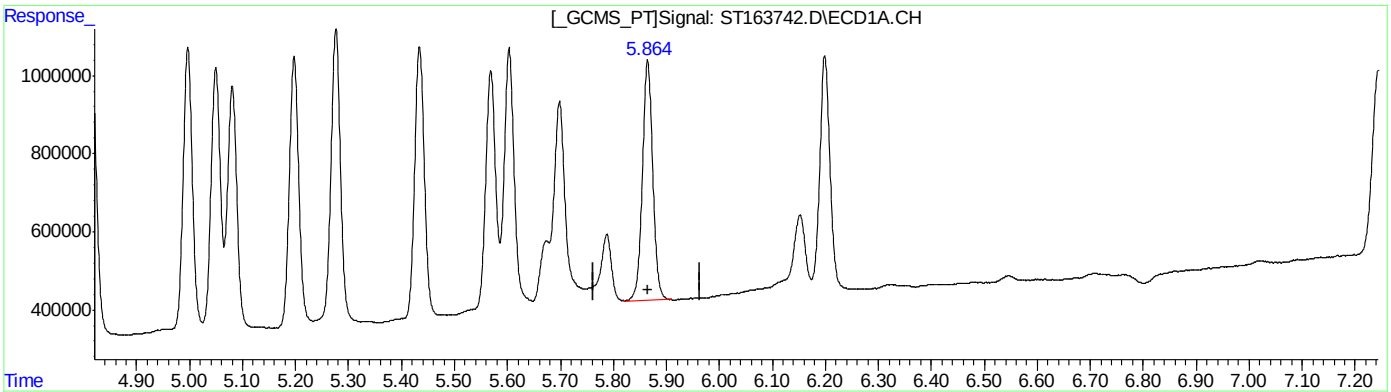
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:48:15 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(20) Endosulfan Sulfate ( )

5.864min 7.897 PPB m

response 616363

(20) Endosulfan Sulfate #2 ( )

6.169min 6.008 PPB m

response 121140

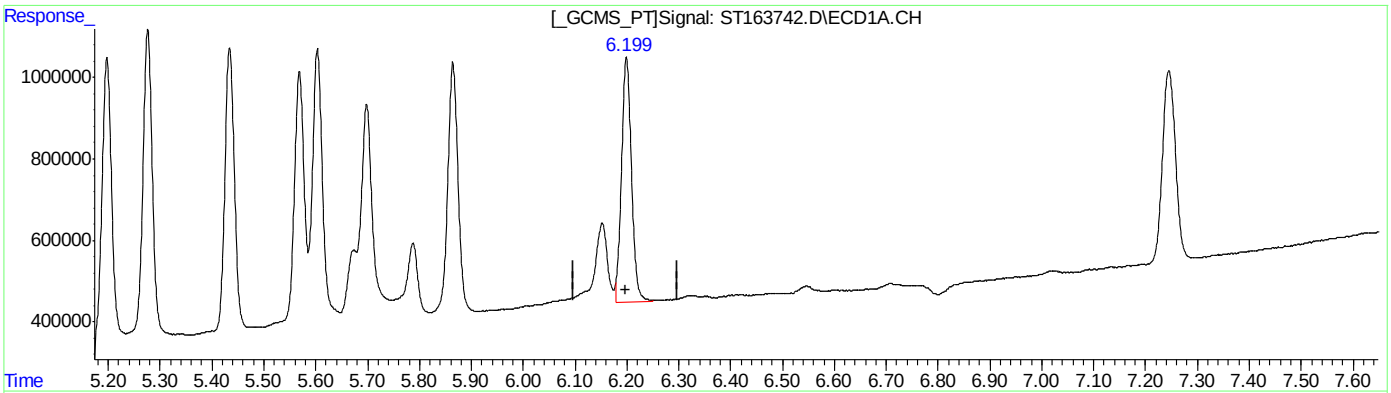
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163742.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:03 am
Operator : eduardom
Sample : ic3992-5 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 11:37:17 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(21) Endrin Ketone ( )
6.199min 5.979 PPB m
response 604069

(21) Endrin Ketone #2 ( )
6.563min 5.666 PPB m
response 124577

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:48:36 2022 Page: 1

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 21 09:29:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.312	3.423	2424320	341055	19.317m	19.915
		Spiked Amount	50.000	Range 42 - 127		Recovery =	38.63%#	39.83%#
33)	S	Decachlor...	7.246	7.475	1875677	439368	25.162	24.795
		Spiked Amount	50.000	Range 27 - 127		Recovery =	50.32%	49.59%
		Target Compounds						
2)		alpha-BHC	3.645	3.838	3652811	517025	22.335	22.504
3)		gamma-BHC...	3.881	4.102	3280148	520952	22.212	22.666
4)		beta-BHC	4.046	4.328	1497434	278537	21.622	24.235
5)		delta-BHC	4.208	4.512	3565016	603000	28.043	24.871
6)		Heptachlor	4.277	4.377	2752823	474323	24.381	23.683
7)		Aldrin	4.508	4.596	3127131	539219	21.968	23.251
8)		Heptachlo...	4.817	4.973	2953849	569861	22.636	23.591
9)		gamma-Chl...	4.997	5.163	2898358	572963	22.182	23.812
10)		alpha-Chl...	5.050	5.211	2846975	567307	22.997m	23.705
11)		4,4'-DDE	5.198	5.346	2824732	580030	21.555	23.675
12)		Endosulfa...	5.080	5.255	2566731	521465	24.538m	22.839
13)		Dieldrin	5.277	5.451	3104550	612146	22.804	23.840
14)		Endrin	5.435	5.657	2914130	559542	24.877	25.402
15)		4,4'-DDD	5.569	5.758	2474505	492886	21.476	23.242
16)		Endosulfa...	5.603	5.872	2659018	561180	22.949	23.390
17)		4,4'-DDT	5.787	5.947	1568630	386322	25.203	27.719
18)		Endrin Al...	5.699	6.004	2073369	448713	30.539	27.800
19)		Methoxychlor	6.152	6.377	1012289	235420	25.830m	27.718m
20)		Endosulfa...	5.865	6.170	2356014	511418	30.186m	25.364
21)		Endrin Ke...	6.199	6.564	2572241	555223	25.460m	25.251m
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 21 09:29:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

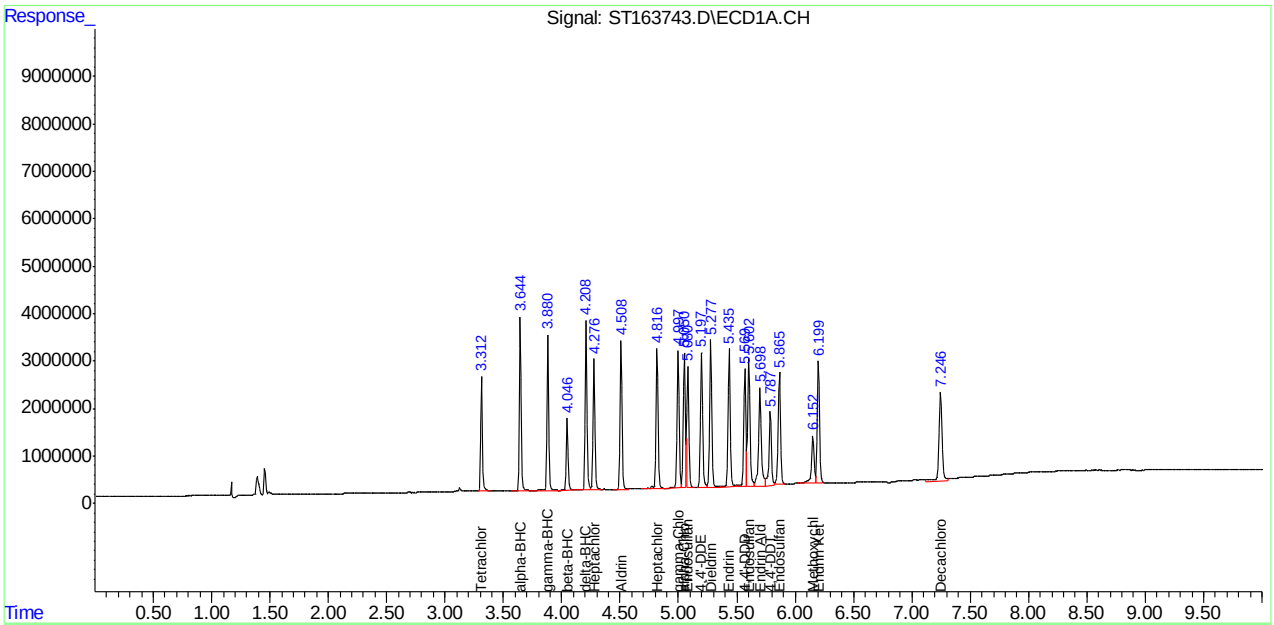
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

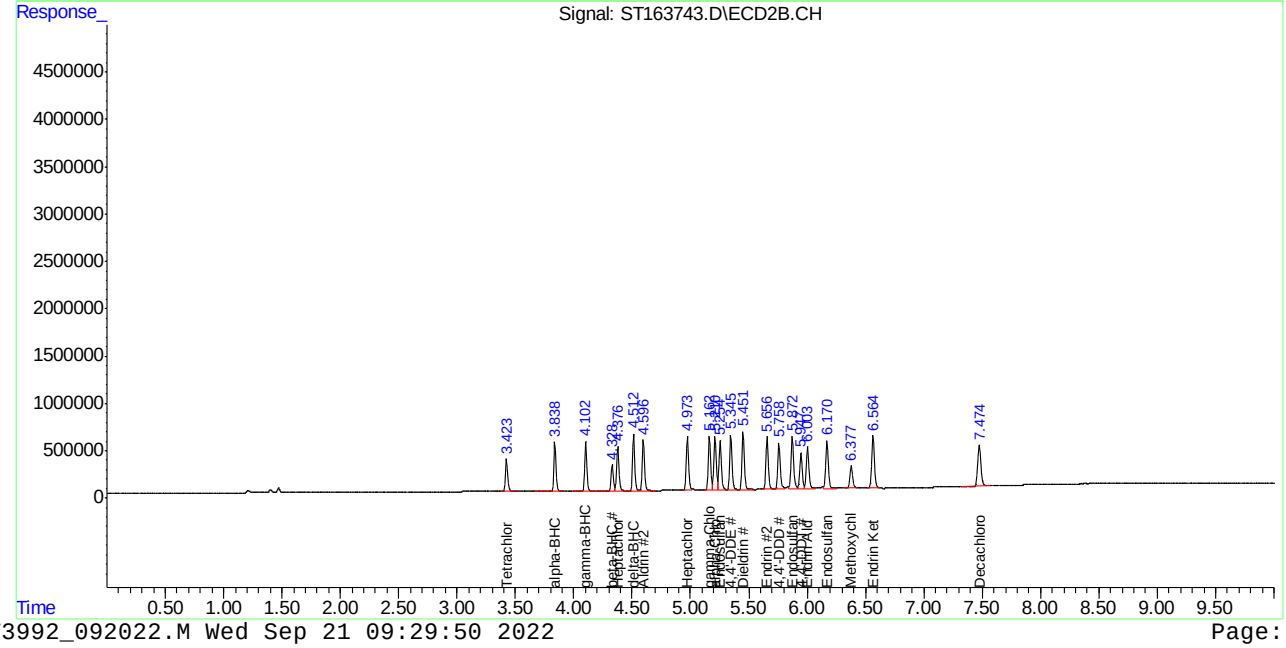
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 21 09:29:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





SGS FA98819

Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163743.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 11:21 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

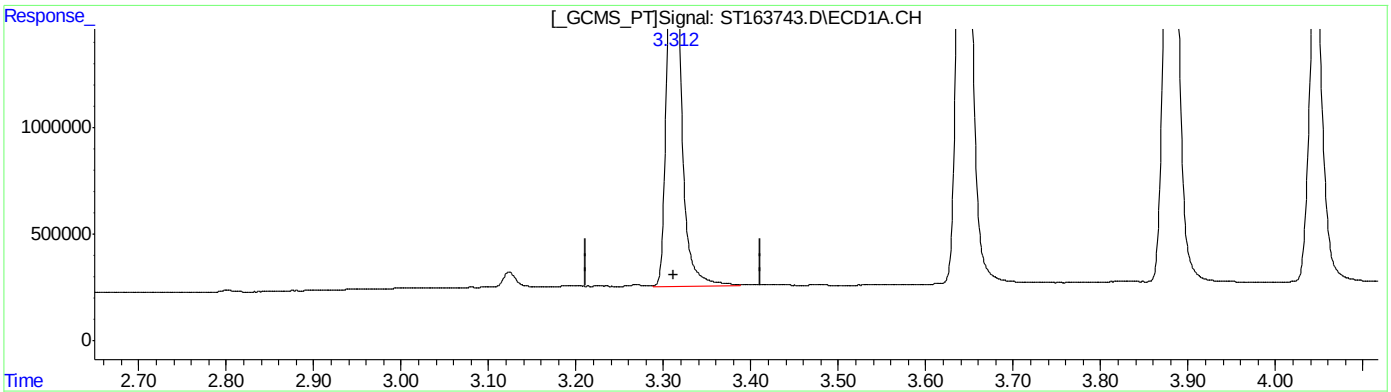
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	3.31	Poor instrument integration
alpha-Chlordane	5103-71-9	1	5.05	Poor instrument integration
Endosulfan-I	959-98-8	1	5.08	Poor instrument integration
Endosulfan sulfate	1031-07-8	1	5.86	Poor instrument integration
Methoxychlor	72-43-5	1	6.15	Poor instrument integration
Endrin ketone	53494-70-5	1	6.20	Poor instrument integration
Methoxychlor	72-43-5	2	6.38	Poor instrument integration
Endrin ketone	53494-70-5	2	6.56	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(1) Tetrachloro-m-xylene (S)

3.312min 19.317 PPB m

response 2424320

(1) Tetrachloro-m-xylene #2 (S)

3.423min 19.915 PPB

response 341055

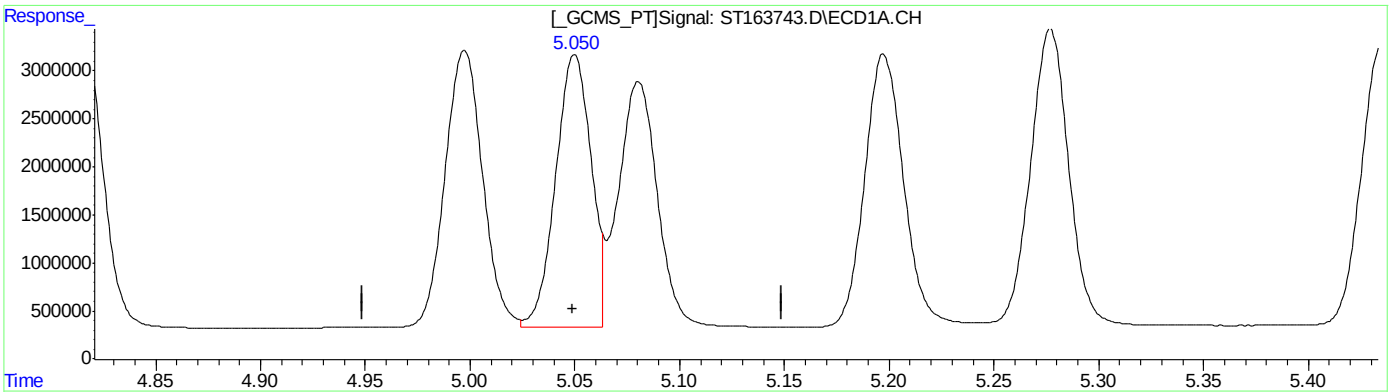
(+) = Expected Retention Time

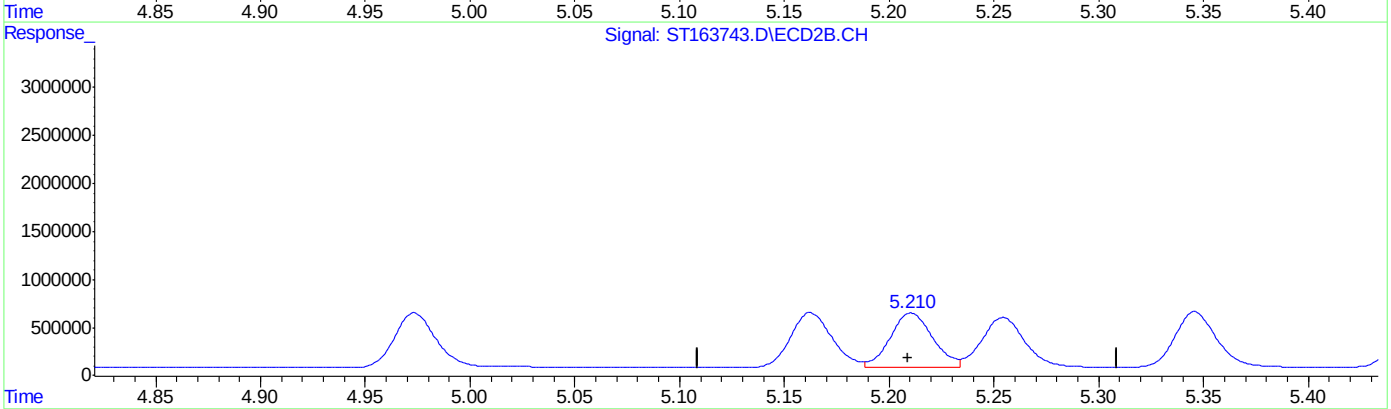
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(10) alpha-Chlordane
5.050min 22.997 PPB m
response 2846975

(10) alpha-Chlordane #2
5.211min 23.705 PPB
response 567307

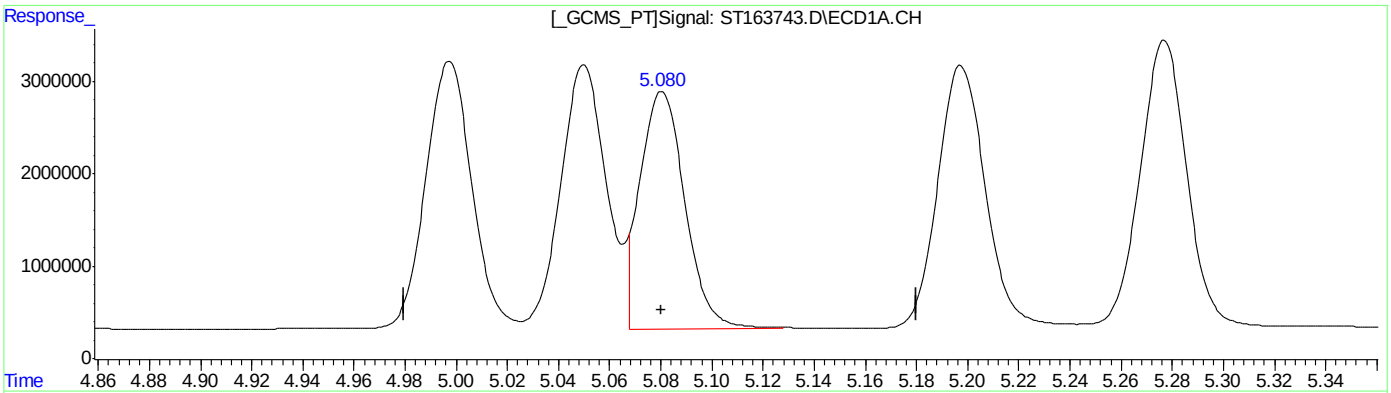
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:50:17 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(12) Endosulfan I ( )
5.080min 24.538 PPB m
response 2566731

(12) Endosulfan I #2 ( )
5.255min 22.839 PPB
response 521465

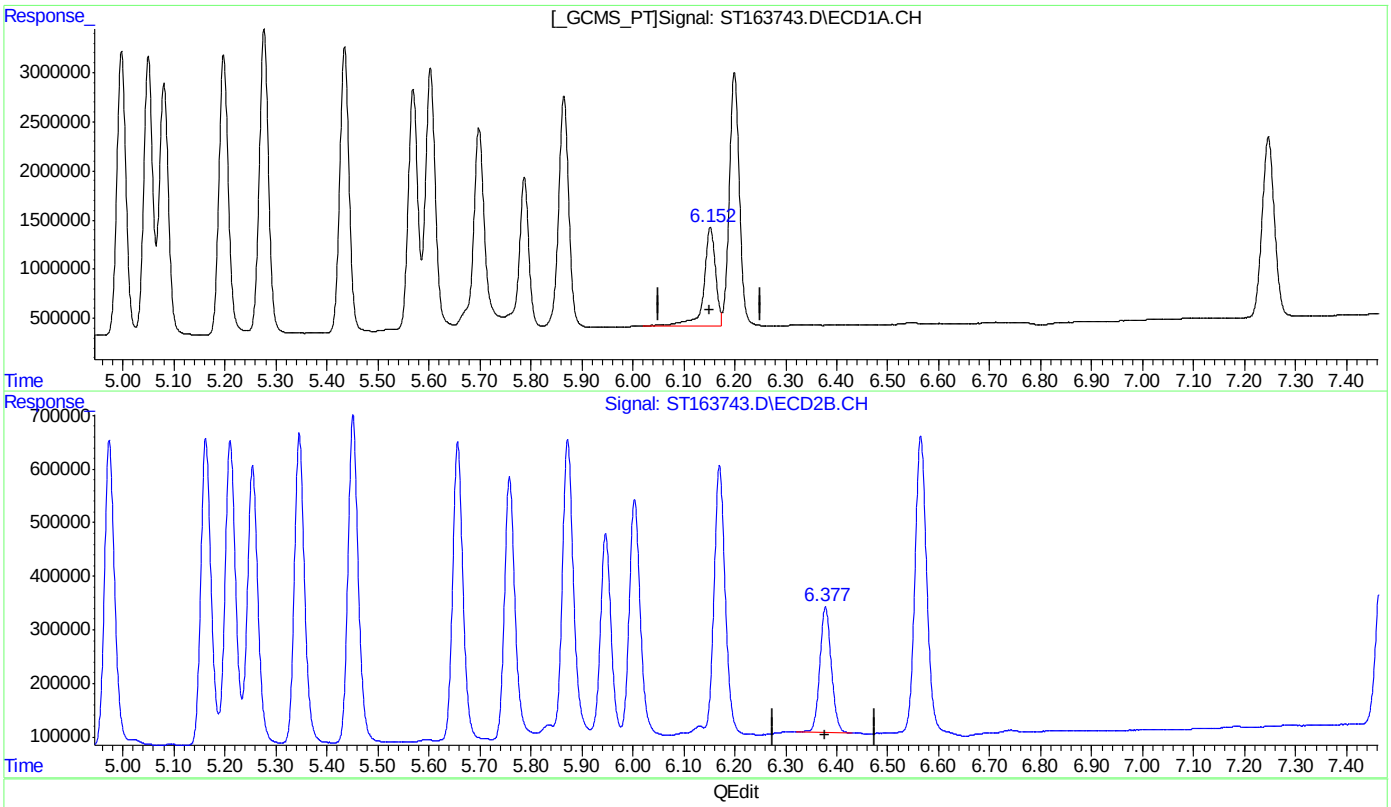
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(19) Methoxychlor
6.152min 25.830 ppb m
response 1012289

(19) Methoxychlor #2
6.377min 27.718 ppb m
response 235420

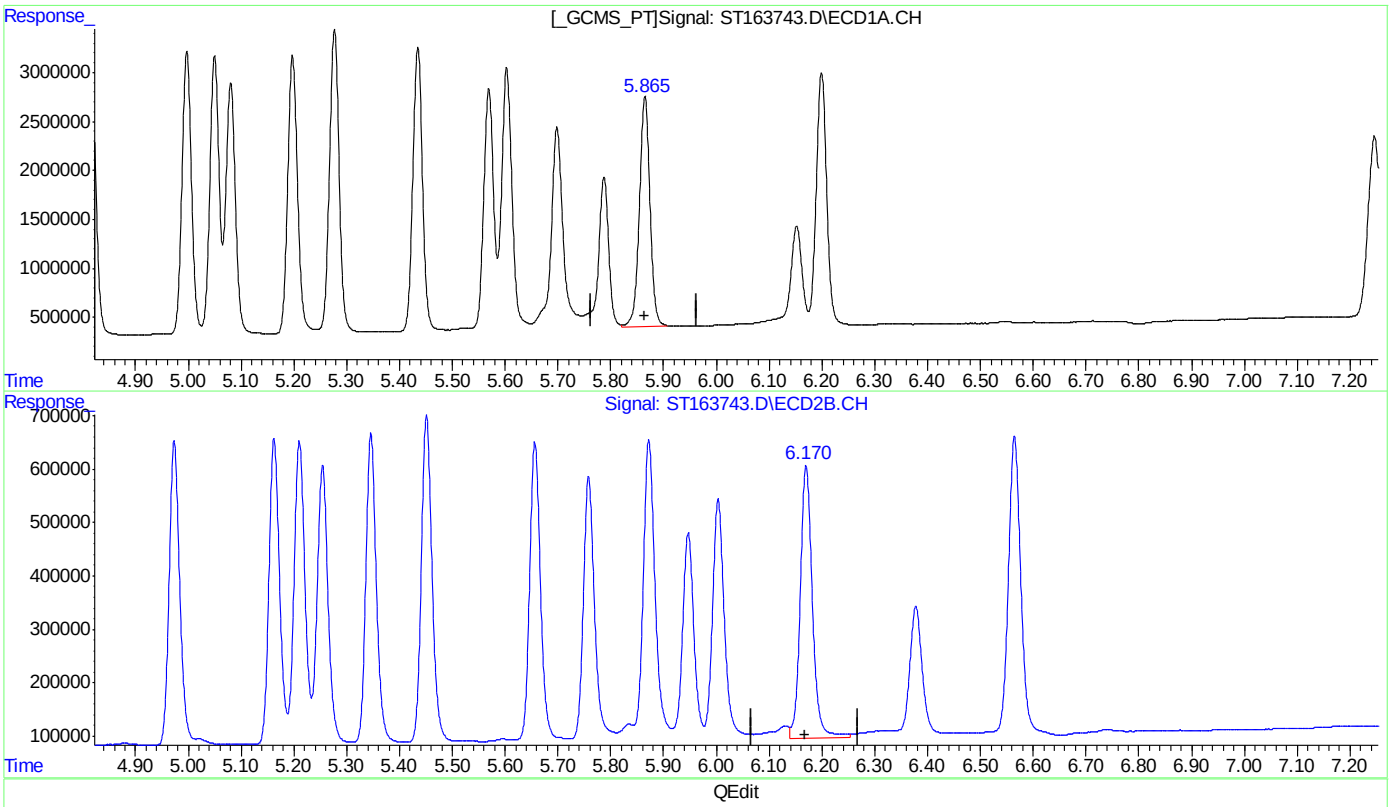
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:50:41 2022 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(20) Endosulfan Sulfate ( )
5.865min 30.186 PPB m
response 2356014

(20) Endosulfan Sulfate #2 ( )
6.170min 25.364 PPB
response 511418

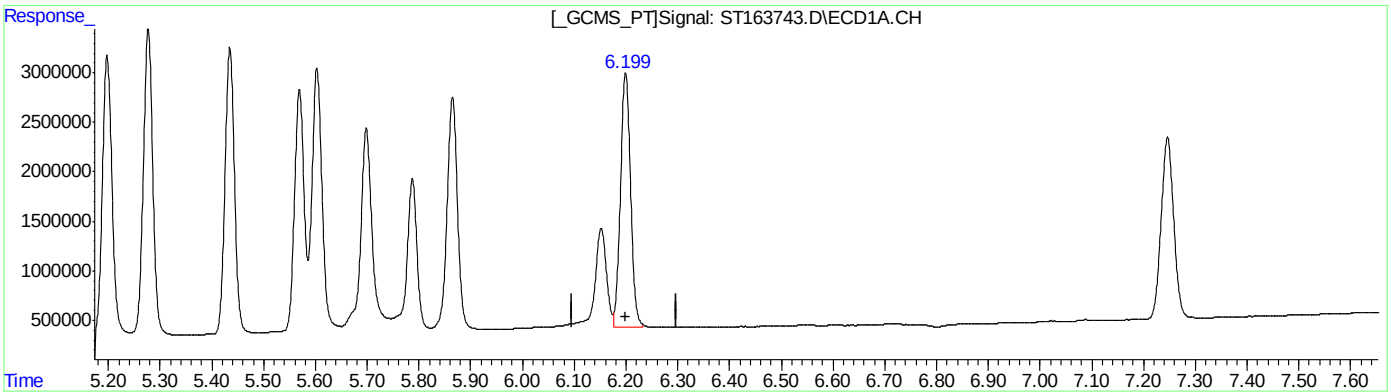
(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:50:48 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:21 am
Operator : eduardom
Sample : ic3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 11:37:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(21) Endrin Ketone ( )
6.199min 25.460 PPB m
response 2572241

(21) Endrin Ketone #2 ( )
6.564min 25.251 PPB m
response 555223

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 11:50:57 2022 Page: 1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:38 am
Operator : eduardom
Sample : icc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 12:54:31 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.312	3.424	4518425	652719	36.003	38.114
		Spiked Amount	50.000	Range 42 - 127		Recovery =	72.01%	76.23%
33)	S	Decachlor...	7.247	7.474	3713952	822902	49.822	46.440
		Spiked Amount	50.000	Range 27 - 127		Recovery =	99.64%	92.88%
		Target Compounds						
2)		alpha-BHC	3.645	3.839	6947479	1071298	42.480	46.629
3)		gamma-BHC...	3.881	4.103	6381312	1059162	43.213	46.082
4)		beta-BHC	4.046	4.328	2783360	543454	40.190	47.284
5)		delta-BHC	4.208	4.512	6823515	1210341	53.675	49.920
6)		Heptachlor	4.276	4.377	5320119	949780	47.120	47.423
7)		Aldrin	4.508	4.596	6092419	1090038	42.799	47.003
8)		Heptachlo...	4.817	4.973	5553781	1105354	42.561	45.759
9)		gamma-Chl...	4.997	5.163	5818255	1128557	44.528	46.902
10)		alpha-Chl...	5.050	5.210	5472719	1113374	44.206	46.523
11)		4,4'-DDE	5.198	5.346	5418389	1150676	41.346	46.967
12)		Endosulfa...	5.080	5.254	5015425	1031206	47.948	45.165
13)		Dieldrin	5.276	5.451	5924932	1208445	43.522	47.062
14)		Endrin	5.434	5.656	5601930	1115342	47.822	50.634
15)		4,4'-DDD	5.569	5.758	4717213	977863	40.940	46.111
16)		Endosulfa...	5.604	5.872	5340807	1089481	46.094	45.410
17)		4,4'-DDT	5.787	5.947	3571065	869629	52.672	56.942
18)		Endrin Al...	5.699	6.003	4019590	887136	59.205	54.963
19)		Methoxychlor	6.153	6.377	2147562	484539	54.798	57.049
20)		Endosulfa...	5.864	6.170	4703079	1016160	60.257	50.397
21)		Endrin Ke...	6.199	6.564	5179588	1132472	51.267	51.503
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:38 am
Operator : eduardom
Sample : icc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 12:54:31 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:38 am
Operator : eduardom
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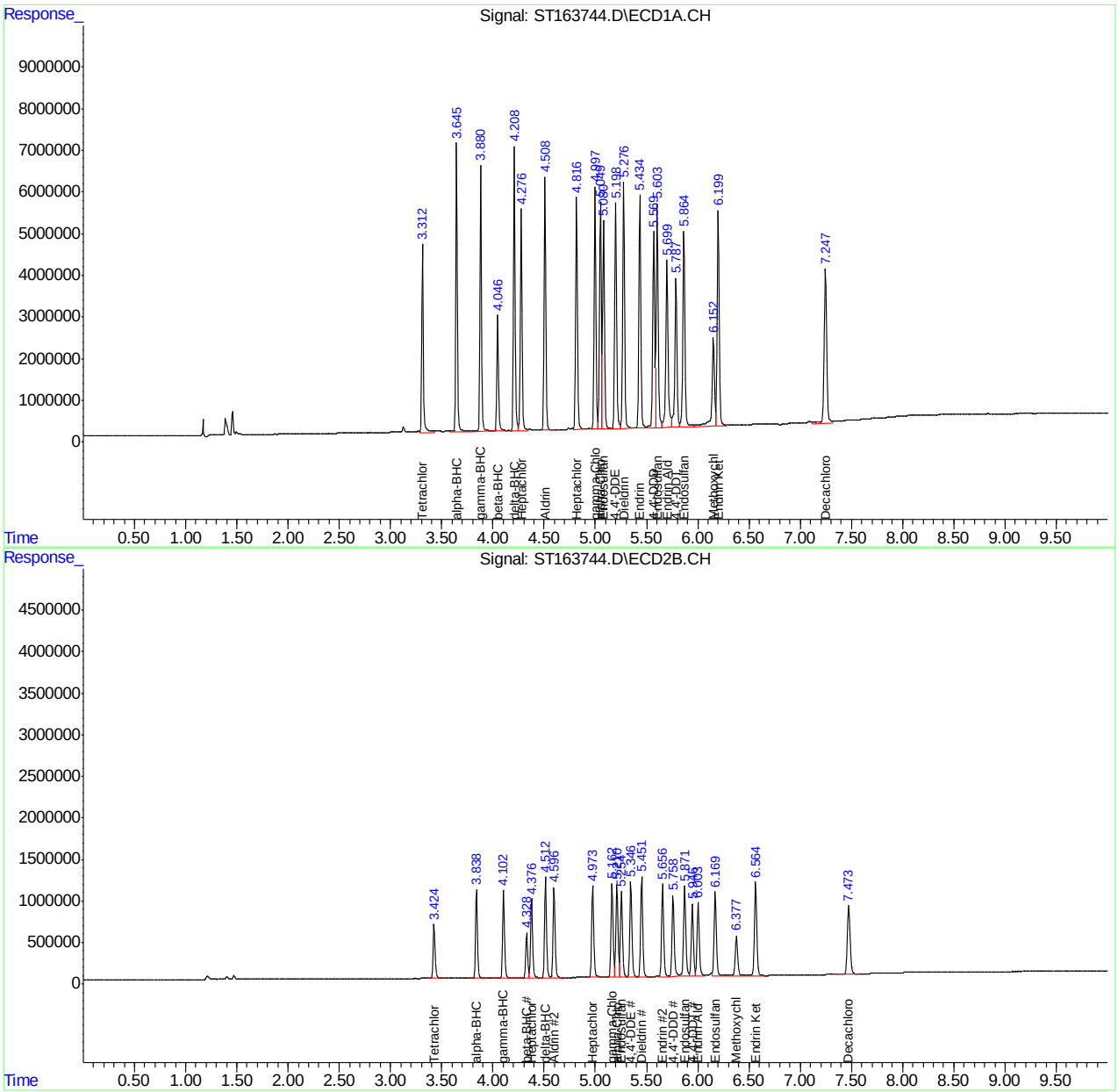
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 12:54:31 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163745.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:56 am
Operator : eduardom
Sample : ic3992-60 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 12:54:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.313	3.424	6821081	1029244	54.350	60.100
		Spiked Amount	50.000	Range 42 - 127		Recovery =	108.70%	120.20%
33)	S	Decachlor...	7.248	7.474	5320307	1211714	71.371	68.382
		Spiked Amount	50.000	Range 27 - 127		Recovery =	142.74%#	136.76%#
		Target Compounds						
2)		alpha-BHC	3.646	3.839	10669073	1648364	65.236	71.746
3)		gamma-BHC...	3.882	4.104	9688365	1633296	65.607	71.061
4)		beta-BHC	4.048	4.329	4279488	826632	61.794	71.923
5)		delta-BHC	4.210	4.513	10276545	1878411	80.838	77.475
6)		Heptachlor	4.278	4.378	8224306	1451345	72.842	72.466
7)		Aldrin	4.509	4.597	9138516	1683263	64.197	72.583
8)		Heptachlo...	4.818	4.974	8614298	1695428	66.014	70.187
9)		gamma-Chl...	4.998	5.163	8593691	1721067	65.769	71.526
10)		alpha-Chl...	5.051	5.211	8254738	1703891	66.679	71.199
11)		4,4'-DDE	5.199	5.347	8604407	1740563	65.658	71.044
12)		Endosulfa...	5.082	5.255	7563646	1578417	72.309	69.132
13)		Dieldrin	5.278	5.452	9034523	1850256	66.363	72.057
14)		Endrin	5.435	5.657	8639316	1674998	73.751	76.040
15)		4,4'-DDD	5.571	5.759	7050495	1504475	61.190	70.943
16)		Endosulfa...	5.605	5.872	7949255	1638604	68.607	68.298
17)		4,4'-DDT	5.788	5.947	5928981	1362062	80.699	82.785
18)		Endrin Al...	5.699	6.004	6120115	1315688	90.145	81.514
19)		Methoxychlor	6.153	6.378	3344762	739882	85.347	87.113
20)		Endosulfa...	5.867	6.170	6781803	1493865	86.891	74.089
21)		Endrin Ke...	6.201	6.565	7961135	1705326	78.798	77.555
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163745.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:56 am
Operator : eduardom
Sample : ic3992-60 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 12:54:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

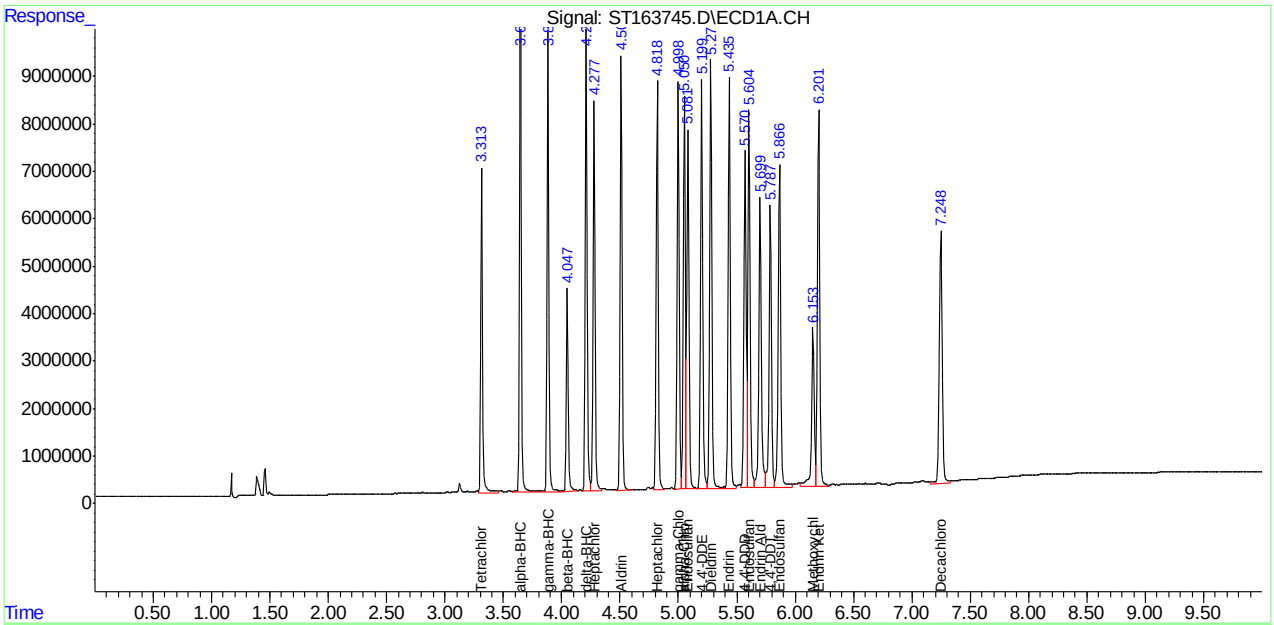
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

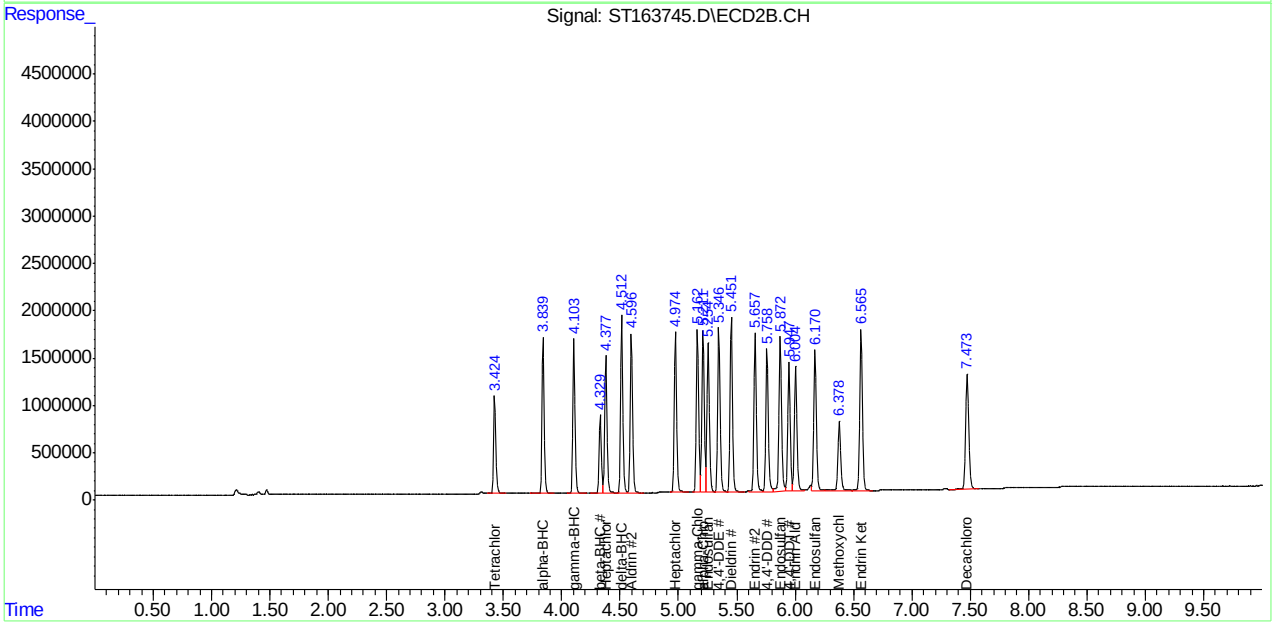
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163745.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 11:56 am
Operator : eduardom
Sample : ic3992-60 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 12:54:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





FA98819

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163746.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:13 pm
Operator : eduardom
Sample : ic3992-80 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 12:54:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.313	3.424	8915477	1348914	71.039	78.767
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	142.08%#	157.53%#
33) S	Decachlor...	7.247	7.474	7021676	1590771	94.195	89.774
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	188.39%#	179.55%#
	Target Compounds						
2)	alpha-BHC	3.646	3.840	13936244	2182212	85.213	94.981
3)	gamma-BHC...	3.882	4.103	12546173	2169614	84.959	94.396
4)	beta-BHC	4.047	4.329	5607651	1079348	80.972	93.911
5)	delta-BHC	4.210	4.513	13273805	2408966	104.415	99.357
6)	Heptachlor	4.277	4.377	10558247	1874866	93.513	93.612
7)	Aldrin	4.509	4.597	11725004	2223792	82.367	95.890
8)	Heptachlo...	4.818	4.974	11010581	2201337	84.378	91.131
9)	gamma-Chl...	4.998	5.163	11068197	2273547	84.707	94.486
10)	alpha-Chl...	5.050	5.211	10676927	2235944	86.244	93.431
11)	4,4'-DDE	5.199	5.347	11114281	2290065	84.810	93.474
12)	Endosulfa...	5.081	5.254	10035024	2079079	95.936	91.060
13)	Dieldrin	5.277	5.451	11887601	2431698	87.320	94.701
14)	Endrin	5.435	5.657	11076561	2231250	94.557	101.293
15)	4,4'-DDD	5.570	5.759	9277245	1944175	80.515	91.677
16)	Endosulfa...	5.604	5.872	10227437	2168102	88.269	90.368
17)	4,4'-DDT	5.787	5.947	8097101	1820704	103.655	104.396
18)	Endrin Al...	5.699	6.003	7870708	1735817	115.930	107.544
19)	Methoxychlor	6.153	6.378	4348296	982365	110.953	115.662
20)	Endosulfa...	5.865	6.170	9190441	1972126	117.751	97.808
21)	Endrin Ke...	6.200	6.564	10371122	2220655	102.652	100.992
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Toxaphene-A			0	0	N.D.	N.D.
	Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163746.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:13 pm
Operator : eduardom
Sample : ic3992-80 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 12:54:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

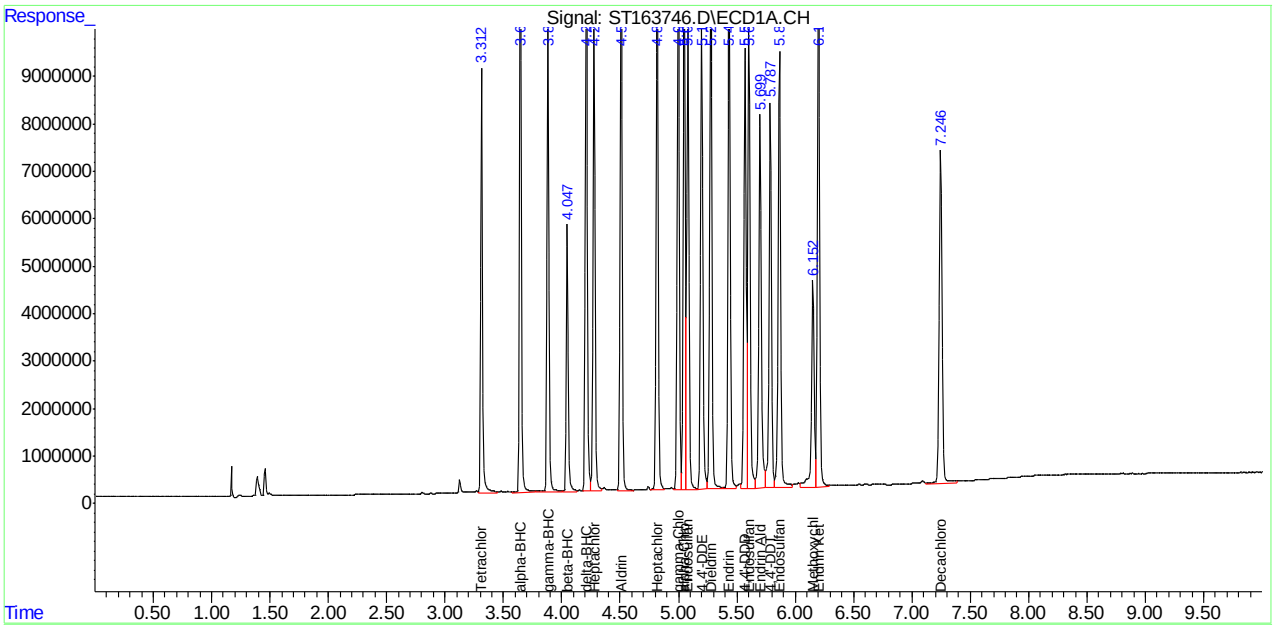
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

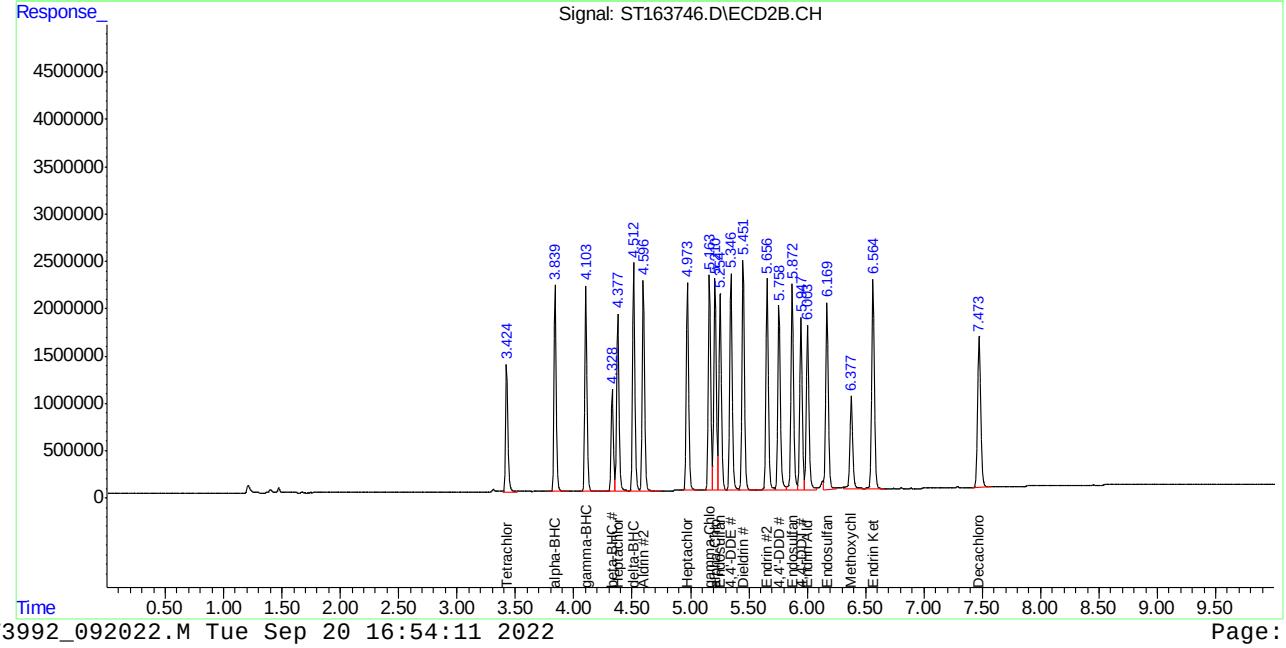
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163746.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:13 pm
Operator : eduardom
Sample : ic3992-80 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 12:54:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





SGS FA98819

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163747.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:31 pm
Operator : eduardom
Sample : ic3992-120 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 20 12:54:54 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.314	3.425	12874321	1980286	102.583	115.634
		Spiked Amount	50.000	Range 42 - 127		Recovery =	205.17%#	231.27%#
33)	S	Decachlor...	7.247	7.474	10365865	2331296	139.056	131.564
		Spiked Amount	50.000	Range 27 - 127		Recovery =	278.11%#	263.13%#
		Target Compounds						
2)		alpha-BHC	3.646	3.839	19948924	3226073	121.977	140.416
3)		gamma-BHC...	3.882	4.103	18485453	3132044	125.179	136.269
4)		beta-BHC	4.048	4.329	8351087	1554817	120.585	135.280
5)		delta-BHC	4.210	4.513	19352366	3610113	152.230	148.898
6)		Heptachlor	4.278	4.377	15421686	2750057	136.588	137.311
7)		Aldrin	4.510	4.597	16921784	3214898	118.874	138.627
8)		Heptachlo...	4.818	4.974	16028608	3171942	122.833	131.312
9)		gamma-Chl...	4.999	5.163	16554587	3318139	126.696	137.898
10)		alpha-Chl...	5.052	5.211	16064195	3240749	129.760	135.417
11)		4,4'-DDE	5.200	5.347	15963565	3360476	121.813	137.164
12)		Endosulfa...	5.052	5.255	16064195	2990821	153.575	130.993
13)		Dieldrin	5.278	5.452	17720344	3561733	130.165	138.710
14)		Endrin	5.436	5.656	16047491	3222229	136.993	146.280
15)		4,4'-DDD	5.571	5.758	14077655	2845581	122.177	134.182
16)		Endosulfa...	5.605	5.872	15268316	3189933	131.775	132.959
17)		4,4'-DDT	5.788	5.948	12807986	2773025	147.305	144.041
18)		Endrin Al...	5.700	6.004	11395467	2578966	167.847	159.781
19)		Methoxychlor	6.154	6.378	6556056	1452157	167.288	170.975
20)		Endosulfa...	5.866	6.171	13552315	2932351	173.637	145.431
21)		Endrin Ke...	6.201	6.565	15646368	3253813	154.865	147.978
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163747.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:31 pm
Operator : eduardom
Sample : ic3992-120 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 20 12:54:54 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

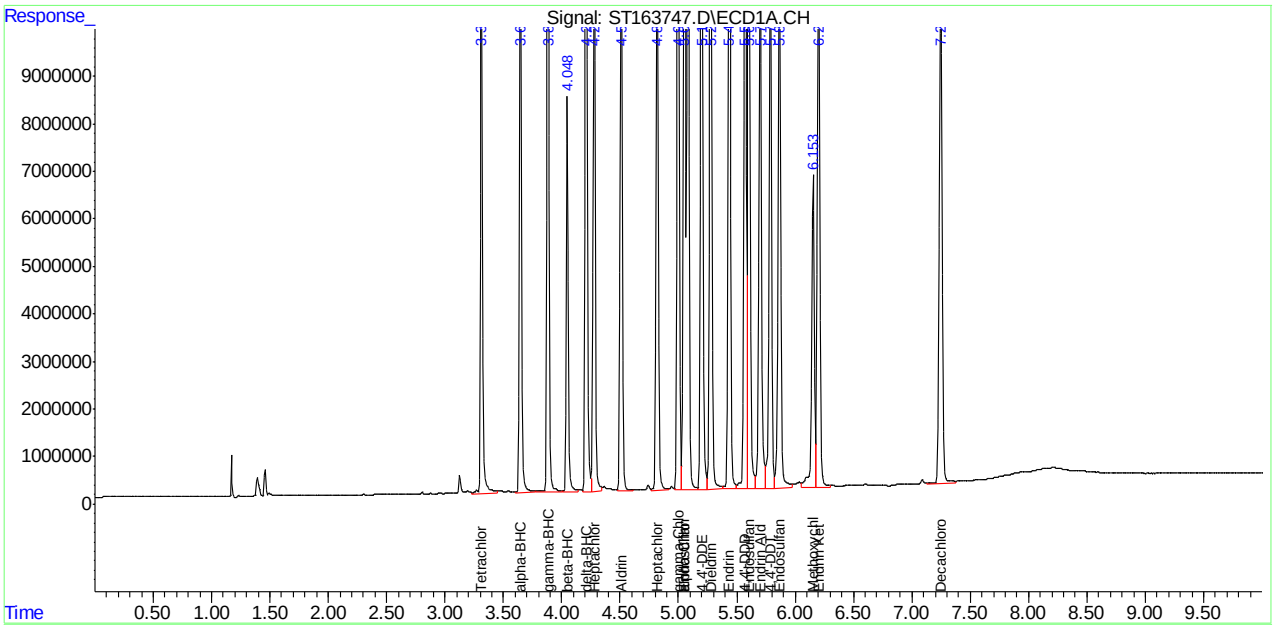
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

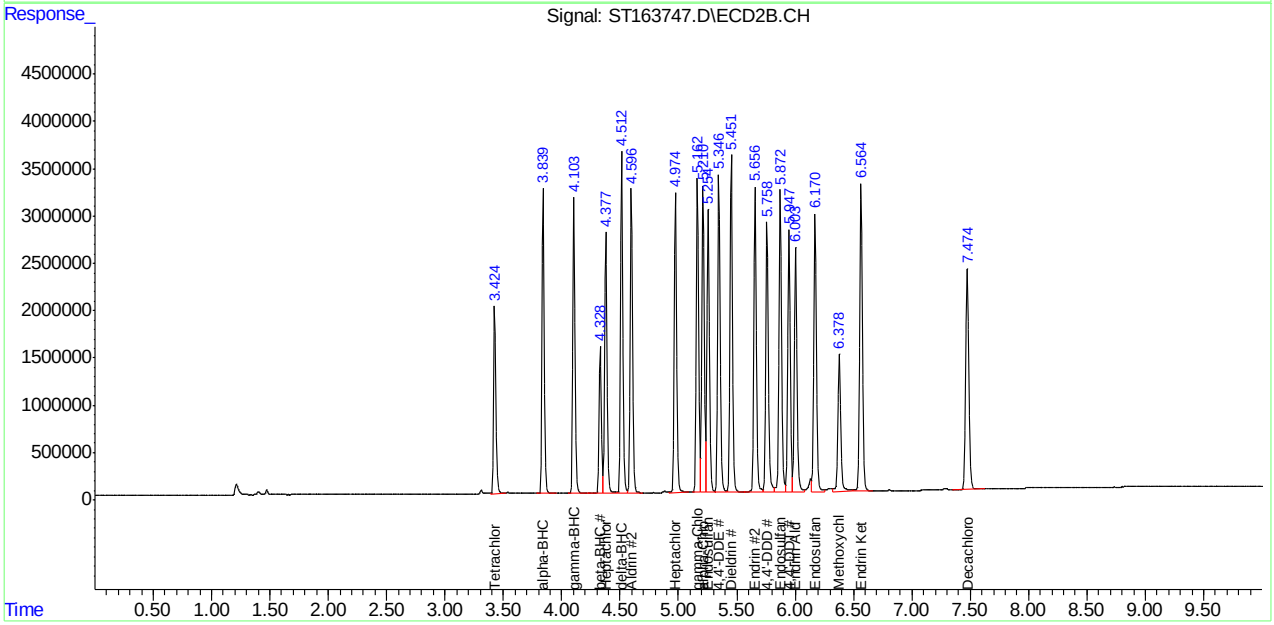
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163747.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:31 pm
Operator : eduardom
Sample : ic3992-120 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 20 12:54:54 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 13 10:12:18 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:05 pm
Operator : eduardom
Sample : ic3992-20 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 15:05:41 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	88732	11298	11.851	8.113
23)	L1	Chlordane-B	4.277	4.377	138095	18737	10.033	7.901
24)	L1	Chlordane-C	4.505	4.684	91205	14836	5.833	5.503
25)	L1	Chlordane-D	4.999	5.168	356314	55379	24.587	19.331
26)	L1	Chlordane-E	5.053	5.210	409464	48383	28.886	17.057 #
27)	L1	Chlordane-F	5.645	5.886	31723	20568	3.060m	7.330 #
		Sum Chlordane-A			1115533	169202	84.251	65.234
		Average Chlordane-A					14.042	10.872
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:05 pm
Operator : eduardom
Sample : ic3992-20 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 15:05:41 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

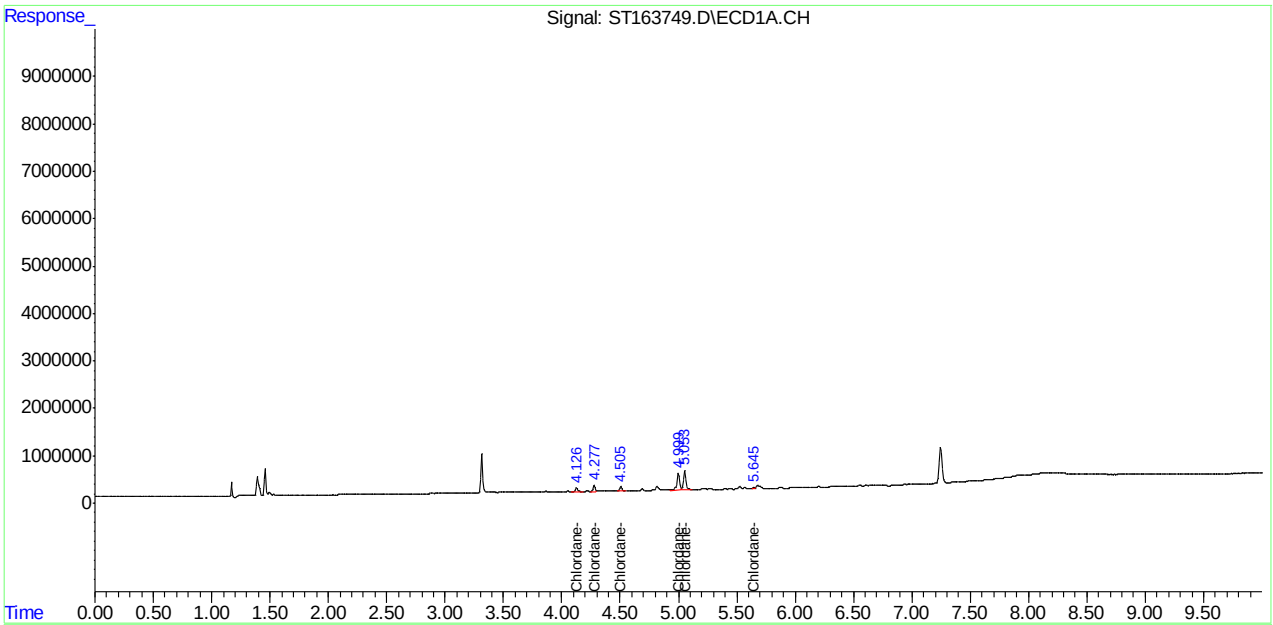
12.6.8 12

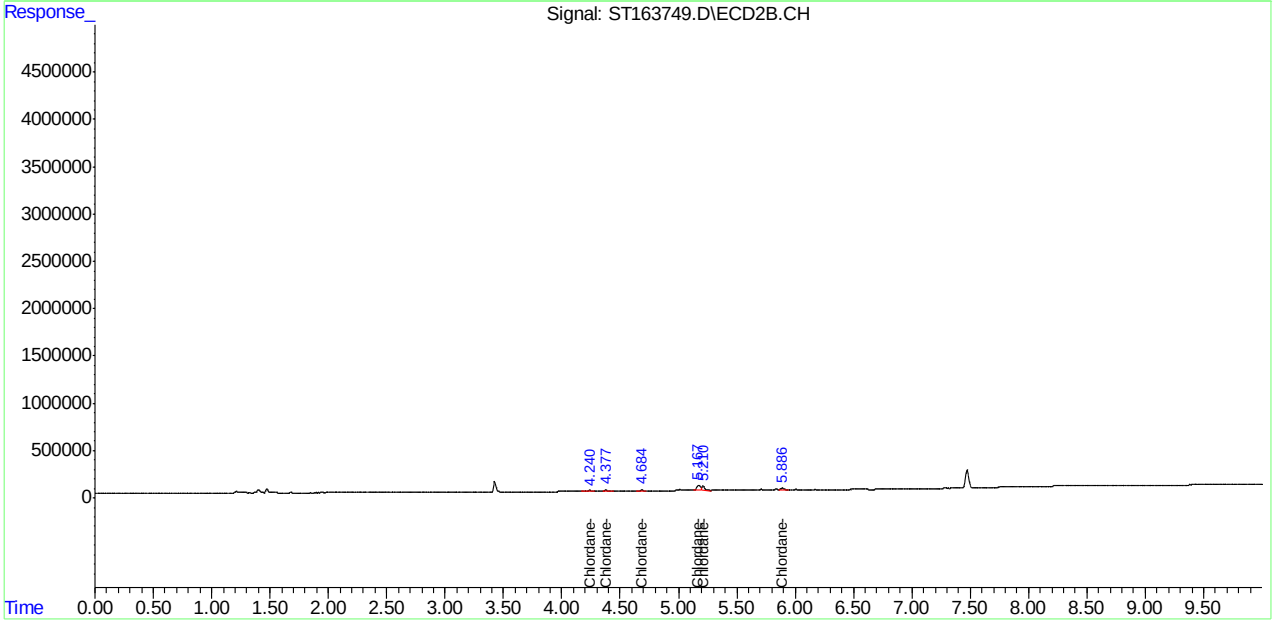
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:05 pm
Operator : eduardom
Sample : ic3992-20 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 15:05:41 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163749.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 13:05	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

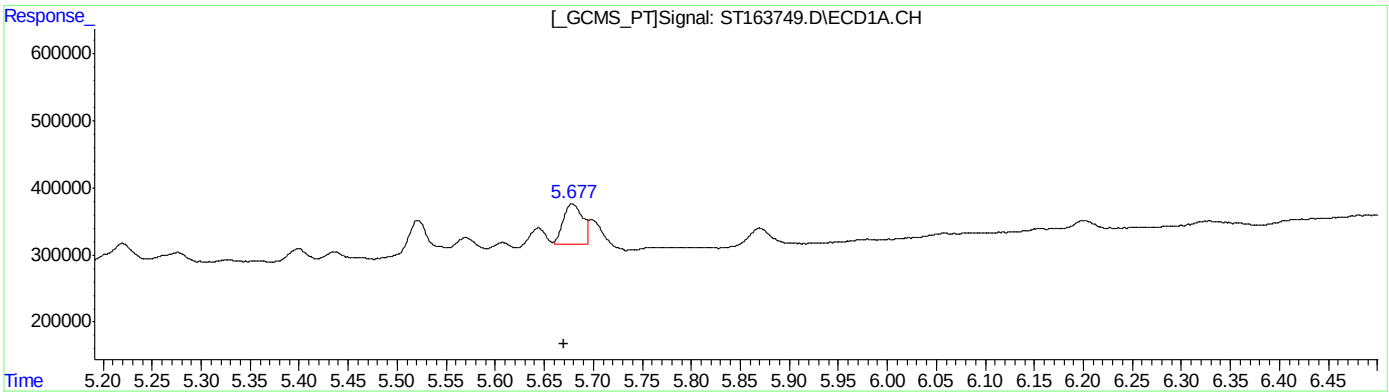
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-F		1	5.64	Poor instrument integration

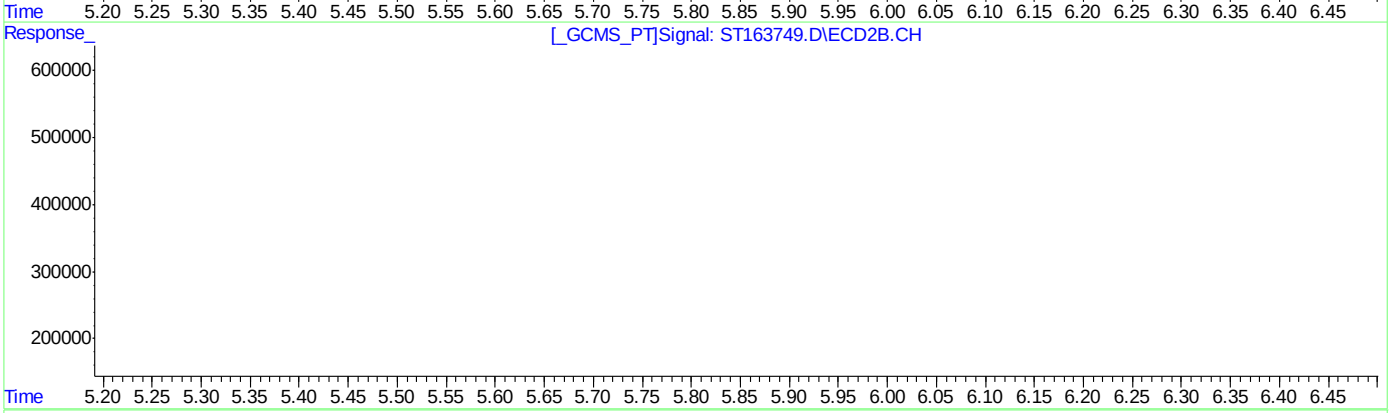
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:05 pm
Operator : eduardom
Sample : ic3992-20 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 15:00:00 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.68	60265	5.81

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.89	20568	7.33

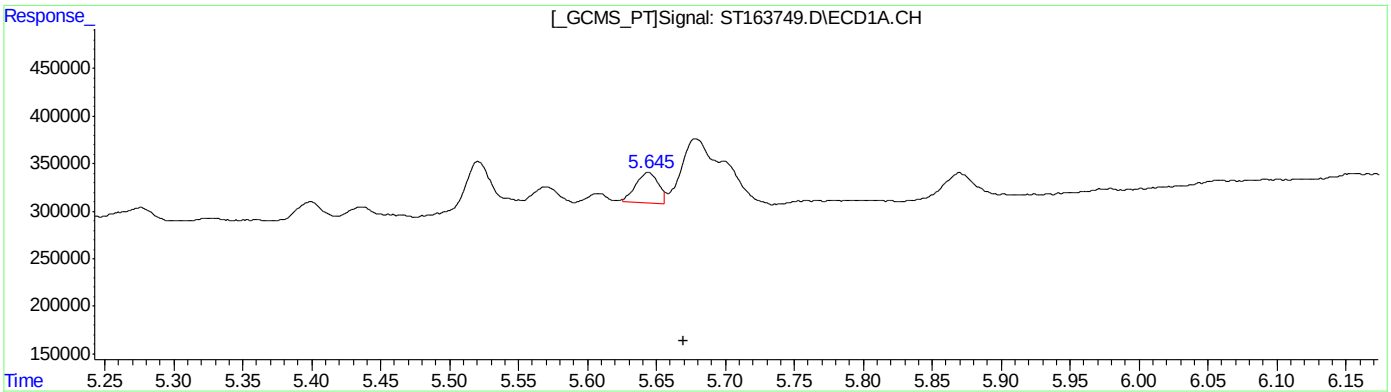
(+) = Expected Retention Time

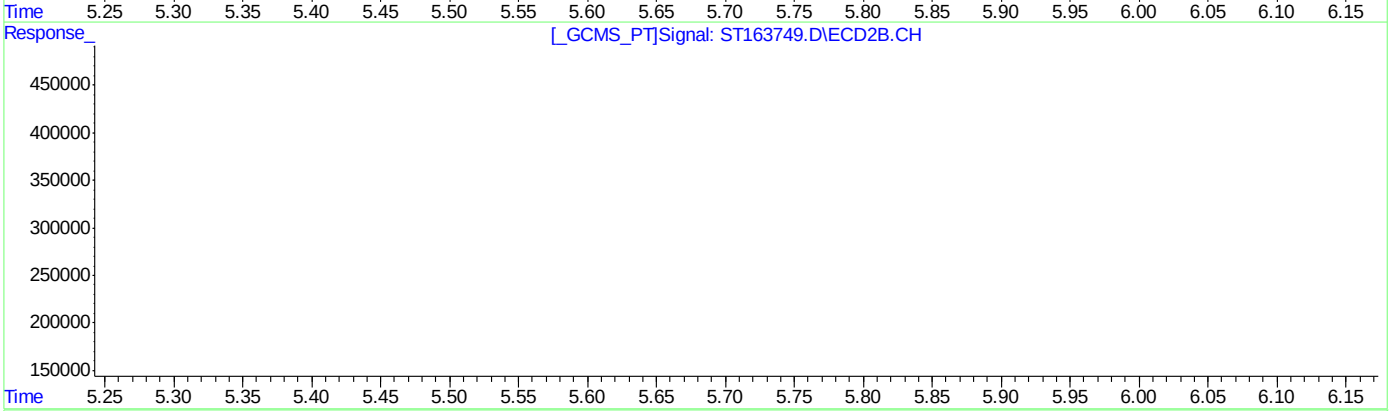
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:05 pm
Operator : eduardom
Sample : ic3992-20 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 15:03:10 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.64	31723	3.06

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.89	20568	7.33

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 15:05:44 2022 Page: 1

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163750.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:22 pm
Operator : eduardom
Sample : ic3992-50 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 15:06:59 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	209046	26951	27.921	19.352
23)	L1	Chlordane-B	4.278	4.378	313405	44554	22.770	18.786
24)	L1	Chlordane-C	4.505	4.684	202180	38462	12.931	14.266
25)	L1	Chlordane-D	4.999	5.175	840030	138979	57.966	48.512
26)	L1	Chlordane-E	5.054	5.210	946425	120975	66.767	42.649
27)	L1	Chlordane-F	5.645	5.881	85619	38713	8.259m	13.797 #
		Sum Chlordane-A			2596705	408634	196.613	157.362
		Average Chlordane-A					32.769	26.227
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163750.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:22 pm
Operator : eduardom
Sample : ic3992-50 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 15:06:59 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

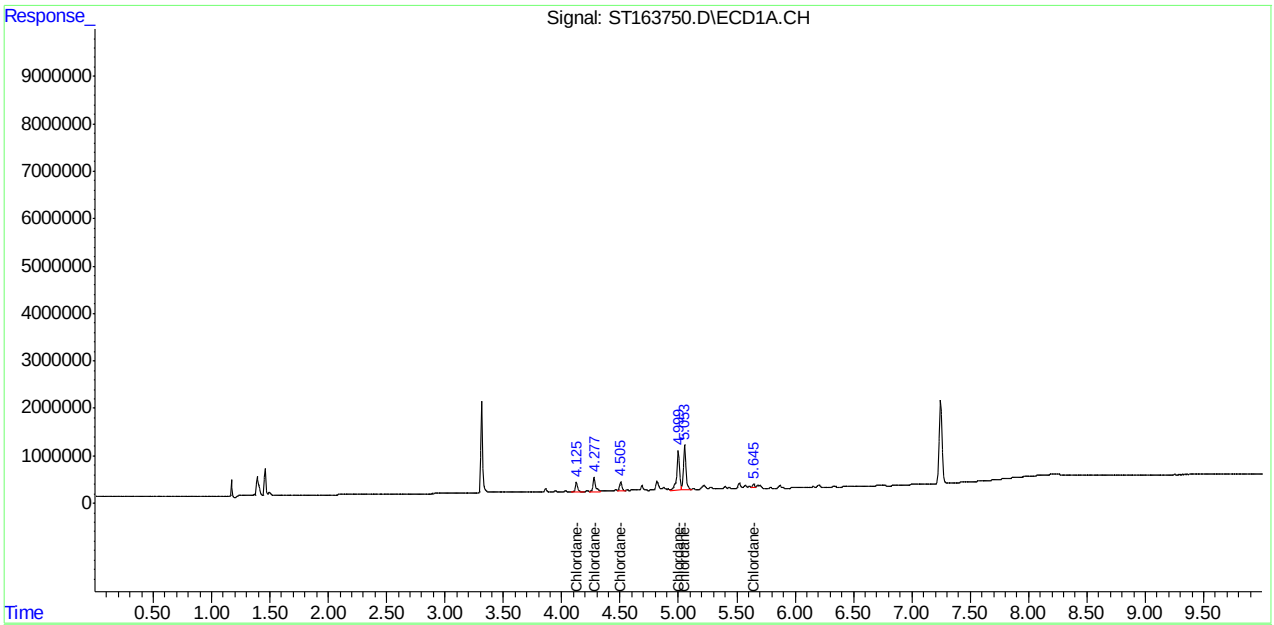
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

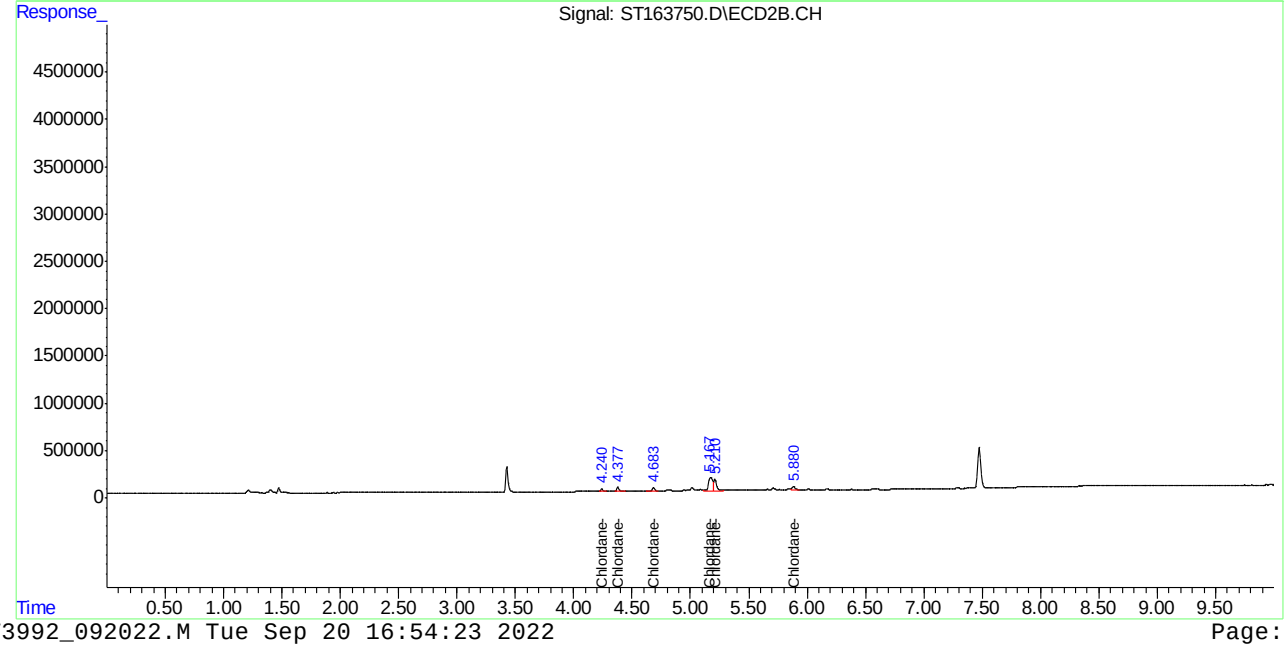
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163750.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:22 pm
Operator : eduardom
Sample : ic3992-50 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 15:06:59 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163750.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 13:22	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

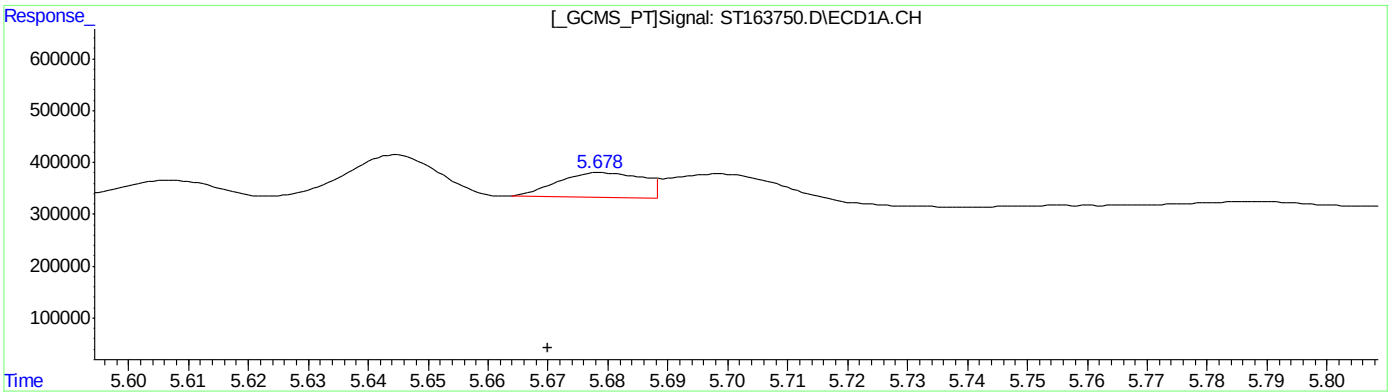
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-F		1	5.64	Poor instrument integration

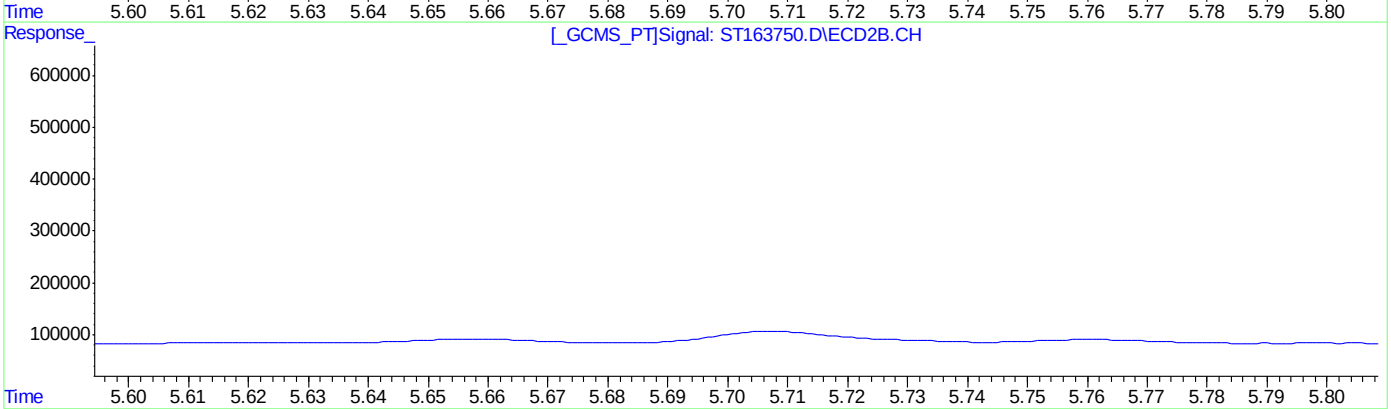
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163750.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:22 pm
Operator : eduardom
Sample : ic3992-50 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 15:00:14 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(22) Chlordane-A #2 (L1)

R.T.	Response	Conc
4.13	209046	27.92
4.28	313405	22.77
4.51	202180	12.93
5.00	840030	57.97
5.05	946425	66.77
5.68	48407	4.67

(22) Chlordane-A #2 (L1)

R.T.	Response	Conc
4.24	28951	19.35
4.58	44554	18.79
4.68	38462	14.27
5.18	138979	48.51
5.21	120975	42.65
5.88	38713	13.80

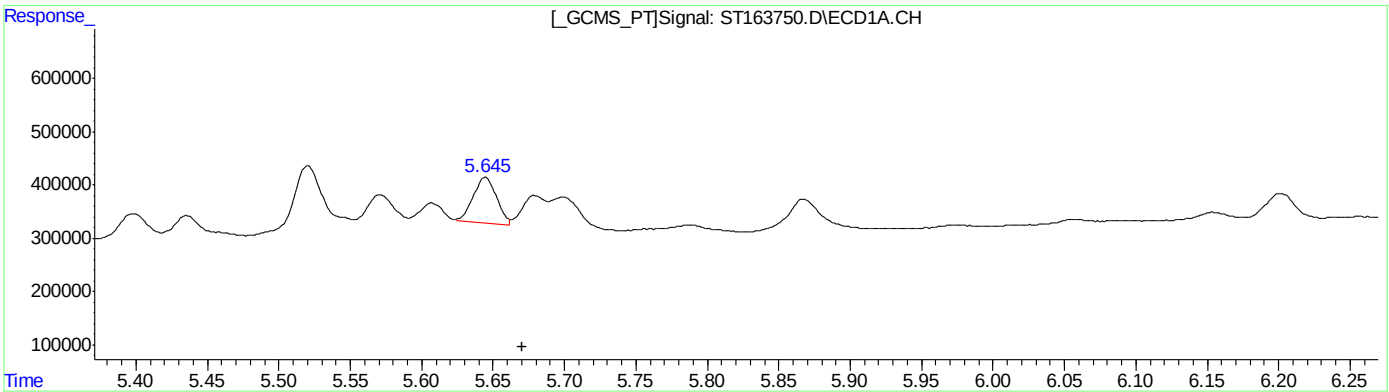
(+) = Expected Retention Time

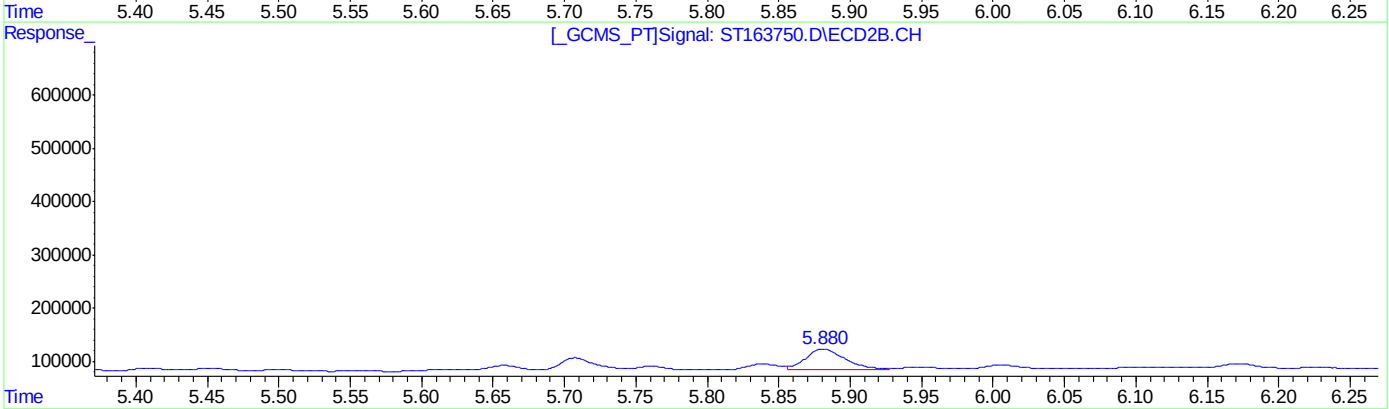
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163750.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:22 pm
Operator : eduardom
Sample : ic3992-50 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 15:04:41 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.64	85619	8.26

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.88	38713	13.80

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163751.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:40 pm
Operator : eduardom
Sample : ic3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 20 15:05:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	827154	122076	110.476	87.655
23)	L1	Chlordane-B	4.278	4.377	1262280	200769	91.708	84.655
24)	L1	Chlordane-C	4.505	4.684	739716	149498	47.310	55.450
25)	L1	Chlordane-D	5.000	5.167	3277119	592912	226.136	206.963
26)	L1	Chlordane-E	5.054	5.210	3741638	502725	263.960	177.232
27)	L1	Chlordane-F	5.645	5.881	524801	139534	50.623m	49.729
		Sum Chlordane-A			10372707	1707514	790.213	661.684
		Average Chlordane-A					131.702	110.281
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163751.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:40 pm
Operator : eduardom
Sample : ic3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 20 15:05:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

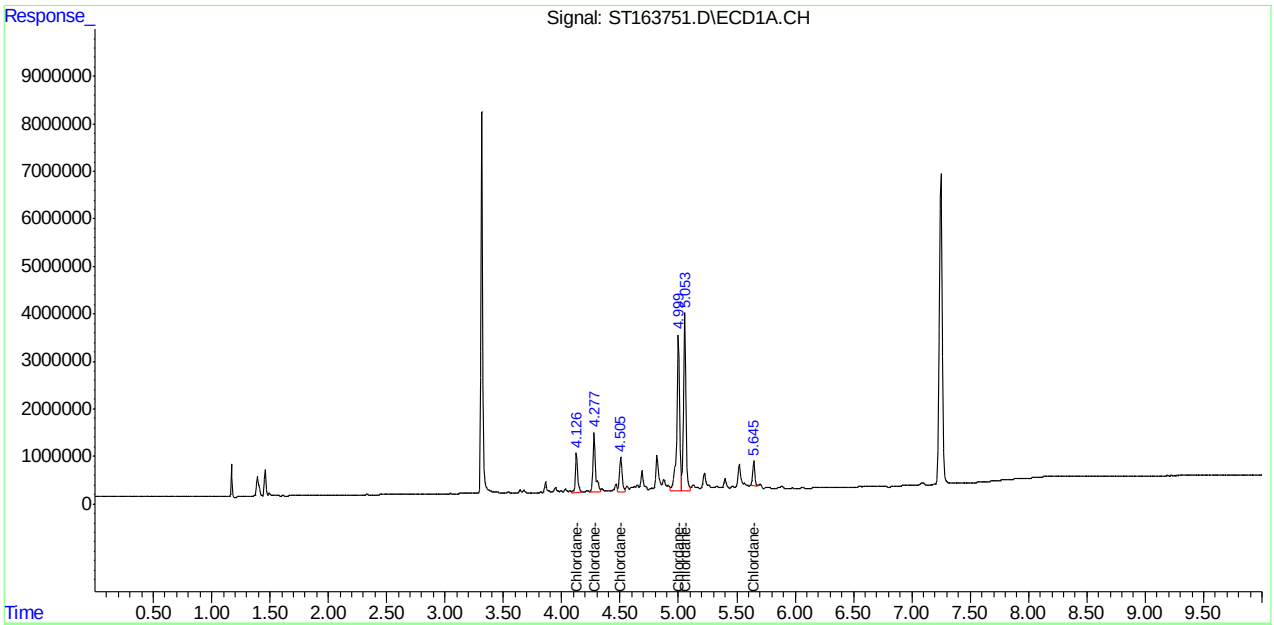
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

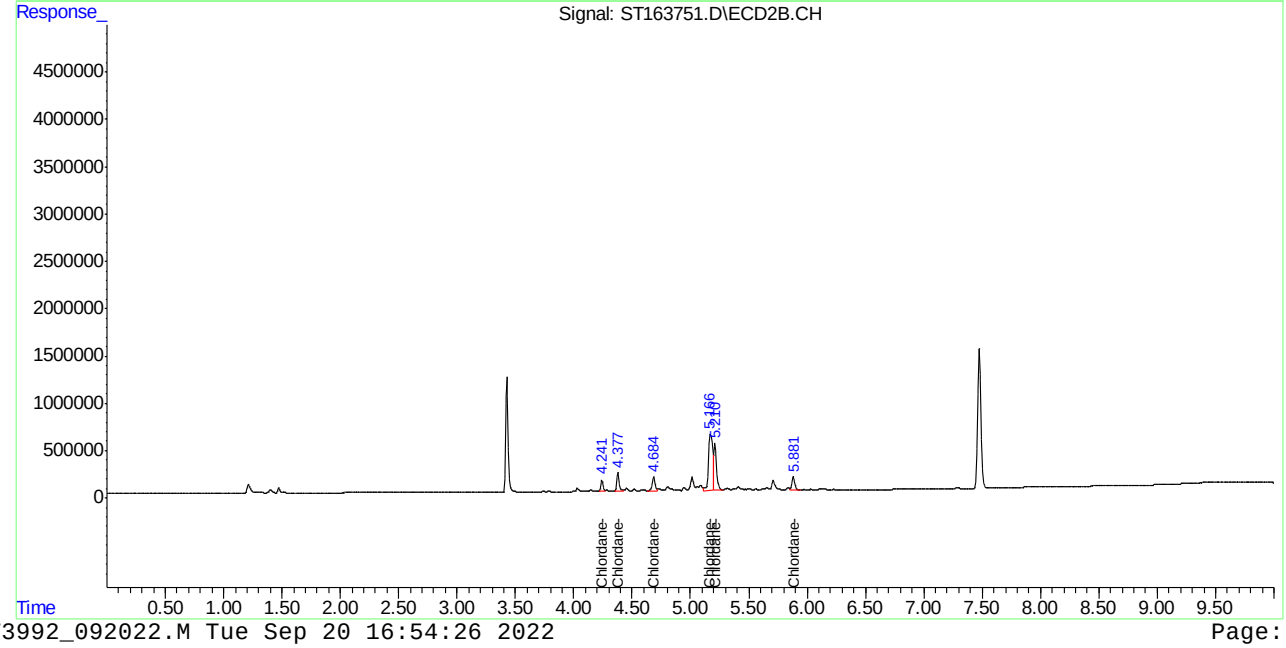
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163751.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:40 pm
Operator : eduardom
Sample : ic3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 20 15:05:01 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163751.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 13:40	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-F		1	5.64	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:57 pm
Operator : eduardom
Sample : ic3992-400 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 20 15:05:13 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	1473365	230858	196.785	165.765
23)	L1	Chlordane-B	4.277	4.378	2319130	379844	168.491	160.163
24)	L1	Chlordane-C	4.505	4.684	1336848	269090	85.500	99.808
25)	L1	Chlordane-D	4.999	5.167	5958347	1087785	411.153	379.705
26)	L1	Chlordane-E	5.054	5.210	6594039	940068	465.188	331.414
27)	L1	Chlordane-F	5.644	5.881	1118764	280365	107.918m	99.920
		Sum Chlordane-A			18800493	3188012	1435.035	1236.774
		Average Chlordane-A					239.172	206.129
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:57 pm
Operator : eduardom
Sample : ic3992-400 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 20 15:05:13 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

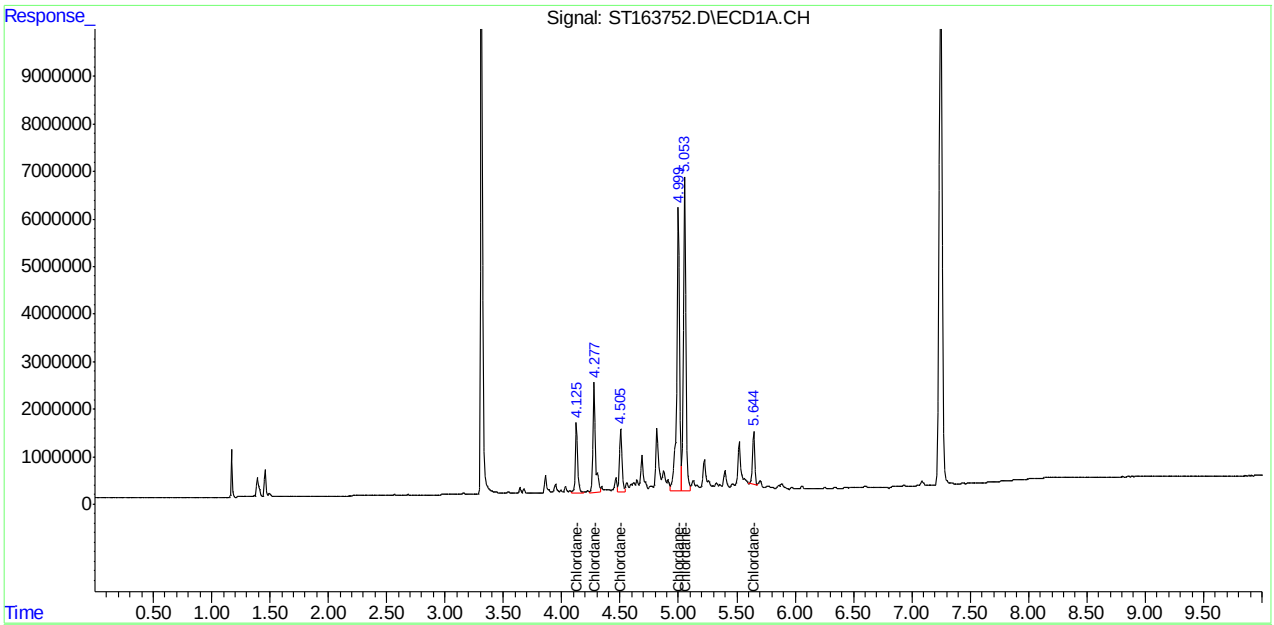
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

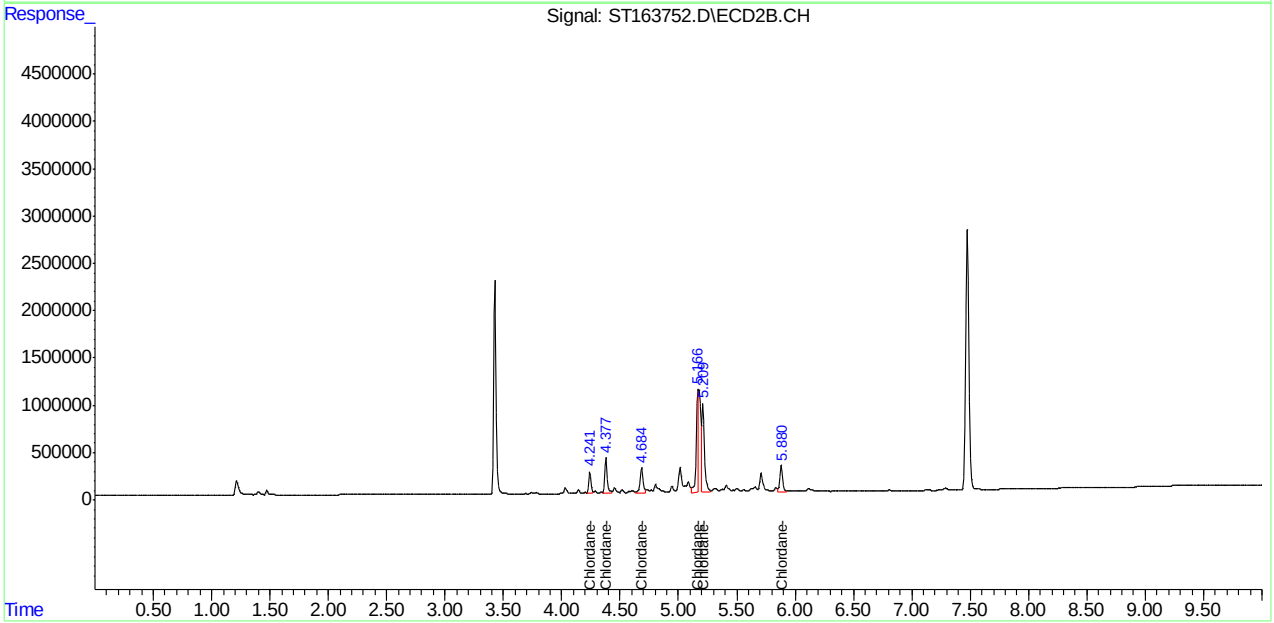
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:57 pm
Operator : eduardom
Sample : ic3992-400 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 20 15:05:13 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163752.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 13:57	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

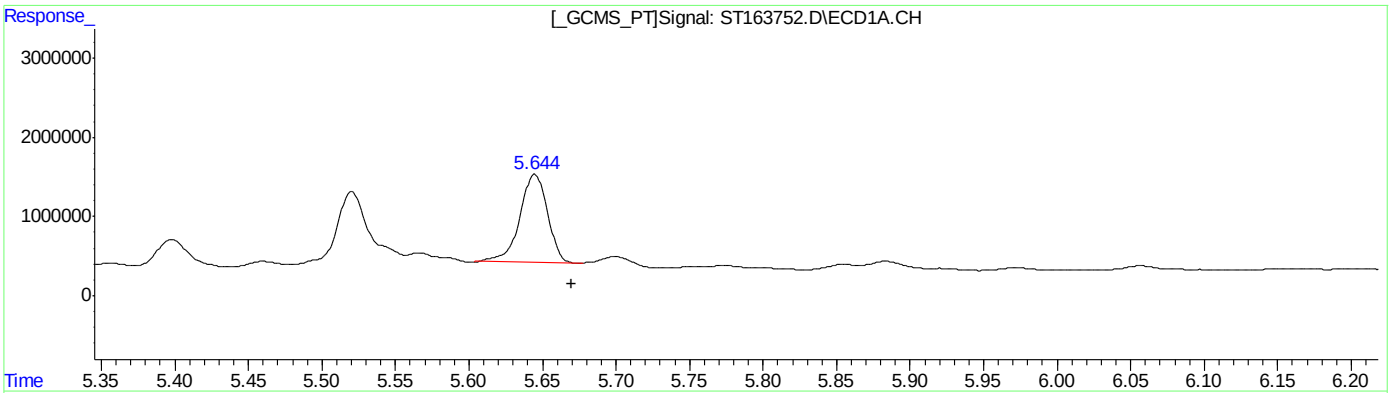
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-F		1	5.64	Poor instrument integration

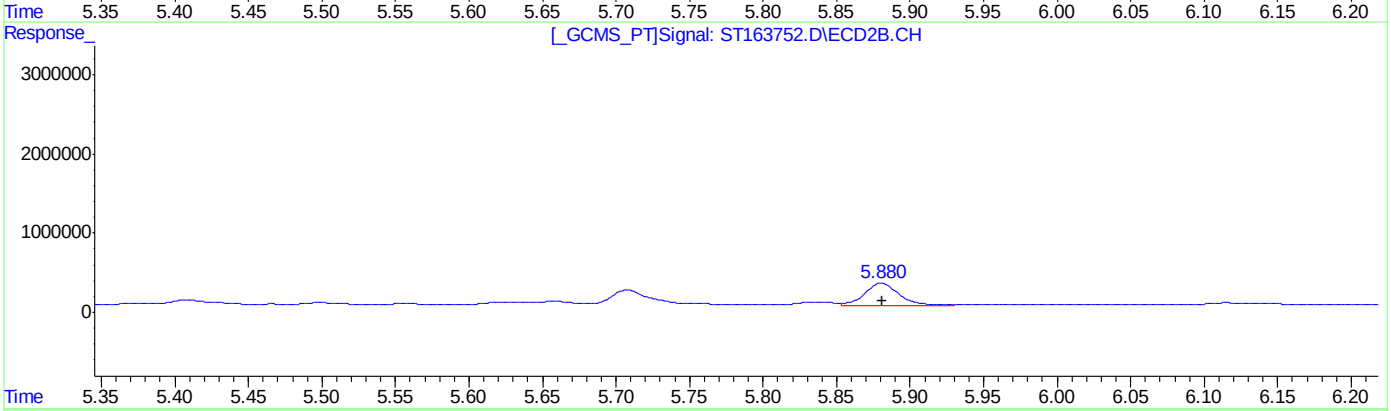
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 1:57 pm
Operator : eduardom
Sample : ic3992-400 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 20 15:00:40 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.64	1118764	107.92

(27) Chlordane-F #2 (L1)

R.T.	Response	Conc
5.88	280365	99.92

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:15 pm
Operator : eduardom
Sample : ic3992-600 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 20 15:00:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	4.126	4.241	2296350	382921	306.705	274.951
23) L1	Chlordane-B	4.278	4.378	3776333	634593	274.361	267.578
24) L1	Chlordane-C	4.505	4.684	2048717	430728	131.029	159.760
25) L1	Chlordane-D	5.000	5.167	9391690	1763281	648.070	615.495
26) L1	Chlordane-E	5.054	5.210	10304817	1499721	726.971	528.716
27) L1	Chlordane-F	5.645	5.880	2080053	470657	200.645	167.738
Sum	Chlordane-A			29897961	5181902	2287.780	2014.239
Average	Chlordane-A					381.297	335.706
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
Sum	Toxaphene-A			0	0	N.D.	N.D.
Average	Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:15 pm
Operator : eduardom
Sample : ic3992-600 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 20 15:00:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

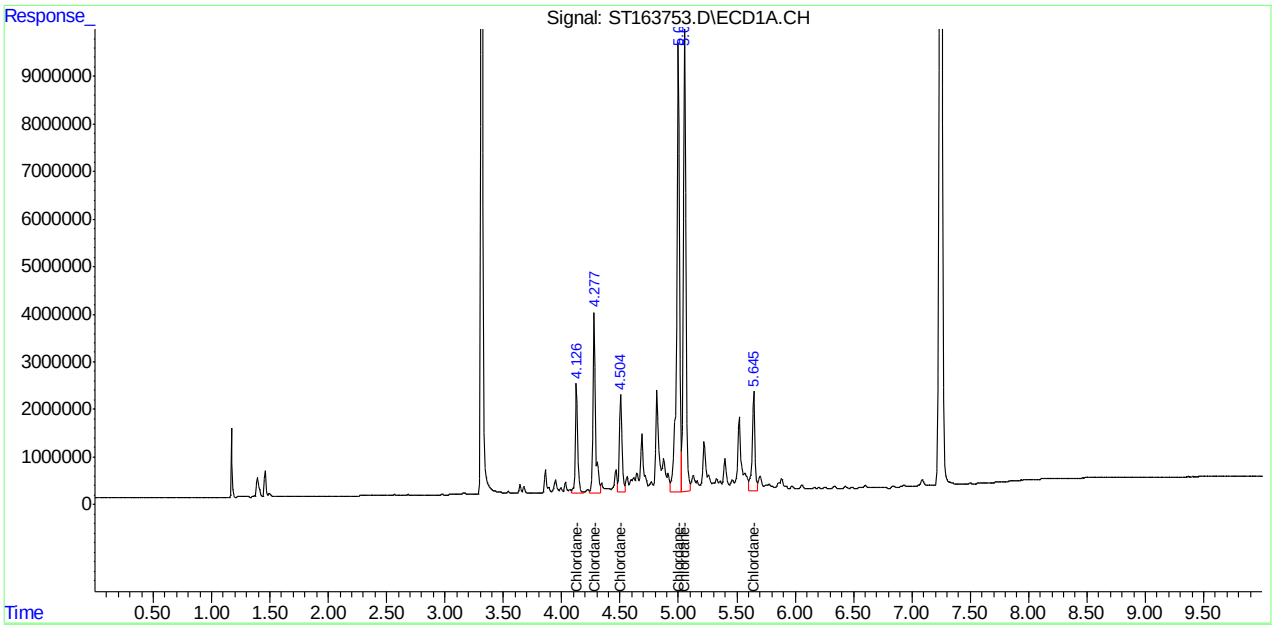
12.6.12 12

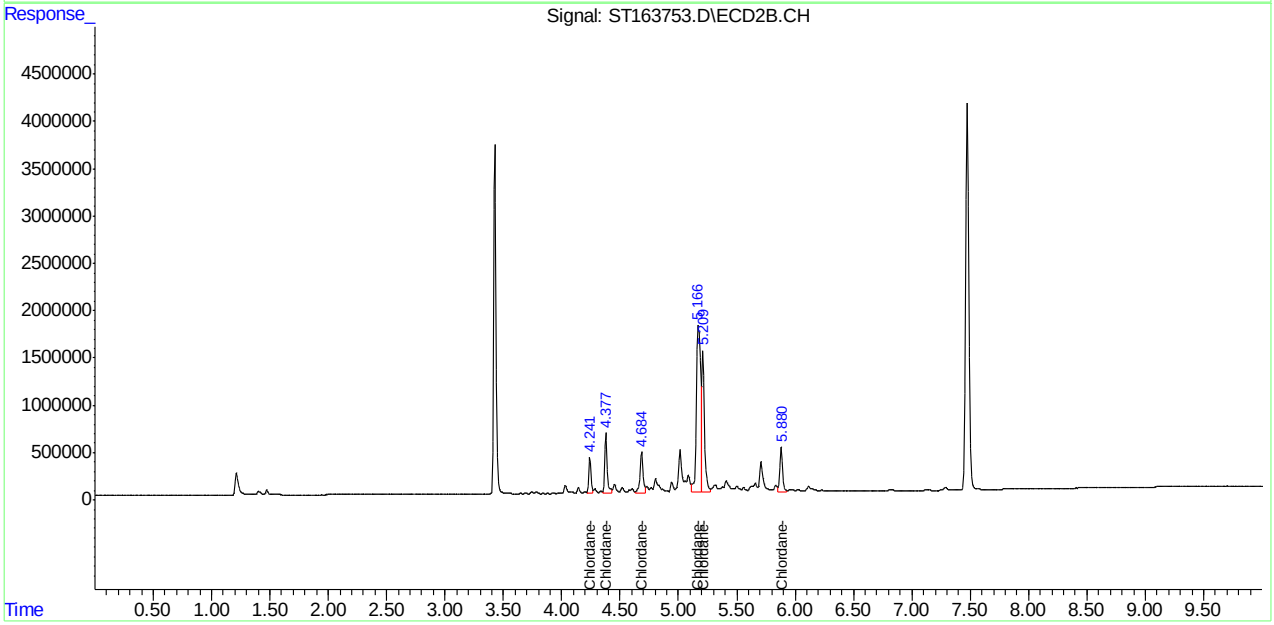
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:15 pm
Operator : eduardom
Sample : ic3992-600 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 20 15:00:52 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:32 pm
Operator : eduardom
Sample : ic3992-1000 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 20 15:01:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	3811701	636629	509.098	457.123
23)	L1	Chlordane-B	4.278	4.378	6189757	1068704	449.703	450.623
24)	L1	Chlordane-C	4.505	4.684	3339226	697869	213.565	258.845
25)	L1	Chlordane-D	5.000	5.167	15031847	2886313	1037.267	1007.503
26)	L1	Chlordane-E	5.054	5.210	17150839	2423606	1209.935	854.425
27)	L1	Chlordane-F	5.645	5.880	3592418	810878	346.530	288.990
		Sum Chlordane-A			49115788	8523999	3766.097	3317.508
		Average Chlordane-A					627.683	552.918
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:32 pm
Operator : eduardom
Sample : ic3992-1000 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 20 15:01:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

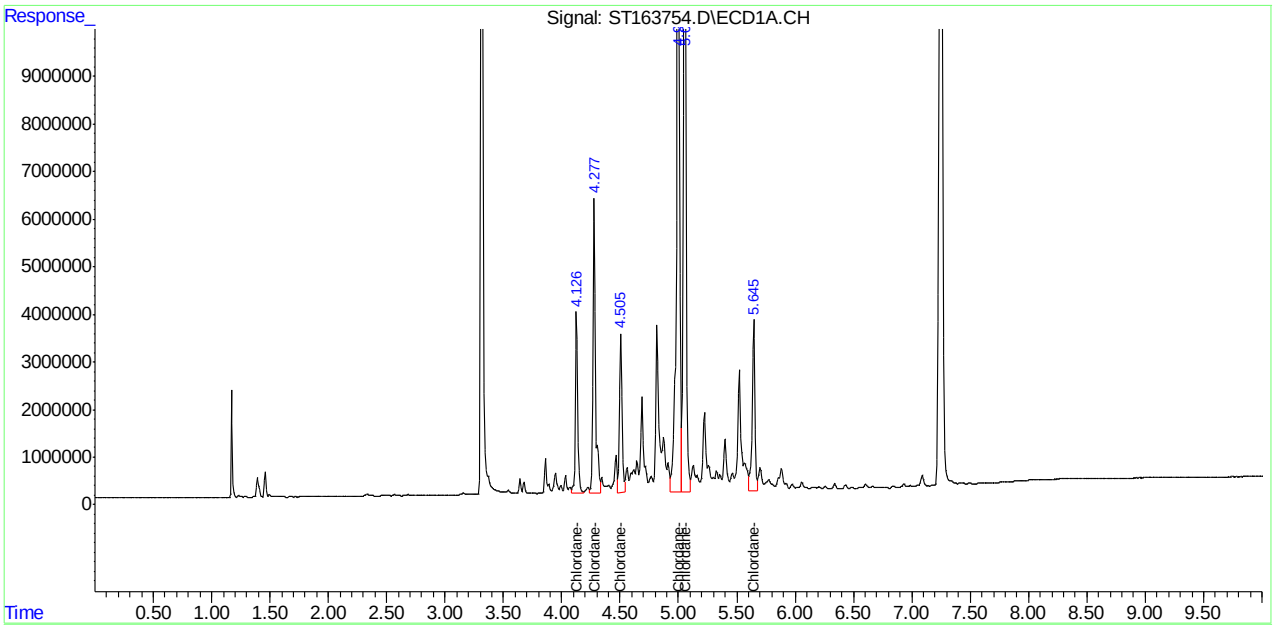
12.6.13 12

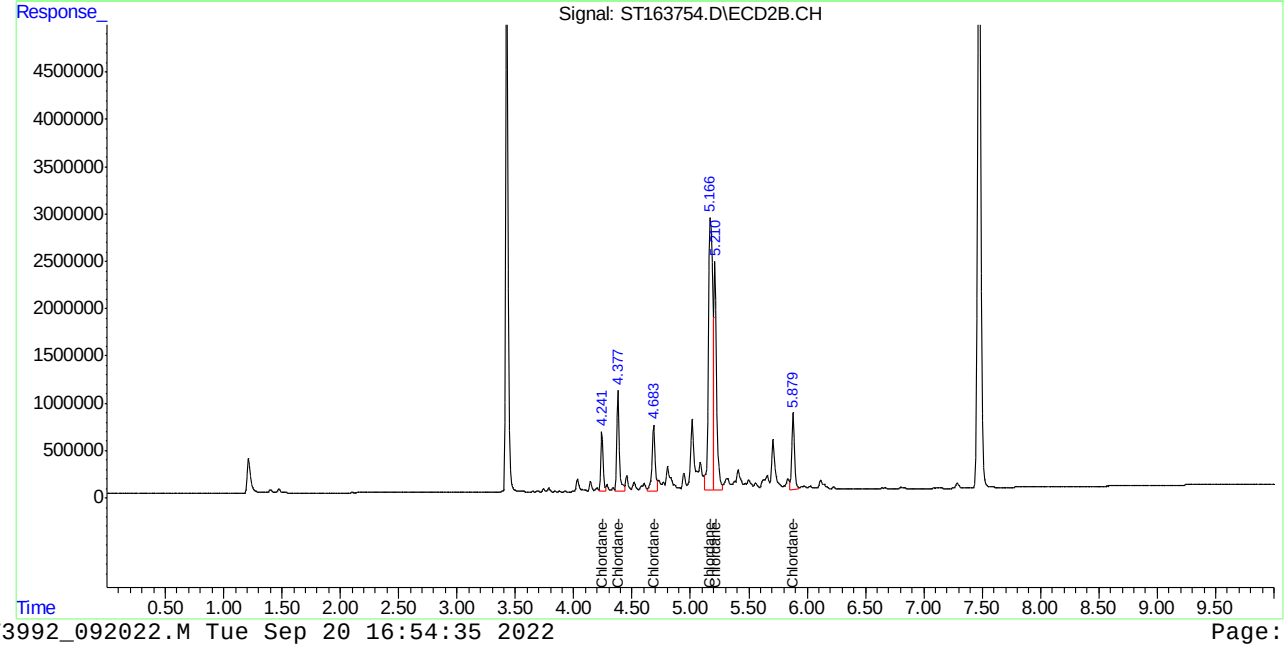
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:32 pm
Operator : eduardom
Sample : ic3992-1000 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 20 15:01:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:08 pm
Operator : eduardom
Sample : ic3992-100 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 20 16:43:35 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.211	5.421	1791838	377689	24.212m	21.963m
29) L2	Toxaphene-B	5.567	5.839	2026968	696683	30.983m	789.079m#
30) L2	Toxaphene-C	5.634	5.897	4160218	563599	55.728m	32.154m#
31) L2	Toxaphene-D	5.790	6.036	2541411	413857	56.290m	29.320m#
32) L2	Toxaphene-E	6.149	6.478	2186600	714805	52.769m	37.640m
	Sum Toxaphene-A			12707035	2766634	219.981	910.156
	Average Toxaphene-A					43.996	182.031

12.6.14
12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:08 pm
Operator : eduardom
Sample : ic3992-100 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 20 16:43:35 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

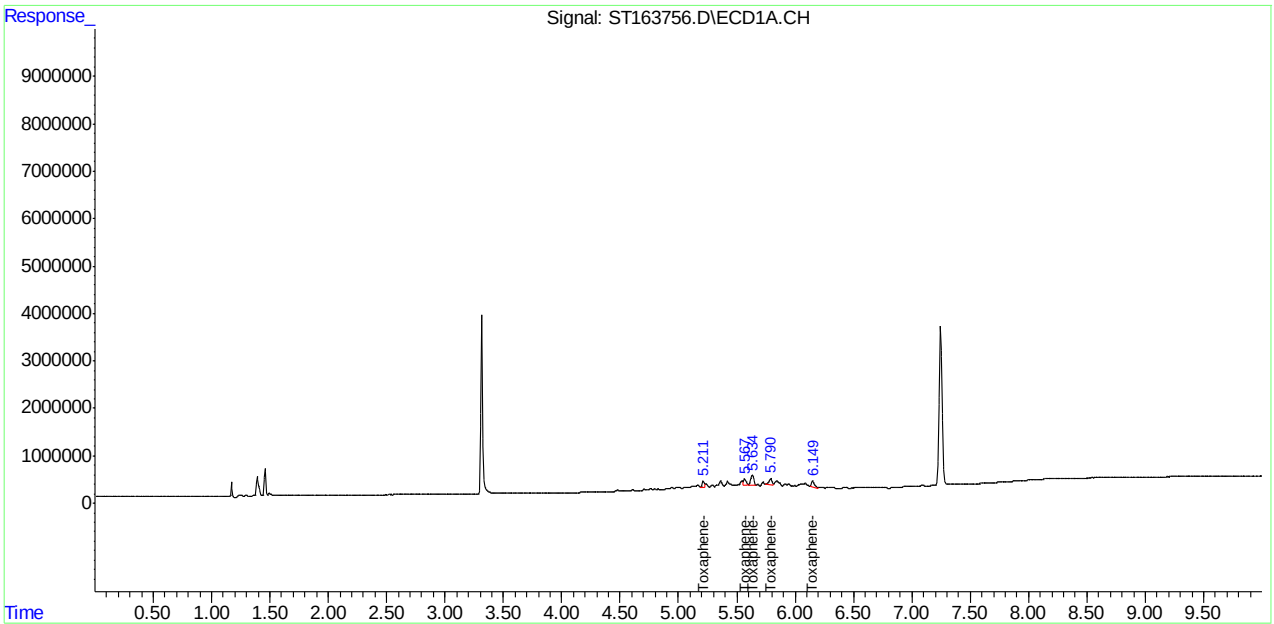
12.6.14 12

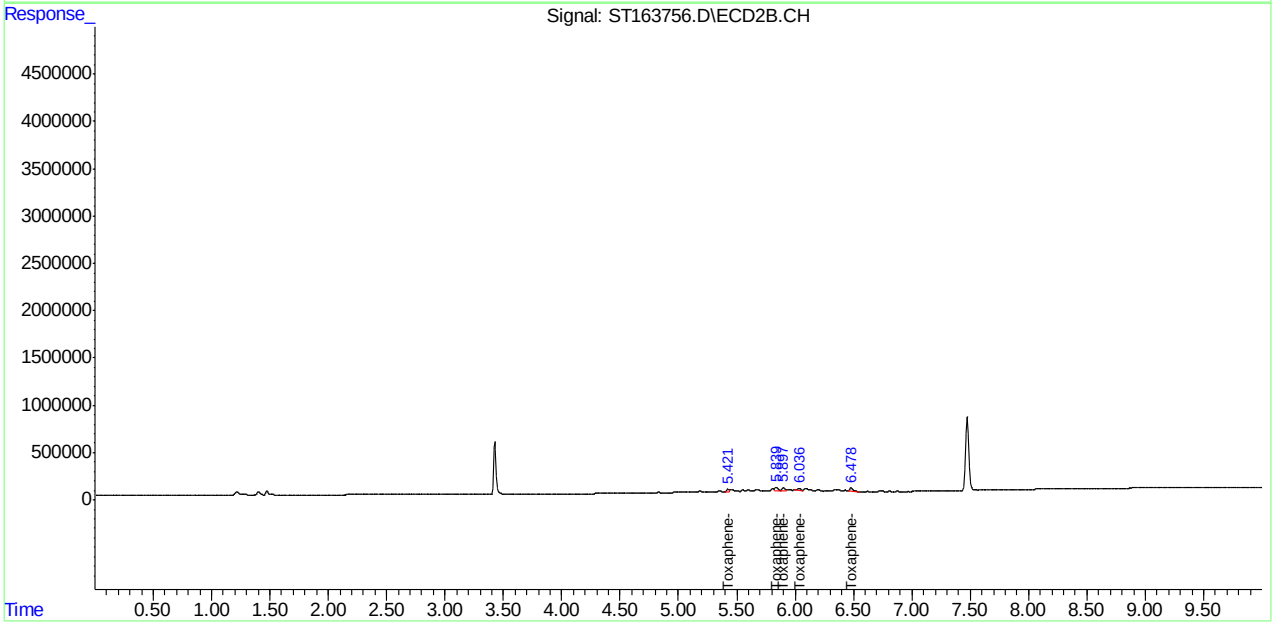
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:08 pm
Operator : eduardom
Sample : ic3992-100 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 20 16:43:35 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163756.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 15:08 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

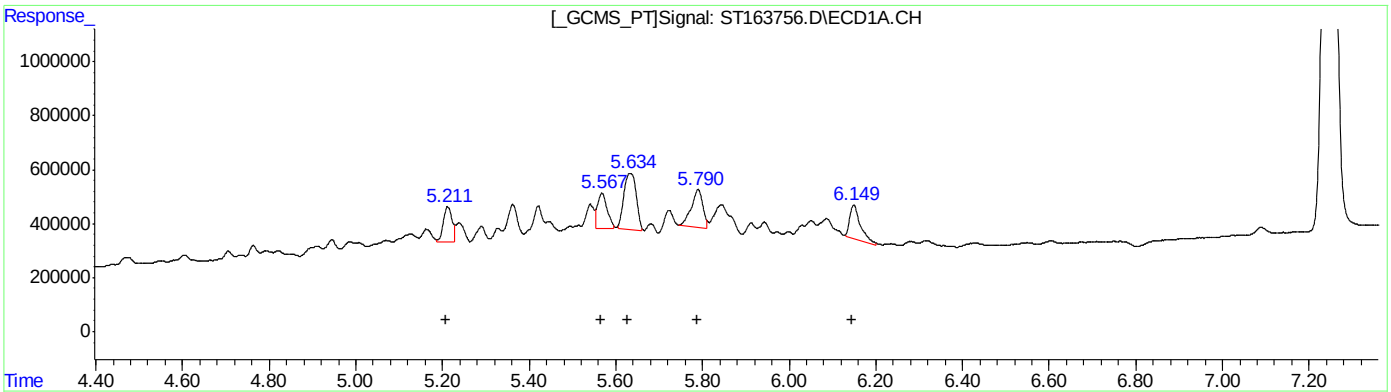
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

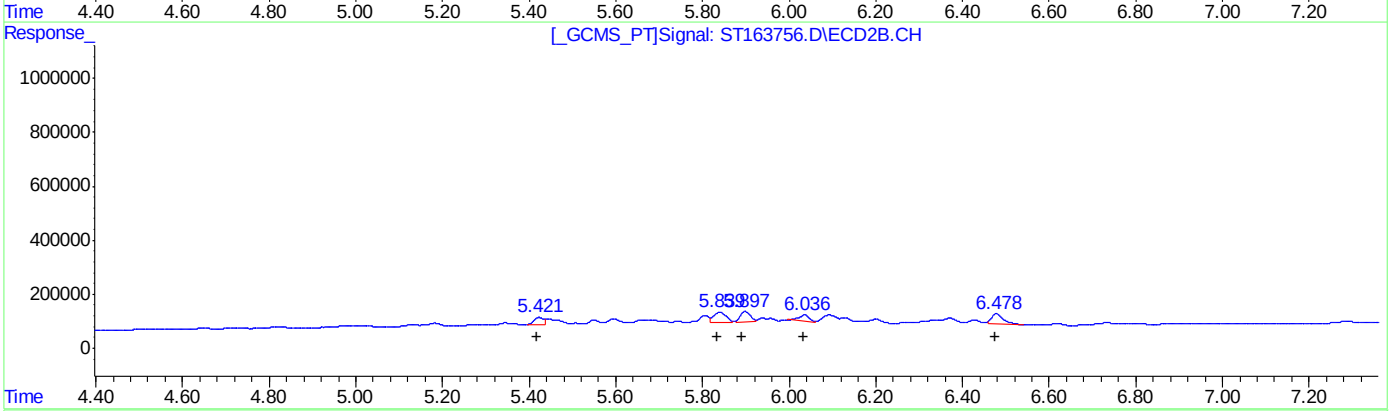
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:08 pm
Operator : eduardom
Sample : ic3992-100 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 20 16:41:32 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	1791838	24.21
5.57	2026968	30.98
5.63	4160218	55.73
5.79	2541411	56.29
6.15	2186600	52.77

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	377689	21.96
5.84	696683	789.08
5.90	563599	32.15
6.04	413857	29.32
6.48	714805	37.64

(+) = Expected Retention Time

ST163757.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:26 pm
Operator : eduardom
Sample : ic3992-200 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 20 16:44:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.213	5.422	3337249	739182	45.094m	42.983m
29) L2	Toxaphene-B	5.567	5.837	4752235	1665324	72.639m	1886.184m#
30) L2	Toxaphene-C	5.634	5.900	9344264	1277373	125.170m	72.875m#
31) L2	Toxaphene-D	5.790	6.037	5828586	842678	129.098m	59.701m#
32) L2	Toxaphene-E	6.148	6.479	5105126	1875533	123.201m	98.763m
	Sum Toxaphene-A			28367459	6400090	495.202	2160.506
	Average Toxaphene-A					99.040	432.101

12.6.15 12

SGS FA98819

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:26 pm
Operator : eduardom
Sample : ic3992-200 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 20 16:44:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

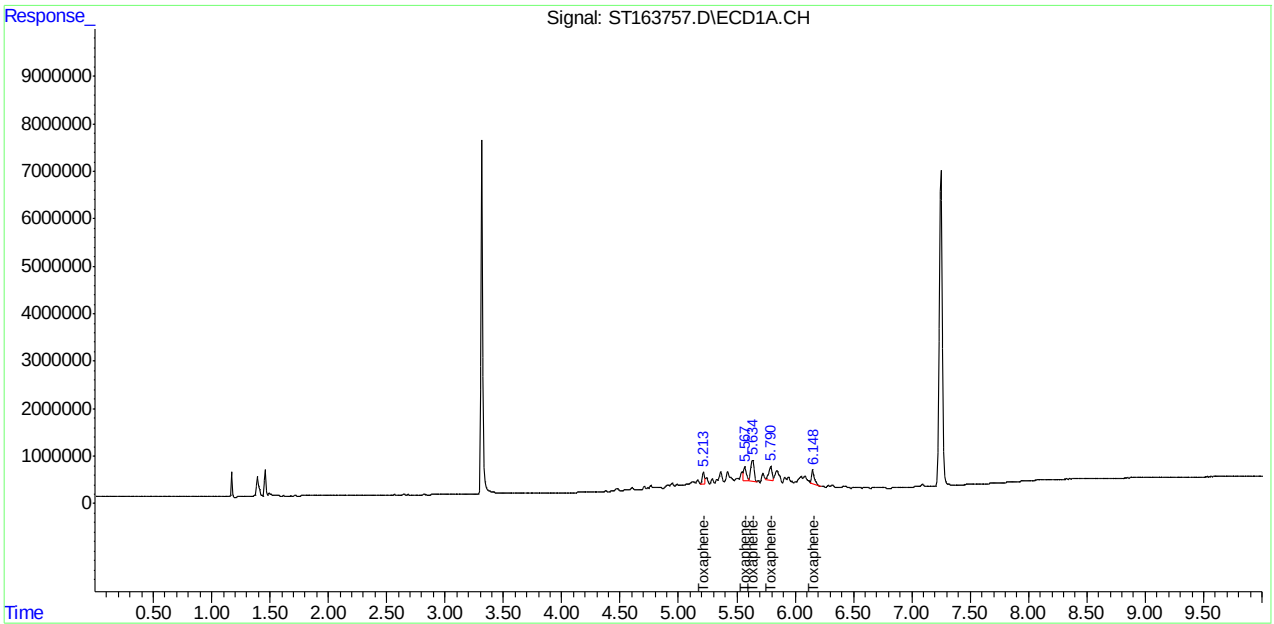
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

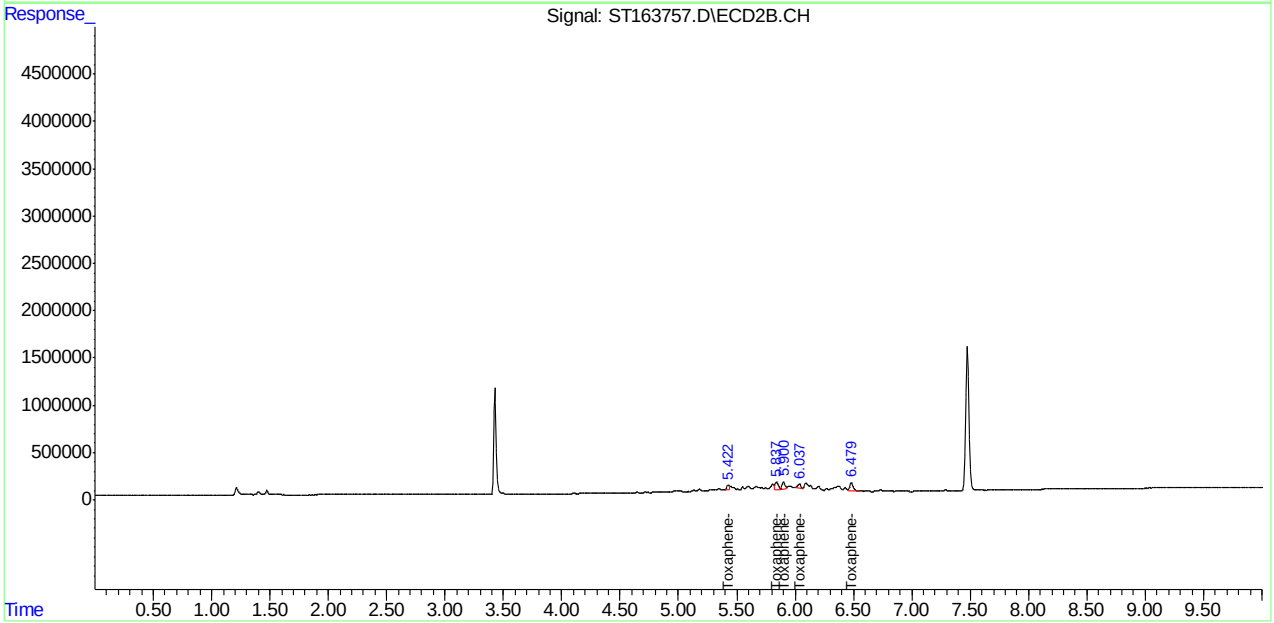
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:26 pm
Operator : eduardom
Sample : ic3992-200 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 20 16:44:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163757.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 15:26	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

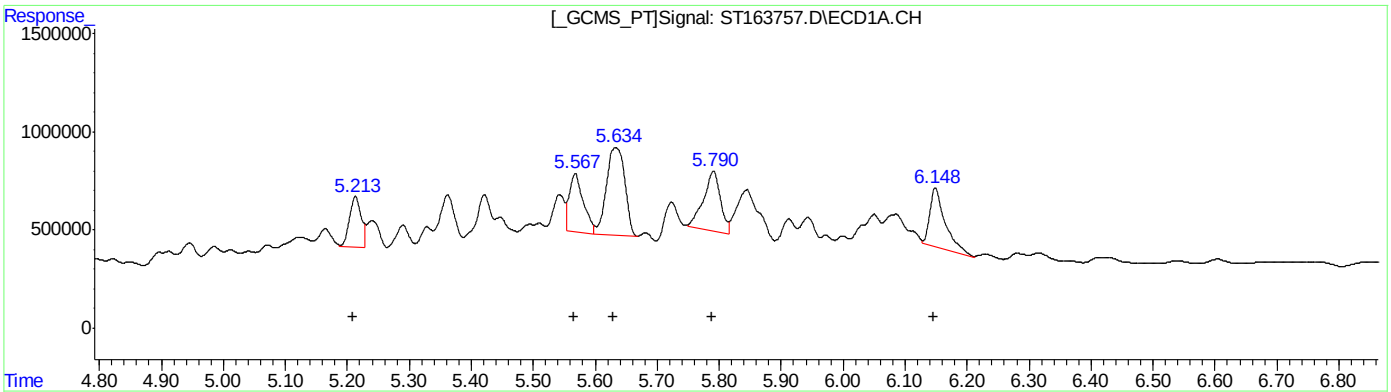
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

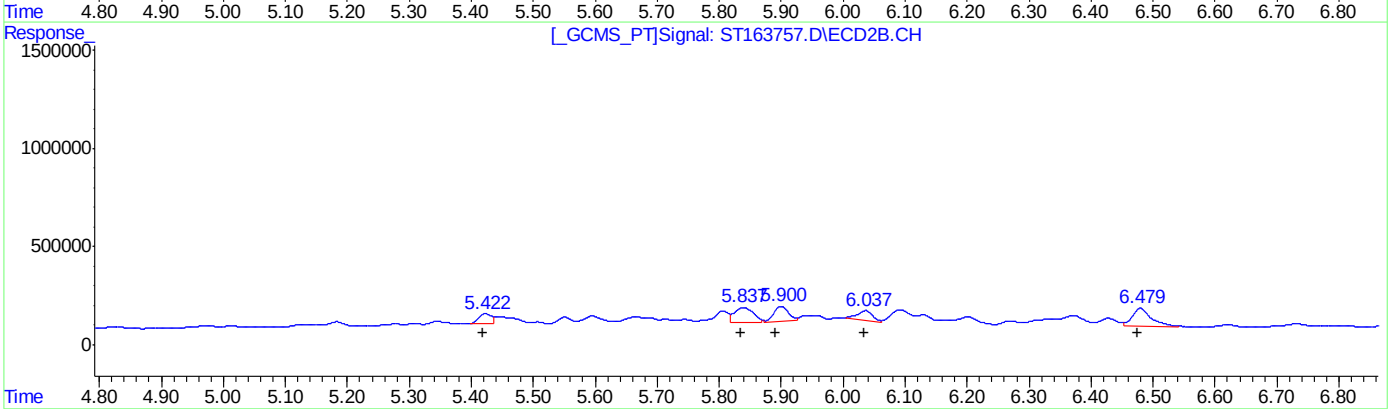
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:26 pm
Operator : eduardom
Sample : ic3992-200 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 20 16:41:35 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	3337249	45.09
5.57	4752235	72.64
5.63	9344264	125.17
5.79	5828586	129.10
6.15	5105126	123.20

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	739182	42.98
5.84	1665324	1886.18
5.90	1277373	72.87
6.04	842678	59.70
6.48	1875533	98.76

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163758.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:43 pm
Operator : eduardom
Sample : ic3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 20 16:45:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.211	5.422	7920888	2456472	107.029m	142.844m
29) L2	Toxaphene-B	5.567	5.837	11666213	3545939	178.321m	4016.211m#
30) L2	Toxaphene-C	5.634	5.899	22207531	2608385	297.477m	148.810m#
31) L2	Toxaphene-D	5.790	6.035	15017895	1965605	332.634m	139.256m#
32) L2	Toxaphene-E	6.149	6.479	13164181	4454505	317.688m	234.567m
	Sum Toxaphene-A			69976707	15030906	1233.149	4681.688
	Average Toxaphene-A					246.630	936.338

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163758.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:43 pm
Operator : eduardom
Sample : ic3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 20 16:45:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

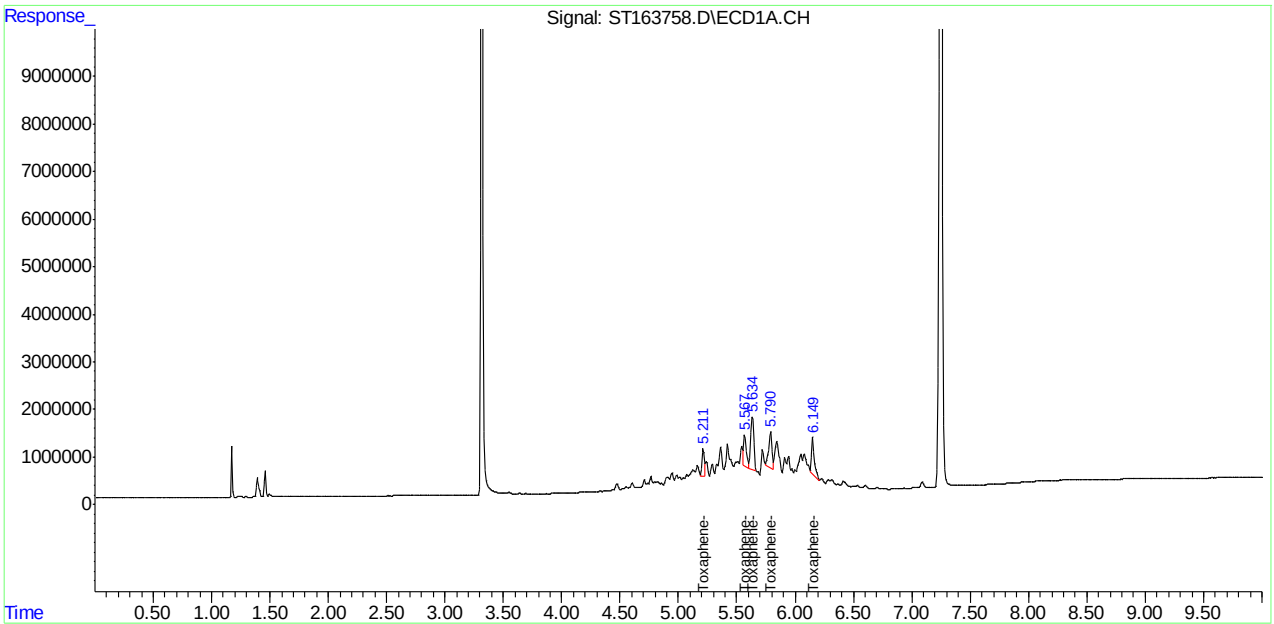
12.6.16 12

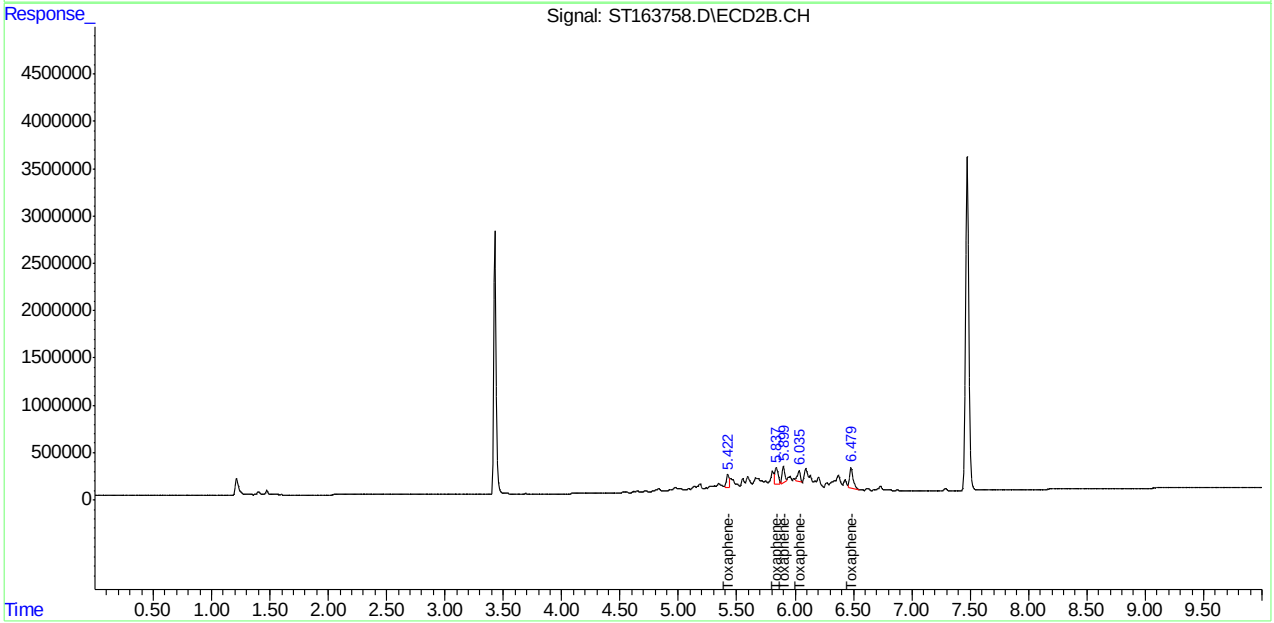
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163758.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 3:43 pm
Operator : eduardom
Sample : ic3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 20 16:45:15 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163758.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 15:43 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163759.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:01 pm
Operator : eduardom
Sample : ic3992-750 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 20 16:48:06 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.212	5.422	11711707	2978086	158.251m	173.176m
29) L2	Toxaphene-B	5.566	5.838	17005322	4798186	259.931m	5434.535m#
30) L2	Toxaphene-C	5.632	5.899	34725387	4173705	465.158m	238.112m#
31) L2	Toxaphene-D	5.790	6.035	20280197	3599060	449.190m	254.981m#
32) L2	Toxaphene-E	6.148	6.479	21148680	6938019	510.376m	365.345m
	Sum Toxaphene-A			104.9E6	22487056	1842.906	6466.149
	Average Toxaphene-A					368.581	1293.230

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163759.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:01 pm
Operator : eduardom
Sample : ic3992-750 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 20 16:48:06 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

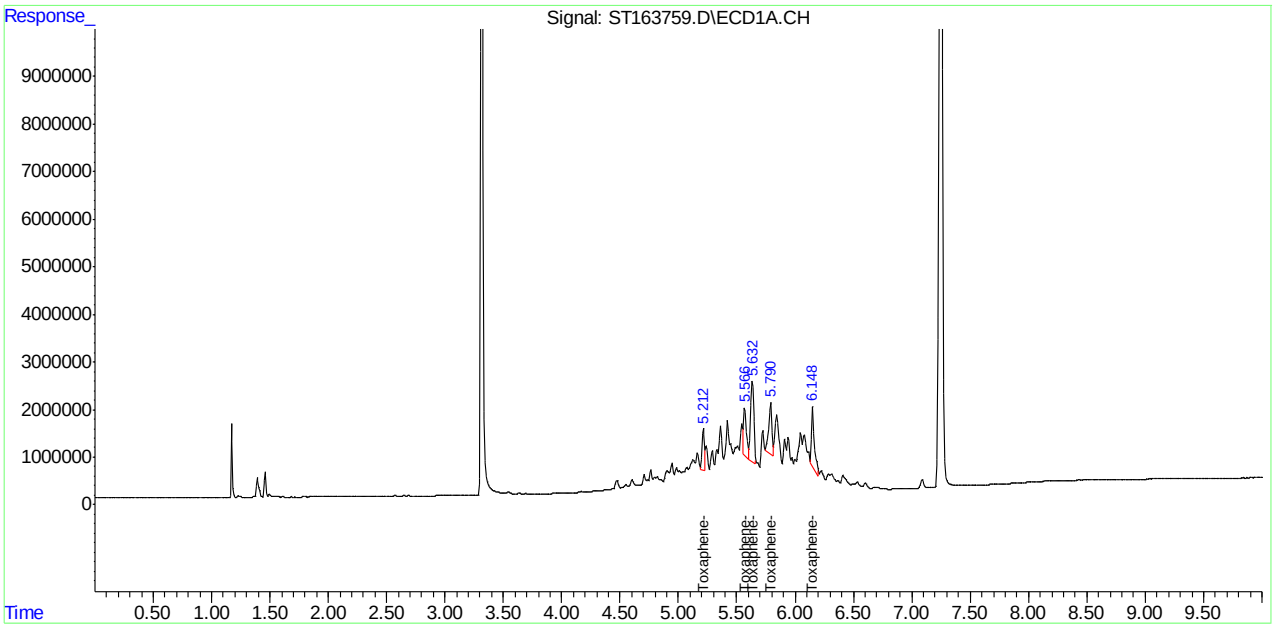
12.6.17 12

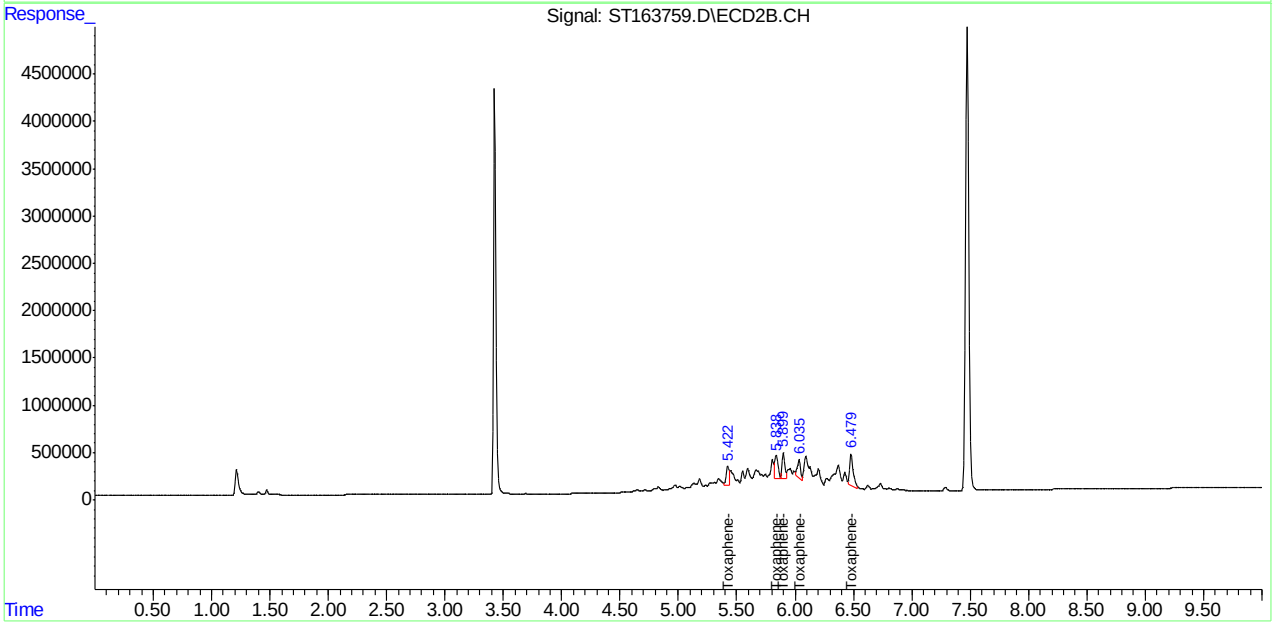
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163759.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:01 pm
Operator : eduardom
Sample : ic3992-750 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 20 16:48:06 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163759.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 16:01 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

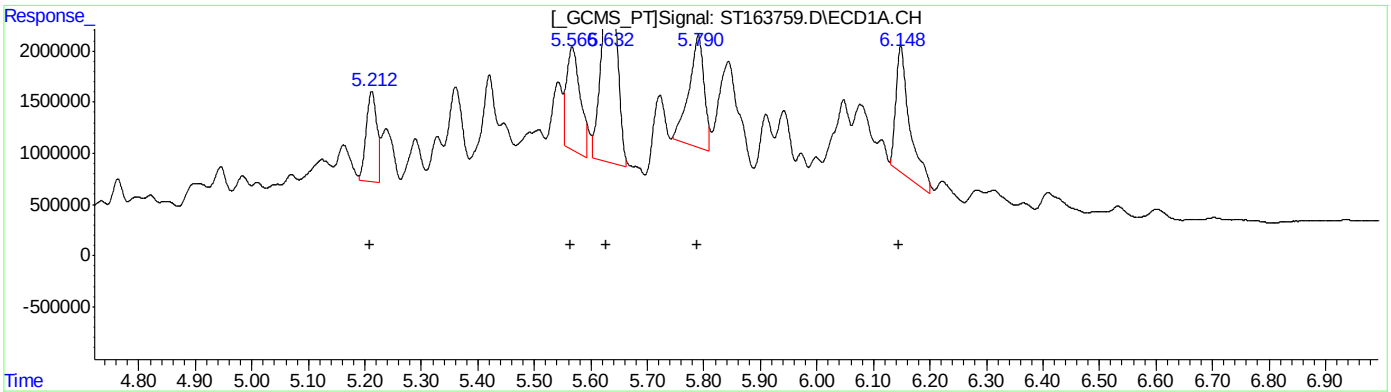
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163759.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:01 pm
Operator : eduardom
Sample : ic3992-750 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 20 16:41:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	11711707	158.25
5.57	17005322	259.93
5.63	34725387	465.16
5.79	20280197	449.19
6.15	21148680	510.38

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	2978086	173.18
5.84	4798186	5434.53
5.90	4173705	238.11
6.04	3599060	254.98
6.48	6938019	365.34

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:18 pm
Operator : eduardom
Sample : ic3992-1000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 20 16:42:23 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.212	5.421	13619909	4363039	184.035m	253.711m
29) L2	Toxaphene-B	5.567	5.837	24872041	7016715	380.176m	7947.293m#
30) L2	Toxaphene-C	5.630	5.899	48183904	5458191	645.440m	311.393m#
31) L2	Toxaphene-D	5.790	6.035	30219619	5026030	669.339m	356.077m#
32) L2	Toxaphene-E	6.148	6.480	28062796	9494787	677.233m	499.980m
	Sum Toxaphene-A			145.0E6	31358763	2556.223	9368.453
	Average Toxaphene-A					511.245	1873.691

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:18 pm
Operator : eduardom
Sample : ic3992-1000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 20 16:42:23 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

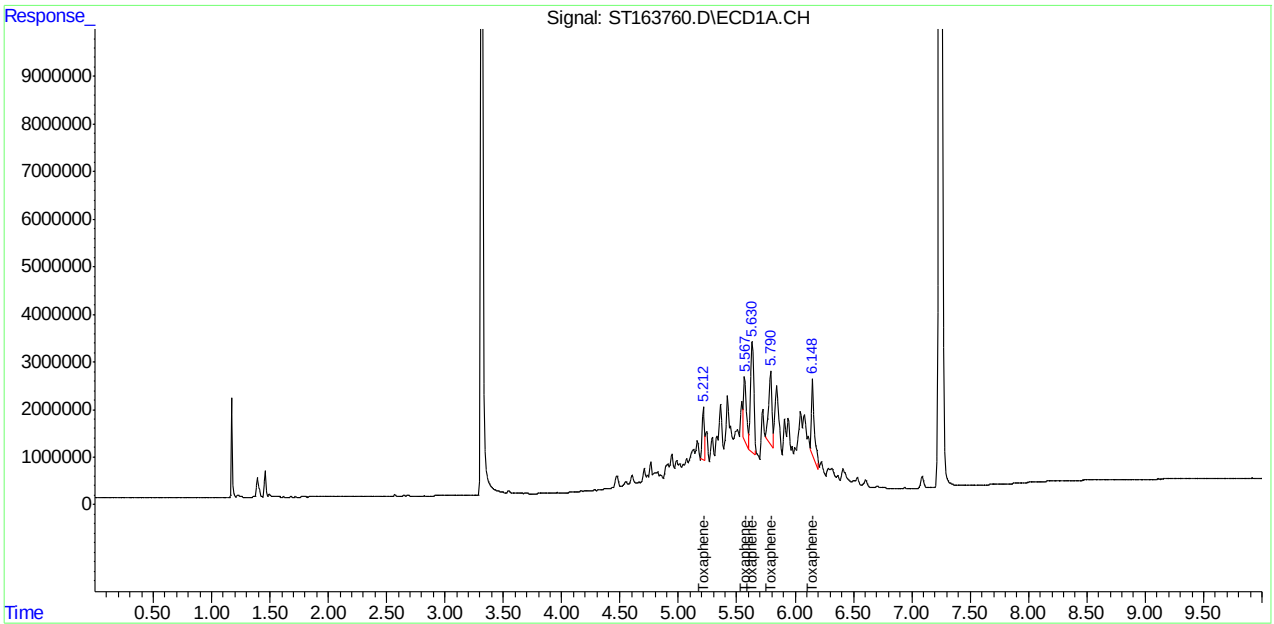
12.6.18 12

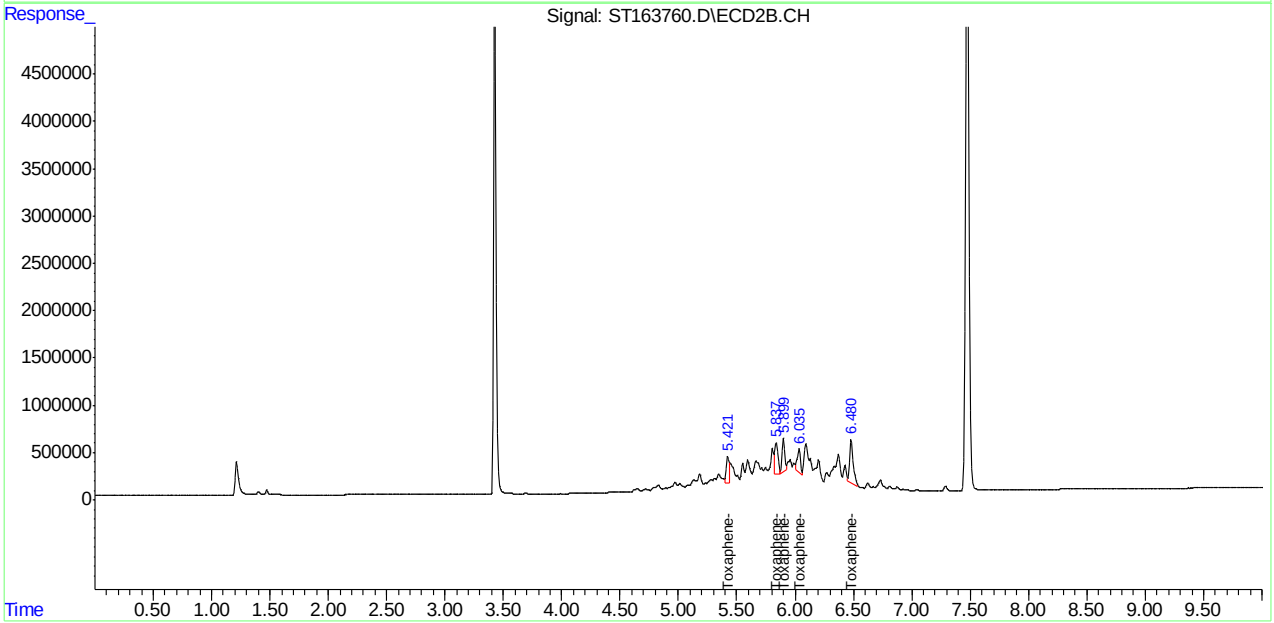
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:18 pm
Operator : eduardom
Sample : ic3992-1000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 20 16:42:23 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GST3992-IC3992	**Method:**	SW846 8081B
Lab FileID:	ST163760.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 16:18	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

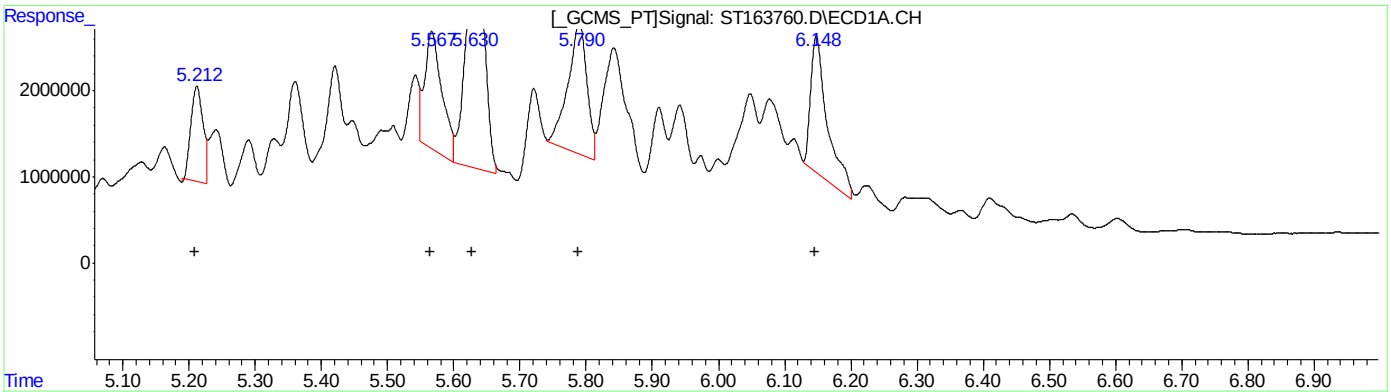
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:18 pm
Operator : eduardom
Sample : ic3992-1000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 20 16:41:41 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	13619909	184.03
5.57	24872041	380.18
5.63	48183904	645.44
5.79	30219619	669.34
6.15	28062796	677.23

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	4363039	253.71
5.84	7016715	7947.29
5.90	5458191	311.39
6.04	5026030	356.08
6.48	9494787	499.98

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:35 pm
Operator : eduardom
Sample : ic3992-2000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 20 16:51:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	5.211	5.421	29917576	6510675	404.252m	378.596m
29)	L2	Toxaphene-B	5.567	5.836	53801259	12042712	822.367m	13639.852m#
30)	L2	Toxaphene-C	5.631	5.898	97164757	9946751	1301.555m	567.468m#
31)	L2	Toxaphene-D	5.788	6.035	56909946	7469698	1260.508m	529.202m#
32)	L2	Toxaphene-E	6.148	6.479	57801353	19973486	1394.907m	1051.771m
		Sum Toxaphene-A			295.6E6	55943322	5183.590	16166.889
		Average Toxaphene-A					1036.718	3233.378

12.6.19 12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:35 pm
Operator : eduardom
Sample : ic3992-2000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 20 16:51:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

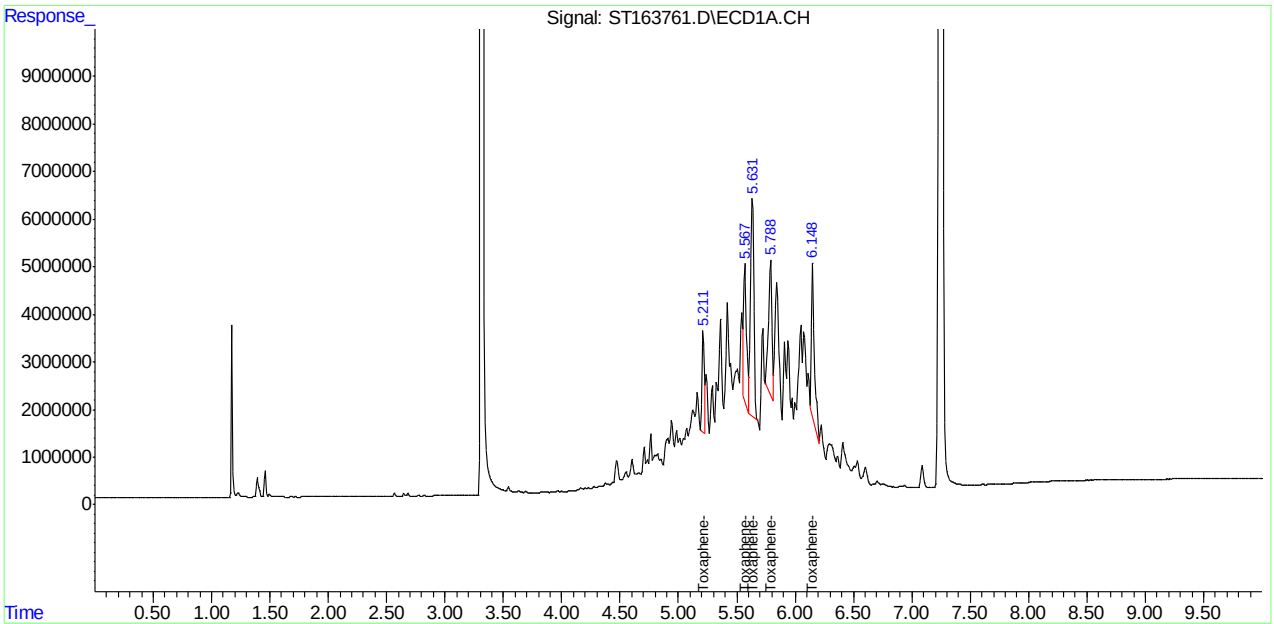
12.6.19 12

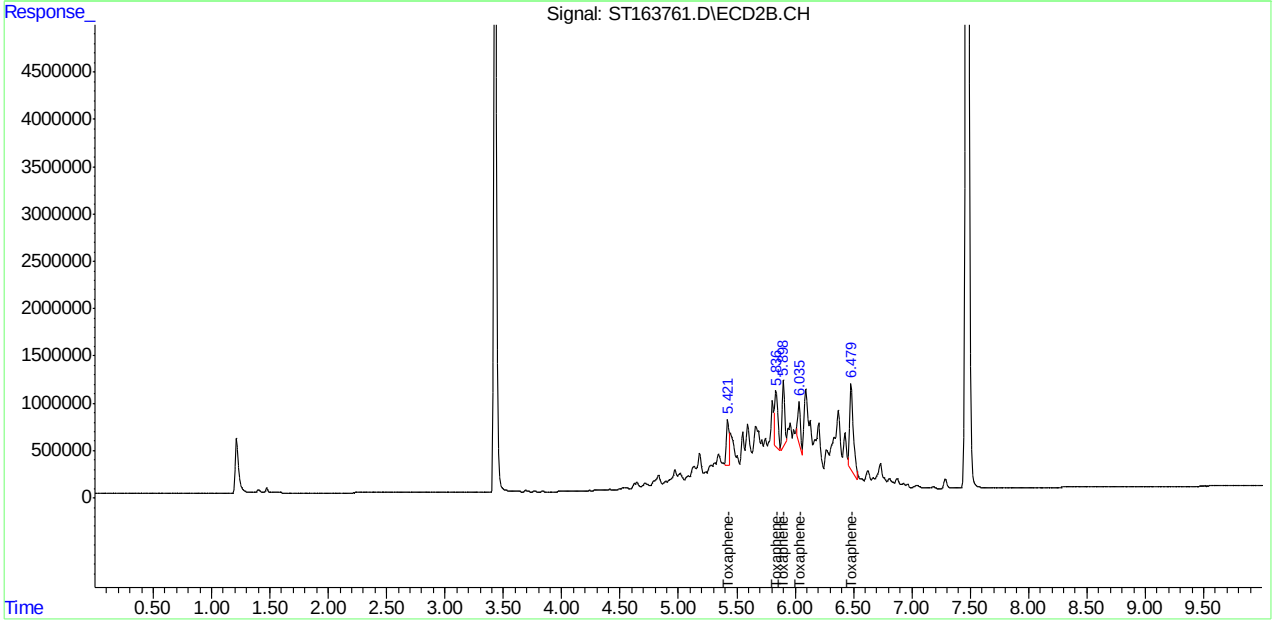
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:35 pm
Operator : eduardom
Sample : ic3992-2000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 20 16:51:04 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-IC3992 **Method:** SW846 8081B
Lab FileID: ST163761.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 16:35 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

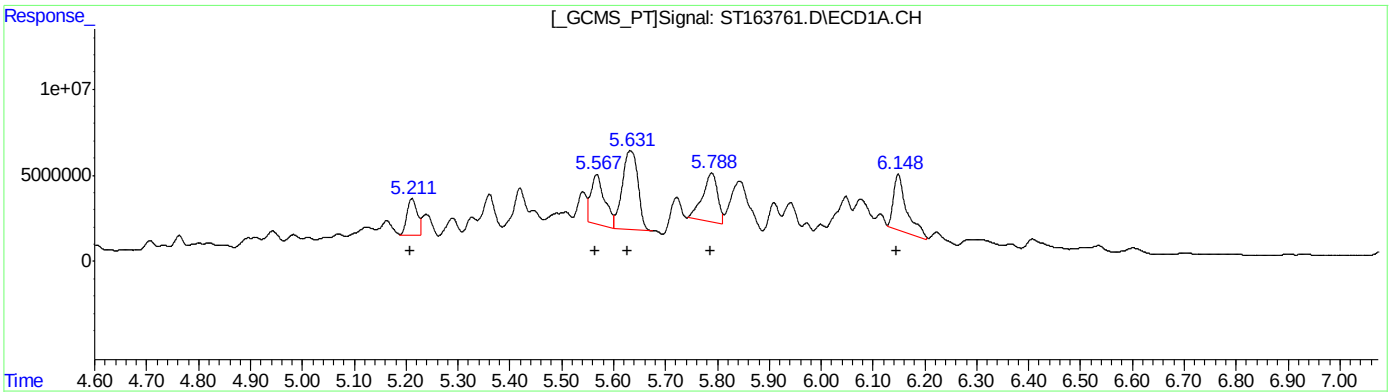
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.03	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

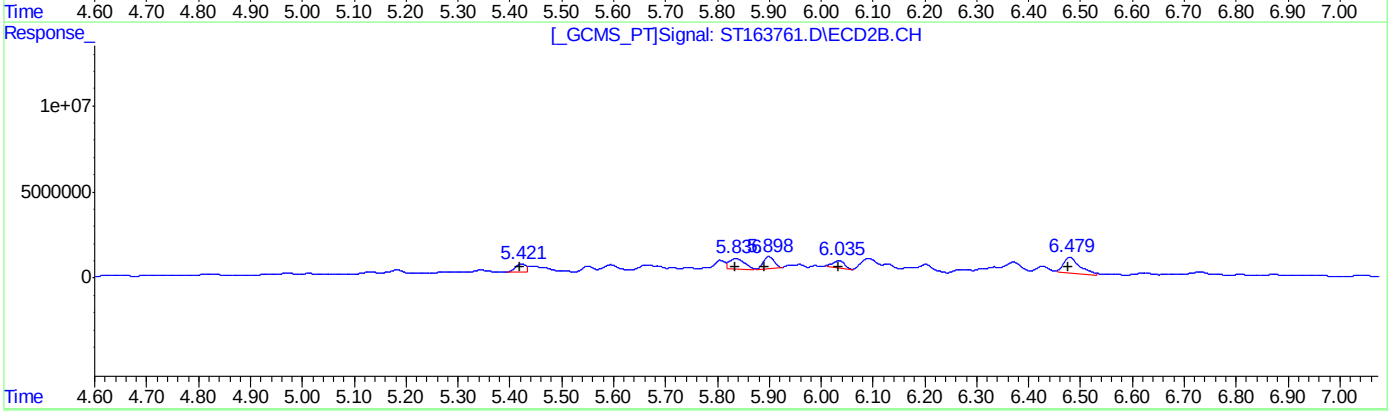
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:35 pm
Operator : eduardom
Sample : ic3992-2000 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 20 16:48:18 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	29917576	404.25
5.57	53801259	822.37
5.63	97164757	1301.56
5.79	56909946	1260.51
6.15	57801353	1394.91

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	6510675	378.60
5.84	12042712	13639.85
5.90	9946751	567.47
6.03	7469698	529.20
6.48	19973486	1051.77

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:59:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	3.646	3.840	2851631	412636	16.411	16.893
3)		gamma-BHC...	3.883	4.103	2626918	403924	16.731	16.281
4)		beta-BHC	4.048	4.330	1224182	220101	16.774	16.305
5)		delta-BHC	4.211	4.514	2804882	472053	16.366	16.588
6)		Heptachlor	4.278	4.377	2207190	371765	16.558	16.460
7)		Aldrin	4.509	4.597	2633316	448254	17.364	17.521
8)		Heptachlo...	4.818	4.974	2506634	460619	17.552	16.539
9)		gamma-Chl...	4.999	5.163	2578594	479272	17.968	17.527
10)		alpha-Chl...	5.051	5.211	2472720	479889	18.175	17.670
11)		4,4'-DDE	5.200	5.347	2488264	468045	17.935	17.229
12)		Endosulfa...	5.082	5.255	2345503	437837	18.323	17.640
13)		Dieldrin	5.278	5.452	2653185	510210	17.597	17.466
14)		Endrin	5.436	5.657	2492284	465326	17.697	17.502
15)		4,4'-DDD	5.571	5.760	2186029	416104	18.011m	17.668
16)		Endosulfa...	5.605	5.873	2376691	476243	17.987m	17.086
17)		4,4'-DDT	5.789	5.947	1288096	321589	16.142m	16.034m
18)		Endrin Al...	5.700	6.004	1841004	396804	18.197m	18.264
19)		Methoxychlor	6.154	6.378	877739	199430	17.037m	17.435m
20)		Endosulfa...	5.867	6.171	2132618	434934	18.003	17.678
21)		Endrin Ke...	6.201	6.565	2285908	483574	18.139	18.103
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

12.6.20
12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:59:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

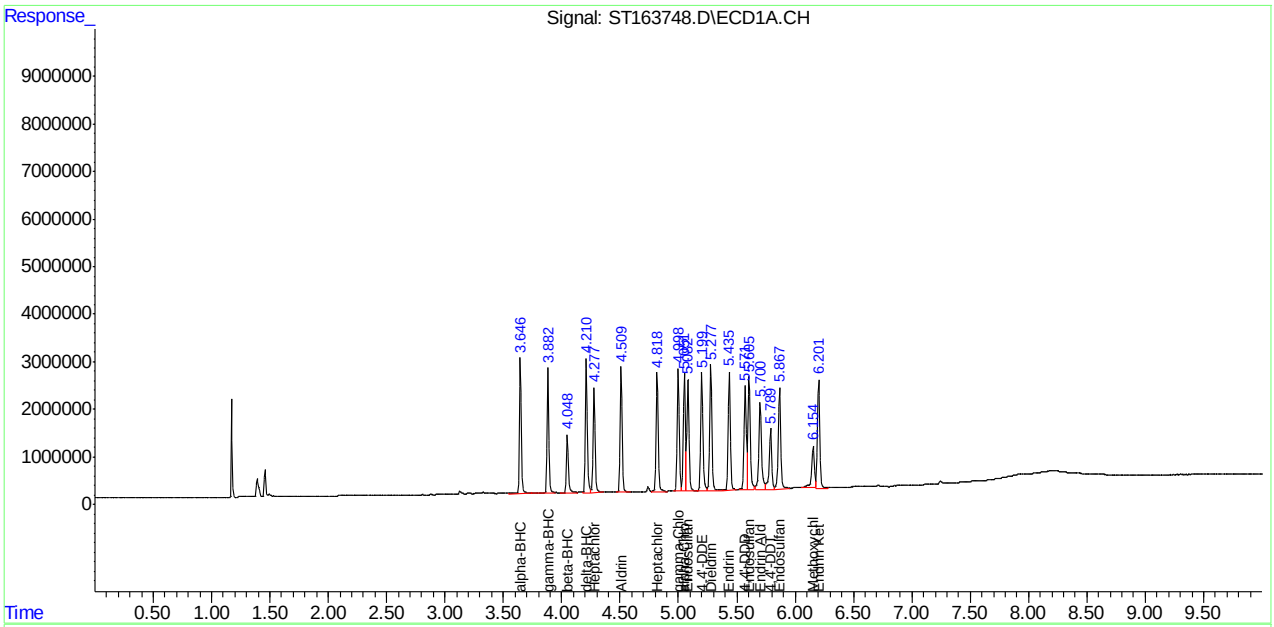
12.6.20
12

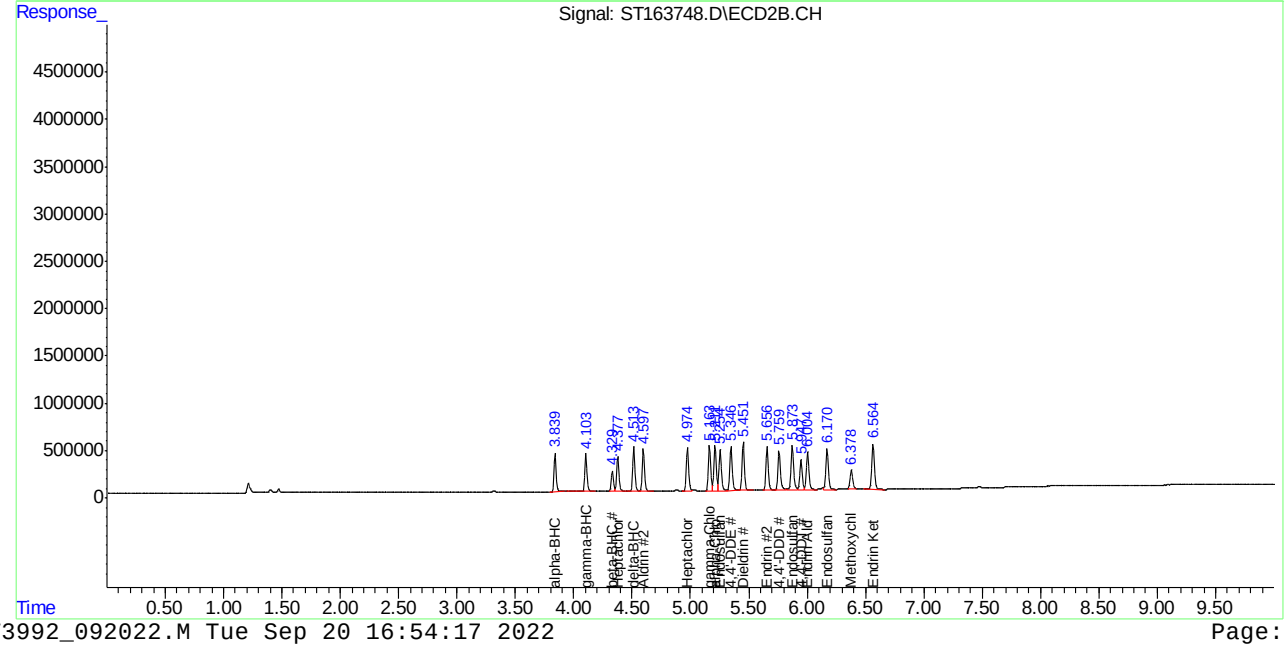
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:59:39 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





SGS FA98819

12.6.20 12

Manual Integration Approval Summary

Sample Number:	GST3992-ICV3992	**Method:**	SW846 8081B
Lab FileID:	ST163748.D	**Analyst approved:**	09/20/22 17:32 William Hustedde
Injection Time:	09/20/22 12:48	**Supervisor approved:**	09/21/22 10:49 Naresh Jiawan

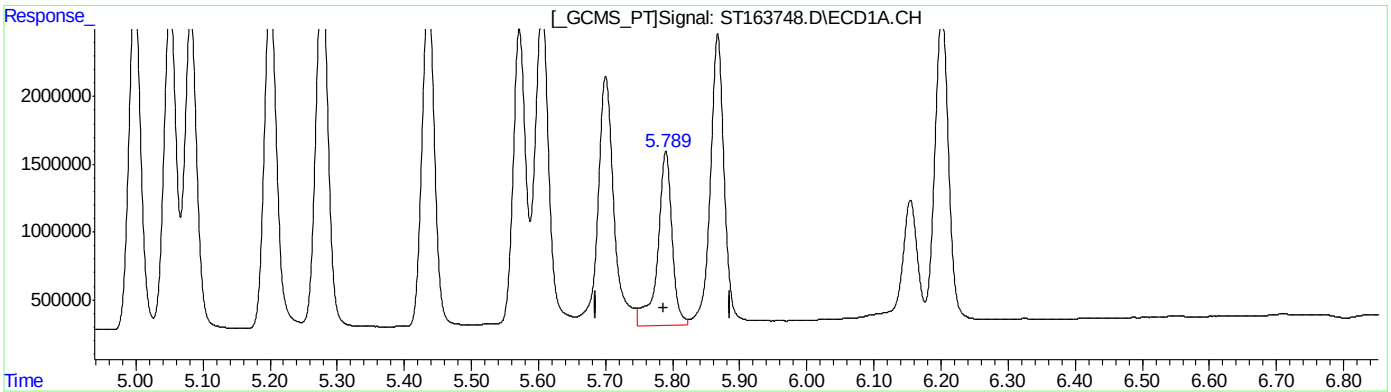
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDD	72-54-8	1	5.57	Poor instrument integration
Endosulfan-II	33213-65-9	1	5.61	Poor instrument integration
Endrin aldehyde	7421-93-4	1	5.70	Poor instrument integration
4,4'-DDT	50-29-3	1	5.79	Poor instrument integration
4,4'-DDT	50-29-3	2	5.95	Poor instrument integration
Methoxychlor	72-43-5	1	6.15	Poor instrument integration
Methoxychlor	72-43-5	2	6.38	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:58:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(17) 4,4'-DDT

5.789min 16.142 ppb m

response 1288096

(17) 4,4'-DDT #2

5.947min 16.034 ppb m

response 321589

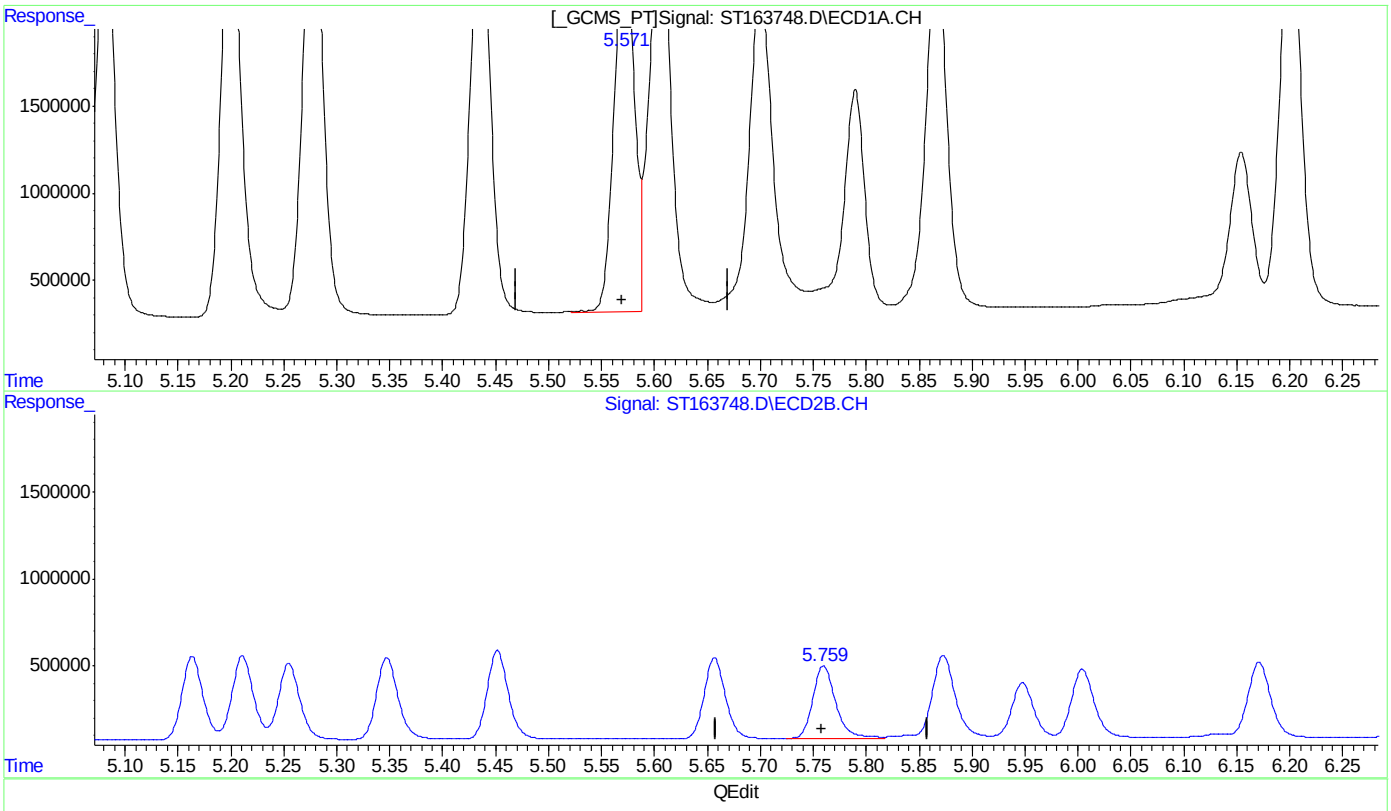
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:58:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(15) 4,4'-DDD ( )

5.571min 18.011 PPB m

response 2186029

(15) 4,4'-DDD #2 ( )

5.760min 17.668 PPB

response 416104

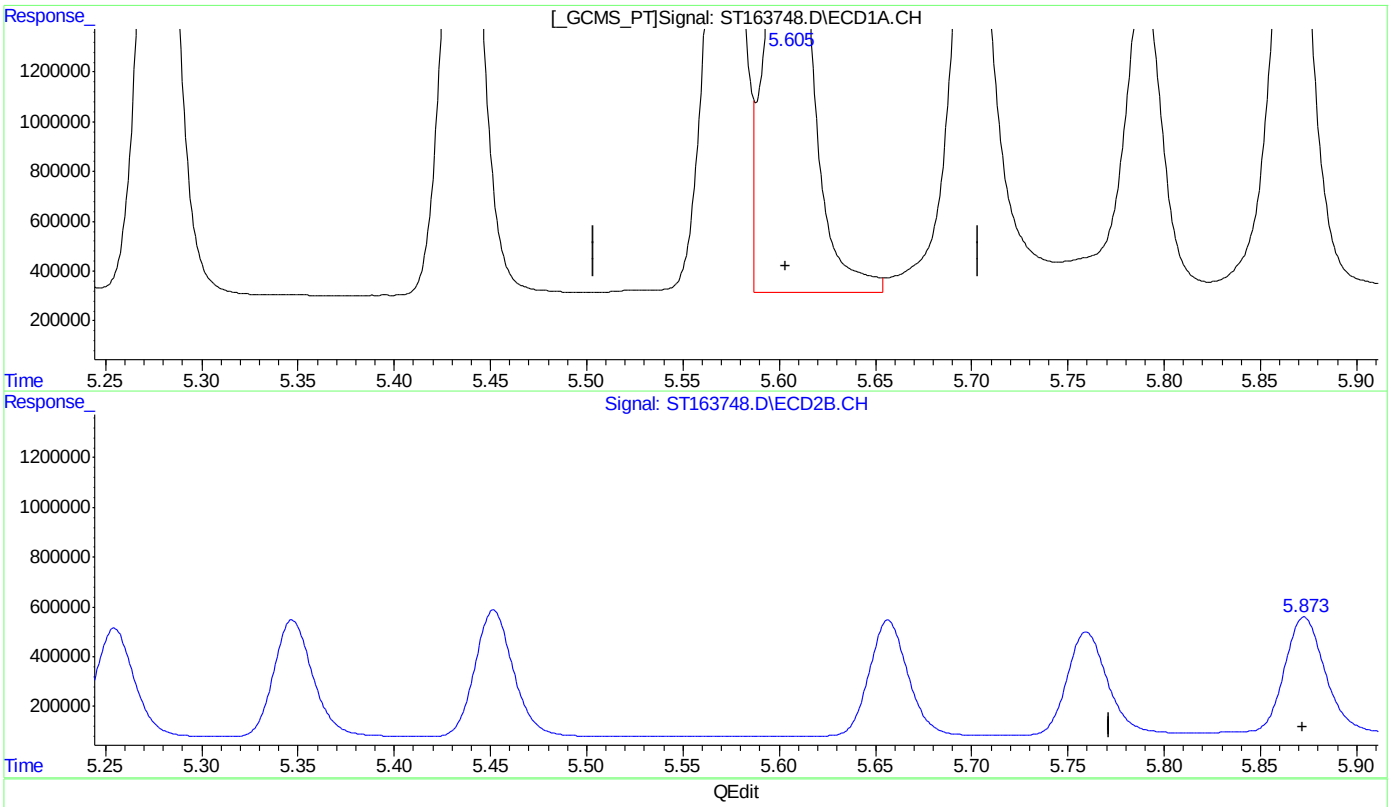
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:58:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(16) Endosulfan II ( )

5.605min 17.987 PPB m

response 2376691

(16) Endosulfan II #2 ( )

5.873min 17.086 PPB

response 476243

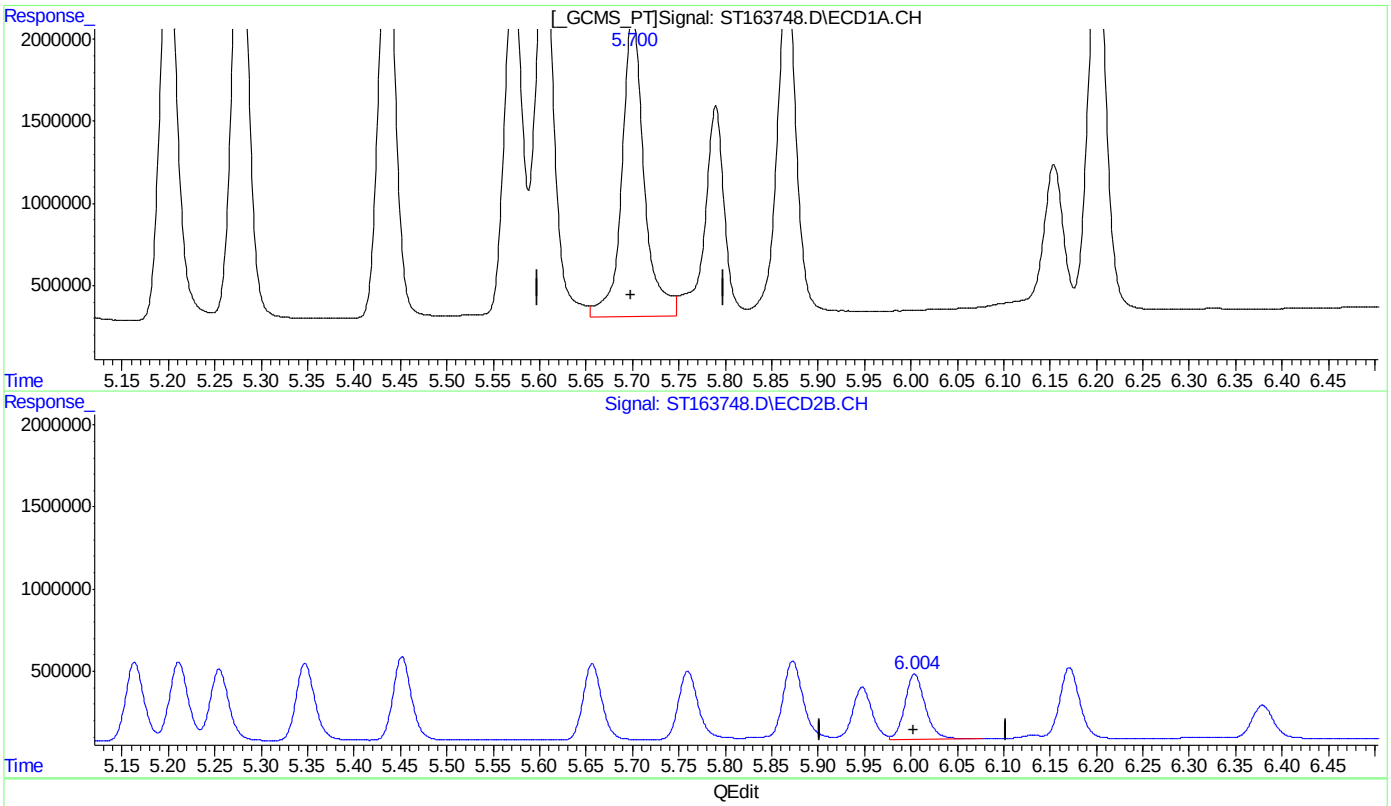
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:58:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



QEdit

(18) Endrin Aldehyde ( )

5.700min 18.197 PPB m

response 1841004

(18) Endrin Aldehyde #2 ( )

6.004min 18.264 PPB

response 396804

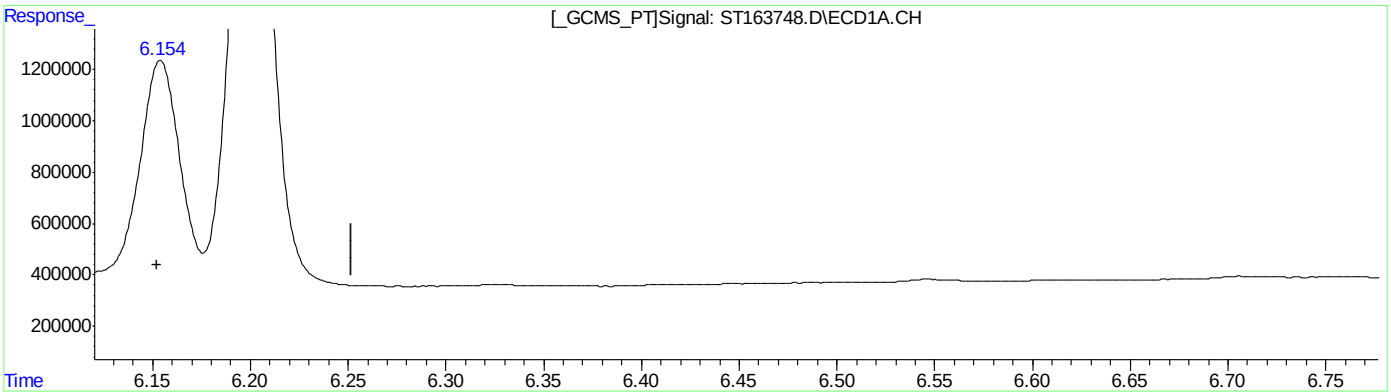
(+) = Expected Retention Time

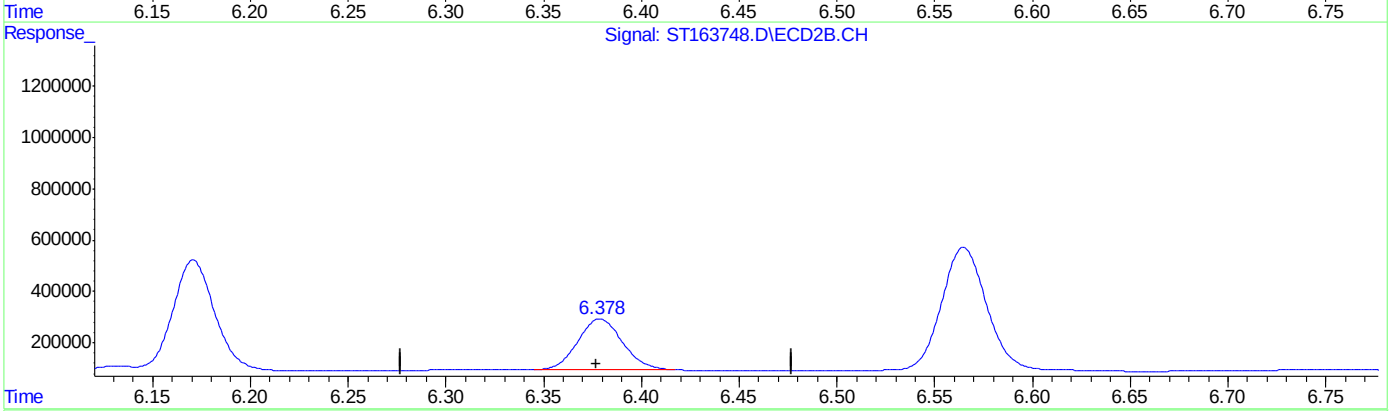
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 12:48 pm
Operator : eduardom
Sample : icv3992-20 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 12:58:19 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 12:56:07 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(19) Methoxychlor
6.154min 17.037 ppb m
response 877739

(19) Methoxychlor #2
6.378min 17.435 ppb m
response 199430

(+) = Expected Retention Time
GST3992_092022.M Tue Sep 20 12:59:41 2022 Page: 1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163755.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:51 pm
Operator : eduardom
Sample : icv3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 20 15:08:05 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 50.000	Range 42 - 127		Recovery =		0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 50.000	Range 27 - 127		Recovery =		0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	4.126	4.241	734446	107631	183.035	181.081
23) L1	Chlordane-B	4.278	4.377	734900	110310	116.757	112.032
24) L1	Chlordane-C	4.505	4.684	902047	182882	241.638	252.425
25) L1	Chlordane-D	5.000	5.180	3111545	581550	193.299	204.559
26) L1	Chlordane-E	5.055	5.209	3661206	497357	201.681	204.036
27) L1	Chlordane-F	5.646	5.880	832221	192498	301.165	240.795
Sum	Chlordane-A			9976364	1672229	1237.575	1194.928
Average	Chlordane-A					206.262	199.155
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
Sum	Toxaphene-A			0	0	N.D.	N.D.
Average	Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163755.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:51 pm
Operator : eduardom
Sample : icv3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 20 15:08:05 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 15:07:42 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

12.6.21
12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163755.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 2:51 pm
Operator : eduardom
Sample : icv3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 20 15:08:05 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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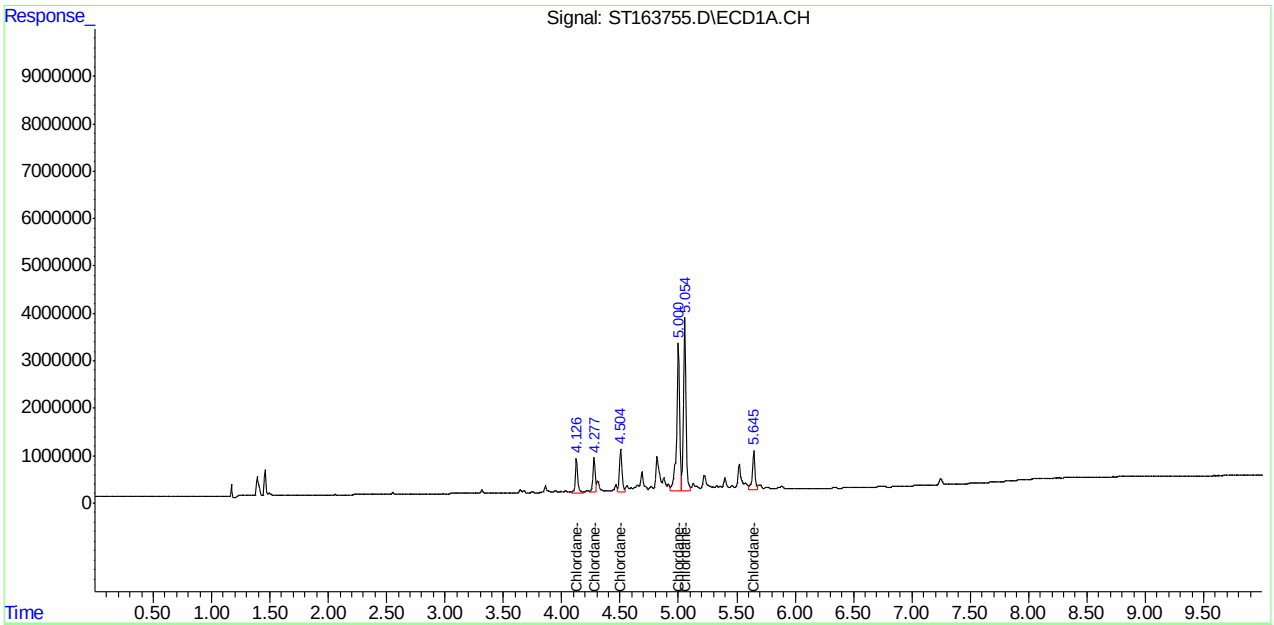
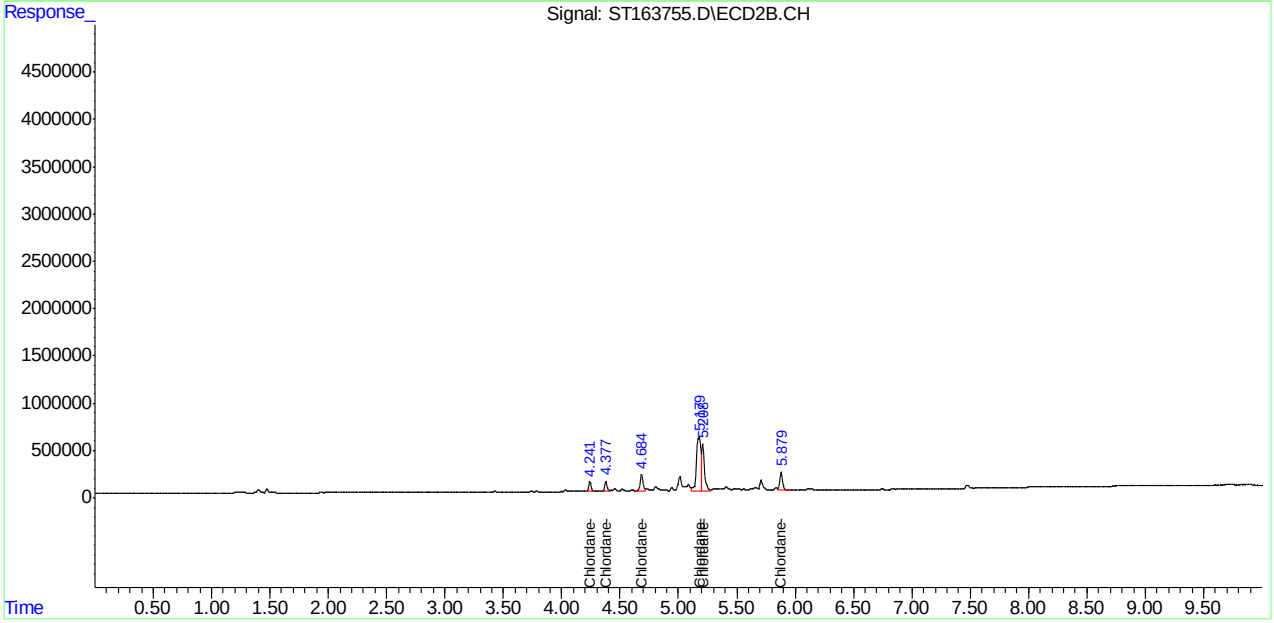
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.21 12

SGS FA98819

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:52 pm
Operator : eduardom
Sample : icv3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 20 17:04:11 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.212	5.422	7018865	1968274	444.980m	492.584m
29) L2	Toxaphene-B	5.568	5.839	9858188	2928090	417.102m	420.089m
30) L2	Toxaphene-C	5.634	5.900	22551409	2491973	490.594m	449.867m
31) L2	Toxaphene-D	5.790	6.036	14519386	2106210	511.523m	489.005m
32) L2	Toxaphene-E	6.149	6.479	12661120	4074135	478.134m	451.286m
	Sum Toxaphene-A			66608968	13568682	2342.333	2302.831
	Average Toxaphene-A					468.467	460.566

12.6.22
12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:52 pm
Operator : eduardom
Sample : icv3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 20 17:04:11 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

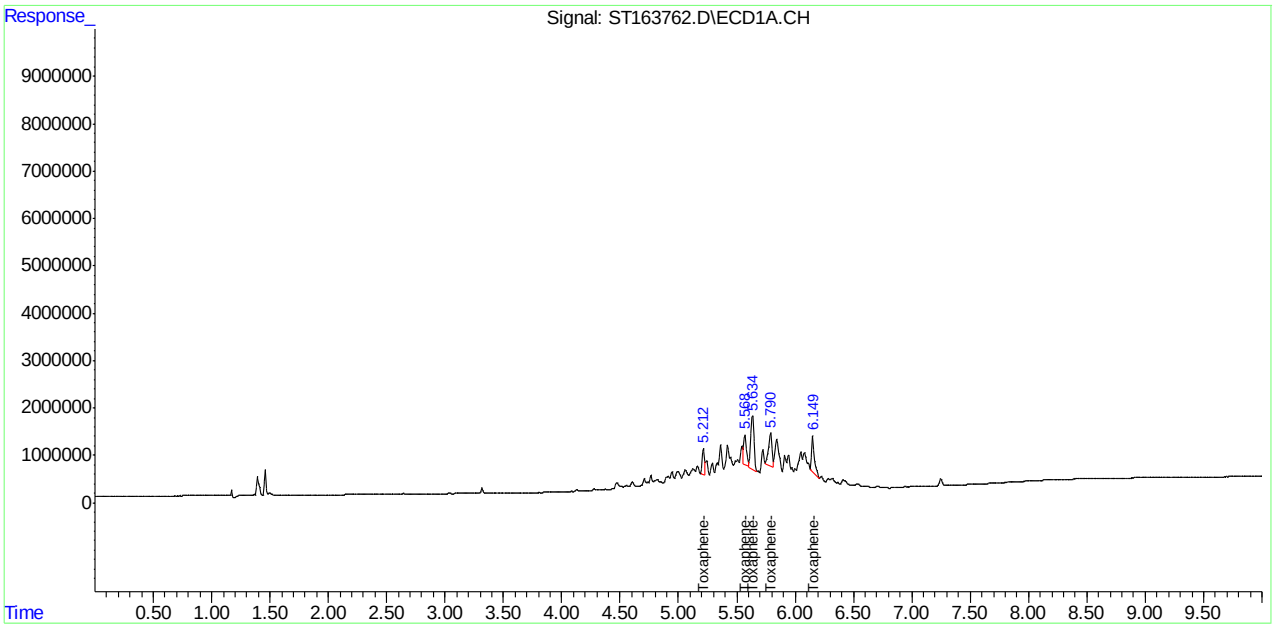
12.6.22
12

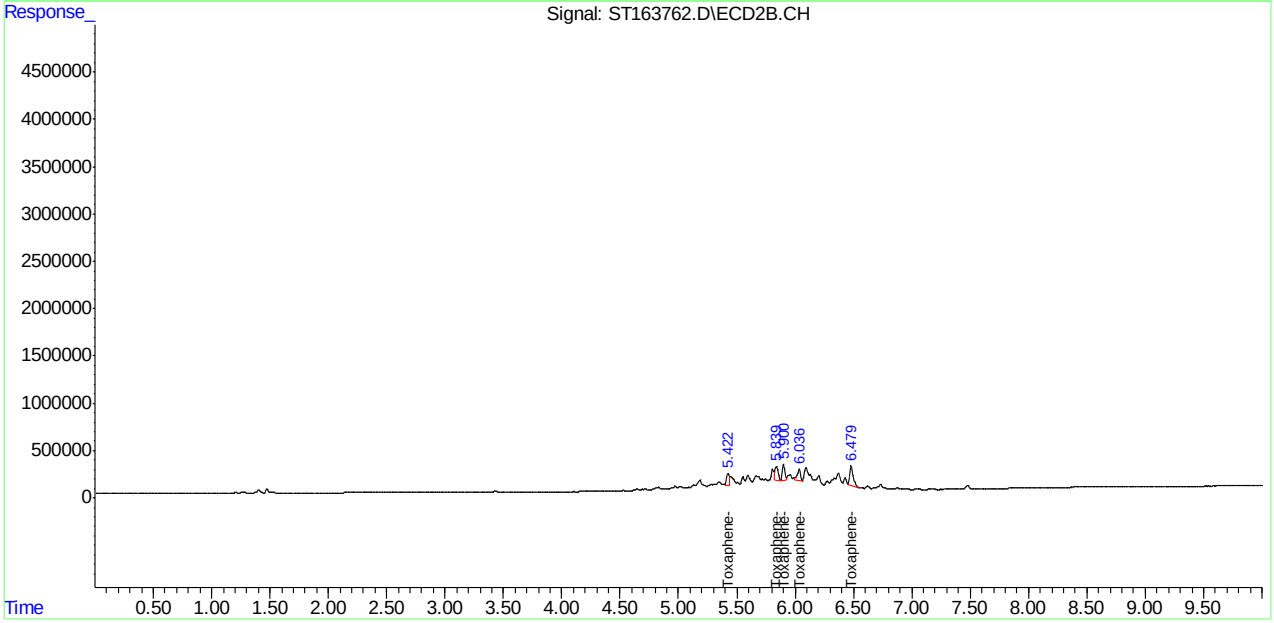
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:52 pm
Operator : eduardom
Sample : icv3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 20 17:04:11 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-ICV3992 **Method:** SW846 8081B
Lab FileID: ST163762.D **Analyst approved:** 09/20/22 17:32 William Hustedde
Injection Time: 09/20/22 16:52 **Supervisor approved:** 09/21/22 10:49 Naresh Jiawan

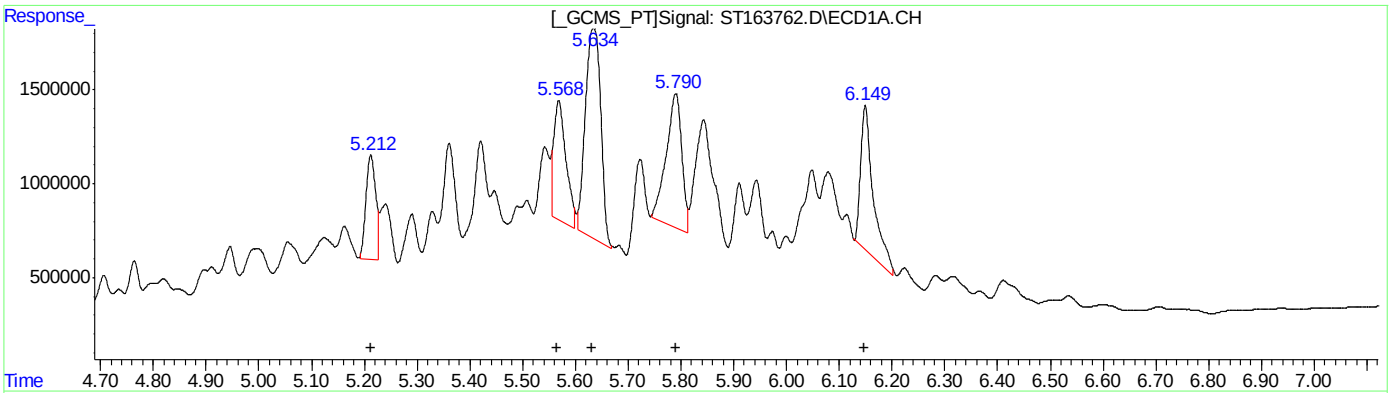
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.04	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

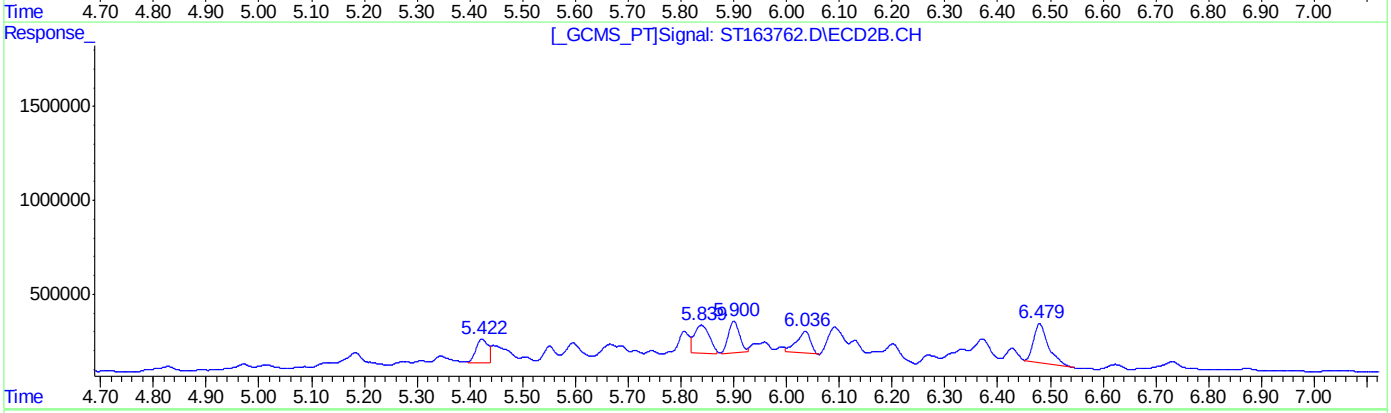
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 4:52 pm
Operator : eduardom
Sample : icv3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 20 17:03:35 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	7018865	444.98
5.57	9858188	417.10
5.63	22551409	490.59
5.79	14519386	511.52
6.15	12661120	478.13

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	1968274	492.58
5.84	2928090	420.09
5.90	2491973	449.87
6.04	2106210	489.01
6.48	4074135	451.29

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163764.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:25 pm
Operator : eduardom
Sample : cc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:33:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	3.314	3.426	3977525	589408	34.963	36.241
		Spiked Amount	50.000	Range 42 - 127		Recovery =	69.93%	72.48%
33)	S	Decachlor...	7.247	7.473	3697703	863474	39.882	38.795
		Spiked Amount	50.000	Range 27 - 127		Recovery =	79.76%	77.59%
		Target Compounds						
2)		alpha-BHC	3.646	3.840	6363613	969340	36.622	39.684
3)		gamma-BHC...	3.882	4.104	5891573	979911	37.523	39.497
4)		beta-BHC	4.048	4.330	2640639	505107	36.183	37.418
5)		delta-BHC	4.211	4.514	5803496	1082758	33.862	38.049
6)		Heptachlor	4.277	4.377	4814804	887247	36.121	39.283
7)		Aldrin	4.509	4.597	5942126	1070517	39.181	41.843
8)		Heptachlo...	4.817	4.974	5607652	1073276	39.266	38.537
9)		gamma-Chl...	4.998	5.164	5744593	1114257	40.029	40.749
10)		alpha-Chl...	5.051	5.211	5500056	1100025	40.427	40.504
11)		4,4'-DDE	5.201	5.349	5224430	1073726	37.657	39.524
12)		Endosulfa...	5.081	5.255	5117429	1019383	39.976	41.070
13)		Dieldrin	5.277	5.452	6009349	1188332	39.856	40.680
14)		Endrin	5.435	5.657	5457841	1083861	38.755	40.767
15)		4,4'-DDD	5.573	5.761	4496806	953048	37.050	40.467
16)		Endosulfa...	5.605	5.873	5523962	1094199	41.806	39.255
17)		4,4'-DDT	5.788	5.948	3551295	815868	40.852	39.119
18)		Endrin Al...	5.700	6.004	4034668	881326	39.879	40.566
19)		Methoxychlor	6.155	6.379	2066320	452066	39.440	39.522
20)		Endosulfa...	5.867	6.171	4613677	965466	38.948	39.241
21)		Endrin Ke...	6.201	6.564	5257230	1129067	41.716	42.267
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163764.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:25 pm
Operator : eduardom
Sample : cc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:33:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

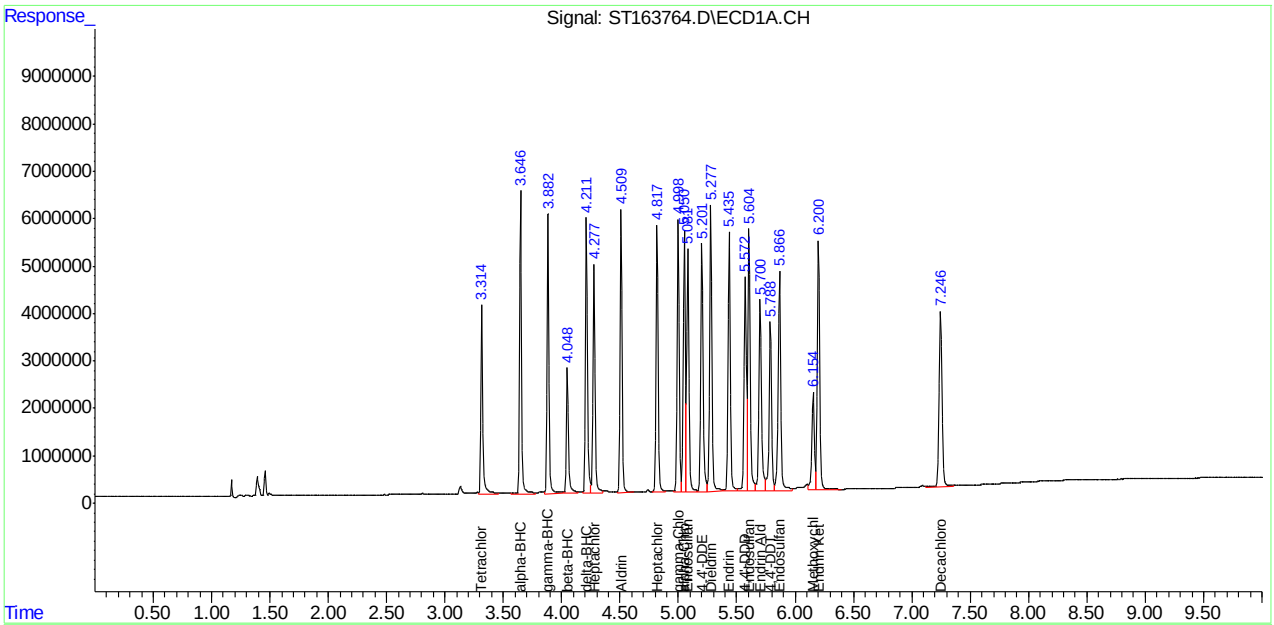
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

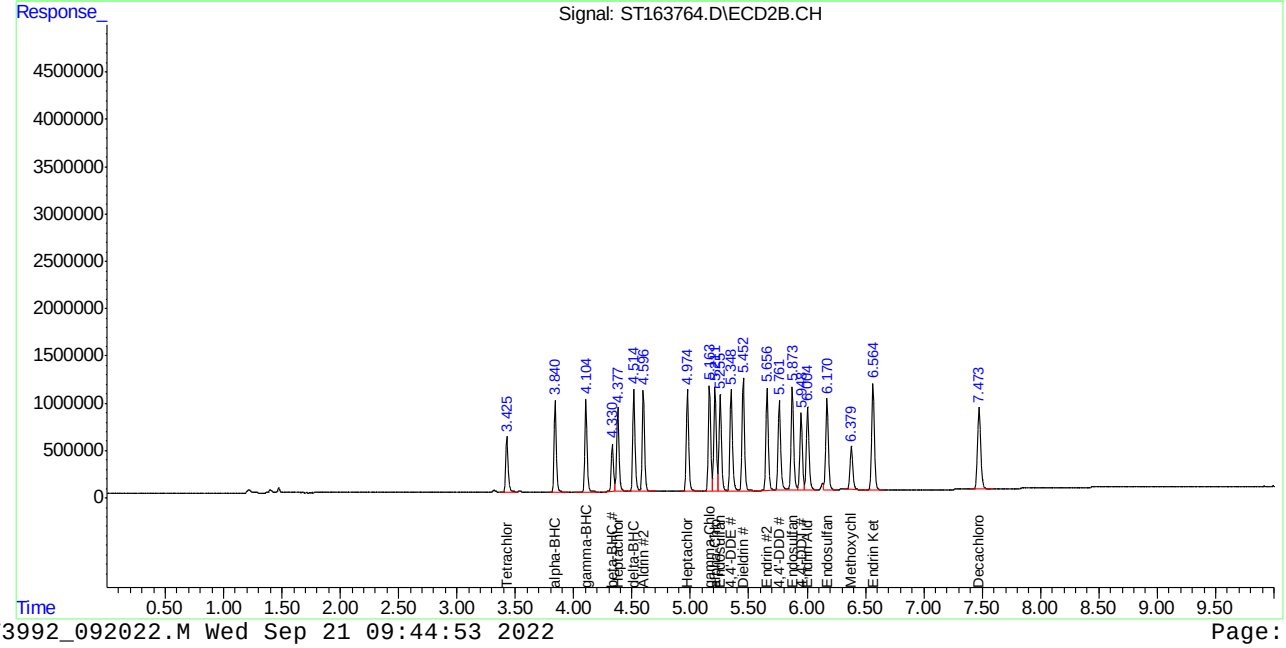
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163764.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:25 pm
Operator : eduardom
Sample : cc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:33:21 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163765.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:41 pm
Operator : eduardom
Sample : cc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:33:58 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	4.126	4.241	797275	118656	198.693	199.629
23)	L1	Chlordane-B	4.278	4.378	1232423	188039	195.800	190.975
24)	L1	Chlordane-C	4.506	4.684	746701	145583	200.024	200.942
25)	L1	Chlordane-D	4.999	5.167	3228535	591367	200.567	208.012
26)	L1	Chlordane-E	5.054	5.210	3473436	491383	191.338	201.585
27)	L1	Chlordane-F	5.645	5.881	641321	139160	239.165	174.074
		Sum Chlordane-A			10119691	1674188	1225.587	1175.217
		Average Chlordane-A					204.264	195.870
28)	L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29)	L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30)	L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31)	L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32)	L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Toxaphene-A			0	0	N.D.	N.D.
		Average Toxaphene-A					0.000	0.000

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163765.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:41 pm
Operator : eduardom
Sample : cc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:33:58 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

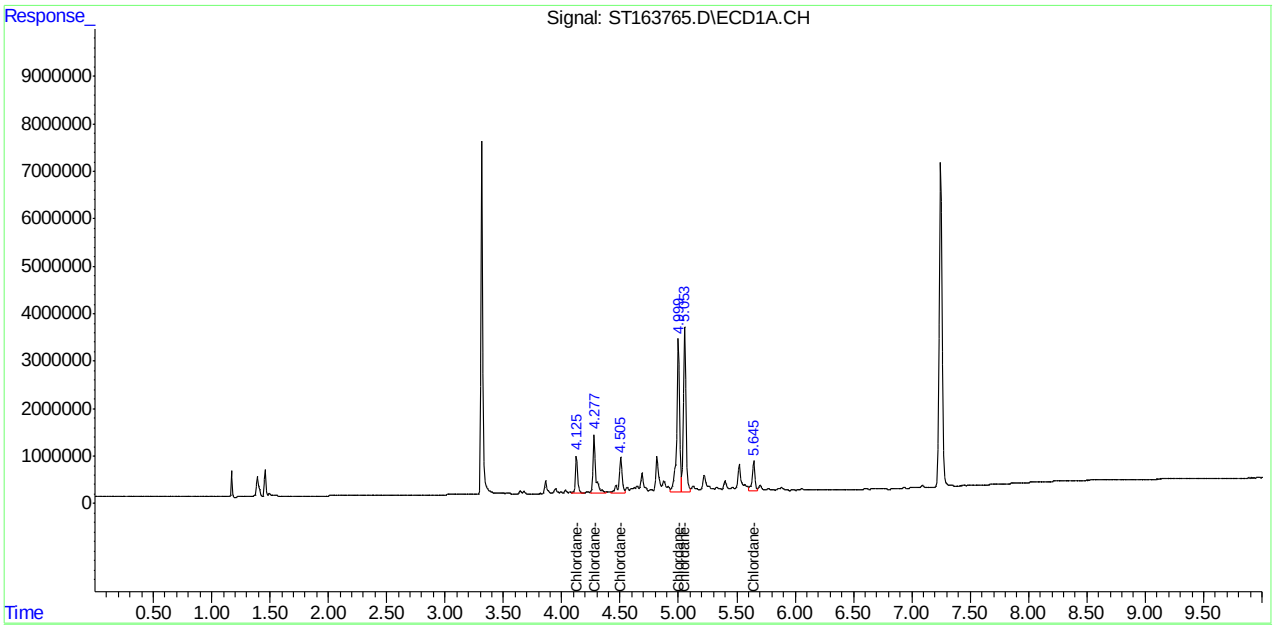
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

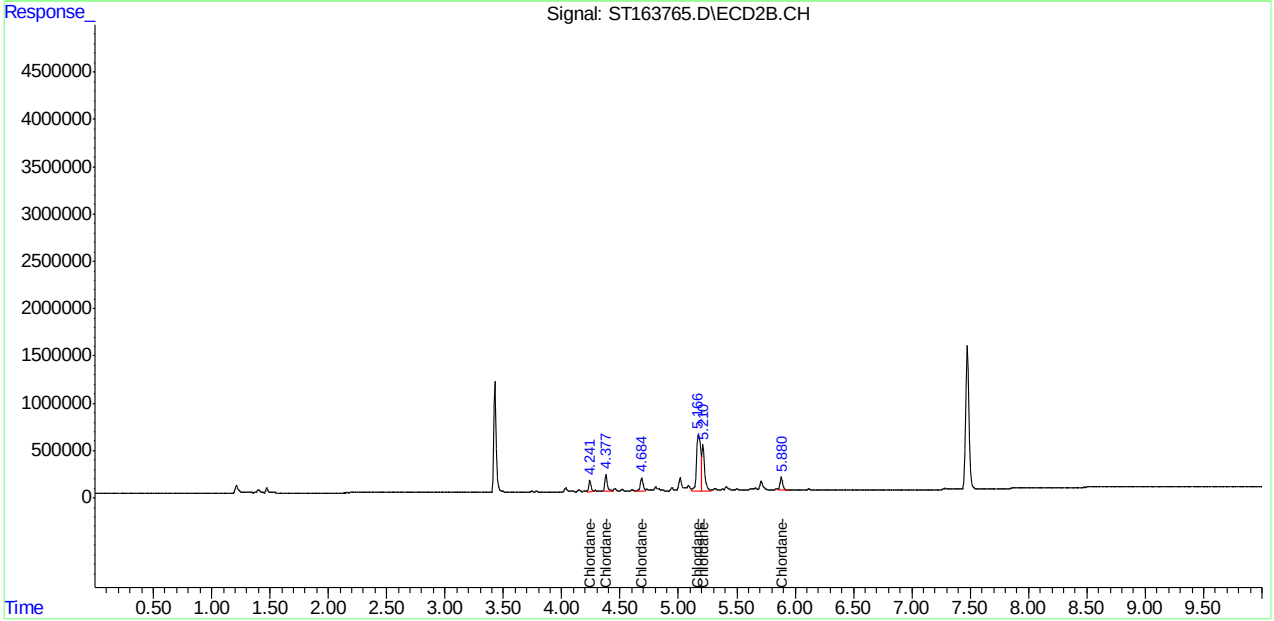
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163765.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:41 pm
Operator : eduardom
Sample : cc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:33:58 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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SGS FA98819

Manual Integrations APPROVED
(compounds with "m" flag)
Naresh Jiawan
09/21/22 10:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:59 pm
Operator : eduardom
Sample : cc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:34:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		System Monitoring Compounds						
1)	S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 42 - 127	Recovery	=	0.00%#	0.00%#
33)	S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
		Spiked Amount	50.000	Range 27 - 127	Recovery	=	0.00%#	0.00%#
		Target Compounds						
2)		alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)		gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)		beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)		delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)		Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)		Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)		Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)		gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)		alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)		4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)		Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)		Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)		4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)		4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)		Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)		Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)		Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)		Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22)	L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23)	L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24)	L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25)	L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26)	L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27)	L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
		Sum Chlordane-A			0	0	N.D.	N.D.
		Average Chlordane-A					0.000	0.000
28)	L2	Toxaphene-A	5.211	5.421	7261219	1825002	460.344m	456.728m
29)	L2	Toxaphene-B	5.567	5.838	12258031	3632270	518.640m	521.117m
30)	L2	Toxaphene-C	5.631	5.898	23439341	2870664	509.911m	518.231m
31)	L2	Toxaphene-D	5.789	6.035	14315712	1928785	504.348m	447.812m
32)	L2	Toxaphene-E	6.148	6.478	13191274	4086402	498.155m	452.645m
		Sum Toxaphene-A			70465578	14343122	2491.397	2396.533
		Average Toxaphene-A					498.279	479.307

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:59 pm
Operator : eduardom
Sample : cc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:34:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

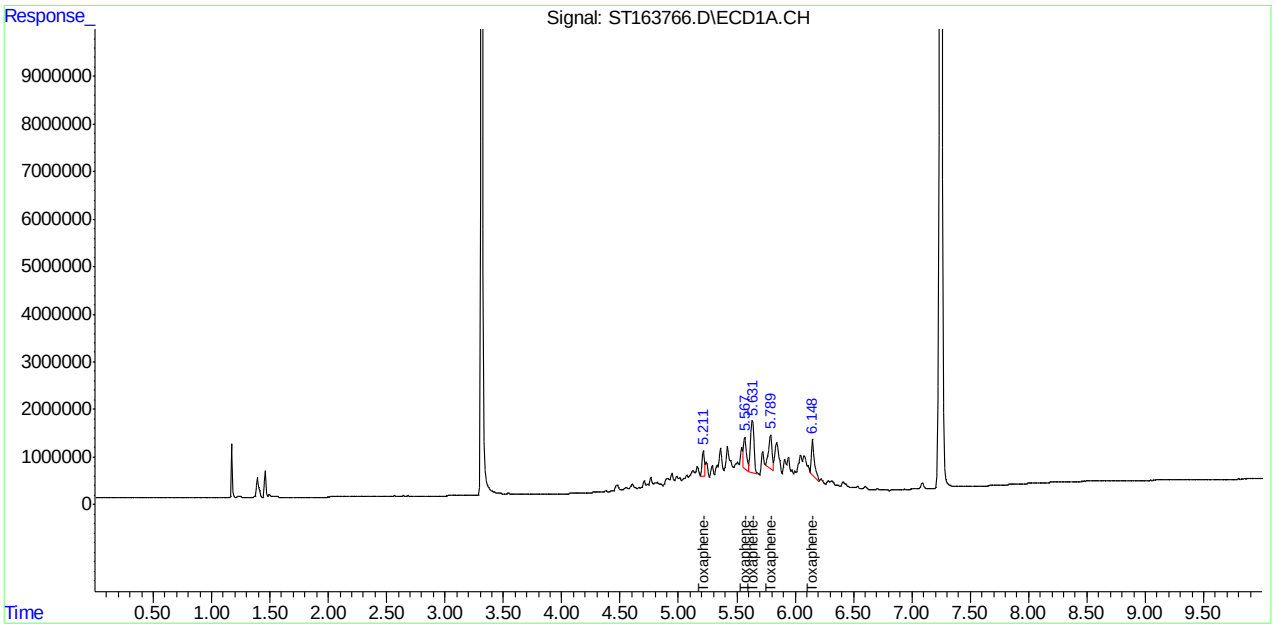
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

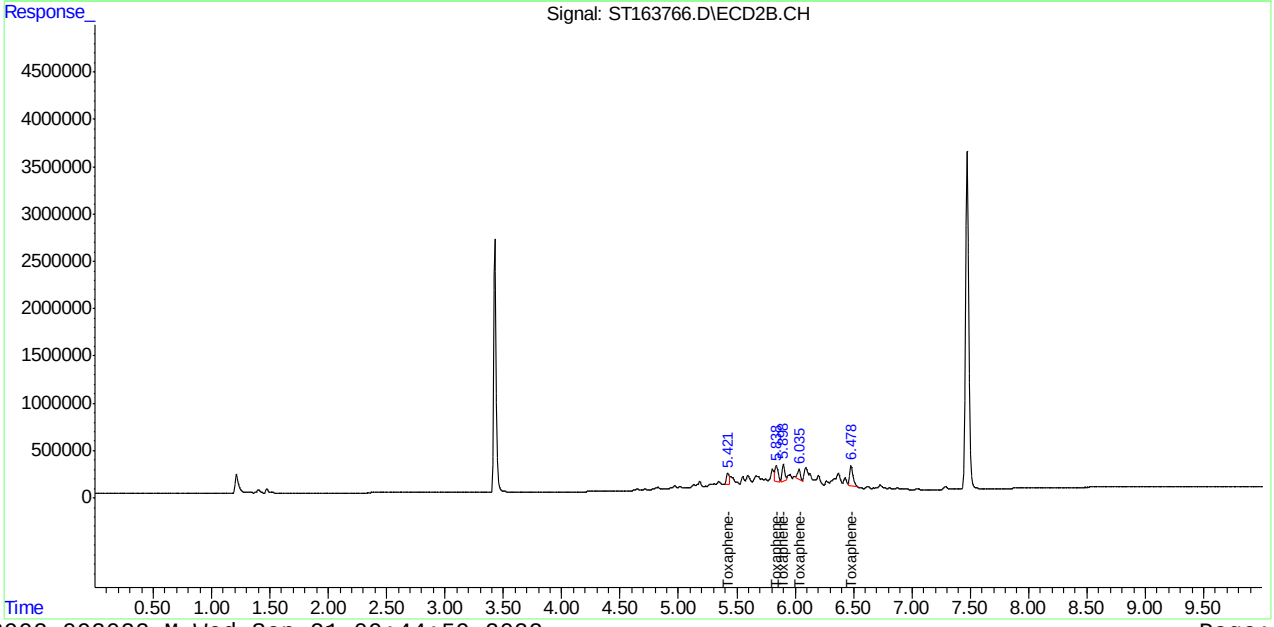
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:59 pm
Operator : eduardom
Sample : cc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:34:44 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GST3992-CC3992 **Method:** SW846 8081B
Lab FileID: ST163766.D **Analyst approved:** 09/21/22 10:01 William Hustedde
Injection Time: 09/20/22 17:59 **Supervisor approved:** 09/21/22 10:51 Naresh Jiawan

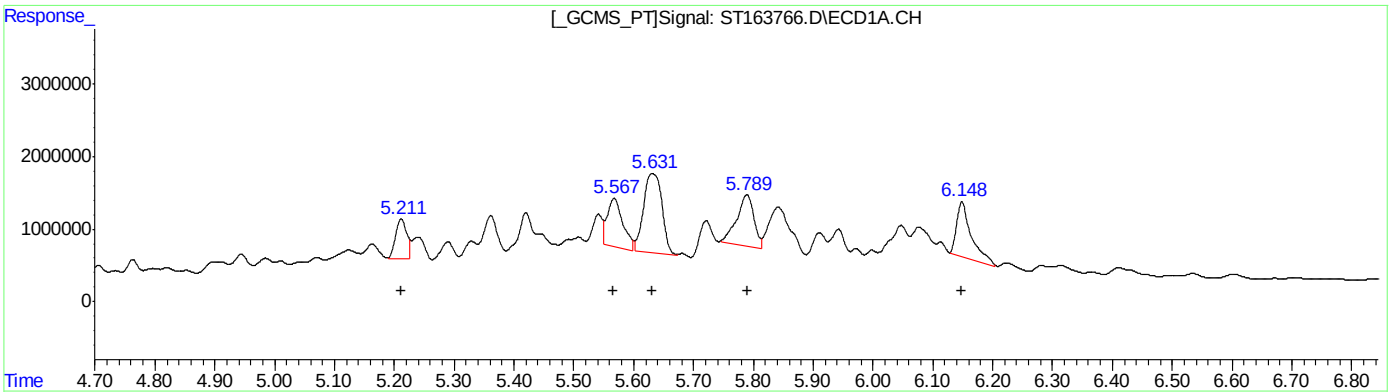
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.03	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

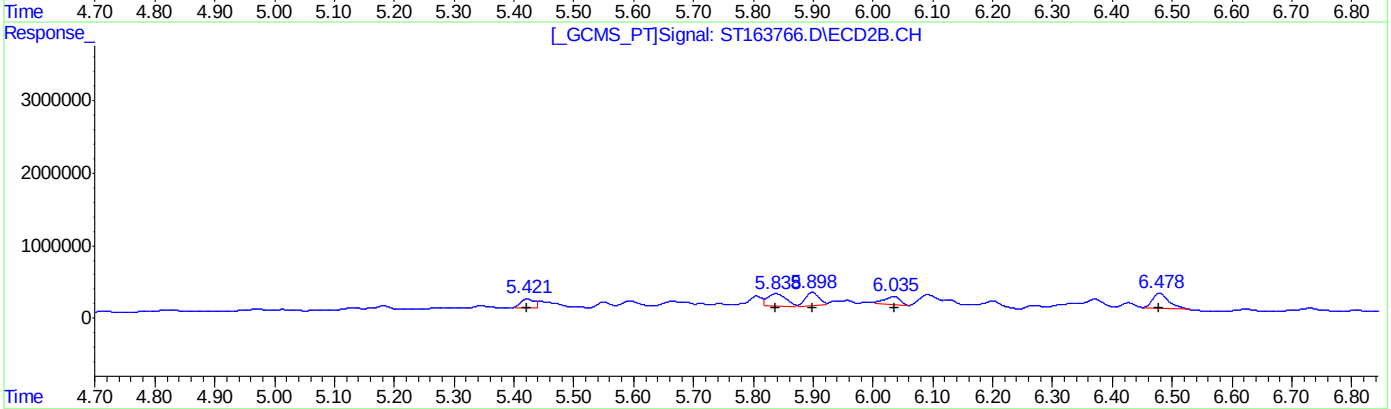
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 5:59 pm
Operator : eduardom
Sample : cc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:31:24 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





QEdit

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	7261219	460.34
5.57	12258031	518.64
5.63	23439341	509.91
5.79	14315712	504.35
6.15	13191274	498.15

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	1825002	456.73
5.84	3632270	521.12
5.90	2870664	518.23
6.03	1928785	447.81
6.48	4086402	452.65

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163776.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:47 pm
Operator : eduardom
Sample : ecc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:42:38 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.315	3.427	4204644	633516	36.959	38.953
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	73.92%	77.91%
33) S	Decachlor...	7.247	7.474	3622459	886223	39.071	39.817
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	78.14%	79.63%
	Target Compounds						
2)	alpha-BHC	3.647	3.841	6708823	1032749	38.609	42.280
3)	gamma-BHC...	3.883	4.105	6432170	1067840	40.966	43.041
4)	beta-BHC	4.049	4.331	2813931	530980	38.557	39.335
5)	delta-BHC	4.212	4.515	6208413	1147296	36.224	40.316
6)	Heptachlor	4.278	4.378	5348903	947255	40.128	41.940
7)	Aldrin	4.509	4.597	6173988	1119932	40.710	43.775
8)	Heptachlo...	4.818	4.974	5745560	1126482	40.232	40.448
9)	gamma-Chl...	4.998	5.163	5818018	1165203	40.541	42.612
10)	alpha-Chl...	5.051	5.211	5706457	1152204	41.944	42.426
11)	4,4'-DDE	5.201	5.348	5312776	1123534	38.294	41.357
12)	Endosulfa...	5.051	5.255	5706457	1063597	44.578	42.851
13)	Dieldrin	5.277	5.452	6226684	1251240	41.297	42.833
14)	Endrin	5.435	5.657	5913171	1144660	41.988	43.054
15)	4,4'-DDD	5.573	5.761	4598876	969795	37.891	41.179
16)	Endosulfa...	5.605	5.873	5513060	1122947	41.724	40.287
17)	4,4'-DDT	5.788	5.948	3690052	852545	42.251	40.766
18)	Endrin Al...	5.700	6.004	4020161	906183	39.735	41.710
19)	Methoxychlor	6.154	6.379	2151707	472614	41.022	41.319
20)	Endosulfa...	5.866	6.171	4626732	992053	39.058	40.322
21)	Endrin Ke...	6.200	6.565	5375120	1187253	42.652	44.445
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
Sum	Chlordane-A			0	0	N.D.	N.D.
Average	Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
Sum	Toxaphene-A			0	0	N.D.	N.D.
Average	Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163776.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:47 pm
Operator : eduardom
Sample : ecc3992-40 Pest Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:42:38 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163776.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 8:47 pm
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Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 09:42:38 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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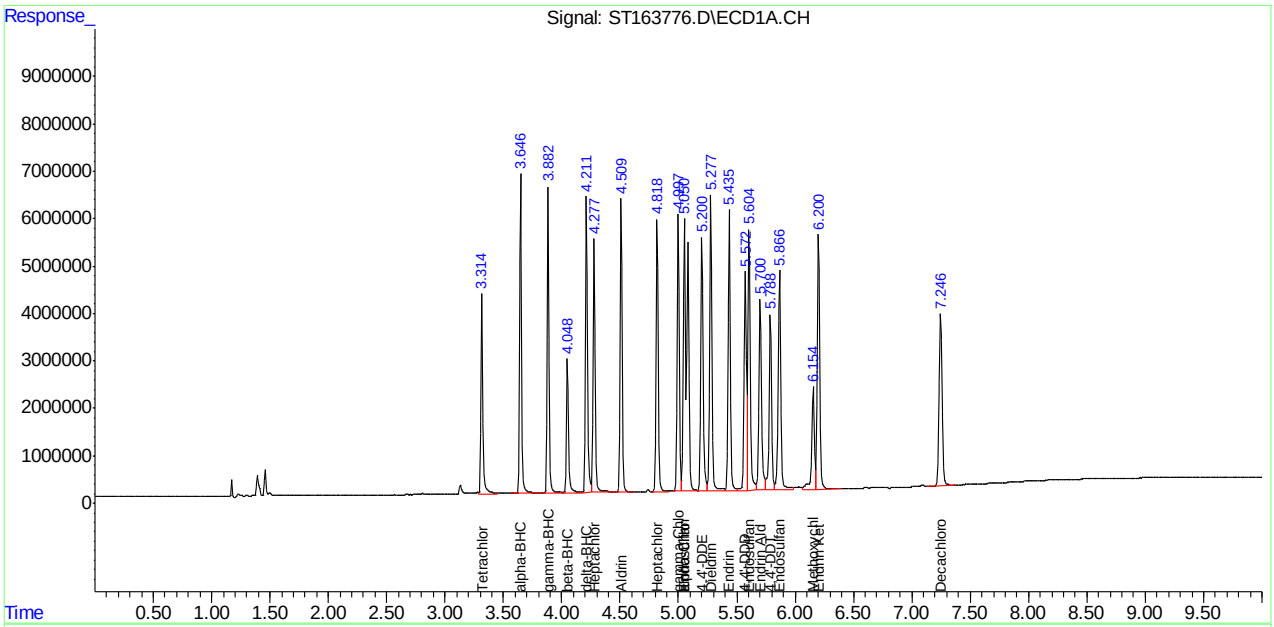
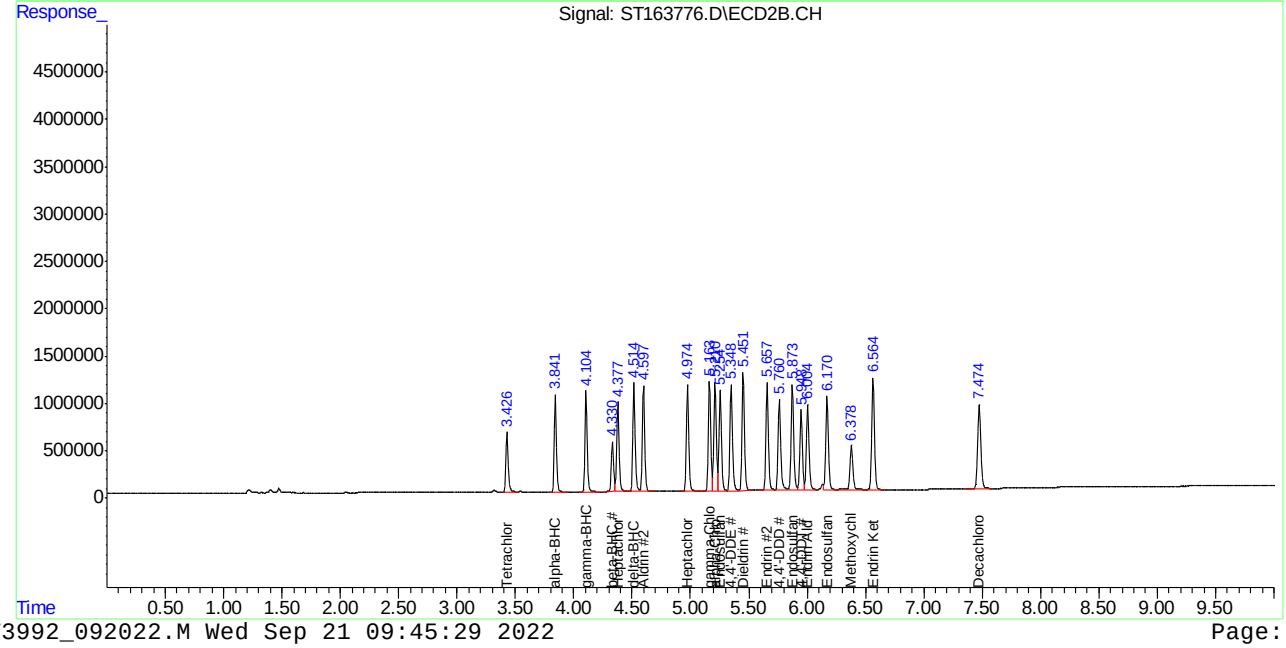
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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12.6.26 12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163777.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:03 pm
Operator : eduardom
Sample : ecc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:42:56 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 50.000	Range 42 - 127		Recovery =		0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 50.000	Range 27 - 127		Recovery =		0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	4.127	4.241	781810	115896	194.838	194.985
23) L1	Chlordane-B	4.277	4.378	1225711	188451	194.734	191.394
24) L1	Chlordane-C	4.505	4.684	728628	144553	195.183	199.520
25) L1	Chlordane-D	4.999	5.168	3154114	574274	195.943	201.999
26) L1	Chlordane-E	5.054	5.210	3605588	488955	198.618	200.589
27) L1	Chlordane-F	5.645	5.880	639674	144799	238.616	181.128
Sum	Chlordane-A			10135524	1656928	1217.932	1169.616
Average	Chlordane-A					202.989	194.936
28) L2	Toxaphene-A	0.000	0.000	0	0	N.D. d	N.D. d
29) L2	Toxaphene-B	0.000	0.000	0	0	N.D. d	N.D. d
30) L2	Toxaphene-C	0.000	0.000	0	0	N.D. d	N.D. d
31) L2	Toxaphene-D	0.000	0.000	0	0	N.D. d	N.D. d
32) L2	Toxaphene-E	0.000	0.000	0	0	N.D. d	N.D. d
Sum	Toxaphene-A			0	0	N.D.	N.D.
Average	Toxaphene-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163777.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:03 pm
Operator : eduardom
Sample : ecc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:42:56 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163777.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:03 pm
Operator : eduardom
Sample : ecc3992-200 CHL Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 21 09:42:56 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
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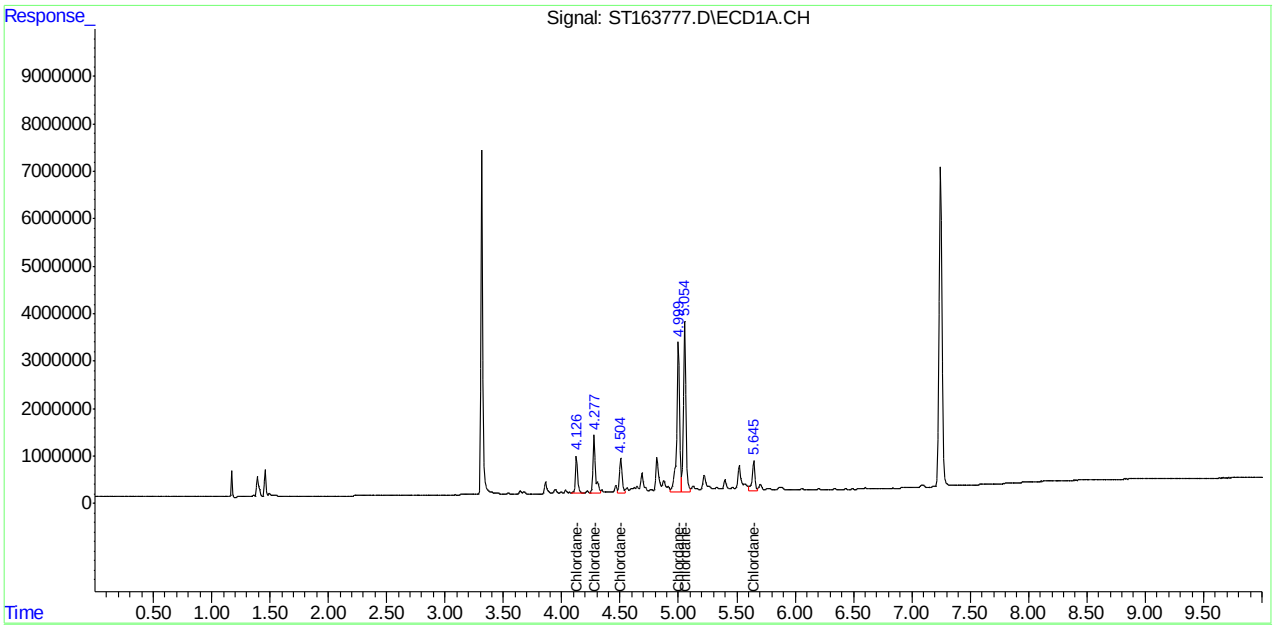
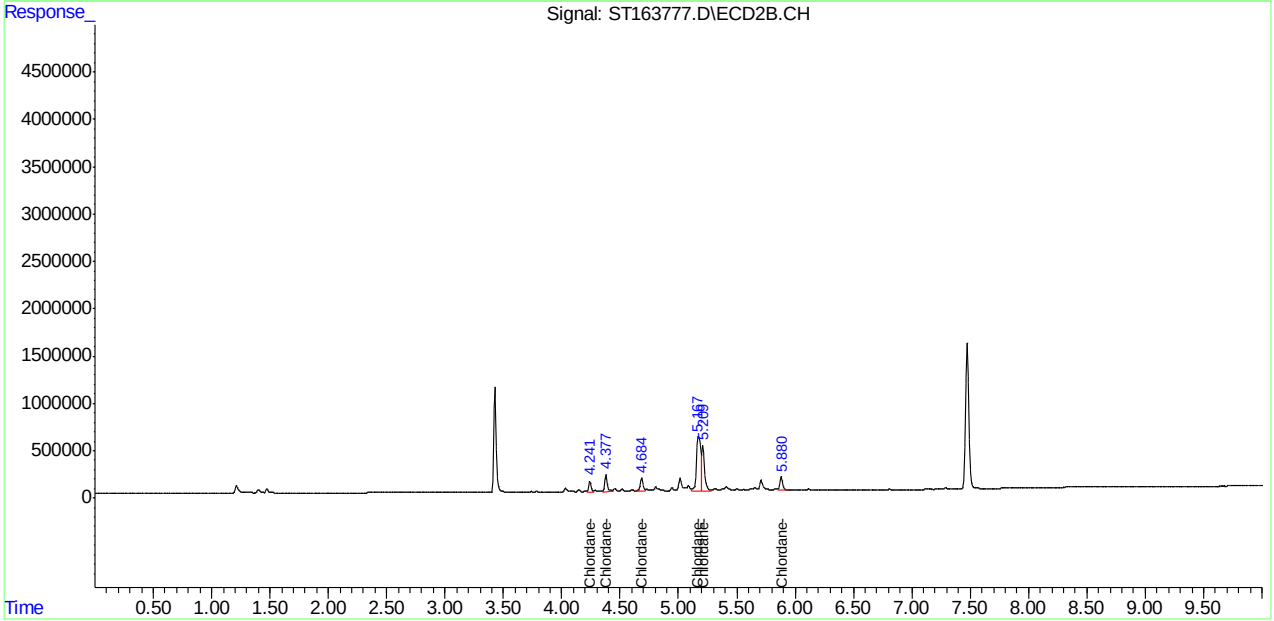
Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/21/22 10:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163778.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:19 pm
Operator : eduardom
Sample : ecc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:44:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	42 - 127	Recovery	=	0.00%#	0.00%#
33) S	Decachlor...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount	50.000 Range	27 - 127	Recovery	=	0.00%#	0.00%#
	Target Compounds						
2)	alpha-BHC	0.000	0.000	0	0	N.D. d	N.D. d
3)	gamma-BHC...	0.000	0.000	0	0	N.D. d	N.D. d
4)	beta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
5)	delta-BHC	0.000	0.000	0	0	N.D. d	N.D. d
6)	Heptachlor	0.000	0.000	0	0	N.D. d	N.D. d
7)	Aldrin	0.000	0.000	0	0	N.D. d	N.D. d
8)	Heptachlo...	0.000	0.000	0	0	N.D. d	N.D. d
9)	gamma-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
10)	alpha-Chl...	0.000	0.000	0	0	N.D. d	N.D. d
11)	4,4'-DDE	0.000	0.000	0	0	N.D. d	N.D. d
12)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
13)	Dieldrin	0.000	0.000	0	0	N.D. d	N.D. d
14)	Endrin	0.000	0.000	0	0	N.D. d	N.D. d
15)	4,4'-DDD	0.000	0.000	0	0	N.D. d	N.D. d
16)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
17)	4,4'-DDT	0.000	0.000	0	0	N.D. d	N.D. d
18)	Endrin Al...	0.000	0.000	0	0	N.D. d	N.D. d
19)	Methoxychlor	0.000	0.000	0	0	N.D. d	N.D. d
20)	Endosulfa...	0.000	0.000	0	0	N.D. d	N.D. d
21)	Endrin Ke...	0.000	0.000	0	0	N.D. d	N.D. d
22) L1	Chlordane-A	0.000	0.000	0	0	N.D. d	N.D. d
23) L1	Chlordane-B	0.000	0.000	0	0	N.D. d	N.D. d
24) L1	Chlordane-C	0.000	0.000	0	0	N.D. d	N.D. d
25) L1	Chlordane-D	0.000	0.000	0	0	N.D. d	N.D. d
26) L1	Chlordane-E	0.000	0.000	0	0	N.D. d	N.D. d
27) L1	Chlordane-F	0.000	0.000	0	0	N.D. d	N.D. d
	Sum Chlordane-A			0	0	N.D.	N.D.
	Average Chlordane-A					0.000	0.000
28) L2	Toxaphene-A	5.211	5.421	7468950	1568615	473.514m	392.564m
29) L2	Toxaphene-B	5.566	5.837	12330905	3018871	521.723m	433.113m
30) L2	Toxaphene-C	5.629	5.898	23326134	2502946	507.448m	451.848m
31) L2	Toxaphene-D	5.788	6.034	15188906	2021888	535.111m	469.428m
32) L2	Toxaphene-E	6.147	6.478	13050057	5072352	492.822m	561.858m
	Sum Toxaphene-A			71364953	14184672	2530.617	2308.811
	Average Toxaphene-A					506.123	461.762

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163778.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:19 pm
Operator : eduardom
Sample : ecc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:44:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

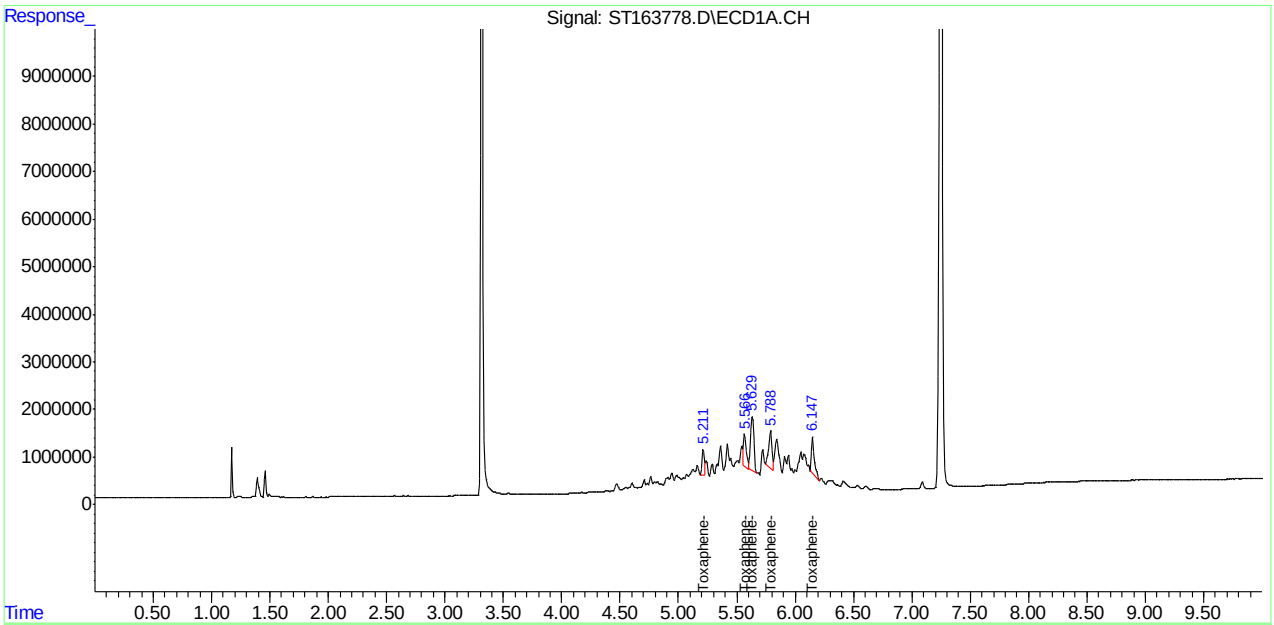
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

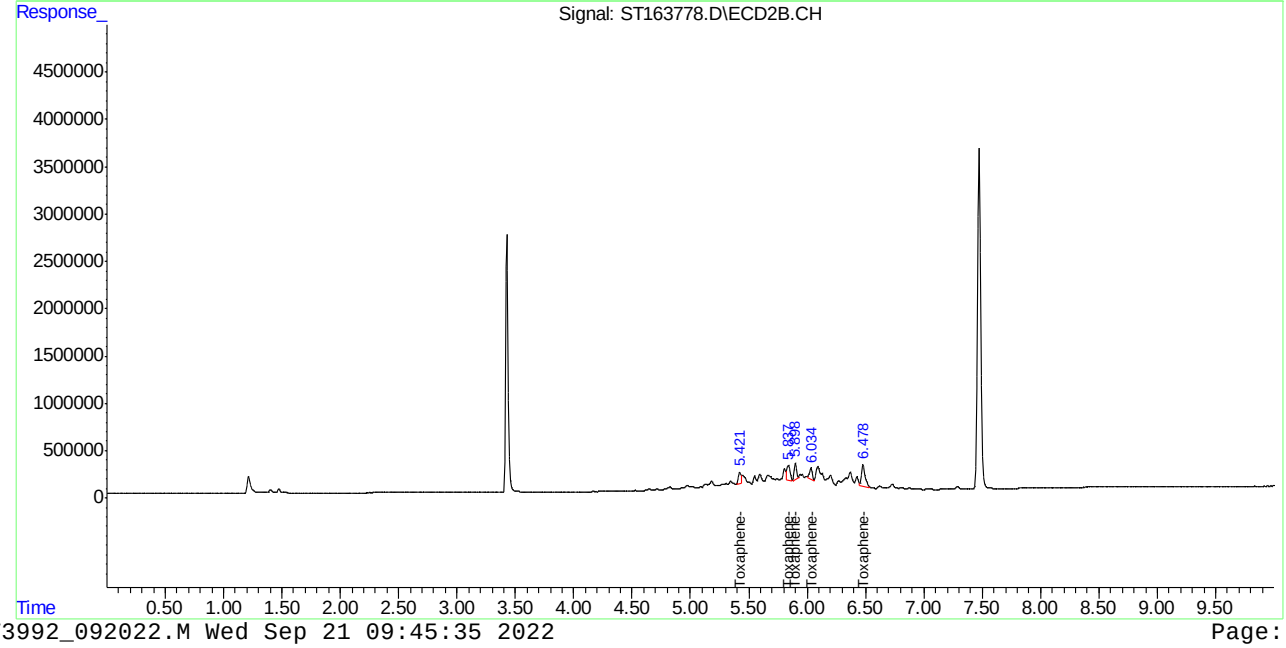
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163778.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:19 pm
Operator : eduardom
Sample : ecc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:44:12 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Manual Integration Approval Summary

Sample Number: GST3992-ECC3992 **Method:** SW846 8081B
Lab FileID: ST163778.D **Analyst approved:** 09/21/22 10:01 William Hustedde
Injection Time: 09/20/22 21:19 **Supervisor approved:** 09/21/22 10:51 Naresh Jiawan

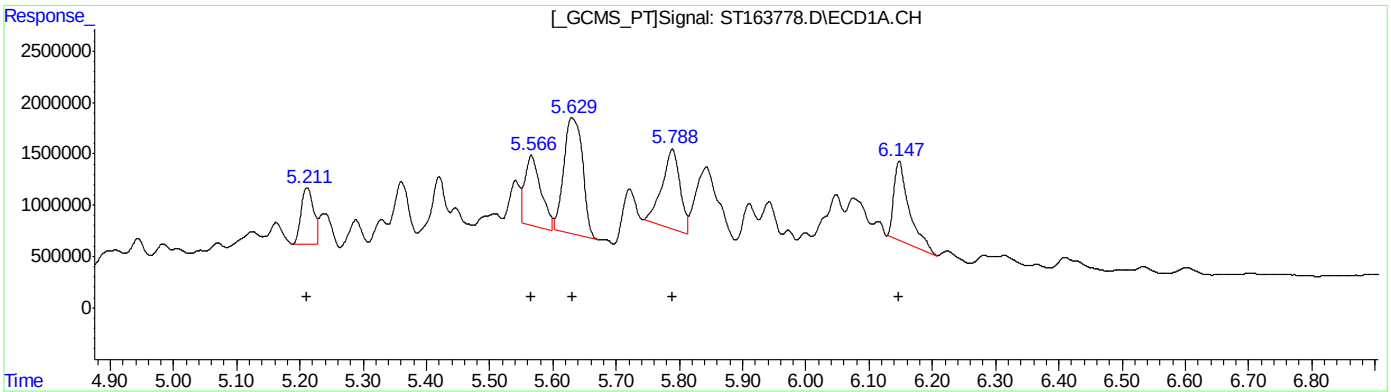
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toxaphene-A		1	5.21	Poor instrument integration
Toxaphene-A		2	5.42	Poor instrument integration
Toxaphene-B		1	5.57	Poor instrument integration
Toxaphene-C		1	5.63	Poor instrument integration
Toxaphene-D		1	5.79	Poor instrument integration
Toxaphene-B		2	5.84	Poor instrument integration
Toxaphene-C		2	5.90	Poor instrument integration
Toxaphene-D		2	6.03	Poor instrument integration
Toxaphene-E		1	6.15	Poor instrument integration
Toxaphene-E		2	6.48	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GST3992_092022\
Data File : ST163778.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 20 Sep 2022 9:19 pm
Operator : eduardom
Sample : ecc3992-500 Tox Inst : ECD 3
Misc : OP93001,GST3992,250,,,5,1,Water
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 21 09:31:48 2022
Quant Method : C:\msdchem\1\METHODS\GST3992_092022.M
Quant Title : Pesticides by 8081B
QLast Update : Tue Sep 20 16:52:14 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : MR-1 Signal #2 Phase: MR-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.21	7468950	473.51
5.57	12330905	521.72
5.63	23326134	507.45
5.79	15188906	535.11
6.15	13050057	492.82

(28) Toxaphene-A #2 (L2)

R.T.	Response	Conc
5.42	1568615	392.56
5.84	3018871	433.11
5.90	2502946	451.85
6.03	2021888	469.43
6.48	5072352	561.86

(+) = Expected Retention Time
GST3992_092022.M Wed Sep 21 09:44:20 2022

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081734.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:05:32
Operator : eduardom
Sample : ic1547-20 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:33:05 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:28:03 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
1) S	Tetrachlo...	3.153	3.471	1068958	2802278	2.663	21.984m#
	Spiked Amount	50.000	Range 44 - 126	Recovery =		5.33%#	43.97%#
55) S	Decachlor...	6.313	7.037	1270287	1199634	5.383m	3.226 #
	Spiked Amount	50.000	Range 41 - 145	Recovery =		10.77%#	6.45%#
	Target Compounds						
2) L1	AR1016-A	3.388	3.777	247032	446675	30.192m	19.741
3) L1	AR1016-B	3.602	4.014	403503	674075	30.523m	21.042m
4) L1	AR1016-C	3.724	4.157	210244	357976	8.872m	6.104m
5) L1	AR1016-D	3.871	4.273	753369	1138519	61.391m	34.271 #
6) L1	AR1016-E	3.946	4.349	404056	650277	36.498	26.172
7) L1	AR1016-F	4.166	4.606	340916	556864	53.616	36.751
	Sum AR1016-A			2359120	3824387	221.093	144.081
	Average AR1016-A					36.849	24.013
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
37) L7	AR1260-A	4.818	5.315	672351	892704	36.358	22.291m
38) L7	AR1260-B	4.968	5.428	875859	1119659	40.438	23.897m#
39) L7	AR1260-C	5.127	5.645	781611	961567	36.440	29.302
40) L7	AR1260-D	5.324	5.876	651177	900810	38.808	25.860
41) L7	AR1260-E	5.498	6.019	1530057	1882625	35.213	24.653
42) L7	AR1260-F	5.666	6.250	754561	926083	42.007m	25.792
	Sum AR1260-A			5265616	6683448	229.264	151.794
	Average AR1260-A					38.211	25.299
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081734.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:05:32
Operator : eduardom
Sample : ic1547-20 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:33:05 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:28:03 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

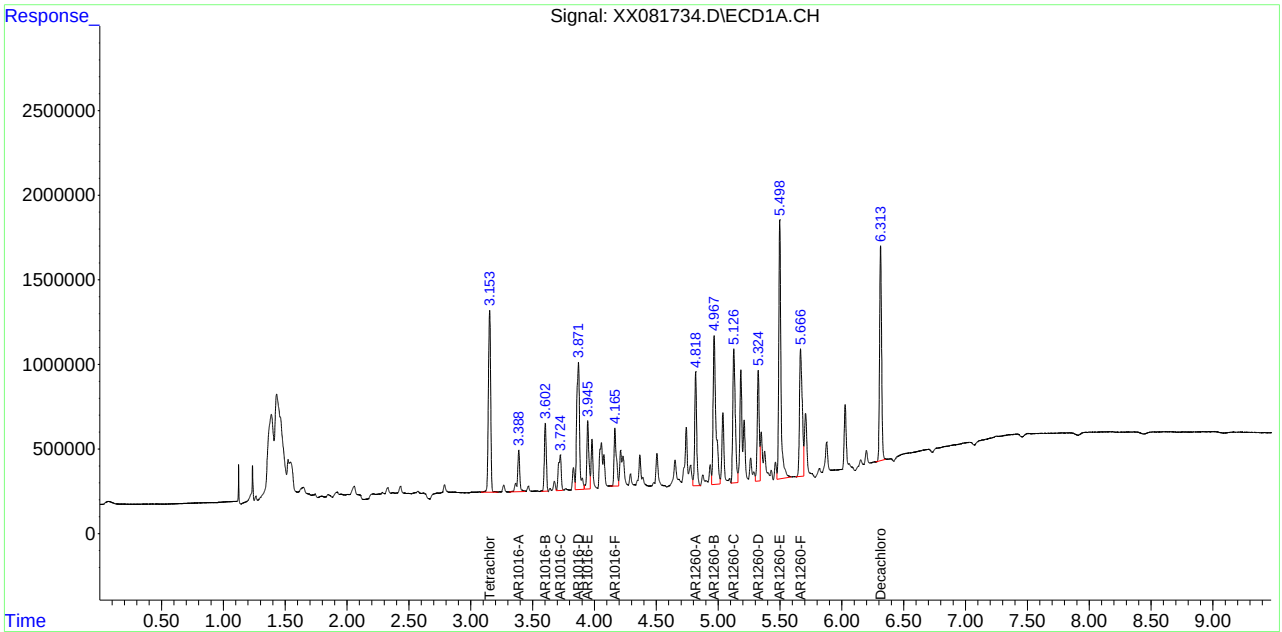
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

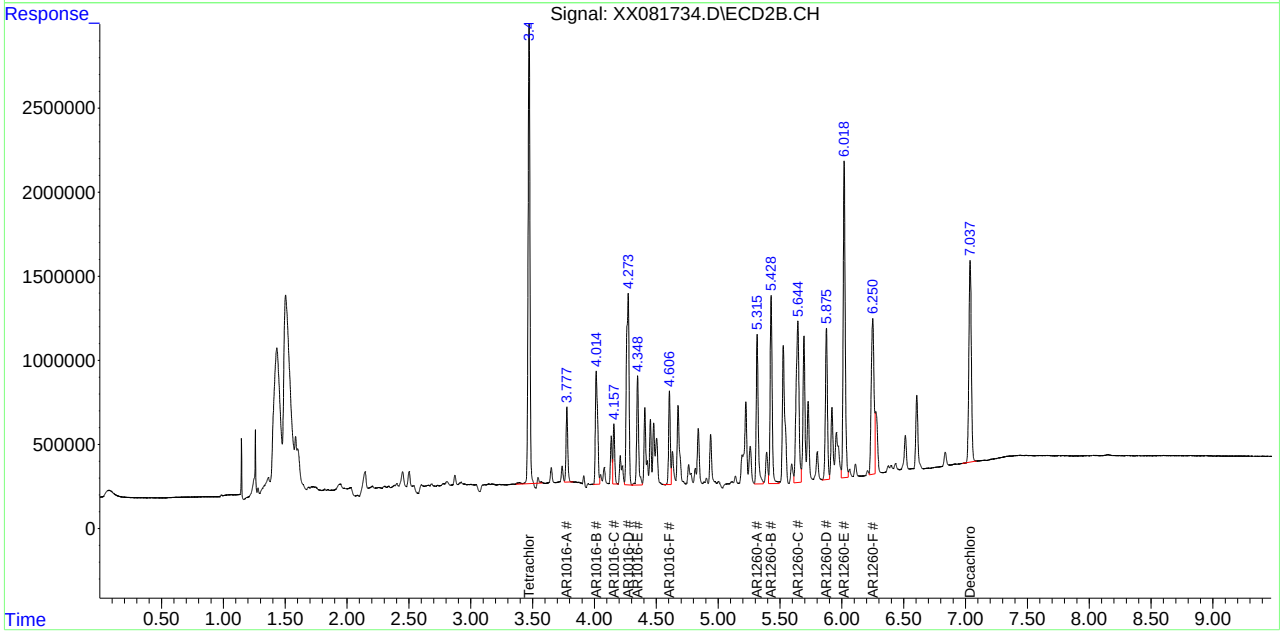
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081734.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:05:32
Operator : eduardom
Sample : ic1547-20 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:33:05 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:28:03 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.29 12

SGS FA98819

Manual Integration Approval Summary

Sample Number: GXX1547-IC1547 **Method:** SW846 8082A
Lab FileID: XX081734.D **Analyst approved:** 09/20/22 13:58 Eduardo Melendez
Injection Time: 09/16/22 15:05 **Supervisor approved:** 09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.39	Poor instrument integration
Tetrachloro-m-xylene	877-09-8	2	3.47	Poor instrument integration
AR1016-B		1	3.60	Poor instrument integration
AR1016-C		1	3.72	Poor instrument integration
AR1016-D		1	3.87	Poor instrument integration
AR1016-B		2	4.01	Poor instrument integration
AR1016-C		2	4.16	Poor instrument integration
AR1260-A		2	5.32	Poor instrument integration
AR1260-B		2	5.43	Poor instrument integration
AR1260-F		1	5.67	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	6.31	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081735.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:18:15
Operator : eduardom
Sample : ic1547-50 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.154	3.472	2830973	6177161	7.054	27.027	#
	Spiked Amount	50.000	Range 44 - 126		Recovery =	14.11%#	54.05%	
55)	S Decachlor...	6.313	7.037	2851359	2599012	12.084	6.990	#
	Spiked Amount	50.000	Range 41 - 145		Recovery =	24.17%#	13.98%#	
	Target Compounds							
2)	L1 AR1016-A	3.389	3.777	537914	969342	65.743	42.841	
3)	L1 AR1016-B	3.603	4.015	943097	1417067	71.341m	44.235	
4)	L1 AR1016-C	3.724	4.157	467014	771773	19.707m	13.159	
5)	L1 AR1016-D	3.871	4.273	1661542	2512799	135.397m	75.638	#
6)	L1 AR1016-E	3.946	4.349	906921	1400528	81.922	56.368	
7)	L1 AR1016-F	4.166	4.606	769805	1198063	121.069	79.069	
	Sum AR1016-A			5286292	8269573	495.178	311.309	
	Average AR1016-A					82.530	51.885	
	Sum AR1221-A			0	0	N.D.	N.D.	
	Average AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
	Average AR1254-A					0.000	0.000	
37)	L7 AR1260-A	4.819	5.315	1472557	1981504	79.631	49.478	
38)	L7 AR1260-B	4.968	5.429	1973226	2456027	91.103	52.419	#
39)	L7 AR1260-C	5.126	5.644	1822950	2112347	84.988	64.369	
40)	L7 AR1260-D	5.325	5.875	1434311	1960481	85.480	56.281	
41)	L7 AR1260-E	5.498	6.019	3517567	4105634	80.953	53.763	
42)	L7 AR1260-F	5.667	6.250	1695913	2109806	94.413	58.759	
	Sum AR1260-A			11916525	14725797	516.568	335.069	
	Average AR1260-A					86.095	55.845	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081735.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:18:15
Operator : eduardom
Sample : ic1547-50 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

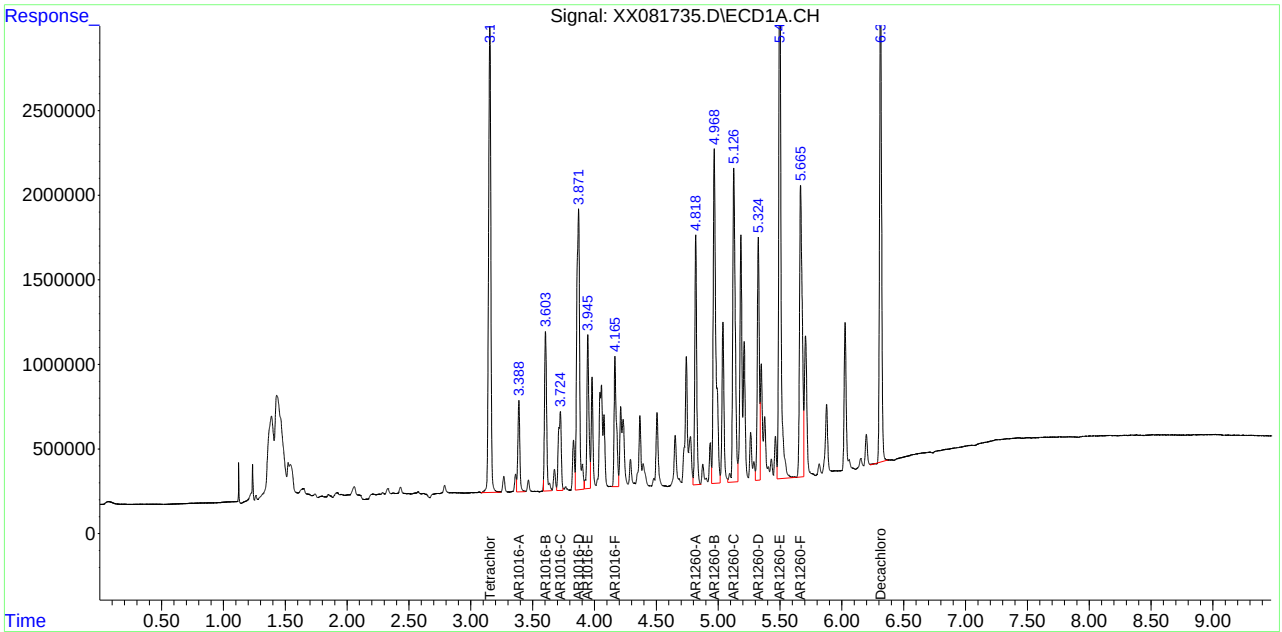
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

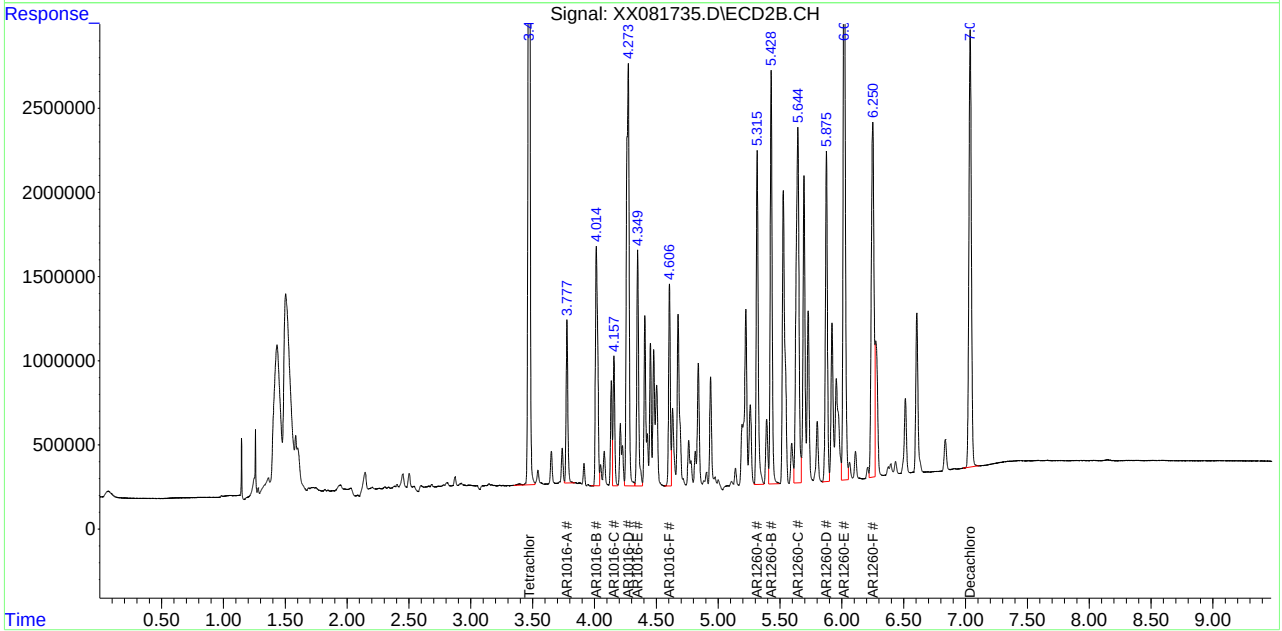
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081735.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:18:15
Operator : eduardom
Sample : ic1547-50 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GXX1547-IC1547	**Method:**	SW846 8082A
Lab FileID:	XX081735.D	**Analyst approved:**	09/20/22 13:58 Eduardo Melendez
Injection Time:	09/16/22 15:18	**Supervisor approved:**	09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-B		1	3.60	Poor instrument integration
AR1016-C		1	3.72	Poor instrument integration
AR1016-D		1	3.87	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081736.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:31:04
Operator : eduardom
Sample : ic1547-200 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:48 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.154	3.472	9868379	22053869	24.589	41.889	#
	Spiked Amount 50.000	Range 44 - 126		Recovery =		49.18%	83.78%	
55)	S Decachlor...	6.314	7.038	11051981	9674477	46.836	26.020	#
	Spiked Amount 50.000	Range 41 - 145		Recovery =		93.67%	52.04%	
	Target Compounds							
2)	L1 AR1016-A	3.389	3.777	1950658	3413483	238.406	150.861	
3)	L1 AR1016-B	3.604	4.015	3331483	5073294	252.013	158.369	
4)	L1 AR1016-C	3.724	4.157	1736055	2684006	73.259	45.762	
5)	L1 AR1016-D	3.870	4.273	6310050	9201589	514.196	276.977	#
6)	L1 AR1016-E	3.946	4.349	3406316	5117010	307.692	205.946	
7)	L1 AR1016-F	4.166	4.606	2924241	4332480	459.900	285.931	
	Sum AR1016-A			19658803	29821862	1845.466	1123.847	
	Average AR1016-A					307.578	187.308	
	Sum AR1221-A			0	0	N.D.	N.D.	
	Average AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
	Average AR1254-A					0.000	0.000	
37)	L7 AR1260-A	4.818	5.315	5734353	7155166	310.093	178.663	#
38)	L7 AR1260-B	4.968	5.428	7721122	9117035	356.481	194.585	#
39)	L7 AR1260-C	5.126	5.644	7016349	7894647	327.112	240.571	
40)	L7 AR1260-D	5.324	5.875	5708818	7314031	340.225	209.970	
41)	L7 AR1260-E	5.498	6.019	14122460	15929662	325.015	208.596	
42)	L7 AR1260-F	5.666	6.250	6811569	7740425	379.205	215.574	#
	Sum AR1260-A			47114671	55150965	2038.130	1247.960	
	Average AR1260-A					339.688	207.993	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081736.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:31:04
Operator : eduardom
Sample : ic1547-200 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:48 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

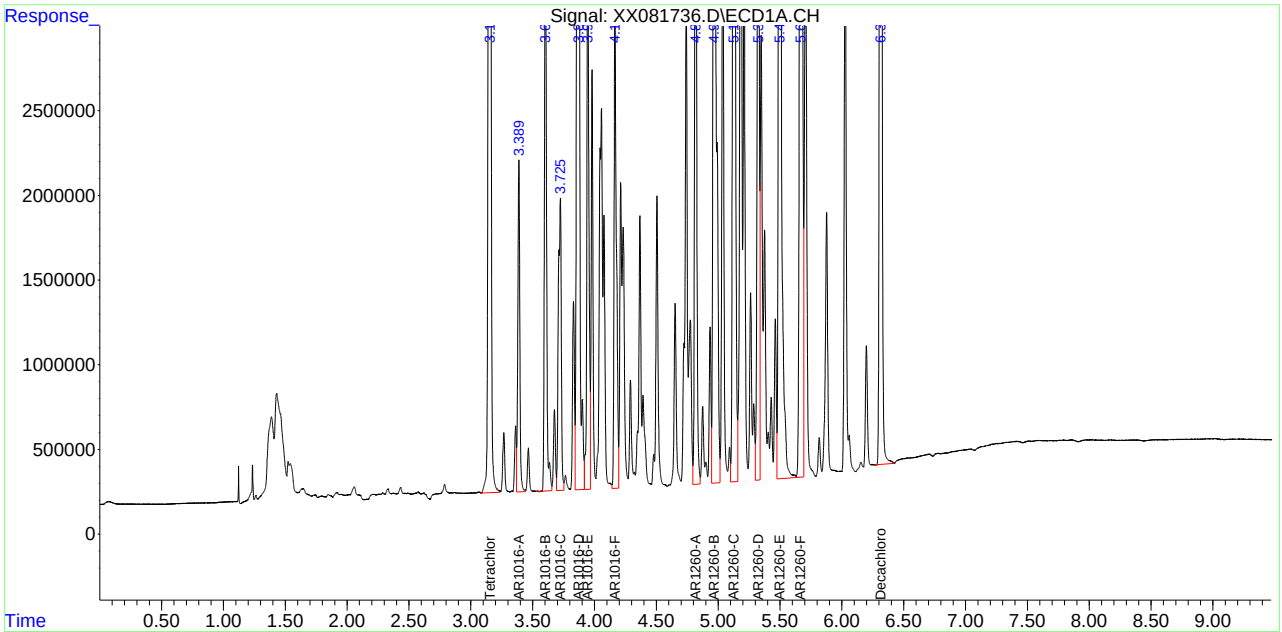
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

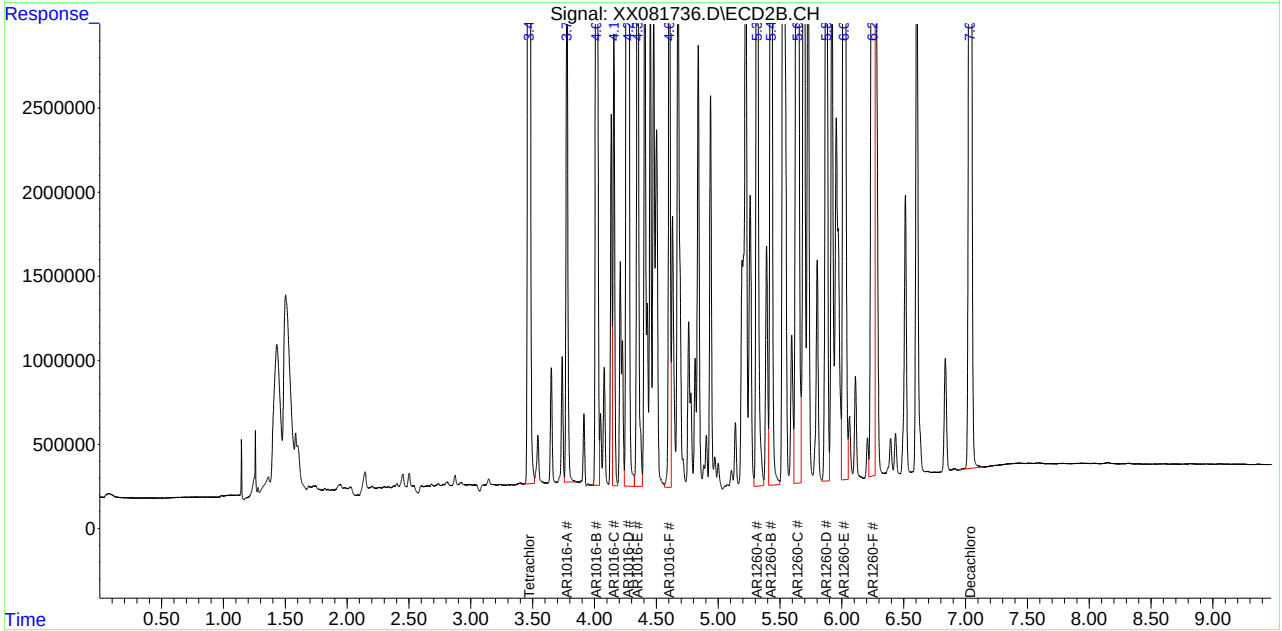
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081736.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:31:04
Operator : eduardom
Sample : ic1547-200 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:34:48 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081737.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:43:42
Operator : eduardom
Sample : icc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:06 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.154	3.473	18483921	40623478	46.055	53.503	
	Spiked Amount	50.000	Range 44 - 126		Recovery =	92.11%	107.01%	
55)	S Decachlor...	6.314	7.039	20645262	18066716	87.491	48.591	#
	Spiked Amount	50.000	Range 41 - 145		Recovery =	174.98%#	97.18%	
	Target Compounds							
2)	L1 AR1016-A	3.388	3.778	3545800	6137858	433.361	271.267	
3)	L1 AR1016-B	3.604	4.015	6076004	9025273	459.624	281.735	
4)	L1 AR1016-C	3.724	4.158	3226854	4862806	136.169	82.911	
5)	L1 AR1016-D	3.870	4.274	11552566	16704258	941.401	502.815	#
6)	L1 AR1016-E	3.946	4.349	6307120	9319036	569.721	375.066	
7)	L1 AR1016-F	4.165	4.606	5481291	7871004	862.052	519.463	
	Sum AR1016-A			36189634	53920234	3402.327	2033.257	
	Average AR1016-A					567.055	338.876	
	Sum AR1221-A			0	0	N.D.	N.D.	
	Average AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
	Average AR1254-A					0.000	0.000	
37)	L7 AR1260-A	4.817	5.315	10761391	13009124	581.937	324.834	#
38)	L7 AR1260-B	4.967	5.428	14602537	16773914	674.192	358.006	#
39)	L7 AR1260-C	5.126	5.644	13165089	14353540	613.774	437.392	
40)	L7 AR1260-D	5.324	5.876	10691202	13237836	637.156	380.030	#
41)	L7 AR1260-E	5.498	6.020	26978199	29569882	620.877	387.213	
42)	L7 AR1260-F	5.666	6.251	12973216	14426156	722.228	401.774	#
	Sum AR1260-A			89171634	101.4E6	3850.166	2289.250	
	Average AR1260-A					641.694	381.542	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081737.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:43:42
Operator : eduardom
Sample : icc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:06 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

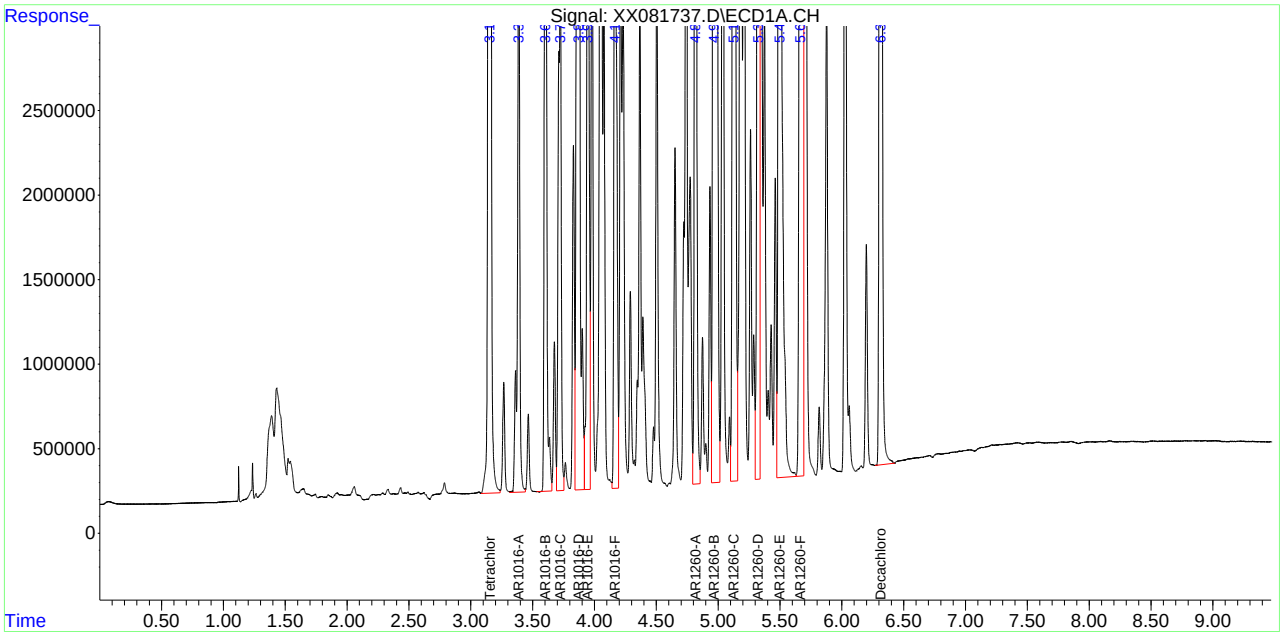
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

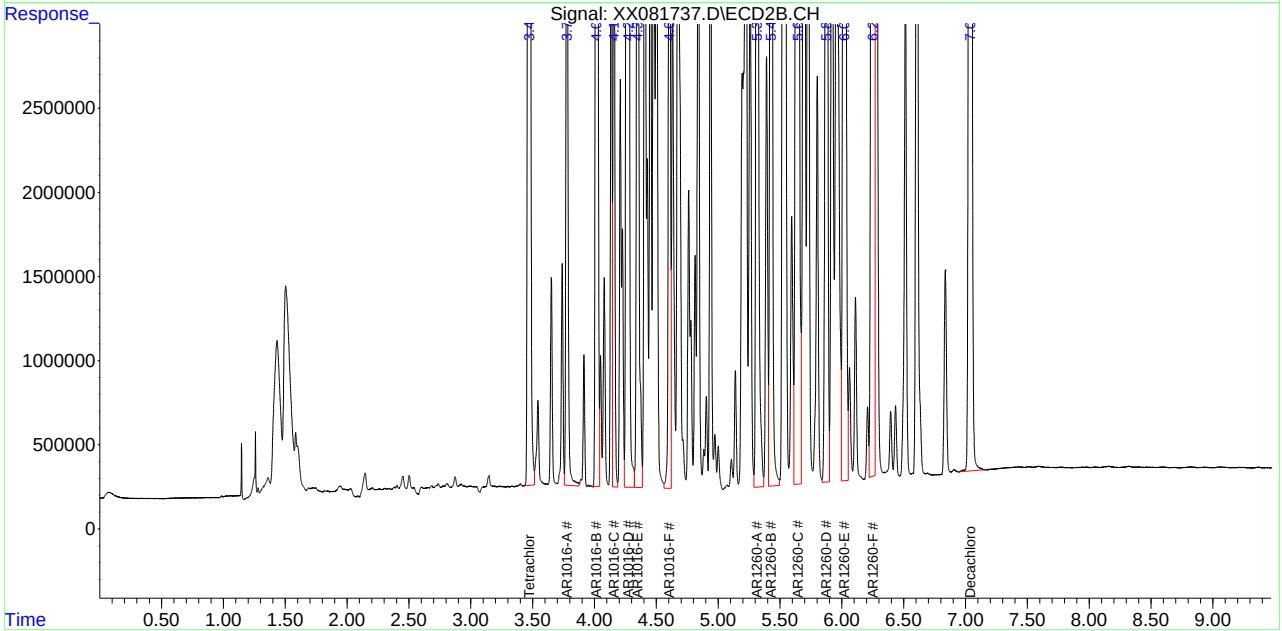
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081737.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:43:42
Operator : eduardom
Sample : icc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:06 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081738.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:56:19
Operator : eduardom
Sample : ic1547-600 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:46 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound		RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds								
1)	S	Tetrachlo...	3.153	3.474	25395026	63895949	63.275	64.808	
	Spiked Amount		50.000	Range	44 - 126	Recovery	=	126.55%#	129.62%#
55)	S	Decachlor...	6.313	7.038	30697430	26350763	130.090	70.871	#
	Spiked Amount		50.000	Range	41 - 145	Recovery	=	260.18%#	141.74%
	Target Compounds								
2)	L1	AR1016-A	3.388	3.778	5277123	8892886	644.960	393.028	
3)	L1	AR1016-B	3.603	4.015	8832205	13111325	668.119	409.286	
4)	L1	AR1016-C	3.723	4.158	4745004	6978864	200.233	118.990	#
5)	L1	AR1016-D	3.870	4.274	17579752	24687759	1432.547	743.127	#
6)	L1	AR1016-E	3.945	4.350	9581623	13900540	865.506	559.460	
7)	L1	AR1016-F	4.165	4.606	8372503	11685110	1316.758	771.183	#
	Sum	AR1016-A			54388211	79256484	5128.122	2995.073	
	Average	AR1016-A					854.687	499.179	
	Sum	AR1221-A			0	0	N.D.	N.D.	
	Average	AR1221-A					0.000	0.000	
	Sum	AR1232-A			0	0	N.D.	N.D.	
	Average	AR1232-A					0.000	0.000	
	Sum	AR1242-A			0	0	N.D.	N.D.	
	Average	AR1242-A					0.000	0.000	
	Sum	AR1248-A			0	0	N.D.	N.D.	
	Average	AR1248-A					0.000	0.000	
	Sum	AR1254-A			0	0	N.D.	N.D.	
	Average	AR1254-A					0.000	0.000	
37)	L7	AR1260-A	4.817	5.315	16301255	18870270	881.513	471.186	#
38)	L7	AR1260-B	4.966	5.428	22213033	25044598	1025.566	534.528	#
39)	L7	AR1260-C	5.125	5.644	19107582	21018853	890.822	640.502	
40)	L7	AR1260-D	5.323	5.875	16238183	19818372	967.736	568.944	#
41)	L7	AR1260-E	5.497	6.019	41985925	46536272	966.265	609.385	
42)	L7	AR1260-F	5.665	6.250	19633568	21019046	1093.014	585.389	#
	Sum	AR1260-A			135.5E6	152.3E6	5824.917	3409.933	
	Average	AR1260-A					970.819	568.322	
	Sum	AR1262-A			0	0	N.D.	N.D.	
	Average	AR1262-A					0.000	0.000	
	Sum	AR1268-A			0	0	N.D.	N.D.	
	Average	AR1268-A					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081738.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:56:19
Operator : eduardom
Sample : ic1547-600 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:46 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

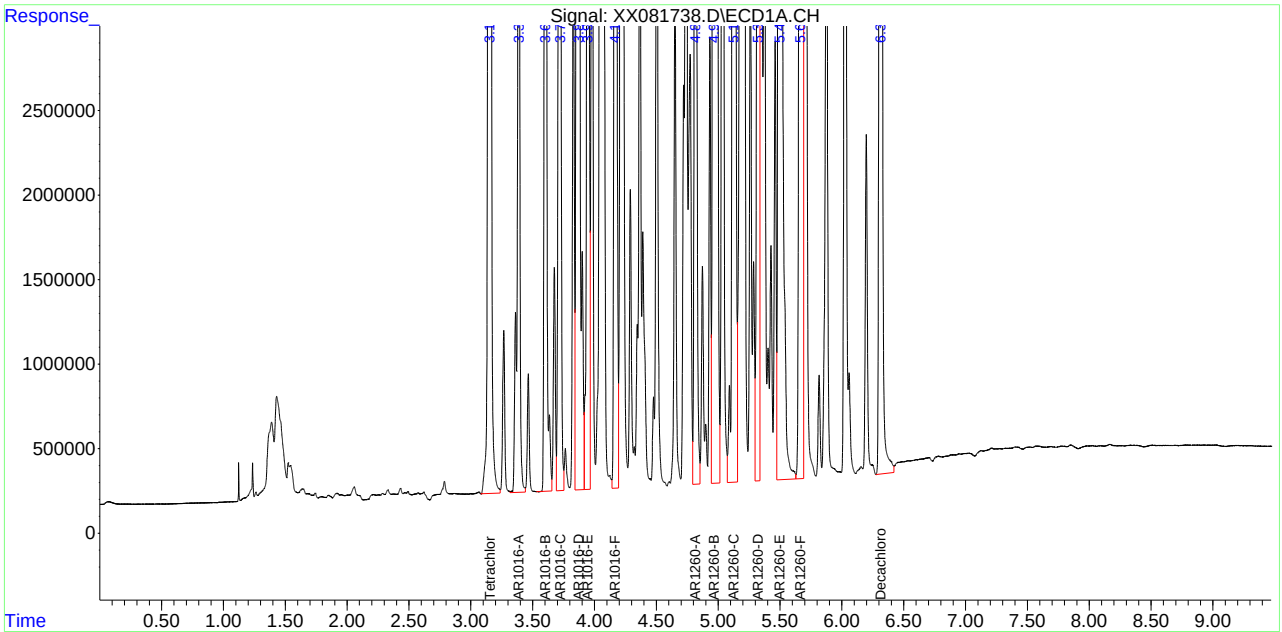
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

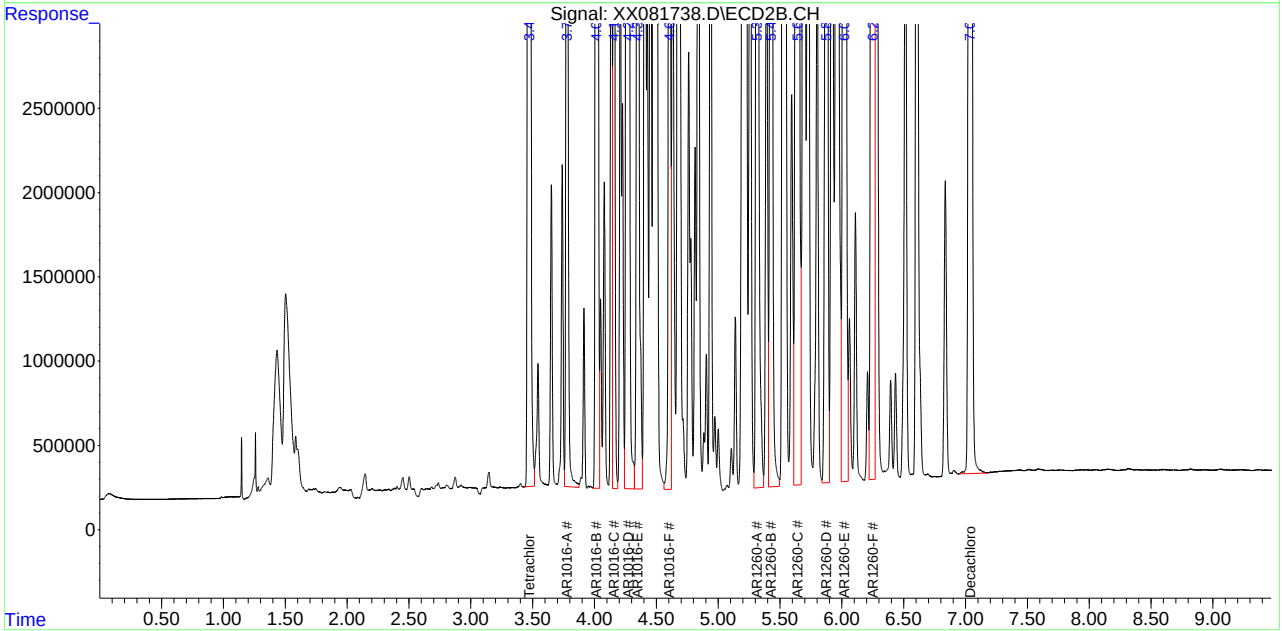
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081738.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 15:56:19
Operator : eduardom
Sample : ic1547-600 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:37:46 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081739.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:09:00
Operator : eduardom
Sample : ic1547-1000 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:38:12 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.154	3.476	44142364	132.3E6	109.987	89.428	
	Spiked Amount	50.000	Range	44 - 126	Recovery	= 219.97%#	178.86%#	
55)	S Decachlor...	6.314	7.038	54333052	46164533	230.253	124.160	#
	Spiked Amount	50.000	Range	41 - 145	Recovery	= 460.51%#	248.32%#	
	Target Compounds							
2)	L1 AR1016-A	3.389	3.778	8559568	14410299	1046.134	636.874	
3)	L1 AR1016-B	3.603	4.016	14376458	21319810	1087.519	665.524	
4)	L1 AR1016-C	3.724	4.157	7810407	11383664	329.588	194.092	#
5)	L1 AR1016-D	3.870	4.274	29357785	41750406	2392.321	1256.729	#
6)	L1 AR1016-E	3.946	4.350	15767182	22741345	1424.246	915.279	
7)	L1 AR1016-F	4.165	4.606	14021356	19454317	2205.162	1283.927	#
	Sum AR1016-A			89892756	131.1E6	8484.971	4952.425	
	Average AR1016-A					1414.162	825.404	
	Sum AR1221-A			0	0	N.D.	N.D.	
	Average AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
	Average AR1254-A					0.000	0.000	
37)	L7 AR1260-A	4.816	5.315	27947113	31832757	1511.280	794.856	#
38)	L7 AR1260-B	4.965	5.428	38370108	42975202	1771.530	917.222	#
39)	L7 AR1260-C	5.125	5.644	32969493	35697676	1537.083	1087.806	
40)	L7 AR1260-D	5.323	5.876	28351907	33686346	1689.670	967.064	#
41)	L7 AR1260-E	5.497	6.020	78880258	83989642	1815.353	1099.831	
42)	L7 AR1260-F	5.665	6.250	34069818	36192044	1896.691	1007.963	#
	Sum AR1260-A			240.6E6	264.4E6	10221.606	5874.741	
	Average AR1260-A					1703.601	979.123	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081739.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:09:00
Operator : eduardom
Sample : ic1547-1000 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:38:12 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

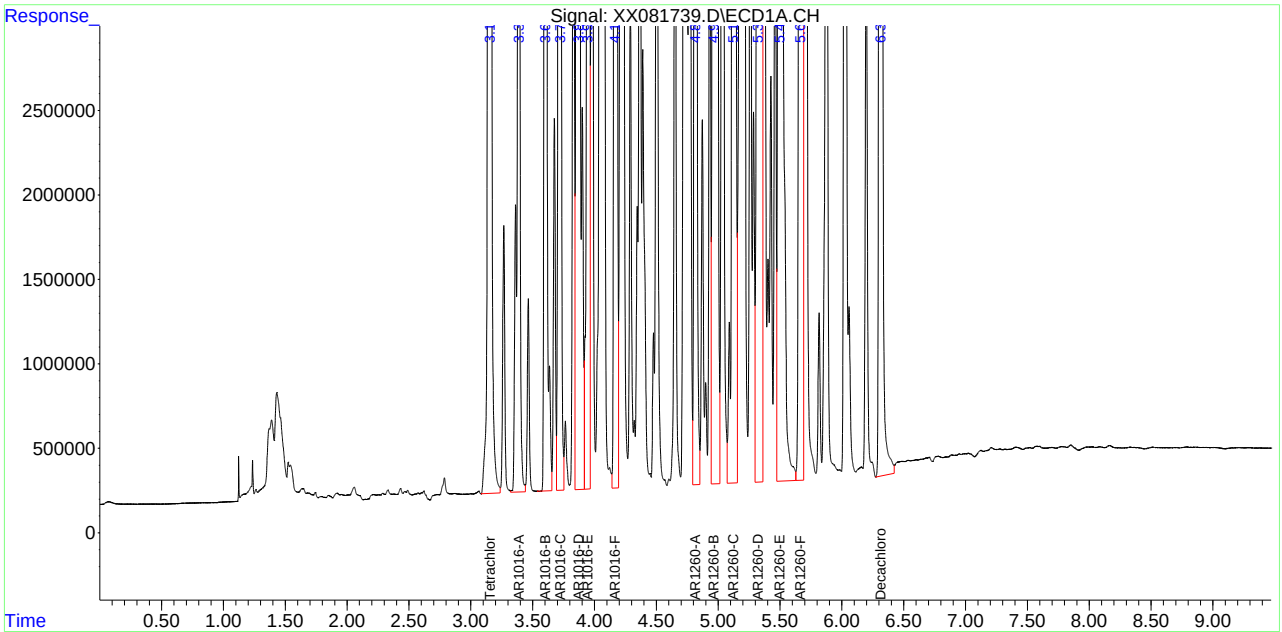
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

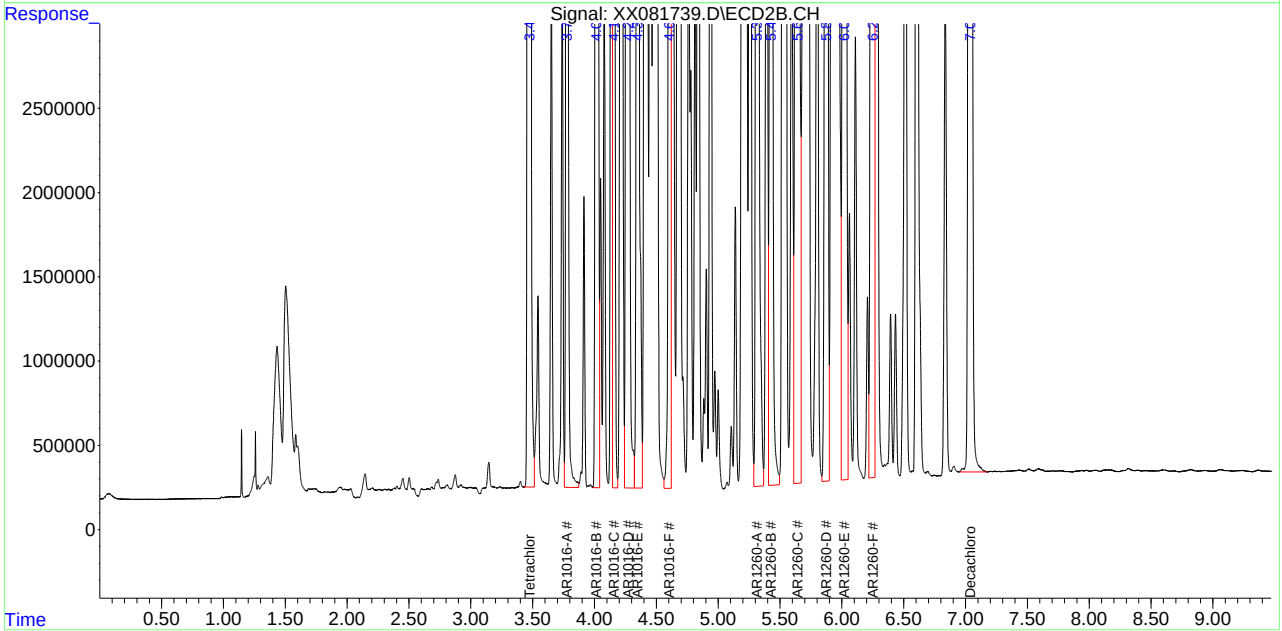
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081739.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:09:00
Operator : eduardom
Sample : ic1547-1000 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:38:12 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





XX081743.D

Manual Integrations APPROVED (compounds with "m" flag)

Naresh Jiawan 09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:59:48
Operator : eduardom
Sample : ic1547-50 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 09:29:42 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
	Average AR1016-A					0.000	0.000	
8)	L2 AR1221-A	2.785	3.145	170791	337203	74.018	49.442	
9)	L2 AR1221-B	3.061	3.400	54914	127627	62.102	54.630	
10)	L2 AR1221-C	3.266	3.651	310190	611840	61.729	43.013m	
11)	L2 AR1221-D	3.361	3.738	209806	400731	64.732m	48.608m	
12)	L2 AR1221-E	3.387	3.777	786992	1287709	66.248m	42.680m	
	Sum AR1221-A			1532693	2765110	328.829	238.373	
	Average AR1221-A					65.766	47.675	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
31)	L6 AR1254-A	4.367	4.839	1053704	1716417	112.378	68.863	
32)	L6 AR1254-B	4.504	4.939	1508928	1880162	91.897	43.648	#
33)	L6 AR1254-C	4.724	5.207	1847792	2704918	73.802	56.410	
34)	L6 AR1254-D	4.876	5.333	1320108	1905174	42.326	26.893	
35)	L6 AR1254-E	4.971	5.429	1100730	1252559	53.475	27.680	#
36)	L6 AR1254-F	5.128	5.646	1625156	2188587	66.585	50.965	
	Sum AR1254-A			8456418	11647816	440.464	274.458	
	Average AR1254-A					73.411	45.743	
	Sum AR1260-A			0	0	N.D.	N.D.	
	Average AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

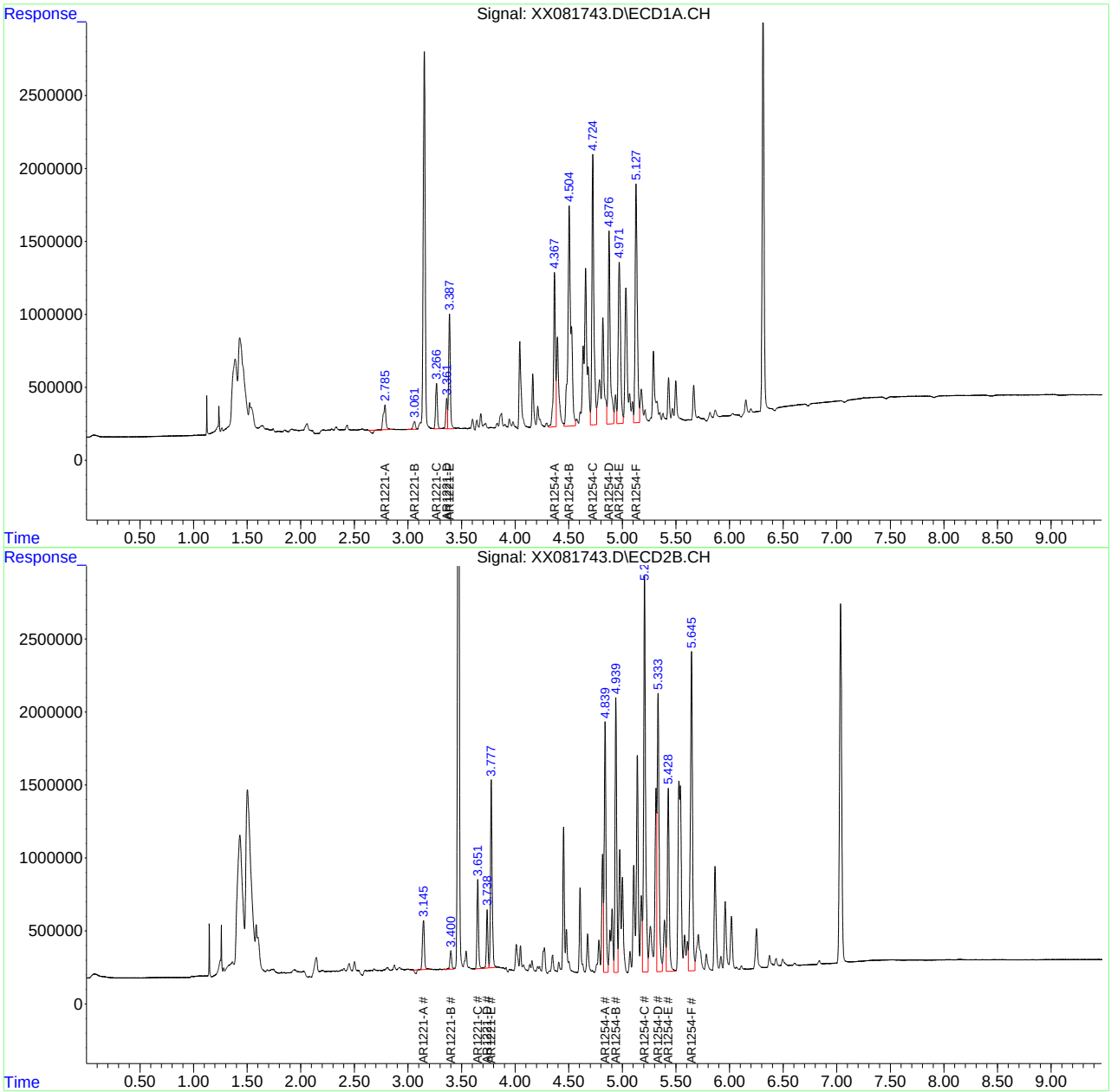
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081743.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:59:48
Operator : eduardom
Sample : ic1547-50 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 09:29:42 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



12.6.35 12

SGS FA98819

Manual Integration Approval Summary

Sample Number: GXX1547-IC1547 **Method:** SW846 8082A
Lab FileID: XX081743.D **Analyst approved:** 09/20/22 13:58 Eduardo Melendez
Injection Time: 09/16/22 16:59 **Supervisor approved:** 09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.36	Poor instrument integration
AR1221-E		1	3.39	Poor instrument integration
AR1221-C		2	3.65	Poor instrument integration
AR1221-D		2	3.74	Poor instrument integration
AR1221-E		2	3.78	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:12:24
Operator : eduardom
Sample : ic1547-200 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 09:32:25 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
	Average AR1016-A					0.000	0.000	
8)	L2 AR1221-A	2.785	3.145	521766	1088187	226.125	159.554m	
9)	L2 AR1221-B	3.061	3.401	190337	419070	215.253	179.381	
10)	L2 AR1221-C	3.267	3.652	1123367	2081034	223.555	146.298	
11)	L2 AR1221-D	3.362	3.739	744106	1378017	229.580	167.151	
12)	L2 AR1221-E	3.388	3.777	2762456	4389822	232.540	145.498	
	Sum AR1221-A			5342032	9356130	1127.052	797.883	
	Average AR1221-A					225.410	159.577	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
31)	L6 AR1254-A	4.367	4.839	4064013	6365338	433.430	255.380	#
32)	L6 AR1254-B	4.504	4.939	5995425	7157211	365.136	166.155	#
33)	L6 AR1254-C	4.722	5.206	7493737	10243060	299.304	213.614	
34)	L6 AR1254-D	4.873	5.331	5352190	7148264	171.606	100.903	#
35)	L6 AR1254-E	4.969	5.427	4176895	4522171	202.920	99.934	#
36)	L6 AR1254-F	5.127	5.645	5539036	7746463	226.942	180.388	
	Sum AR1254-A			32621296	43182508	1699.339	1016.374	
	Average AR1254-A					283.223	169.396	
	Sum AR1260-A			0	0	N.D.	N.D.	
	Average AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

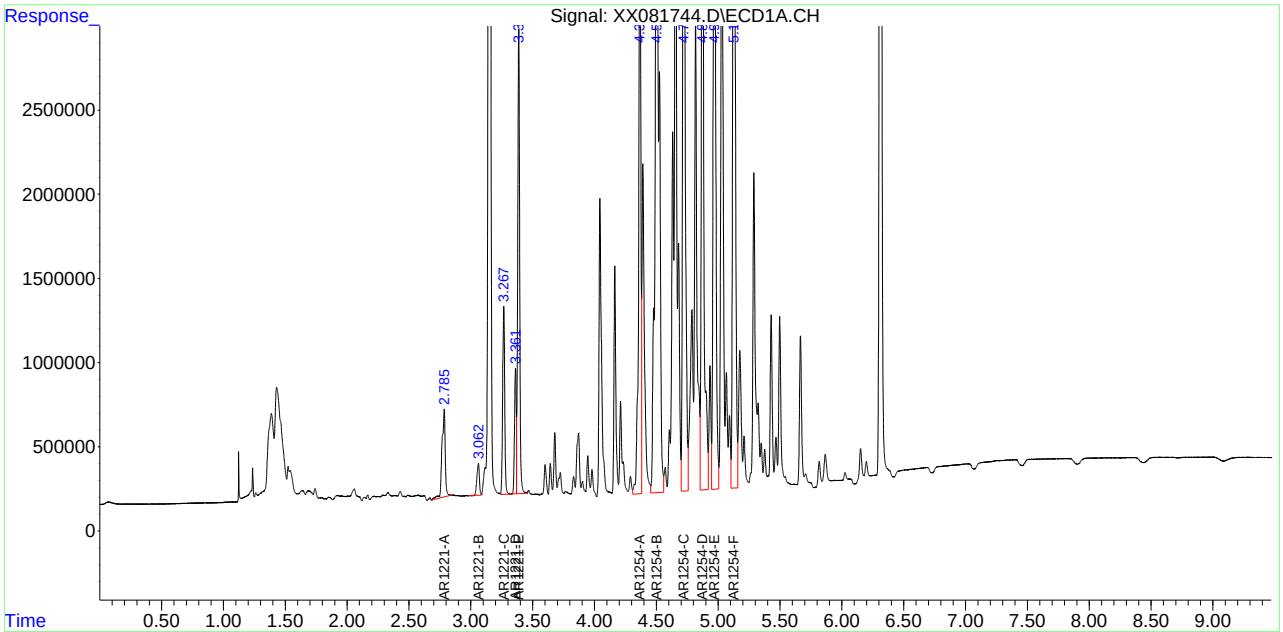
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

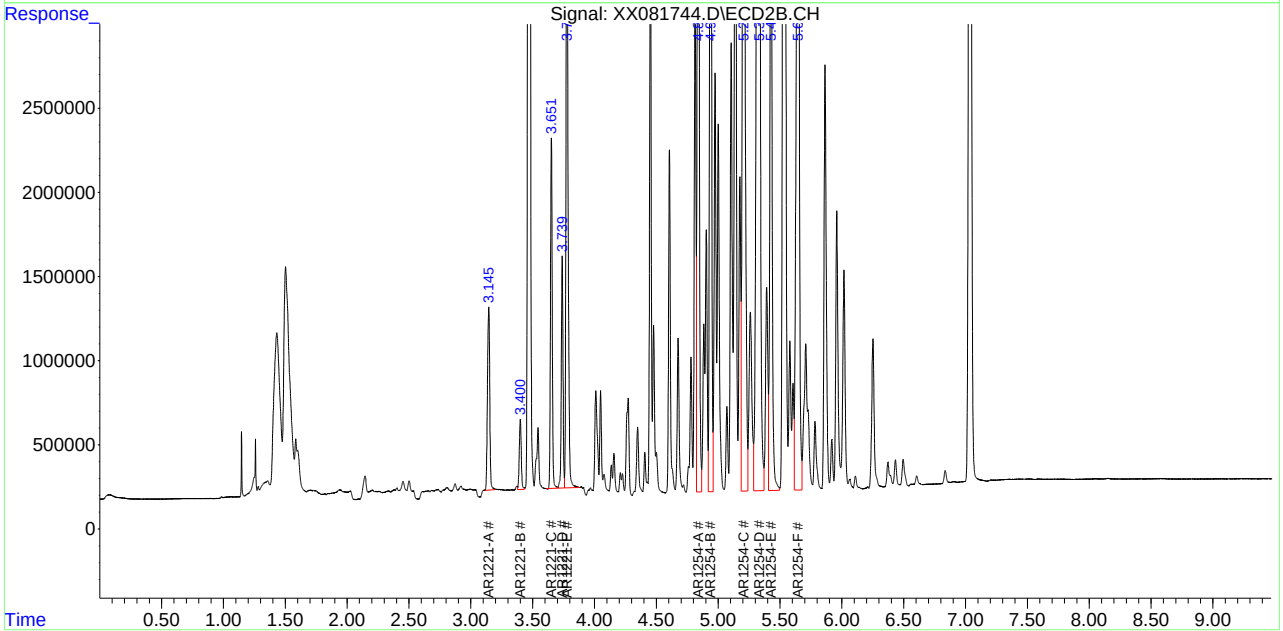
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081744.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:12:24
Operator : eduardom
Sample : ic1547-200 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 09:32:25 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number:	GXX1547-IC1547	**Method:**	SW846 8082A
Lab FileID:	XX081744.D	**Analyst approved:**	09/20/22 13:58 Eduardo Melendez
Injection Time:	09/16/22 17:12	**Supervisor approved:**	09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-A		2	3.15	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081745.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:25:06
Operator : eduardom
Sample : ic1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:25:01 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
	Average AR1016-A					0.000	0.000	
8)	L2 AR1221-A	2.785	3.146	917183	1993571	397.491	292.306	
9)	L2 AR1221-B	3.062	3.401	337476	751871	381.654	321.835	
10)	L2 AR1221-C	3.267	3.652	2080618	3805255	414.051	267.512	
11)	L2 AR1221-D	3.362	3.739	1363113	2506693	420.563	304.057	
12)	L2 AR1221-E	3.388	3.778	5066865	8089891	426.521	268.135	
	Sum AR1221-A			9765255	17147282	2040.281	1453.845	
	Average AR1221-A					408.056	290.769	
	Sum AR1232-A			0	0	N.D.	N.D.	
	Average AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
	Average AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
	Average AR1248-A					0.000	0.000	
31)	L6 AR1254-A	4.367	4.839	7745255	11797846	826.036	473.335	#
32)	L6 AR1254-B	4.503	4.939	11375706	13151399	692.809	305.310	#
33)	L6 AR1254-C	4.721	5.206	14223136	19188862	568.081	400.174	
34)	L6 AR1254-D	4.872	5.332	9843210	13240936	315.601	186.905	#
35)	L6 AR1254-E	4.969	5.428	7756388	8492235	376.817	187.666	#
36)	L6 AR1254-F	5.126	5.645	12057015	14928671	493.993	347.636	
	Sum AR1254-A			63000711	80799949	3273.337	1901.027	
	Average AR1254-A					545.556	316.838	
	Sum AR1260-A			0	0	N.D.	N.D.	
	Average AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
	Average AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
	Average AR1268-A					0.000	0.000	

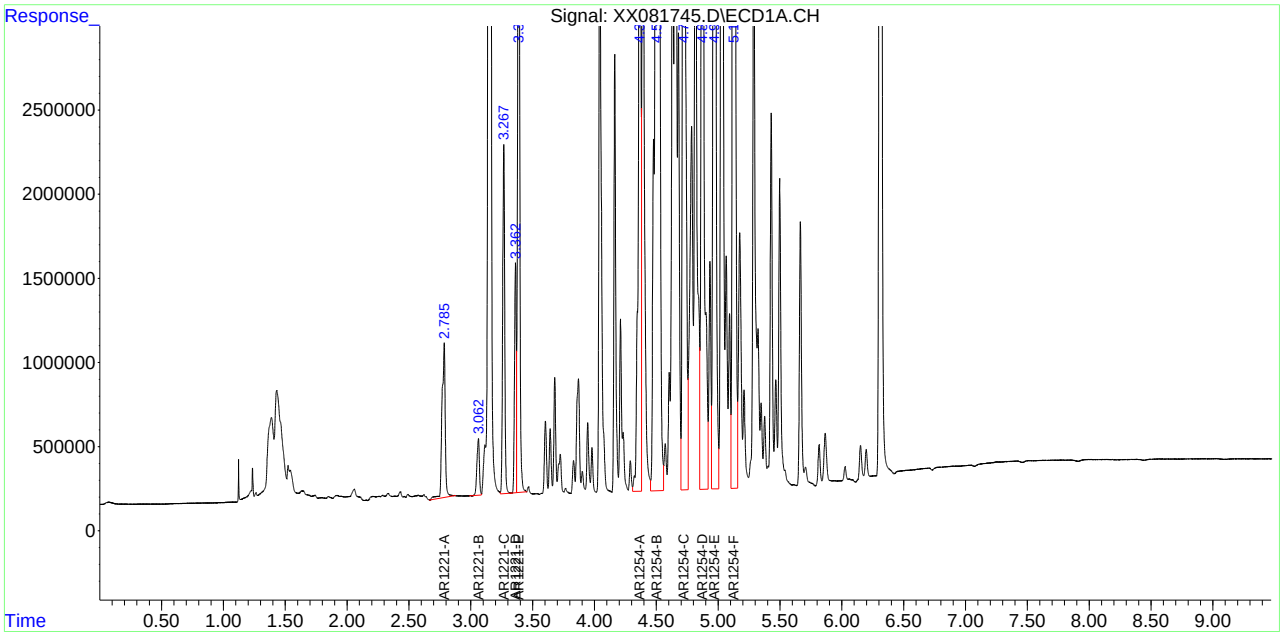
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

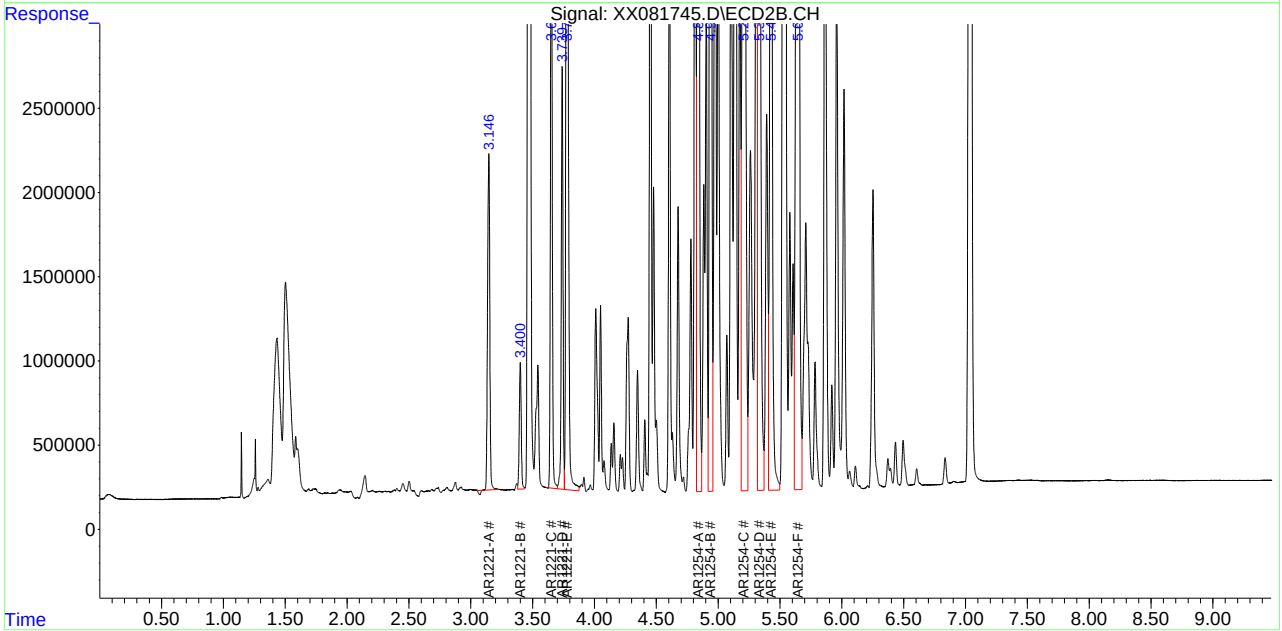
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081745.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:25:06
Operator : eduardom
Sample : ic1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:25:01 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081746.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:37:53
Operator : eduardom
Sample : ic1547-600 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:26:45 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
8) L2	AR1221-A	2.785	3.145	1330734	2922529	576.717	428.513	
9) L2	AR1221-B	3.062	3.399	490697	1081715	554.932	463.023	
10) L2	AR1221-C	3.267	3.651	3084909	5590867	613.909	393.041	
11) L2	AR1221-D	3.362	3.739	1988602	3656177	613.547	443.488	
12) L2	AR1221-E	3.388	3.777	7439384	11863426	626.236	393.207	
	Sum AR1221-A			14334327	25114714	2985.341	2121.272	
Average	AR1221-A					597.068	424.254	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
Average	AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
31) L6	AR1254-A	4.367	4.839	11543574	17395084	1231.129	697.899	#
32) L6	AR1254-B	4.503	4.938	17117953	19417437	1042.526	450.777	#
33) L6	AR1254-C	4.721	5.205	21633672	28465967	864.062	593.644	
34) L6	AR1254-D	4.872	5.331	14830534	19766149	475.508	279.013	#
35) L6	AR1254-E	4.969	5.427	11516790	12448772	559.504	275.100	#
36) L6	AR1254-F	5.126	5.645	18117773	22288403	742.311	519.019	
	Sum AR1254-A			94760295	119.8E6	4915.040	2815.451	
Average	AR1254-A					819.173	469.242	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
Average	AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

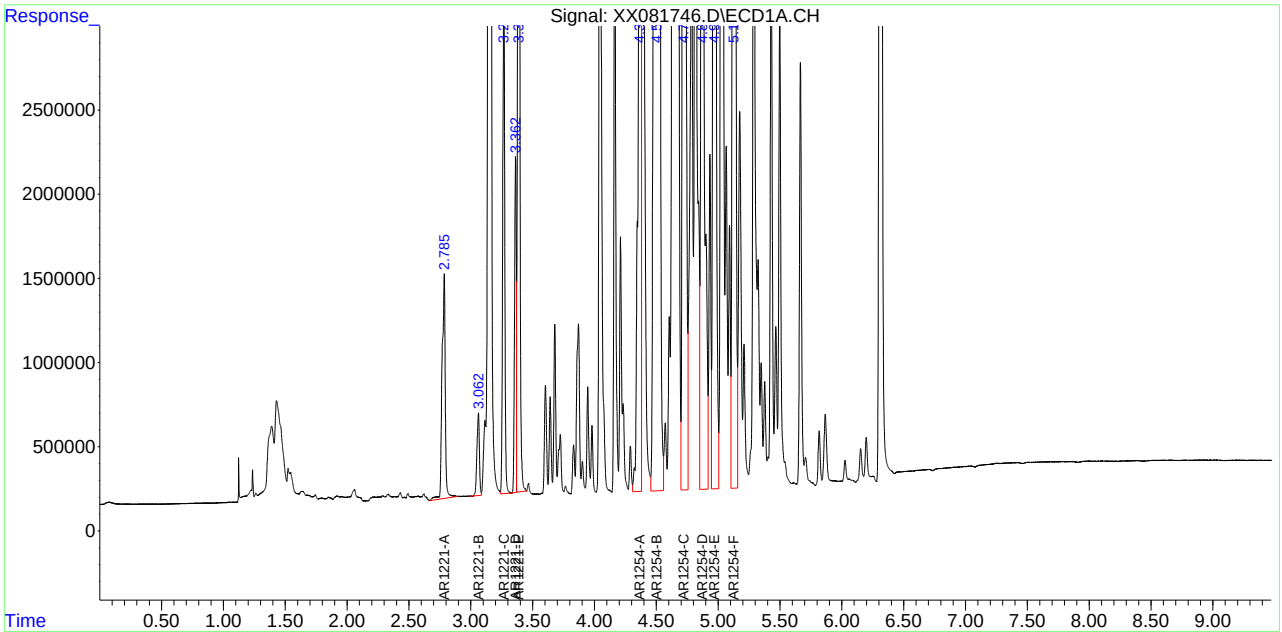
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

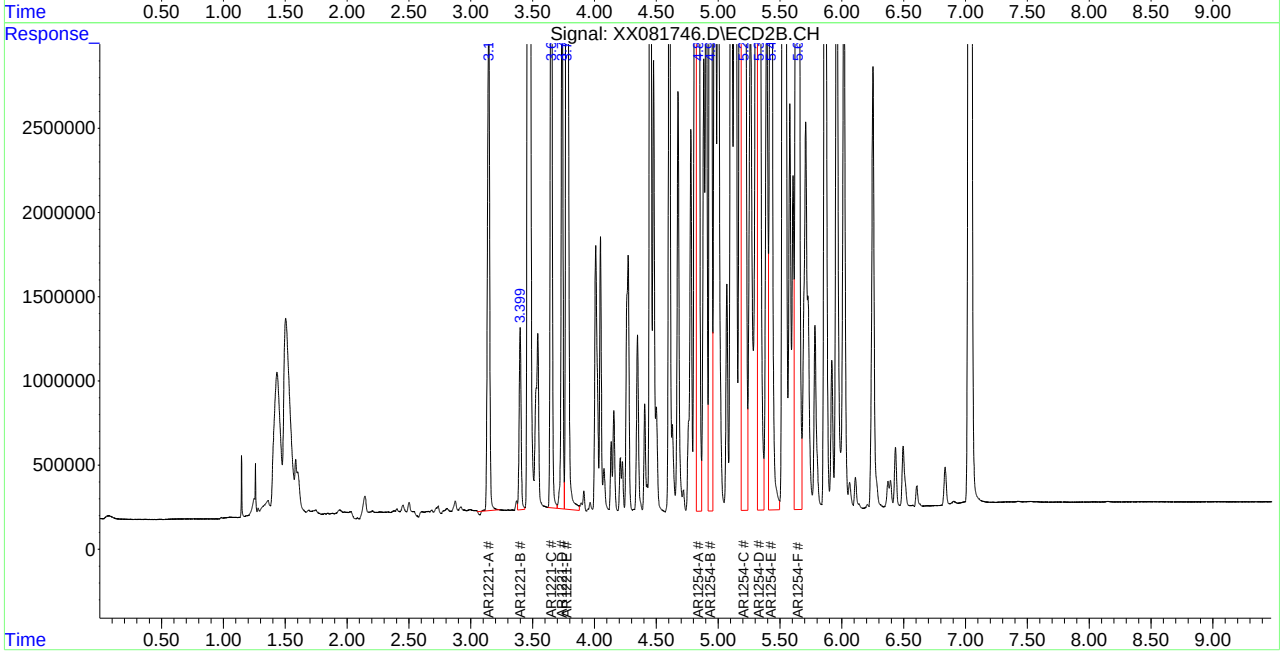
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081746.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:37:53
Operator : eduardom
Sample : ic1547-600 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:26:45 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:57:32 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081747.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:50:34
Operator : eduardom
Sample : ic1547-1000 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:31:35 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
8)	L2 AR1221-A	2.782	3.146	1947324	4611353	885.435	941.030
9)	L2 AR1221-B	3.060	3.400	797674	1721884	854.379	938.360
10)	L2 AR1221-C	3.266	3.652	4816182	9155045	840.256	964.888
11)	L2 AR1221-D	3.361	3.739	3167478	5828580	831.781m	947.361
12)	L2 AR1221-E	3.387	3.777	11663149	18806547	821.004m	947.142
	Sum AR1221-A			22391807	40123409	4232.855	4738.780
	Average AR1221-A					846.571	947.756
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
31)	L6 AR1254-A	4.367	4.839	19218710	29289984	922.806	888.386
32)	L6 AR1254-B	4.502	4.938	29095804	33071512	954.525	906.750
33)	L6 AR1254-C	4.720	5.206	36836148	49213410	969.221	931.029
34)	L6 AR1254-D	4.870	5.330	25709007	33513682	960.017	910.978
35)	L6 AR1254-E	4.968	5.427	19045673	20566048	894.596	870.703
36)	L6 AR1254-F	5.125	5.645	29473529	38458468	928.585	923.036
	Sum AR1254-A			159.4E6	204.1E6	5629.751	5430.881
	Average AR1254-A					938.292	905.147
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

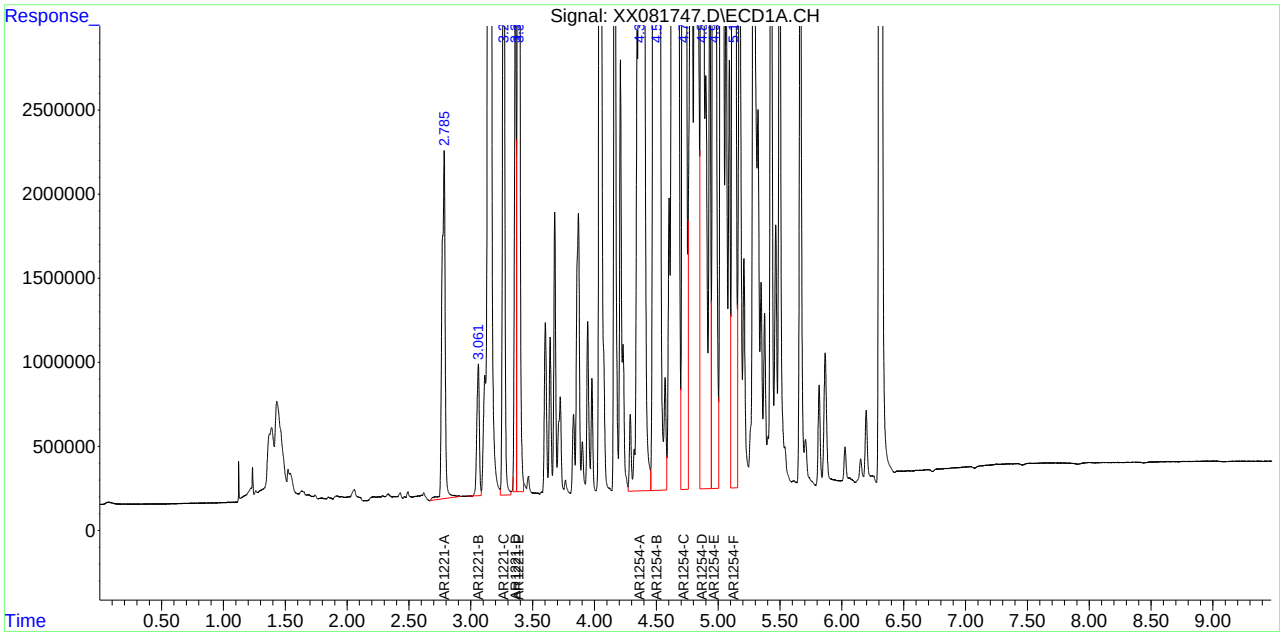
12.6.39 12

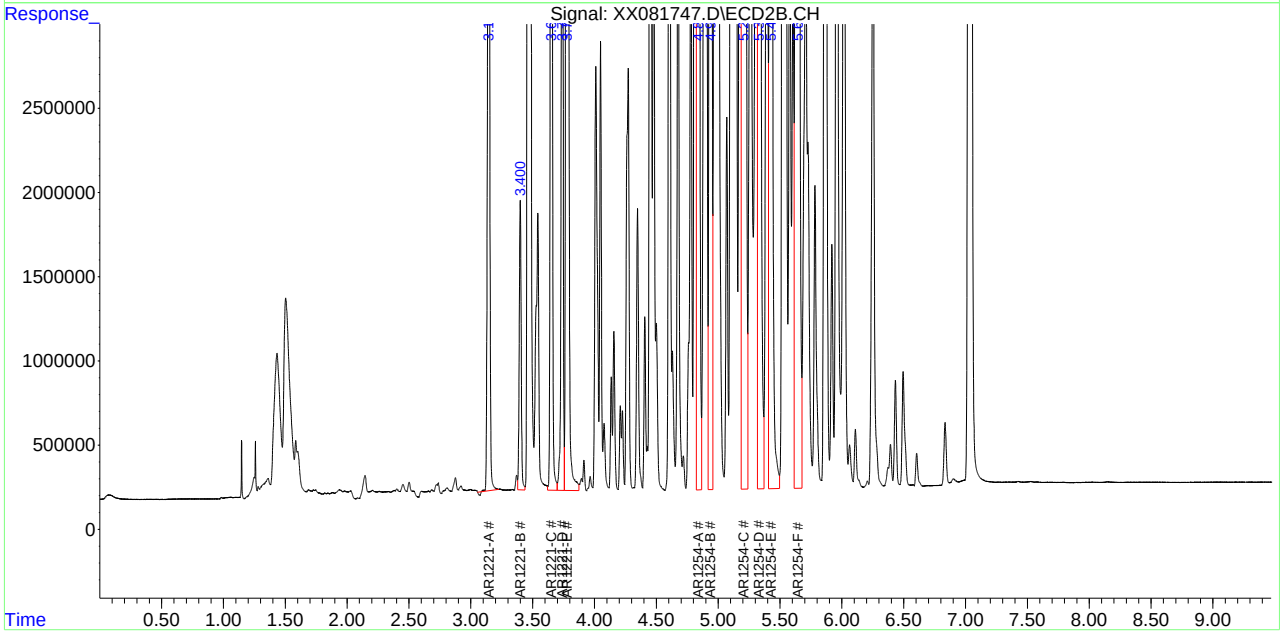
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081747.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 17:50:34
Operator : eduardom
Sample : ic1547-1000 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:31:35 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.39 12
SGS
FA98819

Manual Integration Approval Summary

Sample Number:	GXX1547-IC1547	**Method:**	SW846 8082A
Lab FileID:	XX081747.D	**Analyst approved:**	09/20/22 15:43 Eduardo Melendez
Injection Time:	09/16/22 17:50	**Supervisor approved:**	09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.36	Poor instrument integration
AR1221-E		1	3.39	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081751.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:41:20
Operator : eduardom
Sample : ic1547-20 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:48:17 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:42:36 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
13)	L3 AR1232-A	3.387	3.776	281541	493348	104.858m	63.515
14)	L3 AR1232-B	3.602	4.014	205279	351779	24.747	15.976
15)	L3 AR1232-C	3.869	4.272	355472	566079	60.796	37.486
16)	L3 AR1232-D	3.945	4.348	197050	331810	20.794	13.060
17)	L3 AR1232-E	3.980	4.605	142063	275505	28.671	18.909
18)	L3 AR1232-F	4.165	4.675	155987	234682	38.159	19.772 #
	Sum AR1232-A			1337393	2253203	278.024	168.719
	Average AR1232-A					46.337	28.120
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
49)	L8 AR1268-A	5.185	5.694	355479	500859	22.157m	17.276m
50)	L8 AR1268-B	5.319	5.877	487324	620127	7.954m	12.344 #
51)	L8 AR1268-C	5.679	6.241	2077768	2236271	39.569m	27.171m
52)	L8 AR1268-D	5.702	6.272	1927216	1955324	43.363m	28.313
53)	L8 AR1268-E	5.816	6.433	1736993	1813247	107.865	71.635
54)	L8 AR1268-F	6.025	6.605	707513	766427	32.727	26.696
	Sum AR1268-A			7292293	7892255	253.634	183.433
	Average AR1268-A					42.272	30.572

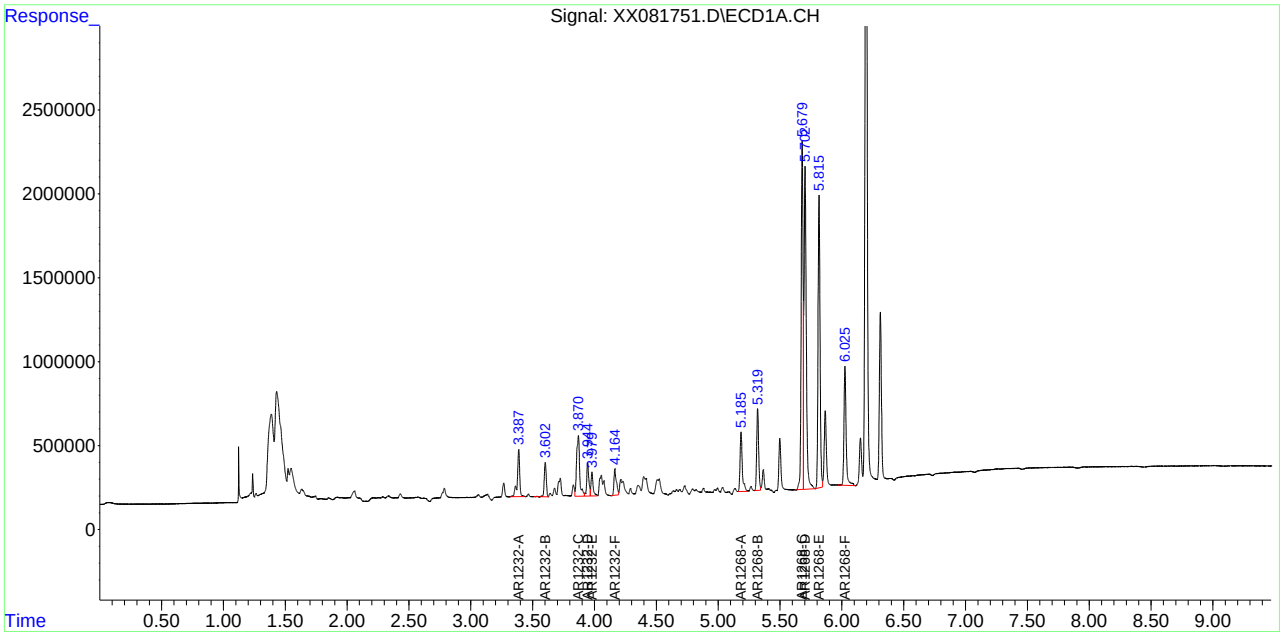
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

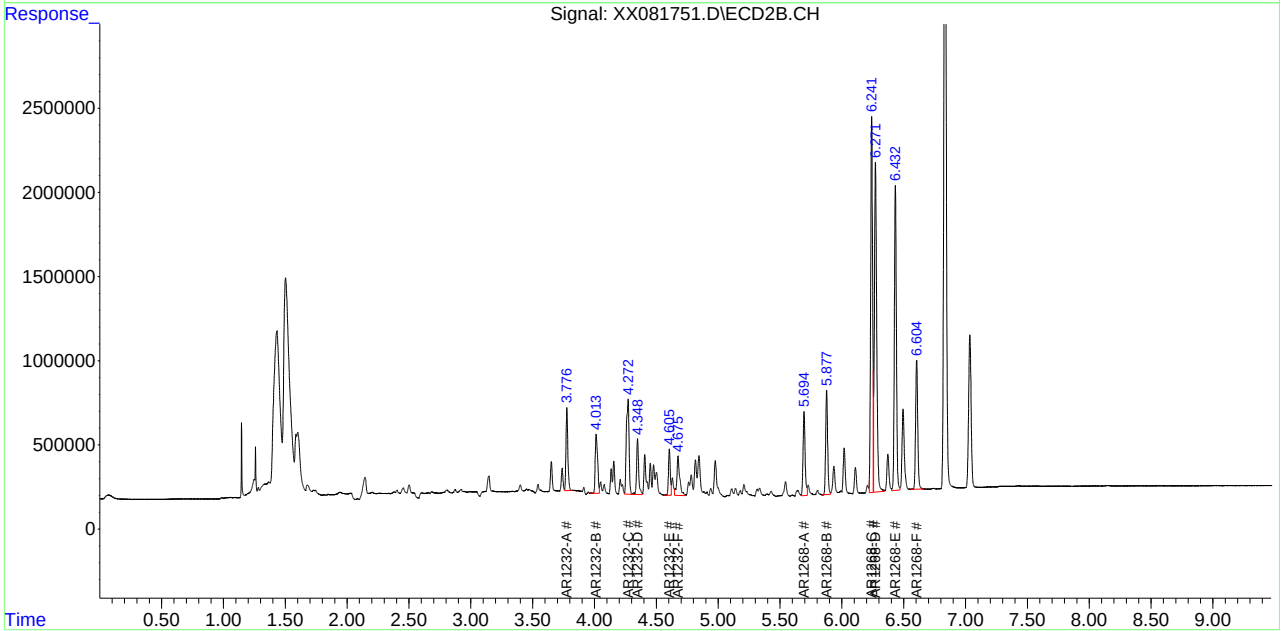
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081751.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:41:20
Operator : eduardom
Sample : ic1547-20 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:48:17 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:42:36 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GXX1547-IC1547 **Method:** SW846 8082A
Lab FileID: XX081751.D **Analyst approved:** 09/20/22 13:58 Eduardo Melendez
Injection Time: 09/16/22 18:41 **Supervisor approved:** 09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1232-A		1	3.39	Poor instrument integration
AR1268-A		1	5.18	Poor instrument integration
AR1268-B		1	5.32	Poor instrument integration
AR1268-C		1	5.68	Poor instrument integration
AR1268-A		2	5.69	Poor instrument integration
AR1268-D		1	5.70	Poor instrument integration
AR1268-C		2	6.24	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:54:00
Operator : eduardom
Sample : ic1547-50 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:51:57 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
13)	L3 AR1232-A	3.387	3.777	635269	1085529	236.602m	139.755 #
14)	L3 AR1232-B	3.601	4.013	384545	767303	46.358	34.848m
15)	L3 AR1232-C	3.869	4.272	800718	1247073	136.945	82.582m
16)	L3 AR1232-D	3.945	4.348	442134	734040	46.656	28.891m
17)	L3 AR1232-E	3.979	4.605	327459	597527	66.088	41.012
18)	L3 AR1232-F	4.163	4.676	357845	506054	87.538m	42.636 #
	Sum AR1232-A			2947969	4937526	620.187	369.723
	Average AR1232-A					103.364	61.620
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
49)	L8 AR1268-A	5.184	5.694	850353	1067242	53.002	36.812
50)	L8 AR1268-B	5.318	5.877	1123122	1312349	18.332	25.370
51)	L8 AR1268-C	5.678	6.240	5001696	4635558	95.252m	56.322m#
52)	L8 AR1268-D	5.702	6.271	4534203	4453699	102.020m	64.488
53)	L8 AR1268-E	5.815	6.433	4006018	4096673	248.769	161.844
54)	L8 AR1268-F	6.024	6.605	1579540	1728751	73.063m	60.216
	Sum AR1268-A			17094932	17294271	590.438	405.051
	Average AR1268-A					98.406	67.509

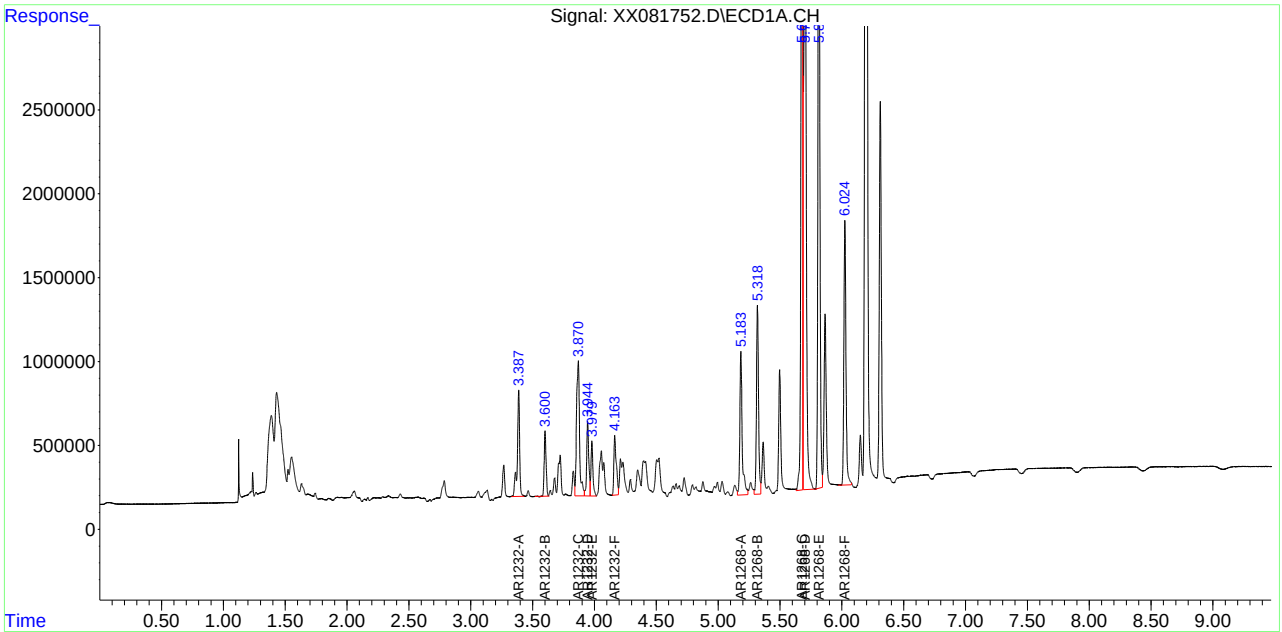
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

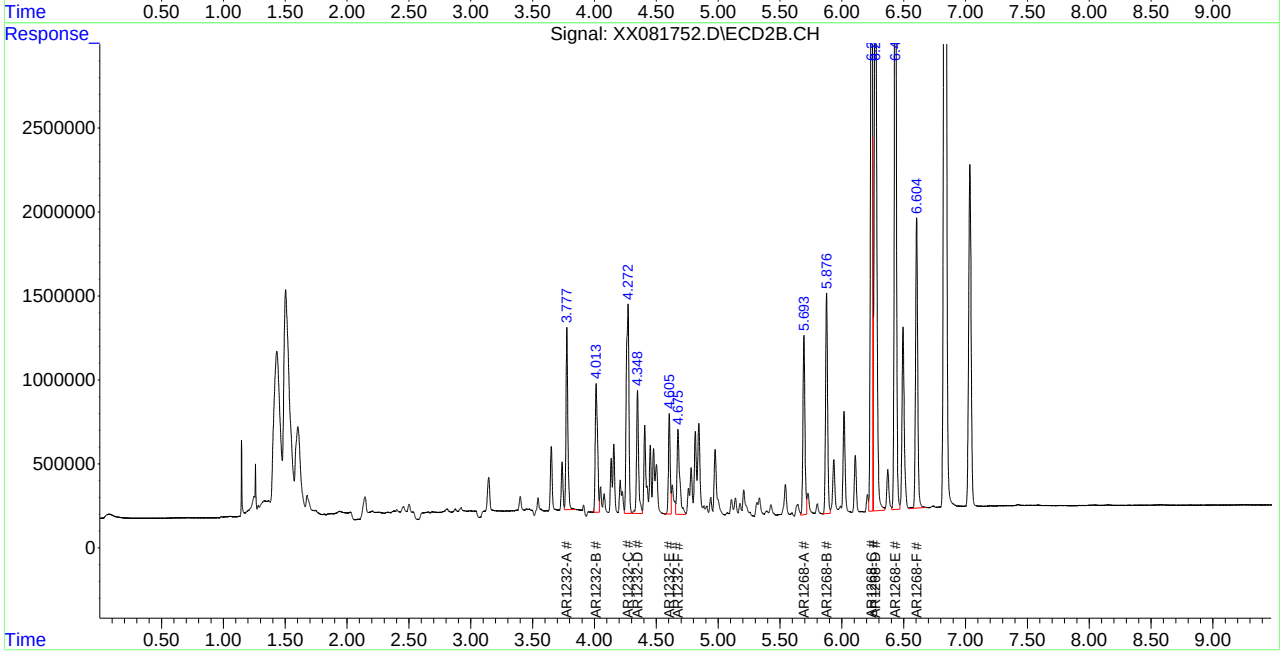
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081752.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:54:00
Operator : eduardom
Sample : ic1547-50 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:51:57 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integration Approval Summary

Sample Number: GXX1547-IC1547 **Method:** SW846 8082A
Lab FileID: XX081752.D **Analyst approved:** 09/20/22 13:58 Eduardo Melendez
Injection Time: 09/16/22 18:54 **Supervisor approved:** 09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1232-A		1	3.39	Poor instrument integration
AR1232-B		2	4.01	Poor instrument integration
AR1232-F		1	4.16	Poor instrument integration
AR1232-C		2	4.27	Poor instrument integration
AR1232-D		2	4.35	Poor instrument integration
AR1268-C		1	5.68	Poor instrument integration
AR1268-D		1	5.70	Poor instrument integration
AR1268-F		1	6.02	Poor instrument integration
AR1268-C		2	6.24	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:06:40
Operator : eduardom
Sample : ic1547-200 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:52:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
13) L3	AR1232-A	3.388	3.777	1938523	3262760	721.992	420.060	#
14) L3	AR1232-B	3.602	4.014	1384339	2267622	166.885	102.986	
15) L3	AR1232-C	3.870	4.273	2549216	3906095	435.987	258.663	#
16) L3	AR1232-D	3.945	4.349	1423624	2222551	150.228	87.477	#
17) L3	AR1232-E	3.980	4.606	1048582	1773719	211.625	121.740	#
18) L3	AR1232-F	4.165	4.676	1147103	1510505	280.611	127.262	#
	Sum AR1232-A			9491387	14943253	1967.327	1118.189	
Average	AR1232-A					327.888	186.365	
	Sum AR1242-A			0	0	N.D.	N.D.	
Average	AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
Average	AR1262-A					0.000	0.000	
49) L8	AR1268-A	5.184	5.694	2591245	3151327	161.512	108.697	
50) L8	AR1268-B	5.319	5.877	3491839	4023081	56.995	70.687	
51) L8	AR1268-C	5.679	6.241	15442945	16540303	294.096	200.964	
52) L8	AR1268-D	5.703	6.272	14148991	14173347	318.354	205.226	
53) L8	AR1268-E	5.816	6.434	12917316	13034004	802.149	514.924	
54) L8	AR1268-F	6.026	6.605	5057137	5413648	233.922	188.567	
	Sum AR1268-A			53649473	56335711	1867.027	1289.066	
Average	AR1268-A					311.171	214.844	

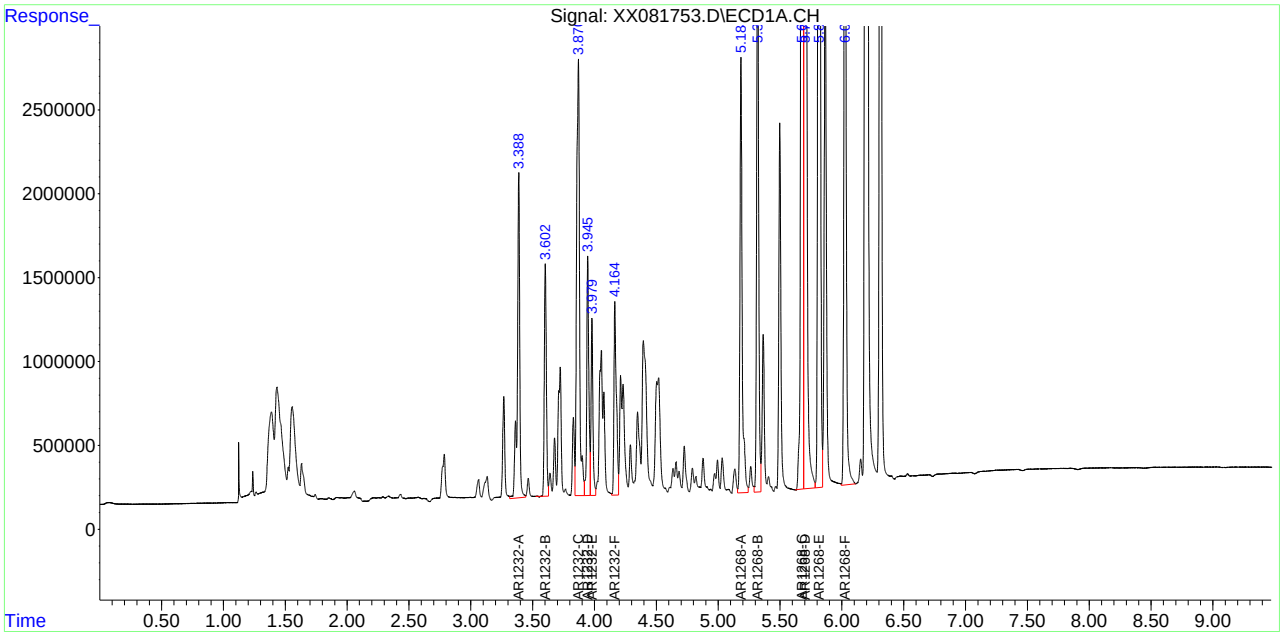
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

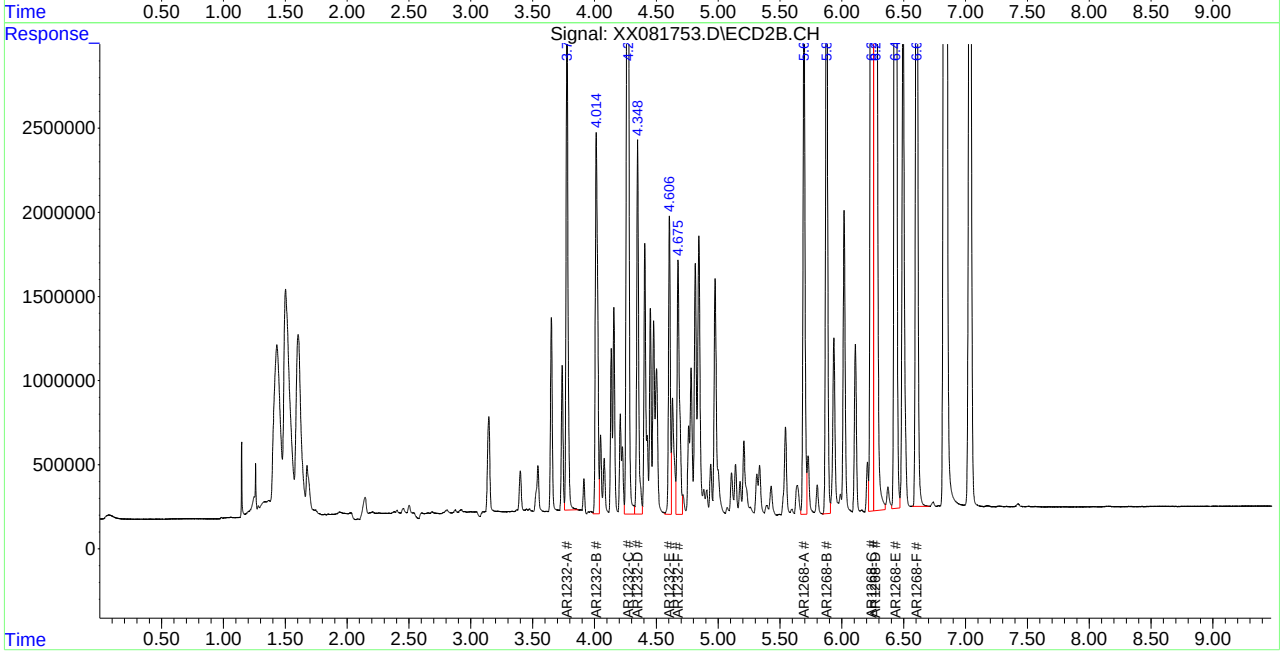
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081753.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:06:40
Operator : eduardom
Sample : ic1547-200 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:52:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.42 12
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:19:21
Operator : eduardom
Sample : ic1547-400 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:53:10 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	0.000	3.651	0	2263984	N.D.	4.777 #
Spiked Amount 50.000	Range 44 - 126		Recovery =		0.00%#	9.55%#
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
13) L3 AR1232-A	3.388	3.777	3840912	6512935	1430.526	838.499 #
14) L3 AR1232-B	3.602	4.014	2839357	4487658	342.291	203.811 #
15) L3 AR1232-C	3.869	4.273	5259580	7821429	899.534	517.938 #
16) L3 AR1232-D	3.945	4.349	2940016	4502299	310.245	177.206 #
17) L3 AR1232-E	3.980	4.606	2154839	3626242	434.890	248.889 #
18) L3 AR1232-F	4.165	4.676	2388692	3108748	584.335	261.917 #
Sum AR1232-A			19423396	30059312	4001.820	2248.260
Average AR1232-A					666.970	374.710
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
49) L8 AR1268-A	5.183	5.694	5494437	6378368	342.467	220.006
50) L8 AR1268-B	5.317	5.877	7378484	8193079	120.435	128.880
51) L8 AR1268-C	5.678	6.241	35386606	35720099	673.903	433.997
52) L8 AR1268-D	5.701	6.272	31033823	29687330	698.264	429.864
53) L8 AR1268-E	5.815	6.434	27856015	27937841	1729.824	1103.719
54) L8 AR1268-F	6.024	6.605	11098073	11297955	513.350	393.528
Sum AR1268-A			118.2E6	119.2E6	4078.242	2709.994
Average AR1268-A					679.707	451.666

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:19:21
Operator : eduardom
Sample : ic1547-400 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:53:10 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

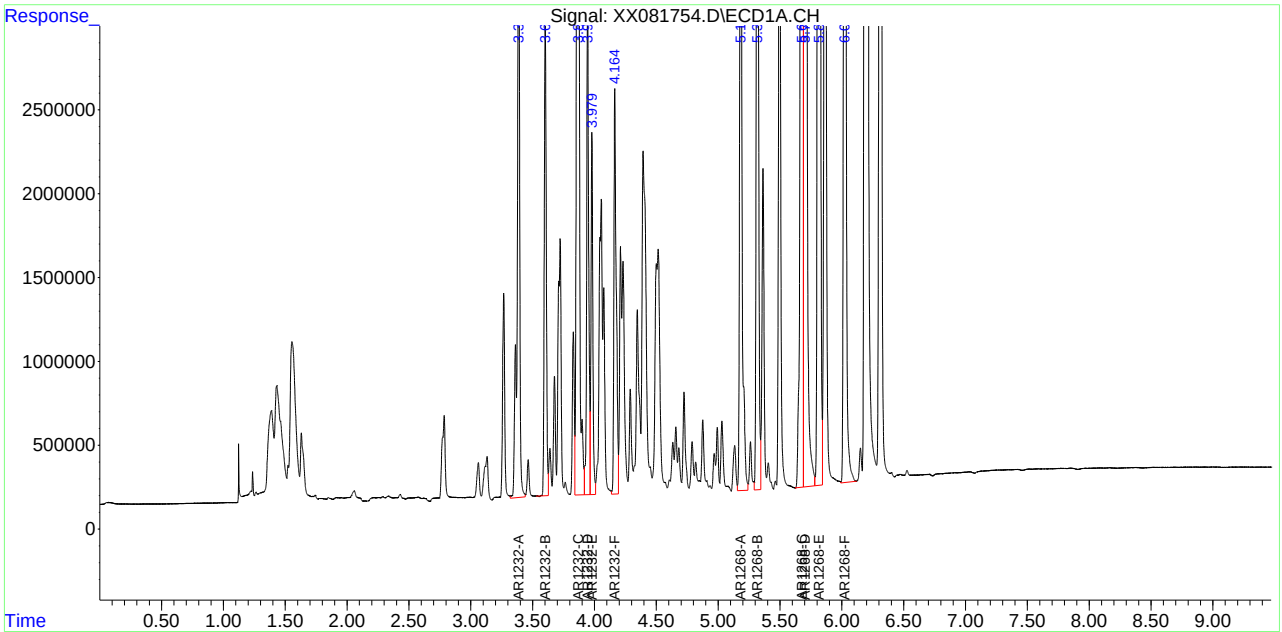
12.6.43 12

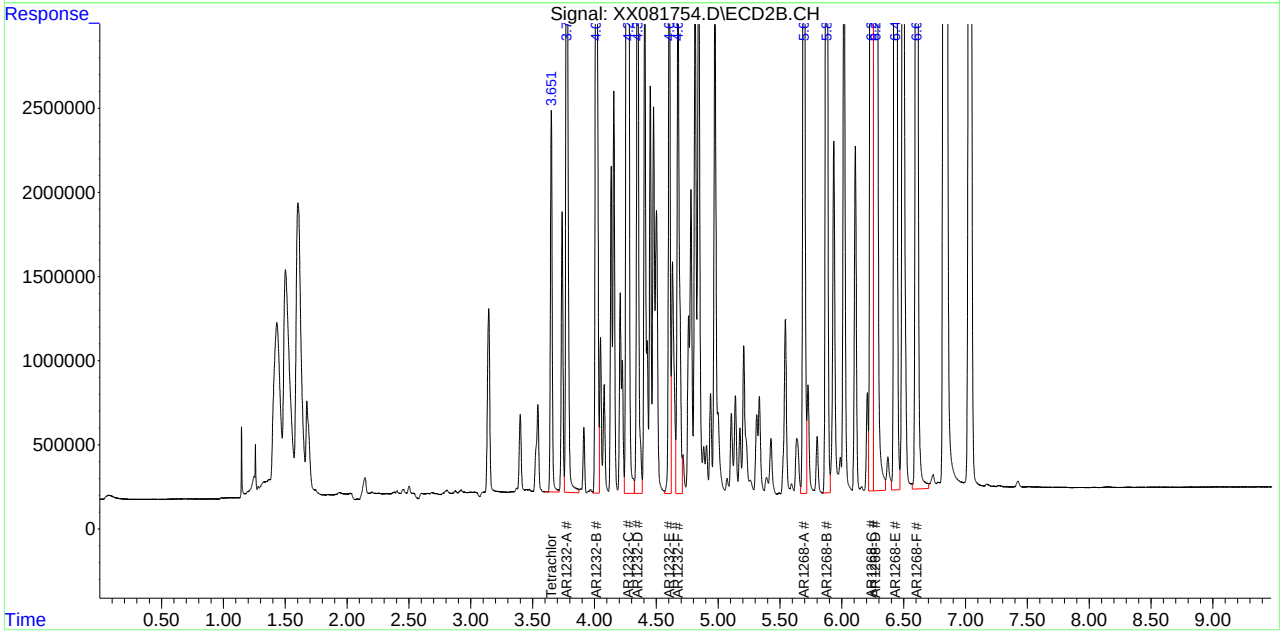
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081754.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:19:21
Operator : eduardom
Sample : ic1547-400 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:53:10 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.43 12
SGS
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081755.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:32:00
Operator : eduardom
Sample : ic1547-600 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:55:16 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
13) L3	AR1232-A	3.388	3.778	5735790	9659953	2136.263	1243.658	#
14) L3	AR1232-B	3.603	4.014	4221049	6669608	508.857	302.907	#
15) L3	AR1232-C	3.870	4.273	8109684	11936833	1386.981	790.462	#
16) L3	AR1232-D	3.945	4.349	4522217	6782235	477.206	266.942	#
17) L3	AR1232-E	3.980	4.606	3318884	5531557	669.817	379.661	#
18) L3	AR1232-F	4.165	4.676	3701263	4640114	905.423	390.937	#
	Sum AR1232-A			29608887	45220300	6084.548	3374.566	
Average	AR1232-A					1014.091	562.428	
	Sum AR1242-A			0	0	N.D.	N.D.	
Average	AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
Average	AR1262-A					0.000	0.000	
49) L8	AR1268-A	5.182	5.693	8539185	9882501	532.245	340.872	
50) L8	AR1268-B	5.317	5.876	11320120	12722048	184.772	182.509	
51) L8	AR1268-C	5.678	6.241	56720256	56004560	1080.182	680.452	
52) L8	AR1268-D	5.701	6.271	49085790	46611942	1104.436	674.928	
53) L8	AR1268-E	5.815	6.433	43798629	42644966	2719.840	1684.742	
54) L8	AR1268-F	6.024	6.605	17358903	17438116	802.949	607.401	
	Sum AR1268-A			186.8E6	185.3E6	6424.423	4170.904	
Average	AR1268-A					1070.737	695.151	

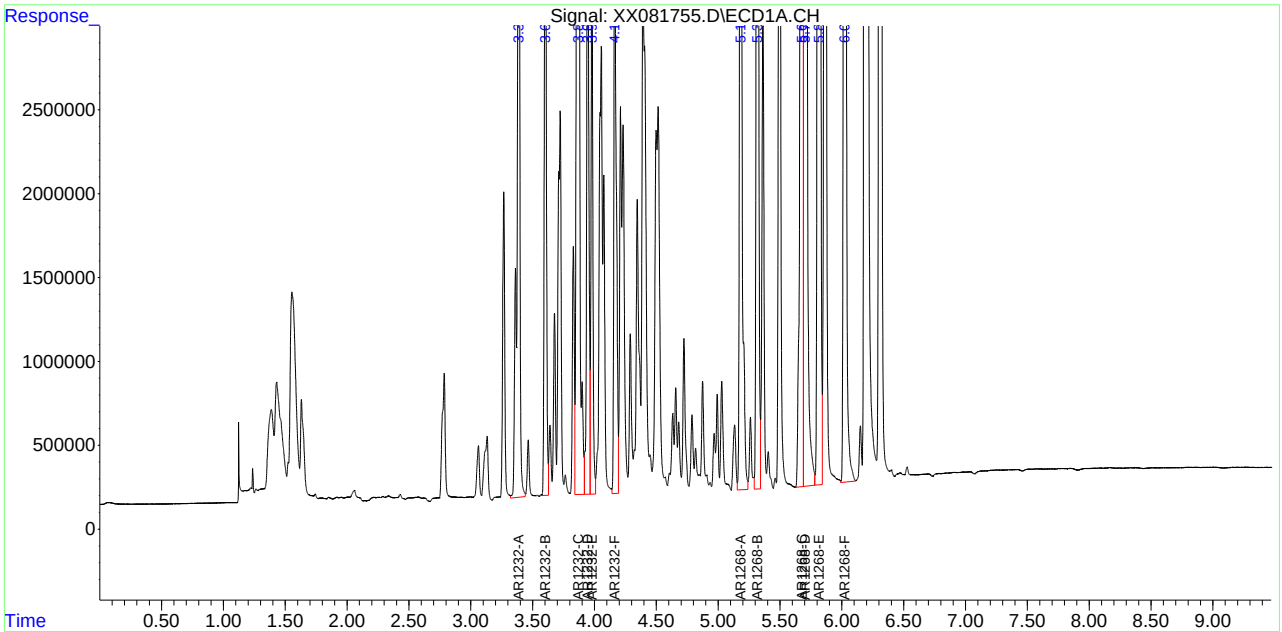
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

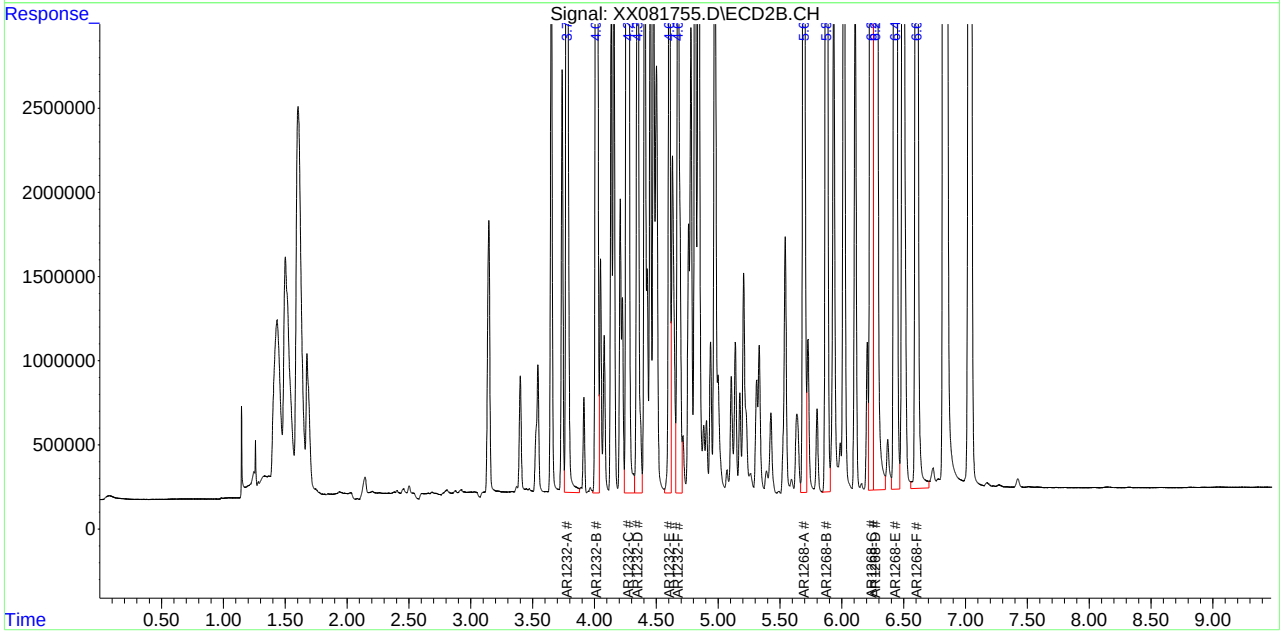
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081755.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:32:00
Operator : eduardom
Sample : ic1547-600 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:55:16 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:44:43
Operator : eduardom
Sample : ic1547-1000 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:46:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
13) L3	AR1232-A	3.388	3.777	9264834	15328969	3450.635	1973.508	#
14) L3	AR1232-B	3.602	4.014	6850671	10630295	825.864	482.785	#
15) L3	AR1232-C	3.870	4.272	13082031	19318716	2237.390	1279.293	#
16) L3	AR1232-D	3.945	4.348	7399739	10900711	780.857	429.040	#
17) L3	AR1232-E	3.979	4.605	5470006	8857873	1103.957	607.964	#
18) L3	AR1232-F	4.165	4.675	6145161	7598667	1503.263	640.200	#
	Sum AR1232-A			48212442	72635230	9901.966	5412.790	
Average	AR1232-A					1650.328	902.132	
	Sum AR1242-A			0	0	N.D.	N.D.	
Average	AR1242-A					0.000	0.000	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
Average	AR1262-A					0.000	0.000	
49) L8	AR1268-A	5.181	5.693	14021213	15852489	873.938	546.792	
50) L8	AR1268-B	5.317	5.876	18895255	20319624	308.417	258.992	
51) L8	AR1268-C	5.678	6.241	104.1E6	103.9E6	1982.724	1261.819	
52) L8	AR1268-D	5.701	6.271	87080752	82265305	1959.327	1191.179	
53) L8	AR1268-E	5.814	6.433	77226050	75435273	4795.641	2980.163	
54) L8	AR1268-F	6.023	6.604	28721690	29165509	1328.543	1015.887	
	Sum AR1268-A			330.1E6	326.9E6	11248.589	7254.832	
Average	AR1268-A					1874.765	1209.139	

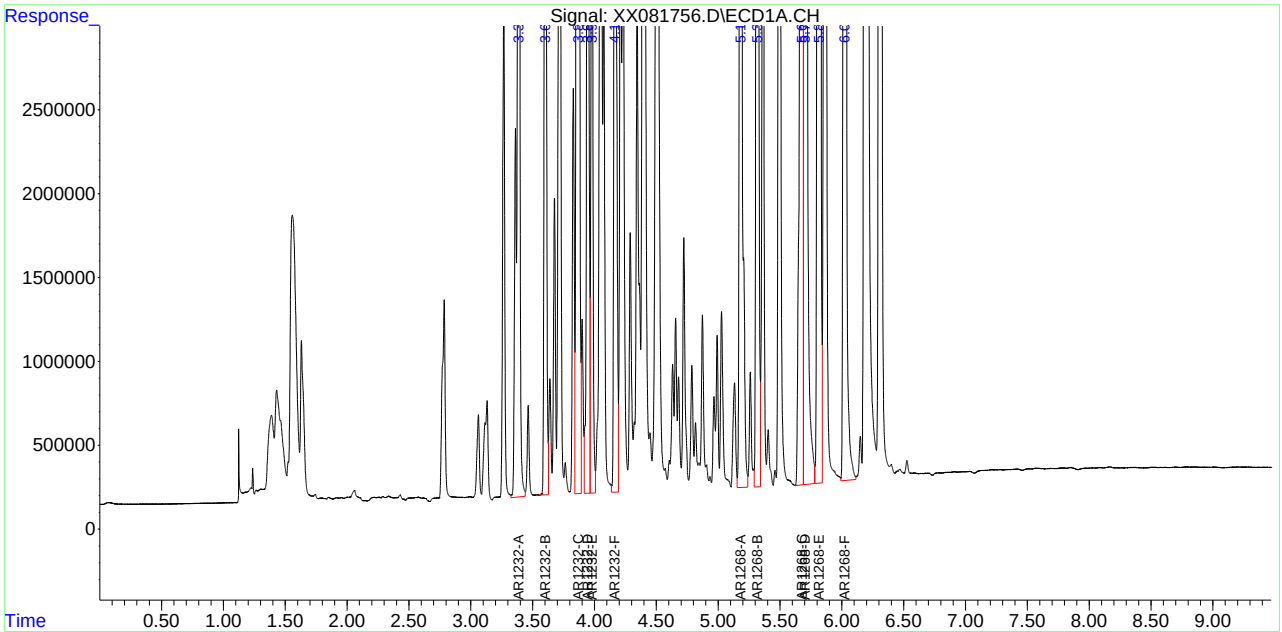
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

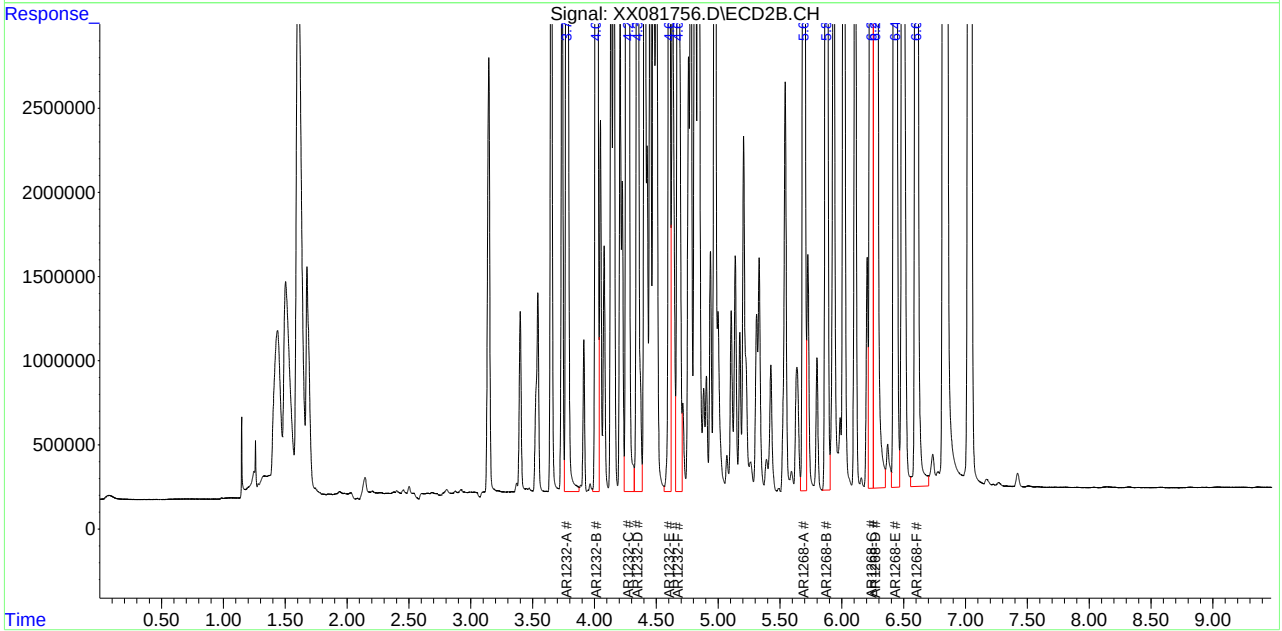
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081756.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:44:43
Operator : eduardom
Sample : ic1547-1000 1232/1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:46:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:04:37 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:35:21
Operator : eduardom
Sample : ic1547-20 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:50:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 15:09:24 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
19) L4	AR1242-A	3.387	3.777	207773	387788	34.478	23.494	
20) L4	AR1242-B	3.602	4.014	366550	590151	36.176	23.914	
21) L4	AR1242-C	3.722	4.156	184057	324284	10.835	7.489	
22) L4	AR1242-D	3.868	4.272	626667	975248	70.439	39.369	#
23) L4	AR1242-E	3.945	4.348	335793	552722	39.658	24.729	
24) L4	AR1242-F	4.164	4.605	293941	495337	30.568	18.071	#
	Sum AR1242-A			2014781	3325530	222.155	137.067	
Average	AR1242-A					37.026	22.844	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
43) L9	AR1262-A	4.820	5.315	542583	793658	27.884	18.421	
44) L9	AR1262-B	4.970	5.429	703664	907932	31.027	19.062	
45) L9	AR1262-C	5.184	5.693	991141	1222904	30.212	18.678	
46) L9	AR1262-D	5.324	5.875	844152	1139601	29.242	19.217	
47) L9	AR1262-E	5.497	6.018	1765580	2056551	30.152	48.429	#
48) L9	AR1262-F	5.675	6.243	864146	1129318	30.634	22.056	
	Sum AR1262-A			5711266	7249964	179.150	145.863	
Average	AR1262-A					29.858	24.310	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

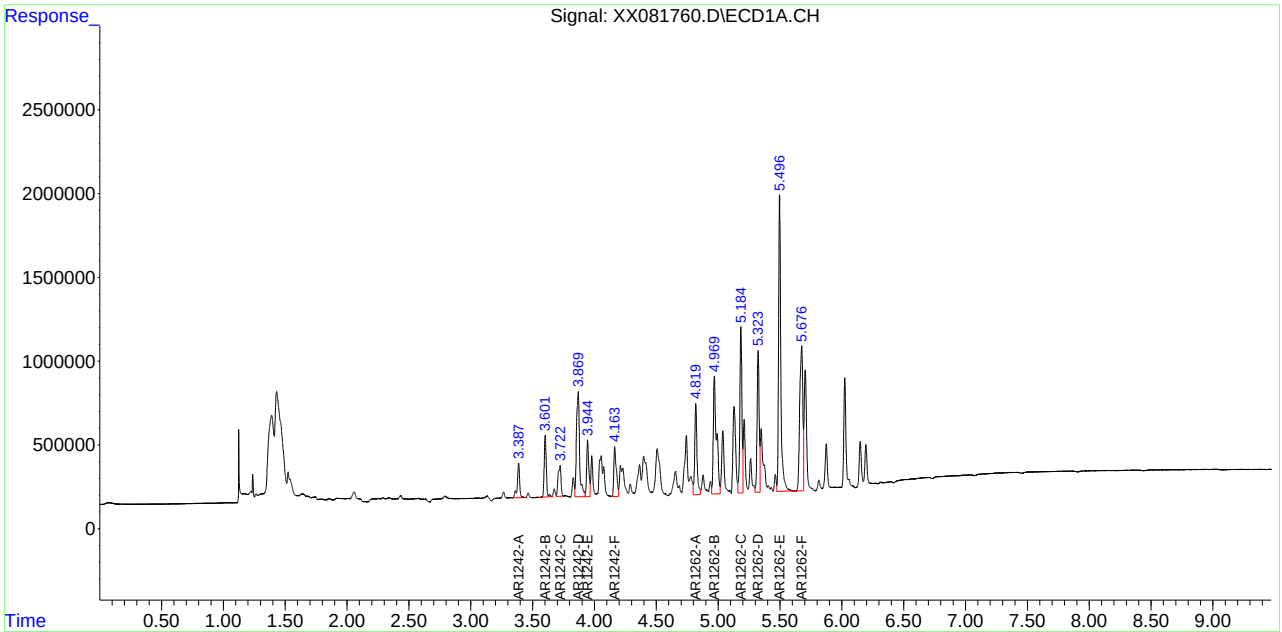
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

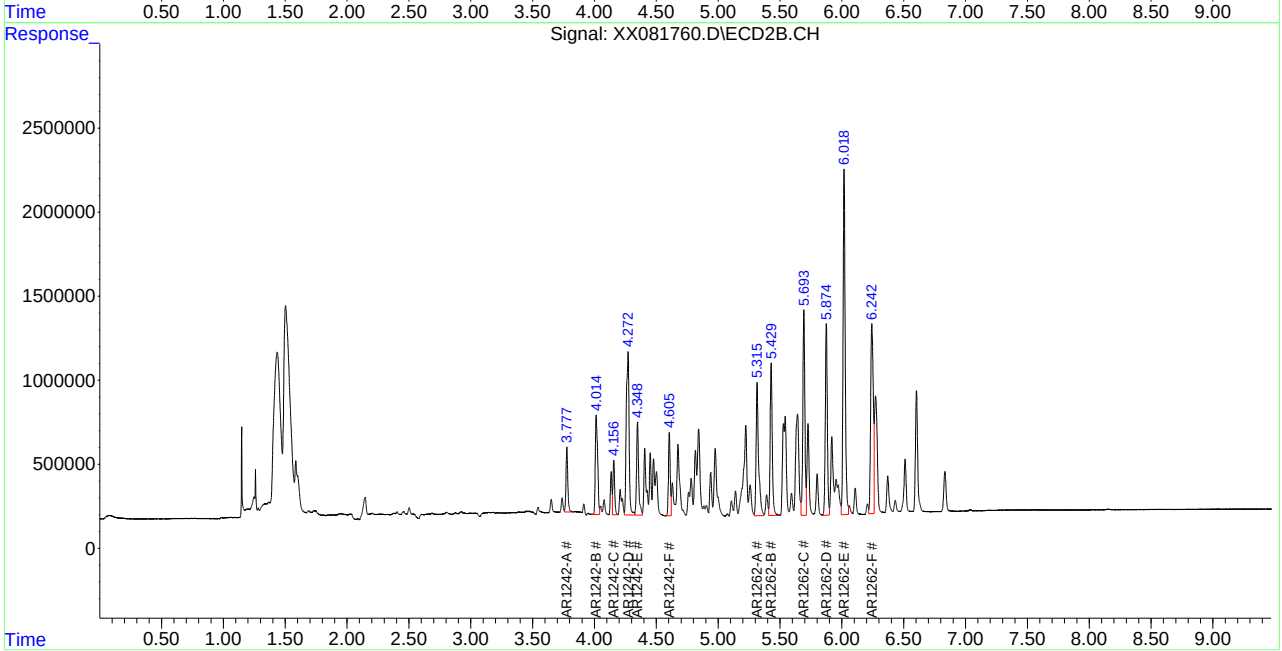
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081760.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:35:21
Operator : eduardom
Sample : ic1547-20 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:50:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 15:09:24 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:48:09
Operator : eduardom
Sample : ic1547-50 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:54:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
19)	L4 AR1242-A	3.388	3.777	439150	793376	72.874	48.066	
20)	L4 AR1242-B	3.603	4.015	786372	1191843	77.610	48.295	
21)	L4 AR1242-C	3.723	4.157	399472	656043	23.517	15.151	
22)	L4 AR1242-D	3.870	4.273	1327674	2024197	149.235	81.714	#
23)	L4 AR1242-E	3.946	4.349	732656	1143865	86.528	51.178	#
24)	L4 AR1242-F	4.165	4.606	646769	1023224	67.260	37.330	#
	Sum AR1242-A			4332093	6832548	477.023	281.734	
Average	AR1242-A					79.504	46.956	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
43)	L9 AR1262-A	4.820	5.316	1167777	1622565	60.013	37.660	
44)	L9 AR1262-B	4.969	5.429	1500957	1855018	66.182	38.945	#
45)	L9 AR1262-C	5.184	5.694	2148386	2525935	65.486	38.579	#
46)	L9 AR1262-D	5.324	5.875	1814888	2356953	62.868	39.745	
47)	L9 AR1262-E	5.498	6.019	3932157	4365464	67.151	88.807	
48)	L9 AR1262-F	5.676	6.244	1864519	2345998	66.097	45.819	
	Sum AR1262-A			12428685	15071933	387.799	289.556	
Average	AR1262-A					64.633	48.259	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

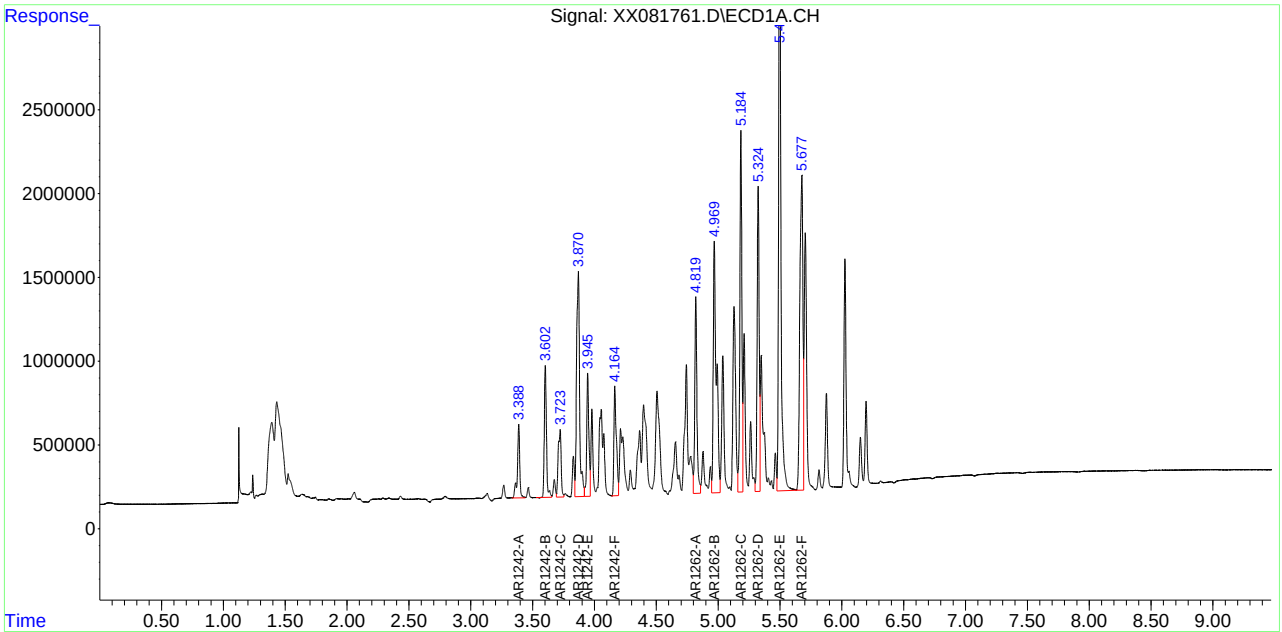
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

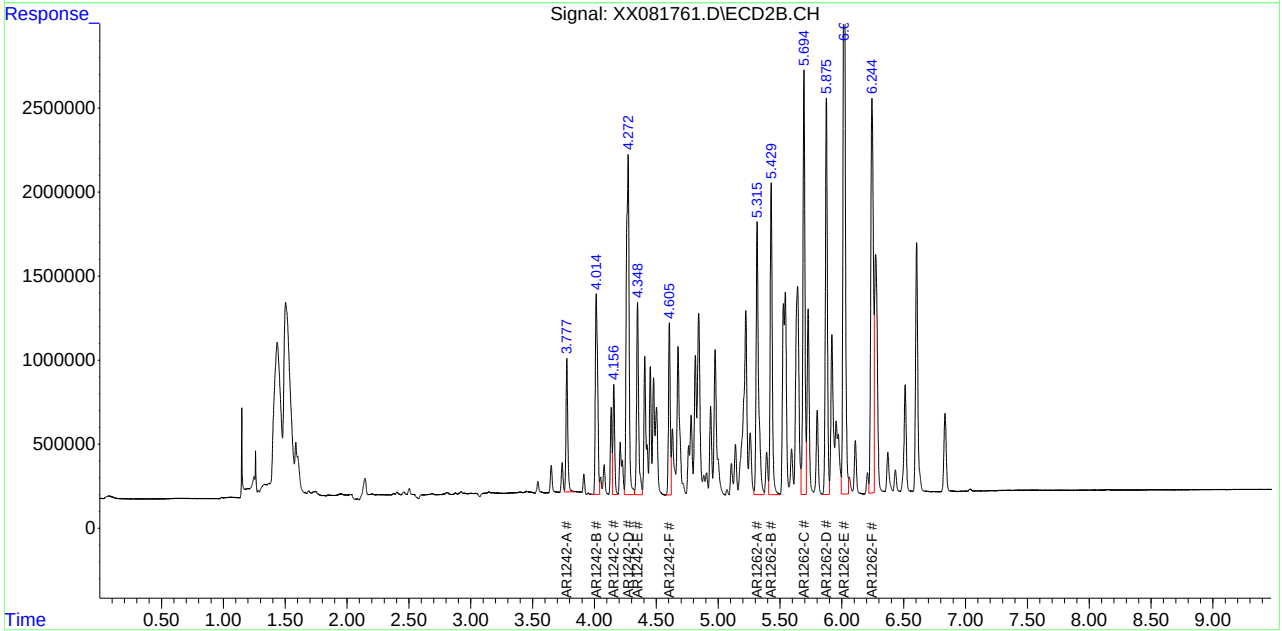
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081761.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:48:09
Operator : eduardom
Sample : ic1547-50 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:54:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:00:49
Operator : eduardom
Sample : ic1547-200 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 28 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:59:04 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
19)	L4 AR1242-A	3.388	3.777	1516218	2594055	251.605	157.158	
20)	L4 AR1242-B	3.602	4.014	2629984	4014343	259.562	162.667	
21)	L4 AR1242-C	3.722	4.156	1376823	2168988	81.053	50.093	
22)	L4 AR1242-D	3.869	4.272	4854654	7179330	545.678	289.819	#
23)	L4 AR1242-E	3.945	4.348	2653871	4036817	313.426	180.611	#
24)	L4 AR1242-F	4.164	4.605	2395841	3548801	249.153	129.469	#
	Sum AR1242-A			15427390	23542334	1700.477	969.817	
Average	AR1242-A					283.413	161.636	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
43)	L9 AR1262-A	4.817	5.314	4406192	5625457	226.438	130.569	#
44)	L9 AR1262-B	4.967	5.427	5638559	6721629	248.623	141.117	#
45)	L9 AR1262-C	5.182	5.693	8074306	9135605	246.119	139.530	#
46)	L9 AR1262-D	5.322	5.874	6934567	8402243	240.216	141.685	#
47)	L9 AR1262-E	5.496	6.018	15013900	16193200	256.399	225.502	
48)	L9 AR1262-F	5.675	6.242	6923173	8441538	245.427	164.869	
	Sum AR1262-A			46990695	54519672	1463.222	943.273	
Average	AR1262-A					243.870	157.212	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

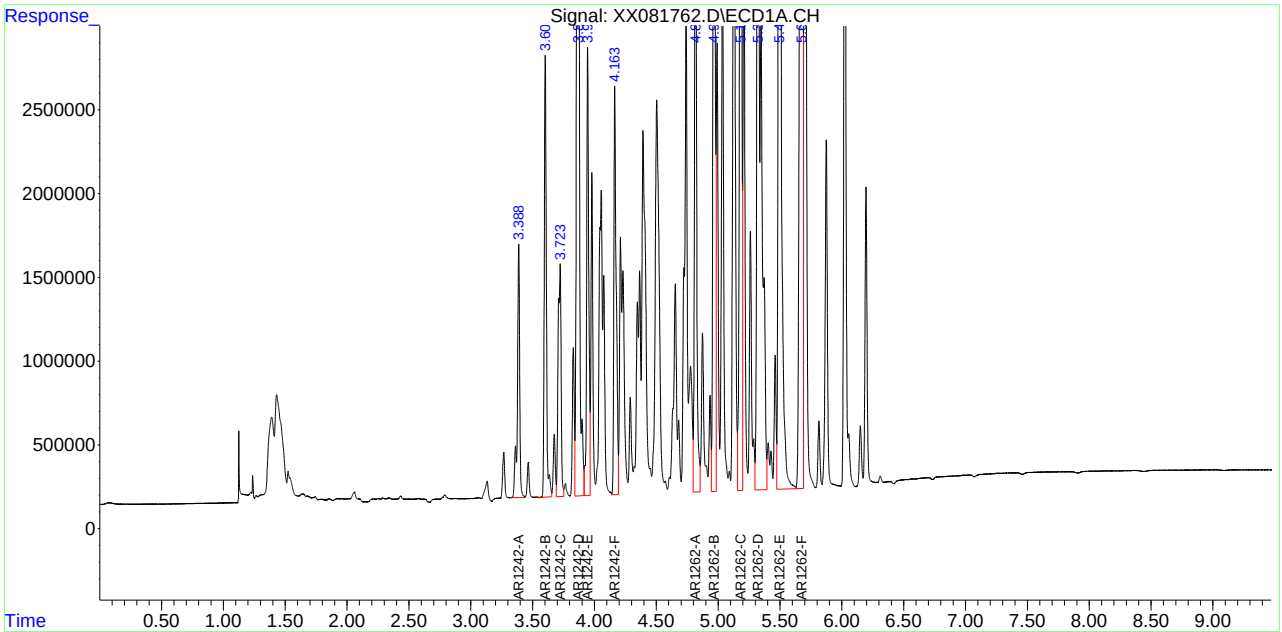
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

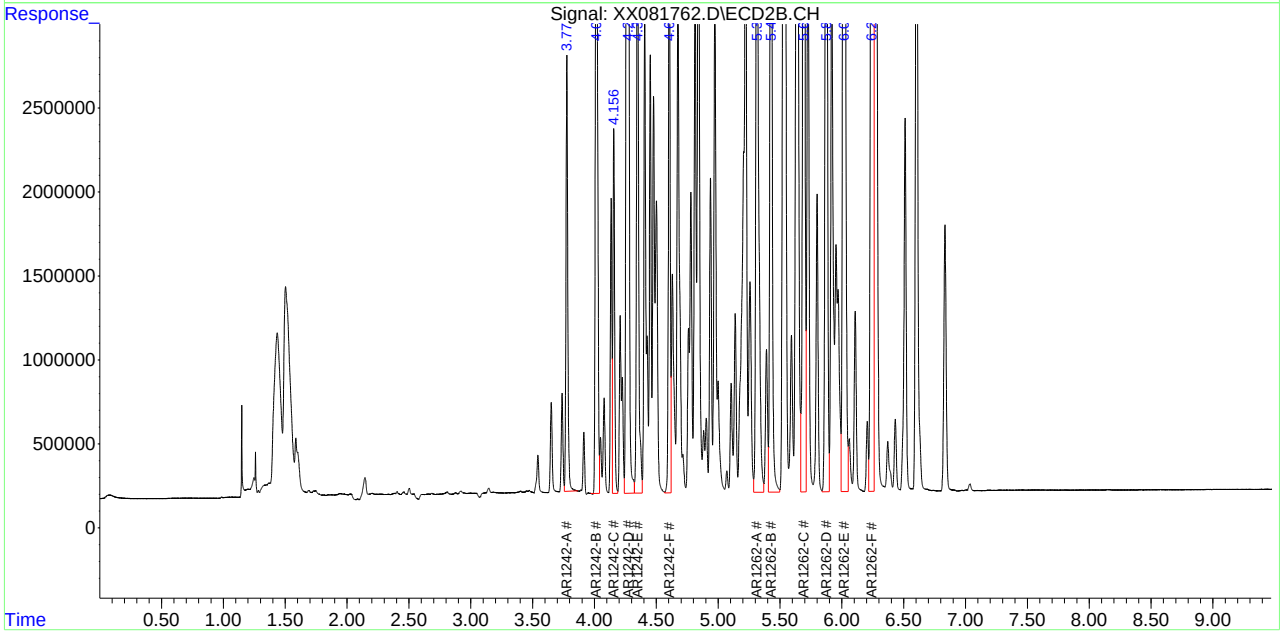
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081762.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:00:49
Operator : eduardom
Sample : ic1547-200 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 28 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 15:59:04 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:13:25
Operator : eduardom
Sample : ic1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:00:31 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
System Monitoring Compounds							
Target Compounds							
Sum AR1016-A			0	0	N.D.	N.D.	
Average AR1016-A					0.000	0.000	
Sum AR1221-A			0	0	N.D.	N.D.	
Average AR1221-A					0.000	0.000	
Sum AR1232-A			0	0	N.D.	N.D.	
Average AR1232-A					0.000	0.000	
19) L4 AR1242-A	3.388	3.778	2868905	4894113	476.074	296.505	
20) L4 AR1242-B	3.603	4.015	5099832	7407405	503.320	300.158	#
21) L4 AR1242-C	3.722	4.157	2597205	4000636	152.897	92.394	
22) L4 AR1242-D	3.869	4.273	9367845	13580774	1052.975	548.237	#
23) L4 AR1242-E	3.945	4.349	5087331	7627855	600.821	341.277	#
24) L4 AR1242-F	4.164	4.606	4675065	6792830	486.179	247.819	#
Sum AR1242-A			29696184	44303612	3272.264	1826.391	
Average AR1242-A					545.377	304.398	
Sum AR1248-A			0	0	N.D.	N.D.	
Average AR1248-A					0.000	0.000	
Sum AR1254-A			0	0	N.D.	N.D.	
Average AR1254-A					0.000	0.000	
Sum AR1260-A			0	0	N.D.	N.D.	
Average AR1260-A					0.000	0.000	
43) L9 AR1262-A	4.816	5.314	8691428	11095476	446.659	257.531	#
44) L9 AR1262-B	4.966	5.428	11101032	12959094	489.482	272.070	#
45) L9 AR1262-C	5.181	5.693	15669995	17595646	477.648	268.742	#
46) L9 AR1262-D	5.322	5.875	13509505	16277103	467.974	274.477	#
47) L9 AR1262-E	5.496	6.018	29805690	32472237	509.005	350.782	
48) L9 AR1262-F	5.675	6.244	13521631	16757486	479.344	327.285	
Sum AR1262-A			92299280	107.2E6	2870.112	1750.886	
Average AR1262-A					478.352	291.814	
Sum AR1268-A			0	0	N.D.	N.D.	
Average AR1268-A					0.000	0.000	

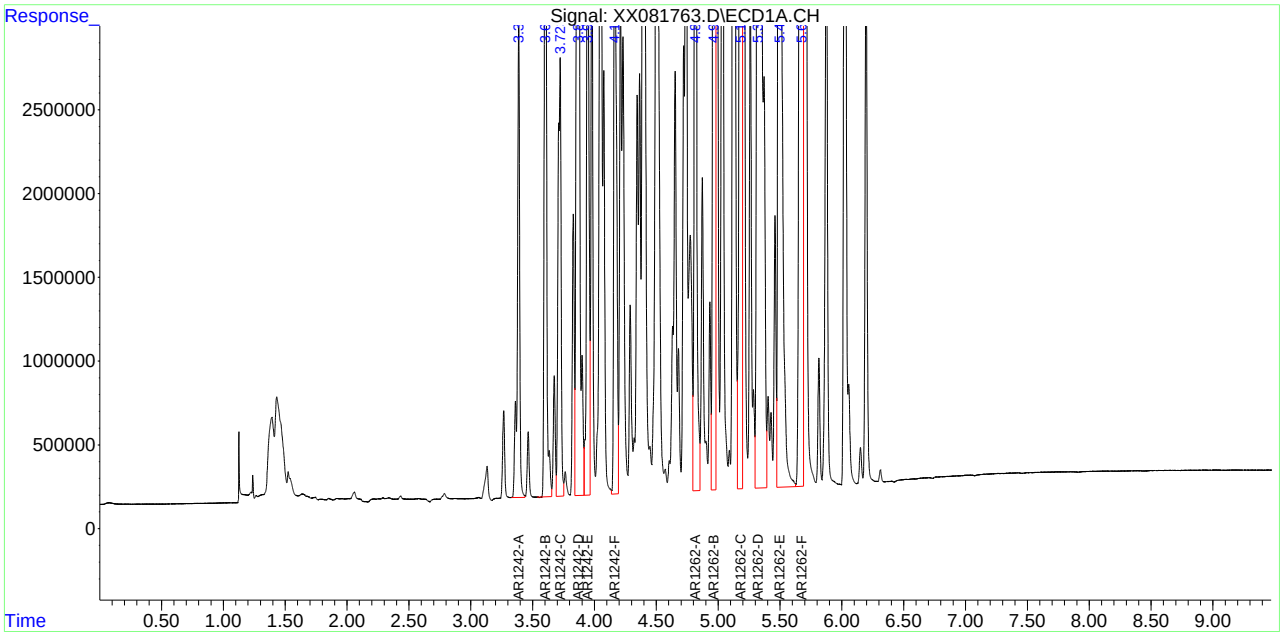
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

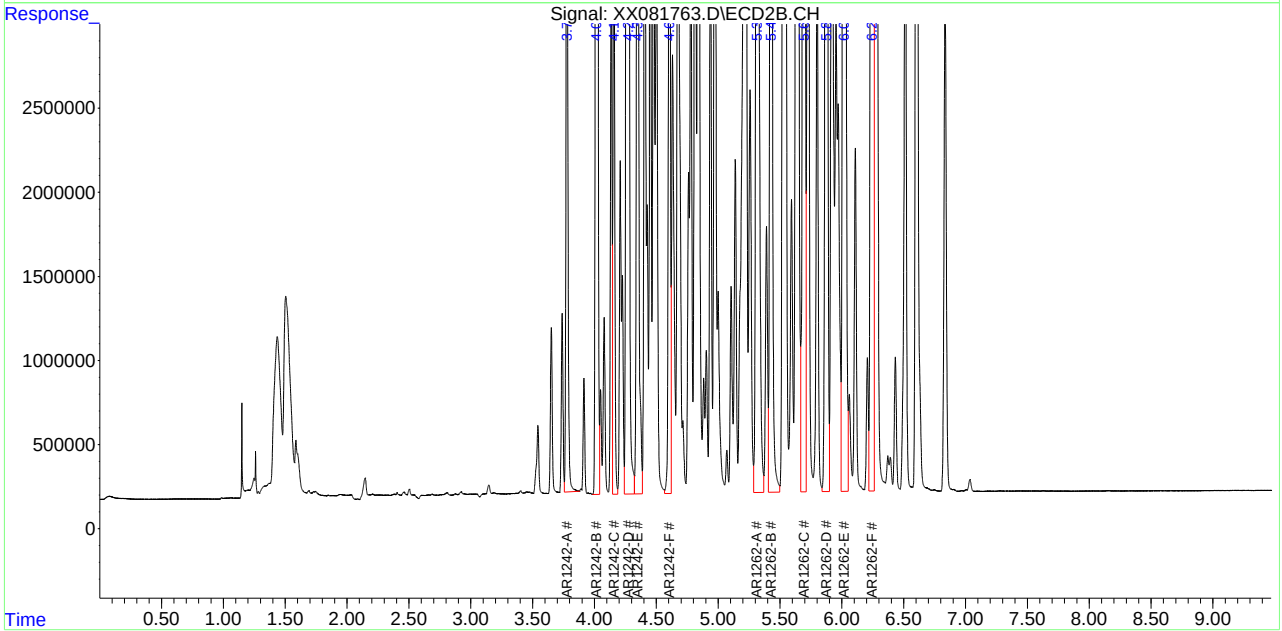
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081763.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:13:25
Operator : eduardom
Sample : ic1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:00:31 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081764.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:26:04
Operator : eduardom
Sample : ic1547-600 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 30 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:00:56 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
System Monitoring Compounds							
Target Compounds							
Sum AR1016-A			0	0	N.D.	N.D.	
Average AR1016-A					0.000	0.000	
Sum AR1221-A			0	0	N.D.	N.D.	
Average AR1221-A					0.000	0.000	
Sum AR1232-A			0	0	N.D.	N.D.	
Average AR1232-A					0.000	0.000	
19) L4 AR1242-A	3.388	3.778	4210811	7189286	698.753	435.556	
20) L4 AR1242-B	3.603	4.015	7364284	10865247	726.806	440.275	
21) L4 AR1242-C	3.722	4.157	3838082	5828413	225.947	134.607	#
22) L4 AR1242-D	3.869	4.273	13967620	20274068	1570.003	818.435	#
23) L4 AR1242-E	3.945	4.349	7577410	11356830	894.902	508.114	#
24) L4 AR1242-F	4.164	4.606	7082545	10014056	736.543	365.338	#
Sum AR1242-A			44040752	65527900	4852.955	2702.325	
Average AR1242-A					808.826	450.388	
Sum AR1248-A			0	0	N.D.	N.D.	
Average AR1248-A					0.000	0.000	
Sum AR1254-A			0	0	N.D.	N.D.	
Average AR1254-A					0.000	0.000	
Sum AR1260-A			0	0	N.D.	N.D.	
Average AR1260-A					0.000	0.000	
43) L9 AR1262-A	4.816	5.314	13199769	16465797	678.346	382.179	#
44) L9 AR1262-B	4.965	5.427	16695427	19431070	736.158	407.945	#
45) L9 AR1262-C	5.181	5.693	23953453	26854416	730.142	410.154	#
46) L9 AR1262-D	5.322	5.875	20276146	24331208	702.372	410.291	#
47) L9 AR1262-E	5.496	6.019	46635208	50710307	796.410	458.938	#
48) L9 AR1262-F	5.676	6.244	20384960	25587925	722.650	499.749	
Sum AR1262-A			141.1E6	163.4E6	4366.079	2569.257	
Average AR1262-A					727.680	428.209	
Sum AR1268-A			0	0	N.D.	N.D.	
Average AR1268-A					0.000	0.000	

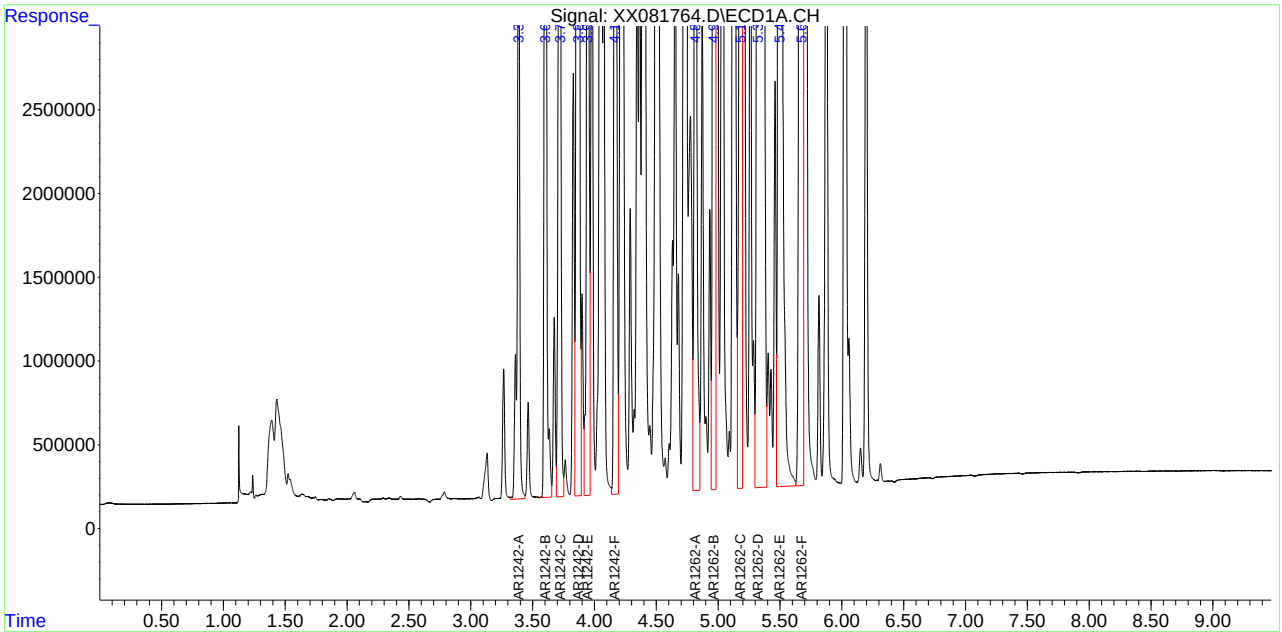
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

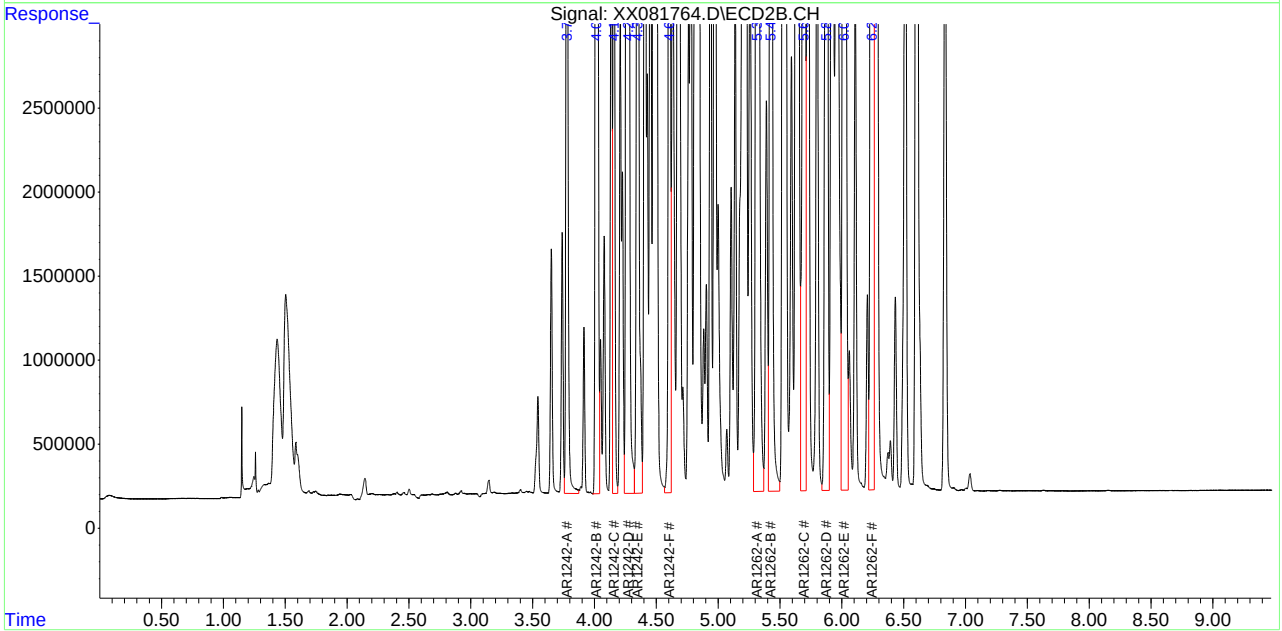
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081764.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:26:04
Operator : eduardom
Sample : ic1547-600 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 30 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:00:56 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081765.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:38:47
Operator : eduardom
Sample : ic1547-1000 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 31 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:01:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
19)	L4 AR1242-A	3.388	3.777	6632765	11426505	1100.658	692.264	
20)	L4 AR1242-B	3.603	4.014	11698737	17390390	1154.588	704.682	
21)	L4 AR1242-C	3.722	4.156	6040705	9306337	355.615	214.929	
22)	L4 AR1242-D	3.870	4.273	23152910	32990352	2602.458	1331.774	#
23)	L4 AR1242-E	3.945	4.348	12450530	18307555	1470.424	819.096	#
24)	L4 AR1242-F	4.165	4.605	11610439	16674585	1207.417	608.331	#
	Sum AR1242-A			71586086	106.1E6	7891.161	4371.076	
Average	AR1242-A					1315.193	728.513	
	Sum AR1248-A			0	0	N.D.	N.D.	
Average	AR1248-A					0.000	0.000	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
43)	L9 AR1262-A	4.816	5.313	22085300	27172435	1134.981	630.685	#
44)	L9 AR1262-B	4.965	5.427	28484529	32450569	1255.979	681.283	#
45)	L9 AR1262-C	5.181	5.693	41123610	46293191	1253.518	707.046	#
46)	L9 AR1262-D	5.322	5.875	34657211	41896618	1200.537	706.493	#
47)	L9 AR1262-E	5.497	6.019	87220212	93466206	1489.499	654.245	#
48)	L9 AR1262-F	5.675	6.243	34106724	43270941	1209.088	845.110	
	Sum AR1262-A			247.7E6	284.5E6	7543.602	4224.862	
Average	AR1262-A					1257.267	704.144	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

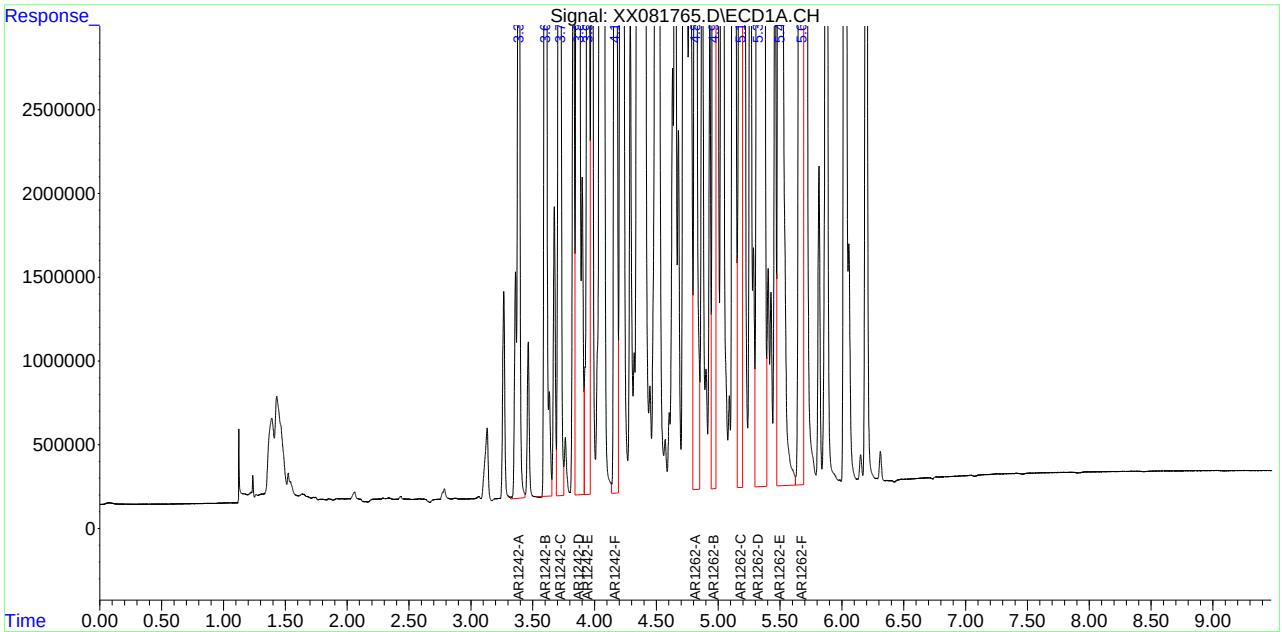
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

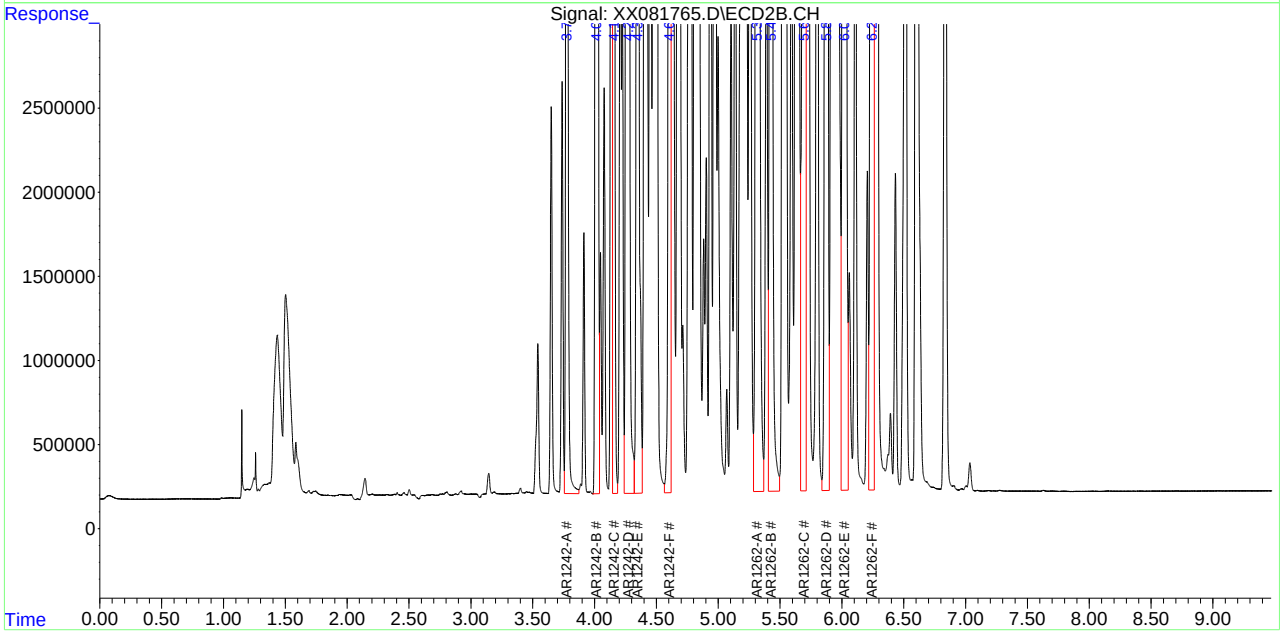
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081765.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:38:47
Operator : eduardom
Sample : ic1547-1000 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 31 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:01:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/20/22 15:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081769.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:29:33
Operator : eduardom
Sample : ic1547-20 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 34 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:45:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:42:33 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.868	4.271	391221	606305	35.396	22.079
26) L5 AR1248-B	4.054	4.451	374063	610999	31.888	21.272
27) L5 AR1248-C	4.165	4.605	472022	769838	34.387	21.709
28) L5 AR1248-D	4.401	4.844	420453	706291	31.796	17.621 #
29) L5 AR1248-E	4.508	4.977	361959	672028	29.797	18.776
30) L5 AR1248-F	4.729	5.208	249722	393756	29.033	18.510m
Sum AR1248-A			2269440	3759216	192.297	119.967
Average AR1248-A					32.050	19.994
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

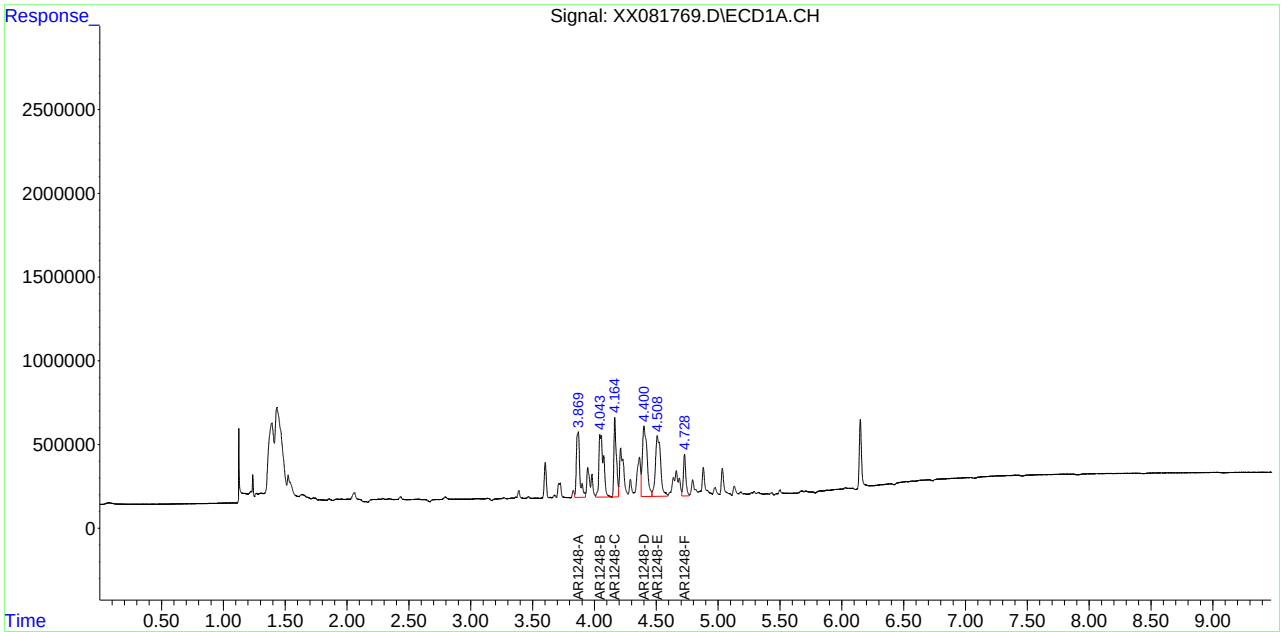
12.6.52 12

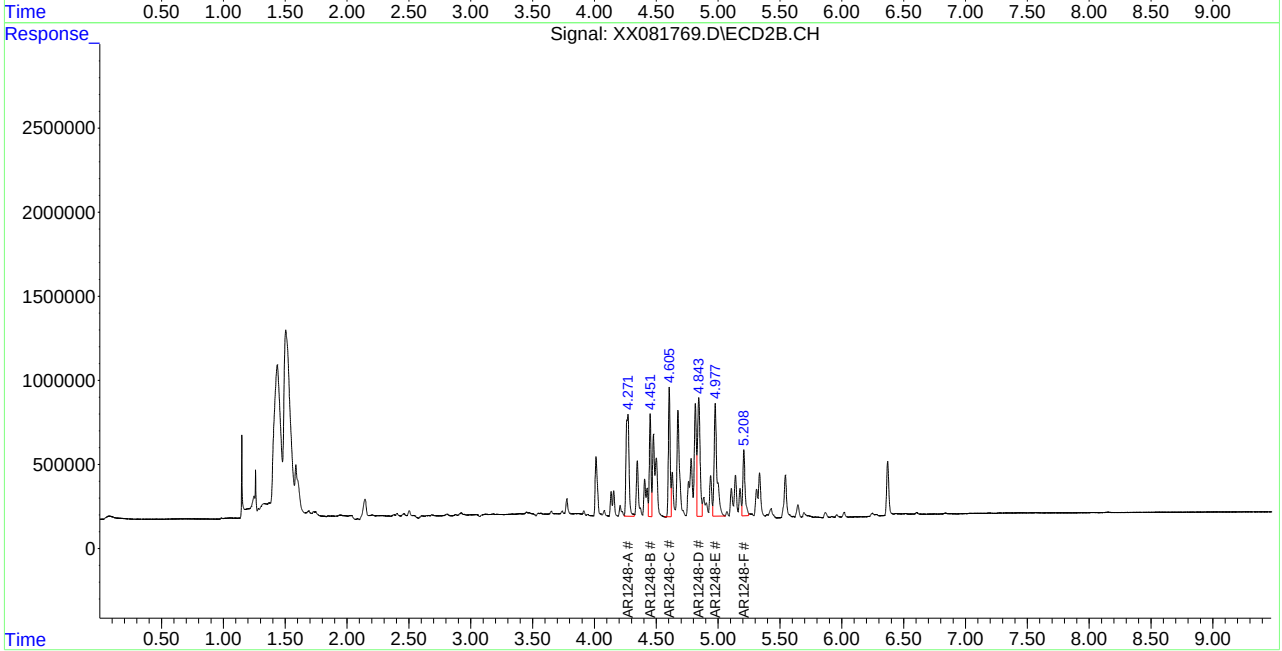
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081769.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:29:33
Operator : eduardom
Sample : ic1547-20 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 34 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:45:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:42:33 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





12.6.52 12
997 of 1485
SGS
FA98819

Manual Integration Approval Summary

Sample Number:	GXX1547-IC1547	**Method:**	SW846 8082A
Lab FileID:	XX081769.D	**Analyst approved:**	09/20/22 13:58 Eduardo Melendez
Injection Time:	09/16/22 22:29	**Supervisor approved:**	09/20/22 15:55 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1248-F		2	5.21	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081770.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:42:09
Operator : eduardom
Sample : ic1547-50 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 35 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:46:19 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.867	4.272	818404	1206634	74.046	43.940 #
26) L5 AR1248-B	4.053	4.451	782029	1211908	66.666	42.193
27) L5 AR1248-C	4.164	4.605	991587	1520418	72.237	42.876 #
28) L5 AR1248-D	4.398	4.843	882046	1446665	66.704	36.093 #
29) L5 AR1248-E	4.508	4.976	752176	1290187	61.920	36.047 #
30) L5 AR1248-F	4.728	5.209	508429	760267	59.111	35.739
Sum AR1248-A			4734671	7436079	400.684	236.886
Average AR1248-A					66.781	39.481
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

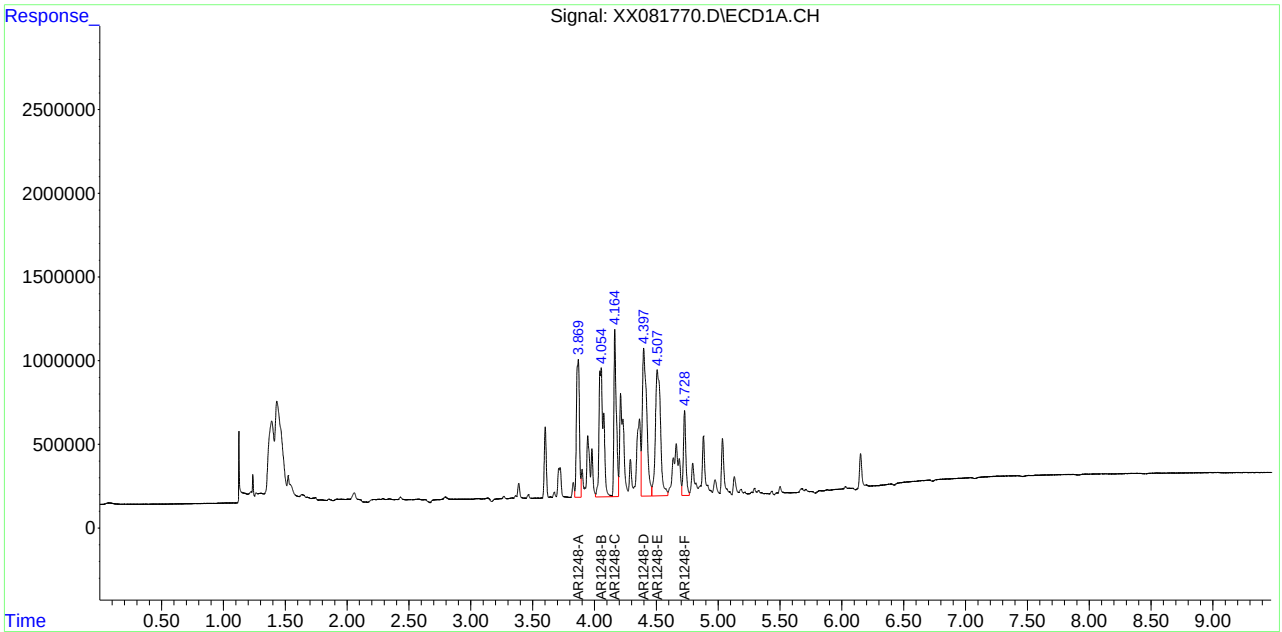
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

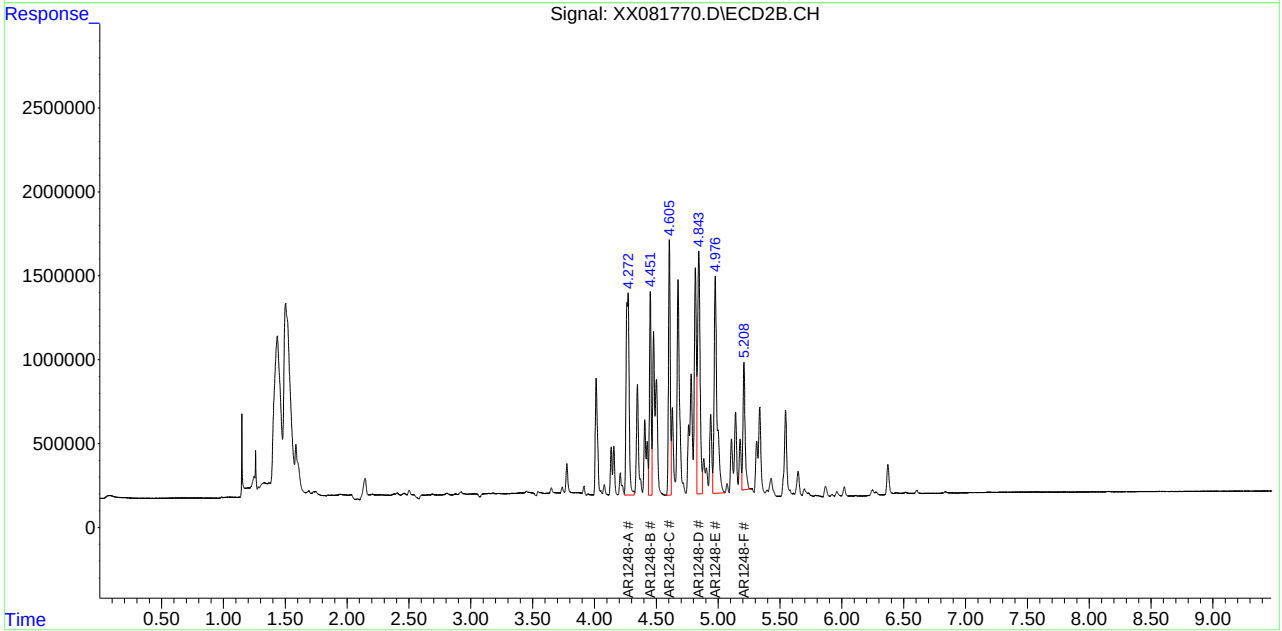
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081770.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:42:09
Operator : eduardom
Sample : ic1547-50 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 35 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:46:19 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081771.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:54:56
Operator : eduardom
Sample : ic1547-200 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 36 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:48:52 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	System Monitoring Compounds							
	Target Compounds							
	Sum AR1016-A			0	0	N.D.	N.D.	
Average	AR1016-A					0.000	0.000	
	Sum AR1221-A			0	0	N.D.	N.D.	
Average	AR1221-A					0.000	0.000	
	Sum AR1232-A			0	0	N.D.	N.D.	
Average	AR1232-A					0.000	0.000	
	Sum AR1242-A			0	0	N.D.	N.D.	
Average	AR1242-A					0.000	0.000	
25)	L5 AR1248-A	3.868	4.271	2804018	4179256	253.696	152.188	#
26)	L5 AR1248-B	4.045	4.451	2707954	4147681	230.845	144.402	
27)	L5 AR1248-C	4.165	4.605	3651919	5338974	266.042	150.559	#
28)	L5 AR1248-D	4.396	4.842	3624695	5667678	274.115	141.403	#
29)	L5 AR1248-E	4.506	4.974	2704311	5184228	222.621	144.842	
30)	L5 AR1248-F	4.726	5.207	1862366	2772206	216.524	130.316	
	Sum AR1248-A			17355263	27290023	1463.844	863.709	
Average	AR1248-A					243.974	143.952	
	Sum AR1254-A			0	0	N.D.	N.D.	
Average	AR1254-A					0.000	0.000	
	Sum AR1260-A			0	0	N.D.	N.D.	
Average	AR1260-A					0.000	0.000	
	Sum AR1262-A			0	0	N.D.	N.D.	
Average	AR1262-A					0.000	0.000	
	Sum AR1268-A			0	0	N.D.	N.D.	
Average	AR1268-A					0.000	0.000	

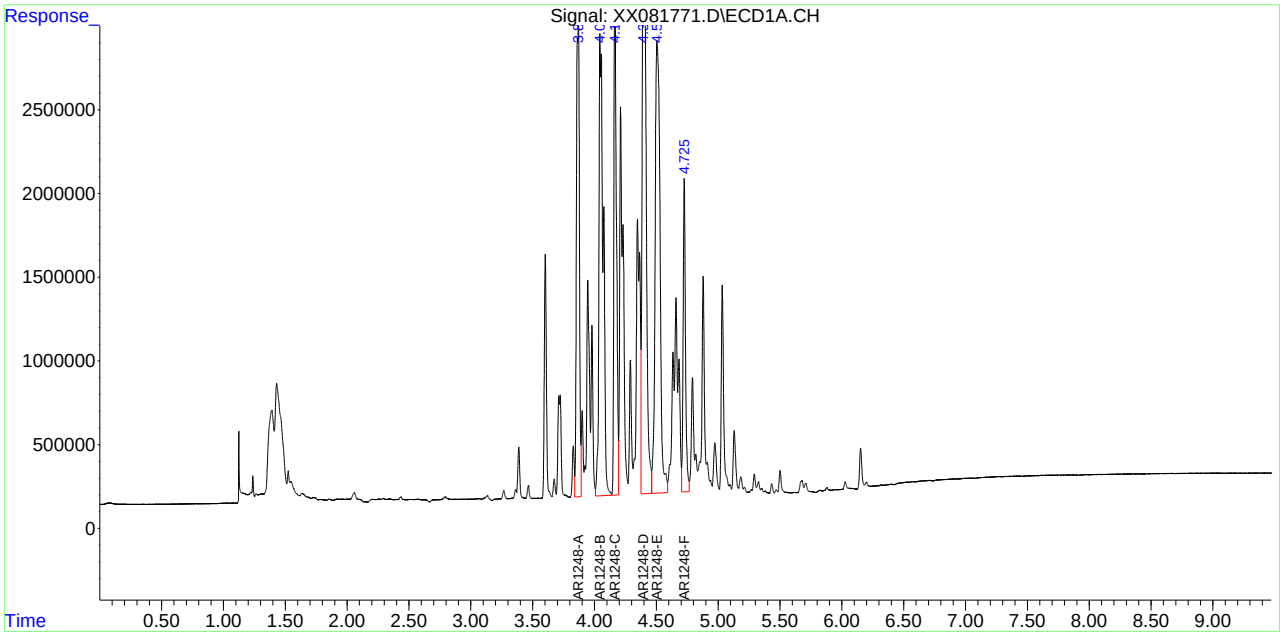
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

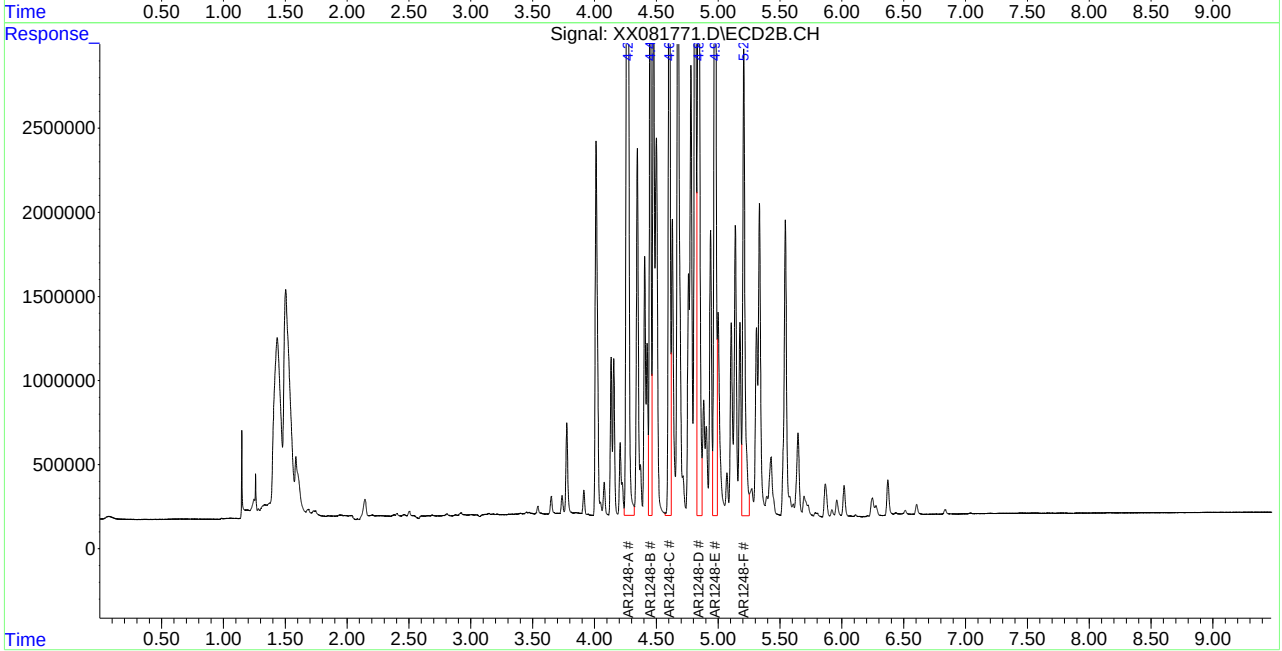
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081771.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:54:56
Operator : eduardom
Sample : ic1547-200 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 36 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:48:52 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081772.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:07:36
Operator : eduardom
Sample : ic1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 37 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:52:10 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.868	4.272	5496302	7943657	497.282	289.268 #
26) L5 AR1248-B	4.053	4.451	4897550	7917610	417.502	275.652
27) L5 AR1248-C	4.164	4.605	6940093	10146448	505.585	286.129 #
28) L5 AR1248-D	4.393	4.842	7300097	11234568	552.066	280.291 #
29) L5 AR1248-E	4.503	4.974	5370382	9655091	442.094	269.753
30) L5 AR1248-F	4.724	5.207	3725215	5374366	433.105	252.639 #
Sum AR1248-A			33729639	52271739	2847.634	1653.733
Average AR1248-A					474.606	275.622
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

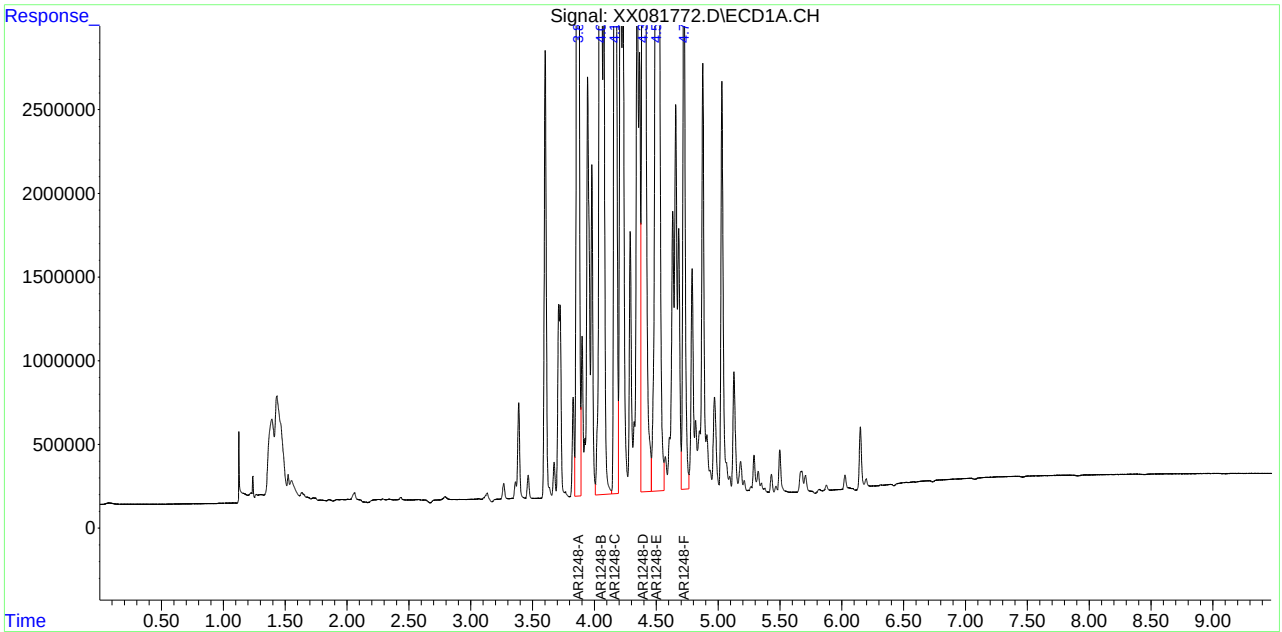
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

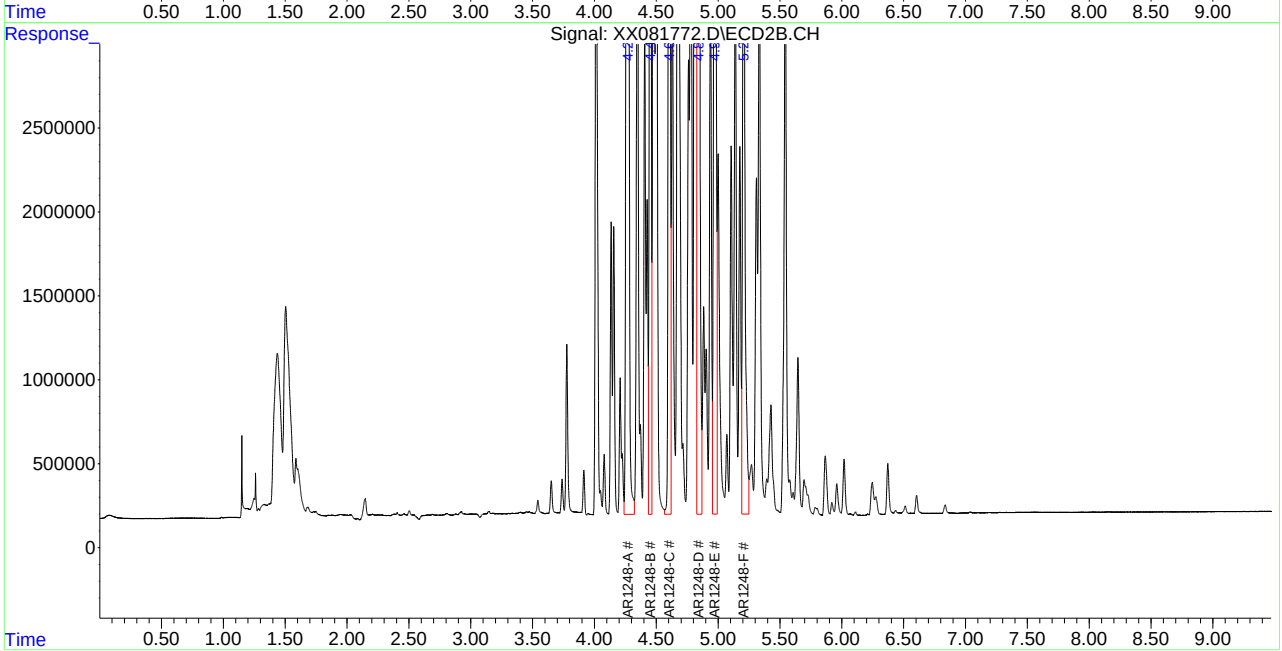
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081772.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:07:36
Operator : eduardom
Sample : ic1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 37 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:52:10 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:20:16
Operator : eduardom
Sample : ic1547-600 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 38 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:29:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.867	4.272	8240916	11638868	745.604	423.829 #
26) L5 AR1248-B	4.053	4.451	7537202	11652056	642.525	405.668
27) L5 AR1248-C	4.164	4.605	10609072	15110767	772.869	426.122 #
28) L5 AR1248-D	4.393	4.841	11538419	16897441	872.586	421.573 #
29) L5 AR1248-E	4.503	4.973	8144408	15036495	670.455	420.104
30) L5 AR1248-F	4.723	5.206	5775165	8065072	671.438	379.125 #
Sum AR1248-A			51845182	78400699	4375.476	2476.421
Average AR1248-A					729.246	412.737
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

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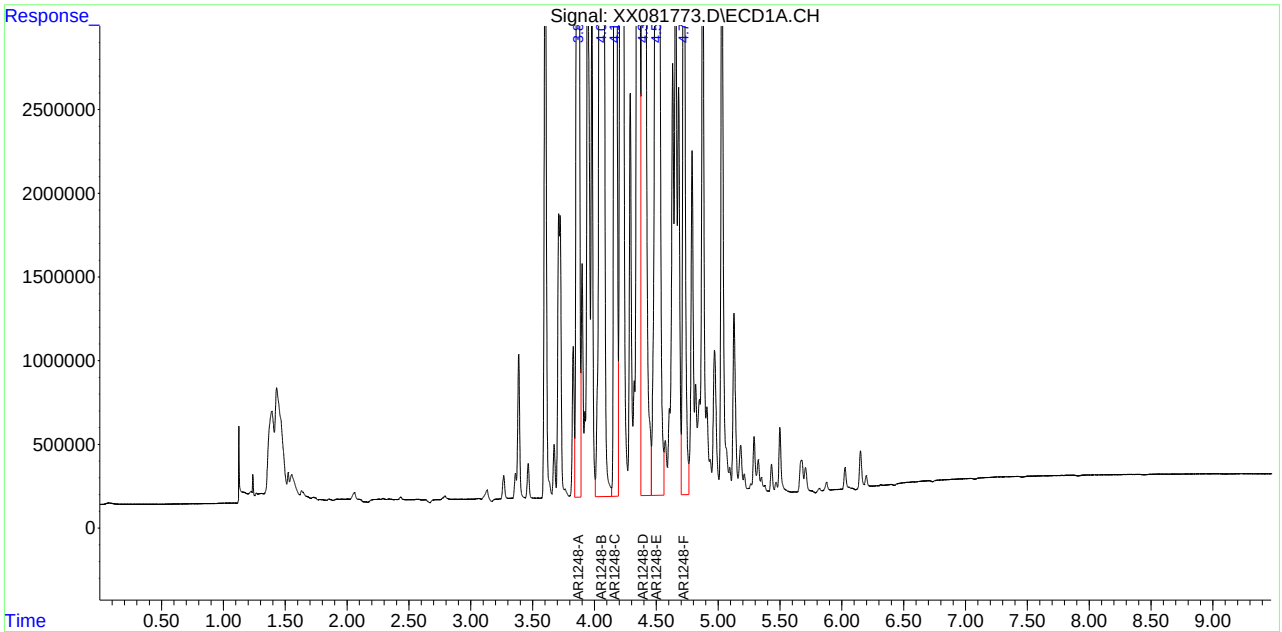
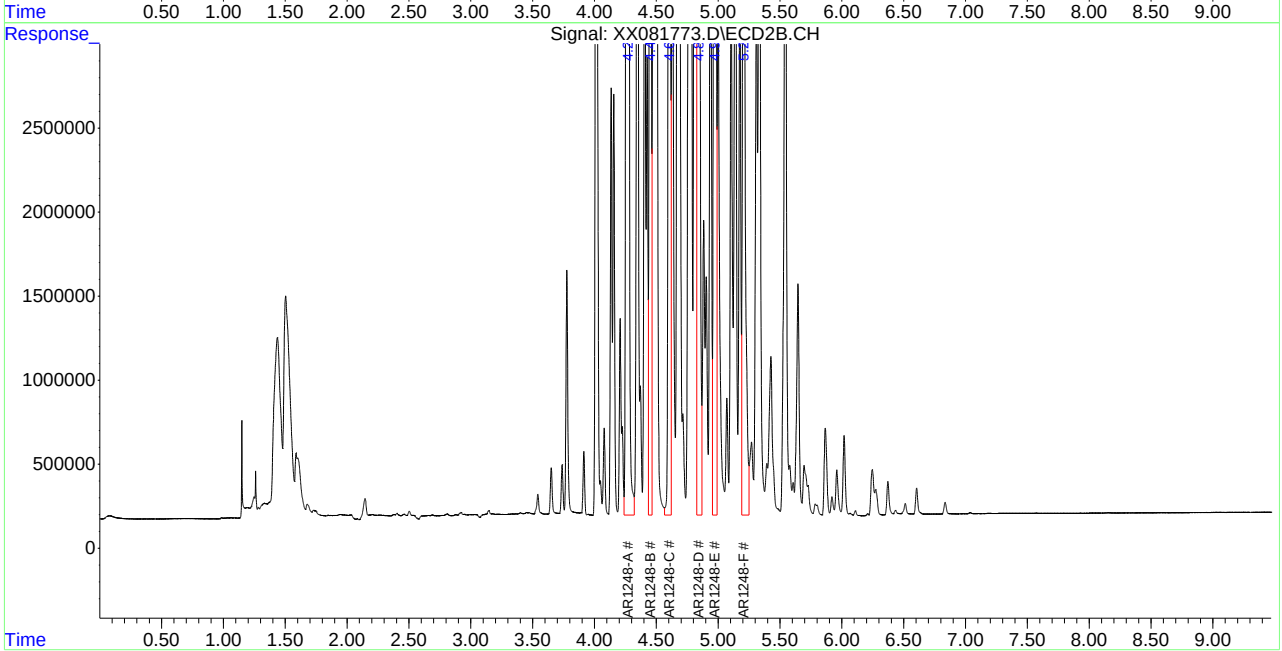
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081773.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:20:16
Operator : eduardom
Sample : ic1547-600 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 38 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:29:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081774.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:32:55
Operator : eduardom
Sample : ic1547-1000 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 39 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:45:28 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.867	4.272	13541250	19232058	1225.156	700.335 #
26) L5 AR1248-B	4.045	4.452	12586357	18989908	1072.951	661.136
27) L5 AR1248-C	4.164	4.606	17527543	25027014	1276.879	705.760 #
28) L5 AR1248-D	4.392	4.841	19786210	28975010	1496.321	722.896 #
29) L5 AR1248-E	4.501	4.973	13504026	26207346	1111.663	732.206
30) L5 AR1248-F	4.722	5.206	9865028	13379443	1146.937	628.944 #
Sum AR1248-A			86810413	131.8E6	7329.906	4151.277
Average AR1248-A					1221.651	691.879
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

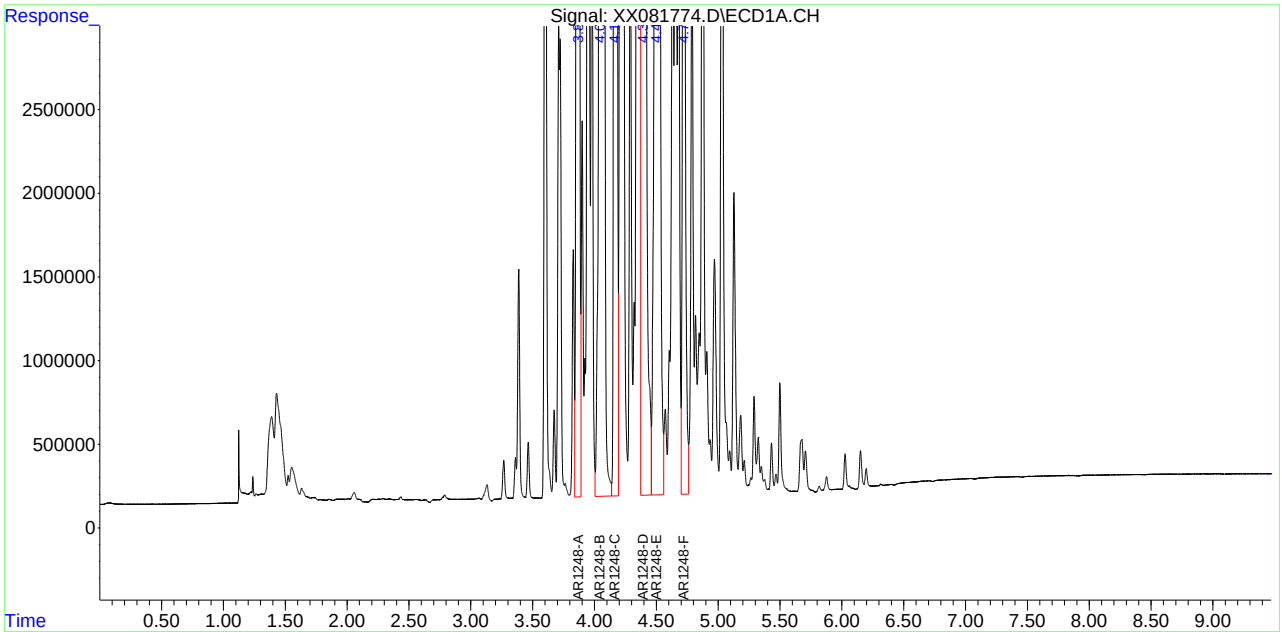
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

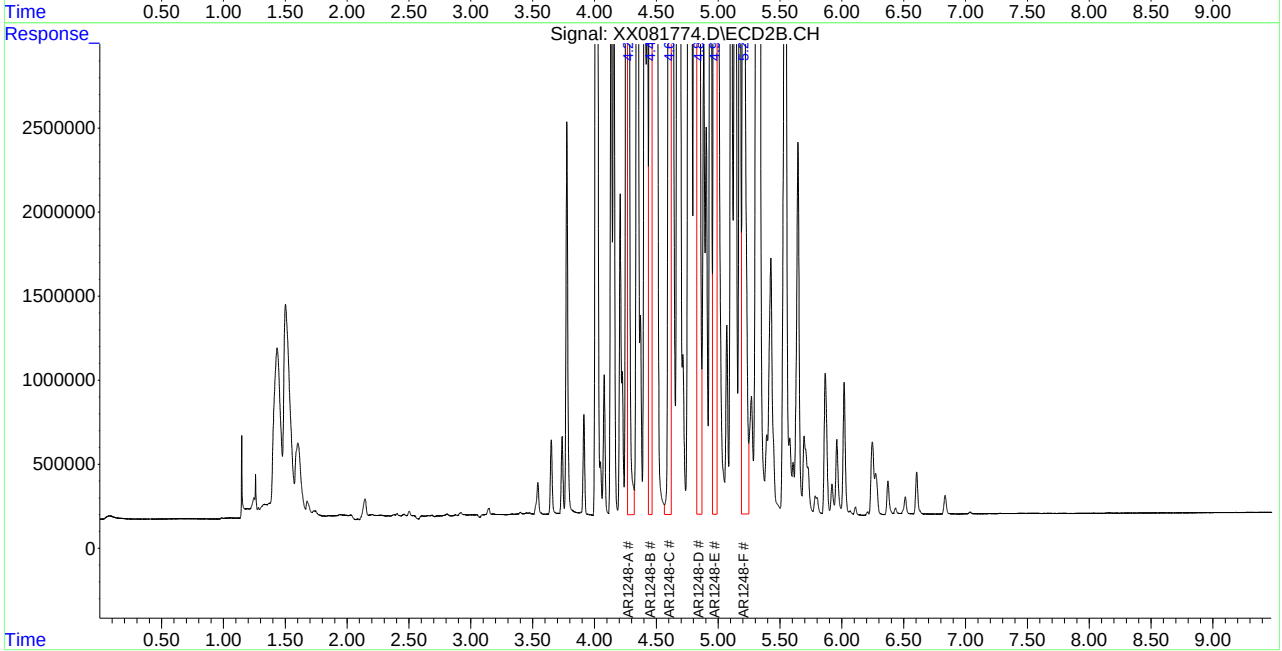
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081774.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:32:55
Operator : eduardom
Sample : ic1547-1000 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 39 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:45:28 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Aug 01 11:02:53 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:21:43
Operator : eduardom
Sample : icv1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:49:28 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:44:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
2)	L1 AR1016-A	3.388	3.778	4097239	7025618	416.087	407.816
3)	L1 AR1016-B	3.603	4.015	7294513	10951326	437.753	429.052
4)	L1 AR1016-C	3.723	4.157	3859056	5925473	442.564	433.961
5)	L1 AR1016-D	3.870	4.273	14772021	20898938	466.514	451.304
6)	L1 AR1016-E	3.946	4.349	7949484	11817855	463.630	456.535
7)	L1 AR1016-F	4.165	4.606	6929877	9899151	468.542	449.710
	Sum AR1016-A			44902192	66518361	2695.088	2628.378
	Average AR1016-A					449.181	438.063
	Sum AR1221-A			0	0	N.D.	N.D.
	Average AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
37)	L7 AR1260-A	4.817	5.315	12013306	13693020	414.825	380.631
38)	L7 AR1260-B	4.966	5.428	16189654	18280124	415.543	395.474
39)	L7 AR1260-C	5.126	5.644	14142196	16446096	407.264	417.393
40)	L7 AR1260-D	5.323	5.875	12032300	14675672	419.896	399.099
41)	L7 AR1260-E	5.497	6.019	30475714	33377354	421.548	407.565
42)	L7 AR1260-F	5.666	6.249	14340696	15554136	419.872	397.988
	Sum AR1260-A			99193865	112.0E6	2498.947	2398.151
	Average AR1260-A					416.491	399.692
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

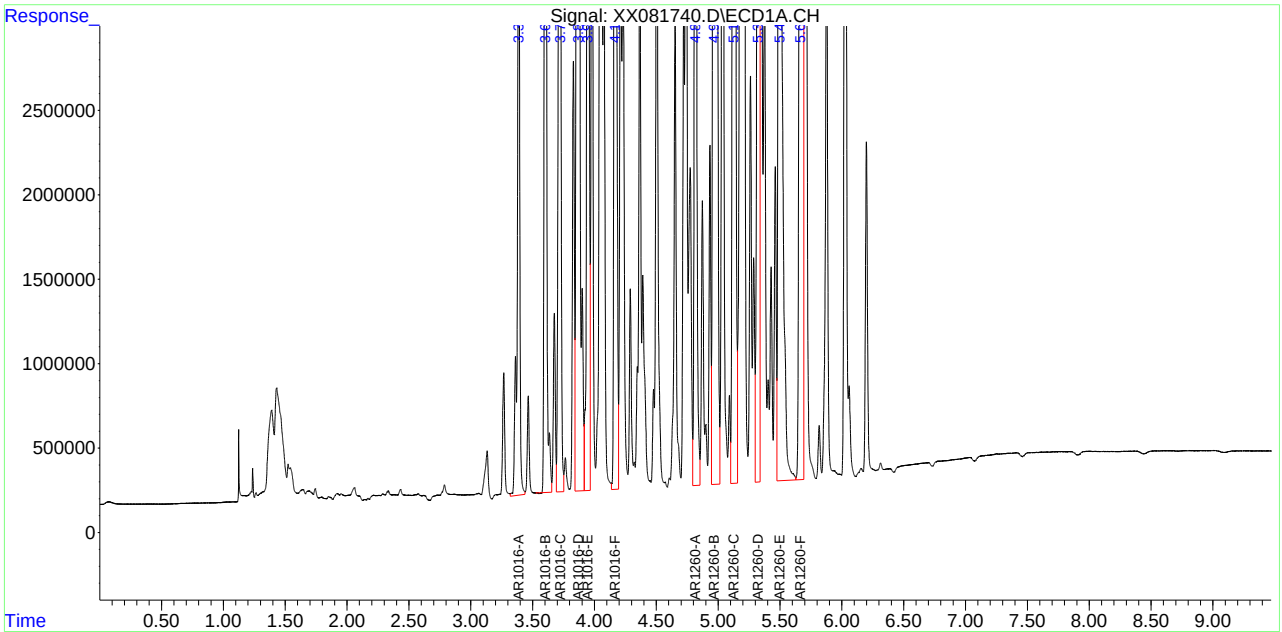
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

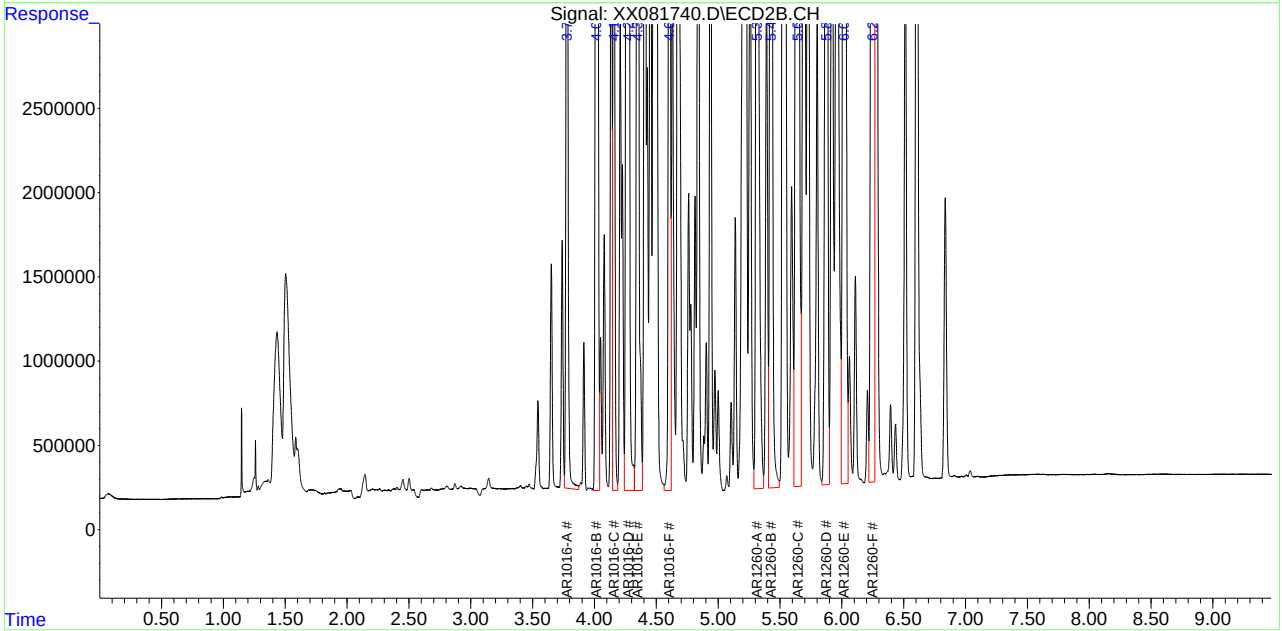
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081740.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 16:21:43
Operator : eduardom
Sample : icv1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 13:49:28 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:44:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:03:15
Operator : eduardom
Sample : icv1547-400 1221 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:38:36 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
8)	L2 AR1221-A	2.785	3.146	854365	1938331	388.474	395.552
9)	L2 AR1221-B	3.061	3.400	328262	721894	391.988	393.404
10)	L2 AR1221-C	3.267	3.651	2146736	3987639	374.531	420.274
11)	L2 AR1221-D	3.362	3.739	1398790	2605135	367.479	423.431
12)	L2 AR1221-E	3.388	3.777	5260505	8496735	370.292	427.915
	Sum AR1221-A			9988658	17749734	1892.764	2060.576
	Average AR1221-A					378.553	412.115
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
	Average AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

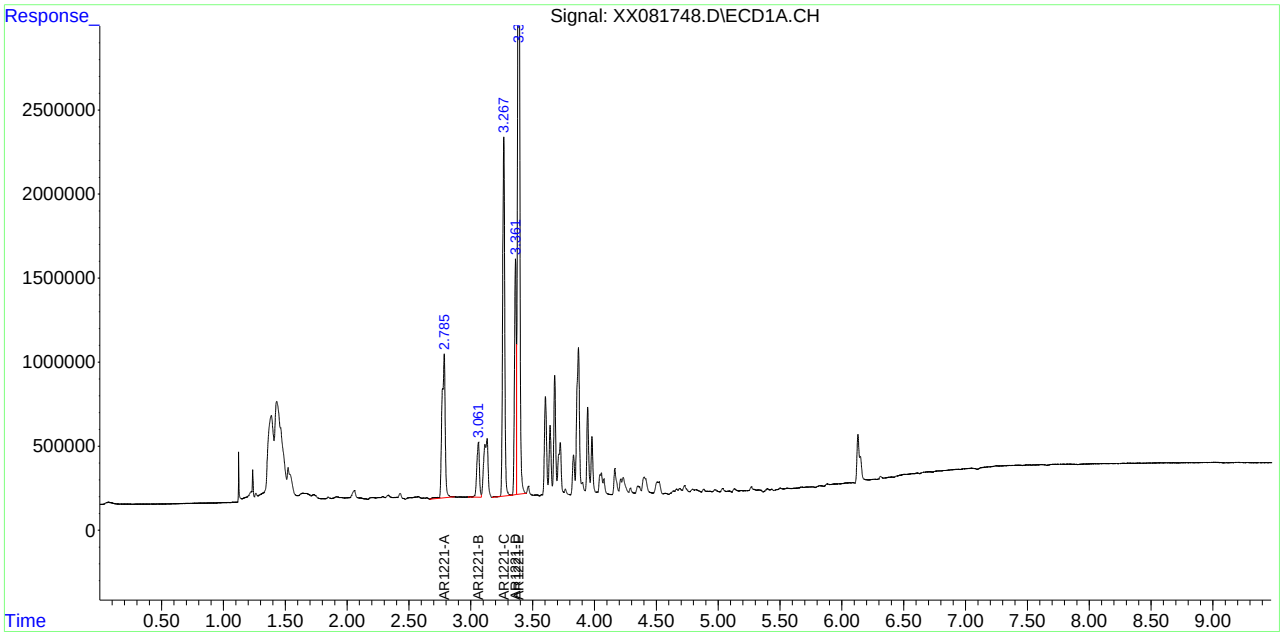
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

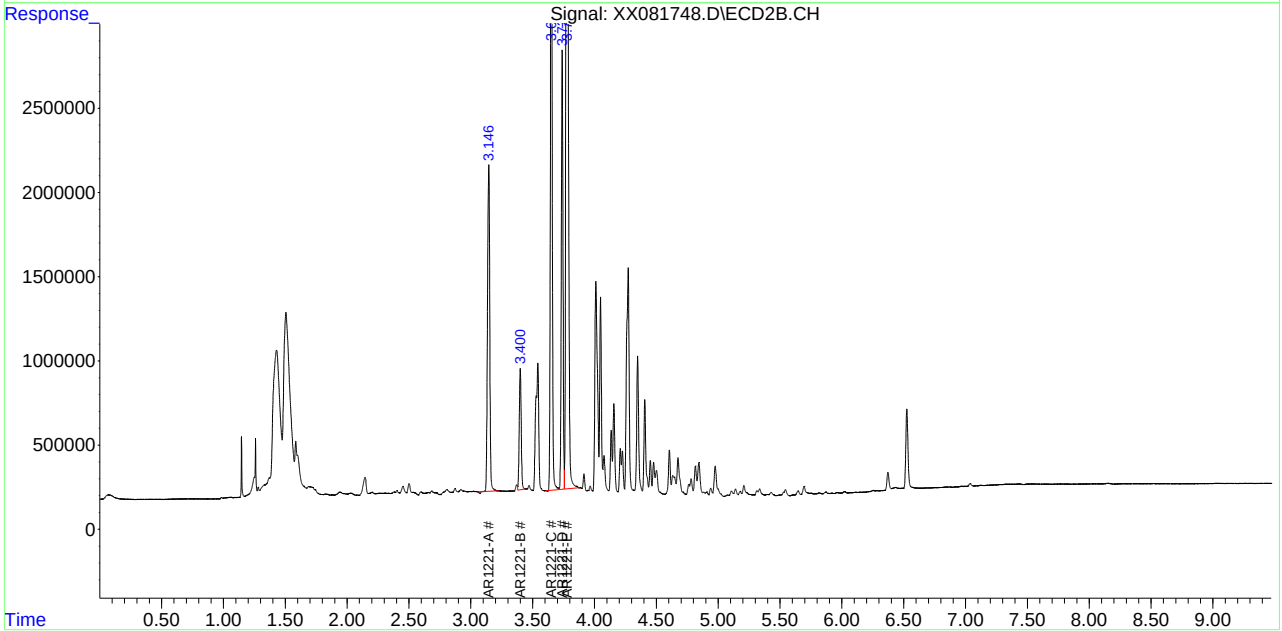
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081748.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:03:15
Operator : eduardom
Sample : icv1547-400 1221 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:38:36 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:15:57
Operator : eduardom
Sample : icv1547-400 1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:39:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
31) L6 AR1254-A	4.367	4.839	7315325	11370412	351.253	344.873
32) L6 AR1254-B	4.503	4.938	10926634	12461532	358.462	341.669
33) L6 AR1254-C	4.722	5.206	13657527	18656313	359.353	352.944
34) L6 AR1254-D	4.873	5.331	9338932	12786566	348.731	347.568
35) L6 AR1254-E	4.969	5.427	6999203	7598533	328.760	321.698
36) L6 AR1254-F	5.126	5.645	11097215	13875056	349.626	333.013
Sum AR1254-A			59334836	76748413	2096.185	2041.764
Average AR1254-A					349.364	340.294
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

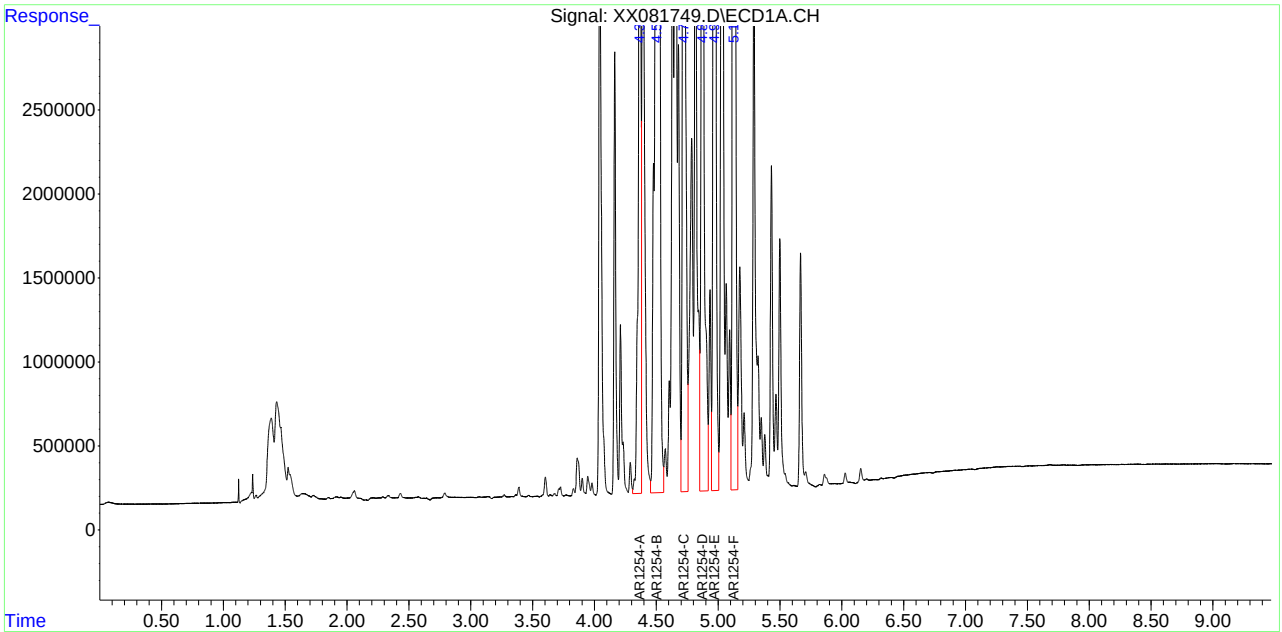
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

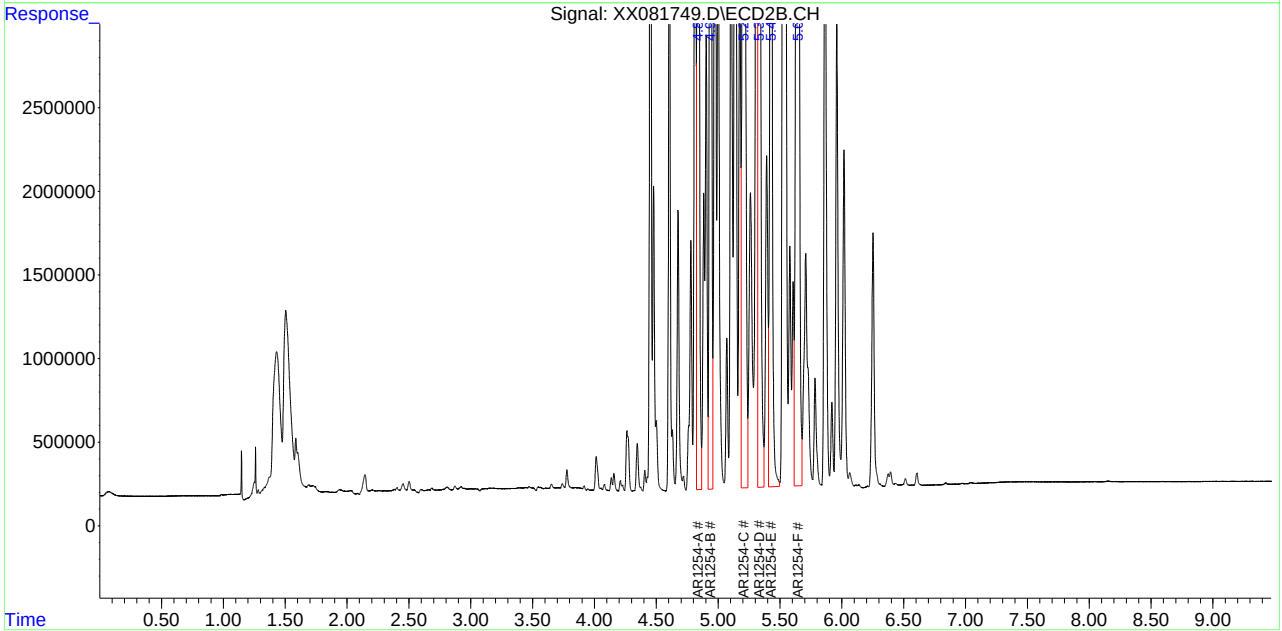
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081749.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 18:15:57
Operator : eduardom
Sample : icv1547-400 1254 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 20 15:39:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:57:21
Operator : eduardom
Sample : icv1547-400 1232 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:58:45 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:56:05 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
13) L3 AR1232-A	3.387	3.777	5094973	8460354	471.017	528.430
14) L3 AR1232-B	3.602	4.014	3272315	5237042	428.120	472.232
15) L3 AR1232-C	3.869	4.273	6323516	9329923	439.738	425.561
16) L3 AR1232-D	3.945	4.349	3459740	5200303	431.567	411.393
17) L3 AR1232-E	3.979	4.606	2546481	3927655	433.028	431.497
18) L3 AR1232-F	4.164	4.676	2643670	3480274	406.954	448.908
Sum AR1232-A			23340695	35635550	2610.424	2718.021
Average AR1232-A					435.071	453.003
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

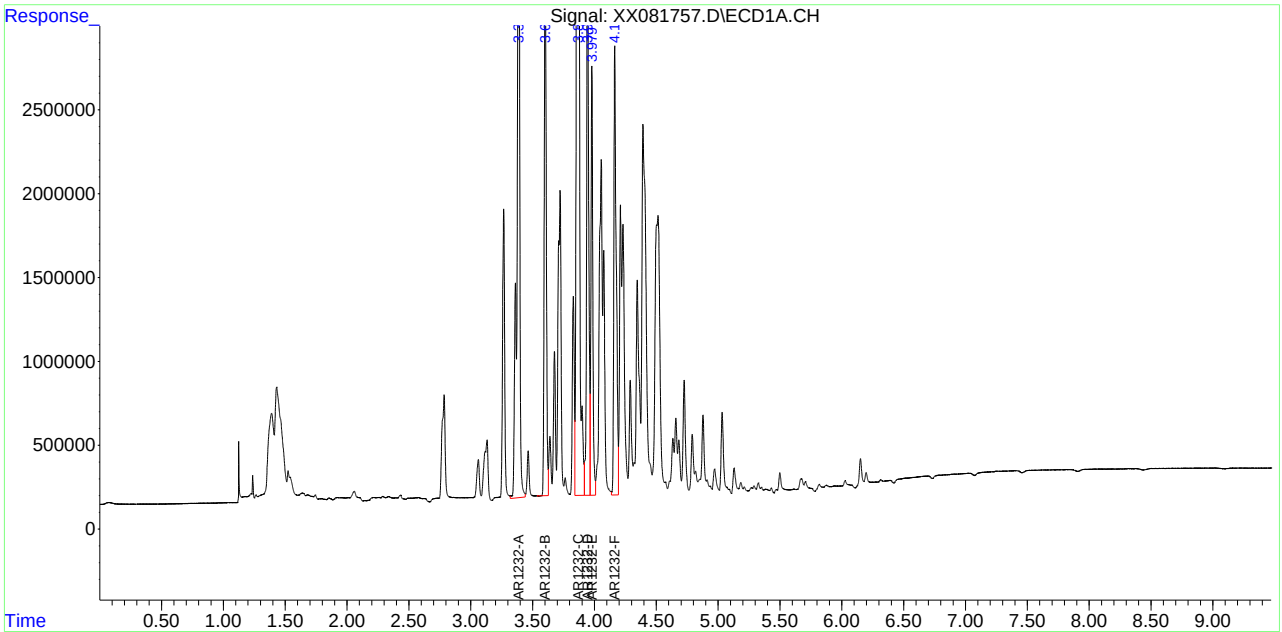
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

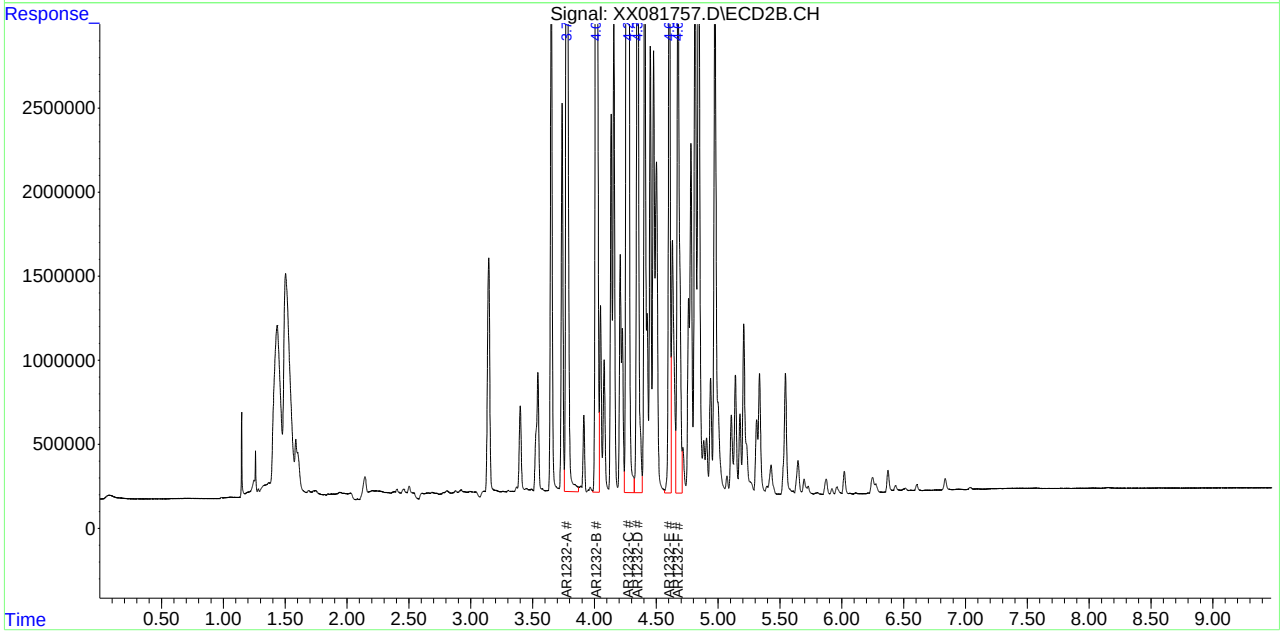
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081757.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 19:57:21
Operator : eduardom
Sample : icv1547-400 1232 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:58:45 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:56:05 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081758.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:10:01
Operator : eduardom
Sample : icv1547-400 1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:59:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:56:05 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
Average	AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
Average	AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
Average	AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
Average	AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
Average	AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
Average	AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
Average	AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
Average	AR1262-A					0.000	0.000
49)	L8 AR1268-A	5.183	5.693	5826785	6799523	389.636	419.054
50)	L8 AR1268-B	5.317	5.876	7807131	8620759	388.749	371.119
51)	L8 AR1268-C	5.677	6.240	38021818	37736813	401.462	394.653
52)	L8 AR1268-D	5.701	6.271	33679948	31903904	400.741	389.169
53)	L8 AR1268-E	5.814	6.433	30295717	29811573	402.672	393.881
54)	L8 AR1268-F	6.024	6.604	11985071	12379728	404.786	398.407
	Sum AR1268-A			127.6E6	127.3E6	2388.047	2366.283
Average	AR1268-A					398.008	394.380

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

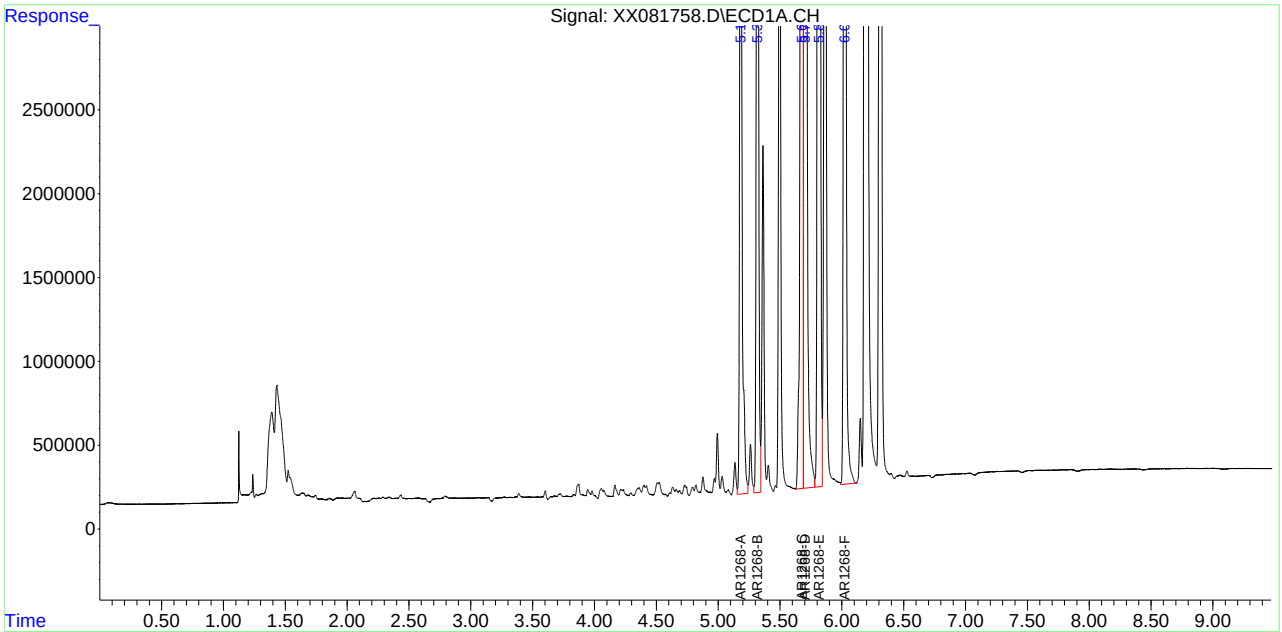
SGS FA98819

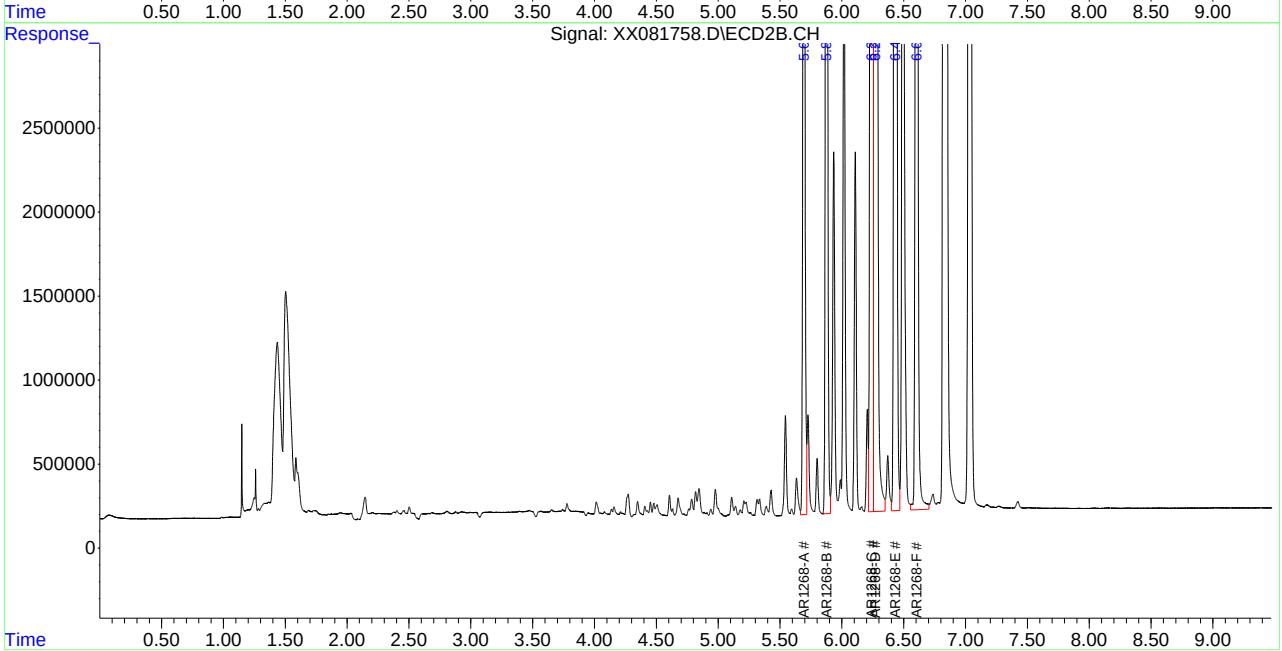
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081758.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 20:10:01
Operator : eduardom
Sample : icv1547-400 1268 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:59:03 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:56:05 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:51:34
Operator : eduardom
Sample : icv1547-400 1242 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 32 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:04:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:03:23 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
Average	AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
Average	AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
Average	AR1232-A					0.000	0.000
19)	L4 AR1242-A	3.388	3.777	3064899	5269915	386.528	438.433
20)	L4 AR1242-B	3.603	4.014	5454878	7903617	389.973	432.742
21)	L4 AR1242-C	3.722	4.156	2783551	4266450	388.340	434.596
22)	L4 AR1242-D	3.869	4.272	10022697	14766895	395.602	392.258
23)	L4 AR1242-E	3.945	4.348	5507570	8183652	400.502	386.621
24)	L4 AR1242-F	4.164	4.605	4821027	6973023	387.159	369.197
	Sum AR1242-A			31654622	47363552	2348.104	2453.847
Average	AR1242-A					391.351	408.974
	Sum AR1248-A			0	0	N.D.	N.D.
Average	AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
Average	AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
Average	AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
Average	AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
Average	AR1268-A					0.000	0.000

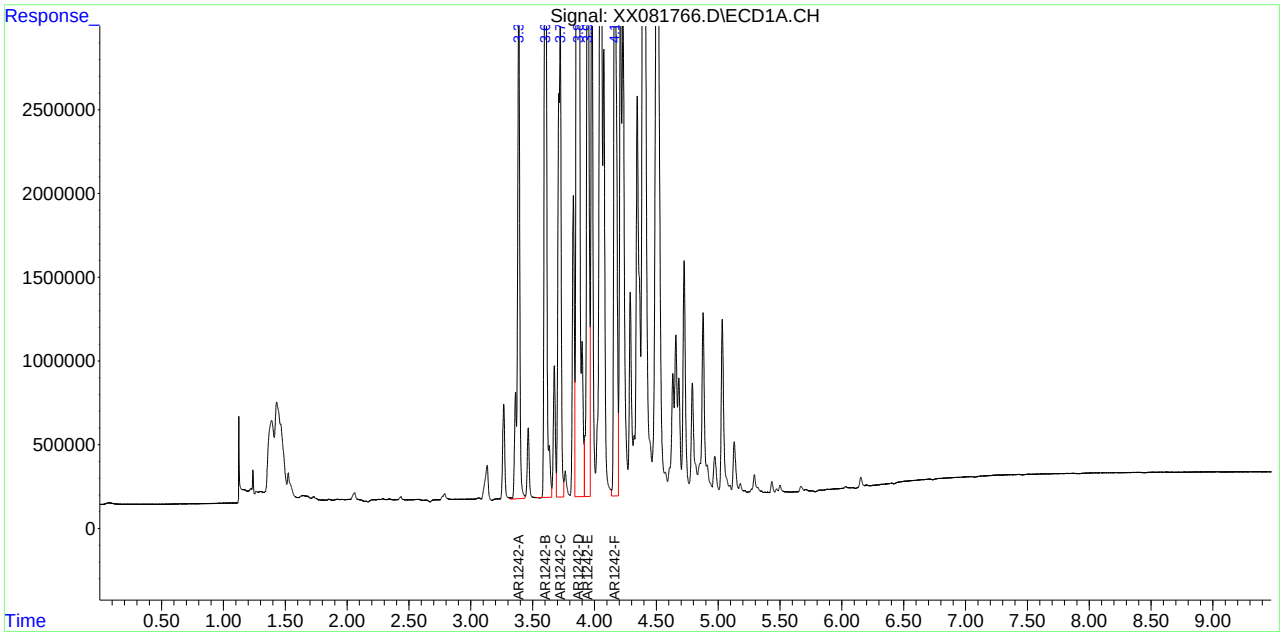
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

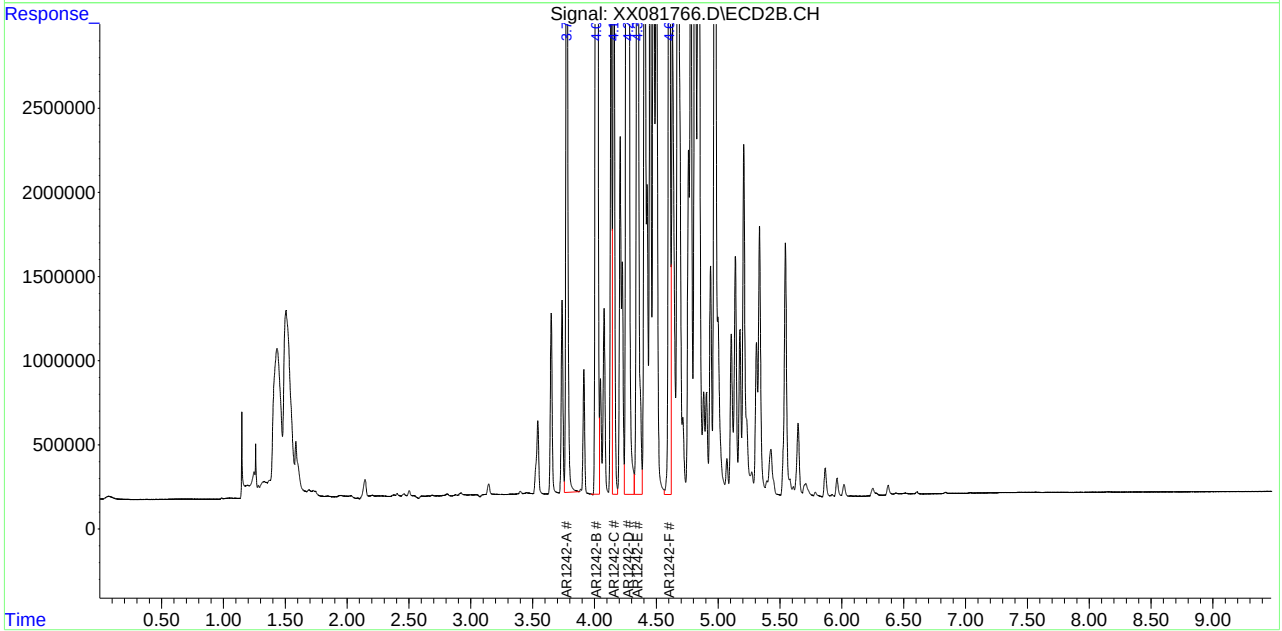
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081766.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 21:51:34
Operator : eduardom
Sample : icv1547-400 1242 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 32 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:04:59 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:03:23 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081767.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:04:15
Operator : eduardom
Sample : icv1547-400 1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:05:22 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:03:23 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
43) L9 AR1262-A	4.817	5.314	8012192	9914255	347.527	325.742
44) L9 AR1262-B	4.967	5.427	10047296	11789549	339.707	331.573
45) L9 AR1262-C	5.182	5.693	15210943	17006884	360.567	349.000
46) L9 AR1262-D	5.323	5.875	12936093	15591254	360.332	347.409
47) L9 AR1262-E	5.497	6.018	29261654	31022855	364.668	351.025
48) L9 AR1262-F	5.677	6.243	13558609	16349379	374.894	358.795
Sum AR1262-A			89026788	101.7E6	2147.695	2063.545
Average AR1262-A					357.949	343.924
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

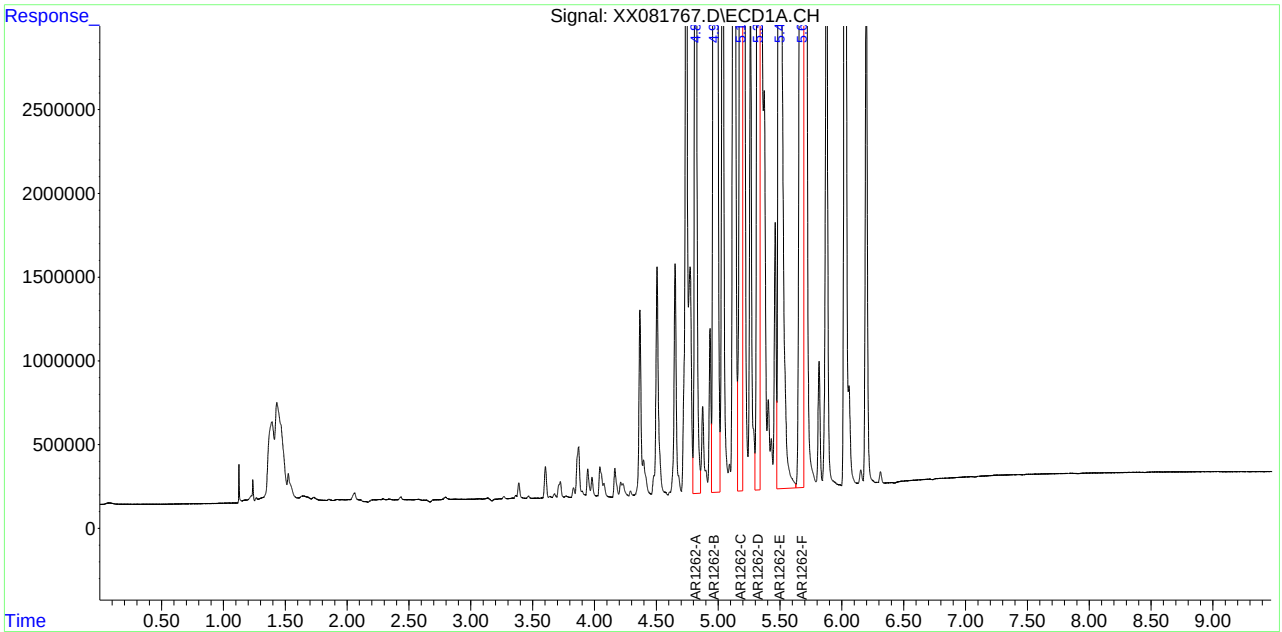
SGS FA98819

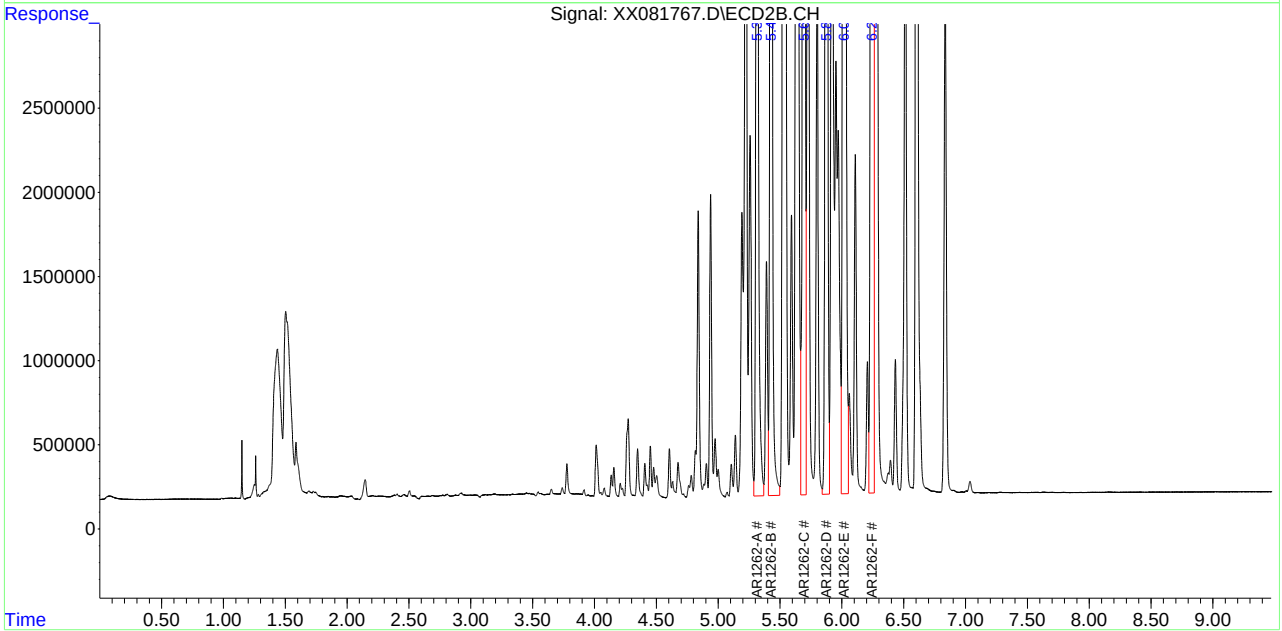
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081767.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 22:04:15
Operator : eduardom
Sample : icv1547-400 1262 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 16:05:22 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 16:03:23 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081775.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:45:30
Operator : eduardom
Sample : icv1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 40 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:55:31 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.866	4.272	6023646	8522985	397.312	382.101
26) L5 AR1248-B	4.045	4.452	6275126	9027721	441.518	405.041
27) L5 AR1248-C	4.164	4.605	8322520	11861897	437.061	415.787
28) L5 AR1248-D	4.394	4.841	8823529	13306111	464.176	449.000
29) L5 AR1248-E	4.502	4.974	6471146	12867054	445.431	480.317
30) L5 AR1248-F	4.723	5.206	4302748	6113104	424.824	412.067
Sum AR1248-A			40218716	61698872	2610.321	2544.312
Average AR1248-A					435.054	424.052
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

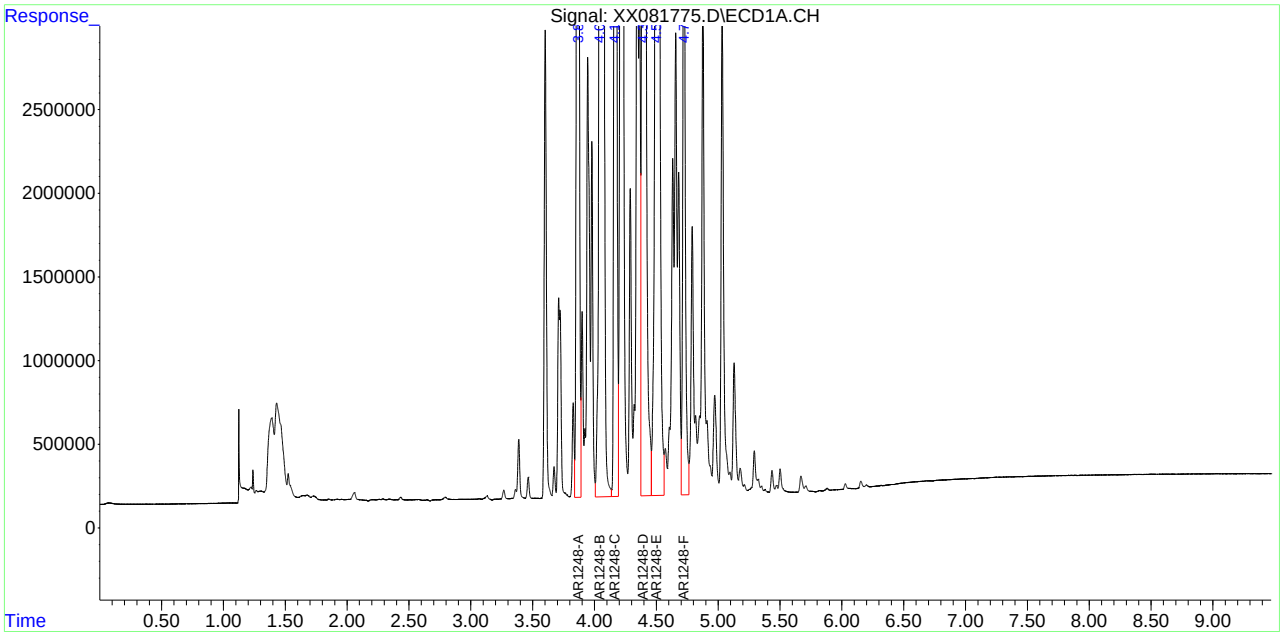
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

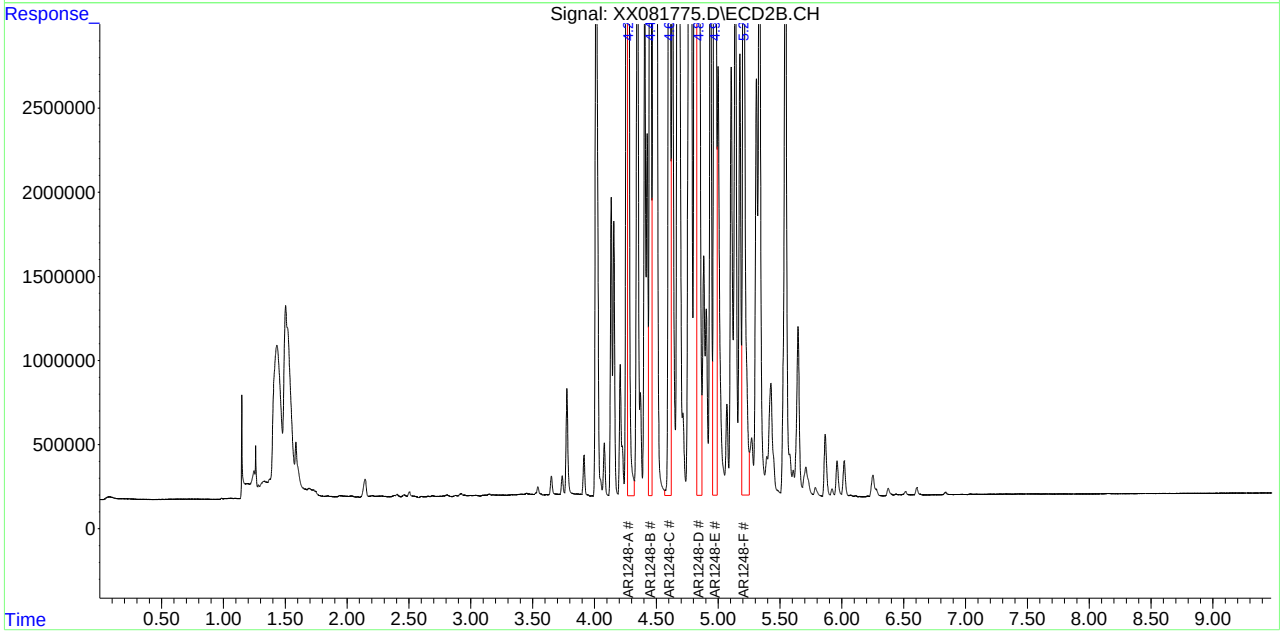
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1547_091622\
Data File : XX081775.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 16-Sep-22, 23:45:30
Operator : eduardom
Sample : icv1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1547,15,,,5,1,Soil
ALS Vial : 40 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 19 14:55:31 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Mon Sep 19 14:53:27 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081780.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:09:08
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:49:34 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	3.153	3.470	19977213	44046520	41.037	36.999
Spiked Amount	50.000 Range	44 - 126	Recovery	=	82.07%	74.00%
55) S Decachlor...	6.310	7.033	18369513	17763346	33.107	36.058
Spiked Amount	50.000 Range	41 - 145	Recovery	=	66.21%	72.12%
Target Compounds						
2) L1 AR1016-A	3.386	3.775	3292041	6392070	334.317	371.041
3) L1 AR1016-B	3.602	4.012	5795921	9319572	347.820	365.123
4) L1 AR1016-C	3.721	4.154	3025845	5033178	347.010	368.612
5) L1 AR1016-D	3.868	4.270	10617788	17055393	335.319	368.304
6) L1 AR1016-E	3.943	4.346	5785907	9601044	337.446	370.897
7) L1 AR1016-F	4.163	4.603	5044558	8129744	341.072	369.327
Sum AR1016-A			33562059	55531002	2042.983	2213.305
Average AR1016-A					340.497	368.884
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
37) L7 AR1260-A	4.815	5.311	9871858	13905986	340.879	386.551
38) L7 AR1260-B	4.965	5.425	12937659	16777929	332.074	362.976
39) L7 AR1260-C	5.123	5.640	12185208	14862281	350.907	377.197
40) L7 AR1260-D	5.321	5.872	9752103	13625419	340.323	370.538
41) L7 AR1260-E	5.495	6.016	21517727	29536579	297.639	360.666
42) L7 AR1260-F	5.664	6.246	10415846	15057815	304.959	385.288
Sum AR1260-A			76680400	103.8E6	1966.780	2243.216
Average AR1260-A					327.797	373.869
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081780.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:09:08
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:49:34 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

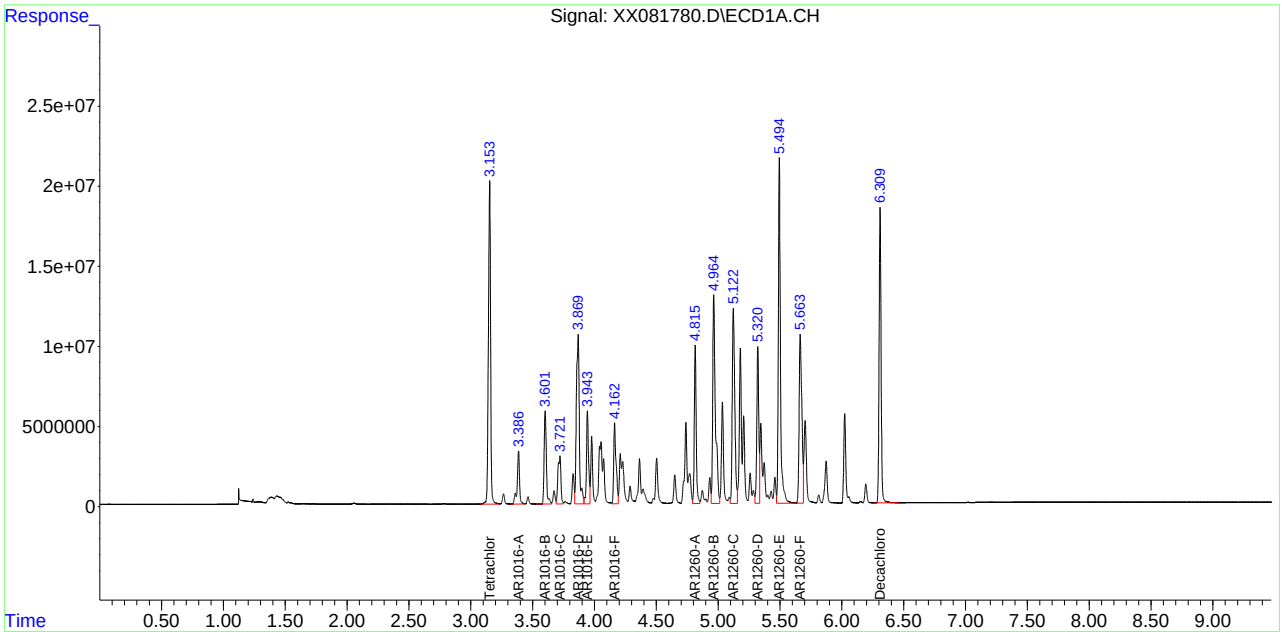
12.6.66 12

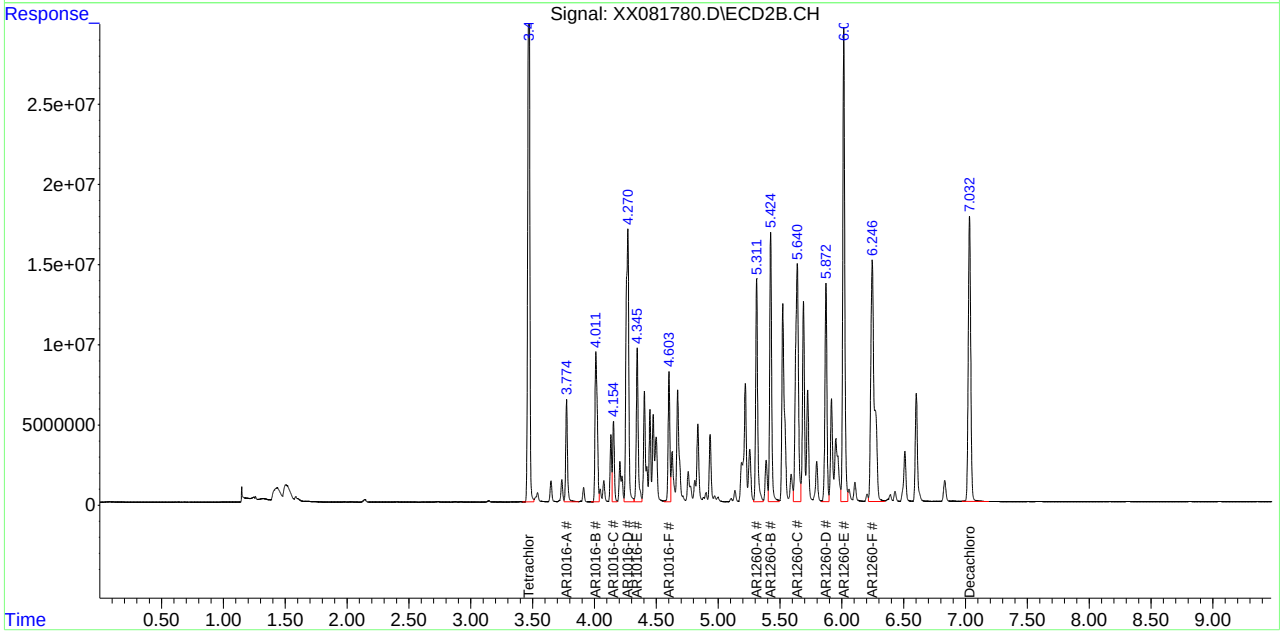
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081780.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:09:08
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:49:34 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/22/22 14:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081781.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:21:48
Operator : eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:51:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
8)	L2 AR1221-A	2.784	3.144	843173	2069147	383.385	422.247
9)	L2 AR1221-B	3.060	3.398	324956	797014	348.056	434.342
10)	L2 AR1221-C	3.265	3.649	1968338	3961074	343.406	417.474
11)	L2 AR1221-D	3.360	3.737	1298862	2598391	341.082m	422.335
12)	L2 AR1221-E	3.386	3.775	4729580	8368665	332.929m	421.465
	Sum AR1221-A			9164908	17794291	1748.858	2117.863
	Average AR1221-A					349.772	423.573
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
31)	L6 AR1254-A	4.365	4.837	7238608	11992751	347.569	363.749
32)	L6 AR1254-B	4.501	4.936	10503363	13307544	344.576	364.864
33)	L6 AR1254-C	4.721	5.204	12513199	19226439	329.243	363.729
34)	L6 AR1254-D	4.873	5.330	8886371	13168585	331.832	357.952
35)	L6 AR1254-E	4.968	5.425	7100272	8538702	333.508	361.502
36)	L6 AR1254-F	5.125	5.643	10889430	15371262	343.079	368.924
	Sum AR1254-A			57131242	81605283	2029.808	2180.720
	Average AR1254-A					338.301	363.453
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

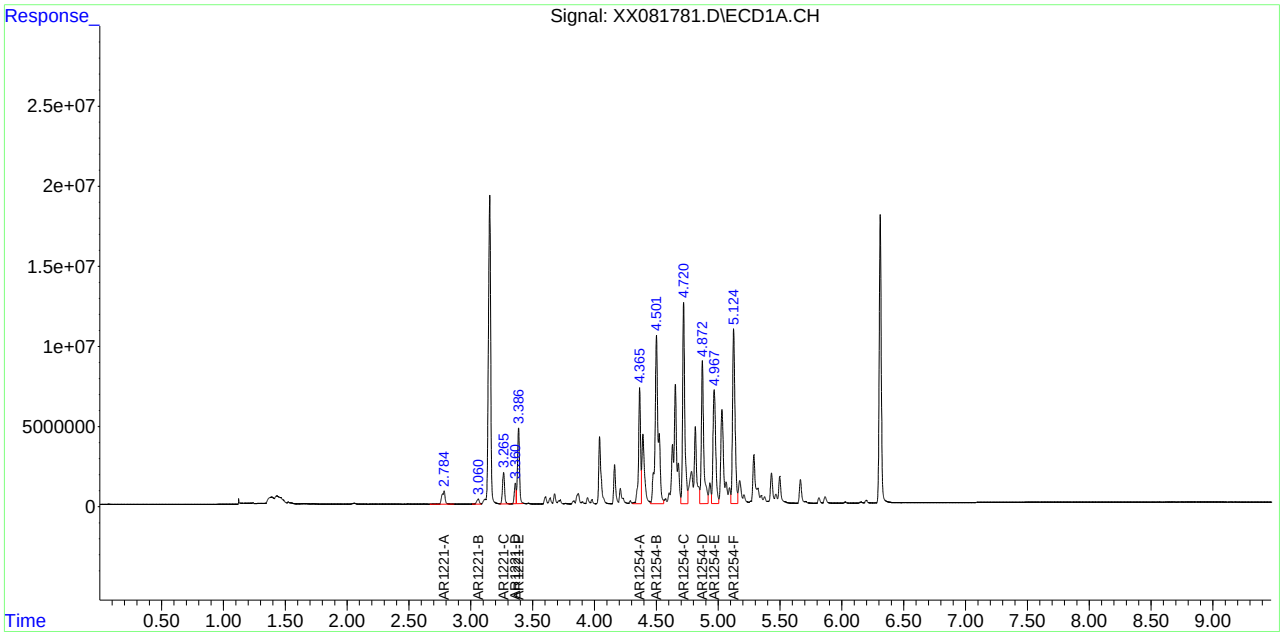
12.6.67 12

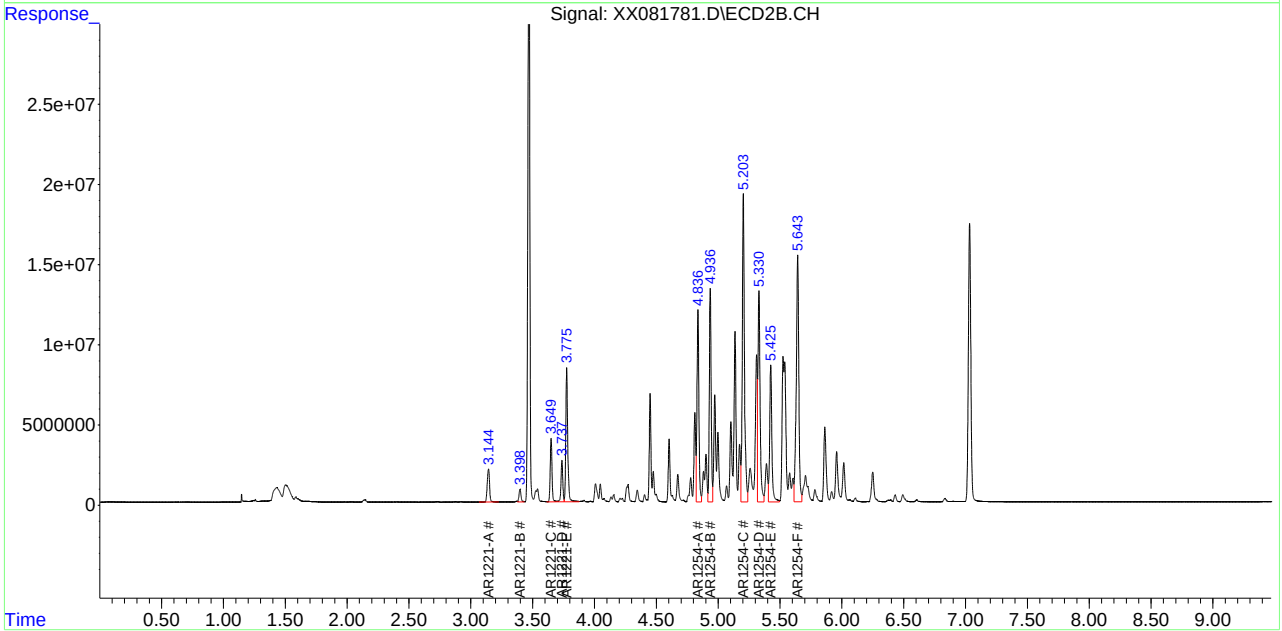
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081781.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:21:48
Operator : eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:51:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Manual Integration Approval Summary

Sample Number:	GXX1548-CC1547	**Method:**	SW846 8082A
Lab FileID:	XX081781.D	**Analyst approved:**	09/22/22 10:11 Eduardo Melendez
Injection Time:	09/21/22 11:21	**Supervisor approved:**	09/22/22 14:36 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.36	Poor instrument integration
AR1221-E		1	3.39	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081782.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:34:35 (#1); 21-Sep-22, 11:34:34 (#2)
Operator : eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:52:09 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
Average	AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
Average	AR1221-A					0.000	0.000
13) L3	AR1232-A	3.387	3.775	3657697	6675654	338.144	416.959
14) L3	AR1232-B	3.602	4.012	2798009	4560109	366.066	411.192
15) L3	AR1232-C	3.868	4.271	5035481	8111017	350.168	369.964
16) L3	AR1232-D	3.944	4.347	2708120	4561953	337.810	360.894
17) L3	AR1232-E	3.979	4.604	2040864	3632994	347.048	399.125
18) L3	AR1232-F	4.164	4.674	2192267	3101253	337.467	400.019
	Sum AR1232-A			18432438	30642980	2076.704	2358.152
Average	AR1232-A					346.117	393.025
	Sum AR1242-A			0	0	N.D.	N.D.
Average	AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
Average	AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
Average	AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
Average	AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
Average	AR1262-A					0.000	0.000
49) L8	AR1268-A	5.183	5.692	4910549	6530712	328.368	402.487
50) L8	AR1268-B	5.317	5.874	6640061	8561995	330.636	368.590
51) L8	AR1268-C	5.678	6.239	32351688	36438237	341.593	381.073
52) L8	AR1268-D	5.701	6.269	28432139	29844068	338.300	364.043
53) L8	AR1268-E	5.814	6.431	25550770	28505663	339.605	376.627
54) L8	AR1268-F	6.024	6.602	9725335	11435630	328.465	368.024
	Sum AR1268-A			107.6E6	121.3E6	2006.967	2260.842
Average	AR1268-A					334.494	376.807

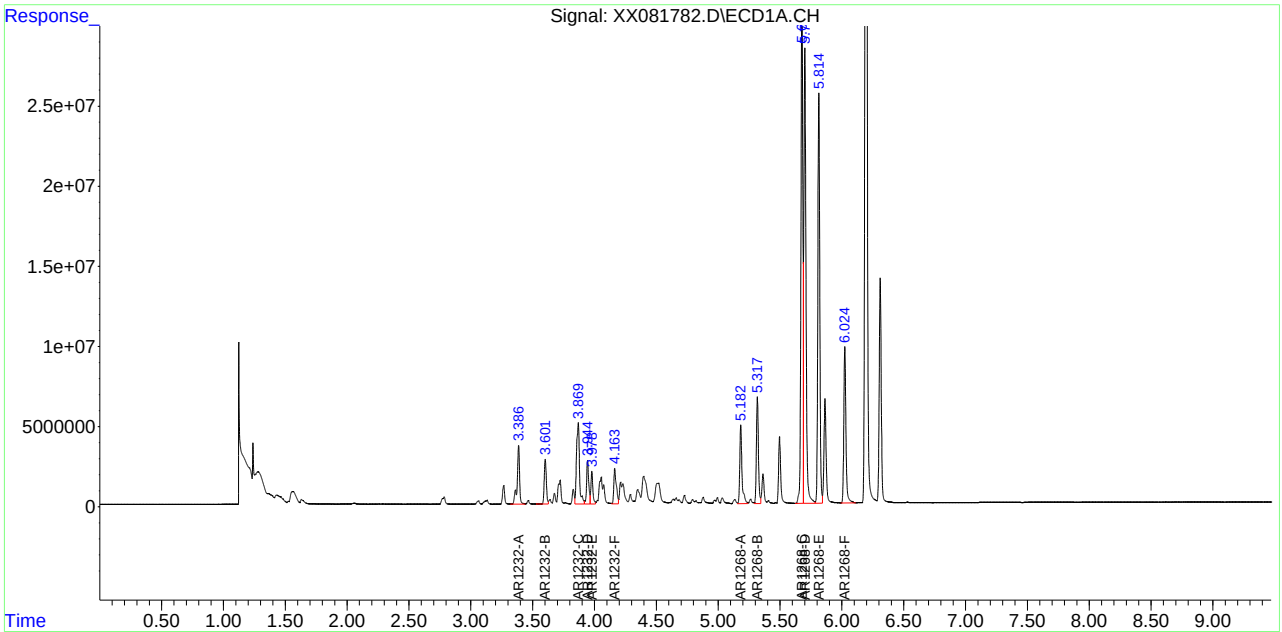
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

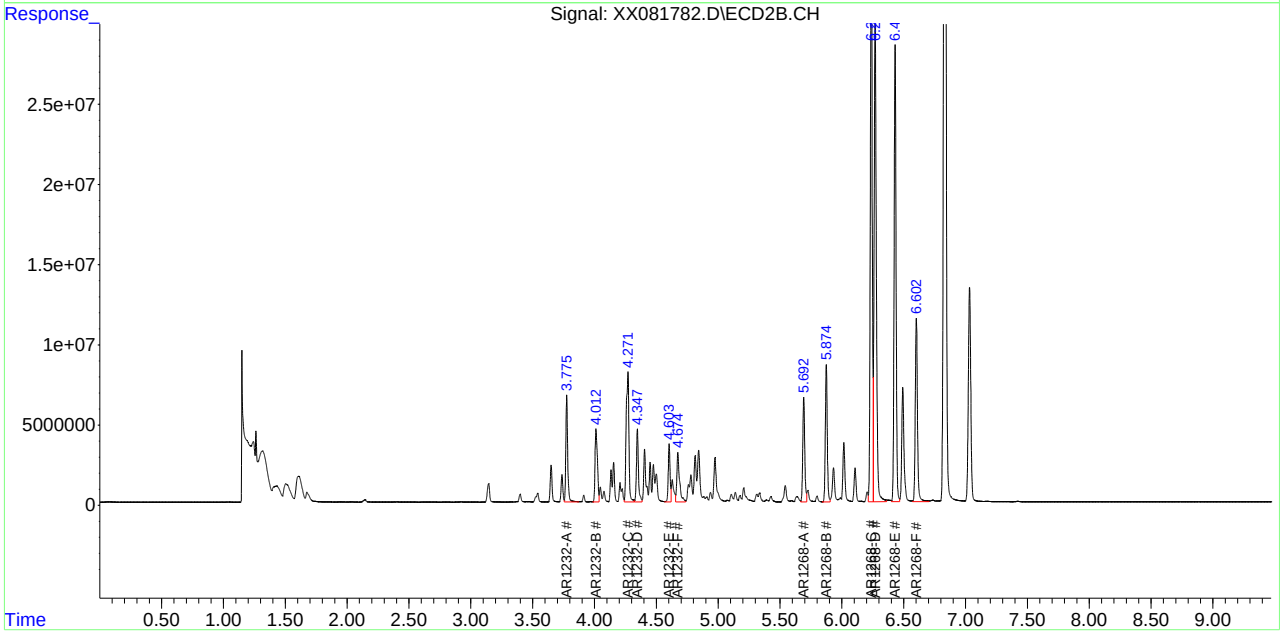
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081782.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:34:35 (#1); 21-Sep-22, 11:34:34 (#2)
Operator : eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 11:52:09 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081783.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:47:14
Operator : eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:43:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
19) L4 AR1242-A	3.387	3.776	2775975	5019005	350.091	417.559
20) L4 AR1242-B	3.603	4.013	4974131	7593740	355.604	415.775
21) L4 AR1242-C	3.722	4.155	2561245	4159107	357.325	423.662
22) L4 AR1242-D	3.869	4.271	8991937	13927415	354.917	369.958
23) L4 AR1242-E	3.944	4.347	4953973	7877577	360.245	372.161
24) L4 AR1242-F	4.164	4.604	4489036	6996953	360.498	370.464
Sum AR1242-A			28746297	45573797	2138.680	2369.579
Average AR1242-A					356.447	394.930
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
43) L9 AR1262-A	4.816	5.312	8222248	11919156	356.638	391.615
44) L9 AR1262-B	4.966	5.426	10435390	13138754	352.829	369.518
45) L9 AR1262-C	5.181	5.691	14594195	17987455	345.947	369.123
46) L9 AR1262-D	5.322	5.873	12404503	16621288	345.525	370.361
47) L9 AR1262-E	5.497	6.017	27098642	32560775	337.712	368.427
48) L9 AR1262-F	5.675	6.242	13098356	17110396	362.168	375.496
Sum AR1262-A			85853335	109.3E6	2100.819	2244.540
Average AR1262-A					350.137	374.090
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

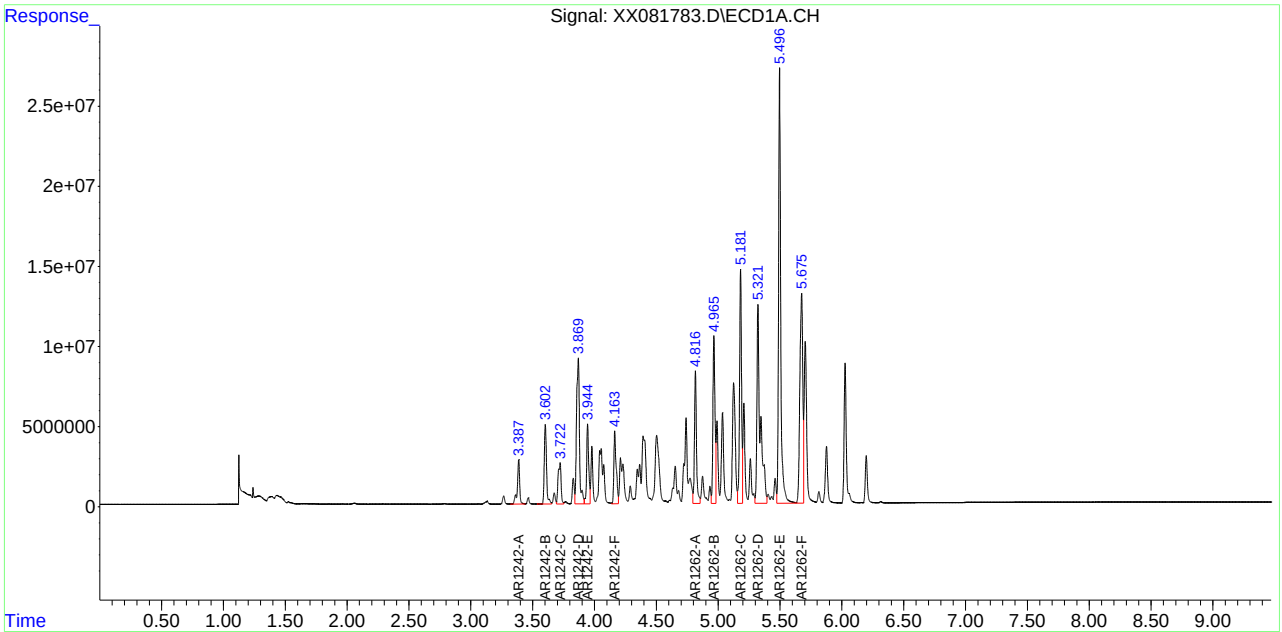
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

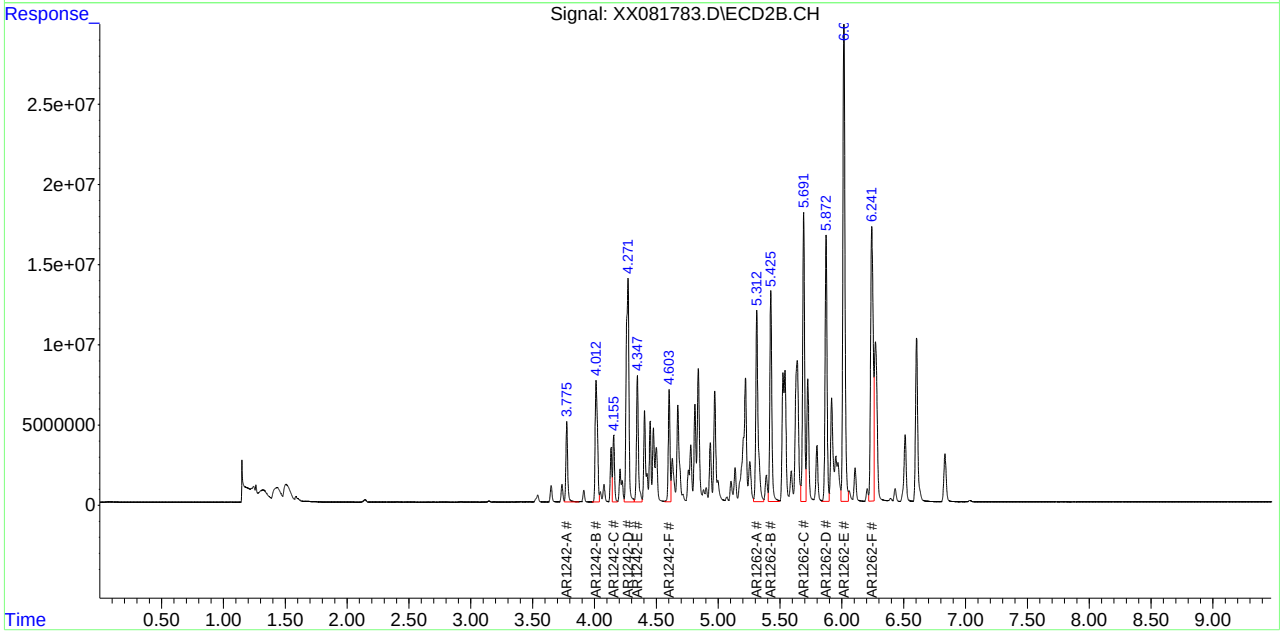
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081783.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:47:14
Operator : eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:43:29 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081784.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:59:51
Operator : eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:43:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.867	4.270	5706940	8630671	376.422	386.929
26) L5 AR1248-B	4.043	4.450	5574265	8563606	392.205	384.218
27) L5 AR1248-C	4.163	4.604	7128762	10963556	374.370	384.298
28) L5 AR1248-D	4.394	4.840	7138196	11559529	375.516	390.063
29) L5 AR1248-E	4.505	4.973	5298027	10936321	364.681	408.244
30) L5 AR1248-F	4.724	5.206	3453902	5625240	341.015	379.181
Sum AR1248-A			34300091	56278923	2224.209	2332.933
Average AR1248-A					370.702	388.822
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

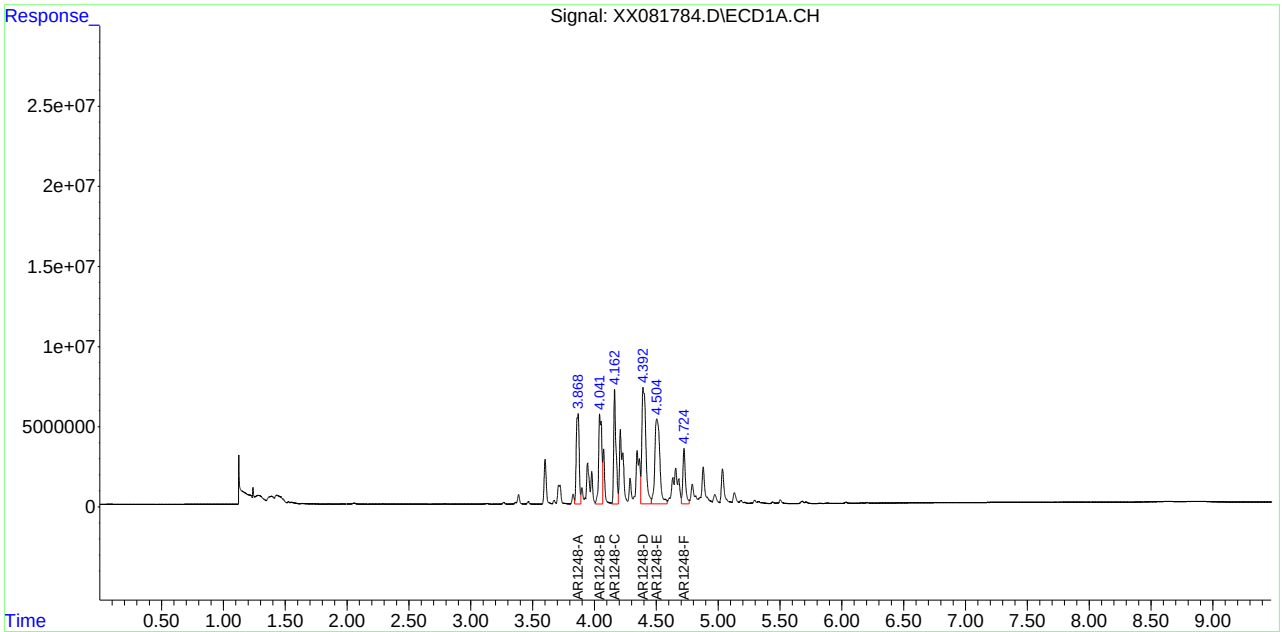
12.6.70 12

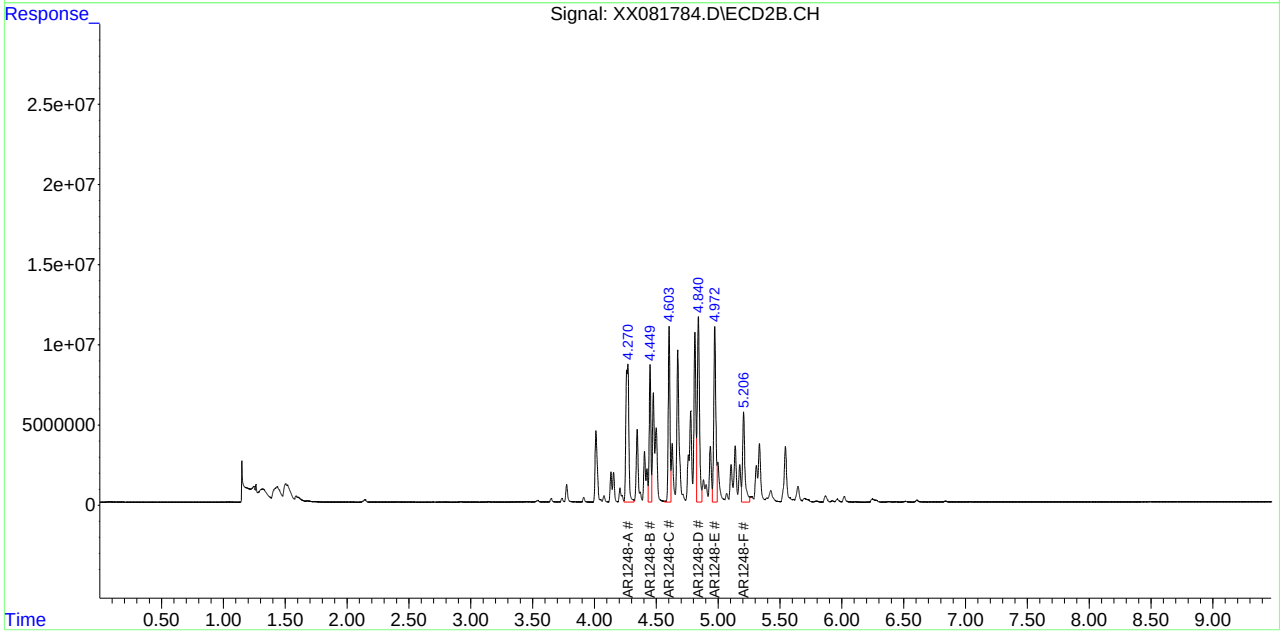
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081784.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 11:59:51
Operator : eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 21 12:43:53 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 13:41:45 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081795.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:19:32
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:15:49 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
1) S Tetrachlo...	3.154	3.471	21472747	45582023	44.109	38.289
Spiked Amount	50.000 Range	44 - 126	Recovery	=	88.22%	76.58%
55) S Decachlor...	6.311	7.034	22129813	19316009	39.884	39.209
Spiked Amount	50.000 Range	41 - 145	Recovery	=	79.77%	78.42%
Target Compounds						
2) L1 AR1016-A	3.387	3.775	3678223	6544969	373.535	379.916
3) L1 AR1016-B	3.602	4.013	6478726	9731172	388.796	381.249
4) L1 AR1016-C	3.721	4.155	3403225	5374556	390.288	393.613
5) L1 AR1016-D	3.868	4.271	11792170	18152278	372.407	391.991
6) L1 AR1016-E	3.944	4.347	6306662	10055137	367.817	388.439
7) L1 AR1016-F	4.164	4.604	5517427	8826542	373.043	400.982
Sum AR1016-A			37176434	58684654	2265.887	2336.191
Average AR1016-A					377.648	389.365
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
37) L7 AR1260-A	4.817	5.313	11168907	14416691	385.667	400.747
38) L7 AR1260-B	4.966	5.426	14768392	17703128	379.063	382.992
39) L7 AR1260-C	5.125	5.642	13326638	15385365	383.777	390.473
40) L7 AR1260-D	5.322	5.873	11379371	14685675	397.110	399.371
41) L7 AR1260-E	5.496	6.017	27142223	31569281	375.438	385.487
42) L7 AR1260-F	5.665	6.247	13348455	15453083	390.821	395.402
Sum AR1260-A			91133986	109.2E6	2311.877	2354.472
Average AR1260-A					385.313	392.412
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081795.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:19:32
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:15:49 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB

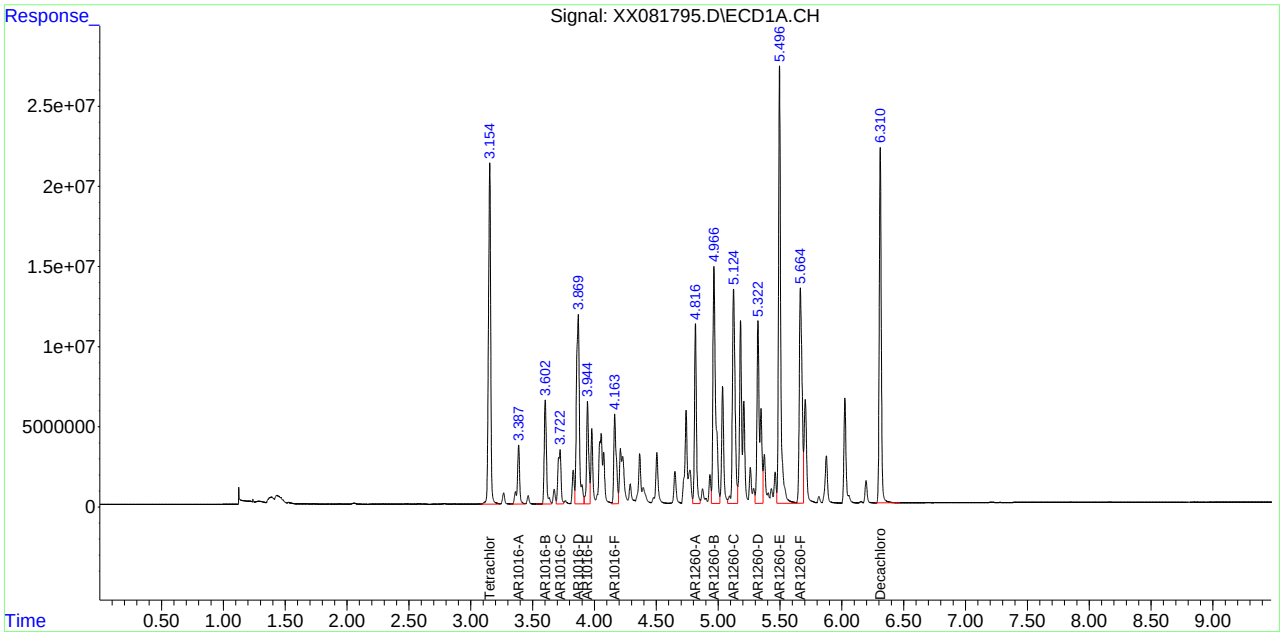
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

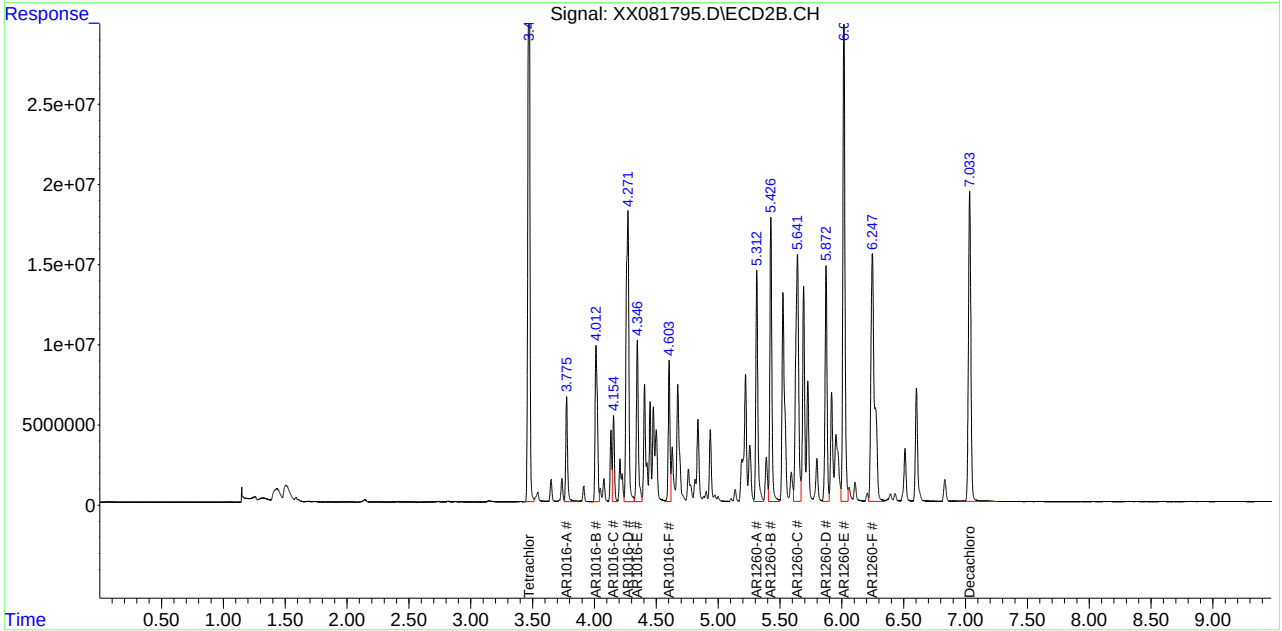
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081795.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:19:32
Operator : eduardom
Sample : cc1547-400 1016/1260 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:15:49 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/22/22 14:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081796.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:32:13
Operator : eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:19:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
	Average AR1016-A					0.000	0.000
8)	L2 AR1221-A	2.785	3.146	948251	2133652	431.163	435.410
9)	L2 AR1221-B	3.061	3.400	356365	796310	381.699	433.958
10)	L2 AR1221-C	3.266	3.651	2178758	4171714	380.118	439.674
11)	L2 AR1221-D	3.361	3.738	1431734	2705233	375.974m	439.701
12)	L2 AR1221-E	3.387	3.776	5225700	8729397	367.853m	439.633
	Sum AR1221-A			10140809	18536305	1936.806	2188.376
	Average AR1221-A					387.361	437.675
	Sum AR1232-A			0	0	N.D.	N.D.
	Average AR1232-A					0.000	0.000
	Sum AR1242-A			0	0	N.D.	N.D.
	Average AR1242-A					0.000	0.000
	Sum AR1248-A			0	0	N.D.	N.D.
	Average AR1248-A					0.000	0.000
31)	L6 AR1254-A	4.366	4.837	8049479	12749731	386.504	386.708
32)	L6 AR1254-B	4.503	4.937	11580394	14210887	379.910	389.632
33)	L6 AR1254-C	4.722	5.205	14117096	20340905	371.445	384.813
34)	L6 AR1254-D	4.874	5.332	9867679	13787445	368.476	374.774
35)	L6 AR1254-E	4.970	5.426	8211835	9047930	385.719	383.061
36)	L6 AR1254-F	5.127	5.644	12645861	16213468	398.417	389.137
	Sum AR1254-A			64472344	86350365	2290.470	2308.126
	Average AR1254-A					381.745	384.688
	Sum AR1260-A			0	0	N.D.	N.D.
	Average AR1260-A					0.000	0.000
	Sum AR1262-A			0	0	N.D.	N.D.
	Average AR1262-A					0.000	0.000
	Sum AR1268-A			0	0	N.D.	N.D.
	Average AR1268-A					0.000	0.000

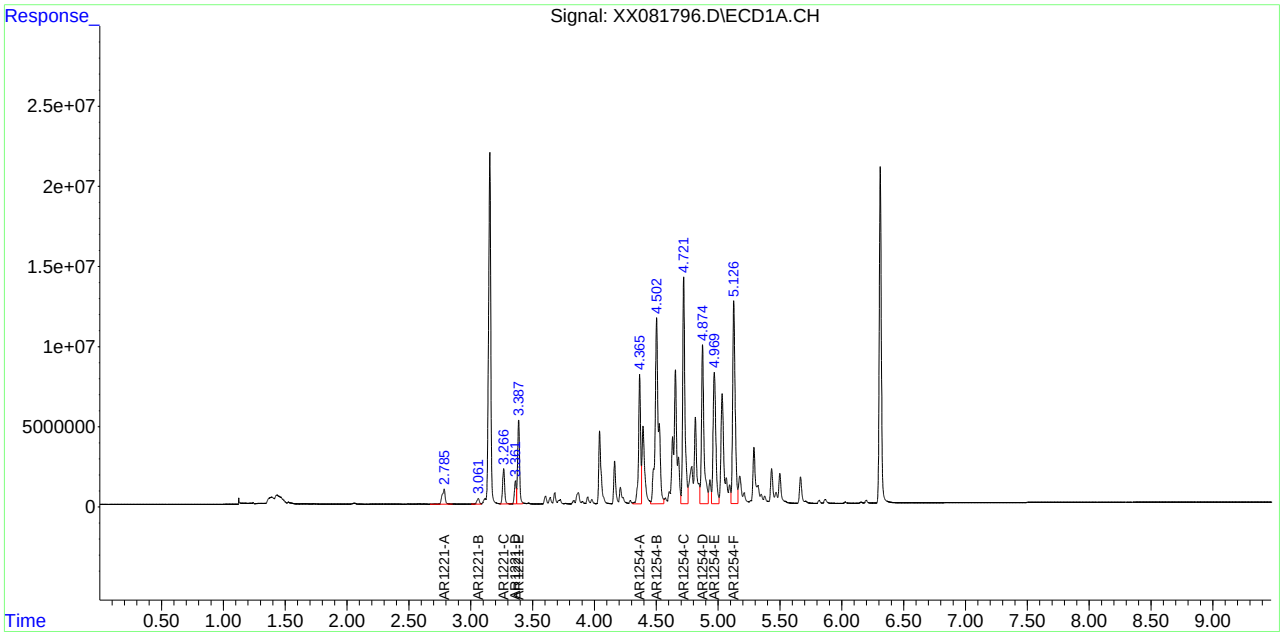
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

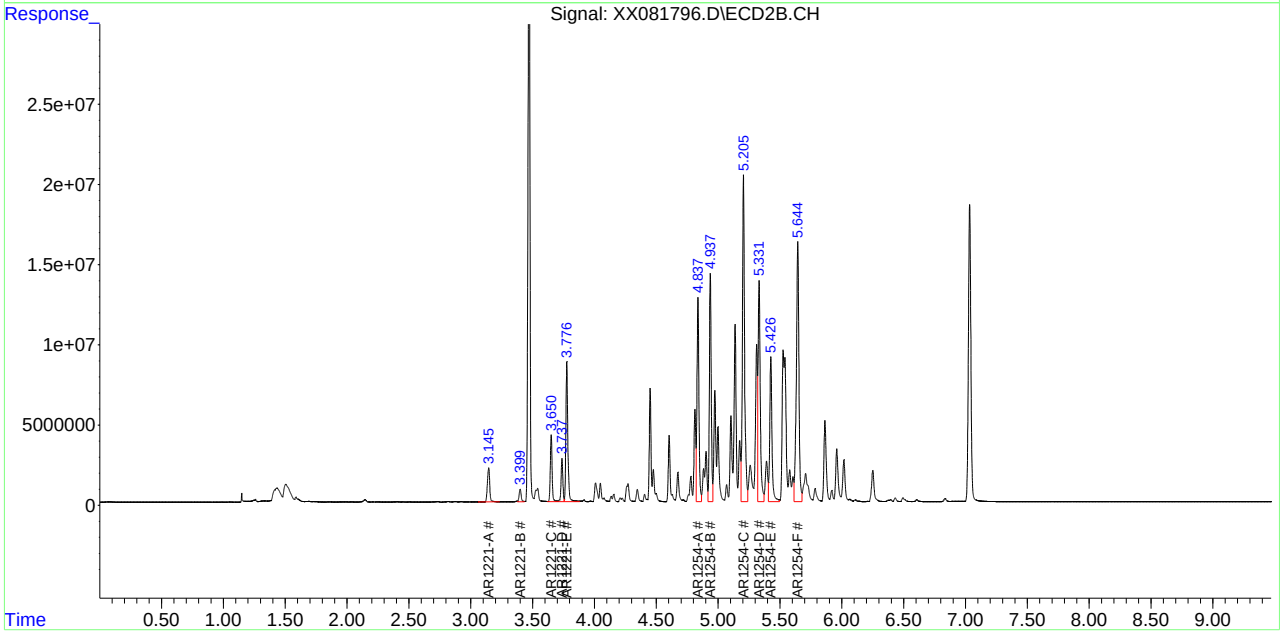
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081796.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:32:13
Operator : eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:19:11 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Manual Integration Approval Summary

Sample Number:	GXX1548-CC1547	**Method:**	SW846 8082A
Lab FileID:	XX081796.D	**Analyst approved:**	09/22/22 10:11 Eduardo Melendez
Injection Time:	09/21/22 14:32	**Supervisor approved:**	09/22/22 14:36 Naresh Jiawan

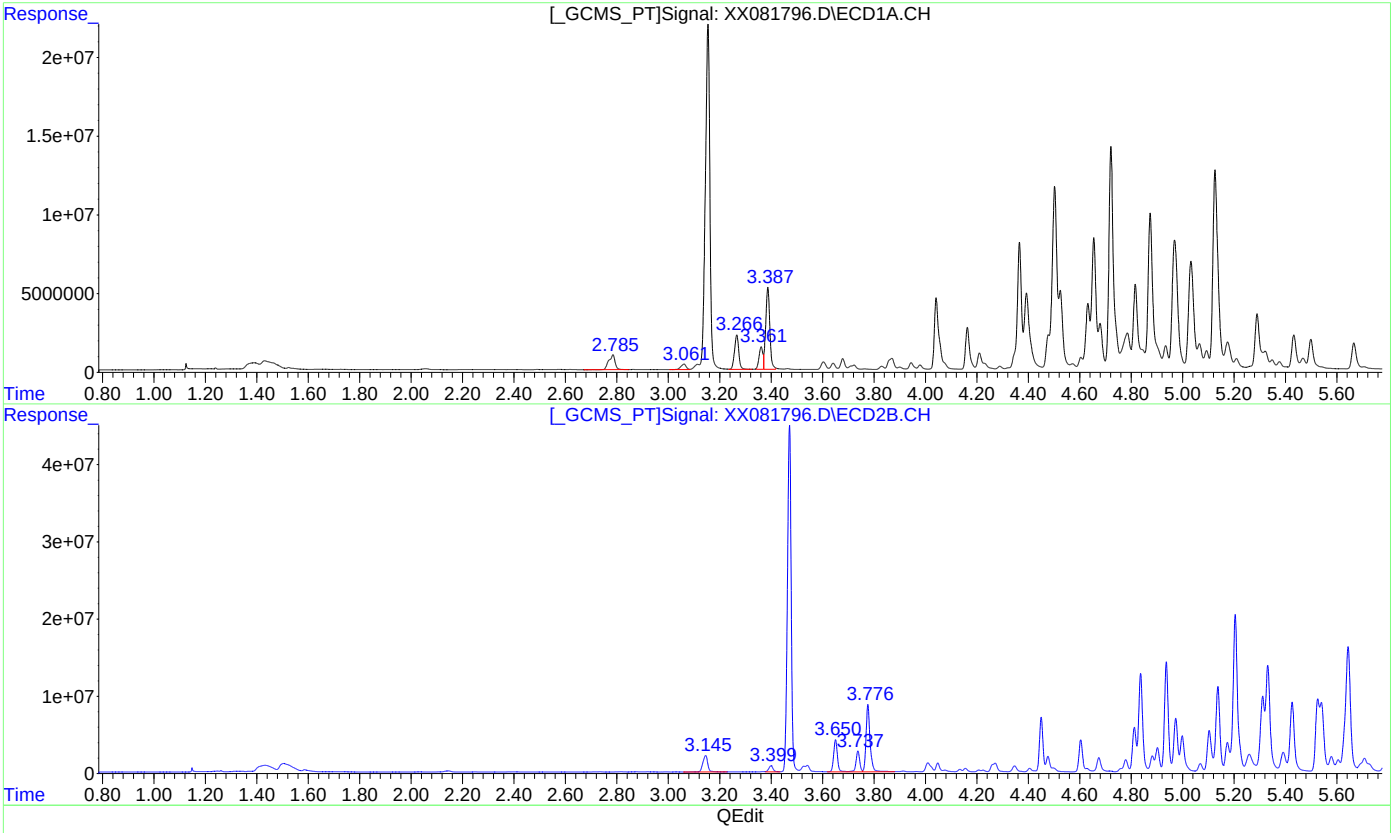
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.36	Poor instrument integration
AR1221-E		1	3.39	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081796.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:32:13
Operator : eduardom
Sample : cc1547-400 1221/1254 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 08:03:56 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID



(8) AR1221-A (L2)

R.T.	Response	Conc
2.78	948251	431.16
3.06	356365	381.70
3.27	2178758	380.12
3.36	1431734	375.97
3.39	5225700	367.85

(8) AR1221-A #2 (L2)

R.T.	Response	Conc
3.15	2133652	435.41
3.40	796310	433.96
3.65	4171714	439.67
3.74	2705233	439.70
3.78	8729397	439.63

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081797.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:44:59
Operator : eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:20:42 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
13) L3 AR1232-A	3.388	3.776	3997953	6911996	369.600	431.720
14) L3 AR1232-B	3.603	4.013	3042321	4835595	398.030	436.033
15) L3 AR1232-C	3.869	4.271	5439313	8565011	378.250	390.671
16) L3 AR1232-D	3.945	4.347	2913916	4747392	363.481	375.564
17) L3 AR1232-E	3.979	4.604	2166065	3841507	368.339	422.033
18) L3 AR1232-F	4.165	4.674	2290278	3241753	352.554	418.142
Sum AR1232-A			19849844	32143253	2230.255	2474.163
Average AR1232-A					371.709	412.360
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
Sum AR1248-A			0	0	N.D.	N.D.
Average AR1248-A					0.000	0.000
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
49) L8 AR1268-A	5.183	5.692	5256828	6794079	351.523	418.718
50) L8 AR1268-B	5.317	5.874	7384937	8753730	367.726	376.844
51) L8 AR1268-C	5.677	6.238	34340766	39470016	362.595	412.779
52) L8 AR1268-D	5.701	6.269	31146470	31831106	370.597	388.281
53) L8 AR1268-E	5.814	6.430	28347215	29067030	376.774	384.044
54) L8 AR1268-F	6.024	6.602	10387215	11687891	350.820	376.142
Sum AR1268-A			116.9E6	127.6E6	2180.035	2356.808
Average AR1268-A					363.339	392.801

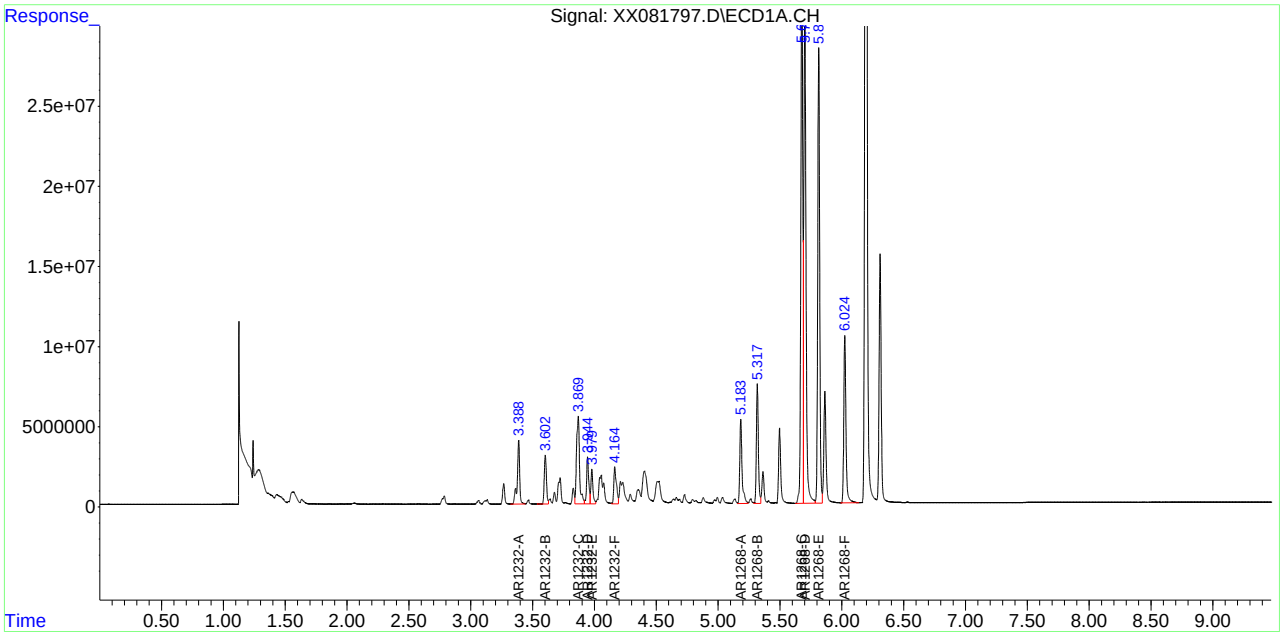
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

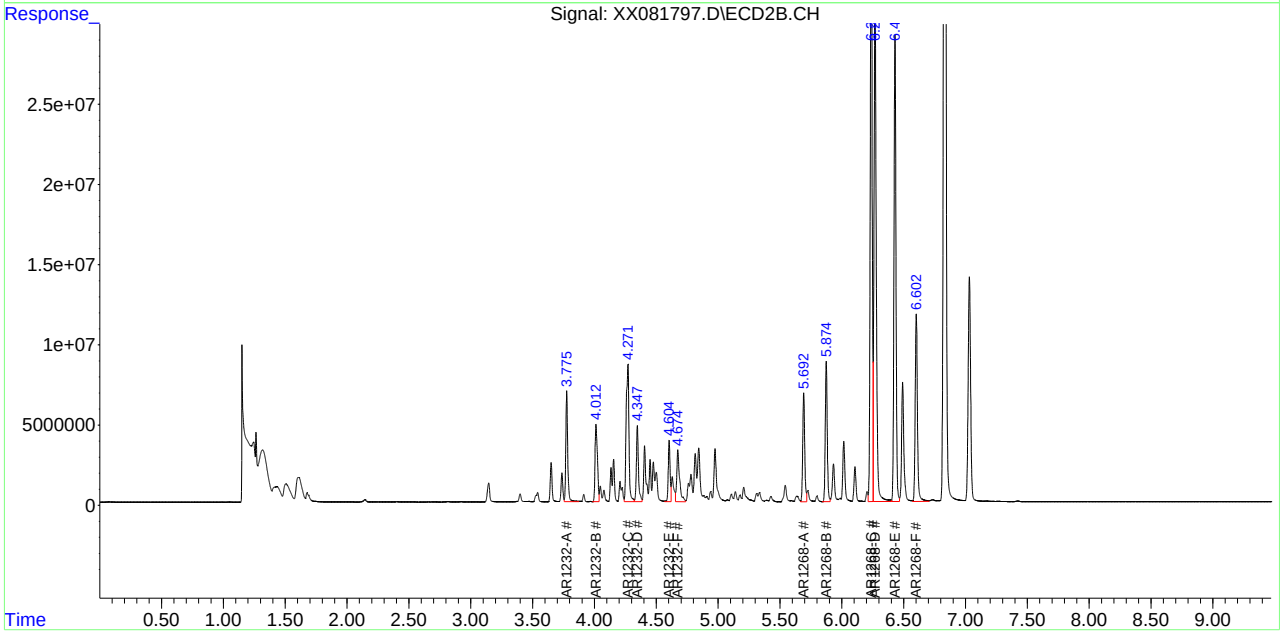
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081797.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:44:59
Operator : eduardom
Sample : cc1547-400 1232/68 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:20:42 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081798.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:57:38
Operator : eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:21:16 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
	Target Compounds						
	Sum AR1016-A			0	0	N.D.	N.D.
Average	AR1016-A					0.000	0.000
	Sum AR1221-A			0	0	N.D.	N.D.
Average	AR1221-A					0.000	0.000
	Sum AR1232-A			0	0	N.D.	N.D.
Average	AR1232-A					0.000	0.000
19) L4	AR1242-A	3.387	3.776	2935987	5172740	370.271	430.349
20) L4	AR1242-B	3.602	4.013	5226791	7983277	373.667	437.103
21) L4	AR1242-C	3.721	4.155	2756651	4390881	384.587	447.271
22) L4	AR1242-D	3.868	4.271	9575162	14843749	377.937	394.299
23) L4	AR1242-E	3.944	4.347	5127083	8239580	372.834	389.263
24) L4	AR1242-F	4.163	4.604	4781665	7399753	383.998	391.791
	Sum AR1242-A			30403340	48029979	2263.293	2490.076
Average	AR1242-A					377.216	415.013
	Sum AR1248-A			0	0	N.D.	N.D.
Average	AR1248-A					0.000	0.000
	Sum AR1254-A			0	0	N.D.	N.D.
Average	AR1254-A					0.000	0.000
	Sum AR1260-A			0	0	N.D.	N.D.
Average	AR1260-A					0.000	0.000
43) L9	AR1262-A	4.816	5.312	8771148	12282161	380.447	403.541
44) L9	AR1262-B	4.965	5.425	11056622	13754437	373.834	386.834
45) L9	AR1262-C	5.181	5.691	15653163	19176158	371.049	393.516
46) L9	AR1262-D	5.321	5.872	13309087	17407801	370.722	387.886
47) L9	AR1262-E	5.496	6.016	29058648	34144064	362.138	386.342
48) L9	AR1262-F	5.675	6.241	14130812	17720790	390.715	388.891
	Sum AR1262-A			91979480	114.5E6	2248.905	2347.012
Average	AR1262-A					374.817	391.169
	Sum AR1268-A			0	0	N.D.	N.D.
Average	AR1268-A					0.000	0.000

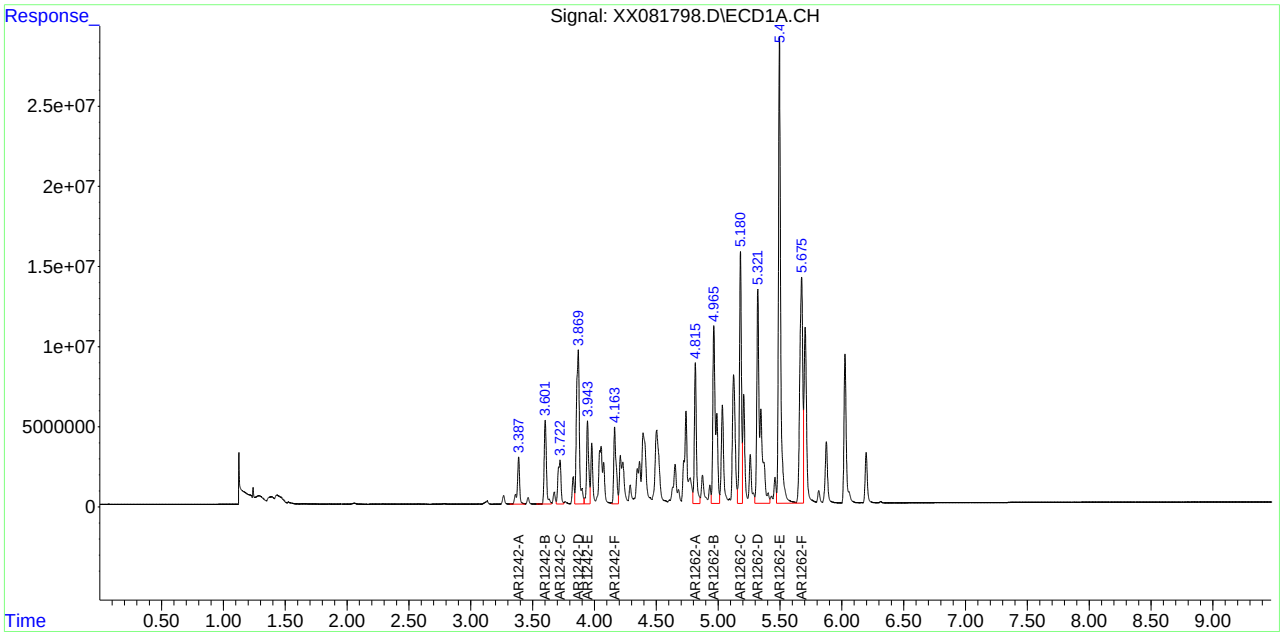
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

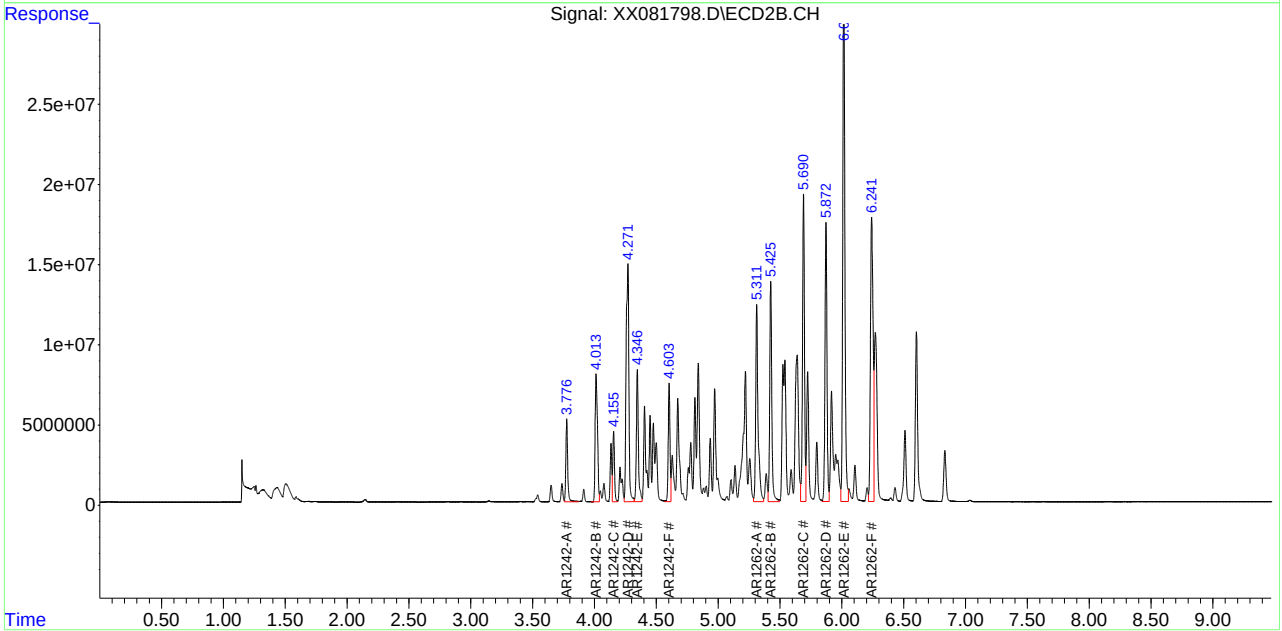
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081798.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 14:57:38
Operator : eduardom
Sample : cc1547-400 1242/1262 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:21:16 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081799.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 15:10:20
Operator : eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:21:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
Target Compounds						
Sum AR1016-A			0	0	N.D.	N.D.
Average AR1016-A					0.000	0.000
Sum AR1221-A			0	0	N.D.	N.D.
Average AR1221-A					0.000	0.000
Sum AR1232-A			0	0	N.D.	N.D.
Average AR1232-A					0.000	0.000
Sum AR1242-A			0	0	N.D.	N.D.
Average AR1242-A					0.000	0.000
25) L5 AR1248-A	3.867	4.271	5943901	9041394	392.052	405.342
26) L5 AR1248-B	4.044	4.450	5488606	8953910	386.178	401.729
27) L5 AR1248-C	4.164	4.604	7358807	11484188	386.451	402.547
28) L5 AR1248-D	4.397	4.841	7286754	11805462	383.331	398.362
29) L5 AR1248-E	4.506	4.974	5599765	11207315	385.451	418.360
30) L5 AR1248-F	4.725	5.206	3553231	5882131	350.822	396.498
Sum AR1248-A			35231063	58374400	2284.285	2422.838
Average AR1248-A					380.714	403.806
Sum AR1254-A			0	0	N.D.	N.D.
Average AR1254-A					0.000	0.000
Sum AR1260-A			0	0	N.D.	N.D.
Average AR1260-A					0.000	0.000
Sum AR1262-A			0	0	N.D.	N.D.
Average AR1262-A					0.000	0.000
Sum AR1268-A			0	0	N.D.	N.D.
Average AR1268-A					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

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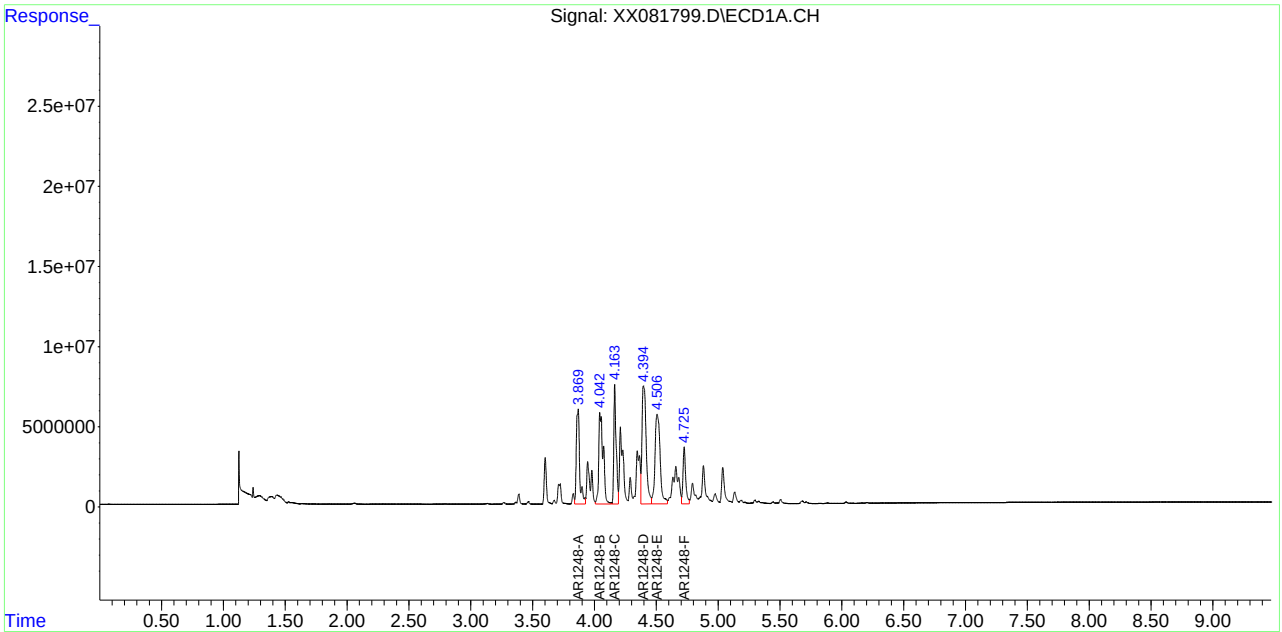
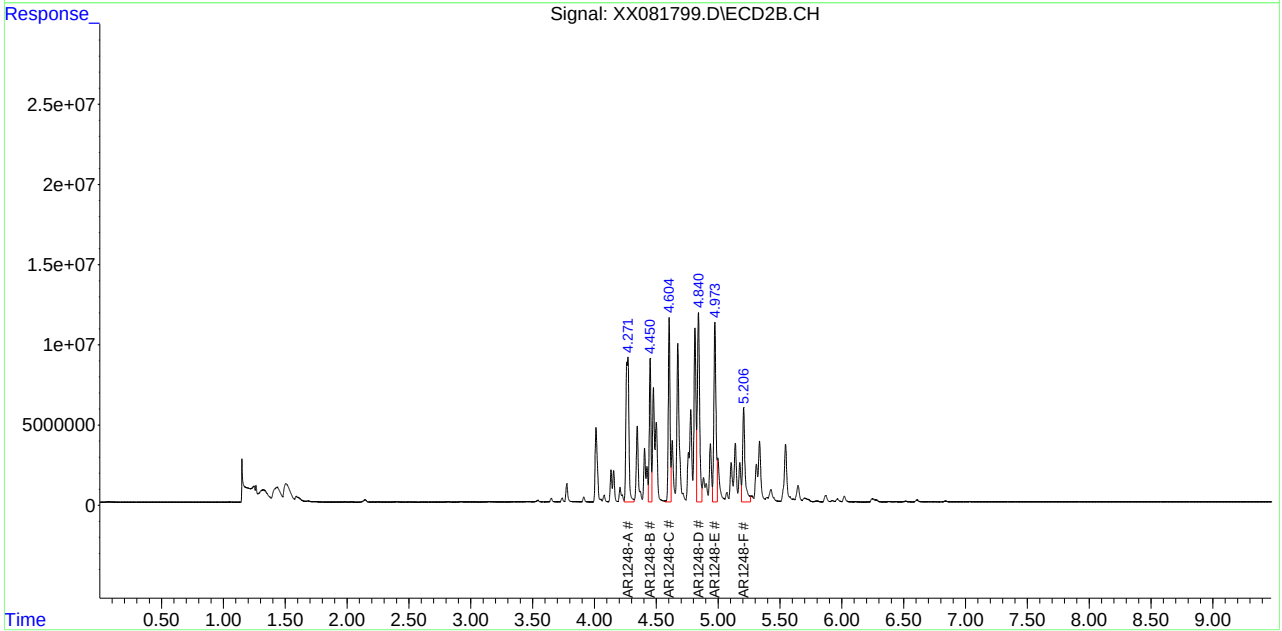
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GXX1548_092122\
Data File : XX081799.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 21-Sep-22, 15:10:20
Operator : eduardom
Sample : cc1547-400 1248 Inst : ECD 7
Misc : OP93009,GXX1548,15,,,5,1,Soil
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Quant Time: Sep 22 09:21:33 2022
Quant Method : C:\msdchem\1\METHODS\8082DODXX091622.m
Quant Title : PCBs by 8082a
QLast Update : Tue Sep 20 15:34:25 2022
Response via : Initial Calibration

Volume Inj. : 2ul
Signal #1 Phase : Multiresidue-1 Signal #2 Phase: Multiresidue-2
Signal #1 Info : 0.53mm ID Signal #2 Info : 0.53mm ID





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SGS 1049 of 1485
FA98819

DATE	9/20/2022	**METHODS**	8081	**IC/ICC STD LOT**	S6746/S6763/S6769
COLUMN TYPE	MR1/MR2	**ACQ. METHOD**	PEST_ACQ	**ICV STD LOT**	S6748/S6749/S6756
AMOUNT INJ	4 uL	**PROC. METHOD**	GST3987_091222.M	**DFTPP**	Hexane
INSTRUMENT	GST	**CALIB. DATE**	7/8/2022	**EM VOLTAGE**	
ANALYST	EM	**RUN BATCH**	GST3992	**ISTD LOT**	

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
ST163738	1	cond std	8081	1	OP93001,GST3992,250,,,5,1,Water	
ST163739	2	ccb	8081	1	OP93001,GST3992,250,,,5,1,Water	
ST163740	3	ddt	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163741	4	ic3992-2 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163742	5	ic3992-5 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163743	6	ic3992-20 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163744	7	icc3992-40 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163745	8	ic3992-60 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163746	9	ic3992-80 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163747	10	ic3992-120 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163748	11	icv3992-20 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163749	12	ic3992-20 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163750	13	ic3992-50 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163751	14	ic3992-200 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163752	15	ic3992-400 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163753	16	ic3992-600 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163754	17	ic3992-1000 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163755	18	icv3992-200 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163756	19	ic3992-100 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163757	20	ic3992-200 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163758	21	ic3992-500 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163759	22	ic3992-750 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163760	23	ic3992-1000 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	\
ST163761	24	ic3992-2000 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163762	25	icv3992-500 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163763	3	ddt	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163764	7	cc3992-40 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163765	14	cc3992-200 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163766	21	cc3992-500 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163767	26	op93037-BS	8081	1	OP93037,GST3992,1000,,,5,1,Water	\
ST163768	27	op93037-BS2	8081	1	OP93037,GST3992,1000,,,5,1,Water	\

ST163769	28	op93037-MB	8081	1	OP93037,GST3992,1000,,,5,1,Water	\
ST163770	29	FA98741-1	8081	10	OP93037,GST3992,100,,,5,10,Water	report matrix - historical dilution
ST163771	30	FA98773-1	8081	1	OP93037,GST3992,1000,,,5,1,Water	\
ST163772	31	FA98756-2	8081	1	OP93037,GST3992,1050,,,5,1,Water	\
ST163773	32	FA98819-1	8081	1	OP93037,GST3992,980,,,5,1,Water	\
ST163774	33	op93037-MS	8081	1	OP93037,GST3992,520,,,5,1,Water	\
ST163775	34	op93037-MSD	8081	1	OP93037,GST3992,520,,,5,1,Water	\
ST163776	7	ecc3992-40 Pest	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163777	14	ecc3992-200 CHL	8081	1	OP93001,GST3992,250,,,5,1,Water	pass
ST163778	21	ecc3992-500 Tox	8081	1	OP93001,GST3992,250,,,5,1,Water	pass

SGS-ORLANDO **GC ECD07-XX** **ANALYSIS LOG**

DATE	9/16/2022	**METHODS**	8082/608	**IC/ICC STD LOT**	S6809,S6810,S6811,S6812,S6813
COLUMN TYPE	MR1/MR2	**ACQ. METHOD**	PCB2_HY	**ICV STD LOT**	S6777,10566A,11191,10567A,10698A,10568A,10697A,10569A
AMOUNT INJ	2uL	**PROC. METHOD**	8082DODXX091622.m	**SOLVENT**	Hexane MKCQ0969
INSTRUMENT	GCECD07 - XX	**CALIB. DATE**	9/15/2022	**SIGNAL 1**	397
ANALYST	EM	**RUN BATCH**	GXX1547	**SIGNAL 2**	1033

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
XX081680	1	cond std		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081681	1	cond std		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081682	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081683	3	ic1546-20 1016/1260		2/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081684	4	ic1546-50 1016/1260		5/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081685	5	ic1546-200 1016/1260		20/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081686	6	icc1546-400 1016/1260		40/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081687	7	ic1546-600 1016/1260		60/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081688	8	ic1546-1000 1016/1260		100/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081689	9	icv1546-400 1016/1260		40/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081690	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081691	10	ic1546-20 1221/1254		2/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081692	11	ic1546-50 1221/1254		5/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081693	12	ic1546-200 1221/1254		20/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081694	13	ic1546-400 1221/1254		40/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081695	14	ic1546-600 1221/1254		60/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081696	15	ic1546-1000 1221/1254		100/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081697	16	icv1546-400 1221		2/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081698	17	icv1546-400 1254		2/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081699	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081700	18	ic1546-20 1232/1268		2/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081701	19	ic1546-50 1232/1268		5/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081702	20	ic1546-200 1232/1268		20/1000	OP93009,GXX1547,15,,,5,1,Soil	\

SGS-ORLANDO **GC ECD07-XX** **ANALYSIS LOG**

XX081703	21	ic1546-400 1232/1268		40/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081704	22	ic1546-600 1232/1268		60/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081705	23	ic1546-1000 1232/1268		100/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081706	24	icv1546-400 1232		2/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081707	25	icv1546-400 1268		40/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081708	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081709	26	ic1546-20 1242/1262		2/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081710	27	ic1546-50 1242/1262		5/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081711	28	ic1546-200 1242/1262		20/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081712	29	ic1546-400 1242/1262		40/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081713	30	ic1546-600 1242/1262		60/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081714	31	ic1546-1000 1242/1262		100/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081715	32	icv1546-400 1242		2/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081716	33	icv1546-400 1262		40/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081717	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	
XX081718	34	ic1546-20 1248		2/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081719	35	ic1546-50 1248		5/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081720	36	ic1546-200 1248		20/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081721	37	ic1546-400 1248		40/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081722	38	ic1546-600 1248		60/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081723	39	ic1546-1000 1248		100/1000	OP93009,GXX1547,15,,,5,1,Soil	\
XX081724	40	icv1546-400 1248		2/1000	OP93009,GXX1547,15,,,5,1,Soil	Pass
XX081725	2	ccb		1	OP93009,GXX1547,15,,,5,1,Soil	

SGS-ORLANDO **GC ECD07-XX** **ANALYSIS LOG**

DATE	9/21/2022	**METHODS**	8082/608	**IC/ICC STD LOT**	S6809,S6810,S6811,S6812,S6813
COLUMN TYPE	MR1/MR2	**ACQ. METHOD**	PCB2_HY	**ICV STD LOT**	S6777,10566A,11191,10567A,10698A,10568A,10697A,10569A
AMOUNT INJ	2uL	**PROC. METHOD**	8082DODXX091622.m	**SOLVENT**	Hexane MKCQ0969
INSTRUMENT	GCECD07 - XX	**CALIB. DATE**	9/15/2022	**SIGNAL 1**	397
ANALYST	EM	**RUN BATCH**	GXX1548	**SIGNAL 2**	1033

DATA FILE	ALS	SAMPLE NAME	METHOD	DF	MISC. INFO	COMMENTS
XX081777	1	cond std	8082	1	OP93009,GXX1548,15,,,5,1,Soil	
XX081778	1	cond std	8082	1	OP93009,GXX1548,15,,,5,1,Soil	
XX081779	1	cond std	8082	1	OP93009,GXX1548,15,,,5,1,Soil	
XX081780	2	cc1547-400 1016/1260	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081781	3	cc1547-400 1221/1254	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081782	4	cc1547-400 1232/68	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081783	5	cc1547-400 1242/1262	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081784	6	cc1547-400 1248	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081785	7	OP93038-BS	608	1	OP93038,GXX1548,1000,,,5,1,Water	Pass
XX081786	8	OP93038-MB	608	1	OP93038,GXX1548,1000,,,5,1,Water	Pass
XX081787	9	FA98741-1	608	1	OP93038,GXX1548,100,,,5,1,Water	RRSulfur/RR10x
XX081788	10	FA98773-1	608	1	OP93038,GXX1548,1000,,,5,1,Water	ND
XX081789	11	OP93038-MS	608	1	OP93038,GXX1548,520,,,5,1,Water	Pass
XX081790	12	OP93038-MSD	608	1	OP93038,GXX1548,520,,,5,1,Water	Pass
XX081791	13	FA98756-1	608	1	OP93038,GXX1548,1050,,,5,1,Water	RR10x/RR50xRR100x
XX081792	14	FA98756-2	608	1	OP93038,GXX1548,1050,,,5,1,Water	1260
XX081793	15	FA98756-3	608	1	OP93038,GXX1548,1050,,,5,1,Water	1260
XX081794	16	FA98819-1	608	1	OP93038,GXX1548,980,,,5,1,Water	ND
XX081795	2	cc1547-400 1016/1260	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081796	3	cc1547-400 1221/1254	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081797	4	cc1547-400 1232/68	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081798	5	cc1547-400 1242/1262	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081799	6	cc1547-400 1248	608	1	OP93009,GXX1548,15,,,5,1,Soil	Pass

SGS-ORLANDO **GC ECD07-XX** **ANALYSIS LOG**

XX081800	17	OP93052-MB	8082	1	OP93052,GXX1548,15,,,5,1,Soil	MDL
XX081801	18	FA98731-50A	8082	1	OP93052,GXX1548,15.1,,,5,1,Soil	MDL
XX081802	19	FA98731-51A	8082	1	OP93052,GXX1548,15,,,5,1,Soil	MDL
XX081803	20	FA98731-52A	8082	1	OP93052,GXX1548,15.3,,,5,1,Soil	MDL
XX081804	21	FA98731-53A	8082	1	OP93052,GXX1548,15.1,,,5,1,Soil	MDL
XX081805	22	FA98731-54A	8082	1	OP93052,GXX1548,15.2,,,5,1,Soil	MDL
XX081806	2	cc1547-400 1016/1260	8082	1	OP93009,GXX1548,15,,,5,1,Soil	Pass
XX081807	23	FA98731-55A	8082	1	OP93052,GXX1548,15.4,,,5,1,Soil	MDL
XX081808	24	FA98731-56A	8082	1	OP93052,GXX1548,15,,,5,1,Soil	No Spike
XX081809	25	FA98731-57A	8082	1	OP93052,GXX1548,15,,,5,1,Soil	MDL
XX081810	26	FA98731-58A	8082	1	OP93052,GXX1548,15.1,,,5,1,Soil	MDL
XX081811	27	FA98731-59A	8082	1	OP93052,GXX1548,15.4,,,5,1,Soil	MDL
XX081812	28	FA98731-60A	8082	1	OP93052,GXX1548,15.1,,,5,1,Soil	MDL
XX081813	29	FA98731-61A	8082	1	OP93052,GXX1548,15.2,,,5,1,Soil	MDL
XX081814	30	FA98731-62A	8082	1	OP93052,GXX1548,15.2,,,5,1,Soil	MDL
XX081815	31	FA98731-63A	8082	1	OP93052,GXX1548,15.2,,,5,1,Soil	MDL
XX081816	32	FA98731-64A	8082	1	OP93052,GXX1548,15.1,,,5,1,Soil	MDL
XX081817	2	ecc1547-400 1016/1260	8082	1	OP93009,GXX1548,15,,,5,1,Soil	Pass

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: Started: 9/13/2022 7:39 (mm/dd/yy 24:00)

Date/Time: Finished: 9/13/22 13:30 (mm/dd/yy 24:00)

Prep Method: 3510C ✓ 3580A

Analytical Method: 608PEST

Batch#: OP93037 Ext. By: JC,VK Conc. By: PM/EA Vialed By: PM

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP93037-MB	-	1000	6	NA	0.5		5.0mL	
OP93037-BS	-	1000	6	NA	0.5	0.5		
OP93037-BS2	-	1000	6	NA	0.5	0.5		
fa98741-1	16	100/1000						
fa98773-1	17	1000						
fa98756-2	7	1050						
fa98819-1	14	980						
FA98756-2MS	6	520	6	N/A	0.5	0.5	5.0mL	
FA98756-2MSD	6	520			0.5	0.5		
DUP								

x VK 09-13-22

Comments:

Surr ID: E7231 B Conc: 500ppb Exp. Date: 03-07-23 Inj. By: VK 22 Ver. By: VK

Spk ID#1: E7200 B Conc: 500ppb Exp. Date: 1-6-23 Inj. By: VK 22 Ver. By: VK

Spk ID#2: E7203 B Conc: 2.5-5.0ppm Exp. Date: 01-8-23 Inj. By: VK 22 Ver. By: VK

Initial Bath Temp (Therm ID): TV 15, 16, 17 Exchange Bath/N-Evap Temp (Therm ID): TV 15, 16, 17

Observed Temp °C: 45 Observed Temp °C: 55 Corr. Temp °C: —

CH2CL2 Lot#	221764	Hexane Lot #	223504	H2SO4 Lot#	X
CH3CN Lot #	X	Methanol Lot #	X	Acetone Lot#	X
Syr Filter Lot#	X	pH Paper #	226621	NaOH Lot #	X

Copper Lot # _____ If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: Patrick Machella Date: 9/13/22

Accepted By: VK Date: 9/13/22

608PESTaq_rev 02232021_SH

SGS - ORLANDO

LIQUID SAMPLE PREP REPORT

Date/Time: Started: 9/13/2022 7:46 {mm/dd/yy 24:00}

Date/Time: Finished: 9/13/22 13:30 {mm/dd/yy 24:00}

Prep Method: 3510C ✓ 3580A

Analytical Method: 608PCB

Batch#: **OP93038** Ext. By: JC,VK Conc. By: PM/EA Vialed By: PM

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP93038-MB	-	**1000**	**6**	**NA**	**0.5**		5.0mL	
OP93038-BS	-	**1000**	**6**	**NA**	**0.5**	**0.5**		
fa98741-1	16	100/1000						
fa98773-1	17	1001						
fa98756-1	4	1050						
fa98756-2	7	1050						
fa98756-3	5	1050						
fa98819-1	14	980					↓	
fa98756-3MS	4	520	6	b/p	**0.5**	**0.5**	5.0mL	
fa98756-3MSD	4	520			**0.5**	**0.5**	↓	
DUP								

Comments:

Surr ID: E7231 B Conc: **500 ppb** Exp. Date: 03-07-23 Inj. By: AE Ver. By: VK

Spk ID: E7201 A Conc: **4000 ppb** Exp. Date: 1-6-23 Inj. By: AE Ver. By: VK

Initial Bath Temp (Therm ID): TV 15, 16, 17 Observed Temp °C: 45

Exchange Bath/N-Evap Temp (Therm ID): TV 15, 16, 17 Observed Temp °C: 55 Corr. Temp °C: —

CH2CL2 Lot#	221764	Hexane Lot #	223504	H2SO4 Lot#	X
CH3CN Lot #	X	Methanol Lot #	X	Acetone Lot#	X
Syr Filter Lot#	X	pH Paper #	226621	NaoH #	N/A
Sulfur and Acid Clenaing (3660B)		Initials:		Copper Lot #	

Relinquished By: Patricia Mazella Date: 9/13/22

Accepted By: VK Date: 9/13/22

608PCBaq_rev 02232021_SH

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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:22	MA18915-STD1	1		STDA
08:26	MA18915-STD2	1		STDB
08:30	MA18915-STD3	1		STDC
08:34	MA18915-STD4	1		STDD
08:38	MA18915-STD5	1		STDE
08:42	MA18915-STD6	1		STDF
08:46	MA18915-STD7	1		STDG
08:50	MA18915-HSTD1	1		
08:54	MA18915-HSTD2	1		
08:57	MA18915-ICV1	1		
09:01	MA18915-ICB1	1		
09:05	MA18915-CRIA1	1		
09:09	MA18915-ICSA1	1		
09:13	MA18915-ICSAB1	1		
09:17	MA18915-CCV1	1		
09:20	MA18915-CCV2	1		
09:24	MA18915-CCB1	1		
10:25	MA18915-CCV3	1		
10:29	MA18915-CCV4	1		
10:32	MA18915-CCB2	1		
10:43	MA18915-CCV5	1		
10:47	MA18915-CCV6	1		
10:51	MA18915-CCB3	1		
10:58	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:06	ZZZZZZ	5		
11:10	ZZZZZZ	5		
11:13	MP41201-B1	5		
11:17	FA98739-26	200		(sample used for QC only; not part of login FA98819)
11:21	MP41201-D1	200		
11:25	MP41201-SD1	1000		
11:29	MP41201-S1	200		
11:32	MA18915-CCV7	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:36	MA18915-CCV8	1		
11:40	MA18915-CCB4	1		
11:44	MP41201-S2	200		
11:48	MP41201-PS1	200		
11:51	ZZZZZZ	200		
11:55	ZZZZZZ	200		
11:59	MP41201-MB1	1		
12:03	MP41211-MB1	2		
12:06	MP41211-B1	2		
12:10	FA98621-8	2		(sample used for QC only; not part of login FA98819)
12:14	MP41211-D1	2		
12:18	MP41211-SD1	10		
12:21	MA18915-CCV9	1		
12:25	MA18915-CCV10	1		
12:29	MA18915-CCB5	1		
12:33	MP41211-S1	2		
12:37	MP41211-S2	2		
12:40	MP41211-PS1	2		
12:44	FA98679-3	2		(sample used for QC only; not part of login FA98819)
12:48	MP41211-D2	2		
12:52	MP41211-SD2	10		
12:55	MP41211-S3	2		
12:59	MP41211-S4	2		
13:03	MP41211-PS1	2		
13:07	ZZZZZZ	2		
13:11	MA18915-CCV11	1		
13:14	MA18915-CCV12	1		
13:18	MA18915-CCB6	1		
13:22	ZZZZZZ	2		
13:26	ZZZZZZ	2		
13:29	ZZZZZZ	2		
13:33	ZZZZZZ	2		
13:37	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:48	ZZZZZZ	2		
13:52	ZZZZZZ	2		
13:56	ZZZZZZ	2		
14:00	MA18915-CCV13	1		
14:03	MA18915-CCV14	1		
14:07	MA18915-CCB7	1		
14:11	ZZZZZZ	2		
14:15	ZZZZZZ	2		
14:19	ZZZZZZ	2		
14:22	FA98819-1B	2		
---------->	Last reportable sample/prep for job FA98819			
14:26	ZZZZZZ	2		
14:30	ZZZZZZ	2		
14:34	MA18915-CCV15	1		
14:37	MA18915-CCV16	1		
14:41	MA18915-CCB8	1		
---------->	Last reportable CCB for job FA98819			

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:50	MA18915-HSTD1	1		
08:54	MA18915-HSTD2	1	X	
08:57	MA18915-ICV1	1	X	
09:01	MA18915-ICB1	1	X	
09:05	MA18915-CRIA1	1	X	
09:09	MA18915-ICSA1	1	X	
09:13	MA18915-ICSAB1	1	X	
09:17	MA18915-CCV1	1		
09:20	MA18915-CCV2	1	X	
09:24	MA18915-CCB1	1	X	
10:25	MA18915-CCV3	1		
10:29	MA18915-CCV4	1	X	
10:32	MA18915-CCB2	1	X	
10:43	MA18915-CCV5	1		
10:47	MA18915-CCV6	1	X	
10:51	MA18915-CCB3	1	X	
10:58	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:06	ZZZZZZ	5		
11:10	ZZZZZZ	5		
11:13	MP41201-B1	5	X	
11:17	FA98739-26	200		(a)
11:21	MP41201-D1	200	X	
11:25	MP41201-SD1	1000	X	
11:29	MP41201-S1	200	X	
11:32	MA18915-CCV7	1		
11:36	MA18915-CCV8	1	X	
11:40	MA18915-CCB4	1	X	
11:44	MP41201-S2	200	X	
11:48	MP41201-PS1	200	X	
11:51	ZZZZZZ	200		
11:55	ZZZZZZ	200		
11:59	MP41201-MB1	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Element: Dilution	As	
12:03	MP41211-MB1	2	X	
12:06	MP41211-B1	2	X	
12:10	FA98621-8	2	X	(a)
12:14	MP41211-D1	2	X	
12:18	MP41211-SD1	10	X	
12:21	MA18915-CCV9	1		
12:25	MA18915-CCV10	1	X	
12:29	MA18915-CCB5	1	X	
12:33	MP41211-S1	2	X	
12:37	MP41211-S2	2	X	
12:40	MP41211-PS1	2		
12:44	FA98679-3	2	X	(a)
12:48	MP41211-D2	2	X	
12:52	MP41211-SD2	10	X	
12:55	MP41211-S3	2	X	
12:59	MP41211-S4	2	X	
13:03	MP41211-PS1	2		
13:07	ZZZZZZ	2		
13:11	MA18915-CCV11	1		
13:14	MA18915-CCV12	1	X	
13:18	MA18915-CCB6	1	X	
13:22	ZZZZZZ	2		
13:26	ZZZZZZ	2		
13:29	ZZZZZZ	2		
13:33	ZZZZZZ	2		
13:37	ZZZZZZ	2		
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:48	ZZZZZZ	2		
13:52	ZZZZZZ	2		
13:56	ZZZZZZ	2		
14:00	MA18915-CCV13	1		
14:03	MA18915-CCV14	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution	Element: As
14:07	MA18915-CCB7	1	X
14:11	ZZZZZZ	2	
14:15	ZZZZZZ	2	
14:19	ZZZZZZ	2	
14:22	FA98819-1B	2	X
14:26	ZZZZZZ	2	
14:30	ZZZZZZ	2	
14:34	MA18915-CCV15	1	
14:37	MA18915-CCV16	1	X
14:41	MA18915-CCB8	1	X

(a) Sample used for QC only; not part of login FA98819.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:22	MA18915-STD1	100	100	100	100	100	100	100
08:26	MA18915-STD2	95.2	92.6	92.6	92.4	92.9	92.5	92.4
08:30	MA18915-STD3	114.8	99.6	99.7	99.8	99.7	99.4	98.4
08:34	MA18915-STD4	105	101.1	100.9	100.1	100	100.5	99.7
08:38	MA18915-STD5	102.2	101.5	101.5	100.5	100	100.5	98.5
08:42	MA18915-STD6	117.7	100.8	100.3	100.5	98.5	100.1	96.6
08:46	MA18915-STD7	100.3	100.7	100.3	99.3	98.2	99.7	95.2
08:50	MA18915-HSTD1	107.6	100.9	100.7	100.3	99.5	100.5	97.2
08:54	MA18915-HSTD2	110	100.7	101.7	99.2	97.9	99.9	95.1
08:57	MA18915-ICV1	111.7	101.5	101.6	100.6	99	100.4	97.1
09:01	MA18915-ICB1	110.3	100	98.7	98.4	98	98.1	97.8
09:05	MA18915-CRIA1	113.1	100.5	99.1	98.2	98.7	98.4	97.5
09:09	MA18915-ICSA1	101.7	95.8	96.9	93.1	89.8	92.8	86
09:13	MA18915-ICSAB1	111.7	100.3	102.1	97.7	93.2	96.5	88.6
09:17	MA18915-CCV1	118.3	105.9	106.4	107.1	102.4	103.3	100.1
09:20	MA18915-CCV2	119.6	104.4	105.4	104.1	100.7	101.7	97.6
09:24	MA18915-CCB1	120.5	108	106.7	106.8	103	102.5	101.3
10:25	MA18915-CCV3	94.9	97.8	98	98.3	98.3	98.8	99.4
10:29	MA18915-CCV4	90.9	93.5	94.2	94.7	95	96.3	94.4
10:32	MA18915-CCB2	102.4	97.9	97.8	97.9	99	98.4	99.3
10:43	MA18915-CCV5	105.8	100.4	101	101.2	100.4	101.1	99.7
10:47	MA18915-CCV6	95.6	100.2	100.8	100.5	99.7	101.5	98.8
10:51	MA18915-CCB3	98.9	98.8	99.3	98.5	99.7	99.5	99.5
10:58	ZZZZZZ	98.8	98.5	97.3	97.1	97.1	96.6	96.3
11:02	ZZZZZZ	107	97.3	97.4	96	95.6	95.4	95.3
11:06	ZZZZZZ	103.1	97.7	96	97	96	96	95.3
11:10	ZZZZZZ	106.1	97.5	96.1	96.2	96.2	95.7	95.2
11:13	MP41201-B1	98.1	96.3	96.5	95.5	94.8	95.5	93
11:17	FA98739-26	98.2	100.2	98.7	99.5	100.9	99.6	105.2
11:21	MP41201-D1	96.1	98.6	99.2	98	99.7	99	104.9
11:25	MP41201-SD1	99.8	97.7	98	96.6	99	98.9	101
11:29	MP41201-S1	97.6	97.7	98	98	99.3	99.1	103.5
11:32	MA18915-CCV7	94.4	97.3	97	97.3	98.2	99.2	98.7

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
11:36	MA18915-CCV8	94	96.9	98	97	98.1	99.9	97.6
11:40	MA18915-CCB4	103.4	97.6	96.8	96.8	98.2	98.4	98.7
11:44	MP41201-S2	97.2	97.6	96.5	97.2	98.7	98.8	103.5
11:48	MP41201-PS1	98.2	97.4	97.3	97	99	98.6	103.9
11:51	ZZZZZZ	97.7	96.9	97.3	96.6	98.7	98.1	100.4
11:55	ZZZZZZ	91.7	96.4	97.4	96.6	98.3	98.2	100.1
11:59	MP41201-MB1	94.5	97.3	96.7	97.3	99.1	98.6	99.8
12:03	MP41211-MB1	95.2	90.7	90.1	90.3	90.7	91.3	92
12:06	MP41211-B1	95.9	90.9	91.3	90.8	90.2	92.1	89.3
12:10	FA98621-8	101.2	89.7	89.2	89.5	88.9	89.6	88.8
12:14	MP41211-D1	99.3	92.2	91.8	91.8	90.9	92.4	91.7
12:18	MP41211-SD1	96.2	98.1	96.9	97.2	97.5	97.3	97.7
12:21	MA18915-CCV9	96.9	97	97	97.7	97.6	98.3	97.2
12:25	MA18915-CCV10	95.4	96.1	96.3	95.9	95.7	96.8	95
12:29	MA18915-CCB5	93.2	96.4	95.7	95.6	96.3	96	96.8
12:33	MP41211-S1	90.1	88.9	88.4	88.5	87.1	88.9	86.2
12:37	MP41211-S2	94.9	88.6	87.9	88.1	87.4	89	86.4
12:40	MP41211-PS1	95.2	93.3	91.7	91.6	90.7	91.9	90.7
12:44	FA98679-3	92.6	92.2	91	90.5	91	91.7	90.6
12:48	MP41211-D2	90.5	85.9	85.6	85.5	84.8	85	84.5
12:52	MP41211-SD2	97.7	100.3	99.4	99.9	100.5	99.6	99.3
12:55	MP41211-S3	89.6	91.8	91.6	91.3	90	92.2	89.4
12:59	MP41211-S4	92.5	92.6	91.4	91.7	90.5	92.9	89.5
13:03	MP41211-PS1	97.9	94.9	94	93.6	91.8	93.5	91.8
13:07	ZZZZZZ	96.9	94.8	93.8	93.7	93.1	93.1	91.7
13:11	MA18915-CCV11	100.2	100.1	99	98.9	99.5	99.7	98.7
13:14	MA18915-CCV12	89.8	97.2	96.7	96.4	96.2	97	96
13:18	MA18915-CCB6	94.3	94.9	93.1	93.5	94.9	95	95.9
13:22	ZZZZZZ	89.9	90.5	89.8	89.4	89.9	90.4	90
13:26	ZZZZZZ	95	91.7	90.9	91.1	90.7	91.6	91.2
13:29	ZZZZZZ	98.5	93.3	92.7	92.2	91.6	92.2	91.3
13:33	ZZZZZZ	91	93.2	91.3	90.9	91.3	92.8	91.6
13:37	ZZZZZZ	92.5	92.6	91.7	91	91.9	92	91.7

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
13:41	ZZZZZZ	95.2	94	93.4	93	93.2	94.3	93.5
13:45	ZZZZZZ	105.9	92.8	92.4	91.9	91.7	93.3	92.7
13:48	ZZZZZZ	99.1	92.3	91.7	92	91.6	92.2	92.1
13:52	ZZZZZZ	96.1	92.2	91.1	90.9	91.1	91.9	92
13:56	ZZZZZZ	94	92.9	92.1	91.8	92.9	93.3	93
14:00	MA18915-CCV13	93.9	98.4	97.8	97.7	97.9	98.5	97.4
14:03	MA18915-CCV14	96.4	97.2	96.5	96.5	96.8	97.9	95.8
14:07	MA18915-CCB7	102.2	96.7	95.1	95	96.8	96.5	97.7
14:11	ZZZZZZ	97.2	90.4	89.3	89.3	90.8	91.2	91.2
14:15	ZZZZZZ	92.6	90.5	90.3	90.1	89.8	90.9	91.2
14:19	ZZZZZZ	98.5	89.8	88.7	88.2	89.5	90.7	90.5
14:22	FA98819-1B	93.6	89.6	88.7	88.5	89	90.4	89.3
14:26	ZZZZZZ	97.8	88.1	88.1	86.5	85.7	89.4	88
14:30	ZZZZZZ	89	89.4	89.5	88.5	87.8	90.2	90
14:34	MA18915-CCV15	92.1	94.8	93.9	94.5	95.2	96.4	96
14:37	MA18915-CCV16	89.1	94.8	93.9	93.8	94	95.5	94.2
14:41	MA18915-CCB8	89.9	93.9	91.9	91.5	93.7	94.3	95.4

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time: / Sample ID:			09:01 ICB1		09:24 CCB1		10:32 CCB2		10:51 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0140	<1.0	0.00941	<1.0	0.0190	<1.0	0.0229	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time: / Sample ID:			11:40 CCB4		12:29 CCB5		13:18 CCB6		14:07 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0177	<1.0	0.0216	<1.0	0.0286	<1.0	0.0224	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time:			14:41	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Aluminum	100	4.4	anr	
Antimony	1.0	.1	anr	
Arsenic	1.0	.1	0.0511	<1.0
Barium	1.0	.1	anr	
Beryllium	1.0	.1	anr	
Cadmium	1.0	.1	anr	
Calcium	100	7.2	anr	
Chromium	1.0	.1	anr	
Cobalt	1.0	.1	anr	
Copper	1.0	.1	anr	
Iron	100	7.9	anr	
Lead	1.0	.1	anr	
Magnesium	100	5.2	anr	
Manganese	1.0	.1	anr	
Molybdenum	1.0	.1		
Nickel	1.0	.1	anr	
Potassium	100	6.6	anr	
Selenium	1.0	.11	anr	
Silver	1.0	.1	anr	
Sodium	100	4.8	anr	
Strontium	1.0	.1		
Thallium	1.0	.1	anr	
Tin	1.0	.1		
Titanium	1.0	.3		
Vanadium	1.0	.1	anr	
Zinc	2.0	.29	anr	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		08:57			09:17			09:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	95.1	95.1				100	98.5	98.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		10:25			10:29			10:43	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	105	105.0			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		10:47			11:32			11:36	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	97.8	97.8				100	97.5	97.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		12:21			12:25			13:11	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	100	100.0			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		13:14			14:00			14:03	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	98.1	98.1				100	98.6	98.6
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		14:34			14:37	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	98.6	98.6
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		08:50			08:54	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	193	96.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18915 Units: ug/l

Time:			09:05	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.978	97.8
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18915 Units: ug/l

Time:			09:09		09:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	93600	93.6	95400	95.4
Antimony			0.0683		0.113	
Arsenic		20	0.115		18.7	93.5
Barium			0.323		0.380	
Beryllium			0.00443		0.0290	
Cadmium		20	0.666		19.2	96.0
Calcium	100000	100000	93800	93.8	99200	99.2
Chromium		20	2.11*(a)		21.1	105.5
Cobalt		20	0.214		19.1	95.5
Copper		20	-0.483		18.1	90.5
Iron	100000	100000	95000	95.0	97500	97.5
Lead			0.191		0.120	
Magnesium	100000	100000	96200	96.2	99200	99.2
Manganese		20	1.07*(a)		19.8	99.0
Molybdenum	2000	2000	2000	100.0	2080	104.0
Nickel		20	0.212		18.7	93.5
Potassium	100000	100000	96900	96.9	101000	101.0
Selenium			0.272		0.299	
Silver		20	0.336		18.0	90.0
Sodium	100000	100000	97900	97.9	102000	102.0
Strontium			1.10*		1.18*	
Thallium			0.0129		0.00933	
Tin			0.0927		0.0734	
Titanium	2000	2000	1980	99.0	2050	102.5
Vanadium			0.0792		0.0611	
Zinc		20	0.399		20.7	103.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:10	MA18931-STD1	1		STDA
10:15	MA18931-STD2	1		STDB
10:19	MA18931-STD3	1		STDC
10:23	MA18931-STD4	1		STDD
10:26	MA18931-STD5	1		STDE
10:30	MA18931-STD6	1		STDF
10:35	MA18931-STD7	1		STDG
10:41	MA18931-HSTD1	1		
10:47	MA18931-ICV1	1		
10:54	MA18931-ICB1	1		
10:58	MA18931-CRIA1	1		
11:05	MA18931-ICSA1	1		
11:15	MA18931-ICSAB1	1		
11:21	MA18931-CCV1	1		
11:27	MA18931-CCB1	1		
11:31	MP41231-MB1	1		
11:36	MP41231-B1	1		
11:41	MP41228-B1	1		
11:45	FA98986-4	1		(sample used for QC only; not part of login FA98819)
11:50	MP41231-D1	1		
11:55	MP41231-SD1	5		
12:00	MP41231-PS1	1		
12:04	MP41231-S1	1		
12:09	MP41231-S2	1		
12:13	ZZZZZZ	1		
12:18	MA18931-CCV2	1		
12:23	MA18931-CCB2	1		
14:18	MA18931-ICV2	1		
14:25	MA18931-CCV3	1		
14:35	MA18931-CCB3	1		
14:45	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:54	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:59	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:13	ZZZZZZ	5		
15:18	ZZZZZZ	1		
15:22	ZZZZZZ	5		
15:27	ZZZZZZ	5		
15:32	MA18931-CCV4	1		
15:36	MA18931-CCB4	1		
15:41	ZZZZZZ	5		
15:46	ZZZZZZ	5		
15:51	ZZZZZZ	5		
15:55	ZZZZZZ	5		
16:00	ZZZZZZ	5		
16:05	ZZZZZZ	5		
16:10	ZZZZZZ	5		
16:14	MP41228-MB1	1		
16:19	FA98999-1	1		(sample used for QC only; not part of login FA98819)
16:24	MP41228-D1	1		
16:29	MA18931-CCV5	1		
16:34	MA18931-CCB5	1		
16:38	MP41228-SD1	5		
16:43	MP41228-PS1	1		
16:48	MP41228-S1	1		
16:53	MP41228-S2	1		
16:57	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:22	ZZZZZZ	1		
17:26	MA18931-CCV6	1		
17:31	MA18931-CCB6	1		
17:36	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	17:41	ZZZZZZ	5		
	17:46	ZZZZZZ	5		
	17:51	FA98819-1	1		
---------->		Last reportable sample/prep for job FA98819			
	17:56	ZZZZZZ	1		
	18:00	ZZZZZZ	1		
	18:05	ZZZZZZ	1		
	18:10	ZZZZZZ	1		
	18:15	ZZZZZZ	1		
	18:20	ZZZZZZ	1		
	18:25	MA18931-CCV7	1		
	18:29	MA18931-CCB7	1		
---------->		Last reportable CCB for job FA98819			
	18:34	ZZZZZZ	1		
	18:39	MA18931-HSTD2	1		
	18:44	MA18931-CCV8	1		
	18:48	MA18931-CCB8	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Element: Dilution	B a	C d	C r	C u	P b	M g	M n	S e	A g	
10:41	MA18931-HSTD1	1	X	X	X	X	X	X	X	X	X	
10:47	MA18931-ICV1	1	X	X	X	X	X	X	X	X	X	
10:54	MA18931-ICB1	1	X	X	X	X	X	X	X	X	X	
10:58	MA18931-CRIA1	1	X	X	X	X	X	X	X	X	X	
11:05	MA18931-ICSA1	1	X	X	X	X	X	X	X	X	X	
11:15	MA18931-ICSAB1	1	X	X	X	X	X	X	X	X	X	
11:21	MA18931-CCV1	1	X	X	X	X	X	X	X	X	X	
11:27	MA18931-CCB1	1	X	X	X	X	X	X	X	X	X	
11:31	MP41231-MB1	1	X	X	X	X	X			X	X	
11:36	MP41231-B1	1	X	X	X	X	X			X	X	
11:41	MP41228-B1	1	X	X	X	X	X	X	X	X	X	
11:45	FA98986-4	1	X	X	X		X			X	X	(a)
11:50	MP41231-D1	1	X	X	X	X	X			X	X	
11:55	MP41231-SD1	5	X	X	X	X	X			X	X	
12:00	MP41231-PS1	1	X	X	X	X	X			X	X	
12:04	MP41231-S1	1	X	X	X	X	X			X	X	
12:09	MP41231-S2	1	X	X	X	X	X			X	X	
12:13	ZZZZZZ	1										
12:18	MA18931-CCV2	1	X	X	X	X	X	X	X	X	X	
12:23	MA18931-CCB2	1	X	X	X	X	X	X	X	X	X	
14:18	MA18931-ICV2	1	X	X	X	X	X	X	X	X	X	
14:25	MA18931-CCV3	1	X	X	X	X	X	X	X	X	X	
14:35	MA18931-CCB3	1	X	X	X	X	X	X	X	X	X	
14:45	ZZZZZZ	1										
14:49	ZZZZZZ	1										
14:54	ZZZZZZ	1										
14:59	ZZZZZZ	1										
15:03	ZZZZZZ	1										
15:08	ZZZZZZ	1										
15:13	ZZZZZZ	5										
15:18	ZZZZZZ	1										
15:22	ZZZZZZ	5										
15:27	ZZZZZZ	5										
		Element:	B a	C d	C r	C u	P b	M g	M n	S e	A g	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Dilution	Element: Ba	Cd	Cr	Cu	Pb	Mg	Mn	Se	Ag	
15:32	MA18931-CCV4	1	X	X	X	X	X	X	X	X	X	
15:36	MA18931-CCB4	1	X	X	X	X	X	X	X	X	X	
15:41	ZZZZZZ	5										
15:46	ZZZZZZ	5										
15:51	ZZZZZZ	5										
15:55	ZZZZZZ	5										
16:00	ZZZZZZ	5										
16:05	ZZZZZZ	5										
16:10	ZZZZZZ	5										
16:14	MP41228-MB1	1	X	X	X	X	X	X	X	X	X	
16:19	FA98999-1	1										(a)
16:24	MP41228-D1	1	X	X	X	X	X	X	X	X	X	
16:29	MA18931-CCV5	1	X	X	X	X	X	X	X	X	X	
16:34	MA18931-CCB5	1	X	X	X	X	X	X	X	X	X	
16:38	MP41228-SD1	5	X	X	X	X	X	X	X	X	X	
16:43	MP41228-PS1	1	X	X	X	X	X	X	X	X	X	
16:48	MP41228-S1	1	X	X	X	X	X	X	X	X	X	
16:53	MP41228-S2	1	X	X	X	X	X	X	X	X	X	
16:57	ZZZZZZ	1										
17:02	ZZZZZZ	1										
17:07	ZZZZZZ	1										
17:12	ZZZZZZ	1										
17:22	ZZZZZZ	1										
17:26	MA18931-CCV6	1	X	X	X	X	X	X	X	X	X	
17:31	MA18931-CCB6	1	X	X	X	X	X	X	X	X	X	
17:36	ZZZZZZ	1										
17:41	ZZZZZZ	5										
17:46	ZZZZZZ	5										
17:51	FA98819-1	1	X	X	X	X	X	X	X	X	X	
17:56	ZZZZZZ	1										
18:00	ZZZZZZ	1										
18:05	ZZZZZZ	1										
18:10	ZZZZZZ	1										
		Element:	Ba	Cd	Cr	Cu	Pb	Mg	Mn	Se	Ag	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Element: Dilution	B a	C d	C r	C u	P b	M g	M n	S e	A g
18:15	ZZZZZZ	1									
18:20	ZZZZZZ	1									
18:25	MA18931-CCV7	1	X	X	X	X	X	X	X	X	X
18:29	MA18931-CCB7	1	X	X	X	X	X	X	X	X	X
18:34	ZZZZZZ	1									
18:39	MA18931-HSTD2	1									
18:44	MA18931-CCV8	1	X	X	X	X	X	X	X	X	X
18:48	MA18931-CCB8	1	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login FA98819.

Element: B a C d C r C u P b M g M n S e A g

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:10	MA18931-STD1	2905	20657	4416	959
10:15	MA18931-STD2	2871	20588	4359	933
10:19	MA18931-STD3	2882	20657	4450	941
10:23	MA18931-STD4	2864	20479	4457	929
10:26	MA18931-STD5	2823	20373	4427	904
10:30	MA18931-STD6	2746	20190	4402	873
10:35	MA18931-STD7	2630	19869	4377	830
10:41	MA18931-HSTD1	2650	19906	4377	832
10:47	MA18931-ICV1	2777	20281	4424	878
10:54	MA18931-ICB1	2910 R	20832 R	4473 R	960 R
10:58	MA18931-CRIA1	2871	20575	4441	934
11:05	MA18931-ICSA1	2524	18637	4255	785
11:15	MA18931-ICSAB1	2556	18734	4305	774
11:21	MA18931-CCV1	2760	20285	4385	872
11:27	MA18931-CCB1	2916	20786	4474	957
11:31	MP41231-MB1	2846	20269	4471	929
11:36	MP41231-B1	2763	20081	4419	880
11:41	MP41228-B1	2826	20571	4455	901
11:45	FA98986-4	3080	22005	4855	896
11:50	MP41231-D1	3024	21722	4779	898
11:55	MP41231-SD1	2959	21180	4570	945
12:00	MP41231-PS1	3065	21794	4869	884
12:04	MP41231-S1	3040	21902	4823	862
12:09	MP41231-S2	2974	21370	4765	855
12:13	ZZZZZZ	3025	21650	4841	908
12:18	MA18931-CCV2	2811	20616	4536	895
12:23	MA18931-CCB2	2923	20992	4530	973
14:18	MA18931-ICV2	2724	19735	4336	898
14:25	MA18931-CCV3	2731	19860	4309	901
14:35	MA18931-CCB3	2858	20028	4391	986
14:45	ZZZZZZ	2960	20806	4650	940
14:49	ZZZZZZ	2914	20489	4556	951
14:54	ZZZZZZ	3048	21363	4803	941

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:59	ZZZZZZ	2965	20910	4706	951
15:03	ZZZZZZ	3132	21999	4986	944
15:08	ZZZZZZ	3158	22283	5000	962
15:13	ZZZZZZ	3192	23202	5108	956
15:18	ZZZZZZ	3390	24084	5351	957
15:22	ZZZZZZ	3064	21932	4817	999
15:27	ZZZZZZ	3077	21929	4777	1004
15:32	MA18931-CCV4	2787	20464	4555	926
15:36	MA18931-CCB4	2892	20498	4494	1008
15:41	ZZZZZZ	3057	21754	4794	991
15:46	ZZZZZZ	2999	21290	4685	997
15:51	ZZZZZZ	3043	21699	4744	994
15:55	ZZZZZZ	3065	21891	4780	1007
16:00	ZZZZZZ	3019	21620	4686	1004
16:05	ZZZZZZ	3090	22197	4834	999
16:10	ZZZZZZ	2995	21478	4704	1008
16:14	MP41228-MB1	2925	20922	4571	1013
16:19	FA98999-1	2890	20935	4568	1003
16:24	MP41228-D1	2908	20768	4549	1003
16:29	MA18931-CCV5	2767	20317	4428	925
16:34	MA18931-CCB5	2894	20718	4491	1011
16:38	MP41228-SD1	2922	20757	4513	1013
16:43	MP41228-PS1	2861	20452	4507	977
16:48	MP41228-S1	2804	20351	4490	939
16:53	MP41228-S2	2828	20495	4495	945
16:57	ZZZZZZ	2786	20336	4453	929
17:02	ZZZZZZ	2830	20652	4517	968
17:07	ZZZZZZ	2784	20190	4395	942
17:12	ZZZZZZ	2768	20157	4444	936
17:22	ZZZZZZ	2781	20250	4387	929
17:26	MA18931-CCV6	2771	20283	4370	922
17:31	MA18931-CCB6	2920	20756	4421	1012
17:36	ZZZZZZ	2907	20812	4473	997

INTERNAL STANDARD SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Ba,Cd,Cr,Cu,Pb,Mg,Mn,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:41	ZZZZZZ	2786	20039	4432	908
17:46	ZZZZZZ	2805	20217	4453	920
17:51	FA98819-1	2861	20574	4445	972
17:56	ZZZZZZ	2849	20594	4461	972
18:00	ZZZZZZ	2894	20684	4484	993
18:05	ZZZZZZ	2838	20433	4464	905
18:10	ZZZZZZ	2847	20647	4435	957
18:15	ZZZZZZ	2870	20791	4495	976
18:20	ZZZZZZ	2912	20822	4525	938
18:25	MA18931-CCV7	2777	20238	4317	920
18:29	MA18931-CCB7	2944	20869	4403	1006
18:34	ZZZZZZ	2916	20956	4498	1002
18:39	MA18931-HSTD2	2662	19915	4263	877
18:44	MA18931-CCV8	2782	20325	4311	919
18:48	MA18931-CCB8	2937	21031	4362	1004

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18931 Units: ug/l

Time: / Sample ID:			10:54 ICB1		11:27 CCB1		12:23 CCB2		14:35 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	-0.100	<200	-0.100	<200	0.100	<200	0.100	<200
Beryllium	5.0	.1	anr							
Cadmium	4.0	.1	0.00	<4.0	0.00	<4.0	0.100	<4.0	0.00	<4.0
Calcium	5000	50								
Chromium	10	.5	0.100	<10	0.100	<10	0.00	<10	-0.200	<10
Cobalt	50	.2	anr							
Copper	25	1	-0.200	<25	0.200	<25	-0.100	<25	0.100	<25
Iron	300	15	anr							
Lead	20	1	-0.300	<20	-0.100	<20	-0.300	<20	-0.600	<20
Magnesium	5000	35	-10.4	<5000	-15.3	<5000	5.50	<5000	21.2	<5000
Manganese	15	.25	0.100	<15	0.00	<15	0.100	<15	0.00	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100								
Selenium	20	2	1.50	<20	0.700	<20	0.100	<20	-1.60	<20
Silver	10	.5	0.100	<10	0.00	<10	0.00	<10	0.100	<10
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18931 Units: ug/l

Time: / Sample ID:			15:36 CCB4		16:34 CCB5		17:31 CCB6		18:29 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	0.200	<200	0.200	<200	0.200	<200	0.00	<200
Beryllium	5.0	.1	anr							
Cadmium	4.0	.1	0.100	<4.0	0.00	<4.0	0.00	<4.0	0.00	<4.0
Calcium	5000	50								
Chromium	10	.5	0.200	<10	0.200	<10	0.00	<10	0.200	<10
Cobalt	50	.2	anr							
Copper	25	1	0.00	<25	0.00	<25	0.00	<25	0.00	<25
Iron	300	15	anr							
Lead	20	1	-0.200	<20	0.200	<20	-0.300	<20	0.200	<20
Magnesium	5000	35	-7.70	<5000	-6.10	<5000	7.40	<5000	5.10	<5000
Manganese	15	.25	0.100	<15	0.100	<15	0.100	<15	0.100	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100								
Selenium	20	2	0.600	<20	-0.400	<20	-0.100	<20	-0.600	<20
Silver	10	.5	0.200	<10	0.300	<10	0.300	<10	-0.100	<10
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		10:47			11:21			12:18	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	2000	2060	103.0	2000	2020	101.0	2000	2030	101.5
Beryllium	anr								
Cadmium	2000	2050	102.5	2000	2020	101.0	2000	2010	100.5
Calcium									
Chromium	2000	2070	103.5	2000	2010	100.5	2000	2020	101.0
Cobalt	anr								
Copper	2000	2080	104.0	2000	2040	102.0	2000	2040	102.0
Iron	anr								
Lead	2000	2070	103.5	2000	2030	101.5	2000	2010	100.5
Magnesium	40000	42300	105.8	40000	40600	101.5	40000	40200	100.5
Manganese	2000	2090	104.5	2000	2050	102.5	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	2060	103.0	2000	1990	99.5	2000	2010	100.5
Silver	250	256	102.4	250	255	102.0	250	256	102.4
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		14:18			14:25			15:32	
Sample ID:	ICV	ICV2		CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	2000	2060	103.0	2000	2000	100.0	2000	1980	99.0
Beryllium	anr								
Cadmium	2000	2060	103.0	2000	2020	101.0	2000	2030	101.5
Calcium									
Chromium	2000	2080	104.0	2000	2030	101.5	2000	2050	102.5
Cobalt	anr								
Copper	2000	2060	103.0	2000	1990	99.5	2000	1960	98.0
Iron	anr								
Lead	2000	2070	103.5	2000	2020	101.0	2000	2010	100.5
Magnesium	40000	42100	105.3	40000	40500	101.3	40000	40100	100.3
Manganese	2000	2070	103.5	2000	2020	101.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	2080	104.0	2000	2010	100.5	2000	2020	101.0
Silver	250	257	102.8	250	258	103.2	250	259	103.6
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		16:29			17:26			18:25	
Sample ID:	CCV	CCV5		CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	2000	1990	99.5	2000	1970	98.5	2000	1970	98.5
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Calcium									
Chromium	2000	2060	103.0	2000	2070	103.5	2000	2070	103.5
Cobalt	anr								
Copper	2000	1940	97.0	2000	1930	96.5	2000	1930	96.5
Iron	anr								
Lead	2000	1990	99.5	2000	2020	101.0	2000	2030	101.5
Magnesium	40000	39900	99.8	40000	40400	101.0	40000	40600	101.5
Manganese	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Silver	250	260	104.0	250	261	104.4	250	261	104.4
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA18931 Units: ug/l

Time:		10:41	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum			
Antimony	anr		
Arsenic	anr		
Barium	4000	3980	99.5
Beryllium	anr		
Cadmium	4000	3970	99.3
Calcium			
Chromium	4000	3930	98.3
Cobalt	anr		
Copper	4000	4010	100.3
Iron	anr		
Lead	4000	4010	100.3
Magnesium	80000	79300	99.1
Manganese	4000	3930	98.3
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	4000	3990	99.8
Silver	500	490	98.0
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA18931 Units: ug/l

Time:			10:58	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	400	200		
Antimony	10	5.0	anr	
Arsenic	20	10	anr	
Barium	400	200	209	104.5
Beryllium	10	5.0	anr	
Cadmium	10	5.0	5.20	104.0
Calcium	2000	1000		
Chromium	20	10	10.6	106.0
Cobalt	100	50	anr	
Copper	50	25	26.1	104.4
Iron	600	300	anr	
Lead	10	5.0	5.60	112.0
Magnesium	10000	5000	5290	105.8
Manganese	30	15	16.2	108.0
Molybdenum	100	50	anr	
Nickel	80	40	anr	
Potassium	20000	10000		
Selenium	20	10	10.8	108.0
Silver	20	10	9.00	90.0
Sodium	20000	10000	anr	
Strontium	20	10		
Thallium	20	10	anr	
Tin	100	50		
Titanium	20	10		
Vanadium	100	50	anr	
Zinc	40	20	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA18931 Units: ug/l

Time:			11:05		11:15	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	513000	102.6	514000	102.8
Antimony		1000	1.90		942	94.2
Arsenic		1000	0.00		915	91.5
Barium		500	0.100		500	100.0
Beryllium		500	-0.100		497	99.4
Cadmium		1000	0.00		956	95.6
Calcium	500000	500000	456000	91.2	465000	93.0
Chromium		500	-0.400		486	97.2
Cobalt		500	0.00		476	95.2
Copper		500	1.80		560	112.0
Iron	200000	200000	471000	94.2	190000	95.0
Lead		1000	0.00		990	99.0
Magnesium	500000	500000	520000	104.0	521000	104.2
Manganese		500	-0.700		512	102.4
Molybdenum		1000	0.200		858	85.8
Nickel		1000	0.00		905	90.5
Potassium			197		-14.8	
Selenium		1000	0.00		883	88.3
Silver		1000	-0.600		993	99.3
Sodium			292		282	
Strontium		1000	0.300		931	93.1
Thallium		1000	0.00		860	86.0
Tin		1000	0.300		887	88.7
Titanium		1000	-0.400		988	98.8
Vanadium		500	-0.700		510	102.0
Zinc		1000	2.50		920	92.0

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:01	MA18933-STD1	1		STD1
14:03	MA18933-STD2	1		STD2
14:04	MA18933-STD3	1		STD3
14:06	MA18933-STD4	1		STD4
14:07	MA18933-STD5	1		STD5
14:09	MA18933-STD6	1		STD6
14:11	MA18933-HSTD1	1		
14:13	MA18933-ICV1	1		
14:15	MA18933-ICB1	1		
14:17	MA18933-CRI1	1		
14:18	MA18933-CCV1	1		
14:19	MA18933-CCB1	1		
14:21	MP41239-MB1	1		
14:23	MP41239-B1	1		
14:24	FA99026-1	1		(sample used for QC only; not part of login FA98819)
14:26	MP41239-D1	1		
14:27	MP41239-SD1	5		
14:28	MP41239-S1	1		
14:30	MP41239-S2	1		
14:31	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:36	MA18933-CCV2	1		
14:37	MA18933-CCB2	1		
14:39	ZZZZZZ	1		
14:40	FA98819-1	1		
---------->	Last reportable sample/prep for job FA98819			
14:42	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:51	ZZZZZZ	1		
14:52	MA18933-CCV3	1		
14:54	MA18933-CCB3	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:58	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:04	MP41240-MB1	1		
15:05	MP41240-B1	1		
15:06	FA98906-18	1		(sample used for QC only; not part of login FA98819)
15:08	MP41240-D1	1		
15:10	MA18933-CCV4	1		
15:11	MA18933-CCB4	1		
15:13	MP41240-SD1	5		
15:14	MP41240-S1	1		
15:15	MP41240-S2	1		
15:17	ZZZZZZ	1		
15:19	ZZZZZZ	1		
15:20	ZZZZZZ	1		
15:22	ZZZZZZ	1		
15:23	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:27	MA18933-CCV5	1		
15:28	MA18933-CCB5	1		
15:30	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:33	FA98908-1R	1		(sample used for QC only; not part of login FA98819)
15:34	ZZZZZZ	1		
15:36	ZZZZZZ	1		
15:37	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:38	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:44	MA18933-CCV6	1		
15:45	MA18933-CCB6	1		
15:47	ZZZZZZ	1		
15:48	ZZZZZZ	1		
15:50	MP41240-D2	1		
15:51	MP41240-MB2	1		
15:52	MP41240-B2	1		
15:53	MP41240-MB3	1		
15:55	MP41240-B3	1		
15:57	MP41240-MB4	1		
15:58	MP41240-B4	1		
16:00	MP41240-MB5	1		
16:02	MA18933-CCV7	1		
16:03	MA18933-CCB7	1		
16:05	MP41240-B5	1		
16:06	MA18933-CRI2	1		
16:08	MA18933-CCV8	1		
16:10	MA18933-CCB8	1		

----------> Last reportable CCB for job FA98819
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
14:11	MA18933-HSTD1	1	X	
14:13	MA18933-ICV1	1	X	
14:15	MA18933-ICB1	1	X	
14:17	MA18933-CRI1	1	X	
14:18	MA18933-CCV1	1	X	
14:19	MA18933-CCB1	1	X	
14:21	MP41239-MB1	1	X	
14:23	MP41239-B1	1	X	
14:24	FA99026-1	1	X	(a)
14:26	MP41239-D1	1	X	
14:27	MP41239-SD1	5	X	
14:28	MP41239-S1	1	X	
14:30	MP41239-S2	1	X	
14:31	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:36	MA18933-CCV2	1	X	
14:37	MA18933-CCB2	1	X	
14:39	ZZZZZZ	1		
14:40	FA98819-1	1	X	
14:42	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	MA18933-CCV3	1	X	
14:54	MA18933-CCB3	1	X	
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:58	ZZZZZZ	1		
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
15:00	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:04	MP41240-MB1	1	X	
15:05	MP41240-B1	1	X	
15:06	FA98906-18	1	X	(a)
15:08	MP41240-D1	1	X	
15:10	MA18933-CCV4	1	X	
15:11	MA18933-CCB4	1	X	
15:13	MP41240-SD1	5	X	
15:14	MP41240-S1	1	X	
15:15	MP41240-S2	1	X	
15:17	ZZZZZZ	1		
15:19	ZZZZZZ	1		
15:20	ZZZZZZ	1		
15:22	ZZZZZZ	1		
15:23	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:27	MA18933-CCV5	1	X	
15:28	MA18933-CCB5	1	X	
15:30	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:33	FA98908-1R	1	X	(a)
15:34	ZZZZZZ	1		
15:36	ZZZZZZ	1		
15:37	ZZZZZZ	1		
15:38	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:44	MA18933-CCV6	1	X	
15:45	MA18933-CCB6	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
Analyst: JC Run ID: MA18933
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
15:47	ZZZZZZ	1	
15:48	ZZZZZZ	1	
15:50	MP41240-D2	1	X
15:51	MP41240-MB2	1	X
15:52	MP41240-B2	1	X
15:53	MP41240-MB3	1	X
15:55	MP41240-B3	1	X
15:57	MP41240-MB4	1	X
15:58	MP41240-B4	1	X
16:00	MP41240-MB5	1	X
16:02	MA18933-CCV7	1	X
16:03	MA18933-CCB7	1	X
16:05	MP41240-B5	1	X
16:06	MA18933-CRI2	1	X
16:08	MA18933-CCV8	1	X
16:10	MA18933-CCB8	1	X

(a) Sample used for QC only; not part of login FA98819.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA18933 Units: ug/l

Time: / Sample ID:			14:15 ICB1		14:19 CCB1		14:37 CCB2		14:54 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.000100	<0.50	0.00650	<0.50	0.00580	<0.50	0.00160	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA18933 Units: ug/l

Time: / Sample ID:			15:11 CCB4		15:28 CCB5		15:45 CCB6		16:03 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.00340	<0.50	0.00520	<0.50	0.00100	<0.50	0.00300	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA18933 Units: ug/l

Time:			16:10	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.50	.03	-0.00100	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA18933 Units: ug/l

Time:		14:13			14:18			14:36	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.99	99.7	3	3.04	101.3	3	3.04	101.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA18933 Units: ug/l

Time:		14:52			15:10			15:27	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.04	101.3	3	3.04	101.3	3	3.06	102.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA18933 Units: ug/l

Time:		15:44			16:02			16:08	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.03	101.0	3	2.97	99.0	3	3.01	100.3

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA18933 Units: ug/l

Time:		14:11	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.99	99.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: H50922W1.CSV Date Analyzed: 09/22/22 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA18933 Units: ug/l

Time:			14:17		16:06	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.189	94.5	0.195	97.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.20	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22 09/14/22

Metal	FA98621-8 Original	DUP	RPD	QC Limits	FA98621-8 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	1.4	1.2	15.4	0-20	1.4	229	200	113.8	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	FA98621-8 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	1.4	230	200	114.3	0.4	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	234	200	117.0	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date:			09/14/22				09/14/22	
Metal	FA98621-8 Original	SDL 2:10	%DIF	QC Limits	FA98679-3 Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	1.36	0.00	100.0(a)	0-10	0.601	0.00	100.0(a)	0-10
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium	anr							
Manganese	anr							
Molybdenum								
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Strontium								
Thallium	anr							
Tin								
Titanium								
Vanadium	anr							
Zinc	anr							

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	Sample ml	Final ml	FA98621-8 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41211: FA98819-1B

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	.5	1	-0.10	<200
Beryllium	4.0	.1	.2		
Cadmium	5.0	.1	.2	-0.10	<5.0
Calcium	1000	50	50		
Chromium	10	.5	1	0.10	<10
Cobalt	50	.2	.2		
Copper	25	1	1	0.0	<25
Iron	300	15	17		
Lead	5.0	1	1.1	-0.30	<5.0
Magnesium	5000	35	35	13.8	<5000
Manganese	15	.25	1	0.10	<15
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	100	200		
Selenium	10	2	2.9	0.10	<10
Silver	10	.5	.7	0.0	<10
Sodium	10000	250	500		
Strontium	10	.25	.5		
Thallium	10	1	1.4		
Tin	50	.5	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:			09/20/22					09/20/22	
Metal	FA98999-1 Original	DUP	RPD	QC Limits	FA98999-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	16.0	15.8	1.3	0-20	16.0	2000	2000	99.2	80-120
Beryllium	anr								
Cadmium	1.4	1.4	0.0	0-20	1.4	51.2	50	99.6	80-120
Calcium									
Chromium	2.6	2.7	3.8	0-20	2.6	211	200	104.2	80-120
Cobalt	anr								
Copper	0.0	0.0	NC	0-20	0.0	249	250	99.6	80-120
Iron	anr								
Lead	0.0	0.0	NC	0-20	0.0	488	500	97.6	80-120
Magnesium	1760	1720	2.3	0-20	1760	27000	25000	101.0	80-120
Manganese	41.5	41.2	0.7	0-20	41.5	547	500	101.1	80-120
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1950	2000	97.5	80-120
Silver	0.70	0.0	200.0(a)	0-20	0.70	44.3	50	87.2	80-120
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	FA98999-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	16.0	2020	2000	100.2	1.0	20
Beryllium	anr					
Cadmium	1.4	51.4	50	100.0	0.4	20
Calcium						
Chromium	2.6	212	200	104.7	0.5	20
Cobalt	anr					
Copper	0.0	249	250	99.6	0.0	20
Iron	anr					
Lead	0.0	492	500	98.4	0.8	20
Magnesium	1760	27100	25000	101.4	0.4	20
Manganese	41.5	549	500	101.5	0.4	20
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	0.0	1960	2000	98.0	0.5	20
Silver	0.70	45.2	50	89.0	2.0	20
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	2070	2000	103.5	80-120
Beryllium	anr			
Cadmium	50.9	50	101.8	80-120
Calcium				
Chromium	211	200	105.5	80-120
Cobalt	anr			
Copper	264	250	105.6	80-120
Iron	anr			
Lead	505	500	101.0	80-120
Magnesium	25800	25000	103.2	80-120
Manganese	527	500	105.4	80-120
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	1970	2000	98.5	80-120
Silver	45.5	50	91.0	80-120
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	FA98999-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	16.0	15.2	5.0	0-10
Beryllium	anr			
Cadmium	1.40	1.50	7.1	0-10
Calcium				
Chromium	2.60	0.00	100.0(a)	0-10
Cobalt	anr			
Copper	0.00	0.00	NC	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	1760	1730	1.5	0-10
Manganese	41.5	40.5	2.4	0-10
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.700	0.00	100.0(a)	0-10
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	Sample ml	Final ml	FA98999-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium	9.8	10	16	15.68	258.4	0.2	12.5	250	97.1	80-120
Beryllium										
Cadmium	9.8	10	1.4	1.372	50.9	0.2	2.5	50	99.1	80-120
Calcium										
Chromium	9.8	10	2.6	2.548	54	0.2	2.5	50	102.9	80-120
Cobalt										
Copper	9.8	10			94.9	0.2	5	100	94.9	80-120
Iron										
Lead	9.8	10			47.4	0.2	2.5	50	94.8	80-120
Magnesium	9.8	10	1758	1722.84	6724	0.2	250	5000	100.0	80-120
Manganese	9.8	10	41.5	40.67	91	0.2	2.5	50	100.7	80-120
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10			92.7	0.2	5	100	92.7	80-120
Silver	9.8	10	.7	.686	46.5	0.2	2.5	50	91.6	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41228: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41239 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/22/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.013	<0.50

Associated samples MP41239: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41239
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/22/22 09/22/22

Metal	FA99026-1 Original	DUP	RPD	QC Limits	FA99026-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.1	3	103.3	80-120

Associated samples MP41239: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41239 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/22/22

Metal	FA99026-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.2	3	106.7	3.2	20

Associated samples MP41239: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41239
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/22/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.1	3	103.3	80-120

Associated samples MP41239: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41239
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/22/22

Metal	FA99026-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP41239: FA98819-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18915

Instrument Detection Limits

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: LEEMANHG5 **Effective Date:** 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA18933

Instrument Detection Limits

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 01/30/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA18931

Instrument Linear Ranges

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18915

Instrument Linear Ranges

Job Number: FA98819
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 12/01/21

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA18931

Metals Analysis

Raw Data

Quantitation Report

File Name	001CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:14
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.035	ug/l	61.85	4,925.97	2.910E-02	Pulse	0.50	3
As			1	-0.004	ug/l	-67.65	59.33	3.505E-04	Pulse	1.00	3
Mo			1	0.043	ug/l	37.08	292.00	1.166E-03	Pulse	0.50	3
Pb			1	-0.002	ug/l	-32.08	672.02	2.412E-04	Pulse	1.00	3
Be			1	-0.002	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.010	ug/l	97.99	280.00	1.116E-03	Pulse	0.50	3
Ba			1	-0.002	ug/l	-49.28	24.67	1.611E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	37.99	156.00	5.601E-05	Pulse	0.50	3
Sn			1	0.042	ug/l	85.00	486.70	3.180E-04	Pulse	0.30	3
Sr			1	0.021	ug/l	40.90	570.01	3.723E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	1700.12	338.00	1.213E-04	Pulse	0.50	3
Ca			1	5.874	ug/l	32.88	1,992.78	6.879E-04	Pulse	0.50	3
Ti			1	0.031	ug/l	60.75	12.00	3.943E-05	Pulse	0.50	3
Na			1	0.212	ug/l	46.80	21,196.51	6.944E-02	Pulse	1.00	3
Mg			1	0.019	ug/l	551.42	632.68	2.072E-03	Pulse	1.00	3
K			1	0.723	ug/l	146.27	94,598.34	3.099E-01	Pulse	1.00	3
V			1	-0.007	ug/l	-55.68	930.03	3.047E-03	Pulse	0.50	3
Mn			1	-0.001	ug/l	-389.75	478.68	2.829E-03	Pulse	0.50	3
Fe			1	8.657	ug/l	64.50	105,732.02	6.237E-01	Pulse	0.50	3
Co			1	0.001	ug/l	241.11	99.33	5.878E-04	Pulse	0.50	3
Ni			1	-0.018	ug/l	-54.23	488.01	2.882E-03	Pulse	0.50	3
Cu			1	0.346	ug/l	18.22	19,870.91	1.174E-01	Pulse	0.50	3
Zn			1	-0.301	ug/l	-12.76	2,231.47	8.927E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-35.01	0.67	2.636E-06	Pulse	0.50	3
Al			1	0.264	ug/l	47.97	1,120.37	3.670E-03	Pulse	1.00	3
Se			1	0.027	ug/l	112.37	37.67	1.506E-04	Pulse	3.00	3
Sb			1	0.013	ug/l	23.91	168.67	6.742E-04	Pulse	1.00	3
Se			1	-0.052	ug/l	-39.36	41.00	1.641E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,786,497.00	0.30	100.0	Pulse	0.50	3
1	Sc		305,240.61	0.88	100.0	Pulse	0.30	3
1	Ge		169,236.41	0.71	100.0	Pulse	0.30	3
1	In		1,531,133.17	0.31	100.0	Pulse	0.30	3
1	Tb		3,806,093.83	0.44	100.0	Pulse	0.50	3
1	Lu		2,896,331.92	0.49	100.0	Pulse	0.50	3
1	Ge		249,935.93	1.05	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,294.49	3.91	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:18
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	144.69	4,589.22	2.684E-02	Pulse	0.50	3
As			1	-0.003	ug/l	-163.33	61.00	3.563E-04	Pulse	1.00	3
Mo			1	0.002	ug/l	154.66	69.33	2.750E-04	Pulse	0.50	3
Pb			1	-0.003	ug/l	-27.83	661.35	2.351E-04	Pulse	1.00	3
Be			1	0.000	ug/l	-52655.42	0.17	5.420E-07	Pulse	2.00	3
Ag			1	0.003	ug/l	181.73	155.33	6.161E-04	Pulse	0.50	3
Ba			1	-0.001	ug/l	-325.76	28.00	1.813E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	53.83	48.00	1.708E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	4308.24	244.45	1.582E-04	Pulse	0.30	3
Sr			1	-0.003	ug/l	-273.42	377.34	2.445E-04	Pulse	0.50	3
[Pb]			1	0.002	ug/l	56.25	366.01	1.301E-04	Pulse	0.50	3
Ca			1	-4.450	ug/l	-46.23	1,476.73	5.072E-04	Pulse	0.50	3
Ti			1	-0.002	ug/l	-176.09	1.33	4.336E-06	Pulse	0.50	3
Na			1	0.120	ug/l	747.35	21,160.20	6.883E-02	Pulse	1.00	3
Mg			1	-0.219	ug/l	-2.72	390.00	1.269E-03	Pulse	1.00	3
K			1	0.640	ug/l	51.27	95,198.51	3.097E-01	Pulse	1.00	3
V			1	-0.002	ug/l	-450.36	986.70	3.209E-03	Pulse	0.50	3
Mn			1	-0.012	ug/l	-54.69	404.01	2.364E-03	Pulse	0.50	3
Fe			1	0.196	ug/l	48.19	21,936.43	1.283E-01	Pulse	0.50	3
Co			1	0.000	ug/l	-2445.34	86.67	5.059E-04	Pulse	0.50	3
Ni			1	-0.017	ug/l	-12.61	497.34	2.908E-03	Pulse	0.50	3
Cu			1	0.133	ug/l	27.24	17,447.89	1.021E-01	Pulse	0.50	3
Zn			1	-0.330	ug/l	-5.48	2,184.13	8.673E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	-177.89	2.67	1.054E-05	Pulse	0.50	3
Al			1	-0.238	ug/l	-44.03	897.36	2.919E-03	Pulse	1.00	3
Se			1	0.006	ug/l	612.10	35.33	1.404E-04	Pulse	3.00	3
Sb			1	0.002	ug/l	73.32	83.67	3.323E-04	Pulse	1.00	3
Se			1	0.016	ug/l	427.96	45.22	1.795E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,740.92	0.69	100.0	Pulse	0.50	3
1	Sc		307,439.08	0.02	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		170,994.39	2.00	100.0	Pulse	0.30	3
1	In		1,543,787.34	0.50	100.0	Pulse	0.30	3
1	Tb		3,827,790.92	1.03	100.0	Pulse	0.50	3
1	Lu		2,911,850.92	0.50	100.0	Pulse	0.50	3
1	Ge		251,845.03	0.93	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,234.49	5.34	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:22
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,598.56	2.665E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	66.00	3.824E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	56.67	2.223E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	748.35	2.632E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.17	5.438E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	---	107.33	4.207E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	31.33	2.017E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	36.67	1.289E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	244.45	1.575E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	403.34	2.599E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	340.00	1.196E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	1,710.08	5.851E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.00	6.469E-06	Pulse	0.50	3
Na			1	0.000	ug/l	---	21,167.47	6.802E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	625.34	2.009E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	95,666.85	3.074E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,016.70	3.265E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	496.01	2.874E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	20,153.79	1.168E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	88.00	5.097E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	584.68	3.388E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	15,955.29	9.246E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,965.57	1.162E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.00	1.567E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,019.03	3.275E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	35.11	1.375E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	66.00	2.587E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	44.89	1.759E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,843,165.75	0.75	100.0	Pulse	0.50	3
1	Sc		311,213.33	1.37	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		172,554.23	0.26	100.0	Pulse	0.30	3
1	In		1,551,977.89	0.43	100.0	Pulse	0.30	3
1	Tb		3,857,807.67	0.35	100.0	Pulse	0.50	3
1	Lu		2,922,466.75	0.43	100.0	Pulse	0.50	3
1	Ge		255,204.45	0.81	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,144.48	7.93	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:26
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.539	ug/l	4.39	10,204.69	6.387E-02	Pulse	0.50	3
As			1	0.510	ug/l	3.95	793.35	4.966E-03	Pulse	1.00	3
Mo			1	0.508	ug/l	6.34	2,706.21	1.149E-02	Pulse	0.50	3
Pb			1	0.516	ug/l	3.31	12,662.36	4.824E-03	Pulse	1.00	3
Be			1	0.536	ug/l	17.63	40.17	1.395E-04	Pulse	2.00	3
Ag			1	0.506	ug/l	2.07	8,576.01	3.639E-02	Pulse	0.50	3
Ba			1	0.482	ug/l	1.10	1,208.71	8.380E-04	Pulse	0.50	3
Tl			1	0.504	ug/l	2.11	16,453.95	6.267E-03	Pulse	0.50	3
Sn			1	0.489	ug/l	2.42	2,930.25	2.031E-03	Pulse	0.30	3
Sr			1	0.502	ug/l	3.00	4,190.48	2.906E-03	Pulse	0.50	3
[Pb]			1	0.515	ug/l	4.43	6,009.75	2.289E-03	Pulse	0.50	3
Ca			1	49.981	ug/l	4.62	3,952.41	1.460E-03	Pulse	0.50	3
Ti			1	0.651	ug/l	16.16	204.00	7.081E-04	Pulse	0.50	3
Na			1	52.069	ug/l	3.38	120,408.20	4.182E-01	Pulse	1.00	3
Mg			1	52.673	ug/l	2.31	51,886.83	1.802E-01	Pulse	1.00	3
K			1	66.525	ug/l	6.25	154,703.12	5.373E-01	Pulse	1.00	3
V			1	0.481	ug/l	4.94	5,233.39	1.817E-02	Pulse	0.50	3
Mn			1	0.526	ug/l	5.83	3,966.42	2.484E-02	Pulse	0.50	3
Fe			1	53.499	ug/l	3.41	519,029.88	3.249E+00	Pulse	0.50	3
Co			1	0.511	ug/l	2.37	8,501.23	5.321E-02	Pulse	0.50	3
Ni			1	0.532	ug/l	0.94	2,900.23	1.815E-02	Pulse	0.50	3
Cu			1	0.588	ug/l	8.32	21,544.04	1.348E-01	Pulse	0.50	3
Zn			1	0.178	ug/l	13.90	3,114.93	1.321E-02	Pulse	1.00	3
Cd			1	0.509	ug/l	5.83	1,321.39	5.610E-03	Pulse	0.50	3
Al			1	54.605	ug/l	3.33	24,458.61	8.496E-02	Pulse	1.00	3
Se			1	0.517	ug/l	9.39	91.66	3.892E-04	Pulse	3.00	3
Sb			1	0.501	ug/l	3.18	3,871.75	1.643E-02	Pulse	1.00	3
Se			1	0.417	ug/l	20.01	64.00	2.715E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,626,588.42	2.90	92.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		288,041.83	2.71	92.6	Pulse	0.30	3
1	Ge		159,840.90	2.92	92.6	Pulse	0.30	3
1	In		1,442,530.29	2.94	92.9	Pulse	0.30	3
1	Tb		3,568,774.50	2.47	92.5	Pulse	0.50	3
1	Lu		2,707,513.67	2.66	92.6	Pulse	0.50	3
1	Ge		235,793.92	3.09	92.4	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,090.03	7.05	95.2	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:30
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.964	ug/l	2.92	16,041.96	9.327E-02	Pulse	0.50	3
As			1	0.952	ug/l	3.89	1,538.73	8.947E-03	Pulse	1.00	3
Mo			1	0.935	ug/l	5.15	5,342.78	2.098E-02	Pulse	0.50	3
Pb			1	0.961	ug/l	1.35	24,516.50	8.761E-03	Pulse	1.00	3
Be			1	0.994	ug/l	4.42	80.00	2.580E-04	Pulse	2.00	3
Ag			1	0.964	ug/l	1.55	17,550.97	6.890E-02	Pulse	0.50	3
Ba			1	0.922	ug/l	2.34	2,451.51	1.584E-03	Pulse	0.50	3
Tl			1	0.971	ug/l	0.87	33,732.45	1.205E-02	Pulse	0.50	3
Sn			1	0.944	ug/l	6.76	5,842.08	3.774E-03	Pulse	0.30	3
Sr			1	0.944	ug/l	3.65	8,107.76	5.238E-03	Pulse	0.50	3
[Pb]			1	0.962	ug/l	2.64	11,672.68	4.171E-03	Pulse	0.50	3
Ca			1	93.489	ug/l	2.12	6,449.08	2.221E-03	Pulse	0.50	3
Ti			1	1.048	ug/l	13.04	352.00	1.135E-03	Pulse	0.50	3
Na			1	99.712	ug/l	1.03	229,073.21	7.387E-01	Pulse	1.00	3
Mg			1	99.845	ug/l	0.44	105,375.25	3.398E-01	Pulse	1.00	3
K			1	105.421	ug/l	0.51	208,322.01	6.718E-01	Pulse	1.00	3
V			1	0.967	ug/l	2.13	10,309.41	3.324E-02	Pulse	0.50	3
Mn			1	1.024	ug/l	1.11	7,855.62	4.567E-02	Pulse	0.50	3
Fe			1	100.744	ug/l	0.97	1,034,566.50	6.015E+00	Pulse	0.50	3
Co			1	0.987	ug/l	0.91	17,608.69	1.024E-01	Pulse	0.50	3
Ni			1	1.132	ug/l	2.67	5,978.27	3.476E-02	Pulse	0.50	3
Cu			1	0.908	ug/l	1.27	27,159.08	1.579E-01	Pulse	0.50	3
Zn			1	0.803	ug/l	0.68	4,787.94	1.880E-02	Pulse	1.00	3
Cd			1	0.936	ug/l	2.46	2,625.53	1.031E-02	Pulse	0.50	3
Al			1	99.485	ug/l	0.36	47,168.40	1.521E-01	Pulse	1.00	3
Se			1	0.940	ug/l	6.84	151.56	5.951E-04	Pulse	3.00	3
Sb			1	0.958	ug/l	1.92	7,941.39	3.118E-02	Pulse	1.00	3
Se			1	0.791	ug/l	15.22	91.00	3.572E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,798,629.50	1.17	98.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		310,111.60	0.18	99.6	Pulse	0.30	3
1	Ge		171,994.86	1.07	99.7	Pulse	0.30	3
1	In		1,547,904.38	0.26	99.7	Pulse	0.30	3
1	Tb		3,833,489.83	0.87	99.4	Pulse	0.50	3
1	Lu		2,903,343.25	0.83	99.3	Pulse	0.50	3
1	Ge		254,711.01	0.67	99.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,313.39	11.50	114.8	Pulse	0.30	3

Quantitation Report

File Name	006CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:34
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.928	ug/l	0.28	124,033.61	7.127E-01	Pulse	0.50	3
As			1	9.710	ug/l	0.80	15,262.43	8.770E-02	Pulse	1.00	3
Mo			1	9.711	ug/l	0.67	55,095.13	2.157E-01	Pulse	0.50	3
Pb			1	9.662	ug/l	0.75	242,958.53	8.573E-02	Pulse	1.00	3
Be			1	9.671	ug/l	4.55	788.02	2.505E-03	Pulse	2.00	3
Ag			1	9.854	ug/l	1.07	178,805.70	7.001E-01	Pulse	0.50	3
Ba			1	9.746	ug/l	1.77	25,706.90	1.656E-02	Pulse	0.50	3
Tl			1	9.991	ug/l	1.29	351,078.95	1.239E-01	Pulse	0.50	3
Sn			1	9.727	ug/l	0.68	58,132.71	3.744E-02	Pulse	0.30	3
Sr			1	9.814	ug/l	0.41	80,771.60	5.202E-02	Pulse	0.50	3
[Pb]			1	9.704	ug/l	0.79	116,110.67	4.097E-02	Pulse	0.50	3
Ca			1	982.518	ug/l	0.64	52,349.41	1.778E-02	Pulse	0.50	3
Ti			1	9.584	ug/l	3.77	3,248.95	1.033E-02	Pulse	0.50	3
Na			1	996.334	ug/l	0.22	2,129,131.25	6.769E+00	Pulse	1.00	3
Mg			1	1017.026	ug/l	0.76	1,082,817.91	3.443E+00	Pulse	1.00	3
K			1	1006.978	ug/l	0.53	1,191,250.50	3.788E+00	Pulse	1.00	3
V			1	9.752	ug/l	0.35	96,137.63	3.057E-01	Pulse	0.50	3
Mn			1	9.984	ug/l	0.69	73,085.73	4.200E-01	Pulse	0.50	3
Fe			1	996.674	ug/l	0.58	10,175,543.00	5.847E+01	Analog	0.50	3
Co			1	10.075	ug/l	0.33	181,067.91	1.040E+00	Pulse	0.50	3
Ni			1	10.133	ug/l	0.58	49,464.22	2.842E-01	Pulse	0.50	3
Cu			1	10.072	ug/l	0.75	142,472.22	8.187E-01	Pulse	0.50	3
Zn			1	9.384	ug/l	1.20	24,393.38	9.552E-02	Pulse	1.00	3
Cd			1	10.065	ug/l	1.66	28,260.86	1.107E-01	Pulse	0.50	3
Al			1	991.949	ug/l	0.87	467,752.30	1.487E+00	Pulse	1.00	3
Se			1	9.997	ug/l	4.80	1,277.82	5.004E-03	Pulse	3.00	3
Sb			1	9.827	ug/l	0.92	81,064.55	3.174E-01	Pulse	1.00	3
Se			1	9.369	ug/l	1.46	593.12	2.322E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,834,250.58	1.01	99.7	Pulse	0.50	3
1	Sc		314,523.23	0.24	101.1	Pulse	0.30	3
1	Ge		174,022.78	0.30	100.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,552,747.40	0.31	100.0	Pulse	0.30	3
1	Tb		3,878,694.17	0.43	100.5	Pulse	0.50	3
1	Lu		2,943,927.33	0.23	100.7	Pulse	0.50	3
1	Ge		255,392.65	0.66	100.1	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,202.27	12.49	105.0	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:38
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.331	ug/l	0.75	625,954.68	3.574E+00	Pulse	0.50	3
As			1	51.115	ug/l	0.41	80,568.84	4.600E-01	Pulse	1.00	3
Mo			1	50.871	ug/l	0.51	289,519.68	1.129E+00	Pulse	0.50	3
Pb			1	50.524	ug/l	0.69	1,252,441.08	4.472E-01	Pulse	1.00	3
Be			1	51.941	ug/l	1.34	4,249.45	1.345E-02	Pulse	2.00	3
Ag			1	51.167	ug/l	0.54	931,696.69	3.634E+00	Pulse	0.50	3
Ba			1	50.936	ug/l	0.49	134,114.22	8.645E-02	Pulse	0.50	3
Tl			1	52.240	ug/l	0.55	1,814,133.75	6.477E-01	Pulse	0.50	3
Sn			1	50.261	ug/l	0.31	299,111.90	1.928E-01	Pulse	0.30	3
Sr			1	50.494	ug/l	0.07	413,564.51	2.666E-01	Pulse	0.50	3
[Pb]			1	50.720	ug/l	0.72	598,325.58	2.136E-01	Pulse	0.50	3
Ca			1	5098.814	ug/l	0.89	265,537.54	8.983E-02	Pulse	0.50	3
Ti			1	51.091	ug/l	1.01	17,384.39	5.504E-02	Pulse	0.50	3
Na			1	5168.302	ug/l	0.05	11,001,920.33	3.483E+01	Analog	1.00	3
Mg			1	5195.225	ug/l	0.45	5,552,460.17	1.758E+01	Analog	1.00	3
K			1	5127.401	ug/l	0.61	5,694,283.00	1.803E+01	Analog	1.00	3
V			1	50.896	ug/l	0.57	499,522.49	1.581E+00	Pulse	0.50	3
Mn			1	51.428	ug/l	0.44	376,799.01	2.151E+00	Pulse	0.50	3
Fe			1	5140.928	ug/l	0.48	52,738,038.67	3.011E+02	Analog	0.50	3
Co			1	51.880	ug/l	0.79	937,990.50	5.356E+00	Pulse	0.50	3
Ni			1	52.304	ug/l	0.65	254,493.80	1.453E+00	Pulse	0.50	3
Cu			1	52.197	ug/l	1.33	675,362.27	3.856E+00	Pulse	0.50	3
Zn			1	51.372	ug/l	0.50	120,735.79	4.709E-01	Pulse	1.00	3
Cd			1	51.815	ug/l	0.66	146,054.21	5.696E-01	Pulse	0.50	3
Al			1	5172.006	ug/l	0.21	2,444,966.58	7.740E+00	Pulse	1.00	3
Se			1	51.256	ug/l	1.97	6,432.97	2.509E-02	Pulse	3.00	3
Sb			1	51.210	ug/l	1.05	423,845.24	1.653E+00	Pulse	1.00	3
Se			1	51.423	ug/l	1.15	3,065.58	1.196E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,800,963.17	0.97	98.5	Pulse	0.50	3
1	Sc		315,872.09	0.49	101.5	Pulse	0.30	3
1	Ge		175,140.53	0.53	101.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,551,434.14	0.41	100.0	Pulse	0.30	3
1	Tb		3,877,281.67	0.21	100.5	Pulse	0.50	3
1	Lu		2,956,192.00	1.16	101.2	Pulse	0.50	3
1	Ge		256,409.47	0.62	100.5	Pulse	0.30	3
1	Te		7.33	110.22	1100.0	Pulse	0.50	3
1	Li		1,170.04	1.42	102.2	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:42
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.821	ug/l	0.30	1,222,221.96	7.063E+00	Pulse	0.50	3
As			1	101.785	ug/l	0.36	158,448.95	9.157E-01	Pulse	1.00	3
Mo			1	100.494	ug/l	0.80	571,804.44	2.230E+00	Pulse	0.50	3
Pb			1	101.148	ug/l	0.54	2,457,750.42	8.950E-01	Pulse	1.00	3
Be			1	101.373	ug/l	1.25	8,239.67	2.626E-02	Pulse	2.00	3
Ag			1	99.432	ug/l	0.34	1,810,243.21	7.061E+00	Pulse	0.50	3
Ba			1	101.710	ug/l	0.46	263,820.56	1.726E-01	Pulse	0.50	3
Tl			1	104.036	ug/l	0.85	3,542,346.58	1.290E+00	Pulse	0.50	3
Sn			1	100.712	ug/l	0.87	590,254.39	3.862E-01	Pulse	0.30	3
Sr			1	99.975	ug/l	0.80	806,336.12	5.275E-01	Pulse	0.50	3
[Pb]			1	100.901	ug/l	0.20	1,166,762.50	4.249E-01	Pulse	0.50	3
Ca			1	10185.256	ug/l	0.25	523,852.79	1.789E-01	Pulse	0.50	3
Ti			1	100.972	ug/l	0.47	34,132.99	1.088E-01	Pulse	0.50	3
Na			1	10215.338	ug/l	0.30	21,583,557.33	6.878E+01	Analog	1.00	3
Mg			1	10225.269	ug/l	0.13	10,856,796.33	3.460E+01	Analog	1.00	3
K			1	10146.612	ug/l	0.18	11,100,971.67	3.537E+01	Analog	1.00	3
V			1	101.955	ug/l	0.14	993,122.64	3.165E+00	Pulse	0.50	3
Mn			1	102.081	ug/l	0.83	738,434.52	4.268E+00	Pulse	0.50	3
Fe			1	10169.459	ug/l	0.42	103,052,696.00	5.955E+02	Analog	0.50	3
Co			1	102.382	ug/l	0.56	1,828,785.42	1.057E+01	Pulse	0.50	3
Ni			1	102.816	ug/l	0.40	493,713.66	2.853E+00	Pulse	0.50	3
Cu			1	102.748	ug/l	0.92	1,297,997.75	7.501E+00	Pulse	0.50	3
Zn			1	101.672	ug/l	0.47	236,007.04	9.206E-01	Pulse	1.00	3
Cd			1	101.758	ug/l	0.71	286,790.17	1.119E+00	Pulse	0.50	3
Al			1	10142.984	ug/l	0.28	4,762,789.33	1.518E+01	Pulse	1.00	3
Se			1	100.905	ug/l	1.24	12,628.83	4.926E-02	Pulse	3.00	3
Sb			1	100.759	ug/l	0.40	833,803.19	3.252E+00	Pulse	1.00	3
Se			1	101.624	ug/l	2.40	6,013.28	2.346E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,746,237.25	0.06	96.6	Pulse	0.50	3
1	Sc		313,820.16	0.14	100.8	Pulse	0.30	3
1	Ge		173,040.13	0.43	100.3	Pulse	0.30	3
1	In		1,528,539.73	0.52	98.5	Pulse	0.30	3
1	Tb		3,861,919.42	0.33	100.1	Pulse	0.50	3
1	Lu		2,928,859.75	0.30	100.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		256,377.95	0.62	100.5	Pulse	0.30	3
1	Te		16.67	55.43	2500.0	Pulse	0.50	3
1	Li		1,346.72	8.76	117.7	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:46
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.760	ug/l	0.57	2,382,022.25	1.376E+01	Pulse	0.50	3
As			1	198.844	ug/l	0.73	309,548.19	1.788E+00	Pulse	1.00	3
Mo			1	199.550	ug/l	0.85	1,122,781.25	4.429E+00	Pulse	0.50	3
Pb			1	199.312	ug/l	0.31	4,772,784.50	1.763E+00	Pulse	1.00	3
Be			1	198.845	ug/l	0.46	16,138.39	5.150E-02	Pulse	2.00	3
Ag			1	120.974	ug/l	0.57	2,178,039.83	8.591E+00	Pulse	0.50	3
Ba			1	198.924	ug/l	0.96	514,438.10	3.375E-01	Pulse	0.50	3
Tl			1	197.423	ug/l	0.87	6,625,448.83	2.448E+00	Analog	0.50	3
Sn			1	199.593	ug/l	1.15	1,166,143.49	7.652E-01	Pulse	0.30	3
Sr			1	199.898	ug/l	0.96	1,607,175.00	1.055E+00	Pulse	0.50	3
[Pb]			1	199.385	ug/l	1.03	2,272,151.67	8.394E-01	Pulse	0.50	3
Ca			1	19883.575	ug/l	0.43	1,021,465.98	3.486E-01	Pulse	0.50	3
Ti			1	199.261	ug/l	1.67	67,250.03	2.146E-01	Pulse	0.50	3
Na			1	19850.435	ug/l	0.87	41,857,797.33	1.336E+02	Analog	1.00	3
Mg			1	19837.702	ug/l	1.18	21,029,889.33	6.712E+01	Analog	1.00	3
K			1	19894.426	ug/l	1.01	21,639,919.33	6.906E+01	Analog	1.00	3
V			1	198.811	ug/l	1.36	1,932,629.79	6.168E+00	Pulse	0.50	3
Mn			1	198.603	ug/l	0.86	1,436,541.21	8.300E+00	Pulse	0.50	3
Fe			1	19880.193	ug/l	0.15	201,490,453.33	1.164E+03	Analog	0.50	3
Co			1	198.335	ug/l	0.64	3,543,518.17	2.047E+01	Pulse	0.50	3
Ni			1	198.009	ug/l	0.57	950,500.67	5.492E+00	Pulse	0.50	3
Cu			1	198.073	ug/l	1.24	2,487,944.92	1.437E+01	Pulse	0.50	3
Zn			1	198.854	ug/l	0.26	453,660.81	1.789E+00	Pulse	1.00	3
Cd			1	198.664	ug/l	1.05	553,690.08	2.184E+00	Pulse	0.50	3
Al			1	19885.900	ug/l	1.52	9,322,079.67	2.975E+01	Analog	1.00	3
Se			1	199.234	ug/l	0.83	24,625.34	9.713E-02	Pulse	3.00	3
Sb			1	199.327	ug/l	0.54	1,631,113.87	6.434E+00	Pulse	1.00	3
Se			1	198.865	ug/l	0.53	11,594.64	4.573E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,706,831.58	0.40	95.2	Pulse	0.50	3
1	Sc		313,370.42	1.37	100.7	Pulse	0.30	3
1	Ge		173,083.42	0.59	100.3	Pulse	0.30	3
1	In		1,524,140.21	0.82	98.2	Pulse	0.30	3
1	Tb		3,846,727.00	0.34	99.7	Pulse	0.50	3
1	Lu		2,930,145.92	0.36	100.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,534.36	0.45	99.3	Pulse	0.30	3
1	Te		19.33	33.25	2900.0	Pulse	0.50	3
1	Li		1,147.82	10.30	100.3	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:50
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.155	ug/l	1.00	1,182,857.75	6.810E+00	Pulse	0.50	3
As			1	98.092	ug/l	0.81	153,283.02	8.825E-01	Pulse	1.00	3
Mo			1	96.945	ug/l	1.02	550,781.71	2.152E+00	Pulse	0.50	3
Pb			1	97.123	ug/l	0.73	2,374,911.00	8.593E-01	Pulse	1.00	3
Be			1	98.454	ug/l	2.24	8,003.57	2.550E-02	Pulse	2.00	3
Ag			1	96.163	ug/l	0.84	1,748,100.25	6.829E+00	Pulse	0.50	3
Ba			1	96.284	ug/l	0.68	252,253.90	1.634E-01	Pulse	0.50	3
Tl			1	99.735	ug/l	1.10	3,417,399.83	1.237E+00	Pulse	0.50	3
Sn			1	96.785	ug/l	1.01	572,996.50	3.711E-01	Pulse	0.30	3
Sr			1	96.687	ug/l	0.17	787,690.90	5.102E-01	Pulse	0.50	3
[Pb]			1	97.047	ug/l	0.35	1,129,318.46	4.086E-01	Pulse	0.50	3
Ca			1	9740.412	ug/l	1.01	502,874.28	1.711E-01	Pulse	0.50	3
Ti			1	98.168	ug/l	2.26	33,189.41	1.057E-01	Pulse	0.50	3
Na			1	9923.511	ug/l	1.32	20,971,809.33	6.681E+01	Analog	1.00	3
Mg			1	9933.921	ug/l	1.48	10,549,500.33	3.361E+01	Analog	1.00	3
K			1	9879.671	ug/l	0.89	10,814,037.33	3.445E+01	Analog	1.00	3
V			1	97.720	ug/l	2.41	952,040.23	3.033E+00	Pulse	0.50	3
Mn			1	97.602	ug/l	1.03	708,736.69	4.080E+00	Pulse	0.50	3
Fe			1	9867.950	ug/l	0.68	100,378,664.00	5.779E+02	Analog	0.50	3
Co			1	98.294	ug/l	0.42	1,762,507.42	1.015E+01	Pulse	0.50	3
Ni			1	98.251	ug/l	0.94	473,613.81	2.727E+00	Pulse	0.50	3
Cu			1	98.921	ug/l	0.79	1,255,057.75	7.225E+00	Pulse	0.50	3
Zn			1	99.421	ug/l	1.09	230,497.32	9.004E-01	Pulse	1.00	3
Cd			1	97.985	ug/l	1.72	275,730.42	1.077E+00	Pulse	0.50	3
Al			1	9744.986	ug/l	1.53	4,576,810.67	1.458E+01	Pulse	1.00	3
Se			1	97.694	ug/l	1.59	12,209.56	4.770E-02	Pulse	3.00	3
Sb			1	97.537	ug/l	1.19	805,904.63	3.148E+00	Pulse	1.00	3
Se			1	97.179	ug/l	0.50	5,743.98	2.244E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,763,625.67	0.20	97.2	Pulse	0.50	3
1	Sc		313,912.29	1.07	100.9	Pulse	0.30	3
1	Ge		173,703.12	0.90	100.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,543,919.31	0.74	99.5	Pulse	0.30	3
1	Tb		3,878,652.25	0.53	100.5	Pulse	0.50	3
1	Lu		2,939,675.67	0.68	100.6	Pulse	0.50	3
1	Ge		256,001.55	1.06	100.3	Pulse	0.30	3
1	Te		8.00	86.60	1200.0	Pulse	0.50	3
1	Li		1,231.16	7.03	107.6	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:54
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	192.274	ug/l	0.55	2,336,770.92	1.331E+01	Pulse	0.50	3
As			1	192.779	ug/l	1.11	304,317.40	1.734E+00	Pulse	1.00	3
Mo			1	194.487	ug/l	0.91	1,093,063.87	4.316E+00	Pulse	0.50	3
Pb			1	194.589	ug/l	0.56	4,652,088.33	1.721E+00	Pulse	1.00	3
Be			1	197.113	ug/l	1.49	15,999.11	5.105E-02	Pulse	2.00	3
Ag			1	110.173	ug/l	0.67	1,981,300.54	7.824E+00	Pulse	0.50	3
Ba			1	195.406	ug/l	0.95	503,521.15	3.316E-01	Pulse	0.50	3
Tl			1	198.021	ug/l	1.54	6,634,527.83	2.455E+00	Mix	0.50	3
Sn			1	194.589	ug/l	0.96	1,132,857.07	7.460E-01	Pulse	0.30	3
Sr			1	195.596	ug/l	0.86	1,566,934.04	1.032E+00	Pulse	0.50	3
[Pb]			1	195.102	ug/l	0.64	2,219,704.33	8.214E-01	Pulse	0.50	3
Ca			1	19336.395	ug/l	0.99	995,860.02	3.390E-01	Pulse	0.50	3
Ti			1	195.073	ug/l	2.00	65,846.05	2.101E-01	Pulse	0.50	3
Na			1	19711.966	ug/l	0.47	41,573,936.00	1.327E+02	Analog	1.00	3
Mg			1	19656.678	ug/l	1.08	20,841,606.00	6.650E+01	Analog	1.00	3
K			1	19567.010	ug/l	0.14	21,290,495.33	6.793E+01	Analog	1.00	3
V			1	194.861	ug/l	1.17	1,894,562.29	6.045E+00	Pulse	0.50	3
Mn			1	190.990	ug/l	0.99	1,400,853.04	7.982E+00	Pulse	0.50	3
Fe			1	19216.111	ug/l	0.41	197,490,560.00	1.125E+03	Analog	0.50	3
Co			1	190.859	ug/l	0.80	3,457,786.83	1.970E+01	Pulse	0.50	3
Ni			1	190.896	ug/l	0.78	929,231.54	5.295E+00	Pulse	0.50	3
Cu			1	191.864	ug/l	1.55	2,444,274.08	1.393E+01	Pulse	0.50	3
Zn			1	195.164	ug/l	0.76	444,786.46	1.756E+00	Pulse	1.00	3
Cd			1	195.381	ug/l	0.84	543,933.11	2.148E+00	Pulse	0.50	3
Al			1	19532.666	ug/l	0.90	9,158,542.00	2.922E+01	Analog	1.00	3
Se			1	193.910	ug/l	0.03	23,941.38	9.454E-02	Pulse	3.00	3
Sb			1	194.808	ug/l	0.65	1,592,328.62	6.288E+00	Pulse	1.00	3
Se			1	192.649	ug/l	0.31	11,220.85	4.431E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,702,431.17	0.69	95.1	Pulse	0.50	3
1	Sc		313,417.24	1.19	100.7	Pulse	0.30	3
1	Ge		175,513.09	0.75	101.7	Pulse	0.30	3
1	In		1,518,630.42	0.71	97.9	Pulse	0.30	3
1	Tb		3,853,799.42	0.41	99.9	Pulse	0.50	3
1	Lu		2,937,488.92	0.63	100.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,244.89	0.27	99.2	Pulse	0.30	3
1	Te		16.67	48.50	2500.0	Pulse	0.50	3
1	Li		1,258.94	11.41	110.0	Pulse	0.30	3

Quantitation Report

File Name	012_ICV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:57
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	94.177	ug/l	0.83	1,145,980.08	6.535E+00	Pulse	0.50	3
As			1	95.113	ug/l	0.27	150,052.87	8.557E-01	Pulse	1.00	3
Mo			1	94.283	ug/l	0.36	537,438.69	2.093E+00	Pulse	0.50	3
Pb			1	93.424	ug/l	0.47	2,282,398.58	8.266E-01	Pulse	1.00	3
Be			1	96.471	ug/l	2.06	7,894.53	2.499E-02	Pulse	2.00	3
Ag			1	46.822	ug/l	0.39	854,018.29	3.325E+00	Pulse	0.50	3
Ba			1	95.099	ug/l	1.19	248,033.28	1.614E-01	Pulse	0.50	3
Tl			1	96.199	ug/l	0.94	3,293,275.08	1.193E+00	Pulse	0.50	3
Sn			1	96.954	ug/l	1.09	571,398.22	3.718E-01	Pulse	0.30	3
Sr			1	95.826	ug/l	0.85	777,178.37	5.057E-01	Pulse	0.50	3
[Pb]			1	93.674	ug/l	0.27	1,089,073.21	3.944E-01	Pulse	0.50	3
Ca			1	9050.175	ug/l	0.24	465,895.30	1.590E-01	Pulse	0.50	3
Ti			1	97.334	ug/l	1.23	33,127.93	1.048E-01	Pulse	0.50	3
Na			1	9466.660	ug/l	0.88	20,140,422.67	6.374E+01	Analog	1.00	3
Mg			1	9884.870	ug/l	1.38	10,567,101.00	3.344E+01	Analog	1.00	3
K			1	9235.066	ug/l	0.89	10,181,671.00	3.222E+01	Analog	1.00	3
V			1	93.801	ug/l	1.76	920,013.27	2.912E+00	Pulse	0.50	3
Mn			1	94.068	ug/l	0.17	689,644.92	3.933E+00	Pulse	0.50	3
Fe			1	9589.210	ug/l	0.58	98,477,352.00	5.616E+02	Analog	0.50	3
Co			1	95.069	ug/l	0.56	1,720,943.29	9.814E+00	Pulse	0.50	3
Ni			1	94.603	ug/l	0.51	460,410.33	2.626E+00	Pulse	0.50	3
Cu			1	96.201	ug/l	0.82	1,232,632.67	7.029E+00	Pulse	0.50	3
Zn			1	96.467	ug/l	0.35	224,478.25	8.740E-01	Pulse	1.00	3
Cd			1	94.334	ug/l	1.07	266,336.64	1.037E+00	Pulse	0.50	3
Al			1	9423.977	ug/l	1.63	4,455,407.67	1.410E+01	Pulse	1.00	3
Se			1	93.900	ug/l	0.70	11,775.95	4.585E-02	Pulse	3.00	3
Sb			1	93.703	ug/l	0.48	776,810.85	3.025E+00	Pulse	1.00	3
Se			1	94.272	ug/l	0.94	5,591.60	2.177E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,761,048.17	0.63	97.1	Pulse	0.50	3
1	Sc		315,989.54	0.99	101.5	Pulse	0.30	3
1	Ge		175,358.25	0.19	101.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,536,994.07	0.46	99.0	Pulse	0.30	3
1	Tb		3,871,673.17	0.52	100.4	Pulse	0.50	3
1	Lu		2,930,335.33	0.29	100.3	Pulse	0.50	3
1	Ge		256,835.74	0.78	100.6	Pulse	0.30	3
1	Te		2.67	173.21	400.0	Pulse	0.50	3
1	Li		1,278.94	10.82	111.7	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:01
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.012	ug/l	83.00	4,676.58	2.746E-02	Pulse	0.50	3
As			1	0.014	ug/l	58.32	86.67	5.086E-04	Pulse	1.00	3
Mo			1	0.147	ug/l	27.03	874.69	3.484E-03	Pulse	0.50	3
Pb			1	0.068	ug/l	16.45	2,408.84	8.668E-04	Pulse	1.00	3
Be			1	0.027	ug/l	116.16	2.33	7.452E-06	Pulse	2.00	3
Ag			1	0.058	ug/l	30.07	1,138.71	4.535E-03	Pulse	0.50	3
Ba			1	0.004	ug/l	218.90	41.33	2.717E-05	Pulse	0.50	3
Tl			1	0.027	ug/l	7.33	968.03	3.482E-04	Pulse	0.50	3
Sn			1	0.197	ug/l	16.81	1,386.73	9.123E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	107.59	481.34	3.166E-04	Pulse	0.50	3
[Pb]			1	0.067	ug/l	15.13	1,115.37	4.013E-04	Pulse	0.50	3
Ca			1	-0.536	ug/l	-175.02	1,644.08	5.757E-04	Pulse	0.50	3
Ti			1	0.066	ug/l	72.13	24.00	7.747E-05	Pulse	0.50	3
Na			1	3.656	ug/l	9.78	28,813.96	9.261E-02	Pulse	1.00	3
Mg			1	0.958	ug/l	17.41	1,634.74	5.252E-03	Pulse	1.00	3
K			1	0.695	ug/l	412.41	96,378.54	3.098E-01	Pulse	1.00	3
V			1	0.011	ug/l	63.68	1,122.04	3.607E-03	Pulse	0.50	3
Mn			1	0.020	ug/l	34.61	632.68	3.717E-03	Pulse	0.50	3
Fe			1	1.114	ug/l	10.95	30,989.35	1.820E-01	Pulse	0.50	3
Co			1	0.006	ug/l	23.98	196.00	1.151E-03	Pulse	0.50	3
Ni			1	0.001	ug/l	609.82	580.01	3.406E-03	Pulse	0.50	3
Cu			1	-0.447	ug/l	-5.62	10,250.75	6.020E-02	Pulse	0.50	3
Zn			1	0.078	ug/l	35.25	3,095.26	1.232E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	10.89	25.33	1.009E-04	Pulse	0.50	3
Al			1	1.194	ug/l	144.17	1,569.57	5.061E-03	Pulse	1.00	3
Se			1	0.151	ug/l	69.70	53.00	2.111E-04	Pulse	3.00	3
Sb			1	0.051	ug/l	18.59	480.34	1.913E-03	Pulse	1.00	3
Se			1	0.119	ug/l	204.92	51.00	2.031E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,779,849.75	0.72	97.8	Pulse	0.50	3
1	Sc		311,120.79	0.97	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		170,272.16	0.76	98.7	Pulse	0.30	3
1	In		1,520,309.59	0.18	98.0	Pulse	0.30	3
1	Tb		3,783,335.50	0.43	98.1	Pulse	0.50	3
1	Lu		2,855,741.00	0.22	97.7	Pulse	0.50	3
1	Ge		251,173.77	0.25	98.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,262.27	5.10	110.3	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 9:05
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.025	ug/l	2.24	16,667.14	9.748E-02	Pulse	0.50	3
As			1	0.978	ug/l	1.49	1,568.40	9.173E-03	Pulse	1.00	3
Mo			1	1.047	ug/l	3.23	5,880.28	2.346E-02	Pulse	0.50	3
Pb			1	1.027	ug/l	0.74	25,929.59	9.351E-03	Pulse	1.00	3
Be			1	0.994	ug/l	8.70	80.67	2.579E-04	Pulse	2.00	3
Ag			1	1.064	ug/l	2.22	19,043.78	7.597E-02	Pulse	0.50	3
Ba			1	0.948	ug/l	6.35	2,494.18	1.628E-03	Pulse	0.50	3
Tl			1	1.024	ug/l	1.25	35,257.56	1.271E-02	Pulse	0.50	3
Sn			1	1.073	ug/l	9.15	6,543.45	4.272E-03	Pulse	0.30	3
Sr			1	0.977	ug/l	1.12	8,289.85	5.413E-03	Pulse	0.50	3
[Pb]			1	1.036	ug/l	1.29	12,426.55	4.481E-03	Pulse	0.50	3
Ca			1	90.875	ug/l	2.15	6,213.67	2.176E-03	Pulse	0.50	3
Ti			1	1.072	ug/l	4.44	363.34	1.162E-03	Pulse	0.50	3
Na			1	102.275	ug/l	0.51	236,418.94	7.559E-01	Pulse	1.00	3
Mg			1	103.923	ug/l	0.66	110,591.18	3.536E-01	Pulse	1.00	3
K			1	100.207	ug/l	1.27	204,461.92	6.537E-01	Pulse	1.00	3
V			1	0.980	ug/l	1.14	10,524.20	3.365E-02	Pulse	0.50	3
Mn			1	0.990	ug/l	1.50	7,566.83	4.425E-02	Pulse	0.50	3
Fe			1	104.147	ug/l	1.99	1,062,613.08	6.215E+00	Pulse	0.50	3
Co			1	1.038	ug/l	2.46	18,404.09	1.076E-01	Pulse	0.50	3
Ni			1	1.021	ug/l	0.24	5,416.11	3.168E-02	Pulse	0.50	3
Cu			1	0.611	ug/l	4.48	23,340.79	1.365E-01	Pulse	0.50	3
Zn			1	0.338	ug/l	6.18	3,669.69	1.464E-02	Pulse	1.00	3
Cd			1	1.024	ug/l	2.09	2,824.89	1.127E-02	Pulse	0.50	3
Al			1	99.263	ug/l	0.98	47,467.44	1.518E-01	Pulse	1.00	3
Se			1	1.074	ug/l	2.34	165.56	6.604E-04	Pulse	3.00	3
Sb			1	1.015	ug/l	2.28	8,276.21	3.302E-02	Pulse	1.00	3
Se			1	0.757	ug/l	6.23	87.55	3.493E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,773,023.33	0.55	97.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		312,757.63	0.31	100.5	Pulse	0.30	3
1	Ge		170,989.32	0.28	99.1	Pulse	0.30	3
1	In		1,531,331.92	0.50	98.7	Pulse	0.30	3
1	Tb		3,794,837.00	0.03	98.4	Pulse	0.50	3
1	Lu		2,855,849.00	0.42	97.7	Pulse	0.50	3
1	Ge		250,675.15	0.06	98.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,294.50	0.79	113.1	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 9:09
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.114	ug/l	2.64	28,876.01	1.728E-01	Pulse	0.50	3
As			1	0.115	ug/l	4.83	237.00	1.417E-03	Pulse	1.00	3
Mo			1	2003.436	ug/l	1.22	10,556,501.67	4.446E+01	Analog	0.50	3
Pb			1	0.191	ug/l	9.53	4,769.01	1.953E-03	Pulse	1.00	3
Be			1	0.004	ug/l	255.37	0.50	1.690E-06	Pulse	2.00	3
Ag			1	0.336	ug/l	5.67	5,766.25	2.426E-02	Pulse	0.50	3
Ba			1	0.323	ug/l	5.08	792.02	5.688E-04	Pulse	0.50	3
Tl			1	0.013	ug/l	1.28	422.01	1.727E-04	Pulse	0.50	3
Sn			1	0.093	ug/l	19.16	715.57	5.129E-04	Pulse	0.30	3
Sr			1	1.104	ug/l	2.25	8,473.93	6.084E-03	Pulse	0.50	3
[Pb]			1	0.196	ug/l	15.81	2,304.17	9.438E-04	Pulse	0.50	3
Ca			1	93766.340	ug/l	0.45	4,470,141.67	1.642E+00	Pulse	0.50	3
Ti			1	1975.421	ug/l	0.94	634,184.06	2.128E+00	Pulse	0.50	3
Na			1	97851.578	ug/l	0.15	196,185,200.00	6.582E+02	Analog	1.00	3
Mg			1	96164.074	ug/l	0.25	96,968,240.00	3.253E+02	Analog	1.00	3
K			1	96869.907	ug/l	0.54	99,870,400.00	3.351E+02	Analog	1.00	3
V			1	0.079	ug/l	9.58	1,704.75	5.721E-03	Pulse	0.50	3
Mn			1	1.073	ug/l	5.91	7,969.66	4.770E-02	Pulse	0.50	3
Fe			1	94967.057	ug/l	0.66	929,594,240.00	5.561E+03	Analog	0.50	3
Co			1	0.214	ug/l	1.35	3,782.39	2.263E-02	Pulse	0.50	3
Ni			1	0.212	ug/l	12.86	1,548.07	9.263E-03	Pulse	0.50	3
Cu			1	-0.483	ug/l	-1.61	9,631.09	5.760E-02	Pulse	0.50	3
Zn			1	0.399	ug/l	0.59	3,608.01	1.519E-02	Pulse	1.00	3
Cd			1	0.666	ug/l	4.17	1,741.42	7.337E-03	Pulse	0.50	3
Al			1	93556.020	ug/l	0.37	41,715,448.00	1.400E+02	Analog	1.00	3
Se			1	0.272	ug/l	17.13	64.11	2.698E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	10.26	586.01	2.463E-03	Pulse	1.00	3
Se			1	0.240	ug/l	19.89	54.89	2.310E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,444,550.50	2.13	86.0	Pulse	0.50	3
1	Sc		298,053.18	0.83	95.8	Pulse	0.30	3
1	Ge		167,191.31	1.93	96.9	Pulse	0.30	3
1	In		1,393,054.94	1.83	89.8	Pulse	0.30	3
1	Tb		3,578,801.42	1.30	92.8	Pulse	0.50	3
1	Lu		2,722,847.92	1.35	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,487.43	2.69	93.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,163.37	1.74	101.7	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:13
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.092	ug/l	0.82	261,376.20	1.484E+00	Pulse	0.50	3
As			1	18.748	ug/l	0.76	29,757.40	1.690E-01	Pulse	1.00	3
Mo			1	2084.739	ug/l	1.47	11,539,706.00	4.626E+01	Analog	0.50	3
Pb			1	0.120	ug/l	2.58	3,347.67	1.328E-03	Pulse	1.00	3
Be			1	0.029	ug/l	38.64	2.50	8.044E-06	Pulse	2.00	3
Ag			1	18.038	ug/l	0.90	319,579.22	1.281E+00	Pulse	0.50	3
Ba			1	0.380	ug/l	6.26	961.36	6.649E-04	Pulse	0.50	3
Tl			1	0.009	ug/l	4.03	324.00	1.285E-04	Pulse	0.50	3
Sn			1	0.073	ug/l	81.04	637.85	4.389E-04	Pulse	0.30	3
Sr			1	1.182	ug/l	1.68	9,397.02	6.496E-03	Pulse	0.50	3
[Pb]			1	0.125	ug/l	7.02	1,624.09	6.446E-04	Pulse	0.50	3
Ca			1	99246.659	ug/l	1.78	4,852,862.17	1.738E+00	Pulse	0.50	3
Ti			1	2047.446	ug/l	1.22	688,552.25	2.205E+00	Pulse	0.50	3
Na			1	101929.389	ug/l	1.73	214,054,112.00	6.857E+02	Analog	1.00	3
Mg			1	99176.839	ug/l	1.28	104,756,352.00	3.355E+02	Analog	1.00	3
K			1	101105.328	ug/l	1.30	109,185,477.33	3.497E+02	Analog	1.00	3
V			1	0.061	ug/l	2.01	1,610.74	5.159E-03	Pulse	0.50	3
Mn			1	19.835	ug/l	0.55	146,422.22	8.315E-01	Pulse	0.50	3
Fe			1	97539.781	ug/l	0.78	1,005,761,685.33	5.711E+03	Analog	0.50	3
Co			1	19.100	ug/l	0.84	347,290.52	1.972E+00	Pulse	0.50	3
Ni			1	18.702	ug/l	1.00	91,877.85	5.218E-01	Pulse	0.50	3
Cu			1	18.060	ug/l	1.10	245,591.19	1.395E+00	Pulse	0.50	3
Zn			1	20.684	ug/l	2.04	49,024.03	1.965E-01	Pulse	1.00	3
Cd			1	19.248	ug/l	1.73	52,780.21	2.116E-01	Pulse	0.50	3
Al			1	95359.628	ug/l	1.42	44,538,390.67	1.427E+02	Analog	1.00	3
Se			1	0.298	ug/l	13.70	70.56	2.828E-04	Pulse	3.00	3
Sb			1	0.113	ug/l	64.10	975.63	3.903E-03	Pulse	1.00	3
Se			1	0.177	ug/l	17.25	54.00	2.165E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,520,241.67	0.66	88.6	Pulse	0.50	3
1	Sc		312,261.49	2.09	100.3	Pulse	0.30	3
1	Ge		176,101.98	1.41	102.1	Pulse	0.30	3
1	In		1,446,580.36	1.36	93.2	Pulse	0.30	3
1	Tb		3,720,914.75	0.72	96.5	Pulse	0.50	3
1	Lu		2,792,779.83	0.93	95.6	Pulse	0.50	3
1	Ge		249,412.99	0.94	97.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		2.67	173.21	400.0	Pulse	0.50	3
1	Li		1,277.83	1.31	111.7	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:17
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.538	ug/l	1.48	658,742.19	3.588E+00	Pulse	0.50	3
As			1	50.374	ug/l	1.16	83,231.46	4.534E-01	Pulse	1.00	3
Mo			1	50.325	ug/l	1.48	305,306.01	1.117E+00	Pulse	0.50	3
Pb			1	50.054	ug/l	0.50	1,260,982.04	4.430E-01	Pulse	1.00	3
Be			1	51.805	ug/l	0.46	4,424.32	1.342E-02	Pulse	2.00	3
Ag			1	49.963	ug/l	1.25	969,767.17	3.548E+00	Pulse	0.50	3
Ba			1	49.913	ug/l	0.38	134,622.41	8.471E-02	Pulse	0.50	3
Tl			1	51.461	ug/l	0.63	1,816,128.21	6.380E-01	Pulse	0.50	3
Sn			1	50.180	ug/l	0.80	305,911.12	1.925E-01	Pulse	0.30	3
Sr			1	49.545	ug/l	0.94	415,684.28	2.616E-01	Pulse	0.50	3
[Pb]			1	50.093	ug/l	1.13	600,555.44	2.110E-01	Pulse	0.50	3
Ca			1	5208.461	ug/l	0.58	269,497.05	9.175E-02	Pulse	0.50	3
Ti			1	50.046	ug/l	2.98	17,776.09	5.391E-02	Pulse	0.50	3
Na			1	5245.881	ug/l	0.28	11,656,505.00	3.535E+01	Analog	1.00	3
Mg			1	5125.297	ug/l	0.62	5,717,971.00	1.734E+01	Analog	1.00	3
K			1	5181.897	ug/l	0.17	6,006,244.33	1.822E+01	Analog	1.00	3
V			1	51.583	ug/l	0.50	528,463.34	1.603E+00	Pulse	0.50	3
Mn			1	50.340	ug/l	1.24	386,604.40	2.106E+00	Pulse	0.50	3
Fe			1	5166.390	ug/l	0.78	55,554,341.33	3.026E+02	Analog	0.50	3
Co			1	51.947	ug/l	0.94	984,485.63	5.363E+00	Pulse	0.50	3
Ni			1	52.322	ug/l	1.05	266,860.52	1.454E+00	Pulse	0.50	3
Cu			1	52.294	ug/l	0.31	709,232.96	3.863E+00	Pulse	0.50	3
Zn			1	50.828	ug/l	1.21	127,370.79	4.660E-01	Pulse	1.00	3
Cd			1	49.570	ug/l	1.17	148,940.48	5.449E-01	Pulse	0.50	3
Al			1	4834.589	ug/l	1.25	2,385,764.75	7.236E+00	Pulse	1.00	3
Se			1	49.102	ug/l	0.59	6,571.24	2.404E-02	Pulse	3.00	3
Sb			1	48.644	ug/l	1.49	429,166.31	1.570E+00	Pulse	1.00	3
Se			1	48.133	ug/l	1.98	3,061.69	1.120E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,846,393.92	0.46	100.1	Pulse	0.50	3
1	Sc		329,726.37	0.17	105.9	Pulse	0.30	3
1	Ge		183,588.07	0.71	106.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,589,220.42	0.23	102.4	Pulse	0.30	3
1	Tb		3,984,456.92	0.85	103.3	Pulse	0.50	3
1	Lu		2,937,281.08	0.43	100.5	Pulse	0.50	3
1	Ge		273,329.82	0.75	107.1	Pulse	0.30	3
1	Te		6.67	45.83	1000.0	Pulse	0.50	3
1	Li		1,353.39	11.96	118.3	Pulse	0.30	3

Quantitation Report

File Name	018_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:20
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.419	ug/l	1.05	1,267,356.67	6.966E+00	Pulse	0.50	3
As			1	98.498	ug/l	1.04	161,207.80	8.861E-01	Pulse	1.00	3
Mo			1	99.417	ug/l	0.75	586,161.96	2.206E+00	Pulse	0.50	3
Pb			1	98.860	ug/l	0.70	2,427,025.83	8.747E-01	Pulse	1.00	3
Be			1	102.613	ug/l	0.15	8,638.84	2.658E-02	Pulse	2.00	3
Ag			1	97.646	ug/l	0.19	1,842,105.00	6.934E+00	Pulse	0.50	3
Ba			1	97.678	ug/l	0.67	259,024.36	1.658E-01	Pulse	0.50	3
Tl			1	102.510	ug/l	0.25	3,526,466.75	1.271E+00	Pulse	0.50	3
Sn			1	99.879	ug/l	0.81	598,479.35	3.830E-01	Pulse	0.30	3
Sr			1	98.259	ug/l	0.43	810,234.58	5.185E-01	Pulse	0.50	3
[Pb]			1	99.340	ug/l	0.53	1,160,596.13	4.183E-01	Pulse	0.50	3
Ca			1	10210.603	ug/l	0.50	525,566.06	1.793E-01	Pulse	0.50	3
Ti			1	99.045	ug/l	0.89	34,678.59	1.067E-01	Pulse	0.50	3
Na			1	10315.460	ug/l	0.67	22,574,135.33	6.945E+01	Analog	1.00	3
Mg			1	10111.377	ug/l	0.35	11,119,775.67	3.421E+01	Analog	1.00	3
K			1	10160.762	ug/l	0.48	11,513,850.67	3.542E+01	Analog	1.00	3
V			1	101.387	ug/l	0.51	1,022,904.06	3.147E+00	Pulse	0.50	3
Mn			1	98.168	ug/l	1.06	746,625.29	4.104E+00	Pulse	0.50	3
Fe			1	10059.591	ug/l	0.90	107,175,176.00	5.891E+02	Analog	0.50	3
Co			1	100.916	ug/l	1.02	1,895,191.54	1.042E+01	Pulse	0.50	3
Ni			1	100.558	ug/l	0.57	507,686.57	2.791E+00	Pulse	0.50	3
Cu			1	101.162	ug/l	1.06	1,343,869.46	7.387E+00	Pulse	0.50	3
Zn			1	100.180	ug/l	0.75	241,006.53	9.072E-01	Pulse	1.00	3
Cd			1	98.834	ug/l	1.23	288,634.18	1.087E+00	Pulse	0.50	3
Al			1	9589.754	ug/l	1.08	4,664,015.33	1.435E+01	Pulse	1.00	3
Se			1	97.261	ug/l	0.54	12,615.15	4.749E-02	Pulse	3.00	3
Sb			1	97.000	ug/l	1.02	831,753.15	3.131E+00	Pulse	1.00	3
Se			1	96.592	ug/l	1.62	5,925.04	2.230E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,774,614.58	0.33	97.6	Pulse	0.50	3
1	Sc		325,043.94	0.35	104.4	Pulse	0.30	3
1	Ge		181,929.99	0.43	105.4	Pulse	0.30	3
1	In		1,562,696.53	0.28	100.7	Pulse	0.30	3
1	Tb		3,923,350.17	0.11	101.7	Pulse	0.50	3
1	Lu		2,931,232.92	0.57	100.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		265,656.65	0.23	104.1	Pulse	0.30	3
1	Te		9.33	61.86	1400.0	Pulse	0.50	3
1	Li		1,368.94	8.38	119.6	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:24
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.037	ug/l	-12.44	4,432.52	2.407E-02	Pulse	0.50	3
As			1	0.009	ug/l	95.75	86.00	4.670E-04	Pulse	1.00	3
Mo			1	0.187	ug/l	24.23	1,190.05	4.371E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	19.91	1,164.71	4.045E-04	Pulse	1.00	3
Be			1	0.021	ug/l	28.06	2.00	5.954E-06	Pulse	2.00	3
Ag			1	0.035	ug/l	40.37	786.69	2.891E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	56.97	36.00	2.252E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	15.36	453.34	1.575E-04	Pulse	0.50	3
Sn			1	0.105	ug/l	24.25	894.47	5.591E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	138.18	430.68	2.693E-04	Pulse	0.50	3
[Pb]			1	0.015	ug/l	26.74	526.01	1.827E-04	Pulse	0.50	3
Ca			1	-9.587	ug/l	-6.79	1,221.38	4.173E-04	Pulse	0.50	3
Ti			1	0.038	ug/l	72.05	16.00	4.749E-05	Pulse	0.50	3
Na			1	4.571	ug/l	14.34	33,208.74	9.876E-02	Pulse	1.00	3
Mg			1	1.659	ug/l	15.16	2,563.17	7.622E-03	Pulse	1.00	3
K			1	-4.102	ug/l	-7.22	98,596.73	2.933E-01	Pulse	1.00	3
V			1	0.009	ug/l	24.89	1,192.71	3.547E-03	Pulse	0.50	3
Mn			1	-0.023	ug/l	-20.41	350.67	1.905E-03	Pulse	0.50	3
Fe			1	1.597	ug/l	14.26	38,730.60	2.103E-01	Pulse	0.50	3
Co			1	0.002	ug/l	56.44	124.00	6.731E-04	Pulse	0.50	3
Ni			1	-0.037	ug/l	-31.08	434.68	2.361E-03	Pulse	0.50	3
Cu			1	-0.633	ug/l	-1.81	8,617.28	4.679E-02	Pulse	0.50	3
Zn			1	-0.838	ug/l	-1.89	1,125.70	4.132E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	40.54	24.67	9.049E-05	Pulse	0.50	3
Al			1	0.018	ug/l	1871.31	1,110.36	3.301E-03	Pulse	1.00	3
Se			1	0.085	ug/l	41.19	48.78	1.790E-04	Pulse	3.00	3
Sb			1	0.030	ug/l	18.83	336.67	1.236E-03	Pulse	1.00	3
Se			1	-0.006	ug/l	-2689.28	47.56	1.747E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,880,385.25	0.89	101.3	Pulse	0.50	3
1	Sc		336,204.64	0.55	108.0	Pulse	0.30	3

Quantitation Report

1	Ge		184,171.40	0.53	106.7	Pulse	0.30	3
1	In		1,598,828.96	0.65	103.0	Pulse	0.30	3
1	Tb		3,955,027.83	0.64	102.5	Pulse	0.50	3
1	Lu		2,926,930.08	0.16	100.2	Pulse	0.50	3
1	Ge		272,431.87	0.54	106.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,378.94	2.56	120.5	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:28
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	021SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:32
Sample Name	FA98836-13
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	022SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:35
Sample Name	FA98836-14
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:39
Sample Name	FA98836-15
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:43
Sample Name	FA98836-16
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	025_BSP.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:47
Sample Name	MP41201-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name 027CALB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 9:53
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.006	ug/l	176.48	4,778.60	2.521E-02	Pulse	0.50	3
As			1	-0.003	ug/l	-218.43	69.00	3.640E-04	Pulse	1.00	3
Mo			1	0.006	ug/l	37.75	168.00	6.046E-04	Pulse	0.50	3
Pb			1	0.005	ug/l	31.57	987.36	3.499E-04	Pulse	1.00	3
Be			1	0.022	ug/l	37.35	2.33	6.669E-06	Pulse	2.00	3
Ag			1	0.002	ug/l	64.03	125.33	4.509E-04	Pulse	0.50	3
Ba			1	0.012	ug/l	50.61	64.67	3.988E-05	Pulse	0.50	3
Tl			1	0.004	ug/l	29.17	289.33	1.025E-04	Pulse	0.50	3
Sn			1	0.002	ug/l	283.04	240.00	1.480E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	192.75	448.68	2.766E-04	Pulse	0.50	3
[Pb]			1	0.003	ug/l	44.85	485.34	1.720E-04	Pulse	0.50	3
Ca			1	1.788	ug/l	127.88	1,802.76	6.177E-04	Pulse	0.50	3
Ti			1	-0.005	ug/l	-390.38	6.00	1.744E-05	Pulse	0.50	3
Na			1	0.494	ug/l	16.24	28,994.87	8.308E-02	Pulse	1.00	3
Mg			1	0.100	ug/l	51.84	1,214.37	3.477E-03	Pulse	1.00	3
K			1	1.221	ug/l	144.27	106,435.41	3.050E-01	Pulse	1.00	3
V			1	0.002	ug/l	51.87	1,290.72	3.697E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-43.20	483.34	2.549E-03	Pulse	0.50	3
Fe			1	0.160	ug/l	15.54	20,763.78	1.095E-01	Pulse	0.50	3
Co			1	0.001	ug/l	71.25	86.67	4.575E-04	Pulse	0.50	3
Ni			1	0.005	ug/l	171.88	548.01	2.889E-03	Pulse	0.50	3
Cu			1	0.001	ug/l	1142.05	7,782.26	4.105E-02	Pulse	0.50	3
Zn			1	-0.032	ug/l	-36.73	2,815.88	1.014E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	19.13	16.67	6.005E-05	Pulse	0.50	3
Al			1	-0.054	ug/l	-223.16	1,684.41	4.828E-03	Pulse	1.00	3
Se			1	-0.017	ug/l	-37.78	35.89	1.292E-04	Pulse	3.00	3
Sb			1	0.006	ug/l	42.63	146.67	5.285E-04	Pulse	1.00	3
Se			1	-0.037	ug/l	-61.87	39.11	1.408E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,822,076.50	0.12	100.0	Pulse	0.50	3
1	Sc		349,041.73	1.84	100.0	Pulse	0.30	3
1	Ge		189,597.00	0.77	100.0	Pulse	0.30	3
1	In		1,621,817.33	0.15	100.0	Pulse	0.30	3
1	Tb		3,922,206.67	0.63	100.0	Pulse	0.50	3
1	Lu		2,919,136.75	0.41	100.0	Pulse	0.50	3
1	Ge		277,744.61	0.89	100.0	Pulse	0.30	3
1	Te		1.33	173.21	100.0	Pulse	0.50	3
1	Li		1,524.51	8.76	100.0	Pulse	0.30	3

Quantitation Report

File Name 028CALB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 9:57
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,689.25	2.480E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	73.33	3.877E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	134.67	4.836E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	867.36	3.044E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	9.537E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	---	96.00	3.445E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	32.67	2.024E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	143.33	5.029E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	224.45	1.391E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	432.01	2.676E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	457.34	1.605E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	1,710.75	5.855E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	8.00	2.284E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	27,928.05	7.981E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	1,102.70	3.151E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	105,307.01	3.009E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,270.05	3.629E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	508.01	2.685E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	19,019.99	1.006E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	60.00	3.169E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	521.34	2.757E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	7,746.24	4.097E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,901.89	1.041E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.00	1.434E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,715.74	4.903E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	38.22	1.371E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	98.33	3.530E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	41.45	1.488E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,849,157.08	1.08	100.0	Pulse	0.50	3
1	Sc		349,946.26	0.39	100.0	Pulse	0.30	3
1	Ge		189,124.22	0.88	100.0	Pulse	0.30	3
1	In		1,614,752.12	0.92	100.0	Pulse	0.30	3
1	Tb		3,947,660.00	0.85	100.0	Pulse	0.50	3
1	Lu		2,922,476.33	0.70	100.0	Pulse	0.50	3
1	Ge		278,689.27	0.53	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,450.06	4.39	100.0	Pulse	0.30	3

Quantitation Report

File Name 029CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:01
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.446	ug/l	0.64	10,376.12	5.474E-02	Pulse	0.50	3
As			1	0.435	ug/l	2.27	779.35	4.111E-03	Pulse	1.00	3
Mo			1	0.458	ug/l	2.70	2,804.22	1.000E-02	Pulse	0.50	3
Pb			1	0.467	ug/l	0.65	12,230.71	4.243E-03	Pulse	1.00	3
Be			1	0.483	ug/l	12.68	44.00	1.253E-04	Pulse	2.00	3
Ag			1	0.452	ug/l	2.26	8,539.32	3.045E-02	Pulse	0.50	3
Ba			1	0.464	ug/l	4.78	1,240.05	7.578E-04	Pulse	0.50	3
Tl			1	0.460	ug/l	1.05	15,988.83	5.547E-03	Pulse	0.50	3
Sn			1	0.473	ug/l	1.61	3,056.94	1.868E-03	Pulse	0.30	3
Sr			1	0.453	ug/l	2.50	4,203.15	2.569E-03	Pulse	0.50	3
[Pb]			1	0.478	ug/l	3.50	6,016.44	2.087E-03	Pulse	0.50	3
Ca			1	46.874	ug/l	2.00	4,202.47	1.429E-03	Pulse	0.50	3
Ti			1	0.492	ug/l	20.92	184.00	5.240E-04	Pulse	0.50	3
Na			1	46.822	ug/l	2.10	136,827.72	3.896E-01	Pulse	1.00	3
Mg			1	47.536	ug/l	0.38	55,676.92	1.585E-01	Pulse	1.00	3
K			1	52.952	ug/l	3.40	167,823.66	4.778E-01	Pulse	1.00	3
V			1	0.453	ug/l	2.92	5,981.61	1.703E-02	Pulse	0.50	3
Mn			1	0.482	ug/l	4.23	4,167.13	2.198E-02	Pulse	0.50	3
Fe			1	49.020	ug/l	0.07	538,048.25	2.838E+00	Pulse	0.50	3
Co			1	0.480	ug/l	0.88	9,062.81	4.781E-02	Pulse	0.50	3
Ni			1	0.500	ug/l	2.69	3,038.25	1.603E-02	Pulse	0.50	3
Cu			1	0.568	ug/l	2.97	15,210.01	8.024E-02	Pulse	0.50	3
Zn			1	0.144	ug/l	33.94	3,263.62	1.164E-02	Pulse	1.00	3
Cd			1	0.501	ug/l	2.22	1,432.06	5.107E-03	Pulse	0.50	3
Al			1	47.780	ug/l	1.25	25,184.82	7.170E-02	Pulse	1.00	3
Se			1	0.435	ug/l	19.57	93.78	3.343E-04	Pulse	3.00	3
Sb			1	0.448	ug/l	0.79	3,799.07	1.355E-02	Pulse	1.00	3
Se			1	0.388	ug/l	31.99	64.78	2.309E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,882,567.17	1.27	101.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		351,271.13	0.82	100.4	Pulse	0.30	3
1	Ge		189,566.07	0.76	100.2	Pulse	0.30	3
1	In		1,636,097.33	0.77	101.3	Pulse	0.30	3
1	Tb		3,978,753.75	0.42	100.8	Pulse	0.50	3
1	Lu		2,940,495.17	0.63	100.6	Pulse	0.50	3
1	Ge		280,431.07	0.51	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,418.95	6.85	97.9	Pulse	0.30	3

Quantitation Report

File Name 030CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:05
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.950	ug/l	1.64	16,881.33	8.853E-02	Pulse	0.50	3
As			1	0.912	ug/l	1.41	1,561.07	8.187E-03	Pulse	1.00	3
Mo			1	0.927	ug/l	3.17	5,538.83	1.976E-02	Pulse	0.50	3
Pb			1	0.948	ug/l	0.50	24,087.58	8.306E-03	Pulse	1.00	3
Be			1	1.010	ug/l	11.45	91.50	2.610E-04	Pulse	2.00	3
Ag			1	0.937	ug/l	1.46	17,591.69	6.275E-02	Pulse	0.50	3
Ba			1	0.935	ug/l	6.36	2,480.85	1.507E-03	Pulse	0.50	3
Tl			1	0.939	ug/l	0.39	32,689.14	1.127E-02	Pulse	0.50	3
Sn			1	0.937	ug/l	1.41	5,865.42	3.564E-03	Pulse	0.30	3
Sr			1	0.936	ug/l	1.55	8,276.52	5.028E-03	Pulse	0.50	3
[Pb]			1	0.927	ug/l	1.40	11,290.42	3.893E-03	Pulse	0.50	3
Ca			1	95.654	ug/l	1.60	6,832.55	2.307E-03	Pulse	0.50	3
Ti			1	0.936	ug/l	12.11	342.00	9.755E-04	Pulse	0.50	3
Na			1	97.268	ug/l	0.78	253,700.49	7.233E-01	Pulse	1.00	3
Mg			1	97.985	ug/l	0.43	113,429.17	3.234E-01	Pulse	1.00	3
K			1	103.467	ug/l	0.61	226,781.68	6.465E-01	Pulse	1.00	3
V			1	0.914	ug/l	1.34	10,772.33	3.071E-02	Pulse	0.50	3
Mn			1	1.020	ug/l	1.65	8,293.79	4.350E-02	Pulse	0.50	3
Fe			1	99.285	ug/l	0.48	1,076,486.87	5.646E+00	Pulse	0.50	3
Co			1	0.967	ug/l	0.58	18,320.01	9.608E-02	Pulse	0.50	3
Ni			1	1.122	ug/l	4.28	6,198.35	3.250E-02	Pulse	0.50	3
Cu			1	1.071	ug/l	2.56	21,916.45	1.149E-01	Pulse	0.50	3
Zn			1	0.878	ug/l	2.36	5,012.99	1.788E-02	Pulse	1.00	3
Cd			1	0.994	ug/l	4.30	2,838.90	1.013E-02	Pulse	0.50	3
Al			1	96.320	ug/l	0.66	48,954.32	1.396E-01	Pulse	1.00	3
Se			1	0.953	ug/l	9.82	159.33	5.684E-04	Pulse	3.00	3
Sb			1	0.935	ug/l	1.66	7,814.00	2.787E-02	Pulse	1.00	3
Se			1	0.972	ug/l	16.20	99.45	3.547E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,900,033.67	0.98	101.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		350,775.41	0.69	100.2	Pulse	0.30	3
1	Ge		190,680.34	0.47	100.8	Pulse	0.30	3
1	In		1,646,062.26	0.69	101.9	Pulse	0.30	3
1	Tb		3,994,704.00	0.46	101.2	Pulse	0.50	3
1	Lu		2,961,221.08	0.44	101.3	Pulse	0.50	3
1	Ge		280,349.14	0.45	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,395.61	9.20	96.2	Pulse	0.30	3

Quantitation Report

File Name	031CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:09
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.844	ug/l	0.67	130,573.86	6.852E-01	Pulse	0.50	3
As			1	9.635	ug/l	1.45	15,771.84	8.276E-02	Pulse	1.00	3
Mo			1	9.750	ug/l	0.36	56,925.29	2.031E-01	Pulse	0.50	3
Pb			1	9.570	ug/l	0.19	235,786.87	8.105E-02	Pulse	1.00	3
Be			1	9.537	ug/l	1.89	867.35	2.457E-03	Pulse	2.00	3
Ag			1	9.815	ug/l	0.32	183,198.45	6.537E-01	Pulse	0.50	3
Ba			1	9.598	ug/l	0.90	25,208.21	1.529E-02	Pulse	0.50	3
Tl			1	9.767	ug/l	0.37	339,779.02	1.168E-01	Pulse	0.50	3
Sn			1	9.648	ug/l	0.36	58,391.26	3.542E-02	Pulse	0.30	3
Sr			1	9.585	ug/l	0.46	80,776.99	4.899E-02	Pulse	0.50	3
[Pb]			1	9.506	ug/l	0.66	111,840.30	3.844E-02	Pulse	0.50	3
Ca			1	980.035	ug/l	2.30	54,398.95	1.823E-02	Pulse	0.50	3
Ti			1	9.682	ug/l	2.01	3,486.99	9.879E-03	Pulse	0.50	3
Na			1	979.522	ug/l	0.79	2,315,476.00	6.560E+00	Pulse	1.00	3
Mg			1	995.984	ug/l	0.83	1,150,046.25	3.258E+00	Pulse	1.00	3
K			1	993.106	ug/l	1.38	1,277,061.17	3.618E+00	Pulse	1.00	3
V			1	9.627	ug/l	0.79	101,924.08	2.887E-01	Pulse	0.50	3
Mn			1	9.930	ug/l	0.65	76,244.35	4.001E-01	Pulse	0.50	3
Fe			1	993.291	ug/l	0.50	10,590,652.00	5.557E+01	Analog	0.50	3
Co			1	10.042	ug/l	0.56	189,475.28	9.943E-01	Pulse	0.50	3
Ni			1	10.089	ug/l	1.62	51,503.56	2.703E-01	Pulse	0.50	3
Cu			1	10.208	ug/l	0.82	142,189.28	7.461E-01	Pulse	0.50	3
Zn			1	9.413	ug/l	1.33	25,349.95	9.046E-02	Pulse	1.00	3
Cd			1	9.944	ug/l	1.29	28,350.99	1.012E-01	Pulse	0.50	3
Al			1	976.347	ug/l	0.80	483,532.88	1.370E+00	Pulse	1.00	3
Se			1	9.802	ug/l	0.72	1,281.93	4.575E-03	Pulse	3.00	3
Sb			1	9.742	ug/l	1.55	80,455.26	2.871E-01	Pulse	1.00	3
Se			1	9.983	ug/l	2.35	634.67	2.265E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,909,287.92	0.73	102.1	Pulse	0.50	3
1	Sc		352,992.78	0.58	100.9	Pulse	0.30	3
1	Ge		190,570.49	0.73	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,648,718.89	0.75	102.1	Pulse	0.30	3
1	Tb		4,004,537.08	0.43	101.4	Pulse	0.50	3
1	Lu		2,985,140.33	1.11	102.1	Pulse	0.50	3
1	Ge		280,229.77	0.28	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,432.28	6.30	98.8	Pulse	0.30	3

Quantitation Report

File Name 032CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:13
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.370	ug/l	0.80	658,673.29	3.471E+00	Pulse	0.50	3
As			1	50.656	ug/l	0.95	82,257.89	4.335E-01	Pulse	1.00	3
Mo			1	50.693	ug/l	0.52	294,802.99	1.054E+00	Pulse	0.50	3
Pb			1	50.387	ug/l	0.78	1,211,724.62	4.254E-01	Pulse	1.00	3
Be			1	50.978	ug/l	1.62	4,595.52	1.313E-02	Pulse	2.00	3
Ag			1	50.487	ug/l	0.52	940,067.96	3.361E+00	Pulse	0.50	3
Ba			1	50.297	ug/l	1.11	130,138.93	8.004E-02	Pulse	0.50	3
Tl			1	51.546	ug/l	0.69	1,754,990.46	6.162E-01	Pulse	0.50	3
Sn			1	50.324	ug/l	0.21	299,397.56	1.841E-01	Pulse	0.30	3
Sr			1	50.262	ug/l	0.97	415,856.04	2.558E-01	Pulse	0.50	3
[Pb]			1	50.332	ug/l	1.56	577,780.46	2.029E-01	Pulse	0.50	3
Ca			1	5157.238	ug/l	1.14	276,550.36	9.342E-02	Pulse	0.50	3
Ti			1	50.218	ug/l	1.32	17,900.22	5.115E-02	Pulse	0.50	3
Na			1	5133.603	ug/l	0.65	11,913,936.00	3.404E+01	Analog	1.00	3
Mg			1	5114.082	ug/l	0.73	5,850,508.67	1.672E+01	Analog	1.00	3
K			1	5117.334	ug/l	0.95	6,087,401.00	1.739E+01	Analog	1.00	3
V			1	50.647	ug/l	0.07	526,228.40	1.504E+00	Pulse	0.50	3
Mn			1	51.590	ug/l	0.93	392,296.95	2.067E+00	Pulse	0.50	3
Fe			1	5166.116	ug/l	0.61	54,771,254.67	2.886E+02	Analog	0.50	3
Co			1	51.989	ug/l	1.03	976,548.84	5.146E+00	Pulse	0.50	3
Ni			1	52.007	ug/l	0.83	262,197.84	1.382E+00	Pulse	0.50	3
Cu			1	52.318	ug/l	0.55	693,641.27	3.655E+00	Pulse	0.50	3
Zn			1	51.055	ug/l	0.38	124,337.18	4.446E-01	Pulse	1.00	3
Cd			1	51.746	ug/l	0.32	147,214.64	5.264E-01	Pulse	0.50	3
Al			1	5130.976	ug/l	0.86	2,512,236.50	7.178E+00	Pulse	1.00	3
Se			1	51.119	ug/l	0.98	6,510.55	2.328E-02	Pulse	3.00	3
Sb			1	50.870	ug/l	0.38	418,837.70	1.498E+00	Pulse	1.00	3
Se			1	51.674	ug/l	2.24	3,104.92	1.110E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,848,411.42	1.02	100.0	Pulse	0.50	3
1	Sc		349,996.40	0.47	100.0	Pulse	0.30	3
1	Ge		189,771.85	0.90	100.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,625,950.35	0.51	100.7	Pulse	0.30	3
1	Tb		3,995,620.33	0.62	101.2	Pulse	0.50	3
1	Lu		2,960,595.75	0.93	101.3	Pulse	0.50	3
1	Ge		279,663.75	0.19	100.3	Pulse	0.30	3
1	Te		4.67	107.85	700.0	Pulse	0.50	3
1	Li		1,434.50	16.64	98.9	Pulse	0.30	3

Quantitation Report

File Name	033CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:17
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.833	ug/l	1.69	1,284,917.04	6.923E+00	Pulse	0.50	3
As			1	101.750	ug/l	1.87	161,517.07	8.703E-01	Pulse	1.00	3
Mo			1	102.398	ug/l	1.56	584,927.56	2.129E+00	Pulse	0.50	3
Pb			1	100.646	ug/l	0.18	2,369,022.75	8.495E-01	Pulse	1.00	3
Be			1	100.901	ug/l	0.85	8,925.13	2.599E-02	Pulse	2.00	3
Ag			1	99.776	ug/l	1.29	1,825,250.79	6.643E+00	Pulse	0.50	3
Ba			1	100.906	ug/l	0.24	256,147.26	1.606E-01	Pulse	0.50	3
Tl			1	102.868	ug/l	0.17	3,429,180.67	1.230E+00	Pulse	0.50	3
Sn			1	99.770	ug/l	0.18	582,199.32	3.649E-01	Pulse	0.30	3
Sr			1	99.725	ug/l	0.19	809,196.81	5.072E-01	Pulse	0.50	3
[Pb]			1	100.765	ug/l	0.65	1,132,218.79	4.060E-01	Pulse	0.50	3
Ca			1	10207.483	ug/l	0.62	542,690.29	1.843E-01	Pulse	0.50	3
Ti			1	100.557	ug/l	1.16	35,166.19	1.024E-01	Pulse	0.50	3
Na			1	10224.038	ug/l	0.73	23,256,850.67	6.772E+01	Analog	1.00	3
Mg			1	10206.121	ug/l	1.15	11,456,102.67	3.336E+01	Analog	1.00	3
K			1	10191.997	ug/l	0.57	11,795,138.33	3.434E+01	Analog	1.00	3
V			1	101.306	ug/l	1.18	1,031,608.21	3.004E+00	Pulse	0.50	3
Mn			1	102.798	ug/l	1.43	764,041.35	4.117E+00	Pulse	0.50	3
Fe			1	10242.144	ug/l	1.04	106,187,013.33	5.721E+02	Analog	0.50	3
Co			1	103.312	ug/l	0.88	1,898,027.54	1.023E+01	Pulse	0.50	3
Ni			1	103.328	ug/l	1.21	509,005.29	2.743E+00	Pulse	0.50	3
Cu			1	103.477	ug/l	1.71	1,334,279.46	7.189E+00	Pulse	0.50	3
Zn			1	101.789	ug/l	1.09	240,717.94	8.761E-01	Pulse	1.00	3
Cd			1	102.120	ug/l	0.70	285,456.25	1.039E+00	Pulse	0.50	3
Al			1	10192.254	ug/l	1.15	4,895,283.83	1.425E+01	Mix	1.00	3
Se			1	101.808	ug/l	1.72	12,701.88	4.623E-02	Pulse	3.00	3
Sb			1	101.990	ug/l	1.02	824,965.37	3.002E+00	Pulse	1.00	3
Se			1	101.289	ug/l	1.23	5,940.37	2.162E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,788,872.58	0.26	97.9	Pulse	0.50	3
1	Sc		343,466.14	1.17	98.1	Pulse	0.30	3
1	Ge		185,623.08	1.69	98.1	Pulse	0.30	3
1	In		1,595,370.66	0.33	98.8	Pulse	0.30	3
1	Tb		3,935,268.83	0.82	99.7	Pulse	0.50	3
1	Lu		2,944,261.42	0.14	100.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		274,802.10	1.32	98.6	Pulse	0.30	3
1	Te		12.00	44.10	1800.0	Pulse	0.50	3
1	Li		1,404.50	9.76	96.9	Pulse	0.30	3

Quantitation Report

File Name	034CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:21
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.249	ug/l	1.50	2,480,872.75	1.332E+01	Pulse	0.50	3
As			1	198.980	ug/l	1.65	316,814.07	1.702E+00	Pulse	1.00	3
Mo			1	198.641	ug/l	1.51	1,129,070.21	4.129E+00	Pulse	0.50	3
Pb			1	199.602	ug/l	1.26	4,600,233.67	1.684E+00	Pulse	1.00	3
Be			1	199.328	ug/l	1.05	17,466.48	5.134E-02	Pulse	2.00	3
Ag			1	126.711	ug/l	1.78	2,306,661.83	8.436E+00	Pulse	0.50	3
Ba			1	199.493	ug/l	1.19	499,406.75	3.174E-01	Pulse	0.50	3
Tl			1	198.192	ug/l	2.73	6,469,779.67	2.369E+00	Mix	0.50	3
Sn			1	200.052	ug/l	0.87	1,151,106.31	7.316E-01	Pulse	0.30	3
Sr			1	200.093	ug/l	0.07	1,600,881.29	1.017E+00	Pulse	0.50	3
[Pb]			1	199.559	ug/l	0.99	2,195,455.42	8.039E-01	Pulse	0.50	3
Ca			1	19857.977	ug/l	0.64	1,050,812.06	3.580E-01	Pulse	0.50	3
Ti			1	199.684	ug/l	1.96	69,166.64	2.033E-01	Pulse	0.50	3
Na			1	19855.626	ug/l	0.78	44,719,205.33	1.314E+02	Analog	1.00	3
Mg			1	19868.636	ug/l	1.03	22,093,077.33	6.494E+01	Analog	1.00	3
K			1	19874.988	ug/l	0.85	22,689,145.33	6.668E+01	Analog	1.00	3
V			1	199.204	ug/l	0.83	2,008,458.50	5.903E+00	Pulse	0.50	3
Mn			1	198.207	ug/l	1.35	1,477,392.37	7.935E+00	Pulse	0.50	3
Fe			1	19837.741	ug/l	1.37	206,302,074.67	1.108E+03	Analog	0.50	3
Co			1	197.845	ug/l	1.58	3,646,019.17	1.958E+01	Pulse	0.50	3
Ni			1	197.829	ug/l	1.84	977,107.54	5.248E+00	Pulse	0.50	3
Cu			1	197.671	ug/l	1.88	2,550,034.25	1.370E+01	Pulse	0.50	3
Zn			1	198.873	ug/l	1.17	465,311.48	1.702E+00	Pulse	1.00	3
Cd			1	198.506	ug/l	1.34	552,157.19	2.019E+00	Pulse	0.50	3
Al			1	19872.336	ug/l	1.13	9,453,972.33	2.779E+01	Analog	1.00	3
Se			1	198.827	ug/l	1.55	24,650.39	9.015E-02	Pulse	3.00	3
Sb			1	198.801	ug/l	1.24	1,600,132.46	5.852E+00	Pulse	1.00	3
Se			1	198.938	ug/l	1.44	11,571.84	4.232E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,731,327.25	0.85	95.9	Pulse	0.50	3
1	Sc		340,271.31	1.72	97.2	Pulse	0.30	3
1	Ge		186,217.22	1.72	98.5	Pulse	0.30	3
1	In		1,573,465.59	0.55	97.4	Pulse	0.30	3
1	Tb		3,929,860.50	0.67	99.5	Pulse	0.50	3
1	Lu		2,934,988.83	0.24	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,472.28	1.37	98.1	Pulse	0.30	3
1	Te		14.00	42.86	2100.0	Pulse	0.50	3
1	Li		1,384.51	7.40	95.5	Pulse	0.30	3

Quantitation Report

File Name	035CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:25
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.807	ug/l	0.30	648,518.15	3.500E+00	Pulse	0.50	3
As			1	51.132	ug/l	0.30	81,065.30	4.376E-01	Pulse	1.00	3
Mo			1	51.289	ug/l	0.74	292,148.49	1.067E+00	Pulse	0.50	3
Pb			1	50.448	ug/l	0.83	1,206,514.79	4.259E-01	Pulse	1.00	3
Be			1	51.499	ug/l	0.60	4,538.18	1.326E-02	Pulse	2.00	3
Ag			1	50.568	ug/l	0.53	922,259.75	3.367E+00	Pulse	0.50	3
Ba			1	50.898	ug/l	0.11	128,598.13	8.100E-02	Pulse	0.50	3
Tl			1	51.257	ug/l	0.13	1,735,564.42	6.127E-01	Pulse	0.50	3
Sn			1	50.419	ug/l	0.65	292,908.79	1.845E-01	Pulse	0.30	3
Sr			1	50.338	ug/l	0.67	406,699.14	2.562E-01	Pulse	0.50	3
[Pb]			1	50.297	ug/l	0.48	574,221.21	2.027E-01	Pulse	0.50	3
Ca			1	5159.062	ug/l	1.37	272,149.40	9.345E-02	Pulse	0.50	3
Ti			1	50.661	ug/l	1.49	17,653.31	5.160E-02	Pulse	0.50	3
Na			1	5172.412	ug/l	1.71	11,733,126.33	3.430E+01	Analog	1.00	3
Mg			1	5155.590	ug/l	1.29	5,765,308.50	1.685E+01	Analog	1.00	3
K			1	5149.117	ug/l	1.22	5,986,841.83	1.750E+01	Analog	1.00	3
V			1	50.715	ug/l	0.82	515,095.78	1.506E+00	Pulse	0.50	3
Mn			1	51.771	ug/l	0.28	384,354.69	2.075E+00	Pulse	0.50	3
Fe			1	5189.939	ug/l	0.28	53,719,370.67	2.900E+02	Analog	0.50	3
Co			1	52.440	ug/l	0.59	961,709.12	5.191E+00	Pulse	0.50	3
Ni			1	52.625	ug/l	0.26	259,025.88	1.398E+00	Pulse	0.50	3
Cu			1	53.102	ug/l	0.41	687,244.40	3.709E+00	Pulse	0.50	3
Zn			1	52.428	ug/l	0.67	124,985.82	4.563E-01	Pulse	1.00	3
Cd			1	51.438	ug/l	0.30	143,335.13	5.233E-01	Pulse	0.50	3
Al			1	5134.760	ug/l	1.54	2,457,538.92	7.183E+00	Pulse	1.00	3
Se			1	51.559	ug/l	0.61	6,431.64	2.348E-02	Pulse	3.00	3
Sb			1	51.309	ug/l	0.94	413,785.31	1.511E+00	Pulse	1.00	3
Se			1	51.729	ug/l	0.74	3,044.36	1.111E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,832,612.08	0.50	99.4	Pulse	0.50	3
1	Sc		342,159.82	1.57	97.8	Pulse	0.30	3
1	Ge		185,271.64	0.62	98.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,587,695.04	0.35	98.3	Pulse	0.30	3
1	Tb		3,900,612.42	1.81	98.8	Mix	0.50	3
1	Lu		2,912,384.50	0.53	99.7	Pulse	0.50	3
1	Ge		273,927.14	0.17	98.3	Pulse	0.30	3
1	Te		8.00	25.00	1200.0	Pulse	0.50	3
1	Li		1,375.61	13.99	94.9	Pulse	0.30	3

Quantitation Report

File Name	036_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:29
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	104.712	ug/l	6.59	1,252,420.29	7.050E+00	Pulse	0.50	3
As			1	104.605	ug/l	6.95	158,930.84	8.947E-01	Pulse	1.00	3
Mo			1	104.416	ug/l	5.86	571,601.54	2.171E+00	Pulse	0.50	3
Pb			1	103.805	ug/l	6.98	2,349,881.42	8.761E-01	Pulse	1.00	3
Be			1	104.661	ug/l	5.14	8,802.91	2.696E-02	Pulse	2.00	3
Ag			1	102.918	ug/l	6.03	1,804,115.83	6.852E+00	Pulse	0.50	3
Ba			1	103.983	ug/l	6.97	252,992.96	1.655E-01	Pulse	0.50	3
Tl			1	106.079	ug/l	7.17	3,400,630.00	1.268E+00	Pulse	0.50	3
Sn			1	104.746	ug/l	6.77	585,880.55	3.831E-01	Pulse	0.30	3
Sr			1	103.581	ug/l	6.36	805,750.07	5.268E-01	Pulse	0.50	3
[Pb]			1	103.093	ug/l	6.99	1,114,027.96	4.153E-01	Pulse	0.50	3
Ca			1	10359.746	ug/l	6.27	529,453.00	1.871E-01	Pulse	0.50	3
Ti			1	105.169	ug/l	5.32	34,972.50	1.071E-01	Pulse	0.50	3
Na			1	10599.483	ug/l	6.68	22,911,412.00	7.020E+01	Analog	1.00	3
Mg			1	10522.705	ug/l	6.06	11,227,388.00	3.439E+01	Analog	1.00	3
K			1	10519.108	ug/l	7.41	11,562,132.33	3.544E+01	Analog	1.00	3
V			1	104.440	ug/l	5.73	1,011,036.08	3.097E+00	Pulse	0.50	3
Mn			1	105.187	ug/l	6.40	748,405.63	4.212E+00	Pulse	0.50	3
Fe			1	10531.690	ug/l	6.96	104,496,512.00	5.883E+02	Analog	0.50	3
Co			1	105.240	ug/l	6.53	1,850,694.54	1.042E+01	Pulse	0.50	3
Ni			1	106.144	ug/l	7.21	500,367.11	2.817E+00	Pulse	0.50	3
Cu			1	106.817	ug/l	6.29	1,318,483.91	7.420E+00	Pulse	0.50	3
Zn			1	105.361	ug/l	6.20	238,655.01	9.064E-01	Pulse	1.00	3
Cd			1	104.750	ug/l	6.34	280,532.93	1.066E+00	Pulse	0.50	3
Al			1	10477.793	ug/l	6.01	4,783,634.50	1.465E+01	Pulse	1.00	3
Se			1	104.774	ug/l	6.14	12,525.21	4.757E-02	Pulse	3.00	3
Sb			1	104.961	ug/l	6.17	813,484.94	3.090E+00	Pulse	1.00	3
Se			1	103.023	ug/l	7.61	5,785.55	2.199E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,690,389.17	6.57	94.4	Pulse	0.50	3
1	Sc		327,243.73	5.97	93.5	Pulse	0.30	3
1	Ge		178,159.58	6.41	94.2	Pulse	0.30	3
1	In		1,533,555.67	6.28	95.0	Pulse	0.30	3
1	Tb		3,802,911.42	6.54	96.3	Pulse	0.50	3
1	Lu		2,837,615.67	6.14	97.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		263,948.05	6.10	94.7	Pulse	0.30	3
1	Te		9.33	86.60	1400.0	Pulse	0.50	3
1	Li		1,317.83	11.98	90.9	Pulse	0.30	3

Quantitation Report

File Name	037_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:32
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.021	ug/l	31.32	4,849.29	2.623E-02	Pulse	0.50	3
As			1	0.019	ug/l	24.82	101.67	5.499E-04	Pulse	1.00	3
Mo			1	0.109	ug/l	22.38	752.02	2.755E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	25.30	1,472.40	5.203E-04	Pulse	1.00	3
Be			1	0.023	ug/l	87.46	2.33	6.831E-06	Pulse	2.00	3
Ag			1	0.081	ug/l	9.32	1,569.41	5.750E-03	Pulse	0.50	3
Ba			1	0.002	ug/l	189.74	37.33	2.335E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	28.56	742.02	2.621E-04	Pulse	0.50	3
Sn			1	0.146	ug/l	15.62	1,076.71	6.735E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	161.48	444.68	2.782E-04	Pulse	0.50	3
[Pb]			1	0.022	ug/l	40.04	701.35	2.478E-04	Pulse	0.50	3
Ca			1	-9.540	ug/l	-17.81	1,199.38	4.138E-04	Pulse	0.50	3
Ti			1	0.010	ug/l	32.83	11.33	3.309E-05	Pulse	0.50	3
Na			1	0.218	ug/l	279.18	27,826.94	8.125E-02	Pulse	1.00	3
Mg			1	0.693	ug/l	27.57	1,854.09	5.415E-03	Pulse	1.00	3
K			1	-1.033	ug/l	-118.14	101,885.97	2.975E-01	Pulse	1.00	3
V			1	0.009	ug/l	46.97	1,336.72	3.903E-03	Pulse	0.50	3
Mn			1	-0.015	ug/l	-37.35	382.67	2.072E-03	Pulse	0.50	3
Fe			1	1.181	ug/l	15.78	30,785.70	1.666E-01	Pulse	0.50	3
Co			1	0.012	ug/l	30.11	274.67	1.488E-03	Pulse	0.50	3
Ni			1	-0.016	ug/l	-28.01	433.34	2.344E-03	Pulse	0.50	3
Cu			1	0.008	ug/l	241.63	7,674.21	4.152E-02	Pulse	0.50	3
Zn			1	-0.719	ug/l	-3.30	1,174.37	4.302E-03	Pulse	1.00	3
Cd			1	0.013	ug/l	12.88	39.33	1.441E-04	Pulse	0.50	3
Al			1	-1.495	ug/l	-17.90	963.02	2.813E-03	Pulse	1.00	3
Se			1	0.153	ug/l	32.61	56.33	2.064E-04	Pulse	3.00	3
Sb			1	0.040	ug/l	32.98	421.01	1.543E-03	Pulse	1.00	3
Se			1	0.099	ug/l	68.12	46.33	1.697E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,829,010.83	0.42	99.3	Pulse	0.50	3
1	Sc		342,521.11	0.85	97.9	Pulse	0.30	3
1	Ge		184,878.93	1.12	97.8	Pulse	0.30	3
1	In		1,598,631.95	0.01	99.0	Pulse	0.30	3
1	Tb		3,885,811.92	0.14	98.4	Pulse	0.50	3
1	Lu		2,899,122.92	0.34	99.2	Pulse	0.50	3
1	Ge		272,970.03	0.16	97.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,484.51	2.26	102.4	Pulse	0.30	3

Quantitation Report

File Name	038_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:36
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	040CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:43
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.731	ug/l	1.65	655,007.98	3.428E+00	Pulse	0.50	3
As			1	49.817	ug/l	1.33	81,453.18	4.263E-01	Pulse	1.00	3
Mo			1	49.763	ug/l	1.11	291,755.14	1.035E+00	Pulse	0.50	3
Pb			1	50.092	ug/l	0.42	1,201,066.63	4.229E-01	Pulse	1.00	3
Be			1	50.824	ug/l	1.12	4,600.69	1.309E-02	Pulse	2.00	3
Ag			1	49.463	ug/l	0.73	928,504.50	3.293E+00	Pulse	0.50	3
Ba			1	50.081	ug/l	0.89	129,169.36	7.970E-02	Pulse	0.50	3
Tl			1	50.860	ug/l	0.28	1,726,538.50	6.080E-01	Pulse	0.50	3
Sn			1	49.829	ug/l	1.07	295,514.96	1.823E-01	Pulse	0.30	3
Sr			1	49.938	ug/l	0.82	411,873.86	2.541E-01	Pulse	0.50	3
[Pb]			1	49.999	ug/l	0.48	572,333.04	2.015E-01	Pulse	0.50	3
Ca			1	5136.181	ug/l	0.45	276,406.14	9.304E-02	Pulse	0.50	3
Ti			1	49.779	ug/l	1.65	17,818.78	5.070E-02	Pulse	0.50	3
Na			1	5139.371	ug/l	0.22	11,977,877.00	3.408E+01	Analog	1.00	3
Mg			1	5120.081	ug/l	0.72	5,882,087.83	1.674E+01	Analog	1.00	3
K			1	5121.423	ug/l	0.32	6,118,159.83	1.741E+01	Analog	1.00	3
V			1	50.148	ug/l	1.01	523,241.23	1.489E+00	Pulse	0.50	3
Mn			1	50.919	ug/l	1.60	389,860.43	2.040E+00	Pulse	0.50	3
Fe			1	5113.902	ug/l	1.23	54,589,972.00	2.857E+02	Analog	0.50	3
Co			1	51.151	ug/l	1.38	967,424.65	5.063E+00	Pulse	0.50	3
Ni			1	51.069	ug/l	1.23	259,255.52	1.357E+00	Pulse	0.50	3
Cu			1	51.830	ug/l	1.50	691,964.44	3.622E+00	Pulse	0.50	3
Zn			1	51.072	ug/l	1.57	125,387.02	4.447E-01	Pulse	1.00	3
Cd			1	50.406	ug/l	0.79	144,570.60	5.128E-01	Pulse	0.50	3
Al			1	5084.742	ug/l	1.46	2,500,038.92	7.113E+00	Pulse	1.00	3
Se			1	50.450	ug/l	1.97	6,477.88	2.298E-02	Pulse	3.00	3
Sb			1	49.709	ug/l	1.22	412,612.64	1.463E+00	Pulse	1.00	3
Se			1	50.417	ug/l	0.27	3,055.13	1.084E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,839,927.25	1.17	99.7	Pulse	0.50	3
1	Sc		351,478.06	0.75	100.4	Pulse	0.30	3
1	Ge		191,083.69	0.92	101.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,620,721.98	0.35	100.4	Pulse	0.30	3
1	Tb		3,989,256.33	0.76	101.1	Pulse	0.50	3
1	Lu		2,970,950.75	0.49	101.7	Pulse	0.50	3
1	Ge		281,952.11	0.79	101.2	Pulse	0.30	3
1	Te		12.00	109.29	1800.0	Pulse	0.50	3
1	Li		1,534.51	3.78	105.8	Pulse	0.30	3

Quantitation Report

File Name	041_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:47
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.518	ug/l	1.36	1,264,041.96	6.634E+00	Pulse	0.50	3
As			1	97.755	ug/l	0.57	159,324.64	8.362E-01	Pulse	1.00	3
Mo			1	98.028	ug/l	0.59	571,012.88	2.038E+00	Pulse	0.50	3
Pb			1	98.451	ug/l	0.71	2,338,616.75	8.309E-01	Pulse	1.00	3
Be			1	98.984	ug/l	1.10	8,935.80	2.549E-02	Pulse	2.00	3
Ag			1	96.124	ug/l	0.44	1,793,084.42	6.400E+00	Pulse	0.50	3
Ba			1	98.086	ug/l	0.99	251,209.89	1.561E-01	Pulse	0.50	3
Tl			1	100.428	ug/l	0.48	3,378,476.58	1.200E+00	Pulse	0.50	3
Sn			1	98.548	ug/l	0.85	580,194.16	3.605E-01	Pulse	0.30	3
Sr			1	98.249	ug/l	0.36	804,321.50	4.997E-01	Pulse	0.50	3
[Pb]			1	98.067	ug/l	0.40	1,111,985.34	3.951E-01	Pulse	0.50	3
Ca			1	9913.775	ug/l	0.30	533,177.96	1.790E-01	Pulse	0.50	3
Ti			1	97.738	ug/l	0.55	34,884.99	9.952E-02	Pulse	0.50	3
Na			1	9945.474	ug/l	0.80	23,088,597.33	6.587E+01	Analog	1.00	3
Mg			1	9914.352	ug/l	0.55	11,357,672.67	3.240E+01	Analog	1.00	3
K			1	9914.053	ug/l	0.76	11,712,001.00	3.341E+01	Analog	1.00	3
V			1	97.827	ug/l	0.83	1,016,736.85	2.901E+00	Pulse	0.50	3
Mn			1	98.700	ug/l	0.50	753,157.37	3.953E+00	Pulse	0.50	3
Fe			1	9862.677	ug/l	0.66	104,973,589.33	5.509E+02	Analog	0.50	3
Co			1	98.998	ug/l	0.71	1,867,149.29	9.799E+00	Pulse	0.50	3
Ni			1	98.545	ug/l	0.64	498,402.34	2.616E+00	Pulse	0.50	3
Cu			1	99.233	ug/l	1.00	1,314,068.17	6.896E+00	Pulse	0.50	3
Zn			1	98.693	ug/l	0.62	238,080.39	8.497E-01	Pulse	1.00	3
Cd			1	97.788	ug/l	0.87	278,715.24	9.948E-01	Pulse	0.50	3
Al			1	9839.595	ug/l	0.57	4,823,232.50	1.376E+01	Pulse	1.00	3
Se			1	98.322	ug/l	0.68	12,510.42	4.465E-02	Pulse	3.00	3
Sb			1	98.019	ug/l	0.85	808,445.88	2.885E+00	Pulse	1.00	3
Se			1	99.077	ug/l	0.67	5,925.92	2.115E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,814,359.75	0.44	98.8	Pulse	0.50	3
1	Sc		350,512.96	0.71	100.2	Pulse	0.30	3
1	Ge		190,548.38	0.76	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,609,571.05	0.16	99.7	Pulse	0.30	3
1	Tb		4,005,883.67	0.25	101.5	Pulse	0.50	3
1	Lu		2,978,079.42	0.36	101.9	Pulse	0.50	3
1	Ge		280,186.04	0.15	100.5	Pulse	0.30	3
1	Te		4.00	100.00	600.0	Pulse	0.50	3
1	Li		1,385.61	10.73	95.6	Pulse	0.30	3

Quantitation Report

File Name	042_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:51
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	802.21	4,696.59	2.503E-02	Pulse	0.50	3
As			1	0.023	ug/l	27.40	109.67	5.837E-04	Pulse	1.00	3
Mo			1	0.088	ug/l	20.22	634.01	2.311E-03	Pulse	0.50	3
Pb			1	0.017	ug/l	36.24	1,279.05	4.509E-04	Pulse	1.00	3
Be			1	0.013	ug/l	85.41	1.50	4.344E-06	Pulse	2.00	3
Ag			1	0.028	ug/l	8.27	603.34	2.196E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	200.63	35.33	2.194E-05	Pulse	0.50	3
Tl			1	0.010	ug/l	11.79	496.68	1.751E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	31.40	925.59	5.756E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	376.57	444.68	2.764E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	28.15	647.35	2.282E-04	Pulse	0.50	3
Ca			1	-7.508	ug/l	-24.05	1,312.72	4.504E-04	Pulse	0.50	3
Ti			1	0.002	ug/l	1344.93	8.67	2.494E-05	Pulse	0.50	3
Na			1	-0.717	ug/l	-46.02	25,968.44	7.507E-02	Pulse	1.00	3
Mg			1	0.227	ug/l	61.28	1,347.38	3.893E-03	Pulse	1.00	3
K			1	-1.338	ug/l	-28.20	102,544.00	2.965E-01	Pulse	1.00	3
V			1	0.010	ug/l	60.38	1,360.72	3.933E-03	Pulse	0.50	3
Mn			1	-0.016	ug/l	-11.66	387.34	2.063E-03	Pulse	0.50	3
Fe			1	0.596	ug/l	5.79	25,140.27	1.339E-01	Pulse	0.50	3
Co			1	0.007	ug/l	5.86	190.00	1.012E-03	Pulse	0.50	3
Ni			1	-0.022	ug/l	-21.35	410.01	2.183E-03	Pulse	0.50	3
Cu			1	-0.030	ug/l	-6.69	7,309.42	3.893E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-1.73	1,173.04	4.271E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	62.89	34.00	1.234E-04	Pulse	0.50	3
Al			1	-1.990	ug/l	-8.28	734.01	2.121E-03	Pulse	1.00	3
Se			1	0.037	ug/l	306.55	42.22	1.541E-04	Pulse	3.00	3
Sb			1	0.029	ug/l	25.94	334.00	1.218E-03	Pulse	1.00	3
Se			1	0.110	ug/l	66.55	47.22	1.720E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,836,038.25	0.69	99.5	Pulse	0.50	3
1	Sc		345,888.52	0.81	98.8	Pulse	0.30	3
1	Ge		187,762.02	1.17	99.3	Pulse	0.30	3
1	In		1,609,157.44	0.76	99.7	Pulse	0.30	3
1	Tb		3,927,826.50	0.84	99.5	Pulse	0.50	3
1	Lu		2,914,355.92	0.62	99.7	Pulse	0.50	3
1	Ge		274,641.90	1.28	98.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,434.51	4.32	98.9	Pulse	0.30	3

Quantitation Report

File Name	043_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:55
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name 044SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:58
Sample Name FA98836-13
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.355	ug/l	1.11	21,296.30	1.157E-01	Pulse	0.50	3
As			1	0.524	ug/l	6.89	896.36	4.869E-03	Pulse	1.00	3
Mo			1	0.497	ug/l	3.15	2,924.91	1.081E-02	Pulse	0.50	3
Pb			1	0.485	ug/l	2.52	12,067.60	4.398E-03	Pulse	1.00	3
Be			1	0.518	ug/l	10.40	46.33	1.344E-04	Pulse	2.00	3
Ag			1	0.935	ug/l	1.59	16,932.40	6.260E-02	Pulse	0.50	3
Ba			1	0.463	ug/l	6.95	1,186.71	7.566E-04	Pulse	0.50	3
Tl			1	0.445	ug/l	1.38	14,742.37	5.371E-03	Pulse	0.50	3
Sn			1	0.592	ug/l	2.77	3,614.82	2.305E-03	Pulse	0.30	3
Sr			1	0.495	ug/l	5.14	4,367.85	2.786E-03	Pulse	0.50	3
[Pb]			1	0.474	ug/l	4.85	5,680.96	2.069E-03	Pulse	0.50	3
Ca			1	47.308	ug/l	1.81	4,023.76	1.437E-03	Pulse	0.50	3
Ti			1	0.645	ug/l	4.87	234.00	6.790E-04	Pulse	0.50	3
Na			1	46.054	ug/l	0.32	132,489.60	3.845E-01	Pulse	1.00	3
Mg			1	23.488	ug/l	1.11	27,536.85	7.991E-02	Pulse	1.00	3
K			1	48.873	ug/l	2.64	159,945.09	4.642E-01	Pulse	1.00	3
V			1	0.722	ug/l	1.15	8,617.93	2.501E-02	Pulse	0.50	3
Mn			1	0.526	ug/l	3.39	4,367.17	2.372E-02	Pulse	0.50	3
Fe			1	27.307	ug/l	0.92	299,261.85	1.626E+00	Pulse	0.50	3
Co			1	0.484	ug/l	0.27	8,884.73	4.826E-02	Pulse	0.50	3
Ni			1	0.465	ug/l	5.20	2,776.88	1.508E-02	Pulse	0.50	3
Cu			1	1.160	ug/l	1.07	22,292.20	1.211E-01	Pulse	0.50	3
Zn			1	1.217	ug/l	5.82	5,616.16	2.076E-02	Pulse	1.00	3
Cd			1	0.477	ug/l	1.12	1,317.38	4.870E-03	Pulse	0.50	3
Al			1	4.288	ug/l	1.56	3,755.69	1.090E-02	Pulse	1.00	3
Se			1	0.421	ug/l	11.63	88.67	3.279E-04	Pulse	3.00	3
Sb			1	1.878	ug/l	0.96	15,050.16	5.564E-02	Pulse	1.00	3
Se			1	0.552	ug/l	15.98	71.89	2.658E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,744,394.50	0.95	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		344,606.45	1.13	98.5	Pulse	0.30	3
1	Ge		184,087.20	0.24	97.3	Pulse	0.30	3
1	In		1,567,866.61	1.09	97.1	Pulse	0.30	3
1	Tb		3,813,336.75	0.61	96.6	Pulse	0.50	3
1	Lu		2,800,112.08	0.41	95.8	Pulse	0.50	3
1	Ge		270,502.09	0.63	97.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,432.28	6.03	98.8	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:02
Sample Name FA98836-14
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.262	ug/l	3.09	20,171.78	1.095E-01	Pulse	0.50	3
As			1	0.344	ug/l	8.13	613.01	3.328E-03	Pulse	1.00	3
Mo			1	0.315	ug/l	4.70	1,880.77	7.031E-03	Pulse	0.50	3
Pb			1	0.321	ug/l	1.67	8,174.63	3.011E-03	Pulse	1.00	3
Be			1	0.361	ug/l	11.06	32.00	9.403E-05	Pulse	2.00	3
Ag			1	0.714	ug/l	0.78	12,803.78	4.788E-02	Pulse	0.50	3
Ba			1	0.302	ug/l	3.92	774.02	5.015E-04	Pulse	0.50	3
Tl			1	0.283	ug/l	1.57	9,329.91	3.436E-03	Pulse	0.50	3
Sn			1	0.428	ug/l	3.72	2,632.44	1.705E-03	Pulse	0.30	3
Sr			1	0.324	ug/l	1.31	2,958.91	1.917E-03	Pulse	0.50	3
[Pb]			1	0.291	ug/l	4.44	3,611.73	1.331E-03	Pulse	0.50	3
Ca			1	20.431	ug/l	8.78	2,652.86	9.532E-04	Pulse	0.50	3
Ti			1	0.951	ug/l	8.33	337.33	9.909E-04	Pulse	0.50	3
Na			1	16.218	ug/l	0.65	63,676.75	1.871E-01	Pulse	1.00	3
Mg			1	19.014	ug/l	0.40	22,220.63	6.529E-02	Pulse	1.00	3
K			1	23.103	ug/l	1.80	128,678.97	3.781E-01	Pulse	1.00	3
V			1	0.600	ug/l	0.37	7,286.05	2.141E-02	Pulse	0.50	3
Mn			1	0.340	ug/l	6.44	3,002.24	1.630E-02	Pulse	0.50	3
Fe			1	26.685	ug/l	1.50	293,083.54	1.591E+00	Pulse	0.50	3
Co			1	0.304	ug/l	2.17	5,602.16	3.041E-02	Pulse	0.50	3
Ni			1	0.311	ug/l	6.02	2,027.45	1.100E-02	Pulse	0.50	3
Cu			1	1.017	ug/l	1.91	20,490.20	1.112E-01	Pulse	0.50	3
Zn			1	0.990	ug/l	3.33	5,036.67	1.883E-02	Pulse	1.00	3
Cd			1	0.284	ug/l	4.78	776.02	2.903E-03	Pulse	0.50	3
Al			1	2.199	ug/l	9.43	2,715.19	7.977E-03	Pulse	1.00	3
Se			1	0.617	ug/l	5.94	111.34	4.163E-04	Pulse	3.00	3
Sb			1	1.218	ug/l	0.95	9,682.90	3.621E-02	Pulse	1.00	3
Se			1	0.569	ug/l	23.14	72.00	2.694E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,715,071.42	1.08	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		340,340.47	0.49	97.3	Pulse	0.30	3
1	Ge		184,214.11	0.51	97.4	Pulse	0.30	3
1	In		1,543,749.14	0.77	95.6	Pulse	0.30	3
1	Tb		3,765,183.67	1.32	95.4	Pulse	0.50	3
1	Lu		2,782,364.42	1.09	95.2	Pulse	0.50	3
1	Ge		267,411.54	1.06	96.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,551.18	4.34	107.0	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:06
Sample Name FA98836-15
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.737	ug/l	0.90	28,219.06	1.555E-01	Pulse	0.50	3
As			1	5.079	ug/l	3.39	1,647.07	9.073E-03	Pulse	1.00	3
Mo			1	4.932	ug/l	3.04	5,671.55	2.098E-02	Pulse	0.50	3
Pb			1	5.101	ug/l	1.60	24,200.76	8.912E-03	Pulse	1.00	3
Be			1	4.723	ug/l	8.18	83.50	2.442E-04	Pulse	2.00	3
Ag			1	6.434	ug/l	1.27	23,245.87	8.601E-02	Pulse	0.50	3
Ba			1	4.860	ug/l	5.46	2,428.84	1.567E-03	Pulse	0.50	3
Tl			1	4.948	ug/l	1.60	32,256.97	1.188E-02	Pulse	0.50	3
Sn			1	5.489	ug/l	2.53	6,435.61	4.153E-03	Pulse	0.30	3
Sr			1	4.983	ug/l	1.83	8,264.51	5.333E-03	Pulse	0.50	3
[Pb]			1	5.000	ug/l	1.65	11,371.81	4.187E-03	Pulse	0.50	3
Ca			1	542.759	ug/l	4.02	7,077.30	2.539E-03	Pulse	0.50	3
Ti			1	4.823	ug/l	7.66	343.34	1.005E-03	Pulse	0.50	3
Na			1	511.743	ug/l	0.44	258,688.10	7.569E-01	Pulse	1.00	3
Mg			1	516.651	ug/l	0.51	116,492.36	3.408E-01	Pulse	1.00	3
K			1	543.090	ug/l	1.00	226,839.77	6.637E-01	Pulse	1.00	3
V			1	6.444	ug/l	2.05	14,285.24	4.180E-02	Pulse	0.50	3
Mn			1	5.356	ug/l	1.40	8,268.46	4.555E-02	Pulse	0.50	3
Fe			1	557.126	ug/l	1.14	1,147,921.08	6.324E+00	Pulse	0.50	3
Co			1	5.213	ug/l	2.30	18,789.79	1.035E-01	Pulse	0.50	3
Ni			1	5.163	ug/l	0.51	5,470.79	3.014E-02	Pulse	0.50	3
Cu			1	9.974	ug/l	2.19	32,453.90	1.788E-01	Pulse	0.50	3
Zn			1	7.672	ug/l	3.98	6,341.05	2.346E-02	Pulse	1.00	3
Cd			1	4.974	ug/l	1.53	2,738.88	1.013E-02	Pulse	0.50	3
Al			1	489.131	ug/l	0.66	48,418.71	1.417E-01	Pulse	1.00	3
Se			1	4.914	ug/l	2.00	157.33	5.821E-04	Pulse	3.00	3
Sb			1	4.785	ug/l	2.99	7,708.96	2.852E-02	Pulse	1.00	3
Se			1	4.462	ug/l	17.97	91.33	3.379E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,715,638.58	0.16	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,778.69	0.73	97.7	Pulse	0.30	3
1	Ge		181,524.50	0.55	96.0	Pulse	0.30	3
1	In		1,549,650.46	1.13	96.0	Pulse	0.30	3
1	Tb		3,789,921.67	0.44	96.0	Pulse	0.50	3
1	Lu		2,787,580.67	1.13	95.4	Pulse	0.50	3
1	Ge		270,272.67	0.18	97.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,495.62	5.24	103.1	Pulse	0.30	3

Quantitation Report

File Name	047SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:10
Sample Name	FA98836-16
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	15.401	ug/l	0.66	42,057.81	2.314E-01	Pulse	0.50	3
As			1	10.146	ug/l	2.52	3,222.94	1.774E-02	Pulse	1.00	3
Mo			1	10.214	ug/l	3.33	11,512.23	4.294E-02	Pulse	0.50	3
Pb			1	10.129	ug/l	1.14	47,187.43	1.740E-02	Pulse	1.00	3
Be			1	10.635	ug/l	8.64	187.33	5.488E-04	Pulse	2.00	3
Ag			1	11.732	ug/l	0.71	41,969.24	1.565E-01	Pulse	0.50	3
Ba			1	9.777	ug/l	2.94	4,864.67	3.131E-03	Pulse	0.50	3
Tl			1	10.073	ug/l	1.55	65,459.71	2.413E-02	Pulse	0.50	3
Sn			1	10.314	ug/l	2.15	11,935.03	7.682E-03	Pulse	0.30	3
Sr			1	9.931	ug/l	1.82	16,100.88	1.036E-02	Pulse	0.50	3
[Pb]			1	10.124	ug/l	1.81	22,552.85	8.315E-03	Pulse	0.50	3
Ca			1	1063.629	ug/l	2.37	12,319.90	4.415E-03	Pulse	0.50	3
Ti			1	9.795	ug/l	3.65	688.68	2.017E-03	Pulse	0.50	3
Na			1	1044.260	ug/l	0.63	498,903.53	1.461E+00	Pulse	1.00	3
Mg			1	1044.598	ug/l	1.00	234,152.76	6.859E-01	Pulse	1.00	3
K			1	1070.680	ug/l	0.21	346,888.06	1.016E+00	Pulse	1.00	3
V			1	11.565	ug/l	0.21	24,621.51	7.213E-02	Pulse	0.50	3
Mn			1	10.742	ug/l	1.60	16,113.38	8.866E-02	Pulse	0.50	3
Fe			1	1093.110	ug/l	1.01	2,237,173.33	1.231E+01	Pulse	0.50	3
Co			1	10.442	ug/l	1.13	37,624.42	2.070E-01	Pulse	0.50	3
Ni			1	10.414	ug/l	1.01	10,536.90	5.798E-02	Pulse	0.50	3
Cu			1	13.635	ug/l	0.79	41,681.46	2.294E-01	Pulse	0.50	3
Zn			1	11.001	ug/l	3.84	7,807.59	2.912E-02	Pulse	1.00	3
Cd			1	10.241	ug/l	2.53	5,589.53	2.085E-02	Pulse	0.50	3
Al			1	1009.586	ug/l	1.23	98,039.49	2.872E-01	Pulse	1.00	3
Se			1	9.901	ug/l	7.23	277.12	1.034E-03	Pulse	3.00	3
Sb			1	9.830	ug/l	1.38	15,608.63	5.822E-02	Pulse	1.00	3
Se			1	9.425	ug/l	8.97	147.00	5.483E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,712,757.67	1.40	95.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,371.84	0.47	97.5	Pulse	0.30	3
1	Ge		181,729.17	0.54	96.1	Pulse	0.30	3
1	In		1,553,621.78	0.48	96.2	Pulse	0.30	3
1	Tb		3,778,674.00	0.50	95.7	Pulse	0.50	3
1	Lu		2,790,659.67	0.88	95.5	Pulse	0.50	3
1	Ge		268,093.79	0.32	96.2	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,537.84	10.88	106.1	Pulse	0.30	3

Quantitation Report

File Name 048_BSP.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:13
Sample Name MP41201-B1
Sample Type BSP
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	511.582	ug/l	0.56	1,256,894.92	6.889E+00	Pulse	0.50	3
As			1	518.351	ug/l	0.37	161,791.01	8.867E-01	Pulse	1.00	3
Mo			1	504.014	ug/l	0.34	558,029.69	2.096E+00	Pulse	0.50	3
Pb			1	504.115	ug/l	0.29	2,254,153.50	8.510E-01	Pulse	1.00	3
Be			1	517.506	ug/l	0.78	8,985.65	2.666E-02	Pulse	2.00	3
Ag			1	264.564	ug/l	0.11	938,094.14	3.523E+00	Pulse	0.50	3
Ba			1	498.927	ug/l	0.56	242,953.77	1.588E-01	Pulse	0.50	3
Tl			1	496.426	ug/l	0.31	3,143,719.92	1.187E+00	Pulse	0.50	3
Sn			1	539.167	ug/l	0.09	603,499.89	3.944E-01	Pulse	0.30	3
Sr			1	499.942	ug/l	0.61	778,127.35	5.086E-01	Pulse	0.50	3
[Pb]			1	483.796	ug/l	0.69	1,032,674.04	3.898E-01	Pulse	0.50	3
Ca			1	50700.791	ug/l	0.39	514,151.80	1.831E-01	Pulse	0.50	3
Ti			1	515.799	ug/l	1.05	35,408.54	1.050E-01	Pulse	0.50	3
Na			1	50289.950	ug/l	0.12	22,456,389.33	6.662E+01	Analog	1.00	3
Mg			1	49832.584	ug/l	0.17	10,980,573.67	3.257E+01	Analog	1.00	3
K			1	49405.524	ug/l	0.28	11,226,692.67	3.330E+01	Analog	1.00	3
V			1	499.460	ug/l	0.26	998,446.63	2.962E+00	Pulse	0.50	3
Mn			1	504.260	ug/l	0.45	736,899.85	4.039E+00	Pulse	0.50	3
Fe			1	53848.764	ug/l	0.69	109,760,394.67	6.016E+02	Analog	0.50	3
Co			1	510.635	ug/l	0.23	1,844,396.29	1.011E+01	Pulse	0.50	3
Ni			1	504.460	ug/l	0.55	488,590.24	2.678E+00	Pulse	0.50	3
Cu			1	513.873	ug/l	0.81	1,302,930.79	7.141E+00	Pulse	0.50	3
Zn			1	595.132	ug/l	0.15	272,311.06	1.023E+00	Pulse	1.00	3
Cd			1	498.826	ug/l	0.29	270,237.44	1.015E+00	Pulse	0.50	3
Al			1	48657.411	ug/l	0.19	4,587,725.83	1.361E+01	Pulse	1.00	3
Se			1	505.670	ug/l	1.35	12,228.13	4.592E-02	Pulse	3.00	3
Sb			1	510.023	ug/l	0.17	799,564.94	3.003E+00	Pulse	1.00	3
Se			1	499.408	ug/l	1.64	5,677.07	2.132E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,649,026.25	1.09	93.0	Pulse	0.50	3
1	Sc		337,093.08	0.30	96.3	Pulse	0.30	3
1	Ge		182,454.66	0.41	96.5	Pulse	0.30	3
1	In		1,530,132.82	0.93	94.8	Pulse	0.30	3
1	Tb		3,768,705.42	1.17	95.5	Pulse	0.50	3
1	Lu		2,807,897.33	0.84	96.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		266,281.01	0.57	95.5	Pulse	0.30	3
1	Te		2.00	173.21	300.0	Pulse	0.50	3
1	Li		1,422.28	9.39	98.1	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:17
Sample Name FA98739-26
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3498.735	ug/l	1.22	223,694.33	1.198E+00	Pulse	0.50	3
As			1	18.058	ug/l	17.71	216.33	1.160E-03	Pulse	1.00	3
Mo			1	74.965	ug/l	7.91	2,294.15	8.274E-03	Pulse	0.50	3
Pb			1	293.478	ug/l	1.42	38,011.04	1.268E-02	Pulse	1.00	3
Be			1	4.796	ug/l	23.36	2.50	7.129E-06	Pulse	2.00	3
Ag			1	10202.746	ug/l	0.48	941,586.18	3.397E+00	Pulse	0.50	3
Ba			1	1233.713	ug/l	1.43	16,027.13	9.834E-03	Pulse	0.50	3
Tl			1	3.817	ug/l	17.76	834.02	2.784E-04	Pulse	0.50	3
Sn			1	342.601	ug/l	2.51	10,434.12	6.402E-03	Pulse	0.30	3
Sr			1	4581.976	ug/l	0.86	190,234.69	1.167E-01	Pulse	0.50	3
[Pb]			1	307.141	ug/l	1.41	19,013.91	6.345E-03	Pulse	0.50	3
Ca			1	985623.543	ug/l	1.08	261,879.41	8.929E-02	Pulse	0.50	3
Ti			1	374.224	ug/l	23.27	676.07	1.928E-03	Pulse	0.50	3
Na			1	35318.991	ug/l	0.32	437,817.75	1.248E+00	Pulse	1.00	3
Mg			1	89385.120	ug/l	0.81	513,470.12	1.464E+00	Pulse	1.00	3
K			1	34298.410	ug/l	5.96	306,490.21	8.737E-01	Pulse	1.00	3
V			1	28.856	ug/l	10.70	2,772.21	7.902E-03	Pulse	0.50	3
Mn			1	1495.022	ug/l	2.40	56,337.83	3.018E-01	Pulse	0.50	3
Fe			1	661445.791	ug/l	1.07	34,496,384.00	1.848E+02	Analog	0.50	3
Co			1	24.284	ug/l	4.15	2,302.15	1.234E-02	Pulse	0.50	3
Ni			1	340.571	ug/l	1.63	8,942.75	4.791E-02	Pulse	0.50	3
Cu			1	17051.028	ug/l	1.18	1,107,034.54	5.931E+00	Pulse	0.50	3
Zn			1	9689.966	ug/l	0.86	117,108.47	4.224E-01	Pulse	1.00	3
Cd			1	15.507	ug/l	8.16	222.67	8.031E-04	Pulse	0.50	3
Al			1	59384.254	ug/l	1.99	147,333.19	4.200E-01	Pulse	1.00	3
Se			1	21.582	ug/l	36.61	51.56	1.860E-04	Pulse	3.00	3
Sb			1	37.035	ug/l	5.33	1,609.07	5.803E-03	Pulse	1.00	3
Se			1	2.931	ug/l	490.48	42.11	1.519E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,996,717.58	0.63	105.2	Pulse	0.50	3
1	Sc		350,800.91	0.31	100.2	Pulse	0.30	3
1	Ge		186,674.70	0.86	98.7	Pulse	0.30	3
1	In		1,629,727.12	0.06	100.9	Pulse	0.30	3
1	Tb		3,930,312.42	0.24	99.6	Pulse	0.50	3
1	Lu		2,932,899.33	0.46	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		277,223.98	0.41	99.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,424.50	5.62	98.2	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:21
Sample Name MP41201-D1
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3447.708	ug/l	0.29	221,558.35	1.181E+00	Pulse	0.50	3
As			1	15.993	ug/l	8.61	201.00	1.071E-03	Pulse	1.00	3
Mo			1	77.903	ug/l	5.04	2,342.82	8.580E-03	Pulse	0.50	3
Pb			1	291.974	ug/l	0.62	37,730.05	1.262E-02	Pulse	1.00	3
Be			1	6.386	ug/l	61.69	3.17	9.177E-06	Pulse	2.00	3
Ag			1	10579.520	ug/l	0.27	961,918.84	3.522E+00	Pulse	0.50	3
Ba			1	1226.886	ug/l	0.85	15,739.53	9.780E-03	Pulse	0.50	3
Tl			1	1.073	ug/l	7.89	342.01	1.144E-04	Pulse	0.50	3
Sn			1	336.678	ug/l	1.35	10,129.51	6.294E-03	Pulse	0.30	3
Sr			1	3871.110	ug/l	0.48	158,780.84	9.866E-02	Pulse	0.50	3
[Pb]			1	308.174	ug/l	3.13	19,033.98	6.366E-03	Pulse	0.50	3
Ca			1	878871.080	ug/l	0.07	232,088.31	7.968E-02	Pulse	0.50	3
Ti			1	420.075	ug/l	53.19	746.17	2.161E-03	Pulse	0.50	3
Na			1	34085.705	ug/l	0.06	416,486.73	1.207E+00	Pulse	1.00	3
Mg			1	87818.054	ug/l	0.59	496,124.33	1.438E+00	Pulse	1.00	3
K			1	31787.753	ug/l	0.42	286,954.09	8.318E-01	Pulse	1.00	3
V			1	29.606	ug/l	2.44	2,764.21	8.013E-03	Pulse	0.50	3
Mn			1	1523.478	ug/l	0.96	57,683.82	3.075E-01	Pulse	0.50	3
Fe			1	650656.632	ug/l	0.23	34,097,022.67	1.818E+02	Analog	0.50	3
Co			1	23.527	ug/l	10.33	2,242.81	1.196E-02	Pulse	0.50	3
Ni			1	370.086	ug/l	1.88	9,720.47	5.182E-02	Pulse	0.50	3
Cu			1	16679.251	ug/l	0.79	1,088,309.54	5.802E+00	Pulse	0.50	3
Zn			1	10621.436	ug/l	0.99	126,194.53	4.620E-01	Pulse	1.00	3
Cd			1	18.051	ug/l	4.84	254.67	9.324E-04	Pulse	0.50	3
Al			1	60964.895	ug/l	1.29	148,702.81	4.311E-01	Pulse	1.00	3
Se			1	13.649	ug/l	44.87	45.89	1.680E-04	Pulse	3.00	3
Sb			1	38.247	ug/l	1.80	1,633.74	5.982E-03	Pulse	1.00	3
Se			1	-2.203	ug/l	-1004.95	40.00	1.464E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,989,455.67	0.81	104.9	Pulse	0.50	3
1	Sc		344,983.98	0.40	98.6	Pulse	0.30	3
1	Ge		187,561.71	0.75	99.2	Pulse	0.30	3
1	In		1,609,364.56	0.44	99.7	Pulse	0.30	3
1	Tb		3,907,338.50	0.32	99.0	Pulse	0.50	3
1	Lu		2,912,595.42	0.48	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,126.29	0.81	98.0	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,393.39	0.63	96.1	Pulse	0.30	3

Quantitation Report

File Name 051SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:25
Sample Name MP41201-SD1
Sample Type Sample
Comment
Prep Dilution 1000.000
Auto Dilution N/A
Total Dilution 1000.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3259.209	ug/l	0.45	45,105.32	2.434E-01	Pulse	0.50	3
As			1	8.079	ug/l	68.18	84.67	4.568E-04	Pulse	1.00	3
Mo			1	57.489	ug/l	4.71	452.01	1.679E-03	Pulse	0.50	3
Pb			1	281.308	ug/l	2.02	7,703.41	2.678E-03	Pulse	1.00	3
Be			1	15.227	ug/l	77.61	1.67	4.875E-06	Pulse	2.00	3
Ag			1	9766.235	ug/l	0.53	175,157.39	6.505E-01	Pulse	0.50	3
Ba			1	1165.115	ug/l	1.97	2,996.26	1.874E-03	Pulse	0.50	3
Tl			1	-0.563	ug/l	-143.30	125.33	4.355E-05	Pulse	0.50	3
Sn			1	311.311	ug/l	3.70	2,042.35	1.277E-03	Pulse	0.30	3
Sr			1	4381.522	ug/l	0.66	36,039.63	2.254E-02	Pulse	0.50	3
[Pb]			1	288.275	ug/l	2.73	3,801.77	1.321E-03	Pulse	0.50	3
Ca			1	917561.232	ug/l	0.81	49,407.25	1.710E-02	Pulse	0.50	3
Ti			1	243.865	ug/l	29.94	92.67	2.711E-04	Pulse	0.50	3
Na			1	31278.965	ug/l	0.42	98,024.70	2.867E-01	Pulse	1.00	3
Mg			1	84457.981	ug/l	0.56	95,438.03	2.792E-01	Pulse	1.00	3
K			1	30888.611	ug/l	1.01	138,148.16	4.041E-01	Pulse	1.00	3
V			1	13.246	ug/l	10.00	1,374.72	4.021E-03	Pulse	0.50	3
Mn			1	1361.850	ug/l	1.86	10,594.25	5.719E-02	Pulse	0.50	3
Fe			1	621924.211	ug/l	0.13	6,453,791.17	3.483E+01	Analog	0.50	3
Co			1	21.380	ug/l	7.35	450.68	2.433E-03	Pulse	0.50	3
Ni			1	306.748	ug/l	4.47	2,018.11	1.089E-02	Pulse	0.50	3
Cu			1	16060.385	ug/l	0.64	213,154.74	1.150E+00	Pulse	0.50	3
Zn			1	8922.294	ug/l	0.35	23,233.96	8.629E-02	Pulse	1.00	3
Cd			1	15.381	ug/l	13.89	46.00	1.708E-04	Pulse	0.50	3
Al			1	53411.651	ug/l	1.14	27,203.80	7.957E-02	Pulse	1.00	3
Se			1	-11.251	ug/l	-88.84	35.56	1.320E-04	Pulse	3.00	3
Sb			1	29.077	ug/l	15.30	325.67	1.209E-03	Pulse	1.00	3
Se			1	-111.397	ug/l	-142.98	33.67	1.252E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,876,941.33	0.73	101.0	Pulse	0.50	3
1	Sc		341,868.92	0.10	97.7	Pulse	0.30	3
1	Ge		185,271.63	0.93	98.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,598,899.49	0.53	99.0	Pulse	0.30	3
1	Tb		3,904,890.92	0.66	98.9	Pulse	0.50	3
1	Lu		2,888,994.92	0.47	98.9	Pulse	0.50	3
1	Ge		269,256.85	0.77	96.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,447.84	5.64	99.8	Pulse	0.30	3

Quantitation Report

File Name	052SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:29
Sample Name	MP41201-S1
Sample Type	Sample
Comment	
Prep Dilution	200.000
Auto Dilution	N/A
Total Dilution	200.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2839.895	ug/l	1.50	181,140.97	9.774E-01	Pulse	0.50	3
As			1	362.794	ug/l	1.00	2,946.23	1.590E-02	Pulse	1.00	3
Mo			1	382.827	ug/l	3.00	10,993.92	4.027E-02	Pulse	0.50	3
Pb			1	565.754	ug/l	0.55	71,252.44	2.417E-02	Pulse	1.00	3
Be			1	343.428	ug/l	19.95	151.67	4.432E-04	Pulse	2.00	3
Ag			1	6793.778	ug/l	0.92	617,578.48	2.262E+00	Pulse	0.50	3
Ba			1	1290.381	ug/l	2.05	16,498.88	1.028E-02	Pulse	0.50	3
Tl			1	314.007	ug/l	1.34	55,469.40	1.882E-02	Pulse	0.50	3
Sn			1	615.079	ug/l	0.52	18,262.44	1.138E-02	Pulse	0.30	3
Sr			1	3282.801	ug/l	1.40	134,283.20	8.371E-02	Pulse	0.50	3
[Pb]			1	563.869	ug/l	0.29	33,943.60	1.151E-02	Pulse	0.50	3
Ca			1	691959.304	ug/l	0.57	183,094.02	6.286E-02	Pulse	0.50	3
Ti			1	444.620	ug/l	2.46	782.02	2.286E-03	Pulse	0.50	3
Na			1	61661.545	ug/l	0.30	724,955.46	2.119E+00	Pulse	1.00	3
Mg			1	101546.703	ug/l	0.31	568,665.14	1.662E+00	Pulse	1.00	3
K			1	59472.529	ug/l	0.72	442,667.10	1.294E+00	Pulse	1.00	3
V			1	360.003	ug/l	1.20	19,476.40	5.694E-02	Pulse	0.50	3
Mn			1	1349.990	ug/l	2.59	50,558.80	2.728E-01	Pulse	0.50	3
Fe			1	544222.122	ug/l	1.37	28,183,748.67	1.521E+02	Analog	0.50	3
Co			1	366.350	ug/l	1.52	33,662.50	1.816E-01	Pulse	0.50	3
Ni			1	568.442	ug/l	2.03	14,477.46	7.812E-02	Pulse	0.50	3
Cu			1	13107.794	ug/l	1.28	846,719.06	4.569E+00	Pulse	0.50	3
Zn			1	6482.109	ug/l	0.65	78,108.55	2.860E-01	Pulse	1.00	3
Cd			1	351.199	ug/l	4.80	4,880.67	1.788E-02	Pulse	0.50	3
Al			1	77146.486	ug/l	0.96	186,141.08	5.442E-01	Pulse	1.00	3
Se			1	350.807	ug/l	5.65	254.23	9.312E-04	Pulse	3.00	3
Sb			1	331.086	ug/l	2.18	13,399.89	4.908E-02	Pulse	1.00	3
Se			1	360.488	ug/l	11.04	144.89	5.308E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,947,792.25	0.69	103.5	Pulse	0.50	3
1	Sc		342,061.35	0.53	97.7	Pulse	0.30	3
1	Ge		185,345.50	0.78	98.0	Pulse	0.30	3
1	In		1,604,240.00	0.30	99.3	Pulse	0.30	3
1	Tb		3,911,204.83	0.55	99.1	Pulse	0.50	3
1	Lu		2,912,632.58	0.19	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,065.04	0.95	98.0	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,415.62	14.02	97.6	Pulse	0.30	3

Quantitation Report

File Name	053CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:32
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.136	ug/l	0.58	633,794.98	3.455E+00	Pulse	0.50	3
As			1	50.346	ug/l	0.43	79,025.19	4.308E-01	Pulse	1.00	3
Mo			1	50.619	ug/l	0.69	285,420.73	1.053E+00	Pulse	0.50	3
Pb			1	50.061	ug/l	0.39	1,188,782.42	4.227E-01	Pulse	1.00	3
Be			1	50.099	ug/l	0.59	4,392.97	1.290E-02	Pulse	2.00	3
Ag			1	50.186	ug/l	0.30	906,042.50	3.341E+00	Pulse	0.50	3
Ba			1	50.196	ug/l	0.71	126,650.31	7.988E-02	Pulse	0.50	3
Tl			1	50.924	ug/l	0.61	1,712,109.79	6.087E-01	Pulse	0.50	3
Sn			1	49.946	ug/l	0.78	289,761.26	1.828E-01	Pulse	0.30	3
Sr			1	49.593	ug/l	1.43	400,128.77	2.524E-01	Pulse	0.50	3
[Pb]			1	49.999	ug/l	0.61	566,801.81	2.015E-01	Pulse	0.50	3
Ca			1	5067.089	ug/l	0.19	267,478.00	9.179E-02	Pulse	0.50	3
Ti			1	49.447	ug/l	2.73	17,145.53	5.036E-02	Pulse	0.50	3
Na			1	5144.089	ug/l	0.31	11,612,763.00	3.411E+01	Analog	1.00	3
Mg			1	5134.879	ug/l	0.90	5,714,165.50	1.678E+01	Analog	1.00	3
K			1	5112.428	ug/l	0.23	5,915,946.50	1.738E+01	Analog	1.00	3
V			1	50.092	ug/l	1.10	506,277.96	1.487E+00	Pulse	0.50	3
Mn			1	51.419	ug/l	0.62	377,939.49	2.060E+00	Pulse	0.50	3
Fe			1	5162.572	ug/l	0.22	52,904,442.67	2.884E+02	Analog	0.50	3
Co			1	51.847	ug/l	0.35	941,372.27	5.132E+00	Pulse	0.50	3
Ni			1	51.879	ug/l	0.93	252,827.52	1.378E+00	Pulse	0.50	3
Cu			1	52.541	ug/l	0.96	673,295.75	3.671E+00	Pulse	0.50	3
Zn			1	51.870	ug/l	0.48	122,439.60	4.515E-01	Pulse	1.00	3
Cd			1	51.335	ug/l	0.58	141,602.17	5.222E-01	Pulse	0.50	3
Al			1	5089.969	ug/l	0.83	2,424,262.67	7.121E+00	Pulse	1.00	3
Se			1	51.530	ug/l	0.88	6,362.84	2.347E-02	Pulse	3.00	3
Sb			1	50.777	ug/l	0.67	405,350.78	1.495E+00	Pulse	1.00	3
Se			1	51.046	ug/l	1.89	2,974.12	1.097E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,559.33	0.34	98.7	Pulse	0.50	3
1	Sc		340,449.33	0.21	97.3	Pulse	0.30	3
1	Ge		183,424.29	0.60	97.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,585,522.71	0.28	98.2	Pulse	0.30	3
1	Tb		3,917,312.17	0.20	99.2	Pulse	0.50	3
1	Lu		2,913,899.08	0.18	99.7	Pulse	0.50	3
1	Ge		271,164.40	1.01	97.3	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,368.94	1.89	94.4	Pulse	0.30	3

Quantitation Report

File Name 054_CCV.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:36
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.577	ug/l	0.99	1,230,658.04	6.638E+00	Pulse	0.50	3
As			1	97.511	ug/l	0.57	154,637.00	8.341E-01	Pulse	1.00	3
Mo			1	99.516	ug/l	1.86	559,323.40	2.069E+00	Pulse	0.50	3
Pb			1	98.482	ug/l	0.71	2,310,439.08	8.312E-01	Pulse	1.00	3
Be			1	99.174	ug/l	0.50	8,663.85	2.554E-02	Pulse	2.00	3
Ag			1	97.459	ug/l	1.27	1,754,198.91	6.489E+00	Pulse	0.50	3
Ba			1	98.297	ug/l	0.69	247,746.33	1.564E-01	Pulse	0.50	3
Tl			1	100.710	ug/l	0.44	3,346,099.83	1.204E+00	Pulse	0.50	3
Sn			1	98.053	ug/l	1.34	568,101.11	3.587E-01	Pulse	0.30	3
Sr			1	98.324	ug/l	1.00	792,128.54	5.001E-01	Pulse	0.50	3
[Pb]			1	98.409	ug/l	0.96	1,102,074.38	3.965E-01	Pulse	0.50	3
Ca			1	9803.335	ug/l	0.41	520,544.14	1.770E-01	Pulse	0.50	3
Ti			1	98.615	ug/l	0.53	34,061.52	1.004E-01	Pulse	0.50	3
Na			1	10027.713	ug/l	0.23	22,528,722.67	6.642E+01	Analog	1.00	3
Mg			1	10025.438	ug/l	0.72	11,114,241.00	3.277E+01	Analog	1.00	3
K			1	9989.281	ug/l	0.10	11,419,511.00	3.367E+01	Analog	1.00	3
V			1	98.461	ug/l	1.29	990,260.00	2.920E+00	Pulse	0.50	3
Mn			1	99.099	ug/l	0.73	735,773.42	3.969E+00	Pulse	0.50	3
Fe			1	9924.843	ug/l	0.40	102,783,800.00	5.544E+02	Analog	0.50	3
Co			1	99.317	ug/l	1.09	1,822,573.50	9.831E+00	Pulse	0.50	3
Ni			1	99.372	ug/l	1.03	489,009.58	2.638E+00	Pulse	0.50	3
Cu			1	99.913	ug/l	1.10	1,287,263.92	6.943E+00	Pulse	0.50	3
Zn			1	99.843	ug/l	1.45	232,366.89	8.595E-01	Pulse	1.00	3
Cd			1	99.634	ug/l	1.46	274,009.55	1.014E+00	Pulse	0.50	3
Al			1	9981.223	ug/l	1.13	4,734,637.00	1.396E+01	Pulse	1.00	3
Se			1	100.221	ug/l	1.50	12,303.62	4.551E-02	Pulse	3.00	3
Sb			1	99.789	ug/l	1.80	794,144.11	2.938E+00	Pulse	1.00	3
Se			1	98.878	ug/l	2.26	5,706.41	2.111E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,779,614.67	0.28	97.6	Pulse	0.50	3
1	Sc		339,202.82	0.71	96.9	Pulse	0.30	3
1	Ge		185,401.17	0.37	98.0	Pulse	0.30	3
1	In		1,583,995.56	0.33	98.1	Pulse	0.30	3
1	Tb		3,944,368.83	0.93	99.9	Pulse	0.50	3
1	Lu		2,940,169.58	0.31	100.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,370.61	0.79	97.0	Pulse	0.30	3
1	Te		4.67	49.49	700.0	Pulse	0.50	3
1	Li		1,363.39	6.32	94.0	Pulse	0.30	3

Quantitation Report

File Name 055_CCB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:40
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.034	ug/l	51.56	4,952.65	2.706E-02	Pulse	0.50	3
As			1	0.018	ug/l	19.28	98.67	5.390E-04	Pulse	1.00	3
Mo			1	0.096	ug/l	24.97	669.35	2.481E-03	Pulse	0.50	3
Pb			1	0.019	ug/l	44.26	1,297.39	4.615E-04	Pulse	1.00	3
Be			1	0.025	ug/l	46.17	2.50	7.324E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	21.97	386.67	1.434E-03	Pulse	0.50	3
Ba			1	0.003	ug/l	166.11	40.00	2.524E-05	Pulse	0.50	3
Tl			1	0.016	ug/l	22.98	662.68	2.357E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	21.93	910.03	5.739E-04	Pulse	0.30	3
Sr			1	0.009	ug/l	132.13	500.01	3.156E-04	Pulse	0.50	3
[Pb]			1	0.014	ug/l	43.94	614.68	2.186E-04	Pulse	0.50	3
Ca			1	-10.260	ug/l	-8.17	1,150.04	4.008E-04	Pulse	0.50	3
Ti			1	0.012	ug/l	171.56	12.00	3.515E-05	Pulse	0.50	3
Na			1	-0.727	ug/l	-64.92	25,611.66	7.500E-02	Pulse	1.00	3
Mg			1	0.820	ug/l	42.06	1,991.11	5.832E-03	Pulse	1.00	3
K			1	-2.303	ug/l	-11.58	100,142.72	2.932E-01	Pulse	1.00	3
V			1	0.016	ug/l	55.60	1,398.06	4.094E-03	Pulse	0.50	3
Mn			1	-0.018	ug/l	-23.56	356.00	1.945E-03	Pulse	0.50	3
Fe			1	1.353	ug/l	25.16	32,225.52	1.761E-01	Pulse	0.50	3
Co			1	0.014	ug/l	39.82	303.34	1.659E-03	Pulse	0.50	3
Ni			1	-0.013	ug/l	-32.82	441.34	2.412E-03	Pulse	0.50	3
Cu			1	-0.066	ug/l	-13.58	6,665.84	3.642E-02	Pulse	0.50	3
Zn			1	-0.738	ug/l	-0.81	1,116.70	4.140E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	34.91	35.33	1.310E-04	Pulse	0.50	3
Al			1	-1.252	ug/l	-27.93	1,076.36	3.152E-03	Pulse	1.00	3
Se			1	0.076	ug/l	26.74	46.22	1.714E-04	Pulse	3.00	3
Sb			1	0.032	ug/l	12.01	350.67	1.300E-03	Pulse	1.00	3
Se			1	-0.020	ug/l	-496.45	39.00	1.446E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,614.92	0.43	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,509.54	0.17	97.6	Pulse	0.30	3
1	Ge		183,032.20	0.63	96.8	Pulse	0.30	3
1	In		1,585,126.74	0.32	98.2	Pulse	0.30	3
1	Tb		3,886,195.83	0.23	98.4	Pulse	0.50	3
1	Lu		2,869,172.92	0.34	98.2	Pulse	0.50	3
1	Ge		269,708.26	0.17	96.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,498.96	4.32	103.4	Pulse	0.30	3

Quantitation Report

File Name 056SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:44
Sample Name MP41201-S2
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4045.618	ug/l	1.64	252,261.61	1.382E+00	Pulse	0.50	3
As			1	479.523	ug/l	1.61	3,813.05	2.089E-02	Pulse	1.00	3
Mo			1	512.790	ug/l	2.38	14,558.34	5.378E-02	Pulse	0.50	3
Pb			1	728.797	ug/l	0.41	91,590.38	3.105E-02	Pulse	1.00	3
Be			1	444.055	ug/l	2.43	195.67	5.728E-04	Pulse	2.00	3
Ag			1	11304.193	ug/l	0.60	1,018,843.19	3.763E+00	Pulse	0.50	3
Ba			1	1718.380	ug/l	1.72	21,823.17	1.369E-02	Pulse	0.50	3
Tl			1	420.910	ug/l	1.11	74,353.07	2.521E-02	Pulse	0.50	3
Sn			1	791.972	ug/l	2.92	23,301.54	1.462E-02	Pulse	0.30	3
Sr			1	4382.324	ug/l	0.70	177,990.54	1.117E-01	Pulse	0.50	3
[Pb]			1	717.822	ug/l	1.62	43,112.13	1.461E-02	Pulse	0.50	3
Ca			1	862227.828	ug/l	1.27	227,854.59	7.819E-02	Pulse	0.50	3
Ti			1	1139.270	ug/l	79.92	1,989.09	5.822E-03	Pulse	0.50	3
Na			1	78330.535	ug/l	0.38	912,369.79	2.671E+00	Pulse	1.00	3
Mg			1	129938.674	ug/l	0.39	726,406.21	2.126E+00	Pulse	1.00	3
K			1	76220.426	ug/l	0.55	537,646.40	1.574E+00	Pulse	1.00	3
V			1	477.792	ug/l	0.92	25,408.55	7.438E-02	Pulse	0.50	3
Mn			1	1957.486	ug/l	1.97	71,996.37	3.944E-01	Pulse	0.50	3
Fe			1	674432.632	ug/l	0.98	34,400,438.67	1.884E+02	Analog	0.50	3
Co			1	497.333	ug/l	1.40	44,990.71	2.464E-01	Pulse	0.50	3
Ni			1	799.163	ug/l	2.10	19,844.87	1.087E-01	Pulse	0.50	3
Cu			1	17182.779	ug/l	0.49	1,091,035.96	5.976E+00	Pulse	0.50	3
Zn			1	10060.249	ug/l	1.09	118,634.05	4.382E-01	Pulse	1.00	3
Cd			1	475.654	ug/l	2.28	6,554.52	2.421E-02	Pulse	0.50	3
Al			1	102798.058	ug/l	1.17	247,146.92	7.235E-01	Pulse	1.00	3
Se			1	470.964	ug/l	2.18	325.78	1.203E-03	Pulse	3.00	3
Sb			1	452.237	ug/l	1.81	18,114.25	6.691E-02	Pulse	1.00	3
Se			1	482.639	ug/l	5.60	178.78	6.603E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,949,862.00	0.29	103.5	Pulse	0.50	3
1	Sc		341,615.81	0.09	97.6	Pulse	0.30	3
1	Ge		182,566.86	0.51	96.5	Pulse	0.30	3
1	In		1,594,145.18	0.27	98.7	Pulse	0.30	3
1	Tb		3,899,311.42	0.36	98.8	Pulse	0.50	3
1	Lu		2,914,298.75	0.37	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,747.92	0.50	97.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,410.06	12.10	97.2	Pulse	0.30	3

Quantitation Report

File Name 057SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:48
Sample Name MP41201-PS1
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3509.254	ug/l	0.71	221,074.01	1.202E+00	Pulse	0.50	3
As			1	107.722	ug/l	4.18	918.36	4.993E-03	Pulse	1.00	3
Mo			1	157.877	ug/l	4.96	4,566.57	1.689E-02	Pulse	0.50	3
Pb			1	371.856	ug/l	1.04	47,349.51	1.599E-02	Pulse	1.00	3
Be			1	74.781	ug/l	10.62	33.17	9.725E-05	Pulse	2.00	3
Ag			1	10096.038	ug/l	1.47	908,659.83	3.361E+00	Pulse	0.50	3
Ba			1	1288.410	ug/l	1.03	16,422.81	1.027E-02	Pulse	0.50	3
Tl			1	83.340	ug/l	1.46	14,898.51	5.031E-03	Pulse	0.50	3
Sn			1	423.486	ug/l	1.79	12,603.28	7.881E-03	Pulse	0.30	3
Sr			1	4639.599	ug/l	0.21	189,006.38	1.182E-01	Pulse	0.50	3
[Pb]			1	376.642	ug/l	0.73	22,932.68	7.745E-03	Pulse	0.50	3
Ca			1	960059.913	ug/l	0.45	252,369.85	8.699E-02	Pulse	0.50	3
Ti			1	358.947	ug/l	12.56	630.69	1.850E-03	Pulse	0.50	3
Na			1	43232.049	ug/l	0.61	514,844.42	1.510E+00	Pulse	1.00	3
Mg			1	96453.906	ug/l	0.23	538,526.36	1.579E+00	Pulse	1.00	3
K			1	41135.466	ug/l	1.10	336,876.97	9.879E-01	Pulse	1.00	3
V			1	112.421	ug/l	1.76	6,913.91	2.028E-02	Pulse	0.50	3
Mn			1	1521.578	ug/l	0.96	56,496.33	3.072E-01	Pulse	0.50	3
Fe			1	659214.481	ug/l	0.44	33,877,450.67	1.842E+02	Analog	0.50	3
Co			1	113.168	ug/l	2.80	10,360.14	5.632E-02	Pulse	0.50	3
Ni			1	422.746	ug/l	1.47	10,815.70	5.880E-02	Pulse	0.50	3
Cu			1	16787.362	ug/l	0.63	1,074,105.33	5.840E+00	Pulse	0.50	3
Zn			1	9785.623	ug/l	2.24	115,300.06	4.265E-01	Pulse	1.00	3
Cd			1	107.848	ug/l	3.52	1,486.74	5.500E-03	Pulse	0.50	3
Al			1	66243.536	ug/l	0.92	159,576.20	4.680E-01	Pulse	1.00	3
Se			1	85.863	ug/l	17.60	89.56	3.315E-04	Pulse	3.00	3
Sb			1	117.404	ug/l	1.43	4,766.62	1.763E-02	Pulse	1.00	3
Se			1	106.376	ug/l	26.49	70.67	2.615E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,961,040.92	1.14	103.9	Pulse	0.50	3
1	Sc		341,005.45	0.29	97.4	Pulse	0.30	3
1	Ge		183,934.46	0.18	97.3	Pulse	0.30	3
1	In		1,599,134.69	0.75	99.0	Pulse	0.30	3
1	Tb		3,890,929.92	0.76	98.6	Pulse	0.50	3
1	Lu		2,901,096.33	0.25	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,382.59	1.32	97.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,423.39	7.36	98.2	Pulse	0.30	3

Quantitation Report

File Name 058SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:51
Sample Name FA98739-27
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	15108.325	ug/l	0.98	936,927.89	5.093E+00	Pulse	0.50	3
As			1	165.426	ug/l	3.52	1,372.39	7.459E-03	Pulse	1.00	3
Mo			1	96.317	ug/l	3.56	2,826.22	1.049E-02	Pulse	0.50	3
Pb			1	600.680	ug/l	0.12	73,379.98	2.564E-02	Pulse	1.00	3
Be			1	5.762	ug/l	42.35	2.83	8.373E-06	Pulse	2.00	3
Ag			1	11347.092	ug/l	0.88	1,017,394.44	3.777E+00	Pulse	0.50	3
Ba			1	1914.930	ug/l	2.17	24,296.97	1.525E-02	Pulse	0.50	3
Tl			1	0.932	ug/l	30.50	303.34	1.060E-04	Pulse	0.50	3
Sn			1	120.923	ug/l	3.27	3,743.73	2.350E-03	Pulse	0.30	3
Sr			1	16459.272	ug/l	1.30	666,853.21	4.186E-01	Pulse	0.50	3
[Pb]			1	631.000	ug/l	0.67	36,817.47	1.287E-02	Pulse	0.50	3
Ca			1	3381990.214	ug/l	0.36	884,580.85	3.050E-01	Pulse	0.50	3
Ti			1	492.801	ug/l	0.80	858.02	2.531E-03	Pulse	0.50	3
Na			1	6495.225	ug/l	1.17	99,877.42	2.947E-01	Pulse	1.00	3
Mg			1	104340.775	ug/l	1.17	578,986.58	1.708E+00	Pulse	1.00	3
K			1	15190.119	ug/l	0.76	187,997.92	5.546E-01	Pulse	1.00	3
V			1	34.176	ug/l	1.43	2,945.57	8.689E-03	Pulse	0.50	3
Mn			1	3764.458	ug/l	0.71	139,078.27	7.559E-01	Pulse	0.50	3
Fe			1	1356210.068	ug/l	0.97	69,693,733.33	3.788E+02	Analog	0.50	3
Co			1	30.203	ug/l	4.35	2,808.21	1.526E-02	Pulse	0.50	3
Ni			1	465.032	ug/l	2.56	11,849.66	6.441E-02	Pulse	0.50	3
Cu			1	20648.050	ug/l	0.99	1,319,707.50	7.173E+00	Pulse	0.50	3
Zn			1	5600.943	ug/l	1.48	66,948.50	2.486E-01	Pulse	1.00	3
Cd			1	17.243	ug/l	9.50	240.00	8.914E-04	Pulse	0.50	3
Al			1	299177.827	ug/l	0.89	710,543.77	2.096E+00	Pulse	1.00	3
Se			1	8.892	ug/l	127.45	42.33	1.573E-04	Pulse	3.00	3
Sb			1	21.115	ug/l	3.45	932.03	3.460E-03	Pulse	1.00	3
Se			1	-11.186	ug/l	-136.41	36.89	1.369E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,861,457.67	0.08	100.4	Pulse	0.50	3
1	Sc		338,980.14	0.79	96.9	Pulse	0.30	3
1	Ge		183,977.34	0.12	97.3	Pulse	0.30	3
1	In		1,593,126.12	0.98	98.7	Pulse	0.30	3
1	Tb		3,872,600.83	0.26	98.1	Pulse	0.50	3
1	Lu		2,900,593.17	0.31	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,344.39	0.60	96.6	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,416.73	8.61	97.7	Pulse	0.30	3

Quantitation Report

File Name	059SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:55
Sample Name	FA98739-28
Sample Type	Sample
Comment	
Prep Dilution	200.000
Auto Dilution	N/A
Total Dilution	200.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10480.032	ug/l	0.50	652,005.19	3.540E+00	Pulse	0.50	3
As			1	38.435	ug/l	5.04	374.00	2.031E-03	Pulse	1.00	3
Mo			1	70.387	ug/l	4.47	2,098.79	7.798E-03	Pulse	0.50	3
Pb			1	470.631	ug/l	0.78	57,482.06	2.016E-02	Pulse	1.00	3
Be			1	0.793	ug/l	167.49	0.67	1.975E-06	Pulse	2.00	3
Ag			1	9637.461	ug/l	1.05	863,535.77	3.208E+00	Pulse	0.50	3
Ba			1	1574.764	ug/l	2.02	19,912.96	1.255E-02	Pulse	0.50	3
Tl			1	0.575	ug/l	18.86	241.33	8.465E-05	Pulse	0.50	3
Sn			1	117.937	ug/l	4.89	3,642.61	2.295E-03	Pulse	0.30	3
Sr			1	12501.314	ug/l	0.95	504,745.91	3.180E-01	Pulse	0.50	3
[Pb]			1	504.305	ug/l	0.71	29,414.55	1.032E-02	Pulse	0.50	3
Ca			1	3220276.181	ug/l	0.66	838,177.08	2.904E-01	Pulse	0.50	3
Ti			1	590.334	ug/l	7.03	1,021.36	3.028E-03	Pulse	0.50	3
Na			1	5241.414	ug/l	1.26	85,421.99	2.532E-01	Pulse	1.00	3
Mg			1	98489.335	ug/l	0.88	544,045.73	1.612E+00	Pulse	1.00	3
K			1	13626.083	ug/l	1.84	178,311.26	5.285E-01	Pulse	1.00	3
V			1	33.286	ug/l	6.62	2,887.56	8.558E-03	Pulse	0.50	3
Mn			1	2974.341	ug/l	1.08	110,111.23	5.978E-01	Pulse	0.50	3
Fe			1	1085403.258	ug/l	0.28	55,841,102.67	3.032E+02	Analog	0.50	3
Co			1	27.446	ug/l	1.44	2,560.18	1.390E-02	Pulse	0.50	3
Ni			1	327.295	ug/l	1.47	8,499.89	4.615E-02	Pulse	0.50	3
Cu			1	16319.068	ug/l	0.64	1,045,696.48	5.678E+00	Pulse	0.50	3
Zn			1	4467.999	ug/l	1.88	53,936.70	2.004E-01	Pulse	1.00	3
Cd			1	10.193	ug/l	13.53	143.33	5.328E-04	Pulse	0.50	3
Al			1	222189.926	ug/l	0.49	525,683.56	1.558E+00	Pulse	1.00	3
Se			1	-1.849	ug/l	-283.03	35.78	1.330E-04	Pulse	3.00	3
Sb			1	19.854	ug/l	5.04	881.36	3.275E-03	Pulse	1.00	3
Se			1	-4.824	ug/l	-214.56	38.67	1.437E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,851,574.17	0.70	100.1	Pulse	0.50	3
1	Sc		337,412.97	1.08	96.4	Pulse	0.30	3
1	Ge		184,176.45	0.68	97.4	Pulse	0.30	3
1	In		1,587,154.83	0.57	98.3	Pulse	0.30	3
1	Tb		3,874,845.58	0.23	98.2	Pulse	0.50	3
1	Lu		2,886,089.33	0.61	98.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,163.63	0.58	96.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,330.05	2.05	91.7	Pulse	0.30	3

Quantitation Report

File Name	060_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:59
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.017	ug/l	36.17	4,738.59	2.591E-02	Pulse	0.50	3
As			1	-0.008	ug/l	-23.30	58.67	3.209E-04	Pulse	1.00	3
Mo			1	-0.010	ug/l	-48.56	72.67	2.678E-04	Pulse	0.50	3
Pb			1	-0.006	ug/l	-25.27	725.69	2.552E-04	Pulse	1.00	3
Be			1	0.010	ug/l	68.42	1.17	3.425E-06	Pulse	2.00	3
Ag			1	0.007	ug/l	58.19	219.33	8.095E-04	Pulse	0.50	3
Ba			1	-0.008	ug/l	-26.07	12.00	7.503E-06	Pulse	0.50	3
Tl			1	-0.003	ug/l	-11.27	35.33	1.242E-05	Pulse	0.50	3
Sn			1	0.004	ug/l	146.33	244.45	1.528E-04	Pulse	0.30	3
Sr			1	0.009	ug/l	62.36	503.34	3.146E-04	Pulse	0.50	3
[Pb]			1	-0.016	ug/l	-18.55	275.33	9.680E-05	Pulse	0.50	3
Ca			1	-9.010	ug/l	-16.18	1,229.38	4.233E-04	Pulse	0.50	3
Ti			1	-0.011	ug/l	-52.15	4.00	1.173E-05	Pulse	0.50	3
Na			1	-2.939	ug/l	-3.62	20,546.84	6.036E-02	Pulse	1.00	3
Mg			1	0.395	ug/l	22.82	1,512.39	4.442E-03	Pulse	1.00	3
K			1	-1.740	ug/l	-20.41	100,453.70	2.951E-01	Pulse	1.00	3
V			1	-0.017	ug/l	-38.04	1,068.04	3.137E-03	Pulse	0.50	3
Mn			1	-0.030	ug/l	-1.45	269.33	1.473E-03	Pulse	0.50	3
Fe			1	0.722	ug/l	41.15	25,757.21	1.409E-01	Pulse	0.50	3
Co			1	-0.002	ug/l	-18.72	27.33	1.494E-04	Pulse	0.50	3
Ni			1	-0.024	ug/l	-6.41	386.67	2.114E-03	Pulse	0.50	3
Cu			1	-0.051	ug/l	-29.75	6,845.23	3.743E-02	Pulse	0.50	3
Zn			1	-0.679	ug/l	-2.22	1,256.38	4.636E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-89.78	1.33	4.895E-06	Pulse	0.50	3
Al			1	-2.073	ug/l	-3.74	682.34	2.005E-03	Pulse	1.00	3
Se			1	-0.013	ug/l	-111.24	35.56	1.312E-04	Pulse	3.00	3
Sb			1	-0.007	ug/l	-27.14	41.33	1.528E-04	Pulse	1.00	3
Se			1	-0.097	ug/l	-144.71	34.78	1.281E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,843,656.58	0.26	99.8	Pulse	0.50	3
1	Sc		340,395.70	0.77	97.3	Pulse	0.30	3
1	Ge		182,877.94	1.05	96.7	Pulse	0.30	3
1	In		1,600,050.77	0.36	99.1	Pulse	0.30	3
1	Tb		3,891,364.67	0.86	98.6	Pulse	0.50	3
1	Lu		2,904,669.08	0.60	99.4	Pulse	0.50	3
1	Ge		271,040.20	0.94	97.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,370.05	3.86	94.5	Pulse	0.30	3

Quantitation Report

File Name 061_MB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:03
Sample Name MP41211-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.951	ug/l	1.39	21,095.41	1.238E-01	Pulse	0.50	3
As			1	0.199	ug/l	7.08	210.67	1.237E-03	Pulse	1.00	3
Mo			1	-0.007	ug/l	-173.64	102.67	4.080E-04	Pulse	0.50	3
Pb			1	0.075	ug/l	6.68	1,631.75	6.224E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1718.43	0.33	1.061E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	10.67	290.67	1.155E-03	Pulse	0.50	3
Ba			1	0.021	ug/l	18.70	54.67	3.733E-05	Pulse	0.50	3
Tl			1	-0.005	ug/l	-15.05	52.00	1.983E-05	Pulse	0.50	3
Sn			1	0.407	ug/l	9.45	1,295.61	8.839E-04	Pulse	0.30	3
Sr			1	0.025	ug/l	49.96	486.68	3.319E-04	Pulse	0.50	3
[Pb]			1	0.067	ug/l	19.94	774.69	2.955E-04	Pulse	0.50	3
Ca			1	3.007	ug/l	98.59	1,634.07	6.126E-04	Pulse	0.50	3
Ti			1	0.195	ug/l	12.95	38.67	1.218E-04	Pulse	0.50	3
Na			1	3.788	ug/l	11.87	29,301.34	9.234E-02	Pulse	1.00	3
Mg			1	0.636	ug/l	31.22	1,330.05	4.191E-03	Pulse	1.00	3
K			1	19.565	ug/l	0.59	105,854.20	3.336E-01	Pulse	1.00	3
V			1	0.901	ug/l	6.06	5,383.43	1.697E-02	Pulse	0.50	3
Mn			1	0.114	ug/l	14.93	846.02	4.966E-03	Pulse	0.50	3
Fe			1	9.596	ug/l	10.41	62,828.19	3.686E-01	Pulse	0.50	3
Co			1	0.000	ug/l	-342.72	51.33	3.009E-04	Pulse	0.50	3
Ni			1	0.115	ug/l	29.20	730.68	4.286E-03	Pulse	0.50	3
Cu			1	2.154	ug/l	1.92	19,660.67	1.154E-01	Pulse	0.50	3
Zn			1	4.325	ug/l	2.87	7,246.04	2.880E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	84.81	6.00	2.389E-05	Pulse	0.50	3
Al			1	-1.609	ug/l	-10.53	1,199.04	3.778E-03	Pulse	1.00	3
Se			1	-0.048	ug/l	-124.29	31.78	1.264E-04	Pulse	3.00	3
Sb			1	0.023	ug/l	36.37	172.67	6.865E-04	Pulse	1.00	3
Se			1	-0.057	ug/l	-364.96	35.89	1.427E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,621,487.58	0.29	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		317,306.64	0.98	90.7	Pulse	0.30	3
1	Ge		170,407.90	1.14	90.1	Pulse	0.30	3
1	In		1,465,142.96	1.04	90.7	Pulse	0.30	3
1	Tb		3,602,921.58	0.74	91.3	Pulse	0.50	3
1	Lu		2,667,684.75	0.64	91.3	Pulse	0.50	3
1	Ge		251,557.92	0.70	90.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,380.06	1.28	95.2	Pulse	0.30	3

Quantitation Report

File Name	062_BSP.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:06
Sample Name	MP41211-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	230.439	ug/l	2.62	1,339,466.88	7.754E+00	Pulse	0.50	3
As			1	233.653	ug/l	2.04	172,599.92	9.992E-01	Pulse	1.00	3
Mo			1	228.721	ug/l	0.52	601,320.50	2.377E+00	Pulse	0.50	3
Pb			1	229.394	ug/l	1.34	2,463,476.42	9.680E-01	Pulse	1.00	3
Be			1	234.000	ug/l	0.44	9,583.42	3.013E-02	Pulse	2.00	3
Ag			1	103.408	ug/l	0.27	870,627.19	3.442E+00	Pulse	0.50	3
Ba			1	225.270	ug/l	1.29	261,073.08	1.792E-01	Pulse	0.50	3
Tl			1	223.625	ug/l	1.33	3,401,185.75	1.337E+00	Pulse	0.50	3
Sn			1	233.788	ug/l	1.43	622,820.76	4.275E-01	Pulse	0.30	3
Sr			1	224.935	ug/l	1.42	833,234.17	5.720E-01	Pulse	0.50	3
[Pb]			1	219.940	ug/l	1.35	1,127,503.17	4.430E-01	Pulse	0.50	3
Ca			1	21222.796	ug/l	0.90	516,094.94	1.916E-01	Pulse	0.50	3
Ti			1	232.539	ug/l	1.12	37,656.13	1.184E-01	Pulse	0.50	3
Na			1	21663.832	ug/l	0.25	22,815,573.33	7.174E+01	Analog	1.00	3
Mg			1	21462.798	ug/l	0.42	11,155,201.33	3.507E+01	Analog	1.00	3
K			1	21094.349	ug/l	0.30	11,299,188.67	3.553E+01	Analog	1.00	3
V			1	225.743	ug/l	1.42	1,064,376.02	3.346E+00	Pulse	0.50	3
Mn			1	227.941	ug/l	2.77	788,313.06	4.564E+00	Pulse	0.50	3
Fe			1	21410.483	ug/l	2.33	103,290,581.33	5.980E+02	Analog	0.50	3
Co			1	229.682	ug/l	2.68	1,963,481.25	1.137E+01	Pulse	0.50	3
Ni			1	228.292	ug/l	2.43	523,270.87	3.029E+00	Pulse	0.50	3
Cu			1	229.700	ug/l	2.45	1,377,582.46	7.975E+00	Pulse	0.50	3
Zn			1	223.638	ug/l	0.52	243,147.53	9.613E-01	Pulse	1.00	3
Cd			1	224.553	ug/l	0.92	288,888.34	1.142E+00	Pulse	0.50	3
Al			1	20788.290	ug/l	0.76	4,623,332.83	1.454E+01	Pulse	1.00	3
Se			1	222.720	ug/l	0.72	12,785.60	5.055E-02	Pulse	3.00	3
Sb			1	231.001	ug/l	0.84	859,955.85	3.400E+00	Pulse	1.00	3
Se			1	225.156	ug/l	1.15	6,073.30	2.401E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,544,691.42	1.40	89.3	Pulse	0.50	3
1	Sc		318,033.69	1.73	90.9	Pulse	0.30	3
1	Ge		172,740.44	0.82	91.3	Pulse	0.30	3
1	In		1,456,639.80	0.95	90.2	Pulse	0.30	3
1	Tb		3,634,930.08	0.85	92.1	Pulse	0.50	3
1	Lu		2,693,606.83	1.56	92.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,914.36	1.43	90.8	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,390.06	0.86	95.9	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:10
Sample Name	FA98621-8
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.100	ug/l	1.05	27,377.21	1.623E-01	Pulse	0.50	3
As			1	1.364	ug/l	1.96	1,048.36	6.217E-03	Pulse	1.00	3
Mo			1	0.223	ug/l	13.20	697.35	2.796E-03	Pulse	0.50	3
Pb			1	0.307	ug/l	10.56	4,050.49	1.602E-03	Pulse	1.00	3
Be			1	0.096	ug/l	71.42	4.17	1.331E-05	Pulse	2.00	3
Ag			1	0.038	ug/l	13.50	400.01	1.603E-03	Pulse	0.50	3
Ba			1	3.540	ug/l	5.09	4,071.81	2.836E-03	Pulse	0.50	3
Tl			1	0.062	ug/l	42.84	1,060.71	4.196E-04	Pulse	0.50	3
Sn			1	0.584	ug/l	8.52	1,731.21	1.206E-03	Pulse	0.30	3
Sr			1	12.516	ug/l	0.82	46,047.23	3.208E-02	Pulse	0.50	3
[Pb]			1	0.299	ug/l	14.52	1,927.45	7.622E-04	Pulse	0.50	3
Ca			1	3049.459	ug/l	0.94	72,784.72	2.803E-02	Pulse	0.50	3
Ti			1	12.590	ug/l	4.38	2,018.79	6.431E-03	Pulse	0.50	3
Na			1	4219.773	ug/l	1.77	4,405,874.17	1.404E+01	Mix	1.00	3
Mg			1	324.591	ug/l	1.13	167,460.98	5.335E-01	Pulse	1.00	3
K			1	188.249	ug/l	1.74	193,117.80	6.153E-01	Pulse	1.00	3
V			1	2.403	ug/l	1.57	12,308.57	3.922E-02	Pulse	0.50	3
Mn			1	1.676	ug/l	2.23	6,107.65	3.622E-02	Pulse	0.50	3
Fe			1	2354.253	ug/l	0.84	11,103,472.00	6.584E+01	Analog	0.50	3
Co			1	0.131	ug/l	23.50	1,145.37	6.795E-03	Pulse	0.50	3
Ni			1	0.630	ug/l	8.74	1,873.43	1.111E-02	Pulse	0.50	3
Cu			1	1.352	ug/l	1.59	14,781.68	8.766E-02	Pulse	0.50	3
Zn			1	7.643	ug/l	1.49	10,707.32	4.291E-02	Pulse	1.00	3
Cd			1	0.040	ug/l	76.64	54.00	2.170E-04	Pulse	0.50	3
Al			1	754.874	ug/l	0.12	167,154.88	5.326E-01	Pulse	1.00	3
Se			1	0.268	ug/l	24.33	49.33	1.977E-04	Pulse	3.00	3
Sb			1	0.141	ug/l	10.32	607.34	2.434E-03	Pulse	1.00	3
Se			1	0.487	ug/l	11.46	50.00	2.004E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,529,553.50	0.75	88.8	Pulse	0.50	3
1	Sc		313,865.54	0.60	89.7	Pulse	0.30	3
1	Ge		168,635.48	0.38	89.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,435,478.52	0.98	88.9	Pulse	0.30	3
1	Tb		3,537,970.67	0.63	89.6	Pulse	0.50	3
1	Lu		2,596,511.42	0.56	88.8	Pulse	0.50	3
1	Ge		249,527.50	0.70	89.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,467.84	3.70	101.2	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:14
Sample Name MP41211-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.720	ug/l	1.11	25,967.28	1.496E-01	Pulse	0.50	3
As			1	1.221	ug/l	0.56	973.36	5.607E-03	Pulse	1.00	3
Mo			1	0.144	ug/l	13.83	506.01	1.976E-03	Pulse	0.50	3
Pb			1	0.223	ug/l	3.85	3,250.65	1.245E-03	Pulse	1.00	3
Be			1	0.025	ug/l	55.46	1.33	4.124E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	19.76	278.00	1.086E-03	Pulse	0.50	3
Ba			1	3.145	ug/l	3.71	3,703.06	2.522E-03	Pulse	0.50	3
Tl			1	0.011	ug/l	25.78	303.34	1.161E-04	Pulse	0.50	3
Sn			1	0.677	ug/l	5.02	2,023.46	1.378E-03	Pulse	0.30	3
Sr			1	11.665	ug/l	0.90	43,935.55	2.992E-02	Pulse	0.50	3
[Pb]			1	0.208	ug/l	9.51	1,514.74	5.802E-04	Pulse	0.50	3
Ca			1	2802.572	ug/l	0.80	68,986.32	2.581E-02	Pulse	0.50	3
Ti			1	12.130	ug/l	2.69	2,000.14	6.197E-03	Pulse	0.50	3
Na			1	3827.240	ug/l	0.88	4,111,472.08	1.274E+01	Pulse	1.00	3
Mg			1	293.700	ug/l	0.07	155,919.30	4.831E-01	Pulse	1.00	3
K			1	164.601	ug/l	2.80	185,831.38	5.758E-01	Pulse	1.00	3
V			1	2.069	ug/l	0.32	11,058.49	3.426E-02	Pulse	0.50	3
Mn			1	1.488	ug/l	2.98	5,633.51	3.245E-02	Pulse	0.50	3
Fe			1	2165.864	ug/l	0.41	10,517,825.00	6.058E+01	Analog	0.50	3
Co			1	0.087	ug/l	5.75	806.69	4.646E-03	Pulse	0.50	3
Ni			1	0.573	ug/l	5.39	1,797.42	1.035E-02	Pulse	0.50	3
Cu			1	1.165	ug/l	1.87	14,101.83	8.123E-02	Pulse	0.50	3
Zn			1	6.602	ug/l	3.42	9,847.86	3.848E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	98.89	8.67	3.369E-05	Pulse	0.50	3
Al			1	681.773	ug/l	0.60	155,393.99	4.815E-01	Pulse	1.00	3
Se			1	0.208	ug/l	57.36	47.22	1.843E-04	Pulse	3.00	3
Sb			1	0.061	ug/l	5.15	321.00	1.254E-03	Pulse	1.00	3
Se			1	0.288	ug/l	65.30	45.89	1.793E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,611,571.42	0.54	91.7	Pulse	0.50	3
1	Sc		322,770.58	1.57	92.2	Pulse	0.30	3
1	Ge		173,612.70	0.67	91.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,468,559.94	0.76	90.9	Pulse	0.30	3
1	Tb		3,647,292.58	1.01	92.4	Pulse	0.50	3
1	Lu		2,673,113.67	1.37	91.5	Pulse	0.50	3
1	Ge		255,922.16	1.36	91.8	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,440.06	2.84	99.3	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:18
Sample Name MP41211-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.567	ug/l	7.20	6,469.76	3.532E-02	Pulse	0.50	3
As			1	0.474	ug/l	6.80	145.33	7.933E-04	Pulse	1.00	3
Mo			1	-0.077	ug/l	-62.95	87.33	3.228E-04	Pulse	0.50	3
Pb			1	0.032	ug/l	66.11	922.69	3.316E-04	Pulse	1.00	3
Be			1	0.038	ug/l	169.99	0.67	1.944E-06	Pulse	2.00	3
Ag			1	-0.007	ug/l	-163.19	80.00	2.953E-04	Pulse	0.50	3
Ba			1	0.993	ug/l	12.13	280.67	1.782E-04	Pulse	0.50	3
Tl			1	-0.012	ug/l	-47.90	99.33	3.573E-05	Pulse	0.50	3
Sn			1	0.117	ug/l	107.03	286.67	1.819E-04	Pulse	0.30	3
Sr			1	3.331	ug/l	1.32	3,086.93	1.961E-03	Pulse	0.50	3
[Pb]			1	-0.006	ug/l	-770.74	440.01	1.581E-04	Pulse	0.50	3
Ca			1	816.656	ug/l	2.26	5,856.89	2.055E-03	Pulse	0.50	3
Ti			1	4.010	ug/l	18.07	148.00	4.311E-04	Pulse	0.50	3
Na			1	1173.467	ug/l	0.80	293,878.34	8.561E-01	Pulse	1.00	3
Mg			1	86.432	ug/l	2.50	10,777.57	3.140E-02	Pulse	1.00	3
K			1	41.452	ug/l	28.18	108,051.07	3.148E-01	Pulse	1.00	3
V			1	0.693	ug/l	9.01	1,950.77	5.683E-03	Pulse	0.50	3
Mn			1	0.371	ug/l	18.85	764.02	4.170E-03	Pulse	0.50	3
Fe			1	680.461	ug/l	0.19	714,640.98	3.901E+00	Pulse	0.50	3
Co			1	0.002	ug/l	41.10	61.33	3.348E-04	Pulse	0.50	3
Ni			1	-0.006	ug/l	-1091.53	502.01	2.740E-03	Pulse	0.50	3
Cu			1	0.535	ug/l	30.55	8,182.42	4.467E-02	Pulse	0.50	3
Zn			1	-3.460	ug/l	-3.40	2,024.11	7.471E-03	Pulse	1.00	3
Cd			1	0.027	ug/l	40.60	11.33	4.179E-05	Pulse	0.50	3
Al			1	209.983	ug/l	2.29	11,760.49	3.426E-02	Pulse	1.00	3
Se			1	-0.158	ug/l	-72.96	35.22	1.300E-04	Pulse	3.00	3
Sb			1	-0.030	ug/l	-33.43	71.33	2.633E-04	Pulse	1.00	3
Se			1	-0.785	ug/l	-103.32	35.78	1.321E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,782,329.83	0.88	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		343,273.45	0.23	98.1	Pulse	0.30	3
1	Ge		183,199.76	0.36	96.9	Pulse	0.30	3
1	In		1,574,144.55	0.87	97.5	Pulse	0.30	3
1	Tb		3,842,135.42	0.65	97.3	Pulse	0.50	3
1	Lu		2,849,457.25	0.24	97.5	Pulse	0.50	3
1	Ge		270,976.43	1.46	97.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,394.50	4.30	96.2	Pulse	0.30	3

Quantitation Report

File Name	066CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:21
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.290	ug/l	1.32	635,510.31	3.466E+00	Pulse	0.50	3
As			1	50.531	ug/l	0.81	79,292.91	4.324E-01	Pulse	1.00	3
Mo			1	50.196	ug/l	1.24	284,141.17	1.044E+00	Pulse	0.50	3
Pb			1	50.334	ug/l	0.37	1,176,367.29	4.250E-01	Pulse	1.00	3
Be			1	51.289	ug/l	1.78	4,484.33	1.321E-02	Pulse	2.00	3
Ag			1	49.814	ug/l	0.81	902,819.37	3.317E+00	Pulse	0.50	3
Ba			1	50.403	ug/l	1.16	126,360.57	8.021E-02	Pulse	0.50	3
Tl			1	51.205	ug/l	0.52	1,694,289.04	6.121E-01	Pulse	0.50	3
Sn			1	49.915	ug/l	0.12	287,738.09	1.826E-01	Pulse	0.30	3
Sr			1	50.104	ug/l	0.65	401,683.03	2.550E-01	Pulse	0.50	3
[Pb]			1	50.320	ug/l	0.21	561,401.27	2.028E-01	Pulse	0.50	3
Ca			1	5079.415	ug/l	1.36	266,985.97	9.202E-02	Pulse	0.50	3
Ti			1	50.463	ug/l	1.05	17,447.78	5.140E-02	Pulse	0.50	3
Na			1	5208.155	ug/l	1.01	11,723,454.33	3.453E+01	Analog	1.00	3
Mg			1	5212.682	ug/l	1.27	5,784,114.83	1.704E+01	Analog	1.00	3
K			1	5179.569	ug/l	0.51	5,975,270.17	1.760E+01	Analog	1.00	3
V			1	50.515	ug/l	1.36	509,078.22	1.500E+00	Pulse	0.50	3
Mn			1	51.323	ug/l	0.70	377,125.50	2.057E+00	Pulse	0.50	3
Fe			1	5210.394	ug/l	0.52	53,378,716.00	2.911E+02	Analog	0.50	3
Co			1	51.692	ug/l	1.23	938,269.58	5.117E+00	Pulse	0.50	3
Ni			1	51.960	ug/l	1.40	253,139.84	1.380E+00	Pulse	0.50	3
Cu			1	52.189	ug/l	0.57	668,640.58	3.646E+00	Pulse	0.50	3
Zn			1	51.375	ug/l	0.70	121,772.09	4.473E-01	Pulse	1.00	3
Cd			1	50.727	ug/l	0.35	140,473.42	5.160E-01	Pulse	0.50	3
Al			1	5158.892	ug/l	1.29	2,450,015.00	7.217E+00	Pulse	1.00	3
Se			1	50.716	ug/l	1.20	6,287.70	2.310E-02	Pulse	3.00	3
Sb			1	50.330	ug/l	0.66	403,365.30	1.482E+00	Pulse	1.00	3
Se			1	51.167	ug/l	2.42	2,992.57	1.099E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,768,071.75	1.12	97.2	Pulse	0.50	3
1	Sc		339,488.82	0.55	97.0	Pulse	0.30	3
1	Ge		183,373.05	0.21	97.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,575,396.78	0.50	97.6	Pulse	0.30	3
1	Tb		3,882,043.75	0.94	98.3	Pulse	0.50	3
1	Lu		2,901,925.42	1.51	99.3	Pulse	0.50	3
1	Ge		272,219.77	0.85	97.7	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,405.62	8.42	96.9	Pulse	0.30	3

Quantitation Report

File Name	067_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:25
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.610	ug/l	0.37	1,233,498.46	6.774E+00	Pulse	0.50	3
As			1	100.062	ug/l	0.51	155,838.66	8.559E-01	Pulse	1.00	3
Mo			1	100.194	ug/l	0.71	556,630.71	2.083E+00	Pulse	0.50	3
Pb			1	100.231	ug/l	1.12	2,290,825.33	8.460E-01	Pulse	1.00	3
Be			1	99.442	ug/l	0.43	8,616.66	2.561E-02	Pulse	2.00	3
Ag			1	98.004	ug/l	0.47	1,743,557.71	6.525E+00	Pulse	0.50	3
Ba			1	100.340	ug/l	0.52	246,849.23	1.597E-01	Pulse	0.50	3
Tl			1	101.881	ug/l	0.42	3,297,875.42	1.218E+00	Pulse	0.50	3
Sn			1	99.954	ug/l	0.20	565,263.50	3.656E-01	Pulse	0.30	3
Sr			1	101.007	ug/l	0.27	794,276.23	5.137E-01	Pulse	0.50	3
[Pb]			1	100.022	ug/l	1.41	1,091,261.21	4.030E-01	Pulse	0.50	3
Ca			1	10101.491	ug/l	1.17	523,696.43	1.824E-01	Pulse	0.50	3
Ti			1	101.280	ug/l	1.44	34,697.30	1.031E-01	Pulse	0.50	3
Na			1	10241.003	ug/l	0.41	22,819,792.00	6.783E+01	Analog	1.00	3
Mg			1	10206.302	ug/l	0.49	11,222,983.67	3.336E+01	Analog	1.00	3
K			1	10182.832	ug/l	0.99	11,543,793.33	3.431E+01	Analog	1.00	3
V			1	99.708	ug/l	0.77	994,679.21	2.956E+00	Pulse	0.50	3
Mn			1	100.876	ug/l	0.41	735,539.21	4.040E+00	Pulse	0.50	3
Fe			1	10195.685	ug/l	0.27	103,697,837.33	5.695E+02	Analog	0.50	3
Co			1	101.447	ug/l	0.35	1,828,336.58	1.004E+01	Pulse	0.50	3
Ni			1	101.051	ug/l	0.25	488,361.93	2.682E+00	Pulse	0.50	3
Cu			1	101.878	ug/l	0.38	1,288,973.54	7.079E+00	Pulse	0.50	3
Zn			1	101.406	ug/l	0.25	233,228.75	8.728E-01	Pulse	1.00	3
Cd			1	100.923	ug/l	0.13	274,341.44	1.027E+00	Pulse	0.50	3
Al			1	10132.296	ug/l	1.09	4,767,385.83	1.417E+01	Mix	1.00	3
Se			1	101.579	ug/l	0.40	12,325.41	4.612E-02	Pulse	3.00	3
Sb			1	100.185	ug/l	0.60	788,089.92	2.949E+00	Pulse	1.00	3
Se			1	102.114	ug/l	0.66	5,823.67	2.179E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,708,117.42	1.13	95.0	Pulse	0.50	3
1	Sc		336,438.04	0.38	96.1	Pulse	0.30	3
1	Ge		182,080.53	0.70	96.3	Pulse	0.30	3
1	In		1,546,114.77	0.80	95.7	Pulse	0.30	3
1	Tb		3,823,139.17	0.48	96.8	Pulse	0.50	3
1	Lu		2,870,856.33	0.37	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		267,219.34	0.43	95.9	Pulse	0.30	3
1	Te		11.33	26.96	1700.0	Pulse	0.50	3
1	Li		1,383.39	2.78	95.4	Pulse	0.30	3

Quantitation Report

File Name	068_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:29
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.053	ug/l	20.10	5,130.69	2.834E-02	Pulse	0.50	3
As			1	0.022	ug/l	20.43	103.67	5.724E-04	Pulse	1.00	3
Mo			1	0.096	ug/l	20.32	662.02	2.487E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	35.35	1,214.05	4.404E-04	Pulse	1.00	3
Be			1	0.023	ug/l	62.04	2.33	6.899E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	12.03	328.67	1.232E-03	Pulse	0.50	3
Ba			1	0.005	ug/l	228.68	43.33	2.788E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	24.64	548.01	1.988E-04	Pulse	0.50	3
Sn			1	0.130	ug/l	19.93	955.59	6.146E-04	Pulse	0.30	3
Sr			1	0.005	ug/l	83.48	455.34	2.928E-04	Pulse	0.50	3
[Pb]			1	0.013	ug/l	39.74	588.01	2.132E-04	Pulse	0.50	3
Ca			1	-7.212	ug/l	-11.22	1,289.38	4.557E-04	Pulse	0.50	3
Ti			1	0.011	ug/l	116.82	11.33	3.367E-05	Pulse	0.50	3
Na			1	-0.731	ug/l	-52.36	25,290.92	7.497E-02	Pulse	1.00	3
Mg			1	0.508	ug/l	34.60	1,624.07	4.812E-03	Pulse	1.00	3
K			1	-0.318	ug/l	-134.09	101,140.46	2.999E-01	Pulse	1.00	3
V			1	0.011	ug/l	89.05	1,330.05	3.943E-03	Pulse	0.50	3
Mn			1	-0.018	ug/l	-37.53	358.67	1.979E-03	Pulse	0.50	3
Fe			1	1.002	ug/l	10.52	28,348.71	1.566E-01	Pulse	0.50	3
Co			1	0.009	ug/l	16.26	214.67	1.186E-03	Pulse	0.50	3
Ni			1	-0.020	ug/l	-59.64	403.34	2.230E-03	Pulse	0.50	3
Cu			1	-0.061	ug/l	-36.57	6,655.17	3.676E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-2.60	1,139.37	4.274E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	47.65	33.33	1.247E-04	Pulse	0.50	3
Al			1	0.229	ug/l	1344.17	1,765.06	5.223E-03	Pulse	1.00	3
Se			1	0.061	ug/l	48.62	43.89	1.646E-04	Pulse	3.00	3
Sb			1	0.031	ug/l	17.45	335.33	1.259E-03	Pulse	1.00	3
Se			1	-0.038	ug/l	-143.24	37.56	1.408E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,757,296.58	0.41	96.8	Pulse	0.50	3
1	Sc		337,293.44	0.78	96.4	Pulse	0.30	3
1	Ge		181,081.44	1.48	95.7	Pulse	0.30	3
1	In		1,555,391.78	0.57	96.3	Pulse	0.30	3
1	Tb		3,788,727.83	0.80	96.0	Pulse	0.50	3
1	Lu		2,829,516.42	0.44	96.8	Pulse	0.50	3
1	Ge		266,543.64	1.24	95.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,351.16	7.14	93.2	Pulse	0.30	3

Quantitation Report

File Name 069SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:33
Sample Name MP41211-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	226.818	ug/l	0.11	1,275,814.04	7.633E+00	Pulse	0.50	3
As			1	228.665	ug/l	0.74	163,439.65	9.779E-01	Pulse	1.00	3
Mo			1	220.902	ug/l	0.26	566,344.37	2.296E+00	Pulse	0.50	3
Pb			1	223.436	ug/l	0.25	2,315,085.33	9.429E-01	Pulse	1.00	3
Be			1	225.459	ug/l	1.10	9,029.84	2.903E-02	Pulse	2.00	3
Ag			1	99.608	ug/l	0.28	817,893.81	3.316E+00	Pulse	0.50	3
Ba			1	223.119	ug/l	0.13	249,588.71	1.775E-01	Pulse	0.50	3
Tl			1	217.921	ug/l	0.12	3,197,917.75	1.302E+00	Pulse	0.50	3
Sn			1	225.445	ug/l	0.98	579,731.19	4.123E-01	Pulse	0.30	3
Sr			1	231.750	ug/l	0.52	828,643.25	5.893E-01	Pulse	0.50	3
[Pb]			1	212.776	ug/l	0.61	1,052,466.29	4.286E-01	Pulse	0.50	3
Ca			1	23339.544	ug/l	0.74	547,808.54	2.106E-01	Pulse	0.50	3
Ti			1	237.551	ug/l	1.52	37,607.99	1.209E-01	Pulse	0.50	3
Na			1	24709.444	ug/l	0.93	25,442,815.33	8.181E+01	Analog	1.00	3
Mg			1	20895.396	ug/l	1.06	10,619,139.33	3.415E+01	Analog	1.00	3
K			1	20424.797	ug/l	1.61	10,700,462.33	3.441E+01	Analog	1.00	3
V			1	220.072	ug/l	0.77	1,014,583.31	3.262E+00	Pulse	0.50	3
Mn			1	223.039	ug/l	0.81	746,419.09	4.466E+00	Pulse	0.50	3
Fe			1	22870.408	ug/l	0.41	106,760,160.00	6.387E+02	Analog	0.50	3
Co			1	224.958	ug/l	0.37	1,860,970.13	1.113E+01	Pulse	0.50	3
Ni			1	221.888	ug/l	0.61	492,150.99	2.944E+00	Pulse	0.50	3
Cu			1	223.002	ug/l	0.12	1,294,344.50	7.744E+00	Pulse	0.50	3
Zn			1	220.125	ug/l	0.37	233,424.92	9.464E-01	Pulse	1.00	3
Cd			1	217.209	ug/l	0.44	272,493.66	1.105E+00	Pulse	0.50	3
Al			1	20717.963	ug/l	0.94	4,505,284.17	1.449E+01	Pulse	1.00	3
Se			1	216.829	ug/l	1.41	12,138.51	4.922E-02	Pulse	3.00	3
Sb			1	221.237	ug/l	0.60	803,150.75	3.256E+00	Pulse	1.00	3
Se			1	217.623	ug/l	1.36	5,725.64	2.321E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,455,349.25	1.31	86.2	Pulse	0.50	3
1	Sc		311,033.15	2.23	88.9	Pulse	0.30	3
1	Ge		167,145.09	1.43	88.4	Pulse	0.30	3
1	In		1,406,078.62	1.05	87.1	Pulse	0.30	3
1	Tb		3,507,935.17	1.77	88.9	Pulse	0.50	3
1	Lu		2,600,641.17	1.13	89.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,649.25	1.24	88.5	Pulse	0.30	3
1	Te		3.33	91.65	500.0	Pulse	0.50	3
1	Li		1,306.72	9.28	90.1	Pulse	0.30	3

Quantitation Report

File Name 070SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:37
Sample Name MP41211-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	228.562	ug/l	1.44	1,278,959.17	7.691E+00	Pulse	0.50	3
As			1	230.045	ug/l	0.71	163,581.57	9.838E-01	Pulse	1.00	3
Mo			1	223.226	ug/l	0.93	569,756.94	2.320E+00	Pulse	0.50	3
Pb			1	222.478	ug/l	0.40	2,309,814.92	9.388E-01	Pulse	1.00	3
Be			1	228.122	ug/l	1.17	9,113.04	2.938E-02	Pulse	2.00	3
Ag			1	101.199	ug/l	0.19	827,179.94	3.369E+00	Pulse	0.50	3
Ba			1	222.141	ug/l	0.47	249,536.66	1.767E-01	Pulse	0.50	3
Tl			1	218.041	ug/l	0.86	3,206,051.92	1.303E+00	Pulse	0.50	3
Sn			1	225.043	ug/l	0.92	581,116.73	4.116E-01	Pulse	0.30	3
Sr			1	229.616	ug/l	0.46	824,421.62	5.839E-01	Pulse	0.50	3
[Pb]			1	212.972	ug/l	0.45	1,055,493.48	4.290E-01	Pulse	0.50	3
Ca			1	23526.391	ug/l	0.99	551,852.17	2.123E-01	Pulse	0.50	3
Ti			1	236.523	ug/l	0.82	37,356.22	1.204E-01	Pulse	0.50	3
Na			1	24970.655	ug/l	0.79	25,645,993.33	8.268E+01	Analog	1.00	3
Mg			1	21223.191	ug/l	0.95	10,758,646.67	3.468E+01	Analog	1.00	3
K			1	20706.890	ug/l	0.63	10,820,381.67	3.488E+01	Analog	1.00	3
V			1	221.006	ug/l	0.69	1,016,313.12	3.276E+00	Pulse	0.50	3
Mn			1	223.690	ug/l	0.98	744,711.88	4.479E+00	Pulse	0.50	3
Fe			1	23218.947	ug/l	0.52	107,826,053.33	6.485E+02	Analog	0.50	3
Co			1	226.197	ug/l	0.94	1,861,438.58	1.119E+01	Pulse	0.50	3
Ni			1	223.207	ug/l	0.78	492,503.57	2.962E+00	Pulse	0.50	3
Cu			1	226.029	ug/l	1.02	1,305,018.71	7.848E+00	Pulse	0.50	3
Zn			1	222.831	ug/l	0.55	235,204.46	9.579E-01	Pulse	1.00	3
Cd			1	216.174	ug/l	0.57	269,978.30	1.100E+00	Pulse	0.50	3
Al			1	21035.108	ug/l	0.99	4,562,742.00	1.471E+01	Pulse	1.00	3
Se			1	217.878	ug/l	0.34	12,143.29	4.946E-02	Pulse	3.00	3
Sb			1	221.927	ug/l	0.39	802,026.69	3.266E+00	Pulse	1.00	3
Se			1	220.226	ug/l	1.56	5,767.65	2.349E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,460,339.75	1.58	86.4	Pulse	0.50	3
1	Sc		310,205.11	1.15	88.6	Pulse	0.30	3
1	Ge		166,271.85	0.76	87.9	Pulse	0.30	3
1	In		1,411,937.58	0.95	87.4	Pulse	0.30	3
1	Tb		3,513,697.83	1.70	89.0	Pulse	0.50	3
1	Lu		2,599,312.75	1.64	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,531.25	1.12	88.1	Pulse	0.30	3
1	Te		4.67	49.49	700.0	Pulse	0.50	3
1	Li		1,375.61	4.13	94.9	Pulse	0.30	3

Quantitation Report

File Name 071SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:40
Sample Name MP41211-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	26.182	ug/l	0.61	156,695.49	9.030E-01	Pulse	0.50	3
As			1	23.693	ug/l	1.89	17,642.46	1.017E-01	Pulse	1.00	3
Mo			1	21.998	ug/l	0.74	58,461.95	2.291E-01	Pulse	0.50	3
Pb			1	22.098	ug/l	0.59	241,727.84	9.353E-02	Pulse	1.00	3
Be			1	22.418	ug/l	4.99	943.19	2.888E-03	Pulse	2.00	3
Ag			1	5.365	ug/l	0.34	45,658.57	1.789E-01	Pulse	0.50	3
Ba			1	24.871	ug/l	1.78	29,015.88	1.980E-02	Pulse	0.50	3
Tl			1	21.435	ug/l	0.24	331,225.35	1.282E-01	Pulse	0.50	3
Sn			1	21.358	ug/l	0.56	57,409.27	3.918E-02	Pulse	0.30	3
Sr			1	33.556	ug/l	0.52	125,350.87	8.556E-02	Pulse	0.50	3
[Pb]			1	21.178	ug/l	0.80	110,636.69	4.281E-02	Pulse	0.50	3
Ca			1	5128.228	ug/l	0.49	125,231.39	4.674E-02	Pulse	0.50	3
Ti			1	37.932	ug/l	2.86	6,311.79	1.933E-02	Pulse	0.50	3
Na			1	6129.932	ug/l	0.32	6,647,227.50	2.036E+01	Analog	1.00	3
Mg			1	2517.194	ug/l	0.61	1,344,201.25	4.116E+00	Pulse	1.00	3
K			1	2301.780	ug/l	0.86	1,353,517.42	4.145E+00	Pulse	1.00	3
V			1	23.997	ug/l	1.15	117,221.35	3.590E-01	Pulse	0.50	3
Mn			1	23.681	ug/l	0.62	82,691.93	4.765E-01	Pulse	0.50	3
Fe			1	4391.836	ug/l	0.73	21,298,251.33	1.227E+02	Analog	0.50	3
Co			1	22.558	ug/l	1.02	193,782.63	1.117E+00	Pulse	0.50	3
Ni			1	23.362	ug/l	0.94	54,223.61	3.125E-01	Pulse	0.50	3
Cu			1	23.897	ug/l	0.69	150,332.11	8.664E-01	Pulse	0.50	3
Zn			1	29.306	ug/l	0.66	34,454.35	1.350E-01	Pulse	1.00	3
Cd			1	21.388	ug/l	1.57	27,765.46	1.088E-01	Pulse	0.50	3
Al			1	2845.892	ug/l	0.14	651,226.56	1.994E+00	Pulse	1.00	3
Se			1	21.761	ug/l	0.97	1,292.05	5.063E-03	Pulse	3.00	3
Sb			1	20.294	ug/l	0.59	76,300.39	2.990E-01	Pulse	1.00	3
Se			1	21.155	ug/l	1.64	610.01	2.391E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,584,602.58	0.72	90.7	Pulse	0.50	3
1	Sc		326,557.43	0.89	93.3	Pulse	0.30	3
1	Ge		173,519.06	0.77	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,465,112.62	0.74	90.7	Pulse	0.30	3
1	Tb		3,627,825.67	1.11	91.9	Pulse	0.50	3
1	Lu		2,679,239.42	1.04	91.7	Pulse	0.50	3
1	Ge		255,168.78	1.25	91.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,381.17	6.41	95.2	Pulse	0.30	3

Quantitation Report

File Name 072SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:44
Sample Name FA98679-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.889	ug/l	1.99	20,935.23	1.217E-01	Pulse	0.50	3
As			1	0.601	ug/l	0.71	508.68	2.957E-03	Pulse	1.00	3
Mo			1	0.719	ug/l	4.41	2,006.78	7.953E-03	Pulse	0.50	3
Pb			1	0.074	ug/l	3.99	1,590.75	6.163E-04	Pulse	1.00	3
Be			1	0.009	ug/l	211.84	0.67	2.060E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	14.42	271.33	1.075E-03	Pulse	0.50	3
Ba			1	3.392	ug/l	3.37	3,995.13	2.718E-03	Pulse	0.50	3
Tl			1	0.015	ug/l	53.29	364.01	1.412E-04	Pulse	0.50	3
Sn			1	0.449	ug/l	8.26	1,411.18	9.597E-04	Pulse	0.30	3
Sr			1	142.899	ug/l	0.71	534,086.42	3.635E-01	Pulse	0.50	3
[Pb]			1	0.068	ug/l	17.18	767.35	2.973E-04	Pulse	0.50	3
Ca			1	46699.512	ug/l	0.46	1,122,073.25	4.209E-01	Pulse	0.50	3
Ti			1	1.303	ug/l	44.14	220.67	6.863E-04	Pulse	0.50	3
Na			1	3757.150	ug/l	0.78	4,034,437.75	1.251E+01	Pulse	1.00	3
Mg			1	1696.724	ug/l	0.86	895,343.52	2.776E+00	Pulse	1.00	3
K			1	540.296	ug/l	1.11	388,113.77	1.203E+00	Pulse	1.00	3
V			1	1.105	ug/l	4.41	6,444.42	1.998E-02	Pulse	0.50	3
Mn			1	10.749	ug/l	1.72	37,464.02	2.178E-01	Pulse	0.50	3
Fe			1	130.347	ug/l	0.27	643,452.63	3.740E+00	Pulse	0.50	3
Co			1	0.134	ug/l	12.87	1,192.71	6.938E-03	Pulse	0.50	3
Ni			1	0.200	ug/l	7.23	931.36	5.412E-03	Pulse	0.50	3
Cu			1	0.542	ug/l	1.41	10,266.77	5.968E-02	Pulse	0.50	3
Zn			1	4.925	ug/l	4.30	7,911.96	3.135E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	33.46	14.00	5.549E-05	Pulse	0.50	3
Al			1	30.512	ug/l	14.91	8,453.62	2.623E-02	Pulse	1.00	3
Se			1	0.153	ug/l	23.08	43.33	1.717E-04	Pulse	3.00	3
Sb			1	0.097	ug/l	10.75	448.68	1.778E-03	Pulse	1.00	3
Se			1	0.341	ug/l	49.58	46.67	1.849E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,581,594.83	1.51	90.6	Pulse	0.50	3
1	Sc		322,562.19	1.12	92.2	Pulse	0.30	3
1	Ge		172,024.77	1.50	91.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,469,490.53	1.75	91.0	Pulse	0.30	3
1	Tb		3,619,844.67	1.26	91.7	Pulse	0.50	3
1	Lu		2,665,899.42	1.17	91.2	Pulse	0.50	3
1	Ge		252,335.33	0.11	90.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,343.39	7.74	92.6	Pulse	0.30	3

Quantitation Report

File Name	073SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:48
Sample Name	MP41211-D2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.273	ug/l	10.76	21,652.02	1.346E-01	Pulse	0.50	3
As			1	0.602	ug/l	18.83	474.01	2.959E-03	Pulse	1.00	3
Mo			1	0.761	ug/l	7.80	1,994.11	8.396E-03	Pulse	0.50	3
Pb			1	0.059	ug/l	21.81	1,323.39	5.532E-04	Pulse	1.00	3
Be			1	0.031	ug/l	33.02	1.50	4.942E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	34.03	256.67	1.086E-03	Pulse	0.50	3
Ba			1	3.729	ug/l	10.77	4,062.47	2.986E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	21.36	174.00	7.203E-05	Pulse	0.50	3
Sn			1	0.466	ug/l	9.12	1,352.28	9.916E-04	Pulse	0.30	3
Sr			1	157.144	ug/l	7.22	544,525.31	3.997E-01	Pulse	0.50	3
[Pb]			1	0.042	ug/l	25.39	588.68	2.460E-04	Pulse	0.50	3
Ca			1	51121.560	ug/l	7.45	1,138,177.42	4.607E-01	Pulse	0.50	3
Ti			1	2.082	ug/l	54.33	330.73	1.083E-03	Pulse	0.50	3
Na			1	4101.422	ug/l	8.25	4,081,353.83	1.365E+01	Pulse	1.00	3
Mg			1	1850.117	ug/l	8.00	905,297.77	3.026E+00	Pulse	1.00	3
K			1	607.621	ug/l	10.90	393,426.39	1.316E+00	Pulse	1.00	3
V			1	1.413	ug/l	10.82	7,336.73	2.455E-02	Pulse	0.50	3
Mn			1	11.597	ug/l	7.17	37,810.71	2.347E-01	Pulse	0.50	3
Fe			1	140.400	ug/l	7.80	647,557.56	4.021E+00	Pulse	0.50	3
Co			1	0.134	ug/l	14.56	1,118.70	6.968E-03	Pulse	0.50	3
Ni			1	0.179	ug/l	16.87	825.35	5.124E-03	Pulse	0.50	3
Cu			1	0.606	ug/l	26.14	9,961.27	6.190E-02	Pulse	0.50	3
Zn			1	4.618	ug/l	12.06	7,126.00	3.005E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	58.36	11.33	4.839E-05	Pulse	0.50	3
Al			1	33.149	ug/l	13.66	8,383.35	2.807E-02	Pulse	1.00	3
Se			1	0.233	ug/l	50.32	44.89	1.899E-04	Pulse	3.00	3
Sb			1	0.061	ug/l	12.59	300.33	1.253E-03	Pulse	1.00	3
Se			1	0.154	ug/l	146.93	39.00	1.651E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,406,601.92	9.68	84.5	Pulse	0.50	3
1	Sc		300,706.98	10.08	85.9	Pulse	0.30	3
1	Ge		161,831.34	10.12	85.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,368,683.94	9.77	84.8	Pulse	0.30	3
1	Tb		3,356,306.08	10.07	85.0	Pulse	0.50	3
1	Lu		2,482,632.92	9.96	84.9	Pulse	0.50	3
1	Ge		238,371.94	9.80	85.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,312.28	11.08	90.5	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:52
Sample Name	MP41211-SD2
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.352	ug/l	4.15	6,365.06	3.387E-02	Pulse	0.50	3
As			1	0.150	ug/l	129.84	97.00	5.159E-04	Pulse	1.00	3
Mo			1	0.159	ug/l	40.36	226.67	8.147E-04	Pulse	0.50	3
Pb			1	-0.025	ug/l	-49.16	801.02	2.832E-04	Pulse	1.00	3
Be			1	0.074	ug/l	150.59	1.00	2.849E-06	Pulse	2.00	3
Ag			1	-0.011	ug/l	-42.01	76.00	2.729E-04	Pulse	0.50	3
Ba			1	1.090	ug/l	6.92	314.00	1.936E-04	Pulse	0.50	3
Tl			1	-0.009	ug/l	-50.65	111.33	3.935E-05	Pulse	0.50	3
Sn			1	0.041	ug/l	209.67	250.00	1.542E-04	Pulse	0.30	3
Sr			1	52.145	ug/l	2.61	43,431.10	2.678E-02	Pulse	0.50	3
[Pb]			1	-0.113	ug/l	-8.88	324.67	1.148E-04	Pulse	0.50	3
Ca			1	17291.560	ug/l	0.40	92,486.10	3.171E-02	Pulse	0.50	3
Ti			1	0.913	ug/l	49.36	40.67	1.158E-04	Pulse	0.50	3
Na			1	1372.108	ug/l	0.17	346,711.12	9.875E-01	Pulse	1.00	3
Mg			1	627.160	ug/l	0.92	73,065.03	2.081E-01	Pulse	1.00	3
K			1	188.429	ug/l	1.47	127,750.70	3.639E-01	Pulse	1.00	3
V			1	0.713	ug/l	2.77	2,015.45	5.740E-03	Pulse	0.50	3
Mn			1	3.753	ug/l	4.46	3,326.97	1.770E-02	Pulse	0.50	3
Fe			1	48.083	ug/l	1.04	69,371.82	3.691E-01	Pulse	0.50	3
Co			1	0.040	ug/l	30.38	134.00	7.130E-04	Pulse	0.50	3
Ni			1	-0.241	ug/l	-17.89	398.01	2.118E-03	Pulse	0.50	3
Cu			1	0.248	ug/l	17.33	8,021.70	4.268E-02	Pulse	0.50	3
Zn			1	-4.517	ug/l	-10.58	1,829.42	6.572E-03	Pulse	1.00	3
Cd			1	-0.005	ug/l	-88.58	2.67	9.592E-06	Pulse	0.50	3
Al			1	-11.199	ug/l	-0.73	1,171.71	3.337E-03	Pulse	1.00	3
Se			1	-0.483	ug/l	-139.60	32.11	1.153E-04	Pulse	3.00	3
Sb			1	-0.031	ug/l	-82.26	73.00	2.623E-04	Pulse	1.00	3
Se			1	-0.372	ug/l	-241.21	39.22	1.409E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,828,460.58	0.46	99.3	Pulse	0.50	3
1	Sc		351,093.61	0.30	100.3	Pulse	0.30	3
1	Ge		187,935.58	0.24	99.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,622,174.94	0.52	100.5	Pulse	0.30	3
1	Tb		3,932,825.58	0.41	99.6	Pulse	0.50	3
1	Lu		2,916,601.83	0.34	99.8	Pulse	0.50	3
1	Ge		278,377.18	0.49	99.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,416.72	9.78	97.7	Pulse	0.30	3

Quantitation Report

File Name 075SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:55
Sample Name MP41211-S3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	219.146	ug/l	0.69	1,277,311.17	7.376E+00	Pulse	0.50	3
As			1	220.002	ug/l	0.83	162,938.20	9.409E-01	Pulse	1.00	3
Mo			1	216.511	ug/l	0.58	572,530.33	2.251E+00	Pulse	0.50	3
Pb			1	215.483	ug/l	1.60	2,315,121.42	9.093E-01	Pulse	1.00	3
Be			1	222.404	ug/l	0.59	9,200.41	2.864E-02	Pulse	2.00	3
Ag			1	95.825	ug/l	0.53	811,524.96	3.190E+00	Pulse	0.50	3
Ba			1	216.069	ug/l	1.16	249,781.86	1.719E-01	Pulse	0.50	3
Tl			1	210.529	ug/l	1.44	3,203,408.25	1.258E+00	Pulse	0.50	3
Sn			1	219.839	ug/l	1.20	584,190.78	4.020E-01	Pulse	0.30	3
Sr			1	347.003	ug/l	1.13	1,281,968.54	8.822E-01	Pulse	0.50	3
[Pb]			1	205.894	ug/l	1.91	1,055,954.00	4.148E-01	Pulse	0.50	3
Ca			1	61944.408	ug/l	0.46	1,511,405.00	5.581E-01	Pulse	0.50	3
Ti			1	220.345	ug/l	1.46	36,035.74	1.122E-01	Pulse	0.50	3
Na			1	23799.105	ug/l	0.44	25,313,728.67	7.880E+01	Analog	1.00	3
Mg			1	21616.119	ug/l	0.34	11,347,696.33	3.532E+01	Analog	1.00	3
K			1	20272.161	ug/l	0.87	10,972,048.00	3.416E+01	Analog	1.00	3
V			1	212.959	ug/l	0.62	1,014,153.27	3.157E+00	Pulse	0.50	3
Mn			1	223.332	ug/l	0.76	774,381.60	4.472E+00	Pulse	0.50	3
Fe			1	20090.515	ug/l	0.61	97,173,472.00	5.611E+02	Analog	0.50	3
Co			1	216.102	ug/l	1.07	1,852,199.58	1.070E+01	Pulse	0.50	3
Ni			1	213.918	ug/l	1.03	491,617.06	2.839E+00	Pulse	0.50	3
Cu			1	215.751	ug/l	0.96	1,297,704.37	7.493E+00	Pulse	0.50	3
Zn			1	210.859	ug/l	0.72	230,739.90	9.070E-01	Pulse	1.00	3
Cd			1	209.628	ug/l	1.02	271,246.17	1.066E+00	Pulse	0.50	3
Al			1	19370.466	ug/l	0.27	4,351,250.00	1.355E+01	Pulse	1.00	3
Se			1	210.836	ug/l	1.21	12,176.10	4.786E-02	Pulse	3.00	3
Sb			1	214.843	ug/l	0.73	804,435.79	3.162E+00	Pulse	1.00	3
Se			1	212.338	ug/l	1.06	5,762.76	2.265E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,546,013.00	0.35	89.4	Pulse	0.50	3
1	Sc		321,246.18	0.79	91.8	Pulse	0.30	3
1	Ge		173,177.75	0.29	91.6	Pulse	0.30	3
1	In		1,453,098.00	0.53	90.0	Pulse	0.30	3
1	Tb		3,640,047.42	0.29	92.2	Pulse	0.50	3
1	Lu		2,708,270.67	1.26	92.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		254,393.37	0.26	91.3	Pulse	0.30	3
1	Te		4.67	65.47	700.0	Pulse	0.50	3
1	Li		1,298.94	8.96	89.6	Pulse	0.30	3

Quantitation Report

File Name 076SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:59
Sample Name MP41211-S4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	216.296	ug/l	1.44	1,258,570.00	7.280E+00	Pulse	0.50	3
As			1	218.162	ug/l	0.81	161,300.69	9.330E-01	Pulse	1.00	3
Mo			1	213.625	ug/l	1.73	567,438.81	2.221E+00	Pulse	0.50	3
Pb			1	211.659	ug/l	0.72	2,277,321.25	8.932E-01	Pulse	1.00	3
Be			1	214.803	ug/l	0.70	8,961.81	2.766E-02	Pulse	2.00	3
Ag			1	94.786	ug/l	1.66	806,344.13	3.155E+00	Pulse	0.50	3
Ba			1	211.464	ug/l	1.16	245,813.02	1.682E-01	Pulse	0.50	3
Tl			1	207.320	ug/l	0.98	3,158,905.00	1.239E+00	Pulse	0.50	3
Sn			1	215.556	ug/l	0.58	575,980.71	3.942E-01	Pulse	0.30	3
Sr			1	346.324	ug/l	0.10	1,286,516.00	8.805E-01	Pulse	0.50	3
[Pb]			1	201.658	ug/l	0.79	1,035,727.15	4.062E-01	Pulse	0.50	3
Ca			1	63077.848	ug/l	0.23	1,541,302.33	5.683E-01	Pulse	0.50	3
Ti			1	215.774	ug/l	0.56	35,592.97	1.099E-01	Pulse	0.50	3
Na			1	23493.233	ug/l	0.51	25,201,501.33	7.779E+01	Analog	1.00	3
Mg			1	21280.759	ug/l	0.48	11,266,814.00	3.478E+01	Analog	1.00	3
K			1	20035.279	ug/l	0.38	10,937,646.67	3.376E+01	Analog	1.00	3
V			1	208.716	ug/l	0.30	1,002,474.09	3.094E+00	Pulse	0.50	3
Mn			1	222.216	ug/l	0.99	769,201.00	4.449E+00	Pulse	0.50	3
Fe			1	20038.718	ug/l	0.57	96,760,072.00	5.597E+02	Analog	0.50	3
Co			1	214.081	ug/l	1.69	1,831,741.42	1.060E+01	Pulse	0.50	3
Ni			1	210.751	ug/l	2.17	483,506.12	2.797E+00	Pulse	0.50	3
Cu			1	212.337	ug/l	1.38	1,275,096.71	7.375E+00	Pulse	0.50	3
Zn			1	206.360	ug/l	1.55	226,893.09	8.879E-01	Pulse	1.00	3
Cd			1	204.626	ug/l	1.09	265,967.22	1.041E+00	Pulse	0.50	3
Al			1	19098.955	ug/l	0.19	4,326,857.33	1.336E+01	Pulse	1.00	3
Se			1	207.965	ug/l	1.77	12,064.69	4.721E-02	Pulse	3.00	3
Sb			1	211.504	ug/l	1.27	795,523.38	3.113E+00	Pulse	1.00	3
Se			1	207.731	ug/l	1.60	5,664.51	2.217E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,549,631.17	1.53	89.5	Pulse	0.50	3
1	Sc		323,985.06	1.03	92.6	Pulse	0.30	3
1	Ge		172,888.55	0.87	91.4	Pulse	0.30	3
1	In		1,461,084.18	0.50	90.5	Pulse	0.30	3
1	Tb		3,667,317.00	1.39	92.9	Pulse	0.50	3
1	Lu		2,712,217.50	1.01	92.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,556.39	0.69	91.7	Pulse	0.30	3
1	Te		4.67	89.21	700.0	Pulse	0.50	3
1	Li		1,341.16	3.28	92.5	Pulse	0.30	3

Quantitation Report

File Name 077SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:03
Sample Name MP41211-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	25.597	ug/l	0.56	157,029.56	8.834E-01	Pulse	0.50	3
As			1	23.699	ug/l	0.91	18,077.53	1.017E-01	Pulse	1.00	3
Mo			1	23.229	ug/l	0.97	63,092.08	2.419E-01	Pulse	0.50	3
Pb			1	22.238	ug/l	0.37	246,112.58	9.412E-02	Pulse	1.00	3
Be			1	22.992	ug/l	3.26	983.36	2.962E-03	Pulse	2.00	3
Ag			1	5.480	ug/l	1.71	47,664.90	1.827E-01	Pulse	0.50	3
Ba			1	25.678	ug/l	0.74	30,317.33	2.045E-02	Pulse	0.50	3
Tl			1	22.148	ug/l	1.41	346,270.19	1.324E-01	Pulse	0.50	3
Sn			1	21.821	ug/l	0.30	59,355.45	4.003E-02	Pulse	0.30	3
Sr			1	171.319	ug/l	0.13	646,031.13	4.357E-01	Pulse	0.50	3
[Pb]			1	21.239	ug/l	1.95	112,257.28	4.293E-02	Pulse	0.50	3
Ca			1	49938.903	ug/l	0.28	1,226,471.67	4.500E-01	Pulse	0.50	3
Ti			1	24.552	ug/l	5.27	4,157.80	1.252E-02	Pulse	0.50	3
Na			1	6117.193	ug/l	1.12	6,742,324.50	2.031E+01	Analog	1.00	3
Mg			1	3964.972	ug/l	0.90	2,151,457.58	6.482E+00	Pulse	1.00	3
K			1	2754.491	ug/l	1.07	1,626,679.37	4.901E+00	Pulse	1.00	3
V			1	23.692	ug/l	0.81	117,645.50	3.544E-01	Pulse	0.50	3
Mn			1	33.017	ug/l	1.11	117,921.83	6.634E-01	Pulse	0.50	3
Fe			1	2350.961	ug/l	0.23	11,687,355.00	6.575E+01	Analog	0.50	3
Co			1	22.872	ug/l	0.74	201,268.59	1.132E+00	Pulse	0.50	3
Ni			1	22.911	ug/l	0.38	54,478.93	3.065E-01	Pulse	0.50	3
Cu			1	23.616	ug/l	0.48	152,284.23	8.567E-01	Pulse	0.50	3
Zn			1	26.658	ug/l	1.57	32,282.59	1.238E-01	Pulse	1.00	3
Cd			1	21.911	ug/l	1.25	29,072.14	1.115E-01	Pulse	0.50	3
Al			1	2193.494	ug/l	0.71	510,581.14	1.538E+00	Pulse	1.00	3
Se			1	22.598	ug/l	1.56	1,369.94	5.252E-03	Pulse	3.00	3
Sb			1	20.814	ug/l	0.37	79,985.58	3.067E-01	Pulse	1.00	3
Se			1	22.071	ug/l	1.87	648.90	2.488E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,615,019.67	0.44	91.8	Pulse	0.50	3
1	Sc		331,934.94	1.33	94.9	Pulse	0.30	3
1	Ge		177,752.72	0.87	94.0	Pulse	0.30	3
1	In		1,482,712.86	1.11	91.8	Pulse	0.30	3
1	Tb		3,690,114.58	0.69	93.5	Pulse	0.50	3
1	Lu		2,725,278.17	0.76	93.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,825.17	0.52	93.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,418.95	0.83	97.9	Pulse	0.30	3

Quantitation Report

File Name	078SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:07
Sample Name	FA98621-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.995	ug/l	2.81	22,215.31	1.253E-01	Pulse	0.50	3
As			1	0.982	ug/l	5.72	813.35	4.585E-03	Pulse	1.00	3
Mo			1	0.875	ug/l	3.28	2,502.18	9.578E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	21.53	1,083.37	4.146E-04	Pulse	1.00	3
Be			1	0.055	ug/l	50.59	2.67	8.066E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	8.67	229.33	8.777E-04	Pulse	0.50	3
Ba			1	3.714	ug/l	3.54	4,471.24	2.975E-03	Pulse	0.50	3
Tl			1	0.017	ug/l	40.74	390.00	1.495E-04	Pulse	0.50	3
Sn			1	0.442	ug/l	7.31	1,423.95	9.470E-04	Pulse	0.30	3
Sr			1	158.904	ug/l	1.17	607,594.15	4.042E-01	Pulse	0.50	3
[Pb]			1	0.022	ug/l	80.61	532.68	2.038E-04	Pulse	0.50	3
Ca			1	44958.665	ug/l	0.16	1,095,674.67	4.052E-01	Pulse	0.50	3
Ti			1	0.440	ug/l	21.19	82.00	2.469E-04	Pulse	0.50	3
Na			1	4451.668	ug/l	0.64	4,911,381.50	1.480E+01	Analog	1.00	3
Mg			1	2124.360	ug/l	0.15	1,152,669.92	3.474E+00	Pulse	1.00	3
K			1	1143.784	ug/l	1.32	733,493.21	2.211E+00	Pulse	1.00	3
V			1	1.615	ug/l	2.62	9,135.49	2.754E-02	Pulse	0.50	3
Mn			1	4.877	ug/l	0.98	17,789.49	1.003E-01	Pulse	0.50	3
Fe			1	83.298	ug/l	1.07	430,459.86	2.427E+00	Pulse	0.50	3
Co			1	0.124	ug/l	6.33	1,148.70	6.474E-03	Pulse	0.50	3
Ni			1	0.270	ug/l	7.36	1,125.37	6.342E-03	Pulse	0.50	3
Cu			1	0.470	ug/l	5.00	10,150.03	5.720E-02	Pulse	0.50	3
Zn			1	4.167	ug/l	1.88	7,349.41	2.813E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	26.11	21.33	8.164E-05	Pulse	0.50	3
Al			1	9.653	ug/l	14.39	3,862.73	1.165E-02	Pulse	1.00	3
Se			1	0.274	ug/l	11.40	52.00	1.991E-04	Pulse	3.00	3
Sb			1	0.226	ug/l	2.06	962.36	3.683E-03	Pulse	1.00	3
Se			1	0.265	ug/l	68.35	46.22	1.769E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,613,560.08	1.22	91.7	Pulse	0.50	3
1	Sc		331,762.85	1.17	94.8	Pulse	0.30	3
1	Ge		177,410.41	1.78	93.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,503,509.11	1.40	93.1	Pulse	0.30	3
1	Tb		3,675,846.33	1.01	93.1	Pulse	0.50	3
1	Lu		2,703,939.33	0.81	92.5	Pulse	0.50	3
1	Ge		261,244.75	0.87	93.7	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,404.50	14.62	96.9	Pulse	0.30	3

Quantitation Report

File Name 079CCVA.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:11
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.853	ug/l	0.98	643,097.42	3.436E+00	Pulse	0.50	3
As			1	49.755	ug/l	0.48	79,682.78	4.258E-01	Pulse	1.00	3
Mo			1	49.864	ug/l	0.75	285,895.25	1.037E+00	Pulse	0.50	3
Pb			1	49.302	ug/l	0.35	1,170,780.92	4.163E-01	Pulse	1.00	3
Be			1	50.369	ug/l	1.21	4,544.51	1.297E-02	Pulse	2.00	3
Ag			1	49.271	ug/l	0.34	904,501.63	3.280E+00	Pulse	0.50	3
Ba			1	49.122	ug/l	0.77	125,614.59	7.817E-02	Pulse	0.50	3
Tl			1	50.183	ug/l	0.18	1,687,148.79	5.999E-01	Pulse	0.50	3
Sn			1	48.431	ug/l	1.06	284,772.08	1.772E-01	Pulse	0.30	3
Sr			1	49.142	ug/l	0.94	401,854.00	2.501E-01	Pulse	0.50	3
[Pb]			1	49.329	ug/l	0.26	559,199.87	1.988E-01	Pulse	0.50	3
Ca			1	5082.874	ug/l	0.88	271,248.28	9.208E-02	Pulse	0.50	3
Ti			1	49.281	ug/l	0.74	17,581.93	5.019E-02	Pulse	0.50	3
Na			1	5148.400	ug/l	0.88	11,957,609.00	3.414E+01	Analog	1.00	3
Mg			1	5121.163	ug/l	1.16	5,863,059.00	1.674E+01	Analog	1.00	3
K			1	5126.650	ug/l	0.41	6,103,303.17	1.742E+01	Analog	1.00	3
V			1	49.506	ug/l	1.72	514,765.21	1.470E+00	Pulse	0.50	3
Mn			1	51.013	ug/l	0.70	382,568.57	2.044E+00	Pulse	0.50	3
Fe			1	5169.578	ug/l	0.40	54,050,846.67	2.888E+02	Analog	0.50	3
Co			1	51.177	ug/l	0.70	948,039.27	5.066E+00	Pulse	0.50	3
Ni			1	51.076	ug/l	0.21	253,964.82	1.357E+00	Pulse	0.50	3
Cu			1	51.755	ug/l	1.11	676,784.33	3.616E+00	Pulse	0.50	3
Zn			1	51.108	ug/l	0.20	122,710.13	4.450E-01	Pulse	1.00	3
Cd			1	50.264	ug/l	0.98	140,981.84	5.113E-01	Pulse	0.50	3
Al			1	5069.847	ug/l	1.31	2,484,195.25	7.093E+00	Pulse	1.00	3
Se			1	50.696	ug/l	0.82	6,366.06	2.309E-02	Pulse	3.00	3
Sb			1	49.694	ug/l	0.65	403,390.94	1.463E+00	Pulse	1.00	3
Se			1	50.642	ug/l	0.53	3,000.79	1.088E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,524.00	0.32	98.7	Pulse	0.50	3
1	Sc		350,285.10	1.14	100.1	Pulse	0.30	3
1	Ge		187,148.39	0.40	99.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,606,952.40	0.46	99.5	Pulse	0.30	3
1	Tb		3,937,603.75	0.56	99.7	Pulse	0.50	3
1	Lu		2,945,954.58	0.55	100.8	Pulse	0.50	3
1	Ge		275,724.95	0.30	98.9	Pulse	0.30	3
1	Te		4.67	24.74	700.0	Pulse	0.50	3
1	Li		1,453.39	6.54	100.2	Pulse	0.30	3

Quantitation Report

File Name	080_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:14
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.835	ug/l	0.50	1,216,800.88	6.655E+00	Pulse	0.50	3
As			1	98.101	ug/l	0.67	153,419.91	8.391E-01	Pulse	1.00	3
Mo			1	98.546	ug/l	0.75	550,575.27	2.049E+00	Pulse	0.50	3
Pb			1	98.034	ug/l	0.35	2,263,344.83	8.274E-01	Pulse	1.00	3
Be			1	98.794	ug/l	0.45	8,658.51	2.544E-02	Pulse	2.00	3
Ag			1	96.551	ug/l	0.68	1,727,452.25	6.428E+00	Pulse	0.50	3
Ba			1	98.889	ug/l	0.15	244,383.43	1.573E-01	Pulse	0.50	3
Tl			1	100.323	ug/l	0.83	3,280,098.58	1.199E+00	Pulse	0.50	3
Sn			1	98.291	ug/l	0.42	558,386.85	3.595E-01	Pulse	0.30	3
Sr			1	98.660	ug/l	0.12	779,363.27	5.018E-01	Pulse	0.50	3
[Pb]			1	98.121	ug/l	0.02	1,081,398.75	3.953E-01	Pulse	0.50	3
Ca			1	9958.691	ug/l	0.55	520,146.79	1.798E-01	Pulse	0.50	3
Ti			1	98.200	ug/l	1.83	34,023.47	9.999E-02	Pulse	0.50	3
Na			1	10133.773	ug/l	0.96	22,839,180.00	6.712E+01	Analog	1.00	3
Mg			1	10112.582	ug/l	1.22	11,246,532.00	3.305E+01	Analog	1.00	3
K			1	10030.692	ug/l	0.84	11,503,032.00	3.380E+01	Analog	1.00	3
V			1	97.611	ug/l	1.21	984,871.83	2.894E+00	Pulse	0.50	3
Mn			1	99.902	ug/l	0.43	731,467.38	4.001E+00	Pulse	0.50	3
Fe			1	10133.475	ug/l	0.53	103,491,234.67	5.660E+02	Analog	0.50	3
Co			1	99.506	ug/l	0.40	1,800,811.63	9.849E+00	Pulse	0.50	3
Ni			1	99.518	ug/l	0.87	482,951.12	2.641E+00	Pulse	0.50	3
Cu			1	99.574	ug/l	0.67	1,265,183.38	6.920E+00	Pulse	0.50	3
Zn			1	99.578	ug/l	0.46	230,375.03	8.573E-01	Pulse	1.00	3
Cd			1	98.687	ug/l	0.91	269,783.12	1.004E+00	Pulse	0.50	3
Al			1	10036.704	ug/l	1.54	4,776,054.33	1.404E+01	Mix	1.00	3
Se			1	99.593	ug/l	0.86	12,153.86	4.523E-02	Pulse	3.00	3
Sb			1	98.576	ug/l	0.41	779,822.37	2.902E+00	Pulse	1.00	3
Se			1	98.226	ug/l	1.05	5,635.28	2.097E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,735,469.17	1.24	96.0	Pulse	0.50	3
1	Sc		340,299.17	1.04	97.2	Pulse	0.30	3
1	Ge		182,833.47	0.27	96.7	Pulse	0.30	3
1	In		1,553,139.07	0.21	96.2	Pulse	0.30	3
1	Tb		3,828,787.42	0.40	97.0	Pulse	0.50	3
1	Lu		2,892,238.08	0.57	99.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		268,737.80	0.14	96.4	Pulse	0.30	3
1	Te		5.33	78.06	800.0	Pulse	0.50	3
1	Li		1,302.27	2.38	89.8	Pulse	0.30	3

Quantitation Report

File Name	081_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:18
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.039	ug/l	15.52	4,831.28	2.744E-02	Pulse	0.50	3
As			1	0.029	ug/l	6.86	111.33	6.320E-04	Pulse	1.00	3
Mo			1	0.089	ug/l	28.74	606.68	2.328E-03	Pulse	0.50	3
Pb			1	0.010	ug/l	113.29	1,057.70	3.883E-04	Pulse	1.00	3
Be			1	0.022	ug/l	41.81	2.17	6.529E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	49.28	264.00	1.015E-03	Pulse	0.50	3
Ba			1	0.003	ug/l	210.30	38.67	2.532E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	59.94	514.01	1.891E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	13.00	883.36	5.760E-04	Pulse	0.30	3
Sr			1	0.005	ug/l	136.55	452.68	2.955E-04	Pulse	0.50	3
[Pb]			1	0.007	ug/l	138.80	518.68	1.903E-04	Pulse	0.50	3
Ca			1	-9.687	ug/l	-17.50	1,149.37	4.111E-04	Pulse	0.50	3
Ti			1	0.011	ug/l	187.39	11.33	3.418E-05	Pulse	0.50	3
Na			1	-0.977	ug/l	-93.31	24,362.82	7.334E-02	Pulse	1.00	3
Mg			1	0.406	ug/l	178.88	1,485.07	4.477E-03	Pulse	1.00	3
K			1	-1.973	ug/l	-53.35	97,795.11	2.943E-01	Pulse	1.00	3
V			1	0.009	ug/l	208.38	1,291.38	3.889E-03	Pulse	0.50	3
Mn			1	-0.021	ug/l	-31.27	321.34	1.826E-03	Pulse	0.50	3
Fe			1	0.934	ug/l	74.90	26,870.13	1.527E-01	Pulse	0.50	3
Co			1	0.008	ug/l	94.18	192.67	1.096E-03	Pulse	0.50	3
Ni			1	-0.018	ug/l	-71.37	402.01	2.285E-03	Pulse	0.50	3
Cu			1	-0.082	ug/l	-19.46	6,219.69	3.532E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-4.06	1,112.37	4.271E-03	Pulse	1.00	3
Cd			1	0.009	ug/l	36.76	28.00	1.077E-04	Pulse	0.50	3
Al			1	-1.693	ug/l	-45.39	841.36	2.535E-03	Pulse	1.00	3
Se			1	0.048	ug/l	98.36	41.33	1.587E-04	Pulse	3.00	3
Sb			1	0.030	ug/l	9.89	326.00	1.251E-03	Pulse	1.00	3
Se			1	0.080	ug/l	51.82	43.22	1.658E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,731,720.00	1.69	95.9	Pulse	0.50	3
1	Sc		332,269.52	0.59	94.9	Pulse	0.30	3

Quantitation Report

1	Ge		176,119.55	1.40	93.1	Pulse	0.30	3
1	In		1,532,250.43	1.59	94.9	Pulse	0.30	3
1	Tb		3,748,903.75	0.95	95.0	Pulse	0.50	3
1	Lu		2,796,951.00	1.00	95.7	Pulse	0.50	3
1	Ge		260,540.67	1.31	93.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,367.83	4.88	94.3	Pulse	0.30	3

Quantitation Report

File Name	082SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:22
Sample Name	FA98621-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.251	ug/l	1.60	22,746.59	1.338E-01	Pulse	0.50	3
As			1	0.478	ug/l	5.46	413.34	2.432E-03	Pulse	1.00	3
Mo			1	1.192	ug/l	5.11	3,208.96	1.288E-02	Pulse	0.50	3
Pb			1	0.029	ug/l	19.24	1,090.04	4.249E-04	Pulse	1.00	3
Be			1	0.017	ug/l	123.57	1.00	3.148E-06	Pulse	2.00	3
Ag			1	0.034	ug/l	12.64	366.67	1.471E-03	Pulse	0.50	3
Ba			1	2.750	ug/l	1.12	3,205.63	2.208E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	13.50	193.33	7.535E-05	Pulse	0.50	3
Sn			1	1.059	ug/l	19.78	3,018.05	2.075E-03	Pulse	0.30	3
Sr			1	104.785	ug/l	1.14	387,094.87	2.666E-01	Pulse	0.50	3
[Pb]			1	0.017	ug/l	66.35	498.68	1.944E-04	Pulse	0.50	3
Ca			1	36094.804	ug/l	0.98	856,634.73	3.254E-01	Pulse	0.50	3
Ti			1	0.817	ug/l	33.73	138.67	4.386E-04	Pulse	0.50	3
Na			1	2568.668	ug/l	1.17	2,717,536.83	8.576E+00	Pulse	1.00	3
Mg			1	1827.300	ug/l	1.25	947,141.77	2.989E+00	Pulse	1.00	3
K			1	200.288	ug/l	1.99	201,339.79	6.354E-01	Pulse	1.00	3
V			1	1.722	ug/l	4.68	9,232.22	2.913E-02	Pulse	0.50	3
Mn			1	5.858	ug/l	1.69	20,378.02	1.199E-01	Pulse	0.50	3
Fe			1	101.083	ug/l	1.34	496,807.91	2.923E+00	Pulse	0.50	3
Co			1	0.092	ug/l	3.04	828.69	4.877E-03	Pulse	0.50	3
Ni			1	0.164	ug/l	10.84	839.35	4.937E-03	Pulse	0.50	3
Cu			1	0.439	ug/l	11.85	9,539.72	5.615E-02	Pulse	0.50	3
Zn			1	4.058	ug/l	2.02	6,892.24	2.767E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-1512.05	3.33	1.325E-05	Pulse	0.50	3
Al			1	35.106	ug/l	1.63	9,329.86	2.944E-02	Pulse	1.00	3
Se			1	0.425	ug/l	16.15	58.11	2.333E-04	Pulse	3.00	3
Sb			1	0.118	ug/l	5.36	520.01	2.088E-03	Pulse	1.00	3
Se			1	0.490	ug/l	15.18	50.00	2.007E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,565,589.67	0.77	90.0	Pulse	0.50	3
1	Sc		316,854.18	1.01	90.5	Pulse	0.30	3
1	Ge		169,925.68	1.74	89.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,451,950.36	1.85	89.9	Pulse	0.30	3
1	Tb		3,569,990.92	1.17	90.4	Pulse	0.50	3
1	Lu		2,632,008.33	1.31	90.1	Pulse	0.50	3
1	Ge		249,118.18	1.40	89.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,303.39	7.97	89.9	Pulse	0.30	3

Quantitation Report

File Name 083SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:26
Sample Name FA98621-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.093	ug/l	1.36	22,095.84	1.286E-01	Pulse	0.50	3
As			1	2.271	ug/l	4.25	1,734.75	1.010E-02	Pulse	1.00	3
Mo			1	1.261	ug/l	1.70	3,449.00	1.359E-02	Pulse	0.50	3
Pb			1	0.037	ug/l	17.32	1,193.71	4.596E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1034.74	0.33	1.041E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	22.49	273.33	1.077E-03	Pulse	0.50	3
Ba			1	1.870	ug/l	3.37	2,208.15	1.508E-03	Pulse	0.50	3
Tl			1	0.010	ug/l	13.93	289.33	1.114E-04	Pulse	0.50	3
Sn			1	0.431	ug/l	9.43	1,356.72	9.267E-04	Pulse	0.30	3
Sr			1	87.838	ug/l	0.99	327,290.99	2.235E-01	Pulse	0.50	3
[Pb]			1	0.029	ug/l	7.17	567.34	2.184E-04	Pulse	0.50	3
Ca			1	30904.529	ug/l	0.43	744,363.02	2.787E-01	Pulse	0.50	3
Ti			1	0.433	ug/l	26.41	78.00	2.432E-04	Pulse	0.50	3
Na			1	2739.629	ug/l	0.71	2,934,326.17	9.142E+00	Pulse	1.00	3
Mg			1	3713.024	ug/l	0.70	1,948,467.21	6.070E+00	Pulse	1.00	3
K			1	356.399	ug/l	0.70	287,631.87	8.961E-01	Pulse	1.00	3
V			1	1.379	ug/l	4.70	7,719.55	2.405E-02	Pulse	0.50	3
Mn			1	10.195	ug/l	2.68	35,519.03	2.067E-01	Pulse	0.50	3
Fe			1	728.682	ug/l	2.27	3,514,130.67	2.045E+01	Pulse	0.50	3
Co			1	0.115	ug/l	6.48	1,032.03	6.002E-03	Pulse	0.50	3
Ni			1	0.246	ug/l	12.89	1,034.70	6.023E-03	Pulse	0.50	3
Cu			1	0.403	ug/l	5.97	9,432.99	5.489E-02	Pulse	0.50	3
Zn			1	3.884	ug/l	1.66	6,835.22	2.693E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-121.94	2.00	7.884E-06	Pulse	0.50	3
Al			1	15.166	ug/l	6.77	4,977.00	1.550E-02	Pulse	1.00	3
Se			1	0.375	ug/l	19.42	56.33	2.220E-04	Pulse	3.00	3
Sb			1	0.102	ug/l	3.90	472.34	1.861E-03	Pulse	1.00	3
Se			1	0.534	ug/l	36.72	52.11	2.053E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,597,718.83	0.39	91.2	Pulse	0.50	3
1	Sc		320,976.48	0.50	91.7	Pulse	0.30	3
1	Ge		171,884.47	1.25	90.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,464,247.82	0.31	90.7	Pulse	0.30	3
1	Tb		3,616,401.33	0.59	91.6	Pulse	0.50	3
1	Lu		2,670,545.00	0.45	91.4	Pulse	0.50	3
1	Ge		253,828.39	0.33	91.1	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,377.83	4.01	95.0	Pulse	0.30	3

Quantitation Report

File Name 084SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:29
Sample Name FA98621-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.178	ug/l	1.79	23,026.92	1.314E-01	Pulse	0.50	3
As			1	1.225	ug/l	1.76	986.03	5.626E-03	Pulse	1.00	3
Mo			1	0.885	ug/l	2.15	2,489.51	9.685E-03	Pulse	0.50	3
Pb			1	0.116	ug/l	1.86	2,061.46	7.925E-04	Pulse	1.00	3
Be			1	-0.003	ug/l	-199.89	0.17	5.110E-07	Pulse	2.00	3
Ag			1	0.015	ug/l	47.20	212.67	8.288E-04	Pulse	0.50	3
Ba			1	21.562	ug/l	2.52	25,407.82	1.717E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	49.95	144.00	5.536E-05	Pulse	0.50	3
Sn			1	0.382	ug/l	12.90	1,241.16	8.382E-04	Pulse	0.30	3
Sr			1	133.940	ug/l	0.26	504,161.78	3.407E-01	Pulse	0.50	3
[Pb]			1	0.104	ug/l	8.88	964.03	3.705E-04	Pulse	0.50	3
Ca			1	44571.581	ug/l	1.09	1,082,558.88	4.017E-01	Pulse	0.50	3
Ti			1	0.585	ug/l	12.34	104.67	3.207E-04	Pulse	0.50	3
Na			1	4193.796	ug/l	0.99	4,553,720.00	1.395E+01	Analog	1.00	3
Mg			1	2141.512	ug/l	0.76	1,143,168.71	3.502E+00	Pulse	1.00	3
K			1	174.093	ug/l	0.42	193,116.00	5.917E-01	Pulse	1.00	3
V			1	3.337	ug/l	0.70	17,314.36	5.305E-02	Pulse	0.50	3
Mn			1	40.391	ug/l	1.85	142,094.97	8.109E-01	Pulse	0.50	3
Fe			1	968.105	ug/l	1.03	4,755,027.83	2.713E+01	Pulse	0.50	3
Co			1	0.104	ug/l	7.89	958.03	5.470E-03	Pulse	0.50	3
Ni			1	0.166	ug/l	17.05	870.02	4.961E-03	Pulse	0.50	3
Cu			1	0.373	ug/l	16.19	9,435.00	5.385E-02	Pulse	0.50	3
Zn			1	7.083	ug/l	1.05	10,416.83	4.053E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	31.26	10.00	3.889E-05	Pulse	0.50	3
Al			1	45.807	ug/l	13.03	12,050.61	3.692E-02	Pulse	1.00	3
Se			1	0.259	ug/l	21.47	50.33	1.958E-04	Pulse	3.00	3
Sb			1	0.077	ug/l	21.34	382.67	1.488E-03	Pulse	1.00	3
Se			1	0.171	ug/l	32.73	42.89	1.669E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,601,134.67	1.00	91.3	Pulse	0.50	3
1	Sc		326,392.01	0.06	93.3	Pulse	0.30	3
1	Ge		175,253.14	1.28	92.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,479,761.64	1.01	91.6	Pulse	0.30	3
1	Tb		3,640,032.75	1.79	92.2	Pulse	0.50	3
1	Lu		2,694,899.25	1.01	92.2	Pulse	0.50	3
1	Ge		257,010.73	1.11	92.2	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,428.95	6.56	98.5	Pulse	0.30	3

Quantitation Report

File Name 085SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:33
Sample Name FA98621-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.332	ug/l	2.07	23,571.58	1.366E-01	Pulse	0.50	3
As			1	0.921	ug/l	4.23	746.68	4.326E-03	Pulse	1.00	3
Mo			1	1.246	ug/l	1.16	3,402.32	1.343E-02	Pulse	0.50	3
Pb			1	0.053	ug/l	9.14	1,376.06	5.271E-04	Pulse	1.00	3
Be			1	0.024	ug/l	28.00	1.33	4.085E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	3.71	212.00	8.370E-04	Pulse	0.50	3
Ba			1	7.005	ug/l	1.91	8,245.90	5.593E-03	Pulse	0.50	3
Tl			1	0.000	ug/l	265.62	138.67	5.317E-05	Pulse	0.50	3
Sn			1	0.396	ug/l	4.37	1,272.27	8.629E-04	Pulse	0.30	3
Sr			1	214.522	ug/l	0.75	804,325.14	5.455E-01	Pulse	0.50	3
[Pb]			1	0.041	ug/l	15.79	633.35	2.427E-04	Pulse	0.50	3
Ca			1	59127.054	ug/l	1.27	1,441,539.04	5.327E-01	Pulse	0.50	3
Ti			1	0.625	ug/l	21.74	111.33	3.411E-04	Pulse	0.50	3
Na			1	3730.289	ug/l	1.19	4,051,773.58	1.242E+01	Pulse	1.00	3
Mg			1	2461.973	ug/l	1.66	1,313,560.54	4.026E+00	Pulse	1.00	3
K			1	282.317	ug/l	0.90	252,019.89	7.724E-01	Pulse	1.00	3
V			1	1.629	ug/l	1.86	9,052.12	2.774E-02	Pulse	0.50	3
Mn			1	8.163	ug/l	1.08	28,657.09	1.660E-01	Pulse	0.50	3
Fe			1	192.279	ug/l	1.28	944,178.40	5.470E+00	Pulse	0.50	3
Co			1	0.197	ug/l	3.02	1,738.08	1.007E-02	Pulse	0.50	3
Ni			1	0.445	ug/l	10.60	1,493.40	8.652E-03	Pulse	0.50	3
Cu			1	0.413	ug/l	5.61	9,531.72	5.522E-02	Pulse	0.50	3
Zn			1	6.838	ug/l	1.20	10,002.93	3.949E-02	Pulse	1.00	3
Cd			1	0.011	ug/l	65.56	17.33	6.844E-05	Pulse	0.50	3
Al			1	90.007	ug/l	3.63	22,125.32	6.782E-02	Pulse	1.00	3
Se			1	0.227	ug/l	70.93	47.78	1.886E-04	Pulse	3.00	3
Sb			1	0.065	ug/l	17.29	333.33	1.317E-03	Pulse	1.00	3
Se			1	0.253	ug/l	120.22	44.44	1.756E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,609,854.83	0.93	91.6	Pulse	0.50	3
1	Sc		326,283.78	0.60	93.2	Pulse	0.30	3
1	Ge		172,618.95	0.35	91.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,474,420.22	0.11	91.3	Pulse	0.30	3
1	Tb		3,664,137.67	0.59	92.8	Pulse	0.50	3
1	Lu		2,706,165.33	1.13	92.6	Pulse	0.50	3
1	Ge		253,310.89	0.83	90.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,320.05	6.37	91.0	Pulse	0.30	3

Quantitation Report

File Name 086SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:37
Sample Name FA98621-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.161	ug/l	1.14	22,689.19	1.308E-01	Pulse	0.50	3
As			1	0.674	ug/l	4.69	567.01	3.270E-03	Pulse	1.00	3
Mo			1	2.469	ug/l	2.99	6,629.19	2.614E-02	Pulse	0.50	3
Pb			1	0.016	ug/l	23.52	972.03	3.721E-04	Pulse	1.00	3
Be			1	0.013	ug/l	145.88	0.83	2.570E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	20.67	191.33	7.543E-04	Pulse	0.50	3
Ba			1	4.470	ug/l	1.21	5,307.46	3.576E-03	Pulse	0.50	3
Tl			1	-0.004	ug/l	-0.21	68.00	2.603E-05	Pulse	0.50	3
Sn			1	0.398	ug/l	28.86	1,285.64	8.672E-04	Pulse	0.30	3
Sr			1	198.608	ug/l	1.56	749,524.08	5.051E-01	Pulse	0.50	3
[Pb]			1	0.012	ug/l	159.73	480.68	1.840E-04	Pulse	0.50	3
Ca			1	59052.374	ug/l	1.44	1,441,290.83	5.321E-01	Pulse	0.50	3
Ti			1	0.711	ug/l	30.21	124.67	3.847E-04	Pulse	0.50	3
Na			1	2655.480	ug/l	0.93	2,870,720.58	8.863E+00	Pulse	1.00	3
Mg			1	1552.422	ug/l	1.17	822,617.83	2.540E+00	Pulse	1.00	3
K			1	198.499	ug/l	0.98	204,836.48	6.324E-01	Pulse	1.00	3
V			1	2.049	ug/l	3.43	11,002.46	3.397E-02	Pulse	0.50	3
Mn			1	14.540	ug/l	0.57	50,914.98	2.936E-01	Pulse	0.50	3
Fe			1	742.799	ug/l	1.41	3,614,342.83	2.084E+01	Pulse	0.50	3
Co			1	0.173	ug/l	4.80	1,540.73	8.887E-03	Pulse	0.50	3
Ni			1	0.312	ug/l	1.21	1,196.04	6.897E-03	Pulse	0.50	3
Cu			1	0.382	ug/l	0.67	9,390.97	5.416E-02	Pulse	0.50	3
Zn			1	3.286	ug/l	1.78	6,184.00	2.439E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	189.54	7.33	2.890E-05	Pulse	0.50	3
Al			1	11.695	ug/l	6.34	4,235.82	1.308E-02	Pulse	1.00	3
Se			1	0.207	ug/l	49.18	46.67	1.840E-04	Pulse	3.00	3
Sb			1	0.398	ug/l	5.81	1,576.07	6.215E-03	Pulse	1.00	3
Se			1	0.118	ug/l	26.52	40.89	1.613E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,612,502.08	0.20	91.7	Pulse	0.50	3
1	Sc		323,892.00	0.32	92.6	Pulse	0.30	3
1	Ge		173,405.26	0.54	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,484,119.60	1.17	91.9	Pulse	0.30	3
1	Tb		3,631,558.33	0.65	92.0	Pulse	0.50	3
1	Lu		2,708,964.17	0.61	92.7	Pulse	0.50	3
1	Ge		253,578.82	0.47	91.0	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,341.16	5.97	92.5	Pulse	0.30	3

Quantitation Report

File Name 087SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:41
Sample Name FA98621-7
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.244	ug/l	2.29	23,598.27	1.336E-01	Pulse	0.50	3
As			1	0.426	ug/l	7.26	390.00	2.208E-03	Pulse	1.00	3
Mo			1	1.144	ug/l	5.40	3,207.62	1.238E-02	Pulse	0.50	3
Pb			1	0.008	ug/l	17.46	897.03	3.369E-04	Pulse	1.00	3
Be			1	0.020	ug/l	89.45	1.17	3.539E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	20.48	199.33	7.687E-04	Pulse	0.50	3
Ba			1	2.632	ug/l	3.01	3,181.63	2.114E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-36.51	99.33	3.733E-05	Pulse	0.50	3
Sn			1	0.333	ug/l	6.66	1,124.49	7.471E-04	Pulse	0.30	3
Sr			1	105.036	ug/l	1.79	402,231.15	2.672E-01	Pulse	0.50	3
[Pb]			1	0.004	ug/l	200.61	450.68	1.693E-04	Pulse	0.50	3
Ca			1	36020.816	ug/l	0.21	892,697.83	3.248E-01	Pulse	0.50	3
Ti			1	0.775	ug/l	79.74	137.34	4.174E-04	Pulse	0.50	3
Na			1	2499.435	ug/l	0.43	2,746,791.00	8.347E+00	Pulse	1.00	3
Mg			1	1793.800	ug/l	0.74	965,601.33	2.934E+00	Pulse	1.00	3
K			1	186.676	ug/l	2.06	201,605.04	6.127E-01	Pulse	1.00	3
V			1	1.813	ug/l	1.90	10,028.60	3.048E-02	Pulse	0.50	3
Mn			1	5.400	ug/l	2.04	19,559.19	1.107E-01	Pulse	0.50	3
Fe			1	100.512	ug/l	2.25	513,481.80	2.907E+00	Pulse	0.50	3
Co			1	0.088	ug/l	3.71	822.02	4.655E-03	Pulse	0.50	3
Ni			1	0.965	ug/l	2.56	2,746.21	1.555E-02	Pulse	0.50	3
Cu			1	4.107	ug/l	1.92	32,292.28	1.828E-01	Pulse	0.50	3
Zn			1	4.481	ug/l	0.84	7,637.52	2.947E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	322.22	4.67	1.789E-05	Pulse	0.50	3
Al			1	17.601	ug/l	3.99	5,662.83	1.721E-02	Pulse	1.00	3
Se			1	0.390	ug/l	59.89	58.45	2.255E-04	Pulse	3.00	3
Sb			1	0.093	ug/l	12.12	445.68	1.720E-03	Pulse	1.00	3
Se			1	0.295	ug/l	24.26	46.67	1.800E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,663,129.42	1.00	93.5	Pulse	0.50	3
1	Sc		329,072.11	0.83	94.0	Pulse	0.30	3
1	Ge		176,623.16	0.70	93.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,505,221.08	1.07	93.2	Pulse	0.30	3
1	Tb		3,722,544.25	0.53	94.3	Pulse	0.50	3
1	Lu		2,748,646.08	0.70	94.1	Pulse	0.50	3
1	Ge		259,183.55	1.52	93.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,380.05	3.89	95.2	Pulse	0.30	3

Quantitation Report

File Name 088SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:45
Sample Name FA98621-10
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.454	ug/l	33.82	24,543.62	1.407E-01	Pulse	0.50	3
As			1	0.277	ug/l	5.49	274.67	1.572E-03	Pulse	1.00	3
Mo			1	2.509	ug/l	0.63	6,800.59	2.656E-02	Pulse	0.50	3
Pb			1	0.014	ug/l	22.70	965.03	3.654E-04	Pulse	1.00	3
Be			1	0.013	ug/l	145.33	0.83	2.564E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	31.42	218.00	8.513E-04	Pulse	0.50	3
Ba			1	22.632	ug/l	0.96	26,695.68	1.802E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	172.96	156.00	5.909E-05	Pulse	0.50	3
Sn			1	0.354	ug/l	6.83	1,166.16	7.870E-04	Pulse	0.30	3
Sr			1	563.328	ug/l	0.52	2,121,173.00	1.432E+00	Pulse	0.50	3
[Pb]			1	0.005	ug/l	66.29	449.34	1.702E-04	Pulse	0.50	3
Ca			1	36081.687	ug/l	1.44	884,422.35	3.253E-01	Pulse	0.50	3
Ti			1	0.702	ug/l	13.61	123.33	3.801E-04	Pulse	0.50	3
Na			1	9498.663	ug/l	0.96	10,227,568.33	3.150E+01	Analog	1.00	3
Mg			1	8370.491	ug/l	0.39	4,442,293.33	1.368E+01	Pulse	1.00	3
K			1	989.831	ug/l	0.55	634,471.25	1.954E+00	Pulse	1.00	3
V			1	1.089	ug/l	2.06	6,411.74	1.975E-02	Pulse	0.50	3
Mn			1	0.134	ug/l	4.34	936.70	5.362E-03	Pulse	0.50	3
Fe			1	5.941	ug/l	2.15	46,549.78	2.665E-01	Pulse	0.50	3
Co			1	0.093	ug/l	7.01	858.02	4.912E-03	Pulse	0.50	3
Ni			1	0.221	ug/l	2.30	994.03	5.691E-03	Pulse	0.50	3
Cu			1	1.761	ug/l	0.19	17,779.53	1.018E-01	Pulse	0.50	3
Zn			1	4.112	ug/l	2.52	7,144.66	2.790E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-315.74	2.67	1.051E-05	Pulse	0.50	3
Al			1	16.475	ug/l	0.85	5,331.72	1.642E-02	Pulse	1.00	3
Se			1	0.021	ug/l	332.06	36.33	1.419E-04	Pulse	3.00	3
Sb			1	0.056	ug/l	11.35	302.33	1.181E-03	Pulse	1.00	3
Se			1	-0.025	ug/l	-1067.09	37.45	1.461E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,641,377.25	0.92	92.7	Pulse	0.50	3
1	Sc		324,714.81	0.81	92.8	Pulse	0.30	3
1	Ge		174,667.89	0.63	92.4	Pulse	0.30	3
1	In		1,481,225.64	1.01	91.7	Pulse	0.30	3
1	Tb		3,682,001.75	1.48	93.3	Pulse	0.50	3
1	Lu		2,719,056.42	1.95	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		256,076.46	1.28	91.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,535.62	5.91	105.9	Pulse	0.30	3

Quantitation Report

File Name 089SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:48
Sample Name FA98679-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.438	ug/l	1.86	24,305.15	1.401E-01	Pulse	0.50	3
As			1	4.506	ug/l	1.17	3,407.98	1.965E-02	Pulse	1.00	3
Mo			1	1.107	ug/l	2.52	3,072.27	1.199E-02	Pulse	0.50	3
Pb			1	0.224	ug/l	3.09	3,283.65	1.251E-03	Pulse	1.00	3
Be			1	0.021	ug/l	90.09	1.17	3.625E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	17.43	178.67	6.970E-04	Pulse	0.50	3
Ba			1	4.237	ug/l	0.51	5,017.39	3.391E-03	Pulse	0.50	3
Tl			1	-0.001	ug/l	-160.72	123.33	4.695E-05	Pulse	0.50	3
Sn			1	0.367	ug/l	13.92	1,198.94	8.103E-04	Pulse	0.30	3
Sr			1	66.471	ug/l	0.72	250,374.28	1.692E-01	Pulse	0.50	3
[Pb]			1	0.218	ug/l	2.04	1,575.41	6.000E-04	Pulse	0.50	3
Ca			1	24541.594	ug/l	0.13	595,489.75	2.215E-01	Pulse	0.50	3
Ti			1	2.330	ug/l	12.22	390.68	1.209E-03	Pulse	0.50	3
Na			1	2461.437	ug/l	0.46	2,655,309.75	8.222E+00	Pulse	1.00	3
Mg			1	492.069	ug/l	0.46	260,706.07	8.072E-01	Pulse	1.00	3
K			1	130.934	ug/l	3.46	167,799.38	5.196E-01	Pulse	1.00	3
V			1	3.667	ug/l	1.69	18,708.30	5.793E-02	Pulse	0.50	3
Mn			1	2.015	ug/l	1.63	7,460.79	4.301E-02	Pulse	0.50	3
Fe			1	1848.861	ug/l	0.50	8,971,874.00	5.173E+01	Analog	0.50	3
Co			1	0.131	ug/l	4.97	1,183.38	6.822E-03	Pulse	0.50	3
Ni			1	0.600	ug/l	3.63	1,858.10	1.071E-02	Pulse	0.50	3
Cu			1	0.748	ug/l	2.38	11,588.85	6.681E-02	Pulse	0.50	3
Zn			1	5.318	ug/l	1.48	8,465.20	3.303E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	46.47	8.67	3.382E-05	Pulse	0.50	3
Al			1	158.713	ug/l	1.24	37,416.49	1.158E-01	Pulse	1.00	3
Se			1	0.373	ug/l	16.37	56.78	2.215E-04	Pulse	3.00	3
Sb			1	0.129	ug/l	12.23	577.34	2.252E-03	Pulse	1.00	3
Se			1	0.560	ug/l	29.37	53.33	2.081E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,625,463.83	0.76	92.1	Pulse	0.50	3
1	Sc		322,975.33	0.99	92.3	Pulse	0.30	3
1	Ge		173,446.76	1.21	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,479,712.96	1.66	91.6	Pulse	0.30	3
1	Tb		3,638,589.50	1.07	92.2	Pulse	0.50	3
1	Lu		2,688,899.92	0.84	92.0	Pulse	0.50	3
1	Ge		256,301.35	0.25	92.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,436.72	3.27	99.1	Pulse	0.30	3

Quantitation Report

File Name 090SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:52
Sample Name FA98679-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.012	ug/l	1.94	21,679.39	1.258E-01	Pulse	0.50	3
As			1	0.424	ug/l	12.81	379.34	2.201E-03	Pulse	1.00	3
Mo			1	1.192	ug/l	5.91	3,261.63	1.287E-02	Pulse	0.50	3
Pb			1	0.003	ug/l	81.71	827.69	3.158E-04	Pulse	1.00	3
Be			1	0.009	ug/l	212.86	0.67	2.067E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	37.80	159.33	6.290E-04	Pulse	0.50	3
Ba			1	4.295	ug/l	4.37	5,053.39	3.437E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-45.50	98.67	3.764E-05	Pulse	0.50	3
Sn			1	0.335	ug/l	3.51	1,104.48	7.510E-04	Pulse	0.30	3
Sr			1	201.660	ug/l	1.00	754,184.83	5.128E-01	Pulse	0.50	3
[Pb]			1	-0.013	ug/l	-51.27	352.00	1.343E-04	Pulse	0.50	3
Ca			1	58414.625	ug/l	0.80	1,420,439.29	5.263E-01	Pulse	0.50	3
Ti			1	0.604	ug/l	18.34	106.67	3.305E-04	Pulse	0.50	3
Na			1	3510.117	ug/l	1.08	3,773,423.08	1.169E+01	Pulse	1.00	3
Mg			1	2423.796	ug/l	0.79	1,279,420.13	3.964E+00	Pulse	1.00	3
K			1	970.652	ug/l	0.35	620,377.21	1.922E+00	Pulse	1.00	3
V			1	2.320	ug/l	0.63	12,258.56	3.798E-02	Pulse	0.50	3
Mn			1	1.987	ug/l	3.41	7,314.07	4.245E-02	Pulse	0.50	3
Fe			1	46.571	ug/l	1.13	241,396.33	1.401E+00	Pulse	0.50	3
Co			1	0.124	ug/l	2.12	1,108.71	6.435E-03	Pulse	0.50	3
Ni			1	0.176	ug/l	15.63	876.69	5.088E-03	Pulse	0.50	3
Cu			1	0.380	ug/l	7.52	9,320.27	5.410E-02	Pulse	0.50	3
Zn			1	5.543	ug/l	2.18	8,611.26	3.398E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-748.14	3.33	1.313E-05	Pulse	0.50	3
Al			1	9.161	ug/l	6.70	3,649.68	1.131E-02	Pulse	1.00	3
Se			1	1.047	ug/l	14.40	94.78	3.741E-04	Pulse	3.00	3
Sb			1	0.141	ug/l	4.64	613.68	2.422E-03	Pulse	1.00	3
Se			1	0.876	ug/l	26.90	61.22	2.417E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,620,817.83	0.34	92.0	Pulse	0.50	3
1	Sc		322,785.27	0.09	92.2	Pulse	0.30	3
1	Ge		172,297.94	0.32	91.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,470,706.99	1.34	91.1	Pulse	0.30	3
1	Tb		3,629,332.92	0.43	91.9	Pulse	0.50	3
1	Lu		2,698,949.00	0.98	92.4	Pulse	0.50	3
1	Ge		253,413.05	0.61	90.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,393.39	0.86	96.1	Pulse	0.30	3

Quantitation Report

File Name	091SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:56
Sample Name	FA98679-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.817	ug/l	1.78	26,612.15	1.528E-01	Pulse	0.50	3
As			1	0.769	ug/l	9.38	639.34	3.674E-03	Pulse	1.00	3
Mo			1	0.667	ug/l	5.11	1,898.77	7.419E-03	Pulse	0.50	3
Pb			1	0.304	ug/l	1.76	4,209.53	1.589E-03	Pulse	1.00	3
Be			1	0.012	ug/l	145.01	0.83	2.562E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	11.63	215.33	8.414E-04	Pulse	0.50	3
Ba			1	1.679	ug/l	4.82	2,034.13	1.356E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-37.28	109.33	4.125E-05	Pulse	0.50	3
Sn			1	0.315	ug/l	4.96	1,072.26	7.149E-04	Pulse	0.30	3
Sr			1	94.708	ug/l	0.28	361,521.58	2.410E-01	Pulse	0.50	3
[Pb]			1	0.306	ug/l	2.68	2,060.14	7.775E-04	Pulse	0.50	3
Ca			1	30532.057	ug/l	0.17	752,536.25	2.754E-01	Pulse	0.50	3
Ti			1	12.267	ug/l	13.10	2,040.20	6.267E-03	Pulse	0.50	3
Na			1	2882.470	ug/l	0.66	3,126,748.75	9.614E+00	Pulse	1.00	3
Mg			1	787.740	ug/l	1.01	419,659.14	1.290E+00	Pulse	1.00	3
K			1	195.279	ug/l	3.09	203,912.61	6.270E-01	Pulse	1.00	3
V			1	3.162	ug/l	0.65	16,405.58	5.044E-02	Pulse	0.50	3
Mn			1	1.211	ug/l	1.24	4,685.92	2.691E-02	Pulse	0.50	3
Fe			1	584.307	ug/l	0.75	2,858,629.33	1.642E+01	Pulse	0.50	3
Co			1	0.164	ug/l	2.48	1,470.73	8.448E-03	Pulse	0.50	3
Ni			1	0.761	ug/l	9.97	2,235.47	1.284E-02	Pulse	0.50	3
Cu			1	0.508	ug/l	8.51	10,190.72	5.852E-02	Pulse	0.50	3
Zn			1	4.254	ug/l	3.68	7,294.72	2.850E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	86.71	10.67	4.161E-05	Pulse	0.50	3
Al			1	623.428	ug/l	1.16	143,323.48	4.407E-01	Pulse	1.00	3
Se			1	0.179	ug/l	89.48	45.45	1.777E-04	Pulse	3.00	3
Sb			1	0.074	ug/l	11.06	369.00	1.442E-03	Pulse	1.00	3
Se			1	0.435	ug/l	26.37	49.89	1.949E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,649,690.25	0.49	93.0	Pulse	0.50	3
1	Sc		325,242.76	1.42	92.9	Pulse	0.30	3
1	Ge		174,118.60	0.93	92.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,500,148.48	0.50	92.9	Pulse	0.30	3
1	Tb		3,684,181.33	0.63	93.3	Pulse	0.50	3
1	Lu		2,732,761.00	0.73	93.5	Pulse	0.50	3
1	Ge		255,921.74	0.83	91.8	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,363.39	7.46	94.0	Pulse	0.30	3

Quantitation Report

File Name	092CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:00
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.856	ug/l	1.72	635,573.73	3.437E+00	Pulse	0.50	3
As			1	50.111	ug/l	1.23	79,309.29	4.288E-01	Pulse	1.00	3
Mo			1	50.201	ug/l	1.40	284,193.87	1.044E+00	Pulse	0.50	3
Pb			1	50.050	ug/l	0.73	1,172,847.59	4.226E-01	Pulse	1.00	3
Be			1	50.607	ug/l	1.92	4,487.83	1.303E-02	Pulse	2.00	3
Ag			1	49.440	ug/l	0.89	896,208.48	3.292E+00	Pulse	0.50	3
Ba			1	50.068	ug/l	0.98	125,991.18	7.968E-02	Pulse	0.50	3
Tl			1	50.993	ug/l	0.39	1,691,771.83	6.095E-01	Pulse	0.50	3
Sn			1	49.057	ug/l	1.29	283,855.83	1.795E-01	Pulse	0.30	3
Sr			1	49.859	ug/l	1.01	401,211.18	2.537E-01	Pulse	0.50	3
[Pb]			1	50.056	ug/l	1.05	559,954.63	2.018E-01	Pulse	0.50	3
Ca			1	5131.174	ug/l	0.81	270,692.03	9.295E-02	Pulse	0.50	3
Ti			1	50.788	ug/l	2.41	17,810.12	5.173E-02	Pulse	0.50	3
Na			1	5211.111	ug/l	0.77	11,897,803.33	3.455E+01	Analog	1.00	3
Mg			1	5229.352	ug/l	0.79	5,885,645.50	1.709E+01	Analog	1.00	3
K			1	5189.331	ug/l	0.94	6,071,766.00	1.763E+01	Analog	1.00	3
V			1	49.804	ug/l	1.75	509,093.27	1.479E+00	Pulse	0.50	3
Mn			1	51.093	ug/l	1.57	378,658.62	2.047E+00	Pulse	0.50	3
Fe			1	5186.587	ug/l	2.02	53,589,834.67	2.898E+02	Analog	0.50	3
Co			1	51.150	ug/l	1.18	936,411.04	5.063E+00	Pulse	0.50	3
Ni			1	51.315	ug/l	0.98	252,152.31	1.363E+00	Pulse	0.50	3
Cu			1	51.286	ug/l	0.90	662,849.85	3.584E+00	Pulse	0.50	3
Zn			1	51.047	ug/l	1.19	121,021.39	4.445E-01	Pulse	1.00	3
Cd			1	50.780	ug/l	1.19	140,636.13	5.166E-01	Pulse	0.50	3
Al			1	5162.776	ug/l	1.53	2,486,906.17	7.223E+00	Pulse	1.00	3
Se			1	50.656	ug/l	2.45	6,280.37	2.307E-02	Pulse	3.00	3
Sb			1	50.256	ug/l	1.47	402,799.90	1.480E+00	Pulse	1.00	3
Se			1	51.081	ug/l	1.85	2,988.13	1.098E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,775,427.33	0.25	97.4	Pulse	0.50	3
1	Sc		344,342.81	0.72	98.4	Pulse	0.30	3
1	Ge		184,952.03	0.46	97.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,581,337.37	0.51	97.9	Pulse	0.30	3
1	Tb		3,887,566.67	0.70	98.5	Pulse	0.50	3
1	Lu		2,912,367.33	0.51	99.7	Pulse	0.50	3
1	Ge		272,261.64	0.89	97.7	Pulse	0.30	3
1	Te		9.33	86.60	1400.0	Pulse	0.50	3
1	Li		1,361.17	2.45	93.9	Pulse	0.30	3

Quantitation Report

File Name	093_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:03
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.981	ug/l	0.33	1,228,274.00	6.732E+00	Pulse	0.50	3
As			1	98.584	ug/l	0.11	153,849.32	8.433E-01	Pulse	1.00	3
Mo			1	98.791	ug/l	1.06	552,534.65	2.054E+00	Pulse	0.50	3
Pb			1	99.103	ug/l	0.52	2,284,216.08	8.364E-01	Pulse	1.00	3
Be			1	99.163	ug/l	1.27	8,686.02	2.554E-02	Pulse	2.00	3
Ag			1	96.340	ug/l	1.22	1,725,536.96	6.414E+00	Pulse	0.50	3
Ba			1	98.769	ug/l	1.21	245,677.09	1.572E-01	Pulse	0.50	3
Tl			1	100.713	ug/l	0.45	3,287,425.42	1.204E+00	Pulse	0.50	3
Sn			1	98.333	ug/l	0.61	562,268.09	3.597E-01	Pulse	0.30	3
Sr			1	98.980	ug/l	0.71	786,985.15	5.034E-01	Pulse	0.50	3
[Pb]			1	98.660	ug/l	0.82	1,085,518.34	3.975E-01	Pulse	0.50	3
Ca			1	10001.382	ug/l	0.55	523,689.04	1.806E-01	Pulse	0.50	3
Ti			1	98.712	ug/l	1.46	34,184.42	1.005E-01	Pulse	0.50	3
Na			1	10189.065	ug/l	1.51	22,950,830.00	6.748E+01	Analog	1.00	3
Mg			1	10217.337	ug/l	1.62	11,356,820.67	3.339E+01	Analog	1.00	3
K			1	10115.870	ug/l	1.02	11,593,969.00	3.409E+01	Analog	1.00	3
V			1	97.813	ug/l	1.46	986,389.42	2.900E+00	Pulse	0.50	3
Mn			1	100.505	ug/l	0.42	734,335.27	4.025E+00	Pulse	0.50	3
Fe			1	10188.204	ug/l	0.11	103,831,029.33	5.691E+02	Analog	0.50	3
Co			1	99.826	ug/l	0.29	1,802,772.71	9.881E+00	Pulse	0.50	3
Ni			1	100.041	ug/l	0.19	484,462.51	2.655E+00	Pulse	0.50	3
Cu			1	100.072	ug/l	0.39	1,268,800.29	6.954E+00	Pulse	0.50	3
Zn			1	99.824	ug/l	1.04	231,185.25	8.593E-01	Pulse	1.00	3
Cd			1	98.980	ug/l	0.91	270,882.35	1.007E+00	Pulse	0.50	3
Al			1	10125.989	ug/l	1.26	4,816,198.17	1.416E+01	Mix	1.00	3
Se			1	99.900	ug/l	1.16	12,204.67	4.536E-02	Pulse	3.00	3
Sb			1	98.941	ug/l	1.17	783,541.64	2.913E+00	Pulse	1.00	3
Se			1	99.991	ug/l	1.36	5,742.20	2.134E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,730,821.58	0.59	95.8	Pulse	0.50	3
1	Sc		340,144.66	1.63	97.2	Pulse	0.30	3
1	Ge		182,447.86	0.44	96.5	Pulse	0.30	3
1	In		1,563,259.38	0.22	96.8	Pulse	0.30	3
1	Tb		3,863,286.00	0.65	97.9	Pulse	0.50	3
1	Lu		2,899,555.67	0.21	99.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,051.37	1.44	96.5	Pulse	0.30	3
1	Te		7.33	56.77	1100.0	Pulse	0.50	3
1	Li		1,397.84	5.52	96.4	Pulse	0.30	3

Quantitation Report

File Name	094_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:07
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.056	ug/l	17.61	5,139.36	2.859E-02	Pulse	0.50	3
As			1	0.022	ug/l	34.87	104.00	5.788E-04	Pulse	1.00	3
Mo			1	0.090	ug/l	23.18	621.35	2.350E-03	Pulse	0.50	3
Pb			1	0.012	ug/l	34.67	1,128.04	4.054E-04	Pulse	1.00	3
Be			1	0.013	ug/l	147.01	1.50	4.426E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	16.83	308.00	1.163E-03	Pulse	0.50	3
Ba			1	0.002	ug/l	176.00	37.33	2.390E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	13.05	568.68	2.044E-04	Pulse	0.50	3
Sn			1	0.122	ug/l	25.44	914.47	5.846E-04	Pulse	0.30	3
Sr			1	0.001	ug/l	434.22	424.68	2.716E-04	Pulse	0.50	3
[Pb]			1	0.005	ug/l	72.38	502.68	1.806E-04	Pulse	0.50	3
Ca			1	-9.954	ug/l	-9.24	1,152.04	4.063E-04	Pulse	0.50	3
Ti			1	0.012	ug/l	82.00	12.00	3.549E-05	Pulse	0.50	3
Na			1	-1.088	ug/l	-43.27	24,572.02	7.261E-02	Pulse	1.00	3
Mg			1	0.502	ug/l	24.17	1,621.07	4.791E-03	Pulse	1.00	3
K			1	-2.144	ug/l	-74.38	99,422.57	2.938E-01	Pulse	1.00	3
V			1	0.019	ug/l	47.87	1,417.39	4.187E-03	Pulse	0.50	3
Mn			1	-0.015	ug/l	-32.63	375.34	2.089E-03	Pulse	0.50	3
Fe			1	0.995	ug/l	16.20	28,062.27	1.561E-01	Pulse	0.50	3
Co			1	0.009	ug/l	22.11	214.00	1.190E-03	Pulse	0.50	3
Ni			1	-0.013	ug/l	-39.97	432.68	2.407E-03	Pulse	0.50	3
Cu			1	-0.086	ug/l	-24.36	6,293.05	3.501E-02	Pulse	0.50	3
Zn			1	-0.715	ug/l	-3.02	1,147.04	4.333E-03	Pulse	1.00	3
Cd			1	0.012	ug/l	58.06	35.33	1.338E-04	Pulse	0.50	3
Al			1	-1.546	ug/l	-7.04	928.02	2.742E-03	Pulse	1.00	3
Se			1	0.031	ug/l	106.87	40.00	1.512E-04	Pulse	3.00	3
Sb			1	0.034	ug/l	23.78	356.33	1.348E-03	Pulse	1.00	3
Se			1	-0.018	ug/l	-489.62	38.33	1.449E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,783,100.83	0.20	97.7	Pulse	0.50	3
1	Sc		338,466.88	0.66	96.7	Pulse	0.30	3

Quantitation Report

1	Ge		179,769.66	0.81	95.1	Pulse	0.30	3
1	In		1,563,786.67	0.74	96.8	Pulse	0.30	3
1	Tb		3,807,927.67	0.30	96.5	Pulse	0.50	3
1	Lu		2,835,417.50	0.51	97.0	Pulse	0.50	3
1	Ge		264,677.93	0.79	95.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,482.29	1.06	102.2	Pulse	0.30	3

Quantitation Report

File Name 095SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:11
Sample Name FA98679-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.123	ug/l	1.35	21,869.60	1.296E-01	Pulse	0.50	3
As			1	0.498	ug/l	10.50	424.67	2.515E-03	Pulse	1.00	3
Mo			1	1.377	ug/l	2.08	3,679.71	1.479E-02	Pulse	0.50	3
Pb			1	0.025	ug/l	37.23	1,065.37	4.100E-04	Pulse	1.00	3
Be			1	0.030	ug/l	110.70	1.50	4.757E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	12.52	283.33	1.139E-03	Pulse	0.50	3
Ba			1	4.418	ug/l	1.23	5,184.76	3.535E-03	Pulse	0.50	3
Tl			1	0.009	ug/l	48.00	266.00	1.024E-04	Pulse	0.50	3
Sn			1	0.543	ug/l	19.66	1,662.31	1.133E-03	Pulse	0.30	3
Sr			1	206.948	ug/l	1.29	771,869.02	5.263E-01	Pulse	0.50	3
[Pb]			1	0.018	ug/l	39.68	510.01	1.962E-04	Pulse	0.50	3
Ca			1	59721.183	ug/l	1.37	1,440,443.37	5.381E-01	Pulse	0.50	3
Ti			1	0.912	ug/l	18.53	154.00	4.868E-04	Pulse	0.50	3
Na			1	3624.402	ug/l	0.06	3,817,903.42	1.207E+01	Pulse	1.00	3
Mg			1	2526.251	ug/l	0.66	1,306,912.50	4.131E+00	Pulse	1.00	3
K			1	1011.107	ug/l	0.48	629,382.92	1.990E+00	Pulse	1.00	3
V			1	2.151	ug/l	0.68	11,224.58	3.548E-02	Pulse	0.50	3
Mn			1	2.043	ug/l	2.42	7,353.42	4.356E-02	Pulse	0.50	3
Fe			1	32.873	ug/l	0.45	171,924.51	1.019E+00	Pulse	0.50	3
Co			1	0.135	ug/l	2.12	1,183.37	7.011E-03	Pulse	0.50	3
Ni			1	0.165	ug/l	14.87	834.69	4.943E-03	Pulse	0.50	3
Cu			1	0.577	ug/l	1.83	10,277.43	6.088E-02	Pulse	0.50	3
Zn			1	3.402	ug/l	1.52	6,190.34	2.488E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	43.30	16.00	6.438E-05	Pulse	0.50	3
Al			1	13.089	ug/l	16.45	4,444.02	1.405E-02	Pulse	1.00	3
Se			1	1.025	ug/l	15.35	91.89	3.692E-04	Pulse	3.00	3
Sb			1	0.234	ug/l	6.28	943.36	3.792E-03	Pulse	1.00	3
Se			1	1.311	ug/l	37.62	71.56	2.877E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,599,834.92	0.65	91.2	Pulse	0.50	3
1	Sc		316,357.60	0.89	90.4	Pulse	0.30	3
1	Ge		168,796.03	0.92	89.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,466,638.17	0.64	90.8	Pulse	0.30	3
1	Tb		3,599,445.92	0.86	91.2	Pulse	0.50	3
1	Lu		2,676,877.58	0.55	91.6	Pulse	0.50	3
1	Ge		248,812.58	0.54	89.3	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,410.06	7.61	97.2	Pulse	0.30	3

Quantitation Report

File Name 096SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:15
Sample Name FA98679-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.615	ug/l	0.49	24,946.63	1.461E-01	Pulse	0.50	3
As			1	7.248	ug/l	1.59	5,359.09	3.137E-02	Pulse	1.00	3
Mo			1	1.528	ug/l	2.55	4,109.13	1.637E-02	Pulse	0.50	3
Pb			1	0.371	ug/l	0.51	4,858.03	1.869E-03	Pulse	1.00	3
Be			1	0.034	ug/l	105.73	1.67	5.271E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	30.03	234.00	9.326E-04	Pulse	0.50	3
Ba			1	4.834	ug/l	3.70	5,606.89	3.866E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	44.09	193.33	7.441E-05	Pulse	0.50	3
Sn			1	0.428	ug/l	5.13	1,335.61	9.207E-04	Pulse	0.30	3
Sr			1	65.547	ug/l	0.94	242,049.20	1.669E-01	Pulse	0.50	3
[Pb]			1	0.371	ug/l	1.63	2,361.51	9.085E-04	Pulse	0.50	3
Ca			1	24441.768	ug/l	0.79	585,488.44	2.206E-01	Pulse	0.50	3
Ti			1	4.769	ug/l	18.48	776.08	2.450E-03	Pulse	0.50	3
Na			1	2520.826	ug/l	0.10	2,665,308.42	8.418E+00	Pulse	1.00	3
Mg			1	498.983	ug/l	0.18	259,156.85	8.185E-01	Pulse	1.00	3
K			1	164.885	ug/l	1.17	182,464.47	5.763E-01	Pulse	1.00	3
V			1	5.126	ug/l	0.79	25,180.23	7.953E-02	Pulse	0.50	3
Mn			1	3.115	ug/l	0.62	11,105.86	6.502E-02	Pulse	0.50	3
Fe			1	2770.410	ug/l	0.50	13,231,270.67	7.746E+01	Analog	0.50	3
Co			1	0.159	ug/l	3.37	1,398.05	8.184E-03	Pulse	0.50	3
Ni			1	0.627	ug/l	6.77	1,890.77	1.107E-02	Pulse	0.50	3
Cu			1	1.156	ug/l	4.60	13,816.98	8.089E-02	Pulse	0.50	3
Zn			1	7.552	ug/l	2.24	10,675.29	4.252E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	32.98	18.67	7.432E-05	Pulse	0.50	3
Al			1	256.459	ug/l	0.80	58,312.35	1.842E-01	Pulse	1.00	3
Se			1	0.315	ug/l	14.69	52.33	2.084E-04	Pulse	3.00	3
Sb			1	0.167	ug/l	2.99	707.02	2.817E-03	Pulse	1.00	3
Se			1	0.529	ug/l	25.63	51.44	2.049E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,599,615.75	0.76	91.2	Pulse	0.50	3
1	Sc		316,622.10	0.34	90.5	Pulse	0.30	3
1	Ge		170,804.55	0.71	90.3	Pulse	0.30	3
1	In		1,450,556.33	0.72	89.8	Pulse	0.30	3
1	Tb		3,587,723.83	0.73	90.9	Pulse	0.50	3
1	Lu		2,654,455.00	0.49	90.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,052.06	0.67	90.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,343.39	4.64	92.6	Pulse	0.30	3

Quantitation Report

File Name 097SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:19
Sample Name FA98679-8
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.937	ug/l	0.51	20,678.30	1.233E-01	Pulse	0.50	3
As			1	0.201	ug/l	8.84	209.33	1.248E-03	Pulse	1.00	3
Mo			1	0.006	ug/l	336.38	134.00	5.464E-04	Pulse	0.50	3
Pb			1	0.042	ug/l	2.41	1,244.05	4.825E-04	Pulse	1.00	3
Be			1	0.005	ug/l	248.64	0.50	1.592E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	48.26	187.33	7.621E-04	Pulse	0.50	3
Ba			1	0.121	ug/l	26.96	168.67	1.167E-04	Pulse	0.50	3
Tl			1	-0.006	ug/l	-11.39	44.67	1.730E-05	Pulse	0.50	3
Sn			1	0.428	ug/l	6.64	1,331.17	9.207E-04	Pulse	0.30	3
Sr			1	0.109	ug/l	16.77	786.02	5.437E-04	Pulse	0.50	3
[Pb]			1	0.040	ug/l	12.88	624.01	2.420E-04	Pulse	0.50	3
Ca			1	27.831	ug/l	34.42	2,210.14	8.360E-04	Pulse	0.50	3
Ti			1	0.352	ug/l	37.36	63.33	2.018E-04	Pulse	0.50	3
Na			1	8.001	ug/l	2.85	33,407.03	1.063E-01	Pulse	1.00	3
Mg			1	2.366	ug/l	3.26	2,205.79	7.018E-03	Pulse	1.00	3
K			1	13.574	ug/l	2.93	101,719.06	3.236E-01	Pulse	1.00	3
V			1	1.080	ug/l	2.09	6,167.66	1.962E-02	Pulse	0.50	3
Mn			1	0.129	ug/l	3.04	883.36	5.269E-03	Pulse	0.50	3
Fe			1	12.367	ug/l	1.58	74,765.07	4.459E-01	Pulse	0.50	3
Co			1	0.024	ug/l	16.70	252.67	1.507E-03	Pulse	0.50	3
Ni			1	0.078	ug/l	10.18	635.34	3.790E-03	Pulse	0.50	3
Cu			1	0.432	ug/l	3.89	9,368.96	5.588E-02	Pulse	0.50	3
Zn			1	3.655	ug/l	3.67	6,376.73	2.595E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	229.01	5.33	2.176E-05	Pulse	0.50	3
Al			1	99.846	ug/l	1.27	23,478.77	7.470E-02	Pulse	1.00	3
Se			1	-0.073	ug/l	-308.65	29.55	1.206E-04	Pulse	3.00	3
Sb			1	0.043	ug/l	25.71	244.00	9.928E-04	Pulse	1.00	3
Se			1	-0.072	ug/l	-165.01	34.67	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,578,654.92	0.96	90.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		314,340.08	0.68	89.8	Pulse	0.30	3
1	Ge		167,668.23	0.33	88.7	Pulse	0.30	3
1	In		1,445,776.54	0.05	89.5	Pulse	0.30	3
1	Tb		3,578,724.08	1.04	90.7	Pulse	0.50	3
1	Lu		2,644,723.83	0.51	90.5	Pulse	0.50	3
1	Ge		245,728.44	1.38	88.2	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,427.84	4.24	98.5	Pulse	0.30	3

Quantitation Report

File Name 098SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:22
Sample Name FA98819-1B
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.952	ug/l	1.12	20,772.39	1.238E-01	Pulse	0.50	3
As			1	8.828	ug/l	2.40	6,396.74	3.813E-02	Pulse	1.00	3
Mo			1	0.171	ug/l	13.22	558.01	2.264E-03	Pulse	0.50	3
Pb			1	0.092	ug/l	1.39	1,757.76	6.909E-04	Pulse	1.00	3
Be			1	0.038	ug/l	67.65	1.83	5.848E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	4.51	170.67	6.921E-04	Pulse	0.50	3
Ba			1	16.160	ug/l	3.12	18,494.81	1.288E-02	Pulse	0.50	3
Tl			1	-0.004	ug/l	-32.51	66.00	2.596E-05	Pulse	0.50	3
Sn			1	0.359	ug/l	25.62	1,143.38	7.953E-04	Pulse	0.30	3
Sr			1	285.929	ug/l	0.44	1,044,288.79	7.270E-01	Pulse	0.50	3
[Pb]			1	0.083	ug/l	12.90	835.36	3.283E-04	Pulse	0.50	3
Ca			1	38570.372	ug/l	0.07	915,927.06	3.477E-01	Pulse	0.50	3
Ti			1	0.857	ug/l	17.65	144.00	4.592E-04	Pulse	0.50	3
Na			1	22587.889	ug/l	0.57	23,450,230.67	7.479E+01	Analog	1.00	3
Mg			1	5335.955	ug/l	0.75	2,734,749.50	8.722E+00	Pulse	1.00	3
K			1	7040.069	ug/l	0.83	3,780,528.67	1.206E+01	Pulse	1.00	3
V			1	1.036	ug/l	2.64	5,945.59	1.896E-02	Pulse	0.50	3
Mn			1	11.610	ug/l	1.30	39,426.46	2.350E-01	Pulse	0.50	3
Fe			1	233.310	ug/l	1.53	1,109,943.37	6.616E+00	Pulse	0.50	3
Co			1	0.433	ug/l	3.76	3,644.36	2.172E-02	Pulse	0.50	3
Ni			1	5.447	ug/l	2.86	12,578.10	7.497E-02	Pulse	0.50	3
Cu			1	16.321	ug/l	1.06	101,455.86	6.047E-01	Pulse	0.50	3
Zn			1	16.783	ug/l	2.58	20,162.53	8.178E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-268.80	2.67	1.084E-05	Pulse	0.50	3
Al			1	-2.477	ug/l	-0.86	994.36	3.171E-03	Pulse	1.00	3
Se			1	-0.049	ug/l	-198.49	31.11	1.262E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	15.88	332.33	1.348E-03	Pulse	1.00	3
Se			1	-0.072	ug/l	-295.47	34.78	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,544,112.00	0.67	89.3	Pulse	0.50	3
1	Sc		313,538.22	0.73	89.6	Pulse	0.30	3
1	Ge		167,778.59	0.15	88.7	Pulse	0.30	3
1	In		1,436,418.93	0.79	89.0	Pulse	0.30	3
1	Tb		3,568,403.17	1.52	90.4	Pulse	0.50	3
1	Lu		2,634,073.58	1.01	90.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,570.68	0.61	88.5	Pulse	0.30	3
1	Te		2.67	86.60	400.0	Pulse	0.50	3
1	Li		1,356.72	6.27	93.6	Pulse	0.30	3

Quantitation Report

File Name 099SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:26
Sample Name FA98820-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.009	ug/l	1.62	20,947.27	1.257E-01	Pulse	0.50	3
As			1	1488.689	ug/l	0.56	1,060,423.54	6.364E+00	Pulse	1.00	3
Mo			1	1.335	ug/l	3.69	3,461.00	1.436E-02	Pulse	0.50	3
Pb			1	0.005	ug/l	141.18	814.69	3.251E-04	Pulse	1.00	3
Be			1	0.043	ug/l	87.96	2.00	6.483E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	6.74	167.33	6.941E-04	Pulse	0.50	3
Ba			1	52.234	ug/l	0.74	57,506.89	4.157E-02	Pulse	0.50	3
Tl			1	-0.001	ug/l	-195.19	112.67	4.487E-05	Pulse	0.50	3
Sn			1	0.422	ug/l	6.94	1,261.16	9.114E-04	Pulse	0.30	3
Sr			1	393.903	ug/l	0.45	1,385,257.16	1.001E+00	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-94.72	395.34	1.577E-04	Pulse	0.50	3
Ca			1	47978.497	ug/l	0.28	1,127,894.79	4.324E-01	Pulse	0.50	3
Ti			1	1.429	ug/l	13.34	231.33	7.505E-04	Pulse	0.50	3
Na			1	14076.047	ug/l	0.49	14,372,971.00	4.664E+01	Analog	1.00	3
Mg			1	6943.660	ug/l	0.56	3,497,594.17	1.135E+01	Pulse	1.00	3
K			1	8487.210	ug/l	0.55	4,460,744.00	1.447E+01	Pulse	1.00	3
V			1	1.098	ug/l	4.56	6,130.32	1.989E-02	Pulse	0.50	3
Mn			1	2128.246	ug/l	0.83	7,096,210.67	4.259E+01	Analog	0.50	3
Fe			1	67721.997	ug/l	0.69	315,111,392.00	1.891E+03	Analog	0.50	3
Co			1	17.620	ug/l	0.45	145,348.36	8.723E-01	Pulse	0.50	3
Ni			1	6.526	ug/l	2.82	14,874.42	8.927E-02	Pulse	0.50	3
Cu			1	0.255	ug/l	6.08	8,293.80	4.978E-02	Pulse	0.50	3
Zn			1	14.172	ug/l	2.53	17,040.52	7.067E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	252.96	4.67	1.939E-05	Pulse	0.50	3
Al			1	4.381	ug/l	10.74	2,454.82	7.965E-03	Pulse	1.00	3
Se			1	-0.058	ug/l	-207.28	29.89	1.241E-04	Pulse	3.00	3
Sb			1	0.090	ug/l	7.25	405.67	1.682E-03	Pulse	1.00	3
Se			1	0.010	ug/l	1047.10	36.11	1.498E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,507,546.42	0.95	88.0	Pulse	0.50	3
1	Sc		308,174.10	0.39	88.1	Pulse	0.30	3
1	Ge		166,616.79	0.57	88.1	Pulse	0.30	3
1	In		1,383,275.85	1.01	85.7	Pulse	0.30	3
1	Tb		3,530,911.42	1.21	89.4	Pulse	0.50	3
1	Lu		2,608,559.50	1.80	89.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,097.16	0.49	86.5	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,417.84	9.55	97.8	Pulse	0.30	3

Quantitation Report

File Name	100SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:30
Sample Name	FA98820-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.831	ug/l	2.69	20,277.21	1.198E-01	Pulse	0.50	3
As			1	2771.926	ug/l	1.21	2,006,392.91	1.185E+01	Pulse	1.00	3
Mo			1	2.034	ug/l	5.27	5,330.11	2.162E-02	Pulse	0.50	3
Pb			1	0.008	ug/l	14.02	866.02	3.377E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1601.81	0.33	1.069E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	15.48	171.33	6.948E-04	Pulse	0.50	3
Ba			1	13.818	ug/l	1.59	15,616.09	1.101E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	61.66	140.67	5.486E-05	Pulse	0.50	3
Sn			1	0.405	ug/l	5.67	1,247.83	8.801E-04	Pulse	0.30	3
Sr			1	169.668	ug/l	1.83	611,917.17	4.315E-01	Pulse	0.50	3
[Pb]			1	-0.007	ug/l	-48.35	374.68	1.461E-04	Pulse	0.50	3
Ca			1	23966.835	ug/l	1.66	570,534.25	2.163E-01	Pulse	0.50	3
Ti			1	0.960	ug/l	27.41	160.00	5.115E-04	Pulse	0.50	3
Na			1	5981.674	ug/l	0.75	6,212,587.50	1.987E+01	Analog	1.00	3
Mg			1	2856.690	ug/l	1.25	1,460,808.58	4.671E+00	Pulse	1.00	3
K			1	3443.684	ug/l	0.65	1,892,651.50	6.052E+00	Pulse	1.00	3
V			1	0.738	ug/l	3.95	4,550.55	1.455E-02	Pulse	0.50	3
Mn			1	2320.086	ug/l	1.16	7,860,827.83	4.643E+01	Analog	0.50	3
Fe			1	38707.012	ug/l	1.53	183,027,109.33	1.081E+03	Analog	0.50	3
Co			1	12.875	ug/l	1.53	107,937.15	6.375E-01	Pulse	0.50	3
Ni			1	5.380	ug/l	1.54	12,544.09	7.408E-02	Pulse	0.50	3
Cu			1	0.220	ug/l	9.58	8,222.44	4.856E-02	Pulse	0.50	3
Zn			1	15.558	ug/l	2.22	18,880.23	7.657E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	80.56	6.00	2.432E-05	Pulse	0.50	3
Al			1	-1.003	ug/l	-19.28	1,314.05	4.202E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-3122.83	33.67	1.365E-04	Pulse	3.00	3
Sb			1	0.133	ug/l	7.33	570.68	2.314E-03	Pulse	1.00	3
Se			1	-0.060	ug/l	-198.84	35.11	1.424E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,564,599.25	0.60	90.0	Pulse	0.50	3
1	Sc		312,727.06	0.47	89.4	Pulse	0.30	3
1	Ge		169,320.36	1.03	89.5	Pulse	0.30	3
1	In		1,418,174.25	0.66	87.8	Pulse	0.30	3
1	Tb		3,561,780.67	0.83	90.2	Pulse	0.50	3
1	Lu		2,637,947.75	0.66	90.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,592.57	0.41	88.5	Pulse	0.30	3
1	Te		3.33	124.90	500.0	Pulse	0.50	3
1	Li		1,290.05	10.32	89.0	Pulse	0.30	3

Quantitation Report

File Name	101CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:34
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.752	ug/l	0.22	621,274.87	3.497E+00	Pulse	0.50	3
As			1	50.787	ug/l	0.90	77,219.52	4.346E-01	Pulse	1.00	3
Mo			1	50.432	ug/l	1.34	276,309.89	1.049E+00	Pulse	0.50	3
Pb			1	50.056	ug/l	0.77	1,156,320.92	4.226E-01	Pulse	1.00	3
Be			1	51.534	ug/l	3.87	4,400.81	1.327E-02	Pulse	2.00	3
Ag			1	50.081	ug/l	0.68	878,563.87	3.334E+00	Pulse	0.50	3
Ba			1	50.468	ug/l	0.52	123,453.94	8.031E-02	Pulse	0.50	3
Tl			1	51.175	ug/l	0.27	1,673,677.46	6.117E-01	Pulse	0.50	3
Sn			1	49.478	ug/l	1.05	278,292.89	1.810E-01	Pulse	0.30	3
Sr			1	49.842	ug/l	0.15	389,874.17	2.536E-01	Pulse	0.50	3
[Pb]			1	50.096	ug/l	0.68	552,441.77	2.019E-01	Pulse	0.50	3
Ca			1	5078.944	ug/l	1.11	263,654.58	9.201E-02	Pulse	0.50	3
Ti			1	49.287	ug/l	1.39	16,646.43	5.020E-02	Pulse	0.50	3
Na			1	5307.156	ug/l	1.07	11,669,145.00	3.519E+01	Analog	1.00	3
Mg			1	5310.219	ug/l	1.23	5,755,901.67	1.736E+01	Analog	1.00	3
K			1	5247.156	ug/l	0.28	5,911,846.17	1.783E+01	Analog	1.00	3
V			1	50.312	ug/l	1.43	495,304.09	1.494E+00	Pulse	0.50	3
Mn			1	51.586	ug/l	0.03	367,282.36	2.067E+00	Pulse	0.50	3
Fe			1	5301.383	ug/l	0.47	52,624,333.33	2.962E+02	Analog	0.50	3
Co			1	51.846	ug/l	0.54	911,854.60	5.132E+00	Pulse	0.50	3
Ni			1	52.347	ug/l	0.73	247,094.55	1.391E+00	Pulse	0.50	3
Cu			1	52.273	ug/l	0.75	648,912.06	3.652E+00	Pulse	0.50	3
Zn			1	51.649	ug/l	1.03	118,474.46	4.496E-01	Pulse	1.00	3
Cd			1	51.058	ug/l	0.74	136,853.14	5.194E-01	Pulse	0.50	3
Al			1	5217.111	ug/l	0.86	2,420,329.83	7.299E+00	Pulse	1.00	3
Se			1	50.841	ug/l	0.06	6,100.86	2.315E-02	Pulse	3.00	3
Sb			1	50.604	ug/l	1.00	392,541.68	1.490E+00	Pulse	1.00	3
Se			1	51.316	ug/l	1.32	2,905.33	1.103E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,735,995.17	0.24	96.0	Pulse	0.50	3
1	Sc		331,631.23	0.84	94.8	Pulse	0.30	3
1	Ge		177,676.22	0.58	93.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,537,151.12	0.37	95.2	Pulse	0.30	3
1	Tb		3,804,142.75	0.31	96.4	Pulse	0.50	3
1	Lu		2,865,587.50	0.16	98.1	Pulse	0.50	3
1	Ge		263,486.42	0.34	94.5	Pulse	0.30	3
1	Te		4.00	50.00	600.0	Pulse	0.50	3
1	Li		1,335.61	5.86	92.1	Pulse	0.30	3

Quantitation Report

File Name	102_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:37
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.506	ug/l	0.49	1,202,018.33	6.767E+00	Pulse	0.50	3
As			1	98.589	ug/l	0.47	149,787.82	8.433E-01	Pulse	1.00	3
Mo			1	99.842	ug/l	0.70	542,310.50	2.076E+00	Pulse	0.50	3
Pb			1	98.777	ug/l	0.68	2,236,427.75	8.337E-01	Pulse	1.00	3
Be			1	100.030	ug/l	0.88	8,547.63	2.576E-02	Pulse	2.00	3
Ag			1	97.549	ug/l	0.38	1,696,824.87	6.494E+00	Pulse	0.50	3
Ba			1	99.535	ug/l	0.94	240,491.34	1.584E-01	Pulse	0.50	3
Tl			1	100.888	ug/l	1.01	3,234,905.58	1.206E+00	Pulse	0.50	3
Sn			1	97.969	ug/l	0.23	544,157.62	3.583E-01	Pulse	0.30	3
Sr			1	99.264	ug/l	0.50	766,629.12	5.049E-01	Pulse	0.50	3
[Pb]			1	98.575	ug/l	0.53	1,065,401.29	3.972E-01	Pulse	0.50	3
Ca			1	10005.827	ug/l	0.99	511,237.85	1.807E-01	Pulse	0.50	3
Ti			1	98.599	ug/l	1.97	33,310.93	1.004E-01	Pulse	0.50	3
Na			1	10290.907	ug/l	0.36	22,613,848.00	6.816E+01	Analog	1.00	3
Mg			1	10254.506	ug/l	0.21	11,119,914.67	3.352E+01	Analog	1.00	3
K			1	10137.027	ug/l	0.61	11,333,487.00	3.416E+01	Analog	1.00	3
V			1	98.424	ug/l	0.73	968,297.94	2.918E+00	Pulse	0.50	3
Mn			1	100.376	ug/l	0.33	713,976.58	4.020E+00	Pulse	0.50	3
Fe			1	10219.084	ug/l	0.27	101,388,640.00	5.708E+02	Analog	0.50	3
Co			1	100.418	ug/l	0.76	1,765,458.21	9.940E+00	Pulse	0.50	3
Ni			1	100.656	ug/l	0.20	474,534.90	2.672E+00	Pulse	0.50	3
Cu			1	101.140	ug/l	0.30	1,248,315.37	7.028E+00	Pulse	0.50	3
Zn			1	100.799	ug/l	0.60	226,683.75	8.676E-01	Pulse	1.00	3
Cd			1	100.592	ug/l	0.61	267,366.59	1.023E+00	Pulse	0.50	3
Al			1	10122.076	ug/l	0.49	4,696,649.33	1.416E+01	Pulse	1.00	3
Se			1	99.898	ug/l	0.20	11,852.34	4.536E-02	Pulse	3.00	3
Sb			1	99.287	ug/l	0.17	763,646.75	2.923E+00	Pulse	1.00	3
Se			1	100.570	ug/l	0.84	5,608.49	2.147E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,682,701.33	1.24	94.2	Pulse	0.50	3
1	Sc		331,783.92	0.09	94.8	Pulse	0.30	3
1	Ge		177,619.70	0.60	93.9	Pulse	0.30	3
1	In		1,518,522.47	0.98	94.0	Pulse	0.30	3
1	Tb		3,769,178.83	0.80	95.5	Pulse	0.50	3
1	Lu		2,829,517.58	0.99	96.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		261,275.46	0.78	93.8	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,292.27	4.77	89.1	Pulse	0.30	3

Quantitation Report

File Name	103_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:41
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.064	ug/l	38.58	5,062.68	2.912E-02	Pulse	0.50	3
As			1	0.051	ug/l	31.69	143.33	8.242E-04	Pulse	1.00	3
Mo			1	0.095	ug/l	28.40	624.68	2.448E-03	Pulse	0.50	3
Pb			1	0.012	ug/l	70.90	1,099.37	4.043E-04	Pulse	1.00	3
Be			1	0.018	ug/l	105.77	1.83	5.567E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	21.87	321.34	1.261E-03	Pulse	0.50	3
Ba			1	0.012	ug/l	93.36	59.33	3.920E-05	Pulse	0.50	3
Tl			1	0.017	ug/l	34.66	682.02	2.508E-04	Pulse	0.50	3
Sn			1	0.114	ug/l	16.58	841.14	5.556E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	22.86	454.01	3.000E-04	Pulse	0.50	3
[Pb]			1	0.012	ug/l	101.18	570.68	2.099E-04	Pulse	0.50	3
Ca			1	-10.344	ug/l	-8.75	1,106.04	3.993E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	120.28	13.33	4.061E-05	Pulse	0.50	3
Na			1	-0.770	ug/l	-89.06	24,545.68	7.471E-02	Pulse	1.00	3
Mg			1	0.818	ug/l	67.88	1,914.10	5.823E-03	Pulse	1.00	3
K			1	-2.399	ug/l	-23.91	96,219.45	2.929E-01	Pulse	1.00	3
V			1	0.025	ug/l	28.61	1,436.73	4.374E-03	Pulse	0.50	3
Mn			1	-0.014	ug/l	-34.25	372.67	2.143E-03	Pulse	0.50	3
Fe			1	1.561	ug/l	31.45	32,659.23	1.878E-01	Pulse	0.50	3
Co			1	0.012	ug/l	27.94	264.67	1.522E-03	Pulse	0.50	3
Ni			1	-0.017	ug/l	-20.43	402.01	2.312E-03	Pulse	0.50	3
Cu			1	-0.092	ug/l	-15.74	6,022.29	3.464E-02	Pulse	0.50	3
Zn			1	-0.718	ug/l	-3.68	1,097.70	4.306E-03	Pulse	1.00	3
Cd			1	0.015	ug/l	78.47	42.00	1.652E-04	Pulse	0.50	3
Al			1	-1.206	ug/l	-38.92	1,057.03	3.216E-03	Pulse	1.00	3
Se			1	0.050	ug/l	23.45	40.78	1.599E-04	Pulse	3.00	3
Sb			1	0.034	ug/l	14.57	344.00	1.349E-03	Pulse	1.00	3
Se			1	-0.034	ug/l	-432.37	36.11	1.416E-04	Pulse	3.00	3

Quantitation Report

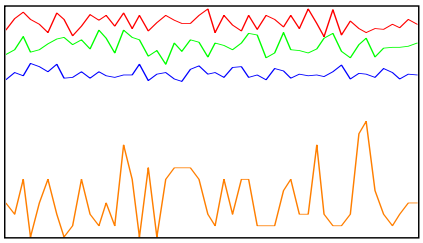
ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,719,468.92	1.14	95.4	Pulse	0.50	3
1	Sc		328,489.06	0.43	93.9	Pulse	0.30	3
1	Ge		173,848.92	0.42	91.9	Pulse	0.30	3
1	In		1,513,300.25	0.48	93.7	Pulse	0.30	3
1	Tb		3,721,545.25	0.72	94.3	Pulse	0.50	3
1	Lu		2,770,198.25	0.51	94.8	Pulse	0.50	3
1	Ge		254,979.03	0.55	91.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,303.38	4.86	89.9	Pulse	0.30	3

Tune Report

Batch Folder	D:\2022\xa091522m1.b
Acq. Date-Time	9/15/2022 8:06
Report Comment	0915
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1860	18603.27	5000.00	
89	2000	1662	16616.67	5000.00	
205	5000	3545	35449.40	5000.00	
78	20	3			

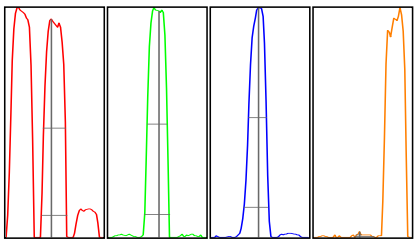
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.48	5.00	
89	4.18	5.00	
205	2.86	5.00	
78	74.94		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.20	2	
89	0.30	2	
205	0.70	2	
78	0.10	5	

Ratio	156/140	1.049	%
Ratio	70/140	3.065	%

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1846.47	58.95	58.9 - 59.1		0.65	0.766	0.900	
89	1627.02	89.05	88.9 - 89.1		0.59	0.737	0.900	

Tune Report

205	3542.32	205.00	204.9 - 205.1	0.53	0.746	0.900
78	8.25	77.95	-	0.14	0.548	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

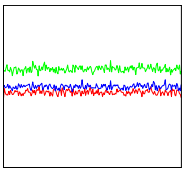
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-200.0 V	Cell Exit	-70 V
Omega Bias	-95 V	Deflect	2.2 V
Omega Lens	7.2 V	Plate Bias	-60 V

Cell Parameters

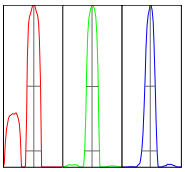
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	190 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



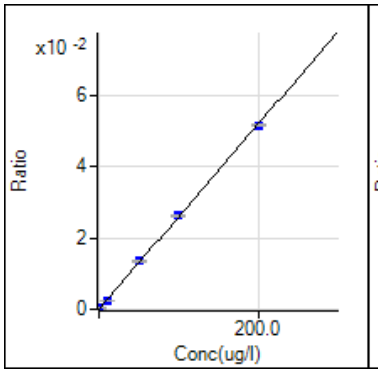
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2315.46	6067.34	4978.31
RSD%	3.1	2.8	2.7
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	0.97%	
Doubly Charged	70/140	4.15%	

Background			
Mass	7	89	205
Count	0.10	1.30	4.45

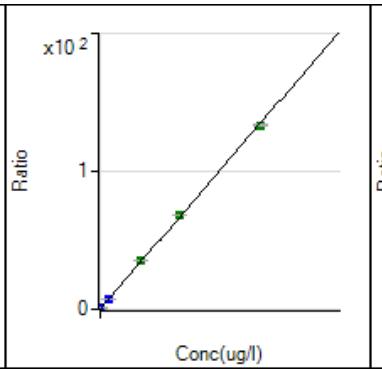


Resolution/Axis			
Mass	7	89	205
Height	2286	6045	4934
Axis	7.05	89.00	204.95
W-50%	0.68	0.59	0.52
W-10%	0.77	0.74	0.76
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

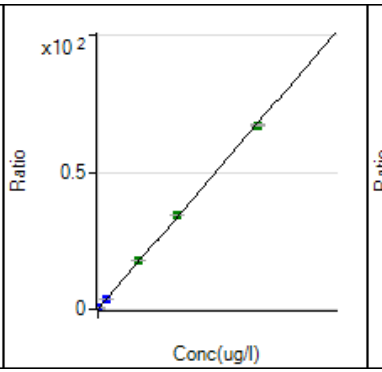
Calibration for D:\2022\xa091522m1.b\001CALB.d



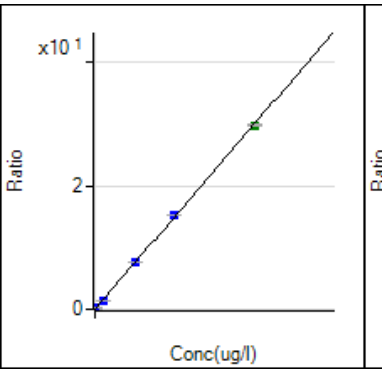
9 Be [2] / ISTD: 45 Sc
y = 2.590E-4 x + 5.438E-7
R 0.9999
DL 0.01091
BEC 0.0021



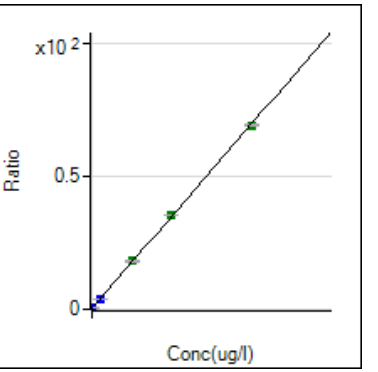
23 Na [2] / ISTD: 45 Sc
y = 6.726E-3 x + 6.802E-2
R 0.9999
DL 0.09463
BEC 10.11



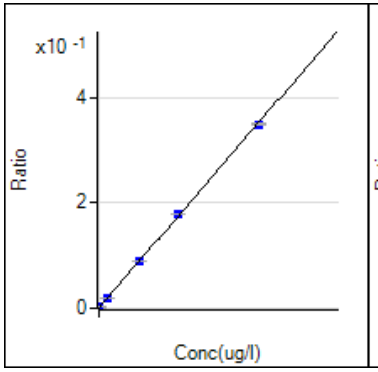
24 Mg [2] / ISTD: 45 Sc
y = 3.383E-3 x + 2.009E-3
R 0.9999
DL 0.05314
BEC 0.5939



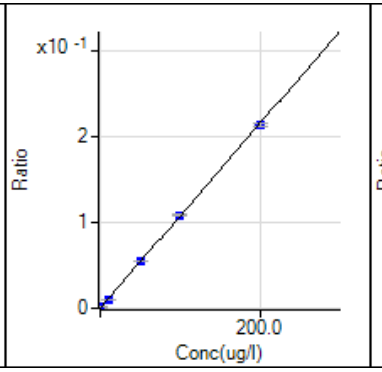
27 Al [2] / ISTD: 45 Sc
y = 1.496E-3 x + 3.275E-3
R 0.9999
DL 0.1047
BEC 2.189



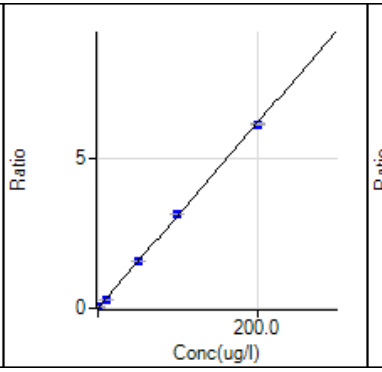
39 K [2] / ISTD: 45 Sc
y = 3.456E-3 x + 3.074E-1
R 0.9999
DL 3.603
BEC 88.96



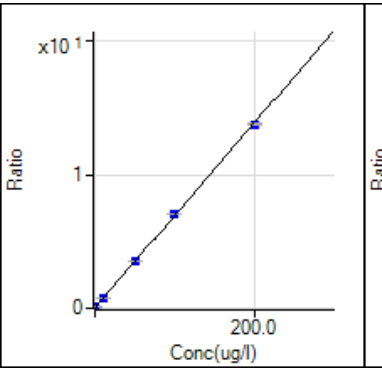
44 Ca [2] / ISTD: 175 Lu
y = 1.750E-5 x + 5.851E-4
R 0.9999
DL 3.636
BEC 33.43



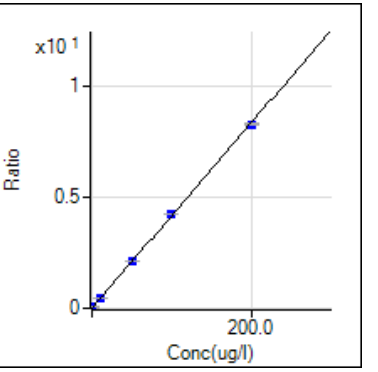
47 Ti [2] / ISTD: 45 Sc
y = 1.077E-3 x + 6.469E-6
R 1.0000
DL 0.01818
BEC 0.006006



51 V [2] / ISTD: 45 Sc
y = 3.101E-2 x + 3.265E-3
R 0.9999
DL 0.02483
BEC 0.1053

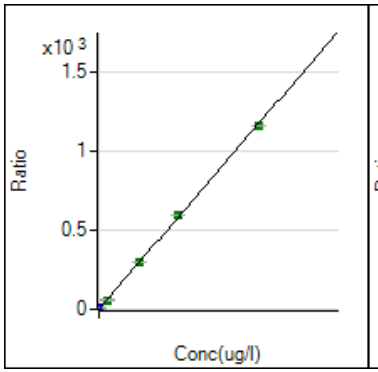


52 Cr [2] / ISTD: 72 Ge
y = 6.911E-2 x + 2.665E-2
R 0.9999
DL 0.04019
BEC 0.3856

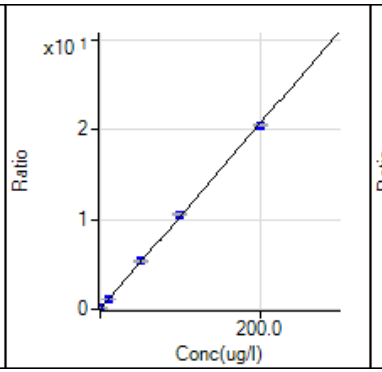


55 Mn [2] / ISTD: 72 Ge
y = 4.178E-2 x + 2.874E-3
R 0.9999
DL 0.006909
BEC 0.0688

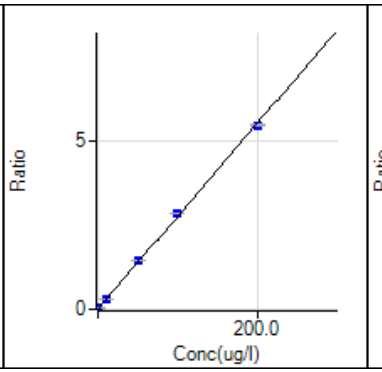
Calibration for D:\2022\xa091522m1.b\001CALB.d



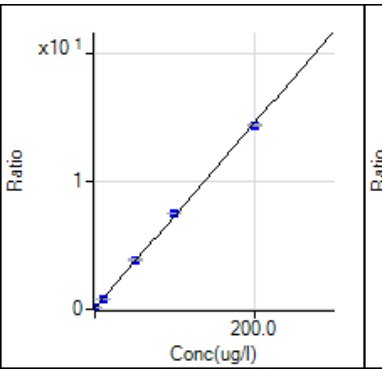
56 Fe [2] / ISTD: 72 Ge
y = 5.855E-2 x + 1.168E-1
R 0.9999
DL 0.09343
BEC 1.995



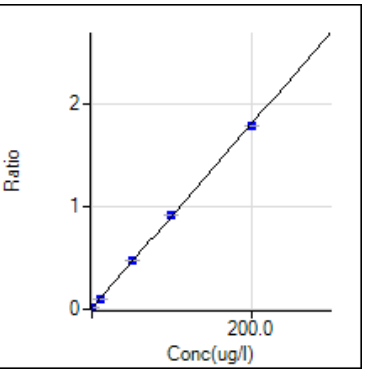
59 Co [2] / ISTD: 72 Ge
y = 1.032E-1 x + 5.097E-4
R 0.9998
DL 0.0045
BEC 0.004938



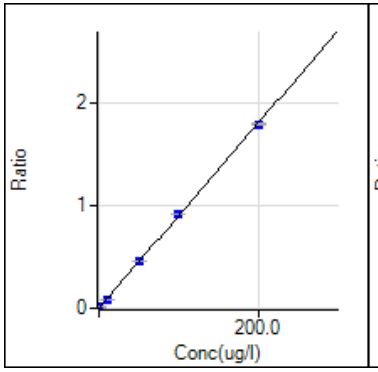
60 Ni [2] / ISTD: 72 Ge
y = 2.772E-2 x + 3.388E-3
R 0.9998
DL 0.02501
BEC 0.1222



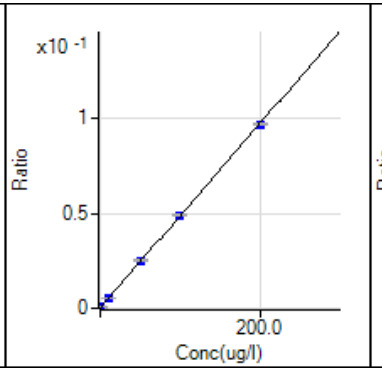
63 Cu [2] / ISTD: 72 Ge
y = 7.211E-2 x + 9.246E-2
R 0.9998
DL 0.1336
BEC 1.282



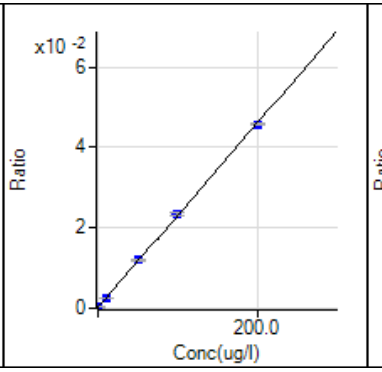
66 Zn [2] / ISTD: 74 Ge
y = 8.940E-3 x + 1.162E-2
R 0.9999
DL 0.0491
BEC 1.3



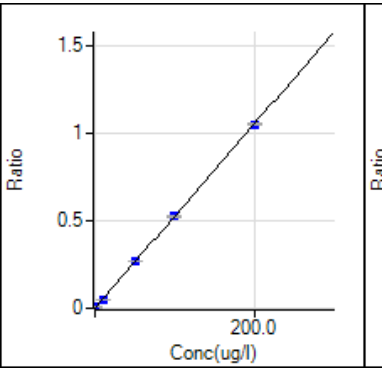
75 As [2] / ISTD: 72 Ge
y = 8.993E-3 x + 3.824E-4
R 0.9999
DL 0.02387
BEC 0.04252



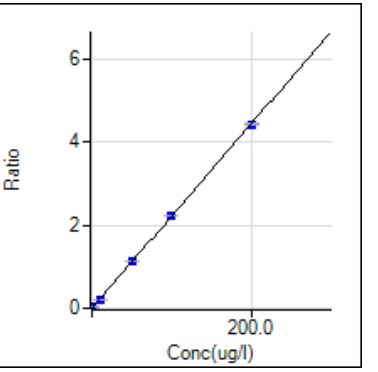
78 Se [2] / ISTD: 74 Ge
y = 4.868E-4 x + 1.375E-4
R 1.0000
DL 0.1002
BEC 0.2824



82 Se [2] / ISTD: 74 Ge
y = 2.291E-4 x + 1.759E-4
R 0.9999
DL 0.2438
BEC 0.768

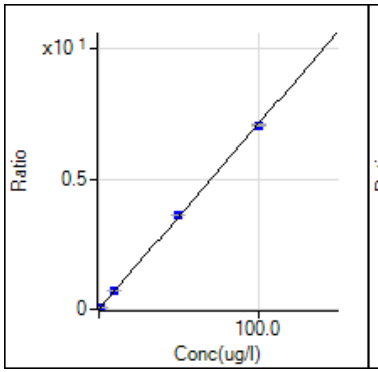


88 Sr [2] / ISTD: 115 In
y = 5.274E-3 x + 2.599E-4
R 1.0000
DL 0.005923
BEC 0.04928

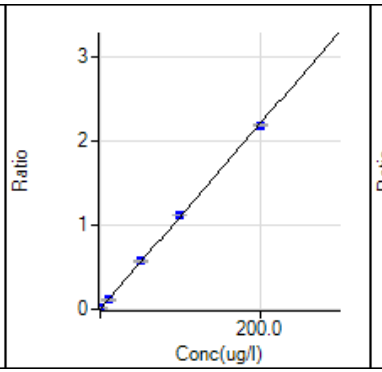


95 Mo [2] / ISTD: 74 Ge
y = 2.219E-2 x + 2.223E-4
R 1.0000
DL 0.01982
BEC 0.01002

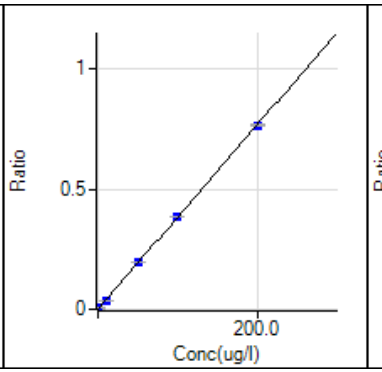
Calibration for D:\2022\xa091522m1.b\001CALB.d



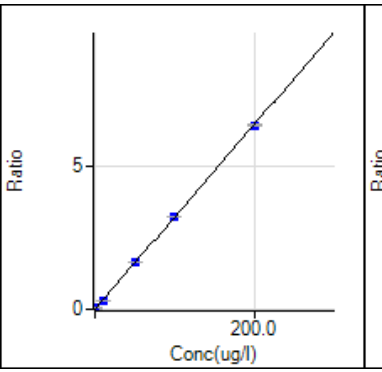
107 Ag [2] / ISTD: 74 Ge
y = 7.101E-2 x + 4.207E-4
R 0.9999
DL 0.0066
BEC 0.005924



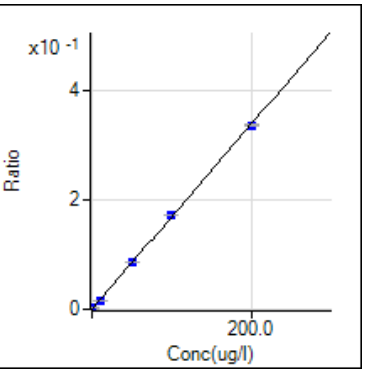
111 Cd [2] / ISTD: 74 Ge
y = 1.099E-2 x + 1.567E-5
R 0.9999
DL 3.443E-05
BEC 0.001426



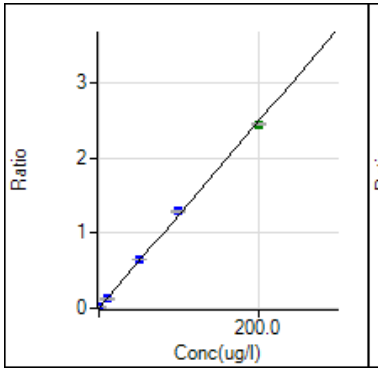
118 Sn [2] / ISTD: 115 In
y = 3.833E-3 x + 1.575E-4
R 1.0000
DL 0.001421
BEC 0.04109



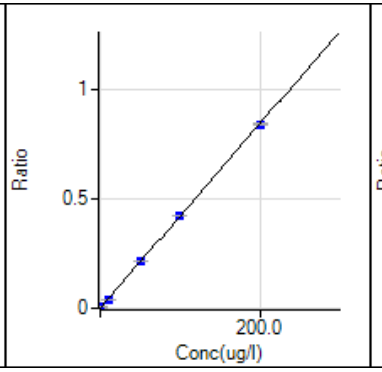
121 Sb [2] / ISTD: 74 Ge
y = 3.228E-2 x + 2.587E-4
R 1.0000
DL 0.001451
BEC 0.008015



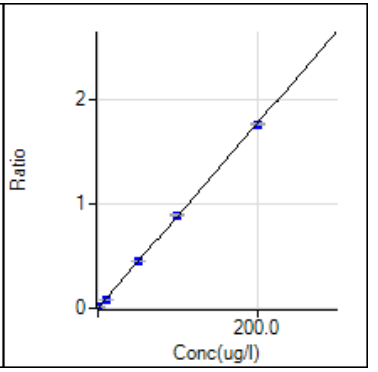
137 Ba [2] / ISTD: 115 In
y = 1.697E-3 x + 2.017E-5
R 0.9999
DL 0.01016
BEC 0.01189



205 Tl [2] / ISTD: 209 Bi
y = 1.240E-2 x + 1.289E-5
R 0.9996
DL 0.0002368
BEC 0.00104



206 [Pb] [2] / ISTD: 209 Bi
y = 4.209E-3 x + 1.196E-4
R 1.0000
DL 0.008844
BEC 0.02842



208 Pb [2] / ISTD: 209 Bi
y = 8.845E-3 x + 2.632E-4
R 1.0000
DL 0.005857
BEC 0.02975

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 9/21/2022 10:10:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0022**	**-.0027**	**-.0004**	**.0105**	**.0008**	**.0087**	**-.0010**	**-.0006**	**.0001**
Stddev	.0001	.0021	.0003	.0023	.0006	.0006	.0004	.0003	.0002
%RSD	4.987	78.50	70.80	21.85	81.91	7.459	40.70	40.56	275.4
#1	-.0021	-.0051	-.0006	.0102	.0015	.0082	-.0009	-.0009	.0000
#2	-.0022	-.0019	-.0005	.0085	.0003	.0094	-.0014	-.0005	-.0001
#3	-.0023	-.0011	-.0001	.0130	.0005	.0084	-.0006	-.0005	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0042**	**.0015**	**.0124**	**-.0037**	**-.0001**	**.0005**	**.0014**	**.0007**	**-.0003**
Stddev	.0002	.0003	.0037	.0027	.0006	.0001	.0002	.0032	.0004
%RSD	4.822	20.39	29.95	70.84	631.5	27.60	15.50	461.9	131.5
#1	.0040	.0013	.0102	-.0024	-.0004	.0006	.0014	-.0030	-.0006
#2	.0042	.0013	.0103	-.0068	.0006	.0004	.0011	.0029	.0001
#3	.0044	.0018	.0167	-.0020	-.0005	.0006	.0015	.0021	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0013**	**.0009**	**-.0001**	**.0078**	**.0001**	**.0012**	**.0018**	**.0009**	**-.0004**
Stddev	.0003	.0000	.0003	.0002	.0001	.0003	.0002	.0013	.0002
%RSD	20.46	1.476	293.7	2.552	81.13	22.13	9.851	138.3	54.30
#1	-.0013	.0009	-.0002	.0077	.0002	.0009	.0020	.0023	-.0002
#2	-.0010	.0009	-.0003	.0081	.0000	.0015	.0019	.0008	-.0006
#3	-.0015	.0009	.0002	.0078	.0001	.0012	.0016	-.0003	-.0006

Elem	Zn2062
Units	Cts/S
Avg	**.0053**
Stddev	.0001
%RSD	2.792
#1	.0055
#2	.0053
#3	.0052

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 9/21/2022 10:10:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**958.58**	**2904.5**	**20657.**	**4415.5**
Stddev	2.48	3.3	13.	56.4
%RSD	.25915	.11478	.06207	1.2771
#1	960.55	2906.0	20647.	4475.8
#2	955.79	2900.6	20671.	4406.6
#3	959.40	2906.8	20651.	4364.1

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 9/21/2022 10:15:36 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0046**	**.0391**	**.0015**	**3.632**	**.0640**	**.3964**	**.0331**	**.1626**	**.0080**
Stddev	.0003	.0013	.0000	.005	.0009	.0004	.0003	.0007	.0003
%RSD	6.954	3.359	2.957	.1427	1.375	.1130	.9022	.4003	3.889
#1	.0049	.0380	.0015	3.627	.0647	.3959	.0328	.1631	.0077
#2	.0047	.0406	.0014	3.631	.0644	.3968	.0334	.1627	.0083
#3	.0043	.0389	.0015	3.637	.0630	.3964	.0330	.1618	.0082

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0311**	**.0878**	**1.650**	**.0307**	**.2233**	**.0705**	**.0731**	**5.075**	**.0706**
Stddev	.0001	.0002	.005	.0038	.0002	.0003	.0001	.008	.0003
%RSD	.2767	.2375	.3144	12.48	.0976	.4919	.0910	.1618	.3678
#1	.0310	.0879	1.655	.0307	.2234	.0703	.0732	5.069	.0703
#2	.0311	.0876	1.650	.0268	.2230	.0704	.0730	5.084	.0708
#3	.0311	.0880	1.645	.0344	.2234	.0709	.0731	5.071	.0706

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0084**	**.0024**	**.0017**	**.0276**	**.2025**	**.0280**	**.0071**	**.0528**	**.0823**
Stddev	.0010	.0003	.0000	.0003	.0005	.0006	.0007	.0002	.0002
%RSD	11.52	12.80	2.498	.9881	.2288	2.303	9.561	.4207	.2906
#1	.0088	.0024	.0016	.0279	.2025	.0287	.0063	.0529	.0825
#2	.0073	.0027	.0017	.0275	.2020	.0279	.0073	.0526	.0820
#3	.0091	.0021	.0017	.0273	.2030	.0274	.0076	.0530	.0824

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**933.26**	**2871.4**	**20588.**	**4359.1**
Stddev	.68	8.7	25.	23.2
%RSD	.07254	.30143	.12063	.53143
#1	932.78	2862.2	20598.	4340.5
#2	934.03	2879.4	20560.	4385.0
#3	932.97	2872.5	20606.	4351.7

◀ Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 9/21/2022 10:19:23 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0183**	**.9667**	**.0502**	**4.244**	**2.971**	**1.846**	**1.599**	**.7706**	**.1924**
Stddev	.0001	.0013	.0003	.014	.004	.005	.002	.0014	.0001
%RSD	.5667	.1380	.6312	.3173	.1340	.2467	.1089	.1850	.0580
#1	.0181	.9657	.0499	4.230	2.966	1.843	1.600	.7708	.1924
#2	.0183	.9682	.0501	4.257	2.972	1.851	1.597	.7691	.1925
#3	.0183	.9662	.0505	4.246	2.974	1.844	1.601	.7719	.1923

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2541**	**1.373**	**.7916**	**.6326**	**.2113**	**1.097**	**.3374**	**2.624**	**.4191**
Stddev	.0012	.003	.0043	.0031	.0008	.003	.0008	.005	.0017
%RSD	.4857	.1788	.5426	.4888	.3576	.2634	.2295	.2053	.3962
#1	.2555	1.370	.7943	.6335	.2112	1.099	.3368	2.618	.4190
#2	.2535	1.375	.7938	.6351	.2121	1.097	.3371	2.626	.4175
#3	.2533	1.373	.7867	.6292	.2107	1.093	.3383	2.627	.4208

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4656**	**.0742**	**.0426**	**.1007**	**.1274**	**4.632**	**.6026**	**.1473**	**.2458**
Stddev	.0022	.0003	.0003	.0003	.0004	.011	.0014	.0013	.0015
%RSD	.4733	.4300	.7489	.2883	.3001	.2465	.2293	.8654	.6051
#1	.4681	.0744	.0427	.1006	.1272	4.620	.6037	.1461	.2469
#2	.4643	.0739	.0423	.1010	.1272	4.642	.6030	.1472	.2463
#3	.4643	.0744	.0429	.1005	.1278	4.633	.6011	.1486	.2441

Elem	Zn2062
Units	Cts/S
Avg	**.8894**
Stddev	.0018
%RSD	.2035
#1	.8906
#2	.8873
#3	.8902

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 10:19:23 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.18**	**2882.3**	**20657.**	**4450.0**
Stddev	1.11	6.6	87.	39.4
%RSD	.11844	.22747	.42163	.88529
#1	939.89	2883.9	20580.	4421.1
#2	941.87	2887.8	20639.	4494.9
#3	941.77	2875.1	20751.	4434.0

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 10:23:09 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0395**	**1.952**	**.1025**	**8.543**	**5.984**	**3.696**	**3.220**	**1.546**	**.3900**
Stddev	.0003	.011	.0003	.017	.027	.018	.004	.003	.0003
%RSD	.8478	.5598	.2647	.2025	.4458	.4993	.1258	.1660	.0706
#1	.0397	1.958	.1026	8.555	5.997	3.705	3.224	1.549	.3899
#2	.0398	1.940	.1027	8.523	5.953	3.675	3.218	1.546	.3898
#3	.0392	1.959	.1022	8.551	6.001	3.709	3.216	1.544	.3903

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5116**	**2.769**	**1.595**	**1.263**	**.4215**	**2.206**	**.6840**	**5.272**	**.8438**
Stddev	.0007	.006	.008	.002	.0025	.009	.0012	.029	.0015
%RSD	.1328	.2247	.4852	.1797	.6031	.3899	.1814	.5542	.1749
#1	.5110	2.772	1.594	1.266	.4210	2.205	.6854	5.278	.8454
#2	.5124	2.762	1.587	1.261	.4193	2.197	.6833	5.240	.8426
#3	.5115	2.773	1.603	1.263	.4243	2.214	.6831	5.297	.8432

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9414**	**.1490**	**.0860**	**.1973**	**.2568**	**9.334**	**1.216**	**.3020**	**.5015**
Stddev	.0015	.0002	.0002	.0005	.0006	.043	.005	.0018	.0013
%RSD	.1632	.1643	.2505	.2459	.2326	.4623	.4021	.6080	.2637
#1	.9417	.1493	.0863	.1970	.2566	9.348	1.211	.3040	.5012
#2	.9398	.1489	.0859	.1971	.2575	9.286	1.216	.3015	.5003
#3	.9428	.1488	.0859	.1979	.2563	9.369	1.220	.3004	.5029

Elem	Zn2062
Units	Cts/S
Avg	**1.780**
Stddev	.004
%RSD	.2127
#1	1.784
#2	1.780
#3	1.776

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 10:23:09 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.90**	**2863.6**	**20479.**	**4457.0**
Stddev	1.94	3.8	90.	40.4
%RSD	.20938	.13115	.43970	.90751
#1	927.89	2860.2	20520.	4462.5
#2	927.67	2862.9	20541.	4494.3
#3	931.14	2867.6	20376.	4414.0

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 10:26:55 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0853**	**3.919**	**.2110**	**17.42**	**12.22**	**7.419**	**6.554**	**3.138**	**.7873**
Stddev	.0002	.009	.0001	.04	.00	.017	.005	.003	.0031
%RSD	.1955	.2251	.0611	.2146	.0365	.2280	.0818	.0984	.3994
#1	.0853	3.924	.2109	17.46	12.22	7.433	6.559	3.142	.7909
#2	.0855	3.909	.2109	17.39	12.21	7.400	6.549	3.135	.7859
#3	.0851	3.925	.2111	17.42	12.22	7.423	6.553	3.138	.7850

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.041**	**5.575**	**3.212**	**2.622**	**.8470**	**4.472**	**1.394**	**10.60**	**1.706**
Stddev	.001	.013	.010	.006	.0028	.022	.001	.00	.002
%RSD	.0487	.2330	.3096	.2151	.3289	.4837	.0597	.0458	.0880
#1	1.042	5.583	3.224	2.622	.8501	4.495	1.394	10.60	1.706
#2	1.041	5.582	3.206	2.628	.8446	4.468	1.393	10.59	1.704
#3	1.041	5.560	3.207	2.616	.8463	4.453	1.395	10.60	1.706

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.936**	**.3054**	**.1773**	**.5315**	**.5302**	**19.36**	**2.519**	**.6188**	**1.032**
Stddev	.005	.0008	.0005	.0015	.0008	.01	.006	.0037	.006
%RSD	.2528	.2761	.2549	.2761	.1454	.0667	.2257	.5975	.5659
#1	1.942	.3057	.1775	.5319	.5303	19.37	2.525	.6229	1.038
#2	1.934	.3045	.1776	.5298	.5293	19.35	2.517	.6157	1.031
#3	1.933	.3061	.1768	.5327	.5308	19.37	2.513	.6178	1.027

Elem	Zn2062
Units	Cts/S
Avg	**3.604**
Stddev	.004
%RSD	.1099
#1	3.607
#2	3.606
#3	3.600

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 10:26:55 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.47**	**2822.9**	**20373.**	**4426.6**
Stddev	2.57	2.4	174.	6.7
%RSD	.28450	.08393	.85313	.15195
#1	902.49	2823.9	20178.	4419.9
#2	903.54	2820.2	20430.	4426.7
#3	907.38	2824.6	20512.	4433.3

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 10:30:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1726**	**7.828**	**.4301**	**34.88**	**24.40**	**14.85**	**13.12**	**6.294**	**1.562**
Stddev	.0007	.012	.0006	.09	.04	.05	.01	.002	.004
%RSD	.3855	.1526	.1328	.2465	.1766	.3542	.0604	.0336	.2861
#1	.1720	7.842	.4308	34.95	24.45	14.91	13.12	6.293	1.559
#2	.1733	7.819	.4296	34.90	24.38	14.82	13.12	6.297	1.567
#3	.1726	7.824	.4300	34.78	24.38	14.82	13.13	6.293	1.560

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.079**	**11.04**	**6.416**	**5.252**	**1.681**	**8.821**	**2.816**	**21.17**	**3.422**
Stddev	.008	.01	.012	.021	.006	.039	.001	.03	.002
%RSD	.3951	.1281	.1935	.4041	.3375	.4375	.0408	.1374	.0591
#1	2.071	11.06	6.427	5.269	1.687	8.809	2.816	21.21	3.422
#2	2.088	11.03	6.419	5.259	1.680	8.864	2.818	21.15	3.424
#3	2.077	11.03	6.403	5.228	1.676	8.790	2.816	21.16	3.420

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.904**	**.6177**	**.3570**	**1.070**	**1.062**	**38.74**	**5.025**	**1.241**	**2.054**
Stddev	.009	.0009	.0003	.000	.002	.09	.014	.009	.007
%RSD	.2325	.1405	.0749	.0362	.1606	.2253	.2745	.7439	.3292
#1	3.901	.6172	.3567	1.069	1.060	38.82	5.018	1.232	2.050
#2	3.897	.6173	.3572	1.070	1.064	38.76	5.041	1.242	2.062
#3	3.914	.6187	.3571	1.070	1.061	38.65	5.017	1.250	2.051

Elem	Zn2062
Units	Cts/S
Avg	**7.209**
Stddev	.007
%RSD	.0913
#1	7.205
#2	7.206
#3	7.217

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 10:30:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**872.79**	**2746.3**	**20190.**	**4401.9**
Stddev	3.08	4.4	87.	12.9
%RSD	.35250	.15863	.42919	.29365
#1	874.95	2748.4	20170.	4387.8
#2	874.14	2749.2	20116.	4413.2
#3	869.26	2741.3	20285.	4404.9

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 10:35:27 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3347**	**15.62**	**.8680**	**69.12**	**47.87**	**29.36**	**25.96**	**12.50**	**3.044**
Stddev	.0007	.03	.0053	.11	.13	.04	.12	.05	.006
%RSD	.2193	.1717	.6084	.1553	.2706	.1302	.4701	.4151	.1973
#1	.3353	15.65	.8739	69.20	48.02	29.39	26.10	12.56	3.051
#2	.3350	15.61	.8666	69.16	47.82	29.31	25.90	12.48	3.040
#3	.3339	15.60	.8636	68.99	47.78	29.37	25.88	12.47	3.040

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.127**	**21.54**	**12.86**	**10.48**	**3.311**	**17.03**	**5.658**	**42.01**	**6.766**
Stddev	.011	.05	.03	.01	.007	.12	.028	.09	.036
%RSD	.2655	.2534	.1997	.1401	.2129	.7216	.4871	.2214	.5356
#1	4.139	21.60	12.88	10.50	3.317	16.91	5.689	42.10	6.805
#2	4.122	21.55	12.87	10.48	3.303	17.15	5.648	42.02	6.757
#3	4.119	21.49	12.83	10.47	3.313	17.02	5.637	41.92	6.735

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.758**	**1.250**	**.7164**	**1.632**	**2.155**	**75.51**	**9.960**	**2.449**	**4.069**
Stddev	.043	.004	.0038	.006	.009	.87	.025	.033	.009
%RSD	.5603	.3299	.5239	.3863	.4346	1.149	.2531	1.343	.2317
#1	7.808	1.254	.7203	1.639	2.165	75.67	9.989	2.479	4.080
#2	7.731	1.248	.7162	1.627	2.153	74.58	9.945	2.453	4.062
#3	7.735	1.247	.7128	1.629	2.147	76.29	9.946	2.414	4.066

Elem	Zn2062
Units	Cts/S
Avg	**14.20**
Stddev	.06
%RSD	.4493
#1	14.27
#2	14.18
#3	14.14

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 10:35:27 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	830.09	2630.0	19869.	4376.6
Stddev	3.99	8.4	69.	17.3
%RSD	.48064	.31853	.34842	.39484
#1	825.52	2620.6	19799.	4386.5
#2	831.88	2632.9	19872.	4386.7
#3	832.87	2636.6	19937.	4356.6

Zoom In Zoom Out

Sample Name: HSTD Acquired: 9/21/2022 10:41:14 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4903	80.01	4.012	3.976	3.965	79.34	3.970	3.981	3.930
Stddev	.0008	.27	.008	.016	.013	.29	.005	.006	.007
%RSD	.1725	.3353	.1957	.3898	.3248	.3600	.1232	.1588	.1910
#1	.4909	79.79	4.003	3.959	3.953	79.21	3.966	3.974	3.924
#2	.4907	80.31	4.016	3.990	3.979	79.66	3.971	3.982	3.938
#3	.4894	79.92	4.016	3.979	3.964	79.13	3.975	3.987	3.926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.007	78.82	79.97	4.000	79.34	3.931	3.998	80.14	3.935
Stddev	.002	.10	.28	.014	.18	.019	.005	.18	.001
%RSD	.0567	.1270	.3440	.3500	.2314	.4795	.1299	.2258	.0367
#1	4.005	78.75	79.71	3.987	79.22	3.909	3.993	79.94	3.934
#2	4.009	78.77	80.26	4.015	79.24	3.940	4.000	80.27	3.936
#3	4.008	78.93	79.96	3.998	79.55	3.943	4.003	80.23	3.936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.012	4.032	3.992	3.597	4.033	4.066	4.006	3.975	3.972
Stddev	.007	.006	.004	.010	.011	.032	.004	.013	.002
%RSD	.1867	.1425	.1127	.2796	.2625	.7775	.0871	.3375	.0486
#1	4.004	4.027	3.988	3.587	4.020	4.093	4.003	3.966	3.973
#2	4.019	4.030	3.990	3.598	4.038	4.075	4.010	3.970	3.973
#3	4.012	4.038	3.997	3.607	4.039	4.031	4.005	3.991	3.970
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 9/21/2022 10:41:14 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	3.950
Stddev	.004
%RSD	.1024
#1	3.947
#2	3.949
#3	3.955
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	831.89	2650.2	19906.	4376.9
Stddev	2.19	5.8	88.	17.6
%RSD	.26298	.21727	.44237	.40290
#1	834.40	2656.5	19995.	4356.6
#2	830.88	2649.1	19819.	4387.8
#3	830.40	2645.1	19904.	4386.4

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 10:47:28 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2558	40.49	2.032	2.062	2.078	38.99	2.048	2.057	2.072
Stddev	.0006	.23	.004	.007	.010	.24	.003	.004	.007
%RSD	.2512	.5737	.2154	.3211	.4823	.6243	.1621	.1899	.3485
#1	.2556	40.75	2.028	2.070	2.090	39.27	2.044	2.054	2.072
#2	.2566	40.39	2.030	2.059	2.072	38.83	2.048	2.057	2.079
#3	.2553	40.32	2.037	2.058	2.073	38.87	2.051	2.062	2.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.082	39.79	40.09	2.053	42.33	2.089	2.007	38.91	2.028
Stddev	.003	.06	.12	.009	.08	.004	.002	.14	.003
%RSD	.1320	.1615	.2978	.4269	.1862	.1789	.1055	.3642	.1339
#1	2.082	39.86	40.23	2.063	42.40	2.091	2.005	39.08	2.025
#2	2.079	39.77	40.02	2.048	42.33	2.091	2.007	38.82	2.028
#3	2.085	39.74	40.02	2.048	42.24	2.084	2.009	38.84	2.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.071	2.045	2.057	.1584	1.949	2.096	2.083	2.111	2.046
Stddev	.005	.002	.003	.0001	.005	.012	.001	.034	.005
%RSD	.2593	.0893	.1619	.0591	.2351	.5826	.0489	1.617	.2480
#1	2.066	2.046	2.057	.1584	1.950	2.110	2.083	2.150	2.049
#2	2.071	2.046	2.053	.1584	1.944	2.090	2.085	2.088	2.049
#3	2.077	2.043	2.060	.1585	1.953	2.089	2.083	2.096	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 10:47:28 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.050**
Stddev	.004
%RSD	.1702
#1	2.046
#2	2.053
#3	2.051
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**878.25**	**2776.7**	**20281.**	**4423.8**
Stddev	4.02	11.5	147.	22.9
%RSD	.45789	.41446	.72684	.51860
#1	882.86	2789.9	20298.	4401.7
#2	876.38	2769.4	20126.	4422.1
#3	875.50	2770.6	20420.	4447.5

Zoom In Zoom Out

Sample Name: ICB Acquired: 9/21/2022 10:54:04 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0034**	**-.0004**	**-.0001**	**.0000**	**.0025**	**.0000**	**.0000**	**.0001**
Stddev	.0003	.0089	.0004	.0002	.000	.0010	.0000	.000	.0000
%RSD	177.0	264.8	126.8	183.4	272.5	38.90	62.97	394.7	50.93
#1	.0000	-.0044	-.0003	-.0004	-.0001	.0020	.0000	.0000	.0001
#2	.0004	.0131	-.0008	.0000	.0000	.0036	.0000	-.0002	.0000
#3	.0000	.0014	.0001	.0000	.0000	.0018	.0001	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0004**	**-.0083**	F **.0028**	**-.0104**	**.0001**	**.0000**	**.0072**	**.0000**
Stddev	.0003	.0014	.0295	.0004	.0142	.0000	.0001	.0075	.000
%RSD	201.5	357.0	355.6	14.60	136.5	97.38	2582.	104.6	1935.
#1	.0001	-.0016	-.0387	.0024	.0059	.0001	.0001	.0027	.0001
#2	-.0001	.0011	-.0063	.0028	-.0168	.0000	-.0001	.0030	.0001
#3	-.0005	-.0007	.0202	.0032	-.0203	.0001	.0000	.0159	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0001**	**.0015**	**-.0003**	**.0001**	**.0000**	**-.0001**	**-.0006**	**.0000**
Stddev	.0003	.0008	.0004	.0003	.0004	.0001	.0000	.0011	.0002
%RSD	89.04	997.2	27.71	123.5	305.5	745.6	14.66	190.6	662.9
#1	-.0007	-.0009	.0012	.0001	.0003	-.0001	-.0001	-.0006	.0001
#2	-.0002	-.0001	.0020	-.0003	.0004	.0001	-.0001	-.0016	-.0001
#3	-.0001	.0007	.0014	-.0005	-.0003	.0000	-.0001	.0005	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB Acquired: 9/21/2022 10:54:04 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	7.082
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**959.55**	**2909.9**	**20832.**	**4473.3**
Stddev	2.26	18.6	113.	27.1
%RSD	.23573	.63955	.54037	.60589
#1	962.16	2927.0	20940.	4502.3
#2	958.15	2912.6	20715.	4448.7
#3	958.35	2890.1	20840.	4468.9

Zoom In Zoom Out

Sample Name: CRIA Acquired: 9/21/2022 10:58:46 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0090**	**.2157**	**.0094**	**.2089**	**.0052**	**1.043**	**.0052**	**.0518**	**.0106**
Stddev	.0002	.0112	.0009	.0003	.0001	.003	.0000	.0002	.0002
%RSD	2.612	5.197	9.931	.1526	1.455	.2394	.6617	.3712	1.889
#1	.0091	.2103	.0100	.2092	.0052	1.040	.0052	.0516	.0107
#2	.0092	.2286	.0084	.2090	.0053	1.045	.0052	.0520	.0103
#3	.0088	.2082	.0100	.2086	.0053	1.042	.0051	.0519	.0106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261**	**.3292**	**10.18**	F **.0133**	**5.290**	**.0162**	**.0509**	**9.655**	**.0415**
Stddev	.0001	.0034	.02	.0012	.008	.0000	.0002	.013	.0003
%RSD	.2351	1.026	.2142	8.940	.1483	.2151	.3102	.1333	.6763
#1	.0261	.3253	10.18	.0146	5.290	.0163	.0508	9.658	.0415
#2	.0262	.3314	10.20	.0124	5.281	.0162	.0511	9.666	.0418
#3	.0262	.3309	10.16	.0128	5.297	.0162	.0508	9.641	.0413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100					
Range				20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.0046**	**.0108**	**.0646**	**.0511**	**.0106**	**.0105**	**.0108**	**.0521**
Stddev	.0009	.0011	.0013	.0006	.0001	.0001	.0000	.0005	.0004
%RSD	15.40	23.64	12.00	.9011	.1672	.6614	.3485	4.464	.8141
#1	.0051	.0036	.0108	.0652	.0512	.0105	.0105	.0105	.0525
#2	.0050	.0057	.0121	.0646	.0511	.0106	.0104	.0114	.0516
#3	.0065	.0046	.0095	.0641	.0512	.0106	.0105	.0106	.0521
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRIA Acquired: 9/21/2022 10:58:46 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0218**
Stddev	.0000
%RSD	.2105
#1	.0218
#2	.0217
#3	.0218
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**933.66**	**2870.7**	**20575.**	**4440.9**
Stddev	.85	6.1	111.	19.2
%RSD	.09071	.21205	.53888	.43346
#1	934.61	2876.0	20473.	4418.8
#2	933.39	2864.1	20693.	4453.8
#3	932.98	2872.1	20559.	4450.1

Zoom In Zoom Out

Sample Name: ICSA Acquired: 9/21/2022 11:05:12 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**512.5**	**.0000**	**.0001**	**-.0001**	**455.9**	**.0000**	**.0000**	**-.0004**
Stddev	.0034	5.8	.0011	.0002	.0000	5.2	.001	.0000	.0001
%RSD	560.2	1.127	4123.	154.1	26.40	1.150	9379.	101.0	29.09
#1	.0018	516.1	-.0005	.0003	-.0001	461.7	-.0002	.0000	-.0006
#2	-.0045	505.9	-.0007	-.0001	-.0001	454.2	.0007	.0001	-.0004
#3	.0009	515.6	.0013	.0001	-.0001	451.7	-.0005	.0000	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**F 471.0**	**.1969**	**F .0027**	**519.5**	**-.0007**	**.0002**	**.2924**	**.0000**
Stddev	.0018	9.5	.0062	.0001	.4	.0001	.0002	.0057	.000
%RSD	100.1	2.013	3.143	3.835	.0827	19.65	77.43	1.953	1242.
#1	.0028	476.0	.2026	.0026	519.9	-.0008	.0003	.2906	.0000
#2	-.0003	460.0	.1903	.0026	519.1	-.0005	.0000	.2988	-.0003
#3	.0029	476.9	.1976	.0028	519.5	-.0007	.0003	.2879	.0002
Check ?	Chk Pass	Chk Fail	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit		240.0		.0010					
Low Limit		160.0		-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0019**	**.0000**	**.1854**	**.0003**	**.0003**	**-.0004**	**.0000**	**-.0007**
Stddev	.0028	.0024	.0023	.0010	.0005	.0001	.0002	.002	.0002
%RSD	282300.	120.9	61590.	.5379	157.2	28.00	36.67	334900.	34.23
#1	-.0025	.0011	.0025	.1844	.0007	.0003	-.0003	.0009	-.0008
#2	.0030	.0046	-.0004	.1864	-.0002	.0004	-.0004	.0011	-.0004
#3	-.0005	.0002	-.0021	.1853	.0005	.0003	-.0006	-.0019	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 9/21/2022 11:05:12 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0025**
Stddev	.0001
%RSD	2.496
#1	.0025
#2	.0026
#3	.0025
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**785.44**	**2523.9**	**18637.**	**4254.9**
Stddev	.70	6.3	39.	50.0
%RSD	.08968	.25151	.21155	1.1747
#1	785.87	2520.8	18597.	4232.3
#2	785.81	2531.2	18675.	4312.2
#3	784.62	2519.7	18639.	4220.3

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 9/21/2022 11:15:11 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9928**	**514.3**	**.9146**	**.4995**	**.4966**	**464.6**	**.9563**	**.4761**	**.4855**
Stddev	.0019	3.0	.0018	.0008	.0007	4.7	.0013	.0009	.0023
%RSD	.1891	.5777	.1966	.1578	.1329	1.003	.1351	.1984	.4672
#1	.9907	515.1	.9149	.4986	.4967	460.7	.9576	.4771	.4839
#2	.9941	516.7	.9127	.5001	.4973	463.3	.9550	.4753	.4881
#3	.9937	511.0	.9163	.4997	.4960	469.7	.9564	.4759	.4846
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5600**	**189.9**	**-.0148**	**.9852**	**521.2**	**.5116**	**.8581**	**.2824**	**.9050**
Stddev	.0015	.1	.0118	.0005	.3	.0015	.0005	.0037	.0019
%RSD	.2668	.0784	79.61	.0508	.0592	.2884	.0575	1.293	.2125
#1	.5592	190.0	-.0038	.9847	521.6	.5116	.8587	.2784	.9072
#2	.5590	189.7	-.0133	.9857	521.0	.5100	.8581	.2856	.9038
#3	.5617	189.9	-.0273	.9852	521.1	.5130	.8577	.2832	.9040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9900**	**.9421**	**.8825**	**.1450**	**.8874**	**.9309**	**.9881**	**.8604**	**.5101**
Stddev	.0025	.0058	.0026	.0005	.0009	.0017	.0011	.0026	.0002
%RSD	.2542	.6139	.2968	.3656	.0976	.1848	.1110	.2987	.0303
#1	.9929	.9430	.8840	.1447	.8879	.9307	.9871	.8625	.5103
#2	.9886	.9359	.8795	.1447	.8864	.9327	.9879	.8575	.5101
#3	.9884	.9473	.8840	.1456	.8879	.9293	.9893	.8613	.5100
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 9/21/2022 11:15:11 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	.9203
Stddev	.0016
%RSD	.1711
#1	.9220
#2	.9198
#3	.9190
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	773.92	2556.0	18734.	4304.6
Stddev	2.65	5.4	42.	17.9
%RSD	.34253	.21136	.22201	.41673
#1	770.92	2550.0	18765.	4304.0
#2	774.88	2560.2	18750.	4322.7
#3	775.95	2557.9	18686.	4286.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 11:21:32 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2545	40.43	1.991	2.024	2.042	40.39	2.016	2.015	2.013
Stddev	.0011	.16	.005	.002	.005	.23	.003	.003	.006
%RSD	.4514	.4057	.2707	.1014	.2623	.5754	.1288	.1236	.2803
#1	.2542	40.62	1.994	2.026	2.048	40.66	2.016	2.013	2.013
#2	.2558	40.32	1.985	2.023	2.040	40.27	2.013	2.013	2.019
#3	.2535	40.35	1.994	2.022	2.037	40.25	2.018	2.017	2.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.037	40.63	40.21	2.017	40.61	2.045	1.998	40.80	1.990
Stddev	.008	.08	.09	.009	.08	.005	.002	.07	.004
%RSD	.3836	.1870	.2334	.4581	.2054	.2690	.1163	.1653	.1927
#1	2.034	40.66	40.31	2.027	40.66	2.041	1.997	40.88	1.992
#2	2.032	40.67	40.20	2.014	40.65	2.044	1.996	40.75	1.986
#3	2.046	40.54	40.13	2.009	40.51	2.052	2.000	40.77	1.992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.025	2.004	1.993	2.373	1.994	2.067	2.036	2.022	2.002
Stddev	.001	.002	.005	.004	.004	.003	.004	.005	.007
%RSD	.0713	.0978	.2365	.1673	.2012	.1632	.1909	.2578	.3408
#1	2.024	2.002	1.991	2.374	1.997	2.070	2.033	2.022	1.995
#2	2.024	2.006	1.990	2.369	1.990	2.063	2.034	2.027	2.009
#3	2.027	2.002	1.999	2.377	1.997	2.068	2.041	2.016	2.002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 11:21:32 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	2.007
Stddev	.002
%RSD	.0918
#1	2.008
#2	2.006
#3	2.009
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	872.16	2760.3	20285.	4384.6
Stddev	2.56	8.3	109.	26.5
%RSD	.29315	.30046	.53539	.60522
#1	874.05	2764.6	20402.	4354.0
#2	873.19	2765.6	20187.	4399.8
#3	869.25	2750.8	20267.	4400.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 11:27:33 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0028	-.0002	-.0001	.0001	.0025	.0000	.0000	.0001
Stddev	.0003	.0014	.0011	.0002	.0001	.0033	.0001	.000	.0001
%RSD	5538.	50.36	480.0	132.5	49.62	130.0	167.7	720.5	109.9
#1	-.0002	.0034	-.0013	-.0002	.0001	-.0013	.0000	.0001	.0002
#2	.0003	.0037	.0009	-.0003	.0001	.0043	.0001	-.0001	.0000
#3	-.0001	.0012	-.0003	.0001	.0000	.0044	.0000	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0000	-.0050	F .0019	-.0153	.0000	-.0002	.0054	.0000
Stddev	.0006	.0012	.0094	.0003	.0210	.000	.0001	.0052	.000
%RSD	346.3	3141.	187.2	13.11	137.1	199.3	62.82	95.17	341.9
#1	.0007	.0006	.0040	.0017	-.0012	.0000	-.0001	.0045	-.0001
#2	-.0005	.0008	-.0148	.0019	-.0395	.0000	-.0001	.0110	.0001
#3	.0003	-.0013	-.0042	.0022	-.0053	.0000	-.0003	.0008	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0003	.0007	.0007	.0001	.0000	.0000	-.0009	-.0001
Stddev	.0005	.0016	.0005	.0005	.0002	.0000	.000	.0010	.0003
%RSD	834.5	470.1	70.88	71.46	208.1	85.71	263.8	110.5	238.5
#1	-.0005	-.0020	.0010	.0003	.0003	.0000	.0000	.0002	.0002
#2	.0004	-.0003	.0001	.0012	.0001	.0001	.0000	-.0014	-.0004
#3	-.0001	.0012	.0008	.0005	-.0001	.0001	.0000	-.0015	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 11:27:33 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0004**
Stddev	.0001
%RSD	22.33
#1	.0003
#2	.0003
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.11**	**2915.8**	**20786.**	**4474.0**
Stddev	.78	5.2	77.	34.3
%RSD	.08141	.17829	.37217	.76733
#1	957.30	2916.7	20867.	4446.4
#2	956.25	2910.2	20714.	4463.1
#3	957.77	2920.4	20776.	4512.4

Zoom In Zoom Out

Sample Name: MP41231-MB1 Acquired: 9/21/2022 11:31:59 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0251**	**-.0002**	**.0005**	**.0000**	**.0226**	**.0000**	**-.0001**	**.0006**
Stddev	.0001	.0099	.0005	.0002	.000	.0016	.000	.0001	.0003
%RSD	306.0	39.52	208.0	40.35	142.1	6.942	374.9	72.54	49.28
#1	-.0001	.0292	-.0003	.0005	-.0001	.0228	.0000	-.0001	.0006
#2	.0000	.0324	.0003	.0008	.0000	.0241	.0000	-.0002	.0003
#3	.0002	.0138	-.0007	.0003	.0000	.0210	-.0001	.0000	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0451**	**-.0024**	**.0007**	**.0162**	**.0007**	**-.0001**	**.0127**	**.0000**
Stddev	.0002	.0019	.0136	.0010	.0105	.0001	.0003	.0051	.0002
%RSD	28.15	4.144	560.7	160.1	64.49	10.13	473.6	40.41	835.4
#1	.0007	.0434	.0117	.0004	.0041	.0006	.0002	.0186	.0000
#2	.0010	.0447	-.0153	-.0002	.0219	.0007	-.0003	.0092	.0002
#3	.0006	.0471	-.0036	.0018	.0226	.0006	-.0001	.0103	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0011**	**.0026**	**.0147**	**F .0252**	**.0000**	**.0009**	**-.0031**	**.0001**
Stddev	.000	.0009	.0012	.0029	.0002	.000	.0001	.0006	.0001
%RSD	706.5	81.84	45.20	19.97	.8940	1225.	7.234	18.52	96.32
#1	-.0004	.0001	.0024	.0131	.0254	.0000	.0009	-.0025	.0000
#2	.0002	.0013	.0015	.0181	.0249	-.0001	.0010	-.0037	.0003
#3	.0000	.0020	.0039	.0129	.0252	.0000	.0009	-.0032	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.0250				
Low Limit					-.0250				

Zoom In Zoom Out

Sample Name: MP41231-MB1 Acquired: 9/21/2022 11:31:59 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0031**
Stddev	.0001
%RSD	1.889
#1	.0031
#2	.0031
#3	.0032
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.23**	**2846.1**	**20269.**	**4471.3**
Stddev	2.94	2.8	69.	20.3
%RSD	.31679	.09909	.33865	.45481
#1	927.28	2842.8	20320.	4493.8
#2	927.81	2847.7	20191.	4454.2
#3	932.62	2847.6	20297.	4466.0

Zoom In Zoom Out

Sample Name: MP41231-B1 Acquired: 9/21/2022 11:36:54 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0435**	**26.78**	**1.898**	**2.017**	**.0509**	**24.94**	**.0491**	**.4942**	**.2051**
Stddev	.0003	.10	.004	.007	.0000	.14	.0001	.0010	.0016
%RSD	.6388	.3876	.2129	.3587	.0913	.5812	.1276	.1930	.7718
#1	.0432	26.77	1.901	2.010	.0509	24.93	.0492	.4953	.2041
#2	.0437	26.69	1.893	2.018	.0508	24.81	.0490	.4934	.2069
#3	.0436	26.90	1.900	2.024	.0509	25.10	.0491	.4940	.2043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2576**	**26.06**	**24.51**	**F .0024**	**25.13**	**.5141**	**.4992**	**23.47**	**.4971**
Stddev	.0006	.05	.10	.0006	.06	.0022	.0011	.09	.0013
%RSD	.2318	.2106	.3897	23.98	.2372	.4197	.2170	.3831	.2529
#1	.2571	26.02	24.42	.0030	25.15	.5117	.4994	23.40	.4976
#2	.2582	26.04	24.50	.0020	25.06	.5158	.4980	23.44	.4956
#3	.2575	26.12	24.61	.0020	25.18	.5148	.5002	23.58	.4979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4885**	**.4841**	**1.892**	**.6043**	**.5162**	**.5241**	**.5247**	**1.952**	**.5018**
Stddev	.0002	.0016	.006	.0008	.0009	.0024	.0014	.014	.0011
%RSD	.0473	.3262	.3283	.1362	.1823	.4528	.2574	.7060	.2240
#1	.4886	.4827	1.898	.6050	.5173	.5224	.5232	1.965	.5005
#2	.4887	.4838	1.886	.6045	.5157	.5232	.5258	1.951	.5022
#3	.4882	.4858	1.890	.6034	.5156	.5268	.5251	1.938	.5027
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41231-B1 Acquired: 9/21/2022 11:36:54 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.4894**
Stddev	.0004
%RSD	.0856
#1	.4899
#2	.4891
#3	.4894
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**880.10**	**2762.9**	**20081.**	**4419.3**
Stddev	1.38	4.5	188.	47.2
%RSD	.15639	.16173	.93422	1.0686
#1	879.10	2757.7	20267.	4396.9
#2	879.52	2764.8	19892.	4473.6
#3	881.67	2766.0	20083.	4387.6

Zoom In Zoom Out

Sample Name: MP41228-B1 Acquired: 9/21/2022 11:41:26 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0455**	**27.49**	**1.969**	**2.074**	**.0523**	**25.58**	**.0509**	**.5094**	**.2108**
Stddev	.0003	.10	.002	.007	.0003	.12	.0002	.0005	.0006
%RSD	.6893	.3689	.0926	.3282	.4877	.4776	.4263	.0975	.2730
#1	.0451	27.61	1.969	2.082	.0526	25.71	.0507	.5095	.2103
#2	.0456	27.47	1.967	2.072	.0521	25.56	.0508	.5089	.2106
#3	.0457	27.41	1.971	2.069	.0522	25.47	.0512	.5099	.2114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2637**	**26.60**	**25.15**	F **.0009**	**25.82**	**.5267**	**.5125**	**24.03**	**.5112**
Stddev	.0003	.10	.08	.0012	.14	.0018	.0019	.06	.0009
%RSD	.1158	.3921	.3349	137.8	.5411	.3461	.3741	.2622	.1776
#1	.2634	26.72	25.24	.0023	25.98	.5246	.5117	24.10	.5103
#2	.2640	26.56	25.12	-.0001	25.75	.5273	.5110	24.03	.5112
#3	.2637	26.53	25.08	.0005	25.73	.5281	.5146	23.97	.5121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5049**	**.5025**	**1.967**	**.6360**	**.5075**	**.5384**	**.5374**	**2.041**	**.5118**
Stddev	.0009	.0014	.001	.0004	.0008	.0020	.0007	.010	.0022
%RSD	.1718	.2757	.0447	.0628	.1648	.3631	.1305	.4914	.4266
#1	.5058	.5029	1.966	.6356	.5068	.5406	.5366	2.052	.5104
#2	.5041	.5036	1.967	.6359	.5072	.5373	.5375	2.039	.5107
#3	.5047	.5009	1.967	.6364	.5084	.5372	.5380	2.032	.5143
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41228-B1 Acquired: 9/21/2022 11:41:26 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.5047**
Stddev	.0007
%RSD	.1369
#1	.5046
#2	.5040
#3	.5054
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**900.60**	**2826.2**	**20571.**	**4454.7**
Stddev	.98	4.9	76.	30.6
%RSD	.10827	.17304	.36841	.68630
#1	900.78	2825.4	20657.	4421.8
#2	901.47	2831.5	20515.	4482.3
#3	899.55	2821.9	20540.	4459.9

Zoom In Zoom Out

Sample Name: FA98986-4 Acquired: 9/21/2022 11:45:59 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**107.5**	**.0094**	**.1522**	**.0020**	**30.05**	**.0007**	**.0027**	**.0802**
Stddev	.0002	.5	.0001	.0003	.0001	.13	.0001	.0000	.0004
%RSD	10.93	.4750	.9867	.2266	4.973	.4481	10.54	1.672	.5072
#1	.0016	107.3	.0094	.1518	.0020	29.99	.0007	.0028	.0803
#2	.0015	107.2	.0093	.1523	.0021	29.96	.0007	.0027	.0805
#3	.0013	108.1	.0094	.1524	.0019	30.21	.0008	.0027	.0797

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0304**	**22.65**	**1.159**	**.0335**	**3.091**	**.1362**	**.0036**	**.2101**	**.0277**
Stddev	.0005	.10	.016	.0016	.021	.0003	.0000	.0057	.0003
%RSD	1.658	.4614	1.399	4.825	.6857	.2081	.8009	2.704	1.058
#1	.0299	22.56	1.168	.0316	3.094	.1360	.0036	.2082	.0274
#2	.0309	22.62	1.140	.0344	3.111	.1365	.0036	.2056	.0278
#3	.0305	22.77	1.168	.0345	3.068	.1361	.0036	.2165	.0280

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1670**	**.0018**	**.0021**	**12.99**	**.0274**	**.1178**	**1.153**	**-.0008**	**.0712**
Stddev	.0008	.0008	.0017	.01	.0003	.0008	.003	.0007	.0003
%RSD	.5067	43.34	80.94	.1136	.9260	.6413	.2198	91.29	.4502
#1	.1677	.0018	.0006	12.99	.0277	.1176	1.156	-.0012	.0713
#2	.1673	.0025	.0018	12.98	.0272	.1171	1.151	-.0011	.0714
#3	.1661	.0010	.0039	13.01	.0274	.1186	1.152	.0000	.0708

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1359**
Stddev	.0003
%RSD	.2013
#1	.1357
#2	.1362
#3	.1358

Zoom In Zoom Out

Sample Name: FA98986-4 Acquired: 9/21/2022 11:45:59 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**896.18**	**3080.0**	**22005.**	**4854.7**
Stddev	1.34	4.6	39.	79.6
%RSD	.14924	.15006	.17855	1.6400
#1	896.69	3076.5	21983.	4941.3
#2	894.66	3078.2	21982.	4838.0
#3	897.19	3085.2	22050.	4784.7

Zoom In Zoom Out

Sample Name: MP41231-D1 Acquired: 9/21/2022 11:50:41 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**88.42**	**.0077**	**.1246**	**.0015**	**24.20**	**.0010**	**.0022**	**.0681**
Stddev	.0003	.04	.0008	.0003	.0001	.03	.0001	.0001	.0004
%RSD	21.94	.0426	10.27	.2292	4.591	.1212	6.871	3.369	.5635
#1	.0012	88.38	.0070	.1245	.0016	24.22	.0011	.0022	.0684
#2	.0017	88.42	.0075	.1249	.0015	24.22	.0010	.0021	.0677
#3	.0012	88.46	.0086	.1244	.0015	24.17	.0009	.0022	.0683

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0270**	**19.56**	**.9805**	**.0277**	**2.641**	**.1127**	**.0028**	**.1648**	**.0233**
Stddev	.0003	.02	.0174	.0012	.026	.0004	.0001	.0022	.0001
%RSD	1.158	.0905	1.779	4.263	.9924	.3119	2.473	1.343	.2413
#1	.0267	19.53	.9990	.0281	2.634	.1128	.0027	.1672	.0234
#2	.0272	19.56	.9782	.0264	2.670	.1123	.0027	.1644	.0233
#3	.0273	19.57	.9643	.0286	2.619	.1129	.0029	.1628	.0233

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1473**	**.0020**	**.0025**	**14.21**	**.0270**	**.1033**	**.9776**	**-.0015**	**.0596**
Stddev	.0008	.0013	.0023	.00	.0003	.0004	.0032	.0008	.0006
%RSD	.5158	65.77	94.01	.0302	1.031	.4076	.3264	52.47	1.025
#1	.1482	.0034	.0013	14.21	.0271	.1035	.9766	-.0023	.0597
#2	.1467	.0017	.0009	14.21	.0273	.1028	.9750	-.0015	.0589
#3	.1471	.0009	.0051	14.22	.0267	.1035	.9811	-.0007	.0601

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1262**
Stddev	.0003
%RSD	.2629
#1	.1258
#2	.1263
#3	.1264

Zoom In Zoom Out

Sample Name: MP41231-D1 Acquired: 9/21/2022 11:50:41 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**898.40**	**3024.0**	**21722.**	**4779.1**
Stddev	2.56	4.4	161.	34.9
%RSD	.28461	.14393	.74154	.72943
#1	901.34	3029.0	21640.	4767.4
#2	896.80	3022.1	21908.	4751.5
#3	897.04	3021.0	21619.	4818.3

Zoom In Zoom Out

Sample Name: MP41231-SD1 Acquired: 9/21/2022 11:55:25 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**118.1**	**.0072**	**.1659**	**.0022**	**33.25**	**.0008**	**.0033**	**.0878**
Stddev	.0030	.5	.0015	.0010	.0001	.17	.0001	.0002	.0012
%RSD	218.5	.4342	20.23	.5854	2.565	.5043	9.509	7.246	1.402
#1	.0047	117.6	.0081	.1658	.0021	33.15	.0009	.0034	.0866
#2	-.0010	118.0	.0055	.1650	.0022	33.16	.0007	.0035	.0891
#3	.0004	118.6	.0081	.1669	.0022	33.44	.0008	.0031	.0877

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0327**	**25.13**	**1.158**	**.0390**	**3.436**	**.1516**	**.0023**	**.2099**	**.0300**
Stddev	.0017	.10	.133	.0021	.141	.0010	.0005	.0269	.0010
%RSD	5.081	.3929	11.49	5.272	4.100	.6741	23.14	12.80	3.250
#1	.0346	25.03	1.085	.0398	3.299	.1527	.0017	.2151	.0292
#2	.0320	25.13	1.076	.0367	3.580	.1514	.0026	.1808	.0298
#3	.0315	25.23	1.311	.0406	3.430	.1507	.0026	.2338	.0311

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1695**	**.0022**	**.0044**	**14.44**	**.0325**	**.1292**	**1.259**	**-.0034**	**.0782**
Stddev	.0012	.0063	.0099	.01	.0015	.0006	.004	.0043	.0018
%RSD	.6995	280.0	224.5	.0777	4.607	.4856	.3003	128.0	2.344
#1	.1706	-.0002	.0034	14.44	.0324	.1291	1.259	.0010	.0802
#2	.1683	-.0025	.0147	14.45	.0311	.1287	1.263	-.0035	.0777
#3	.1696	.0094	-.0049	14.43	.0341	.1299	1.256	-.0076	.0766

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1537**
Stddev	.0001
%RSD	.0809
#1	.1538
#2	.1537
#3	.1536

Zoom In Zoom Out

Sample Name: MP41231-SD1 Acquired: 9/21/2022 11:55:25 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**945.10**	**2959.1**	**21180.**	**4570.4**
Stddev	1.96	8.5	83.	31.0
%RSD	.20784	.28717	.38961	.67828
#1	946.88	2968.7	21106.	4606.2
#2	942.99	2952.5	21164.	4552.6
#3	945.42	2956.2	21269.	4552.4

Zoom In Zoom Out

Sample Name: MP41231-PS1 Acquired: 9/21/2022 12:00:12 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0425**	**107.6**	**.0941**	**.3710**	**.0473**	**33.84**	**.0445**	**.0466**	**.1243**
Stddev	.0005	.0	.0016	.0004	.0001	.03	.0001	.0001	.0001
%RSD	1.135	.0232	1.680	.1179	.2833	.0867	.1454	.2943	.1202
#1	.0425	107.6	.0945	.3706	.0473	33.81	.0445	.0465	.1242
#2	.0430	107.6	.0924	.3715	.0472	33.87	.0444	.0465	.1244
#3	.0420	107.6	.0954	.3708	.0475	33.83	.0445	.0468	.1244

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1231**	**24.77**	**9.645**	**.0349**	**7.569**	**.1806**	**.0874**	**8.355**	**.1142**
Stddev	.0004	.05	.012	.0007	.013	.0006	.0004	.010	.0003
%RSD	.3004	.1982	.1260	2.058	.1753	.3376	.4804	.1207	.2770
#1	.1230	24.71	9.634	.0346	7.583	.1803	.0869	8.360	.1143
#2	.1235	24.79	9.643	.0357	7.557	.1813	.0877	8.344	.1139
#3	.1228	24.80	9.658	.0344	7.568	.1803	.0874	8.363	.1145

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2130**	**.0882**	**.0846**	**13.20**	**.0703**	**.1604**	**1.255**	**.0921**	**.1152**
Stddev	.0015	.0007	.0011	.03	.0004	.0001	.004	.0013	.0004
%RSD	.7071	.7448	1.283	.2418	.5299	.0915	.2815	1.367	.3714
#1	.2146	.0884	.0857	13.23	.0707	.1605	1.254	.0917	.1148
#2	.2116	.0888	.0847	13.17	.0701	.1603	1.258	.0936	.1156
#3	.2128	.0875	.0836	13.21	.0701	.1603	1.251	.0912	.1151

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3464**
Stddev	.0006
%RSD	.1622
#1	.3461
#2	.3459
#3	.3470

Zoom In Zoom Out

Sample Name: MP41231-PS1 Acquired: 9/21/2022 12:00:12 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**884.11**	**3064.7**	**21794.**	**4868.9**
Stddev	1.88	2.8	71.	26.8
%RSD	.21273	.09244	.32750	.54991
#1	881.97	3067.8	21840.	4850.8
#2	884.87	3063.8	21712.	4856.2
#3	885.49	3062.4	21830.	4899.6

Zoom In Zoom Out

Sample Name: MP41231-S1 Acquired: 9/21/2022 12:04:49 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0419**	**141.5**	**1.690**	**2.014**	**.0490**	**59.40**	**.0455**	**.4487**	**.2718**
Stddev	.0005	.4	.003	.003	.0002	.26	.0001	.0006	.0007
%RSD	1.102	.3038	.1519	.1547	.3159	.4382	.2381	.1297	.2455
#1	.0420	142.0	1.691	2.017	.0492	59.66	.0455	.4492	.2717
#2	.0424	141.1	1.687	2.011	.0489	59.14	.0454	.4480	.2712
#3	.0414	141.5	1.692	2.015	.0490	59.38	.0456	.4489	.2725

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2794**	**53.03**	**24.14**	**.0434**	**26.75**	**.6216**	**.4433**	**22.03**	**.4802**
Stddev	.0007	.01	.02	.0002	.11	.0010	.0012	.02	.0011
%RSD	.2663	.0212	.1032	.4714	.4285	.1613	.2667	.1085	.2322
#1	.2785	53.03	24.16	.0435	26.82	.6205	.4439	22.06	.4794
#2	.2799	53.04	24.11	.0432	26.82	.6222	.4419	22.02	.4796
#3	.2798	53.02	24.16	.0436	26.62	.6222	.4441	22.01	.4815

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6701**	**.3091**	**1.701**	**10.62**	**.4624**	**.6242**	**1.423**	**1.980**	**.5364**
Stddev	.0012	.0008	.005	.03	.0003	.0025	.006	.011	.0016
%RSD	.1731	.2557	.2805	.2870	.0564	.4054	.4217	.5316	.3052
#1	.6690	.3083	1.703	10.65	.4621	.6270	1.416	1.969	.5352
#2	.6700	.3099	1.695	10.59	.4626	.6221	1.425	1.990	.5356
#3	.6713	.3092	1.704	10.63	.4625	.6235	1.428	1.982	.5382

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5958**
Stddev	.0018
%RSD	.2999
#1	.5972
#2	.5938
#3	.5965

Zoom In Zoom Out

Sample Name: MP41231-S1 Acquired: 9/21/2022 12:04:49 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**861.77**	**3039.5**	**21902.**	**4822.6**
Stddev	.93	3.6	107.	36.2
%RSD	.10811	.11773	.48672	.75116
#1	862.47	3035.4	22012.	4782.5
#2	860.72	3041.4	21893.	4852.9
#3	862.13	3041.8	21800.	4832.4

Zoom In Zoom Out

Sample Name: MP41231-S2 Acquired: 9/21/2022 12:09:21 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0412**	**138.4**	**1.703**	**2.039**	**.0488**	**90.09**	**.0454**	**.4491**	**.2708**
Stddev	.0009	.4	.006	.004	.0001	.21	.0002	.0009	.0007
%RSD	2.228	.2566	.3573	.2134	.2917	.2384	.3325	.1945	.2471
#1	.0414	138.1	1.707	2.035	.0490	90.17	.0453	.4488	.2702
#2	.0402	138.2	1.696	2.040	.0487	89.84	.0452	.4484	.2715
#3	.0421	138.8	1.707	2.043	.0488	90.25	.0455	.4501	.2706

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2757**	**47.26**	**23.99**	**.0445**	**26.58**	**.6090**	**.4452**	**21.96**	**.4788**
Stddev	.0002	.15	.04	.0008	.04	.0007	.0010	.06	.0015
%RSD	.0656	.3161	.1636	1.755	.1381	.1176	.2170	.2953	.3035
#1	.2758	47.15	23.95	.0442	26.56	.6082	.4462	21.90	.4791
#2	.2758	47.20	23.99	.0438	26.55	.6096	.4443	21.94	.4773
#3	.2755	47.43	24.02	.0453	26.62	.6092	.4452	22.03	.4801

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6675**	**.3251**	**1.708**	**13.76**	**.4602**	**.7528**	**1.373**	**1.931**	**.5388**
Stddev	.0022	.0006	.004	.01	.0006	.0013	.003	.007	.0004
%RSD	.3228	.1803	.2388	.0901	.1200	.1738	.1796	.3593	.0677
#1	.6664	.3252	1.708	13.75	.4596	.7513	1.374	1.925	.5392
#2	.6700	.3245	1.704	13.76	.4602	.7538	1.375	1.939	.5386
#3	.6662	.3257	1.712	13.77	.4607	.7533	1.370	1.929	.5385

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5966**
Stddev	.0012
%RSD	.2047
#1	.5970
#2	.5952
#3	.5975

Zoom In Zoom Out

Sample Name: MP41231-S2 Acquired: 9/21/2022 12:09:21 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**855.22**	**2974.2**	**21370.**	**4765.3**
Stddev	.79	6.7	17.	20.1
%RSD	.09237	.22477	.07971	.42274
#1	855.94	2969.9	21390.	4757.7
#2	854.37	2981.9	21364.	4788.1
#3	855.33	2970.8	21357.	4750.0

Zoom In Zoom Out

Sample Name: FA98986-5 Acquired: 9/21/2022 12:13:53 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**104.6**	**.0101**	**.2043**	**.0012**	**38.87**	**.0007**	**.0026**	**.0769**
Stddev	.0005	.6	.0006	.0008	.0000	.21	.0000	.0000	.0005
%RSD	26.47	.5262	5.739	.4090	3.041	.5526	5.147	1.613	.5997
#1	.0023	104.1	.0100	.2036	.0012	38.68	.0007	.0026	.0768
#2	.0015	104.5	.0096	.2042	.0013	38.83	.0007	.0026	.0765
#3	.0016	105.2	.0108	.2052	.0012	39.10	.0006	.0027	.0774

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0482**	**25.09**	**1.015**	**.0413**	**2.906**	**.1686**	**.0029**	**.2167**	**.0281**
Stddev	.0003	.02	.003	.0011	.028	.0009	.0001	.0049	.0002
%RSD	.5813	.0620	.2749	2.718	.9755	.5133	2.000	2.247	.6993
#1	.0481	25.08	1.015	.0404	2.920	.1676	.0029	.2116	.0279
#2	.0485	25.09	1.012	.0425	2.926	.1691	.0028	.2173	.0283
#3	.0480	25.11	1.018	.0408	2.874	.1692	.0028	.2213	.0280

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4531**	**.0014**	**.0023**	**15.64**	**.0288**	**.2069**	**1.151**	**-.0007**	**.0690**
Stddev	.0040	.0015	.0012	.02	.0002	.0009	.001	.0022	.0007
%RSD	.8728	102.1	52.15	.1021	.6754	.4441	.0483	303.4	1.082
#1	.4498	-.0001	.0026	15.62	.0287	.2060	1.151	-.0022	.0683
#2	.4521	.0016	.0010	15.64	.0286	.2070	1.150	.0018	.0689
#3	.4575	.0028	.0033	15.65	.0290	.2079	1.151	-.0018	.0698

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2580**
Stddev	.0009
%RSD	.3370
#1	.2572
#2	.2581
#3	.2589

Zoom In Zoom Out

Sample Name: FA98986-5 Acquired: 9/21/2022 12:13:53 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.60**	**3025.2**	**21650.**	**4841.2**
Stddev	3.84	2.0	115.	25.3
%RSD	.42278	.06491	.52983	.52157
#1	909.33	3026.3	21779.	4859.3
#2	910.27	3026.3	21613.	4851.9
#3	903.20	3022.9	21559.	4812.3

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 12:18:36 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2564**	**40.28**	**2.008**	**2.033**	**2.032**	**40.20**	**2.014**	**2.016**	**2.019**
Stddev	.0015	.10	.013	.004	.003	.12	.004	.002	.003
%RSD	.5911	.2447	.6544	.2065	.1421	.3103	.1867	.1159	.1625
#1	.2548	40.23	1.993	2.033	2.031	40.12	2.010	2.014	2.017
#2	.2568	40.40	2.017	2.037	2.036	40.34	2.017	2.018	2.017
#3	.2577	40.23	2.015	2.028	2.031	40.14	2.016	2.017	2.022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**40.52**	**40.34**	**2.025**	**40.23**	**2.047**	**2.009**	**40.87**	**2.010**
Stddev	.005	.04	.06	.010	.08	.002	.006	.05	.010
%RSD	.2306	.1095	.1608	.4816	.1896	.0808	.2853	.1234	.4840
#1	2.047	40.51	40.28	2.023	40.30	2.048	2.003	40.86	1.999
#2	2.039	40.49	40.41	2.036	40.14	2.045	2.014	40.92	2.013
#3	2.038	40.57	40.33	2.016	40.24	2.046	2.011	40.82	2.018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.010**	**2.013**	**2.008**	**2.377**	**1.992**	**2.063**	**2.031**	**2.010**	**2.018**
Stddev	.006	.003	.009	.003	.005	.005	.003	.020	.006
%RSD	.3166	.1487	.4602	.1217	.2447	.2681	.1600	.9694	.2986
#1	2.014	2.010	1.998	2.376	1.986	2.064	2.035	2.000	2.016
#2	2.002	2.016	2.013	2.381	1.995	2.068	2.031	1.998	2.013
#3	2.013	2.014	2.014	2.375	1.993	2.057	2.028	2.033	2.025
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 12:18:36 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.003**
Stddev	.005
%RSD	.2395
#1	1.997
#2	2.005
#3	2.006
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**894.86**	**2810.5**	**20616.**	**4536.1**
Stddev	3.17	9.0	43.	37.8
%RSD	.35370	.32033	.20694	.83263
#1	894.27	2820.7	20662.	4564.5
#2	898.28	2807.2	20577.	4550.6
#3	892.03	2803.6	20610.	4493.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 12:23:07 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0071**	**.0000**	**.0001**	**.0002**	**.0064**	**.0001**	**.0001**	**.0000**
Stddev	.0007	.0034	.001	.0000	.0001	.0024	.0000	.0000	.0002
%RSD	10830.	47.17	8833.	66.90	48.83	37.60	31.64	9.626	458.3
#1	.0007	.0099	-.0005	.0001	.0003	.0087	.0001	.0001	-.0002
#2	.0000	.0080	.0012	.0000	.0002	.0039	.0001	.0002	.0001
#3	-.0007	.0034	-.0007	.0001	.0001	.0067	.0001	.0002	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0053**	**.0061**	F **.0013**	**.0055**	**.0001**	**.0001**	**-.0019**	**-.0001**
Stddev	.0003	.0002	.0226	.0002	.0162	.0000	.0001	.0020	.0001
%RSD	218.7	4.325	368.7	11.66	293.6	2.495	142.6	104.6	151.4
#1	-.0002	.0053	.0309	.0015	.0205	.0001	.0000	-.0030	-.0002
#2	.0002	.0056	.0010	.0012	.0076	.0001	.0001	-.0033	-.0001
#3	-.0004	.0051	-.0135	.0014	-.0116	.0001	.0001	.0004	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0005**	**.0001**	**.0025**	**.0001**	**.0001**	**.0003**	**.0002**	**-.0001**
Stddev	.0009	.0013	.0024	.0004	.0003	.0001	.0001	.0005	.0000
%RSD	264.4	271.6	1827.	14.75	500.4	46.75	28.72	279.3	71.08
#1	-.0013	-.0004	-.0024	.0023	-.0003	.0001	.0003	.0005	.0000
#2	.0005	-.0002	.0022	.0023	.0001	.0001	.0004	-.0004	-.0001
#3	-.0002	.0020	.0006	.0029	.0004	.0002	.0002	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 12:23:07 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0004**
Stddev	.0000
%RSD	10.82
#1	.0004
#2	.0004
#3	.0003

Check ? Chk Pass
High Limit
Low Limit

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**973.43**	**2923.1**	**20992.**	**4530.1**
Stddev	6.90	13.1	67.	1.8
%RSD	.70842	.44816	.32090	.04066
#1	981.14	2938.2	21070.	4529.7
#2	971.28	2915.9	20953.	4532.1
#3	967.86	2915.2	20954.	4528.5

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:42:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0008**	**-.0010**	**-.0001**	**.0046**	**.0000**	**.0035**	**-.0004**	**-.0003**	**.0000**
Stddev	.0001	.0009	.0000	.0001	.000	.0004	.0001	.0000	.0001
%RSD	8.331	85.67	14.89	2.687	238.5	10.33	17.46	7.468	328.1
#1	-.0009	-.0019	-.0001	.0047	-.0001	.0031	-.0003	-.0003	.0001
#2	-.0008	-.0001	-.0002	.0047	.0000	.0038	-.0004	-.0003	-.0001
#3	-.0007	-.0011	-.0001	.0044	.0000	.0034	-.0003	-.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0011**	**.0002**	**.0025**	**-.0025**	**-.0003**	**.0001**	**.0002**	**-.0081**	**-.0001**
Stddev	.0000	.0001	.0017	.0006	.0002	.0001	.0000	.0013	.0000
%RSD	3.922	64.84	66.72	22.60	74.54	57.25	24.34	15.88	31.45
#1	.0011	.0003	.0033	-.0021	-.0004	.0001	.0002	-.0092	-.0001
#2	.0011	.0000	.0036	-.0032	-.0004	.0001	.0001	-.0067	-.0001
#3	.0011	.0002	.0006	-.0023	.0000	.0000	.0002	-.0086	-.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0001**	**.0004**	**.0000**	**.0032**	**.0001**	**-.0003**	**.0007**	**.0000**	**.0000**
Stddev	.0003	.0000	.000	.0002	.0000	.0004	.0000	.0002	.0000
%RSD	248.2	10.55	145.2	6.705	38.14	159.6	3.580	2074.	117.1
#1	-.0004	.0005	-.0001	.0034	.0001	-.0005	.0007	-.0002	.0000
#2	-.0001	.0004	-.0001	.0032	.0001	-.0005	.0008	.0000	.0001
#3	.0002	.0004	.0000	.0030	.0001	.0002	.0007	.0002	.0001

Elem	Zn2062
Units	Cts/S
Avg	**.0008**
Stddev	.0000
%RSD	3.550
#1	.0008
#2	.0008
#3	.0009

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:42:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3736.7**	**10840.**	**70697.**	**11393.**
Stddev	65.6	193.	675.	152.
%RSD	1.7564	1.7833	.95436	1.3301
#1	3668.9	10641.	70872.	11283.
#2	3799.9	11027.	71266.	11329.
#3	3741.2	10853.	69952.	11566.

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:48:07 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0022**	**-.0043**	**-.0004**	**.0100**	**.0009**	**.0089**	**-.0010**	**-.0006**	**.0001**
Stddev	.0001	.0028	.0002	.0009	.0004	.0005	.0002	.0003	.0003
%RSD	5.428	64.15	42.96	8.592	47.72	6.038	20.22	58.46	233.3
#1	-.0021	-.0071	-.0002	.0109	.0005	.0091	-.0010	-.0009	.0003
#2	-.0024	-.0016	-.0005	.0092	.0013	.0083	-.0008	-.0006	.0002
#3	-.0022	-.0042	-.0005	.0098	.0008	.0093	-.0012	-.0002	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0037**	**.0009**	**.0082**	**-.0026**	**-.0007**	**.0006**	**.0009**	**-.0056**	**-.0005**
Stddev	.0001	.0004	.0028	.0011	.0004	.0001	.0001	.0030	.0001
%RSD	3.565	37.73	33.68	40.74	58.34	13.27	12.81	54.24	29.89
#1	.0036	.0010	.0056	-.0038	-.0011	.0006	.0010	-.0055	-.0006
#2	.0036	.0013	.0078	-.0018	-.0003	.0006	.0008	-.0086	-.0003
#3	.0038	.0006	.0111	-.0022	-.0006	.0007	.0010	-.0026	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0017**	**.0010**	**.0001**	**.0082**	**.0001**	**.0003**	**.0016**	**.0010**	**-.0005**
Stddev	.0010	.0001	.0001	.0003	.0002	.0009	.0002	.0008	.0001
%RSD	58.88	6.358	129.0	3.157	121.2	282.9	15.31	78.37	27.18
#1	-.0027	.0011	.0001	.0084	.0002	.0014	.0015	.0006	-.0004
#2	-.0016	.0009	.0000	.0079	.0003	-.0003	.0014	.0019	-.0007
#3	-.0008	.0010	.0002	.0082	.0000	-.0001	.0019	.0005	-.0004

Elem	Zn2062
Units	Cts/S
Avg	**.0050**
Stddev	.0001
%RSD	2.210
#1	.0050
#2	.0050
#3	.0052

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:48:07 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**978.13**	**2862.4**	**20361.**	**4350.2**
Stddev	4.39	16.6	57.	8.1
%RSD	.44886	.58059	.28230	.18617
#1	983.11	2881.4	20392.	4351.5
#2	974.82	2854.9	20398.	4341.5
#3	976.46	2850.8	20295.	4357.5

Zoom In Zoom Out

Sample Name: STDB Acquired: 9/21/2022 13:52:02 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0049**	**.0406**	**.0018**	**3.803**	**.0640**	**.4142**	**.0333**	**.1626**	**.0085**
Stddev	.0004	.0011	.0001	.010	.0011	.0012	.0006	.0001	.0002
%RSD	7.630	2.619	7.949	.2657	1.735	.2800	1.718	.0474	1.794
#1	.0045	.0413	.0017	3.802	.0628	.4135	.0329	.1627	.0083
#2	.0050	.0394	.0020	3.814	.0649	.4155	.0330	.1626	.0086
#3	.0052	.0411	.0019	3.794	.0644	.4135	.0339	.1626	.0086

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0311**	**.0851**	**1.732**	**.0302**	**.2080**	**.0734**	**.0750**	**5.170**	**.0737**
Stddev	.0003	.0006	.001	.0039	.0017	.0003	.0003	.020	.0001
%RSD	.8370	.6802	.0680	12.76	.8255	.4413	.4594	.3922	.1583
#1	.0313	.0858	1.731	.0294	.2071	.0737	.0750	5.166	.0736
#2	.0308	.0849	1.734	.0344	.2100	.0730	.0746	5.191	.0738
#3	.0312	.0847	1.732	.0268	.2070	.0735	.0753	5.151	.0736

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0072**	**.0027**	**.0019**	**.0276**	**.2189**	**.0277**	**.0066**	**.0573**	**.0830**
Stddev	.0005	.0002	.0001	.0001	.0000	.0005	.0005	.0004	.0002
%RSD	7.093	9.022	7.303	.4359	.0189	1.787	6.841	.7713	.2509
#1	.0075	.0030	.0017	.0276	.2189	.0283	.0069	.0569	.0831
#2	.0066	.0026	.0020	.0277	.2188	.0273	.0068	.0578	.0832
#3	.0075	.0026	.0019	.0275	.2189	.0276	.0061	.0571	.0828

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**953.96**	**2827.6**	**20052.**	**4336.1**
Stddev	.27	6.2	184.	23.1
%RSD	.02805	.21836	.91989	.53231
#1	953.66	2821.1	20129.	4343.5
#2	954.18	2833.3	19841.	4310.3
#3	954.04	2828.5	20185.	4354.6

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 13:56:26 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0186**	**1.022**	**.0518**	**4.464**	**2.998**	**1.940**	**1.600**	**.7736**	**.1949**
Stddev	.0002	.002	.0004	.004	.002	.001	.002	.0006	.0002
%RSD	1.102	.1624	.8118	.0872	.0697	.0244	.1165	.0736	.1198
#1	.0186	1.021	.0517	4.466	2.999	1.940	1.599	.7739	.1950
#2	.0184	1.024	.0514	4.460	2.996	1.939	1.602	.7739	.1950
#3	.0188	1.021	.0522	4.467	3.000	1.940	1.601	.7729	.1946

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2587**	**1.320**	**.8334**	**.6736**	**.1996**	**1.138**	**.3444**	**2.693**	**.4323**
Stddev	.0003	.001	.0028	.0039	.0013	.005	.0007	.011	.0007
%RSD	.1131	.0774	.3376	.5749	.6724	.4731	.2092	.4131	.1732
#1	.2590	1.319	.8308	.6752	.1980	1.137	.3436	2.684	.4332
#2	.2587	1.321	.8364	.6765	.2004	1.144	.3444	2.706	.4318
#3	.2585	1.320	.8328	.6692	.2003	1.133	.3451	2.689	.4321

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4482**	**.0749**	**.0427**	**.1008**	**.1272**	**4.964**	**.6033**	**.1471**	**.2624**
Stddev	.0015	.0005	.0005	.0001	.0003	.012	.0016	.0006	.0014
%RSD	.3437	.7044	1.206	.1299	.2461	.2325	.2612	.4009	.5186
#1	.4471	.0750	.0427	.1010	.1271	4.967	.6024	.1477	.2627
#2	.4474	.0743	.0421	.1009	.1275	4.951	.6051	.1471	.2635
#3	.4499	.0753	.0432	.1007	.1269	4.973	.6024	.1465	.2609

Elem	Zn2062
Units	Cts/S
Avg	**.8902**
Stddev	.0014
%RSD	.1534
#1	.8898
#2	.8890
#3	.8917

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 13:56:26 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**962.08**	**2861.3**	**20237.**	**4389.8**
Stddev	1.28	2.9	79.	18.0
%RSD	.13269	.10261	.39056	.41037
#1	963.31	2863.7	20216.	4409.2
#2	962.17	2862.3	20171.	4373.7
#3	960.76	2858.0	20325.	4386.4

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 14:00:00 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0393**	**2.056**	**.1055**	**8.946**	**6.019**	**3.880**	**3.211**	**1.548**	**.3918**
Stddev	.0002	.001	.0008	.012	.003	.012	.004	.002	.0013
%RSD	.5067	.0536	.7414	.1334	.0530	.3137	.1278	.1418	.3333
#1	.0394	2.057	.1059	8.932	6.022	3.866	3.210	1.549	.3905
#2	.0395	2.057	.1046	8.950	6.016	3.887	3.207	1.546	.3931
#3	.0391	2.055	.1061	8.955	6.020	3.886	3.215	1.550	.3920

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5202**	**2.631**	**1.663**	**1.366**	**.3938**	**2.285**	**.6984**	**5.390**	**.8714**
Stddev	.0019	.004	.005	.003	.0003	.014	.0007	.004	.0029
%RSD	.3738	.1508	.3302	.1833	.0885	.6002	.1039	.0788	.3326
#1	.5188	2.626	1.659	1.367	.3938	2.273	.6989	5.390	.8713
#2	.5224	2.633	1.661	1.363	.3934	2.300	.6976	5.387	.8686
#3	.5193	2.633	1.669	1.368	.3941	2.282	.6988	5.395	.8744

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9027**	**.1503**	**.0869**	**.1963**	**.2556**	**10.04**	**1.211**	**.2940**	**.5348**
Stddev	.0054	.0003	.0003	.0008	.0004	.02	.006	.0015	.0026
%RSD	.6015	.2178	.3115	.3953	.1617	.2311	.4871	.4971	.4877
#1	.9082	.1507	.0871	.1971	.2557	10.02	1.208	.2956	.5320
#2	.9027	.1501	.0871	.1956	.2552	10.04	1.218	.2928	.5371
#3	.8973	.1502	.0866	.1960	.2560	10.06	1.207	.2936	.5352

Elem	Zn2062
Units	Cts/S
Avg	**1.778**
Stddev	.004
%RSD	.2155
#1	1.776
#2	1.776
#3	1.783

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 14:00:00 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**945.38**	**2813.1**	**19926.**	**4382.1**
Stddev	4.98	4.3	196.	21.6
%RSD	.52686	.15241	.98598	.49302
#1	940.66	2809.9	20129.	4399.1
#2	944.90	2817.9	19736.	4389.3
#3	950.58	2811.3	19912.	4357.8

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 14:03:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0856**	**4.138**	**.2197**	**18.32**	**12.31**	**7.804**	**6.574**	**3.161**	**.7983**
Stddev	.0006	.006	.0004	.04	.04	.016	.006	.003	.0010
%RSD	.6719	.1368	.1933	.1936	.2900	.2073	.0957	.0826	.1308
#1	.0862	4.140	.2201	18.36	12.35	7.818	6.577	3.162	.7990
#2	.0851	4.142	.2195	18.31	12.30	7.808	6.578	3.162	.7988
#3	.0855	4.132	.2193	18.28	12.27	7.786	6.566	3.158	.7971

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.060**	**5.334**	**3.370**	**2.840**	**.7992**	**4.645**	**1.434**	**10.88**	**1.775**
Stddev	.005	.018	.010	.004	.0035	.001	.001	.02	.004
%RSD	.4307	.3409	.3010	.1416	.4328	.0111	.0948	.1996	.2268
#1	1.062	5.349	3.381	2.845	.8030	4.645	1.434	10.89	1.776
#2	1.055	5.339	3.369	2.837	.7985	4.646	1.435	10.90	1.779
#3	1.063	5.314	3.361	2.839	.7962	4.645	1.432	10.86	1.771

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.869**	**.3103**	**.1799**	**.5299**	**.5308**	**20.90**	**2.512**	**.6123**	**1.105**
Stddev	.005	.0005	.0001	.0001	.0013	.06	.004	.0052	.001
%RSD	.2537	.1537	.0693	.0136	.2398	.3100	.1378	.8505	.0825
#1	1.869	.3102	.1799	.5300	.5322	20.97	2.514	.6075	1.104
#2	1.864	.3108	.1798	.5298	.5302	20.87	2.508	.6115	1.104
#3	1.873	.3099	.1800	.5299	.5299	20.85	2.515	.6178	1.106

Elem	Zn2062
Units	Cts/S
Avg	**3.633**
Stddev	.005
%RSD	.1362
#1	3.635
#2	3.637
#3	3.627

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 14:03:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**924.77**	**2779.3**	**19832.**	**4345.0**
Stddev	1.22	11.3	104.	46.0
%RSD	.13205	.40690	.52253	1.0590
#1	923.40	2771.5	19856.	4311.6
#2	925.73	2774.1	19719.	4325.9
#3	925.19	2792.3	19922.	4397.5

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 14:07:44 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1750**	**8.273**	**.4443**	**36.68**	**24.58**	**15.58**	**13.09**	**6.304**	**1.580**
Stddev	.0006	.023	.0004	.04	.03	.05	.01	.003	.001
%RSD	.3330	.2778	.0806	.0981	.1120	.3263	.0692	.0436	.0468
#1	.1745	8.289	.4445	36.65	24.61	15.63	13.10	6.301	1.579
#2	.1748	8.283	.4439	36.68	24.56	15.58	13.09	6.306	1.580
#3	.1757	8.247	.4445	36.72	24.58	15.53	13.08	6.306	1.580

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.116**	**10.56**	**6.758**	**5.698**	**1.583**	**9.172**	**2.878**	**21.73**	**3.531**
Stddev	.004	.02	.006	.003	.006	.007	.001	.04	.002
%RSD	.1819	.1834	.0870	.0461	.3861	.0738	.0306	.1631	.0615
#1	2.119	10.58	6.765	5.700	1.589	9.177	2.877	21.77	3.533
#2	2.112	10.54	6.755	5.700	1.583	9.164	2.877	21.71	3.528
#3	2.117	10.55	6.754	5.695	1.577	9.174	2.879	21.71	3.531

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.747**	**.6263**	**.3613**	**1.065**	**1.055**	**42.09**	**5.010**	**1.223**	**2.207**
Stddev	.004	.0017	.0010	.001	.000	.04	.004	.012	.003
%RSD	.1058	.2701	.2664	.0985	.0345	.0861	.0728	.9417	.1305
#1	3.751	.6249	.3624	1.065	1.055	42.05	5.012	1.227	2.205
#2	3.743	.6258	.3611	1.064	1.055	42.12	5.006	1.232	2.210
#3	3.748	.6282	.3605	1.066	1.055	42.09	5.013	1.210	2.206

Elem	Zn2062
Units	Cts/S
Avg	**7.199**
Stddev	.008
%RSD	.1171
#1	7.205
#2	7.203
#3	7.190

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 14:07:44 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**893.15**	**2715.2**	**19644.**	**4351.9**
Stddev	1.30	4.5	59.	49.9
%RSD	.14535	.16603	.29928	1.1472
#1	893.29	2720.2	19625.	4299.7
#2	894.36	2713.9	19597.	4356.7
#3	891.78	2711.5	19710.	4399.2

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 14:11:35 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3380**	**16.60**	**.9022**	**72.91**	**48.35**	**30.98**	**25.93**	**12.53**	**3.106**
Stddev	.0012	.03	.0007	.06	.08	.03	.04	.03	.009
%RSD	.3418	.1983	.0813	.0762	.1668	.0937	.1534	.2121	.2847
#1	.3393	16.61	.9029	72.94	48.28	31.00	25.92	12.51	3.096
#2	.3370	16.63	.9014	72.95	48.44	30.98	25.90	12.52	3.110
#3	.3379	16.56	.9024	72.85	48.34	30.94	25.98	12.56	3.113

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.221**	**20.67**	**13.58**	**11.42**	**3.122**	**17.92**	**5.795**	**43.28**	**7.012**
Stddev	.014	.03	.01	.01	.016	.13	.005	.10	.011
%RSD	.3367	.1426	.0891	.1207	.5126	.7173	.0912	.2419	.1533
#1	4.207	20.64	13.57	11.43	3.104	17.80	5.797	43.22	7.021
#2	4.222	20.69	13.59	11.42	3.133	17.90	5.790	43.40	7.000
#3	4.235	20.69	13.57	11.41	3.130	18.05	5.800	43.21	7.015

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.453**	**1.266**	**.7277**	**1.624**	**2.148**	**84.06**	**9.983**	**2.416**	**4.414**
Stddev	.012	.002	.0003	.002	.003	1.24	.028	.009	.024
%RSD	.1559	.1882	.0377	.1259	.1204	1.480	.2846	.3526	.5432
#1	7.443	1.265	.7279	1.623	2.147	83.87	9.956	2.421	4.387
#2	7.451	1.265	.7274	1.623	2.145	85.38	9.981	2.421	4.423
#3	7.466	1.269	.7278	1.627	2.150	82.91	10.01	2.406	4.433

Elem	Zn2062
Units	Cts/S
Avg	**14.22**
Stddev	.03
%RSD	.1886
#1	14.23
#2	14.19
#3	14.25

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 14:11:35 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**852.14**	**2607.2**	**19105.**	**4294.1**
Stddev	.73	4.6	137.	11.9
%RSD	.08531	.17540	.71685	.27814
#1	851.77	2604.6	19237.	4306.3
#2	852.98	2612.5	19114.	4282.4
#3	851.68	2604.6	18964.	4293.6

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 14:18:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2573	40.19	2.049	2.055	2.061	38.88	2.058	2.064	2.080
Stddev	.0003	.21	.007	.007	.010	.18	.003	.003	.007
%RSD	.1253	.5340	.3353	.3626	.4860	.4661	.1585	.1267	.3189
#1	.2574	40.06	2.041	2.048	2.051	38.79	2.055	2.061	2.085
#2	.2576	40.07	2.055	2.054	2.060	38.77	2.061	2.066	2.083
#3	.2570	40.44	2.050	2.063	2.071	39.09	2.058	2.065	2.073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.060	39.73	40.10	2.049	42.13	2.071	2.022	38.59	2.055
Stddev	.003	.12	.17	.008	.24	.009	.005	.17	.003
%RSD	.1545	.3086	.4142	.3903	.5598	.4545	.2354	.4285	.1659
#1	2.064	39.60	40.01	2.044	41.96	2.079	2.017	38.47	2.051
#2	2.059	39.73	40.01	2.045	42.03	2.074	2.025	38.51	2.058
#3	2.058	39.85	40.29	2.058	42.40	2.061	2.025	38.78	2.056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.072	2.048	2.079	.1592	1.957	2.053	2.070	2.152	2.046
Stddev	.002	.004	.005	.0004	.004	.008	.001	.018	.009
%RSD	.0935	.1876	.2192	.2516	.1928	.4109	.0267	.8426	.4373
#1	2.074	2.044	2.076	.1593	1.953	2.046	2.071	2.144	2.053
#2	2.070	2.051	2.084	.1588	1.960	2.051	2.070	2.138	2.049
#3	2.072	2.048	2.076	.1596	1.958	2.063	2.070	2.172	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 14:18:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	2.071
Stddev	.004
%RSD	.2019
#1	2.067
#2	2.075
#3	2.070
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	897.82	2723.7	19735.	4336.4
Stddev	.33	6.5	94.	36.2
%RSD	.03625	.24031	.47445	.83566
#1	897.46	2728.8	19635.	4328.2
#2	897.90	2716.3	19751.	4376.0
#3	898.10	2726.0	19820.	4305.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 14:25:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2576	39.93	2.005	2.004	2.018	40.23	2.021	2.014	2.032
Stddev	.0004	.04	.006	.003	.003	.11	.003	.003	.005
%RSD	.1507	.0943	.2827	.1450	.1520	.2843	.1338	.1595	.2353
#1	.2581	39.96	1.998	2.003	2.016	40.28	2.018	2.011	2.035
#2	.2574	39.89	2.007	2.002	2.016	40.11	2.023	2.017	2.027
#3	.2574	39.92	2.009	2.007	2.021	40.32	2.022	2.016	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.994	40.52	40.12	2.013	40.45	2.017	2.011	40.21	2.027
Stddev	.001	.06	.07	.006	.06	.003	.004	.06	.005
%RSD	.0250	.1379	.1679	.2943	.1418	.1415	.1908	.1387	.2405
#1	1.994	40.52	40.15	2.016	40.46	2.015	2.006	40.24	2.021
#2	1.995	40.46	40.05	2.006	40.50	2.016	2.013	40.15	2.030
#3	1.994	40.57	40.17	2.017	40.38	2.020	2.013	40.25	2.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.018	1.998	2.012	2.349	1.993	2.014	2.007	2.045	2.011
Stddev	.006	.002	.005	.001	.003	.008	.002	.013	.002
%RSD	.2795	.1069	.2364	.0366	.1257	.4040	.0982	.6424	.0813
#1	2.024	1.996	2.007	2.348	1.990	2.012	2.008	2.042	2.009
#2	2.019	1.998	2.013	2.350	1.995	2.006	2.005	2.033	2.012
#3	2.013	2.000	2.016	2.349	1.993	2.022	2.009	2.059	2.011
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 14:25:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	2.030
Stddev	.004
%RSD	.2025
#1	2.025
#2	2.033
#3	2.032
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	900.95	2731.3	19860.	4309.2
Stddev	.86	13.5	107.	18.1
%RSD	.09508	.49316	.54002	.41933
#1	901.70	2746.8	19793.	4288.4
#2	900.01	2725.3	19983.	4320.7
#3	901.13	2721.9	19803.	4318.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 14:35:56 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0129**	**.0001**	**.0001**	**.0000**	**.0009**	**.0000**	**.0000**	**-.0002**
Stddev	.0004	.0032	.0009	.0001	.000	.0002	.000	.000	.0002
%RSD	320.5	24.74	598.4	229.0	464.0	21.91	113.9	307.3	139.6
#1	.0004	.0102	.0004	.0002	.0000	.0010	.0000	.0000	-.0004
#2	.0003	.0120	-.0008	-.0001	-.0001	.0007	-.0001	.0000	.0001
#3	-.0003	.0164	.0009	.0000	.0000	.0010	.0000	-.0002	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0004**	**.0103**	**.0006**	**.0212**	**.0000**	**.0001**	**.0064**	**-.0001**
Stddev	.0001	.0012	.0131	.0005	.0013	.000	.0001	.0020	.0000
%RSD	54.89	308.5	127.2	88.12	6.084	97.16	159.0	30.57	36.49
#1	.0001	.0015	-.0020	.0001	.0223	.0000	.0002	.0072	-.0001
#2	.0002	-.0009	.0089	.0011	.0198	.0000	-.0001	.0079	-.0001
#3	.0002	.0005	.0240	.0006	.0215	-.0001	.0001	.0042	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0009**	**-.0016**	**-.0006**	**.0000**	**.0001**	**.0001**	**.0007**	**.0003**
Stddev	.0002	.0012	.0018	.0005	.0002	.0000	.0001	.0011	.0003
%RSD	39.53	138.6	111.1	88.97	398.1	19.88	102.8	158.6	81.19
#1	-.0003	.0011	-.0036	-.0002	.0001	.0001	.0002	-.0005	.0000
#2	-.0007	-.0004	-.0001	-.0011	-.0002	.0001	.0000	.0017	.0004
#3	-.0007	.0020	-.0011	-.0004	.0002	.0001	.0001	.0008	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 14:35:56 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	51.34
#1	.0001
#2	.0002
#3	.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**985.86**	**2857.5**	**20028.**	**4391.2**
Stddev	1.92	4.3	59.	12.1
%RSD	.19514	.15147	.29230	.27526
#1	988.00	2859.8	20082.	4405.0
#2	985.31	2852.5	20037.	4386.0
#3	984.28	2860.3	19966.	4382.5

Zoom In Zoom Out

Sample Name: FA98986-6 Acquired: 9/21/2022 14:45:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**107.0**	**.0069**	**.1174**	**.0011**	**6.463**	**.0002**	**.0019**	**.0766**
Stddev	.0002	.3	.0006	.0002	.0000	.018	.0000	.0000	.0005
%RSD	45.14	.2348	8.919	.1670	3.361	.2823	14.11	1.763	.6550
#1	.0003	106.8	.0073	.1172	.0011	6.466	.0002	.0019	.0761
#2	.0007	107.3	.0062	.1176	.0010	6.480	.0003	.0020	.0771
#3	.0003	106.9	.0071	.1174	.0011	6.444	.0002	.0019	.0768

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0879**	**18.53**	**1.363**	**.0434**	**2.723**	**.0906**	**.0030**	**.1887**	**.0260**
Stddev	.0005	.05	.006	.0003	.025	.0002	.0002	.0036	.0002
%RSD	.5198	.2626	.4762	.7359	.8982	.2746	7.606	1.896	.7530
#1	.0875	18.51	1.356	.0433	2.703	.0903	.0033	.1847	.0259
#2	.0878	18.59	1.364	.0432	2.750	.0908	.0030	.1897	.0259
#3	.0884	18.50	1.369	.0438	2.716	.0905	.0028	.1917	.0263

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1089**	**-.0004**	**-.0008**	**15.20**	**.0254**	**.1292**	**1.070**	**.0003**	**.0573**
Stddev	.0008	.0009	.0010	.02	.0003	.0005	.002	.0009	.0001
%RSD	.7288	198.8	127.6	.1323	1.051	.4209	.1726	296.3	.1727
#1	.1082	-.0009	-.0016	15.22	.0251	.1293	1.068	.0010	.0572
#2	.1088	-.0010	-.0010	15.18	.0257	.1296	1.071	-.0007	.0574
#3	.1098	.0006	.0003	15.20	.0253	.1286	1.071	.0007	.0572

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2354**
Stddev	.0003
%RSD	.1091
#1	.2355
#2	.2352
#3	.2357

Zoom In Zoom Out

Sample Name: FA98986-6 Acquired: 9/21/2022 14:45:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**939.72**	**2959.7**	**20806.**	**4649.9**
Stddev	2.25	6.5	22.	40.7
%RSD	.23945	.21874	.10778	.87518
#1	939.67	2962.7	20803.	4692.9
#2	941.99	2964.2	20785.	4612.0
#3	937.49	2952.3	20829.	4644.7

Zoom In Zoom Out

Sample Name: FA98986-7 Acquired: 9/21/2022 14:49:46 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**78.91**	**.0062**	**.1939**	**.0008**	**6.753**	**.0011**	**.0017**	**.0564**
Stddev	.0003	.30	.0007	.0006	.0000	.018	.0000	.0002	.0002
%RSD	18.01	.3746	10.64	.3268	3.410	.2588	.9913	9.515	.3161
#1	.0016	79.03	.0068	.1943	.0008	6.752	.0011	.0018	.0562
#2	.0017	79.13	.0062	.1943	.0009	6.772	.0011	.0015	.0566
#3	.0012	78.58	.0055	.1932	.0008	6.737	.0011	.0016	.0565

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0251**	**28.11**	**.8104**	**.0291**	**1.937**	**.0823**	**.0019**	**.2750**	**.0189**
Stddev	.0001	.05	.0130	.0010	.016	.0002	.0001	.0076	.0002
%RSD	.4776	.1948	1.604	3.518	.8483	.2029	7.020	2.778	.8090
#1	.0250	28.11	.7974	.0288	1.921	.0824	.0020	.2699	.0188
#2	.0252	28.16	.8234	.0282	1.937	.0822	.0018	.2713	.0189
#3	.0251	28.05	.8103	.0302	1.954	.0825	.0019	.2838	.0191

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2388**	**.0013**	**.0001**	**12.51**	**.0505**	**.1167**	**.7521**	**-.0010**	**.0471**
Stddev	.0014	.0005	.0018	.01	.0001	.0005	.0018	.0010	.0004
%RSD	.5686	37.72	3158.	.0708	.2673	.4587	.2372	95.47	.8606
#1	.2394	.0007	-.0018	12.52	.0504	.1169	.7506	-.0013	.0468
#2	.2399	.0016	.0003	12.51	.0504	.1172	.7516	.0000	.0470
#3	.2373	.0015	.0017	12.50	.0507	.1161	.7540	-.0019	.0476

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3451**
Stddev	.0002
%RSD	.0501
#1	.3450
#2	.3451
#3	.3453

Zoom In Zoom Out

Sample Name: FA98986-7 Acquired: 9/21/2022 14:49:46 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**950.63**	**2914.2**	**20489.**	**4555.9**
Stddev	3.45	4.9	87.	31.0
%RSD	.36341	.16964	.42688	.68103
#1	947.10	2908.6	20527.	4586.5
#2	950.76	2916.1	20551.	4524.4
#3	954.01	2918.0	20389.	4556.7

Zoom In Zoom Out

Sample Name: FA98986-9 Acquired: 9/21/2022 14:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**154.5**	**.0101**	**.1596**	**.0017**	**4.078**	**-.0006**	**.0053**	**.1100**
Stddev	.0005	.4	.0011	.0010	.0000	.007	.0000	.0001	.0006
%RSD	44.43	.2594	11.30	.6260	2.466	.1788	2.136	1.670	.5224
#1	.0005	154.4	.0108	.1594	.0017	4.074	-.0006	.0053	.1106
#2	.0013	154.9	.0108	.1607	.0017	4.087	-.0006	.0053	.1094
#3	.0013	154.1	.0088	.1588	.0016	4.074	-.0006	.0054	.1100

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0143**	**35.96**	**1.558**	**.0404**	**3.731**	**.1099**	**.0053**	**.1946**	**.0380**
Stddev	.0002	.06	.025	.0013	.022	.0002	.0001	.0037	.0001
%RSD	1.612	.1618	1.626	3.145	.5779	.2140	1.365	1.889	.3230
#1	.0141	35.93	1.572	.0413	3.738	.1097	.0054	.1911	.0380
#2	.0144	36.02	1.573	.0410	3.707	.1101	.0053	.1984	.0380
#3	.0145	35.91	1.528	.0390	3.749	.1099	.0053	.1944	.0382

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1052**	**-.0014**	**-.0016**	**13.60**	**.0265**	**.0932**	**1.449**	**.0006**	**.0856**
Stddev	.0009	.0007	.0011	.02	.0003	.0005	.002	.0016	.0001
%RSD	.8938	50.88	69.90	.1145	1.301	.5409	.1296	247.6	.1225
#1	.1045	-.0006	-.0024	13.60	.0267	.0932	1.447	-.0006	.0855
#2	.1049	-.0020	-.0003	13.59	.0261	.0938	1.451	.0001	.0857
#3	.1063	-.0015	-.0022	13.62	.0267	.0927	1.450	.0024	.0857

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0507**
Stddev	.0001
%RSD	.2235
#1	.0507
#2	.0506
#3	.0508

Zoom In Zoom Out

Sample Name: FA98986-9 Acquired: 9/21/2022 14:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.48**	**3048.3**	**21363.**	**4802.6**
Stddev	1.49	3.2	14.	15.7
%RSD	.15800	.10411	.06740	.32620
#1	942.69	3044.8	21379.	4791.5
#2	939.82	3049.1	21355.	4820.5
#3	941.93	3051.0	21353.	4795.8

Zoom In Zoom Out

Sample Name: FA98986-10 Acquired: 9/21/2022 14:59:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**116.6**	**.0189**	**.1463**	**.0013**	**5.003**	**.0002**	**.0039**	**.0810**
Stddev	.0001	.4	.0005	.0003	.0000	.016	.0000	.0001	.0003
%RSD	8.852	.3271	2.393	.1743	3.594	.3178	2.375	2.631	.4206
#1	.0014	116.4	.0185	.1465	.0013	4.987	.0002	.0038	.0806
#2	.0012	116.4	.0190	.1460	.0012	5.005	.0002	.0040	.0811
#3	.0012	117.1	.0194	.1465	.0013	5.018	.0002	.0038	.0813

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0343**	**35.38**	**1.125**	**.0385**	**3.054**	**.1556**	**.0041**	**.1637**	**.0304**
Stddev	.0001	.08	.004	.0004	.041	.0004	.0001	.0065	.0003
%RSD	.3332	.2356	.3669	1.005	1.351	.2835	2.680	3.998	1.111
#1	.0342	35.32	1.129	.0383	3.009	.1558	.0040	.1709	.0308
#2	.0344	35.34	1.125	.0390	3.062	.1559	.0040	.1622	.0304
#3	.0344	35.47	1.121	.0383	3.091	.1551	.0042	.1581	.0301

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3082**	**.0031**	**.0001**	**12.42**	**.0438**	**.1315**	**1.129**	**-.0006**	**.0772**
Stddev	.0004	.0008	.0019	.02	.0005	.0001	.003	.0005	.0003
%RSD	.1252	26.19	1848.	.1547	1.047	.0673	.2321	98.39	.3806
#1	.3078	.0032	-.0016	12.44	.0439	.1315	1.130	-.0011	.0769
#2	.3086	.0039	.0021	12.43	.0441	.1314	1.132	-.0006	.0775
#3	.3081	.0022	-.0002	12.40	.0432	.1316	1.127	.0000	.0771

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1874**
Stddev	.0002
%RSD	.1254
#1	.1873
#2	.1876
#3	.1872

Zoom In Zoom Out

Sample Name: FA98986-10 Acquired: 9/21/2022 14:59:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**951.48**	**2964.9**	**20910.**	**4706.1**
Stddev	.31	6.0	15.	64.7
%RSD	.03206	.20361	.07081	1.3749
#1	951.16	2958.5	20918.	4770.8
#2	951.49	2965.6	20893.	4706.1
#3	951.77	2970.6	20918.	4641.4

Zoom In Zoom Out

Sample Name: FA98986-11 Acquired: 9/21/2022 15:03:59 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**176.2**	**.0150**	**.1817**	**.0023**	**2.623**	**-.0007**	**.0067**	**.1222**
Stddev	.0005	1.1	.0012	.0007	.0001	.017	.0000	.0002	.0007
%RSD	58.78	.6194	8.039	.3810	2.185	.6446	6.811	2.515	.5350
#1	.0003	177.1	.0162	.1822	.0023	2.638	-.0006	.0066	.1215
#2	.0010	175.0	.0138	.1809	.0024	2.605	-.0007	.0069	.1223
#3	.0014	176.6	.0149	.1820	.0023	2.625	-.0007	.0065	.1228

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0161**	**47.59**	**1.697**	**.0466**	**4.451**	**.1375**	**.0057**	**.3024**	**.0437**
Stddev	.0003	.21	.010	.0007	.056	.0005	.0002	.0031	.0002
%RSD	1.829	.4511	.5663	1.511	1.254	.3391	3.890	1.022	.4513
#1	.0161	47.49	1.708	.0474	4.411	.1371	.0059	.2989	.0435
#2	.0159	47.45	1.691	.0463	4.428	.1380	.0056	.3048	.0438
#3	.0165	47.84	1.692	.0462	4.515	.1375	.0055	.3035	.0438

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1114**	**-.0022**	**.0015**	**14.94**	**.0260**	**.1480**	**1.446**	**.0012**	**.1090**
Stddev	.0025	.0006	.0012	.02	.0005	.0010	.003	.0010	.0007
%RSD	2.242	28.57	80.86	.1345	1.804	.6973	.1946	85.55	.6270
#1	.1093	-.0023	.0022	14.92	.0262	.1491	1.443	.0020	.1093
#2	.1142	-.0028	.0001	14.93	.0255	.1470	1.448	.0016	.1095
#3	.1108	-.0016	.0022	14.96	.0263	.1480	1.447	.0000	.1082

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1100**
Stddev	.0001
%RSD	.1183
#1	.1099
#2	.1101
#3	.1101

Zoom In Zoom Out

Sample Name: FA98986-11 Acquired: 9/21/2022 15:03:59 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.44**	**3132.0**	**21999.**	**4985.8**
Stddev	3.10	4.2	27.	13.3
%RSD	.32775	.13259	.12048	.26701
#1	943.06	3133.9	21983.	4984.4
#2	942.27	3127.2	22029.	4999.8
#3	947.98	3134.8	21984.	4973.2

Zoom In Zoom Out

Sample Name: FA98986-12 Acquired: 9/21/2022 15:08:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**131.2**	**.0107**	**.1614**	**.0015**	**3.571**	**-.0003**	**.0049**	**.1022**
Stddev	.0001	.5	.0003	.0005	.0000	.014	.0001	.0002	.0001
%RSD	25.09	.3622	3.234	.2823	2.970	.3981	20.45	3.837	.1088
#1	.0004	130.8	.0111	.1611	.0015	3.560	-.0003	.0047	.1024
#2	.0003	131.0	.0104	.1612	.0014	3.566	-.0002	.0048	.1022
#3	.0006	131.7	.0108	.1619	.0015	3.587	-.0004	.0051	.1021

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201**	**25.62**	**1.421**	**.0382**	**3.453**	**.1025**	**.0039**	**.1824**	**.0344**
Stddev	.0002	.06	.012	.0010	.006	.0003	.0000	.0037	.0002
%RSD	1.133	.2353	.8311	2.555	.1735	.2571	.8441	2.011	.6604
#1	.0203	25.61	1.432	.0373	3.460	.1028	.0039	.1865	.0346
#2	.0199	25.57	1.408	.0380	3.450	.1022	.0039	.1796	.0344
#3	.0199	25.69	1.422	.0392	3.449	.1026	.0039	.1809	.0342

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2937**	**.0041**	**.0002**	**10.25**	**.0583**	**.0900**	**1.406**	**-.0003**	**.0731**
Stddev	.0012	.0012	.0012	.02	.0003	.0003	.001	.0015	.0004
%RSD	.4079	27.86	548.3	.2020	.5195	.2996	.0506	558.9	.5367
#1	.2926	.0053	.0003	10.23	.0582	.0898	1.406	-.0017	.0735
#2	.2935	.0042	.0014	10.25	.0581	.0899	1.405	.0013	.0729
#3	.2950	.0030	-.0010	10.27	.0587	.0903	1.406	-.0004	.0728

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0604**
Stddev	.0001
%RSD	.2054
#1	.0603
#2	.0605
#3	.0605

Zoom In Zoom Out

Sample Name: FA98986-12 Acquired: 9/21/2022 15:08:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**962.45**	**3157.9**	**22283.**	**4999.9**
Stddev	2.25	6.8	19.	21.4
%RSD	.23388	.21556	.08680	.42718
#1	960.60	3150.1	22305.	5018.6
#2	964.96	3162.6	22272.	4976.6
#3	961.80	3161.1	22272.	5004.3

Zoom In Zoom Out

Sample Name: FA98825-2 Acquired: 9/21/2022 15:13:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0142**	**324.0**	**.1010**	**3.273**	**.0099**	**169.8**	**-.0067**	**.2630**	**.7633**
Stddev	.0012	.5	.0040	.003	.0002	.3	.0002	.0006	.0047
%RSD	8.612	.1398	3.966	.0993	2.016	.1630	3.003	.2386	.6199
#1	.0147	324.5	.0998	3.277	.0097	170.1	-.0069	.2624	.7583
#2	.0128	323.6	.1055	3.272	.0098	169.5	-.0065	.2629	.7677
#3	.0151	323.9	.0978	3.271	.0101	169.8	-.0066	.2637	.7640

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5859**	**520.5**	**27.59**	**.3275**	**154.2**	**12.19**	**.0037**	**7.340**	**.9303**
Stddev	.0025	1.3	.00	.0062	.8	.05	.0004	.043	.0023
%RSD	.4221	.2405	.0016	1.891	.4887	.4414	10.79	.5924	.2446
#1	.5864	521.9	27.59	.3278	155.0	12.13	.0035	7.350	.9286
#2	.5832	519.5	27.59	.3336	153.9	12.24	.0035	7.293	.9295
#3	.5880	520.2	27.59	.3212	153.6	12.21	.0042	7.378	.9329

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1641**	**-.0122**	**.0050**	**15.28**	**.0322**	**1.229**	**10.49**	**.0037**	**1.153**
Stddev	.0041	.0020	.0047	.02	.0009	.001	.01	.0108	.005
%RSD	2.469	16.69	94.12	.1510	2.770	.1085	.1287	293.2	.4498
#1	.1602	-.0114	.0079	15.25	.0316	1.229	10.48	.0101	1.148
#2	.1683	-.0107	-.0004	15.28	.0332	1.228	10.49	.0098	1.159
#3	.1638	-.0145	.0075	15.30	.0319	1.231	10.50	-.0088	1.153

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.132**
Stddev	.001
%RSD	.1279
#1	1.131
#2	1.133
#3	1.134

Zoom In Zoom Out

Sample Name: FA98825-2 Acquired: 9/21/2022 15:13:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**956.14**	**3192.1**	**23202.**	**5108.1**
Stddev	2.60	8.4	192.	19.3
%RSD	.27187	.26273	.82932	.37729
#1	959.10	3201.7	23413.	5088.1
#2	955.12	3188.5	23036.	5126.6
#3	954.20	3186.2	23156.	5109.6

Zoom In Zoom Out

Sample Name: FA98994-1 Acquired: 9/21/2022 15:18:06 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**95.22**	**.0156**	**.6274**	**.0021**	**3.461**	**-.0006**	**.0039**	**.1107**
Stddev	.0005	.23	.0004	.0014	.0001	.013	.0000	.0001	.0003
%RSD	42.67	.2364	2.769	.2205	3.873	.3715	6.682	2.000	.3107
#1	.0006	95.44	.0154	.6287	.0022	3.470	-.0006	.0039	.1107
#2	.0014	94.99	.0153	.6260	.0021	3.446	-.0007	.0038	.1103
#3	.0014	95.23	.0161	.6276	.0022	3.467	-.0006	.0039	.1109

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0106**	**32.29**	**2.588**	**.0326**	**4.917**	**.0964**	**.0090**	**.2012**	**.0135**
Stddev	.0002	.01	.007	.0010	.006	.0002	.0000	.0029	.0002
%RSD	2.189	.0330	.2567	3.193	.1263	.2444	.1612	1.450	1.490
#1	.0103	32.28	2.581	.0336	4.914	.0965	.0090	.2002	.0134
#2	.0107	32.30	2.587	.0315	4.914	.0962	.0090	.1989	.0135
#3	.0107	32.29	2.595	.0325	4.924	.0966	.0090	.2045	.0138

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0913**	**-.0008**	**.0035**	**14.44**	**.0228**	**.4356**	**1.369**	**-.0027**	**.1556**
Stddev	.0003	.0013	.0011	.01	.0002	.0010	.002	.0008	.0005
%RSD	.3319	161.5	29.82	.0957	.7167	.2364	.1082	30.93	.3074
#1	.0911	-.0021	.0028	14.45	.0229	.4367	1.367	-.0021	.1559
#2	.0911	.0004	.0031	14.43	.0228	.4346	1.370	-.0036	.1550
#3	.0917	-.0007	.0047	14.45	.0226	.4354	1.369	-.0023	.1558

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0442**
Stddev	.0001
%RSD	.1316
#1	.0441
#2	.0442
#3	.0442

Zoom In Zoom Out

Sample Name: FA98994-1 Acquired: 9/21/2022 15:18:06 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.13**	**3389.5**	**24084.**	**5351.4**
Stddev	1.93	.7	168.	27.5
%RSD	.20112	.02045	.69830	.51343
#1	955.18	3390.3	23896.	5319.7
#2	959.03	3389.2	24219.	5366.1
#3	957.17	3389.0	24138.	5368.4

Zoom In Zoom Out

Sample Name: FA98243-32T Acquired: 9/21/2022 15:22:50 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0075**	**133.0**	**.1201**	**.8315**	**.0050**	**46.76**	**.0085**	**.0430**	**.3844**
Stddev	.0016	.2	.0046	.0005	.0002	.03	.0002	.0003	.0013
%RSD	21.55	.1130	3.819	.0554	5.010	.0645	2.640	.6255	.3433
#1	.0064	132.8	.1221	.8314	.0052	46.73	.0084	.0432	.3847
#2	.0067	133.1	.1234	.8320	.0049	46.75	.0088	.0427	.3830
#3	.0093	132.9	.1149	.8311	.0047	46.79	.0084	.0429	.3856

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4484**	**193.4**	**8.561**	**.0929**	**17.20**	**2.819**	**.0175**	**1.075**	**.1524**
Stddev	.0021	.0	.070	.0064	.14	.009	.0005	.016	.0006
%RSD	.4741	.0240	.8220	6.903	.7981	.3118	2.999	1.513	.3650
#1	.4481	193.4	8.605	.1001	17.06	2.829	.0170	1.070	.1518
#2	.4507	193.5	8.597	.0907	17.34	2.817	.0181	1.093	.1529
#3	.4465	193.4	8.480	.0878	17.21	2.811	.0174	1.062	.1524

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.591**	**.0059**	**.0115**	**14.05**	**.0657**	**.2956**	**2.828**	**-.0063**	**.4502**
Stddev	.001	.0019	.0025	.01	.0006	.0008	.005	.0091	.0033
%RSD	.0378	32.76	21.40	.0507	.9724	.2632	.1922	145.7	.7392
#1	1.590	.0075	.0119	14.06	.0664	.2947	2.834	-.0168	.4541
#2	1.592	.0037	.0089	14.05	.0656	.2958	2.825	-.0009	.4486
#3	1.591	.0064	.0138	14.05	.0651	.2962	2.825	-.0011	.4480

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**2.571**
Stddev	.004
%RSD	.1669
#1	2.566
#2	2.572
#3	2.575

Zoom In Zoom Out

Sample Name: FA98243-32T Acquired: 9/21/2022 15:22:50 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**998.69**	**3064.1**	**21932.**	**4817.4**
Stddev	.05	2.5	135.	29.0
%RSD	.00523	.08254	.61486	.60244
#1	998.74	3066.0	21814.	4817.1
#2	998.68	3061.3	22079.	4846.6
#3	998.64	3065.2	21904.	4788.6

Zoom In Zoom Out

Sample Name: FA98243-35T Acquired: 9/21/2022 15:27:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061**	**127.4**	**.1425**	**.6213**	**.0050**	**16.73**	**.0036**	**.0317**	**.3044**
Stddev	.0016	.4	.0039	.0027	.0004	.06	.0002	.0003	.0016
%RSD	25.25	.3427	2.722	.4410	7.700	.3552	6.438	.8538	.5213
#1	.0055	127.2	.1418	.6223	.0047	16.66	.0038	.0314	.3027
#2	.0050	127.2	.1390	.6182	.0050	16.77	.0034	.0319	.3050
#3	.0079	128.0	.1467	.6233	.0055	16.75	.0034	.0319	.3057

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2651**	**178.2**	**8.408**	**.0936**	**11.79**	**1.748**	**.0131**	**1.361**	**.1170**
Stddev	.0010	.7	.101	.0038	.17	.007	.0006	.021	.0010
%RSD	.3590	.3849	1.206	4.052	1.422	.4233	4.794	1.583	.8403
#1	.2660	178.3	8.488	.0980	11.65	1.742	.0138	1.385	.1170
#2	.2641	177.5	8.294	.0911	11.75	1.757	.0127	1.354	.1180
#3	.2653	178.9	8.442	.0918	11.97	1.746	.0128	1.344	.1160

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.725**	**.0036**	**.0089**	**11.99**	**.0528**	**.1263**	**2.413**	**-.0073**	**.3809**
Stddev	.003	.0094	.0040	.01	.0021	.0009	.006	.0031	.0007
%RSD	.1798	262.2	44.53	.1175	3.977	.7054	.2608	41.74	.1761
#1	1.723	-.0043	.0043	11.97	.0516	.1255	2.409	-.0097	.3801
#2	1.728	.0011	.0108	11.99	.0552	.1262	2.420	-.0039	.3813
#3	1.723	.0140	.0115	12.00	.0516	.1273	2.409	-.0084	.3812

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.646**
Stddev	.004
%RSD	.2187
#1	1.642
#2	1.650
#3	1.646

Zoom In Zoom Out

Sample Name: FA98243-35T Acquired: 9/21/2022 15:27:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1004.3**	**3077.3**	**21929.**	**4776.5**
Stddev	4.3	2.0	49.	44.4
%RSD	.43186	.06599	.22392	.93051
#1	999.35	3075.6	21983.	4824.6
#2	1007.4	3079.5	21887.	4767.8
#3	1006.2	3076.7	21917.	4737.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 15:32:16 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2592**	**39.04**	**2.028**	**1.978**	**2.001**	**39.73**	**2.030**	**2.020**	**2.045**
Stddev	.0011	.12	.006	.003	.004	.08	.004	.002	.008
%RSD	.4232	.3121	.2805	.1744	.1941	.1973	.1957	.0987	.4066
#1	.2580	39.04	2.023	1.977	2.004	39.76	2.026	2.018	2.039
#2	.2595	38.93	2.026	1.975	1.996	39.64	2.030	2.019	2.054
#3	.2601	39.17	2.034	1.982	2.002	39.79	2.034	2.022	2.041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.960**	**40.48**	**39.58**	**1.979**	**40.11**	**2.005**	**2.027**	**39.48**	**2.063**
Stddev	.002	.07	.03	.003	.07	.008	.008	.11	.009
%RSD	.0999	.1608	.0806	.1630	.1787	.3934	.3729	.2902	.4579
#1	1.962	40.55	39.58	1.977	40.19	2.001	2.019	39.49	2.053
#2	1.959	40.42	39.56	1.977	40.04	2.014	2.028	39.37	2.066
#3	1.958	40.48	39.62	1.983	40.10	2.000	2.034	39.60	2.071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.009**	**1.993**	**2.022**	**2.339**	**1.992**	**2.002**	**1.986**	**2.024**	**2.018**
Stddev	.005	.008	.009	.002	.003	.004	.003	.021	.009
%RSD	.2339	.4001	.4253	.0676	.1341	.2157	.1586	1.053	.4187
#1	2.011	1.986	2.012	2.339	1.989	2.000	1.985	2.007	2.011
#2	2.003	1.992	2.026	2.338	1.992	2.000	1.990	2.016	2.028
#3	2.012	2.002	2.028	2.341	1.995	2.007	1.984	2.048	2.015
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 15:32:16 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.056**
Stddev	.004
%RSD	.2161
#1	2.051
#2	2.057
#3	2.059
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**925.54**	**2787.3**	**20464.**	**4555.1**
Stddev	3.15	8.6	154.	12.4
%RSD	.34024	.30771	.75428	.27311
#1	925.79	2794.9	20530.	4540.8
#2	928.55	2789.0	20287.	4563.5
#3	922.27	2778.0	20574.	4561.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 15:36:48 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0157**	**-.0001**	**.0002**	**.0002**	**.0052**	**.0001**	**.0001**	**.0002**
Stddev	.0003	.0077	.0008	.0000	.0001	.0011	.0000	.0000	.0002
%RSD	144.4	49.18	969.2	9.321	39.13	21.85	2.747	15.91	76.34
#1	.0004	.0184	-.0008	.0002	.0001	.0056	.0001	.0001	.0001
#2	-.0001	.0216	-.0001	.0002	.0003	.0062	.0001	.0001	.0002
#3	.0003	.0070	.0007	.0003	.0002	.0040	.0001	.0001	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0048**	**.0071**	**.0000**	**-.0077**	**.0001**	**.0004**	**.0060**	**-.0001**
Stddev	.0003	.0012	.0239	.001	.0034	.0001	.0001	.0073	.0001
%RSD	1091.	25.56	333.7	2079.	44.42	51.56	31.35	122.2	211.0
#1	-.0001	.0062	.0332	.0007	-.0098	.0002	.0003	.0106	.0000
#2	.0004	.0041	-.0136	-.0008	-.0037	.0001	.0005	-.0024	-.0002
#3	-.0002	.0040	.0018	.0000	-.0095	.0001	.0003	.0098	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0002**	**.0006**	**.0011**	**.0002**	**.0002**	**.0003**	**-.0002**	**.0002**
Stddev	.0004	.0008	.0008	.0004	.0002	.0001	.0002	.0005	.0002
%RSD	210.3	401.8	136.6	36.83	86.66	28.45	77.66	227.9	123.3
#1	.0002	-.0002	-.0003	.0011	.0004	.0003	.0004	.0000	.0004
#2	-.0003	.0006	.0010	.0007	.0002	.0003	.0003	.0001	.0001
#3	-.0005	-.0010	.0011	.0014	.0001	.0002	.0000	-.0008	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 15:36:48 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	19.55
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1007.5**	**2891.7**	**20498.**	**4494.3**
Stddev	2.4	1.8	21.	21.0
%RSD	.24092	.06107	.10094	.46761
#1	1006.1	2891.5	20502.	4515.7
#2	1006.1	2890.0	20475.	4473.7
#3	1010.3	2893.5	20516.	4493.5

Zoom In Zoom Out

Sample Name: FA98243-37T Acquired: 9/21/2022 15:41:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104**	**140.0**	**.1106**	**.9050**	**.0059**	**31.75**	**.0163**	**.0535**	**.5143**
Stddev	.0009	.3	.0024	.0009	.0001	.10	.0002	.0004	.0027
%RSD	8.284	.2009	2.130	.0993	1.881	.3126	1.244	.7372	.5214
#1	.0106	139.8	.1080	.9058	.0059	31.72	.0161	.0537	.5151
#2	.0111	140.3	.1125	.9040	.0060	31.87	.0165	.0537	.5113
#3	.0094	139.8	.1115	.9050	.0058	31.68	.0164	.0530	.5164

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5732**	**247.6**	**9.041**	**.1084**	**17.21**	**2.942**	**.0198**	**1.647**	**.2343**
Stddev	.0009	.4	.011	.0035	.11	.002	.0002	.009	.0025
%RSD	.1617	.1589	.1240	3.226	.6646	.0810	.9230	.5470	1.082
#1	.5723	247.4	9.034	.1124	17.09	2.940	.0196	1.642	.2367
#2	.5733	247.3	9.034	.1058	17.31	2.944	.0199	1.641	.2344
#3	.5741	248.0	9.054	.1071	17.24	2.943	.0199	1.657	.2317

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.824**	**.0053**	**.0104**	**12.34**	**.0778**	**.2149**	**2.926**	**-.0048**	**.5607**
Stddev	.016	.0051	.0065	.02	.0006	.0008	.003	.0060	.0034
%RSD	.2758	95.80	62.42	.1531	.7395	.3730	.1109	124.0	.6102
#1	5.818	.0004	.0052	12.32	.0773	.2141	2.924	-.0060	.5627
#2	5.811	.0106	.0177	12.34	.0778	.2156	2.926	-.0101	.5626
#3	5.842	.0049	.0084	12.36	.0784	.2152	2.930	.0017	.5567

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**3.990**
Stddev	.005
%RSD	.1143
#1	3.988
#2	3.988
#3	3.996

Zoom In Zoom Out

Sample Name: FA98243-37T Acquired: 9/21/2022 15:41:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**991.38**	**3056.8**	**21754.**	**4793.7**
Stddev	2.74	6.3	112.	26.7
%RSD	.27634	.20489	.51416	.55746
#1	992.16	3060.9	21820.	4800.5
#2	993.66	3060.0	21817.	4764.3
#3	988.34	3049.6	21625.	4816.4

Zoom In Zoom Out

Sample Name: FA98243-39T Acquired: 9/21/2022 15:46:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**98.08**	**.1146**	**.5329**	**.0044**	**11.61**	**.0035**	**.0242**	**.2784**
Stddev	.0019	.08	.0057	.0018	.0002	.02	.0001	.0004	.0027
%RSD	33.70	.0817	4.956	.3296	4.216	.1696	1.560	1.860	.9814
#1	.0077	97.98	.1191	.5312	.0042	11.63	.0035	.0247	.2800
#2	.0043	98.12	.1082	.5329	.0045	11.59	.0036	.0239	.2752
#3	.0047	98.13	.1165	.5347	.0045	11.61	.0035	.0239	.2798

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1968**	**149.5**	**7.997**	**.0710**	**9.456**	**1.477**	**.0130**	**.3875**	**.0934**
Stddev	.0018	.4	.093	.0015	.153	.001	.0004	.0193	.0004
%RSD	.9273	.2425	1.162	2.047	1.620	.0761	2.808	4.989	.4559
#1	.1984	150.0	8.102	.0696	9.627	1.476	.0130	.3675	.0936
#2	.1948	149.4	7.963	.0725	9.408	1.478	.0134	.4060	.0936
#3	.1972	149.3	7.926	.0709	9.332	1.477	.0127	.3891	.0929

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.283**	**.0017**	**.0037**	**14.49**	**.0425**	**.1017**	**1.989**	**-.0022**	**.2763**
Stddev	.006	.0067	.0040	.02	.0011	.0007	.005	.0046	.0012
%RSD	.4741	392.9	106.3	.1699	2.613	.6807	.2310	213.0	.4249
#1	1.286	.0093	.0013	14.48	.0438	.1014	1.991	-.0012	.2752
#2	1.276	-.0033	.0016	14.47	.0418	.1013	1.984	.0019	.2762
#3	1.288	-.0009	.0083	14.52	.0419	.1025	1.993	-.0072	.2775

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.286**
Stddev	.002
%RSD	.1433
#1	1.284
#2	1.288
#3	1.288

Zoom In Zoom Out

Sample Name: FA98243-39T Acquired: 9/21/2022 15:46:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**997.11**	**2998.8**	**21290.**	**4685.2**
Stddev	1.77	2.7	16.	41.5
%RSD	.17733	.09013	.07471	.88616
#1	995.64	3001.8	21309.	4649.8
#2	999.08	2996.5	21279.	4675.0
#3	996.62	2998.2	21283.	4730.9

Zoom In Zoom Out

Sample Name: FA98243-41T Acquired: 9/21/2022 15:51:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**115.3**	**.0826**	**.5980**	**.0047**	**18.28**	**.0059**	**.0401**	**.3310**
Stddev	.0008	.3	.0039	.0014	.0002	.06	.0001	.0005	.0012
%RSD	14.17	.2563	4.714	.2360	4.647	.3463	1.222	1.210	.3617
#1	.0056	115.2	.0786	.5967	.0046	18.26	.0060	.0401	.3306
#2	.0064	115.2	.0864	.5976	.0050	18.24	.0058	.0405	.3324
#3	.0048	115.7	.0830	.5995	.0046	18.35	.0059	.0395	.3301

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3320**	**195.5**	**6.722**	**.0759**	**10.94**	**1.909**	**.0135**	**1.006**	**.1534**
Stddev	.0016	.6	.171	.0058	.18	.003	.0007	.029	.0003
%RSD	.4815	.2954	2.550	7.692	1.645	.1717	5.209	2.875	.1990
#1	.3316	195.2	6.621	.0692	10.78	1.908	.0139	.9769	.1531
#2	.3307	195.2	6.626	.0793	10.91	1.907	.0139	1.008	.1537
#3	.3338	196.2	6.920	.0792	11.14	1.913	.0127	1.035	.1532

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.134**	**.0057**	**.0045**	**14.00**	**.0644**	**.1728**	**2.723**	**.0015**	**.4247**
Stddev	.025	.0080	.0037	.02	.0009	.0002	.003	.0091	.0023
%RSD	.3575	139.6	82.45	.1325	1.455	.1072	.0906	595.7	.5341
#1	7.119	.0027	.0088	13.98	.0645	.1726	2.725	.0069	.4233
#2	7.119	-.0003	.0024	14.02	.0654	.1728	2.721	-.0090	.4235
#3	7.163	.0148	.0023	14.01	.0635	.1730	2.725	.0066	.4273

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**2.279**
Stddev	.001
%RSD	.0509
#1	2.278
#2	2.278
#3	2.280

Zoom In Zoom Out

Sample Name: FA98243-41T Acquired: 9/21/2022 15:51:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**994.08**	**3042.5**	**21699.**	**4743.6**
Stddev	1.97	6.2	83.	37.2
%RSD	.19815	.20379	.38046	.78431
#1	992.95	3035.4	21791.	4786.6
#2	996.36	3045.1	21674.	4723.6
#3	992.95	3046.9	21631.	4720.7

Zoom In Zoom Out

Sample Name: FA98243-55T Acquired: 9/21/2022 15:55:54 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049**	**115.4**	**.1142**	**.4273**	**.0044**	**11.82**	**.0008**	**.0283**	**.2612**
Stddev	.0013	.6	.0021	.0006	.0000	.08	.0003	.0004	.0010
%RSD	25.60	.5178	1.823	.1351	1.056	.6897	37.40	1.446	.3771
#1	.0036	114.8	.1160	.4267	.0044	11.73	.0012	.0286	.2623
#2	.0061	115.9	.1146	.4277	.0044	11.89	.0006	.0286	.2610
#3	.0050	115.5	.1119	.4276	.0043	11.84	.0007	.0279	.2603

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1995**	**173.6**	**7.287**	**.0681**	**7.754**	**1.078**	**.0130**	**.2238**	**.0848**
Stddev	.0011	.2	.037	.0013	.034	.003	.0008	.0141	.0003
%RSD	.5512	.1330	.5063	1.980	.4397	.3049	6.296	6.305	.3108
#1	.1987	173.4	7.245	.0687	7.778	1.077	.0129	.2075	.0849
#2	.1990	173.9	7.315	.0665	7.769	1.074	.0122	.2318	.0849
#3	.2007	173.6	7.301	.0690	7.715	1.081	.0138	.2322	.0845

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.709**	**.0036**	**.0089**	**15.97**	**.0470**	**.0746**	**2.073**	**-.0015**	**.3332**
Stddev	.004	.0024	.0031	.02	.0008	.0004	.004	.0075	.0021
%RSD	.2480	66.44	35.01	.1026	1.602	.5802	.2015	493.3	.6426
#1	1.710	.0029	.0121	15.96	.0474	.0743	2.071	-.0040	.3346
#2	1.713	.0063	.0089	15.98	.0475	.0751	2.070	-.0074	.3307
#3	1.704	.0016	.0058	15.99	.0461	.0745	2.078	.0069	.3342

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.147**
Stddev	.003
%RSD	.2688
#1	1.148
#2	1.144
#3	1.150

Zoom In Zoom Out

Sample Name: FA98243-55T Acquired: 9/21/2022 15:55:54 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1007.4**	**3064.9**	**21891.**	**4779.6**
Stddev	1.2	5.8	62.	6.9
%RSD	.11818	.18961	.28265	.14374
#1	1007.5	3063.6	21915.	4784.6
#2	1008.6	3071.2	21937.	4782.5
#3	1006.2	3059.7	21821.	4771.8

Zoom In Zoom Out

Sample Name: FA98243-56T Acquired: 9/21/2022 16:00:38 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**69.78**	**.0863**	**.3849**	**.0031**	**13.04**	**-.0009**	**.0140**	**.1556**
Stddev	.0033	.04	.0059	.0009	.0002	.01	.0001	.0005	.0029
%RSD	71.71	.0638	6.837	.2302	7.670	.0825	14.02	3.395	1.870
#1	.0018	69.83	.0915	.3839	.0029	13.05	-.0008	.0146	.1574
#2	.0083	69.74	.0799	.3853	.0030	13.05	-.0008	.0138	.1522
#3	.0038	69.78	.0875	.3855	.0033	13.03	-.0010	.0137	.1572

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0696**	**95.10**	**8.497**	**.0461**	**7.958**	**1.181**	**.0072**	**.1946**	**.0433**
Stddev	.0012	.14	.071	.0027	.031	.003	.0003	.0147	.0008
%RSD	1.732	.1426	.8341	5.940	.3869	.2376	4.057	7.575	1.894
#1	.0692	95.17	8.496	.0442	7.928	1.180	.0075	.1787	.0426
#2	.0687	94.95	8.426	.0492	7.956	1.180	.0071	.2078	.0430
#3	.0710	95.19	8.568	.0449	7.989	1.184	.0069	.1973	.0442

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2540**	**.0018**	**.0041**	**14.26**	**.0350**	**.0676**	**1.652**	**-.0064**	**.1625**
Stddev	.0021	.0030	.0071	.01	.0012	.0001	.004	.0016	.0016
%RSD	.8183	169.5	171.6	.0917	3.434	.0769	.2505	25.17	.9957
#1	.2538	-.0017	.0063	14.27	.0349	.0677	1.648	-.0079	.1635
#2	.2562	.0039	.0099	14.24	.0339	.0676	1.650	-.0047	.1606
#3	.2521	.0032	-.0038	14.26	.0363	.0677	1.656	-.0067	.1633

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3991**
Stddev	.0003
%RSD	.0831
#1	.3989
#2	.3995
#3	.3990

Zoom In Zoom Out

Sample Name: FA98243-56T Acquired: 9/21/2022 16:00:38 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1004.2**	**3019.0**	**21620.**	**4686.2**
Stddev	2.3	8.9	65.	22.6
%RSD	.23238	.29640	.29968	.48247
#1	1005.9	3028.2	21695.	4669.4
#2	1005.2	3018.6	21580.	4711.9
#3	1001.5	3010.3	21586.	4677.4

Zoom In Zoom Out

Sample Name: FA98243-58T Acquired: 9/21/2022 16:05:26 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076**	**132.5**	**.1117**	**.8410**	**.0056**	**54.87**	**.0091**	**.0469**	**.7263**
Stddev	.0010	.4	.0011	.0027	.0003	.08	.0000	.0006	.0030
%RSD	13.59	.2843	.9903	.3259	5.281	.1387	.4952	1.307	.4156
#1	.0086	132.4	.1104	.8386	.0053	54.91	.0091	.0470	.7297
#2	.0078	132.1	.1121	.8405	.0058	54.79	.0092	.0475	.7240
#3	.0065	132.9	.1125	.8440	.0057	54.93	.0091	.0463	.7253

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4927**	**210.0**	**11.16**	**.1018**	**20.58**	**2.768**	**.0183**	**1.379**	**.1834**
Stddev	.0015	.4	.13	.0052	.12	.006	.0004	.012	.0011
%RSD	.2947	.1687	1.199	5.071	.5970	.2098	2.108	.8629	.5956
#1	.4916	209.6	11.08	.0968	20.72	2.762	.0186	1.366	.1839
#2	.4943	210.1	11.10	.1016	20.50	2.774	.0179	1.390	.1842
#3	.4921	210.3	11.32	.1071	20.53	2.769	.0185	1.380	.1822

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.208**	**.0102**	**.0144**	**16.15**	**.0669**	**.3265**	**2.904**	**-.0097**	**.4689**
Stddev	.007	.0062	.0020	.02	.0025	.0004	.012	.0043	.0034
%RSD	.2245	60.91	14.02	.1194	3.777	.1218	.3985	44.41	.7332
#1	3.205	.0128	.0128	16.14	.0688	.3263	2.894	-.0107	.4729
#2	3.203	.0147	.0166	16.17	.0640	.3262	2.917	-.0134	.4674
#3	3.216	.0031	.0137	16.14	.0678	.3269	2.900	-.0050	.4666

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**3.182**
Stddev	.010
%RSD	.3196
#1	3.173
#2	3.181
#3	3.193

Zoom In Zoom Out

Sample Name: FA98243-58T Acquired: 9/21/2022 16:05:26 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**998.70**	**3089.9**	**22197.**	**4834.2**
Stddev	1.97	8.6	52.	13.3
%RSD	.19688	.27856	.23245	.27456
#1	1000.1	3098.6	22186.	4849.5
#2	999.51	3089.7	22151.	4827.0
#3	996.46	3081.3	22253.	4826.1

Zoom In Zoom Out

Sample Name: FA98243-60T Acquired: 9/21/2022 16:10:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**71.25**	**.0315**	**.2621**	**.0028**	**3.286**	**-.0021**	**.0192**	**.1580**
Stddev	.0015	.28	.0037	.0005	.0002	.013	.0001	.0010	.0003
%RSD	58.33	.3986	11.91	.2069	7.873	.4027	6.617	5.045	.1638
#1	.0039	71.58	.0327	.2623	.0027	3.288	-.0022	.0189	.1579
#2	.0010	71.04	.0272	.2615	.0031	3.272	-.0021	.0185	.1583
#3	.0027	71.14	.0344	.2625	.0027	3.298	-.0019	.0203	.1577

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0420**	**104.1**	**6.972**	**.0480**	**6.699**	**.6223**	**.0069**	**.1581**	**.0428**
Stddev	.0013	.4	.080	.0024	.016	.0019	.0011	.0253	.0005
%RSD	3.176	.3548	1.145	4.988	.2408	.3044	15.52	15.98	1.205
#1	.0407	104.4	6.887	.0478	6.718	.6242	.0082	.1573	.0424
#2	.0434	104.2	6.983	.0505	6.688	.6221	.0062	.1333	.0434
#3	.0418	103.7	7.046	.0457	6.692	.6205	.0064	.1838	.0427

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5097**	**-.0014**	**-.0030**	**10.47**	**.0378**	**.0297**	**1.869**	**-.0075**	**.1649**
Stddev	.0042	.0023	.0057	.01	.0007	.0001	.005	.0048	.0008
%RSD	.8215	163.8	189.8	.0648	1.925	.4183	.2673	64.84	.4786
#1	.5049	-.0028	-.0035	10.47	.0386	.0296	1.874	-.0096	.1644
#2	.5125	-.0027	.0029	10.47	.0372	.0297	1.870	-.0019	.1659
#3	.5117	.0013	-.0083	10.48	.0377	.0298	1.864	-.0108	.1645

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2262**
Stddev	.0003
%RSD	.1500
#1	.2259
#2	.2261
#3	.2266

Zoom In Zoom Out

Sample Name: FA98243-60T Acquired: 9/21/2022 16:10:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1008.4**	**2995.4**	**21478.**	**4703.8**
Stddev	.8	3.3	46.	20.8
%RSD	.08027	.11078	.21427	.44120
#1	1008.1	2998.3	21428.	4697.8
#2	1009.4	2996.1	21517.	4726.9
#3	1007.9	2991.8	21491.	4686.8

Zoom In Zoom Out

Sample Name: MP41228-MB1 Acquired: 9/21/2022 16:14:57 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0098**	**.0000**	**-.0001**	**.0000**	**-.0026**	**-.0001**	**-.0001**	**.0001**
Stddev	.0004	.0040	.0005	.0001	.000	.0015	.0001	.0001	.0004
%RSD	1492.	40.79	2023.	76.82	72.92	57.59	68.88	237.9	357.6
#1	-.0003	.0083	-.0005	-.0001	.0000	-.0014	.0000	.0000	-.0003
#2	.0005	.0143	.0001	-.0001	.0000	-.0042	-.0001	-.0002	.0004
#3	-.0001	.0067	.0005	.0000	-.0001	-.0021	-.0001	.0000	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1002**	**.0097**	**-.0001**	**.0138**	**.0001**	**-.0002**	**-.0051**	**-.0004**
Stddev	.000	.0017	.0209	.0008	.0108	.0000	.0001	.0009	.0002
%RSD	8685.	1.742	214.2	1470.	78.64	30.88	65.64	17.93	46.47
#1	-.0002	.0983	.0187	.0005	.0099	.0001	-.0001	-.0060	-.0005
#2	.0002	.1018	.0246	-.0009	.0054	.0001	-.0002	-.0042	-.0004
#3	.0000	.1006	-.0141	.0002	.0260	.0001	-.0003	-.0052	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0011**	**.0001**	**.0052**	**.0001**	**.0000**	**.0001**	**-.0020**	**.0003**
Stddev	.0008	.0008	.0008	.0003	.0004	.000	.0001	.0006	.0002
%RSD	273.5	74.12	1259.	5.602	248.3	442.8	40.23	31.83	59.73
#1	-.0009	.0011	.0009	.0055	.0005	.0000	.0001	-.0028	.0001
#2	-.0005	.0003	-.0006	.0051	-.0002	.0000	.0002	-.0018	.0002
#3	.0006	.0019	-.0001	.0049	.0001	-.0001	.0001	-.0015	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP41228-MB1 Acquired: 9/21/2022 16:14:57 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0014**
Stddev	.0001
%RSD	3.927
#1	.0014
#2	.0014
#3	.0013
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1013.2**	**2925.0**	**20922.**	**4571.2**
Stddev	2.6	4.6	182.	42.2
%RSD	.25653	.15837	.87076	.92298
#1	1010.7	2927.8	21052.	4540.2
#2	1013.0	2919.6	20999.	4554.1
#3	1015.9	2927.5	20713.	4619.2

Zoom In Zoom Out

Sample Name: FA98999-1 Acquired: 9/21/2022 16:19:52 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0795**	**.0002**	**.0160**	**.0002**	**14.52**	**.0014**	**.0000**	**.0026**
Stddev	.0003	.0069	.0000	.0002	.0001	.07	.0001	.000	.0003
%RSD	37.08	8.649	15.77	1.348	30.29	.4514	4.504	63.57	11.88
#1	.0007	.0798	.0002	.0162	.0002	14.46	.0015	-.0001	.0028
#2	.0004	.0862	.0002	.0161	.0003	14.59	.0014	.0000	.0023
#3	.0009	.0725	.0002	.0158	.0002	14.50	.0014	.0000	.0029

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0316**	**.6623**	**.0112**	**1.758**	**.0415**	**.0001**	**3.813**	**.0063**
Stddev	.0004	.0020	.0323	.0010	.017	.0002	.0001	.010	.0002
%RSD	105.2	6.477	4.871	9.285	.9468	.5780	67.35	.2661	2.720
#1	-.0007	.0339	.6561	.0107	1.740	.0413	.0000	3.804	.0061
#2	.0001	.0306	.6973	.0124	1.764	.0417	.0002	3.824	.0065
#3	-.0006	.0302	.6336	.0105	1.771	.0416	.0002	3.812	.0063

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0010**	**.0006**	**4.419**	**.0000**	**.0203**	**.0009**	**-.0012**	**.0004**
Stddev	.0005	.0008	.0018	.001	.000	.0001	.0002	.0007	.0001
%RSD	69.22	82.66	326.5	.0258	596.9	.5834	19.69	63.39	31.64
#1	-.0013	.0008	-.0001	4.418	.0002	.0201	.0012	-.0004	.0003
#2	-.0002	.0003	-.0008	4.420	-.0002	.0203	.0009	-.0012	.0003
#3	-.0007	.0019	.0026	4.419	-.0001	.0204	.0008	-.0019	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1011**
Stddev	.0001
%RSD	.1278
#1	.1010
#2	.1011
#3	.1012

Zoom In Zoom Out

Sample Name: FA98999-1 Acquired: 9/21/2022 16:19:52 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1002.9**	**2889.8**	**20935.**	**4568.3**
Stddev	3.7	9.9	151.	31.2
%RSD	.37138	.34259	.71999	.68210
#1	1007.2	2901.1	21100.	4603.2
#2	1000.2	2885.7	20900.	4558.8
#3	1001.4	2882.6	20804.	4543.1

Zoom In Zoom Out

Sample Name: MP41228-D1 Acquired: 9/21/2022 16:24:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0719**	**-.0007**	**.0158**	**.0002**	**14.37**	**.0014**	**.0000**	**.0027**
Stddev	.0003	.0032	.0007	.0001	.0001	.02	.0000	.000	.0002
%RSD	86.80	4.496	110.7	.7757	24.57	.1065	1.903	349.1	8.840
#1	.0002	.0697	.0000	.0159	.0002	14.38	.0014	-.0001	.0024
#2	.0001	.0705	-.0015	.0157	.0002	14.37	.0014	.0001	.0028
#3	.0006	.0756	-.0005	.0158	.0003	14.35	.0014	-.0001	.0028

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0268**	**.6347**	**.0115**	**1.717**	**.0412**	**.0001**	**3.759**	**.0064**
Stddev	.000	.0026	.0104	.0003	.017	.0001	.0001	.009	.0000
%RSD	432.0	9.700	1.641	2.639	.9984	.2074	111.8	.2322	.6361
#1	.0001	.0270	.6455	.0112	1.733	.0413	.0000	3.764	.0064
#2	-.0002	.0293	.6247	.0115	1.719	.0413	.0001	3.749	.0064
#3	.0001	.0241	.6341	.0118	1.699	.0411	.0002	3.763	.0064

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0002**	**.0003**	**4.337**	**.0001**	**.0200**	**.0008**	**-.0016**	**.0006**
Stddev	.0002	.0007	.0019	.007	.0000	.0001	.0001	.0012	.0002
%RSD	27.61	462.4	595.0	.1546	32.20	.4284	11.10	77.81	33.62
#1	-.0005	-.0001	.0002	4.335	.0001	.0201	.0009	-.0027	.0004
#2	-.0007	.0010	-.0016	4.332	.0002	.0200	.0007	-.0019	.0006
#3	-.0005	-.0004	.0023	4.344	.0001	.0199	.0007	-.0003	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1002**
Stddev	.0001
%RSD	.0971
#1	.1002
#2	.1001
#3	.1003

Zoom In Zoom Out

Sample Name: MP41228-D1 Acquired: 9/21/2022 16:24:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1003.0**	**2908.2**	**20768.**	**4548.9**
Stddev	2.0	5.9	66.	22.5
%RSD	.20151	.20240	.31742	.49550
#1	1002.6	2906.0	20836.	4524.0
#2	1005.2	2914.9	20765.	4554.9
#3	1001.3	2903.7	20704.	4567.8

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 16:29:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2602**	**39.39**	**2.027**	**1.986**	**2.000**	**40.22**	**2.028**	**2.018**	**2.060**
Stddev	.0008	.12	.002	.003	.002	.13	.001	.001	.005
%RSD	.3235	.2986	.1152	.1403	.1099	.3264	.0540	.0376	.2337
#1	.2592	39.45	2.027	1.989	2.003	40.30	2.028	2.018	2.057
#2	.2606	39.25	2.024	1.984	1.998	40.07	2.026	2.017	2.057
#3	.2608	39.46	2.029	1.986	2.000	40.30	2.029	2.019	2.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.936**	**40.53**	**39.98**	**2.005**	**39.94**	**2.003**	**2.036**	**39.49**	**2.082**
Stddev	.005	.10	.12	.005	.17	.009	.004	.10	.003
%RSD	.2711	.2468	.2997	.2584	.4262	.4400	.1749	.2464	.1468
#1	1.941	40.62	40.07	2.010	40.12	2.011	2.035	39.60	2.081
#2	1.930	40.55	39.84	2.000	39.90	1.994	2.033	39.42	2.079
#3	1.938	40.42	40.01	2.004	39.79	2.005	2.040	39.45	2.085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.991**	**1.989**	**2.028**	**2.319**	**1.992**	**2.041**	**1.969**	**2.074**	**2.037**
Stddev	.002	.000	.001	.002	.000	.006	.004	.012	.009
%RSD	.1050	.0150	.0614	.0767	.0032	.2732	.1954	.6002	.4163
#1	1.988	1.989	2.029	2.320	1.992	2.042	1.971	2.063	2.041
#2	1.993	1.989	2.027	2.317	1.992	2.035	1.964	2.072	2.027
#3	1.991	1.989	2.028	2.319	1.992	2.046	1.971	2.087	2.041
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 16:29:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.064**
Stddev	.001
%RSD	.0333
#1	2.064
#2	2.063
#3	2.064
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**925.37**	**2766.9**	**20317.**	**4428.3**
Stddev	1.44	3.7	137.	48.6
%RSD	.15600	.13376	.67592	1.0968
#1	927.03	2770.1	20203.	4379.1
#2	924.71	2767.9	20469.	4476.2
#3	924.38	2762.9	20279.	4429.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 16:34:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0111**	**.0002**	**.0002**	**.0001**	**.0041**	**.0000**	**.0000**	**.0002**
Stddev	.0008	.0079	.0009	.0001	.0000	.0014	.0000	.0001	.0002
%RSD	217.3	71.19	394.2	58.84	9.227	35.03	32.57	119.9	99.62
#1	-.0005	.0098	.0013	.0003	.0002	.0034	.0000	.0001	.0000
#2	.0006	.0039	.0000	.0003	.0001	.0031	.0000	.0000	.0005
#3	.0009	.0196	-.0006	.0001	.0001	.0057	.0001	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0040**	**.0222**	**.0006**	**-.0061**	**.0001**	**.0003**	**-.0004**	**-.0001**
Stddev	.001	.0007	.0073	.0010	.0055	.0000	.0002	.0097	.0000
%RSD	4460.	17.59	32.84	149.1	89.29	23.80	52.15	2601.	28.74
#1	-.0004	.0045	.0163	.0015	-.0016	.0001	.0005	.0098	-.0001
#2	-.0001	.0044	.0200	.0009	-.0123	.0001	.0004	-.0097	-.0001
#3	.0005	.0032	.0304	-.0004	-.0046	.0001	.0001	-.0012	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**-.0004**	**-.0002**	**.0004**	**.0002**	**.0002**	**-.0007**	**.0002**
Stddev	.0004	.0006	.0011	.0002	.0003	.0001	.0001	.0008	.0001
%RSD	233.3	294.4	283.6	131.5	80.84	33.92	55.98	115.1	63.29
#1	.0004	.0001	.0005	-.0003	.0003	.0002	.0003	.0000	.0003
#2	.0004	.0002	.0000	-.0003	.0001	.0001	.0001	-.0006	.0001
#3	-.0003	-.0010	-.0016	.0001	.0007	.0002	.0002	-.0015	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 16:34:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0001
%RSD	24.92
#1	.0003
#2	.0002
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1010.6**	**2894.1**	**20718.**	**4490.6**
Stddev	3.9	7.6	33.	32.5
%RSD	.38328	.26110	.16079	.72326
#1	1014.7	2900.1	20756.	4504.2
#2	1010.0	2896.5	20706.	4453.5
#3	1007.0	2885.6	20693.	4514.0

Zoom In Zoom Out

Sample Name: MP41228-SD1 Acquired: 9/21/2022 16:38:56 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0977**	**-.0014**	**.0152**	**.0003**	**14.14**	**.0015**	**.0000**	**.0018**
Stddev	.0018	.0209	.0009	.0004	.0002	.02	.0002	.000	.0011
%RSD	214.8	21.39	62.79	2.607	65.59	.1127	13.56	2244.	60.49
#1	-.0011	.1217	-.0016	.0156	.0005	14.14	.0013	.0004	.0030
#2	.0024	.0871	-.0004	.0148	.0001	14.13	.0014	-.0001	.0008
#3	.0011	.0841	-.0021	.0151	.0003	14.16	.0017	-.0003	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0308**	**.6625**	**.0120**	**1.732**	**.0405**	**.0000**	**3.724**	**.0060**
Stddev	.0015	.0043	.0932	.0027	.059	.0001	.000	.016	.0008
%RSD	183.9	13.94	14.07	22.34	3.407	.2456	653.3	.4237	13.39
#1	-.0007	.0280	.5841	.0141	1.693	.0405	.0002	3.739	.0064
#2	.0006	.0286	.6379	.0090	1.703	.0404	-.0004	3.708	.0051
#3	-.0023	.0357	.7655	.0130	1.800	.0406	.0001	3.726	.0065

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0029**	**-.0012**	**-.0009**	**4.299**	**.0013**	**.0199**	**.0013**	**-.0031**	**.0021**
Stddev	.0022	.0013	.0016	.014	.0026	.0002	.0007	.0033	.0012
%RSD	75.30	110.9	185.1	.3271	192.8	.8551	52.40	106.5	57.73
#1	-.0011	-.0025	.0004	4.283	.0043	.0197	.0012	-.0003	.0020
#2	-.0053	-.0013	-.0027	4.309	-.0006	.0199	.0007	-.0022	.0033
#3	-.0022	.0002	-.0003	4.306	.0003	.0201	.0020	-.0068	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0985**
Stddev	.0001
%RSD	.1157
#1	.0984
#2	.0985
#3	.0986

Zoom In Zoom Out

Sample Name: MP41228-SD1 Acquired: 9/21/2022 16:38:56 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1012.8**	**2921.5**	**20757.**	**4512.5**
Stddev	2.1	11.4	65.	18.2
%RSD	.20534	.39060	.31325	.40343
#1	1012.8	2930.9	20684.	4530.3
#2	1014.9	2924.9	20780.	4513.4
#3	1010.7	2908.8	20809.	4493.9

Zoom In Zoom Out

Sample Name: MP41228-PS1 Acquired: 9/21/2022 16:43:47 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0465**	**2.489**	**.0958**	**.2584**	**.0494**	**19.17**	**.0509**	**.0493**	**.0540**
Stddev	.0002	.024	.0014	.0015	.0004	.13	.0001	.0001	.0002
%RSD	.3363	.9573	1.424	.5687	.7410	.6947	.2842	.2825	.4344
#1	.0464	2.473	.0971	.2567	.0491	19.02	.0509	.0493	.0542
#2	.0467	2.478	.0944	.2590	.0493	19.19	.0507	.0492	.0538
#3	.0464	2.516	.0959	.2595	.0498	19.28	.0510	.0494	.0539

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0949**	**2.980**	**9.983**	**.0122**	**6.724**	**.0910**	**.0960**	**12.45**	**.1085**
Stddev	.0005	.017	.061	.0010	.048	.0002	.0004	.07	.0002
%RSD	.5273	.5699	.6115	8.325	.7106	.2232	.3726	.5608	.1939
#1	.0946	2.961	9.917	.0116	6.675	.0912	.0956	12.37	.1085
#2	.0955	2.994	9.996	.0133	6.726	.0909	.0963	12.49	.1083
#3	.0947	2.986	10.04	.0115	6.770	.0908	.0961	12.50	.1087

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0474**	**.0971**	**.0927**	**4.458**	**.0491**	**.0700**	**.0966**	**.0956**	**.0503**
Stddev	.0001	.0005	.0027	.009	.0005	.0005	.0001	.0012	.0004
%RSD	.1692	.5242	2.951	.2016	.9947	.7642	.1336	1.206	.7954
#1	.0473	.0965	.0914	4.452	.0492	.0694	.0965	.0945	.0504
#2	.0475	.0974	.0909	4.453	.0486	.0703	.0967	.0968	.0506
#3	.0475	.0974	.0959	4.468	.0495	.0704	.0967	.0954	.0499

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3452**
Stddev	.0003
%RSD	.1013
#1	.3452
#2	.3455
#3	.3448

Zoom In Zoom Out

Sample Name: MP41228-PS1 Acquired: 9/21/2022 16:43:47 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**976.74**	**2860.8**	**20452.**	**4507.3**
Stddev	3.06	6.6	124.	67.5
%RSD	.31326	.23158	.60449	1.4985
#1	973.97	2853.2	20368.	4578.2
#2	980.03	2863.8	20393.	4499.9
#3	976.23	2865.5	20594.	4443.8

Zoom In Zoom Out

Sample Name: MP41228-S1 Acquired: 9/21/2022 16:48:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0443**	**26.82**	**1.963**	**2.000**	**.0506**	**39.27**	**.0512**	**.4971**	**.2110**
Stddev	.0001	.05	.006	.005	.0002	.03	.0001	.0005	.0007
%RSD	.2247	.1695	.3023	.2670	.3040	.0690	.1804	.1031	.3493
#1	.0442	26.78	1.958	1.997	.0504	39.24	.0511	.4966	.2102
#2	.0442	26.81	1.962	1.996	.0506	39.27	.0512	.4972	.2116
#3	.0444	26.87	1.970	2.006	.0507	39.30	.0513	.4976	.2113

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**26.50**	**25.56**	**.0117**	**27.00**	**.5467**	**.5146**	**26.94**	**.5256**
Stddev	.0011	.05	.05	.0013	.04	.0027	.0016	.04	.0036
%RSD	.4372	.1967	.1799	11.44	.1628	.4940	.3148	.1407	.6897
#1	.2486	26.55	25.54	.0131	27.01	.5458	.5128	26.95	.5214
#2	.2479	26.45	25.53	.0104	26.96	.5445	.5148	26.90	.5279
#3	.2501	26.51	25.62	.0118	27.05	.5497	.5161	26.97	.5275

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4883**	**.4887**	**1.948**	**5.014**	**.4986**	**.5435**	**.5163**	**2.020**	**.5088**
Stddev	.0013	.0017	.008	.004	.0002	.0013	.0015	.021	.0016
%RSD	.2664	.3381	.4020	.0696	.0464	.2309	.2924	1.047	.3144
#1	.4897	.4872	1.941	5.016	.4987	.5428	.5160	2.026	.5082
#2	.4872	.4886	1.946	5.010	.4984	.5429	.5149	1.997	.5076
#3	.4879	.4905	1.956	5.016	.4988	.5450	.5179	2.038	.5106

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5994**
Stddev	.0020
%RSD	.3390
#1	.5972
#2	.5997
#3	.6012

Zoom In Zoom Out

Sample Name: MP41228-S1 Acquired: 9/21/2022 16:48:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.77**	**2803.5**	**20351.**	**4490.0**
Stddev	1.34	8.1	127.	16.6
%RSD	.14312	.28857	.62604	.36944
#1	937.27	2812.3	20397.	4478.1
#2	939.87	2801.8	20450.	4482.8
#3	939.16	2796.3	20208.	4508.9

Zoom In Zoom Out

Sample Name: MP41228-S2 Acquired: 9/21/2022 16:53:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0452**	**26.87**	**1.967**	**2.015**	**.0509**	**39.56**	**.0514**	**.4999**	**.2124**
Stddev	.0004	.07	.002	.003	.0003	.17	.0001	.0002	.0007
%RSD	.9411	.2588	.1182	.1613	.5483	.4326	.1136	.0441	.3195
#1	.0451	26.79	1.967	2.011	.0506	39.37	.0513	.5002	.2130
#2	.0457	26.93	1.964	2.017	.0512	39.71	.0514	.4998	.2117
#3	.0449	26.90	1.969	2.016	.0508	39.58	.0514	.4998	.2126

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**26.53**	**25.70**	**.0112**	**27.09**	**.5489**	**.5158**	**26.98**	**.5264**
Stddev	.0013	.03	.12	.0003	.18	.0022	.0006	.07	.0006
%RSD	.5063	.1081	.4539	2.899	.6482	.3979	.1095	.2561	.1054
#1	.2502	26.50	25.56	.0110	26.96	.5508	.5153	26.91	.5268
#2	.2477	26.53	25.76	.0110	27.29	.5465	.5156	27.04	.5258
#3	.2488	26.56	25.76	.0115	27.02	.5494	.5164	27.01	.5266

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4918**	**.4913**	**1.960**	**5.049**	**.5005**	**.5481**	**.5168**	**2.040**	**.5113**
Stddev	.0007	.0006	.002	.002	.0009	.0019	.0006	.012	.0010
%RSD	.1523	.1277	.0778	.0402	.1700	.3477	.1251	.5665	.1902
#1	.4927	.4910	1.962	5.048	.5014	.5461	.5170	2.041	.5124
#2	.4915	.4921	1.959	5.048	.4997	.5499	.5161	2.028	.5107
#3	.4913	.4909	1.960	5.051	.5006	.5484	.5173	2.051	.5108

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.6015**
Stddev	.0006
%RSD	.0916
#1	.6013
#2	.6021
#3	.6011

Zoom In Zoom Out

Sample Name: MP41228-S2 Acquired: 9/21/2022 16:53:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.51**	**2827.5**	**20495.**	**4495.2**
Stddev	.82	1.0	99.	36.2
%RSD	.08717	.03689	.48271	.80590
#1	945.45	2828.5	20416.	4523.8
#2	943.95	2826.5	20606.	4454.4
#3	944.12	2827.5	20462.	4507.2

Zoom In Zoom Out

Sample Name: FA98969-10 Acquired: 9/21/2022 16:57:36 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0160**	**.0188**	**.0535**	**.0000**	**94.01**	**.0000**	**.0000**	**-.0003**
Stddev	.0004	.0048	.0002	.0002	.000	.10	.000	.0002	.0002
%RSD	104.0	29.83	1.001	.3147	33.98	.1098	146.5	364.1	68.75
#1	.0007	.0107	.0188	.0536	.0000	94.11	-.0001	-.0001	-.0004
#2	.0000	.0172	.0189	.0533	.0000	93.90	.0000	.0002	-.0002
#3	.0003	.0200	.0186	.0536	.0000	94.01	.0000	.0000	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0182**	**.2873**	**.0061**	**78.08**	**.0123**	**.0135**	**35.59**	**.0039**
Stddev	.0001	.0022	.0279	.0003	.24	.0000	.0002	.07	.0000
%RSD	17.45	12.12	9.724	4.865	.3021	.3576	1.327	.1849	1.132
#1	-.0006	.0169	.2554	.0059	78.17	.0124	.0137	35.61	.0039
#2	-.0005	.0208	.2988	.0060	77.81	.0124	.0133	35.52	.0039
#3	-.0008	.0170	.3076	.0065	78.26	.0123	.0134	35.64	.0038

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**.0007**	**-.0002**	**8.545**	**.0007**	**.6646**	**.0008**	**-.0013**	**.0181**
Stddev	.0005	.0012	.0003	.012	.0003	.0007	.0003	.0012	.0002
%RSD	39.41	169.5	136.6	.1408	39.73	.1091	35.52	99.44	1.273
#1	-.0017	-.0007	.0001	8.551	.0008	.6643	.0010	.0001	.0178
#2	-.0008	.0011	-.0004	8.531	.0009	.6641	.0005	-.0015	.0182
#3	-.0017	.0017	-.0005	8.552	.0004	.6655	.0008	-.0024	.0182

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0065**
Stddev	.0000
%RSD	.6152
#1	.0066
#2	.0065
#3	.0065

Zoom In Zoom Out

Sample Name: FA98969-10 Acquired: 9/21/2022 16:57:36 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.89**	**2786.3**	**20336.**	**4453.1**
Stddev	1.32	8.1	147.	31.9
%RSD	.14228	.28987	.72490	.71727
#1	930.42	2792.7	20331.	4468.5
#2	928.23	2788.9	20486.	4474.4
#3	928.04	2777.2	20192.	4416.4

Zoom In Zoom Out

Sample Name: FA98969-11 Acquired: 9/21/2022 17:02:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.3829**	**.0020**	**.0135**	**.0000**	**80.87**	**-.0001**	**.0000**	**.0010**
Stddev	.0001	.0074	.0004	.0001	.000	.35	.0000	.000	.0002
%RSD	15.74	1.921	19.81	.9805	118.0	.4389	32.27	1204.	14.74
#1	.0007	.3778	.0020	.0135	.0000	80.65	.0000	.0000	.0010
#2	.0010	.3797	.0024	.0133	.0000	80.69	-.0001	.0000	.0012
#3	.0009	.3914	.0016	.0136	.0000	81.28	-.0001	.0000	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.1261**	**.1981**	**.0022**	**11.54**	**.0010**	**.0041**	**1.047**	**.0012**
Stddev	.0002	.0022	.0246	.0004	.10	.0001	.0002	.001	.0003
%RSD	3.008	1.754	12.39	16.41	.8517	6.138	3.885	.0900	23.44
#1	.0058	.1236	.1898	.0025	11.43	.0011	.0040	1.048	.0014
#2	.0054	.1278	.2257	.0023	11.57	.0010	.0041	1.047	.0009
#3	.0056	.1269	.1788	.0018	11.62	.0009	.0043	1.047	.0013

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0013**	**.0008**	**.0012**	**2.394**	**.0001**	**.8502**	**.0045**	**-.0018**	**.0099**
Stddev	.0004	.0011	.0003	.005	.0001	.0031	.0001	.0006	.0002
%RSD	26.71	143.6	27.68	.1968	151.2	.3704	2.827	36.22	1.566
#1	-.0011	.0009	.0015	2.393	.0001	.8491	.0044	-.0010	.0100
#2	-.0012	-.0004	.0009	2.390	.0000	.8478	.0045	-.0022	.0097
#3	-.0017	.0018	.0013	2.399	.0002	.8538	.0046	-.0020	.0100

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0206**
Stddev	.0001
%RSD	.2648
#1	.0206
#2	.0205
#3	.0206

Zoom In Zoom Out

Sample Name: FA98969-11 Acquired: 9/21/2022 17:02:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**967.66**	**2829.7**	**20652.**	**4517.2**
Stddev	1.65	5.2	31.	43.3
%RSD	.17094	.18322	.14806	.95861
#1	968.94	2834.5	20673.	4551.7
#2	965.79	2824.2	20666.	4531.3
#3	968.24	2830.4	20617.	4468.6

Zoom In Zoom Out

Sample Name: FA98969-12 Acquired: 9/21/2022 17:07:20 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0369**	**.0027**	**.0430**	**.0001**	**82.79**	**-.0001**	**-.0002**	**.0001**
Stddev	.0001	.0081	.0006	.0001	.0000	.05	.0000	.0001	.0002
%RSD	157.0	22.07	21.40	.2235	40.96	.0554	19.81	40.62	167.4
#1	.0001	.0276	.0029	.0430	.0001	82.76	-.0001	-.0002	.0001
#2	-.0001	.0428	.0021	.0430	.0000	82.77	-.0001	-.0001	.0004
#3	-.0002	.0402	.0032	.0428	.0000	82.84	-.0001	-.0002	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.7081**	**3.000**	**.0055**	**45.83**	**.1036**	**.0013**	**23.15**	**.0002**
Stddev	.0003	.0014	.007	.0011	.09	.0006	.0001	.02	.0002
%RSD	376.9	.1967	.2275	20.23	.1972	.6139	8.837	.0955	98.94
#1	.0003	.7069	3.007	.0055	45.80	.1030	.0013	23.13	.0004
#2	-.0004	.7096	2.998	.0065	45.94	.1035	.0011	23.16	.0000
#3	-.0001	.7078	2.994	.0043	45.76	.1043	.0013	23.17	.0004

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0003**	**-.0002**	**10.29**	**.0003**	**.6416**	**.0012**	**-.0015**	**.0008**
Stddev	.0009	.0011	.0006	.02	.0001	.0022	.0001	.0002	.0002
%RSD	117.2	376.3	257.5	.2209	29.89	.3385	5.885	16.35	20.91
#1	-.0017	.0010	.0000	10.29	.0004	.6400	.0012	-.0018	.0006
#2	-.0002	.0008	.0002	10.27	.0002	.6406	.0013	-.0014	.0009
#3	-.0003	-.0010	-.0009	10.31	.0004	.6440	.0012	-.0013	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0109**
Stddev	.0001
%RSD	.8010
#1	.0108
#2	.0108
#3	.0109

Zoom In Zoom Out

Sample Name: FA98969-12 Acquired: 9/21/2022 17:07:20 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.97**	**2783.7**	**20190.**	**4394.5**
Stddev	1.91	4.4	59.	22.7
%RSD	.20257	.15807	.29296	.51610
#1	943.02	2781.7	20244.	4388.7
#2	943.11	2788.7	20200.	4375.2
#3	939.77	2780.7	20127.	4419.5

Zoom In Zoom Out

Sample Name: FA98969-13 Acquired: 9/21/2022 17:12:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0087**	**.0035**	**.0277**	**.0000**	**84.95**	**-.0001**	**.0000**	**-.0001**
Stddev	.0000	.0098	.0008	.0002	.000	.39	.0000	.000	.0005
%RSD	7.805	112.6	22.05	.5875	415.4	.4608	14.55	225.0	351.0
#1	.0006	-.0019	.0043	.0277	.0000	84.56	-.0001	.0000	.0001
#2	.0005	.0107	.0028	.0278	.0000	85.35	-.0001	-.0001	-.0007
#3	.0005	.0173	.0034	.0275	-.0001	84.94	-.0001	.0000	.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.1710**	**.9660**	**.0061**	**47.50**	**.0200**	**.0030**	**26.85**	**.0008**
Stddev	.0002	.0007	.0282	.0010	.25	.0001	.0002	.09	.0001
%RSD	31.78	.3871	2.924	16.83	.5314	.2835	7.821	.3180	13.77
#1	-.0007	.1703	.9444	.0069	47.38	.0200	.0028	26.77	.0007
#2	-.0004	.1716	.9555	.0049	47.79	.0201	.0031	26.94	.0009
#3	-.0004	.1712	.9979	.0063	47.34	.0200	.0032	26.83	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**.0002**	**-.0011**	**8.585**	**.0000**	**.4696**	**.0005**	**-.0008**	**.0009**
Stddev	.0004	.0015	.0006	.009	.000	.0023	.0002	.0009	.0001
%RSD	29.35	898.8	55.09	.0993	15460.	.4813	40.39	104.6	10.83
#1	-.0019	.0005	-.0015	8.577	-.0003	.4671	.0003	-.0018	.0010
#2	-.0014	.0015	-.0004	8.584	.0003	.4712	.0004	-.0007	.0009
#3	-.0011	-.0015	-.0015	8.594	.0000	.4706	.0007	.0000	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0100**
Stddev	.0001
%RSD	.5450
#1	.0101
#2	.0100
#3	.0100

Zoom In Zoom Out

Sample Name: FA98969-13 Acquired: 9/21/2022 17:12:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**935.53**	**2767.8**	**20157.**	**4444.4**
Stddev	1.48	4.1	44.	29.7
%RSD	.15809	.14941	.21877	.66890
#1	933.96	2772.5	20158.	4466.5
#2	936.91	2765.9	20201.	4410.6
#3	935.71	2764.9	20113.	4456.2

Zoom In Zoom Out

Sample Name: FA98969-14 Acquired: 9/21/2022 17:17:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0323**	**.0088**	**.0529**	**-.0001**	**224.8**	**-.0001**	**.0004**	**.0009**
Stddev	.0001	.0013	.0006	.0002	.0000	1.3	.0000	.0001	.0001
%RSD	40.33	3.884	6.847	.4095	71.27	.5994	12.74	27.51	9.228
#1	.0002	.0322	.0092	.0530	.0000	226.3	-.0001	.0004	.0010
#2	.0004	.0336	.0091	.0526	.0000	224.1	-.0001	.0003	.0008
#3	.0004	.0311	.0081	.0529	-.0001	223.9	-.0001	.0005	.0010

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0576**	**2.489**	**.0167**	**26.12**	**.1127**	**.0299**	F **152.5**	**.0047**
Stddev	.0004	.0009	.026	.0015	.08	.0000	.0002	3.7	.0002
%RSD	58.84	1.598	1.063	9.086	.2917	.0403	.5425	2.417	3.823
#1	.0010	.0582	2.468	.0173	26.16	.1127	.0299	153.2	.0047
#2	.0002	.0566	2.519	.0178	26.18	.1127	.0301	155.8	.0045
#3	.0008	.0582	2.481	.0149	26.04	.1128	.0297	148.5	.0049

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0039**	**.0007**	**-.0011**	**8.811**	**.0002**	**1.378**	**.0009**	**-.0012**	**.0038**
Stddev	.0006	.0015	.0018	.020	.0002	.006	.0001	.0015	.0003
%RSD	15.36	197.8	163.8	.2285	73.19	.4544	10.44	123.3	7.027
#1	-.0040	-.0009	-.0016	8.800	.0004	1.384	.0009	.0003	.0040
#2	-.0044	.0013	.0009	8.799	.0001	1.371	.0009	-.0027	.0035
#3	-.0032	.0019	-.0026	8.834	.0001	1.378	.0008	-.0012	.0039

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0122**
Stddev	.0001
%RSD	.6563
#1	.0121
#2	.0123
#3	.0122

Zoom In Zoom Out

Sample Name: FA98969-14 Acquired: 9/21/2022 17:17:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**877.24**	**2639.5**	**19250.**	**4224.4**
Stddev	1.27	4.8	100.	25.8
%RSD	.14524	.18140	.51843	.61001
#1	878.16	2634.9	19230.	4220.0
#2	875.79	2639.3	19162.	4201.1
#3	877.78	2644.4	19358.	4252.0

Zoom In Zoom Out

Sample Name: FA98969-15 Acquired: 9/21/2022 17:22:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0150**	**.2033**	**.0341**	**.0000**	**85.82**	**-.0001**	**-.0001**	**.0000**
Stddev	.0005	.0103	.0015	.0000	.000	.28	.0000	.0000	.000
%RSD	95.31	68.58	.7219	.1447	222.8	.3318	23.45	14.01	1291.
#1	.0009	.0243	.2034	.0342	.0000	86.10	-.0001	-.0001	.0002
#2	-.0001	.0039	.2047	.0341	-.0001	85.53	-.0001	-.0001	.0000
#3	.0008	.0169	.2018	.0341	.0000	85.84	-.0001	-.0001	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.4338**	**1.047**	**.0033**	**54.65**	**.0288**	**.0175**	**31.68**	**.0011**
Stddev	.0004	.0045	.004	.0006	.09	.0000	.0003	.06	.0001
%RSD	101.7	1.040	.4098	17.01	.1725	.1122	1.527	.1788	6.312
#1	-.0004	.4320	1.043	.0039	54.56	.0288	.0173	31.73	.0011
#2	.0000	.4304	1.052	.0029	54.65	.0288	.0178	31.62	.0010
#3	-.0006	.4389	1.046	.0031	54.75	.0288	.0174	31.67	.0011

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**-.0006**	**-.0018**	**9.772**	**.0002**	**.5970**	**.0006**	**-.0007**	**.0008**
Stddev	.0006	.0016	.0007	.006	.0005	.0015	.0001	.0008	.0002
%RSD	35.07	254.1	38.04	.0649	314.8	.2501	21.82	114.3	18.60
#1	-.0019	-.0024	-.0014	9.766	.0007	.5986	.0006	-.0015	.0009
#2	-.0023	.0005	-.0015	9.773	-.0001	.5956	.0004	-.0009	.0007
#3	-.0011	.0001	-.0027	9.778	-.0001	.5967	.0007	.0002	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0117**
Stddev	.0001
%RSD	.4470
#1	.0117
#2	.0116
#3	.0117

Zoom In Zoom Out

Sample Name: FA98969-15 Acquired: 9/21/2022 17:22:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.07**	**2780.7**	**20250.**	**4387.2**
Stddev	2.19	4.6	62.	14.7
%RSD	.23529	.16536	.30552	.33413
#1	930.49	2775.9	20243.	4400.7
#2	930.18	2781.2	20315.	4389.3
#3	926.56	2785.0	20192.	4371.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 17:26:59 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2612**	**38.95**	**2.013**	**1.971**	**1.990**	**39.74**	**2.035**	**2.019**	**2.065**
Stddev	.0007	.03	.003	.002	.001	.08	.002	.003	.006
%RSD	.2613	.0807	.1362	.1169	.0580	.2035	.1177	.1563	.2786
#1	.2617	38.92	2.015	1.969	1.990	39.70	2.037	2.022	2.064
#2	.2604	38.98	2.010	1.974	1.990	39.83	2.033	2.016	2.060
#3	.2614	38.95	2.014	1.970	1.988	39.69	2.037	2.019	2.071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.927**	**40.74**	**39.85**	**1.974**	**40.36**	**1.995**	**2.033**	**39.45**	**2.082**
Stddev	.005	.04	.09	.003	.06	.008	.002	.01	.002
%RSD	.2473	.1019	.2261	.1743	.1571	.4230	.0851	.0192	.1077
#1	1.931	40.70	39.78	1.974	40.42	2.000	2.034	39.46	2.084
#2	1.922	40.75	39.95	1.978	40.29	1.986	2.031	39.45	2.081
#3	1.928	40.78	39.81	1.971	40.37	2.001	2.033	39.44	2.080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.015**	**1.979**	**2.018**	**2.312**	**1.994**	**2.006**	**1.970**	**2.067**	**2.020**
Stddev	.006	.004	.002	.006	.001	.003	.002	.015	.011
%RSD	.3101	.1845	.0785	.2495	.0696	.1413	.0930	.7130	.5470
#1	2.008	1.983	2.016	2.318	1.993	2.004	1.972	2.050	2.025
#2	2.020	1.977	2.018	2.307	1.993	2.009	1.970	2.079	2.007
#3	2.016	1.977	2.019	2.310	1.995	2.005	1.969	2.072	2.027
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 17:26:59 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.080**
Stddev	.003
%RSD	.1376
#1	2.080
#2	2.078
#3	2.083
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**921.74**	**2771.4**	**20283.**	**4370.1**
Stddev	4.11	5.3	136.	28.6
%RSD	.44543	.19253	.67284	.65424
#1	926.45	2772.8	20262.	4396.2
#2	918.91	2775.9	20430.	4339.5
#3	919.85	2765.5	20159.	4374.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 17:31:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0085**	**.0002**	**.0002**	**.0002**	**.0041**	**.0000**	**.0000**	**.0000**
Stddev	.0003	.0051	.0004	.0001	.0001	.0018	.0000	.000	.001
%RSD	104.6	59.80	274.8	56.40	35.58	44.89	112.9	14890.	3903.
#1	.0005	.0048	-.0002	.0003	.0002	.0043	.0000	.0000	-.0005
#2	.0004	.0143	.0001	.0002	.0002	.0021	.0000	-.0001	-.0001
#3	-.0001	.0063	.0006	.0001	.0001	.0058	.0001	.0001	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0039**	**-.0016**	**-.0008**	**.0074**	**.0001**	**.0004**	**.0209**	**-.0001**
Stddev	.000	.0043	.0076	.0007	.0019	.0001	.0001	.0049	.0001
%RSD	209.6	109.9	468.6	86.73	25.29	135.3	37.56	23.27	39.44
#1	.0000	.0079	.0004	-.0002	.0074	.0001	.0003	.0262	-.0002
#2	.0000	-.0006	.0048	-.0006	.0092	.0000	.0005	.0166	-.0001
#3	-.0002	.0045	-.0100	-.0016	.0055	.0001	.0003	.0200	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0004**	**-.0001**	**.0006**	**.0001**	**.0002**	**.0002**	**-.0002**	**.0002**
Stddev	.0004	.0008	.0014	.0004	.0004	.0000	.0000	.0004	.0003
%RSD	120.3	208.3	1731.	78.05	242.1	17.81	29.05	164.7	166.5
#1	-.0008	-.0002	-.0006	.0009	.0005	.0002	.0002	-.0001	-.0002
#2	.0001	.0013	-.0011	.0008	-.0002	.0002	.0002	.0000	.0003
#3	-.0003	.0001	.0014	.0001	.0002	.0001	.0001	-.0007	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 17:31:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0003**
Stddev	.0001
%RSD	31.35
#1	.0003
#2	.0002
#3	.0003
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1011.7**	**2919.9**	**20756.**	**4421.2**
Stddev	.7	5.1	82.	44.5
%RSD	.07101	.17303	.39454	1.0070
#1	1012.5	2922.1	20676.	4403.2
#2	1011.3	2923.4	20840.	4388.6
#3	1011.2	2914.1	20752.	4472.0

Zoom In Zoom Out

Sample Name: FA98994-11 Acquired: 9/21/2022 17:36:27 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.6031**	**-.0003**	**.0800**	**.0003**	**7.601**	**-.0001**	**.0002**	**.0002**
Stddev	.0007	.0104	.0006	.0002	.0001	.021	.0000	.0002	.0002
%RSD	293.3	1.731	184.5	.2310	21.26	.2741	30.70	78.17	110.5
#1	.0011	.6112	.0002	.0800	.0002	7.577	-.0001	.0000	.0000
#2	.0000	.6068	-.0002	.0798	.0004	7.614	-.0001	.0003	.0003
#3	-.0003	.5913	-.0010	.0802	.0003	7.611	-.0001	.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**2.531**	**1.403**	**.0024**	**5.660**	**.0163**	**.0001**	**8.081**	**-.0003**
Stddev	.0003	.003	.018	.0013	.033	.0001	.0002	.017	.0001
%RSD	78.56	.1151	1.273	56.16	.5774	.4869	209.6	.2123	45.55
#1	-.0005	2.532	1.386	.0038	5.642	.0164	.0001	8.062	-.0004
#2	-.0001	2.527	1.421	.0011	5.641	.0163	.0004	8.094	-.0001
#3	-.0007	2.533	1.401	.0022	5.698	.0164	-.0001	8.087	-.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0012**	**.0008**	**2.155**	**.0003**	**.0467**	**.0019**	**-.0012**	**.0017**
Stddev	.0005	.0008	.0012	.003	.0002	.0002	.0001	.0006	.0002
%RSD	86.49	65.66	155.3	.1198	63.07	.3272	4.283	47.19	9.934
#1	-.0005	.0013	-.0006	2.153	.0002	.0466	.0019	-.0006	.0017
#2	-.0001	.0020	.0017	2.158	.0001	.0468	.0019	-.0017	.0015
#3	-.0011	.0004	.0013	2.153	.0004	.0468	.0018	-.0012	.0018

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0059**
Stddev	.0001
%RSD	.9702
#1	.0059
#2	.0059
#3	.0060

Zoom In Zoom Out

Sample Name: FA98994-11 Acquired: 9/21/2022 17:36:27 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**997.09**	**2906.6**	**20812.**	**4473.0**
Stddev	2.63	6.4	132.	17.8
%RSD	.26351	.21968	.63269	.39838
#1	997.16	2911.3	20917.	4490.3
#2	999.69	2909.2	20854.	4473.9
#3	994.43	2899.3	20664.	4454.7

Zoom In Zoom Out

Sample Name: FA98788-1 Acquired: 9/21/2022 17:41:19 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**5.959**	**.0194**	**.2306**	**.0001**	**54.37**	**.0016**	**.0317**	**.1055**
Stddev	.0010	.033	.0055	.0004	.0003	.07	.0001	.0005	.0018
%RSD	271.9	.5587	28.53	.1914	362.9	.1363	8.383	1.578	1.720
#1	.0016	5.971	.0161	.2305	.0005	54.34	.0015	.0318	.1035
#2	-.0003	5.985	.0162	.2311	.0000	54.45	.0017	.0312	.1071
#3	-.0001	5.922	.0257	.2302	-.0002	54.32	.0017	.0322	.1059

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0508**	**13.47**	**80.03**	**.0133**	**13.68**	**.1444**	**1.135**	F **1233.**	**.1488**
Stddev	.0001	.04	.27	.0040	.08	.0004	.004	6.	.0009
%RSD	.1432	.2895	.3431	29.68	.5892	.2556	.3051	.4683	.5897
#1	.0507	13.46	79.71	.0110	13.74	.1443	1.135	1239.	.1494
#2	.0509	13.51	80.23	.0179	13.59	.1448	1.131	1233.	.1478
#3	.0509	13.44	80.13	.0111	13.72	.1441	1.138	1228.	.1491

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5298**	**.0228**	**-.0028**	**12.52**	**.0335**	**.3869**	**.0750**	**-.0063**	**.0130**
Stddev	.0036	.0069	.0110	.01	.0006	.0012	.0007	.0014	.0004
%RSD	.6746	30.03	386.9	.1017	1.666	.3041	.8820	23.05	2.828
#1	.5267	.0266	-.0111	12.51	.0328	.3868	.0757	-.0076	.0127
#2	.5337	.0269	.0096	12.53	.0338	.3882	.0747	-.0047	.0130
#3	.5289	.0149	-.0070	12.53	.0338	.3859	.0745	-.0065	.0134

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4429**
Stddev	.0013
%RSD	.3009
#1	.4424
#2	.4418
#3	.4444

Zoom In Zoom Out

Sample Name: FA98788-1 Acquired: 9/21/2022 17:41:19 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**908.42**	**2785.9**	**20039.**	**4431.7**
Stddev	1.73	6.9	58.	18.2
%RSD	.19043	.24672	.28947	.41126
#1	910.35	2788.2	20106.	4422.5
#2	907.93	2791.3	20008.	4452.6
#3	906.99	2778.2	20003.	4419.8

Zoom In Zoom Out

Sample Name: FA98788-2 Acquired: 9/21/2022 17:46:14 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**1.687**	**.0107**	**.1375**	**-.0001**	**16.97**	**.0003**	**.0234**	**.0499**
Stddev	.0035	.001	.0009	.0002	.0006	.02	.0002	.0003	.0010
%RSD	561.5	.0822	8.377	.1733	896.9	.1122	74.96	1.304	2.004
#1	-.0025	1.686	.0109	.1374	.0003	16.99	.0001	.0237	.0489
#2	.0045	1.687	.0115	.1373	.0002	16.95	.0005	.0231	.0508
#3	-.0001	1.688	.0097	.1378	-.0008	16.97	.0003	.0234	.0502

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0640**	**1.648**	**66.13**	**.0113**	**9.314**	**.0201**	**.3263**	F **944.6**	**.0957**
Stddev	.0005	.007	.19	.0026	.080	.0003	.0002	28.0	.0015
%RSD	.7218	.4229	.2906	22.68	.8573	1.593	.0583	2.967	1.560
#1	.0635	1.654	65.99	.0139	9.264	.0202	.3265	959.7	.0965
#2	.0643	1.640	66.05	.0087	9.272	.0197	.3263	912.3	.0966
#3	.0642	1.651	66.35	.0114	9.406	.0203	.3261	961.8	.0940

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1268**	**.0260**	**-.0004**	**11.92**	**.0219**	**.1893**	**.0493**	**-.0041**	**.0217**
Stddev	.0027	.0041	.0042	.02	.0014	.0010	.0007	.0039	.0004
%RSD	2.168	15.83	939.6	.1446	6.186	.5525	1.476	93.46	1.871
#1	.1240	.0213	-.0031	11.90	.0204	.1906	.0496	-.0055	.0216
#2	.1269	.0288	.0044	11.93	.0223	.1887	.0499	.0002	.0214
#3	.1295	.0280	-.0027	11.92	.0230	.1888	.0485	-.0072	.0222

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1107**
Stddev	.0009
%RSD	.7837
#1	.1097
#2	.1112
#3	.1112

Zoom In Zoom Out

Sample Name: FA98788-2 Acquired: 9/21/2022 17:46:14 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**919.99**	**2804.5**	**20217.**	**4452.7**
Stddev	2.32	4.4	70.	48.8
%RSD	.25202	.15711	.34440	1.0955
#1	922.01	2808.8	20193.	4413.9
#2	917.46	2804.8	20295.	4507.5
#3	920.50	2800.0	20162.	4436.8

Zoom In Zoom Out

Sample Name: FA98819-1 Acquired: 9/21/2022 17:51:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0128**	**.0086**	**.0160**	**.0000**	**39.10**	**-.0001**	**.0002**	**.0002**
Stddev	.0001	.0006	.0005	.0000	.000	.10	.0000	.0001	.0001
%RSD	83.97	4.444	5.512	.2739	177.7	.2601	38.00	30.38	77.23
#1	.0001	.0124	.0083	.0160	.0000	39.18	-.0002	.0002	.0000
#2	.0003	.0124	.0091	.0160	.0000	38.99	-.0001	.0002	.0003
#3	.0000	.0134	.0083	.0160	.0000	39.14	-.0001	.0003	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0147**	**.2303**	**6.995**	**.0019**	**5.327**	**.0118**	**.0001**	**19.98**	**.0050**
Stddev	.0006	.0019	.035	.0003	.011	.0001	.0000	.07	.0002
%RSD	3.902	.8377	.5048	15.39	.2021	.7283	31.28	.3709	3.996
#1	.0147	.2296	7.021	.0022	5.336	.0118	.0001	20.04	.0048
#2	.0141	.2288	6.955	.0017	5.315	.0117	.0002	19.90	.0050
#3	.0153	.2325	7.009	.0017	5.329	.0118	.0001	20.00	.0052

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0010**	**-.0006**	**5.299**	**.0005**	**.2947**	**.0007**	**-.0006**	**.0005**
Stddev	.0011	.0019	.0010	.008	.0003	.0013	.0002	.0009	.0003
%RSD	120.6	188.0	156.5	.1450	64.22	.4275	22.34	153.9	73.30
#1	-.0022	.0027	-.0016	5.296	.0007	.2953	.0009	-.0017	.0001
#2	-.0001	.0012	.0004	5.307	.0001	.2932	.0006	-.0001	.0005
#3	-.0005	-.0010	-.0007	5.293	.0006	.2955	.0006	-.0001	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0185**
Stddev	.0000
%RSD	.2107
#1	.0185
#2	.0186
#3	.0185

Zoom In Zoom Out

Sample Name: FA98819-1 Acquired: 9/21/2022 17:51:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**972.42**	**2860.9**	**20574.**	**4444.6**
Stddev	1.51	2.6	87.	41.5
%RSD	.15492	.09070	.42198	.93327
#1	973.07	2861.2	20548.	4445.1
#2	973.49	2858.2	20671.	4485.8
#3	970.70	2863.4	20503.	4402.9

Zoom In Zoom Out

Sample Name: FA98820-1A Acquired: 9/21/2022 17:56:07 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0154**	**1.508**	**.0532**	**.0000**	**48.76**	**-.0013**	**.0168**	**.0004**
Stddev	.0005	.0077	.005	.0001	.0000	.14	.0001	.0001	.0003
%RSD	38.19	50.15	.3191	.1013	62.84	.2960	3.846	.6879	88.02
#1	.0008	.0065	1.503	.0533	.0000	48.88	-.0014	.0166	.0000
#2	.0015	.0197	1.507	.0532	.0001	48.60	-.0013	.0168	.0006
#3	.0019	.0200	1.513	.0532	.0000	48.79	-.0013	.0169	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**66.94**	**8.398**	**.0003**	**6.789**	**2.167**	**.0009**	**12.34**	**.0051**
Stddev	.0001	.04	.028	.0006	.021	.001	.0001	.00	.0002
%RSD	36.60	.0575	.3347	164.1	.3169	.0426	10.19	.0270	4.729
#1	.0002	66.92	8.430	.0007	6.795	2.167	.0009	12.34	.0048
#2	.0003	66.93	8.377	-.0003	6.806	2.168	.0008	12.34	.0052
#3	.0004	66.99	8.387	.0007	6.765	2.166	.0009	12.34	.0053

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**.0002**	**.0024**	**6.316**	**.0001**	**.3927**	**.0006**	**.0011**	**.0002**
Stddev	.0007	.0007	.0007	.013	.0003	.0001	.0001	.0009	.0003
%RSD	35.52	294.6	30.04	.2023	184.9	.0198	16.83	89.36	179.8
#1	-.0026	-.0006	.0021	6.317	.0000	.3928	.0005	.0000	.0003
#2	-.0012	.0006	.0019	6.302	.0000	.3927	.0006	.0012	-.0002
#3	-.0022	.0007	.0033	6.328	.0004	.3927	.0007	.0019	.0004

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0127**
Stddev	.0001
%RSD	.4685
#1	.0127
#2	.0126
#3	.0126

Zoom In Zoom Out

Sample Name: FA98820-1A Acquired: 9/21/2022 17:56:07 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**971.61**	**2848.8**	**20594.**	**4461.2**
Stddev	1.06	1.1	70.	24.0
%RSD	.10863	.03954	.33843	.53894
#1	970.72	2850.1	20618.	4455.5
#2	971.35	2848.2	20516.	4487.5
#3	972.78	2848.1	20649.	4440.5

Zoom In Zoom Out

Sample Name: FA98820-2A Acquired: 9/21/2022 18:00:57 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0076**	**2.745**	**.0144**	**.0000**	**23.66**	**-.0009**	**.0122**	**.0006**
Stddev	.0001	.0093	.001	.0001	.0001	.11	.0000	.0000	.0003
%RSD	10.73	123.2	.0325	.9321	192.5	.4509	2.851	.1096	42.10
#1	.0008	-.0023	2.745	.0145	.0000	23.62	-.0009	.0122	.0005
#2	.0010	.0163	2.746	.0143	.0001	23.78	-.0009	.0122	.0005
#3	.0010	.0088	2.744	.0145	.0000	23.57	-.0008	.0122	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**37.29**	**3.249**	**-.0017**	**2.745**	**2.338**	**.0015**	**5.112**	**.0045**
Stddev	.0000	.10	.030	.0007	.013	.001	.0001	.025	.0001
%RSD	136.7	.2812	.9268	40.24	.4889	.0206	8.857	.4871	2.664
#1	.0000	37.22	3.244	-.0009	2.738	2.338	.0015	5.092	.0046
#2	.0000	37.41	3.281	-.0021	2.761	2.339	.0014	5.140	.0044
#3	.0001	37.23	3.222	-.0020	2.737	2.338	.0017	5.104	.0045

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0001**	**.0022**	**4.909**	**.0001**	**.1674**	**.0003**	**.0005**	**-.0006**
Stddev	.0002	.0017	.0001	.001	.0001	.0007	.0001	.0007	.0002
%RSD	43.69	1349.	6.729	.0129	71.44	.4288	41.02	161.9	35.15
#1	-.0004	.0014	.0023	4.908	.0002	.1671	.0002	-.0002	-.0007
#2	-.0004	-.0018	.0022	4.909	.0001	.1682	.0005	.0013	-.0003
#3	-.0008	.0007	.0020	4.910	.0000	.1669	.0003	.0002	-.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0141**
Stddev	.0001
%RSD	.4238
#1	.0140
#2	.0140
#3	.0141

Zoom In Zoom Out

Sample Name: FA98820-2A Acquired: 9/21/2022 18:00:57 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**993.37**	**2893.7**	**20684.**	**4484.0**
Stddev	1.04	6.1	33.	18.0
%RSD	.10448	.21165	.15967	.40239
#1	993.96	2900.1	20702.	4502.1
#2	993.99	2893.2	20646.	4466.0
#3	992.18	2887.9	20705.	4483.7

Zoom In Zoom Out

Sample Name: FA98825-1 Acquired: 9/21/2022 18:05:48 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**13.83**	**.0042**	**.2356**	**.0003**	**67.51**	**-.0005**	**.0110**	**.0414**
Stddev	.0000	.04	.0012	.0005	.0001	.14	.0000	.0001	.0003
%RSD	5.617	.3049	27.99	.2102	37.83	.2074	9.128	.5216	.6813
#1	.0004	13.88	.0041	.2359	.0004	67.62	-.0005	.0110	.0415
#2	.0005	13.81	.0055	.2351	.0002	67.35	-.0004	.0109	.0416
#3	.0005	13.81	.0032	.2360	.0003	67.56	-.0005	.0109	.0411

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0332**	**24.04**	**4.768**	**.0419**	**61.53**	**.4779**	**.0061**	F **95.69**	**.0744**
Stddev	.0003	.05	.006	.0013	.09	.0005	.0001	.20	.0003
%RSD	.7996	.2129	.1274	3.160	.1452	.1131	1.926	.2131	.4341
#1	.0334	24.03	4.772	.0407	61.46	.4778	.0062	95.76	.0741
#2	.0333	23.99	4.761	.0433	61.50	.4784	.0063	95.46	.0742
#3	.0329	24.09	4.770	.0417	61.63	.4774	.0060	95.86	.0747

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**-.0008**	**.0047**	**32.03**	**.0012**	**.6149**	**.3949**	**-.0012**	**.0542**
Stddev	.0004	.0009	.0010	.04	.0002	.0006	.0004	.0017	.0003
%RSD	14.91	115.4	21.07	.1288	20.88	.0972	.1036	139.6	.4882
#1	.0025	.0002	.0057	32.00	.0014	.6153	.3954	-.0013	.0539
#2	.0033	-.0016	.0038	32.00	.0012	.6142	.3949	.0005	.0545
#3	.0028	-.0010	.0046	32.07	.0009	.6150	.3945	-.0028	.0541

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0650**
Stddev	.0003
%RSD	.4100
#1	.0647
#2	.0650
#3	.0652

Zoom In Zoom Out

Sample Name: FA98825-1 Acquired: 9/21/2022 18:05:48 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.89**	**2837.9**	**20433.**	**4463.7**
Stddev	.89	1.6	58.	19.5
%RSD	.09876	.05792	.28560	.43749
#1	905.69	2839.4	20384.	4466.9
#2	905.04	2838.2	20418.	4481.5
#3	903.92	2836.2	20498.	4442.8

Zoom In Zoom Out

Sample Name: FA99026-1 Acquired: 9/21/2022 18:10:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.4647**	**.0010**	**.0274**	**.0000**	**91.73**	**-.0001**	**.0000**	**.0034**
Stddev	.0003	.0100	.0004	.0001	.0001	.38	.0001	.0002	.0003
%RSD	107.7	2.149	34.80	.4308	137.4	.4091	58.64	750.3	9.902
#1	.0004	.4659	.0008	.0273	.0000	91.84	-.0002	.0001	.0034
#2	-.0001	.4542	.0009	.0275	.0001	92.03	.0000	-.0002	.0030
#3	.0004	.4740	.0014	.0275	.0001	91.31	-.0001	.0002	.0037

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**1.257**	**3.435**	**.0020**	**13.39**	**.0287**	**.0009**	**9.925**	**.0000**
Stddev	.0001	.004	.017	.0005	.09	.0001	.0001	.011	.0001
%RSD	90.03	.3200	.4815	26.68	.7029	.1770	12.05	.1080	261.4
#1	-.0001	1.258	3.430	.0015	13.48	.0287	.0010	9.933	-.0001
#2	-.0002	1.260	3.421	.0026	13.41	.0287	.0009	9.928	.0000
#3	.0000	1.252	3.453	.0020	13.29	.0288	.0007	9.913	.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**-.0007**	**-.0007**	**5.593**	**.0001**	**.6046**	**.0061**	**-.0016**	**.0058**
Stddev	.0001	.0010	.0008	.001	.0004	.0008	.0004	.0010	.0003
%RSD	11.21	146.8	106.6	.0186	243.8	.1300	5.883	66.80	5.191
#1	-.0011	-.0017	-.0011	5.594	.0000	.6046	.0058	-.0013	.0057
#2	-.0010	.0003	.0002	5.592	-.0001	.6053	.0060	-.0007	.0061
#3	-.0012	-.0006	-.0013	5.593	.0006	.6038	.0065	-.0027	.0055

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0048**
Stddev	.0000
%RSD	.3074
#1	.0048
#2	.0048
#3	.0048

Zoom In Zoom Out

Sample Name: FA99026-1 Acquired: 9/21/2022 18:10:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.11**	**2847.1**	**20647.**	**4435.1**
Stddev	1.63	4.5	106.	34.1
%RSD	.17038	.15784	.51197	.76955
#1	955.35	2842.8	20756.	4436.6
#2	957.38	2846.8	20545.	4400.2
#3	958.58	2851.8	20639.	4468.4

Zoom In Zoom Out

Sample Name: FA99026-2 Acquired: 9/21/2022 18:15:24 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.1623**	**.0014**	**.0242**	**.0000**	**51.76**	**-.0001**	**.0000**	**.0032**
Stddev	.0006	.0058	.0008	.0003	.0000	.37	.0000	.000	.0001
%RSD	312.9	3.568	56.47	1.268	129.6	.7082	8.252	1781.	4.620
#1	.0008	.1576	.0011	.0244	.0000	51.77	-.0001	.0001	.0032
#2	-.0001	.1687	.0008	.0242	.0001	52.12	-.0001	.0000	.0034
#3	-.0001	.1605	.0023	.0238	.0000	51.39	-.0001	.0000	.0031

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.9361**	**3.366**	**.0016**	**9.083**	**.0151**	**.0036**	**4.951**	**.0001**
Stddev	.0001	.0044	.002	.0014	.027	.0000	.0002	.018	.0003
%RSD	40.46	.4649	.0642	86.80	.2983	.2225	4.498	.3573	350.5
#1	-.0003	.9400	3.366	.0012	9.114	.0151	.0038	4.956	.0004
#2	-.0002	.9369	3.363	.0031	9.069	.0150	.0035	4.966	-.0002
#3	-.0004	.9314	3.368	.0004	9.066	.0150	.0036	4.931	.0000

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0005**	**.0003**	**6.246**	**.0009**	**.2817**	**.0021**	**-.0010**	**.0078**
Stddev	.0005	.0008	.0019	.010	.0005	.0012	.0002	.0003	.0003
%RSD	101.0	172.8	702.8	.1650	54.56	.4173	9.622	34.36	3.972
#1	-.0005	.0000	-.0013	6.257	.0010	.2818	.0023	-.0009	.0082
#2	.0000	.0001	-.0002	6.244	.0013	.2828	.0019	-.0014	.0078
#3	-.0010	.0014	.0023	6.236	.0003	.2804	.0020	-.0007	.0075

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0051**
Stddev	.0000
%RSD	.4073
#1	.0051
#2	.0051
#3	.0051

Zoom In Zoom Out

Sample Name: FA99026-2 Acquired: 9/21/2022 18:15:24 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**976.44**	**2870.3**	**20791.**	**4494.8**
Stddev	1.37	7.9	113.	33.0
%RSD	.14003	.27631	.54448	.73328
#1	975.06	2878.9	20919.	4509.3
#2	976.46	2868.8	20748.	4457.1
#3	977.79	2863.2	20705.	4518.0

Zoom In Zoom Out

Sample Name: FA99026-3 Acquired: 9/21/2022 18:20:16 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**1.962**	**.0005**	**.0378**	**.0002**	**34.29**	**.0001**	**.0003**	**.0098**
Stddev	.0003	.009	.0004	.0001	.0001	.11	.0000	.0000	.0003
%RSD	114.9	.4744	85.60	.2741	30.51	.3147	41.60	10.27	2.784
#1	.0002	1.970	.0010	.0379	.0003	34.31	.0000	.0003	.0100
#2	.0006	1.951	.0001	.0379	.0001	34.39	.0001	.0003	.0095
#3	.0000	1.964	.0004	.0377	.0003	34.17	.0001	.0003	.0099

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**1.123**	**6.035**	**.0024**	**7.175**	**.0067**	**.0004**	**74.81**	**.0007**
Stddev	.0003	.001	.039	.0005	.016	.0001	.0001	.15	.0001
%RSD	65.30	.1269	.6439	19.70	.2256	.9042	15.98	.1971	21.49
#1	.0007	1.122	6.071	.0025	7.192	.0067	.0003	74.86	.0007
#2	.0004	1.125	6.040	.0019	7.171	.0066	.0004	74.92	.0005
#3	.0001	1.124	5.994	.0028	7.160	.0067	.0004	74.64	.0008

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**-.0011**	**-.0010**	**4.884**	**.0004**	**.2339**	**.0160**	**-.0008**	**.0135**
Stddev	.0004	.0012	.0016	.007	.0001	.0004	.0001	.0006	.0003
%RSD	17.44	106.6	157.7	.1350	12.99	.1806	.3802	83.01	2.011
#1	.0022	-.0025	.0008	4.884	.0004	.2339	.0159	-.0004	.0136
#2	.0030	-.0002	-.0020	4.877	.0004	.2344	.0159	-.0015	.0132
#3	.0023	-.0006	-.0019	4.890	.0005	.2335	.0160	-.0004	.0137

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0047**
Stddev	.0001
%RSD	2.288
#1	.0046
#2	.0048
#3	.0047

Zoom In Zoom Out

Sample Name: FA99026-3 Acquired: 9/21/2022 18:20:16 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.26**	**2911.6**	**20822.**	**4524.8**
Stddev	2.77	.8	33.	30.3
%RSD	.29493	.02723	.15764	.66931
#1	940.23	2911.4	20841.	4491.0
#2	935.09	2910.9	20840.	4533.9
#3	939.45	2912.5	20784.	4549.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 18:25:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2607**	**38.99**	**2.016**	**1.969**	**1.993**	**39.94**	**2.043**	**2.023**	**2.072**
Stddev	.0004	.04	.007	.001	.003	.02	.003	.003	.004
%RSD	.1628	.0918	.3692	.0717	.1429	.0454	.1482	.1414	.1910
#1	.2606	39.02	2.013	1.968	1.990	39.92	2.042	2.022	2.068
#2	.2603	39.01	2.011	1.968	1.996	39.96	2.040	2.021	2.073
#3	.2612	38.95	2.025	1.971	1.993	39.93	2.046	2.027	2.076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.934**	**40.79**	**39.94**	**1.979**	**40.57**	**2.010**	**2.028**	**39.50**	**2.076**
Stddev	.005	.09	.08	.002	.08	.006	.004	.02	.002
%RSD	.2870	.2177	.1918	.1011	.1989	.2898	.1747	.0545	.0711
#1	1.929	40.75	39.99	1.981	40.54	2.006	2.027	39.51	2.076
#2	1.931	40.89	39.99	1.980	40.66	2.008	2.024	39.51	2.074
#3	1.940	40.73	39.86	1.977	40.51	2.017	2.031	39.47	2.077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.029**	**1.981**	**2.021**	**2.322**	**2.004**	**2.008**	**1.979**	**2.075**	**2.025**
Stddev	.005	.002	.008	.004	.003	.002	.004	.023	.003
%RSD	.2453	.0849	.4054	.1576	.1250	.1024	.2199	1.095	.1415
#1	2.027	1.981	2.015	2.319	2.002	2.007	1.974	2.060	2.022
#2	2.025	1.980	2.017	2.321	2.004	2.006	1.978	2.063	2.025
#3	2.034	1.983	2.030	2.326	2.007	2.010	1.983	2.101	2.028
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 18:25:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.088**
Stddev	.002
%RSD	.1018
#1	2.089
#2	2.086
#3	2.090
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.46**	**2777.1**	**20238.**	**4316.6**
Stddev	2.71	4.2	74.	42.2
%RSD	.29471	.15079	.36577	.97749
#1	921.89	2778.8	20306.	4277.6
#2	922.15	2780.2	20250.	4310.9
#3	917.33	2772.4	20159.	4361.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 18:29:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0035**	**.0000**	**.0000**	**.0001**	**.0038**	**.0000**	**.0000**	**.0002**
Stddev	.0001	.0026	.0008	.0001	.0000	.0011	.0000	.0002	.0002
%RSD	67.49	74.33	6866.	283.5	23.75	28.78	650.6	450.0	102.1
#1	-.0001	.0018	.0008	.0001	.0001	.0047	.0000	-.0002	.0004
#2	-.0001	.0066	.0001	.0000	.0001	.0040	.0000	.0002	.0001
#3	-.0002	.0022	-.0008	-.0001	.0001	.0026	.0000	.0002	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0020**	**.0153**	F **.0012**	**.0051**	**.0001**	**.0004**	**.0224**	**-.0001**
Stddev	.000	.0007	.0084	.0005	.0070	.0000	.0000	.0036	.0002
%RSD	1006.	32.65	54.86	41.99	135.4	97.15	7.653	16.08	196.6
#1	-.0001	.0015	.0160	.0009	.0010	.0001	.0004	.0193	-.0003
#2	.0000	.0018	.0065	.0018	.0012	.0000	.0004	.0215	.0000
#3	.0000	.0027	.0232	.0009	.0132	.0001	.0004	.0263	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0005**	**-.0006**	**.0001**	**.0000**	**.0001**	**.0002**	**-.0001**	**.0000**
Stddev	.0005	.0006	.0026	.0003	.0003	.0000	.0000	.0014	.0001
%RSD	208.9	125.3	467.3	261.6	809.4	20.57	14.80	1203.	764.1
#1	.0002	-.0002	-.0033	.0005	-.0003	.0001	.0002	.0001	.0000
#2	-.0002	.0010	-.0002	.0000	.0001	.0001	.0002	.0012	.0001
#3	.0008	.0008	.0019	-.0001	.0002	.0002	.0002	-.0017	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 18:29:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	10.96
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1006.4**	**2943.6**	**20869.**	**4402.5**
Stddev	.8	3.8	26.	42.6
%RSD	.08043	.12778	.12528	.96836
#1	1007.2	2947.8	20899.	4353.6
#2	1005.6	2942.2	20850.	4431.8
#3	1006.3	2940.7	20858.	4422.2

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000328	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000028	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000031	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000625	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000068	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000003	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000009	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	-0.000176	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000021	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	0.000008	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	0.000001	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000038	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No
Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No

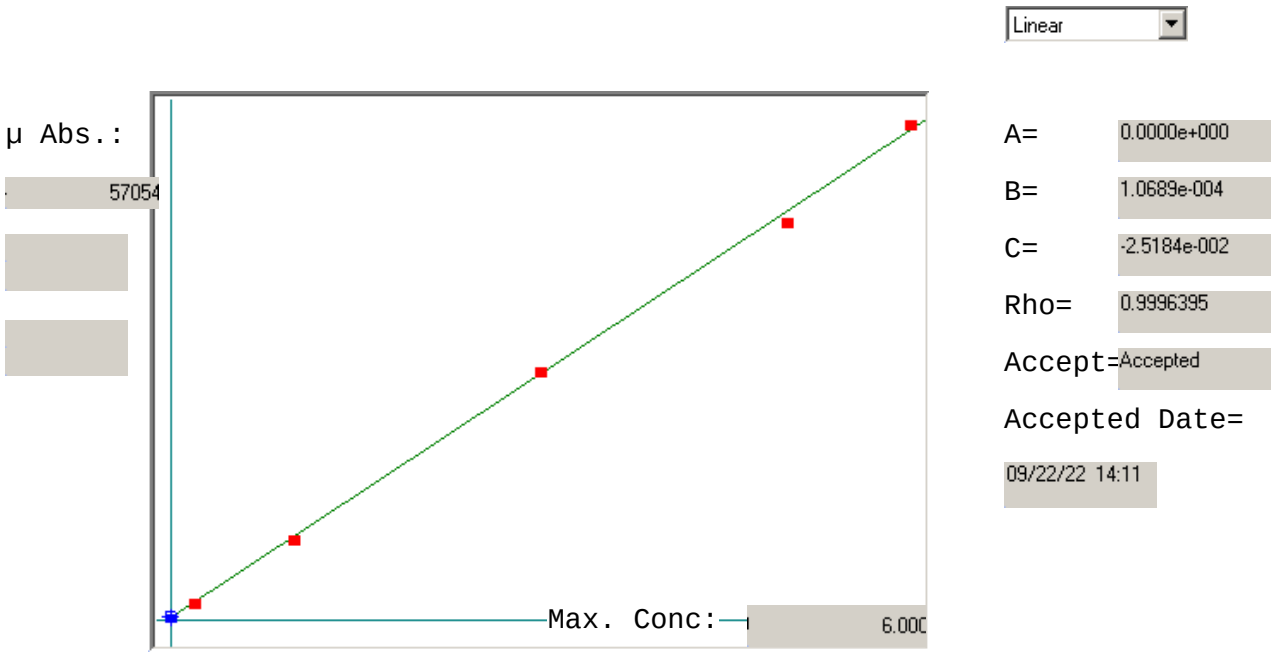
	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Fe	0.000045	0.000000	No
				Mo	-0.002189	0.000000	No
				Cu	0.000467	0.000000	No
				Ti	0.000036	0.000000	No
				Si	0.000043	0.000000	No
				Ca	0.000012	0.000000	No
				Cr	-0.000260	0.000000	No
				Mg	0.000002	0.000000	No
	Sb 206.833 {463}	☒	11	Fe	-0.000001	0.000000	No
				Cr	0.011486	0.000000	No
				Mo	-0.002538	0.000000	No
				V	-0.000441	0.000000	No
				Sn	-0.008695	0.000000	No
				Ti	0.000278	0.000000	No
				Ca	0.000001	0.000000	No
				Ni	-0.000818	0.000000	No
				Al	0.000005	0.000000	No
				Mn	-0.000133	0.000000	No
				Mg	-0.000002	0.000000	No
	Se 196.090 {472}	☒	12	Fe	-0.000018	0.000000	No
				Ca	0.000006	0.000000	No
				Mn	0.000331	0.000000	No
				Mo	0.000111	0.000000	No
				Al	0.000001	0.000000	No
				V	0.000000	0.000000	No
				Zn	0.000000	0.000000	No
				Sr	-0.000111	0.000000	No
				As	0.000125	0.000000	No
				Cd	-0.000250	0.000000	No
				Mg	0.000002	0.000000	No
				Cr	-0.000326	0.000000	No
	Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
	Sn 189.989 {477}	☒	1	Fe	0.000005	0.000000	No
	Sr 407.771 { 83}	☒	2	Ca	0.000002	0.000000	No
				Al	0.000012	0.000000	No
	Ti 334.941 {101}	☒	1	Ca	-0.000011	0.000000	No
	Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
				Fe	-0.000014	0.000000	No
				Al	0.000000	0.000000	No
				Ba	-0.000051	0.000000	No
				Ti	-0.000648	0.000000	No
				Sb	0.000167	0.000000	No
				Ca	0.000001	0.000000	No
				Cr	0.000340	0.000000	No
				Mg	-0.000002	0.000000	No
				V	0.000015	0.000000	No
	V 292.402 {115}	☒	5	Fe	0.000005	0.000000	No
				Cr	-0.003634	0.000000	No
				Mo	-0.009536	0.000000	No
				Ti	0.000303	0.000000	No
				Mn	-0.000333	0.000000	No
	Y 224.306 {450}*	☒	None				
	Y 360.073 { 94}*	☒	None				
	Y 371.030 { 91}*	☒	None				
	Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
				Al	0.000014	0.000000	No
				Ca	0.000003	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Fe	-0.000010	0.000000	No
				As	0.001105	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.002194	0.757281	0.000000	1.000000
Al 396.152 { 85}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.002678	0.195112	0.000000	1.000000
As 189.042 {478}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000411	0.214818	0.000000	1.000000
Ba 455.403 { 74}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.010592	17.320847	0.000000	1.000000
Be 313.042 {108}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000766	12.053619	0.000000	1.000000
Ca 317.933 {106}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.008693	0.368659	0.000000	1.000000
Cd 226.502 {449}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000980	6.502092	0.000000	1.000000
Co 228.616 {447}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000613	3.127143	0.000000	1.000000
Cr 267.716 {126}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000081	0.771123	0.000000	1.000000
Cu 324.754 {104}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.004214	1.035422	0.000000	1.000000
Fe 259.940 {130}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001502	0.272878	0.000000	1.000000
In 230.606 {446}*	9/21/2022 11:14:44	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.012378	0.160299	0.000000	1.000000
Li 670.784 { 50}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.003739	2.616743	0.000000	1.000000
Mg 279.079 {121}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000075	0.041848	0.000000	1.000000
Mn 257.610 {131}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000521	4.337771	0.000000	1.000000
Mo 202.030 {467}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001351	1.404505	0.000000	1.000000
Na 589.592 { 57}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000634	0.525760	0.000000	1.000000
Ni 231.604 {445}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000294	1.697818	0.000000	1.000000
Pb 220.353 {453}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.001264	1.932504	0.000000	1.000000
Sb 206.833 {463}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000924	0.308837	0.000000	1.000000
Se 196.090 {472}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000085	0.178082	0.000000	1.000000
Si 212.412 {459}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.007815	0.450550	0.000000	1.000000
Sn 189.989 {477}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000116	0.533010	0.000000	1.000000
Sr 407.771 { 83}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001215	19.038276	0.000000	1.000000
Ti 334.941 {101}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001830	2.492694	0.000000	1.000000
Tl 190.856 {477}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000933	0.611101	0.000000	1.000000
V 292.402 {115}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000431	1.033818	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.005336	3.568774	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999773	0.000054	0.000570	0.001901	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999995	0.000125	0.008943	0.029808	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999833	0.000041	0.001037	0.003456	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999951	0.008104	0.000152	0.000507	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999950	0.000888	0.000069	0.000230	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999978	0.001140	0.002548	0.008493	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999977	0.000323	0.000057	0.000189	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999981	0.000452	0.000127	0.000425	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999901	0.000113	0.000346	0.001153	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999968	0.000137	0.000373	0.001245	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999900	0.000987	0.001871	0.006238	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999968	0.001380	0.022717	0.075723	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.999827	0.000481	0.001363	0.004543	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999883	0.000675	0.016017	0.053391	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999796	0.001119	0.000054	0.000181	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999927	0.000397	0.000171	0.000572	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999953	0.005456	0.006644	0.022147	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999979	0.000229	0.000233	0.000778	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999947	0.000147	0.000624	0.002080	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999860	0.000038	0.001244	0.004148	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999926	0.000022	0.001982	0.006606	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.990490	0.003369	0.000599	0.001998	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999888	0.000186	0.000357	0.001191	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999898	0.002837	0.000083	0.000276	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999942	0.000280	0.000162	0.000542	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999935	0.000073	0.001088	0.003626	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999950	0.000239	0.000342	0.001141	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999965	0.000440	0.000074	0.000248	OK.	1.000000	0.000000	1	0

Hg7470/EPA245.1 HG5



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	0.031	0.031	521	0.000	521				
0.2ppb	0.200	0.189	-0.011	2005	0.0 %	2005				
1.0ppb	1.000	0.974	-0.026	9344	0.0 %	9344				
3.0ppb	3.000	3.051	0.051	28780	0.0 %	28780				
5.0ppb	5.000	4.883	-0.117	45917	0.0 %	45917				
6.0ppb	6.000	6.073	0.073	57054	0.0 %	57054				

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 22 Sep 2022 14:01:07

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	22 Sep 2022 14:01:54	S		-	521	1.000	1.000
0.2ppb - 1	22 Sep 2022 14:03:10	S		-	2005	1.000	1.000
1.0ppb - 1	22 Sep 2022 14:04:31	S		-	9344	1.000	1.000
3.0ppb - 1	22 Sep 2022 14:06:01	S		-	28780	1.000	1.000
5.0ppb - 1	22 Sep 2022 14:07:41	S		-	45917	1.000	1.000
6.0ppb - 1	22 Sep 2022 14:09:32	S		-	57054	1.000	1.000
HSTD - 1	22 Sep 2022 14:11:27	C		99.9% 5.9933	56307	1.000	1.000
ICV - 1	22 Sep 2022 14:13:23	C		99.7% 2.9910	28219	1.000	1.000
ICB - 1	22 Sep 2022 14:15:18	C		0.0001	237	1.000	1.000
CRI - 1	22 Sep 2022 14:17:09	C		94.2% 0.1885	1999	1.000	1.000
CCV - 1	22 Sep 2022 14:18:30	C		101.4% 3.0407	28684	1.000	1.000
CCB - 1	22 Sep 2022 14:19:59	C		0.0065	296	1.000	1.000
MP41239-MB1 - 1	22 Sep 2022 14:21:50	U		-0.0125	119	1.000	1.000
MP41239-B1 - 1	22 Sep 2022 14:23:08	U		3.0842	29091	1.000	1.000
FA99026-1 - 1	22 Sep 2022 14:24:26	U		-0.0080	161	1.000	1.000
MP41239-D1 - 1	22 Sep 2022 14:26:16	U		0.0005	240	1.000	1.000
MP41239-SD1 - 1	22 Sep 2022 14:27:35	U		-0.1612	-66	1.000	5.000
MP41239-S1 - 1	22 Sep 2022 14:28:53	U		3.0801	29052	1.000	1.000
MP41239-S2 - 1	22 Sep 2022 14:30:09	U		3.1731	29922	1.000	1.000
FA99026-2 - 1	22 Sep 2022 14:31:59	U		-0.0188	60	1.000	1.000
FA99026-3 - 1	22 Sep 2022 14:33:49	U		0.0162	387	1.000	1.000
FA99026-4 - 1	22 Sep 2022 14:35:08	U		-0.0005	231	1.000	1.000
CCV - 1	22 Sep 2022 14:36:27	C		101.3% 3.0383	28661	1.000	1.000
CCB - 1	22 Sep 2022 14:37:45	C		0.0058	290	1.000	1.000
FA99073-1 - 1	22 Sep 2022 14:39:36	U		0.1721	1846	1.000	1.000
FA98819-1 - 1	22 Sep 2022 14:40:56	U		-0.0164	82	1.000	1.000
FA98825-1 - 1	22 Sep 2022 14:42:28	U		0.0835	1017	1.000	1.000
FA98994-11 - 1	22 Sep 2022 14:43:45	U		-0.0179	68	1.000	1.000
FA99028-4 - 1	22 Sep 2022 14:45:08	U		-0.0026	211	1.000	1.000
FA99028-5 - 1	22 Sep 2022 14:46:25	U		0.0019	253	1.000	1.000
FA98850-1A - 1	22 Sep 2022 14:47:44	U		0.0088	318	1.000	1.000
FA98850-2A - 1	22 Sep 2022 14:49:02	U		0.0122	350	1.000	1.000
FA98850-3A - 1	22 Sep 2022 14:50:21	U		-0.0001	235	1.000	1.000
FA98995-2 - 1	22 Sep 2022 14:51:40	U		0.0681	873	1.000	1.000
CCV - 1	22 Sep 2022 14:52:59	C		101.3% 3.0383	28661	1.000	1.000
CCB - 1	22 Sep 2022 14:54:19	C		0.0016	251	1.000	1.000
FA98995-3 - 1	22 Sep 2022 14:56:09	U		0.0821	1004	1.000	1.000
FA98995-4 - 1	22 Sep 2022 14:57:28	U		0.1608	1740	1.000	1.000
FA98995-5 - 1	22 Sep 2022 14:58:52	U		0.0385	596	1.000	1.000
FA98995-6 - 1	22 Sep 2022 15:00:21	U		0.0057	289	1.000	1.000
FA98995-7 - 1	22 Sep 2022 15:01:42	U		0.0170	395	1.000	1.000
FA98995-8 - 1	22 Sep 2022 15:03:01	U		-0.0048	191	1.000	1.000
MP41240-MB1 - 1	22 Sep 2022 15:04:19	U		0.0342	556	1.000	1.000
MP41240-B1 - 1	22 Sep 2022 15:05:38	U		3.1316	29534	1.000	1.000
FA98906-18 - 1	22 Sep 2022 15:06:57	U		0.0229	450	1.000	1.000
MP41240-D1 - 1	22 Sep 2022 15:08:47	U		0.0185	409	1.000	1.000
CCV - 1	22 Sep 2022 15:10:06	C		101.2% 3.0350	28630	1.000	1.000
CCB - 1	22 Sep 2022 15:11:25	C		0.0034	267	1.000	1.000
MP41240-SD1 - 1	22 Sep 2022 15:13:15	U		-0.1703	-83	1.000	5.000
MP41240-S1 - 1	22 Sep 2022 15:14:34	U		3.0739	28994	1.000	1.000
MP41240-S2 - 1	22 Sep 2022 15:15:51	U		2.9734	28054	1.000	1.000
FA98906-19 - 1	22 Sep 2022 15:17:42	U		0.0633	828	1.000	1.000
FA98906-20 - 1	22 Sep 2022 15:19:33	U		0.0472	677	1.000	1.000
FA98906-21 - 1	22 Sep 2022 15:20:57	U		0.0171	396	1.000	1.000
FA98906-22 - 1	22 Sep 2022 15:22:18	U		0.0232	453	1.000	1.000
FA98791-1 - 1	22 Sep 2022 15:23:37	U		0.0253	472	1.000	1.000
FA98826-1 - 1	22 Sep 2022 15:24:56	U		0.0084	314	1.000	1.000
FA98643-1 - 1	22 Sep 2022 15:26:16	U		0.0578	776	1.000	1.000
CCV - 1	22 Sep 2022 15:27:35	C		102.0% 3.0592	28857	1.000	1.000
CCB - 1	22 Sep 2022 15:28:55	C		0.0052	284	1.000	1.000
FA98703-1 - 1	22 Sep 2022 15:30:46	U		0.0520	722	1.000	1.000
FA99052-1 - 1	22 Sep 2022 15:32:05	U		0.0494	698	1.000	1.000
FA98908-1R - 1	22 Sep 2022 15:33:26	U		0.0493	697	1.000	1.000
FA98908-2R - 1	22 Sep 2022 15:34:48	U		0.0475	680	1.000	1.000
FA98908-3R - 1	22 Sep 2022 15:36:08	U		0.0580	778	1.000	1.000
FA98908-4R - 1	22 Sep 2022 15:37:30	U		0.0375	586	1.000	1.000
FA98908-5R - 1	22 Sep 2022 15:38:53	U		0.0474	679	1.000	1.000
FA98908-6R - 1	22 Sep 2022 15:40:14	U		0.0268	486	1.000	1.000
FA98908-7R - 1	22 Sep 2022 15:41:35	U		0.0303	519	1.000	1.000

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 22 Sep 2022 14:01:07

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
FA98908-8R - 1	22 Sep 2022 15:42:55	U		0.0229	450	1.000	1.000
CCV - 1	22 Sep 2022 15:44:15	C		101.0% 3.0294	28578	1.000	1.000
CCB - 1	22 Sep 2022 15:45:33	C		0.0010	245	1.000	1.000
FA98908-9R - 1	22 Sep 2022 15:47:24	U		0.0294	511	1.000	1.000
FA98908-10R - 1	22 Sep 2022 15:48:43	U		0.0003	238	1.000	1.000
MP41240-D2 - 1	22 Sep 2022 15:50:02	U		0.0137	364	1.000	1.000
MP41240-MB2 - 1	22 Sep 2022 15:51:21	U		0.0240	460	1.000	1.000
MP41240-B2 - 1	22 Sep 2022 15:52:40	U		3.0947	29189	1.000	1.000
MP41240-MB3 - 1	22 Sep 2022 15:53:59	U		0.0237	457	1.000	1.000
MP41240-B3 - 1	22 Sep 2022 15:55:48	U		3.0854	29102	1.000	1.000
MP41240-MB4 - 1	22 Sep 2022 15:57:08	U		0.0635	830	1.000	1.000
MP41240-B4 - 1	22 Sep 2022 15:58:57	U		3.1803	29990	1.000	1.000
MP41240-MB5 - 1	22 Sep 2022 16:00:21	U		0.0512	715	1.000	1.000
CCV - 1	22 Sep 2022 16:02:13	C		98.8% 2.9651	27976	1.000	1.000
CCB - 1	22 Sep 2022 16:03:34	C		0.0030	264	1.000	1.000
MP41240-B5 - 1	22 Sep 2022 16:05:25	U		3.2006	30180	1.000	1.000
CRI - 1	22 Sep 2022 16:06:44	U		0.1951	2061	1.000	1.000
CCV - 1	22 Sep 2022 16:08:36	C		100.4% 3.0112	28408	1.000	1.000
CCB - 1	22 Sep 2022 16:10:05	C		-0.0010	226	1.000	1.000

SGS Orlando

Date:	09/14/22
[24hr] **Time**	16:48

Analysts Name:	Adam K
MP Batch ID:	41211
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	62047	ACC1321	0.05	MU45274
Conc. HCl (B)	22C1662007	ACC1319	0.2	KU15244
NA	NA	MET7268	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	94	**Corr. Factor**	-2	**Corrected Observed Temp. C**	92
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2204135

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	DOUBLE QC
	NA	Spike Blank(SB)	50	50	NA	
	22	Matrix Spike(MS)	50	50	Y	
	22	Matrix Spike Dup(MSD)	50	50	Y	
	22	Duplicate(DUP)	50	50	Y	
1(QC) C	22	FA98621-8	50	50	Y	
2	10	Matrix Spike(MS)	50	50	Y	
3	10	Matrix Spike Dup(MSD)	50	50	Y	
4	10	Duplicate(DUP)	50	50	Y	
5	10	FA98679-3	50	50	Y	
6	8	FA98621-1	50	50	Y	
7	8	FA98621-2	50	50	Y	
8	8	FA98621-3	50	50	Y	
9	8	FA98621-4	50	50	Y	
10	8	FA98621-5	50	50	Y	
11	10	FA98621-6	50	50	Y	
12	8	FA98621-7	50	50	Y	
13	10	FA98621-10	50	50	Y	
14	4	FA98679-1	50	50	Y	
15	4	FA98679-2	50	50	Y	
16	4	FA98679-4	50	50	Y	
17	4	FA98679-5	50	50	Y	
18	4	FA98679-6	50	50	Y	
19	4	FA98679-8	50	50	Y	
20	7	FA98819-1B	50	50	Y	
21 [D]	7	FA98820-1	50	50	Y	
22 [D]	8	FA98820-2	50	50	Y	
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

SGS Orlando

Date:	09/20/22
[24hr] Time	15:21

Analysts Name:	Adam K
MP Batch ID:	41228
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	62047	ACC1334	0.5	KU15244
Conc. HCl (B)	22C1662007	ACC1319	0.25	KU15244
NA	NA	MET7294	0.25	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	Therm ID	Mercury	Temp. C	95	Corr. Factor	-2	Corrected Observed Temp. C	93
pH Paper Lot Number	230320			Filter Lot Number		280632432		Digestion Tube Lot Number	2204135

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	2	Matrix Spike(MS)	50	50	Y	
	2	Matrix Spike Dup(MSD)	50	50	Y	
	2	Duplicate(DUP)	50	50	Y	
1(QC) C	2	FA98999-1	50	50	Y	
2	8	FA98969-10	50	50	Y	
3	8	FA98969-11	50	50	Y	
4	8	FA98969-12	50	50	Y	
5	8	FA98969-13	50	50	Y	
6	8	FA98969-14	50	50	Y	
7	8	FA98969-15	50	50	Y	
8	12	FA98994-11	50	50	Y	
9	4	FA98788-1	50	50	Y	
10	4	FA98788-2	50	50	Y	
11	7	FA98819-1	50	50	Y	
12	7	FA98820-1A	50	50	Y	
13	8	FA98820-2A	50	50	Y	
14	9	FA98825-1	50	50	Y	
15	10	FA99026-1	50	50	Y	
16	10	FA99026-2	50	50	Y	
17	10	FA99026-3	50	50	Y	
18	8	FA99026-4	50	50	Y	
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

Mercury Aqueous Digestion Logbook
Rev.3 07/08/2021
DM

SGS Orlando

Date/Time Started	9/22/2022 10:00
Date/Time Ended	9/22/2022 12:00

Analysts Name:	Jordan Cuoco					
MP Batch ID:	41239					
Method	SW846-7470A	Matrix	Water			

Reagent (A)	Lot Number	MET Number/Spiking Solution ID		Pipette Number
Concentrated HNO3 (A)	62047	7245	10 ppm int.	KU15244
H2SO4 (A)	3121042	7239	10 ppm 2nd (ICV)	SU41341
KMnO4 (A)	MET 7304	7266	100 ppb Curve	
K2S2O8 (A)	MET 7305	7267	100 ppb 2nd (ICV)	
SnCl (A)	10237564			
Hydroxylamine HCl (A)	MET 7262			

HotBlock I.D.	11	Therm. ID	213	Temp. C	94	Corr. Factor	-2	Corrected Observed Temp. C	92
pH Paper Lot Number	230320	Filter Lot Number		280632432		Digestion Tube Lot#		543684-2209	

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
(D)	NA	STD1 CAL BLANK	50.00	50	NA	
0.1ml (B)	NA	STD2	50.00	50	NA	
0.5ml (B)	NA	STD3	50.00	50	NA	
1.5ml (B)	NA	STD4	50.00	50	NA	
2.5ml (B)	NA	STD5	50.00	50	NA	
3.0ml (B)	NA	STD6	50.00	50	NA	
1.5ml (F)	NA	ICV	50.00	50	NA	
	NA	ICB	50.00	50	NA	
0.1ml (B)	NA	CRI	50.00	50	NA	
	NA	Method Blank	50.00	50	NA	
1.5ml (F)	NA	Blank Spk	50.00	50	NA	
1.5ml (F)	10	Matrix Spk	50.00	50	y	
1.5ml (F)	10	Mat Spk Dup	50.00	50	y	
	10	Duplicate	50.00	50	y	
1 QC [C]	10	FA99026-1	50.00	50	y	
2	10	FA99026-2	50.00	50	y	
3	10	FA99026-3	50.00	50	y	
4	8	FA99026-4	50.00	50	y	
5	1	FA99073-1	25.00	25	y	Limited sample volume
6	6	FA98819-1	50.00	50	y	
7	9	FA98825-1	50.00	50	y	
8	12	FA98994-11	50.00	50	y	
9	1	FA99028-4	50.00	50	y	
10	1	FA99028-5	50.00	50	y	
11	20	FA98850-1A	50.00	50	y	
12	22	FA98850-2A	50.00	50	y	
13	22	FA98850-3A	50.00	50	y	
14	7	FA98995-2	5.00	50	y	Difficult sample matrix
15	7	FA98995-3	50.00	50	y	
16	7	FA98995-4	5.00	50	y	Difficult sample matrix
17	7	FA98995-5	5.00	50	y	Difficult sample matrix
18	7	FA98995-6	50.00	50	y	
19	7	FA98995-7	50.00	50	y	
20	7	FA98995-8	50.00	50	y	
21 [E]						
22 [E]						
23 [E]						
24 [E]						

Protected Worksheet

A For reagent volumes used consult SOP MET 106 current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10 ppm intermediate)
C Parent sample used to prepare MS,MSD,DUP (matrix QC)
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard used (100 ppb 2nd source standard prepared from 10ppm intermediate 2nd)

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP38049/GN92317	0.50	0.0	mg/l	10	10.1	101.0	90-110%
Chloride	GP38049/GN92317	2.0	0.0	mg/l	50	50.8	101.6	90-110%
Fluoride	GP38049/GN92317	0.20	0.0	mg/l	2.5	2.69	107.6	90-110%
Nitrogen, Nitrate	GP38049/GN92317	0.10	0.0	mg/l	2.5	2.54	101.6	90-110%
Nitrogen, Nitrite	GP38049/GN92317	0.10	0.0	mg/l	2.5	2.54	101.6	90-110%
Sulfate	GP38049/GN92317	2.0	0.0	mg/l	50	50.3	100.6	90-110%

Associated Samples:
Batch GP38049: FA98819-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP38049/GN92317	FA98910-3	mg/l	0.14	10	10.1	99.6	90-110%
Chloride	GP38049/GN92317	FA98910-3	mg/l	12.3	50	60.5	96.4	90-110%
Fluoride	GP38049/GN92317	FA98910-3	mg/l	0.076	2.5	2.7	105.0	90-110%
Nitrogen, Nitrate	GP38049/GN92317	FA98910-3	mg/l	0.059	2.5	2.5	97.6	90-110%
Nitrogen, Nitrite	GP38049/GN92317	FA98910-3	mg/l	0.0	2.5	2.5	100.0	90-110%
Sulfate	GP38049/GN92317	FA98910-3	mg/l	5.0	50	53.8	97.6	90-110%

Associated Samples:
Batch GP38049: FA98819-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP38049/GN92317	FA98910-3	mg/l	0.14	10	10.1	0.0	15%
Chloride	GP38049/GN92317	FA98910-3	mg/l	12.3	50	60.5	0.0	15%
Fluoride	GP38049/GN92317	FA98910-3	mg/l	0.076	2.5	2.7	0.0	15%
Nitrogen, Nitrate	GP38049/GN92317	FA98910-3	mg/l	0.059	2.5	2.5	0.0	15%
Nitrogen, Nitrite	GP38049/GN92317	FA98910-3	mg/l	0.0	2.5	2.5	0.0	15%
Sulfate	GP38049/GN92317	FA98910-3	mg/l	5.0	50	53.7	0.2	15%

Associated Samples:
Batch GP38049: FA98819-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022091501.CSV Date Analyzed: 09/13/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN92317
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:29	GN92317-STD1	1		STDA
11:50	GN92317-STD2	1		STDB
12:15	GN92317-STD3	1		STDC
12:37	GN92317-STD4	1		STDD
12:58	GN92317-STD5	1		STDE
13:19	GN92317-STD6	1		STDF
13:40	GN92317-STD7	1		STDG
14:01	GN92317-STD8	1		STDH
14:22	GN92317-STD9	1		STDI
14:43	GN92317-STD10	1		STDJ
15:04	GN92317-STD11	1		STDK
15:34	GN92317-ICV1	1		
15:58	GN92317-ICB1	1		
16:19	GN92317-CRI1	1		
16:40	GN92317-CCV1	1		
17:02	GN92317-CCB1	1		
10:20	GN92317-CCV2	1		
10:46	GP38049-MB1	1		
11:07	GP38049-B1	1		
12:57	ZZZZZZ	1		
13:18	FA98910-3	1		(sample used for QC only; not part of login FA98819)
13:39	GP38049-S1	1		
14:00	GP38049-S2	1		
14:21	ZZZZZZ	10		
14:42	ZZZZZZ	10		
15:03	ZZZZZZ	10		
15:24	ZZZZZZ	25		
15:45	GN92317-CCV3	1		
16:06	GN92317-CCB2	1		
16:27	ZZZZZZ	50		
16:47	ZZZZZZ	5		
17:08	ZZZZZZ	5		
17:29	ZZZZZZ	25		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022091501.CSV Date Analyzed: 09/13/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN92317
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:50	ZZZZZZ	25		
18:10	ZZZZZZ	50		
18:31	FA98819-1	1		
18:52	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:34	ZZZZZZ	5		
19:55	GN92317-CCV4	1		
20:16	GN92317-CCB3	1		
20:37	FA98855-10	5		(sample used for QC only; not part of login FA98819)
20:58	GP38049-S3	5		
21:19	GP38049-S4	5		
21:39	ZZZZZZ	1		
22:01	ZZZZZZ	1		
22:22	ZZZZZZ	1		
22:43	GP38050-MB1	1		
23:04	GP38050-B1	1		
23:25	FA98890-1	10		(sample used for QC only; not part of login FA98819)
23:45	GP38050-S1	10		
00:06	GN92317-CCV5	1		
00:27	GN92317-CCB4	1		
00:49	GP38050-S2	10		
01:09	ZZZZZZ	5		
01:30	ZZZZZZ	10		
01:51	ZZZZZZ	10		
02:12	ZZZZZZ	25		
02:33	ZZZZZZ	10		
02:53	FA98854-4	1		(sample used for QC only; not part of login FA98819)
03:14	GP38050-S3	1		
03:36	GP38050-S4	1		
03:57	ZZZZZZ	1		
04:18	GN92317-CCV6	1		
04:39	GN92317-CCB5	1		
05:00	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022091501.CSV Date Analyzed: 09/13/22 Methods: EPA 300/SW846 9056A
Analyst: JB Run ID: GN92317
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:21	ZZZZZZ	1		
05:42	ZZZZZZ	1		
06:03	ZZZZZZ	1		
06:24	ZZZZZZ	1		
06:45	ZZZZZZ	1		
07:06	ZZZZZZ	1		
07:27	ZZZZZZ	1		
07:48	ZZZZZZ	1		
08:09	ZZZZZZ	1		
08:30	GN92317-CCV7	1		
08:52	GN92317-CCB6	1		
09:12	ZZZZZZ	1		
09:33	ZZZZZZ	1		
09:53	GN92317-CCV8	1		
10:14	GN92317-CCB7	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA98819
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022091501.CSV Date Analyzed: 09/13/22 Methods: EPA 300/SW846 9056A
Run ID: GN92317 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN92317-ICV1	Chloride	51.9	2.0	0.80	50	103.8	90-110
GN92317-ICV1	Sulfate	51.4	2.0	0.60	50	102.8	90-110
GN92317-ICB1	Chloride	0.80 U	2.0	0.80			
GN92317-ICB1	Sulfate	0.60 U	2.0	0.60			
GN92317-CRI1	Chloride	0.842	2.0	0.80	1	84.2	50-150
GN92317-CRI1	Sulfate	0.820	2.0	0.60	1	82.0	50-150
GN92317-CCV1	Chloride	50.6	2.0	0.80	50	101.2	90-110
GN92317-CCV1	Sulfate	52.0	2.0	0.60	50	104.0	90-110
GN92317-CCB1	Chloride	0.80 U	2.0	0.80			
GN92317-CCB1	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV2	Chloride	50.8	2.0	0.80	50	101.6	90-110
GN92317-CCV2	Sulfate	49.7	2.0	0.60	50	99.4	90-110
GN92317-CCV3	Chloride	51.2	2.0	0.80	50	102.4	90-110
GN92317-CCV3	Sulfate	53.1	2.0	0.60	50	106.2	90-110
GN92317-CCB2	Chloride	0.80 U	2.0	0.80			
GN92317-CCB2	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV4	Chloride	51.0	2.0	0.80	50	102.0	90-110
GN92317-CCV4	Sulfate	49.4	2.0	0.60	50	98.8	90-110
GN92317-CCB3	Chloride	0.80 U	2.0	0.80			
GN92317-CCB3	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV5	Chloride	51.2	2.0	0.80	50	102.4	90-110
GN92317-CCV5	Sulfate	51.6	2.0	0.60	50	103.2	90-110
GN92317-CCB4	Chloride	0.80 U	2.0	0.80			
GN92317-CCB4	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV6	Chloride	51.3	2.0	0.80	50	102.6	90-110
GN92317-CCV6	Sulfate	49.5	2.0	0.60	50	99.0	90-110
GN92317-CCB5	Chloride	0.80 U	2.0	0.80			
GN92317-CCB5	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV7	Chloride	51.3	2.0	0.80	50	102.6	90-110
GN92317-CCV7	Sulfate	49.5	2.0	0.60	50	99.0	90-110
GN92317-CCB6	Chloride	0.80 U	2.0	0.80			
GN92317-CCB6	Sulfate	0.60 U	2.0	0.60			
GN92317-CCV8	Chloride	51.3	2.0	0.80	50	102.6	90-110
GN92317-CCV8	Sulfate	49.5	2.0	0.60	50	99.0	90-110
GN92317-CCB7	Chloride	0.80 U	2.0	0.80			
GN92317-CCB7	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

General Chemistry

Raw Data

IC STANDARDS PREP LOG

JR 9/15/22

STANDARD NAME	ANALYTES	STOCK MFG. #	STOCK LOT #	STOCK EXP. DATE	STOCK CONC. (mg/l)	VOLUME ADDED (ml)	TOTAL VOLUME (ml)	STANDARD CONC. (mg/l)	PREP DATE	INITIALS	STD LOT #	EXP. DATE
Std 10	NO_2/NO_3	IC014019/20	Ref	9-14-22	100	5	50	10	9-13-22	JR	IC014025	9-14-22
	SO_4	WC1955	LGC	5-1-23	1000			100				
	Cl	53	Fisher	5-1-24								
	F	70	LGC	6-30-23		0.5		10				
	Br	68	Spex			1		20				
1°NO_2	NO_2	WC1949	Ricca	10-1-22	1000	~~2.5~~ 5	50	100	9-15-22	JR	IC014026	9-16-22
1°NO_3	NO_3	1899	Absolute	11-3-24							7	
2°NO_2	NO_2	1975		5-18-24							8	
2°NO_3	NO_3	1976		5-12-25							9	
CW	NO_2/NO_3	IC014026/7	Ref	9-16-22	100	5	200	2.5			IC014030	
	SO_4	WC1955	LGC	5-1-23	1000	10		50				
	Cl	53	Fisher	5-1-24								
	F	70	LGC	6-30-23		0.5		2.5				
	Br	68	Spex			2		10				
Ol014028/9 JR 9/15/22 Bi	NO_2/NO_3	~~IC014030~~	Ref	9-16-22	100	1.25	50	2.5			IC014031	
	SO_4	GN33802		9-30-22	1000	2.5		50				
	Cl	3										
	F	IC013991		10-3-22	100	1.25		2.5				
	Br	GN33804		9-30-22	1000	0.5		10				

Rev. 0116 LM

SGS Accutest - Orlando

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

*je 9/15/22

Date: ~~9-15-22~~ 9-15-22 09:55	
Analyst: JR	
Instrument: IC4	
Inst. File Name: 420220915O1.CSV	

Prep Batchs:	390049 / 50
Analytical Batch:	92317
Calibration Date:	9/13/22
Pump pressure:	

Vial lot#	702550-F234911
Cap lot#	
Syringe lot#	
Filter lot#	

Standards	
ICAL:	
ICV:	
CCV:	IC014030
QC:	↓

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed F	Cl	NO2	Br	NO3	SO4	Results OK or Dilution Needed F	Cl	NO2	Br	NO3	SO4	Comments
Rinse																		
CCV	-	AQ	-	1	N													① OK unless marked
MB1	-		-															
B1	-		-															
FA99910-2	10		1038															
-3			62															
-381			1															
-382																		
FA98409-1	12		1644	10														
-2			1095															
-3			580															
-4			1910	25														
CCV	-		-	1														
CCB	-		-															
FA98409-5	12		2.3m	50														
-6			515	5														
-7			491															
-8			1020	25														
-9			1413															
FA98741-1	18		5m	50														
FA98819-1	4		374	1														
FA98855-2	7		1033															
-6			959															
-9			1185	5														
CCV	-		-	1														
CCB	-		-															
FA98855-10	7		1139	5														
-1053																		
-1054																		

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

Date: ~~9/15/22~~ 9-15-22 (cont.)	
Analyst:	
Instrument:	
Inst. File Name:	

Prep Batchs:	
Analytical Batch:	
Calibration Date:	
Pump pressure:	

Vial lot#	
Cap lot#	
Syringe lot#	
Filter lot#	

Standards	
ICAL:	
ICV:	
CCV:	
QC:	

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed						Results OK or Dilution Needed						Comments
						F	Cl	NO2	Br	NO3	SO4	F	Cl	NO2	Br	NO3	SO4	
FA98521-1R	9	AQ	118 N	1	N	—												
-2R	↓		194 N		I	—												
FA98862-1	4		-			—				—	—							
MB1	-		-			—				—	—							
B1	-		-	↓		—				—	—							
FA98890-1	4		1225 N	10		—				—	—							
-1S1	↓		↓	↓		—				—	—							
CW ~~-1S2~~	-		-	1		—				—	—							
CUB	-		-	10		—				—	—							
FA98890-1S2	4		1225 N			—				—	—							
FA98897-1	10		731 N	5		—				—	—							
-2			1380 C	10		—				—	—							
-3			2.5mS	↓		—				—	—							
-4			3.2mS	25		—				—	—							
-5	↓		3.4mS	10		—				—	—							
FA98854-4	6		523 N	1		—				—	—							
-4S3						—				—	—							
-4S4			↓			—				—	—							
-5	↓		240 N			—				—	—							
CW	-		-			—				—	—							
CUB	-		-			—				—	—							
FA98854-7	6		173 C			—				—	—							
-8			97 C			—				—	—							
-9			253 N			—				—	—							
-10			1607 N			—				—	—							
-11			647 N			—				—	—							
-13			510 N			—				—	—							
-14	↓		1616 N	↓	↓	—				—	—							

JR 9/15/22

IC Instrument Log

Method: EPA300.0 / SW846 9056A (circle one)

Date: 9-15-22 (cont)	Prep Batchs:	Vial lot#	Standards
Analyst:	Analytical Batch:	Cap lot#	ICAL:
Instrument:	Calibration Date:	Syringe lot#	ICV:
Inst. File Name:	Pump pressure:	Filter lot#	CCV:
			QC:

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed F	Cl	NO2	Br	NO3	SO4	Results OK or Dilution Needed F	Cl	NO2	Br	NO3	SO4	Comments
FA98885-1	15	AQ	1	1	N	—												
↓ -2	↓		~~1~~ (1)			—												(1) 307 JR 9/15/22
↓ -3	↓		297			—												
CW	-		-			—				—	—							
CCB	-		-			—				—	—							
FA98885-1F	16		1			—												
↓ -2F	↓		297			—												
CW	-		-			—												
CCB	-		-			—												

JR 9/16/22

Rev 0116 LM

SGS Accutest - Orlando

MagIC Net

2022-09-15 10:34:42

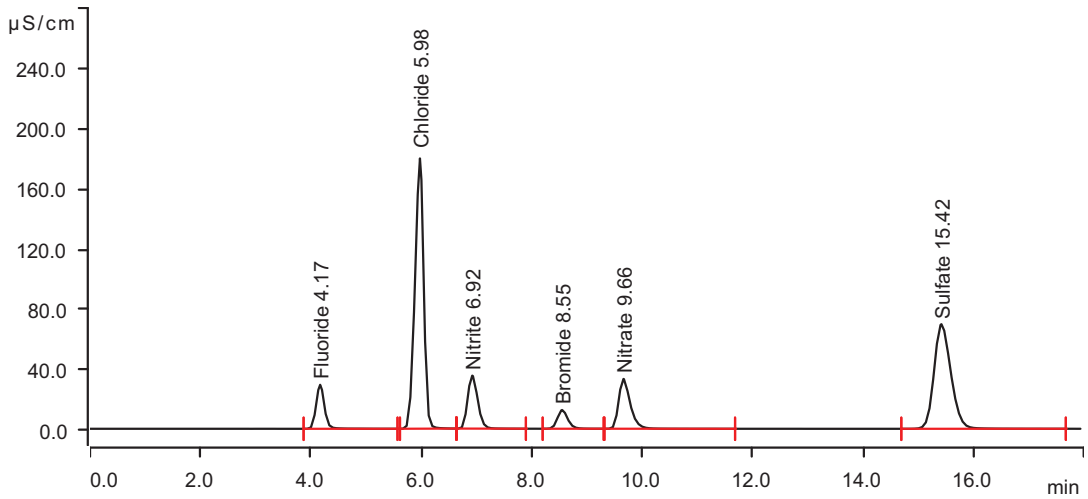
Sample data

Ident	STDK
Sample type	Standard 10
Determination start	2022-09-13 15:04:13 UTC-4
Method	SGS In-Vial Anions191003A
Operator	JR

Anions

Data source	Conductivity detector 1 (930 Compact IC Flex 1)	
Channel	Conductivity	
Recording time	18.0	min
Integration	Automatically	
Column type	Metrosep A Supp 5 - 150/4.0	
Eluent composition	not defined	
Flow	0.700	mL/min
Maximum flow monitored	yes	
Pressure	8.94	MPa
Maximum pressure monitored	yes	
Temperature	30.0	°C

Anions

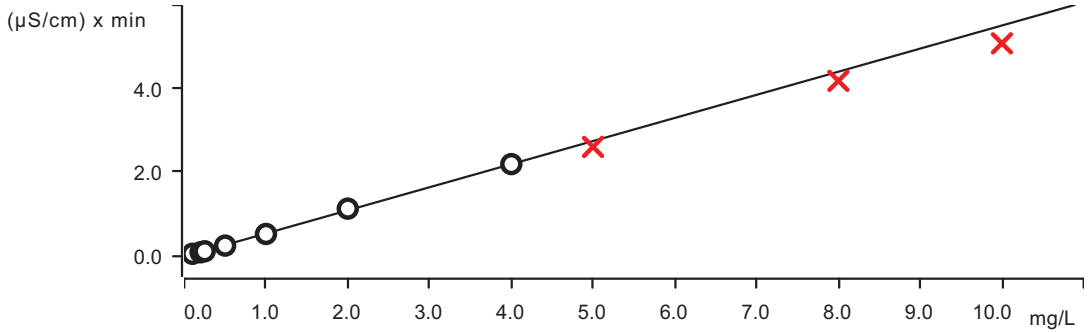


Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration mg/L	Component name
1	4.168	5.0829	29.162	9.229	Fluoride
2	5.975	32.7873	179.216	100.375	Chloride
3	6.922	7.4183	35.144	9.819	Nitrite
4	8.550	2.7074	12.409	20.461	Bromide
5	9.660	8.0139	33.037	10.115	Nitrate
6	15.417	24.4985	69.373	98.999	Sulfate

MagIC Net

2022-09-15 10:34:42

Fluoride (Anions)



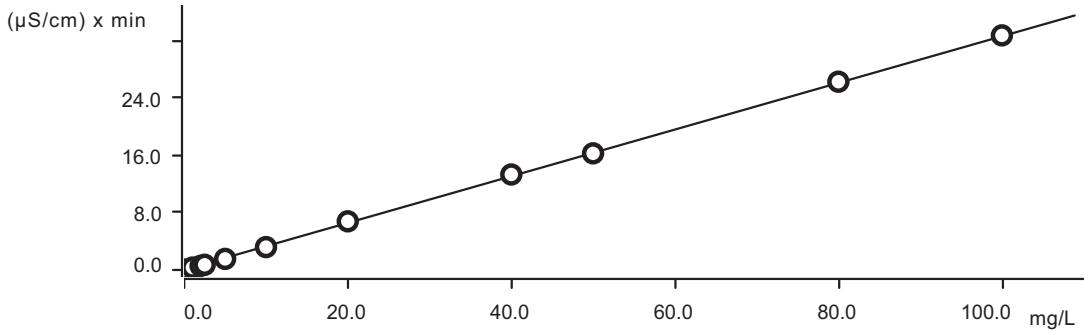
Function: . . . . . *A = - 0.0239785 + 0.0276684× Q*

Relative standard deviation . . . . . *3.526687 %*

Correlation coefficient *0.999690*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0424	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.0787	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1026	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.2388	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.5175	STDF	2022-09-13 13:19:02 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	1.1238	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	2.1906	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	2.6021	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	4.1850	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	5.0829	STDK	2022-09-13 15:04:13 UTC-4

Chloride (Anions)



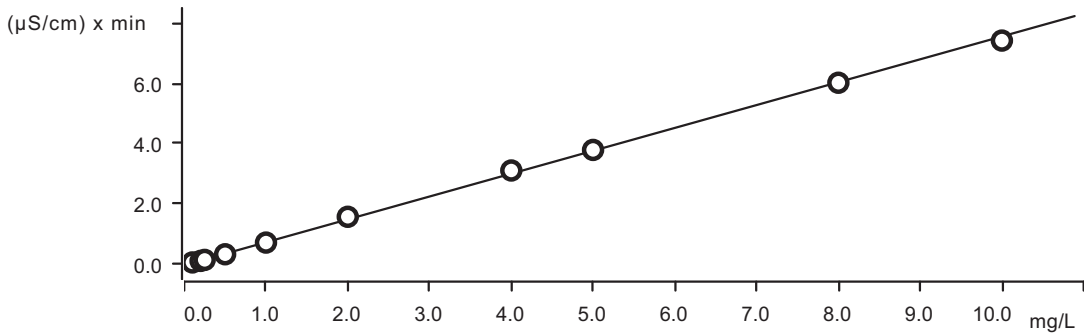
Function: . . . . . *A = 1.17050E-4 + 0.0163323× Q*

Relative standard deviation . . . . . *1.736040 %*

Correlation coefficient *0.999913*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0004	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	1.000	20.0	1.0	1.0	0.2791	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	2.000	20.0	1.0	1.0	0.5176	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	2.500	20.0	1.0	1.0	0.6700	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	5.000	20.0	1.0	1.0	1.4942	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	10.000	20.0	1.0	1.0	3.1471	STDF	2022-09-13 13:19:02 UTC-4
Standard 6	1	20.000	20.0	1.0	1.0	6.7540	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	40.000	20.0	1.0	1.0	13.3102	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	50.000	20.0	1.0	1.0	16.2724	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	80.000	20.0	1.0	1.0	26.2994	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	100.000	20.0	1.0	1.0	32.7873	STDK	2022-09-13 15:04:13 UTC-4

Nitrite (Anions)



Function: . . . . . *A = - 0.0276320 + 0.0379160× Q*

Relative standard deviation . . . . . *3.011741 %*

Correlation coefficient *0.999694*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0613	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.1124	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1457	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.3324	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.7197	STDF	2022-09-13 13:19:02 UTC-4

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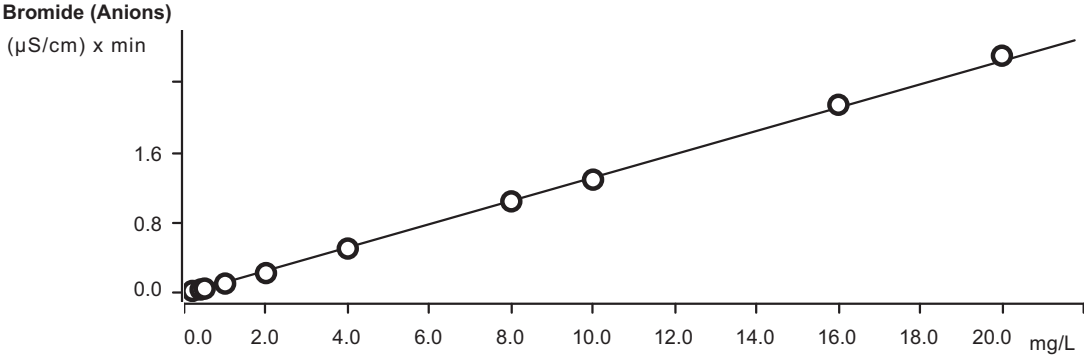
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	2.000	20.0	1.0	1.0	1.5750	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	3.1101	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	3.7924	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	6.0203	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	7.4183	STDK	2022-09-13 15:04:13 UTC-4

Bromide (Anions)



Function: . . . . . *A = - 0.0145081 + 6.65157E-3× Q*

Relative standard deviation . . . . . *3.552342 %*

Correlation coefficient *0.999603*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	0.200	20.0	1.0	1.0	0.0206	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	0.400	20.0	1.0	1.0	0.0369	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	0.500	20.0	1.0	1.0	0.0473	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	1.000	20.0	1.0	1.0	0.1046	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	2.000	20.0	1.0	1.0	0.2242	STDF	2022-09-13 13:19:02 UTC-4
Standard 6	1	4.000	20.0	1.0	1.0	0.5047	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	8.000	20.0	1.0	1.0	1.0437	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	10.000	20.0	1.0	1.0	1.2916	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	16.000	20.0	1.0	1.0	2.1470	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	20.000	20.0	1.0	1.0	2.7074	STDK	2022-09-13 15:04:13 UTC-4

MagIC Net

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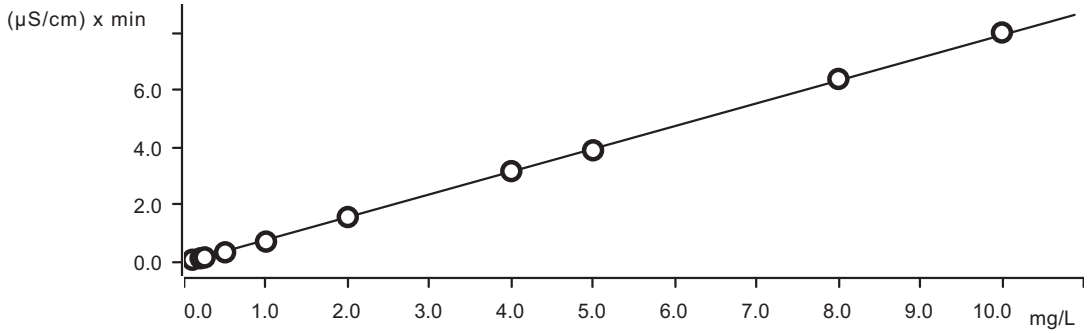
Nitrate (Anions)



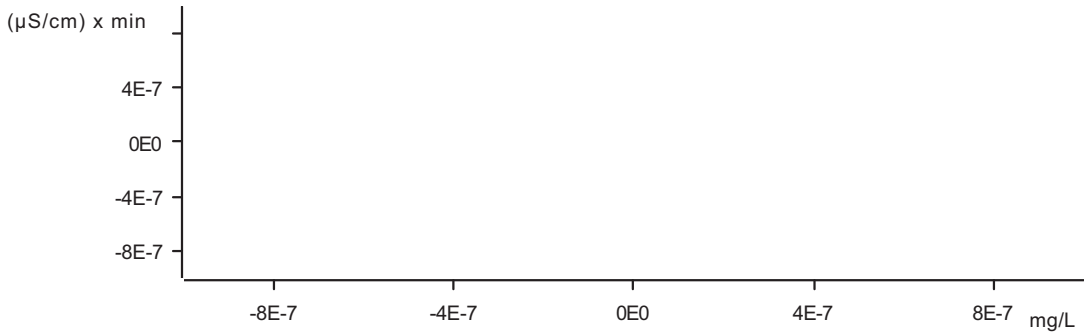
Function: . . . . . *A = - 0.0415713 + 0.0398179× Q*

Relative standard deviation . . . . . *2.075445 %*

Correlation coefficient *0.999862*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	0.0597	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	0.1114	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	0.1408	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	0.3193	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	0.6952	STDF	2022-09-13 13:19:02 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	1.5538	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	3.1608	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	3.8902	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	6.3879	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	8.0139	STDK	2022-09-13 15:04:13 UTC-4

Phosphate (Anions)



MagIC Net

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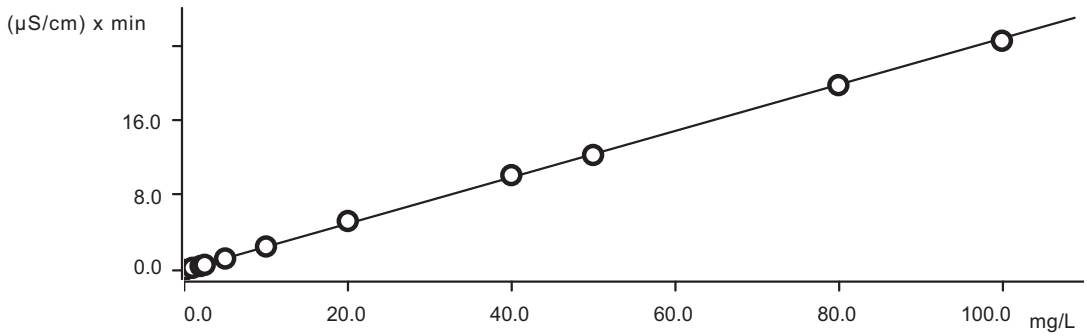
Function: . . . . . .

Relative standard deviation . . . . . *invalid %*

Correlation coefficient . . . . . *invalid*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	0.100	20.0	1.0	1.0	n. d.	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	0.200	20.0	1.0	1.0	n. d.	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	0.250	20.0	1.0	1.0	n. d.	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	0.500	20.0	1.0	1.0	n. d.	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	1.000	20.0	1.0	1.0	n. d.	STDF	2022-09-13 13:19:02 UTC-4
Standard 6	1	2.000	20.0	1.0	1.0	n. d.	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	4.000	20.0	1.0	1.0	n. d.	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	5.000	20.0	1.0	1.0	n. d.	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	8.000	20.0	1.0	1.0	n. d.	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	10.000	20.0	1.0	1.0	n. d.	STDK	2022-09-13 15:04:13 UTC-4

Sulfate (Anions)



Function: . . . . . *A = 1.51515E-3 + 0.0123723× Q*

Relative standard deviation . . . . . *2.240114 %*

Correlation coefficient *0.999851*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0020	STDA	2022-09-13 11:29:14 UTC-4
Standard 1	1	1.000	20.0	1.0	1.0	0.2353	STDB	2022-09-13 11:50:13 UTC-4
Standard 2	1	2.000	20.0	1.0	1.0	0.4311	STDC	2022-09-13 12:15:59 UTC-4
Standard 3	1	2.500	20.0	1.0	1.0	0.5550	STDD	2022-09-13 12:37:00 UTC-4
Standard 4	1	5.000	20.0	1.0	1.0	1.2304	STDE	2022-09-13 12:58:00 UTC-4
Standard 5	1	10.000	20.0	1.0	1.0	2.5139	STDF	2022-09-13 13:19:02 UTC-4

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	20.000	20.0	1.0	1.0	5.2395	STDG	2022-09-13 13:40:03 UTC-4
Standard 7	1	40.000	20.0	1.0	1.0	10.1388	STDH	2022-09-13 14:01:05 UTC-4
Standard 8	1	50.000	20.0	1.0	1.0	12.2932	STDI	2022-09-13 14:22:07 UTC-4
Standard 9	1	80.000	20.0	1.0	1.0	19.7548	STDJ	2022-09-13 14:43:11 UTC-4
Standard 10	1	100.000	20.0	1.0	1.0	24.4985	STDK	2022-09-13 15:04:13 UTC-4

MagIC Net

Summary Report

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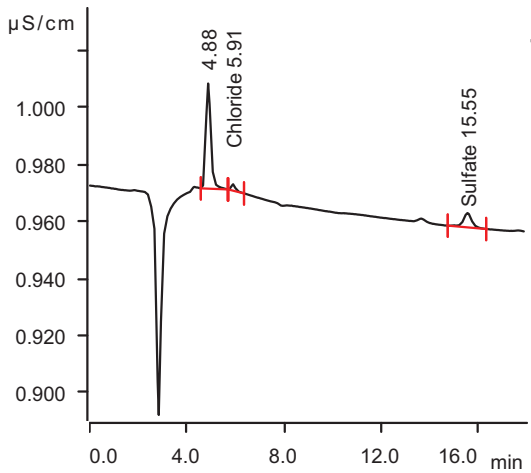
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDA
Sample type . . . . . Standard 100
Determination start 2022-09-13 11:29:14
Dilution factor 1.00

Anions

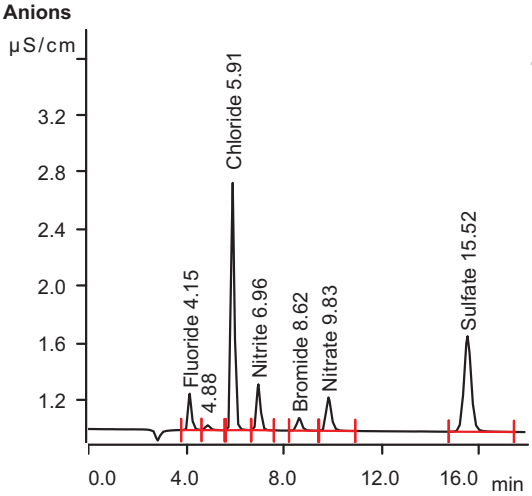


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.91	Chloride	0.0004	0.001	0.001
15.55	Sulfate	0.0020	0.002	0.002

Sample data

Ident . . . . . STDB
Sample type . . . . . Standard 1
Determination start 2022-09-13 11:50:13
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.0424	0.120	0.120
5.91	Chloride	0.2791	0.854	0.854
6.96	Nitrite	0.0613	0.117	0.117
8.62	Bromide	0.0206	0.264	0.264
9.83	Nitrate	0.0597	0.127	0.127
15.52	Sulfate	0.2353	0.945	0.945

MagIC Net

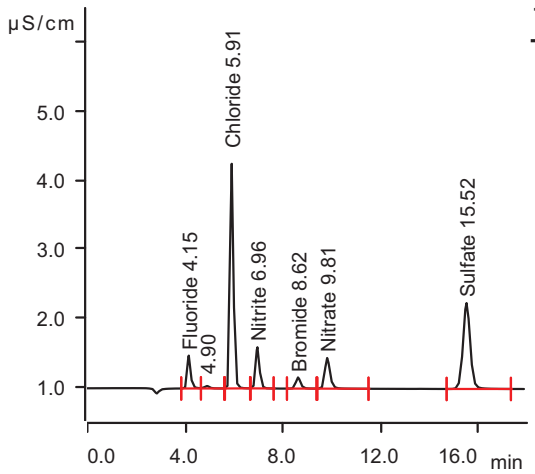
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDC
Sample type . . . . . Standard 2
Determination start 2022-09-13 12:15:59
Dilution factor 1.00

Anions

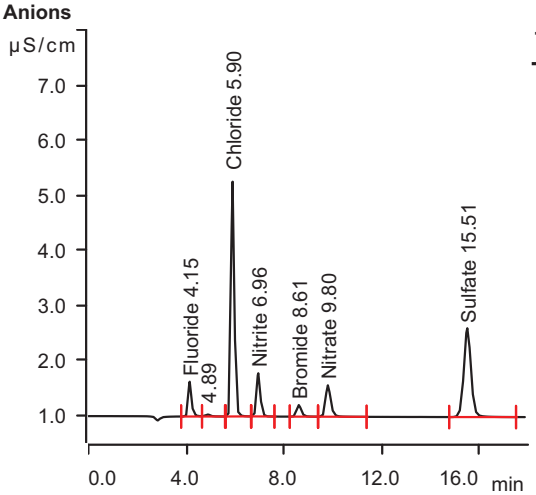


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.0787	0.186	0.186
5.91	Chloride	0.5176	1.584	1.584
6.96	Nitrite	0.1124	0.185	0.185
8.62	Bromide	0.0369	0.387	0.387
9.81	Nitrate	0.1114	0.192	0.192
15.52	Sulfate	0.4311	1.736	1.736

Sample data

Ident . . . . . STDD
Sample type . . . . . Standard 3
Determination start 2022-09-13 12:37:00
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.1026	0.229	0.229
5.90	Chloride	0.6700	2.051	2.051
6.96	Nitrite	0.1457	0.229	0.229
8.61	Bromide	0.0473	0.465	0.465
9.80	Nitrate	0.1408	0.229	0.229
15.51	Sulfate	0.5550	2.237	2.237

MagIC Net

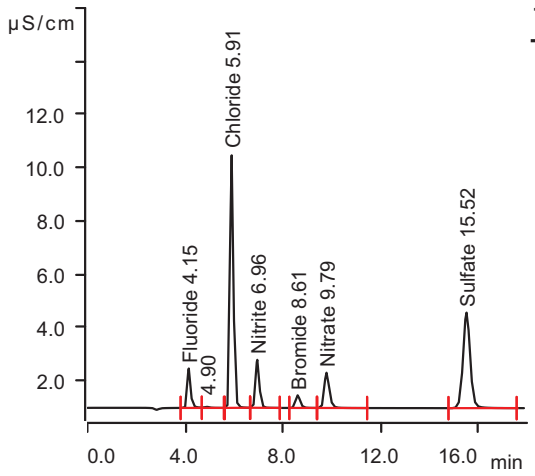
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDE
Sample type . . . . . Standard 4
Determination start 2022-09-13 12:58:00
Dilution factor 1.00

Anions

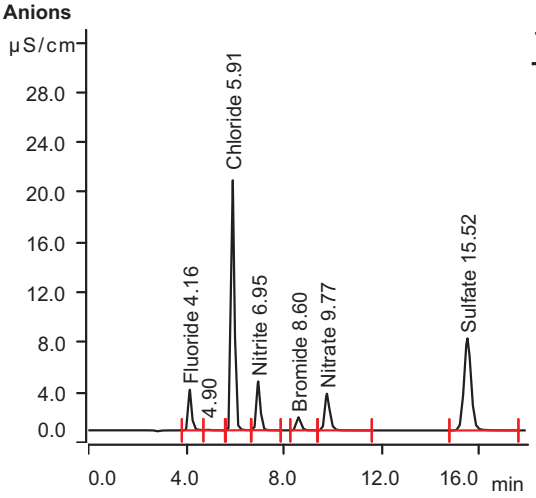


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.2388	0.475	0.475
5.91	Chloride	1.4942	4.574	4.574
6.96	Nitrite	0.3324	0.475	0.475
8.61	Bromide	0.1046	0.895	0.895
9.79	Nitrate	0.3193	0.453	0.453
15.52	Sulfate	1.2304	4.966	4.966

Sample data

Ident . . . . . STDF
Sample type . . . . . Standard 5
Determination start 2022-09-13 13:19:02
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.5175	0.979	0.979
5.91	Chloride	3.1471	9.634	9.634
6.95	Nitrite	0.7197	0.985	0.985
8.60	Bromide	0.2242	1.795	1.795
9.77	Nitrate	0.6952	0.925	0.925
15.52	Sulfate	2.5139	10.153	10.153

MagIC Net

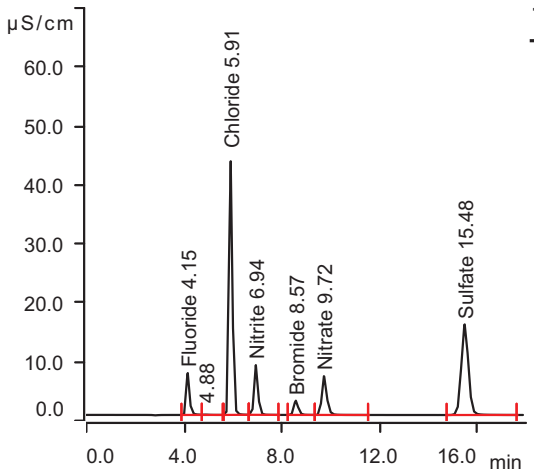
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDG
Sample type . . . . . Standard 6
Determination start 2022-09-13 13:40:03
Dilution factor 1.00

Anions

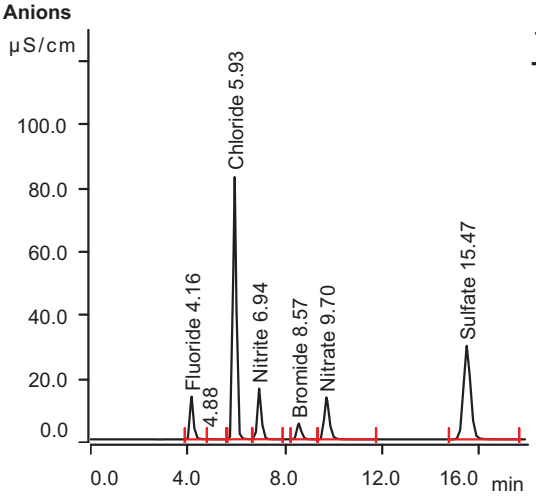


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	1.1238	2.074	2.074
5.91	Chloride	6.7540	20.677	20.677
6.94	Nitrite	1.5750	2.113	2.113
8.57	Bromide	0.5047	3.903	3.903
9.72	Nitrate	1.5538	2.003	2.003
15.48	Sulfate	5.2395	21.168	21.168

Sample data

Ident . . . . . STDH
Sample type . . . . . Standard 7
Determination start 2022-09-13 14:01:05
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	2.1906	4.002	4.002
5.93	Chloride	13.3102	40.748	40.748
6.94	Nitrite	3.1101	4.138	4.138
8.57	Bromide	1.0437	7.955	7.955
9.70	Nitrate	3.1608	4.021	4.021
15.47	Sulfate	10.1388	40.967	40.967

MagIC Net

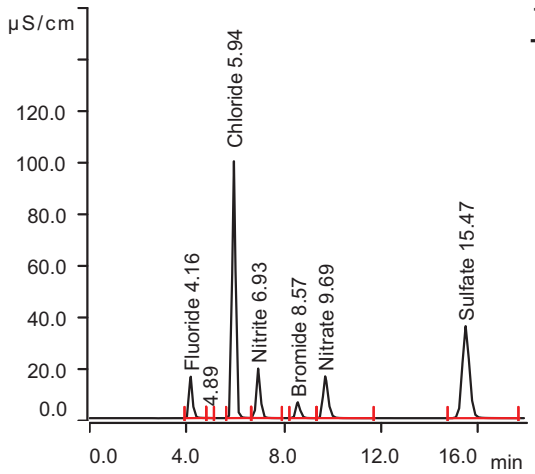
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDI
Sample type . . . . . Standard 8
Determination start 2022-09-13 14:22:07
Dilution factor 1.00

Anions

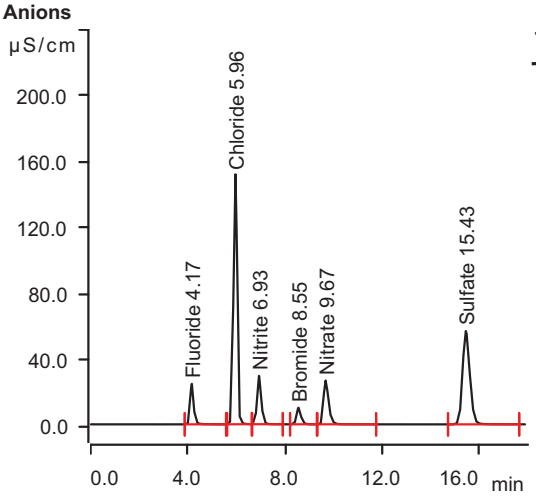


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	2.6021	4.746	4.746
5.94	Chloride	16.2724	49.816	49.816
6.93	Nitrite	3.7924	5.038	5.038
8.57	Bromide	1.2916	9.818	9.818
9.69	Nitrate	3.8902	4.937	4.937
15.47	Sulfate	12.2932	49.674	49.674

Sample data

Ident . . . . . STDJ
Sample type . . . . . Standard 9
Determination start 2022-09-13 14:43:11
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	4.1850	7.606	7.606
5.96	Chloride	26.2994	80.513	80.513
6.93	Nitrite	6.0203	7.975	7.975
8.55	Bromide	2.1470	16.248	16.248
9.67	Nitrate	6.3879	8.074	8.074
15.43	Sulfate	19.7548	79.828	79.828

MagIC Net

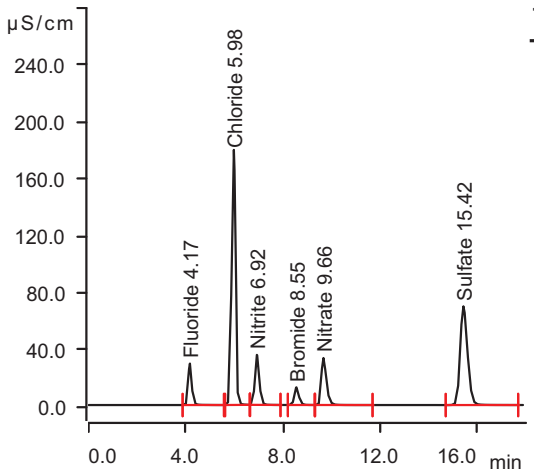
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDK
Sample type . . . . . Standard 10
Determination start 2022-09-13 15:04:13
Dilution factor 1.00

Anions

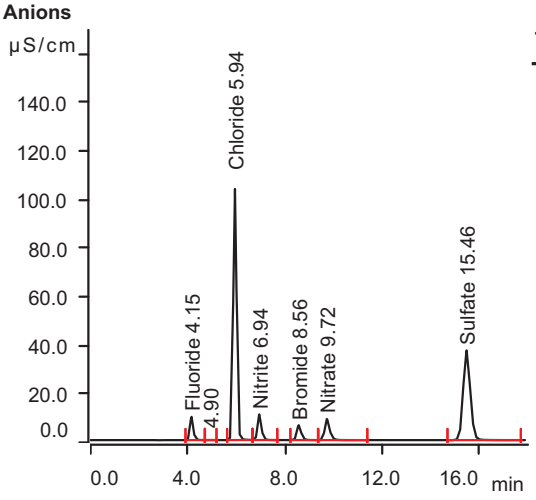


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	5.0829	9.229	9.229
5.98	Chloride	32.7873	100.375	100.375
6.92	Nitrite	7.4183	9.819	9.819
8.55	Bromide	2.7074	20.461	20.461
9.66	Nitrate	8.0139	10.115	10.115
15.42	Sulfate	24.4985	98.999	98.999

Sample data

Ident ICV
Sample type . . . . . Sample
Determination start 2022-09-13 15:34:04
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	1.4964	2.748	2.748
5.94	Chloride	16.9595	51.920	51.920
6.94	Nitrite	1.9839	2.653	2.653
8.56	Bromide	1.2870	9.783	9.783
9.72	Nitrate	2.0723	2.654	2.654
15.46	Sulfate	12.7111	51.363	51.363

MagIC Net

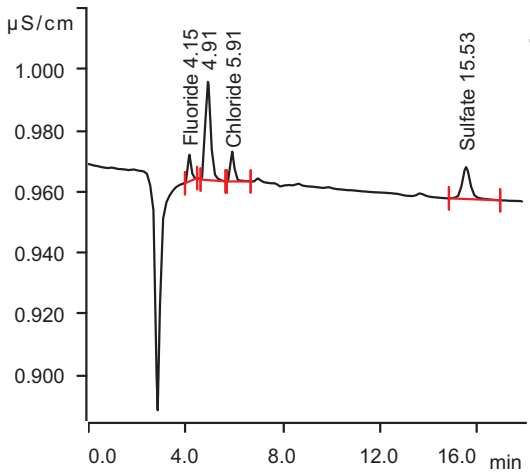
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . ICB
Sample type . . . . . Sample
Determination start 2022-09-13 15:58:55
Dilution factor 1.00

Anions

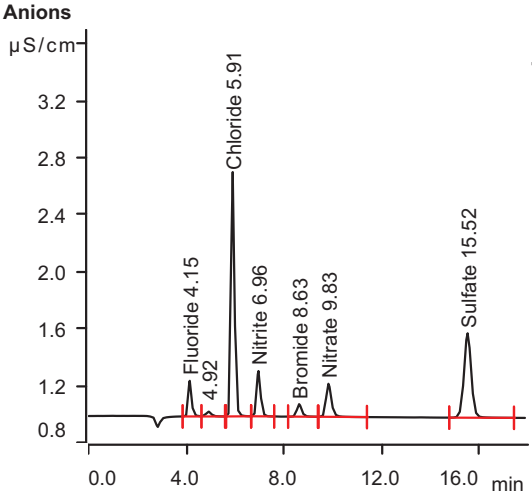


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.0014	0.046	0.046
5.91	Chloride	0.0018	0.005	0.005
15.53	Sulfate	0.0042	0.011	0.011

Sample data

Ident . . . . . CRI
Sample type . . . . . Sample
Determination start 2022-09-13 16:19:56
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.0409	0.117	0.117
5.91	Chloride	0.2750	0.842	0.842
6.96	Nitrite	0.0607	0.116	0.116
8.63	Bromide	0.0203	0.262	0.262
9.83	Nitrate	0.0592	0.127	0.127
15.52	Sulfate	0.2043	0.820	0.820

MagIC Net

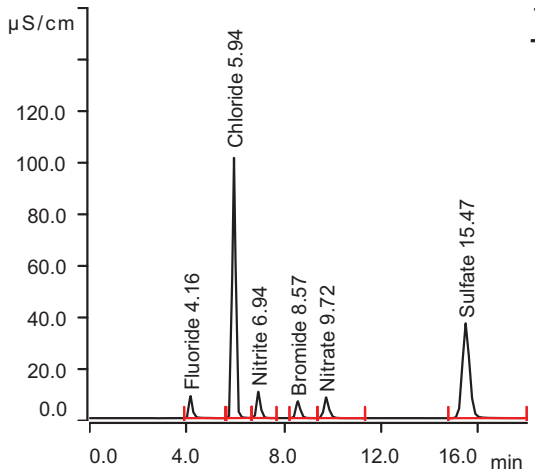
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-13 16:40:59
Dilution factor 1.00

Anions

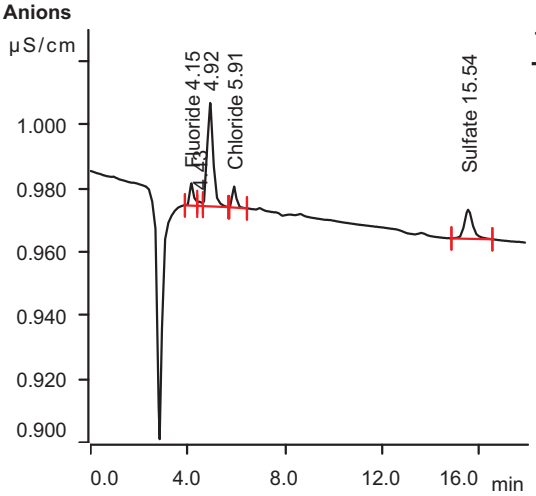


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4624	2.686	2.686
5.94	Chloride	16.5337	50.616	50.616
6.94	Nitrite	1.9269	2.577	2.577
8.57	Bromide	1.3764	10.455	10.455
9.72	Nitrate	1.9174	2.460	2.460
15.47	Sulfate	12.8759	52.029	52.029

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-13 17:02:10
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.0013	0.046	0.046
5.91	Chloride	0.0012	0.003	0.003
15.54	Sulfate	0.0037	0.009	0.009

MagIC Net

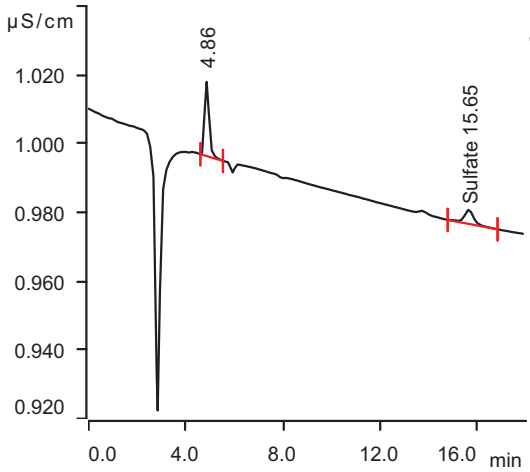
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident . . . . . Rinse
Sample type . . . . . Sample
Determination start 2022-09-15 09:55:01
Dilution factor 1.00

Anions

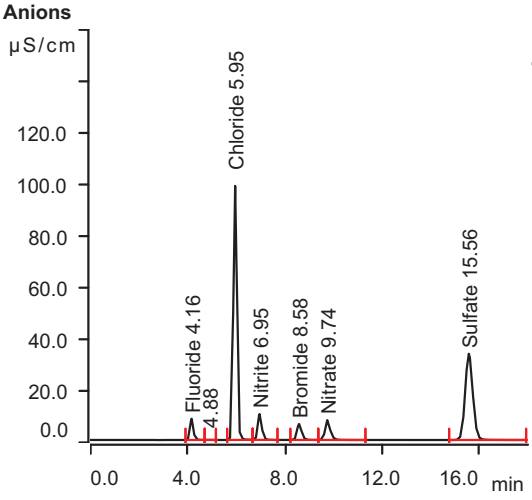


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.65	Sulfate	0.0019	0.002	0.002

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-15 10:20:57
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.2798	2.356	2.356
5.95	Chloride	16.6005	50.821	50.821
6.95	Nitrite	1.9371	2.591	2.591
8.58	Bromide	1.3637	10.360	10.360
9.74	Nitrate	1.9244	2.469	2.469
15.56	Sulfate	12.2936	49.676	49.676

MagIC Net

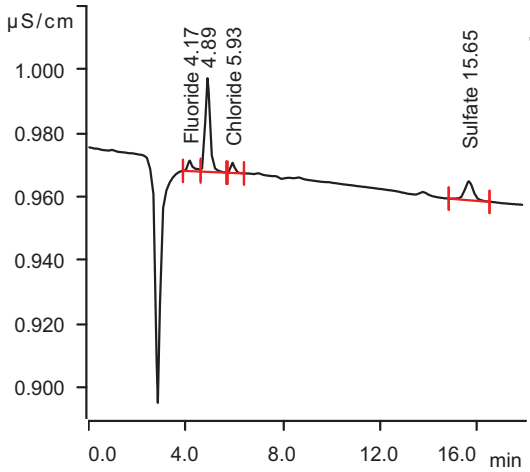
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-09-15 10:46:47
Dilution factor 1.00

Anions

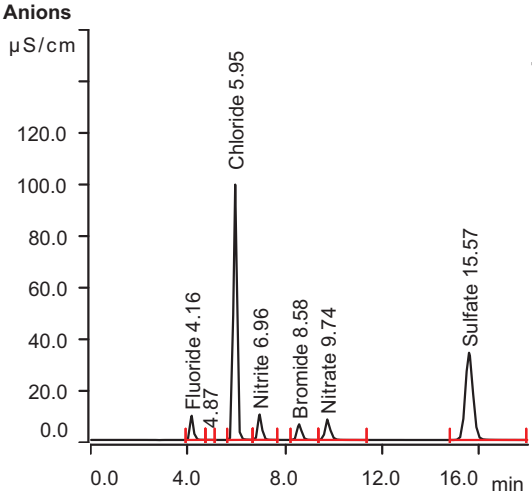


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0008	0.045	0.045
5.93	Chloride	0.0006	0.001	0.001
15.65	Sulfate	0.0025	0.004	0.004

Sample data

Ident B1
Sample type . . . . . Sample
Determination start 2022-09-15 11:07:50
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4661	2.693	2.693
5.95	Chloride	16.6085	50.845	50.845
6.96	Nitrite	1.9007	2.543	2.543
8.58	Bromide	1.3298	10.105	10.105
9.74	Nitrate	1.9815	2.540	2.540
15.57	Sulfate	12.4567	50.335	50.335

MagIC Net

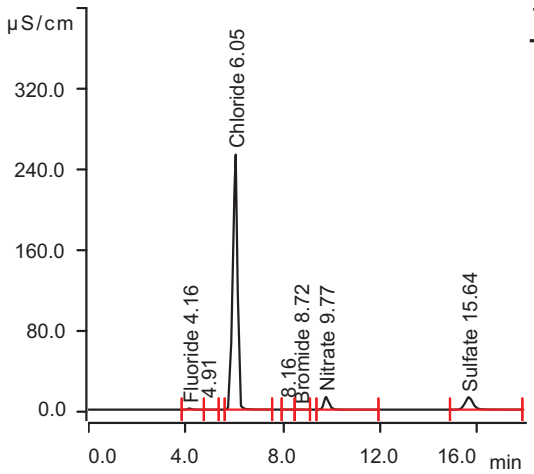
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98910-2
Sample type . . . . . Sample
Determination start 2022-09-15 12:57:52
Dilution factor 1.00

Anions

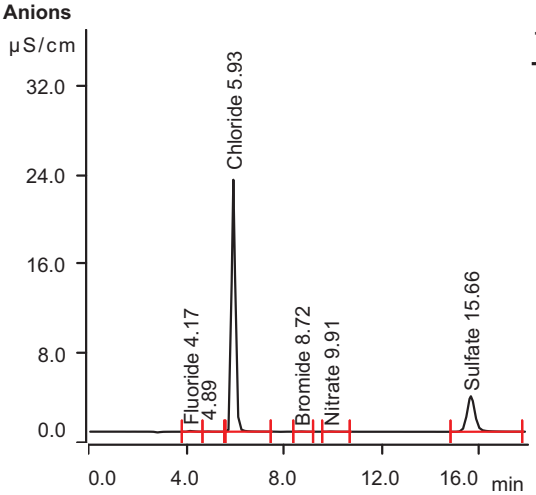


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.1984	0.402	0.402
6.05	Chloride	56.1210	171.810	171.810
8.72	Bromide	0.0069	0.161	0.161
9.77	Nitrate	3.0491	3.881	3.881
15.64	Sulfate	4.7283	19.102	19.102

Sample data

Ident FA98910-3
Sample type . . . . . Sample
Determination start 2022-09-15 13:18:53
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0183	0.076	0.076
5.93	Chloride	4.0252	12.322	12.322
8.72	Bromide	0.0046	0.144	0.144
9.91	Nitrate	0.0056	0.059	0.059
15.66	Sulfate	1.2318	4.972	4.972

MagIC Net

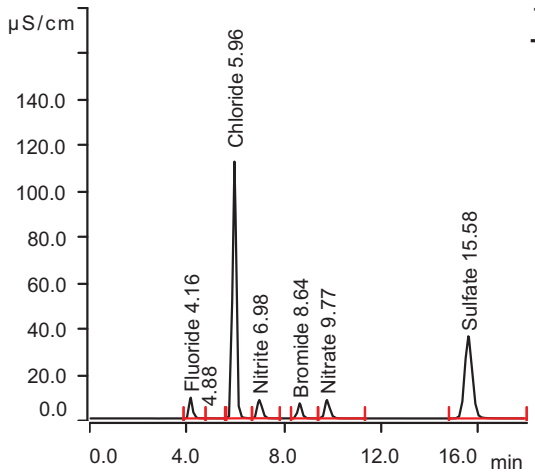
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98910-3S1
Sample type . . . . . Sample
Determination start 2022-09-15 13:39:54
Dilution factor 1.00

Anions

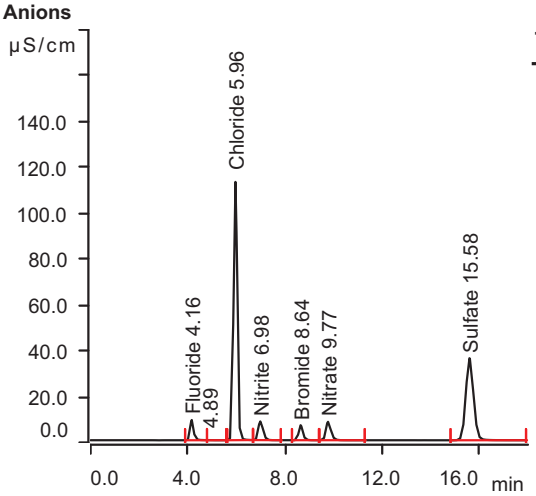


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4943	2.744	2.744
5.96	Chloride	19.7690	60.521	60.521
6.98	Nitrite	1.8752	2.509	2.509
8.64	Bromide	1.3269	10.083	10.083
9.77	Nitrate	1.9543	2.506	2.506
15.58	Sulfate	13.3191	53.820	53.820

Sample data

Ident FA98910-3S2
Sample type . . . . . Sample
Determination start 2022-09-15 14:00:57
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4597	2.681	2.681
5.96	Chloride	19.7746	60.538	60.538
6.98	Nitrite	1.8777	2.513	2.513
8.64	Bromide	1.3268	10.082	10.082
9.77	Nitrate	1.9537	2.506	2.506
15.58	Sulfate	13.2877	53.693	53.693

MagIC Net

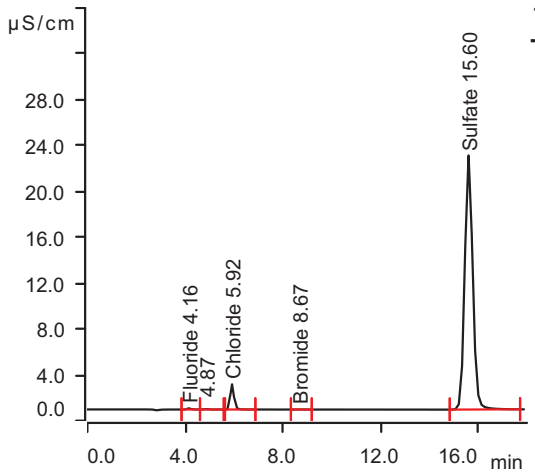
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98609-1
Sample type . . . . . Sample
Determination start 2022-09-15 14:21:59
Dilution factor 10.00

Anions

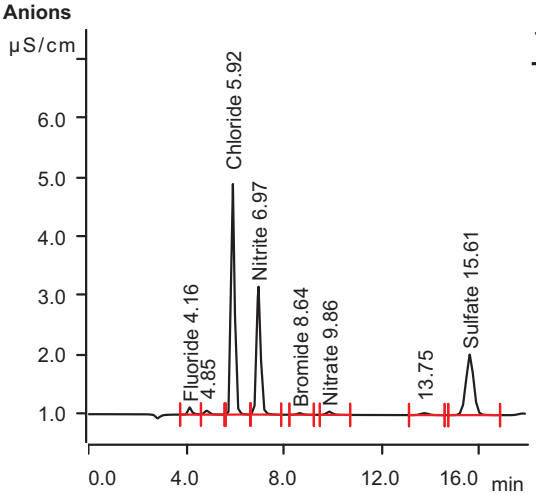


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0182	0.076	0.762
5.92	Chloride	0.3682	1.127	11.269
8.67	Bromide	0.0018	0.122	1.223
15.60	Sulfate	8.4457	34.125	341.252

Sample data

Ident FA98609-2
Sample type . . . . . Sample
Determination start 2022-09-15 14:42:45
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0224	0.084	0.838
5.92	Chloride	0.6400	1.959	19.588
6.97	Nitrite	0.4209	0.591	5.914
8.64	Bromide	0.0067	0.160	1.596
9.86	Nitrate	0.0151	0.071	0.712
15.61	Sulfate	0.3784	1.523	15.232

MagIC Net

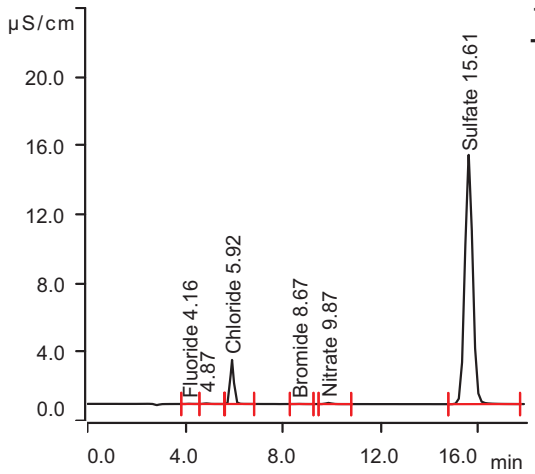
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98609-3
Sample type . . . . . Sample
Determination start 2022-09-15 15:03:31
Dilution factor 10.00

Anions

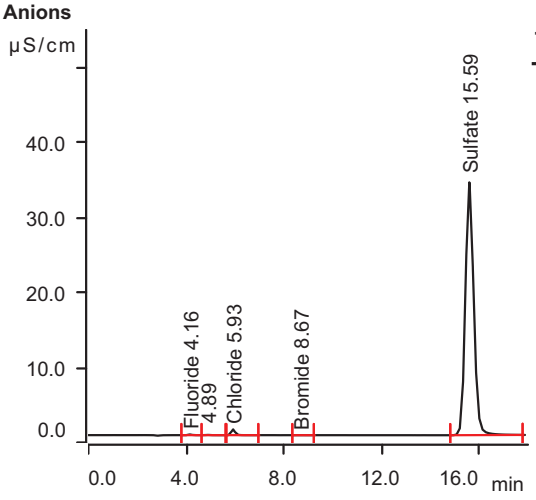


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0028	0.048	0.485
5.92	Chloride	0.4231	1.295	12.950
8.67	Bromide	0.0020	0.124	1.240
9.87	Nitrate	0.0186	0.076	0.755
15.61	Sulfate	5.4244	21.915	219.152

Sample data

Ident FA98609-4
Sample type . . . . . Sample
Determination start 2022-09-15 15:24:17
Dilution factor 25.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0169	0.074	1.845
5.93	Chloride	0.1357	0.415	10.373
8.67	Bromide	0.0008	0.115	2.870
15.59	Sulfate	13.3979	54.139	1353.463

MagIC Net

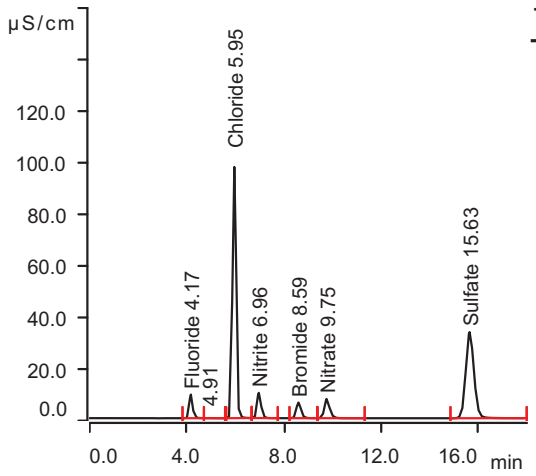
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-15 15:45:02
Dilution factor 1.00

Anions

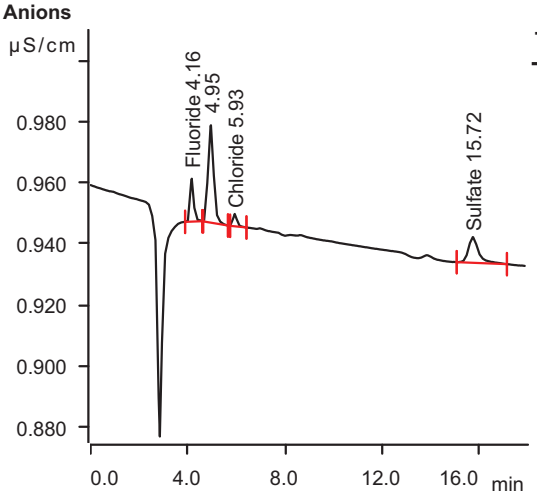


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	1.4847	2.726	2.726
5.95	Chloride	16.7091	51.153	51.153
6.96	Nitrite	1.9514	2.610	2.610
8.59	Bromide	1.3706	10.412	10.412
9.75	Nitrate	1.9303	2.476	2.476
15.63	Sulfate	13.1373	53.085	53.085

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-15 16:06:06
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0024	0.048	0.048
5.93	Chloride	0.0007	0.002	0.002
15.72	Sulfate	0.0041	0.011	0.011

MagIC Net

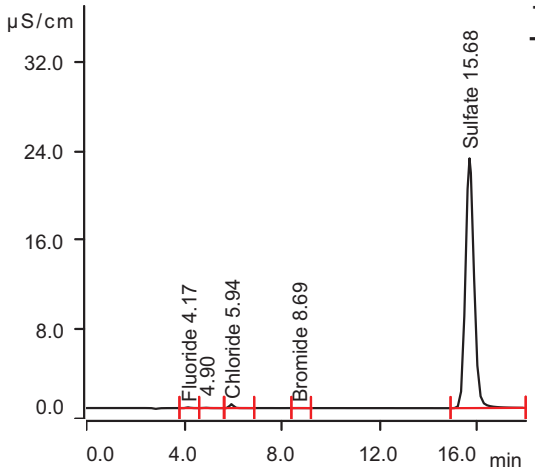
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98609-5
Sample type . . . . . Sample
Determination start 2022-09-15 16:27:07
Dilution factor 50.00

Anions

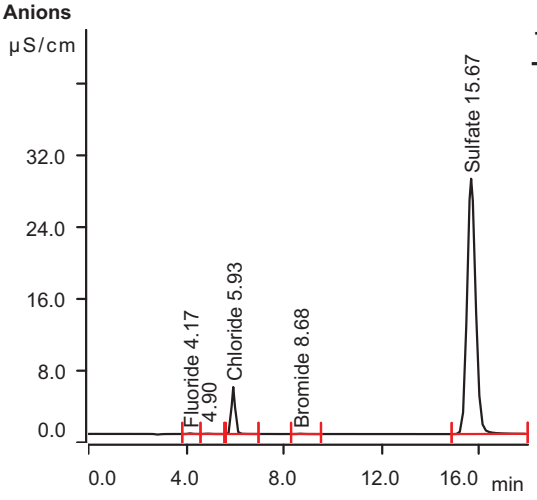


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0115	0.064	3.202
5.94	Chloride	0.0632	0.193	9.657
8.69	Bromide	0.0006	0.114	5.686
15.68	Sulfate	9.1255	36.872	1843.619

Sample data

Ident FA98609-6
Sample type . . . . . Sample
Determination start 2022-09-15 16:47:54
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0121	0.065	0.326
5.93	Chloride	0.8903	2.725	13.626
8.68	Bromide	0.0083	0.172	0.858
15.67	Sulfate	11.6152	46.934	234.671

MagIC Net

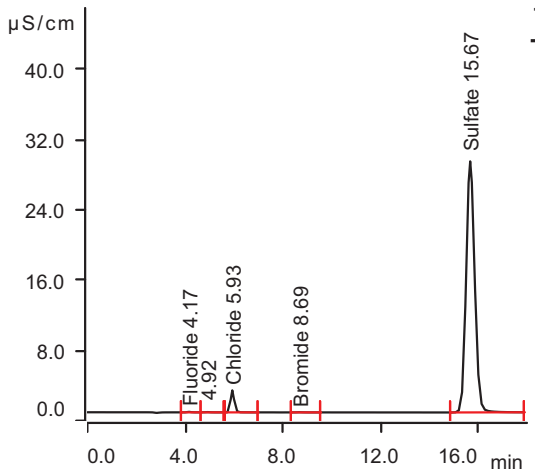
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98609-7
Sample type . . . . . Sample
Determination start 2022-09-15 17:08:39
Dilution factor 5.00

Anions

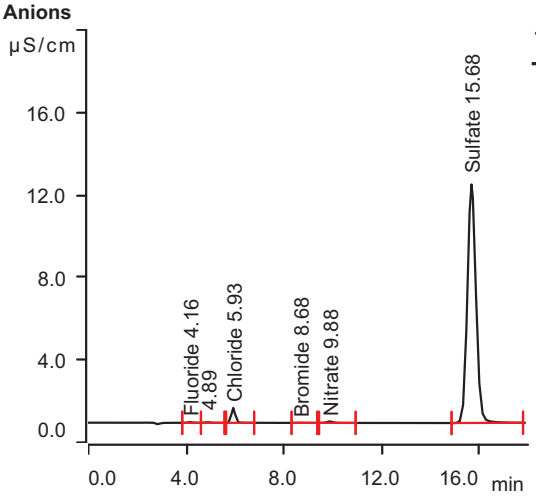


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0104	0.062	0.310
5.93	Chloride	0.4286	1.312	6.559
8.69	Bromide	0.0052	0.148	0.742
15.67	Sulfate	11.6012	46.877	234.387

Sample data

Ident FA98609-8
Sample type . . . . . Sample
Determination start 2022-09-15 17:29:24
Dilution factor 25.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0069	0.056	1.394
5.93	Chloride	0.1278	0.391	9.772
8.68	Bromide	0.0020	0.124	3.093
9.88	Nitrate	0.0210	0.079	1.963
15.68	Sulfate	4.7265	19.095	477.377

MagIC Net

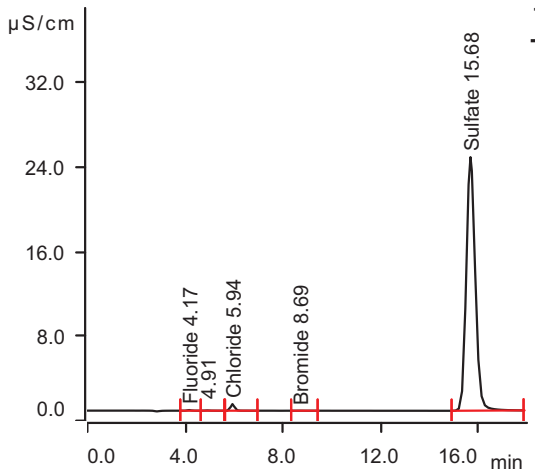
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98609-9
Sample type . . . . . Sample
Determination start 2022-09-15 17:50:10
Dilution factor 25.00

Anions

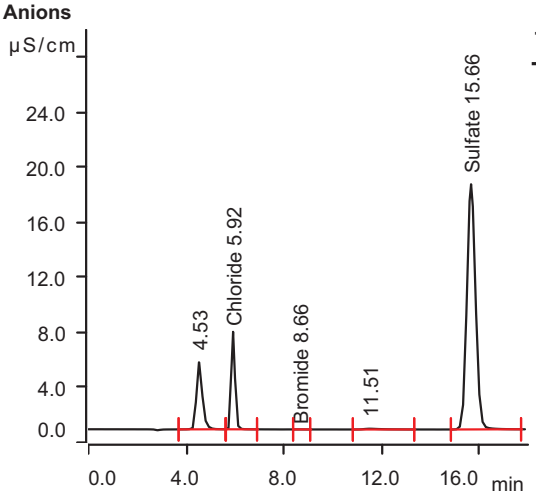


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0112	0.064	1.589
5.94	Chloride	0.1137	0.348	8.695
8.69	Bromide	0.0016	0.121	3.031
15.68	Sulfate	10.2171	41.284	1032.102

Sample data

Ident FA98741-1
Sample type . . . . . Sample
Determination start 2022-09-15 18:10:56
Dilution factor 50.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.92	Chloride	1.2107	3.706	185.306
8.66	Bromide	0.0008	0.115	5.769
15.66	Sulfate	7.3500	29.697	1484.863

MagIC Net

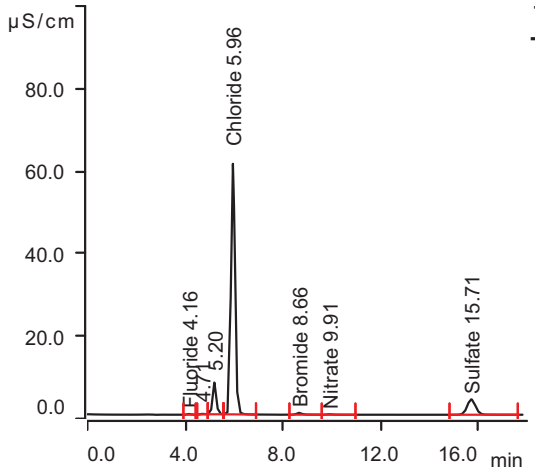
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98819-1
Sample type . . . . . Sample
Determination start 2022-09-15 18:31:41
Dilution factor 1.00

Anions

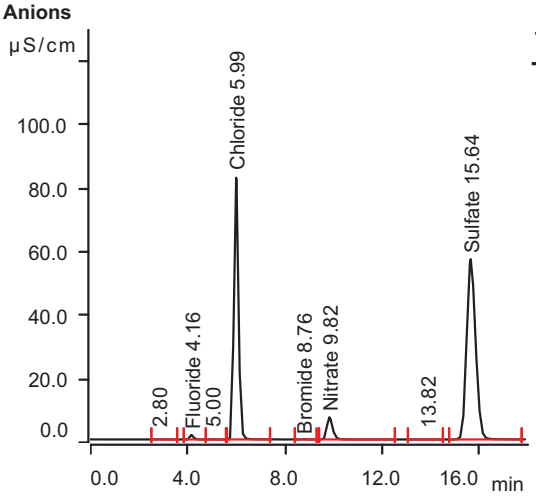


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0262	0.091	0.091
5.96	Chloride	11.4838	35.157	35.157
8.66	Bromide	0.1161	0.982	0.982
9.91	Nitrate	0.0279	0.087	0.087
15.71	Sulfate	1.5101	6.097	6.097

Sample data

Ident FA98855-2
Sample type . . . . . Sample
Determination start 2022-09-15 18:52:43
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.2492	0.494	0.494
5.99	Chloride	17.9375	54.914	54.914
8.76	Bromide	0.0164	0.232	0.232
9.82	Nitrate	1.9002	2.438	2.438
15.64	Sulfate	24.2811	98.120	98.120

MagIC Net

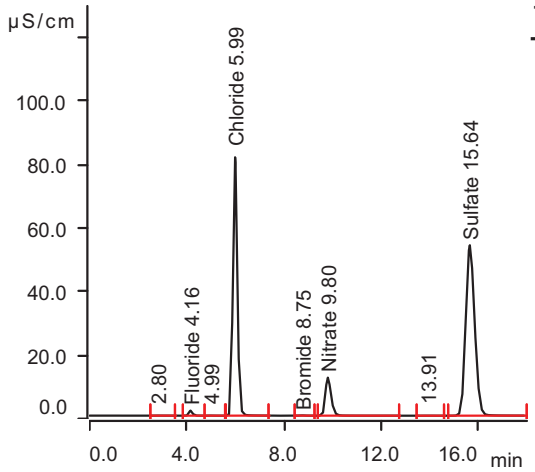
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98855-6
Sample type . . . . . Sample
Determination start 2022-09-15 19:13:46
Dilution factor 1.00

Anions

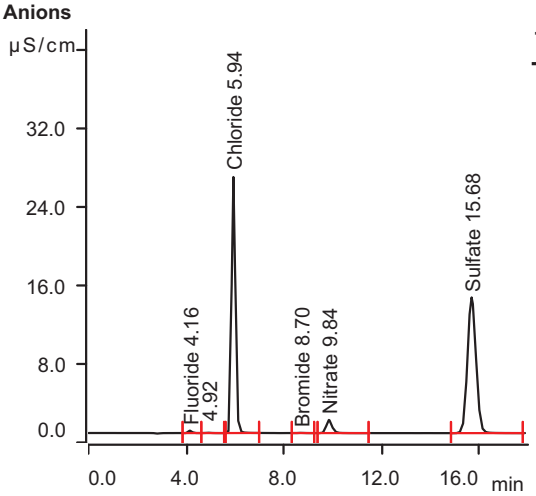


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.2713	0.534	0.534
5.99	Chloride	17.2104	52.688	52.688
8.75	Bromide	0.0164	0.232	0.232
9.80	Nitrate	3.2818	4.173	4.173
15.64	Sulfate	22.9642	92.798	92.798

Sample data

Ident FA98855-9
Sample type . . . . . Sample
Determination start 2022-09-15 19:34:47
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0421	0.119	0.597
5.94	Chloride	4.5888	14.048	70.240
8.70	Bromide	0.0049	0.146	0.730
9.84	Nitrate	0.3702	0.517	2.585
15.68	Sulfate	5.6240	22.722	113.611

MagIC Net

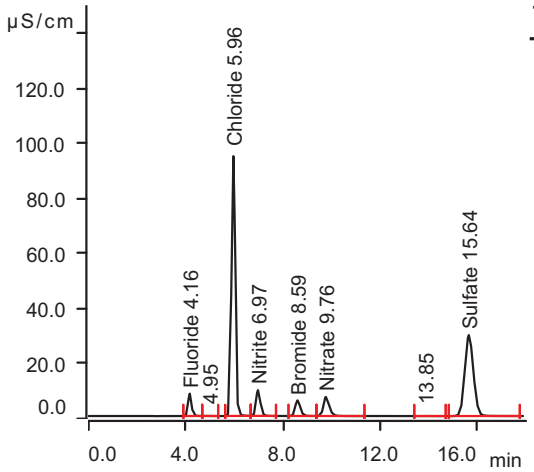
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-15 19:55:33
Dilution factor 1.00

Anions

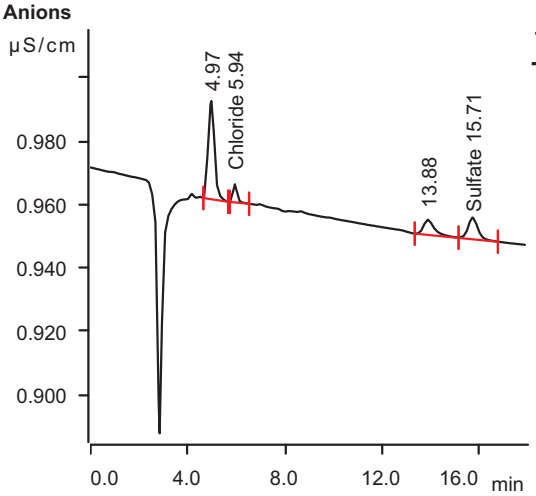


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.2865	2.368	2.368
5.96	Chloride	16.6747	51.048	51.048
6.97	Nitrite	1.9440	2.600	2.600
8.59	Bromide	1.3650	10.370	10.370
9.76	Nitrate	1.9254	2.470	2.470
15.64	Sulfate	12.2184	49.372	49.372

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-15 20:16:40
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.94	Chloride	0.0011	0.003	0.003
15.71	Sulfate	0.0033	0.007	0.007

MagIC Net

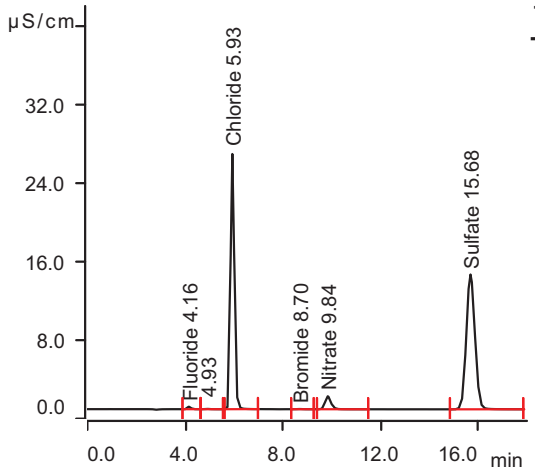
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98855-10
Sample type . . . . . Sample
Determination start 2022-09-15 20:37:41
Dilution factor 5.00

Anions

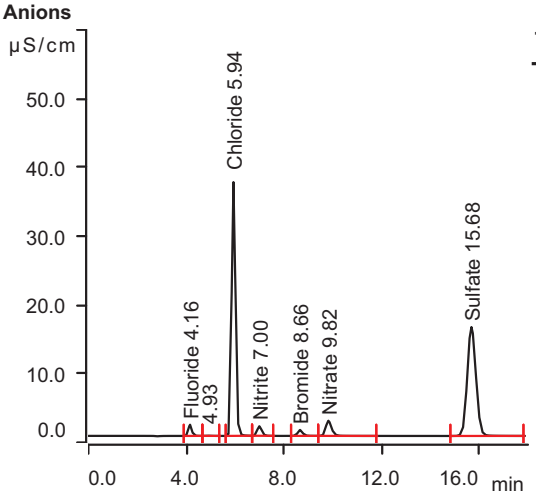


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0426	0.120	0.602
5.93	Chloride	4.5930	14.061	70.304
8.70	Bromide	0.0050	0.146	0.732
9.84	Nitrate	0.3678	0.514	2.570
15.68	Sulfate	5.6392	22.783	113.917

Sample data

Ident FA98855-10S3
Sample type . . . . . Sample
Determination start 2022-09-15 20:58:27
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.2566	0.507	2.535
5.94	Chloride	6.5059	19.917	99.585
7.00	Nitrite	0.2952	0.426	2.129
8.66	Bromide	0.2054	1.653	8.266
9.82	Nitrate	0.6124	0.821	4.106
15.68	Sulfate	6.5417	26.431	132.153

MagIC Net

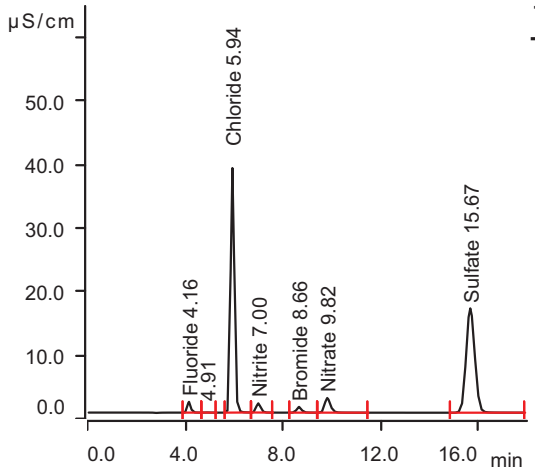
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98855-10S4
Sample type . . . . . Sample
Determination start 2022-09-15 21:19:14
Dilution factor 5.00

Anions

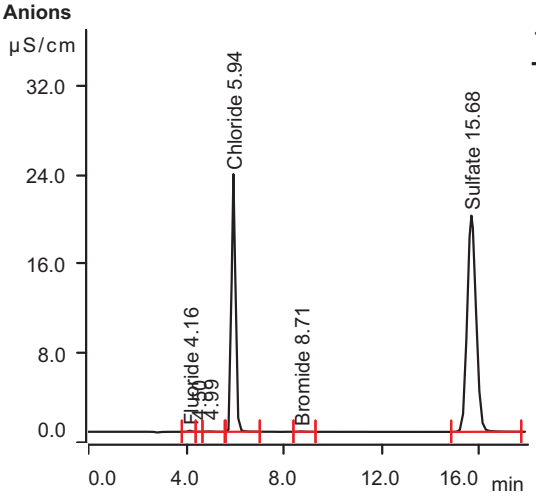


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.2671	0.526	2.630
5.94	Chloride	6.7826	20.764	103.821
7.00	Nitrite	0.3081	0.443	2.213
8.66	Bromide	0.2145	1.721	8.607
9.82	Nitrate	0.6397	0.855	4.277
15.67	Sulfate	6.8101	27.515	137.577

Sample data

Ident FA98521-1R
Sample type . . . . . Sample
Determination start 2022-09-15 21:39:59
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0161	0.072	0.072
5.94	Chloride	4.1463	12.693	12.693
8.71	Bromide	0.0076	0.166	0.166
15.68	Sulfate	8.1810	33.055	33.055

MagIC Net

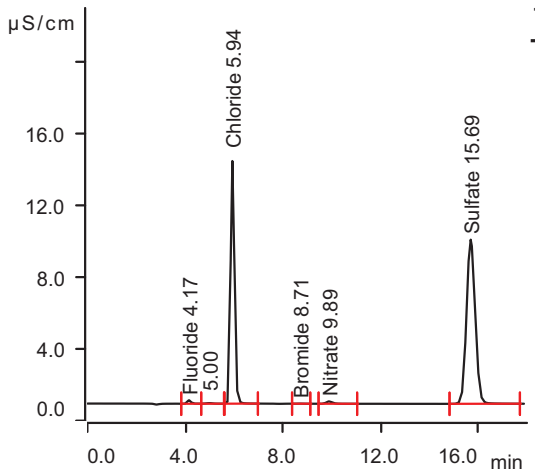
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98521-2R
Sample type . . . . . Sample
Determination start 2022-09-15 22:01:02
Dilution factor 1.00

Anions

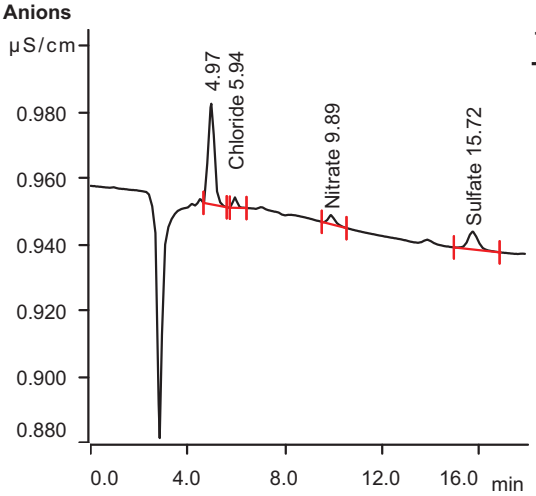


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0344	0.106	0.106
5.94	Chloride	2.4211	7.412	7.412
8.71	Bromide	0.0015	0.120	0.120
9.89	Nitrate	0.0392	0.101	0.101
15.69	Sulfate	3.7816	15.276	15.276

Sample data

Ident FA98862-1
Sample type . . . . . Sample
Determination start 2022-09-15 22:22:04
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.94	Chloride	0.0006	0.002	0.002
9.89	Nitrate	0.0009	0.053	0.053
15.72	Sulfate	0.0027	0.005	0.005

MagIC Net

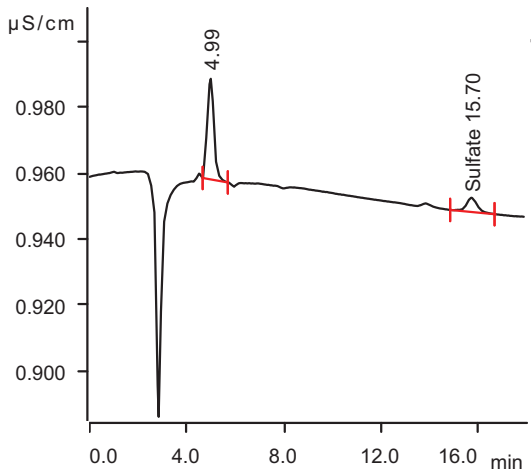
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-09-15 22:43:03
Dilution factor 1.00

Anions

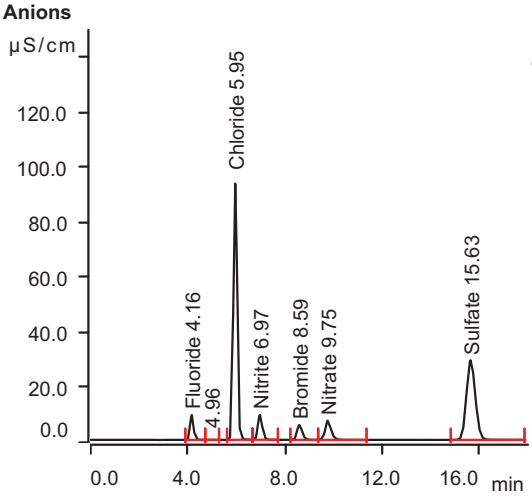


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.70	Sulfate	0.0022	0.003	0.003

Sample data

Ident B1
Sample type . . . . . Sample
Determination start 2022-09-15 23:04:04
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4406	2.647	2.647
5.95	Chloride	16.6458	50.959	50.959
6.97	Nitrite	1.9011	2.543	2.543
8.59	Bromide	1.3230	10.054	10.054
9.75	Nitrate	1.9727	2.529	2.529
15.63	Sulfate	12.3156	49.765	49.765

MagIC Net

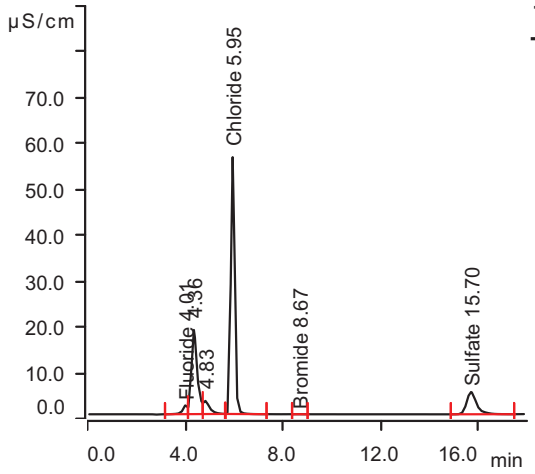
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98890-1
Sample type . . . . . Sample
Determination start 2022-09-15 23:25:07
Dilution factor 10.00

Anions

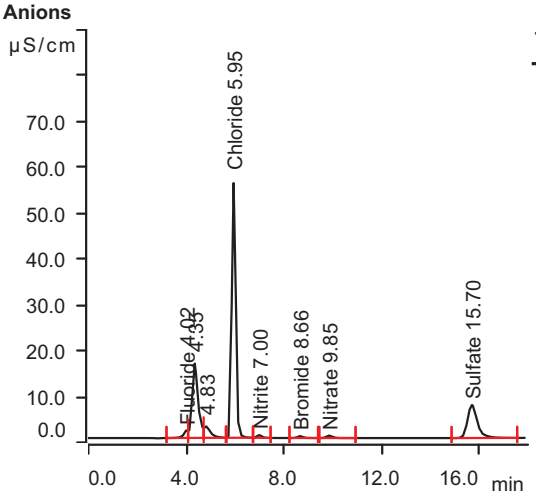


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.01	Fluoride	0.4431	0.844	8.440
5.95	Chloride	10.0578	30.791	307.909
8.67	Bromide	0.0028	0.130	1.301
15.70	Sulfate	2.3092	9.326	93.262

Sample data

Ident FA98890-1S1
Sample type . . . . . Sample
Determination start 2022-09-15 23:45:56
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.02	Fluoride	0.3342	0.647	6.473
5.95	Chloride	10.0077	30.637	306.375
7.00	Nitrite	0.1270	0.204	2.039
8.66	Bromide	0.1065	0.910	9.099
9.85	Nitrate	0.1542	0.246	2.458
15.70	Sulfate	3.3957	13.717	137.168

MagIC Net

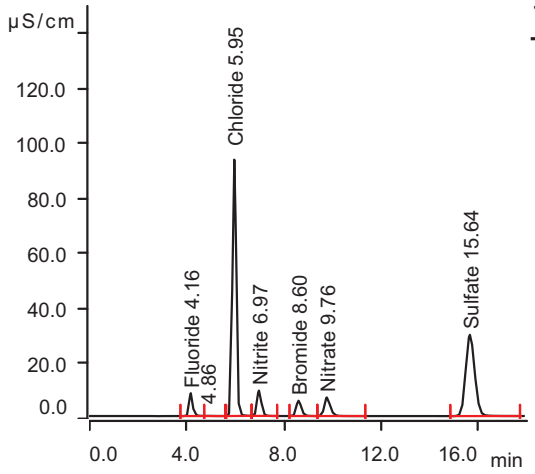
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-16 00:06:48
Dilution factor 1.00

Anions

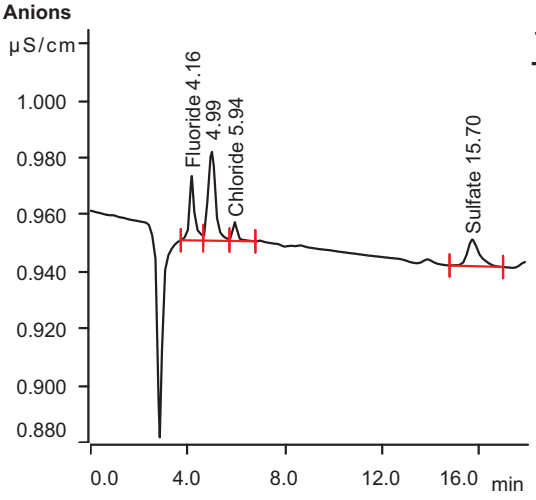


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.3941	2.563	2.563
5.95	Chloride	16.7374	51.240	51.240
6.97	Nitrite	1.9516	2.610	2.610
8.60	Bromide	1.3664	10.380	10.380
9.76	Nitrate	1.9257	2.470	2.470
15.64	Sulfate	12.7695	51.599	51.599

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-16 00:27:59
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0055	0.053	0.053
5.94	Chloride	0.0015	0.004	0.004
15.70	Sulfate	0.0054	0.016	0.016

MagIC Net

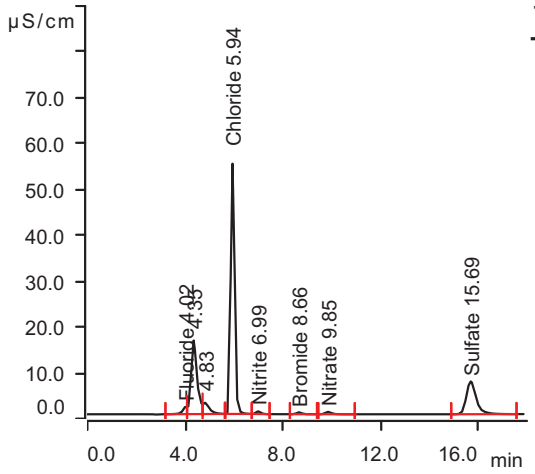
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98890-1S2
Sample type . . . . . Sample
Determination start 2022-09-16 00:49:03
Dilution factor 10.00

Anions

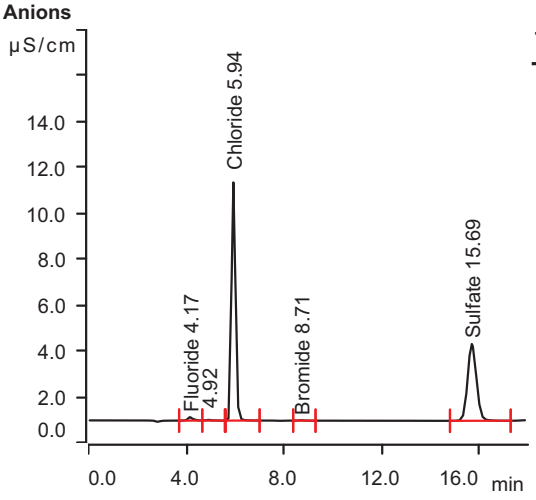


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.02	Fluoride	0.3269	0.634	6.340
5.94	Chloride	9.8540	30.167	301.668
6.99	Nitrite	0.1247	0.201	2.009
8.66	Bromide	0.1041	0.892	8.919
9.85	Nitrate	0.1525	0.244	2.437
15.69	Sulfate	3.3857	13.677	136.766

Sample data

Ident FA98897-1
Sample type . . . . . Sample
Determination start 2022-09-16 01:09:53
Dilution factor 5.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0364	0.109	0.546
5.94	Chloride	1.8897	5.785	28.923
8.71	Bromide	0.0041	0.140	0.701
15.69	Sulfate	1.4075	5.682	28.411

MagIC Net

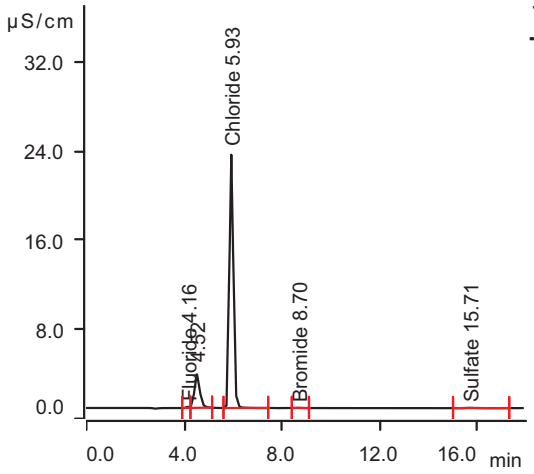
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98897-2
Sample type . . . . . Sample
Determination start 2022-09-16 01:30:41
Dilution factor 10.00

Anions

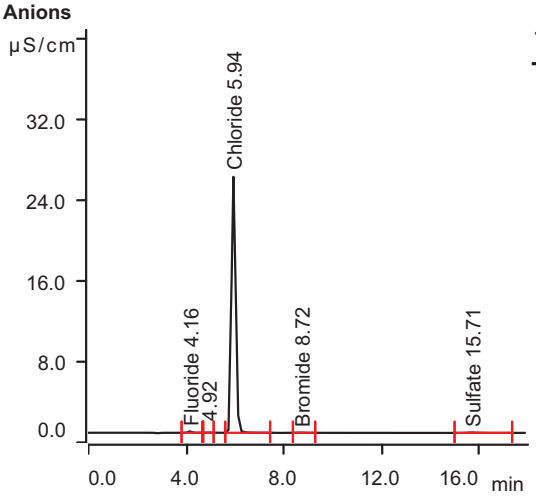


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0149	0.070	0.703
5.93	Chloride	4.0885	12.516	125.162
8.70	Bromide	0.0045	0.143	1.426
15.71	Sulfate	0.0164	0.060	0.603

Sample data

Ident FA98897-3
Sample type . . . . . Sample
Determination start 2022-09-16 01:51:28
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0250	0.089	0.886
5.94	Chloride	4.8001	14.695	146.947
8.72	Bromide	0.0068	0.160	1.599
15.71	Sulfate	0.0223	0.084	0.840

MagIC Net

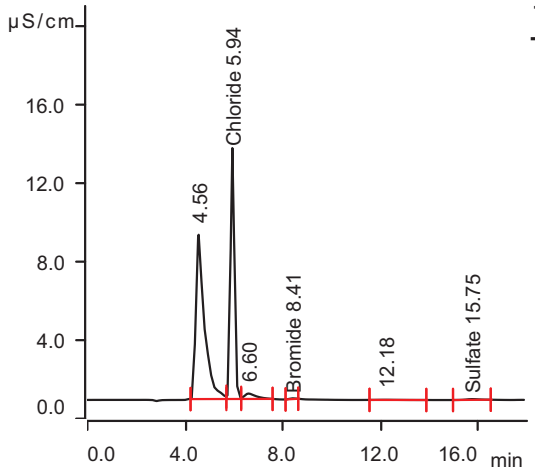
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98897-4
Sample type . . . . . Sample
Determination start 2022-09-16 02:12:16
Dilution factor 25.00

Anions

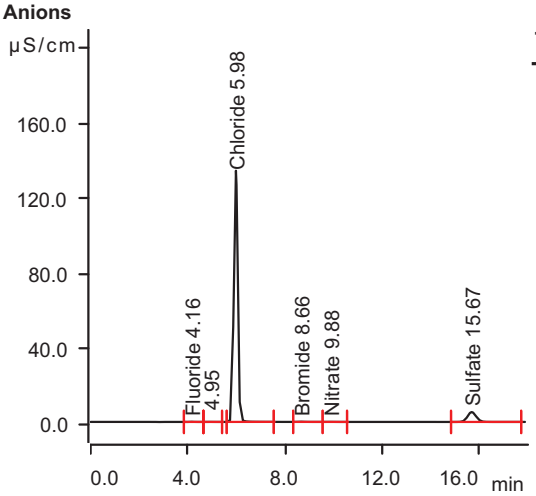


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.94	Chloride	2.2862	6.999	174.967
8.41	Bromide	0.0099	0.183	4.579
15.75	Sulfate	0.0229	0.086	2.160

Sample data

Ident FA98897-5
Sample type . . . . . Sample
Determination start 2022-09-16 02:33:05
Dilution factor 10.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0140	0.069	0.687
5.98	Chloride	24.9706	76.445	764.451
8.66	Bromide	0.0290	0.327	3.270
9.88	Nitrate	0.0102	0.065	0.651
15.67	Sulfate	2.2043	8.902	89.019

MagIC Net

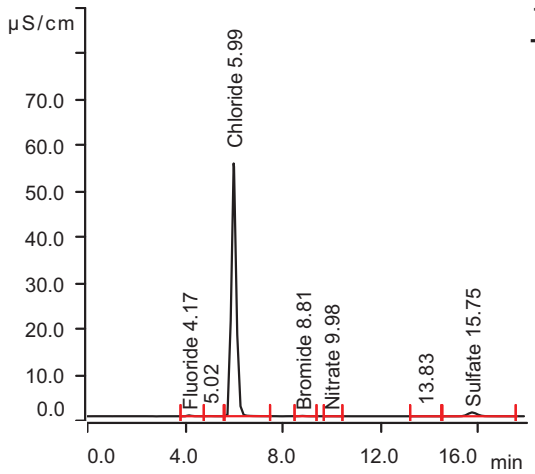
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-4
Sample type . . . . . Sample
Determination start 2022-09-16 02:53:52
Dilution factor 1.00

Anions

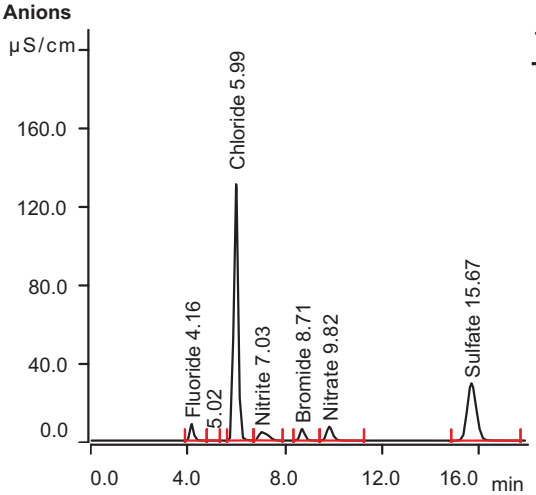


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0408	0.117	0.117
5.99	Chloride	12.8477	39.332	39.332
8.81	Bromide	0.0176	0.241	0.241
9.98	Nitrate	0.0021	0.055	0.055
15.75	Sulfate	0.3832	1.543	1.543

Sample data

Ident FA98854-4S3
Sample type . . . . . Sample
Determination start 2022-09-16 03:14:58
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4326	2.632	2.632
5.99	Chloride	27.1915	83.244	83.244
7.03	Nitrite	1.8564	2.485	2.485
8.71	Bromide	1.3479	10.241	10.241
9.82	Nitrate	1.9929	2.555	2.555
15.67	Sulfate	12.7320	51.447	51.447

MagIC Net

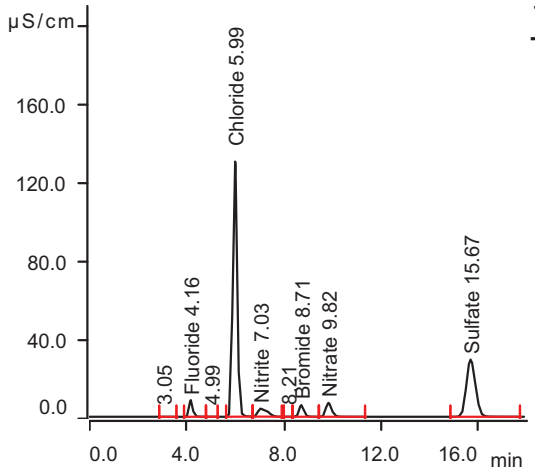
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-4S4
Sample type . . . . . Sample
Determination start 2022-09-16 03:36:01
Dilution factor 1.00

Anions

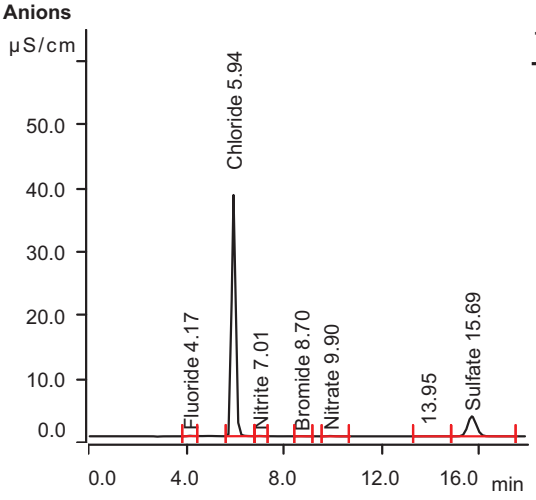


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.4331	2.633	2.633
5.99	Chloride	27.1772	83.201	83.201
7.03	Nitrite	1.8501	2.476	2.476
8.71	Bromide	1.3485	10.246	10.246
9.82	Nitrate	1.9931	2.555	2.555
15.67	Sulfate	12.7267	51.426	51.426

Sample data

Ident FA98854-5
Sample type . . . . . Sample
Determination start 2022-09-16 03:57:05
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0115	0.064	0.064
5.94	Chloride	6.8904	21.094	21.094
7.01	Nitrite	0.0077	0.047	0.047
8.70	Bromide	0.0050	0.147	0.147
9.90	Nitrate	0.0148	0.071	0.071
15.69	Sulfate	1.3175	5.318	5.318

MagIC Net

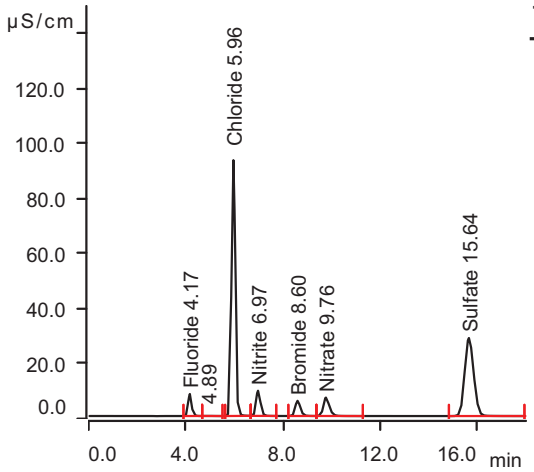
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-16 04:18:08
Dilution factor 1.00

Anions

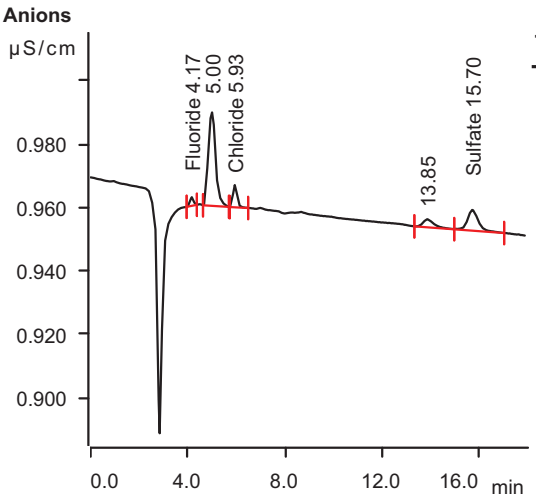


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	1.2816	2.359	2.359
5.96	Chloride	16.7429	51.257	51.257
6.97	Nitrite	1.9494	2.607	2.607
8.60	Bromide	1.3668	10.383	10.383
9.76	Nitrate	1.9281	2.473	2.473
15.64	Sulfate	12.2612	49.545	49.545

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-16 04:39:12
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0004	0.044	0.044
5.93	Chloride	0.0013	0.004	0.004
15.70	Sulfate	0.0034	0.008	0.008

MagIC Net

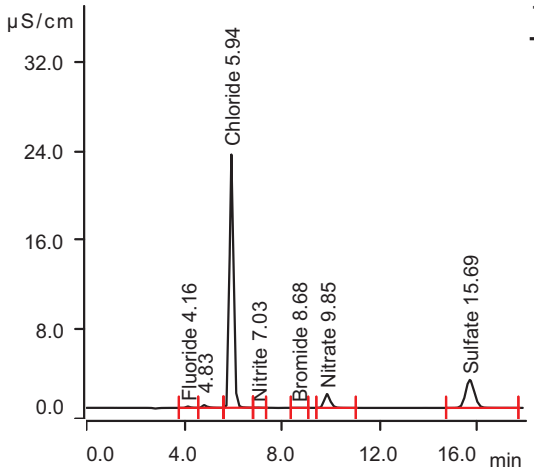
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-7
Sample type . . . . . Sample
Determination start 2022-09-16 05:00:17
Dilution factor 1.00

Anions

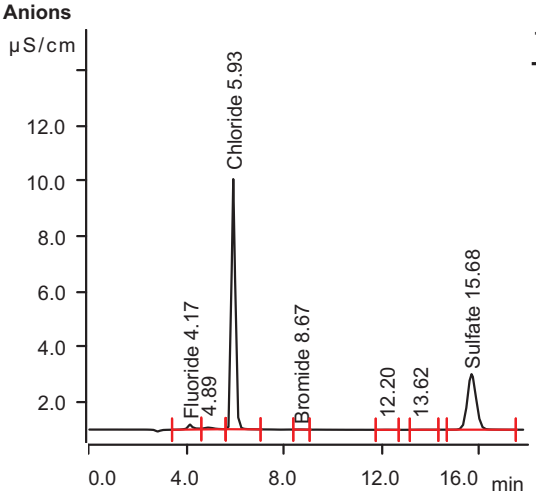


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0247	0.088	0.088
5.94	Chloride	4.1550	12.720	12.720
7.03	Nitrite	0.0029	0.040	0.040
8.68	Bromide	0.0014	0.120	0.120
9.85	Nitrate	0.3570	0.501	0.501
15.69	Sulfate	1.0588	4.273	4.273

Sample data

Ident FA98854-8
Sample type . . . . . Sample
Determination start 2022-09-16 05:21:23
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0491	0.132	0.132
5.93	Chloride	1.6209	4.962	4.962
8.67	Bromide	0.0011	0.117	0.117
15.68	Sulfate	0.8510	3.433	3.433

MagIC Net

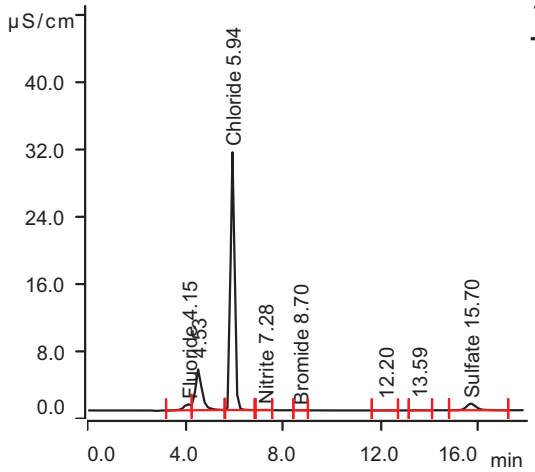
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-9
Sample type . . . . . Sample
Determination start 2022-09-16 05:42:25
Dilution factor 1.00

Anions

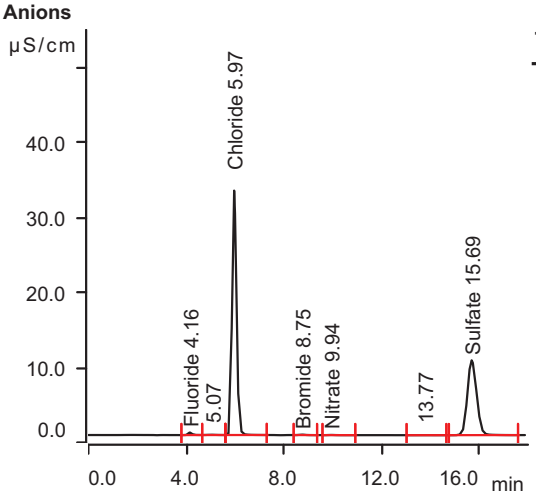


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.15	Fluoride	0.2381	0.474	0.474
5.94	Chloride	5.6219	17.211	17.211
7.28	Nitrite	0.0075	0.046	0.046
8.70	Bromide	0.0031	0.132	0.132
15.70	Sulfate	0.3666	1.475	1.475

Sample data

Ident FA98854-10
Sample type . . . . . Sample
Determination start 2022-09-16 06:03:29
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0638	0.159	0.159
5.97	Chloride	6.7385	20.629	20.629
8.75	Bromide	0.0149	0.221	0.221
9.94	Nitrate	0.0078	0.062	0.062
15.69	Sulfate	4.3788	17.690	17.690

MagIC Net

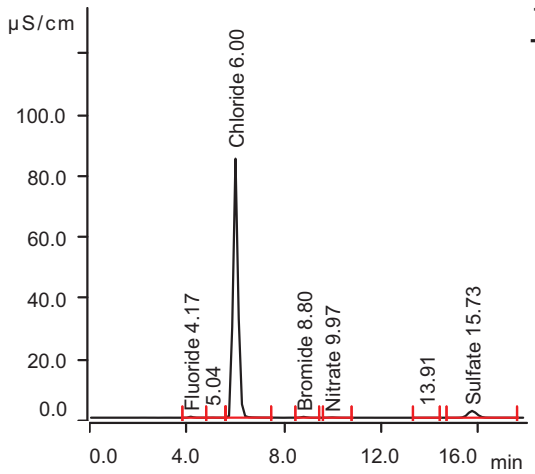
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-11
Sample type . . . . . Sample
Determination start 2022-09-16 06:24:32
Dilution factor 1.00

Anions

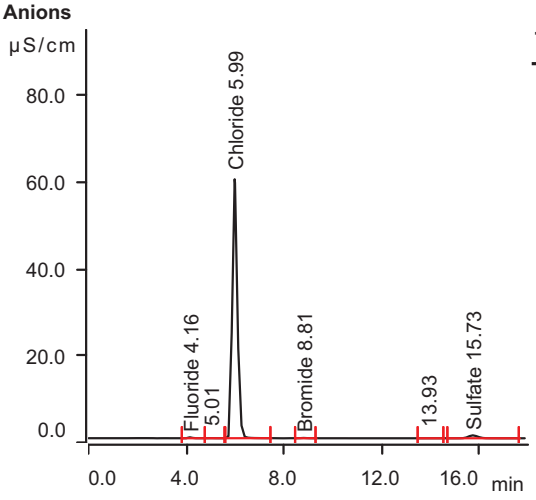


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0658	0.162	0.162
6.00	Chloride	20.4034	62.463	62.463
8.80	Bromide	0.0646	0.595	0.595
9.97	Nitrate	0.0293	0.089	0.089
15.73	Sulfate	0.9758	3.937	3.937

Sample data

Ident FA98854-13
Sample type . . . . . Sample
Determination start 2022-09-16 06:45:40
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0417	0.119	0.119
5.99	Chloride	14.4064	44.104	44.104
8.81	Bromide	0.0154	0.225	0.225
15.73	Sulfate	0.3070	1.234	1.234

MagIC Net

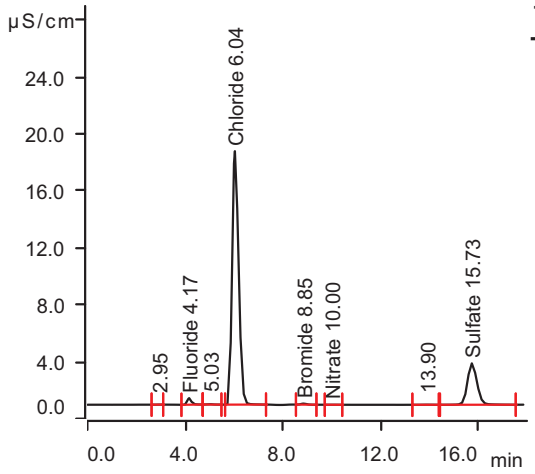
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98854-14
Sample type . . . . . Sample
Determination start 2022-09-16 07:06:43
Dilution factor 1.00

Anions

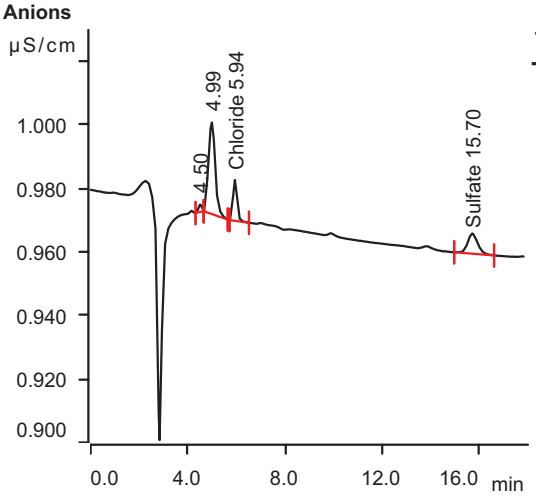


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	0.0891	0.204	0.204
6.04	Chloride	5.4510	16.687	16.687
8.85	Bromide	0.0188	0.250	0.250
10.00	Nitrate	0.0007	0.053	0.053
15.73	Sulfate	1.3220	5.336	5.336

Sample data

Ident FA98885-1
Sample type . . . . . Sample
Determination start 2022-09-16 07:27:47
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.94	Chloride	0.0024	0.007	0.007
15.70	Sulfate	0.0031	0.006	0.006

MagIC Net

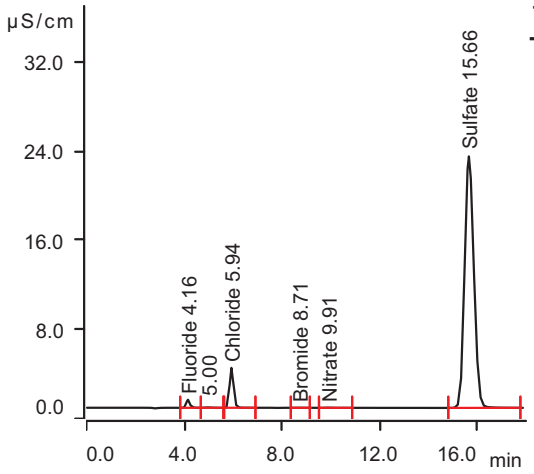
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98885-2
Sample type . . . . . Sample
Determination start 2022-09-16 07:48:49
Dilution factor 1.00

Anions

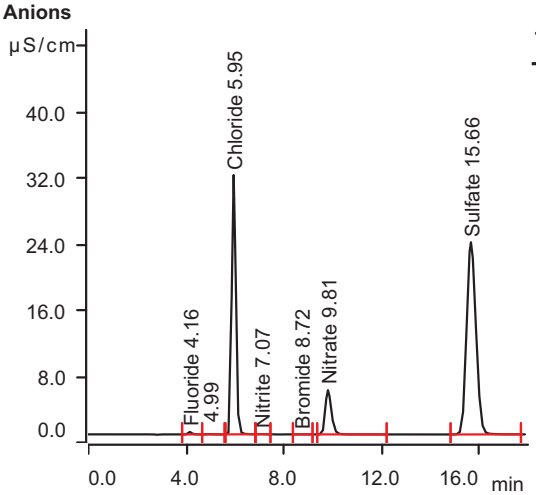


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.1203	0.261	0.261
5.94	Chloride	0.6574	2.012	2.012
8.71	Bromide	0.0016	0.121	0.121
9.91	Nitrate	0.0046	0.058	0.058
15.66	Sulfate	9.8691	39.878	39.878

Sample data

Ident FA98885-3
Sample type . . . . . Sample
Determination start 2022-09-16 08:09:52
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.0512	0.136	0.136
5.95	Chloride	5.8976	18.055	18.055
7.07	Nitrite	0.0051	0.043	0.043
8.72	Bromide	0.0029	0.131	0.131
9.81	Nitrate	1.5534	2.003	2.003
15.66	Sulfate	10.3072	41.648	41.648

MagIC Net

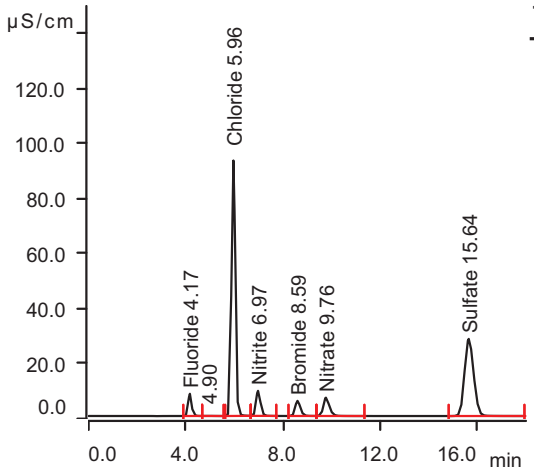
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-16 08:30:57
Dilution factor 1.00

Anions

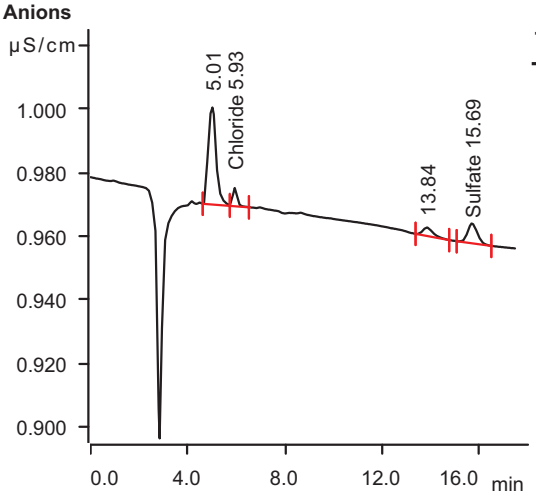


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.17	Fluoride	1.2946	2.383	2.383
5.96	Chloride	16.7720	51.346	51.346
6.97	Nitrite	1.9514	2.610	2.610
8.59	Bromide	1.3704	10.410	10.410
9.76	Nitrate	1.9326	2.479	2.479
15.64	Sulfate	12.2494	49.497	49.497

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-16 08:52:09
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.93	Chloride	0.0012	0.003	0.003
15.69	Sulfate	0.0029	0.006	0.006

MagIC Net

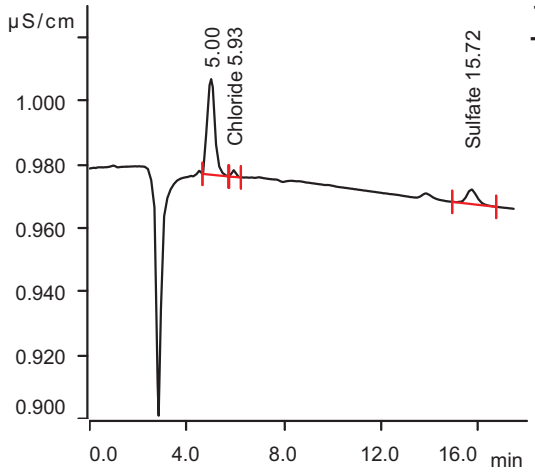
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident FA98885-1F
Sample type . . . . . Sample
Determination start 2022-09-16 09:12:43
Dilution factor 1.00

Anions

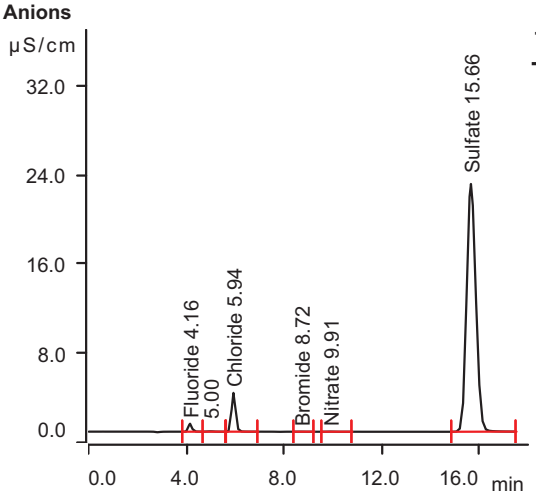


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
5.93	Chloride	0.0004	0.001	0.001
15.72	Sulfate	0.0023	0.003	0.003

Sample data

Ident FA98885-2F
Sample type . . . . . Sample
Determination start 2022-09-16 09:33:18
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	0.1195	0.259	0.259
5.94	Chloride	0.6408	1.961	1.961
8.72	Bromide	0.0016	0.121	0.121
9.91	Nitrate	0.0041	0.057	0.057
15.66	Sulfate	9.7119	39.242	39.242

MagIC Net

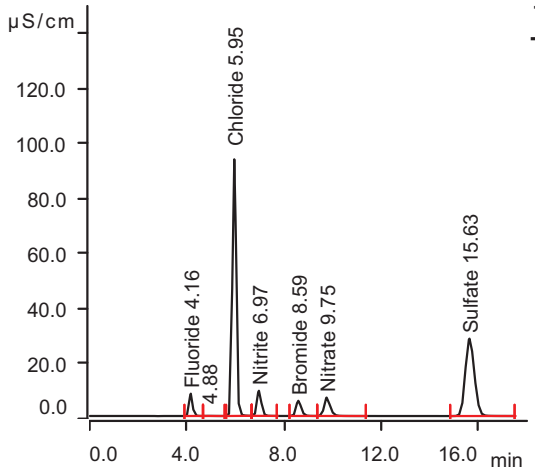
Summary Report

2022-09-16 1:15:13
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-09-16 09:53:48
Dilution factor 1.00

Anions

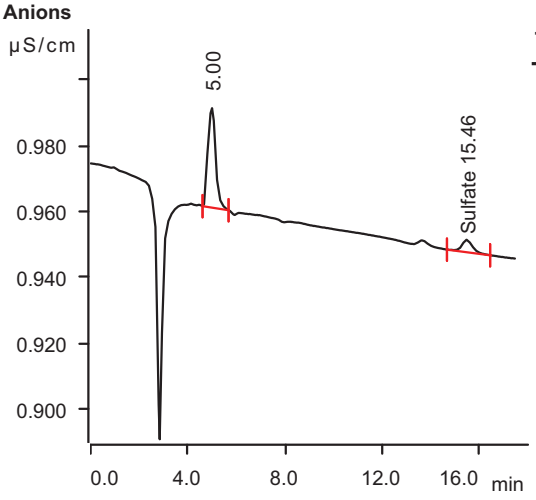


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.16	Fluoride	1.2928	2.379	2.379
5.95	Chloride	16.7731	51.349	51.349
6.97	Nitrite	1.9492	2.607	2.607
8.59	Bromide	1.3701	10.408	10.408
9.75	Nitrate	1.9322	2.479	2.479
15.63	Sulfate	12.2485	49.493	49.493

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-09-16 10:14:26
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
15.46	Sulfate	0.0019	0.002	0.002

Misc. Forms

Custody Documents and Other Forms

(SGS Dayton, NJ)

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

E

WW

SGS Job #	FA98819

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: SGS North America Inc.	Project Name: Shepley's Hill (SHL), Devens, MA		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL- Sludge SED Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 4405 Vineland Rd, Suite C-15	Street:	Billing Information (if different from Report to)	
City: Orlando State: FL Zip: 32811	City: State:	Company Name:	
Project Contact: Ellen.Pampel@sgs.com E-mail:	Project #:	Street Address:	
Phone #: 407-425-6700 Fax #:	Client Purchase Order #:	City: State: Zip:	
Sampler(s) Name(s): JR Phone:	Project Manager:	Attention:	

SGS Sample #	Field ID / Point of Collection	MEOH DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	NO2 ,NO32 ,NO30 ,353.2	LAB USE ONLY
1A	EFFLUENT		9/9/22	10:15:00 AM	JR	AQ	2				1	1				X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 9/26/2022

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ]
- [X] FL

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special instructions

SGS-NJ direct sub

Initial Assessment 3A DM

Label Verification

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1 COURIER	2 COURIER	9/9/22 23:00	2 [signature]
3		3	4		4
5		5	Custody Seal # ☑ Intact ☐ Not intact	Preserved where applicable ☐ Therm. ID 40	On Ice ☑ Cooler Temp. 2.5°C-B

FA98819: Chain of Custody
Page 1 of 3
SGS Dayton, NJ

17.1
17
SGS 1450 of 1485
FA98819

GW

SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15, Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

Direct sub FA#

SGS - ORLANDO JOB # : PAGE 1 OF 1

F-M-081522-23

SGS - ORLANDO Quote # SKIFF # FA98319

Client / Reporting Information	Project Information
Company Name: ~~Sovereign~~ Consulting Inc.	Project Name: Shepley's Hill (SHL), Devens, MA
Address: 9 Payson Road, Suite 150	Street:
City: Foxborough State: MA Zip: 02035	City: Devens State: MA
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com	Project # AC001.J02
Phone #: 508-339-3200	Fax #
Sampler(s) Name(s) (Printed) Sampler 1: Sovereign Staff	Client Purchase Order #

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	Total Arsenic - 6020A	Total Metals List - 6010C	Total Mercury - 7470A	Chloride 300.0	Nitrate - 353.2 *	Sulfate - 300.0	VOCs - 624	SVOCs - 625	PCBs - 608	Pesticides - 608	TPH - 1664A	LAB USE ONLY
1	Effluent	9/9/22	10:15	JWR	GW	15		x	x		x	x			X	X	X	X	X	X	X	X	X	X	X	

Turnaround Time (Business days)

X 10 Day (Business)
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Approved By: / Date:
Initial Assessment NA13A
Label Verification

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [X] FULLT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements
5-Day Rush on Arsenic Samples
6010 Metals List = Ba, Cd, Cr, Cu, Pb, Mg, Mn, Se, Ag
* XALD 30 directly subbed to Dayton
FA# will be provided. (1) 250mL NP (1) 120mL H2SO4 + TF/9/9/22

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	sovcon	9-9-22 1415	2	3	9/9/22 17:00	4
5	Relinquished by/Affiliation	Date Time: 9/9/22 8:15	6 Received By/Affiliation	7	Date Time: 9-9-22 8:50	8

Lab Use Only: Cooler Temperature (s) Celsius (corrected): 2.5°C-8 IR-40

http://www.sgs.com/en/terms-and-conditions

Brandon Mallory 9/9/22 23:00 Rec: ATP - SGS COC Revised 02-07-22.xlsx Rev 031318

SGS Sample Receipt Summary

Job Number: FA98819 **Client:** _____ **Project:** _____

Date / Time Received: 9/9/2022 11:00:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.5);

Cooler Temps (Corrected) °C: Cooler 1: (3.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98819
Account: SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FA98819

General Chemistry

QC Data Summaries

(SGS Dayton, NJ)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Nitrate + Nitrite	GP42401/GN33582	0.10	0.0	mg/l	2	2.36	118.0	80-120%
Nitrogen, Nitrite	GN33204	0.0020	0.00081	mg/l	0.04	0.039	97.5	90-110%

Associated Samples:
Batch GN33204: FA98819-1A
Batch GP42401: FA98819-1A
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate + Nitrite	GP42401/GN33582	JD51942-2	mg/l	0.52	0.51	1.9	0-33%

Associated Samples:
Batch GP42401: FA98819-1A
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GP42401/GN33582	JD51942-2	mg/l	0.52	1	1.5	98.0	80-120%
Nitrogen, Nitrite	GN33204	JD51437-3	mg/l	0.00081	0.04	0.039	95.5	22-140%

Associated Samples:
Batch GN33204: FA98819-1A
Batch GP42401: FA98819-1A
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrite	GN33204	JD51437-3	mg/l	0.00081	0.04	0.038	2.6	20%

Associated Samples:
Batch GN33204: FA98819-1A
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Analyst: JD Run ID: GN33582
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:56	GN33582-STD1	1		STDA
15:57	GN33582-STD2	1		STDB
15:58	GN33582-STD3	1		STDC
16:00	GN33582-STD4	1		STDD
16:01	GN33582-STD5	1		STDE
16:02	GN33582-STD6	1		STDF
16:03	GN33582-STD7	1		STDG
16:10	GN33582-ICV1	1		
16:12	GN33582-ICB1	1		
16:13	GN33582-CCV1	1		
16:14	GN33582-CCB1	1		
16:15	GP42399-MB1	1		
16:16	GP42399-B1	1		
16:17	GP42399-S1	1		
16:18	GP42399-S2	1		
16:19	GP42399-D1	1		
16:20	GN33582-CCV2	1		
16:21	GN33582-CCB2	1		
16:22	JD51916-2	1		(sample used for QC only; not part of login FA98819)
16:24	JD51857-2	1		(sample used for QC only; not part of login FA98819)
16:25	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:27	ZZZZZZ	1		
16:28	ZZZZZZ	1		
16:29	ZZZZZZ	1		
16:30	ZZZZZZ	1		
16:31	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:33	GN33582-CCV3	1		
16:35	GN33582-CCB3	1		
16:36	ZZZZZZ	1		
16:37	ZZZZZZ	1		
16:38	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Analyst: JD Run ID: GN33582
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:39	ZZZZZZ	1		
16:40	ZZZZZZ	1		
16:41	ZZZZZZ	1		
16:42	ZZZZZZ	1		
16:43	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:46	ZZZZZZ	1		
16:47	GN33582-CCV4	1		
16:48	GN33582-CCB4	1		
16:49	GP42400-MB1	1		
16:50	GP42400-B1	1		
16:51	GP42400-S1	1		
16:52	GP42400-S2	1		
16:53	GP42400-D1	1		
16:54	JD52017-2	1		(sample used for QC only; not part of login FA98819)
16:55	JD51937-2	1		(sample used for QC only; not part of login FA98819)
16:57	ZZZZZZ	1		
16:58	ZZZZZZ	1		
16:59	ZZZZZZ	1		
17:00	GN33582-CCV5	1		
17:01	GN33582-CCB5	1		
17:02	ZZZZZZ	1		
17:03	ZZZZZZ	1		
17:04	ZZZZZZ	1		
17:05	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:08	ZZZZZZ	1		
17:09	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:11	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:13	GN33582-CCV6	1		
17:14	GN33582-CCB6	1		

18.5 18

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Analyst: JD Run ID: GN33582
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:15	ZZZZZZ	1		
17:16	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:21	GP42401-MB1	1		
17:22	ZZZZZZ	1		
17:23	GP42401-B1	1		
17:24	GP42401-S1	1		
17:25	GP42401-S2	1		
17:31	GN33582-CCV7	1		
17:32	GN33582-CCB7	1		
17:33	GP42401-D1	1		
17:34	JD51942-2	1		(sample used for QC only; not part of login FA98819)
17:35	JD52047-4	1		(sample used for QC only; not part of login FA98819)
17:36	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:44	GN33582-CCV8	1		
17:45	GN33582-CCB8	1		
17:46	FA98819-1A	1		
17:47	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:50	ZZZZZZ	1		
17:51	ZZZZZZ	1		
17:52	ZZZZZZ	1		
17:53	GN33582-CCV9	1		
17:54	GN33582-CCB9	1		
17:55	ZZZZZZ	1		
17:56	ZZZZZZ	1		
17:57	ZZZZZZ	1		
17:59	ZZZZZZ	1		
18:00	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Analyst: JD Run ID: GN33582
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:01	ZZZZZZ	1		
18:02	ZZZZZZ	1		
18:03	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:05	GP42405-MB1	1		
18:06	GN33582-CCV10	1		
18:08	GN33582-CCB10	1		

Refer to raw data for calibration curve and standards.

18:5
18

Instrument QC Summary
Inorganics Analyses

Login Number: FA98819
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Run ID: GN33582 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN33582-ICV1	Nitrogen, Nitrate + Nitrite	1.99	0.10	0.090	2	99.5	80-120
GN33582-ICB1	Nitrogen, Nitrate + Nitrite	-0.114 <	0.10	0.090			
GN33582-CCV1	Nitrogen, Nitrate + Nitrite	2.58	0.10	0.090	2.5	103.2	80-120
GN33582-CCB1	Nitrogen, Nitrate + Nitrite	-0.100	0.10	0.090			
GN33582-CCV2	Nitrogen, Nitrate + Nitrite	2.59	0.10	0.090	2.5	103.6	80-120
GN33582-CCB2	Nitrogen, Nitrate + Nitrite	-0.102 <	0.10	0.090			
GN33582-CCV3	Nitrogen, Nitrate + Nitrite	2.36	0.10	0.090	2.5	94.4	80-120
GN33582-CCB3	Nitrogen, Nitrate + Nitrite	-0.106 <	0.10	0.090			
GN33582-CCV4	Nitrogen, Nitrate + Nitrite	2.54	0.10	0.090	2.5	101.6	80-120
GN33582-CCB4	Nitrogen, Nitrate + Nitrite	-0.105 <	0.10	0.090			
GN33582-CCV5	Nitrogen, Nitrate + Nitrite	2.73	0.10	0.090	2.5	109.2	80-120
GN33582-CCB5	Nitrogen, Nitrate + Nitrite	-0.105 <	0.10	0.090			
GN33582-CCV6	Nitrogen, Nitrate + Nitrite	2.85	0.10	0.090	2.5	114.0	80-120
GN33582-CCB6	Nitrogen, Nitrate + Nitrite	-0.107 <	0.10	0.090			
GN33582-CCV7	Nitrogen, Nitrate + Nitrite	2.13	0.10	0.090	2.5	85.2	80-120
GN33582-CCB7	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN33582-CCV8	Nitrogen, Nitrate + Nitrite	2.18	0.10	0.090	2.5	87.2	80-120
GN33582-CCB8	Nitrogen, Nitrate + Nitrite	-0.110 <	0.10	0.090			
GN33582-CCV9	Nitrogen, Nitrate + Nitrite	2.85	0.10	0.090	2.5	114.0	80-120
GN33582-CCB9	Nitrogen, Nitrate + Nitrite	-0.101 <	0.10	0.090			
GN33582-CCV10	Nitrogen, Nitrate + Nitrite	2.62	0.10	0.090	2.5	104.8	80-120
GN33582-CCB10	Nitrogen, Nitrate + Nitrite	-0.101 <	0.10	0.090			

(!) Outside of QC limits

General Chemistry

Raw Data

(SGS Dayton, NJ)

Test: Nitrogen, Nitrite
Product: NO2
Method: SM4500NO2 B-11 (Aqueous)
SM4500NO2 B-11 M (Solids)

Units: mg/l / mg/kg

Analyst: MARCINK
GN Batch ID: GN33204
GP Batch ID:
Date: 9/10/2022
Instrument ID: L

Pipet II GLASS PIPETTE CLASS A

Original Calibration Information — Calibration Date: 7/7/2022

	Blank	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7
Known:	0.000	0.010	0.025	0.050	0.075	0.100	0.200	
Absorbance:	0.000	0.032	0.084	0.170	0.254	0.337	0.690	
Actual Value:	#DIV/0!	0.010	0.025	0.050	0.074	0.099	0.201	
% RE:	#DIV/0!	-0.84	-0.65	-0.20	0.73	1.48	-0.44	

Continuing Calibration Check Standards Data: 9/10/2022

	Blank	Std 1	Std 6
Known:	0.000	0.010	0.200
Absorbance:	0.000	0.033	0.688
Recovery:	0.0%	103.7%	100.1%
Actual Value:		0.010	0.200

Correlation Coeff. = 0.99993
Slope = 0.28996
Intercept = 0.00081

Bottle #	Sample ID	Time Analyzed	Initial Wt (g) or Vol (ml)	Final Vol (ml)	Dilution	Sample Abs	Background Abs.	Result From Curve (mg/L)	Final Result	DL	Units	Factor	pH between 5 and 9 (Y or N)
	ICV	08:11	50	50	1	0.333	NA	0.097	0.097	NA	mg/l	NA	
	CCV	08:43	50	50	1	0.341	NA	0.100	0.100	NA	mg/l	NA	
	CCB	08:43	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
	GN33204-MB1	08:43	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	
	GN33204-B1	08:43	50	50	1	0.133	0.000	0.039	0.039	0.010	mg/kg	0.2	
6	GN33204-S1	08:43	50	50	1	0.132	0.000	0.039	0.039	0.010	mg/kg	0.2	
6	GN33204-MSD1	08:43	50	50	1	0.130	0.000	0.038	0.038	0.010	mg/kg	0.2	
6	JD51437-3	08:43	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
3	JD51516-1	08:43	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
3	JD51516-2	09:08	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
3	JD51516-3	09:08	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
3	JD51516-4	09:08	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
2	JD51516-5	09:08	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
	CCVA	09:08	50	50	1	0.689	NA	0.201	0.201	NA	mg/l	NA	
	CCB	09:11	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
2	FA98819-1	09:11	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/kg	0.2	Y
3	JD51533-1	09:13	50	50	1	0.004	0.000	0.002	0.002	0.010	mg/kg	0.2	Y
3	JD51533-2	09:17	50	50	1	0.015	0.000	0.005	0.005	0.010	mg/kg	0.2	Y
3	JD51533-4	09:17	50	50	1	0.019	0.000	0.006	0.006	0.010	mg/kg	0.2	Y
		09:17	50	50	1								
		09:17	50	50	1								
		09:17	50	50	1								
		09:17	50	50	1								
		09:17	50	50	1								
		09:17	50	50	1								
	CCV	09:17	50	50	1	0.339	NA	0.099	0.099	NA	mg/l	NA	
	CCB	09:17	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
			50	50	1								
	CCVA		50	50	1		NA			NA		NA	
	CCB		50	50	1		NA			NA		NA	

9/26/22

Analyst: MK Date: 9/10/22 QC Reviewer: _____ Date: _____

SGS

Test: Nitrogen, Nitrite
Product: NO2
Method: SM18 4500 NO2B (aqueous)
SM18 4500 NO2B M (solids)

Units: mg/l
mg/kg

Analyst: MK
GNBatch ID: GN 33204
GPBatch ID:
Date: 9/10/22

Preparation Batch QC Summary

Units = mg/l

MB ID: GN 33204-MB Date: 9/10/22 Result: <.02 DL: 0.01 <DL: Y

SB ID: -B2 Date: Result: 0.039 Spike: 0.04 %Rec.: 97.5

MS ID: -S1 Samp. Result: <.02 MS Result: 0.039 Spike: 0.04 %Rec: 97.5

MSD ID: -MSD1 Samp. Result: <.02 MSDUP Result: 0.038 Spike: 0.04 %Rec: 95.0

MSD ID: JD51437-3 MSDUP Result: 0.038 MS Result: 0.039 %RPD:

MB ID: (SOIL) Date: Result: DL: <DL:

SB ID: Date: Result: Spike: 0.4 %Rec.:

MS ID: Samp. Result: MS Result: Spike: 0.4 %Rec:

MSD ID: Samp. Result: MSDUP Result: Spike: 0.4 %Rec:

MSD ID: MSDUP Result: MS Result: %RPD:

Analysis Batch QC Summary

Units =

ICV (Ext): 9/10/22 Result: 0.097 TV: 0.1 %Rec: 97

CCV: 9/10/22 Result: 0.101 TV: 0.1 %Rec.: 101

CCVA: Result: 0.201 TV: 0.2 %Rec.: 100.5

CCV: Result: 0.099 TV: 0.1 %Rec.: 99

CCVA: Result: TV: 0.2 %Rec.:

CCV: Result: TV: 0.1 %Rec.:

CCVA: Result: TV: 0.2 %Rec.:

CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:

Reagent Reference Numbers:

Qc-------BS/MS/MSD-----2 ML OF 2 PPM NO2 STD --50 ML DI /H2O /SAMPLE----TV 0.04 Mg/L

MS/MSD- SAMPLE NO--- QC-1

JD 51437-3 QC-2

NOTE---*--SAMPLES FILTERED IN LAB

Analyst: MK Date: 9/10/22

Comments:

Form: GN032-01
Rev. Date:9/4/09]

SGS

GN33204

Reagent Information Log - Nitrite as Nitrogen

Reagent	Reagent # or Manufacturer/Lot
Calibration Source: 1000 mg/l nitrite stock (STD)	ERA LOT #261221M XP: 12/14/2023
External Check (ICV)	ERA LOT #120421M XP: 4/7/2023
Spiking Solution Source STD	ERA LOT #261221M XP: 12/14/2023
NO2 Color Reagent	GNE8-71351-NO2 XP9/26/2022
NH4OH	FISHER 193136 XP: 2/20/2027 N

All standards and stocks were made as described in the SOP for this method (circle one): Y or N
If no (N), see attached page for standards prep.

Form: GN087A-42
Rev. Date:9/26/2022

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: NO2

GN or GP Number: GN33204

Standard	Manufacturer/Lot Number	Concentration	Expiration Date
1000 mg/l Nitrite Standard	ERA LOT# 261221M	1000 PPM	12/14/2023
1000 mg/l Nitrite Standard (ICV)	ERA LOT# 120421M	1000 PPM	4/7/2023

Standard Description	Lot or Tracking #	Initial Volume	Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
10 PPM NO2 STANDARD	GNE9-71692-NO2	1.0 ml	1000 mg/l Nitrite Standard	A	DI water	100 ml	10 mg/l	9/10/2022	MK	9/10/2022
1 PPM NO2 STANDARD	GNE9-71693-NO2	10.0 ml	10 PPM NO2 STANDARD	A	DI water	100 ml	1 mg/L	9/10/2022	MK	9/10/2022
10 PPM NO2 EXTERNAL	GNE9-71694-NO2	1.0 ml	Nitrite Standard (ICV)	A	DI water	100 ml	10 mg/l	9/10/2022	MK	9/10/2022
1 PPM NO2 EXTERNAL	GNE9-71695-NO2	10.0 ml	10 PPM NO2 EXTERNAL	A	DI water	100 ml	1 mg/l	9/10/2022	MK	9/10/2022

Standard Description	Intermediate or Stock used to prepare standard	Initial Volume	Concentration of Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
0.2 mg/L (high)	GNE9-71693-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	9/10/2022	MK	9/10/2022
0.1 mg/L		10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L			
0.075 mg/L		7.5 ml	1.0 mg/L	A	DI water	100 ml	0.075 mg/L			
0.05 mg/L		5.0 ml	1.0 mg/L	A	DI water	100 ml	0.05 mg/L			
0.025 mg/L		2.5 ml	1.0 mg/L	A	DI water	100 ml	0.025 mg/L			
0.01 mg/L (low)	GNE9-71693-NO2	1.0 ml	1.0 mg/L	A	DI water	100 ml	0.01 mg/L	9/10/2022	MK	9/10/2022
0 mg/L	NA	NA	NA	NA	NA	100 ml	NA	9/10/2022	MK	9/10/2022
CCV	GNE9-71693-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	9/10/2022	MK	9/10/2022
CCVA	GNE9-71693-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	9/10/2022	MK	9/10/2022
ICV	GNE9-71695-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	9/10/2022	MK	9/10/2022

* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01
Rev. Date: 1/13/09

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: D092122W1.NO32 Date Analyzed: 09/21/22 Methods: EPA 353.2/LACHAT
Analyst: JD Run ID: GN33582

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: JD Date 9/22/22

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 9/23/22

Author: Chemistry

Date : 9/22/2022

Original Run Filename: OM_9-21-2022_03-55-52PM.OMN Created: 9/21/2022 3:55:52 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_9-21-2022_03-55-52PM.OMN Last Modified: 9/22/2022 11:41:19 AM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

d092122 wl. NO32
GN33582

Sample	Rep.	Cup No.	Channel 1 NO32 (mg/L)	Detection Time	MDF	
STDA	1	1	5.00	9/21/2022@3:56:46 PM		
STDB	1	2	2.50	9/21/2022@3:57:51 PM		
STDC	1	3	1.00	9/21/2022@3:58:57 PM		
STDD	1	4	0.500	9/21/2022@4:00:02 PM		
STDE	1	5	0.200	9/21/2022@4:01:07 PM		
STDF	1	6	0.100	9/21/2022@4:02:12 PM		
STDG	1	7	0.00	9/21/2022@4:03:17 PM		
CONF	1	8	2.77	9/21/2022@4:04:23 PM		wrong injection
	Known Conc:		2.00			
CONF	1	9	-0.109	9/21/2022@4:05:29 PM		
	Known Conc:		2.00			
CONF	1	10	2.07	9/21/2022@4:06:34 PM		
	Known Conc:		0.00			
CONF	1	11	2.07	9/21/2022@4:07:40 PM		
	Known Conc:		2.50			
CONF	1	12	-0.116	9/21/2022@4:08:45 PM		
	Known Conc:		0.00			
EFFCHK	1	8	2.01	9/21/2022@4:09:50 PM		100.5%
	Known Conc:		2.00			
ICV	1	9	1.99	9/21/2022@4:10:56 PM		99.5%
	Known Conc:		2.00			
ICB	1	10	-0.114	9/21/2022@4:12:02 PM		
	Known Conc:		0.00			
CCV	1	11	2.58	9/21/2022@4:13:07 PM		103.2%
	Known Conc:		2.50			
CCB	1	12	-0.100	9/21/2022@4:14:12 PM		
	Known Conc:		0.00			
GP42399-MB1	1	13	-0.101	9/21/2022@4:15:18 PM		
GP42399-B1	1	14	1.95	9/21/2022@4:16:24 PM		97.5%
GP42399-S1	1	15	1.21	9/21/2022@4:17:30 PM		
GP42399-S2	1	16	1.09	9/21/2022@4:18:36 PM		
GP42399-D1	1	17	-0.0640	9/21/2022@4:19:41 PM		
CCV	1	11	2.59	9/21/2022@4:20:47 PM		103.6%
	Known Conc:		2.50			
CCB	1	12	-0.102	9/21/2022@4:21:53 PM		
	Known Conc:		0.00			
JD51916-2	1	18	-0.0645	9/21/2022@4:22:58 PM		
JD51857-2	1	19	-0.0263	9/21/2022@4:24:04 PM		
JD51857-3	1	20	-0.0467	9/21/2022@4:25:10 PM		
JD51857-4	1	21	-0.0677	9/21/2022@4:26:16 PM		
JD51857-5	1	22	3.10	9/21/2022@4:27:21 PM		
JD51857-6	1	23	-0.0928	9/21/2022@4:28:27 PM		
JD51857-7	1	24	-0.0880	9/21/2022@4:29:33 PM		
	Calibration:		Table/Fig. : 1			
JD51857-8	1	25	-0.0763	9/21/2022@4:30:39 PM		
JD51857-9	1	26	-0.0225	9/21/2022@4:31:45 PM		
JD51857-10	1	27	3.35	9/21/2022@4:32:51 PM		
CCV	1	11	2.36	9/21/2022@4:33:57 PM		94.4%
	Known Conc:		2.50			
CCB	1	12	-0.106	9/21/2022@4:35:03 PM		
	Known Conc:		0.00			
JD51858-2	1	28	-0.0386	9/21/2022@4:36:09 PM		
JD51858-3	1	29	7.88	9/21/2022@4:37:14 PM		outofrange
JD51858-4	1	30	-0.116	9/21/2022@4:38:20 PM		
JD51858-5	1	31	0.898	9/21/2022@4:39:26 PM		
JD51940-1	1	32	2.08	9/21/2022@4:40:32 PM		
JD51916-1	1	33	-0.0736	9/21/2022@4:41:38 PM		
JD51916-3	1	34	-0.0643	9/21/2022@4:42:45 PM		
JD51916-4	1	35	-0.111	9/21/2022@4:43:51 PM		
JD51916-5	1	36	-0.0766	9/21/2022@4:44:56 PM		

Author: Chemistry

Date : 9/22/2022

JD51937-1	1	37	9.40	9/21/2022@4:46:03 PM	out of range
CCV	1	11	2.54	9/21/2022@4:47:08 PM	101.6%
	Known Conc:		2.50		
CCB	1	12	-0.105	9/21/2022@4:48:14 PM	
	Known Conc:		0.00		
GP42400-MB1	1	38	-0.102	9/21/2022@4:49:21 PM	
GP42400-B1	1	39	1.87	9/21/2022@4:50:27 PM	93.5%
GP42400-S1	1	40	1.09	9/21/2022@4:51:33 PM	
GP42400-S2	1	41	9.86	9/21/2022@4:52:39 PM	out of range
GP42400-D1	1	42	-0.171	9/21/2022@4:53:45 PM	
JD52017-2	1	43	-0.0864	9/21/2022@4:54:52 PM	
JD51937-2	1	44	9.88	9/21/2022@4:55:59 PM	out of range
JD51937-3	1	45	9.21	9/21/2022@4:57:05 PM	
JD51937-4	1	46	8.99	9/21/2022@4:58:11 PM	
JD51937-5	1	47	8.74	9/21/2022@4:59:17 PM	
CCV	1	11	2.73	9/21/2022@5:00:23 PM	109.2%
	Known Conc:		2.50		
CCB	1	12	-0.105	9/21/2022@5:01:29 PM	
	Known Conc:		0.00		
JD51954-2	1	48	-6.31e-3	9/21/2022@5:02:34 PM	
JD51954-3	1	49	-0.0601	9/21/2022@5:03:41 PM	
JD51954-4	1	50	-0.0851	9/21/2022@5:04:48 PM	
FA98787-1	1	51	-0.0327	9/21/2022@5:05:54 PM	
TD83291-1	1	52	-0.123	9/21/2022@5:07:01 PM	
TD83291-2	1	53	0.542	9/21/2022@5:08:07 PM	
JD52017-1	1	54	1.44	9/21/2022@5:09:14 PM	
JD52017-3	1	55	0.0963	9/21/2022@5:10:21 PM	
JD52017-4	1	56	-0.0572	9/21/2022@5:11:27 PM	
JD52017-5	1	57	-0.0849	9/21/2022@5:12:34 PM	
CCV	1	11	2.85	9/21/2022@5:13:40 PM	114%
	Known Conc:		2.50		
CCB	1	12	-0.107	9/21/2022@5:14:45 PM	
	Known Conc:		0.00		
JD52017-6	1	58	0.671	9/21/2022@5:15:52 PM	
JD52017-7	1	59	-0.107	9/21/2022@5:16:58 PM	
JD52047-1	1	60	2.18	9/21/2022@5:18:04 PM	
JD52047-2	1	61	0.964	9/21/2022@5:19:11 PM	
JD52047-3	1	62	-0.0834	9/21/2022@5:20:18 PM	
GP42401-MB1	1	63	-0.106	9/21/2022@5:21:25 PM	
JD51858-4	1	30	-0.0742	9/21/2022@5:22:30 PM	
GP42401-B1	1	64	2.36 ~~2.47~~ 39	9/21/2022@5:23:37 PM	118%
GP42401-S1	1	65	1.50	9/21/2022@5:24:44 PM	
GP42401-S2	1	66	3.88	9/21/2022@5:25:51 PM	
CONF	1	11	3.48	9/21/2022@5:26:56 PM	wrong injection
	Known Conc:		2.50		
CONF	1	12	-0.108	9/21/2022@5:28:02 PM	
	Known Conc:		0.00		
CONF	1	67	0.513	9/21/2022@5:29:09 PM	
CONF	1	68	0.522	9/21/2022@5:30:16 PM	
CCV	1	11	2.13	9/21/2022@5:31:21 PM	85.2%
	Known Conc:		2.50		
CCB	1	12	-0.0861	9/21/2022@5:32:26 PM	
	Known Conc:		0.00		
GP42401-D1	1	67	0.513	9/21/2022@5:33:33 PM	
JD51942-2	1	68	0.523	9/21/2022@5:34:40 PM	
JD52047-4	1	69	2.03	9/21/2022@5:35:47 PM	
JD52047-5	1	70	-0.0196	9/21/2022@5:36:54 PM	
JD52047-6	1	71	0.174	9/21/2022@5:38:01 PM	
JD52047-7	1	72	0.847	9/21/2022@5:39:07 PM	
CONF	1	11	0.415	9/21/2022@5:40:14 PM	wrong injection
	Known Conc:		2.50		
CONF	1	12	-0.149	9/21/2022@5:41:19 PM	
	Known Conc:		0.00		
CONF	1	73	0.0505	9/21/2022@5:42:26 PM	
CONF	1	74	-0.0489	9/21/2022@5:43:33 PM	
CCV	1	11	2.18	9/21/2022@5:44:38 PM	87.2%
	Known Conc:		2.50		
CCB	1	12	-0.110	9/21/2022@5:45:44 PM	

19.2

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Author: Chemistry

Date : 9/22/2022

	Known Conc:		0.00		
FA98819-1A	1	73	0.0589	9/21/2022@5:46:51 PM	
JD51621-2	1	74	3.06	9/21/2022@5:47:58 PM	
LA83225-1	1	75	-0.111	9/21/2022@5:49:05 PM	
LA83225-2	1	76	0.0482	9/21/2022@5:50:12 PM	
JD51770-2	1	77	3.39	9/21/2022@5:51:19 PM	
FA98890-1	1	78	-0.114	9/21/2022@5:52:26 PM	
CCV	1	11	2.85	9/21/2022@5:53:32 PM	— 114%.
	Known Conc:		2.50		
CCB	1	12	-0.101	9/21/2022@5:54:37 PM	
	Known Conc:		0.00		
JD51849-1	1	79	6.81	9/21/2022@5:55:44 PM	] outofrange
JD51849-2	1	80	6.57	9/21/2022@5:56:52 PM	
JD51849-3	1	81	2.15	9/21/2022@5:57:59 PM	
JD51849-4	1	82	9.33	9/21/2022@5:59:06 PM	— outofrange
JD51849-7	1	83	3.01	9/21/2022@6:00:13 PM	
JD51849-8	1	84	1.23	9/21/2022@6:01:20 PM	
JD51849-9	1	85	3.35	9/21/2022@6:02:28 PM	
JD51849-10	1	86	-0.0425	9/21/2022@6:03:35 PM	
JD51942-1	1	87	-0.109	9/21/2022@6:04:43 PM	
GP42405-MB1	1	88	-0.111	9/21/2022@6:05:50 PM	
CCV	1	11	2.62	9/21/2022@6:06:55 PM	— 104.8%
	Known Conc:		2.50		
CCB	1	12	-0.101	9/21/2022@6:08:01 PM	
	Known Conc:		0.00		↓ Rerun
CONF	1	89	2.67	9/21/2022@6:09:07 PM	
GP42405-S1	1	90	2.17	9/21/2022@6:10:14 PM	
GP42405-S2	1	1	1.43	9/21/2022@6:11:20 PM	
GP42405-D1	1	2	0.474	9/21/2022@6:12:29 PM	
GP42405-B1	1	32	2.04	9/21/2022@6:13:31 PM	— ~~102%~~
JD52066-1	1	3	0.509	9/21/2022@6:14:37 PM	
JD51942-3	1	4	-0.109	9/21/2022@6:15:42 PM	
JD51942-4	1	5	-0.118	9/21/2022@6:16:48 PM	
JD51942-6	1	6	-0.117	9/21/2022@6:17:53 PM	
JD51942-7	1	7	-0.113	9/21/2022@6:18:59 PM	
CCV	1	11	-0.112	9/21/2022@6:20:04 PM	
	Known Conc:		2.50		
CCB	1	12	-0.111	9/21/2022@6:21:10 PM	
	Known Conc:		0.00		
JD51942-8	1	8	-0.114	9/21/2022@6:22:15 PM	
JD51942-9	1	9	-0.110	9/21/2022@6:23:21 PM	
JD52066-2	1	10	-0.111	9/21/2022@6:24:27 PM	
JD52066-4	1	13	-0.111	9/21/2022@6:25:32 PM	
JD52066-7	1	14	-0.0704	9/21/2022@6:26:38 PM	
JD52066-9	1	15	-0.111	9/21/2022@6:27:44 PM	
JD52066-10	1	16	-0.113	9/21/2022@6:28:50 PM	
JD52115-1	1	17	-0.0899	9/21/2022@6:30:04 PM	

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Author: Chemistry

Date : 9/22/2022

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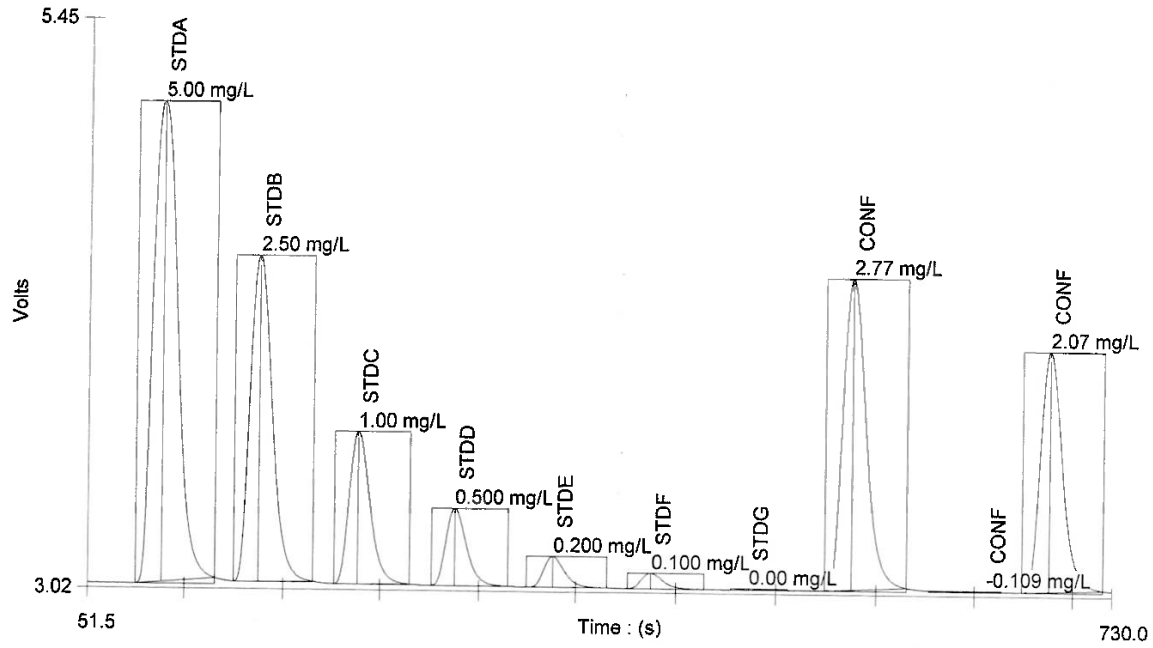

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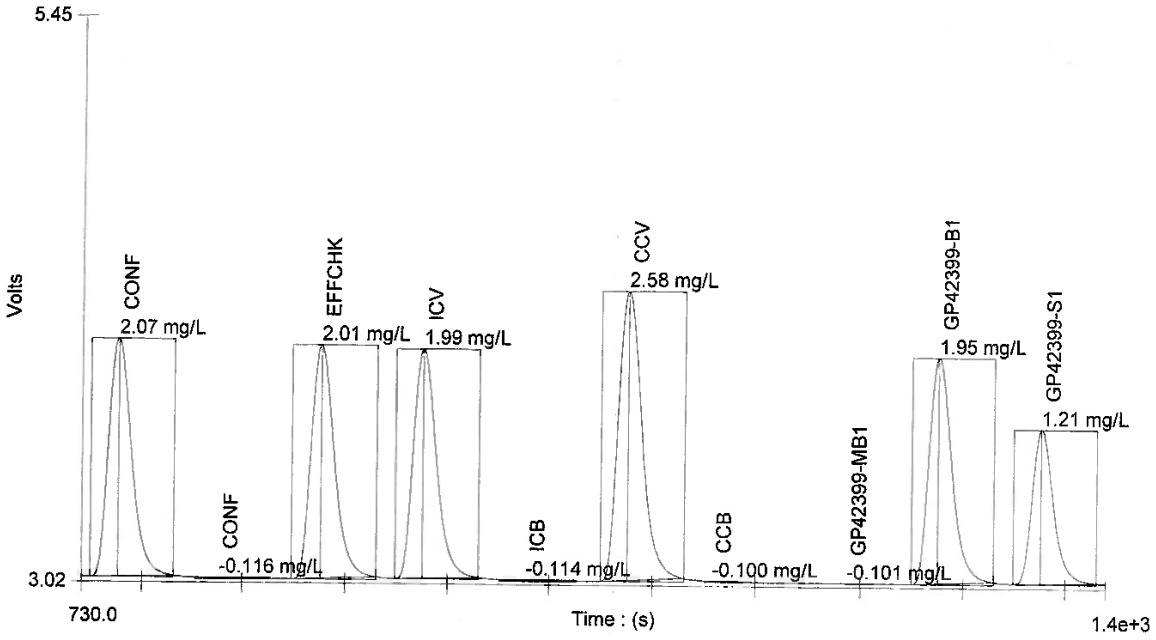

19.2

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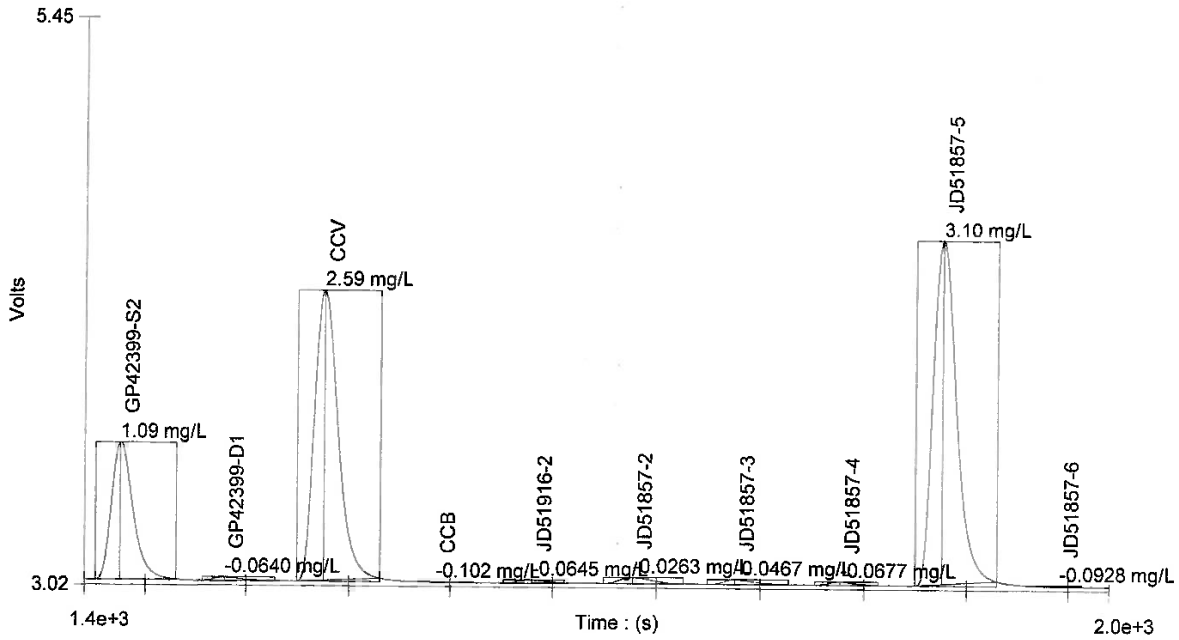
SGS FA98819

Author: Chemistry

Date : 9/22/2022

Channel 1 - Set: 3 / 14



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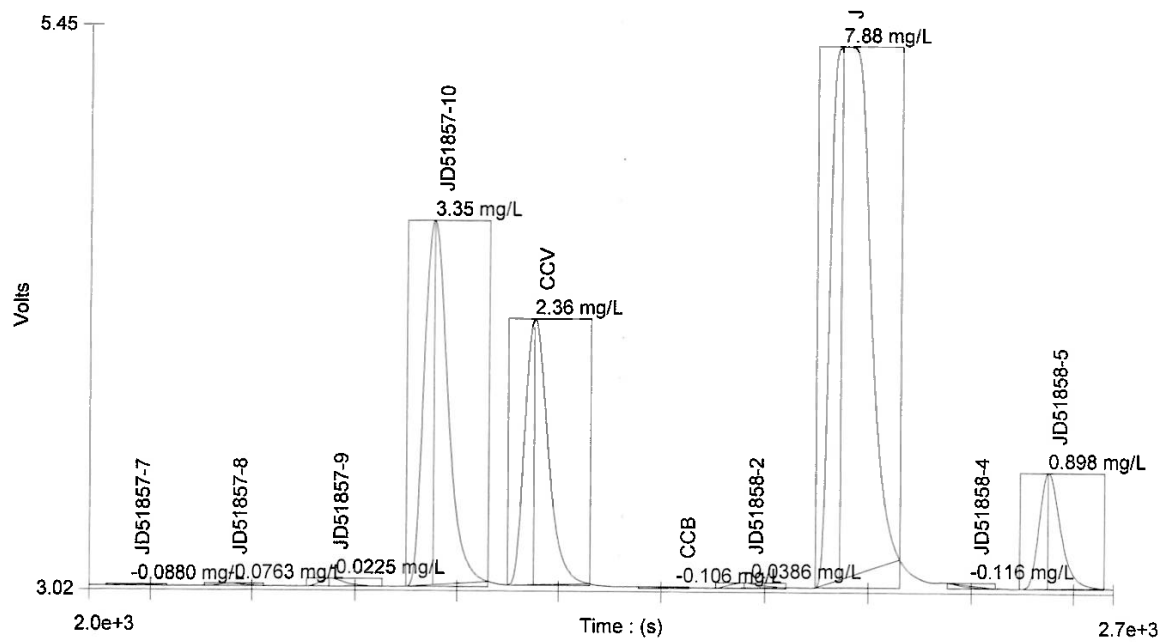

Author: Chemistry

Date : 9/22/2022

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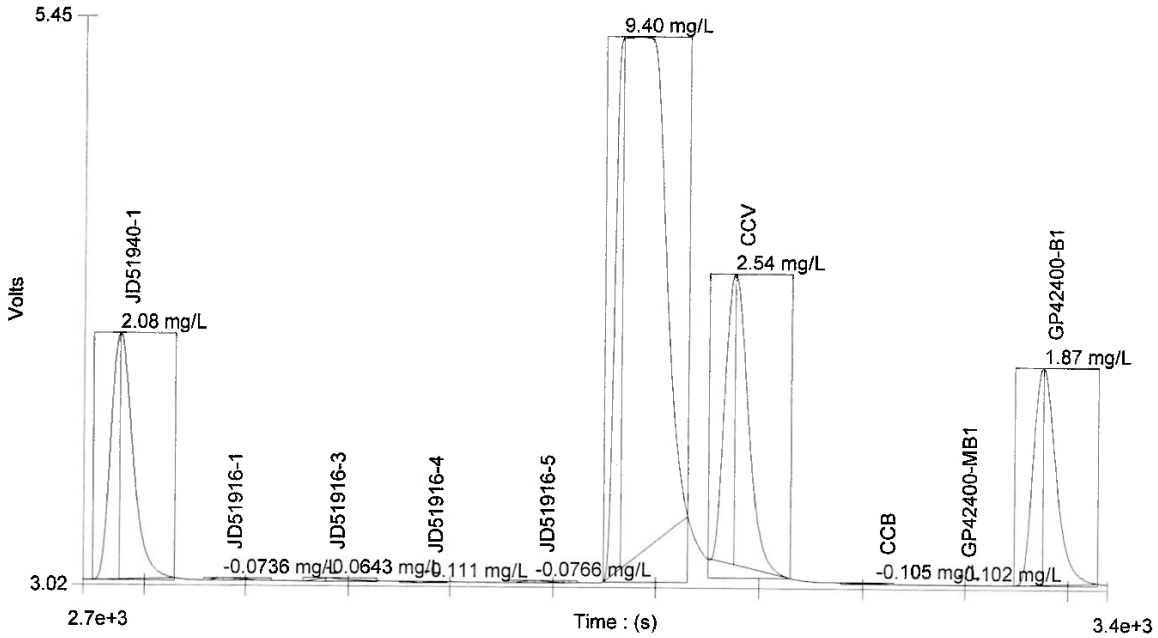

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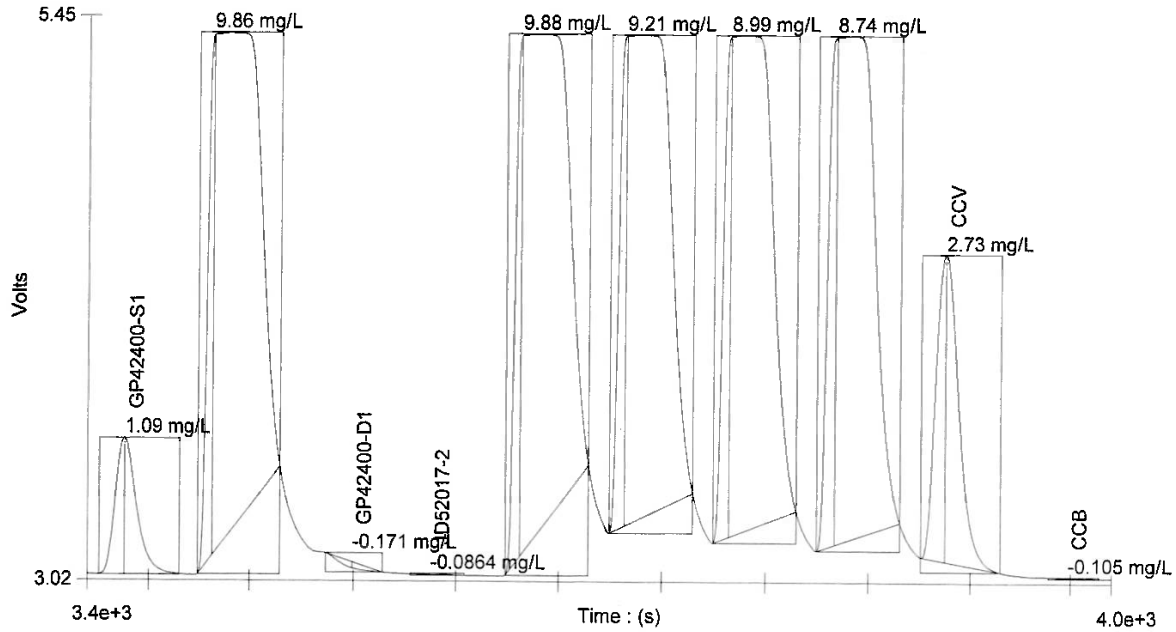

FA98819

Author: Chemistry

Date : 9/22/2022

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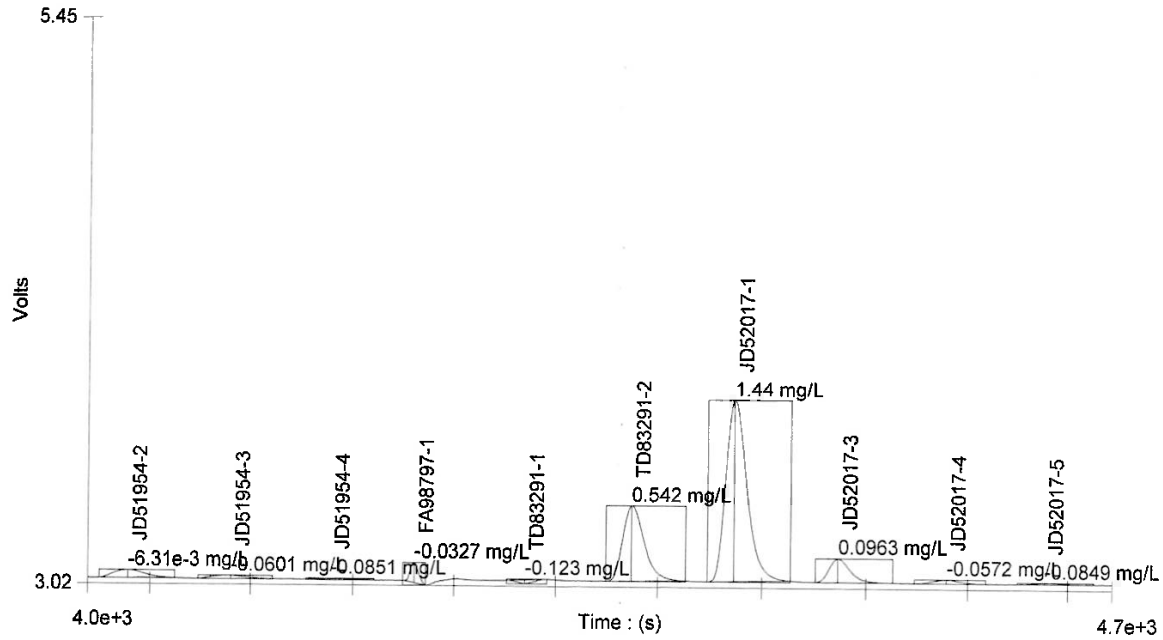

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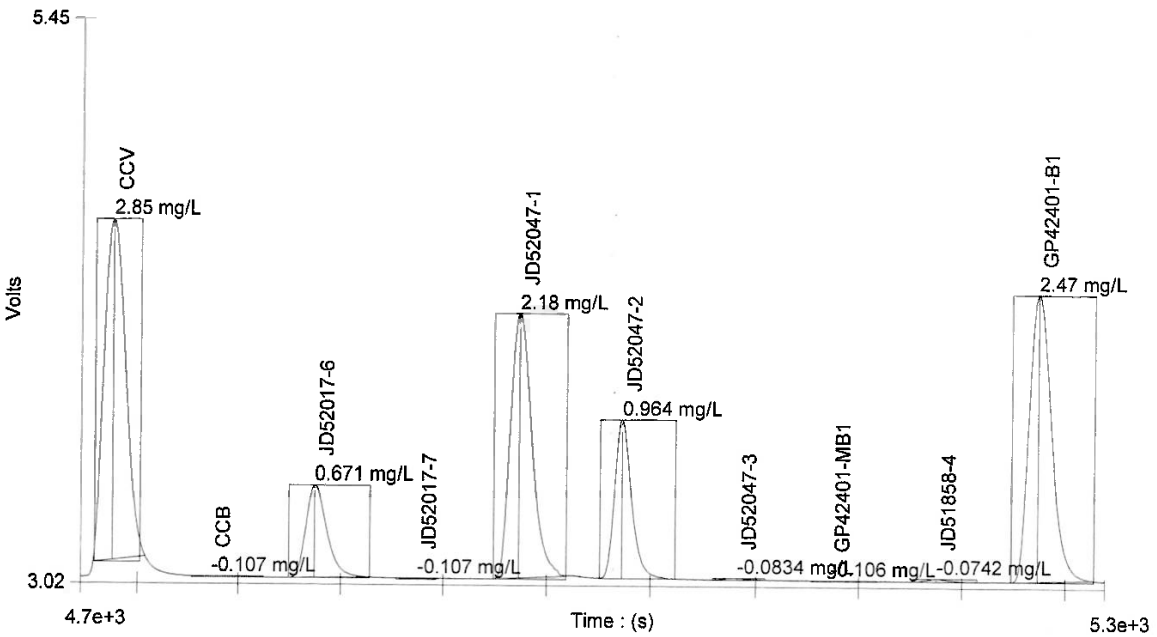
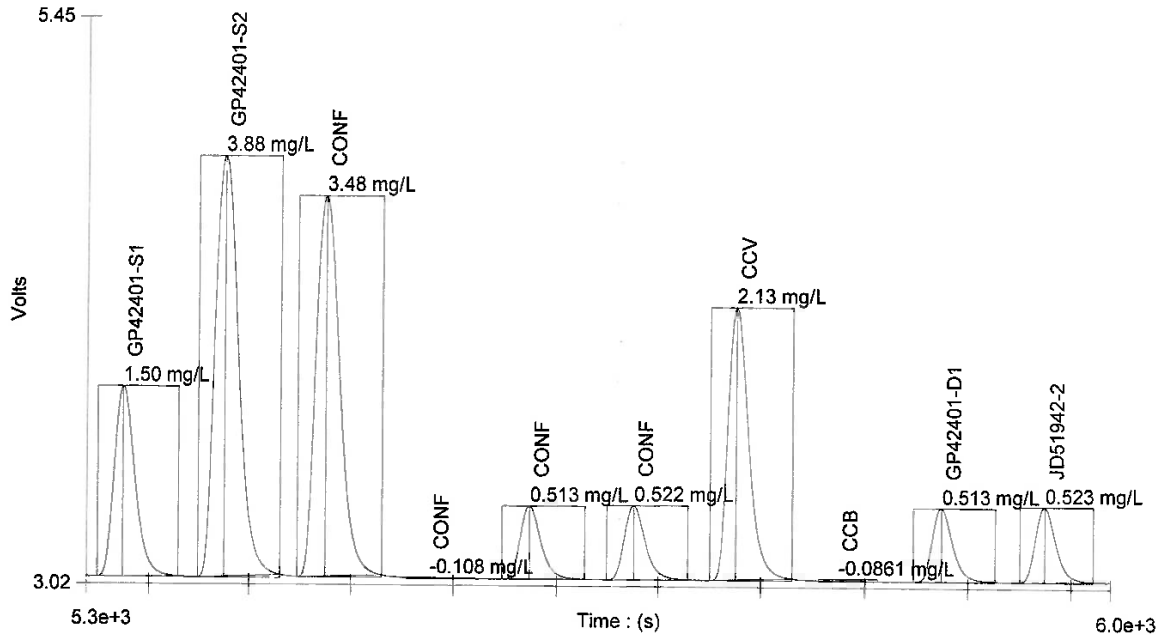


Author: Chemistry

Date : 9/22/2022

Channel 1 - Set: 9 / 14



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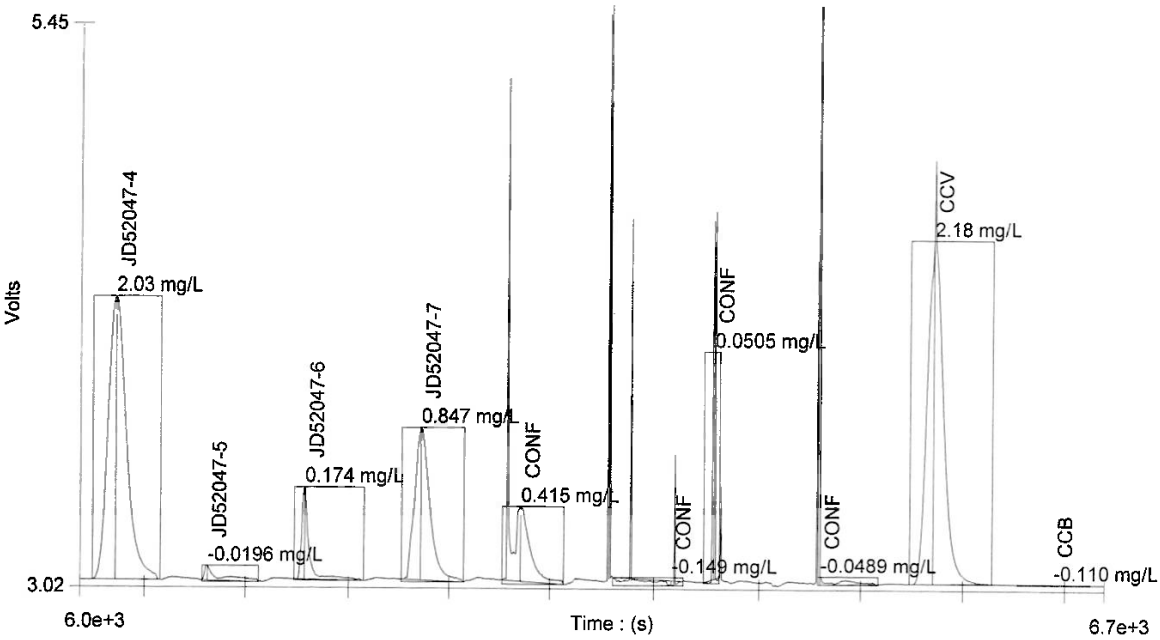
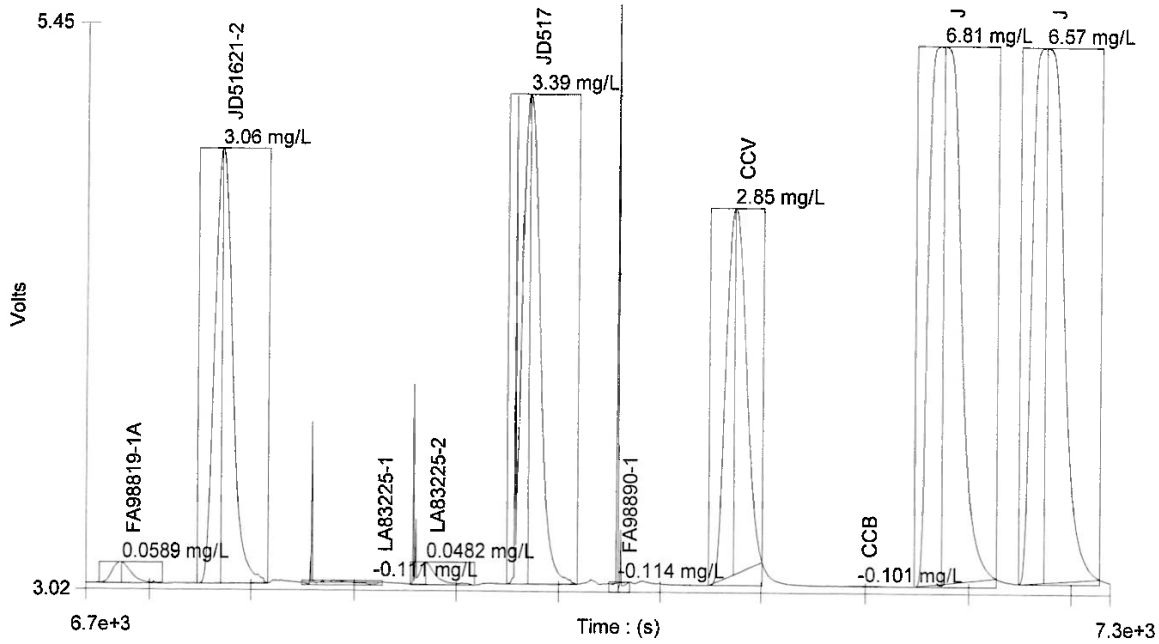


Author: Chemistry

Date : 9/22/2022

Channel 1 - Set: 11 / 14



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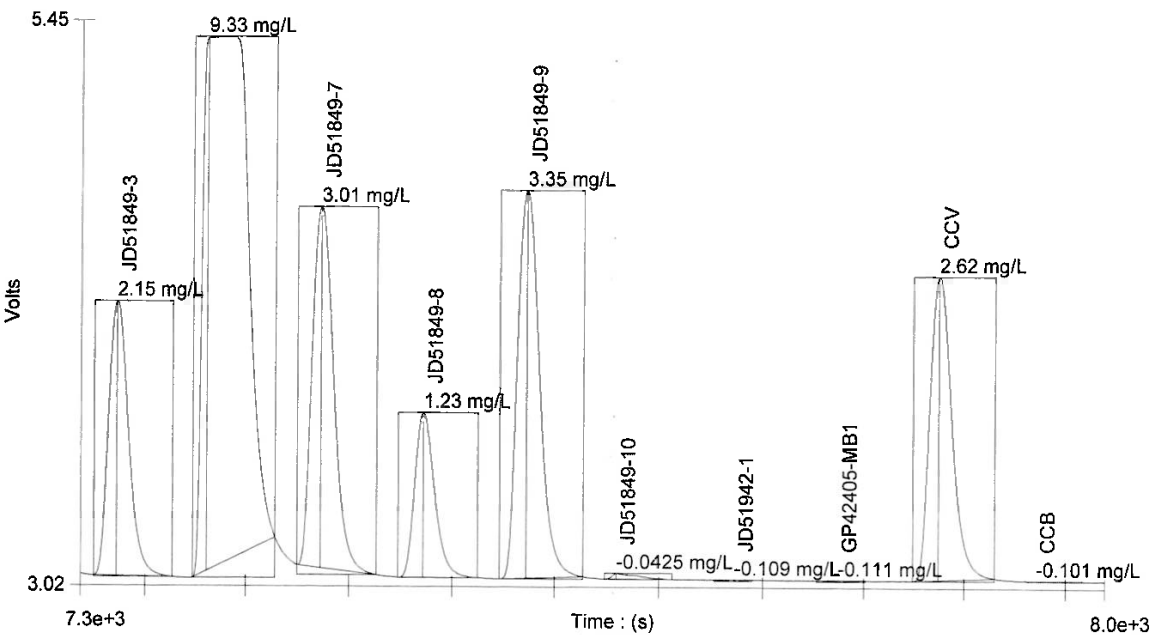
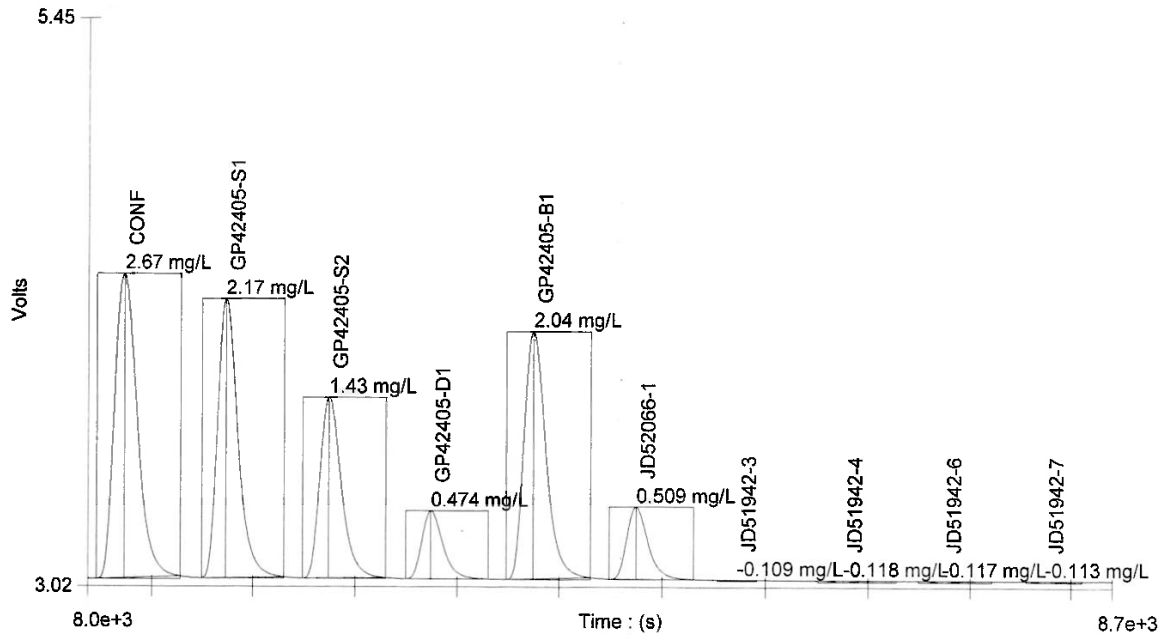


Author: Chemistry

Date : 9/22/2022

Channel 1 - Set: 13 / 14



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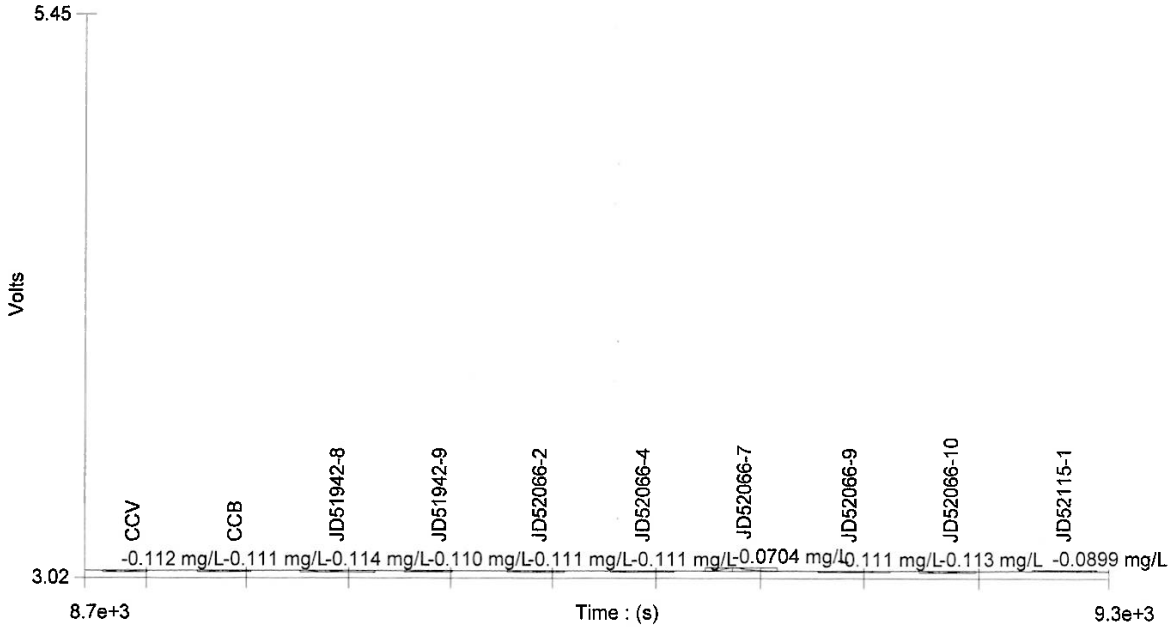

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Author: Chemistry

Date : 9/22/2022

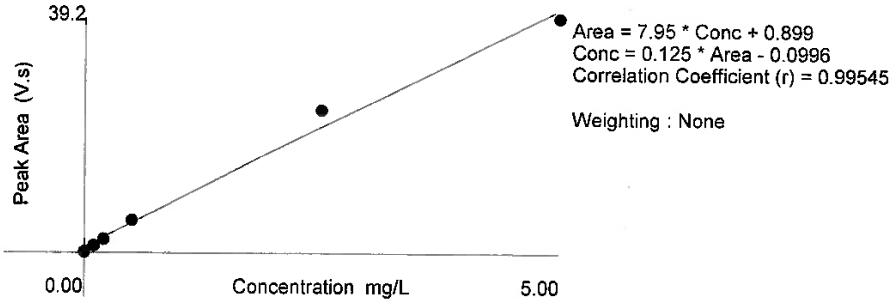
Table : 1 (NO32)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	5.00	1	39.2	2.06	0.0	3.5	4.79	9/21/2022	3:56:46 PM
2	2.50	1	23.6	1.40	0.0	-13.8	2.85	9/21/2022	3:57:51 PM
3	(1.00)	(1)	(10.4)	(0.654)					
4	0.500	1	5.27	0.334	0.0	-8.2	0.558	9/21/2022	4:00:02 PM
5	0.200	1	2.11	0.134	0.0	15.1	0.164	9/21/2022	4:01:07 PM
6	0.100	1	1.07	0.0669	0.0	36.9	0.0337	9/21/2022	4:02:12 PM
7	0.00	1	0.0835	5.06e-3			-0.0892	9/21/2022	4:03:17 PM

11.6%

-66.3%

Figure : 1 (NO32)



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SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: NO32

GN/GP number: GN33582

Analyst: JD

Date: 9/22/22

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume used in ml	Pipette ID*	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Standard ID
100 ppm NO3 intermediate	GNE6-70384-NO32	1000	10	48	Carrier	100 ml	100	12/10/2022	NO32-100-121022
100 ppm NO2 Intermediate	ERA LOT# 291020M	1000	10	48	Carrier	100 ml	100	12/10/2022	NO2-100-061522
100 ppm NO3 External	GNE6-70385-NO32	1000	10	48	Carrier	100 ml	100	12/10/2022	NO32E-100-121022

Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml		Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	
5.0 mg/l NO3	NO32-100-121022	100 mg/l	5.0	48	Carrier	100 ml	5.0	9/22/2022	STDA-091522
2.5 mg/l NO3	NO32-100-121022	100 mg/l	2.5	48	Carrier	100 ml	2.5	9/22/2022	STDB-091522
1.0 mg/l NO3	NO32-100-121022	100 mg/l	1.0	48	Carrier	100 ml	1.0	9/22/2022	STDC-091522
0.5 mg/l NO3	NO32-100-121022	100 mg/l	0.5	48	Carrier	100 ml	0.5	9/22/2022	STDD-091522
0.2 mg/l NO3	NO32-100-121022	100 mg/l	0.2	48	Carrier	100 ml	0.2	9/22/2022	STDE-091522
0.1 mg/l NO3	NO32-100-121022	100 mg/l	0.1	48	Carrier	100 ml	0.1	9/22/2022	STDF-091522
Effcheck 2.0	NO2-100-061522	100 mg/l	2.0	48	Carrier	100 ml	2.0	9/22/2022	EFFcheck-091522
ICV	NO32E-100-121022	100 mg/l	2.0	48	Carrier	100 ml	2.0	9/22/2022	ICV-091522

*If Class A glass pipettes are used, enter an A.

Form: GN205-03
Rev. Date:03/22/2022

Reagent Information Log - Nitrate Lachat Autoanalyzer

Reagent	Reagent # or Manufacturer/Lot	Expiration Date
Nitrate Stock Solution	GNE6-70384-NO32	12/10/2022
Ammonium Chloride Buffer Solution	GNE5-70188-NO3	11/24/2022
Sulfanilamide Color Reagent	GNE7-70867-NO32	9/22/2022
1:1 NH4OH	GNE5-70027-NO3	11/11/2022
Carrier Solution	GNE5-70187-NO32	11/24/2022
1000 ppm Nitrite Solution	GNE2-69020-NO32	9/22/2022
Nitrate External Stock Solution	GNE6-70385-NO32	12/10/2022

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

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Form: GN087A-43
Rev. Date: 7/19/06

SGS

Analyst: JD

Prep Date: 9/21/2022

Pipette ID: 48

Batch ID: GP42399

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
GP42399-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
GP42399-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD51916-2	Y
GP42399-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD51857-2	Y
JD51916-2			Y
JD51857-2			Y
JD51857-3			Y
JD51857-4			Y
JD51857-5			Y
JD51857-6			Y
JD51857-7			Y
JD51857-8			Y
JD51857-9			Y
JD51857-10			Y
JD51858-2			Y
JD51858-3			Y
JD51858-4			Y
JD51858-5			Y
JD51940-1			Y
JD51916-1			Y
JD51916-3			Y
JD51916-4			Y
JD51916-5			Y
JD51937-1			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer: _____

Date: _____

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SGS

Analyst: JD

Prep Date: 9/21/2022

Pipette ID: 48

Batch ID: GP42400

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
GP42400-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
GP42400-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD52017-2	Y
GP42400-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD51937-2	Y
JD52017-2			Y
JD51937-2			Y
JD51937-3			Y
JD51937-4			Y
JD51937-5			Y
JD51954-2			Y
JD51954-3			Y
JD51954-4			Y
FA98787-1			Y
TD83291-1			Y
TD83291-2			Y
JD52017-1			Y
JD52017-3			Y
JD52017-4			Y
JD52017-5			Y
JD52017-6			Y
JD52017-7			Y
JD52047-1			Y
JD52047-2			Y
JD52047-3			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer:

Date:

19.2

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SGS

Analyst: JD

Prep Date: 9/21/2022

Pipette ID: 48

Batch ID: GP42401

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
GP42401-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
GP42401-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD51942-2	Y
GP42401-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD52047-4	Y
JD51942-2			Y
JD52047-4			Y
JD52047-5			Y
JD52047-6			Y
JD52047-7			Y
FA98819-1A			Y
JD51621-2			Y
LA83225-1			Y
LA83225-2			Y
JD51770-2			Y
FA98890-1			Y
JD51849-1			Y
JD51849-2			Y
JD51849-3			Y
JD51849-4			Y
JD51849-7			Y
JD51849-8			Y
JD51849-9			Y
JD51849-10			Y
JD51942-1			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer:

Date:

19.2

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA98820



Sampling Date: 09/09/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: 732

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA98820

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA98820-1	09/09/22	10:45	JR	09/10/22	AQ	Ground Water	EW-01
FA98820-1A	09/09/22	10:45	JR	09/10/22	AQ	Ground Water	EW-01
FA98820-2	09/09/22	11:15	JR	09/10/22	AQ	Ground Water	EW-04
FA98820-2A	09/09/22	11:15	JR	09/10/22	AQ	Ground Water	EW-04

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA98820

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 9/26/2022 2:38:00 PM

On 09/10/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA98820 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260D

Matrix: AQ **Batch ID:** V2P3586

Sample(s) FA98918-5MS, FA98918-5MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference.

FA98820-1A for Methyl Tert Butyl Ether: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98820-1A for Tert-Amyl Methyl Ether: Associated ICV outside DOD QSM control limits high, sample is ND.

FA98820-1A for Tetrahydrofuran: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98820-1A for Trichlorofluoromethane: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98820-2A for Methyl Tert Butyl Ether: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98820-2A for Tert-Amyl Methyl Ether: Associated ICV outside DOD QSM control limits high, sample is ND.

FA98820-2A for Tetrahydrofuran: Associated CCV outside of DOD QSM control limits high, sample is ND.

FA98820-2A for Trichlorofluoromethane: Associated CCV outside of DOD QSM control limits high, sample is ND.

GC Volatiles By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** G1R349

Sample(s) FA98770-6DUP, FA98770-6MS were used as the QC samples indicated.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP41228

Sample(s) FA98999-1DUP, FA98999-1MS, FA98999-1MSD, FA98999-1PS, FA98999-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Iron are outside control limits for sample MP41228-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP41211

Sample(s) FA98621-8DUP, FA98621-8MS, FA98621-8MSD, FA98621-8SDL, FA98679-3SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP41211-SD1, MP41211-SD2. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA98820-1	**EW-01**					
Arsenic		1550	50	25	ug/l	SW846 6020B
FA98820-1A	**EW-01**					
Benzene		0.94 J	1.0	0.50	ug/l	SW846 8260D
Chlorobenzene		0.73 J	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethylene		0.56 J	1.0	0.50	ug/l	SW846 8260D
Ethylbenzene		0.41 J	1.0	0.50	ug/l	SW846 8260D
Ethyl Ether		6.6	5.0	2.0	ug/l	SW846 8260D
m,p-Xylene		1.6 J	2.0	1.0	ug/l	SW846 8260D
Methane		2120	5.0	2.5	ug/l	RSKSOP-147/175
Ethane		0.68 J	1.0	0.50	ug/l	RSKSOP-147/175
Iron		66900	300	50	ug/l	SW846 6010D
Manganese		2170	15	2.0	ug/l	SW846 6010D
FA98820-2	**EW-04**					
Arsenic		2920	50	25	ug/l	SW846 6020B
FA98820-2A	**EW-04**					
Benzene		0.35 J	1.0	0.50	ug/l	SW846 8260D
Ethyl Ether		2.7 J	5.0	2.0	ug/l	SW846 8260D
Methane		1060	0.50	0.25	ug/l	RSKSOP-147/175
Iron		37300	300	50	ug/l	SW846 6010D
Manganese		2340	15	2.0	ug/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1550	50	25	5.3	ug/l	50	09/14/22	09/19/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18924
(2) Prep QC Batch: MP41211

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P93334.D	1	09/23/22 19:17	CF	n/a	n/a	V2P3586
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.94	1.0	0.50	0.31	ug/l	J
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.73	1.0	0.50	0.20	ug/l	J
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.56	1.0	0.50	0.28	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
108-20-3	Di-Isopropyl Ether	0.50 U	1.0	0.50	0.24	ug/l	
123-91-1	1,4-Dioxane	100 U	200	100	75	ug/l	
100-41-4	Ethylbenzene	0.41	1.0	0.50	0.36	ug/l	J
60-29-7	Ethyl Ether	6.6	5.0	2.0	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	1.0 U	2.0	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	4.0 U	5.0	4.0	2.0	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether [a]	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	1.0 U	2.0	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
109-99-9	Tetrahydrofuran [a]	3.5 U	5.0	3.5	1.6	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane [a]	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.6	2.0	1.0	0.47	ug/l	J
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV outside of DOD QSM control limits high, sample is ND.
(b) Associated ICV outside DOD QSM control limits high, sample is ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1R9365.D	1	09/13/22 13:59	TD	n/a	n/a	G1R349
Run #2	1R9371.D	10	09/13/22 15:04	TD	n/a	n/a	G1R349

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	20 Deg. C

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	2120 [a]	5.0	2.5	1.6	ug/l	
74-84-0	Ethane	0.68	1.0	0.50	0.32	ug/l	J
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-01		
Lab Sample ID:	FA98820-1A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	66900	300	50	17	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2170	15	2.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18931
(2) Prep QC Batch: MP41228

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2920	50	25	5.3	ug/l	50	09/14/22	09/19/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18924
(2) Prep QC Batch: MP41211

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P93336.D	1	09/23/22 19:49	CF	n/a	n/a	V2P3586
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.35	1.0	0.50	0.31	ug/l	J
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
108-20-3	Di-Isopropyl Ether	0.50 U	1.0	0.50	0.24	ug/l	
123-91-1	1,4-Dioxane	100 U	200	100	75	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
60-29-7	Ethyl Ether	2.7	5.0	2.0	1.0	ug/l	J
637-92-3	Ethyl Tert Butyl Ether	1.0 U	2.0	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	4.0 U	5.0	4.0	2.0	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether [a]	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	1.0 U	2.0	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
109-99-9	Tetrahydrofuran [a]	3.5 U	5.0	3.5	1.6	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane [a]	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of DOD QSM control limits high, sample is ND.
(b) Associated ICV outside DOD QSM control limits high, sample is ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1R9366.D	1	09/13/22 14:07	TD	n/a	n/a	G1R349
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	1060	0.50	0.25	0.16	ug/l	
74-84-0	Ethane	0.50 U	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EW-04		
Lab Sample ID:	FA98820-2A	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	37300	300	50	17	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2340	15	2.0	1.0	ug/l	1	09/20/22	09/21/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18931
(2) Prep QC Batch: MP41228

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FA98820

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNA	DI WATER	MEOH	Total Arsenic - 6020A	Total Fe & Mn - 6010C	VOCs - 8620	Dissolved Methane & Ethane	LAB USE ONLY
1	EW-01	9/9/22	10:45	JWR	GW	8		x	x		x					X	X	X	X	
2	EW-04	9/9/22	11:15	JWR	GW	8		x	x		x					X	X	X	X	

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

INITIAL ASSESSMENT

LABEL VERIFICATION ZB

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

SGS Service Center
Northborough, MA
9/9

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 [signature] Sovcon	9-9-22 1415	2 [signature]	3 [signature]	9/9/22	4 [signature] 9/10/22 1100
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.0 CTM

CS# 02411 http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

5.1
5

FA98820: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA98820 **Client:** SOVEREIGN CONSULTING, INC **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 9/10/2022 11:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 2645

Therm ID: IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 9/10/2022 11:00:00 A Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2P3586	SW846 8260D						
V2P3586-BS	67-64-1	Acetone	BSP	REC	99	%	39-160
V2P3586-BS	71-43-2	Benzene	BSP	REC	113	%	79-120
V2P3586-BS	108-86-1	Bromobenzene	BSP	REC	98	%	80-120
V2P3586-BS	74-97-5	Bromochloromethane	BSP	REC	108	%	78-123
V2P3586-BS	75-27-4	Bromodichloromethane	BSP	REC	110	%	79-125
V2P3586-BS	75-25-2	Bromoform	BSP	REC	100	%	66-130
V2P3586-BS	78-93-3	2-Butanone (MEK)	BSP	REC	98	%	56-143
V2P3586-BS	104-51-8	n-Butylbenzene	BSP	REC	102	%	75-128
V2P3586-BS	135-98-8	sec-Butylbenzene	BSP	REC	112	%	77-126
V2P3586-BS	98-06-6	tert-Butylbenzene	BSP	REC	103	%	78-124
V2P3586-BS	75-15-0	Carbon Disulfide	BSP	REC	100	%	64-133
V2P3586-BS	56-23-5	Carbon Tetrachloride	BSP	REC	120	%	72-136
V2P3586-BS	108-90-7	Chlorobenzene	BSP	REC	107	%	82-118
V2P3586-BS	75-00-3	Chloroethane	BSP	REC	101	%	60-138
V2P3586-BS	67-66-3	Chloroform	BSP	REC	114	%	79-124
V2P3586-BS	95-49-8	o-Chlorotoluene	BSP	REC	101	%	79-122
V2P3586-BS	106-43-4	p-Chlorotoluene	BSP	REC	101	%	78-122
V2P3586-BS	124-48-1	Dibromochloromethane	BSP	REC	100	%	74-126
V2P3586-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	94	%	62-128
V2P3586-BS	106-93-4	1,2-Dibromoethane	BSP	REC	104	%	77-121
V2P3586-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	108	%	32-152
V2P3586-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	103	%	80-119
V2P3586-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	107	%	80-119
V2P3586-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	102	%	79-118
V2P3586-BS	75-34-3	1,1-Dichloroethane	BSP	REC	120	%	77-125
V2P3586-BS	107-06-2	1,2-Dichloroethane	BSP	REC	107	%	73-128
V2P3586-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	118	%	71-131
V2P3586-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	115	%	78-123
V2P3586-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	116	%	75-124
V2P3586-BS	78-87-5	1,2-Dichloropropane	BSP	REC	109	%	78-122
V2P3586-BS	142-28-9	1,3-Dichloropropane	BSP	REC	97	%	80-119
V2P3586-BS	594-20-7	2,2-Dichloropropane	BSP	REC	108	%	60-139
V2P3586-BS	563-58-6	1,1-Dichloropropene	BSP	REC	116	%	79-125
V2P3586-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	110	%	75-124
V2P3586-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	110	%	73-127
V2P3586-BS	108-20-3	Di-Isopropyl Ether	BSP	REC	114	%	67-128
V2P3586-BS	123-91-1	1,4-Dioxane	BSP	REC	116	%	59-139
V2P3586-BS	100-41-4	Ethylbenzene	BSP	REC	106	%	79-121
V2P3586-BS	60-29-7	Ethyl Ether	BSP	REC	102	%	68-129
V2P3586-BS	637-92-3	Ethyl Tert Butyl Ether	BSP	REC	108	%	70-127
V2P3586-BS	87-68-3	Hexachlorobutadiene	BSP	REC	108	%	66-134
V2P3586-BS	591-78-6	2-Hexanone	BSP	REC	91	%	57-139

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2P3586-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
V2P3586-BS	99-87-6	p-Isopropyltoluene	BSP	REC	111	%	77-127
V2P3586-BS	74-83-9	Methyl Bromide	BSP	REC	95	%	53-141
V2P3586-BS	74-87-3	Methyl Chloride	BSP	REC	110	%	50-139
V2P3586-BS	74-95-3	Methylene Bromide	BSP	REC	110	%	79-123
V2P3586-BS	75-09-2	Methylene Chloride	BSP	REC	92	%	74-124
V2P3586-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	91	%	67-130
V2P3586-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	115	%	71-124
V2P3586-BS	91-20-3	Naphthalene	BSP	REC	102	%	61-128
V2P3586-BS	103-65-1	n-Propylbenzene	BSP	REC	103	%	76-126
V2P3586-BS	100-42-5	Styrene	BSP	REC	107	%	78-123
V2P3586-BS	994-05-8	Tert-Amyl Methyl Ether	BSP	REC	116	%	68-128
V2P3586-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	106	%	78-124
V2P3586-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	101	%	71-121
V2P3586-BS	127-18-4	Tetrachloroethylene	BSP	REC	122	%	74-129
V2P3586-BS	109-99-9	Tetrahydrofuran	BSP	REC	111	%	57-133
V2P3586-BS	108-88-3	Toluene	BSP	REC	104	%	80-121
V2P3586-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	102	%	69-129
V2P3586-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	103	%	69-130
V2P3586-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	117	%	74-131
V2P3586-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	107	%	80-119
V2P3586-BS	79-01-6	Trichloroethylene	BSP	REC	114	%	79-123
V2P3586-BS	75-69-4	Trichlorofluoromethane	BSP	REC	118	%	65-141
V2P3586-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	96	%	73-122
V2P3586-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	103	%	76-124
V2P3586-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	101	%	75-124
V2P3586-BS	75-01-4	Vinyl Chloride	BSP	REC	112	%	58-137
V2P3586-BS		m,p-Xylene	BSP	REC	105	%	80-121
V2P3586-BS	95-47-6	o-Xylene	BSP	REC	111	%	78-122
V2P3586-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
V2P3586-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	81-118
V2P3586-BS	2037-26-5	Toluene-D8	BSP	SURR	94	%	89-112
V2P3586-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	98	%	85-114
FA98918-5MS*	67-64-1	Acetone	MS	REC	109	%	39-160
FA98918-5MS*	71-43-2	Benzene	MS	REC	110	%	79-120
FA98918-5MS*	108-86-1	Bromobenzene	MS	REC	96	%	80-120
FA98918-5MS*	74-97-5	Bromochloromethane	MS	REC	105	%	78-123
FA98918-5MS*	75-27-4	Bromodichloromethane	MS	REC	105	%	79-125
FA98918-5MS*	75-25-2	Bromoform	MS	REC	89	%	66-130
FA98918-5MS*	78-93-3	2-Butanone (MEK)	MS	REC	107	%	56-143
FA98918-5MS*	104-51-8	n-Butylbenzene	MS	REC	92	%	75-128
FA98918-5MS*	135-98-8	sec-Butylbenzene	MS	REC	104	%	77-126
FA98918-5MS*	98-06-6	tert-Butylbenzene	MS	REC	98	%	78-124
FA98918-5MS*	75-15-0	Carbon Disulfide	MS	REC	88	%	64-133
FA98918-5MS*	56-23-5	Carbon Tetrachloride	MS	REC	108	%	72-136

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA98918-5MS*	108-90-7	Chlorobenzene	MS	REC	102	%	82-118
FA98918-5MS*	75-00-3	Chloroethane	MS	REC	114	%	60-138
FA98918-5MS*	67-66-3	Chloroform	MS	REC	109	%	79-124
FA98918-5MS*	95-49-8	o-Chlorotoluene	MS	REC	96	%	79-122
FA98918-5MS*	106-43-4	p-Chlorotoluene	MS	REC	96	%	78-122
FA98918-5MS*	124-48-1	Dibromochloromethane	MS	REC	93	%	74-126
FA98918-5MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	84	%	62-128
FA98918-5MS*	106-93-4	1,2-Dibromoethane	MS	REC	99	%	77-121
FA98918-5MS*	75-71-8	Dichlorodifluoromethane	MS	REC	123	%	32-152
FA98918-5MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	98	%	80-119
FA98918-5MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	100	%	80-119
FA98918-5MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	98	%	79-118
FA98918-5MS*	75-34-3	1,1-Dichloroethane	MS	REC	115	%	77-125
FA98918-5MS*	107-06-2	1,2-Dichloroethane	MS	REC	103	%	73-128
FA98918-5MS*	75-35-4	1,1-Dichloroethylene	MS	REC	112	%	71-131
FA98918-5MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	91	%	78-123
FA98918-5MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	106	%	75-124
FA98918-5MS*	78-87-5	1,2-Dichloropropane	MS	REC	106	%	78-122
FA98918-5MS*	142-28-9	1,3-Dichloropropane	MS	REC	92	%	80-119
FA98918-5MS*	594-20-7	2,2-Dichloropropane	MS	REC	85	%	60-139
FA98918-5MS*	563-58-6	1,1-Dichloropropene	MS	REC	112	%	79-125
FA98918-5MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	101	%	75-124
FA98918-5MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	98	%	73-127
FA98918-5MS*	108-20-3	Di-Isopropyl Ether	MS	REC	112	%	67-128
FA98918-5MS*	123-91-1	1,4-Dioxane	MS	REC	117	%	59-139
FA98918-5MS*	100-41-4	Ethylbenzene	MS	REC	101	%	79-121
FA98918-5MS*	60-29-7	Ethyl Ether	MS	REC	103	%	68-129
FA98918-5MS*	637-92-3	Ethyl Tert Butyl Ether	MS	REC	102	%	70-127
FA98918-5MS*	87-68-3	Hexachlorobutadiene	MS	REC	94	%	66-134
FA98918-5MS*	591-78-6	2-Hexanone	MS	REC	98	%	57-139
FA98918-5MS*	98-82-8	Isopropylbenzene	MS	REC	104	%	72-131
FA98918-5MS*	99-87-6	p-Isopropyltoluene	MS	REC	104	%	77-127
FA98918-5MS*	74-83-9	Methyl Bromide	MS	REC	67	%	53-141
FA98918-5MS*	74-87-3	Methyl Chloride	MS	REC	121	%	50-139
FA98918-5MS*	74-95-3	Methylene Bromide	MS	REC	102	%	79-123
FA98918-5MS*	75-09-2	Methylene Chloride	MS	REC	94	%	74-124
FA98918-5MS*	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	99	%	67-130
FA98918-5MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	108	%	71-124
FA98918-5MS*	91-20-3	Naphthalene	MS	REC	94	%	61-128
FA98918-5MS*	103-65-1	n-Propylbenzene	MS	REC	98	%	76-126
FA98918-5MS*	100-42-5	Styrene	MS	REC	98	%	78-123
FA98918-5MS*	994-05-8	Tert-Amyl Methyl Ether	MS	REC	110	%	68-128
FA98918-5MS*	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	101	%	78-124
FA98918-5MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	95	%	71-121
FA98918-5MS*	127-18-4	Tetrachloroethylene	MS	REC	130	%	74-129

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA98918-5MS*	109-99-9	Tetrahydrofuran	MS	REC	109	%	57-133
FA98918-5MS*	108-88-3	Toluene	MS	REC	99	%	80-121
FA98918-5MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	95	%	69-129
FA98918-5MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	93	%	69-130
FA98918-5MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	110	%	74-131
FA98918-5MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	100	%	80-119
FA98918-5MS*	79-01-6	Trichloroethylene	MS	REC	95	%	79-123
FA98918-5MS*	75-69-4	Trichlorofluoromethane	MS	REC	141	%	65-141
FA98918-5MS*	96-18-4	1,2,3-Trichloropropane	MS	REC	91	%	73-122
FA98918-5MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	98	%	76-124
FA98918-5MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	96	%	75-124
FA98918-5MS*	75-01-4	Vinyl Chloride	MS	REC	124	%	58-137
FA98918-5MS*		m,p-Xylene	MS	REC	99	%	80-121
FA98918-5MS*	95-47-6	o-Xylene	MS	REC	104	%	78-122
FA98918-5MS*	1868-53-7	Dibromofluoromethane	MS	SURR	100	%	80-119
FA98918-5MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	92	%	81-118
FA98918-5MS*	2037-26-5	Toluene-D8	MS	SURR	94	%	89-112
FA98918-5MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	98	%	85-114
FA98918-5MSD*	67-64-1	Acetone	MSD	REC	106	%	39-160
FA98918-5MSD*	67-64-1	Acetone	MSD	RPD	3	%	20
FA98918-5MSD*	71-43-2	Benzene	MSD	REC	112	%	79-120
FA98918-5MSD*	71-43-2	Benzene	MSD	RPD	1	%	20
FA98918-5MSD*	108-86-1	Bromobenzene	MSD	REC	92	%	80-120
FA98918-5MSD*	108-86-1	Bromobenzene	MSD	RPD	4	%	20
FA98918-5MSD*	74-97-5	Bromochloromethane	MSD	REC	107	%	78-123
FA98918-5MSD*	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
FA98918-5MSD*	75-27-4	Bromodichloromethane	MSD	REC	107	%	79-125
FA98918-5MSD*	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
FA98918-5MSD*	75-25-2	Bromoform	MSD	REC	92	%	66-130
FA98918-5MSD*	75-25-2	Bromoform	MSD	RPD	4	%	20
FA98918-5MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	105	%	56-143
FA98918-5MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
FA98918-5MSD*	104-51-8	n-Butylbenzene	MSD	REC	94	%	75-128
FA98918-5MSD*	104-51-8	n-Butylbenzene	MSD	RPD	2	%	20
FA98918-5MSD*	135-98-8	sec-Butylbenzene	MSD	REC	105	%	77-126
FA98918-5MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	1	%	20
FA98918-5MSD*	98-06-6	tert-Butylbenzene	MSD	REC	96	%	78-124
FA98918-5MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	2	%	20
FA98918-5MSD*	75-15-0	Carbon Disulfide	MSD	REC	94	%	64-133
FA98918-5MSD*	75-15-0	Carbon Disulfide	MSD	RPD	7	%	20
FA98918-5MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	114	%	72-136
FA98918-5MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	6	%	20
FA98918-5MSD*	108-90-7	Chlorobenzene	MSD	REC	103	%	82-118
FA98918-5MSD*	108-90-7	Chlorobenzene	MSD	RPD	2	%	20
FA98918-5MSD*	75-00-3	Chloroethane	MSD	REC	104	%	60-138

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA98918-5MSD*	75-00-3	Chloroethane	MSD	RPD	10	%	20
FA98918-5MSD*	67-66-3	Chloroform	MSD	REC	112	%	79-124
FA98918-5MSD*	67-66-3	Chloroform	MSD	RPD	3	%	20
FA98918-5MSD*	95-49-8	o-Chlorotoluene	MSD	REC	95	%	79-122
FA98918-5MSD*	95-49-8	o-Chlorotoluene	MSD	RPD	1	%	20
FA98918-5MSD*	106-43-4	p-Chlorotoluene	MSD	REC	96	%	78-122
FA98918-5MSD*	106-43-4	p-Chlorotoluene	MSD	RPD	0	%	20
FA98918-5MSD*	124-48-1	Dibromochloromethane	MSD	REC	94	%	74-126
FA98918-5MSD*	124-48-1	Dibromochloromethane	MSD	RPD	2	%	20
FA98918-5MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	86	%	62-128
FA98918-5MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	2	%	20
FA98918-5MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	102	%	77-121
FA98918-5MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20
FA98918-5MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	111	%	32-152
FA98918-5MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	10	%	20
FA98918-5MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	98	%	80-119
FA98918-5MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	1	%	20
FA98918-5MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA98918-5MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	1	%	20
FA98918-5MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	98	%	79-118
FA98918-5MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
FA98918-5MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	117	%	77-125
FA98918-5MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	1	%	20
FA98918-5MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	106	%	73-128
FA98918-5MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
FA98918-5MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	115	%	71-131
FA98918-5MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	3	%	20
FA98918-5MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	90	%	78-123
FA98918-5MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	0	%	20
FA98918-5MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	113	%	75-124
FA98918-5MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	5	%	20
FA98918-5MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	110	%	78-122
FA98918-5MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	4	%	20
FA98918-5MSD*	142-28-9	1,3-Dichloropropane	MSD	REC	94	%	80-119
FA98918-5MSD*	142-28-9	1,3-Dichloropropane	MSD	RPD	3	%	20
FA98918-5MSD*	594-20-7	2,2-Dichloropropane	MSD	REC	87	%	60-139
FA98918-5MSD*	594-20-7	2,2-Dichloropropane	MSD	RPD	3	%	20
FA98918-5MSD*	563-58-6	1,1-Dichloropropene	MSD	REC	113	%	79-125
FA98918-5MSD*	563-58-6	1,1-Dichloropropene	MSD	RPD	1	%	20
FA98918-5MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	106	%	75-124
FA98918-5MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	5	%	20
FA98918-5MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	100	%	73-127
FA98918-5MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
FA98918-5MSD*	108-20-3	Di-Isopropyl Ether	MSD	REC	114	%	67-128
FA98918-5MSD*	108-20-3	Di-Isopropyl Ether	MSD	RPD	1	%	20

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA98918-5MSD*	123-91-1	1,4-Dioxane	MSD	REC	118	%	59-139
FA98918-5MSD*	123-91-1	1,4-Dioxane	MSD	RPD	1	%	20
FA98918-5MSD*	100-41-4	Ethylbenzene	MSD	REC	102	%	79-121
FA98918-5MSD*	100-41-4	Ethylbenzene	MSD	RPD	2	%	20
FA98918-5MSD*	60-29-7	Ethyl Ether	MSD	REC	106	%	68-129
FA98918-5MSD*	60-29-7	Ethyl Ether	MSD	RPD	2	%	20
FA98918-5MSD*	637-92-3	Ethyl Tert Butyl Ether	MSD	REC	106	%	70-127
FA98918-5MSD*	637-92-3	Ethyl Tert Butyl Ether	MSD	RPD	4	%	20
FA98918-5MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	99	%	66-134
FA98918-5MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	6	%	20
FA98918-5MSD*	591-78-6	2-Hexanone	MSD	REC	96	%	57-139
FA98918-5MSD*	591-78-6	2-Hexanone	MSD	RPD	2	%	20
FA98918-5MSD*	98-82-8	Isopropylbenzene	MSD	REC	106	%	72-131
FA98918-5MSD*	98-82-8	Isopropylbenzene	MSD	RPD	2	%	20
FA98918-5MSD*	99-87-6	p-Isopropyltoluene	MSD	REC	105	%	77-127
FA98918-5MSD*	99-87-6	p-Isopropyltoluene	MSD	RPD	1	%	20
FA98918-5MSD*	74-83-9	Methyl Bromide	MSD	REC	66	%	53-141
FA98918-5MSD*	74-83-9	Methyl Bromide	MSD	RPD	1	%	20
FA98918-5MSD*	74-87-3	Methyl Chloride	MSD	REC	112	%	50-139
FA98918-5MSD*	74-87-3	Methyl Chloride	MSD	RPD	8	%	20
FA98918-5MSD*	74-95-3	Methylene Bromide	MSD	REC	106	%	79-123
FA98918-5MSD*	74-95-3	Methylene Bromide	MSD	RPD	3	%	20
FA98918-5MSD*	75-09-2	Methylene Chloride	MSD	REC	96	%	74-124
FA98918-5MSD*	75-09-2	Methylene Chloride	MSD	RPD	3	%	20
FA98918-5MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	94	%	67-130
FA98918-5MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	6	%	20
FA98918-5MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	111	%	71-124
FA98918-5MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	3	%	20
FA98918-5MSD*	91-20-3	Naphthalene	MSD	REC	95	%	61-128
FA98918-5MSD*	91-20-3	Naphthalene	MSD	RPD	1	%	20
FA98918-5MSD*	103-65-1	n-Propylbenzene	MSD	REC	98	%	76-126
FA98918-5MSD*	103-65-1	n-Propylbenzene	MSD	RPD	0	%	20
FA98918-5MSD*	100-42-5	Styrene	MSD	REC	101	%	78-123
FA98918-5MSD*	100-42-5	Styrene	MSD	RPD	2	%	20
FA98918-5MSD*	994-05-8	Tert-Amyl Methyl Ether	MSD	REC	113	%	68-128
FA98918-5MSD*	994-05-8	Tert-Amyl Methyl Ether	MSD	RPD	3	%	20
FA98918-5MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	103	%	78-124
FA98918-5MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	2	%	20
FA98918-5MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	94	%	71-121
FA98918-5MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	2	%	20
FA98918-5MSD*	127-18-4	Tetrachloroethylene	MSD	REC	136	%	74-129
FA98918-5MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	4	%	20
FA98918-5MSD*	109-99-9	Tetrahydrofuran	MSD	REC	114	%	57-133
FA98918-5MSD*	109-99-9	Tetrahydrofuran	MSD	RPD	5	%	20
FA98918-5MSD*	108-88-3	Toluene	MSD	REC	100	%	80-121

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA98918-5MSD*	108-88-3	Toluene	MSD	RPD	1	%	20
FA98918-5MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	98	%	69-129
FA98918-5MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	2	%	20
FA98918-5MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	94	%	69-130
FA98918-5MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	2	%	20
FA98918-5MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	112	%	74-131
FA98918-5MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	1	%	20
FA98918-5MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	102	%	80-119
FA98918-5MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	2	%	20
FA98918-5MSD*	79-01-6	Trichloroethylene	MSD	REC	96	%	79-123
FA98918-5MSD*	79-01-6	Trichloroethylene	MSD	RPD	1	%	20
FA98918-5MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	124	%	65-141
FA98918-5MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	13	%	20
FA98918-5MSD*	96-18-4	1,2,3-Trichloropropane	MSD	REC	90	%	73-122
FA98918-5MSD*	96-18-4	1,2,3-Trichloropropane	MSD	RPD	1	%	20
FA98918-5MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	98	%	76-124
FA98918-5MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	0	%	20
FA98918-5MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	96	%	75-124
FA98918-5MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	0	%	20
FA98918-5MSD*	75-01-4	Vinyl Chloride	MSD	REC	111	%	58-137
FA98918-5MSD*	75-01-4	Vinyl Chloride	MSD	RPD	10	%	20
FA98918-5MSD*		m,p-Xylene	MSD	REC	101	%	80-121
FA98918-5MSD*		m,p-Xylene	MSD	RPD	2	%	20
FA98918-5MSD*	95-47-6	o-Xylene	MSD	REC	106	%	78-122
FA98918-5MSD*	95-47-6	o-Xylene	MSD	RPD	2	%	20
FA98918-5MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	100	%	80-119
FA98918-5MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	96	%	81-118
FA98918-5MSD*	2037-26-5	Toluene-D8	MSD	SURR	94	%	89-112
FA98918-5MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	97	%	85-114
V2P3586-MB	1868-53-7	Dibromofluoromethane	MB	SURR	96	%	80-119
V2P3586-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	98	%	81-118
V2P3586-MB	2037-26-5	Toluene-D8	MB	SURR	96	%	89-112
V2P3586-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	98	%	85-114
FA98820-1A	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA98820-1A	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	98	%	81-118
FA98820-1A	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
FA98820-1A	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
FA98820-2A	1868-53-7	Dibromofluoromethane	SAMP	SURR	96	%	80-119
FA98820-2A	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	97	%	81-118
FA98820-2A	2037-26-5	Toluene-D8	SAMP	SURR	94	%	89-112
FA98820-2A	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
G1R349	RSKSOP-147/175						
G1R349-BS	74-82-8	Methane	BSP	REC	106	%	73-125

* Sample used for QC is not from job FA98820

QC Evaluation: DOD QSM5.x Limits

Job Number: FA98820
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 09/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
G1R349-BS	74-84-0	Ethane	BSP	REC	105	%	74-131
G1R349-BS	74-85-1	Ethene	BSP	REC	108	%	72-133
G1R349-BSD	74-82-8	Methane	BSD	REC	96	%	73-125
G1R349-BSD	74-82-8	Methane	BSD	RPD	9	%	30
G1R349-BSD	74-84-0	Ethane	BSD	REC	95	%	74-131
G1R349-BSD	74-84-0	Ethane	BSD	RPD	10	%	30
G1R349-BSD	74-85-1	Ethene	BSD	REC	97	%	72-133
G1R349-BSD	74-85-1	Ethene	BSD	RPD	11	%	30
FA98770-6MS*	74-82-8	Methane	MS	REC	97	%	73-125
FA98770-6MS*	74-84-0	Ethane	MS	REC	100	%	74-131
FA98770-6MS*	74-85-1	Ethene	MS	REC	102	%	72-133
FA98770-6DUP*	74-82-8	Methane	DUP	RPD	19	%	30
FA98770-6DUP*	74-84-0	Ethane	DUP	RPD	0	%	30
FA98770-6DUP*	74-85-1	Ethene	DUP	RPD	0	%	30
MP41211	SW846 6020B						
MP41211-B1	7440-38-2	Arsenic	BSP	REC	117	%	84-116
MP41211-S1*	7440-38-2	Arsenic	MS	REC	113.8	%	84-116
MP41211-S2*	7440-38-2	Arsenic	MSD	REC	114.3	%	84-116
MP41211-S2*	7440-38-2	Arsenic	MSD	RPD	.4	%	20
MP41211-D1*	7440-38-2	Arsenic	DUP	RPD	15.4	%	20
MP41228	SW846 6010D						
MP41228-B1	7439-89-6	Iron	BSP	REC	102.3	%	87-115
MP41228-B1	7439-96-5	Manganese	BSP	REC	105.4	%	90-114
MP41228-S1*	7439-89-6	Iron	MS	REC	101.8	%	87-115
MP41228-S1*	7439-96-5	Manganese	MS	REC	101.1	%	90-114
MP41228-S2*	7439-89-6	Iron	MSD	REC	101.8	%	87-115
MP41228-S2*	7439-89-6	Iron	MSD	RPD	0	%	20
MP41228-S2*	7439-96-5	Manganese	MSD	REC	101.5	%	90-114
MP41228-S2*	7439-96-5	Manganese	MSD	RPD	.4	%	20
MP41228-D1*	7439-89-6	Iron	DUP	RPD	16.4	%	20
MP41228-D1*	7439-96-5	Manganese	DUP	RPD	.7	%	20

* Sample used for QC is not from job FA98820

MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-MB	2P93312.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
108-20-3	Di-Isopropyl Ether	ND	1.0	0.24	ug/l	

Method Blank Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-MB	2P93312.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	200	75	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
60-29-7	Ethyl Ether	ND	5.0	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	1.6	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

Method Blank Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-MB	2P93312.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.05	39	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-BS	2P93308.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
71-43-2	Benzene	25	28.3	113	81-122
108-86-1	Bromobenzene	25	24.4	98	80-121
74-97-5	Bromochloromethane	25	26.9	108	76-123
75-27-4	Bromodichloromethane	25	27.5	110	79-123
75-25-2	Bromoform	25	25.1	100	66-123
78-93-3	2-Butanone (MEK)	125	122	98	56-143
104-51-8	n-Butylbenzene	25	25.4	102	79-126
135-98-8	sec-Butylbenzene	25	28.1	112	83-133
98-06-6	tert-Butylbenzene	25	25.8	103	80-133
75-15-0	Carbon Disulfide	25	24.9	100	66-148
56-23-5	Carbon Tetrachloride	25	29.9	120	76-136
108-90-7	Chlorobenzene	25	26.8	107	82-124
75-00-3	Chloroethane	25	25.2	101	62-144
67-66-3	Chloroform	25	28.5	114	80-124
95-49-8	o-Chlorotoluene	25	25.3	101	81-127
106-43-4	p-Chlorotoluene	25	25.3	101	83-130
124-48-1	Dibromochloromethane	25	25.0	100	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.4	94	64-123
106-93-4	1,2-Dibromoethane	25	26.1	104	75-120
75-71-8	Dichlorodifluoromethane	25	26.9	108	42-167
95-50-1	1,2-Dichlorobenzene	25	25.8	103	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	25.6	102	78-120
75-34-3	1,1-Dichloroethane	25	29.9	120	81-122
107-06-2	1,2-Dichloroethane	25	26.8	107	75-125
75-35-4	1,1-Dichloroethylene	25	29.4	118	78-137
156-59-2	cis-1,2-Dichloroethylene	25	28.8	115	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.9	116	76-127
78-87-5	1,2-Dichloropropane	25	27.3	109	76-124
142-28-9	1,3-Dichloropropane	25	24.3	97	80-118
594-20-7	2,2-Dichloropropane	25	27.1	108	74-139
563-58-6	1,1-Dichloropropene	25	29.0	116	79-131
10061-01-5	cis-1,3-Dichloropropene	25	27.5	110	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.5	110	80-120
108-20-3	Di-Isopropyl Ether	25	28.4	114	68-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-BS	2P93308.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	500	582	116	48-146
100-41-4	Ethylbenzene	25	26.5	106	81-121
60-29-7	Ethyl Ether	25	25.6	102	64-121
637-92-3	Ethyl Tert Butyl Ether	25	27.1	108	71-120
87-68-3	Hexachlorobutadiene	25	27.0	108	75-142
591-78-6	2-Hexanone	125	114	91	61-129
98-82-8	Isopropylbenzene	25	27.8	111	83-132
99-87-6	p-Isopropyltoluene	25	27.8	111	79-130
74-83-9	Methyl Bromide	25	23.7	95	59-143
74-87-3	Methyl Chloride	25	27.6	110	50-159
74-95-3	Methylene Bromide	25	27.5	110	78-119
75-09-2	Methylene Chloride	25	23.1	92	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	114	91	66-122
1634-04-4	Methyl Tert Butyl Ether	25	28.7	115	72-117
91-20-3	Naphthalene	25	25.4	102	63-132
103-65-1	n-Propylbenzene	25	25.8	103	82-133
100-42-5	Styrene	25	26.8	107	78-119
994-05-8	Tert-Amyl Methyl Ether	25	29.1	116	73-122
630-20-6	1,1,1,2-Tetrachloroethane	25	26.4	106	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.2	101	72-120
127-18-4	Tetrachloroethylene	25	30.4	122	76-135
109-99-9	Tetrahydrofuran	25	27.7	111	56-122
108-88-3	Toluene	25	26.0	104	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.5	102	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.7	103	73-129
71-55-6	1,1,1-Trichloroethane	25	29.3	117	75-130
79-00-5	1,1,2-Trichloroethane	25	26.7	107	76-119
79-01-6	Trichloroethylene	25	28.4	114	81-126
75-69-4	Trichlorofluoromethane	25	29.4	118	71-156
96-18-4	1,2,3-Trichloropropane	25	23.9	96	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.8	103	79-120
108-67-8	1,3,5-Trimethylbenzene	25	25.2	101	79-120
75-01-4	Vinyl Chloride	25	27.9	112	69-159
	m,p-Xylene	50	52.5	105	79-126
95-47-6	o-Xylene	25	27.7	111	80-127

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3586-BS	2P93308.D	1	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98918-5MS	2P93346.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5MSD	2P93348.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5 [a]	2P93328.D	50	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	FA98918-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	1300	U	6250	6810	109	6250	6640	106	3	50-147/21
71-43-2	Benzene	50	U	1250	1380	110	1250	1400	112	1	81-122/14
108-86-1	Bromobenzene	50	U	1250	1200	96	1250	1150	92	4	80-121/14
74-97-5	Bromochloromethane	50	U	1250	1310	105	1250	1340	107	2	76-123/14
75-27-4	Bromodichloromethane	50	U	1250	1310	105	1250	1340	107	2	79-123/19
75-25-2	Bromoform	50	U	1250	1110	89	1250	1150	92	4	66-123/21
78-93-3	2-Butanone (MEK)	250	U	6250	6670	107	6250	6560	105	2	56-143/18
104-51-8	n-Butylbenzene	50	U	1250	1150	92	1250	1170	94	2	79-126/16
135-98-8	sec-Butylbenzene	50	U	1250	1300	104	1250	1310	105	1	83-133/16
98-06-6	tert-Butylbenzene	50	U	1250	1220	98	1250	1200	96	2	80-133/16
75-15-0	Carbon Disulfide	100	U	1250	1100	88	1250	1180	94	7	66-148/23
56-23-5	Carbon Tetrachloride	50	U	1250	1350	108	1250	1430	114	6	76-136/23
108-90-7	Chlorobenzene	50	U	1250	1270	102	1250	1290	103	2	82-124/14
75-00-3	Chloroethane	100	U	1250	1430	114	1250	1300	104	10	62-144/20
67-66-3	Chloroform	50	U	1250	1360	109	1250	1400	112	3	80-124/15
95-49-8	o-Chlorotoluene	50	U	1250	1200	96	1250	1190	95	1	81-127/15
106-43-4	p-Chlorotoluene	50	U	1250	1200	96	1250	1200	96	0	83-130/15
124-48-1	Dibromochloromethane	50	U	1250	1160	93	1250	1180	94	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	250	U	1250	1050	84	1250	1070	86	2	64-123/18
106-93-4	1,2-Dibromoethane	100	U	1250	1240	99	1250	1270	102	2	75-120/13
75-71-8	Dichlorodifluoromethane	100	U	1250	1540	123	1250	1390	111	10	42-167/19
95-50-1	1,2-Dichlorobenzene	50	U	1250	1230	98	1250	1220	98	1	82-124/14
541-73-1	1,3-Dichlorobenzene	50	U	1250	1250	100	1250	1260	101	1	84-125/14
106-46-7	1,4-Dichlorobenzene	50	U	1250	1230	98	1250	1220	98	1	78-120/15
75-34-3	1,1-Dichloroethane	90.7		1250	1530	115	1250	1550	117	1	81-122/15
107-06-2	1,2-Dichloroethane	50	U	1250	1290	103	1250	1330	106	3	75-125/14
75-35-4	1,1-Dichloroethylene	50	U	1250	1400	112	1250	1440	115	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1530		1250	2670	91	1250	2660	90	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	121		1250	1450	106	1250	1530	113	5	76-127/17
78-87-5	1,2-Dichloropropane	50	U	1250	1320	106	1250	1370	110	4	76-124/14
142-28-9	1,3-Dichloropropane	50	U	1250	1150	92	1250	1180	94	3	80-118/13
594-20-7	2,2-Dichloropropane	50	U	1250	1060	85	1250	1090	87	3	74-139/17
563-58-6	1,1-Dichloropropene	50	U	1250	1400	112	1250	1410	113	1	79-131/16
10061-01-5	cis-1,3-Dichloropropene	50	U	1250	1260	101	1250	1320	106	5	75-118/23
10061-02-6	trans-1,3-Dichloropropene	50	U	1250	1230	98	1250	1250	100	2	80-120/22
108-20-3	Di-Isopropyl Ether	50	U	1250	1400	112	1250	1420	114	1	68-123/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98918-5MS	2P93346.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5MSD	2P93348.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5 [a]	2P93328.D	50	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Compound	FA98918-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	4250	J	25000	33400	117	25000	33800	118	1	48-146/34
100-41-4	Ethylbenzene	50 U		1250	1260	101	1250	1280	102	2	81-121/14
60-29-7	Ethyl Ether	250 U		1250	1290	103	1250	1320	106	2	64-121/21
637-92-3	Ethyl Tert Butyl Ether	100 U		1250	1280	102	1250	1330	106	4	71-120/14
87-68-3	Hexachlorobutadiene	100 U		1250	1170	94	1250	1240	99	6	75-142/19
591-78-6	2-Hexanone	500 U		6250	6150	98	6250	6020	96	2	61-129/18
98-82-8	Isopropylbenzene	50 U		1250	1300	104	1250	1330	106	2	83-132/15
99-87-6	p-Isopropyltoluene	50 U		1250	1300	104	1250	1310	105	1	79-130/16
74-83-9	Methyl Bromide	250 U		1250	832	67	1250	822	66	1	59-143/19
74-87-3	Methyl Chloride	100 U		1250	1510	121	1250	1400	112	8	50-159/19
74-95-3	Methylene Bromide	100 U		1250	1280	102	1250	1320	106	3	78-119/14
75-09-2	Methylene Chloride	250 U		1250	1170	94	1250	1200	96	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U		6250	6210	99	6250	5850	94	6	66-122/16
1634-04-4	Methyl Tert Butyl Ether	50 U		1250	1350	108	1250	1390	111	3	72-117/14
91-20-3	Naphthalene	250 U		1250	1180	94	1250	1190	95	1	63-132/25
103-65-1	n-Propylbenzene	50 U		1250	1220	98	1250	1220	98	0	82-133/15
100-42-5	Styrene	50 U		1250	1230	98	1250	1260	101	2	78-119/23
994-05-8	Tert-Amyl Methyl Ether	100 U		1250	1370	110	1250	1410	113	3	73-122/13
630-20-6	1,1,1,2-Tetrachloroethane	50 U		1250	1260	101	1250	1290	103	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	50 U		1250	1190	95	1250	1170	94	2	72-120/14
127-18-4	Tetrachloroethylene	50 U		1250	1630	130	1250	1700	136*	4	76-135/16
109-99-9	Tetrahydrofuran	250 U		1250	1360	109	1250	1430	114	5	56-122/21
108-88-3	Toluene	50 U		1250	1240	99	1250	1250	100	1	80-120/14
87-61-6	1,2,3-Trichlorobenzene	100 U		1250	1190	95	1250	1220	98	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	100 U		1250	1160	93	1250	1180	94	2	73-129/20
71-55-6	1,1,1-Trichloroethane	50 U		1250	1380	110	1250	1400	112	1	75-130/16
79-00-5	1,1,2-Trichloroethane	50 U		1250	1250	100	1250	1280	102	2	76-119/14
79-01-6	Trichloroethylene	946		1250	2130	95	1250	2150	96	1	81-126/15
75-69-4	Trichlorofluoromethane	100 U		1250	1760	141	1250	1550	124	13	71-156/21
96-18-4	1,2,3-Trichloropropane	100 U		1250	1140	91	1250	1130	90	1	77-120/16
95-63-6	1,2,4-Trimethylbenzene	50 U		1250	1220	98	1250	1220	98	0	79-120/18
108-67-8	1,3,5-Trimethylbenzene	50 U		1250	1200	96	1250	1200	96	0	79-120/19
75-01-4	Vinyl Chloride	154		1250	1710	124	1250	1540	111	10	69-159/18
	m,p-Xylene	100 U		2500	2480	99	2500	2520	101	2	79-126/15
95-47-6	o-Xylene	50 U		1250	1300	104	1250	1320	106	2	80-127/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98918-5MS	2P93346.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5MSD	2P93348.D	50	09/23/22	CF	n/a	n/a	V2P3586
FA98918-5 [a]	2P93328.D	50	09/23/22	CF	n/a	n/a	V2P3586

The QC reported here applies to the following samples: **Method:** SW846 8260D

FA98820-1A, FA98820-2A

CAS No.	Surrogate Recoveries	MS	MSD	FA98918-5	Limits
1868-53-7	Dibromofluoromethane	100%	100%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	96%	96%	79-125%
2037-26-5	Toluene-D8	94%	94%	95%	85-112%
460-00-4	4-Bromofluorobenzene	98%	97%	97%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-BFB
Lab File ID: 2P92263.D
Instrument ID: GCMS2P
Injection Date: 08/24/22
Injection Time: 09:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	60128	18.5		Pass
75	30.0 - 60.0% of mass 95	160765	49.4		Pass
95	Base peak, 100% relative abundance	325269	100.0		Pass
96	5.0 - 9.0% of mass 95	21171	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	238912	73.5		Pass
175	5.0 - 9.0% of mass 174	18335	5.64	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	231146	71.1	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	15221	4.68	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3560-IC3560	2P92263.D	08/24/22	09:50	00:01	Initial cal 1
V2P3560-IC3560	2P92265.D	08/24/22	10:22	00:33	Initial cal 2
V2P3560-IC3560	2P92267.D	08/24/22	10:54	01:05	Initial cal 3
V2P3560-IC3560	2P92269.D	08/24/22	11:26	01:37	Initial cal 4
V2P3560-ICC3560	2P92271.D	08/24/22	11:59	02:10	Initial cal 5
V2P3560-IC3560	2P92273.D	08/24/22	12:31	02:42	Initial cal 6
V2P3560-IC3560	2P92275.D	08/24/22	13:04	03:15	Initial cal 7
V2P3560-ICV3560	2P92279.D	08/24/22	14:09	04:20	Initial cal verification 5
V2P3560-CC3560	2P92279A.D	08/24/22	14:09	04:20	Continuing cal 5
V2P3560-ICV3560	2P92281.D	08/24/22	14:41	04:52	Initial cal verification 4
V2P3560-BS	2P92281A.D	08/24/22	14:41	04:52	Blank Spike
V2P3560-MB	2P92285.D	08/24/22	15:44	05:55	Method Blank
ZZZZZZ	2P92289.D	08/24/22	16:49	07:00	(unrelated sample)
ZZZZZZ	2P92293.D	08/24/22	17:52	08:03	(unrelated sample)
ZZZZZZ	2P92299.D	08/24/22	19:28	09:39	(unrelated sample)
FA98254-9	2P92303.D	08/24/22	20:31	10:42	(used for QC only; not part of job FA98820)
ZZZZZZ	2P92305.D	08/24/22	21:03	11:14	(unrelated sample)
FA98254-9MS	2P92307.D	08/24/22	21:35	11:46	Matrix Spike
FA98254-9MSD	2P92309.D	08/24/22	22:07	12:18	Matrix Spike Duplicate
V2P3560-ECC3560	2P92311.D	08/24/22	22:38	12:49	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-BFB
Lab File ID: 2P93306.D
Instrument ID: GCMS2P
Injection Date: 09/23/22
Injection Time: 11:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	54330	16.9		Pass
75	30.0 - 60.0% of mass 95	150317	46.8		Pass
95	Base peak, 100% relative abundance	321365	100.0		Pass
96	5.0 - 9.0% of mass 95	21075	6.56		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	240618	74.9		Pass
175	5.0 - 9.0% of mass 174	18458	5.74	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	238400	74.2	(99.1) [a]	Pass
177	5.0 - 9.0% of mass 176	15984	4.97	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2P3586-CC3560	2P93306.D	09/23/22	11:41	00:00	Continuing cal 5
V2P3587-BS	2P93308.D	09/23/22	12:13	00:32	Blank Spike
V2P3586-BS	2P93308.D	09/23/22	12:13	00:32	Blank Spike
V2P3586-MB	2P93312.D	09/23/22	13:18	01:37	Method Blank
V2P3587-MB	2P93312.D	09/23/22	13:18	01:37	Method Blank
ZZZZZZ	2P93314.D	09/23/22	13:51	02:10	(unrelated sample)
ZZZZZZ	2P93316.D	09/23/22	14:23	02:42	(unrelated sample)
ZZZZZZ	2P93318.D	09/23/22	14:56	03:15	(unrelated sample)
ZZZZZZ	2P93320.D	09/23/22	15:29	03:48	(unrelated sample)
ZZZZZZ	2P93322.D	09/23/22	16:02	04:21	(unrelated sample)
ZZZZZZ	2P93324.D	09/23/22	16:34	04:53	(unrelated sample)
ZZZZZZ	2P93326.D	09/23/22	17:07	05:26	(unrelated sample)
FA98918-5	2P93328.D	09/23/22	17:39	05:58	(used for QC only; not part of job FA98820)
ZZZZZZ	2P93330.D	09/23/22	18:12	06:31	(unrelated sample)
ZZZZZZ	2P93332.D	09/23/22	18:44	07:03	(unrelated sample)
FA98820-1A	2P93334.D	09/23/22	19:17	07:36	EW-01
FA98820-2A	2P93336.D	09/23/22	19:49	08:08	EW-04
ZZZZZZ	2P93338.D	09/23/22	20:21	08:40	(unrelated sample)
FA98819-1	2P93340.D	09/23/22	20:53	09:12	(used for QC only; not part of job FA98820)
FA98819-1MS	2P93342.D	09/23/22	21:25	09:44	Matrix Spike
FA98819-1MSD	2P93344.D	09/23/22	21:57	10:16	Matrix Spike Duplicate
FA98918-5MS	2P93346.D	09/23/22	22:29	10:48	Matrix Spike
FA98918-5MSD	2P93348.D	09/23/22	23:02	11:21	Matrix Spike Duplicate
V2P3586-ECC3560	2P93350.D	09/23/22	23:34	11:53	Ending cal 5

Internal Standard Area Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Check Std:	V2P3586-CC3560	**Injection Date:**	09/23/22
Lab File ID:	2P93306.D	**Injection Time:**	11:41
Instrument ID:	GCMS2P	**Method:**	SW846 8260D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	1362226	3.72	951717	5.64	439370	7.33
Check Std [b]	1124849	3.72	869549	5.64	414062	7.33
Upper Limit [c]	2249698	3.89	1739098	5.81	828124	7.50
Lower Limit [d]	562425	3.55	434775	5.47	207031	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2P3587-BS	1142739	3.72	877581	5.64	421193	7.33
V2P3586-BS	1142739	3.72	877581	5.64	421193	7.33
V2P3587-MB	1057762	3.72	790682	5.64	375195	7.33
V2P3586-MB	1057762	3.72	790682	5.64	375195	7.33
ZZZZZZ	1029480	3.72	769602	5.65	355319	7.33
ZZZZZZ	1001880	3.72	748286	5.64	351612	7.33
ZZZZZZ	999525	3.72	752404	5.64	354018	7.33
ZZZZZZ	1007999	3.72	768195	5.64	389312	7.33
ZZZZZZ	1029128	3.72	779376	5.64	399697	7.33
ZZZZZZ	1020239	3.72	765242	5.64	364324	7.33
ZZZZZZ	983440	3.72	737423	5.64	354299	7.33
FA98918-5	1001572	3.73	757954	5.64	356148	7.33
ZZZZZZ	987592	3.73	748160	5.64	359056	7.33
ZZZZZZ	975044	3.72	741567	5.64	346172	7.33
FA98820-1A	973697	3.72	735522	5.64	340484	7.33
FA98820-2A	958095	3.72	732151	5.64	341622	7.33
ZZZZZZ	944580	3.72	714613	5.64	335015	7.33
FA98819-1	940684	3.72	721077	5.65	343342	7.33
FA98819-1MS	996531	3.72	792902	5.64	389711	7.33
FA98819-1MSD	1027411	3.72	811292	5.65	394401	7.33
FA98918-5MS	1083295	3.72	833430	5.64	396873	7.33
FA98918-5MSD	1118013	3.72	869023	5.64	422375	7.33
V2P3586-ECC3560	1159066	3.72	895884	5.65	428166	7.33

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4

(a) Initial Cal is: V2P3560-ICC3560 2P92271.D 08/24/22 11:59
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA98820-1A	2P93334.D	97	98	96	100
FA98820-2A	2P93336.D	96	97	94	97
FA98918-5MS	2P93346.D	100	92	94	98
FA98918-5MSD	2P93348.D	100	96	94	97
V2P3586-BS	2P93308.D	101	96	94	98
V2P3586-MB	2P93312.D	96	98	96	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

Response Factor Report MSVOA13

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Calibration Files
1 =2P92263.D 2 =2P92265.D 3 =2P92267.D 4 =2P92269.D
5 =2P92271.D 6 =2P92273.D 7 =2P92275.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.137	0.141	0.121	0.116	0.147	0.141	0.139	0.135	8.40
3)P Chloromethane	0.143	0.159	0.148	0.141	0.152	0.164	0.160	0.153	5.77
4) 1,3-butadiene	0.137	0.161	0.115	0.132	0.145	0.155	0.148	0.142	10.93
5)C Vinyl Chloride	0.168	0.189	0.176	0.174	0.194	0.201	0.200	0.186	7.09
6) Bromomethane	0.128	0.131	0.120	0.111	0.109	0.106	0.100	0.115	10.11
7) Chloroethane	0.096	0.089	0.066	0.056	0.056	0.057	0.054	0.068	25.99
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9946									
Response Ratio = 0.00000 + 0.06373 *A + -0.00506 *A^2									
8) Trichlorofluorome	0.170	0.233	0.210	0.188	0.212	0.145	0.100	0.180	25.44
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9923									
Response Ratio = 0.00000 + 0.24268 *A + -0.06989 *A^2									
9) Ethyl Ether	0.157	0.193	0.164	0.164	0.176	0.195	0.168	0.174	8.47
10) Ethanol	0.006	0.006	0.004	0.005	0.005	0.005	0.004	0.005	14.87
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9962									
Response Ratio = 0.00000 + 0.00560 *A + -0.00004 *A^2									
11) 1,2-Dichlorotrifl	0.137	0.175	0.142	0.155	0.170	0.179	0.181	0.163	11.20
12)C 1,1-Dichloroethen	0.192	0.254	0.203	0.229	0.249	0.267	0.270	0.238	12.96
13) Freon 113	0.110	0.157	0.121	0.137	0.163	0.166	0.168	0.146	16.08
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973									
Response Ratio = 0.00000 + 0.13945 *A + 0.01587 *A^2									
14) Carbon Disulfide	0.327	0.367	0.315	0.369	0.424	0.472	0.493	0.395	17.55
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 0.34698 *A + 0.07745 *A^2									
15) Iodomethane	0.063	0.060	0.067	0.094	0.117	0.129	0.125	0.094	32.53
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9924									
Response Ratio = 0.00000 + 0.08797 *A + 0.02186 *A^2									
16) Acrolein	0.053	0.068	0.057	0.064	0.065	0.070	0.068	0.064	9.99
17) Allyl chloride	0.149	0.177	0.132	0.164	0.180	0.194	0.201	0.171	14.31
18) Methylene Chlorid	0.881	0.353	0.258	0.232	0.228	0.237	0.220	0.344	69.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9913									
Response Ratio = 0.00000 + 0.27200 *A + -0.02738 *A^2									
19) Acetone	0.178	0.129	0.107	0.114	0.110	0.115	0.108	0.123	20.64
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9985									
Response Ratio = 0.00000 + 0.11705 *A + -0.00078 *A^2									
20) Methyl acetate	0.197	0.245	0.220	0.234	0.238	0.253	0.241	0.233	7.97
21) trans-1,2-Dichlor	0.190	0.260	0.218	0.233	0.245	0.268	0.271	0.241	12.22
22) Hexane	0.097	0.115	0.088	0.105	0.130	0.140	0.144	0.117	18.42

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            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9969
              Response Ratio = 0.00000 + 0.10376 *A + 0.02196 *A^2

23)  Methyl Tert Butyl 0.444 0.567 0.504 0.541 0.565 0.616 0.604 0.549  10.83
24)  Tert Butyl Alcoho 0.060 0.071 0.062 0.071 0.070 0.073 0.068 0.068   7.11
25)  Acetonitrile      0.040 0.046 0.034 0.037 0.035             0.038  12.26
26)  Di-isopropyl ethe 0.417 0.549 0.470 0.487 0.520 0.568 0.557 0.510  10.73
27)  Chloroprene       0.771 0.769 0.633 0.702 0.715 0.754 0.736 0.726   6.66
28)P 1,1-Dichloroethan 0.267 0.334 0.287 0.307 0.325 0.349 0.346 0.317   9.74
29)  Acrylonitrile     0.125 0.122 0.101 0.111 0.112 0.117 0.115 0.115   6.99
30)  ETBE              0.468 0.624 0.553 0.584 0.618 0.672 0.661 0.597  11.73
31)  Vinyl acetate     0.382 0.422 0.356 0.398 0.424 0.450 0.442 0.411   8.19
32)  cis-1,2-Dichloroe 0.161 0.208 0.173 0.181 0.192 0.204 0.203 0.189   9.36
33)  2,2-Dichloropropa 0.171 0.240 0.207 0.233 0.259 0.288 0.295 0.242  18.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 0.22221 *A + 0.03923 *A^2

34)  Bromochloromethan 0.078 0.093 0.083 0.082 0.085 0.090 0.087 0.085   5.86
35)  Cyclohexane       0.221 0.301 0.250 0.275 0.316 0.332 0.346 0.292  15.50
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.27060 *A + 0.03946 *A^2

36)C Chloroform        0.239 0.346 0.294 0.307 0.330 0.355 0.353 0.318  13.15
37)  Ethyl acetate     0.307 0.327 0.275 0.303 0.310 0.331 0.321 0.311   6.06
38)  Tetrahydrofuran   0.116 0.130 0.106 0.115 0.117 0.124 0.120 0.119   6.36
39)S Dibromofluorometh 0.201 0.209 0.212 0.215 0.215 0.216 0.219 0.213   2.70
40)  Carbon Tetrachlor 0.133 0.201 0.158 0.188 0.208 0.224 0.238 0.193  18.93
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 0.17573 *A + 0.03201 *A^2

41)  1,1,1-Trichloroet 0.202 0.274 0.230 0.263 0.285 0.306 0.312 0.268  14.81
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.25339 *A + 0.03146 *A^2

42)  2-Butanone        0.303 0.223 0.179 0.193 0.185 0.197 0.189 0.210  20.66
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
              Response Ratio = 0.00000 + 0.19499 *A + -0.00048 *A^2

43)  1,1-Dichloroprope 0.191 0.253 0.212 0.232 0.249 0.263 0.268 0.238  11.76
44)  tert-Butyl format 0.089 0.119 0.106 0.125 0.145 0.166 0.170 0.132  23.11
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.11733 *A + 0.00574 *A^2

45)  Propionitrile     0.054 0.070 0.053 0.062 0.061 0.064 0.064 0.061   9.67
46)  Methacrylonitrile 0.136 0.182 0.141 0.164 0.168 0.178 0.172 0.163  11.02
47)  Benzene           0.645 0.813 0.706 0.727 0.769 0.835 0.832 0.761   9.43
48)  TAME              0.409 0.561 0.496 0.534 0.565 0.623 0.611 0.543  13.50
49)S 1,2-Dichloroethan 0.293 0.293 0.297 0.297 0.304 0.290 0.293 0.295   1.53
50)  Isobutyl alcohol  0.025 0.034 0.029 0.034 0.034 0.033 0.031 0.031  10.88
51)  1,2-Dichloroethan 0.241 0.289 0.254 0.262 0.277 0.294 0.288 0.272   7.42
52)  Tert Amyl Alcohol 0.038 0.054 0.050 0.057 0.058 0.062 0.059 0.054  15.10
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.05596 *A + 0.00021 *A^2

53)  Trichloroethene   0.191 0.207 0.173 0.183 0.194 0.210 0.212 0.196   7.52
54)  Methylcyclohexane 0.192 0.262 0.213 0.237 0.283 0.299 0.314 0.257  17.68
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.23271 *A + 0.04298 *A^2

55)  Dibromomethane    0.093 0.111 0.097 0.105 0.111 0.120 0.118 0.108   9.54
```

Initial Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

```
56)C 1,2-Dichloropropa 0.144 0.197 0.170 0.182 0.190 0.206 0.205 0.185  11.88
57)  Bromodichlorometh 0.124 0.182 0.162 0.188 0.212 0.241 0.244 0.193  22.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.17720 *A + 0.03671 *A^2

58)  Methyl methacryla 0.163 0.200 0.161 0.206 0.216 0.236 0.239 0.203  15.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.19091 *A + 0.02627 *A^2

59)  1,4-Dioxane       0.005 0.006 0.006 0.006 0.006 0.006 0.005 0.006   7.44
60)  2-Chloroethyl vin 0.118 0.161 0.137 0.150 0.162 0.175 0.174 0.154  13.44
61)  cis-1,3-Dichlorop 0.159 0.225 0.211 0.247 0.274 0.312 0.309 0.248  22.33
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9977
              Response Ratio = 0.00000 + 0.23328 *A + 0.04258 *A^2


62) I   Chlorobenzene-d5      ----------------ISTD--------------------
63)S Toluene-d8        1.388 1.371 1.377 1.380 1.387 1.353 1.375 1.376   0.85
64)C Toluene           1.076 1.275 1.089 1.120 1.182 1.261 1.260 1.180   7.32
65)  2-Nitropropane    0.046 0.064 0.061 0.087 0.103 0.122 0.122 0.086  35.24
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9947
              Response Ratio = 0.00000 + 0.07723 *A + 0.00500 *A^2

66)  4-Methyl-2-pentan 0.473 0.484 0.404 0.446 0.452 0.475 0.454 0.455   5.83
67)  trans-1,3-Dichlor 0.213 0.292 0.285 0.322 0.362 0.397 0.393 0.323  20.59
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9981
              Response Ratio = 0.00000 + 0.31086 *A + 0.04684 *A^2

68)  Tetrachloroethene 0.227 0.268 0.224 0.243 0.256 0.269 0.267 0.251   7.77
69)  Ethyl methacrylat 0.256 0.421 0.336 0.406 0.440 0.472 0.473 0.400  19.69
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.38873 *A + 0.04695 *A^2

70)  1,1,2-Trichloroet 0.170 0.218 0.188 0.197 0.207 0.221 0.213 0.202   9.01
71)  Dibromochlorometh 0.114 0.175 0.163 0.199 0.224 0.254 0.254 0.198  26.01
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.18521 *A + 0.03845 *A^2

72)  1,3-Dichloropropa 0.406 0.488 0.409 0.428 0.454 0.484 0.473 0.449   7.77
73)  1,2-Dibromoethane 0.188 0.254 0.225 0.239 0.255 0.279 0.269 0.244  12.48
74)  3,3-dimethyl-1-bu 0.063 0.096 0.085 0.102 0.105 0.108 0.100 0.094  16.53
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.10092 *A + 0.00002 *A^2

75)  2-hexanone        0.517 0.546 0.461 0.527 0.522 0.526 0.480 0.511   5.77
76)  1-Chlorohexane    0.376 0.395 0.320 0.342 0.379 0.410 0.414 0.376   9.19
77)C Ethylbenzene      1.129 1.390 1.181 1.236 1.322 1.402 1.402 1.295   8.73
78)P Chlorobenzene     0.634 0.766 0.642 0.676 0.709 0.763 0.757 0.707   8.13
79)  1,1,1,2-Tetrachlo 0.145 0.213 0.190 0.209 0.232 0.257 0.254 0.214  18.21
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.20474 *A + 0.02784 *A^2

80)  m,p-Xylene        0.861 1.084 0.932 0.982 1.054 1.129 1.125 1.024   9.98
81)  o-Xylene          0.808 1.063 0.937 0.977 1.039 1.118 1.111 1.008  10.91
82)  Styrene           0.585 0.768 0.681 0.758 0.822 0.902 0.880 0.771  14.44
83)P Bromoform         0.052 0.088 0.082 0.107 0.122 0.147 0.147 0.106  32.85
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9964
              Response Ratio = 0.00000 + 0.09538 *A + 0.02857 *A^2

84)  Isopropylbenzene  0.935 1.217 1.033 1.121 1.221 1.304 1.308 1.163  12.06
```

Initial Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICC3560
Lab FileID: 2P92271.D

```
 85) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 86)S 4-Bromofluorobenz 0.776 0.769 0.776 0.789 0.773 0.782 0.795 0.780   1.16
 87)  cis-1,4-Dichloro- 0.220 0.273 0.218 0.273 0.296 0.342 0.354 0.282  18.95
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
               Response Ratio = 0.00000 + 0.24838 *A + 0.05642 *A^2

 88)  n-Propylbenzene   2.531 3.209 2.723 2.939 3.141 3.434 3.496 3.068  11.65
 89)  Bromobenzene      0.512 0.677 0.572 0.600 0.626 0.681 0.673 0.620  10.25
 90)P 1,1,2,2-Tetrachlo 0.676 0.857 0.776 0.831 0.849 0.911 0.894 0.828   9.63
 91)  1,3,5-Trimethylbe 1.672 2.276 1.931 2.038 2.194 2.397 2.444 2.136  12.87
 92)  2-Chlorotoluene   1.522 1.982 1.680 1.781 1.878 2.045 2.073 1.851  10.97
 93)  trans-1,4-Dichlor 0.289 0.347 0.305 0.350 0.372 0.415 0.404 0.355  13.28
 94)  1,2,3-Trichloropr 0.270 0.314 0.297 0.307 0.312 0.336 0.324 0.309   6.86
 95)  Cyclohexanone     0.063 0.066 0.058 0.070 0.066 0.067 0.063 0.065   5.54
 96)  4-Chlorotoluene   1.667 2.091 1.747 1.892 1.946 2.149 2.168 1.951  10.06
 97)  tert-Butylbenzene 0.902 1.217 1.062 1.131 1.202 1.330 1.366 1.173  13.57
 98)  a-Methyl styrene                                           0.000  -1.00
 99)  1,2,4-Trimethylbe 1.708 2.152 1.861 2.027 2.130 2.343 2.361 2.083  11.50
100)  Pentachloroethane 0.153 0.233 0.186 0.259 0.278 0.317 0.330 0.251  25.97
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.22648 *A + 0.05530 *A^2

101)  sec-Butylbenzene  1.827 2.387 1.980 2.165 2.359 2.562 2.619 2.271  12.97
102)  4-Isopropyltoluen 1.433 2.038 1.766 1.928 2.085 2.279 2.346 1.982  15.76
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 1.85030 *A + 0.26250 *A^2

103)  1,3-Dichlorobenze 0.972 1.198 1.019 1.072 1.110 1.222 1.205 1.114   8.81
104)  1,2,3-Trimethylbe 1.688 2.233 1.913 2.008 2.125 2.322 2.339 2.090  11.34
105)  1,4-Dichlorobenze 1.025 1.297 1.067 1.109 1.171 1.247 1.234 1.164   8.67
106)  n-Butylbenzene    0.710 1.029 0.864 0.937 1.024 1.116 1.137 0.974  15.43
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.91407 *A + 0.11950 *A^2

107)  Benzyl Chloride   0.104 0.152 0.162 0.225 0.282 0.347 0.357 0.233  42.56
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9951
               Response Ratio = 0.00000 + 0.19341 *A + 0.08927 *A^2

108)  1,2-Dichlorobenze 0.909 1.122 0.944 1.021 1.055 1.145 1.125 1.046   8.88
109)  1,2-Dibromo-3-Chl 0.116 0.152 0.146 0.188 0.200 0.236 0.236 0.182  25.23
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9975
               Response Ratio = 0.00000 + 0.16732 *A + 0.03807 *A^2

110)  Hexachlorobutadie 0.152 0.216 0.165 0.172 0.201 0.215 0.223 0.192  14.82
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.17454 *A + 0.02550 *A^2

111)  1,2,4-Trichlorobe 0.471 0.572 0.503 0.528 0.573 0.623 0.626 0.556  10.56
112)  Naphthalene       1.632 2.223 2.003 2.240 2.380 2.677 2.624 2.254  16.02
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
               Response Ratio = 0.00000 + 2.16008 *A + 0.26529 *A^2

113)  1,2,3-Trichlorobe 0.477 0.539 0.466 0.493 0.528 0.579 0.573 0.522   8.65
 ----------------------------------------------------------------------------
 (#) = Out of Range

          V2P_2022-08-24.M        Wed Aug 24 15:20:42 2022
```

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-08-24\2P92279.D Vial: 60
Acq On : 24 Aug 2022 2:09 pm Operator: courtnef
Sample : ICV3560-5 Inst : MSVOA13
Misc : MS52204,V2P3560,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	102	0.00	3.72
2	Dichlorodifluoromethane		----------NA----------				
3 P	Chloromethane	0.153	0.137	10.5	92	0.00	1.25
4	1,3-butadiene	0.142	0.133	6.3	93	0.00	1.32
5 C	Vinyl Chloride	0.186	0.169	9.1	89	0.00	1.30
6	Bromomethane	0.115	0.098	14.8	92	0.00	1.51
	----------	Amount	Calc.	%Drift	----------		
7	Chloroethane	40.000	34.864	12.8	96	0.00	1.58
8	Trichlorofluoromethane	40.000	36.722	8.2	85	0.00	1.67
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether	0.174	0.166	4.6	96	0.00	1.88
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol	800.000	698.394	12.7	86	0.02	1.98
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha	0.163	0.174	-6.7	105	0.00	1.98
12 C	1,1-Dichloroethene	0.238	0.241	-1.3	99	0.00	1.98
	----------	Amount	Calc.	%Drift	----------		
13	Freon 113	40.000	36.928	7.7	87	0.00	2.02
14	Carbon Disulfide	40.000	34.352	14.1	83	0.00	2.00
15	Iodomethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
16	Acrolein	0.064	0.054	15.6	84	0.00	2.16
17	Allyl chloride	0.171	0.198	-15.8	112	0.00	2.25
	----------	Amount	Calc.	%Drift	----------		
18	Methylene Chloride	40.000	32.471	18.8	92	0.00	2.30
19	Acetone	200.000	200.830	-0.4	106	0.00	2.32
	----------	AvgRF	CCRF	%Dev	----------		
20	Methyl acetate	0.233	0.228	2.1	98	0.00	2.40
21	trans-1,2-Dichloroethene	0.241	0.238	1.2	99	0.00	2.40
	----------	Amount	Calc.	%Drift	----------		
22	Hexane	40.000	41.523	-3.8	100	0.00	2.47
	----------	AvgRF	CCRF	%Dev	----------		

Initial Calibration Verification

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Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

23		Methyl Tert Butyl Ether	0.549	0.637	-16.0	115	0.00	2.48
24		Tert Butyl Alcohol	0.068	0.062	8.8	90	0.00	2.51
25		Acetonitrile	0.038	0.031	18.4	90	0.00	2.55
26		Di-isopropyl ether	0.510	0.509	0.2	100	0.00	2.69
27		Chloroprene	0.726	0.921	-26.9#	132	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.324	-2.2	102	0.00	2.73
29		Acrylonitrile	0.115	0.120	-4.3	110	0.00	2.73
30		ETBE	0.597	0.549	8.0	91	0.00	2.88
31		Vinyl acetate	0.411	0.416	-1.2	100	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.183	3.2	98	0.00	3.02
			Amount	Calc.	%Drift			
33		2,2-Dichloropropane	40.000	37.190	7.0	92	0.00	3.09
			AvgRF	CCRF	%Dev			
34		Bromochloromethane	0.085	0.078	8.2	94	0.00	3.13
			Amount	Calc.	%Drift			
35		Cyclohexane	40.000	37.159	7.1	90	0.00	3.17
			AvgRF	CCRF	%Dev			
36	C	Chloroform	0.318	0.310	2.5	96	0.00	3.17
37		Ethyl acetate	0.311	0.306	1.6	101	0.00	3.23
38		Tetrahydrofuran	0.119	0.114	4.2	99	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.217	-1.9	103	0.00	3.26
			Amount	Calc.	%Drift			
40		Carbon Tetrachloride	40.000	40.012	-0.0	99	0.00	3.27
41		1,1,1-Trichloroethane	40.000	38.417	4.0	96	0.00	3.30
42		2-Butanone	200.000	199.870	0.1	107	0.00	3.32
			AvgRF	CCRF	%Dev			
43		1,1-Dichloropropene	0.238	0.229	3.8	94	0.00	3.36
			Amount	Calc.	%Drift			
44		tert-Butyl formate	200.000	175.631	12.2	85	0.00	3.41
			AvgRF	CCRF	%Dev			
45		Propionitrile	0.061	0.057	6.6	96	0.00	3.46
46		Methacrylonitrile	0.163	0.158	3.1	96	0.00	3.48
47		Benzene	0.761	0.725	4.7	96	0.00	3.49
48		TAME	0.543	0.719	-32.4#	130	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.306	-3.7	103	0.00	3.55
50		Isobutyl alcohol	0.031	0.033	-6.5	102	0.00	3.59
51		1,2-Dichloroethane	0.272	0.262	3.7	96	0.00	3.59
			Amount	Calc.	%Drift			
52		Tert Amyl Alcohol	400.000	350.606	12.3	88	0.00	3.65
			AvgRF	CCRF	%Dev			
53		Trichloroethene	0.196	0.184	6.1	97	0.00	3.82
			Amount	Calc.	%Drift			
54		Methylcyclohexane	40.000	38.557	3.6	93	0.00	3.85
			AvgRF	CCRF	%Dev			
55		Dibromomethane	0.108	0.101	6.5	93	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.173	6.5	93	0.00	4.11
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

57		Bromodichloromethane	40.000	39.634	0.9	98	0.00	4.15
58		Methyl methacrylate	40.000	38.542	3.6	96	0.00	4.24
			AvgRF	CCRF	%Dev			
59		1,4-Dioxane	0.006	0.006	0.0	100	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.157	-1.9	99	0.00	4.48
			Amount	Calc.	%Drift			
61		cis-1,3-Dichloropropene	40.000	39.104	2.2	97	0.00	4.52
			AvgRF	CCRF	%Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64
63	S	Toluene-d8	1.376	1.376	0.0	103	0.00	4.65
64	C	Toluene	1.180	1.115	5.5	98	0.00	4.68
			Amount	Calc.	%Drift			
65		2-Nitropropane	200.000	191.129	4.4	93	0.00	4.78
			AvgRF	CCRF	%Dev			
66		4-Methyl-2-pentanone	0.455	0.450	1.1	103	0.00	4.89
			Amount	Calc.	%Drift			
67		trans-1,3-Dichloropropene	40.000	40.810	-2.0	102	0.00	4.92
			AvgRF	CCRF	%Dev			
68		Tetrachloroethene	0.251	0.240	4.4	97	0.00	4.94
			Amount	Calc.	%Drift			
69		Ethyl methacrylate	40.000	38.356	4.1	96	0.00	5.03
			AvgRF	CCRF	%Dev			
70		1,1,2-Trichloroethane	0.202	0.191	5.4	96	0.00	5.02
			Amount	Calc.	%Drift			
71		Dibromochloromethane	40.000	37.409	6.5	93	0.00	5.14
			AvgRF	CCRF	%Dev			
72		1,3-Dichloropropane	0.449	0.400	10.9	91	0.00	5.19
73		1,2-Dibromoethane	0.244	0.243	0.4	99	0.00	5.29
			Amount	Calc.	%Drift			
74		3,3-dimethyl-1-butanol	2000.000	1907.858	4.6	96	0.00	5.42
			AvgRF	CCRF	%Dev			
75		2-hexanone	0.511	0.500	2.2	100	0.00	5.43
76		1-Chlorohexane	0.376	0.344	8.5	94	0.00	5.65
77	C	Ethylbenzene	1.295	1.227	5.3	96	0.00	5.69
78	P	Chlorobenzene	0.707	0.672	5.0	98	0.00	5.65
			Amount	Calc.	%Drift			
79		1,1,1,2-Tetrachloroethane	40.000	38.355	4.1	97	0.00	5.70
			AvgRF	CCRF	%Dev			
80		m,p-Xylene	1.024	0.972	5.1	96	0.00	5.78
81		o-Xylene	1.008	1.000	0.8	100	0.00	6.08
82		Styrene	0.771	0.767	0.5	97	0.00	6.11
			Amount	Calc.	%Drift			
83	P	Bromoform	40.000	38.188	4.5	95	0.00	6.12

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

			AvgRF	CCRF	%Dev			
84		Isopropylbenzene	1.163	1.139	2.1	97	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.782	-0.3	103	0.00	6.50
			Amount	Calc.	%Drift			
87		cis-1,4-Dichloro-2-butene	40.000	37.917	5.2	95	0.00	6.53
			AvgRF	CCRF	%Dev			
88		n-Propylbenzene	3.068	2.985	2.7	97	0.00	6.61
89		Bromobenzene	0.620	0.572	7.7	93	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.813	1.8	97	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.062	3.5	95	0.00	6.76
92		2-Chlorotoluene	1.851	1.808	2.3	98	0.00	6.72
93		trans-1,4-Dichloro-2-Bute	0.355	0.305	14.1	83	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.280	9.4	91	0.00	6.73
95		Cyclohexanone	0.065	0.068	-4.6	105	0.00	6.75
96		4-Chlorotoluene	1.951	1.891	3.1	99	0.00	6.84
97		tert-Butylbenzene	1.173	1.152	1.8	97	0.00	6.99
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.083	2.049	1.6	98	0.00	7.04
			Amount	Calc.	%Drift			
100		Pentachloroethane	40.000	41.245	-3.1	103	0.00	7.00
			AvgRF	CCRF	%Dev			
101		sec-Butylbenzene	2.271	2.324	-2.3	100	0.00	7.13
			Amount	Calc.	%Drift			
102		4-Isopropyltoluene	40.000	40.151	-0.4	101	0.00	7.25
			AvgRF	CCRF	%Dev			
103		1,3-Dichlorobenzene	1.114	1.090	2.2	100	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	2.111	-1.0	101	0.00	7.37
105		1,4-Dichlorobenzene	1.164	1.108	4.8	96	0.00	7.34
			Amount	Calc.	%Drift			
106		n-Butylbenzene	40.000	36.646	8.4	91	0.00	7.56
107		Benzyl Chloride	40.000	29.878	25.3#	66	0.00	7.52
			AvgRF	CCRF	%Dev			
108		1,2-Dichlorobenzene	1.046	1.011	3.3	97	0.00	7.65
			Amount	Calc.	%Drift			
109		1,2-Dibromo-3-Chloropropa	40.000	36.459	8.9	90	0.00	8.21
110		Hexachlorobutadiene	40.000	38.078	4.8	93	0.00	8.69
			AvgRF	CCRF	%Dev			
111		1,2,4-Trichlorobenzene	0.556	0.537	3.4	95	0.00	8.68
			Amount	Calc.	%Drift			
112		Naphthalene	40.000	39.130	2.2	99	0.00	8.88
			AvgRF	CCRF	%Dev			
113		1,2,3-Trichlorobenzene	0.522	0.497	4.8	96	0.00	9.01

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92279.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 2P92271.D  V2P_2022-08-24.M        Wed Aug 24 15:19:29 2022
```

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-08-24\2P92281.D Vial: 61
Acq On : 24 Aug 2022 2:41 pm Operator: courtnef
Sample : ICV3560-4 Inst : MSVOA13
Misc : MS52204,V2P3560,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:30:01 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	105	0.00	3.72
2	Dichlorodifluoromethane	0.135	0.115	14.8	103	0.00	1.12
3 P	Chloromethane		----------NA----------				
4	1,3-butadiene		----------NA----------				
5 C	Vinyl Chloride		----------NA----------				
6	Bromomethane		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
7	Chloroethane		----------NA----------				
8	Trichlorofluoromethane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
9	Ethyl Ether		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
10	Ethanol		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
11	1,2-Dichlorotrifluoroetha		----------NA----------				
12 C	1,1-Dichloroethene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
13	Freon 113		----------NA----------				
14	Carbon Disulfide		----------NA----------				
15	Iodomethane	25.000	22.821	8.7	99	0.00	2.06
	----------	AvgRF	CCRF	%Dev	----------		
16	Acrolein		----------NA----------				
17	Allyl chloride		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
18	Methylene Chloride		----------NA----------				
19	Acetone		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		
20	Methyl acetate		----------NA----------				
21	trans-1,2-Dichloroethene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
22	Hexane		----------NA----------				
	----------	AvgRF	CCRF	%Dev	----------		

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

23		Methyl Tert Butyl Ether		----------NA----------					
24		Tert Butyl Alcohol		----------NA----------					
25		Acetonitrile		----------NA----------					
26		Di-isopropyl ether		----------NA----------					
27		Chloroprene		----------NA----------					
28	P	1,1-Dichloroethane		----------NA----------					
29		Acrylonitrile		----------NA----------					
30		ETBE		----------NA----------					
31		Vinyl acetate		----------NA----------					
32		cis-1,2-Dichloroethene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
33		2,2-Dichloropropane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
34		Bromochloromethane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
35		Cyclohexane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
36	C	Chloroform		----------NA----------					
37		Ethyl acetate		----------NA----------					
38		Tetrahydrofuran		----------NA----------					
39	S	Dibromofluoromethane	0.213	0.215	-0.9	104	0.00	3.27	
		----------	Amount	Calc.	%Drift	----------			
40		Carbon Tetrachloride		----------NA----------					
41		1,1,1-Trichloroethane		----------NA----------					
42		2-Butanone		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
43		1,1-Dichloropropene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
44		tert-Butyl formate		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
45		Propionitrile		----------NA----------					
46		Methacrylonitrile		----------NA----------					
47		Benzene		----------NA----------					
48		TAME		----------NA----------					
49	S	1,2-Dichloroethane-d4	0.295	0.300	-1.7	105	0.00	3.55	
50		Isobutyl alcohol		----------NA----------					
51		1,2-Dichloroethane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
52		Tert Amyl Alcohol		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
53		Trichloroethene		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			
54		Methylcyclohexane		----------NA----------					
		----------	AvgRF	CCRF	%Dev	----------			
55		Dibromomethane		----------NA----------					
56	C	1,2-Dichloropropane		----------NA----------					
		----------	Amount	Calc.	%Drift	----------			

57		Bromodichloromethane			NA				
58		Methyl methacrylate			NA				
			AvgRF	CCRF	%Dev				
59		1,4-Dioxane			NA				
60		2-Chloroethyl vinyl ether			NA				
			Amount	Calc.	%Drift				
61		cis-1,3-Dichloropropene			NA				
			AvgRF	CCRF	%Dev				
62	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	5.64	
63	S	Toluene-d8	1.376	1.377	-0.1	104	0.00	4.65	
64	C	Toluene			NA				
			Amount	Calc.	%Drift				
65		2-Nitropropane			NA				
			AvgRF	CCRF	%Dev				
66		4-Methyl-2-pentanone			NA				
			Amount	Calc.	%Drift				
67		trans-1,3-Dichloropropene			NA				
			AvgRF	CCRF	%Dev				
68		Tetrachloroethene			NA				
			Amount	Calc.	%Drift				
69		Ethyl methacrylate			NA				
			AvgRF	CCRF	%Dev				
70		1,1,2-Trichloroethane			NA				
			Amount	Calc.	%Drift				
71		Dibromochloromethane			NA				
			AvgRF	CCRF	%Dev				
72		1,3-Dichloropropane			NA				
73		1,2-Dibromoethane			NA				
			Amount	Calc.	%Drift				
74		3,3-dimethyl-1-butanol			NA				
			AvgRF	CCRF	%Dev				
75		2-hexanone			NA				
76		1-Chlorohexane			NA				
77	C	Ethylbenzene			NA				
78	P	Chlorobenzene			NA				
			Amount	Calc.	%Drift				
79		1,1,1,2-Tetrachloroethane			NA				
			AvgRF	CCRF	%Dev				
80		m,p-Xylene			NA				
81		o-Xylene			NA				
82		Styrene			NA				
			Amount	Calc.	%Drift				
83	P	Bromoform			NA				

			AvgRF	CCRF	%Dev				
84		Isopropylbenzene		NA					
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00		7.33
86	S	4-Bromofluorobenzene	0.780	0.763	2.2	103	0.00		6.50
			Amount	Calc.	%Drift				
87		cis-1,4-Dichloro-2-butene		NA					
			AvgRF	CCRF	%Dev				
88		n-Propylbenzene		NA					
89		Bromobenzene		NA					
90	P	1,1,2,2-Tetrachloroethane		NA					
91		1,3,5-Trimethylbenzene		NA					
92		2-Chlorotoluene		NA					
93		trans-1,4-Dichloro-2-Bute		NA					
94		1,2,3-Trichloropropane		NA					
95		Cyclohexanone		NA					
96		4-Chlorotoluene		NA					
97		tert-Butylbenzene		NA					
98		a-Methyl styrene		NA					
99		1,2,4-Trimethylbenzene		NA					
			Amount	Calc.	%Drift				
100		Pentachloroethane		NA					
			AvgRF	CCRF	%Dev				
101		sec-Butylbenzene		NA					
			Amount	Calc.	%Drift				
102		4-Isopropyltoluene		NA					
			AvgRF	CCRF	%Dev				
103		1,3-Dichlorobenzene		NA					
104		1,2,3-Trimethylbenzene		NA					
105		1,4-Dichlorobenzene		NA					
			Amount	Calc.	%Drift				
106		n-Butylbenzene		NA					
107		Benzyl Chloride		NA					
			AvgRF	CCRF	%Dev				
108		1,2-Dichlorobenzene		NA					
			Amount	Calc.	%Drift				
109		1,2-Dibromo-3-Chloropropa		NA					
110		Hexachlorobutadiene		NA					
			AvgRF	CCRF	%Dev				
111		1,2,4-Trichlorobenzene		NA					
			Amount	Calc.	%Drift				
112		Naphthalene		NA					
			AvgRF	CCRF	%Dev				
113		1,2,3-Trichlorobenzene		NA					

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3560-ICV3560
Lab FileID: 2P92281.D

(#) = Out of Range SPCC's out = 4 CCC's out = 6
2P92269.D V2P_2022-08-24.M Wed Aug 24 15:20:21 2022

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2022-09-23\2P93306.D Vial: 52
Acq On : 23 Sep 2022 11:41 am Operator: courtnef
Sample : CC3560-5 Inst : MSVOA13
Misc : MS52362,V2P3586,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:29:43 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	83	0.00	3.72
		Amount	Calc.	%Drift			
2	Dichlorodifluoromethane	40.000	45.938	-14.8	89	0.00	1.12
		AvgRF	CCRF	%Dev			
3 P	Chloromethane	0.153	0.181	-18.3	98	0.00	1.25
4	1,3-butadiene	0.142	0.116	18.3	66	0.00	1.32
5 C	Vinyl Chloride	0.186	0.216	-16.1	92	0.00	1.30
6	Bromomethane	0.115	0.111	3.5	85	0.00	1.50
		Amount	Calc.	%Drift			
7	Chloroethane	40.000	43.412	-8.5	96	0.00	1.58
8	Trichlorofluoromethane	40.000	53.947	-34.9#	88	0.00	1.67
		AvgRF	CCRF	%Dev			
9	Ethyl Ether	0.174	0.199	-14.4	93	0.00	1.88
		Amount	Calc.	%Drift			
10	Ethanol	800.000	968.409	-21.1#	92	0.00	1.97
		AvgRF	CCRF	%Dev			
11	1,2-Dichlorotrifluoroetha	0.163	0.223	-36.8#	108	0.00	1.97
12 C	1,1-Dichloroethene	0.238	0.265	-11.3	88	0.00	1.98
		Amount	Calc.	%Drift			
13	Freon 113	40.000	44.908	-12.3	87	0.00	2.01
14	Carbon Disulfide	40.000	39.167	2.1	78	0.00	2.00
15	Iodomethane	40.000	55.409	-38.5#	110	0.00	2.06
		AvgRF	CCRF	%Dev			
16	Acrolein	0.064	0.069	-7.8	88	0.00	2.15
17	Allyl chloride	0.171	0.182	-6.4	83	0.00	2.25
		Amount	Calc.	%Drift			
18	Methylene Chloride	40.000	39.719	0.7	90	0.00	2.30
19	Acetone	200.000	208.286	-4.1	89	0.00	2.31
		AvgRF	CCRF	%Dev			
20	Methyl acetate	0.233	0.270	-15.9	94	0.00	2.40
21	trans-1,2-Dichloroethene	0.241	0.273	-13.3	92	0.00	2.40

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

			Amount	Calc.	%Drift			
22		Hexane	40.000	47.064	-17.7	93	0.00	2.47
			AvgRF	CCRF	%Dev			
23		Methyl Tert Butyl Ether	0.549	0.666	-21.3#	97	0.00	2.47
24		Tert Butyl Alcohol	0.068	0.081	-19.1	95	0.00	2.51
25		Acetonitrile	0.038	0.040	-5.3	94	0.00	2.55
26		Di-isopropyl ether	0.510	0.607	-19.0	97	0.00	2.69
27		Chloroprene	0.726	0.798	-9.9	92	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.366	-15.5	93	0.00	2.73
29		Acrylonitrile	0.115	0.124	-7.8	92	0.00	2.73
30		ETBE	0.597	0.707	-18.4	95	0.00	2.88
31		Vinyl acetate	0.411	0.451	-9.7	88	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.215	-13.8	93	0.00	3.02
			Amount	Calc.	%Drift			
33		2,2-Dichloropropane	40.000	43.836	-9.6	90	0.00	3.09
			AvgRF	CCRF	%Dev			
34		Bromochloromethane	0.085	0.096	-12.9	93	0.00	3.12
			Amount	Calc.	%Drift			
35		Cyclohexane	40.000	43.295	-8.2	86	0.00	3.16
			AvgRF	CCRF	%Dev			
36	C	Chloroform	0.318	0.368	-15.7	92	0.00	3.17
37		Ethyl acetate	0.311	0.345	-10.9	92	0.00	3.23
38		Tetrahydrofuran	0.119	0.144	-21.0#	102	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.213	0.0	82	0.00	3.27
			Amount	Calc.	%Drift			
40		Carbon Tetrachloride	40.000	42.927	-7.3	87	0.00	3.27
41		1,1,1-Trichloroethane	40.000	44.433	-11.1	90	0.00	3.30
42		2-Butanone	200.000	209.682	-4.8	90	0.00	3.31
			AvgRF	CCRF	%Dev			
43		1,1-Dichloropropene	0.238	0.274	-15.1	91	0.00	3.37
			Amount	Calc.	%Drift			
44		tert-Butyl formate	200.000	225.400	-12.7	92	0.00	3.41
			AvgRF	CCRF	%Dev			
45		Propionitrile	0.061	0.069	-13.1	94	0.00	3.46
46		Methacrylonitrile	0.163	0.178	-9.2	87	0.00	3.49
47		Benzene	0.761	0.882	-15.9	95	0.00	3.50
48		TAME	0.543	0.645	-18.8	94	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.271	8.1	74	0.00	3.55
50		Isobutyl alcohol	0.031	0.037	-19.4	92	0.00	3.59
51		1,2-Dichloroethane	0.272	0.299	-9.9	89	0.00	3.59
			Amount	Calc.	%Drift			
52		Tert Amyl Alcohol	400.000	477.430	-19.4	98	0.00	3.65
			AvgRF	CCRF	%Dev			
53		Trichloroethene	0.196	0.222	-13.3	94	0.00	3.83
			Amount	Calc.	%Drift			
54		Methylcyclohexane	40.000	45.211	-13.0	90	0.00	3.85
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

55		Dibromomethane	0.108	0.126	-16.7	94	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.222	-20.0#	97	0.00	4.11
		----------	Amount	Calc.	%Drift	----------		
57		Bromodichloromethane	40.000	44.224	-10.6	90	0.00	4.14
58		Methyl methacrylate	40.000	41.968	-4.9	85	0.00	4.23
		----------	AvgRF	CCRF	%Dev	----------		
59		1,4-Dioxane	0.006	0.007	-16.7	96	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.169	-9.7	86	0.00	4.48
		----------	Amount	Calc.	%Drift	----------		
61		cis-1,3-Dichloropropene	40.000	45.585	-14.0	93	0.00	4.52
		----------	AvgRF	CCRF	%Dev	----------		
62	I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00	5.64
63	S	Toluene-d8	1.376	1.297	5.7	85	0.00	4.65
64	C	Toluene	1.180	1.239	-5.0	96	0.00	4.68
		----------	Amount	Calc.	%Drift	----------		
65		2-Nitropropane	200.000	200.778	-0.4	87	0.00	4.78
		----------	AvgRF	CCRF	%Dev	----------		
66		4-Methyl-2-pentanone	0.455	0.454	0.2	92	0.00	4.89
		----------	Amount	Calc.	%Drift	----------		
67		trans-1,3-Dichloropropene	40.000	42.087	-5.2	93	0.00	4.92
		----------	AvgRF	CCRF	%Dev	----------		
68		Tetrachloroethene	0.251	0.292	-16.3	104	0.00	4.94
		----------	Amount	Calc.	%Drift	----------		
69		Ethyl methacrylate	40.000	40.309	-0.8	89	0.00	5.03
		----------	AvgRF	CCRF	%Dev	----------		
70		1,1,2-Trichloroethane	0.202	0.218	-7.9	96	0.00	5.02
		----------	Amount	Calc.	%Drift	----------		
71		Dibromochloromethane	40.000	42.464	-6.2	94	0.00	5.14
		----------	AvgRF	CCRF	%Dev	----------		
72		1,3-Dichloropropane	0.449	0.473	-5.3	95	0.00	5.20
73		1,2-Dibromoethane	0.244	0.270	-10.7	96	0.00	5.29
		----------	Amount	Calc.	%Drift	----------		
74		3,3-dimethyl-1-butanol	2000.000	2074.695	-3.7	92	0.00	5.42
		----------	AvgRF	CCRF	%Dev	----------		
75		2-hexanone	0.511	0.521	-2.0	91	0.00	5.43
76		1-Chlorohexane	0.376	0.402	-6.9	97	0.00	5.65
77	C	Ethylbenzene	1.295	1.372	-5.9	95	0.00	5.68
78	P	Chlorobenzene	0.707	0.763	-7.9	98	0.00	5.66
		----------	Amount	Calc.	%Drift	----------		
79		1,1,1,2-Tetrachloroethane	40.000	43.163	-7.9	97	0.00	5.70
		----------	AvgRF	CCRF	%Dev	----------		
80		m,p-Xylene	1.024	1.090	-6.4	94	0.00	5.78
81		o-Xylene	1.008	1.075	-6.6	95	0.00	6.08

Continuing Calibration Summary

Job Number: FA98820 **Sample:** V2P3586-CC3560
Account: SCMAW Sovereign Consulting **Lab FileID:** 2P93306.D
Project: Shepley's Hill (SHL); Devens, MA

82		Styrene	0.771	0.856	-11.0	95	0.00	6.11
			Amount	Calc.	%Drift			
83	P	Bromoform	40.000	41.979	-4.9	94	0.00	6.12
			AvgRF	CCRF	%Dev			
84		Isopropylbenzene	1.163	1.275	-9.6	95	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.757	2.9	92	0.00	6.50
			Amount	Calc.	%Drift			
87		cis-1,4-Dichloro-2-butene	40.000	35.585	11.0	82	0.00	6.53
			AvgRF	CCRF	%Dev			
88		n-Propylbenzene	3.068	3.173	-3.4	95	0.00	6.61
89		Bromobenzene	0.620	0.658	-6.1	99	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.873	-5.4	97	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.212	-3.6	95	0.00	6.76
92		2-Chlorotoluene	1.851	1.898	-2.5	95	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.355	0.318	10.4	80	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.322	-4.2	97	0.00	6.73
95		Cyclohexanone	0.065	0.069	-6.2	100	0.00	6.74
96		4-Chlorotoluene	1.951	1.987	-1.8	96	0.00	6.83
97		tert-Butylbenzene	1.173	1.191	-1.5	93	0.00	6.99
98		a-Methyl styrene		----------NA----------				
99		1,2,4-Trimethylbenzene	2.083	2.149	-3.2	95	0.00	7.05
			Amount	Calc.	%Drift			
100		Pentachloroethane	40.000	37.593	6.0	86	0.00	6.99
			AvgRF	CCRF	%Dev			
101		sec-Butylbenzene	2.271	2.390	-5.2	95	0.00	7.13
			Amount	Calc.	%Drift			
102		4-Isopropyltoluene	40.000	41.658	-4.1	97	0.00	7.24
			AvgRF	CCRF	%Dev			
103		1,3-Dichlorobenzene	1.114	1.180	-5.9	100	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	1.072	48.7#	48#	0.00	7.38
105		1,4-Dichlorobenzene	1.164	1.198	-2.9	96	0.00	7.34
			Amount	Calc.	%Drift			
106		n-Butylbenzene	40.000	40.599	-1.5	94	0.00	7.56
107		Benzyl Chloride	40.000	38.566	3.6	84	0.00	7.52
			AvgRF	CCRF	%Dev			
108		1,2-Dichlorobenzene	1.046	1.106	-5.7	99	0.00	7.65
			Amount	Calc.	%Drift			
109		1,2-Dibromo-3-Chloropropa	40.000	40.064	-0.2	93	0.00	8.21
110		Hexachlorobutadiene	40.000	41.308	-3.3	95	0.00	8.69
			AvgRF	CCRF	%Dev			
111		1,2,4-Trichlorobenzene	0.556	0.598	-7.6	98	0.00	8.68
			Amount	Calc.	%Drift			
112		Naphthalene	40.000	41.109	-2.8	97	0.00	8.89
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-CC3560
Lab FileID: 2P93306.D

113	1,2,3-Trichlorobenzene	0.522	0.561	-7.5	100	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 1
2P92271.D V2P_2022-08-24.M Fri Sep 23 11:57:31 2022

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\An...\V2P3586-87\2P93350.D Vial: 74
Acq On : 23 Sep 2022 11:34 pm Operator: courtnef
Sample : ECC3560-5 Inst : MSVOA13
Misc : MS52399,V2P3586,,,,, Multiplr: 1.00
MS Integration Params: big.p

Method : C:\msdchem\1\met...V2P_2022-08-24.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Aug 24 14:29:43 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	85	0.00	3.72
			True	Calc.	% Drift			
2		Dichlorodifluoromethane	40.000	43.188	-8.0	87	0.00	1.13
			AvgRF	CCRF	% Dev			
3	P	Chloromethane	0.153	0.170	-11.1	95	0.00	1.25
4		1,3-butadiene	0.142	0.140	1.4	82	0.00	1.33
5	C	Vinyl Chloride	0.186	0.206	-10.8	90	0.00	1.31
6		Bromomethane	0.115	0.084	27.0	66	0.00	1.52
			True	Calc.	% Drift			
7		Chloroethane	40.000	41.576	-3.9	95	0.00	1.59
8		Trichlorofluoromethane	40.000	51.506	-28.8	88	0.00	1.68
			AvgRF	CCRF	% Dev			
9		Ethyl Ether	0.174	0.199	-14.4	96	0.00	1.89
			True	Calc.	% Drift			
10		Ethanol	800.000	930.613	-16.3	92	0.00	1.97
			AvgRF	CCRF	% Dev			
11		1,2-Dichlorotrifluoroetha	0.163	0.215	-31.9	107	0.00	1.98
12	C	1,1-Dichloroethene	0.238	0.254	-6.7	87	0.00	1.99
			True	Calc.	% Drift			
13		Freon 113	40.000	42.630	-6.6	85	0.00	2.02
14		Carbon Disulfide	40.000	37.937	5.2	77	0.00	2.01
15		Iodomethane	40.000	49.197	-23.0	98	0.00	2.06
			AvgRF	CCRF	% Dev			
16		Acrolein	0.064	0.057	10.9	75	0.00	2.16
17		Allyl chloride	0.171	0.167	2.3	79	0.00	2.25
			True	Calc.	% Drift			
18		Methylene Chloride	40.000	38.867	2.8	91	0.00	2.31
19		Acetone	200.000	207.866	-3.9	91	0.00	2.32
			AvgRF	CCRF	% Dev			
20		Methyl acetate	0.233	0.271	-16.3	97	0.00	2.40
21		trans-1,2-Dichloroethene	0.241	0.263	-9.1	91	0.00	2.40

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

			True	Calc.	% Drift			
22		Hexane	40.000	42.015	-5.0	84	0.00	2.47
			AvgRF	CCRF	% Dev			
23		Methyl Tert Butyl Ether	0.549	0.645	-17.5	97	0.00	2.47
24		Tert Butyl Alcohol	0.068	0.083	-22.1	101	0.00	2.51
25		Acetonitrile	0.038	0.039	-2.6	94	0.00	2.56
26		Di-isopropyl ether	0.510	0.595	-16.7	97	0.00	2.69
27		Chloroprene	0.726	0.791	-9.0	94	0.00	2.73
28	P	1,1-Dichloroethane	0.317	0.349	-10.1	91	0.00	2.73
29		Acrylonitrile	0.115	0.124	-7.8	95	0.00	2.73
30		ETBE	0.597	0.690	-15.6	95	0.00	2.89
31		Vinyl acetate	0.411	0.372	9.5	75	0.00	2.86
32		cis-1,2-Dichloroethene	0.189	0.207	-9.5	92	0.00	3.03
			True	Calc.	% Drift			
33		2,2-Dichloropropane	40.000	34.347	14.1	70	0.00	3.09
			AvgRF	CCRF	% Dev			
34		Bromochloromethane	0.085	0.092	-8.2	92	0.00	3.13
			True	Calc.	% Drift			
35		Cyclohexane	40.000	42.074	-5.2	86	0.00	3.17
			AvgRF	CCRF	% Dev			
36	C	Chloroform	0.318	0.352	-10.7	91	0.00	3.17
37		Ethyl acetate	0.311	0.338	-8.7	93	0.00	3.23
38		Tetrahydrofuran	0.119	0.136	-14.3	98	0.00	3.26
39	S	Dibromofluoromethane	0.213	0.211	0.9	84	0.00	3.27
			True	Calc.	% Drift			
40		Carbon Tetrachloride	40.000	42.431	-6.1	88	0.00	3.27
41		1,1,1-Trichloroethane	40.000	42.129	-5.3	88	0.00	3.30
42		2-Butanone	200.000	205.105	-2.6	91	0.00	3.32
			AvgRF	CCRF	% Dev			
43		1,1-Dichloropropene	0.238	0.260	-9.2	89	0.00	3.37
			True	Calc.	% Drift			
44		tert-Butyl formate	200.000	195.107	2.4	80	0.00	3.41
			AvgRF	CCRF	% Dev			
45		Propionitrile	0.061	0.069	-13.1	96	0.00	3.46
46		Methacrylonitrile	0.163	0.176	-8.0	89	0.00	3.49
47		Benzene	0.761	0.841	-10.5	93	0.00	3.50
48		TAME	0.543	0.626	-15.3	94	0.00	3.57
49	S	1,2-Dichloroethane-d4	0.295	0.279	5.4	78	0.00	3.55
50		Isobutyl alcohol	0.031	0.037	-19.4	93	0.00	3.59
51		1,2-Dichloroethane	0.272	0.292	-7.4	90	0.00	3.59
			True	Calc.	% Drift			
52		Tert Amyl Alcohol	400.000	466.406	-16.6	99	0.00	3.65
			AvgRF	CCRF	% Dev			
53		Trichloroethene	0.196	0.215	-9.7	94	0.00	3.83
			True	Calc.	% Drift			
54		Methylcyclohexane	40.000	42.619	-6.5	86	0.00	3.85
			AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

55		Dibromomethane	0.108	0.123	-13.9	95	0.00	4.05
56	C	1,2-Dichloropropane	0.185	0.216	-16.8	97	0.00	4.11
			True	Calc.	% Drift			
57		Bromodichloromethane	40.000	42.642	-6.6	89	0.00	4.15
58		Methyl methacrylate	40.000	41.937	-4.8	88	0.00	4.23
			AvgRF	CCRF	% Dev			
59		1,4-Dioxane	0.006	0.006	0.0	91	0.00	4.26
60		2-Chloroethyl vinyl ether	0.154	0.165	-7.1	86	0.00	4.48
			True	Calc.	% Drift			
61		cis-1,3-Dichloropropene	40.000	42.601	-6.5	89	0.00	4.52
			AvgRF	CCRF	% Dev			
62	I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00	5.65
63	S	Toluene-d8	1.376	1.290	6.2	88	0.00	4.65
64	C	Toluene	1.180	1.191	-0.9	95	0.00	4.68
			True	Calc.	% Drift			
65		2-Nitropropane	200.000	196.068	2.0	87	0.00	4.78
			AvgRF	CCRF	% Dev			
66		4-Methyl-2-pentanone	0.455	0.449	1.3	93	0.00	4.89
			True	Calc.	% Drift			
67		trans-1,3-Dichloropropene	40.000	39.170	2.1	89	0.00	4.92
			AvgRF	CCRF	% Dev			
68		Tetrachloroethene	0.251	0.371	-47.8	137	0.00	4.94
			True	Calc.	% Drift			
69		Ethyl methacrylate	40.000	39.352	1.6	90	0.00	5.03
			AvgRF	CCRF	% Dev			
70		1,1,2-Trichloroethane	0.202	0.209	-3.5	95	0.00	5.02
			True	Calc.	% Drift			
71		Dibromochloromethane	40.000	40.875	-2.2	93	0.00	5.14
			AvgRF	CCRF	% Dev			
72		1,3-Dichloropropane	0.449	0.465	-3.6	97	0.00	5.20
73		1,2-Dibromoethane	0.244	0.262	-7.4	97	0.00	5.30
			True	Calc.	% Drift			
74		3,3-dimethyl-1-butanol	2000.000	2005.532	-0.3	92	0.00	5.42
			AvgRF	CCRF	% Dev			
75		2-hexanone	0.511	0.505	1.2	91	0.00	5.43
76		1-Chlorohexane	0.376	0.375	0.3	93	0.00	5.65
77	C	Ethylbenzene	1.295	1.306	-0.8	93	0.00	5.68
78	P	Chlorobenzene	0.707	0.727	-2.8	96	0.00	5.66
			True	Calc.	% Drift			
79		1,1,1,2-Tetrachloroethane	40.000	41.384	-3.5	96	0.00	5.70
			AvgRF	CCRF	% Dev			
80		m,p-Xylene	1.024	1.037	-1.3	93	0.00	5.78
81		o-Xylene	1.008	1.043	-3.5	95	0.00	6.08

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

82		Styrene	0.771	0.797	-3.4	91	0.00	6.11
		----------	True	Calc.	% Drift	----------		
83	P	Bromoform	40.000	39.836	0.4	91	0.00	6.12
		----------	AvgRF	CCRF	% Dev	----------		
84		Isopropylbenzene	1.163	1.213	-4.3	94	0.00	6.31
85	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	7.33
86	S	4-Bromofluorobenzene	0.780	0.765	1.9	96	0.00	6.50
		----------	True	Calc.	% Drift	----------		
87		cis-1,4-Dichloro-2-butene	40.000	24.338	39.2	55	0.00	6.53
		----------	AvgRF	CCRF	% Dev	----------		
88		n-Propylbenzene	3.068	2.999	2.2	93	0.00	6.61
89		Bromobenzene	0.620	0.624	-0.6	97	0.00	6.57
90	P	1,1,2,2-Tetrachloroethane	0.828	0.834	-0.7	96	0.00	6.63
91		1,3,5-Trimethylbenzene	2.136	2.085	2.4	93	0.00	6.76
92		2-Chlorotoluene	1.851	1.799	2.8	93	0.00	6.71
93		trans-1,4-Dichloro-2-Bute	0.355	0.231	34.9	61	0.00	6.76
94		1,2,3-Trichloropropane	0.309	0.318	-2.9	99	0.00	6.72
95		Cyclohexanone	0.065	0.066	-1.5	99	0.00	6.74
96		4-Chlorotoluene	1.951	1.879	3.7	94	0.00	6.83
97		tert-Butylbenzene	1.173	1.129	3.8	92	0.00	6.99
98		a-Methyl styrene	0.000	0.000	0.0	0#	0.00	7.14
99		1,2,4-Trimethylbenzene	2.083	2.059	1.2	94	0.00	7.05
		----------	True	Calc.	% Drift	----------		
100		Pentachloroethane	40.000	14.765	63.1#	31	0.00	6.99
		----------	AvgRF	CCRF	% Dev	----------		
101		sec-Butylbenzene	2.271	2.252	0.8	93	0.00	7.13
		----------	True	Calc.	% Drift	----------		
102		4-Isopropyltoluene	40.000	39.447	1.4	95	0.00	7.25
		----------	AvgRF	CCRF	% Dev	----------		
103		1,3-Dichlorobenzene	1.114	1.119	-0.4	98	0.00	7.28
104		1,2,3-Trimethylbenzene	2.090	1.022	51.1#	47#	0.00	7.37
105		1,4-Dichlorobenzene	1.164	1.145	1.6	95	0.00	7.34
		----------	True	Calc.	% Drift	----------		
106		n-Butylbenzene	40.000	38.455	3.9	92	0.00	7.56
107		Benzyl Chloride	40.000	25.683	35.8	53	0.00	7.52
		----------	AvgRF	CCRF	% Dev	----------		
108		1,2-Dichlorobenzene	1.046	1.046	0.0	97	0.00	7.65
		----------	True	Calc.	% Drift	----------		
109		1,2-Dibromo-3-Chloropropa	40.000	38.140	4.6	91	0.00	8.21
110		Hexachlorobutadiene	40.000	39.029	2.4	92	0.00	8.69
		----------	AvgRF	CCRF	% Dev	----------		
111		1,2,4-Trichlorobenzene	0.556	0.561	-0.9	95	0.00	8.68
		----------	True	Calc.	% Drift	----------		
112		Naphthalene	40.000	39.648	0.9	96	0.00	8.88
		----------	AvgRF	CCRF	% Dev	----------		

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: V2P3586-ECC3560
Lab FileID: 2P93350.D

113	1,2,3-Trichlorobenzene	0.522	0.528	-1.1	97	0.00	9.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2P92271.D V2P_2022-08-24.M Sun Sep 25 22:07:05 2022

Run Sequence Report

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3560	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3560-BFB	2P92263.D	08/24/22 09:49	n/a	BFB Tune
V2P3560-IC3560	2P92263.D	08/24/22 09:50	n/a	Initial cal 1
V2P3560-IC3560	2P92265.D	08/24/22 10:22	n/a	Initial cal 2
V2P3560-IC3560	2P92267.D	08/24/22 10:54	n/a	Initial cal 3
V2P3560-IC3560	2P92269.D	08/24/22 11:26	n/a	Initial cal 4
V2P3560-ICC3560	2P92271.D	08/24/22 11:59	n/a	Initial cal 5
V2P3560-IC3560	2P92273.D	08/24/22 12:31	n/a	Initial cal 6
V2P3560-IC3560	2P92275.D	08/24/22 13:04	n/a	Initial cal 7
V2P3560-ICV3560	2P92279.D	08/24/22 14:09	n/a	Initial cal verification 5
V2P3560-CC3560	2P92279A.D	08/24/22 14:09	n/a	Continuing cal 5
V2P3560-ICV3560	2P92281.D	08/24/22 14:41	n/a	Initial cal verification 4
V2P3560-BS	2P92281A.D	08/24/22 14:41	n/a	Blank Spike
V2P3560-MB	2P92285.D	08/24/22 15:44	n/a	Method Blank
ZZZZZZ	2P92289.D	08/24/22 16:49	n/a	(unrelated sample)
ZZZZZZ	2P92293.D	08/24/22 17:52	n/a	(unrelated sample)
ZZZZZZ	2P92299.D	08/24/22 19:28	n/a	(unrelated sample)
FA98254-9	2P92303.D	08/24/22 20:31	n/a	(used for QC only; not part of job FA98820)
ZZZZZZ	2P92305.D	08/24/22 21:03	n/a	(unrelated sample)
FA98254-9MS	2P92307.D	08/24/22 21:35	n/a	Matrix Spike
FA98254-9MSD	2P92309.D	08/24/22 22:07	n/a	Matrix Spike Duplicate
V2P3560-ECC3560	2P92311.D	08/24/22 22:38	n/a	Ending cal 5

Run Sequence Report

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: V2P3586	**Method:** SW846 8260D	**Instrument ID:** GCMS2P

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2P3586-BFB	2P93306.D	09/23/22 11:41	n/a	BFB Tune
V2P3586-CC3560	2P93306.D	09/23/22 11:41	n/a	Continuing cal 5
V2P3586-BS	2P93308.D	09/23/22 12:13	n/a	Blank Spike
V2P3586-MB	2P93312.D	09/23/22 13:18	n/a	Method Blank
ZZZZZZ	2P93314.D	09/23/22 13:51	n/a	(unrelated sample)
ZZZZZZ	2P93316.D	09/23/22 14:23	n/a	(unrelated sample)
ZZZZZZ	2P93318.D	09/23/22 14:56	n/a	(unrelated sample)
ZZZZZZ	2P93320.D	09/23/22 15:29	n/a	(unrelated sample)
ZZZZZZ	2P93322.D	09/23/22 16:02	n/a	(unrelated sample)
ZZZZZZ	2P93324.D	09/23/22 16:34	n/a	(unrelated sample)
ZZZZZZ	2P93326.D	09/23/22 17:07	n/a	(unrelated sample)
FA98918-5	2P93328.D	09/23/22 17:39	n/a	(used for QC only; not part of job FA98820)
ZZZZZZ	2P93330.D	09/23/22 18:12	n/a	(unrelated sample)
ZZZZZZ	2P93332.D	09/23/22 18:44	n/a	(unrelated sample)
FA98820-1A	2P93334.D	09/23/22 19:17	n/a	EW-01
FA98820-2A	2P93336.D	09/23/22 19:49	n/a	EW-04
ZZZZZZ	2P93338.D	09/23/22 20:21	n/a	(unrelated sample)
FA98918-5MS	2P93346.D	09/23/22 22:29	n/a	Matrix Spike
FA98918-5MSD	2P93348.D	09/23/22 23:02	n/a	Matrix Spike Duplicate
V2P3586-ECC3560	2P93350.D	09/23/22 23:34	n/a	Ending cal 5

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93334.D
Acq On : 23 Sep 2022 7:17 pm
Operator : courtnef
Sample : FA98820-1A
Misc : MS52433,V2P3586,,,,,
ALS Vial : 66 Sample Multiplier: 1

Quant Time: Sep 25 21:32:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

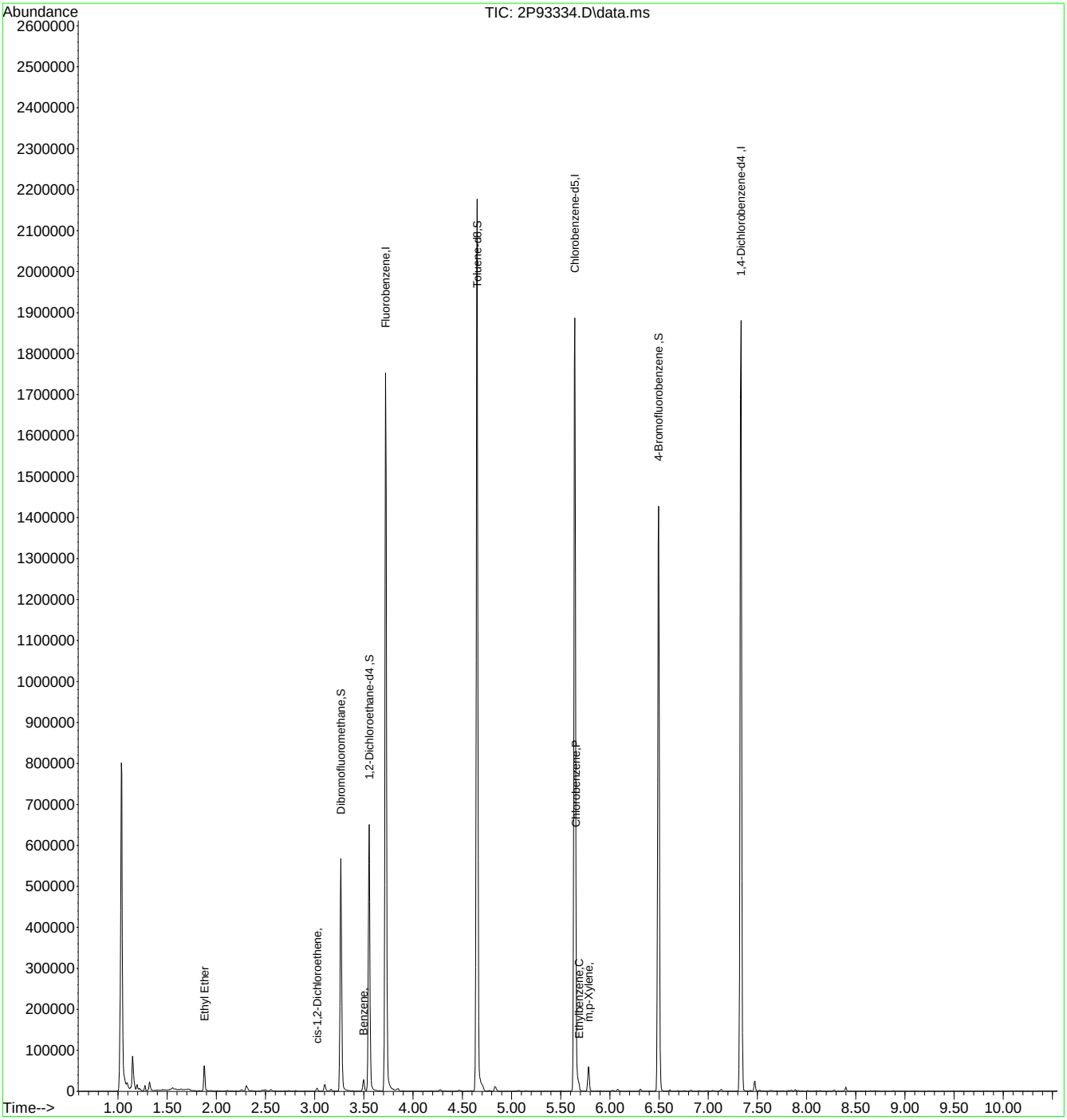
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	3.721	96	973697	50.00 ug/L	0.00
62) Chlorobenzene-d5	5.645	117	735522	50.00 ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	340484	50.00 ug/L	0.00
System Monitoring Compounds					
39) Dibromofluoromethane	3.266	113	200573	48.47 ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.94%		
49) 1,2-Dichloroethane-d4	3.553	65	280968	48.88 ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 97.76%		
63) Toluene-d8	4.651	98	972766	48.06 ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.12%		
86) 4-Bromofluorobenzene	6.497	174	264392	49.79 ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.58%		
Target Compounds					Qvalue
9) Ethyl Ether	1.880	59	22263	6.57 ug/L	93
32) cis-1,2-Dichloroethene	3.025	96	2065	0.56 ug/L	97
47) Benzene	3.496	78	13955	0.94 ug/L	71
77) Ethylbenzene	5.686	91	7865	0.41 ug/L	94
78) Chlorobenzene	5.655	112	7614	0.73 ug/L	79
80) m,p-Xylene	5.786	91	24295	1.61 ug/L	95

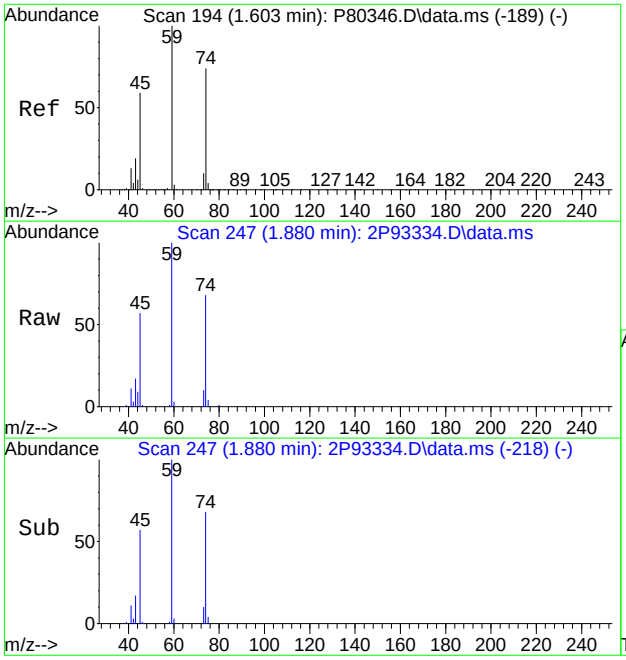
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93334.D
Acq On : 23 Sep 2022 7:17 pm
Operator : courtnef
Sample : FA98820-1A
Misc : MS52433,V2P3586,,,,,
ALS Vial : 66 Sample Multiplier: 1

Quant Time: Sep 25 21:32:14 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

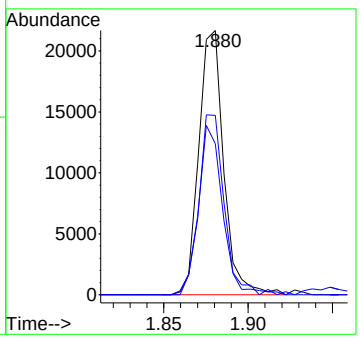


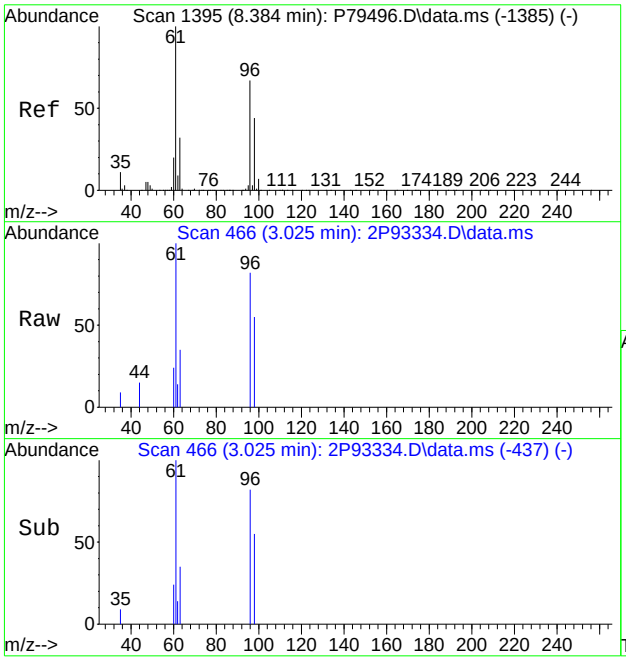


#9
Ethyl Ether
Concen: 6.57 ug/L
RT: 1.880 min Scan# 247
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion: 59 Resp: 22263

Ion	Ratio	Lower	Upper
59	100		
45	57.1	44.0	84.0
74	67.9	52.9	92.9

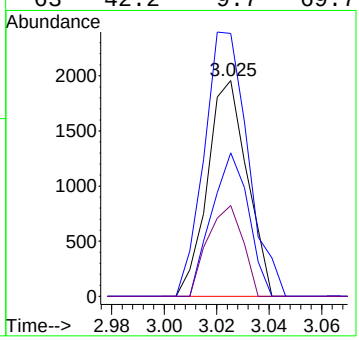


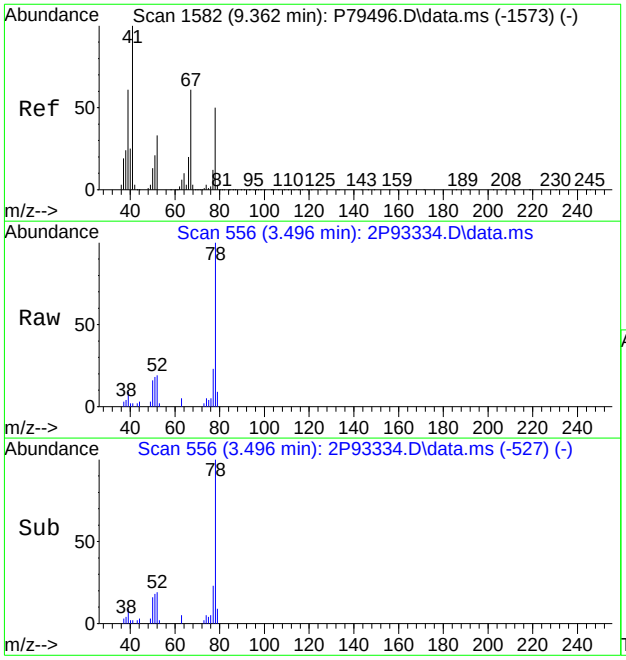


#32
cis-1,2-Dichloroethene
Concen: 0.56 ug/L
RT: 3.025 min Scan# 466
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion: 96 Resp: 2065

Ion	Ratio	Lower	Upper
96	100		
61	121.9	93.5	153.5
98	66.6	32.1	92.1
63	42.2	9.7	69.7

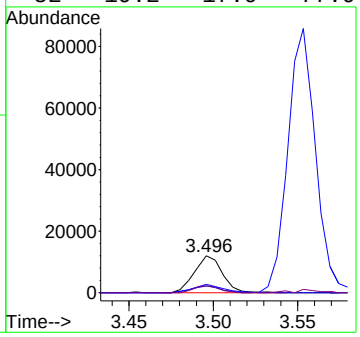


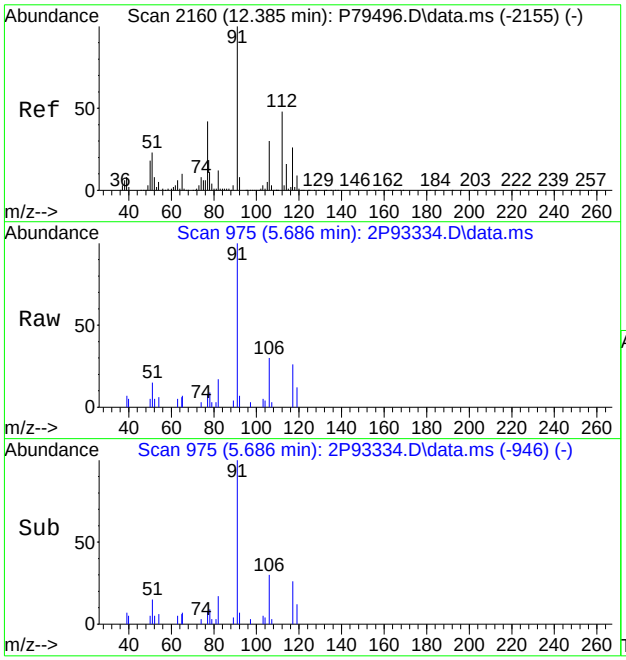


#47
Benzene
Concen: 0.94 ug/L
RT: 3.496 min Scan# 556
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion: 78 Resp: 13955

Ion	Ratio	Lower	Upper
78	100		
51	18.3	4.3	64.3
77	23.2	0.0	54.1
52	19.2	17.9	77.9

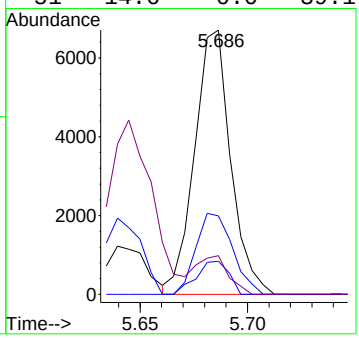


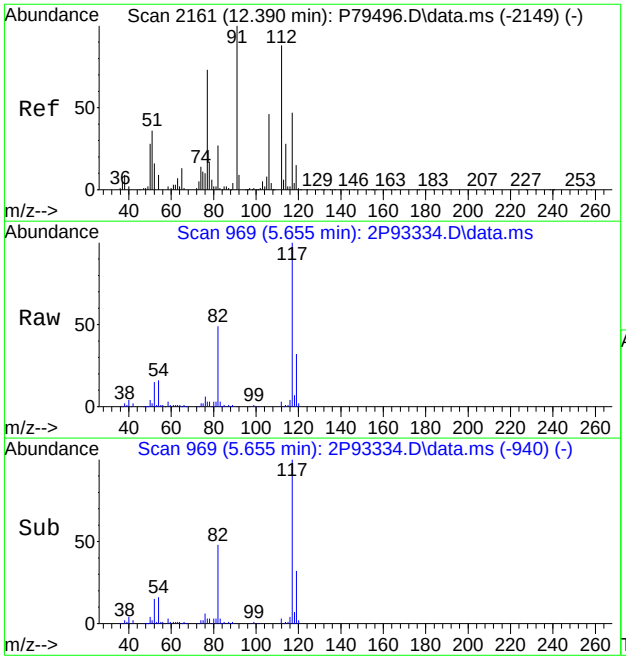


#77
Ethylbenzene
Concen: 0.41 ug/L
RT: 5.686 min Scan# 975
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion: 91 Resp: 7865

Ion	Ratio	Lower	Upper
91	100		
106	29.7	0.8	60.8
65	12.6	0.0	38.3
51	14.6	0.0	39.1

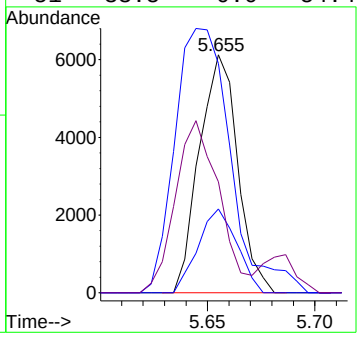


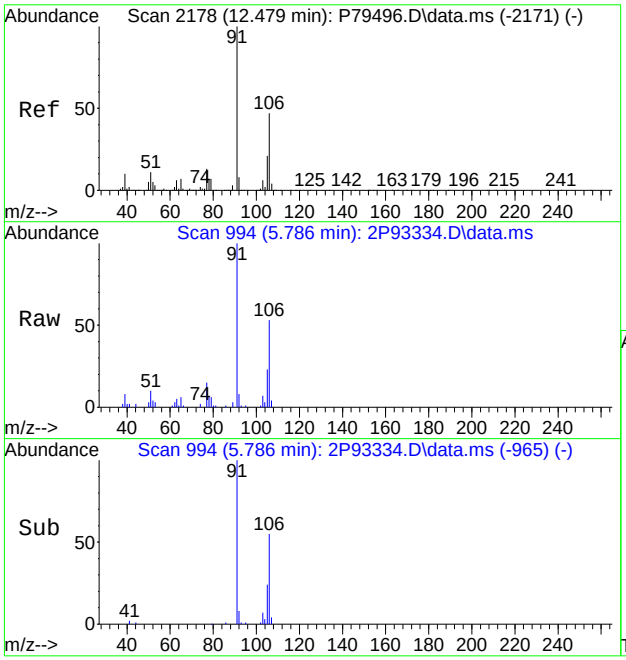


#78
Chlorobenzene
Concen: 0.73 ug/L
RT: 5.655 min Scan# 969
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion:112 Resp: 7614

Ion	Ratio	Lower	Upper
112	100		
77	87.0	33.9	93.9
114	35.2	2.7	62.7
51	33.5	0.0	54.4

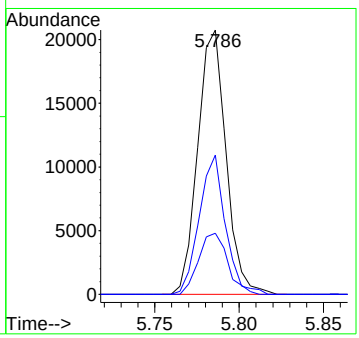




#80
m,p-Xylene
Concen: 1.61 ug/L
RT: 5.786 min Scan# 994
Delta R.T. 0.001 min
Lab File: 2P93334.D
Acq: 23 Sep 2022 7:17 pm

Tgt Ion: 91 Resp: 24295

Ion	Ratio	Lower	Upper
91	100		
106	52.7	18.3	78.3
105	23.2	0.0	51.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93336.D
Acq On : 23 Sep 2022 7:49 pm
Operator : courtnef
Sample : FA98820-2A
Misc : MS52433,V2P3586,,,,,
ALS Vial : 67 Sample Multiplier: 1

Quant Time: Sep 25 21:33:18 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

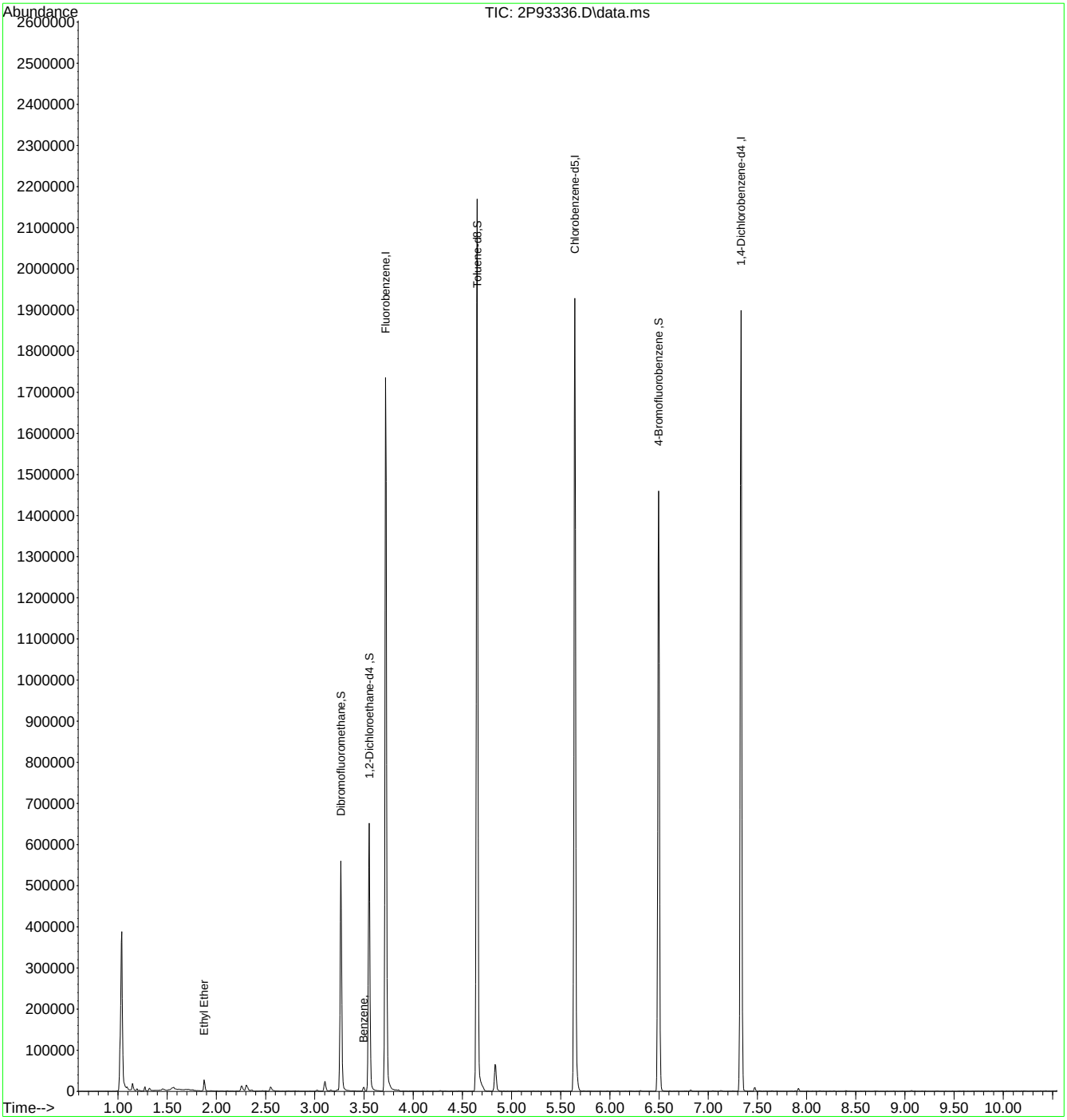
Compound		R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards							
1) Fluorobenzene		3.720	96	958095	50.00	ug/L	0.00
62) Chlorobenzene-d5		5.644	117	732151	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4		7.333	152	341622	50.00	ug/L	0.00
System Monitoring Compounds							
39) Dibromofluoromethane		3.265	113	196171	48.17	ug/L	0.00
Spiked Amount	50.000	Range 83 - 118		Recovery =	96.34%		
49) 1,2-Dichloroethane-d4		3.553	65	275090	48.64	ug/L	0.00
Spiked Amount	50.000	Range 79 - 125		Recovery =	97.28%		
63) Toluene-d8		4.651	98	949150	47.11	ug/L	0.00
Spiked Amount	50.000	Range 85 - 112		Recovery =	94.22%		
86) 4-Bromofluorobenzene		6.496	174	259402	48.68	ug/L	0.00
Spiked Amount	50.000	Range 83 - 118		Recovery =	97.36%		
Target Compounds							Qvalue
9) Ethyl Ether		1.875	59	8950	2.69	ug/L	95
47) Benzene		3.495	78	5174	0.35	ug/L #	68

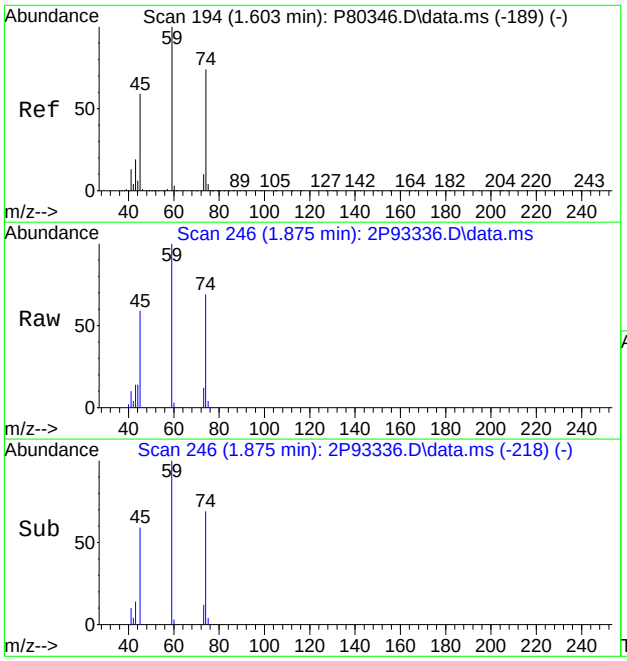
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93336.D
Acq On : 23 Sep 2022 7:49 pm
Operator : courtnef
Sample : FA98820-2A
Misc : MS52433,V2P3586,,,,,
ALS Vial : 67 Sample Multiplier: 1

Quant Time: Sep 25 21:33:18 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

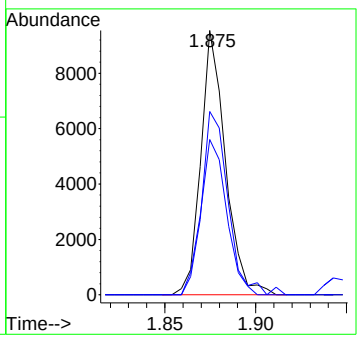


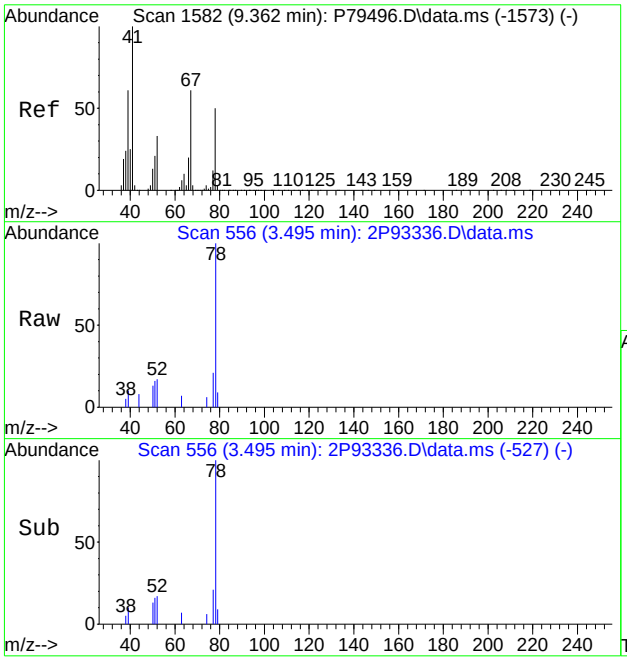


#9
Ethyl Ether
Concen: 2.69 ug/L
RT: 1.875 min Scan# 246
Delta R.T. -0.005 min
Lab File: 2P93336.D
Acq: 23 Sep 2022 7:49 pm

Tgt Ion: 59 Resp: 8950

Ion	Ratio	Lower	Upper
59	100		
45	58.8	44.0	84.0
74	69.3	52.9	92.9

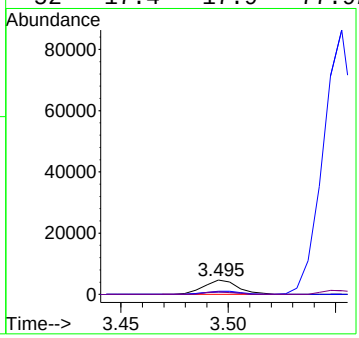




#47
Benzene
Concen: 0.35 ug/L
RT: 3.495 min Scan# 556
Delta R.T. 0.000 min
Lab File: 2P93336.D
Acq: 23 Sep 2022 7:49 pm

Tgt Ion: 78 Resp: 5174

Ion	Ratio	Lower	Upper
78	100		
51	15.6	4.3	64.3
77	21.4	0.0	54.1
52	17.4	17.9	77.9#



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93312.D
Acq On : 23 Sep 2022 1:18 pm
Operator : courtnef
Sample : MB
Misc : MS52362,V2P3586,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 25 21:09:15 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

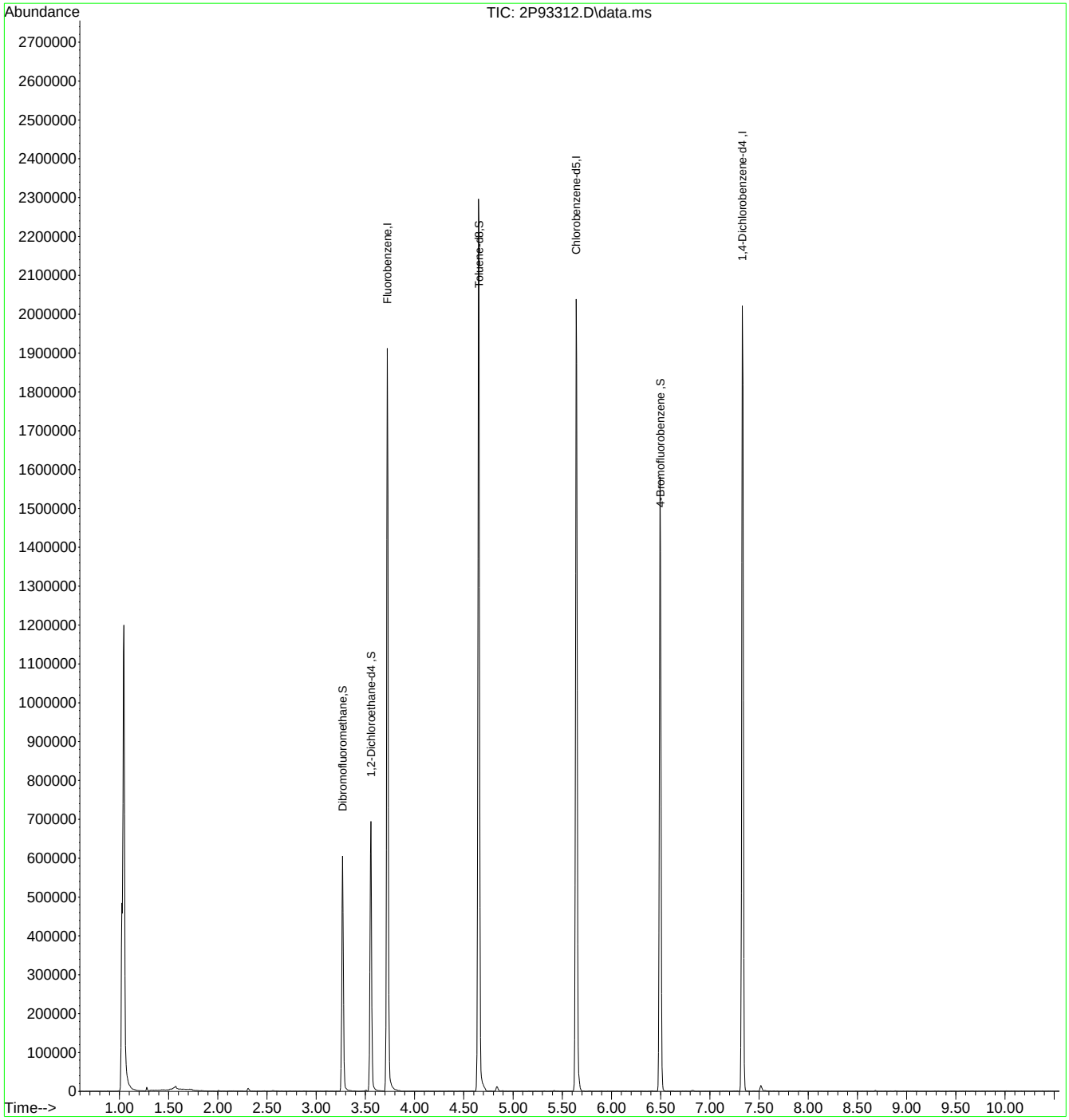
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.723	96	1057762	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.642	117	790682	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.330	152	375195	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.268	113	215164	47.86	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.72%			
49) 1,2-Dichloroethane-d4	3.556	65	305211	48.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 97.76%			
63) Toluene-d8	4.654	98	1043877	47.98	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.96%			
86) 4-Bromofluorobenzene	6.499	174	286377	48.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.88%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93312.D
Acq On : 23 Sep 2022 1:18 pm
Operator : courtnef
Sample : MB
Misc : MS52362,V2P3586,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Sep 25 21:09:15 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1142739	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	877581	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	421193	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	244584	50.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.72%			
49) 1,2-Dichloroethane-d4	3.554	65	323264	47.92	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 95.84%			
63) Toluene-d8	4.651	98	1140243	47.22	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 94.44%			
86) 4-Bromofluorobenzene	6.497	174	321183	48.89	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.128	85	84881	26.91	ug/L	98
3) Chloromethane	1.253	50	96065	27.56	ug/L	99
4) 1,3-butadiene	1.321	39	126740	39.13	ug/L	95
5) Vinyl Chloride	1.305	62	118328	27.86	ug/L	98
6) Bromomethane	1.509	94	62226	23.67	ug/L	97
7) Chloroethane	1.583	64	35239	25.20	ug/L	98
8) Trichlorofluoromethane	1.671	101	135272	29.35	ug/L	99
9) Ethyl Ether	1.881	59	101848	25.62	ug/L	98
10) Ethanol	1.964	45	68284	578.97	ug/L	96
11) 1,2-Dichlorotrifluoroe...	1.980	67	121401	32.64	ug/L	98
12) 1,1-Dichloroethene	1.985	61	159604	29.38	ug/L	99
13) Freon 113	2.016	101	105750	30.99	ug/L	96
14) Carbon Disulfide	2.006	76	219122	24.87	ug/L	100
15) Iodomethane	2.064	142	83882	35.47	ug/L	97
16) Acrolein	2.158	56	162807	111.97	ug/L	99
17) Allyl chloride	2.252	41	133250	34.11	ug/L	93
18) Methylene Chloride	2.304	49	136935	23.10	ug/L	98
19) Acetone	2.320	43	325791	123.83	ug/L	97
20) Methyl acetate	2.398	43	773005	145.38	ug/L	99
21) trans-1,2-Dichloroethene	2.403	61	158913	28.88	ug/L	98
22) Hexane	2.471	56	88482	32.77	ug/L	94
23) Methyl Tert Butyl Ether	2.471	73	360099	28.71	ug/L	97
24) Tert Butyl Alcohol	2.508	59	426436	274.91	ug/L	98
25) Acetonitrile	2.555	41	244511	277.89	ug/L	96
26) Di-isopropyl ether	2.686	45	331132	28.43	ug/L	99
27) Chloroprene	2.733	53	582133	35.09	ug/L	90
28) 1,1-Dichloroethane	2.733	63	216055	29.86	ug/L	99
29) Acrylonitrile	2.733	52	374675	142.85	ug/L	80
30) ETBE	2.884	59	369903	27.11	ug/L	98
31) Vinyl acetate	2.863	43	1135427	120.99	ug/L	99
32) cis-1,2-Dichloroethene	3.025	96	124458	28.84	ug/L	98
33) 2,2-Dichloropropane	3.088	77	151047	27.14	ug/L	99
34) Bromochloromethane	3.130	128	52447	26.88	ug/L	97
35) Cyclohexane	3.167	56	211668	31.36	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.172	83	206900	28.49	ug/L		98
37) Ethyl acetate	3.229	43	922065	129.90	ug/L		99
38) Tetrahydrofuran	3.261	42	74997	27.67	ug/L		94
40) Carbon Tetrachloride	3.271	117	133058m	29.88	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	182132	29.32	ug/L		98
42) 2-Butanone	3.318	43	542168	122.40	ug/L		99
43) 1,1-Dichloropropene	3.365	75	158252	29.04	ug/L		97
44) tert-Butyl formate	3.412	59	328938	110.69	ug/L		98
45) Propionitrile	3.459	54	411970	294.90	ug/L		98
46) Methacrylonitrile	3.486	41	1071060	287.02	ug/L		99
47) Benzene	3.496	78	493002	28.35	ug/L		91
48) TAME	3.569	73	360858	29.09	ug/L		98
50) Isobutyl alcohol	3.590	43	425335m	595.16	ug/L		
51) 1,2-Dichloroethane	3.590	62	166819	26.79	ug/L		98
52) Tert Amyl Alcohol	3.653	59	350095	268.29	ug/L		98
53) Trichloroethene	3.825	95	127016	28.37	ug/L		96
54) Methylcyclohexane	3.846	83	199080	33.33	ug/L		99
55) Dibromomethane	4.050	93	67661	27.51	ug/L		96
56) 1,2-Dichloropropane	4.113	63	115470	27.33	ug/L		97
57) Bromodichloromethane	4.149	83	124190	27.53	ug/L		99
58) Methyl methacrylate	4.238	41	132410	28.16	ug/L		96
59) 1,4-Dioxane	4.259	88	77309	582.22	ug/L		100
60) 2-Chloroethyl vinyl ether	4.479	63	450087	128.04	ug/L		98
61) cis-1,3-Dichloropropene	4.521	75	161170	27.47	ug/L		97
64) Toluene	4.683	91	539487	26.04	ug/L		99
65) 2-Nitropropane	4.777	41	183729	117.64	ug/L		98
66) 4-Methyl-2-pentanone	4.892	43	912580	114.18	ug/L		98
67) trans-1,3-Dichloropropene	4.918	75	162282	27.47	ug/L		86
68) Tetrachloroethene	4.939	166	133720	30.39	ug/L		99
69) Ethyl methacrylate	5.028	69	190279	26.23	ug/L		94
70) 1,1,2-Trichloroethane	5.017	83	94592	26.69	ug/L		94
71) Dibromochloromethane	5.143	129	89752	25.01	ug/L		96
72) 1,3-Dichloropropane	5.195	76	191328	24.28	ug/L		95
73) 1,2-Dibromoethane	5.294	107	111990	26.14	ug/L		98
74) 3,3-dimethyl-1-butanol	5.415	57	1953783	1098.32	ug/L		98
75) 2-hexanone	5.430	43	1020302	113.70	ug/L	#	78
76) 1-Chlorohexane	5.650	91	179076m	27.10	ug/L		
77) Ethylbenzene	5.681	91	602543	26.52	ug/L		98
78) Chlorobenzene	5.655	112	332177	26.77	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.697	131	101774	26.42	ug/L		97
80) m,p-Xylene	5.781	91	942603	52.46	ug/L		98
81) o-Xylene	6.079	91	489902	27.70	ug/L		99
82) Styrene	6.110	104	363082	26.84	ug/L		98
83) Bromoform	6.120	173	48271	25.07	ug/L		98
84) Isopropylbenzene	6.309	105	566379	27.76	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	51311	22.27	ug/L		93
88) n-Propylbenzene	6.612	91	665555	25.75	ug/L		97
89) Bromobenzene	6.570	156	127557	24.41	ug/L		97
90) 1,1,2,2-Tetrachloroethane	6.633	83	175397	25.16	ug/L		99
91) 1,3,5-Trimethylbenzene	6.758	105	453646	25.21	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

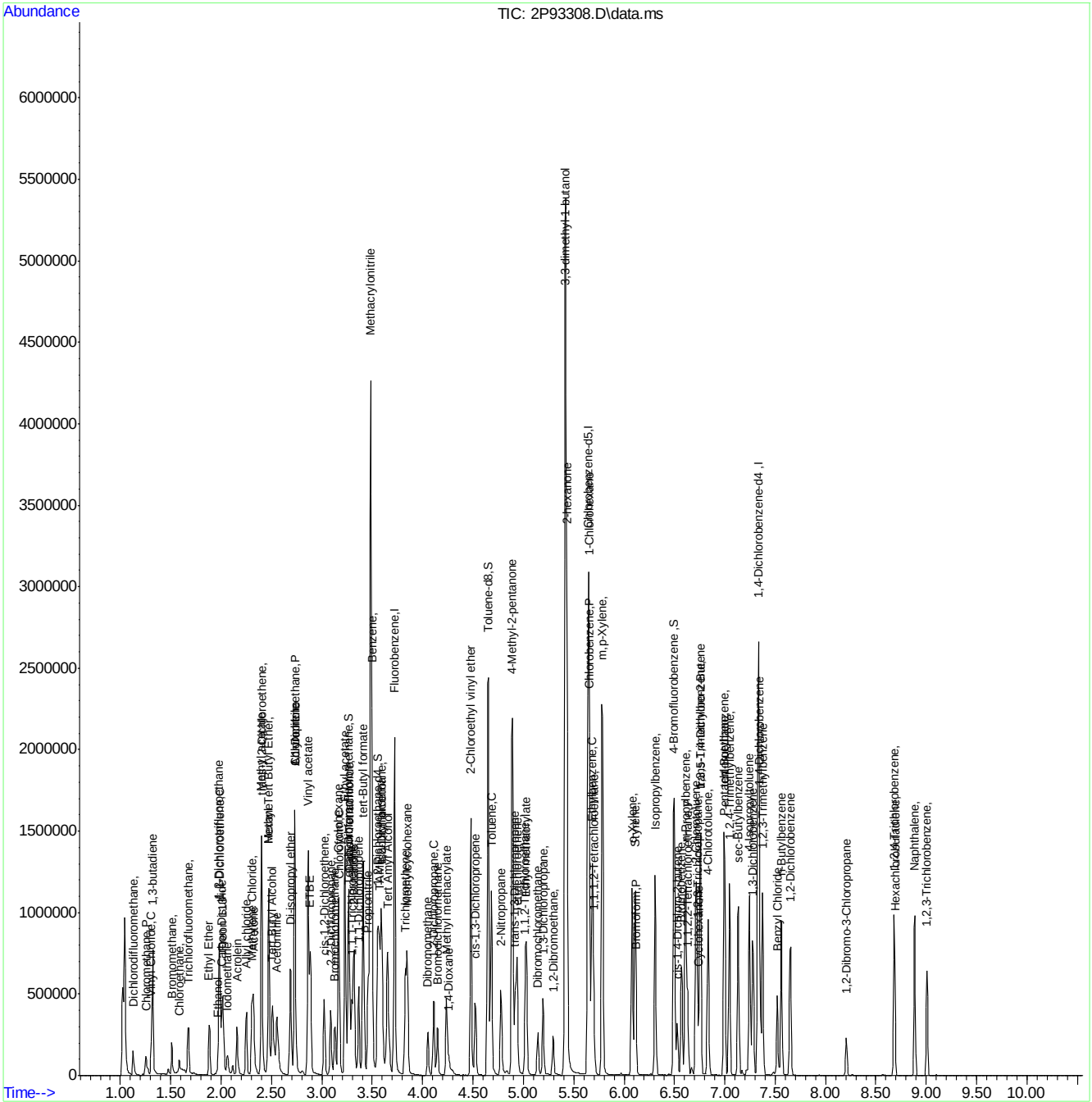
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	394844	25.32	ug/L		99
93)	trans-1,4-Dichloro-2-B...	6.758	53	63513	21.26	ug/L		93
94)	1,2,3-Trichloropropane	6.727	110	62192	23.92	ug/L		96
95)	Cyclohexanone	6.743	55	61049	112.13	ug/L		93
96)	4-Chlorotoluene	6.831	91	415474	25.27	ug/L		97
97)	tert-Butylbenzene	6.994	91	254996	25.81	ug/L		100
99)	1,2,4-Trimethylbenzene	7.046	105	452978	25.81	ug/L		99
100)	Pentachloroethane	6.999	167	52977	24.77	ug/L	#	89
101)	sec-Butylbenzene	7.135	105	536915	28.06	ug/L		99
102)	4-Isopropyltoluene	7.244	119	467336	27.79	ug/L		98
103)	1,3-Dichlorobenzene	7.276	146	250807	26.72	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	467586	26.56	ug/L		99
105)	1,4-Dichlorobenzene	7.344	146	250597	25.55	ug/L		98
106)	n-Butylbenzene	7.558	92	208577	25.40	ug/L		97
107)	Benzyl Chloride	7.522	126	38152	19.80	ug/L	#	91
108)	1,2-Dichlorobenzene	7.652	146	226989	25.76	ug/L		97
109)	1,2-Dibromo-3-Chloropr...	8.206	75	36563	23.44	ug/L		91
110)	Hexachlorobutadiene	8.687	225	42796	26.98	ug/L		94
111)	1,2,4-Trichlorobenzene	8.682	180	120543	25.72	ug/L		98
112)	Naphthalene	8.886	128	490558	25.38	ug/L		99
113)	1,2,3-Trichlorobenzene	9.006	180	112349	25.54	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52434,V2P3587,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:41 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

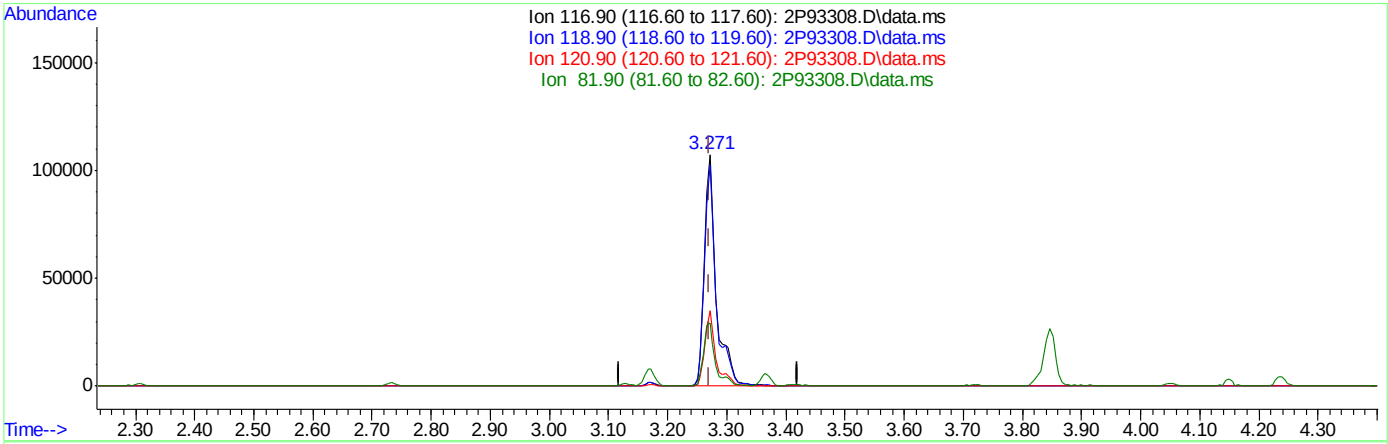
Sample Number: V2P3586-BS
Lab FileID: 2P93308.D
Injection Time: 09/23/22 12:13
Method: SW846 8260D
Analyst approved: 09/23/22 12:28 Courtney Failla
Supervisor approved: 09/26/22 12:39 Karen Watson

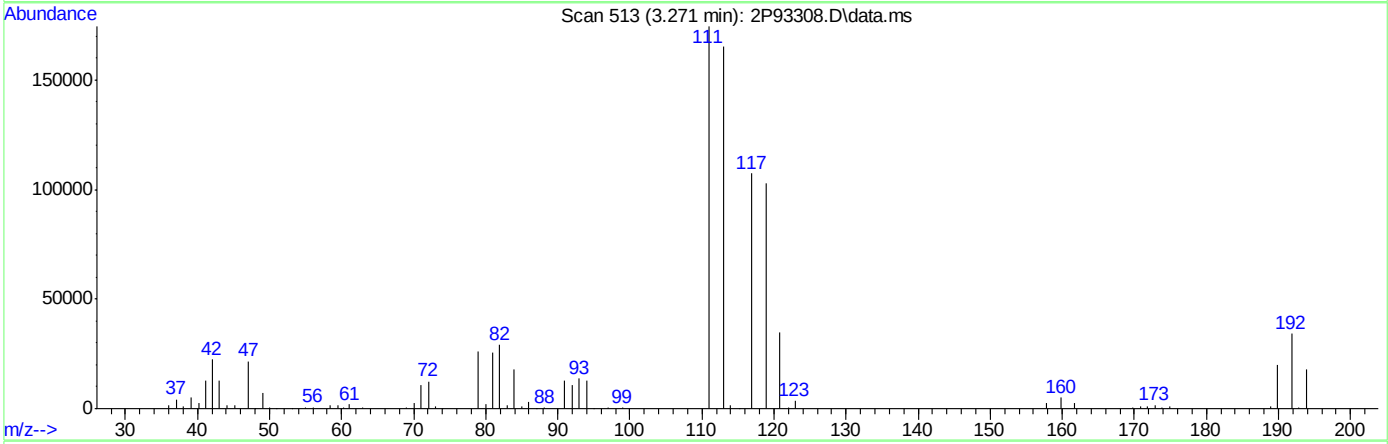
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 33.86ug/L

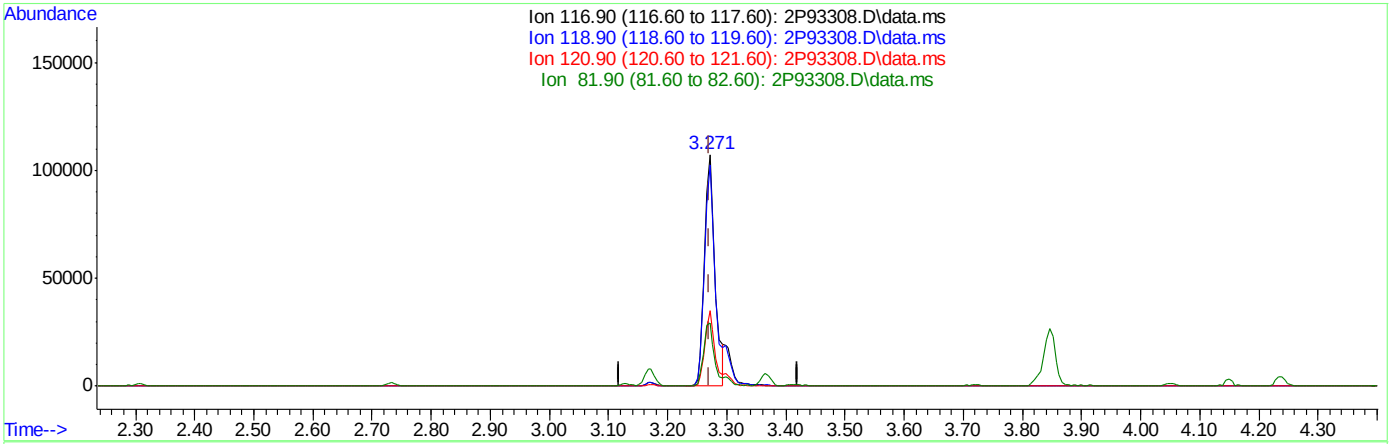
response 152773

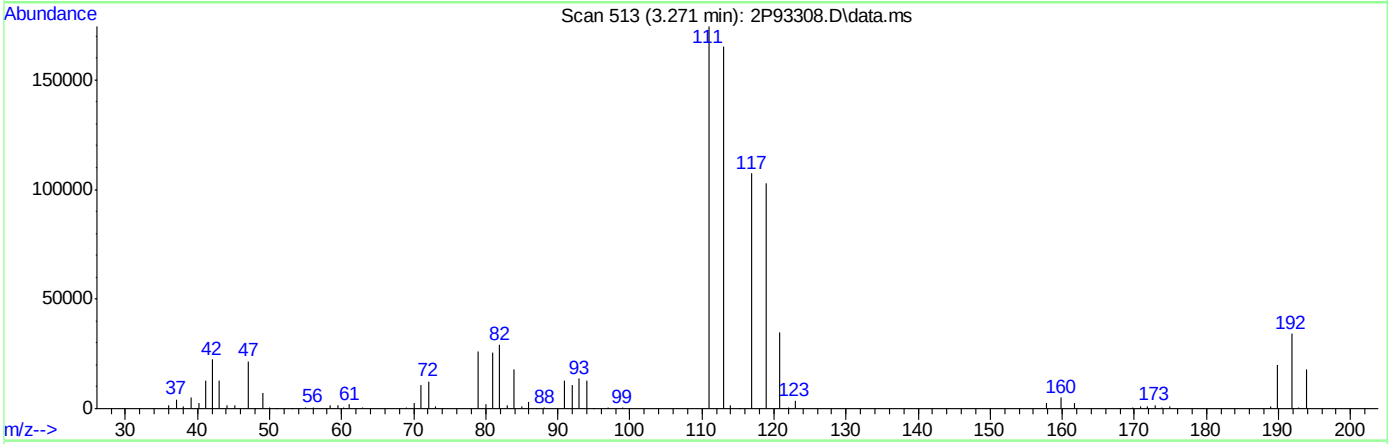
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.70
120.90	29.50	32.57
81.90	28.30	27.03

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 29.88ug/L m

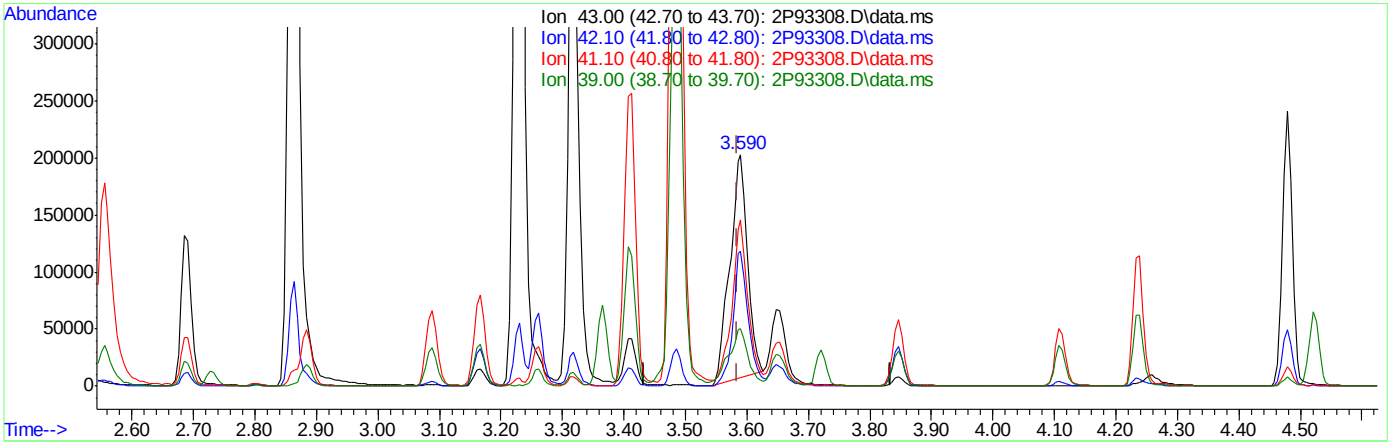
response 133058

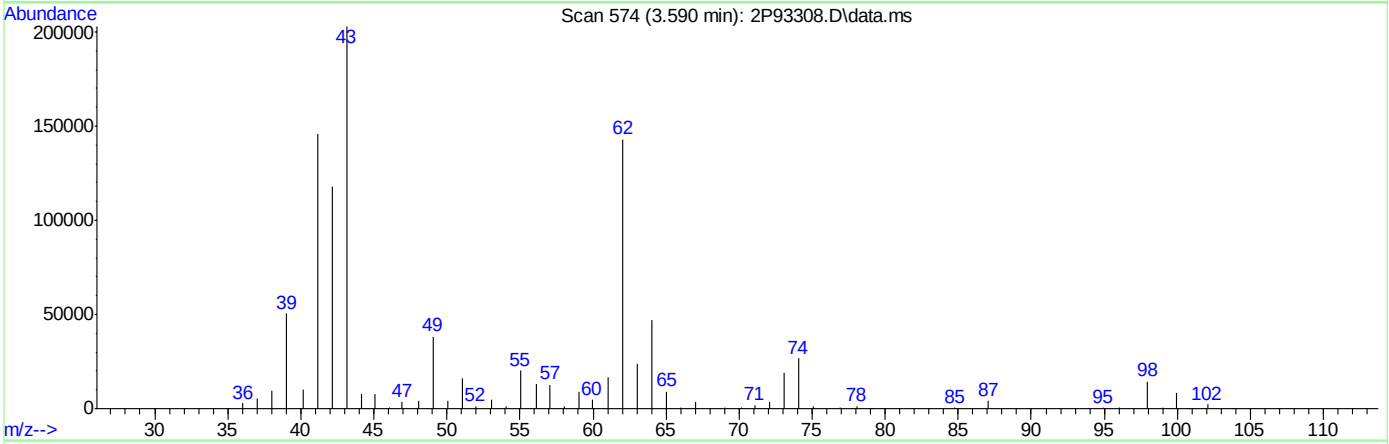
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	95.70
120.90	29.50	32.57
81.90	28.30	27.03

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 545.98ug/L

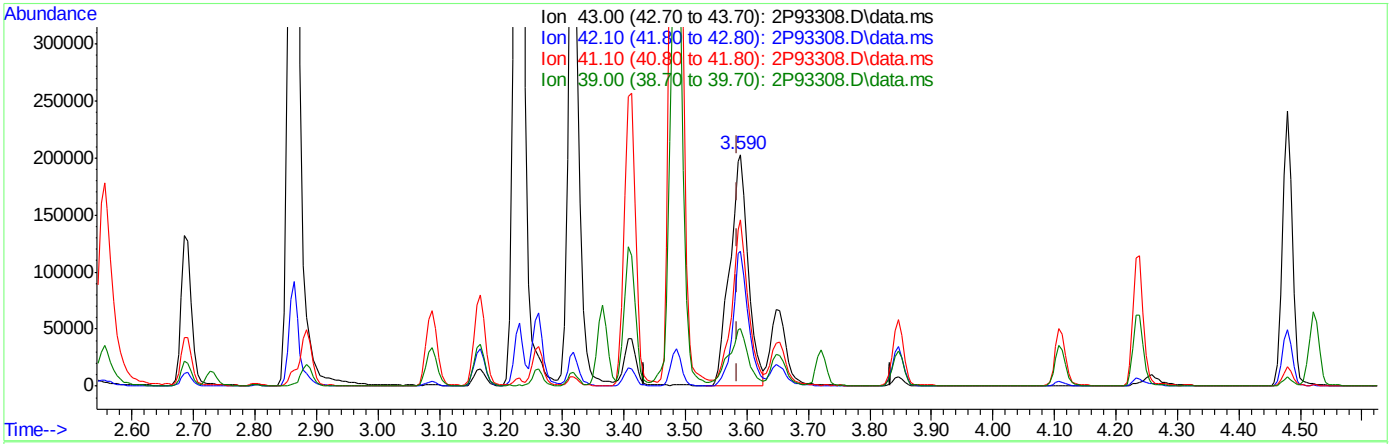
response 390191

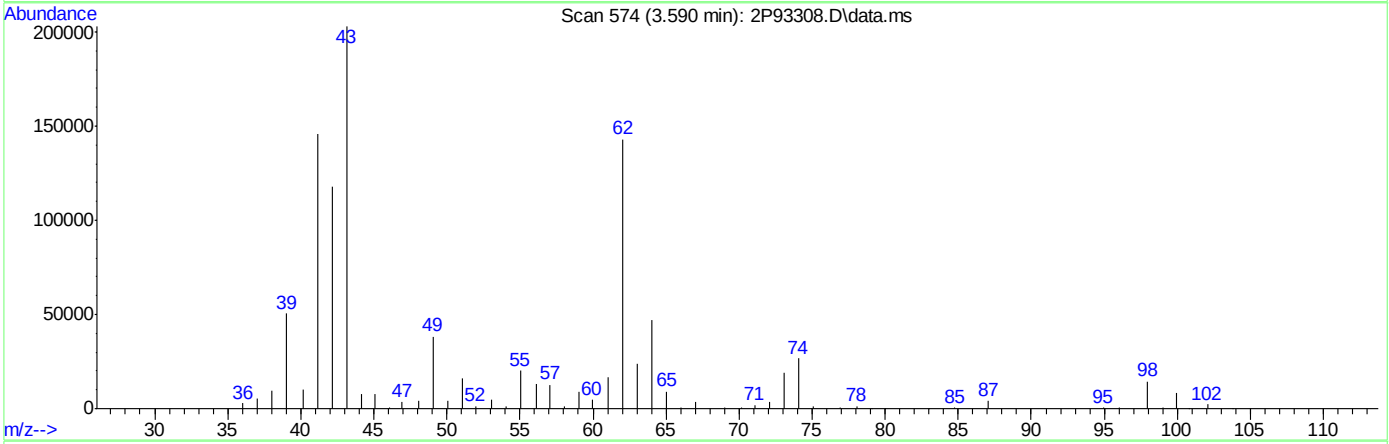
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.97
41.10	70.00	69.52
39.00	27.50	22.95

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 595.16ug/L m

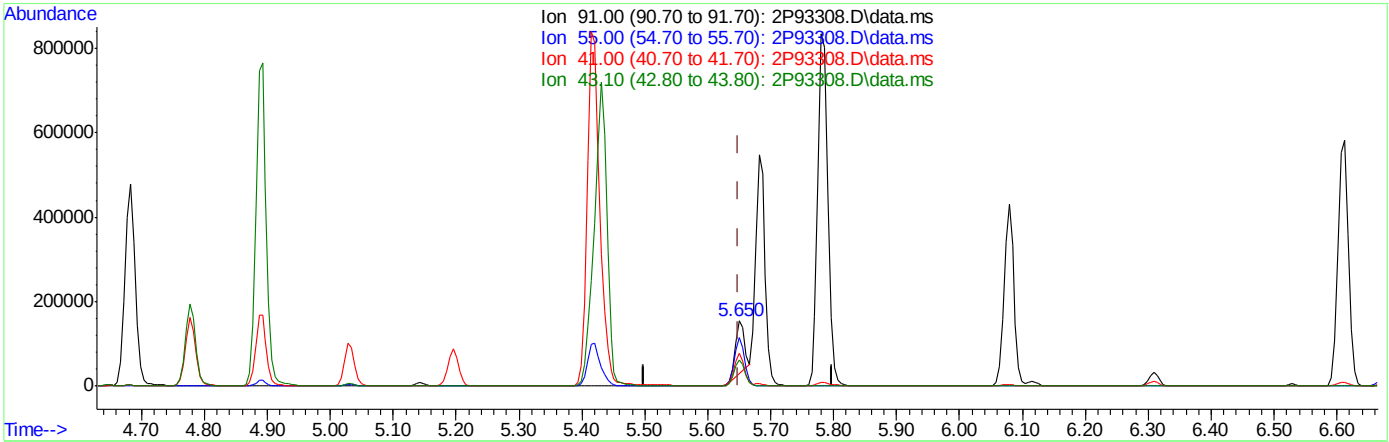
response 425335

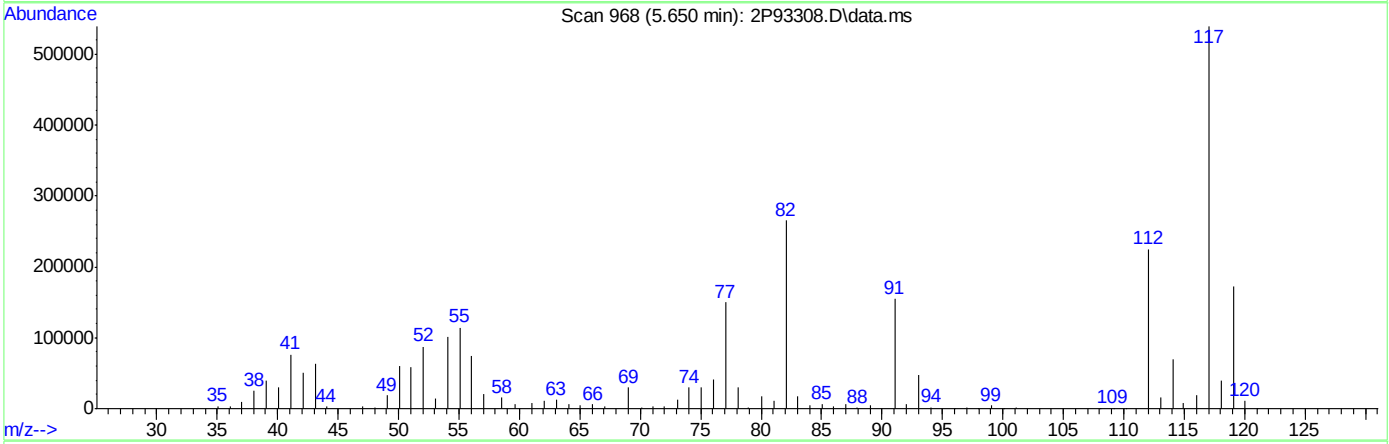
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	58.01
41.10	70.00	71.75
39.00	27.50	24.91

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 18.53ug/L

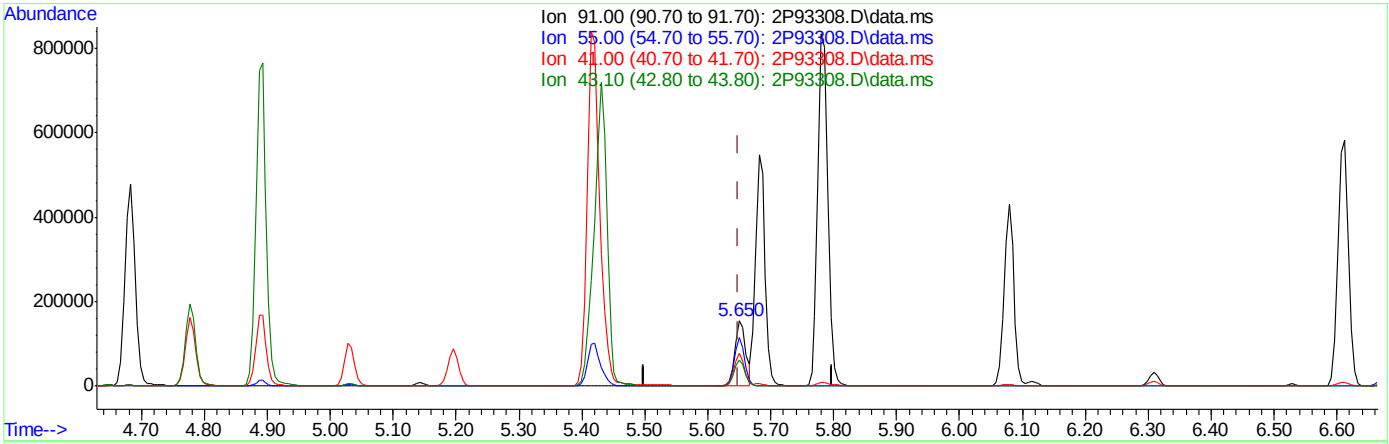
response 122435

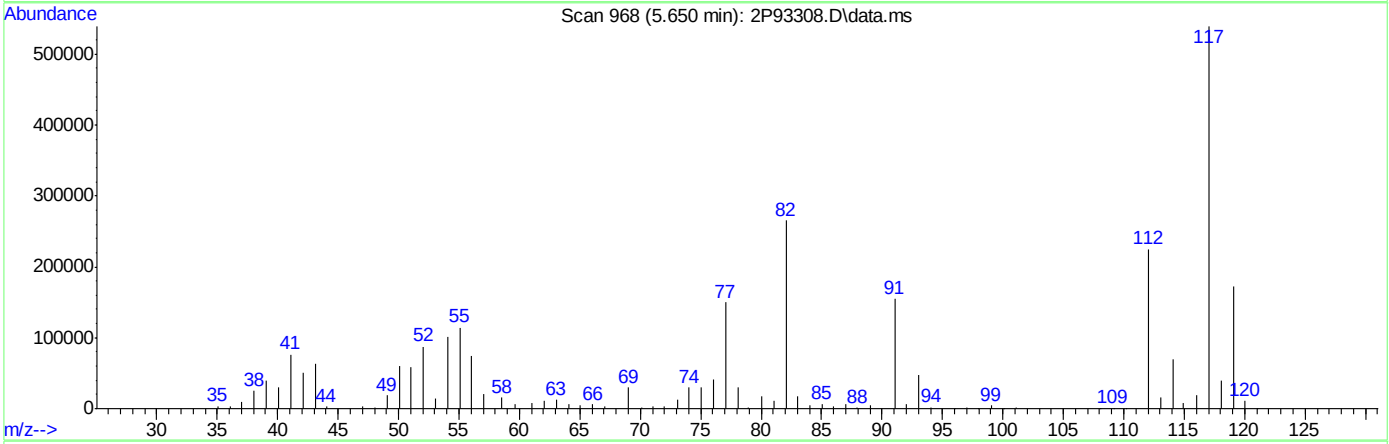
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	72.35
41.00	53.40	48.36
43.10	41.30	40.48

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93308.D
Acq On : 23 Sep 2022 12:13 pm
Operator : courtnef
Sample : BS
Misc : MS52362,V2P3586,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Sep 23 12:28:04 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93308.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 27.10ug/L m

response 179076

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	73.87
41.00	53.40	49.67
43.10	41.30	40.94

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:56:16 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1083295	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	833430	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	396873	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	229200	49.78	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	99.56%		
49) 1,2-Dichloroethane-d4	3.553	65	293444	45.89	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery =	91.78%		
63) Toluene-d8	4.651	98	1081354	47.15	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery =	94.30%		
86) 4-Bromofluorobenzene	6.496	174	302896	48.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	97.86%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.127	85	92367	30.89	ug/L	100
3) Chloromethane	1.252	50	99766	30.19	ug/L	95
4) 1,3-butadiene	1.320	39	127426	41.50	ug/L	98
5) Vinyl Chloride	1.305	62	137915	34.25	ug/L	99
6) Bromomethane	1.509	94	41475	16.64	ug/L	95
7) Chloroethane	1.582	64	37708	28.61	ug/L	95
8) Trichlorofluoromethane	1.676	101	147712	35.25	ug/L	98
9) Ethyl Ether	1.880	59	96872	25.71	ug/L	99
10) Ethanol	1.963	45	60350m	536.46	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.979	67	110198	31.25	ug/L	97
12) 1,1-Dichloroethene	1.984	61	144600	28.08	ug/L	98
13) Freon 113	2.016	101	91006	28.30	ug/L	96
14) Carbon Disulfide	2.005	76	181759	22.01	ug/L	99
15) Iodomethane	2.063	142	64507	29.52	ug/L	99
16) Acrolein	2.157	56	134200	97.36	ug/L	99
17) Allyl chloride	2.251	41	111452	30.09	ug/L	95
18) Methylene Chloride	2.303	49	131745	23.46	ug/L	99
19) Acetone	2.319	43	339092	136.18	ug/L	98
20) Methyl acetate	2.397	43	729481	144.73	ug/L	99
21) trans-1,2-Dichloroethene	2.403	61	151396	29.02	ug/L	97
22) Hexane	2.471	56	75017	29.65	ug/L	96
23) Methyl Tert Butyl Ether	2.471	73	320822	26.98	ug/L	99
24) Tert Butyl Alcohol	2.507	59	392388	266.84	ug/L	97
25) Acetonitrile	2.554	41	213337	255.76	ug/L	96
26) Di-isopropyl ether	2.685	45	309708	28.05	ug/L	95
27) Chloroprene	2.727	53	543096	34.54	ug/L	89
28) 1,1-Dichloroethane	2.732	63	209242	30.50	ug/L	99
29) Acrylonitrile	2.732	52	354158	142.44	ug/L	85
30) ETBE	2.884	59	332213	25.68	ug/L	98
31) Vinyl acetate	2.863	43	1025106	115.23	ug/L	99
32) cis-1,2-Dichloroethene	3.025	96	218365	53.37	ug/L	99
33) 2,2-Dichloropropane	3.087	77	110196	21.29	ug/L	99
34) Bromochloromethane	3.129	128	48622	26.29	ug/L	98
35) Cyclohexane	3.166	56	189984	29.81	ug/L	97
36) Chloroform	3.171	83	187548	27.24	ug/L	99
37) Ethyl acetate	3.229	43	874800	130.01	ug/L	99
38) Tetrahydrofuran	3.260	42	69767	27.16	ug/L	98
40) Carbon Tetrachloride	3.270	117	112571m	26.93	ug/L	
41) 1,1,1-Trichloroethane	3.297	97	162110	27.63	ug/L	98
42) 2-Butanone	3.317	43	560218	133.49	ug/L	99
43) 1,1-Dichloropropene	3.365	75	144240	27.92	ug/L	96
44) tert-Butyl formate	3.412	59	294754	105.14	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:56:16 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.459	54	367486	277.49	ug/L		98
46) Methacrylonitrile	3.485	41	945152	267.17	ug/L		99
47) Benzene	3.495	78	455787	27.64	ug/L		90
48) TAME	3.568	73	323263	27.49	ug/L		96
50) Isobutyl alcohol	3.584	43	389148m	574.40	ug/L		
51) 1,2-Dichloroethane	3.589	62	152556	25.85	ug/L		99
52) Tert Amyl Alcohol	3.647	59	320955	259.63	ug/L		96
53) Trichloroethene	3.825	95	181074	42.67	ug/L		98
54) Methylcyclohexane	3.845	83	174412	31.03	ug/L		99
55) Dibromomethane	4.049	93	59802	25.65	ug/L		95
56) 1,2-Dichloropropane	4.112	63	105941	26.45	ug/L		98
57) Bromodichloromethane	4.149	83	111180	26.13	ug/L		99
58) Methyl methacrylate	4.238	41	114743	25.90	ug/L		98
59) 1,4-Dioxane	4.259	88	83959	667.00	ug/L		99
60) 2-Chloroethyl vinyl ether	4.478	63	408952	122.73	ug/L		98
61) cis-1,3-Dichloropropene	4.520	75	139220	25.22	ug/L		99
64) Toluene	4.682	91	488834	24.84	ug/L		100
65) 2-Nitropropane	4.776	41	165056	112.00	ug/L		98
66) 4-Methyl-2-pentanone	4.891	43	942031	124.10	ug/L		98
67) trans-1,3-Dichloropropene	4.917	75	137195	24.65	ug/L		82
68) Tetrachloroethene	4.938	166	136297	32.61	ug/L		97
69) Ethyl methacrylate	5.032	69	166255	24.24	ug/L		97
70) 1,1,2-Trichloroethane	5.022	83	84306	25.05	ug/L		98
71) Dibromochloromethane	5.142	129	78540	23.21	ug/L		96
72) 1,3-Dichloropropane	5.194	76	171578	22.93	ug/L		98
73) 1,2-Dibromoethane	5.294	107	100876	24.79	ug/L		90
74) 3,3-dimethyl-1-butanol	5.419	57	1906808	1128.57	ug/L		97
75) 2-hexanone	5.430	43	1048316	123.01	ug/L		80
76) 1-Chlorohexane	5.649	91	155531m	24.78	ug/L		
77) Ethylbenzene	5.686	91	543113	25.17	ug/L		99
78) Chlorobenzene	5.654	112	299820	25.45	ug/L		97
79) 1,1,1,2-Tetrachloroethane	5.696	131	91973	25.22	ug/L		98
80) m,p-Xylene	5.785	91	847812	49.68	ug/L		100
81) o-Xylene	6.078	91	436943	26.01	ug/L		99
82) Styrene	6.109	104	316912m	24.67	ug/L		
83) Bromoform	6.120	173	40001	22.21	ug/L		94
84) Isopropylbenzene	6.308	105	503291	25.97	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	30670	14.59	ug/L	#	74
88) n-Propylbenzene	6.611	91	596494	24.50	ug/L		97
89) Bromobenzene	6.575	156	118400	24.05	ug/L		86
90) 1,1,2,2-Tetrachloroethane	6.632	83	156312	23.79	ug/L		99
91) 1,3,5-Trimethylbenzene	6.758	105	407322	24.03	ug/L		99
92) 2-Chlorotoluene	6.716	91	353893	24.08	ug/L		99
93) trans-1,4-Dichloro-2-B...	6.758	53	42351	15.04	ug/L		87
94) 1,2,3-Trichloropropane	6.726	110	55712	22.74	ug/L		96
95) Cyclohexanone	6.742	55	57097	111.30	ug/L		94
96) 4-Chlorotoluene	6.836	91	370970	23.95	ug/L		98
97) tert-Butylbenzene	6.993	91	226743	24.36	ug/L		99
99) 1,2,4-Trimethylbenzene	7.045	105	403277	24.39	ug/L		96
100) Pentachloroethane	6.998	167	32623	16.77	ug/L	#	20
101) sec-Butylbenzene	7.134	105	470353	26.09	ug/L		100
102) 4-Isopropyltoluene	7.244	119	409659	25.98	ug/L		99
103) 1,3-Dichlorobenzene	7.280	146	221781	25.08	ug/L		98
104) 1,2,3-Trimethylbenzene	7.374	105	421458	25.41	ug/L		99
105) 1,4-Dichlorobenzene	7.343	146	227734	24.64	ug/L		97
106) n-Butylbenzene	7.563	92	177445	23.07	ug/L		97
107) Benzyl Chloride	7.521	126	21565	12.58	ug/L	#	77
108) 1,2-Dichlorobenzene	7.651	146	204524	24.64	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:56:16 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.206	75	30464	20.94	ug/L	98
110) Hexachlorobutadiene	8.687	225	34710	23.45	ug/L	95
111) 1,2,4-Trichlorobenzene	8.681	180	102670	23.25	ug/L	98
112) Naphthalene	8.885	128	426434	23.51	ug/L	99
113) 1,2,3-Trichlorobenzene	9.006	180	98845	23.85	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

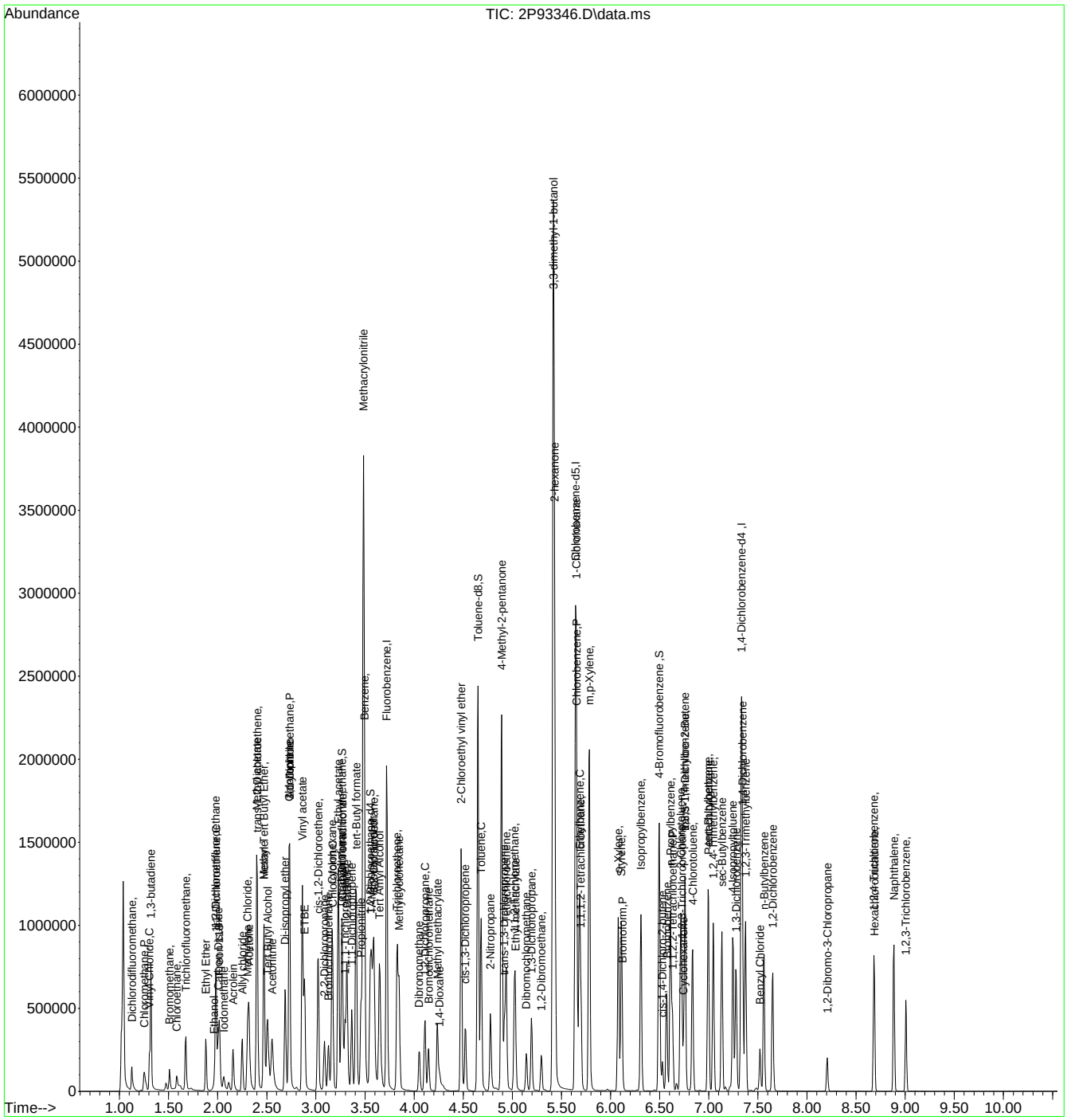
7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:56:16 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

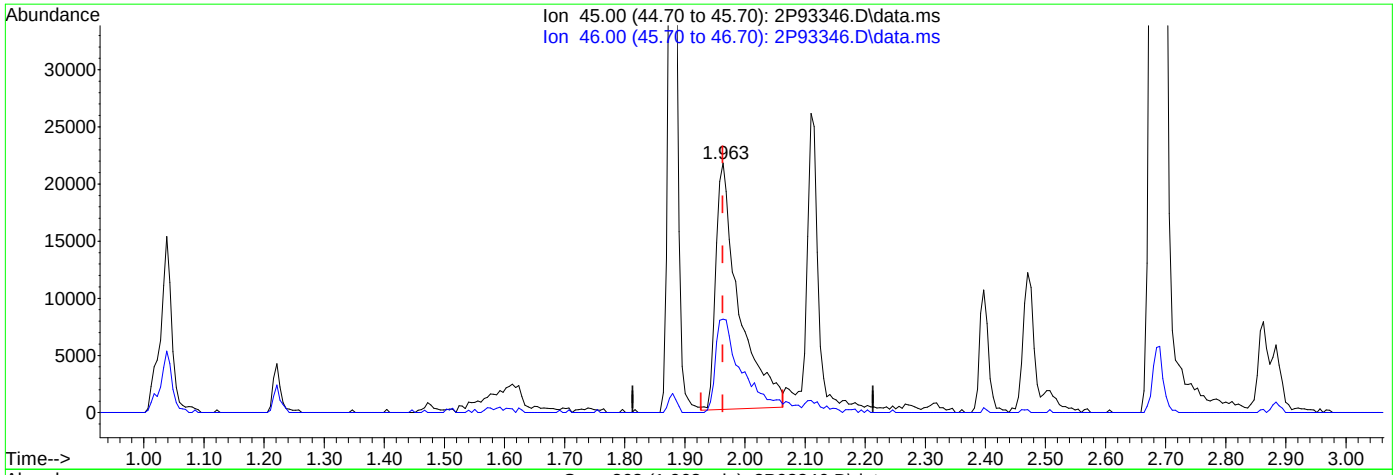
Sample Number: FA98918-5MS
Lab FileID: 2P93346.D
Injection Time: 09/23/22 22:29
Method: SW846 8260D
Analyst approved: 09/25/22 22:24 Antonette Clutario
Supervisor approved: 09/26/22 12:42 Karen Watson

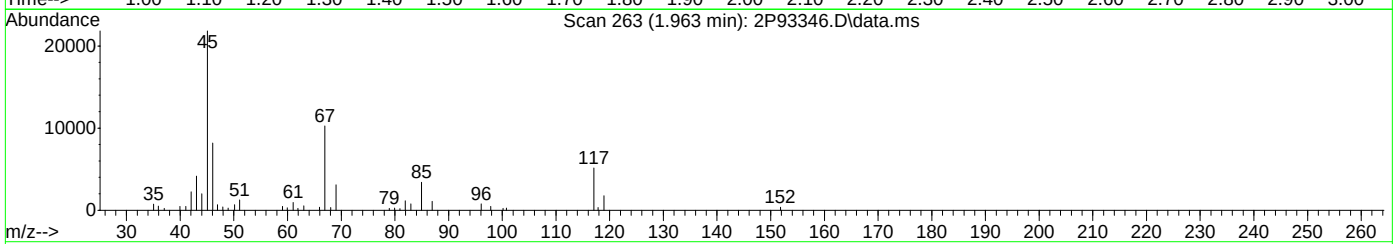
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.96	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

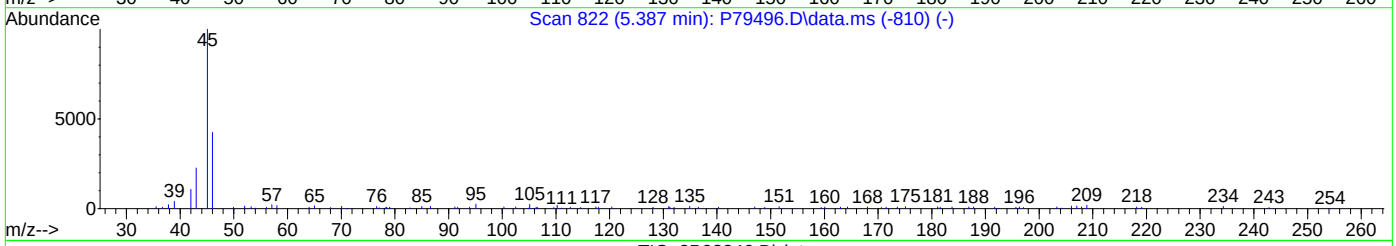
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(10) Ethanol

1.963min (+0.000) 510.47ug/L

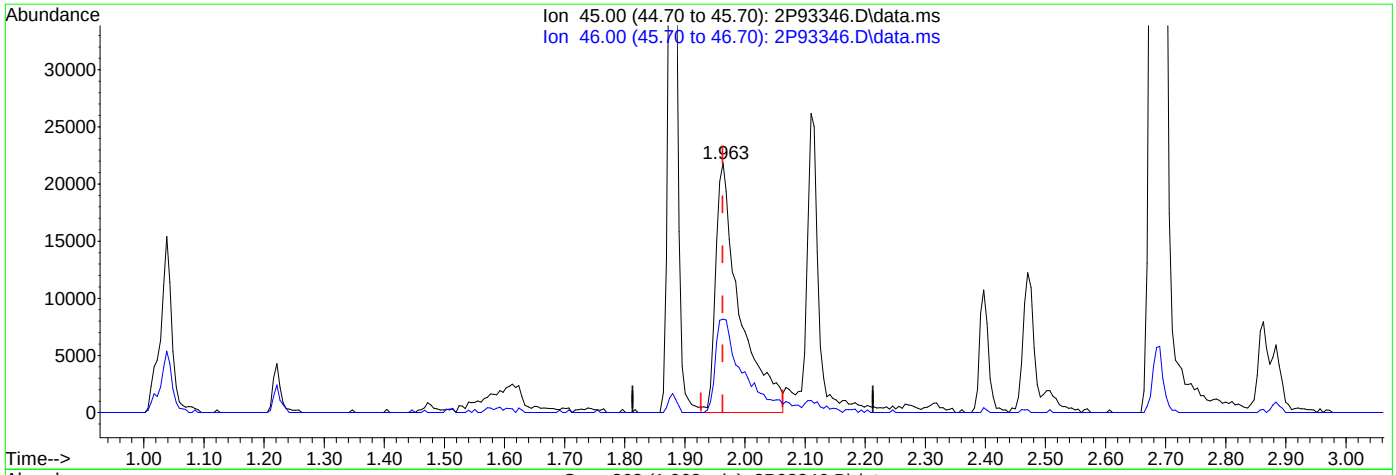
response 57642

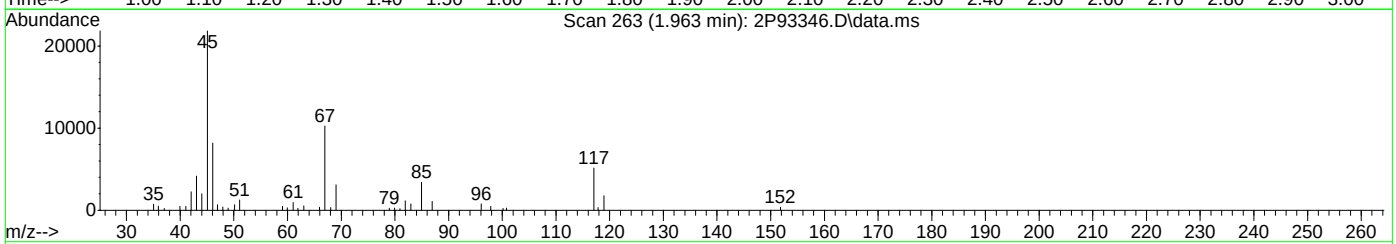
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	38.23
0.00	0.00	0.00
0.00	0.00	0.00

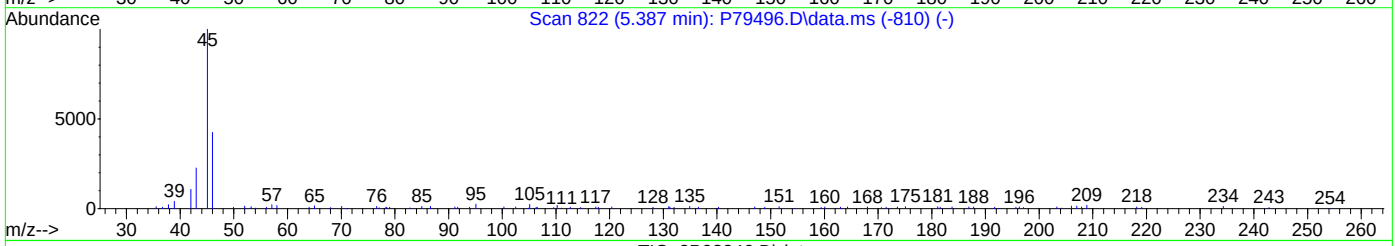
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(10) Ethanol

1.963min (+0.000) 536.46ug/L m

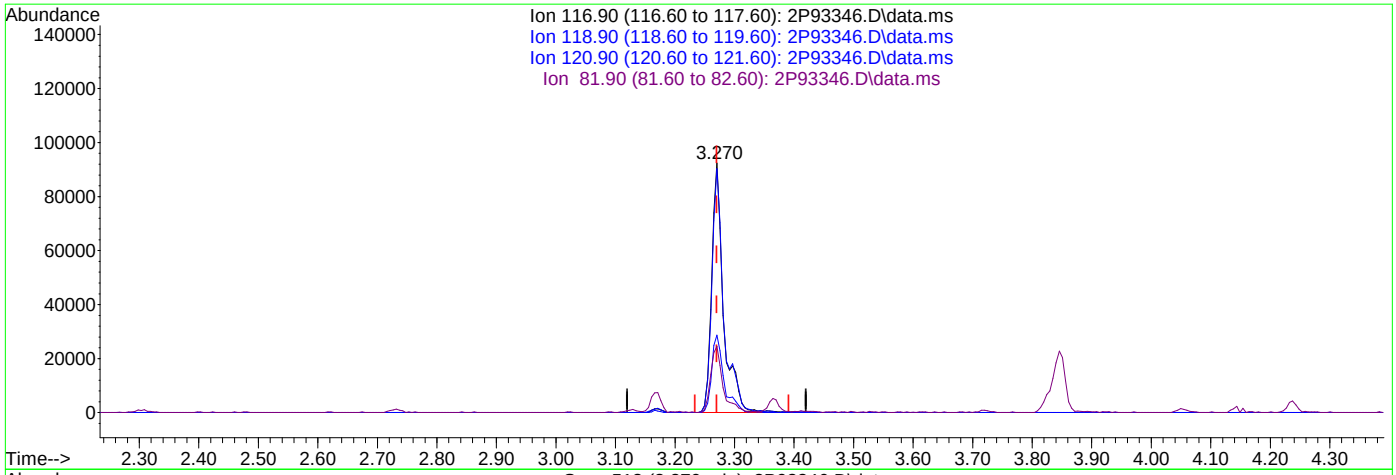
response 60350

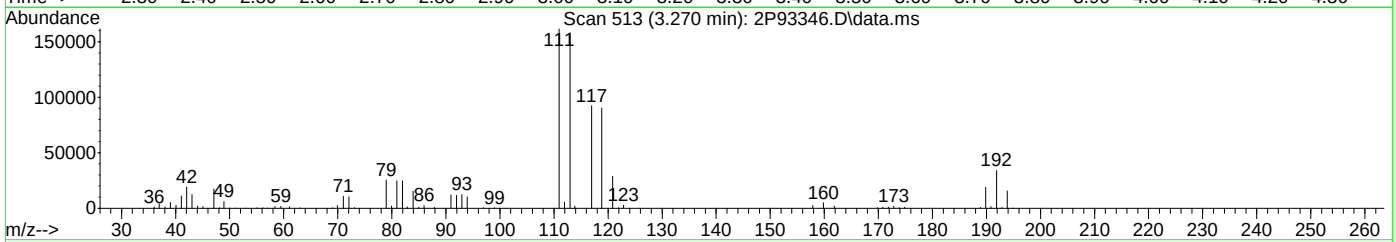
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	37.41
0.00	0.00	0.00
0.00	0.00	0.00

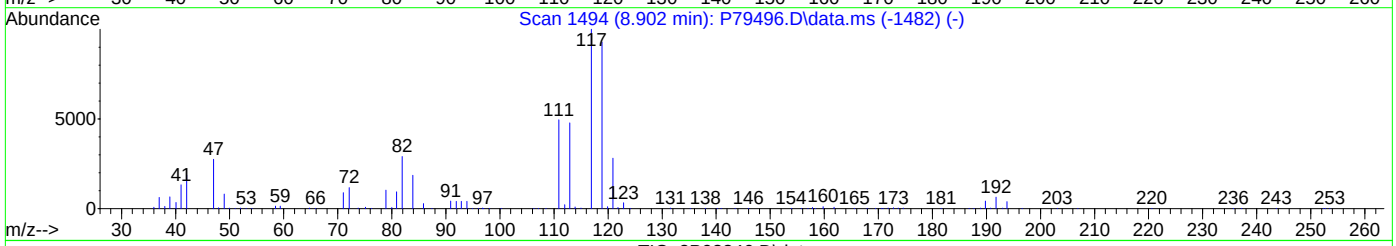
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 30.55ug/L

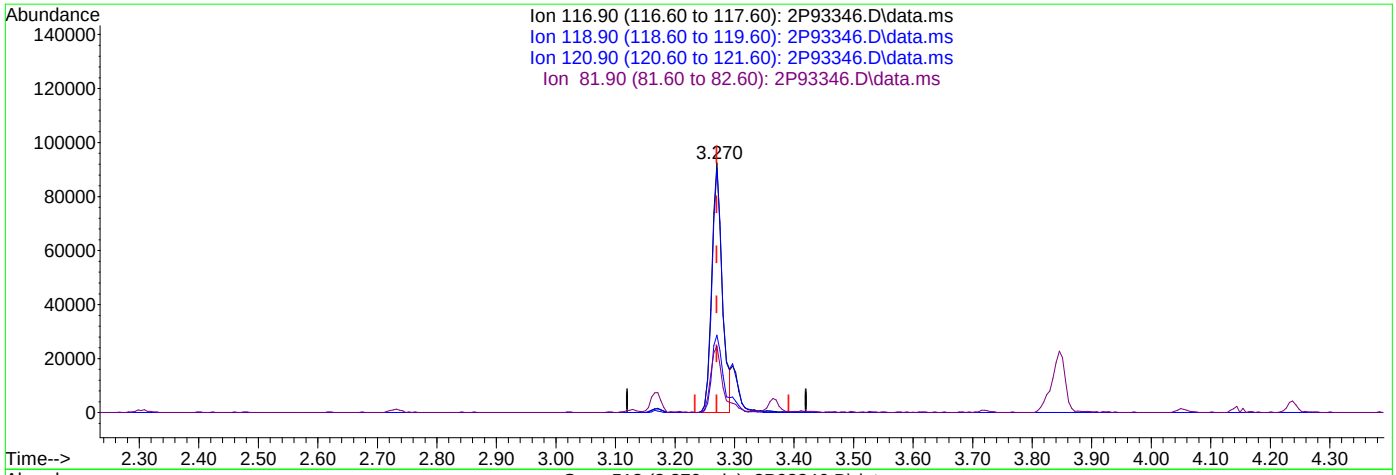
response 129240

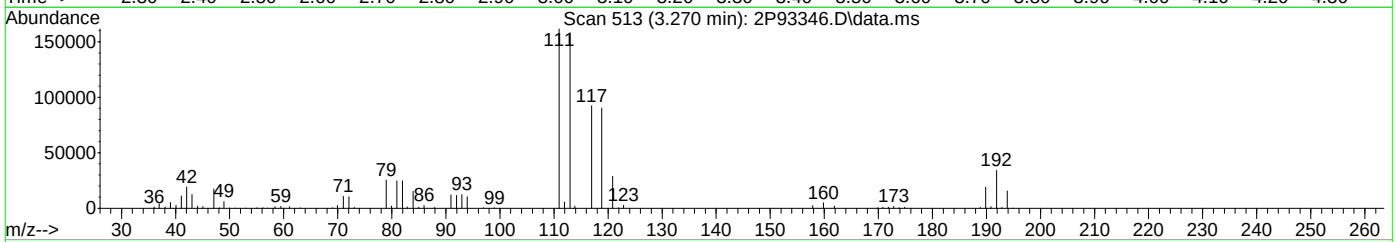
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.71
120.90	29.50	31.09
81.90	28.30	26.59

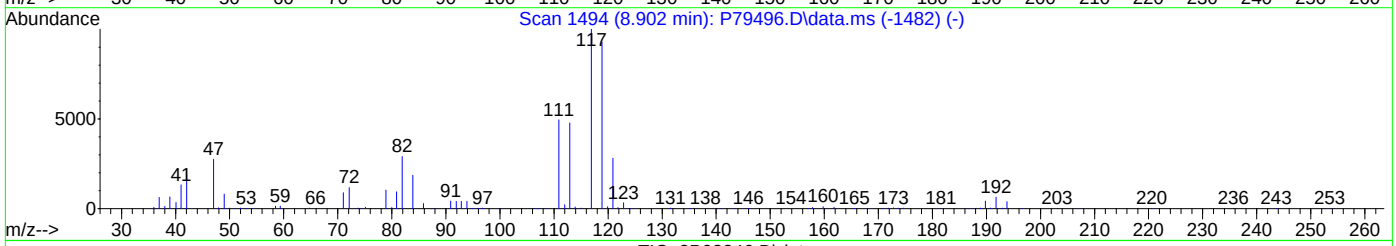
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 26.93ug/L m

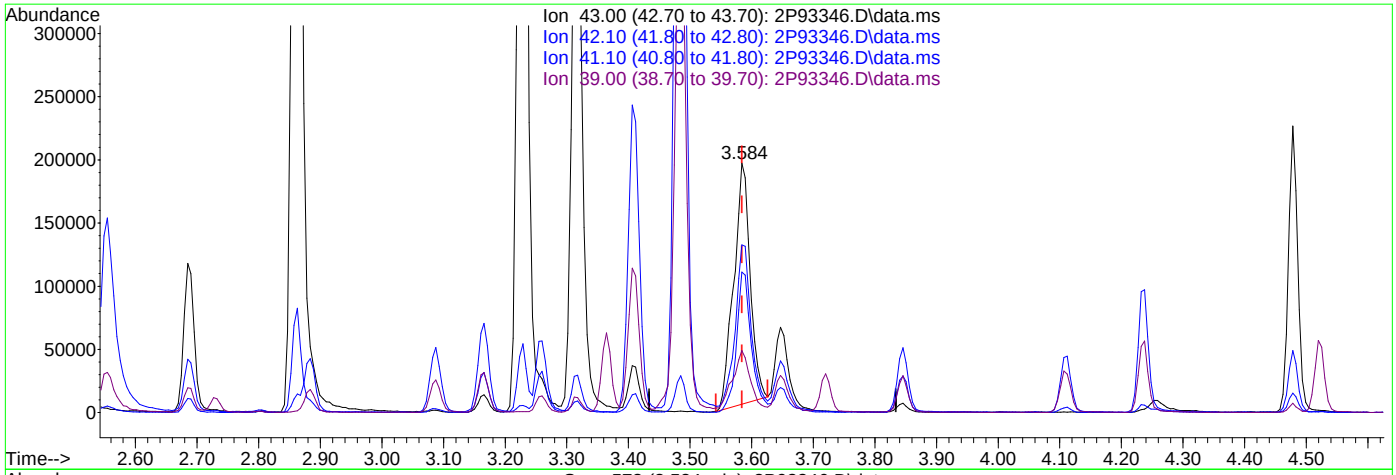
response 112571

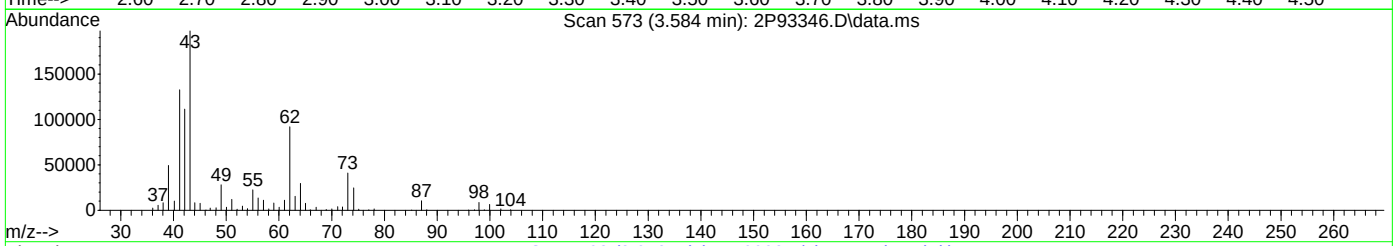
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.71
120.90	29.50	31.09
81.90	28.30	26.59

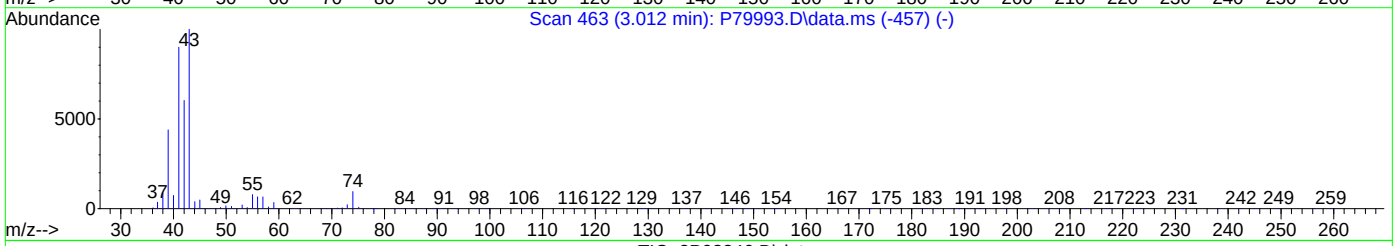
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 525.79ug/L

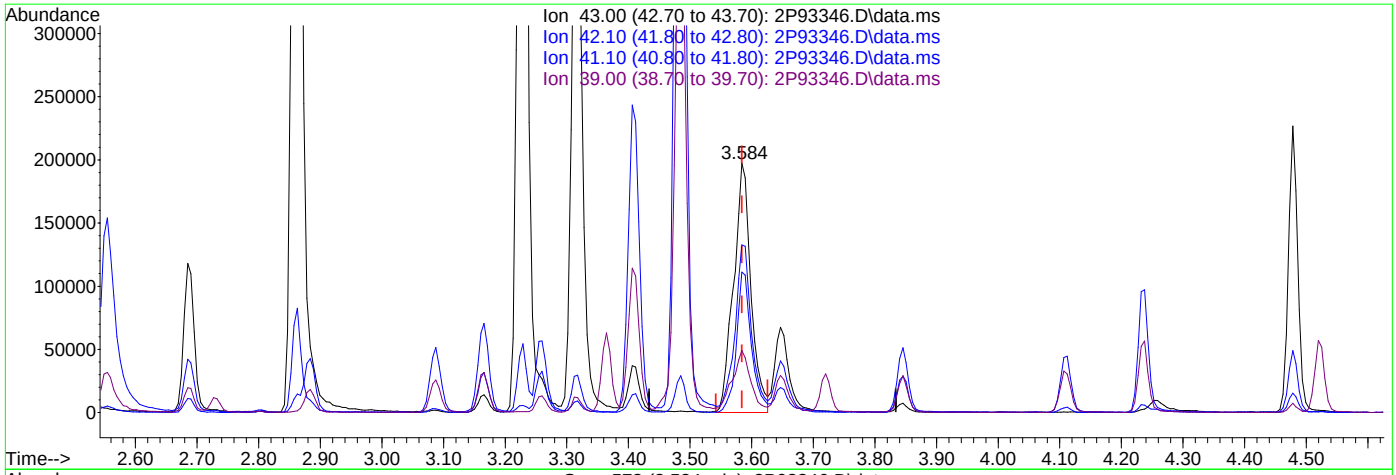
response 356215

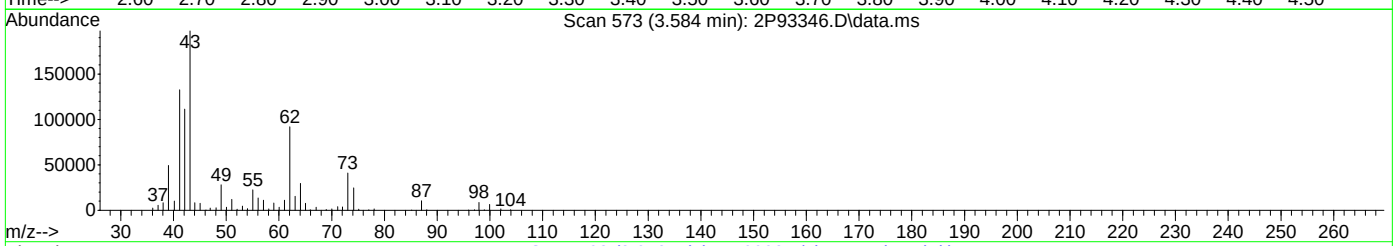
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.26
41.10	70.00	64.88
39.00	27.50	23.13

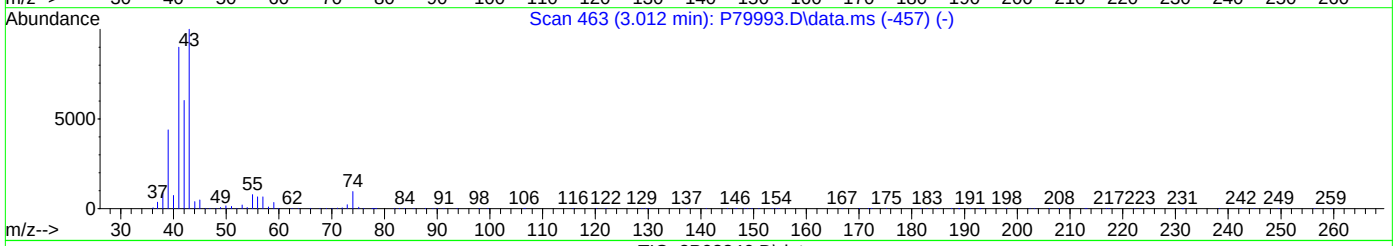
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(50) Isobutyl alcohol

3.584min (+0.000) 574.40ug/L m

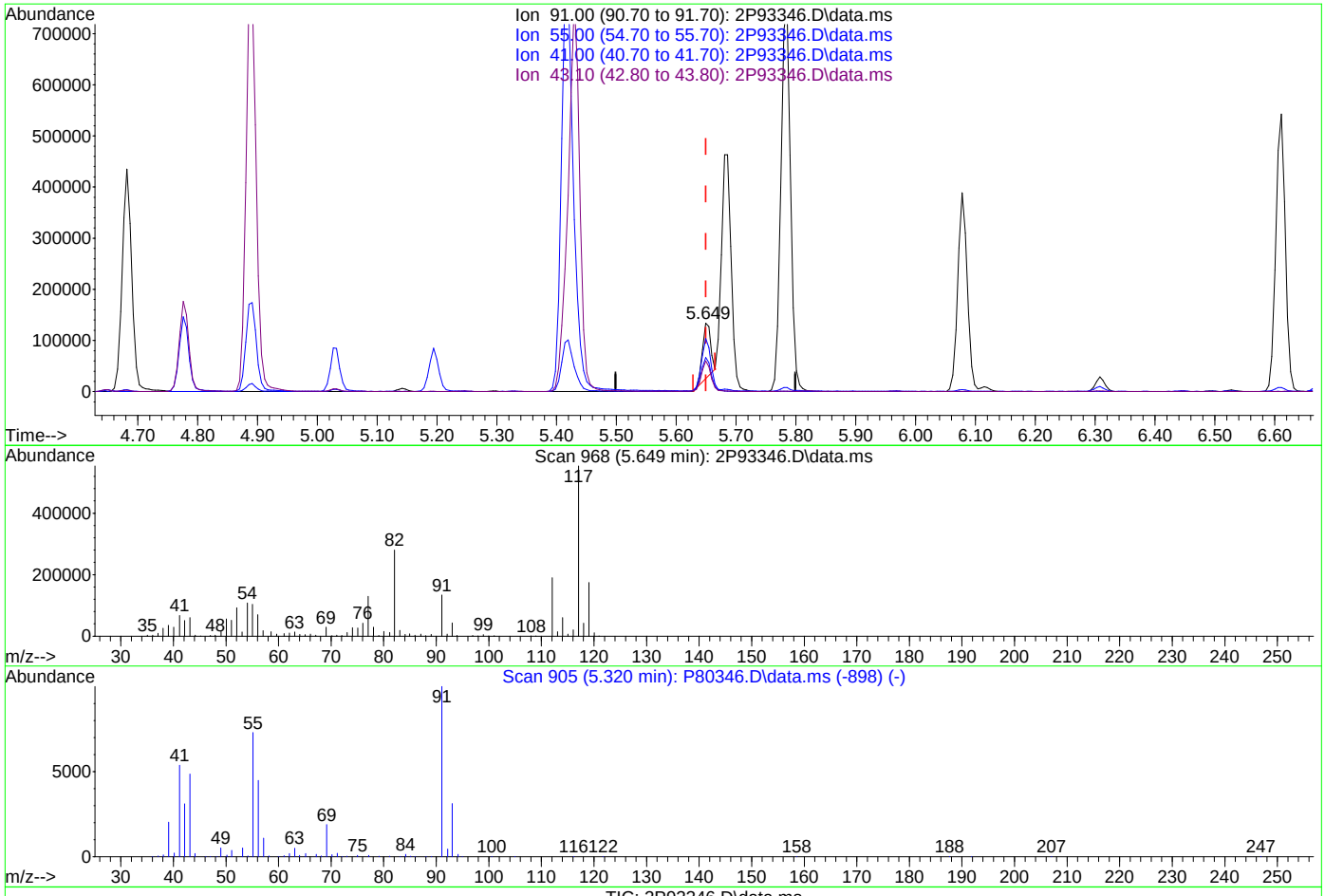
response 389148

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	56.28
41.10	70.00	67.15
39.00	27.50	24.86

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



TIC: 2P93346.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 16.96ug/L

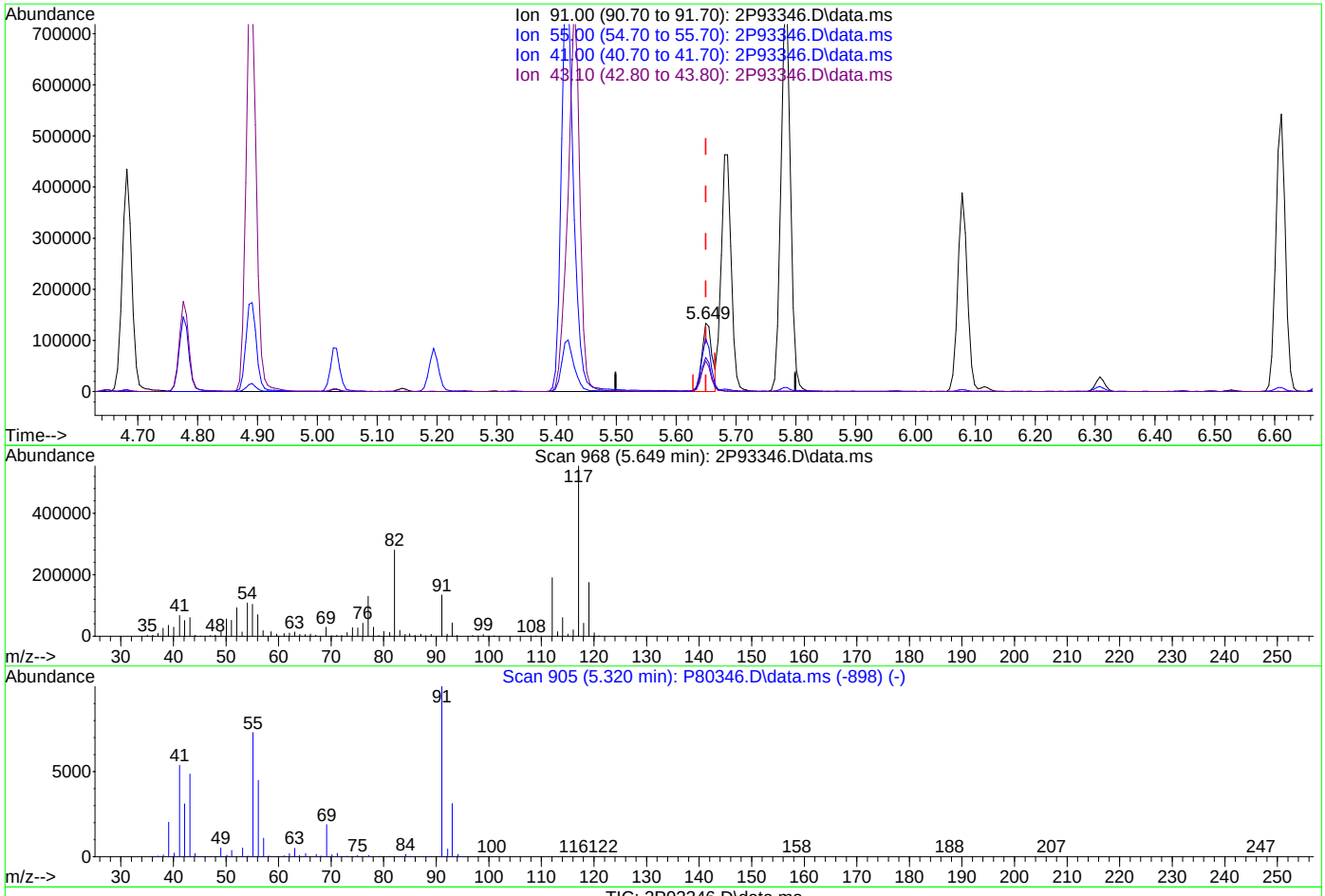
response 106417

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	76.23
41.00	53.40	48.54
43.10	41.30	44.04

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



TIC: 2P93346.D\data.ms

(76) 1-Chlorohexane

5.649min (+0.000) 24.78ug/L m

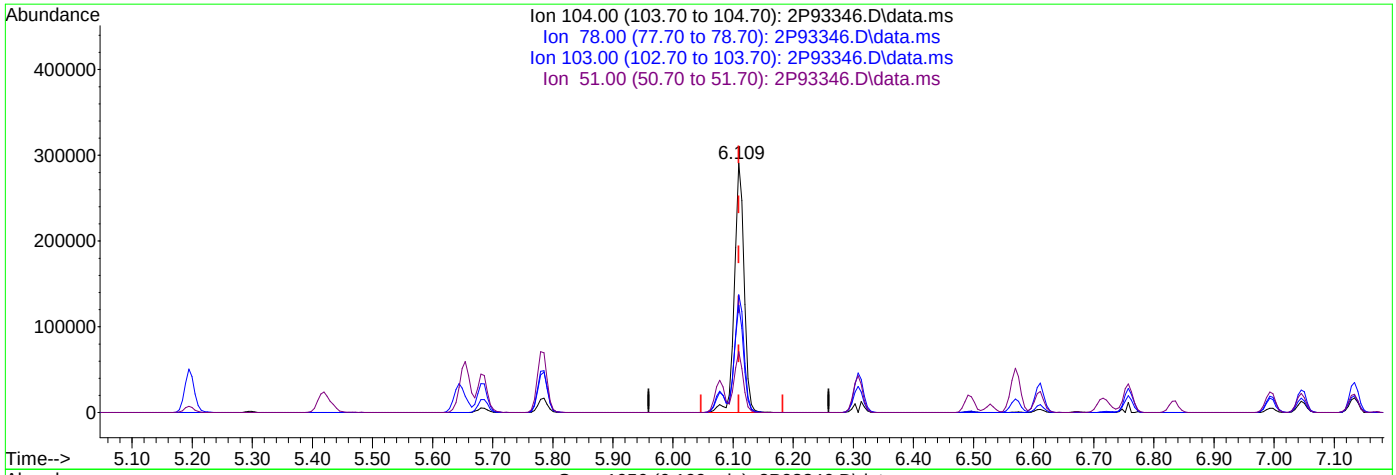
response 155531

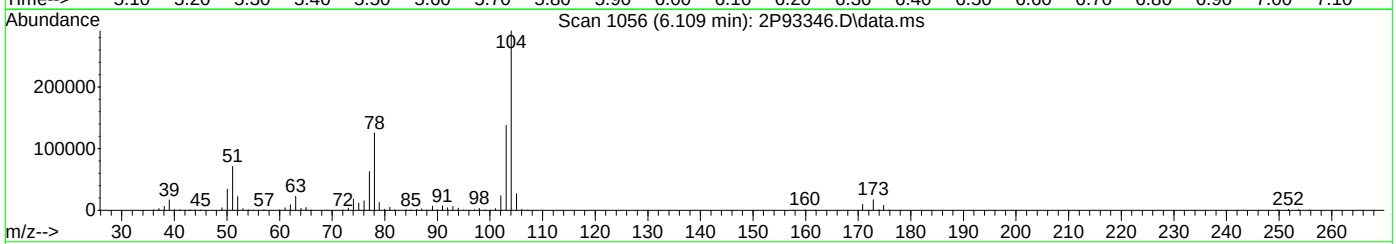
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	77.49
41.00	53.40	49.92
43.10	41.30	44.79

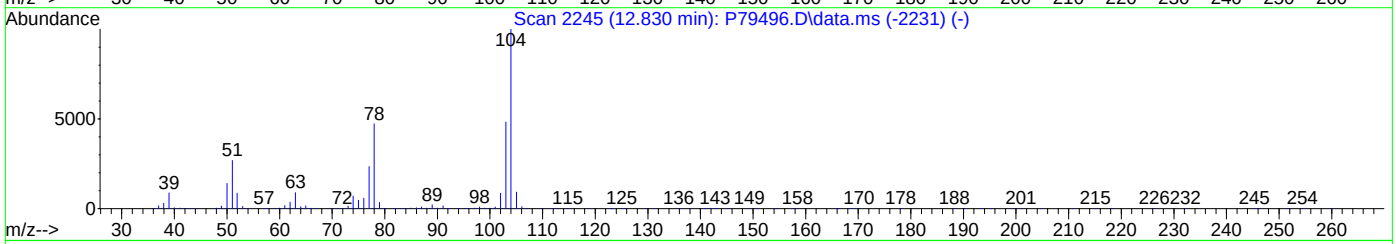
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(82) Styrene ( )

6.109min (+0.000) 25.44ug/L

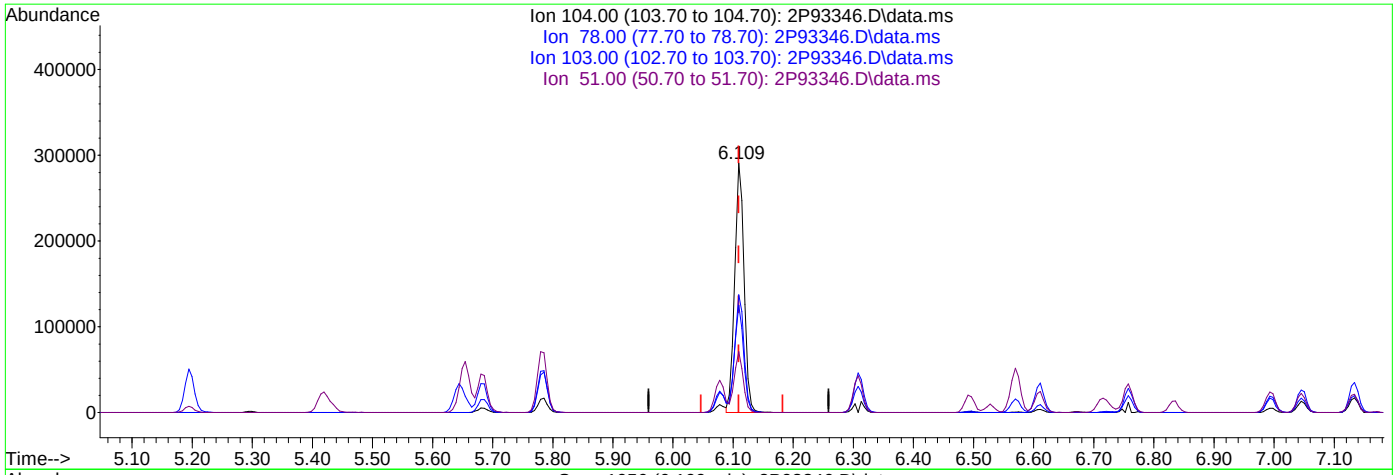
response 326838

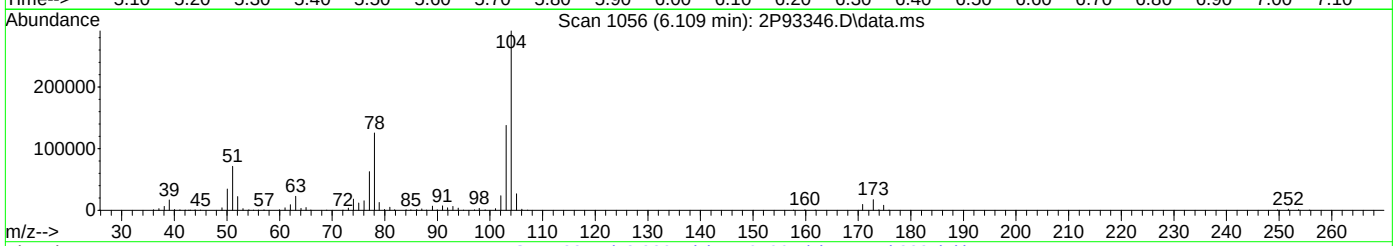
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	43.05
103.00	48.00	47.20
51.00	24.10	24.40

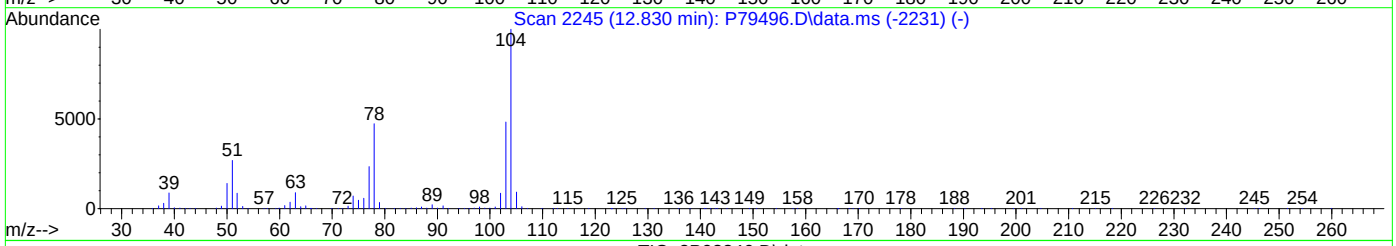
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93346.D
Acq On : 23 Sep 2022 10:29 pm
Operator : courtnef
Sample : FA98918-5MS, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Sep 25 21:00:17 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93346.D\data.ms

(82) Styrene ( )

6.109min (+0.000) 24.67ug/L m

response 316912

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	43.05
103.00	48.00	47.20
51.00	24.10	24.40

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 22:01:06 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1118013	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	869023	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	422375	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	237908	50.07	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	100.14%		
49) 1,2-Dichloroethane-d4	3.552	65	316018	47.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery =	95.76%		
63) Toluene-d8	4.650	98	1118809	46.79	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery =	93.58%		
86) 4-Bromofluorobenzene	6.496	174	318695	48.38	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	96.76%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.127	85	85828	27.81	ug/L	95
3) Chloromethane	1.252	50	95621	28.04	ug/L	96
4) 1,3-butadiene	1.320	39	128616	40.59	ug/L	97
5) Vinyl Chloride	1.304	62	128128	30.83	ug/L	99
6) Bromomethane	1.508	94	42286	16.44	ug/L	97
7) Chloroethane	1.581	64	35574	26.04	ug/L	99
8) Trichlorofluoromethane	1.676	101	138163	30.99	ug/L	98
9) Ethyl Ether	1.879	59	102969	26.47	ug/L	98
10) Ethanol	1.968	45	63506m	547.89	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.979	67	116461	32.01	ug/L	99
12) 1,1-Dichloroethene	1.984	61	153336	28.85	ug/L	99
13) Freon 113	2.015	101	97016	29.18	ug/L	96
14) Carbon Disulfide	2.000	76	202915	23.66	ug/L	96
15) Iodomethane	2.062	142	67001	29.68	ug/L	99
16) Acrolein	2.156	56	142630	100.26	ug/L	100
17) Allyl chloride	2.251	41	113770	29.76	ug/L	94
18) Methylene Chloride	2.303	49	139203	24.05	ug/L	97
19) Acetone	2.319	43	341520	132.84	ug/L	97
20) Methyl acetate	2.397	43	776195	149.21	ug/L	100
21) trans-1,2-Dichloroethene	2.402	61	164911	30.63	ug/L	97
22) Hexane	2.470	56	82768	31.48	ug/L	93
23) Methyl Tert Butyl Ether	2.470	73	341866	27.86	ug/L	96
24) Tert Butyl Alcohol	2.507	59	424704	279.85	ug/L	99
25) Acetonitrile	2.554	41	218393	253.69	ug/L	98
26) Di-isopropyl ether	2.684	45	323300	28.38	ug/L	97
27) Chloroprene	2.726	53	591053	36.42	ug/L	91
28) 1,1-Dichloroethane	2.732	63	219324	30.98	ug/L	99
29) Acrylonitrile	2.732	52	397644	154.96	ug/L	87
30) ETBE	2.883	59	353845	26.51	ug/L	99
31) Vinyl acetate	2.862	43	1123439	122.36	ug/L	99
32) cis-1,2-Dichloroethene	3.024	96	224243	53.11	ug/L	98
33) 2,2-Dichloropropane	3.087	77	116361	21.75	ug/L	99
34) Bromochloromethane	3.129	128	51167	26.81	ug/L	93
35) Cyclohexane	3.165	56	202416	30.70	ug/L	98
36) Chloroform	3.171	83	198738	27.97	ug/L	100
37) Ethyl acetate	3.228	43	984231	141.73	ug/L	99
38) Tetrahydrofuran	3.260	42	75700	28.55	ug/L	98
40) Carbon Tetrachloride	3.270	117	123872m	28.55	ug/L	
41) 1,1,1-Trichloroethane	3.296	97	170141	28.07	ug/L	99
42) 2-Butanone	3.317	43	567940	131.11	ug/L	100
43) 1,1-Dichloropropene	3.364	75	150329	28.20	ug/L	98
44) tert-Butyl formate	3.411	59	319700	110.03	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 22:01:06 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.458	54	381464	279.10	ug/L		98
46) Methacrylonitrile	3.484	41	973671	266.69	ug/L		98
47) Benzene	3.495	78	477691	28.07	ug/L		91
48) TAME	3.568	73	342532	28.22	ug/L		98
50) Isobutyl alcohol	3.584	43	402683m	575.92	ug/L		
51) 1,2-Dichloroethane	3.589	62	162223	26.63	ug/L		99
52) Tert Amyl Alcohol	3.646	59	346911	271.67	ug/L		97
53) Trichloroethene	3.824	95	188190	42.97	ug/L		96
54) Methylcyclohexane	3.845	83	185015	31.82	ug/L		99
55) Dibromomethane	4.049	93	63427	26.36	ug/L		96
56) 1,2-Dichloropropane	4.107	63	113576	27.47	ug/L		97
57) Bromodichloromethane	4.148	83	117568	26.71	ug/L		99
58) Methyl methacrylate	4.237	41	120161	26.25	ug/L		98
59) 1,4-Dioxane	4.258	88	87706	675.13	ug/L		97
60) 2-Chloroethyl vinyl ether	4.478	63	451383	131.25	ug/L		97
61) cis-1,3-Dichloropropene	4.520	75	150998	26.40	ug/L		99
64) Toluene	4.682	91	513624	25.03	ug/L		99
65) 2-Nitropropane	4.776	41	178205	115.51	ug/L		100
66) 4-Methyl-2-pentanone	4.891	43	925852	116.98	ug/L		99
67) trans-1,3-Dichloropropene	4.917	75	145261	25.00	ug/L		85
68) Tetrachloroethene	4.938	166	148566	34.09	ug/L		97
69) Ethyl methacrylate	5.032	69	168461	23.59	ug/L		97
70) 1,1,2-Trichloroethane	5.021	83	89573	25.52	ug/L		96
71) Dibromochloromethane	5.142	129	83577	23.64	ug/L		97
72) 1,3-Dichloropropane	5.194	76	184051	23.59	ug/L		96
73) 1,2-Dibromoethane	5.293	107	107548	25.35	ug/L		94
74) 3,3-dimethyl-1-butanol	5.419	57	2087814	1184.83	ug/L		98
75) 2-hexanone	5.429	43	1069251	120.32	ug/L		87
76) 1-Chlorohexane	5.649	91	166928m	25.51	ug/L		
77) Ethylbenzene	5.680	91	576649	25.63	ug/L		99
78) Chlorobenzene	5.654	112	318181	25.90	ug/L		98
79) 1,1,1,2-Tetrachloroethane	5.696	131	98060	25.75	ug/L		96
80) m,p-Xylene	5.785	91	895257	50.31	ug/L		99
81) o-Xylene	6.077	91	463915	26.49	ug/L		97
82) Styrene	6.109	104	336597m	25.13	ug/L		
83) Bromoform	6.119	173	43420	23.02	ug/L		97
84) Isopropylbenzene	6.308	105	537121	26.58	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	31010	13.90	ug/L		88
88) n-Propylbenzene	6.611	91	634061	24.47	ug/L		98
89) Bromobenzene	6.569	156	120512	23.00	ug/L		98
90) 1,1,2,2-Tetrachloroethane	6.632	83	163946	23.45	ug/L		98
91) 1,3,5-Trimethylbenzene	6.757	105	431580	23.92	ug/L		98
92) 2-Chlorotoluene	6.715	91	373239	23.86	ug/L		99
93) trans-1,4-Dichloro-2-B...	6.757	53	45762	15.27	ug/L		88
94) 1,2,3-Trichloropropane	6.726	110	58890	22.59	ug/L		95
95) Cyclohexanone	6.741	55	64926	118.92	ug/L		98
96) 4-Chlorotoluene	6.836	91	396376	24.05	ug/L		99
97) tert-Butylbenzene	6.992	91	238209	24.04	ug/L		99
99) 1,2,4-Trimethylbenzene	7.045	105	430726	24.47	ug/L		98
100) Pentachloroethane	6.998	167	31801	15.46	ug/L	#	1
101) sec-Butylbenzene	7.134	105	503937	26.27	ug/L		99
102) 4-Isopropyltoluene	7.243	119	439449	26.17	ug/L		100
103) 1,3-Dichlorobenzene	7.280	146	237847	25.27	ug/L		98
104) 1,2,3-Trimethylbenzene	7.374	105	445955	25.26	ug/L		99
105) 1,4-Dichlorobenzene	7.343	146	239156	24.32	ug/L		98
106) n-Butylbenzene	7.562	92	192005	23.43	ug/L		100
107) Benzyl Chloride	7.520	126	24054	13.13	ug/L	#	89
108) 1,2-Dichlorobenzene	7.651	146	215793	24.43	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 22:01:06 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

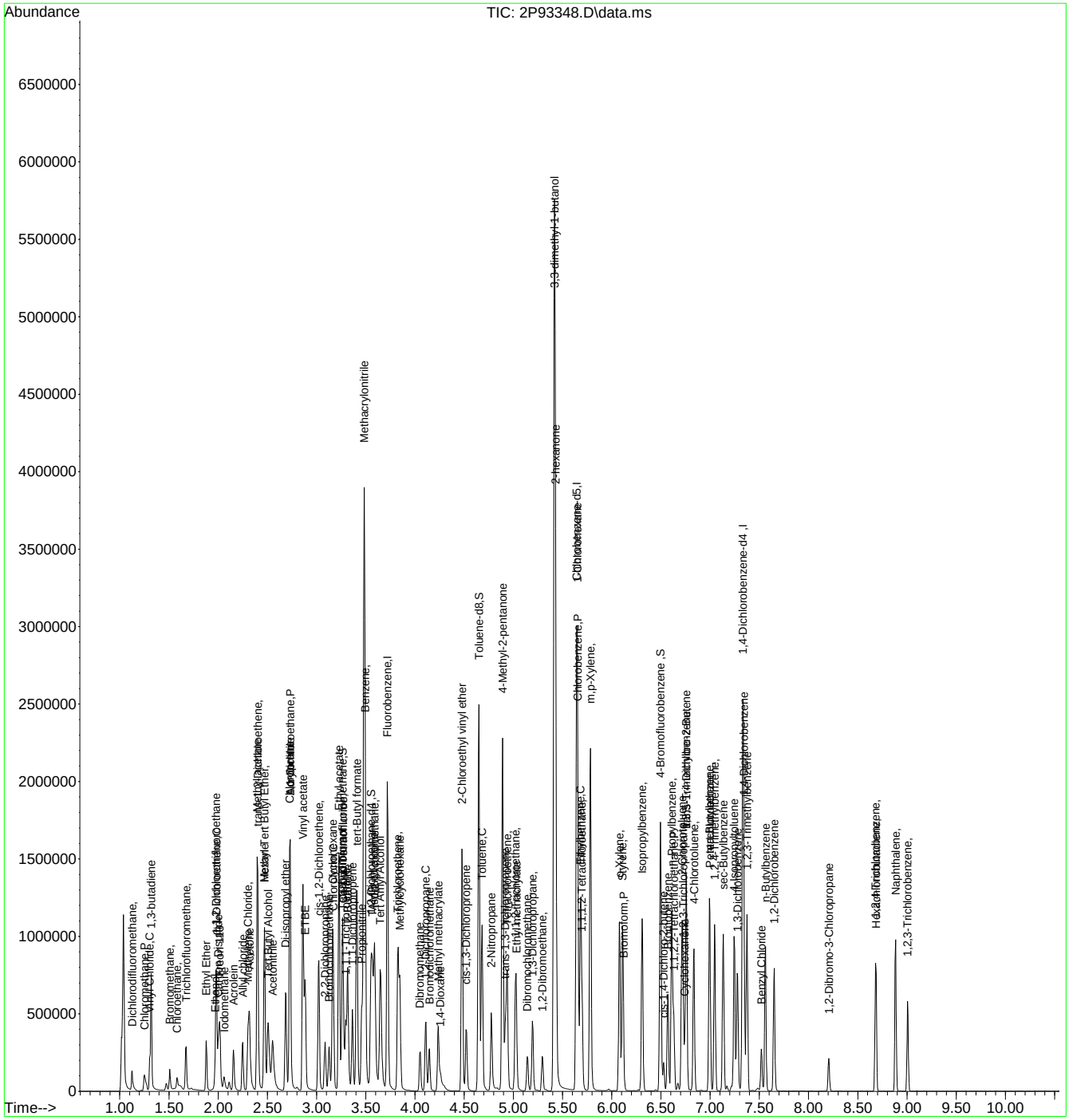
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.205	75	33198	21.40	ug/L	97
110) Hexachlorobutadiene	8.686	225	39098	24.73	ug/L	95
111) 1,2,4-Trichlorobenzene	8.681	180	110560	23.53	ug/L	98
112) Naphthalene	8.885	128	458846	23.76	ug/L	99
113) 1,2,3-Trichlorobenzene	9.005	180	107278	24.32	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 22:01:06 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

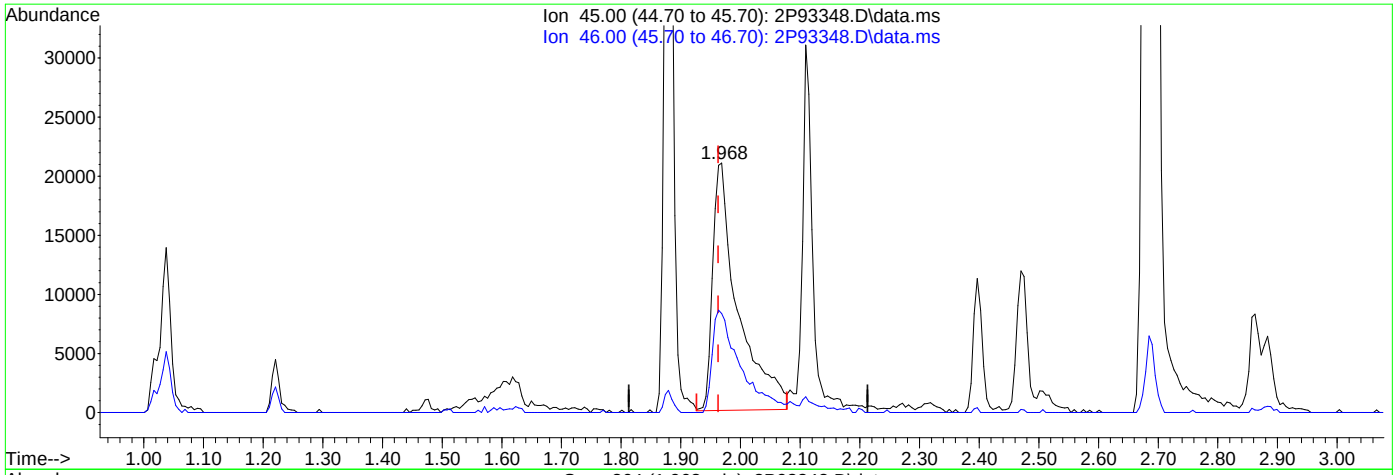
Sample Number: FA98918-5MSD
Lab FileID: 2P93348.D
Injection Time: 09/23/22 23:02
Method: SW846 8260D
Analyst approved: 09/25/22 22:24 Antonette Clutario
Supervisor approved: 09/26/22 12:42 Karen Watson

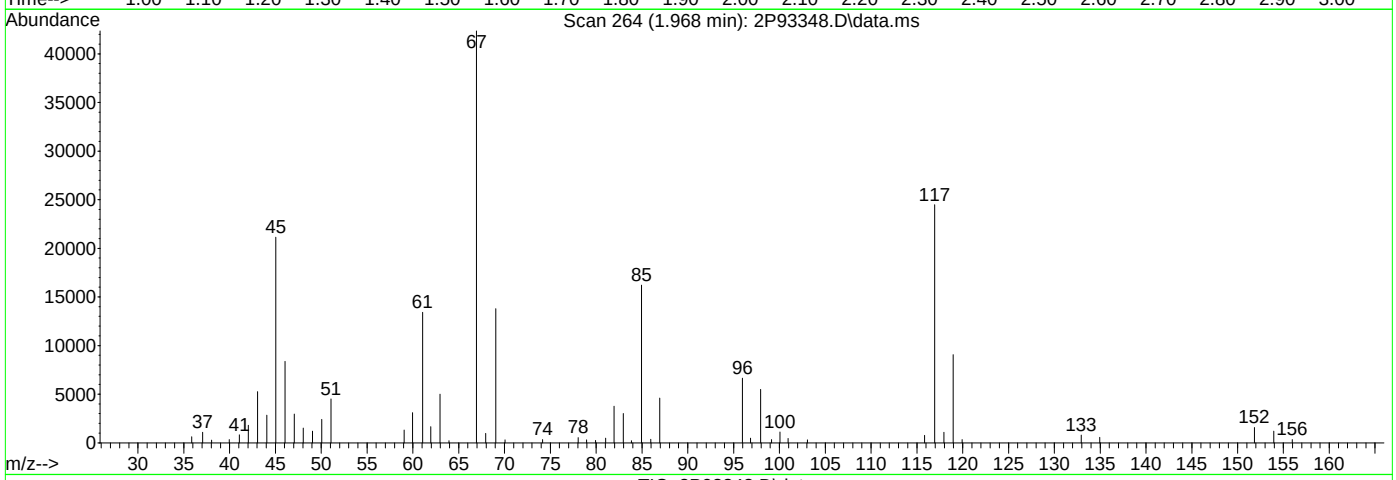
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.97	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(10) Ethanol

1.968min (+0.005) 529.87ug/L

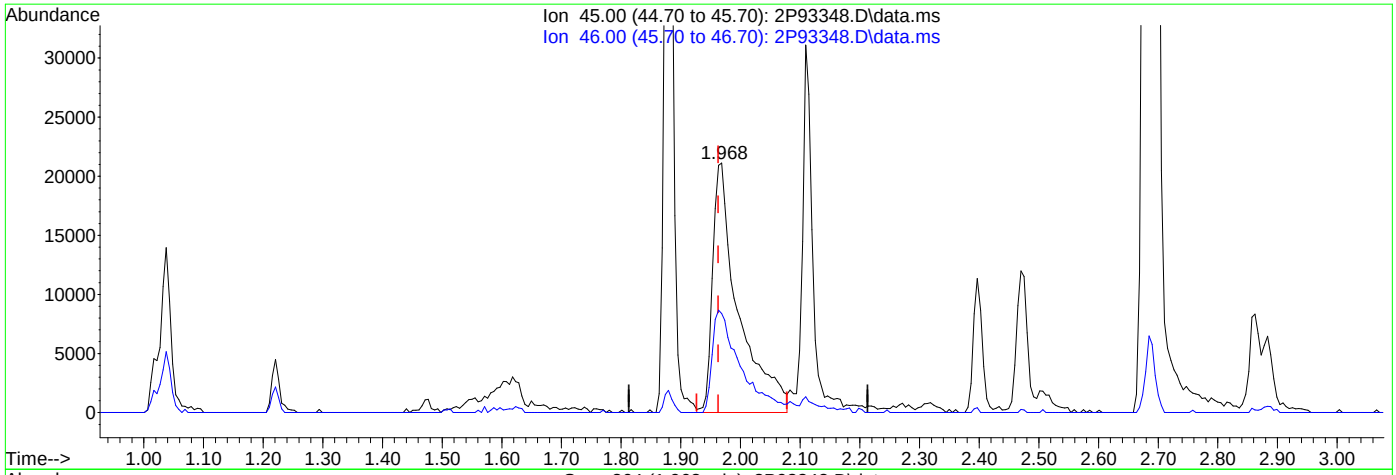
response 61578

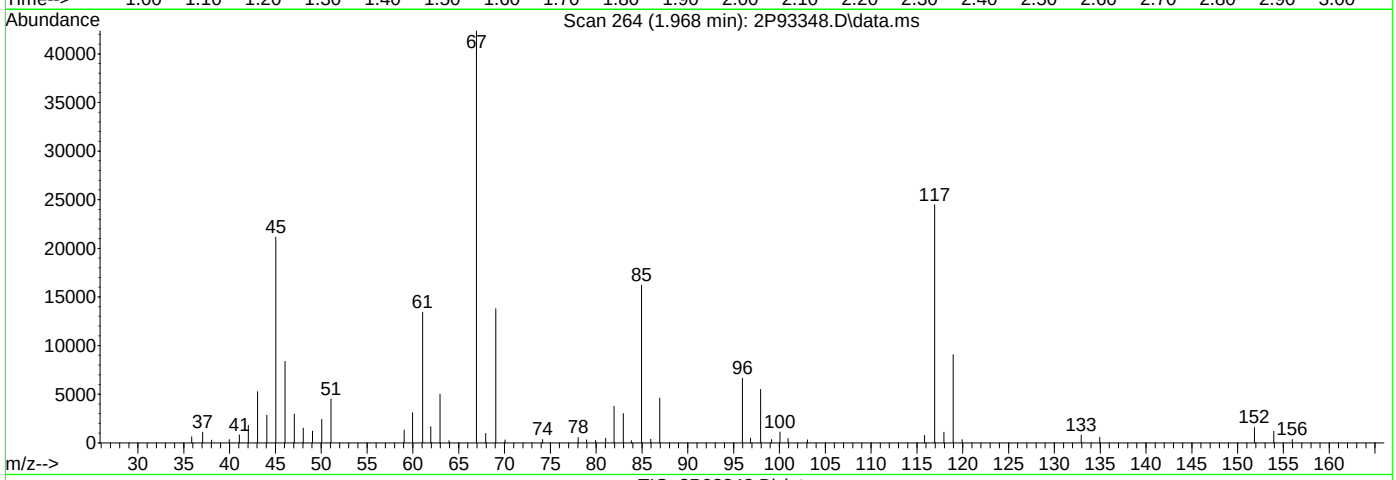
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	40.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(10) Ethanol

1.968min (+0.005) 547.89ug/L m

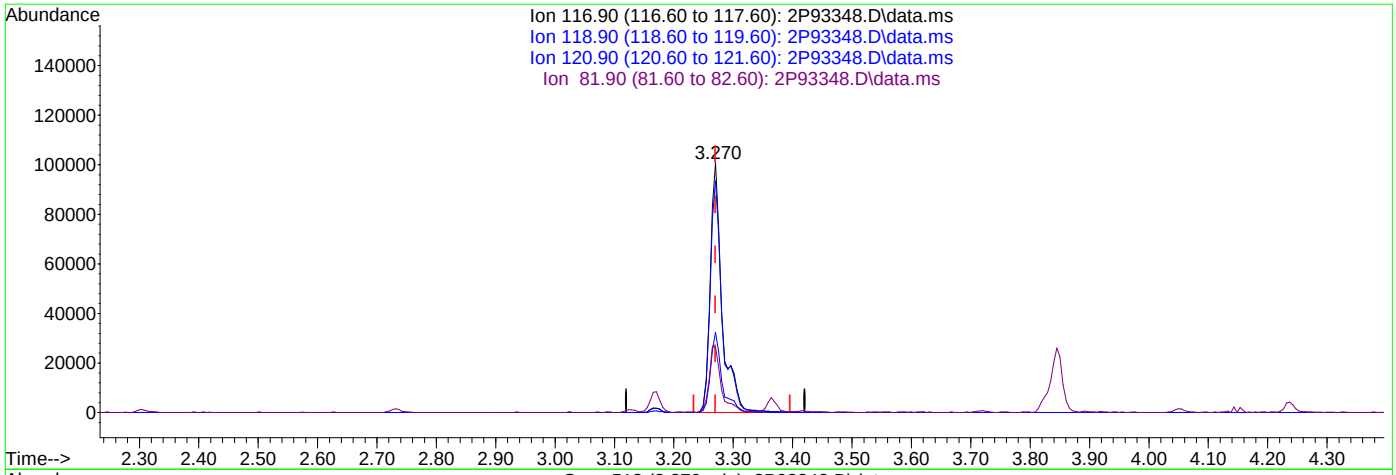
response 63506

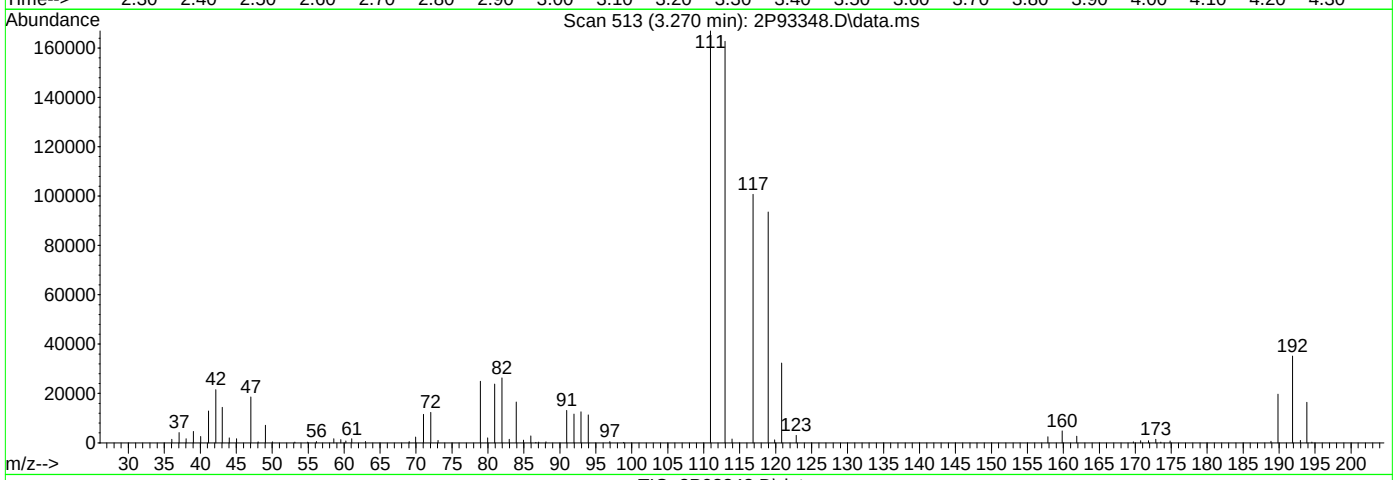
Ion	Exp%	Act%
45.00	100	100
46.00	42.70	39.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 32.36ug/L

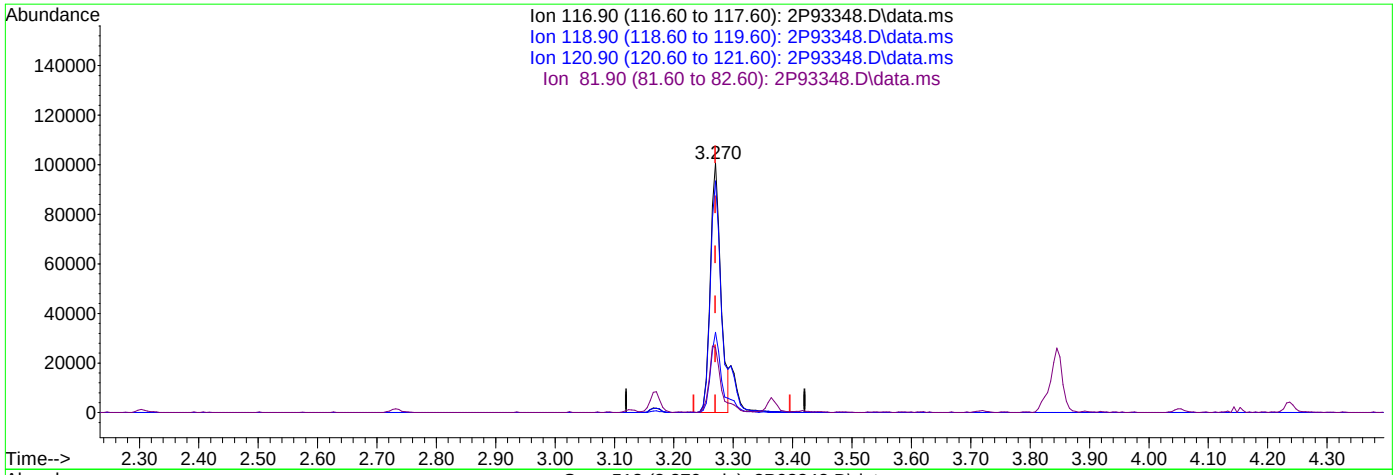
response 142148

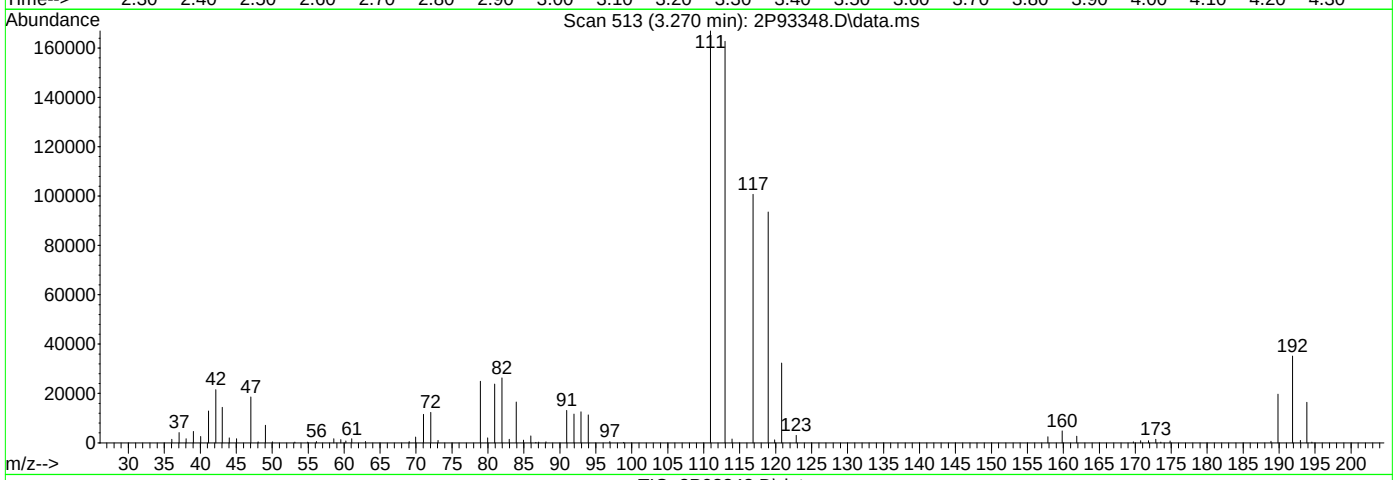
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.82
120.90	29.50	32.11
81.90	28.30	25.87

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (+0.000) 28.55ug/L m

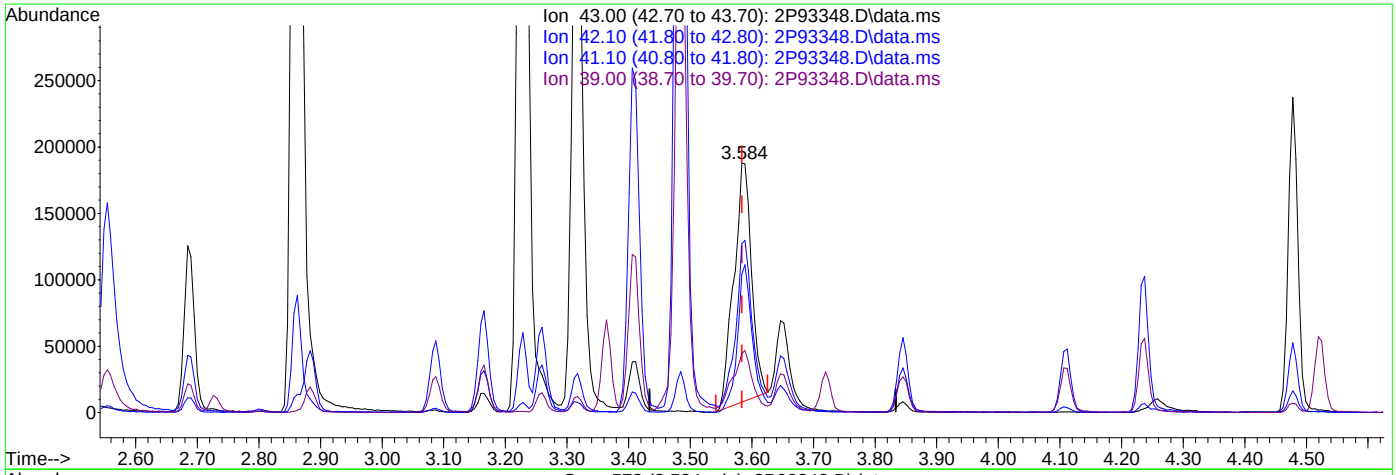
response 123872

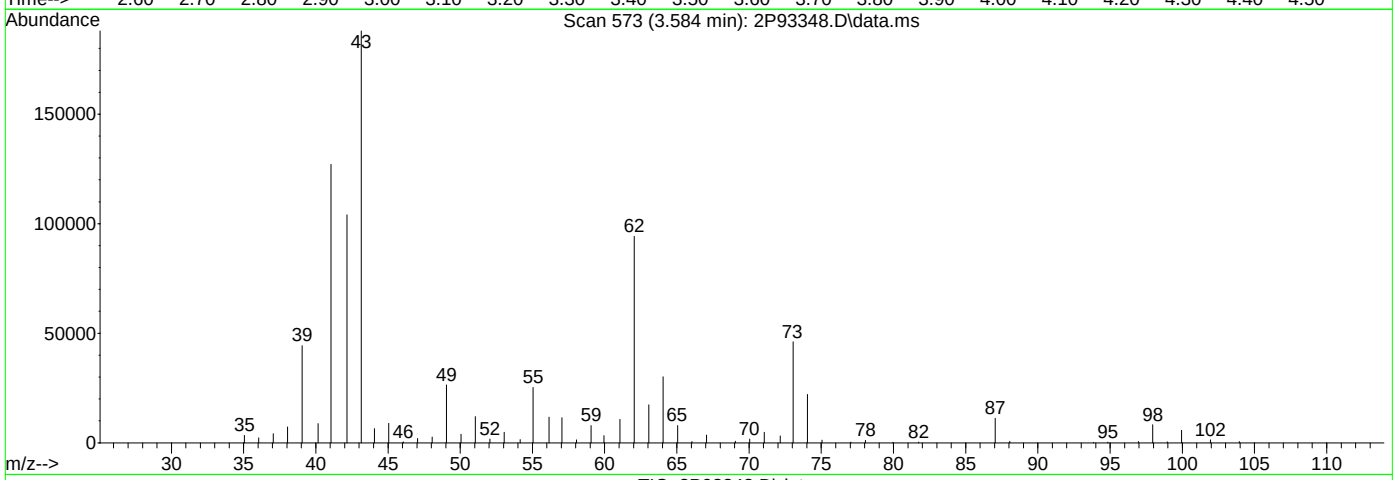
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	92.82
120.90	29.50	32.11
81.90	28.30	26.13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.000) 518.90ug/L

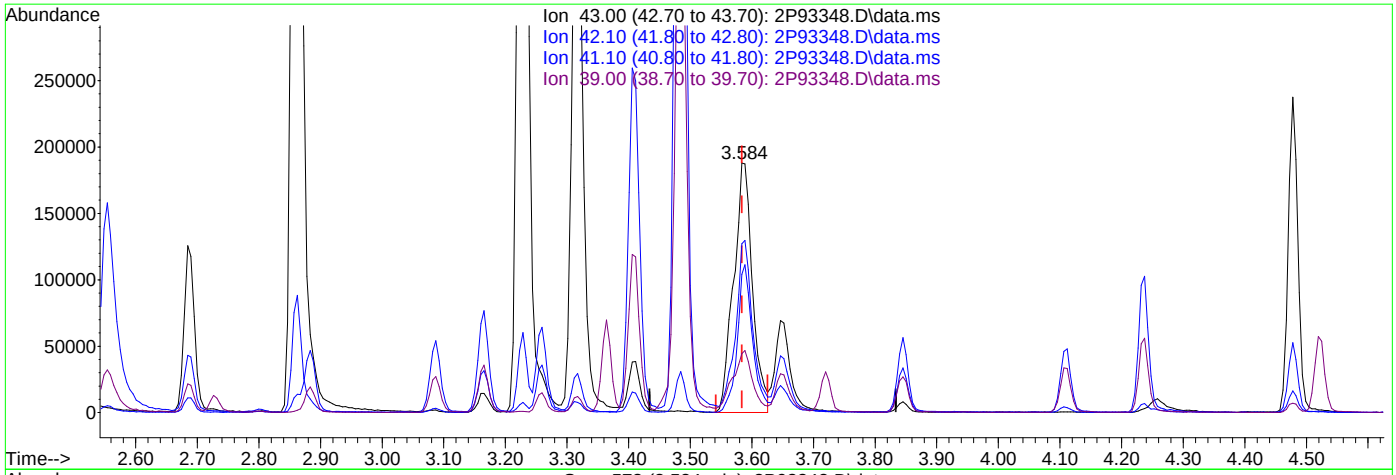
response 362816

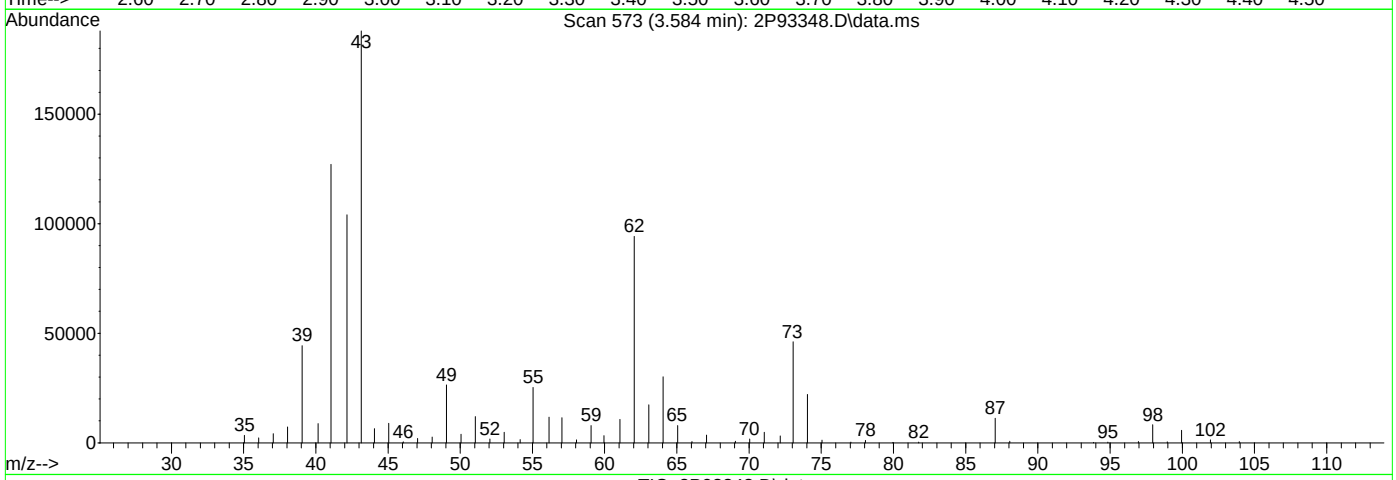
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	55.34
41.10	70.00	65.02
39.00	27.50	21.96

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.000) 575.92ug/L m

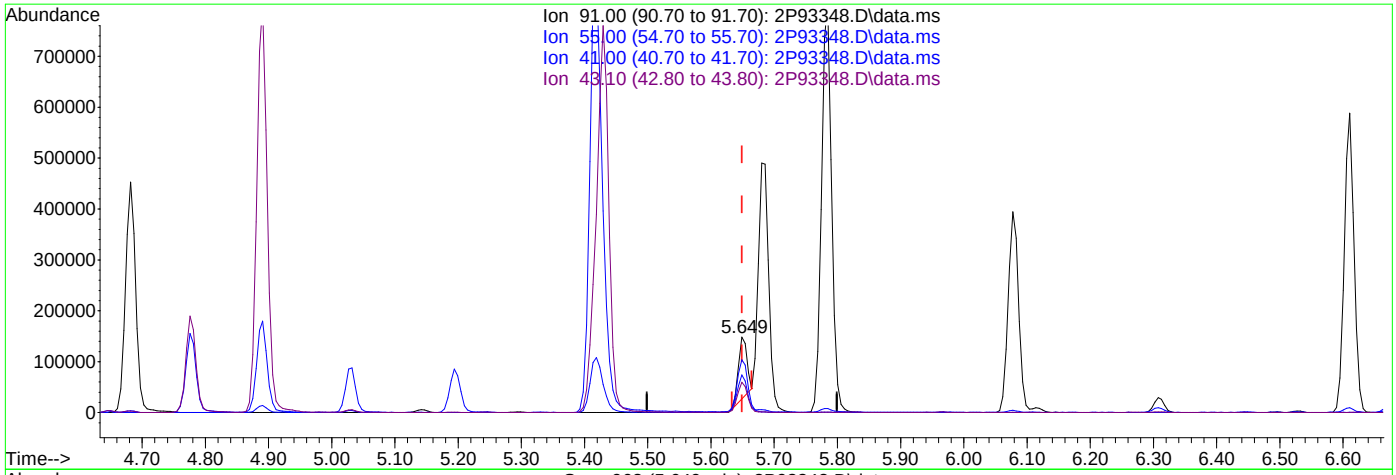
response 402683

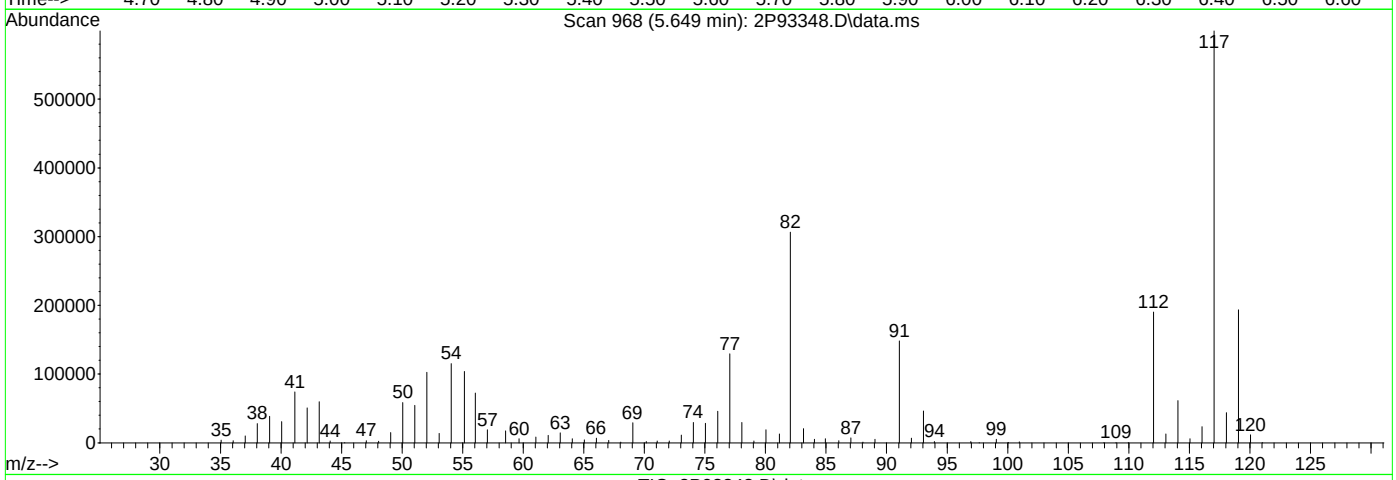
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	55.36
41.10	70.00	67.59
39.00	27.50	23.60

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.000) 18.09ug/L

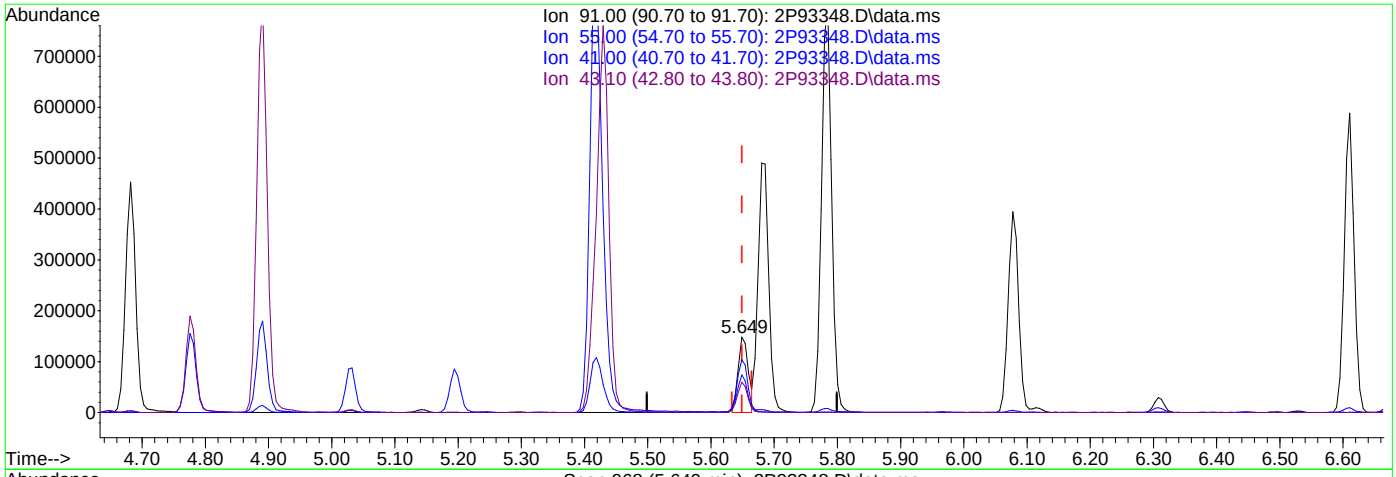
response 118369

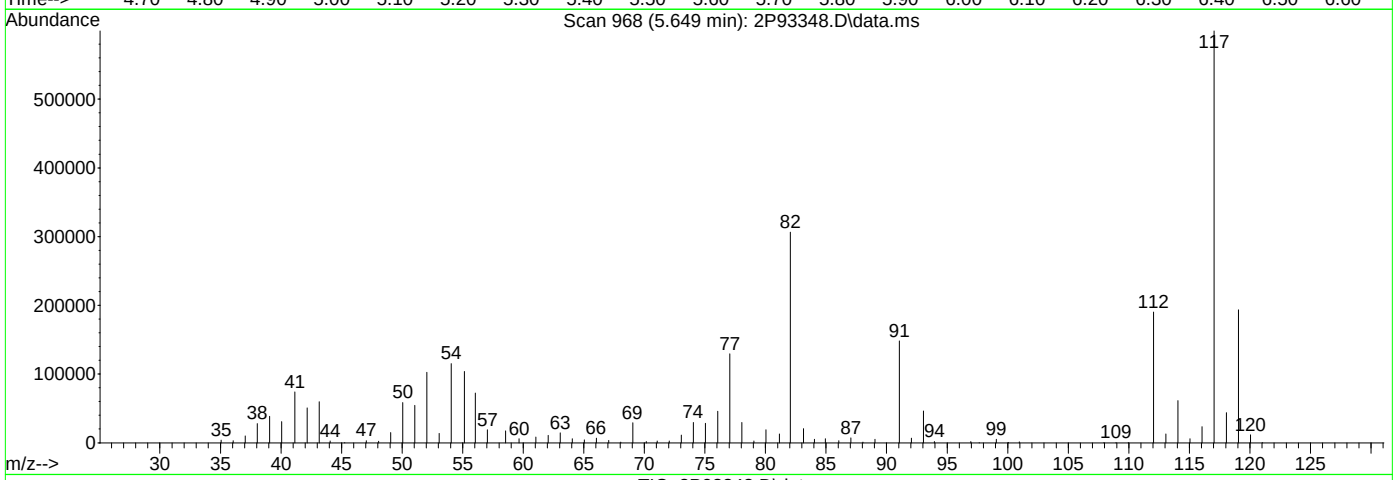
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.84
41.00	53.40	47.51
43.10	41.30	39.45

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.000) 25.51ug/L m

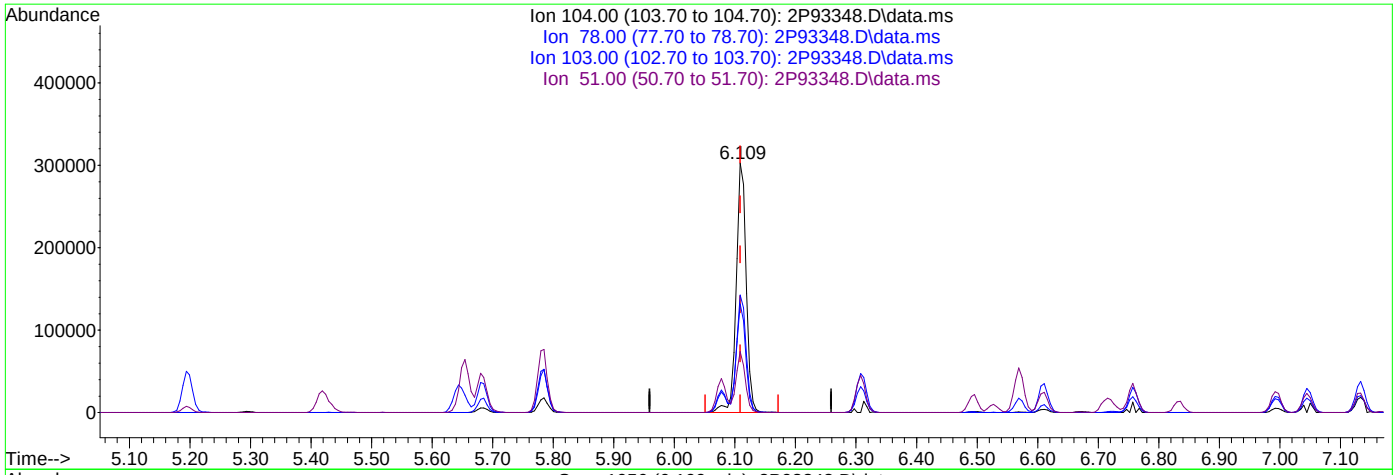
response 166928

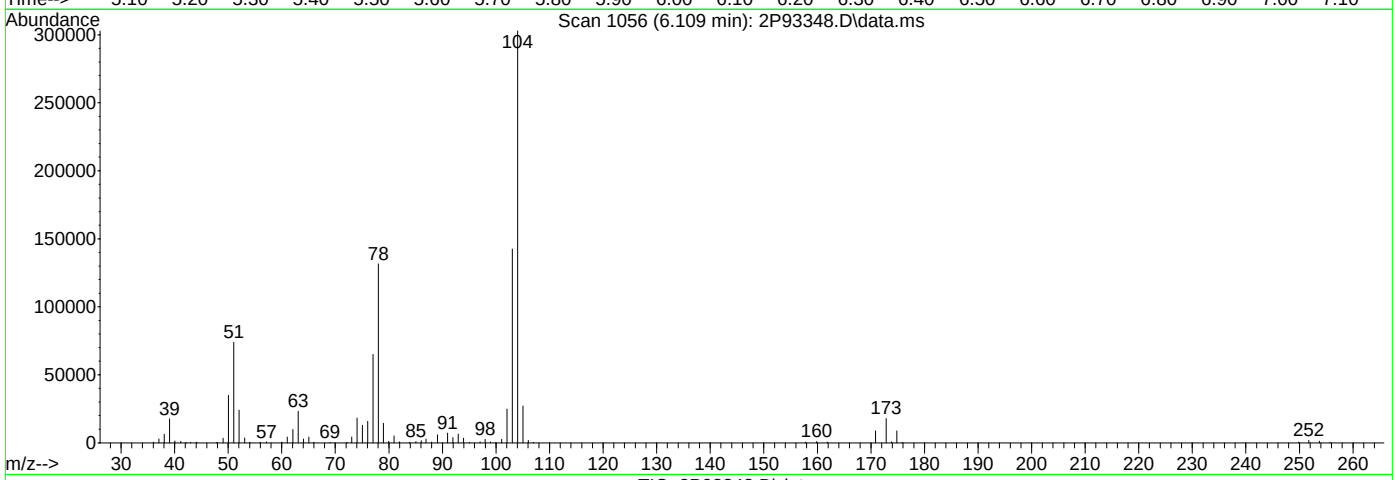
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	70.02
41.00	53.40	49.91
43.10	41.30	40.23

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(82) Styrene ( )

6.109min (-0.000) 25.87ug/L

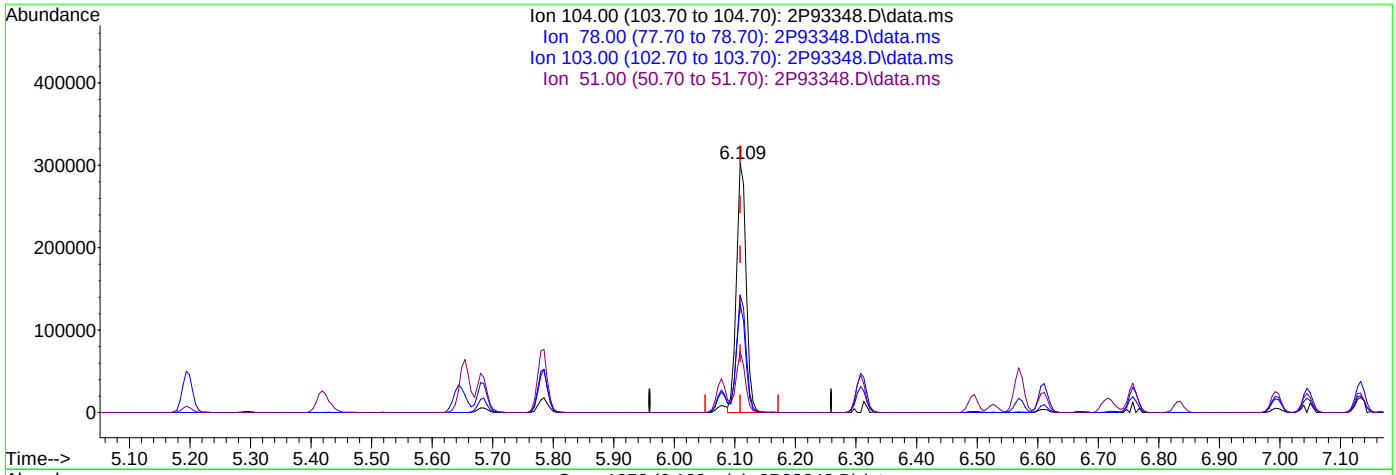
response 346610

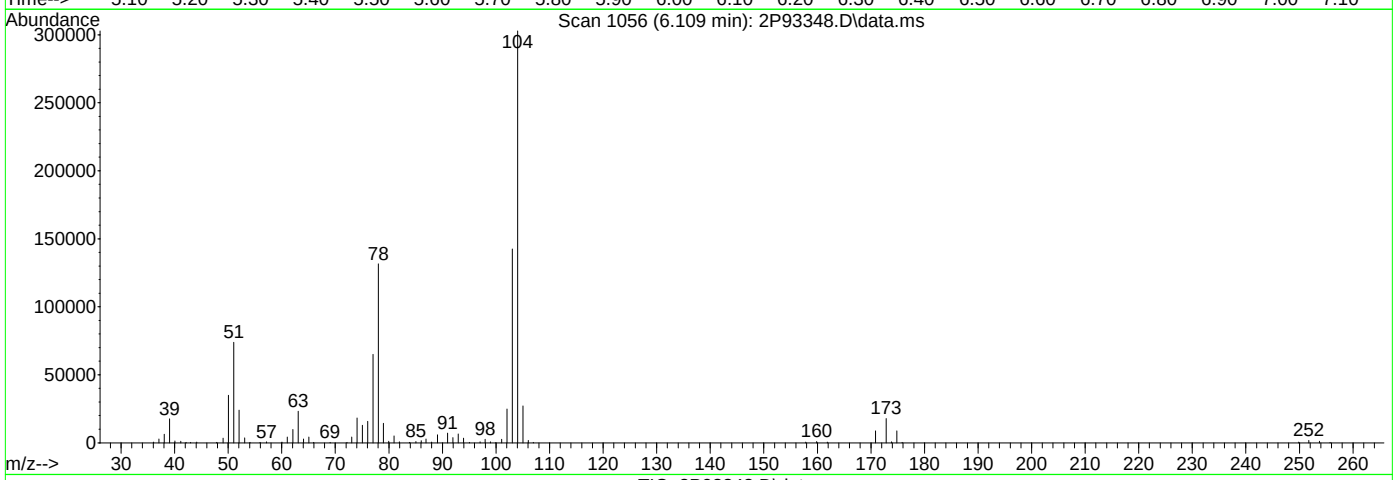
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	43.46
103.00	48.00	47.03
51.00	24.10	24.30

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93348.D
Acq On : 23 Sep 2022 11:02 pm
Operator : courtnef
Sample : FA98918-5MSD, 50X
Misc : MS52399,V2P3586,,,,,50
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Sep 25 21:00:20 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93348.D\data.ms

(82) Styrene ( )

6.109min (-0.000) 25.13ug/L m

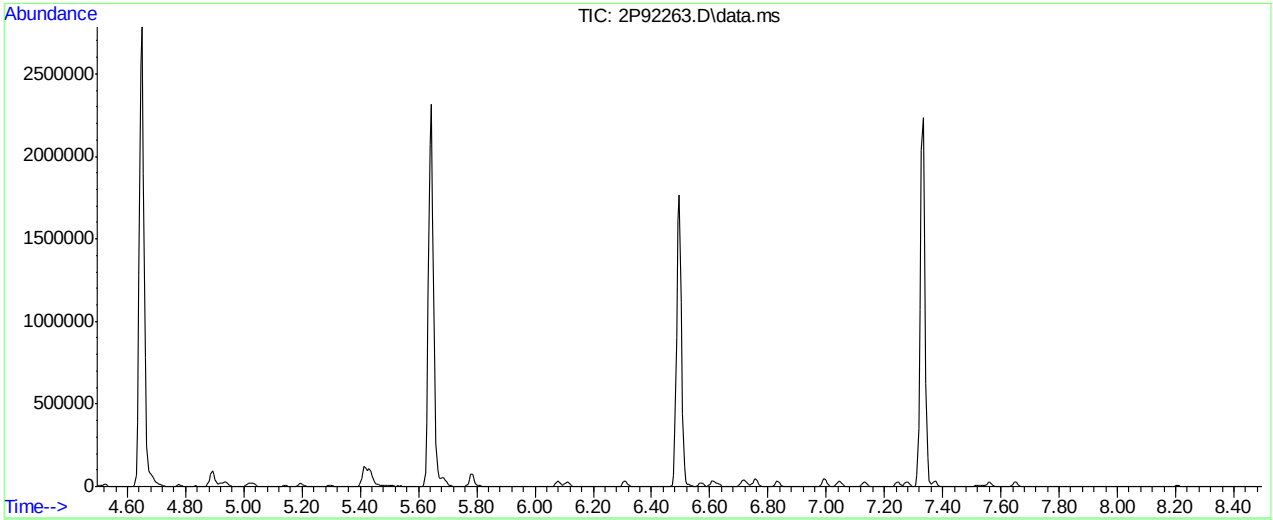
response 336597

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	43.46
103.00	48.00	47.03
51.00	24.10	24.40

Methods: SW-846 8260B

```
Data File : C:\msdchem\1\DATA\2022-08-24\2P92263.D       Vial: 52
Acq On    : 24 Aug 2022   9:50 am                    Operator: courtnef
Sample    : BFB                                     Inst    : MSVOA13
Misc      : MS52204,V2P3560,,,,,                    Multiplr: 1.00
MS Integration Params: big.p

Method    : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title     : SW-846 Method 5035A/8260B
```



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1121

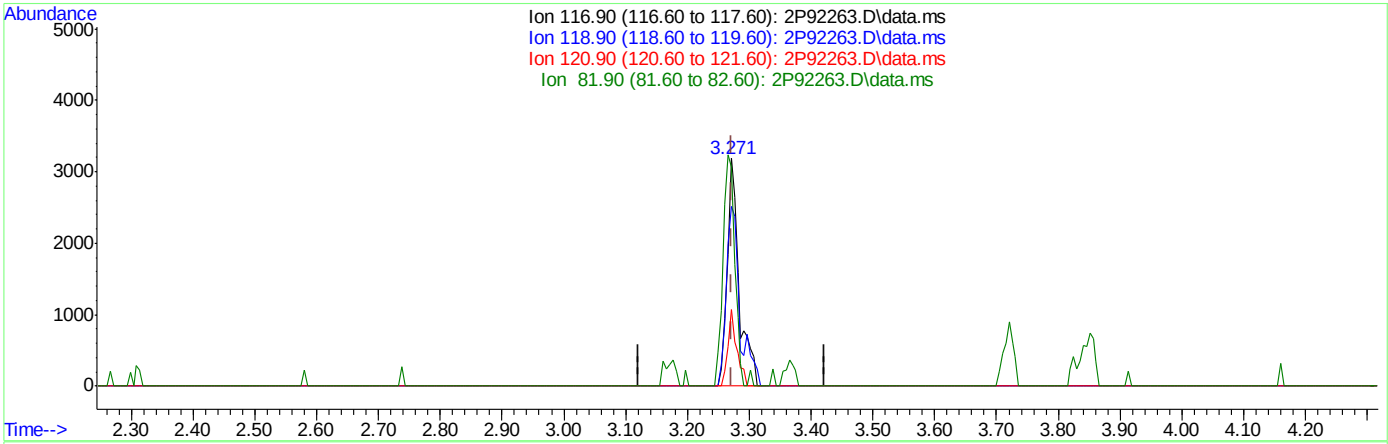
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	60128	PASS
75	95	30	60	49.4	160765	PASS
95	95	100	100	100.0	325269	PASS
96	95	5	9	6.5	21171	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.5	238912	PASS
175	174	5	9	7.7	18335	PASS
176	174	95	101	96.7	231146	PASS
177	176	5	9	6.6	15221	PASS

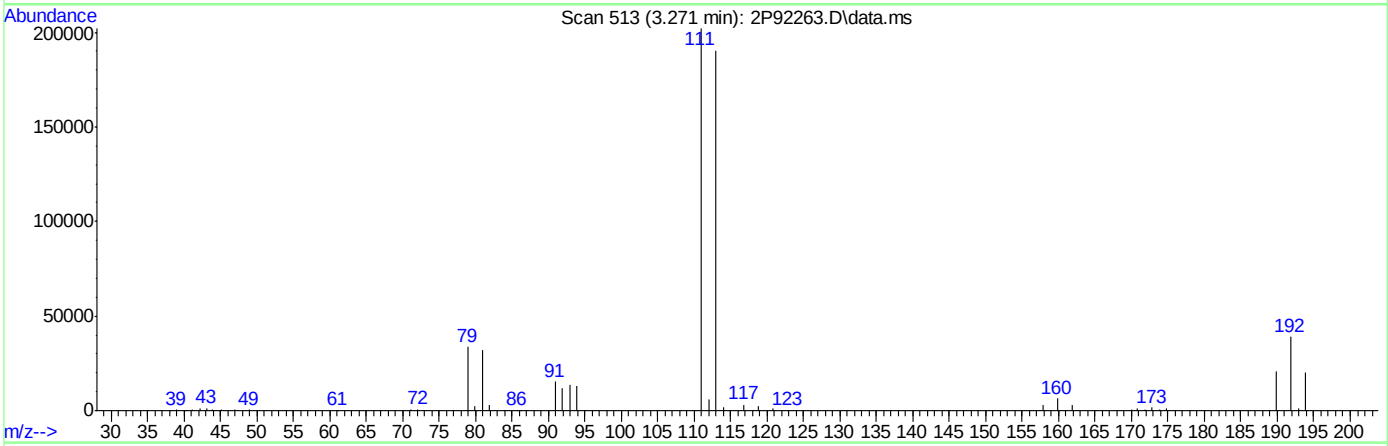
2P92263.D V2P_2022-08-24.M Wed Aug 24 10:08:43 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.79ug/L

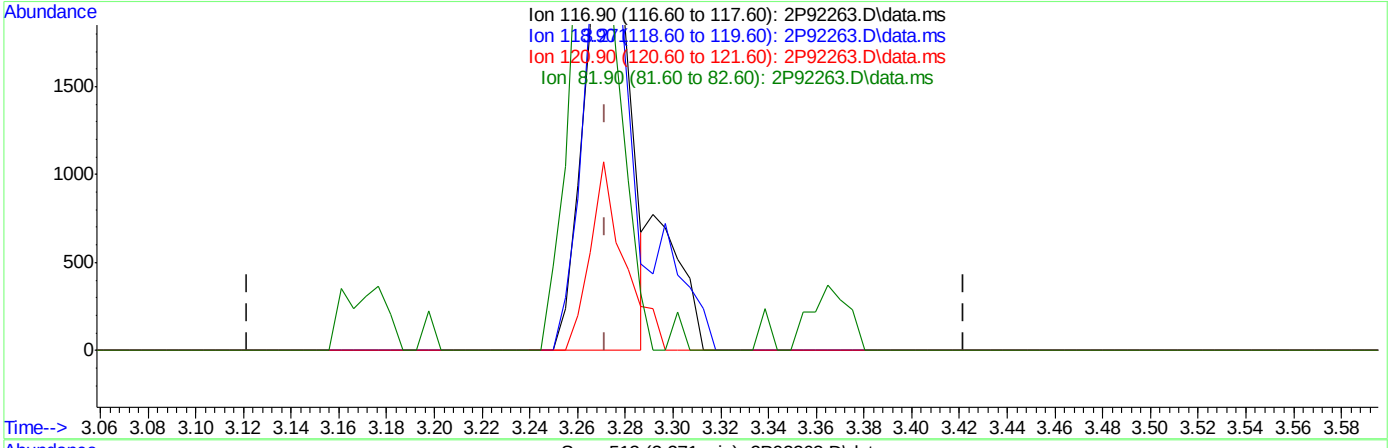
response 4233

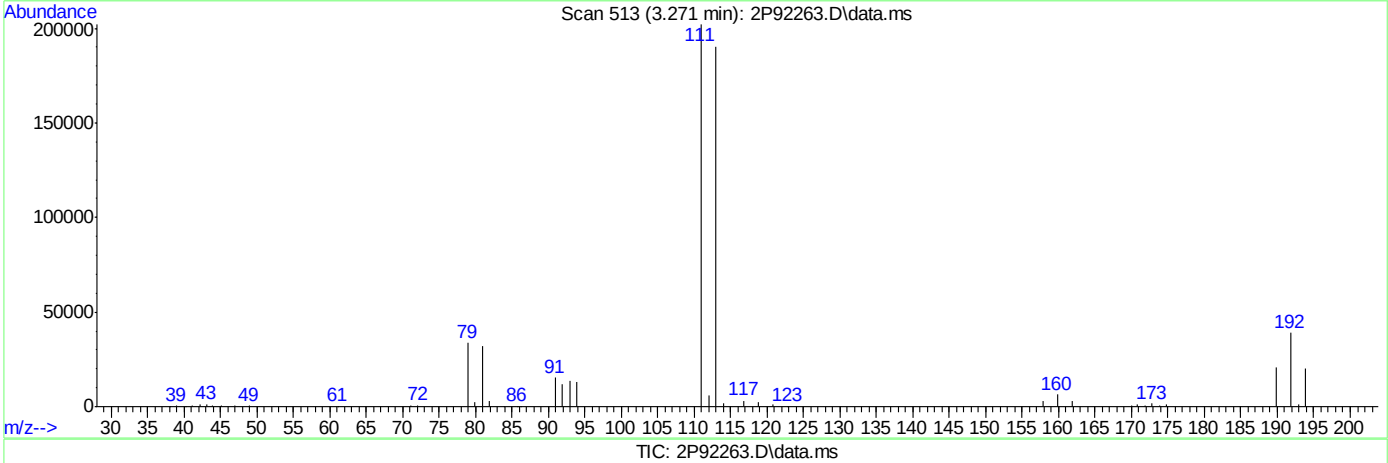
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.65ug/L m

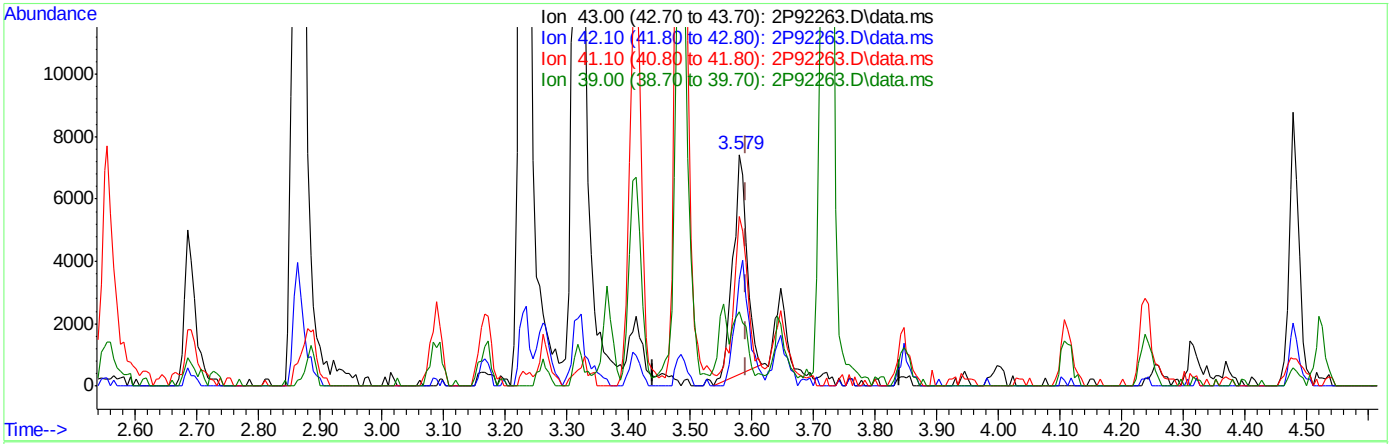
response 3481

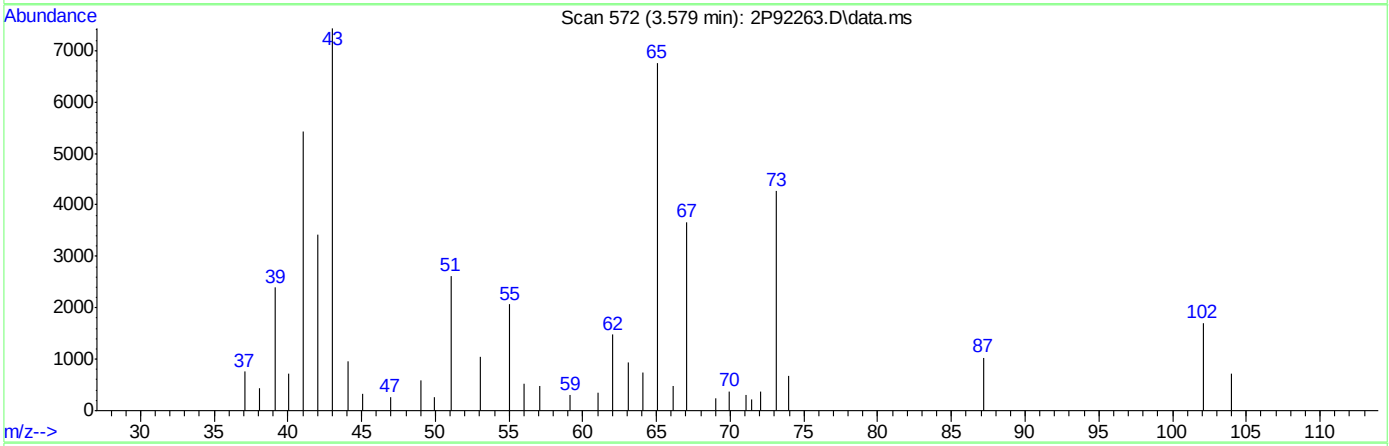
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 8.01ug/L

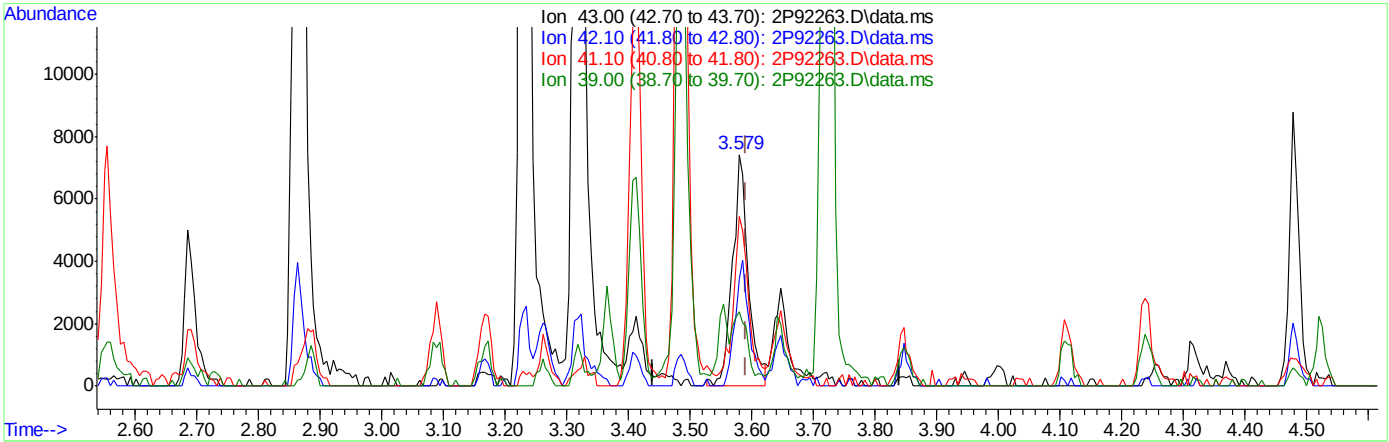
response 11164

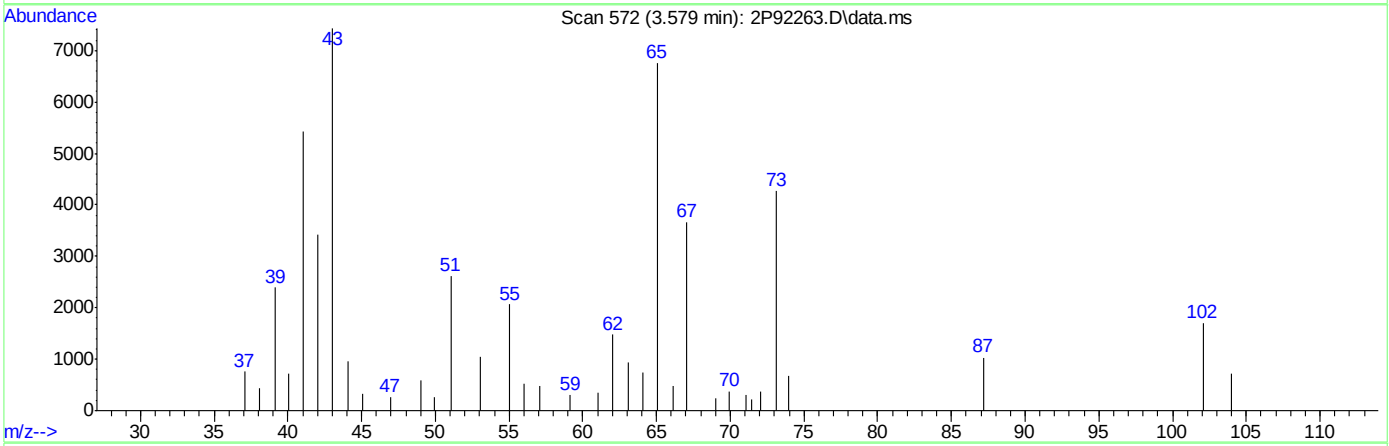
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	68.24
39.00	28.00	27.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 9.38ug/L m

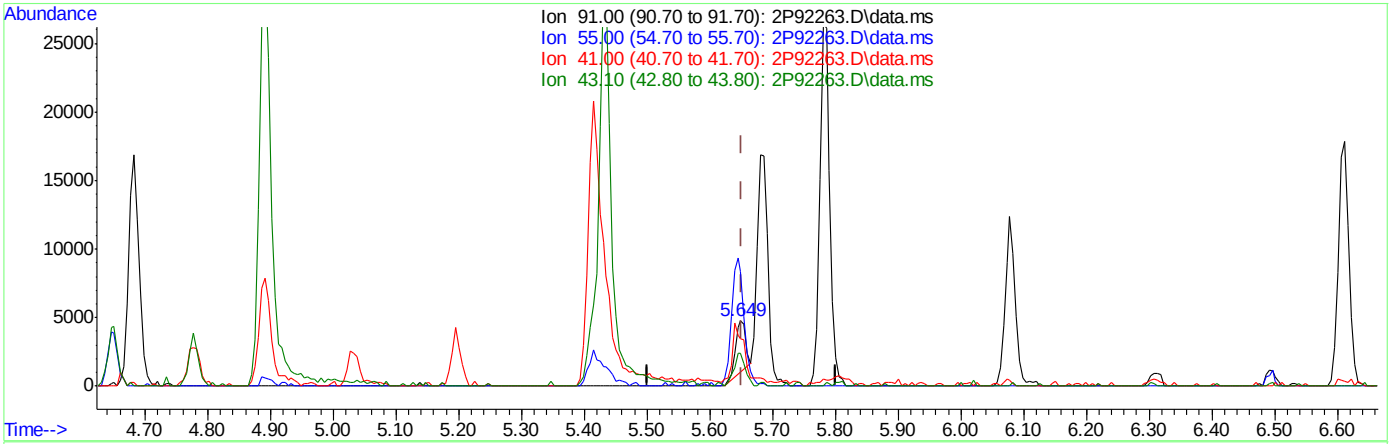
response 13077

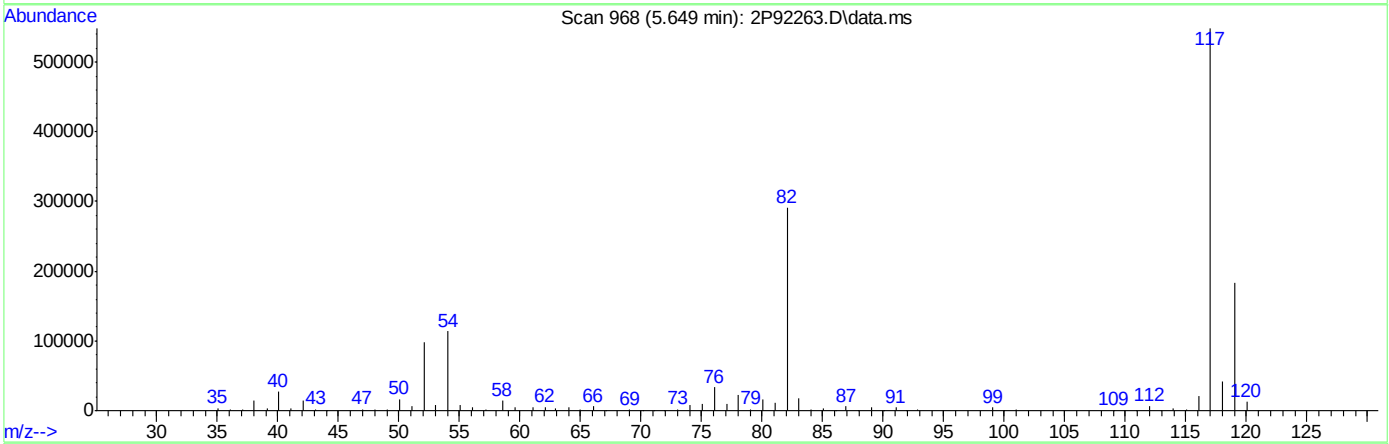
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	73.04
39.00	28.00	32.25

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 0.69ug/L

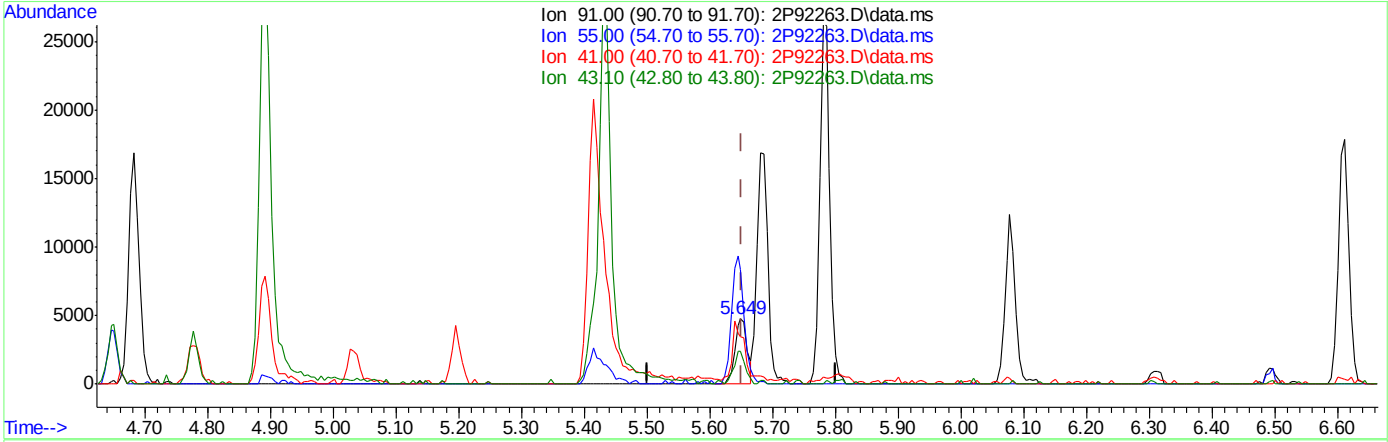
response 4594

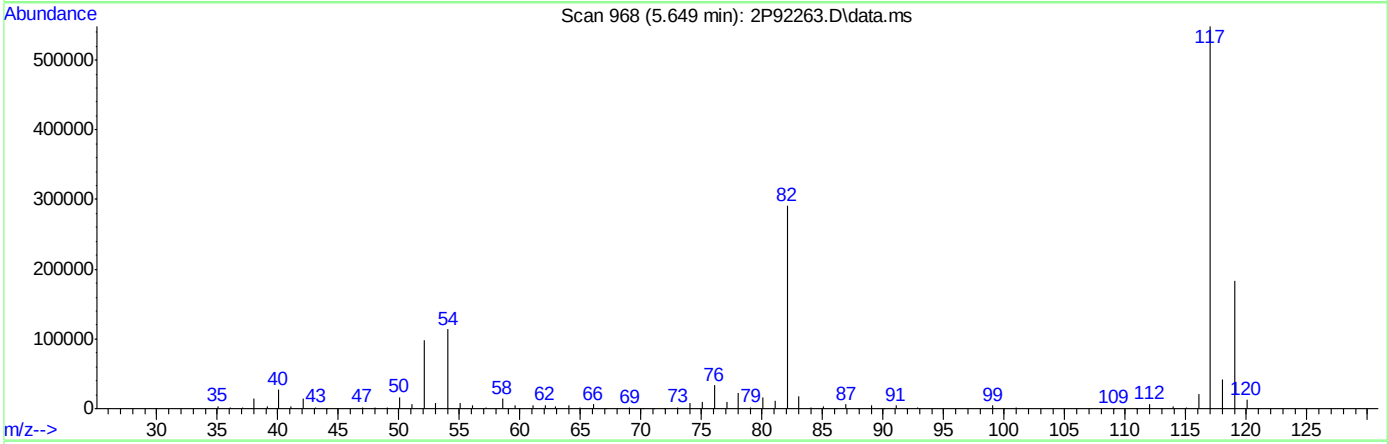
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	164.44#
41.00	83.00	62.38#
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 1.00ug/L m

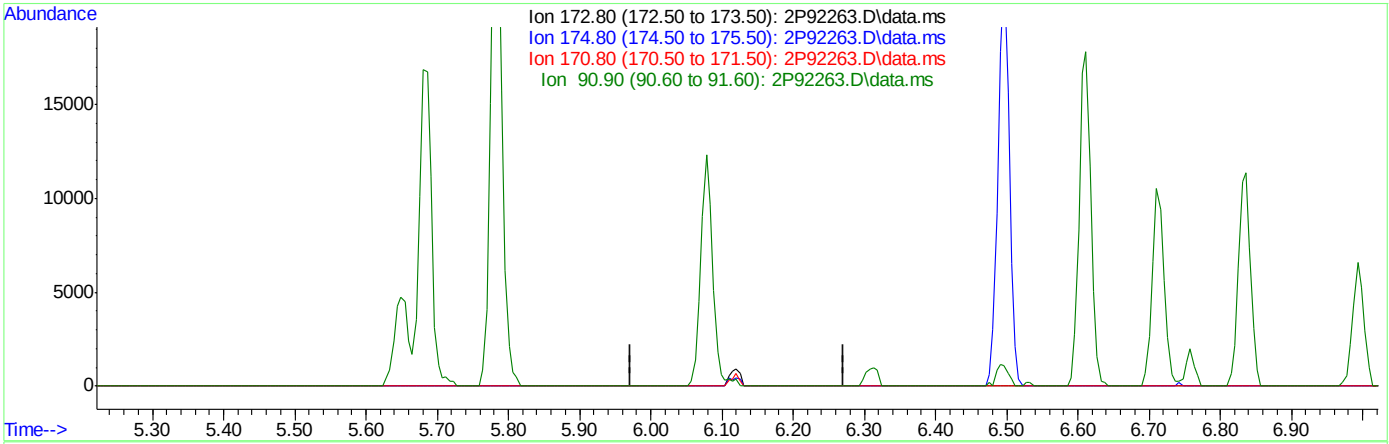
response 6715

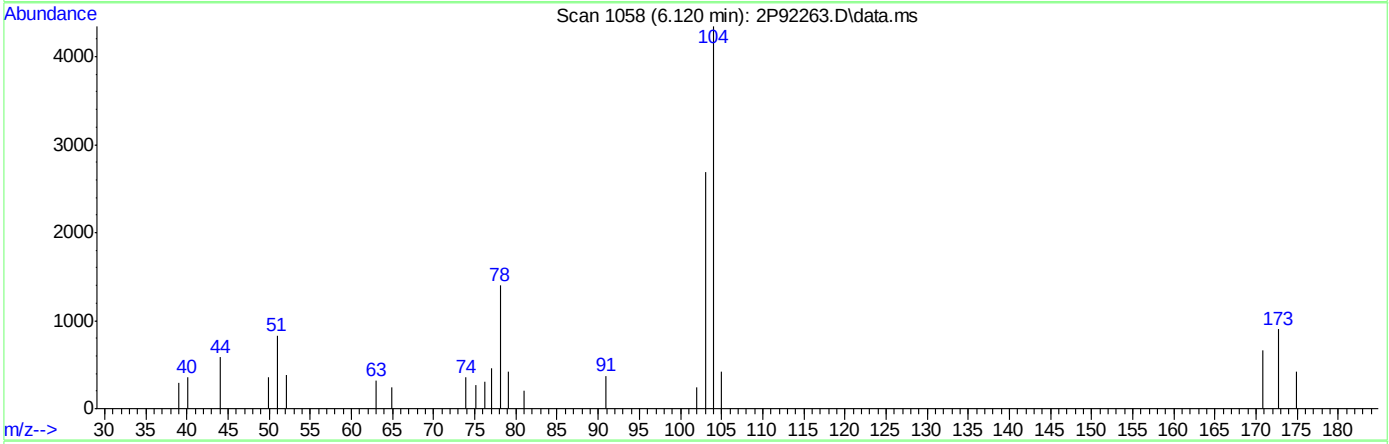
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	176.32#
41.00	83.00	73.01
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.122min (-6.122) 0.00ug/L

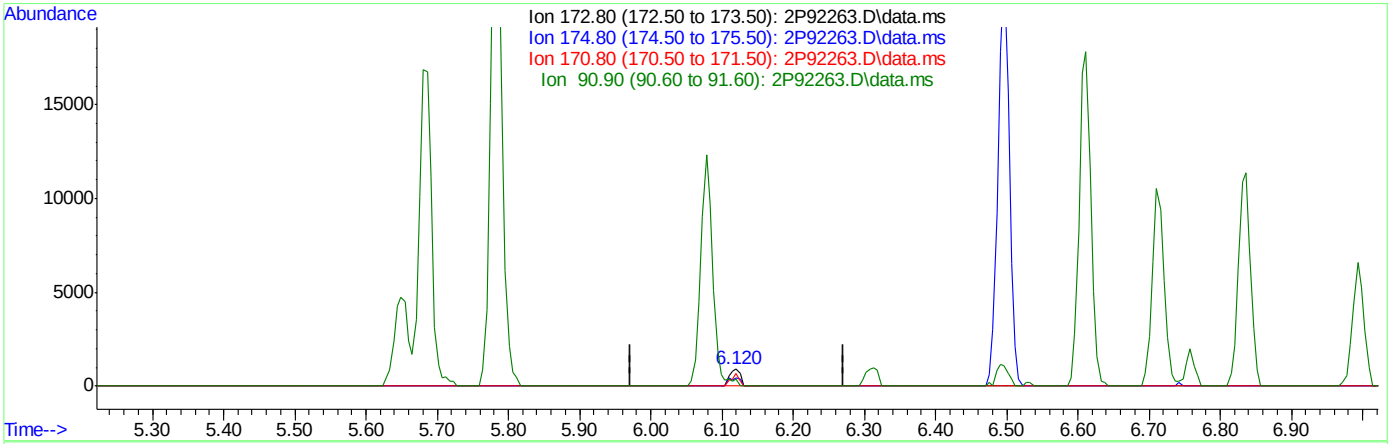
response 0

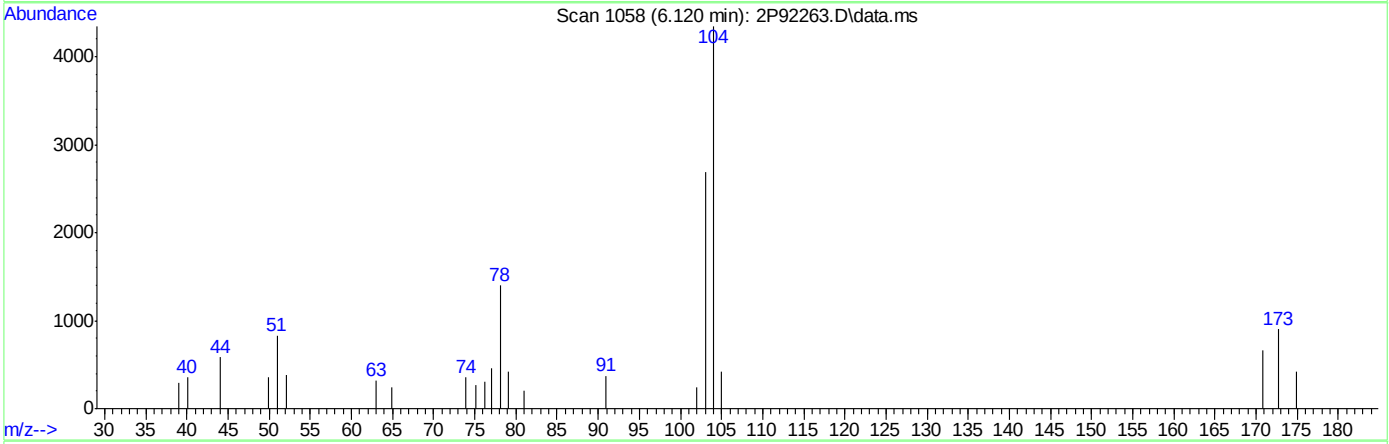
Ion	Exp%	Act%
172.80	100	0.00
174.80	46.40	0.00#
170.80	50.50	0.00#
90.90	21.40	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.120min (-0.002) 0.54ug/L m

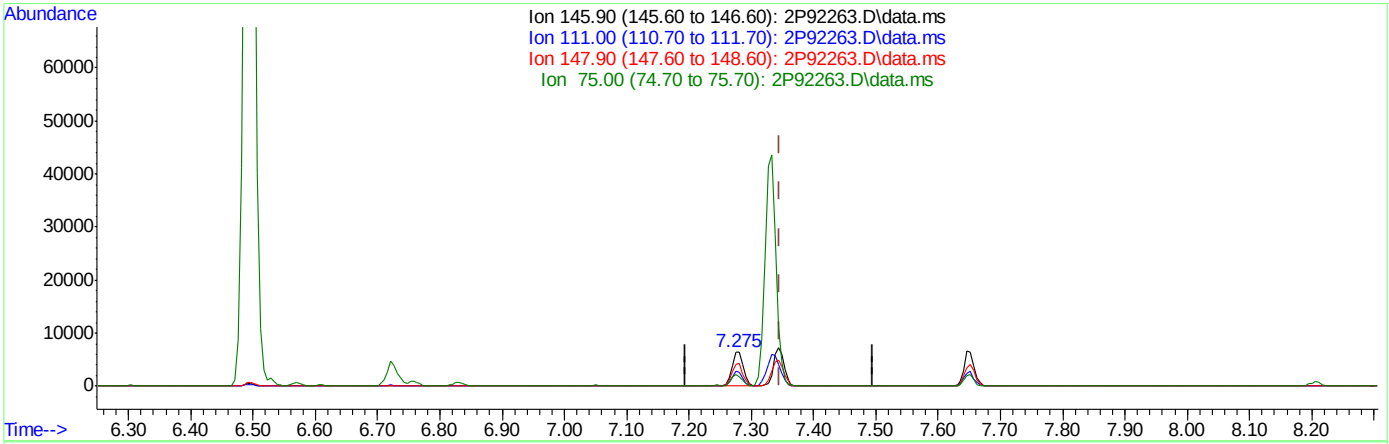
response 935

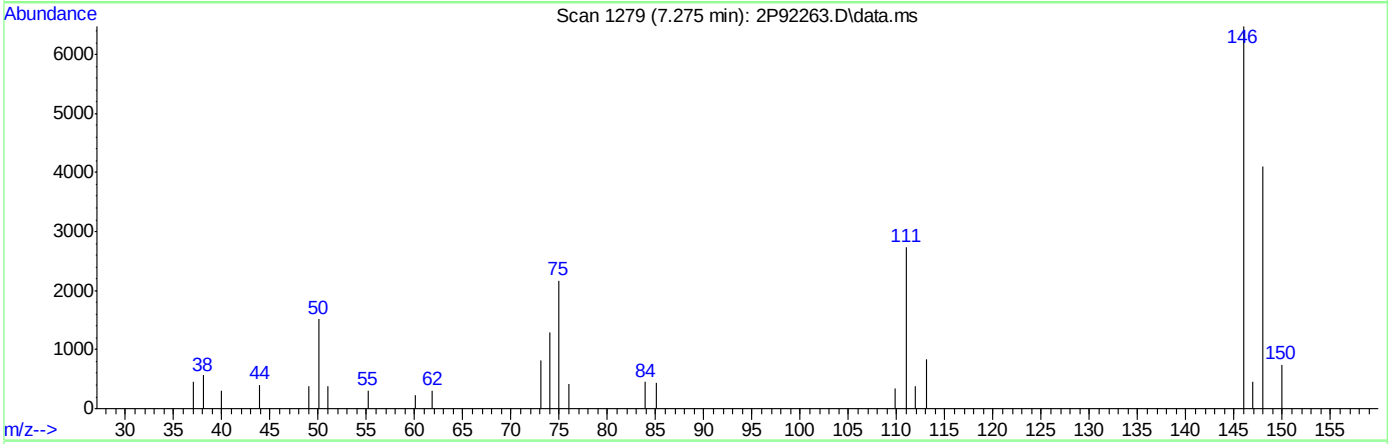
Ion	Exp%	Act%
172.80	100	100
174.80	46.40	47.28
170.80	50.50	73.03
90.90	21.40	41.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.275min (-0.071) 0.87ug/L

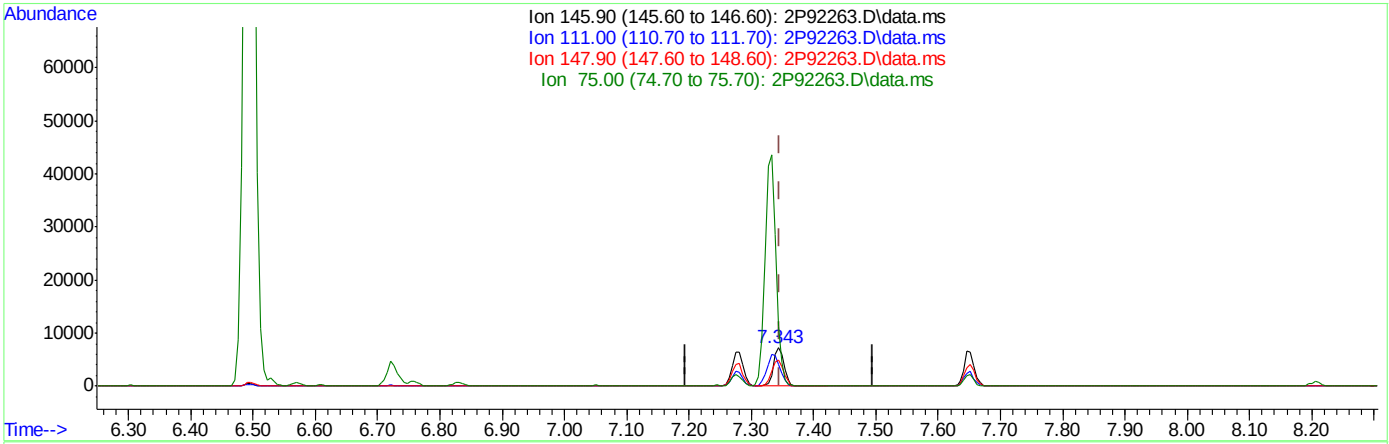
response 7813

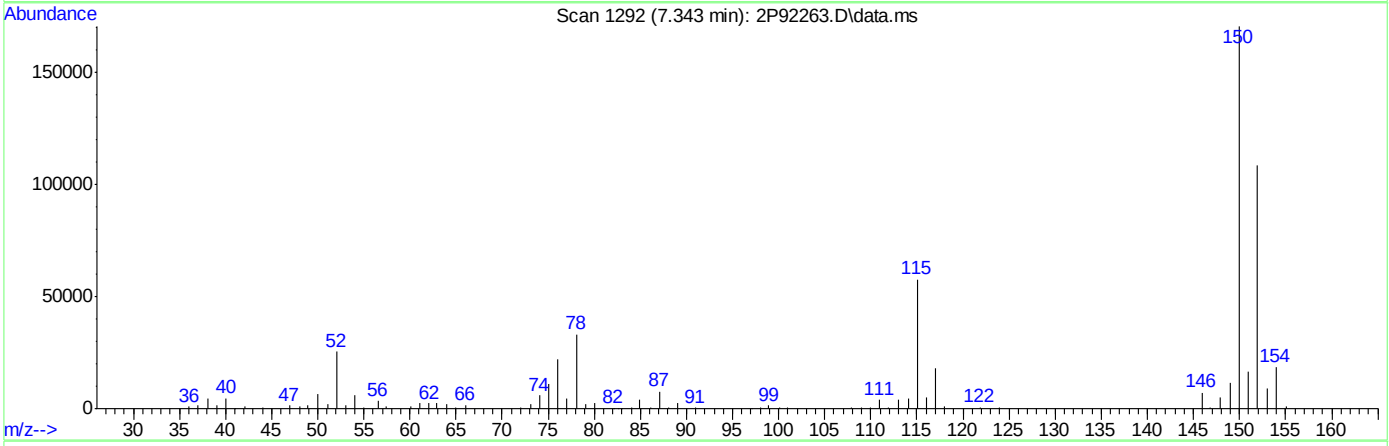
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	42.36
147.90	61.90	63.43
75.00	34.60	33.55

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (-0.003) 0.91ug/L m

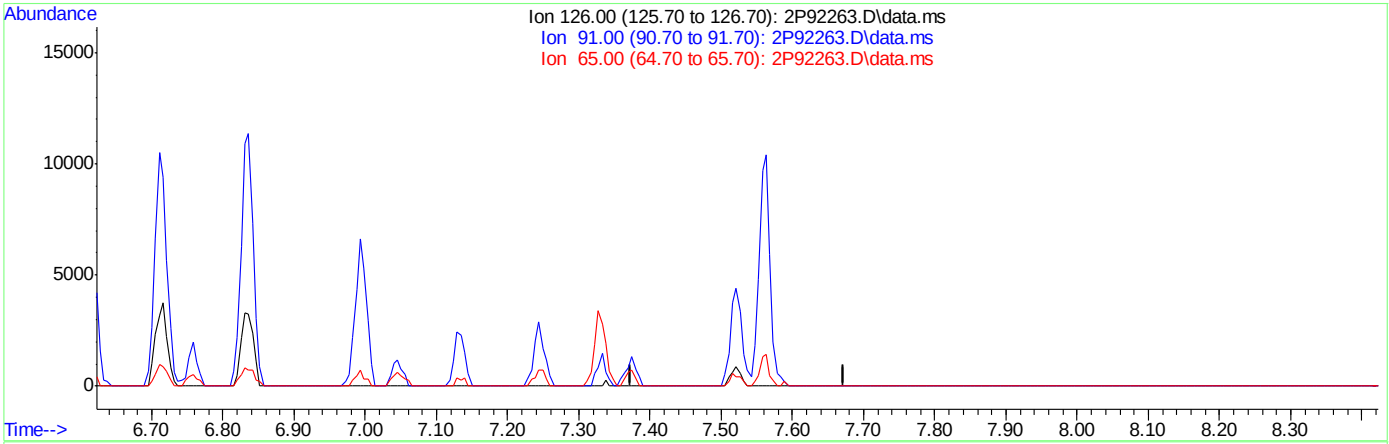
response 8240

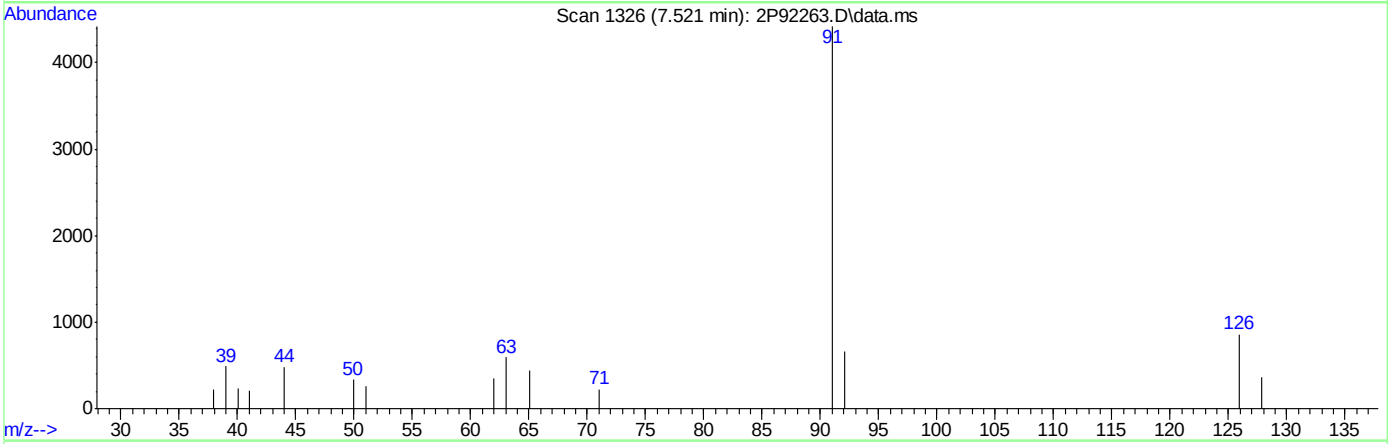
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	55.61
147.90	61.90	69.94
75.00	34.60	155.89#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.523min (-7.523) 0.00ug/L

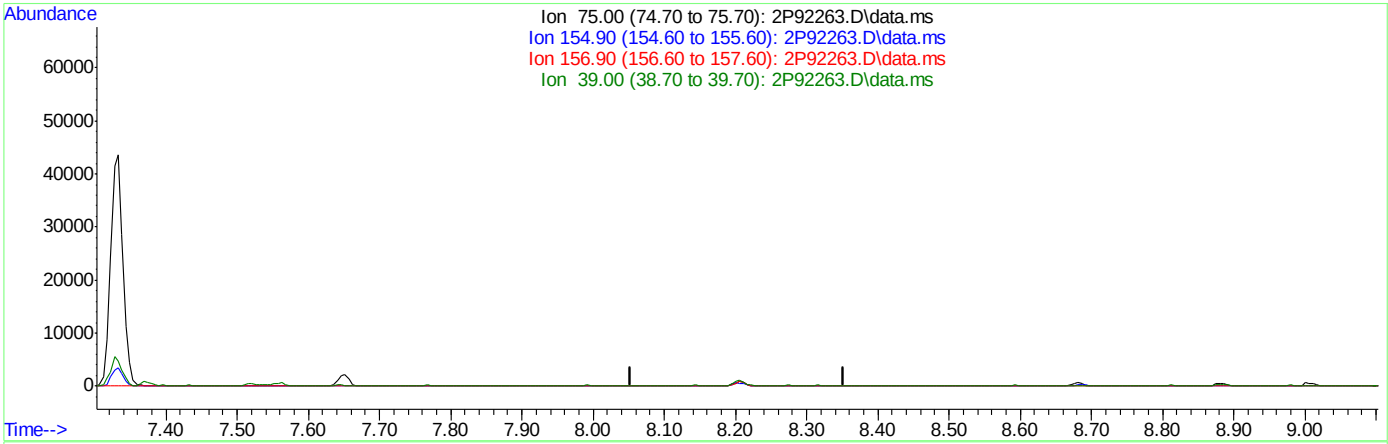
response 0

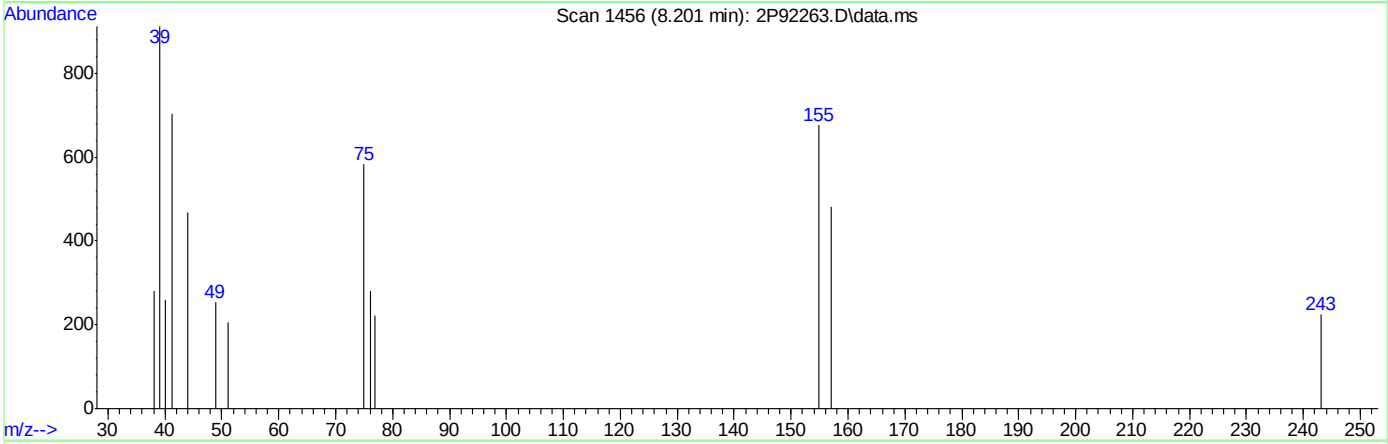
Ion	Exp%	Act%
126.00	100	0.00
91.00	524.80	0.00#
65.00	71.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.203min (-8.203) 0.00ug/L

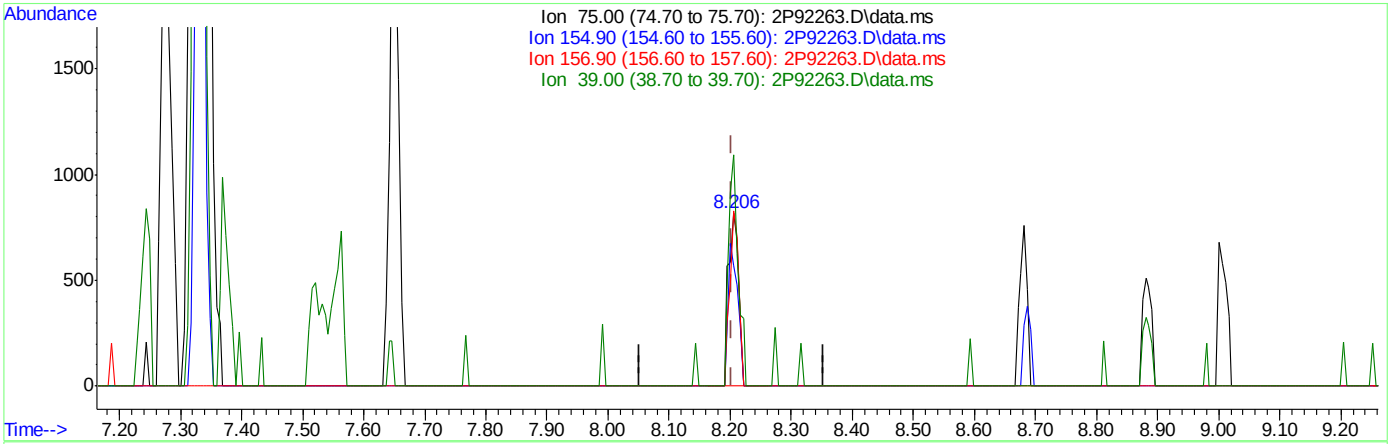
response 0

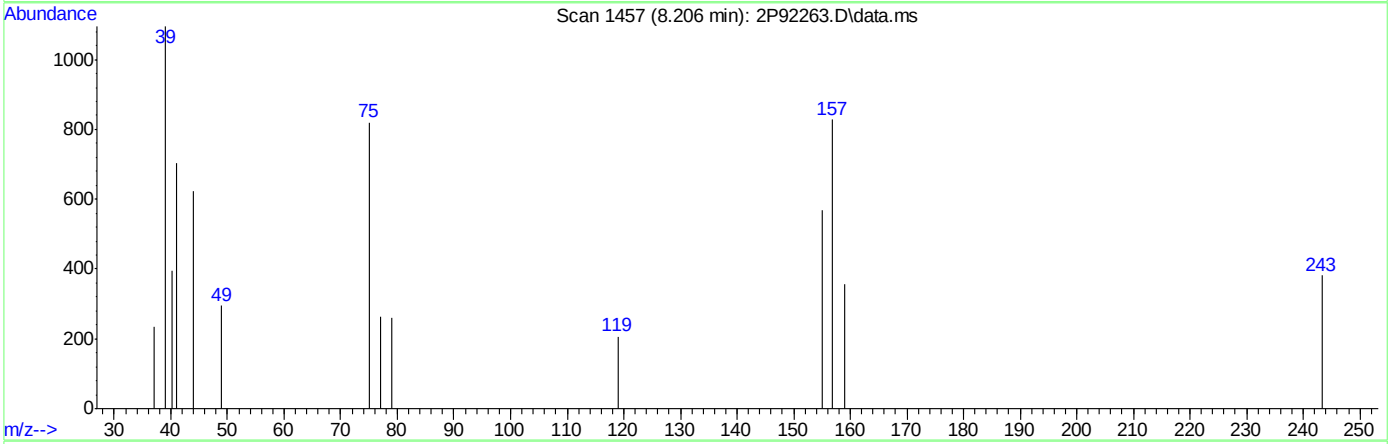
Ion	Exp%	Act%
75.00	100	0.00
154.90	74.10	0.00#
156.90	85.50	0.00#
39.00	122.20	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.206min (+0.003) 0.74ug/L m

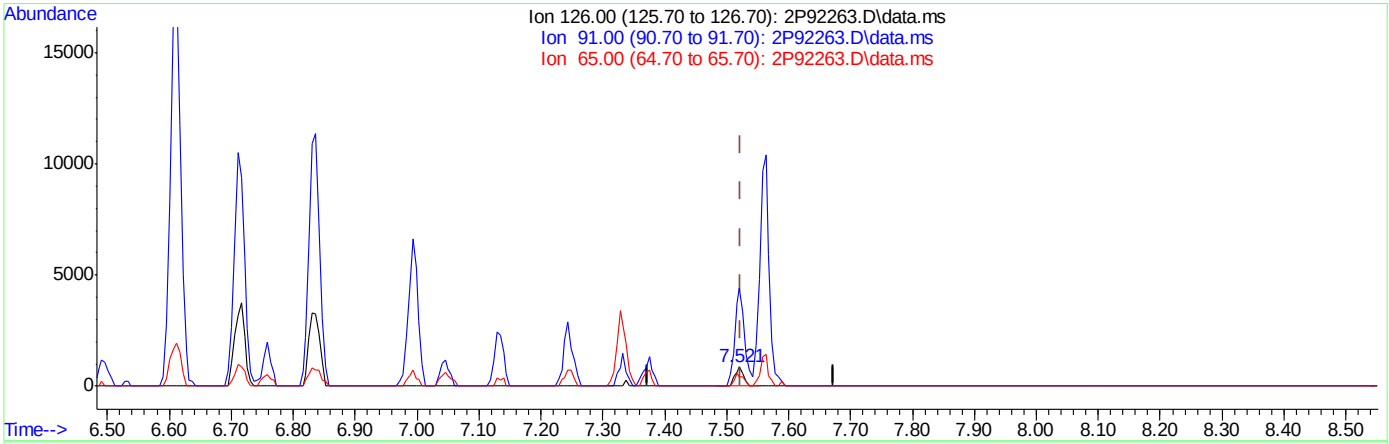
response 932

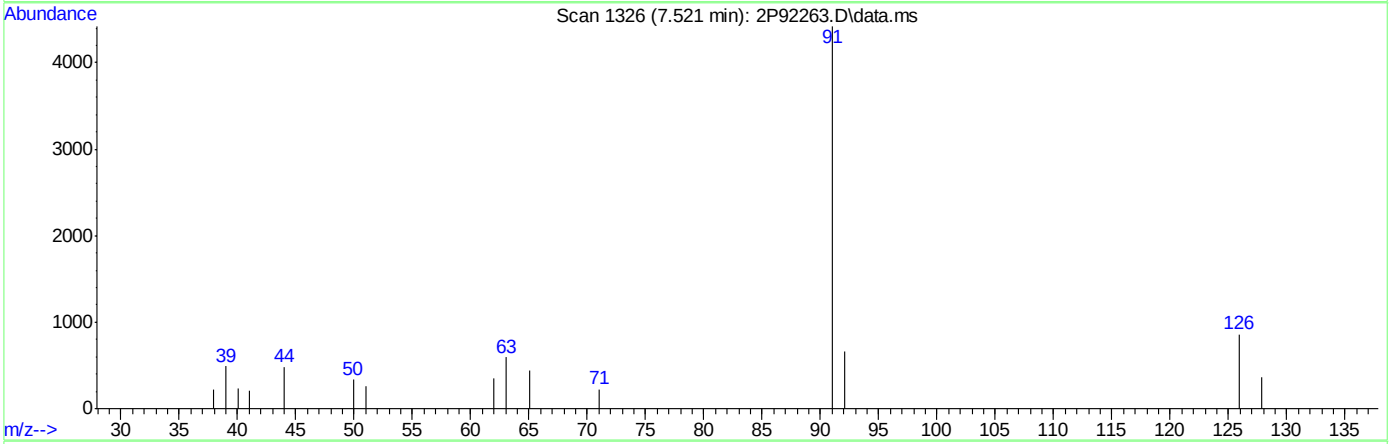
Ion	Exp%	Act%
75.00	100	100
154.90	74.10	69.60
156.90	85.50	101.10
39.00	122.20	133.70

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.521min (-0.002) 0.62ug/L m

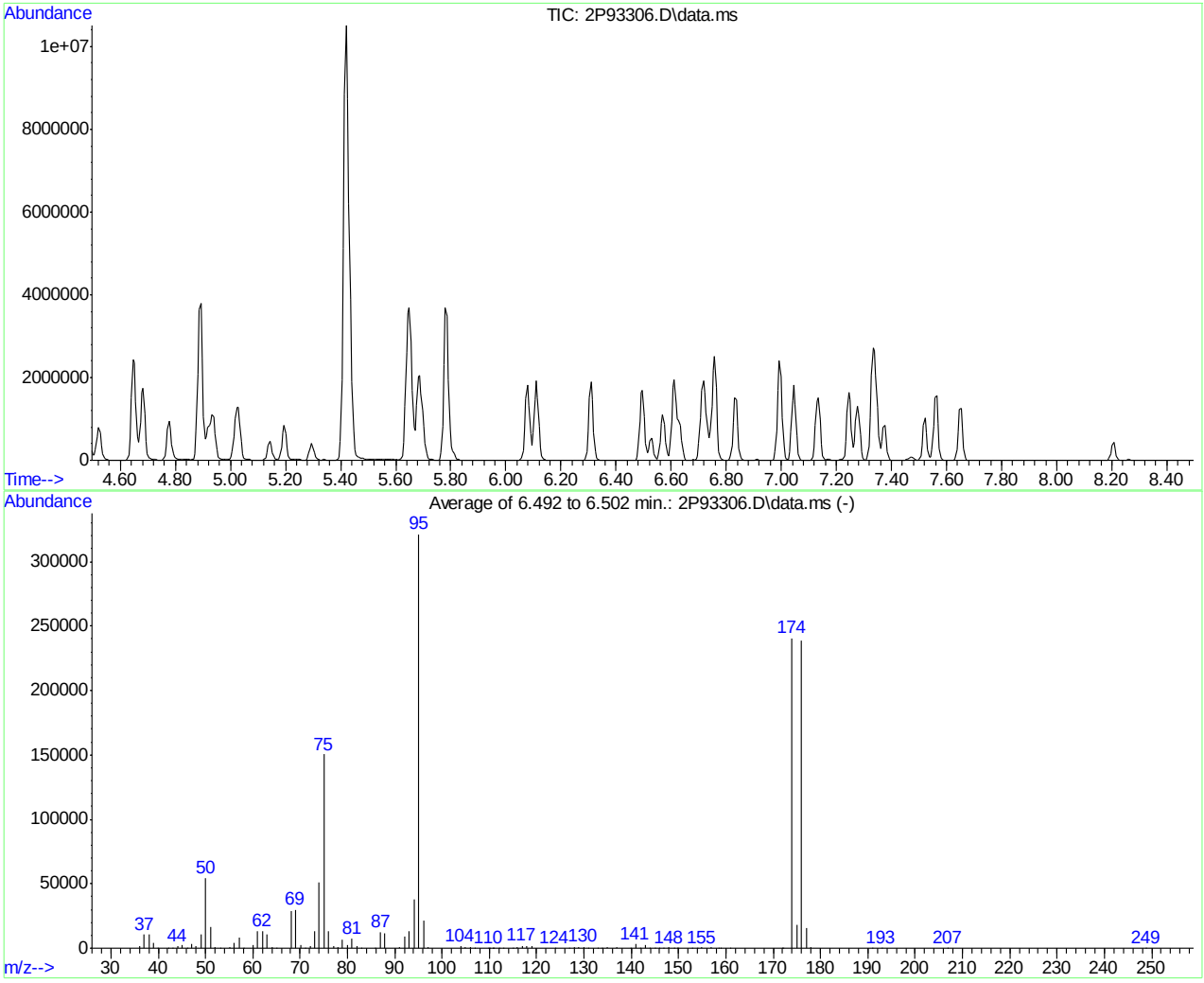
response 838

Ion	Exp%	Act%
126.00	100	100
91.00	524.80	516.36
65.00	71.60	51.29#
0.00	0.00	0.00

Methods: SW-846 8260B

```
Data File : C:\msdchem\1\DATA\2022-09-23\2P93306.D       Vial: 52
Acq On    : 23 Sep 2022  11:41 am                    Operator: courtnef
Sample    : BFB                                      Inst    : MSVOA13
Misc      : MS52362,V2P3586,,,,,                     Multiplr: 1.00
MS Integration Params: big.p

Method    : C:\msdchem\1\MET...V2P_2022-08-24.M (RTE Integrator)
Title     : SW-846 Method 5035A/8260B
```



AutoFind: Scans 1129, 1130, 1131; Background Corrected with Scan 1122

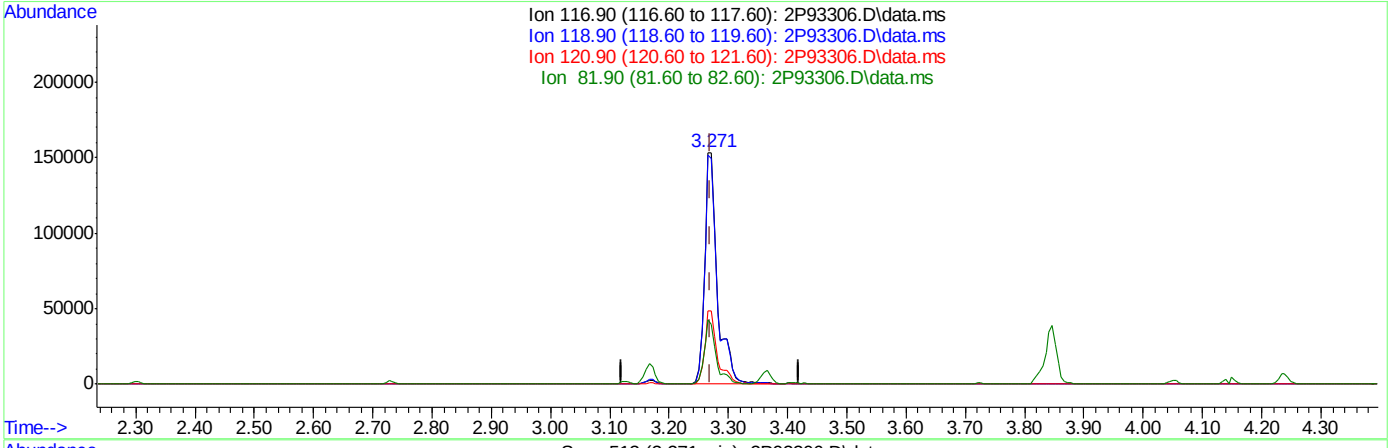
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	54330	PASS
75	95	30	60	46.8	150317	PASS
95	95	100	100	100.0	321365	PASS
96	95	5	9	6.6	21075	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.9	240618	PASS
175	174	5	9	7.7	18458	PASS
176	174	95	101	99.1	238400	PASS
177	176	5	9	6.7	15984	PASS

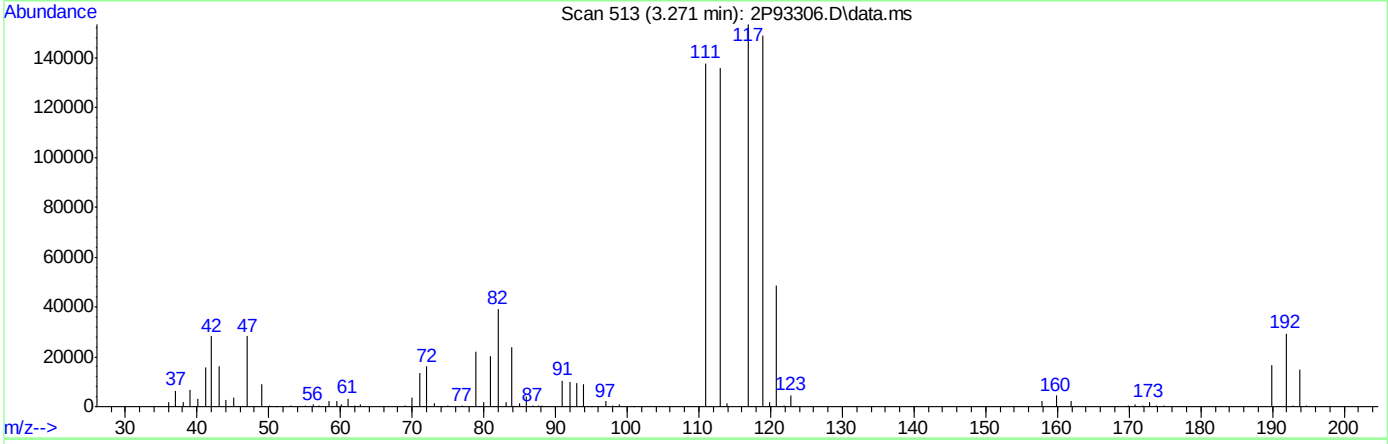
2P93306.D V2P_2022-08-24.M Fri Sep 23 11:56:55 2022

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 49.50ug/L

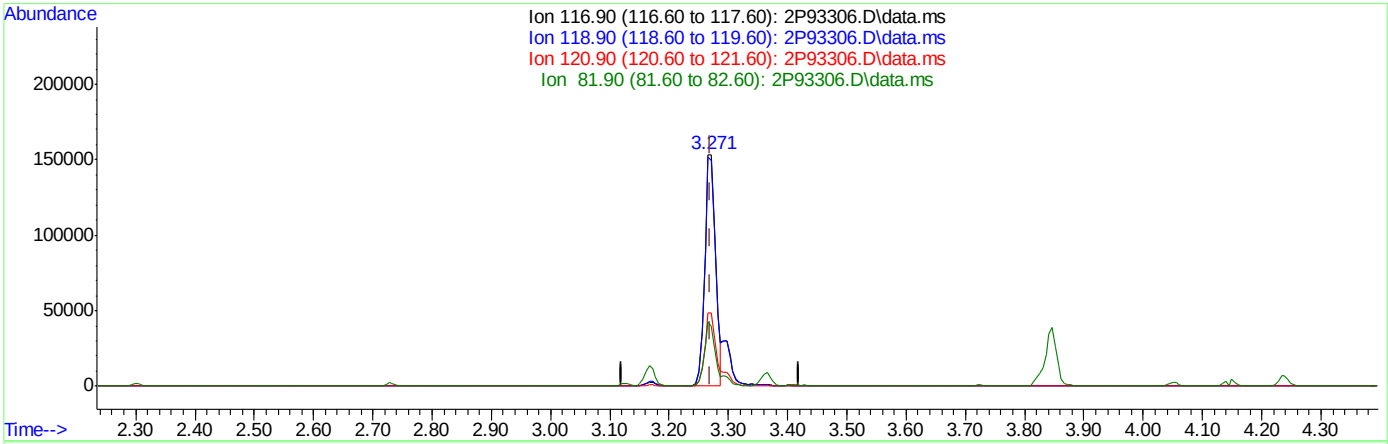
response 230963

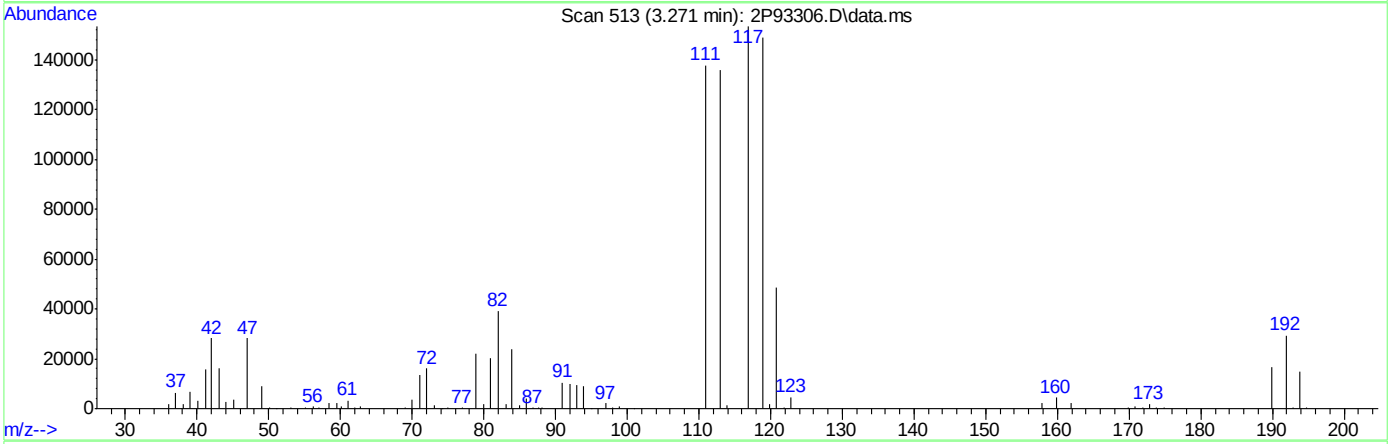
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.42

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 42.93ug/L m

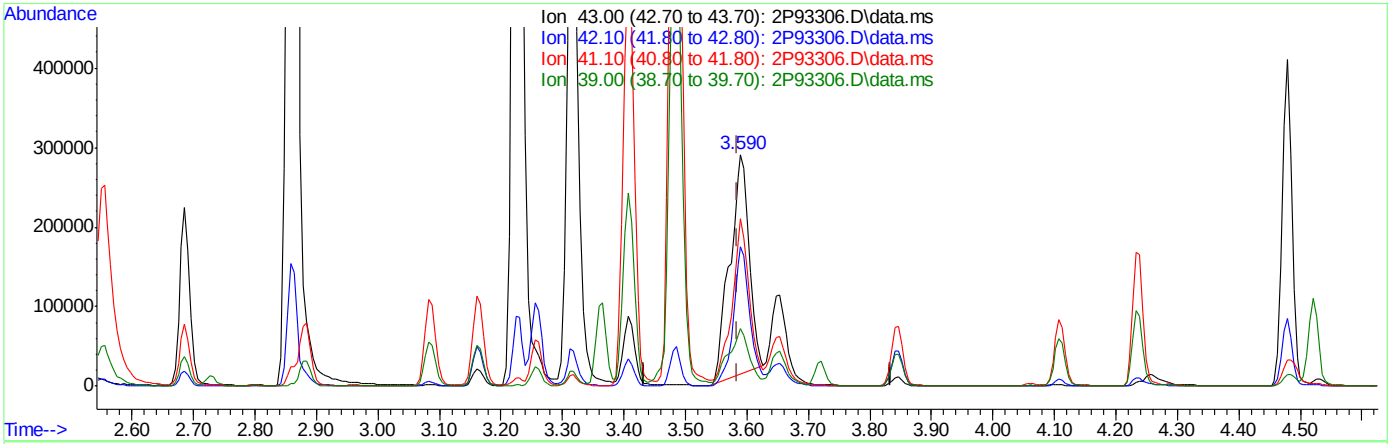
response 196250

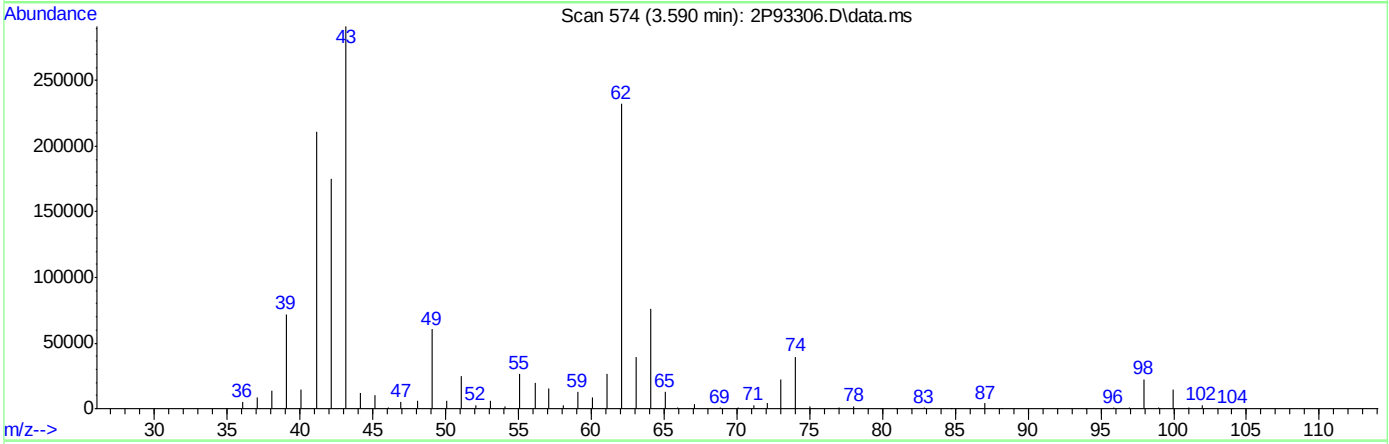
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.66

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 857.25ug/L

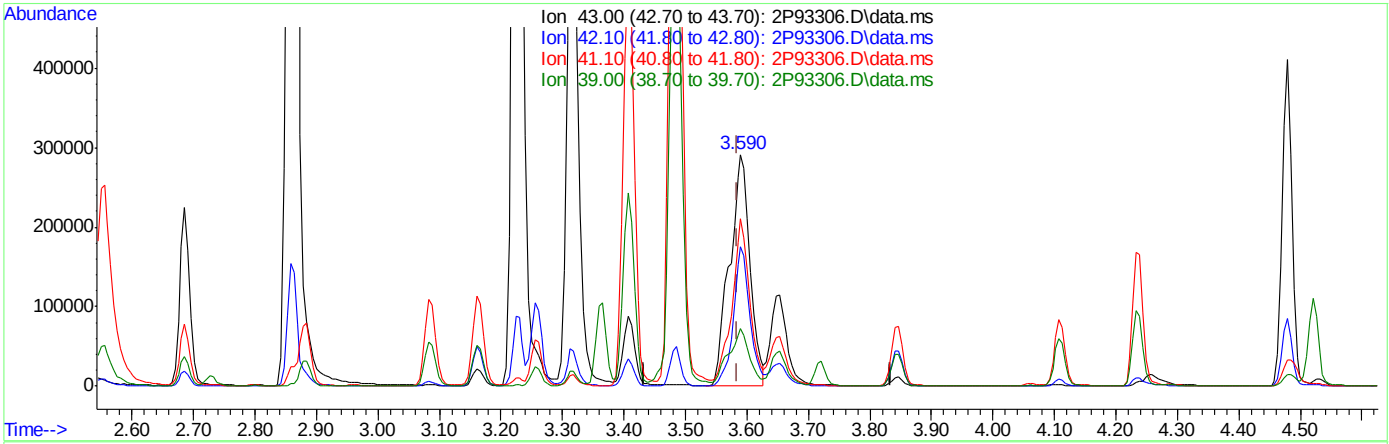
response 603049

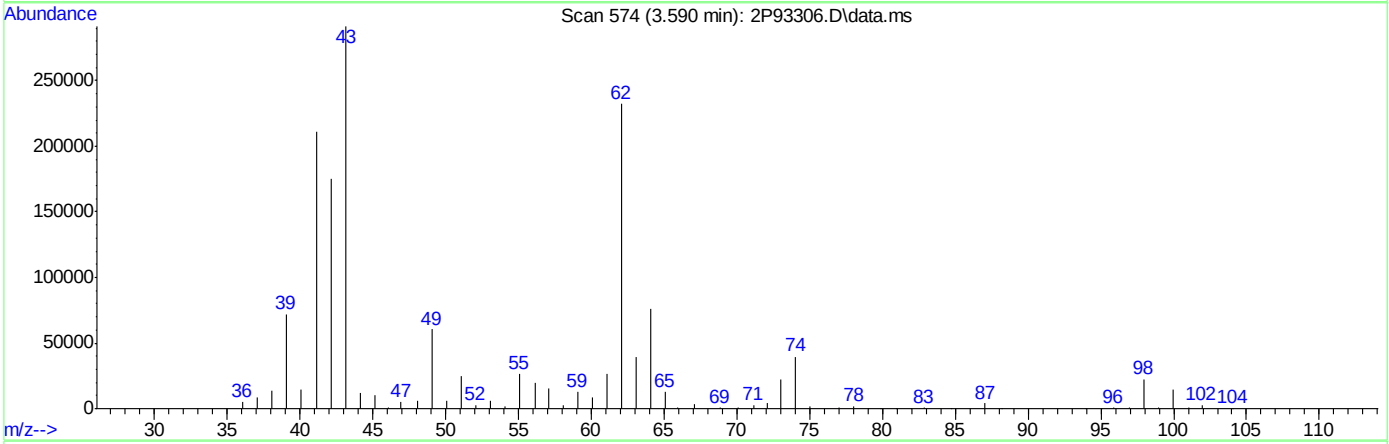
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.32
41.10	70.00	70.12
39.00	27.50	23.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 957.41ug/L m

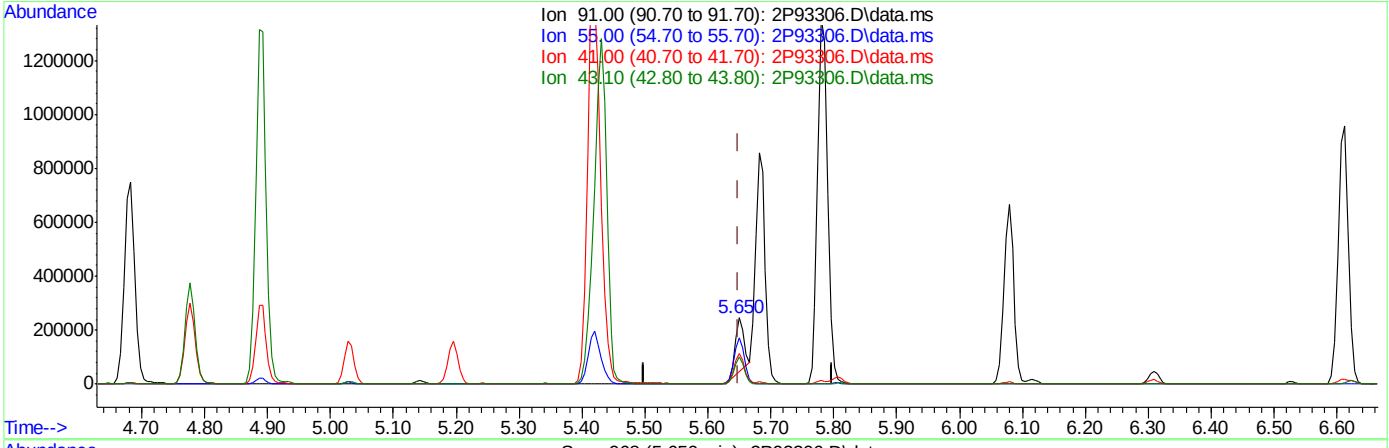
response 673510

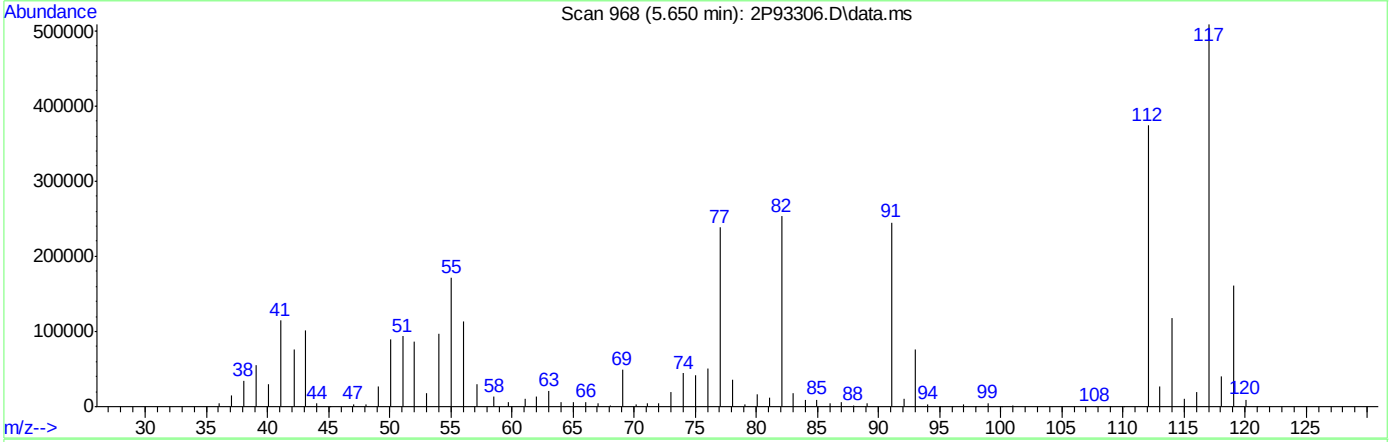
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.18
41.10	70.00	72.37
39.00	27.50	24.69

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 28.77ug/L

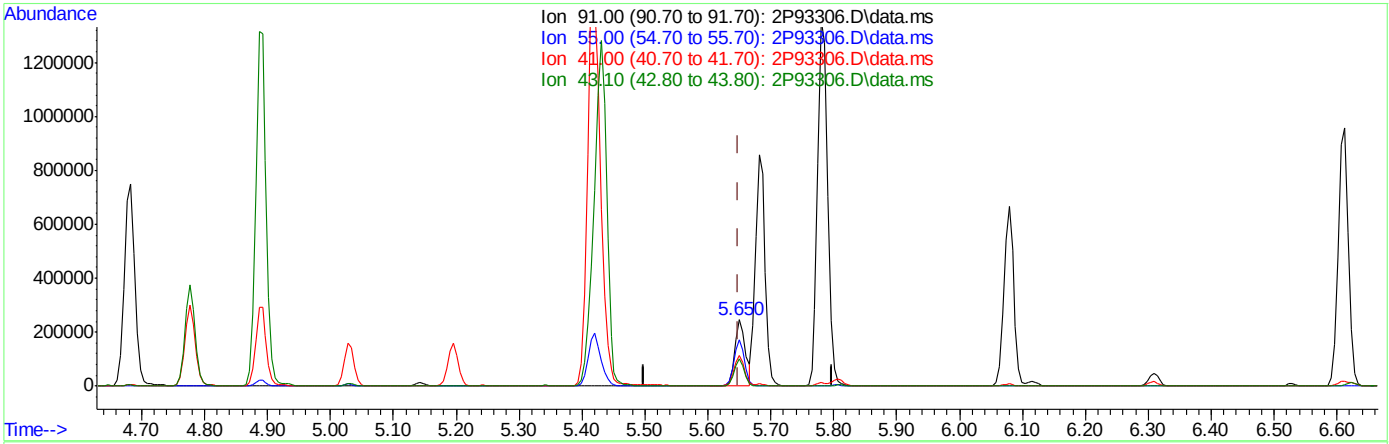
response 188381

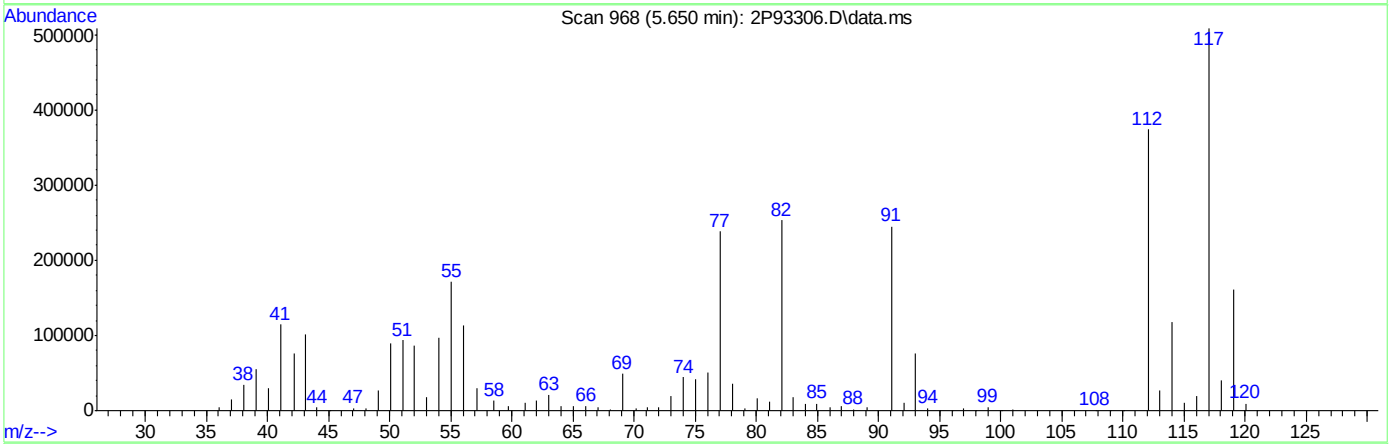
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	68.79
41.00	53.40	45.28
43.10	41.30	41.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 42.69ug/L m

response 279491

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.94
41.00	53.40	46.67
43.10	41.30	41.65

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1304217	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	892129	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	401789	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	262735	44.58	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 89.16%				
49) 1,2-Dichloroethane-d4	3.553	65	381615	41.54	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.08%				
63) Toluene-d8	4.651	98	1238365	52.07	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 104.14%				
86) 4-Bromofluorobenzene	6.496	174	311640	46.66	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.32%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	3574	0.73	ug/L		97
3) Chloromethane	1.247	50	3730	0.51	ug/L		96
4) 1,3-butadiene	1.321	39	3578	0.55	ug/L	#	75
5) Vinyl Chloride	1.305	62	4374	0.67	ug/L		95
6) Bromomethane	1.514	94	3340	1.31	ug/L		93
7) Chloroethane	1.587	64	2508	1.12	ug/L		86
8) Trichlorofluoromethane	1.687	101	4423	0.76	ug/L		98
9) Ethyl Ether	1.880	59	4098	0.67	ug/L	#	81
10) Ethanol	1.948	45	3081	12.83	ug/L		97
11) 1,2-Dichlorotrifluoroe...	1.979	67	3561	0.67	ug/L		96
12) 1,1-Dichloroethene	1.985	61	4997	0.59	ug/L		94
13) Freon 113	2.021	101	2875	0.66	ug/L	#	83
14) Carbon Disulfide	2.006	76	8522	0.84	ug/L		99
15) Iodomethane	2.068	142	1647	0.28	ug/L		90
16) Acrolein	2.157	56	6920	3.30	ug/L		96
17) Allyl chloride	2.251	41	3882	0.51	ug/L		88
18) Methylene Chloride	2.303	49	22978	1.88	ug/L		82
19) Acetone	2.319	43	23241	5.06	ug/L		85
20) Methyl acetate	2.398	43	25726	2.50	ug/L		89
21) trans-1,2-Dichloroethene	2.408	61	4958	0.57	ug/L	#	64
22) Hexane	2.471	56	2541	0.57	ug/L	#	69
23) Methyl Tert Butyl Ether	2.471	73	11584	0.72	ug/L		90
24) Tert Butyl Alcohol	2.497	59	15715	6.54	ug/L		95
25) Acetonitrile	2.554	41	10318	5.97	ug/L		93
26) Di-isopropyl ether	2.685	45	10876	0.51	ug/L		83
27) Chloroprene	2.732	53	20115	0.60	ug/L		89
28) 1,1-Dichloroethane	2.732	63	6975	0.65	ug/L		96
29) Acrylonitrile	2.732	52	16323	3.74	ug/L	#	77
30) ETBE	2.884	59	12215	0.59	ug/L		89
31) Vinyl acetate	2.863	43	49819	3.22	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	4205	0.81	ug/L	#	81
33) 2,2-Dichloropropane	3.088	77	4472	0.66	ug/L		92
34) Bromochloromethane	3.124	128	2046	0.88	ug/L	#	57
35) Cyclohexane	3.166	56	5756	0.52	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	6236	0.66	ug/L		86
37) Ethyl acetate	3.229	43	39999	3.20	ug/L		91
38) Tetrahydrofuran	3.260	42	3036	0.58	ug/L	#	45
40) Carbon Tetrachloride	3.271	117	3481m	0.65	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	5280	0.70	ug/L		91
42) 2-Butanone	3.318	43	39494	5.20	ug/L		81
43) 1,1-Dichloropropene	3.365	75	4992	0.70	ug/L		91
44) tert-Butyl formate	3.412	59	11587	3.27	ug/L	#	83
45) Propionitrile	3.459	54	14196	6.21	ug/L		98
46) Methacrylonitrile	3.485	41	35516	4.94	ug/L		96
47) Benzene	3.495	78	16815	0.77	ug/L	#	64
48) TAME	3.569	73	10665	0.69	ug/L		95
50) Isobutyl alcohol	3.579	43	13077m	9.38	ug/L		
51) 1,2-Dichloroethane	3.590	62	6285	0.67	ug/L		86
52) Tert Amyl Alcohol	3.642	59	9886	5.46	ug/L	#	70
53) Trichloroethene	3.830	95	4974	0.93	ug/L		90
54) Methylcyclohexane	3.846	83	5002	0.66	ug/L	#	81
55) Dibromomethane	4.050	93	2414	0.80	ug/L		76
56) 1,2-Dichloropropane	4.112	63	3763	0.62	ug/L		92
57) Bromodichloromethane	4.149	83	3228	0.65	ug/L		88
58) Methyl methacrylate	4.238	41	4252	0.51	ug/L	#	84
59) 1,4-Dioxane	4.259	88	2736	16.46	ug/L		80
60) 2-Chloroethyl vinyl ether	4.478	63	15384	3.18	ug/L		80
61) cis-1,3-Dichloropropene	4.520	75	4141	0.59	ug/L		88
64) Toluene	4.682	91	19190	0.92	ug/L		91
65) 2-Nitropropane	4.776	41	4134	1.83	ug/L	#	79
66) 4-Methyl-2-pentanone	4.891	43	42161	3.76	ug/L		94
67) trans-1,3-Dichloropropene	4.918	75	3792	0.65	ug/L		84
68) Tetrachloroethene	4.938	166	4054	0.80	ug/L		90
69) Ethyl methacrylate	5.032	69	4575	0.62	ug/L	#	80
70) 1,1,2-Trichloroethane	5.022	83	3028	0.82	ug/L		86
71) Dibromochloromethane	5.142	129	2030	0.64	ug/L		86
72) 1,3-Dichloropropane	5.200	76	7245	0.87	ug/L	#	74
73) 1,2-Dibromoethane	5.294	107	3358	0.76	ug/L		90
74) 3,3-dimethyl-1-butanol	5.414	57	56387	23.02	ug/L		94
75) 2-hexanone	5.430	43	46159	3.39	ug/L		79
76) 1-Chlorohexane	5.649	91	6715m	1.00	ug/L		
77) Ethylbenzene	5.681	91	20142	0.88	ug/L		96
78) Chlorobenzene	5.655	112	11307	0.92	ug/L		96
79) 1,1,1,2-Tetrachloroethane	5.696	131	2585	0.73	ug/L		90
80) m,p-Xylene	5.780	91	30713	1.70	ug/L		93
81) o-Xylene	6.078	91	14421	0.81	ug/L		96
82) Styrene	6.115	104	10442	0.78	ug/L		85
83) Bromoform	6.120	173	935m	0.54	ug/L		
84) Isopropylbenzene	6.308	105	16684	0.82	ug/L		94
87) cis-1,4-Dichloro-2-butene	6.528	53	1764	0.69	ug/L	#	64
88) n-Propylbenzene	6.611	91	20338	0.90	ug/L		99
89) Bromobenzene	6.575	156	4112	0.88	ug/L	#	81
90) 1,1,2,2-Tetrachloroethane	6.627	83	5436	0.88	ug/L		97
91) 1,3,5-Trimethylbenzene	6.758	105	13433	0.85	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

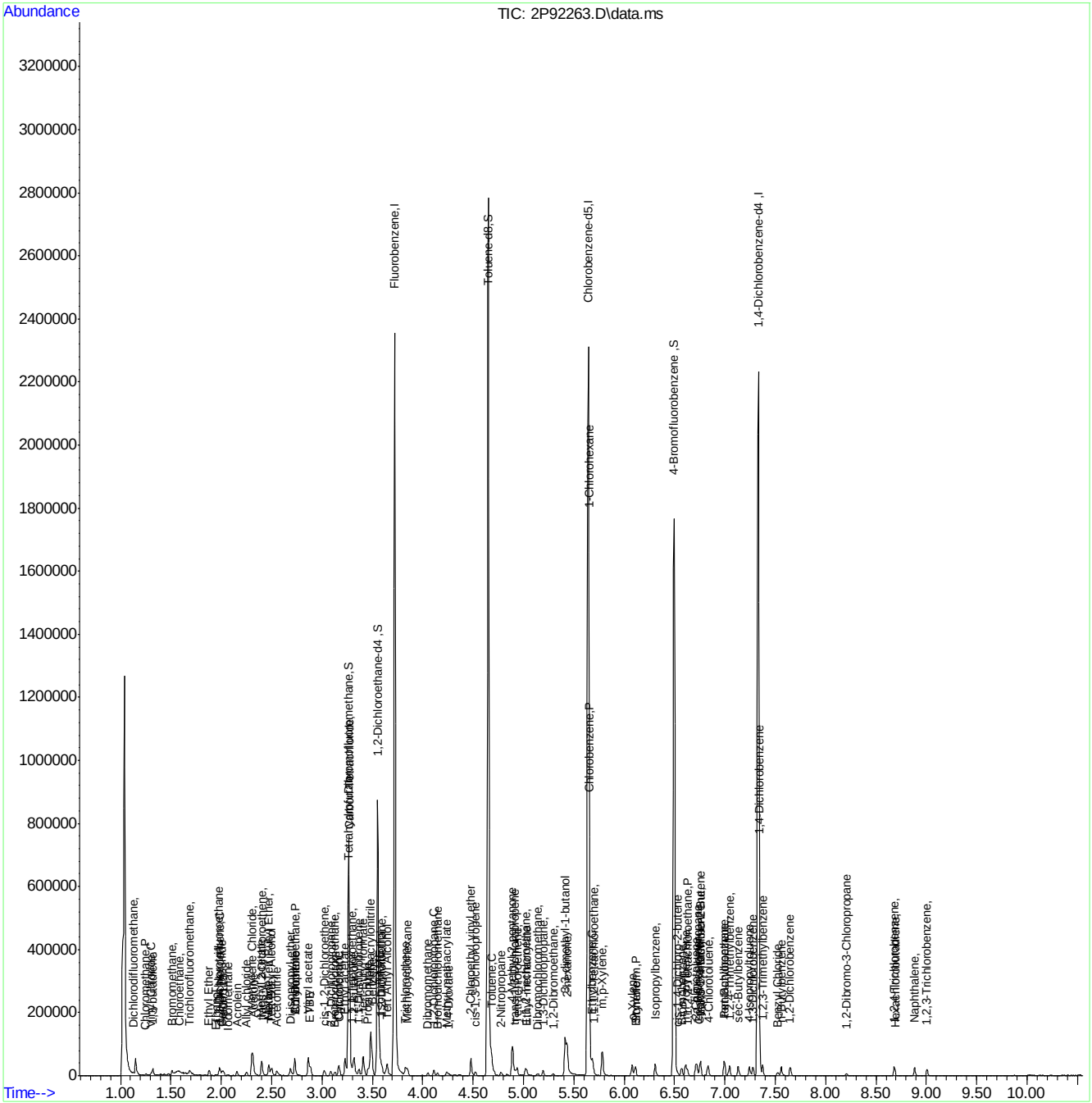
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	12229	0.89	ug/L		99
93)	trans-1,4-Dichloro-2-B...	6.758	53	2321	0.70	ug/L	#	77
94)	1,2,3-Trichloropropane	6.726	110	2170	0.95	ug/L		79
95)	Cyclohexanone	6.747	55	2532	4.30	ug/L		89
96)	4-Chlorotoluene	6.836	91	13399	0.94	ug/L		95
97)	tert-Butylbenzene	6.993	91	7248	0.83	ug/L		96
99)	1,2,4-Trimethylbenzene	7.045	105	13729	0.90	ug/L		96
100)	Pentachloroethane	6.998	167	1229	0.69	ug/L	#	23
101)	sec-Butylbenzene	7.134	105	14679	0.87	ug/L		97
102)	4-Isopropyltoluene	7.244	119	11513	0.80	ug/L		97
103)	1,3-Dichlorobenzene	7.275	146	7813	0.93	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	13562	0.88	ug/L		96
105)	1,4-Dichlorobenzene	7.343	146	8240m	0.91	ug/L		
106)	n-Butylbenzene	7.563	92	5703	0.79	ug/L		92
107)	Benzyl Chloride	7.521	126	838m	0.62	ug/L		
108)	1,2-Dichlorobenzene	7.646	146	7308	0.89	ug/L		90
109)	1,2-Dibromo-3-Chloropr...	8.206	75	932m	0.74	ug/L		
110)	Hexachlorobutadiene	8.692	225	1221	0.66	ug/L		89
111)	1,2,4-Trichlorobenzene	8.682	180	3782	0.83	ug/L		94
112)	Naphthalene	8.886	128	13112	0.84	ug/L		98
113)	1,2,3-Trichlorobenzene	9.006	180	3832	0.89	ug/L		84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

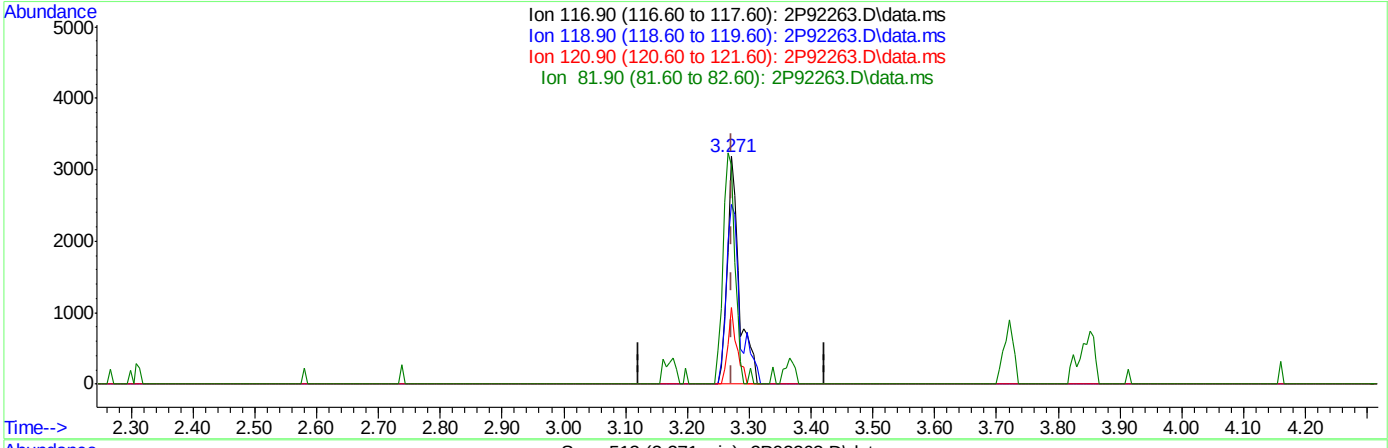
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92263.D **Analyst approved:** 08/24/22 10:09 Courtney Failla
Injection Time: 08/24/22 09:50 **Supervisor approved:** 08/25/22 11:34 Karen Watson

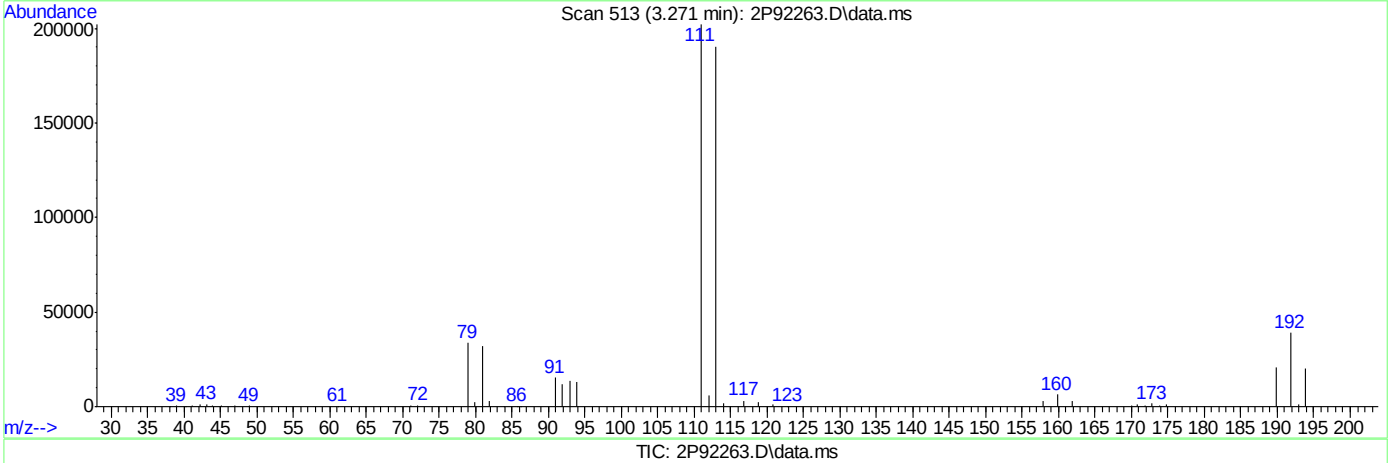
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Bromoform	75-25-2		6.12	Missed peak
1,4-Dichlorobenzene	106-46-7		7.34	Missed peak
Benzyl Chloride	100-44-7		7.52	Missed peak
1,2-Dibromo-3-chloropropane	96-12-8		8.21	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.79ug/L

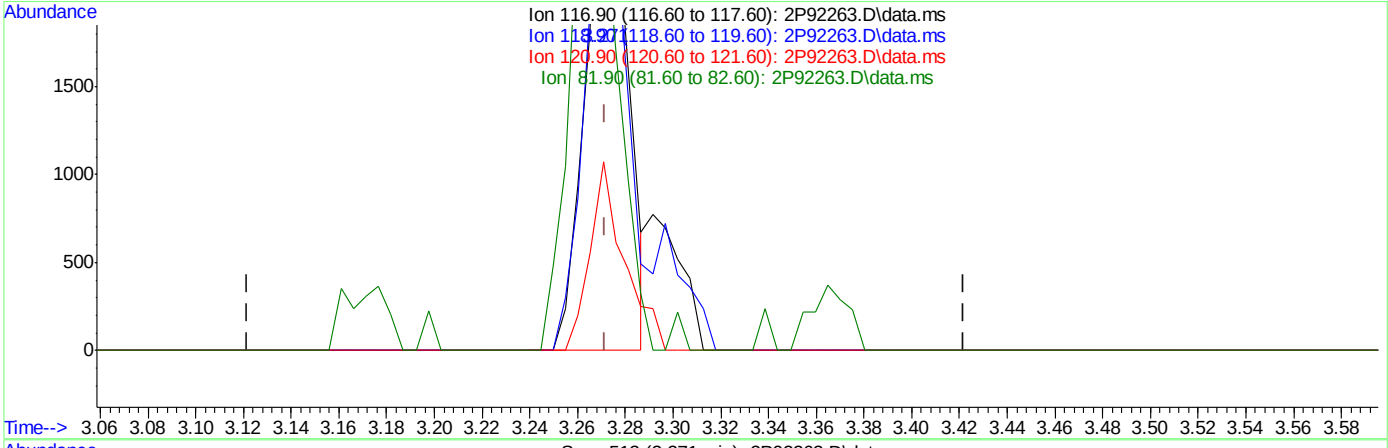
response 4233

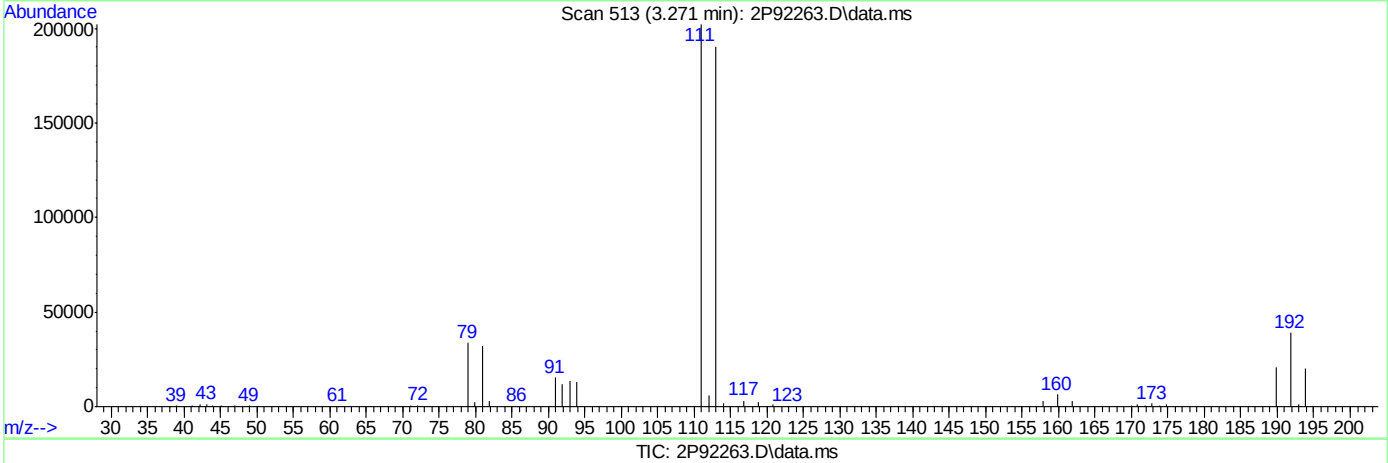
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.001) 0.65ug/L m

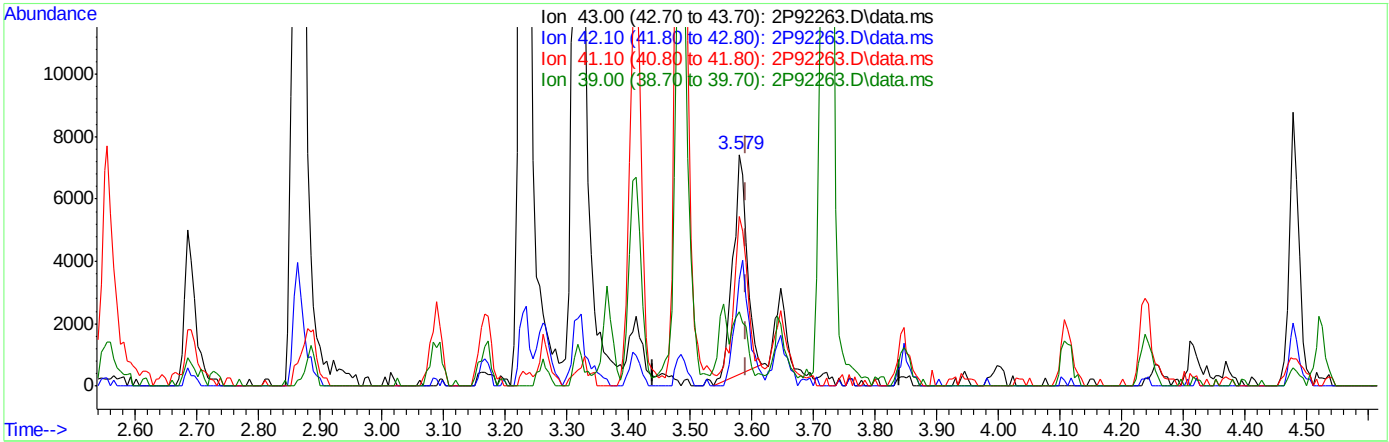
response 3481

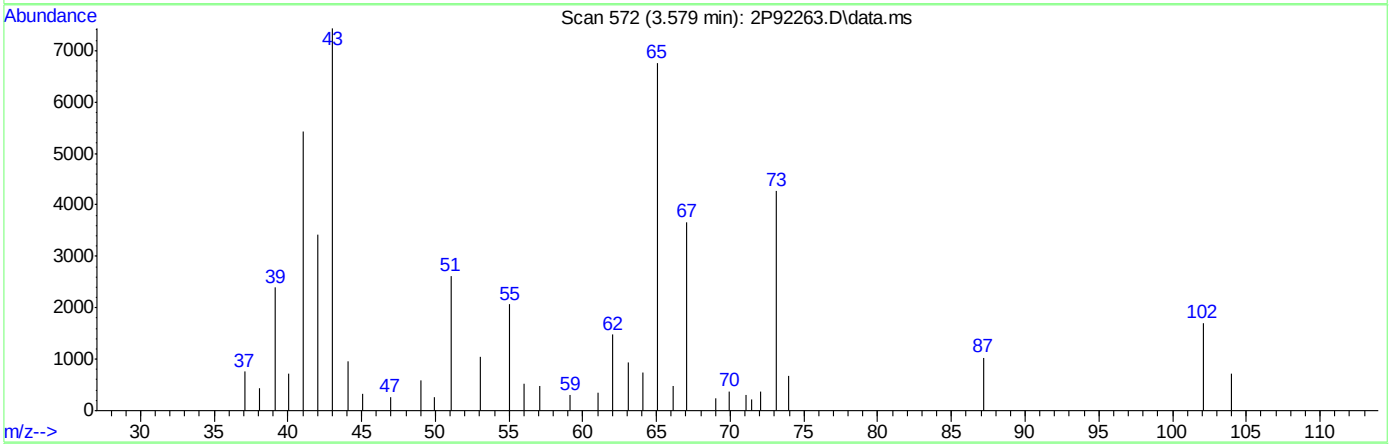
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	79.20
120.90	30.80	33.62
81.90	30.00	96.42#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 8.01ug/L

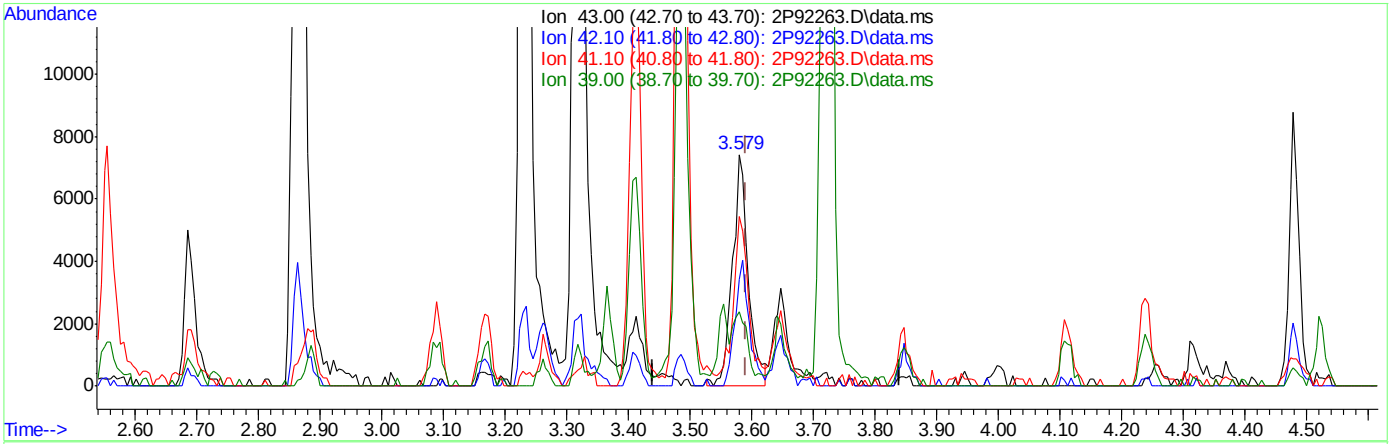
response 11164

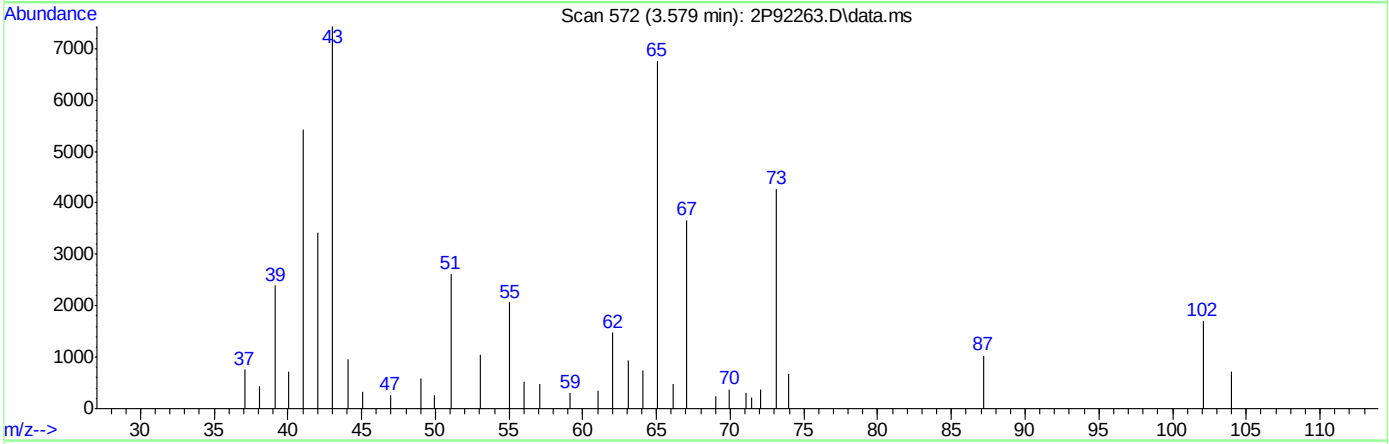
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	68.24
39.00	28.00	27.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(50) Isobutyl alcohol

3.579min (-0.012) 9.38ug/L m

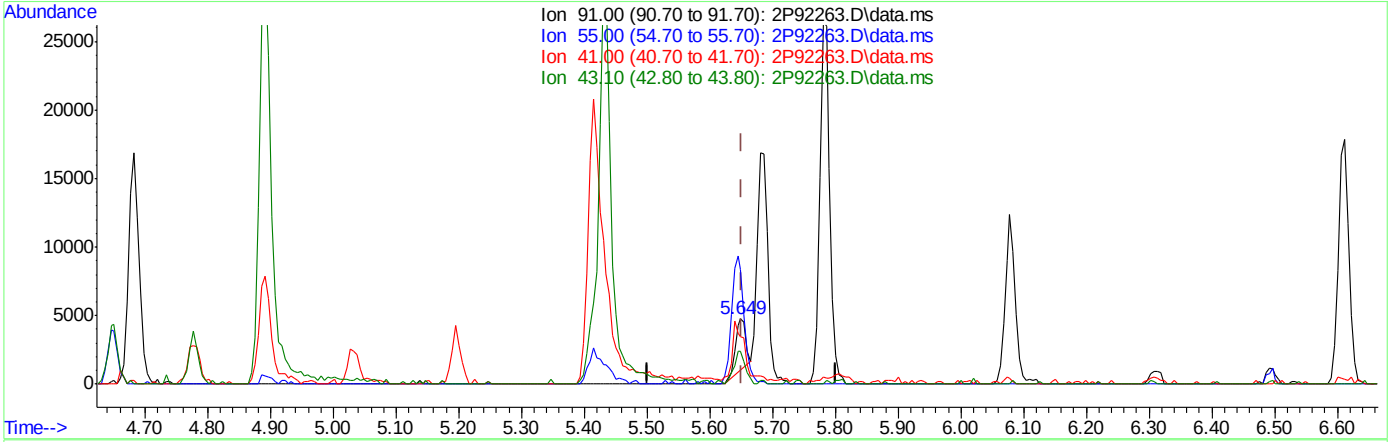
response 13077

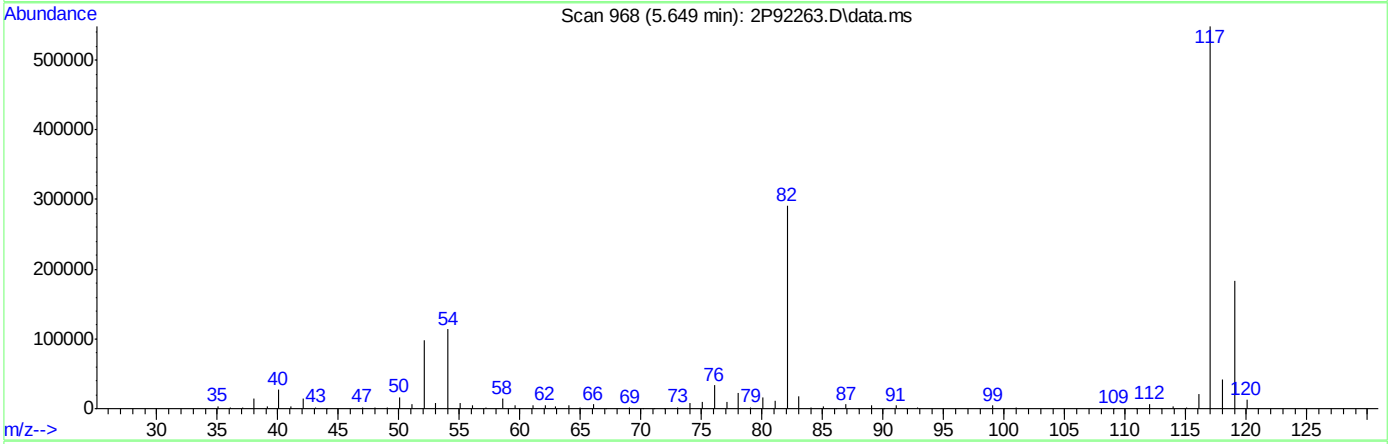
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	45.96
41.10	72.70	73.04
39.00	28.00	32.25

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 0.69ug/L

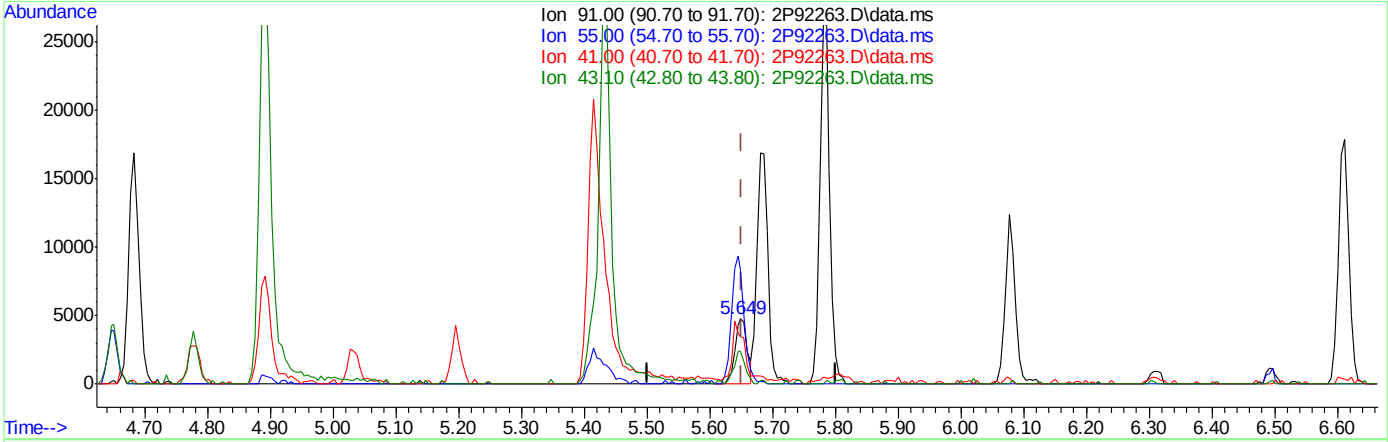
response 4594

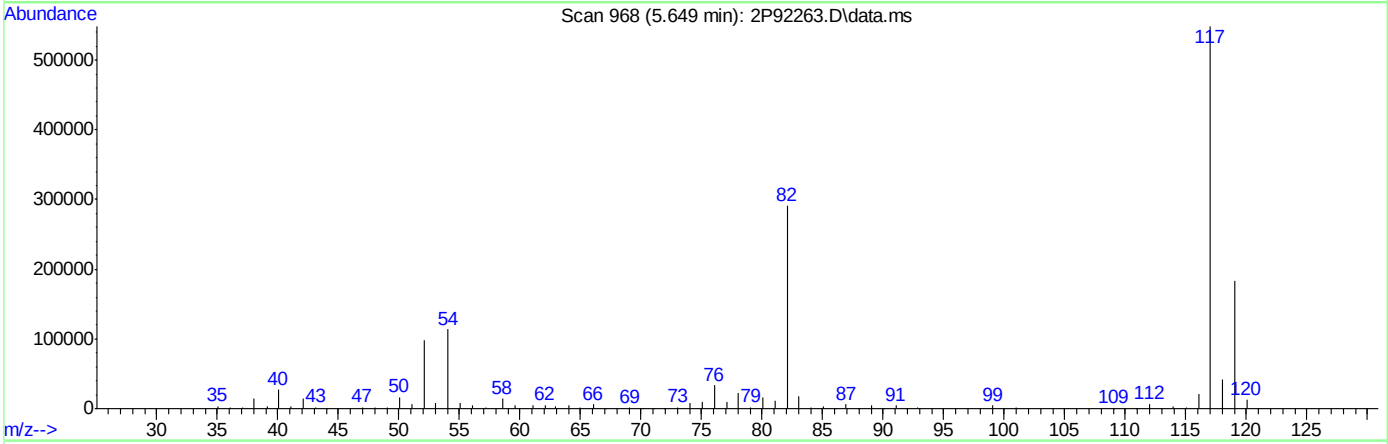
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	164.44#
41.00	83.00	62.38#
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 1.00ug/L m

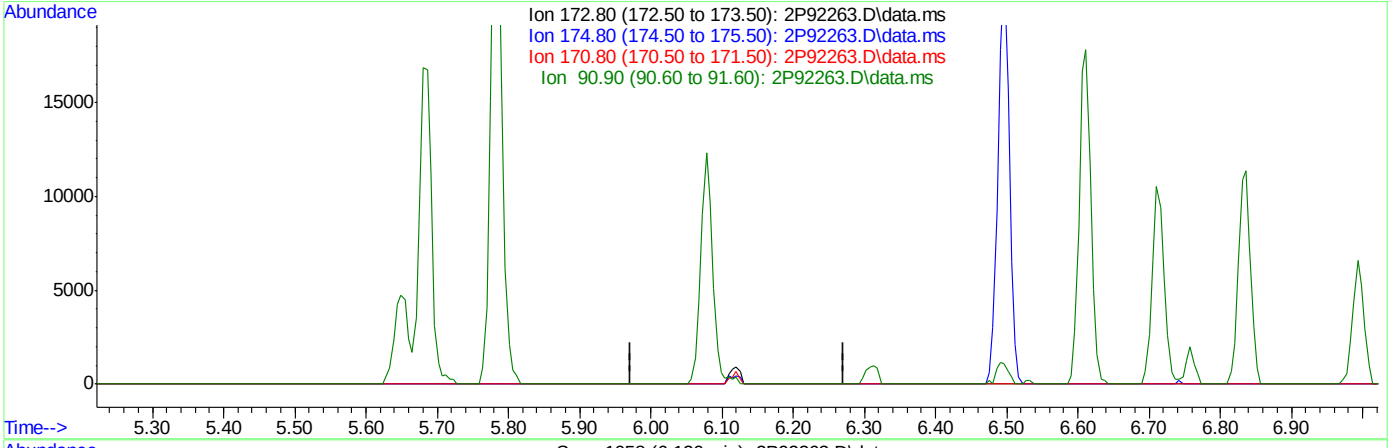
response 6715

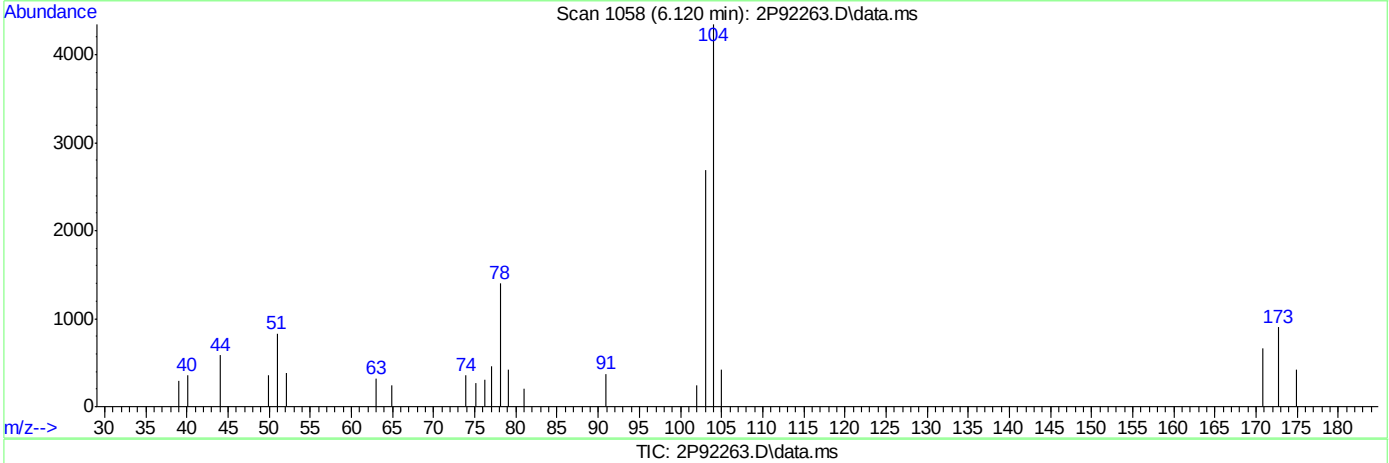
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	176.32#
41.00	83.00	73.01
43.10	65.60	49.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.122min (-6.122) 0.00ug/L

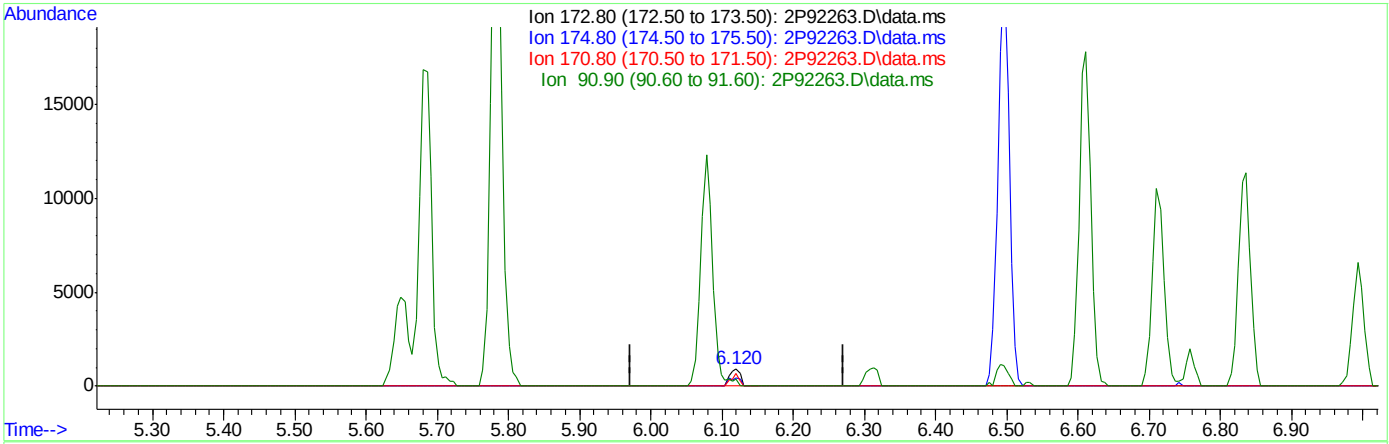
response 0

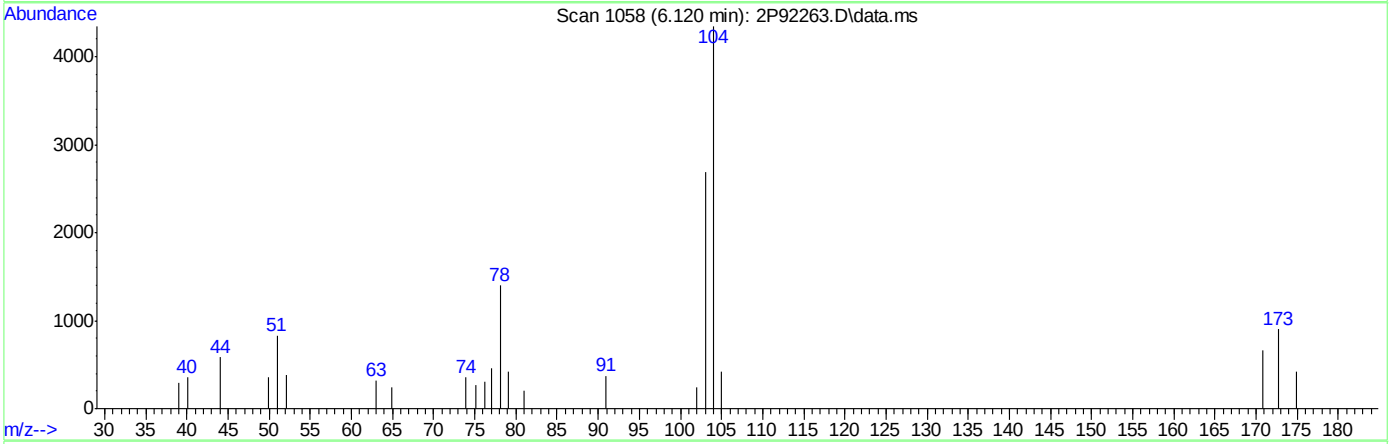
Ion	Exp%	Act%
172.80	100	0.00
174.80	46.40	0.00#
170.80	50.50	0.00#
90.90	21.40	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(83) Bromoform (P)

6.120min (-0.002) 0.54ug/L m

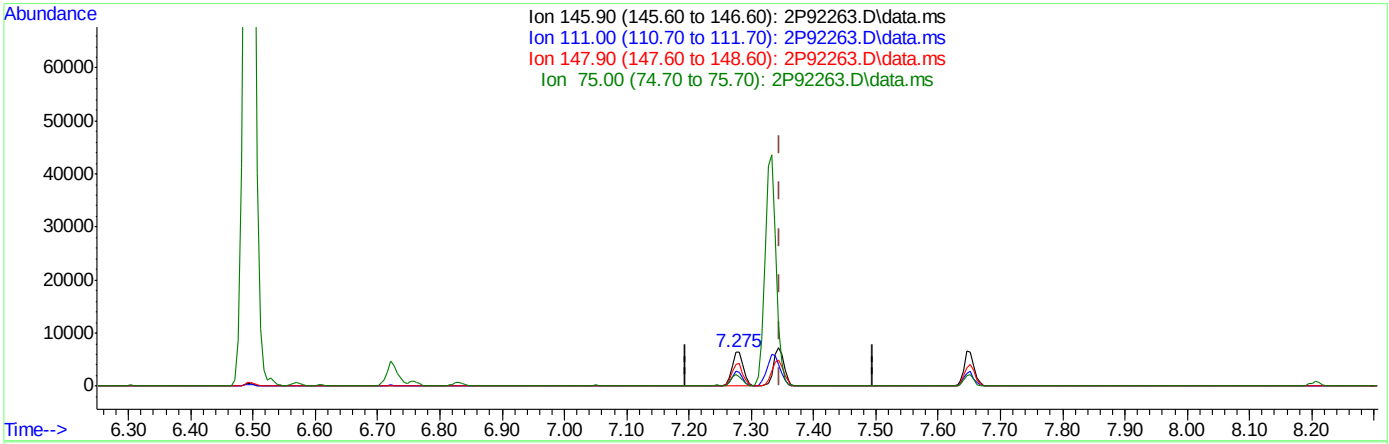
response 935

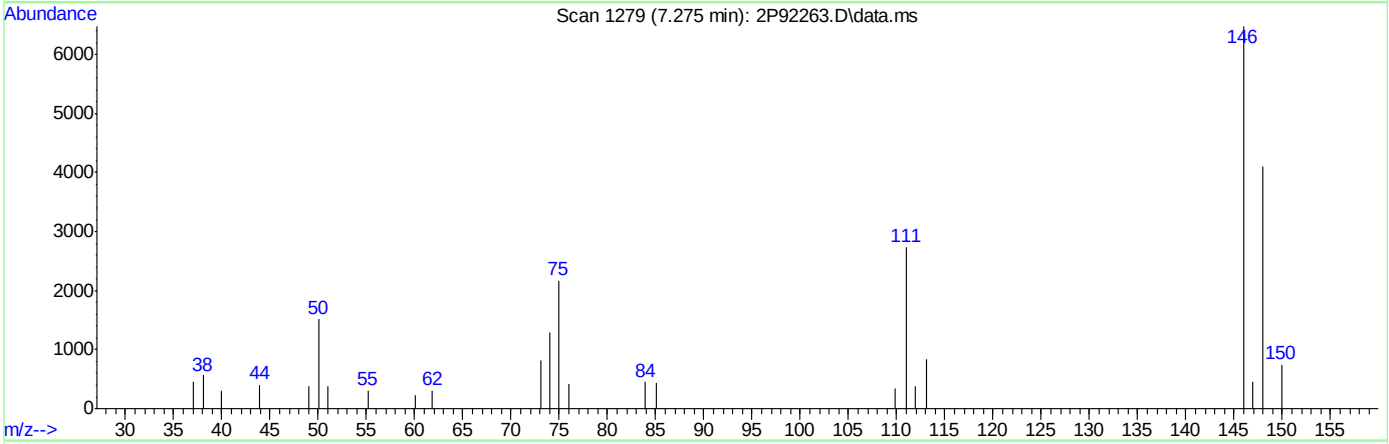
Ion	Exp%	Act%
172.80	100	100
174.80	46.40	47.28
170.80	50.50	73.03
90.90	21.40	41.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.275min (-0.071) 0.87ug/L

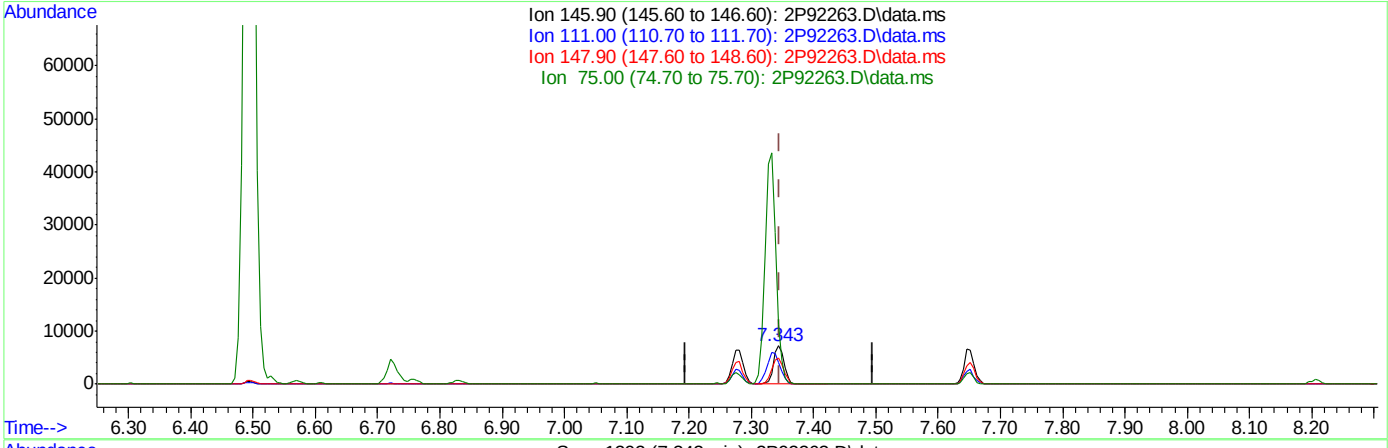
response 7813

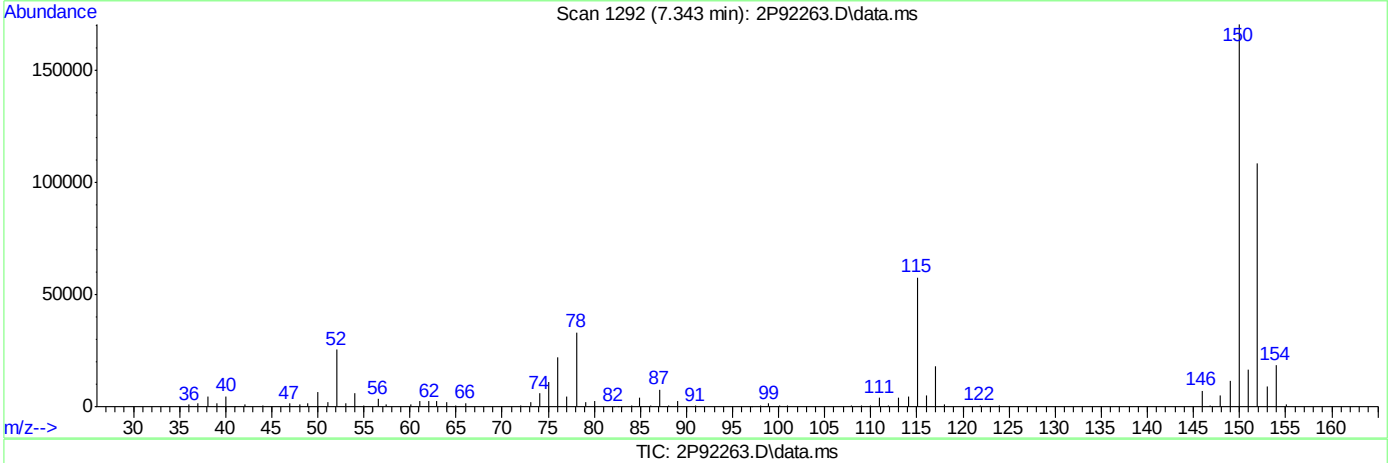
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	42.36
147.90	61.90	63.43
75.00	34.60	33.55

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(105) 1,4-Dichlorobenzene

7.343min (-0.003) 0.91ug/L m

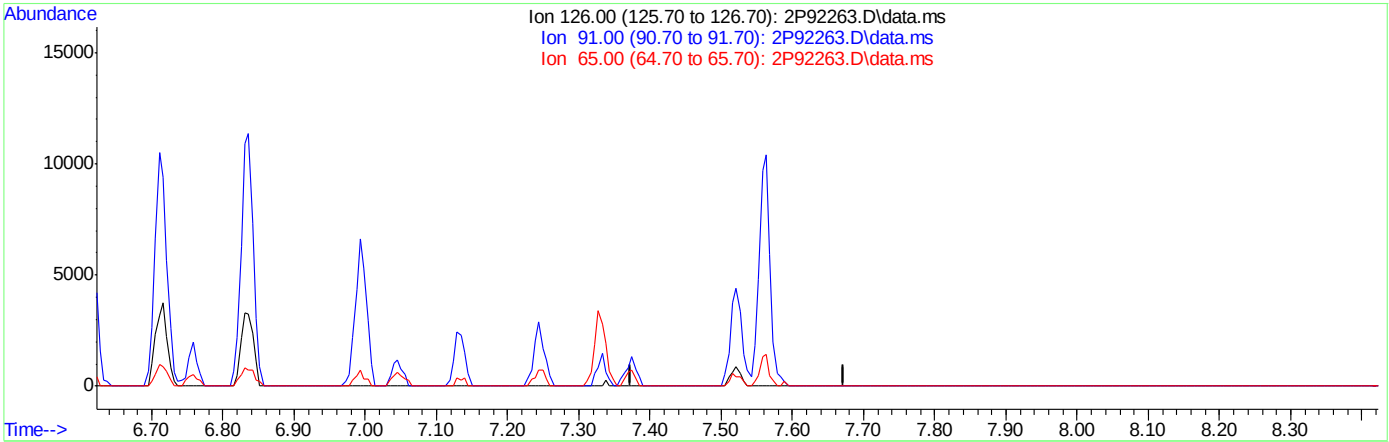
response 8240

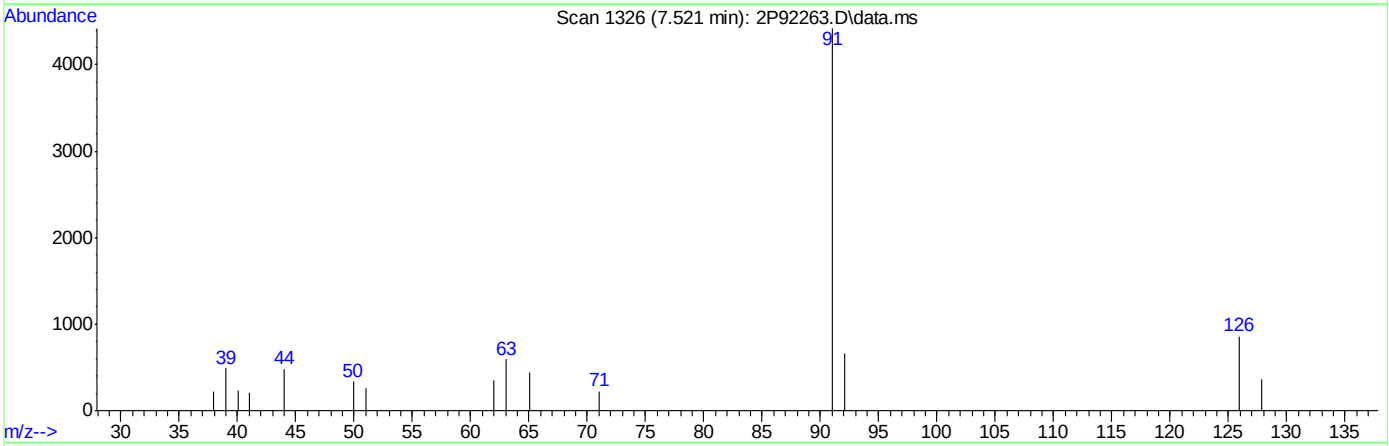
Ion	Exp%	Act%
145.90	100	100
111.00	38.90	55.61
147.90	61.90	69.94
75.00	34.60	155.89#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.523min (-7.523) 0.00ug/L

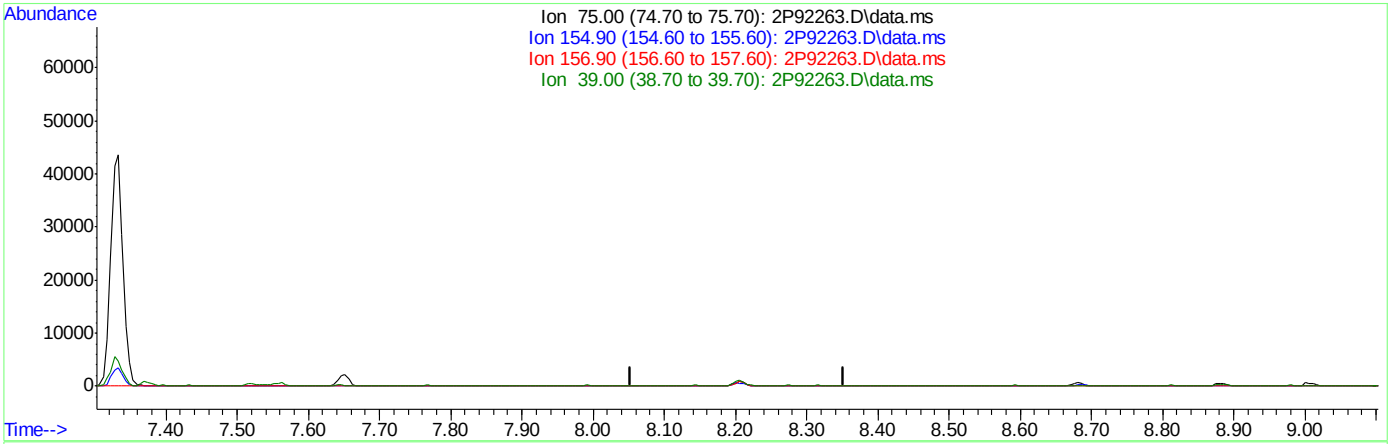
response 0

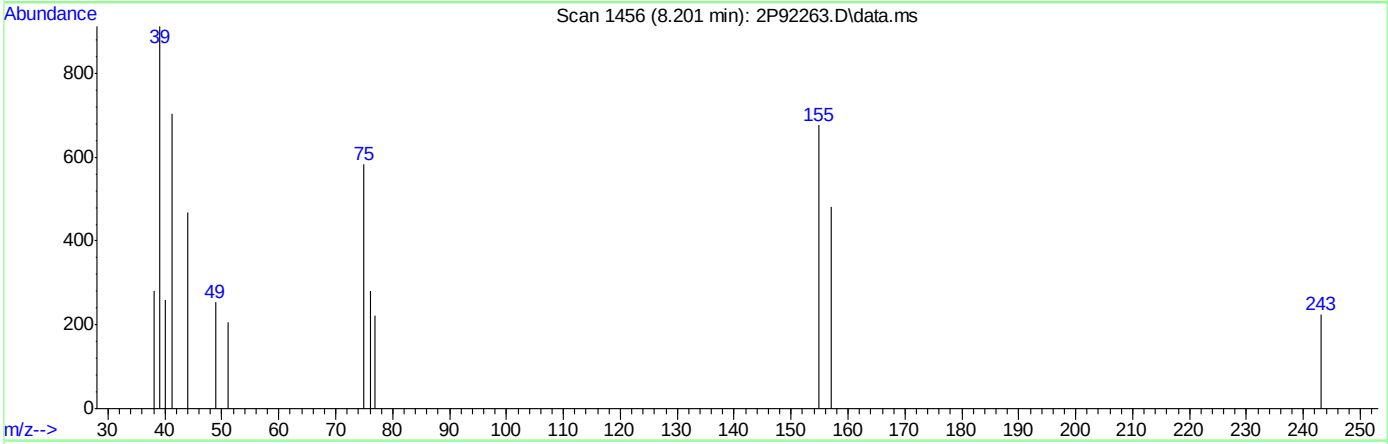
Ion	Exp%	Act%
126.00	100	0.00
91.00	524.80	0.00#
65.00	71.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.203min (-8.203) 0.00ug/L

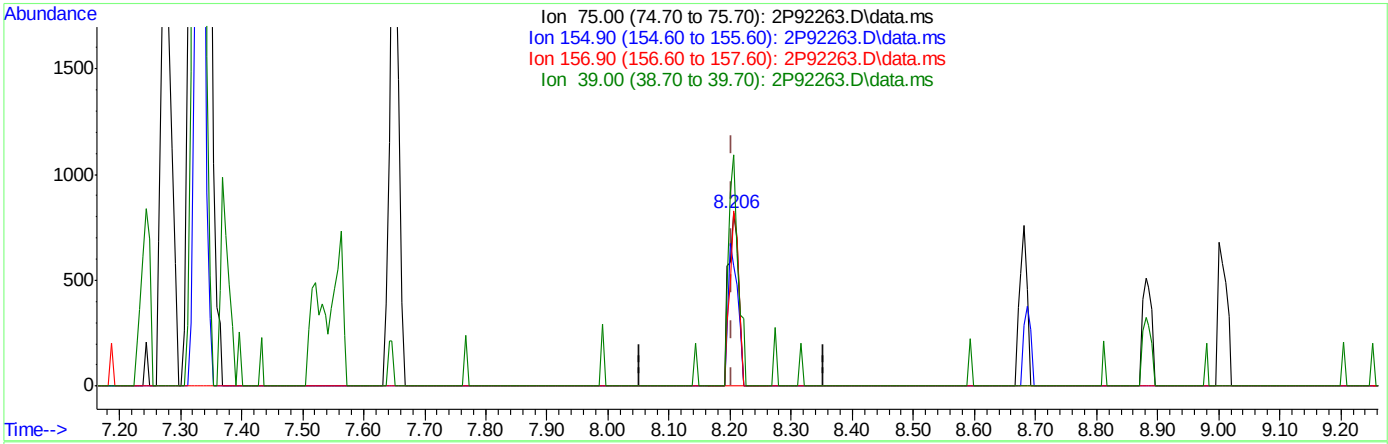
response 0

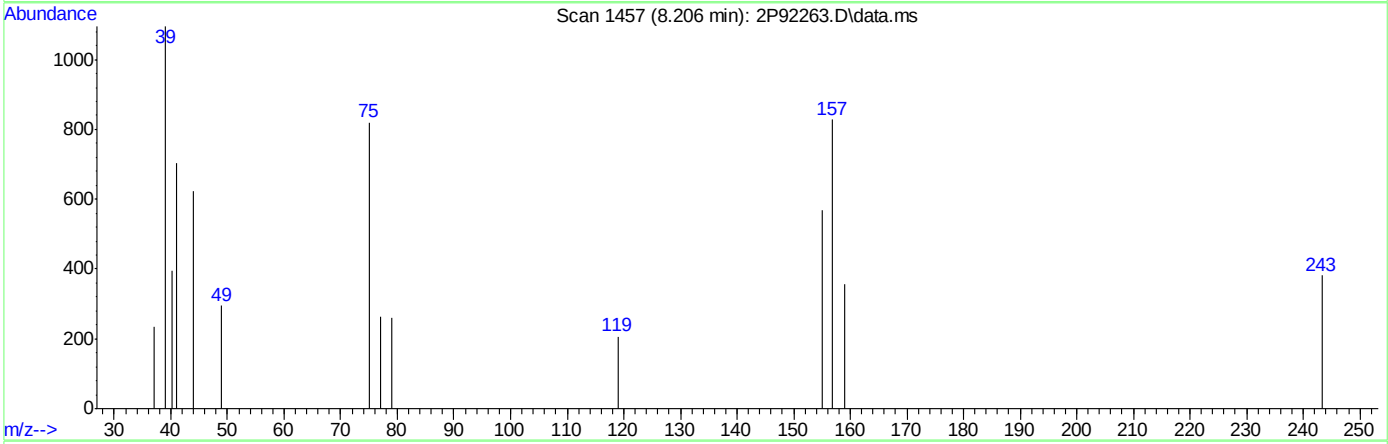
Ion	Exp%	Act%
75.00	100	0.00
154.90	74.10	0.00#
156.90	85.50	0.00#
39.00	122.20	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-1
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:05:29 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(109) 1,2-Dibromo-3-Chloropropane

8.206min (+0.003) 0.74ug/L m

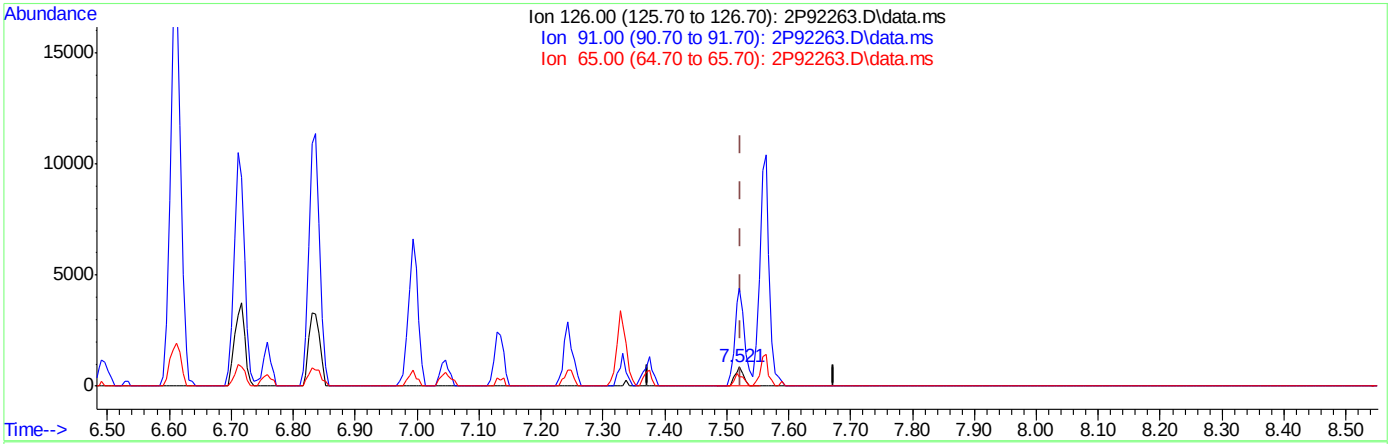
response 932

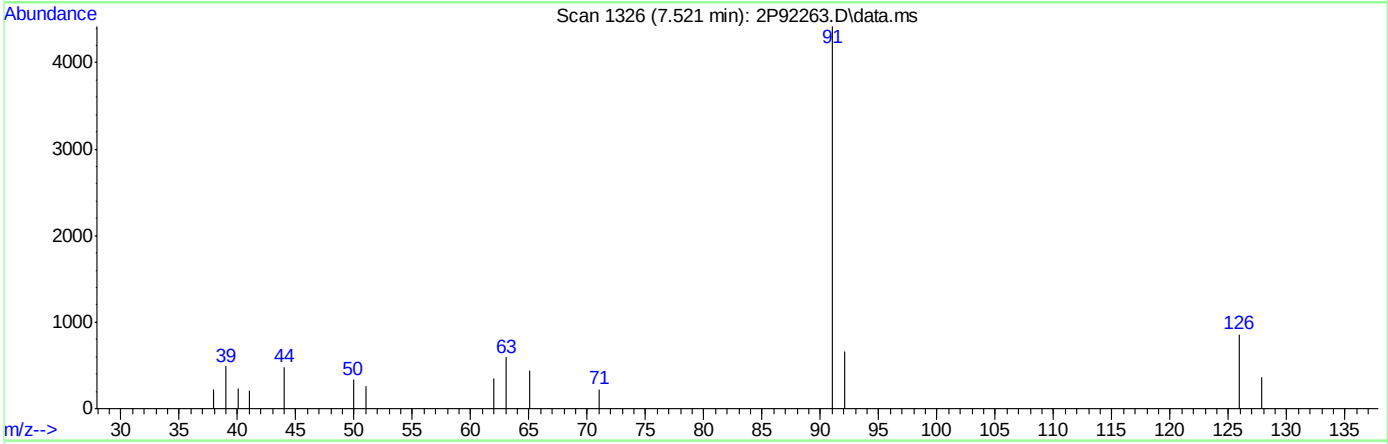
Ion	Exp%	Act%
75.00	100	100
154.90	74.10	69.60
156.90	85.50	101.10
39.00	122.20	133.70

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92263.D
Acq On : 24 Aug 2022 9:50 am
Operator : courtnef
Sample : IC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Aug 24 10:08:00 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92263.D\data.ms

(107) Benzyl Chloride

7.521min (-0.002) 0.62ug/L m

response 838

Ion	Exp%	Act%
126.00	100	100
91.00	524.80	516.36
65.00	71.60	51.29#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.725	96	1290577	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	897703	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	403198	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	270124	46.32	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 92.64%				
49) 1,2-Dichloroethane-d4	3.552	65	378774	41.67	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.34%				
63) Toluene-d8	4.650	98	1230359	51.41	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.82%				
86) 4-Bromofluorobenzene	6.496	174	310144	46.27	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 92.54%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	18173	3.75	ug/L		98
3) Chloromethane	1.252	50	20517	2.85	ug/L		93
4) 1,3-butadiene	1.320	39	20772	3.23	ug/L		91
5) Vinyl Chloride	1.310	62	24345	3.77	ug/L		95
6) Bromomethane	1.513	94	16922	6.70	ug/L		99
7) Chloroethane	1.587	64	11544	5.19	ug/L		94
8) Trichlorofluoromethane	1.686	101	30131	5.23	ug/L		97
9) Ethyl Ether	1.879	59	24918	4.14	ug/L		85
10) Ethanol	1.947	45	15329	64.84	ug/L		88
11) 1,2-Dichlorotrifluoroe...	1.979	67	22588	4.31	ug/L		87
12) 1,1-Dichloroethene	1.989	61	32739	3.91	ug/L		89
13) Freon 113	2.021	101	20226	4.68	ug/L		97
14) Carbon Disulfide	2.010	76	47300	4.68	ug/L		83
15) Iodomethane	2.062	142	7787	1.32	ug/L		88
16) Acrolein	2.156	56	44147	21.20	ug/L		96
17) Allyl chloride	2.251	41	22787	3.00	ug/L		93
18) Methylene Chloride	2.303	49	45580	3.80	ug/L		78
19) Acetone	2.319	43	83434	18.37	ug/L		91
20) Methyl acetate	2.397	43	158182	15.51	ug/L		88
21) trans-1,2-Dichloroethene	2.407	61	33592	3.93	ug/L		81
22) Hexane	2.475	56	14894	3.36	ug/L	#	88
23) Methyl Tert Butyl Ether	2.470	73	73173	4.62	ug/L		89
24) Tert Butyl Alcohol	2.502	59	91250	38.36	ug/L		95
25) Acetonitrile	2.554	41	59508	35.06	ug/L		94
26) Di-isopropyl ether	2.690	45	70813	3.36	ug/L		92
27) Chloroprene	2.732	53	99184	2.97	ug/L		90
28) 1,1-Dichloroethane	2.732	63	43072	4.05	ug/L		92
29) Acrylonitrile	2.732	52	79032	18.31	ug/L		81
30) ETBE	2.883	59	80478	3.95	ug/L		91
31) Vinyl acetate	2.862	43	272570	17.81	ug/L		100
32) cis-1,2-Dichloroethene	3.024	96	26847	5.23	ug/L	#	82
33) 2,2-Dichloropropane	3.092	77	31037	4.57	ug/L		98
34) Bromochloromethane	3.129	128	12004	5.24	ug/L	#	65
35) Cyclohexane	3.165	56	38906	3.56	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	44643	4.76	ug/L		94
37) Ethyl acetate	3.228	43	211307	17.08	ug/L		94
38) Tetrahydrofuran	3.260	42	16825	3.25	ug/L		91
40) Carbon Tetrachloride	3.270	117	25941m	4.92	ug/L		
41) 1,1,1-Trichloroethane	3.296	97	35376	4.71	ug/L		96
42) 2-Butanone	3.317	43	144027	19.16	ug/L		79
43) 1,1-Dichloropropene	3.369	75	32613	4.64	ug/L		82
44) tert-Butyl formate	3.411	59	77006	21.61	ug/L		90
45) Propionitrile	3.458	54	90503	39.92	ug/L		97
46) Methacrylonitrile	3.484	41	235404	33.00	ug/L		98
47) Benzene	3.495	78	104936	4.83	ug/L		73
48) TAME	3.568	73	72443	4.73	ug/L		89
50) Isobutyl alcohol	3.584	43	88293m	63.98	ug/L		
51) 1,2-Dichloroethane	3.594	62	37281	4.04	ug/L		91
52) Tert Amyl Alcohol	3.646	59	69082	38.54	ug/L		88
53) Trichloroethene	3.829	95	26765	5.04	ug/L		93
54) Methylcyclohexane	3.850	83	33758	4.53	ug/L	#	81
55) Dibromomethane	4.054	93	14284	4.78	ug/L		97
56) 1,2-Dichloropropane	4.112	63	25411	4.24	ug/L		91
57) Bromodichloromethane	4.148	83	23490	4.69	ug/L		95
58) Methyl methacrylate	4.237	41	25850	3.13	ug/L	#	75
59) 1,4-Dioxane	4.258	88	16723	101.68	ug/L		92
60) 2-Chloroethyl vinyl ether	4.478	63	103802	21.59	ug/L		81
61) cis-1,3-Dichloropropene	4.525	75	29027	4.17	ug/L		76
64) Toluene	4.682	91	114476	5.45	ug/L		98
65) 2-Nitropropane	4.776	41	28595	12.44	ug/L		94
66) 4-Methyl-2-pentanone	4.891	43	217276	19.24	ug/L		93
67) trans-1,3-Dichloropropene	4.917	75	26173	4.40	ug/L		87
68) Tetrachloroethene	4.938	166	24044	4.72	ug/L		88
69) Ethyl methacrylate	5.032	69	37766	5.05	ug/L	#	74
70) 1,1,2-Trichloroethane	5.021	83	19526	5.27	ug/L		86
71) Dibromochloromethane	5.142	129	15708	4.86	ug/L		92
72) 1,3-Dichloropropane	5.194	76	43843	5.24	ug/L		81
73) 1,2-Dibromoethane	5.293	107	22775	5.15	ug/L		98
74) 3,3-dimethyl-1-butanol	5.414	57	431612	175.14	ug/L	#	88
75) 2-hexanone	5.429	43	244905	17.89	ug/L		84
76) 1-Chlorohexane	5.654	91	35433m	5.26	ug/L		
77) Ethylbenzene	5.685	91	124754	5.43	ug/L		95
78) Chlorobenzene	5.654	112	68797	5.56	ug/L		94
79) 1,1,1,2-Tetrachloroethane	5.696	131	19145	5.37	ug/L		92
80) m,p-Xylene	5.785	91	194619	10.72	ug/L		100
81) o-Xylene	6.077	91	95453	5.35	ug/L		98
82) Styrene	6.109	104	68945	5.15	ug/L		96
83) Bromoform	6.119	173	7924	4.47	ug/L		92
84) Isopropylbenzene	6.308	105	109252	5.32	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	11022	4.24	ug/L		92
88) n-Propylbenzene	6.611	91	129402	5.72	ug/L		98
89) Bromobenzene	6.574	156	27298	5.85	ug/L		88
90) 1,1,2,2-Tetrachloroethane	6.632	83	34540	5.59	ug/L		92
91) 1,3,5-Trimethylbenzene	6.757	105	91753	5.81	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

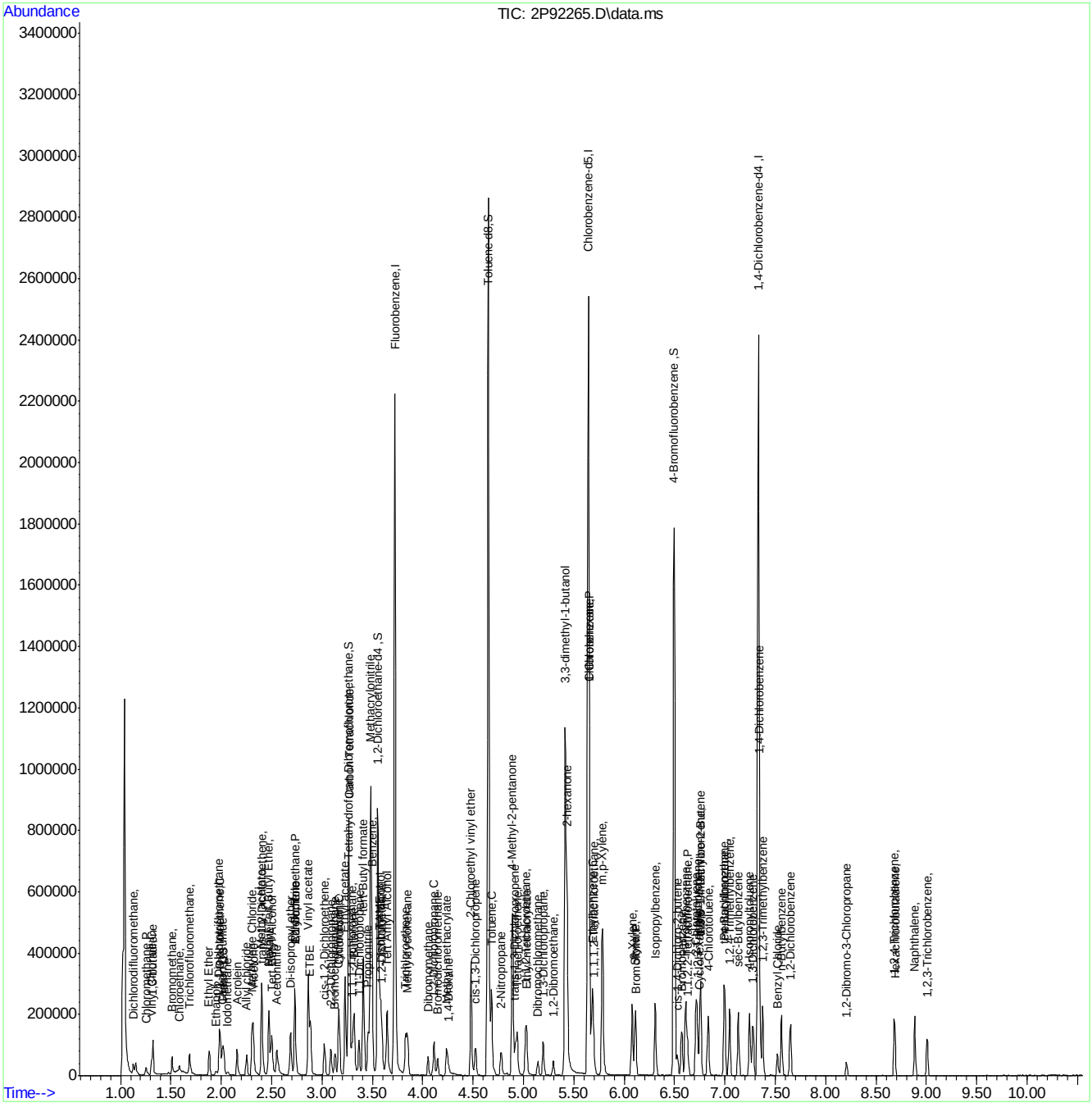
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.715	91	79896	5.82	ug/L		93
93) trans-1,4-Dichloro-2-B...	6.757	53	14007	4.15	ug/L		92
94) 1,2,3-Trichloropropane	6.726	110	12669	5.53	ug/L		83
95) Cyclohexanone	6.747	55	13270	22.45	ug/L		83
96) 4-Chlorotoluene	6.836	91	84303	5.87	ug/L		94
97) tert-Butylbenzene	6.998	91	49056	5.63	ug/L		94
99) 1,2,4-Trimethylbenzene	7.045	105	86779	5.65	ug/L		96
100) Pentachloroethane	6.992	167	9394	5.17	ug/L	#	47
101) sec-Butylbenzene	7.134	105	96243	5.71	ug/L		98
102) 4-Isopropyltoluene	7.243	119	82156	5.71	ug/L		94
103) 1,3-Dichlorobenzene	7.280	146	48323	5.71	ug/L		97
104) 1,2,3-Trimethylbenzene	7.374	105	90040	5.85	ug/L		97
105) 1,4-Dichlorobenzene	7.343	146	52295	5.78	ug/L		88
106) n-Butylbenzene	7.562	92	41492	5.71	ug/L		96
107) Benzyl Chloride	7.520	126	6116	4.36	ug/L	#	85
108) 1,2-Dichlorobenzene	7.651	146	45254	5.50	ug/L		96
109) 1,2-Dibromo-3-Chloropr...	8.205	75	6140	4.79	ug/L		87
110) Hexachlorobutadiene	8.686	225	8710	4.71	ug/L		92
111) 1,2,4-Trichlorobenzene	8.681	180	23047	5.06	ug/L		94
112) Naphthalene	8.885	128	89623	5.73	ug/L		99
113) 1,2,3-Trichlorobenzene	9.010	180	21722	5.05	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:54 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

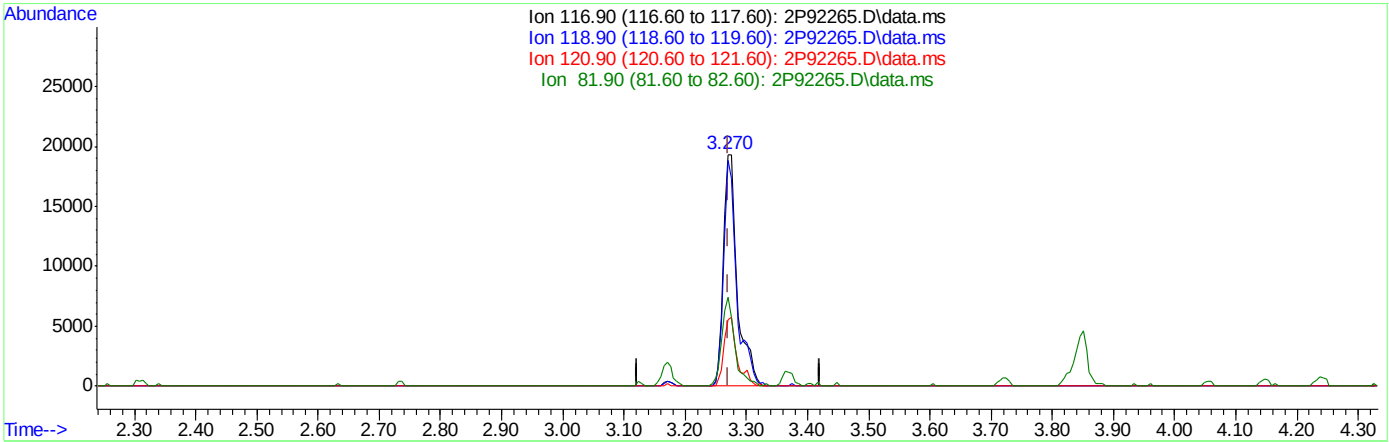
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92265.D **Analyst approved:** 08/24/22 10:38 Courtney Failla
Injection Time: 08/24/22 10:22 **Supervisor approved:** 08/25/22 11:34 Karen Watson

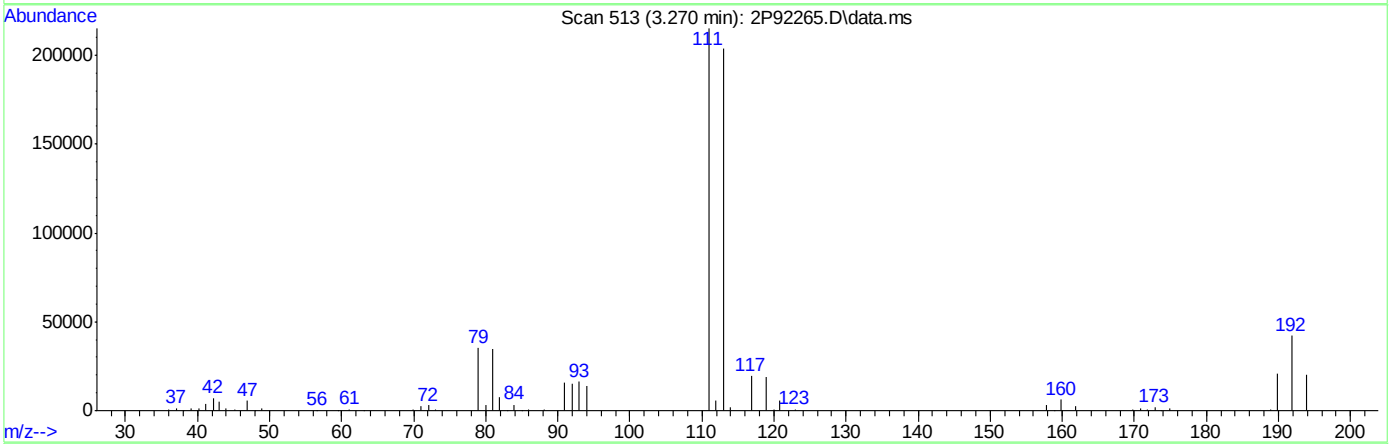
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.002) 5.66ug/L

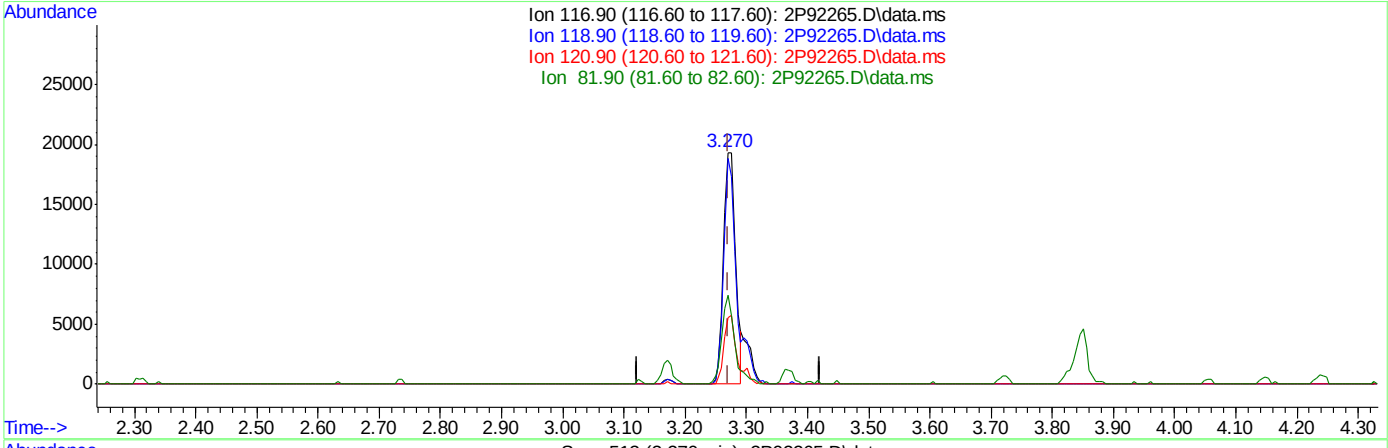
response 29823

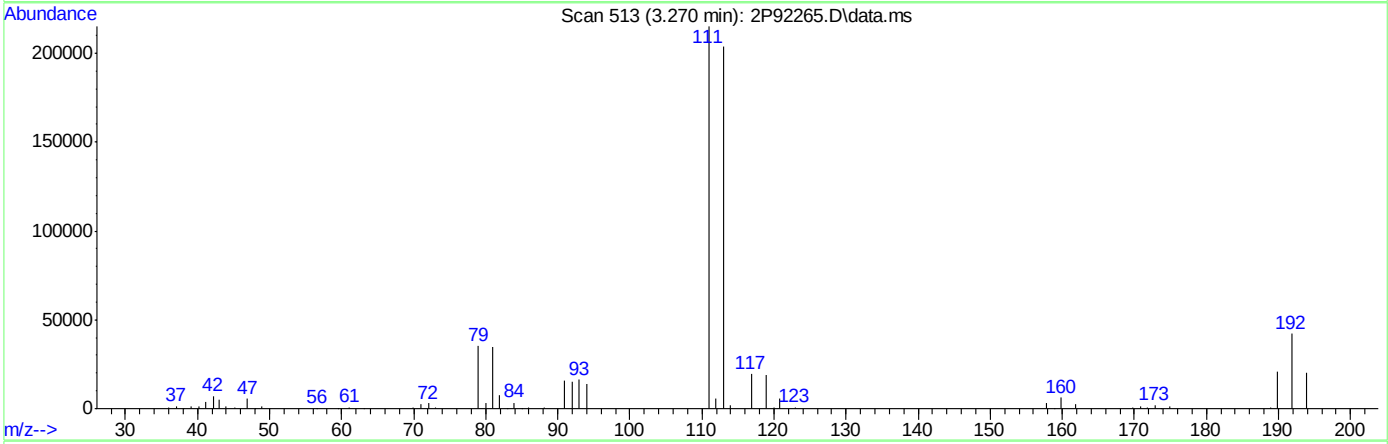
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.56
120.90	30.80	28.73
81.90	30.00	38.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.002) 4.92ug/L m

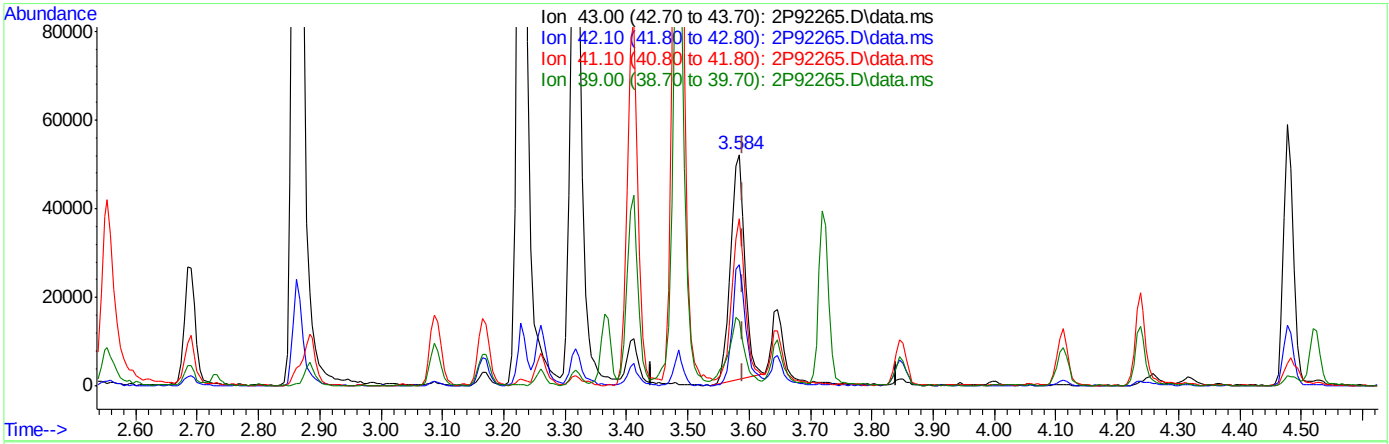
response 25941

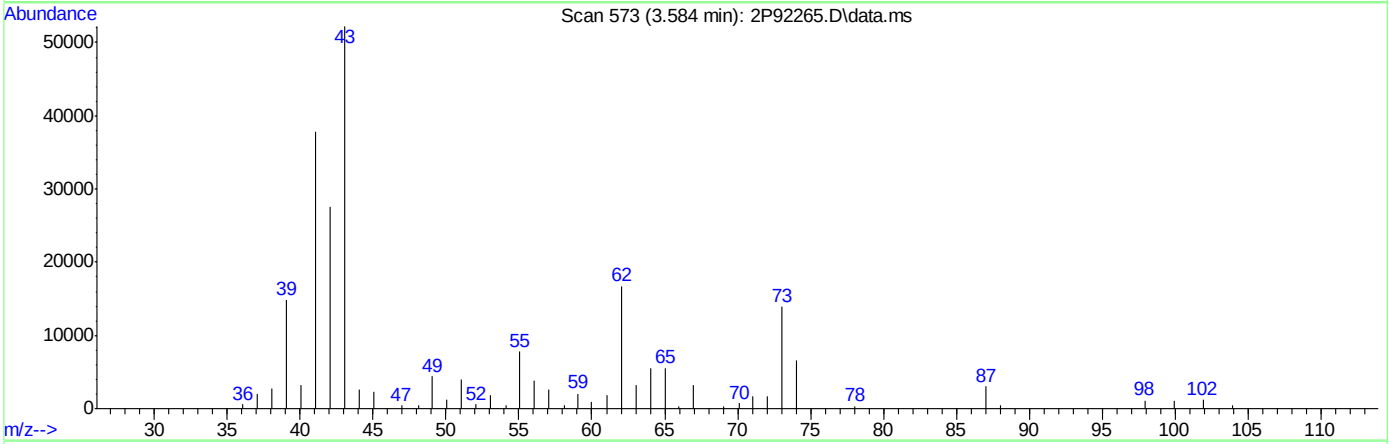
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.56
120.90	30.80	28.73
81.90	30.00	38.54

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 58.55ug/L

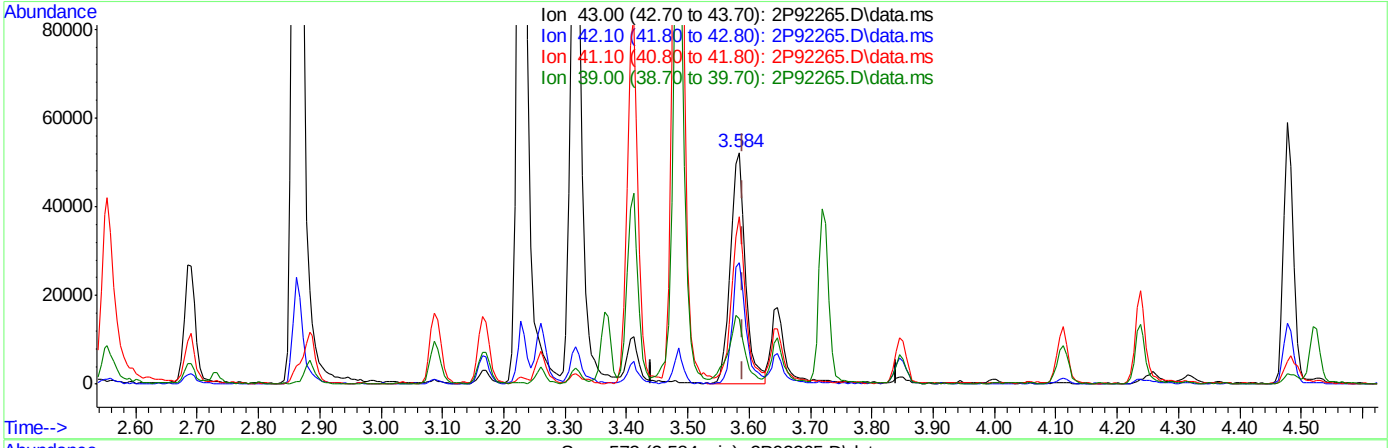
response 80799

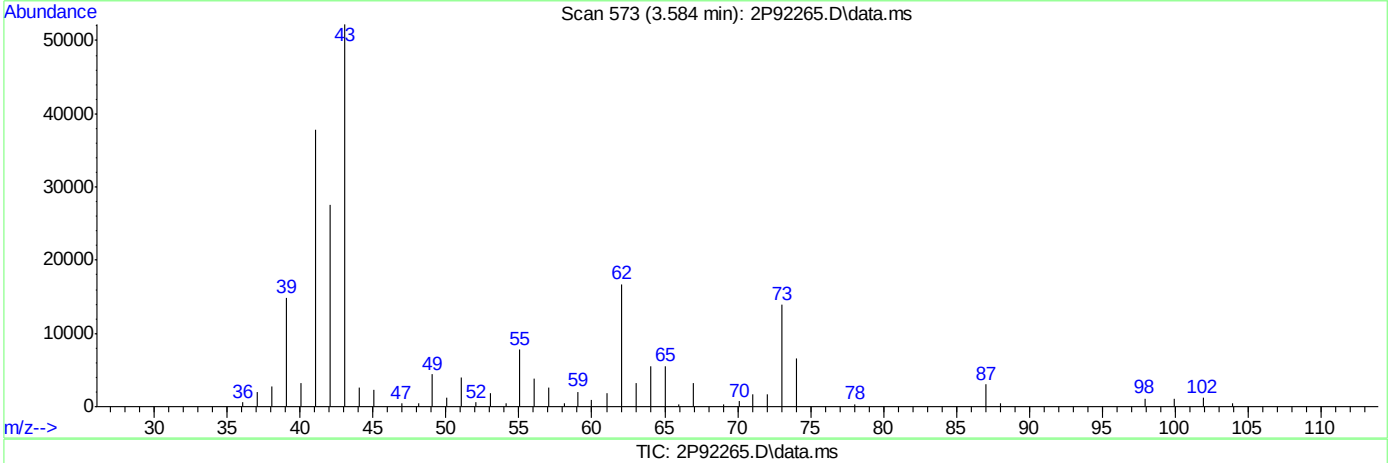
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	52.65
41.10	72.70	68.72
39.00	28.00	26.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 63.98ug/L m

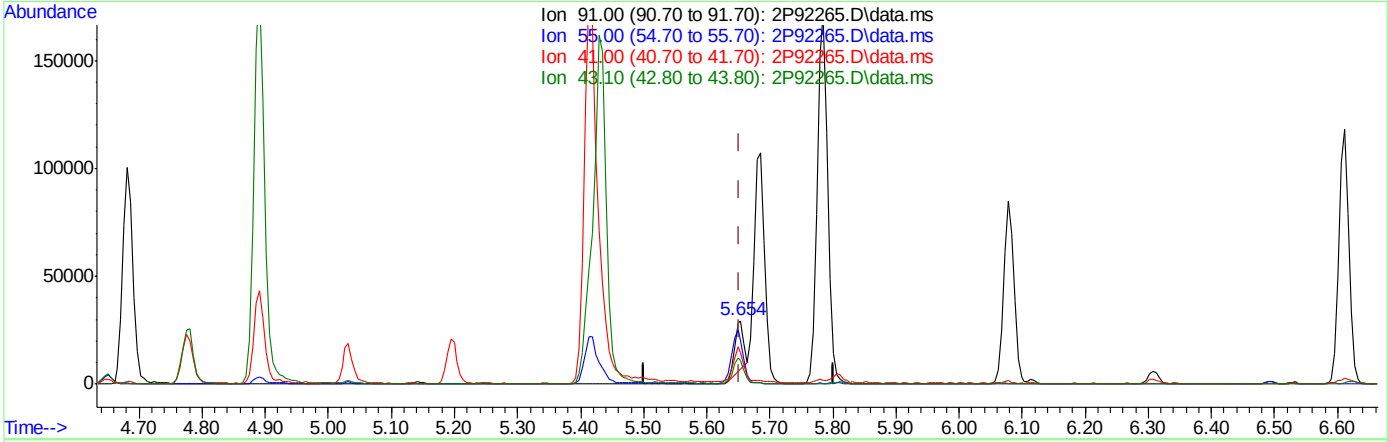
response 88293

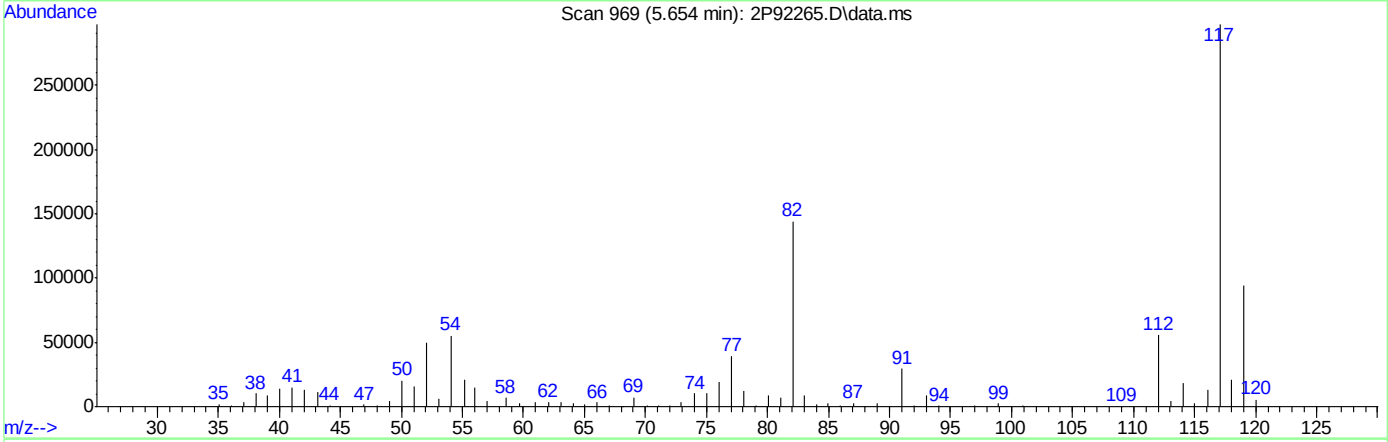
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	52.65
41.10	72.70	72.34
39.00	28.00	28.40

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.003) 3.65ug/L

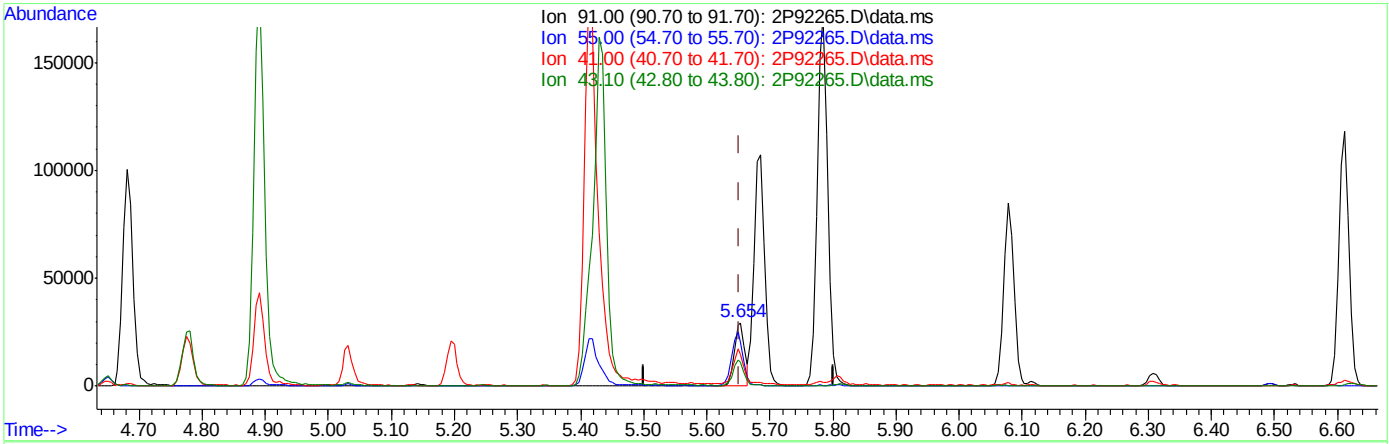
response 24624

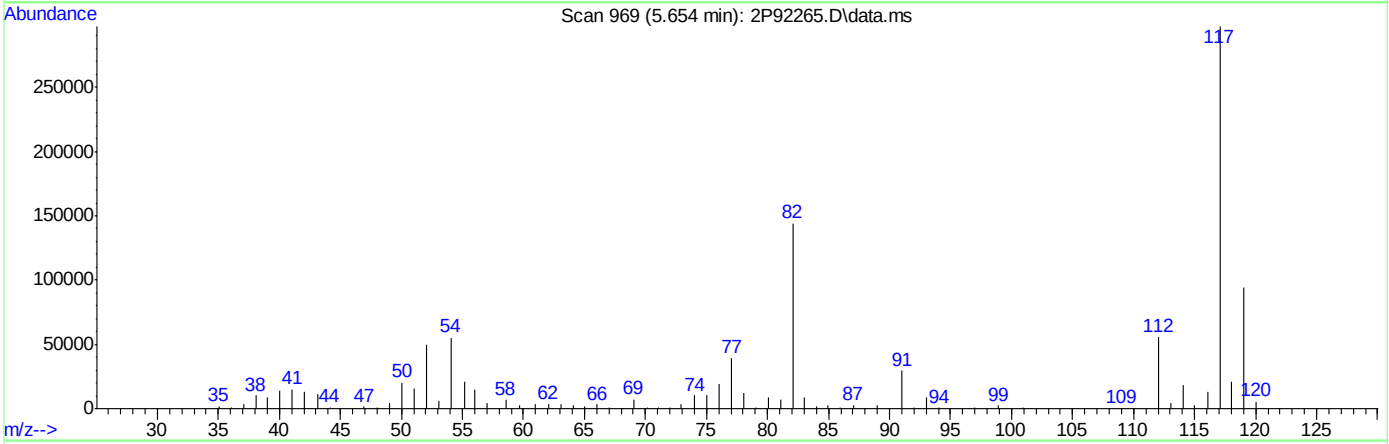
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	57.10#
41.00	83.00	45.04#
43.10	65.60	34.25#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92265.D
Acq On : 24 Aug 2022 10:22 am
Operator : courtnef
Sample : IC3560-2
Misc : MS52204,V2P3560,,,,,
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Aug 24 10:36:06 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92265.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.003) 5.26ug/L m

response 35433

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	69.86#
41.00	83.00	50.82#
43.10	65.60	38.01#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1295262	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	905061	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	411980	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	274375	46.88	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%				
49) 1,2-Dichloroethane-d4	3.553	65	384569	42.15	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 84.30%				
63) Toluene-d8	4.651	98	1246124	51.65	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.30%				
86) 4-Bromofluorobenzene	6.496	174	319677	46.68	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	31403	6.46	ug/L		100
3) Chloromethane	1.252	50	38308	5.31	ug/L		100
4) 1,3-butadiene	1.320	39	29714	4.60	ug/L		90
5) Vinyl Chloride	1.305	62	45651	7.05	ug/L		98
6) Bromomethane	1.514	94	31072	12.26	ug/L		94
7) Chloroethane	1.587	64	17033	7.63	ug/L		94
8) Trichlorofluoromethane	1.681	101	54389	9.40	ug/L		94
9) Ethyl Ether	1.880	59	42493	7.04	ug/L		84
10) Ethanol	1.953	45	22426	94.81	ug/L		100
11) 1,2-Dichlorotrifluoroe...	1.979	67	36857	7.00	ug/L		88
12) 1,1-Dichloroethene	1.984	61	52626	6.26	ug/L		92
13) Freon 113	2.021	101	31257	7.20	ug/L		91
14) Carbon Disulfide	2.005	76	81680	7.97	ug/L		91
15) Iodomethane	2.063	142	17236	2.92	ug/L		88
16) Acrolein	2.157	56	73711	35.20	ug/L		100
17) Allyl chloride	2.251	41	34244	4.50	ug/L		95
18) Methylene Chloride	2.303	49	66775	5.57	ug/L		78
19) Acetone	2.319	43	138555	30.43	ug/L		89
20) Methyl acetate	2.397	43	285484	27.88	ug/L		88
21) trans-1,2-Dichloroethene	2.408	61	56462	6.58	ug/L		78
22) Hexane	2.471	56	22860	5.14	ug/L	#	93
23) Methyl Tert Butyl Ether	2.471	73	130596	8.22	ug/L		83
24) Tert Butyl Alcohol	2.502	59	161231	67.54	ug/L		93
25) Acetonitrile	2.549	41	89361	52.71	ug/L		94
26) Di-isopropyl ether	2.690	45	121811	5.75	ug/L		92
27) Chloroprene	2.732	53	164073	4.90	ug/L		92
28) 1,1-Dichloroethane	2.732	63	74326	6.97	ug/L		91
29) Acrylonitrile	2.732	52	130970	30.23	ug/L		82
30) ETBE	2.884	59	143298	7.01	ug/L		90
31) Vinyl acetate	2.863	43	460988	30.02	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	44939	8.73	ug/L		85
33) 2,2-Dichloropropane	3.087	77	53618	7.82	ug/L		97
34) Bromochloromethane	3.129	128	21383	9.31	ug/L	#	64
35) Cyclohexane	3.166	56	64821	5.92	ug/L	#	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	76083	8.08	ug/L		93
37) Ethyl acetate	3.229	43	356460	28.72	ug/L		94
38) Tetrahydrofuran	3.260	42	27557	5.30	ug/L		82
40) Carbon Tetrachloride	3.270	117	40996m	7.75	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	59644	7.92	ug/L		93
42) 2-Butanone	3.317	43	232206	30.77	ug/L		76
43) 1,1-Dichloropropene	3.365	75	55048	7.81	ug/L		85
44) tert-Butyl formate	3.412	59	137264	37.80	ug/L		94
45) Propionitrile	3.459	54	137310	60.26	ug/L		96
46) Methacrylonitrile	3.485	41	364915	50.90	ug/L		98
47) Benzene	3.495	78	182924	8.39	ug/L	#	67
48) TAME	3.568	73	128393	8.35	ug/L		91
50) Isobutyl alcohol	3.584	43	147999m	106.86	ug/L		
51) 1,2-Dichloroethane	3.589	62	65905	7.11	ug/L		91
52) Tert Amyl Alcohol	3.647	59	128328	71.34	ug/L		92
53) Trichloroethene	3.830	95	44907	8.42	ug/L		94
54) Methylcyclohexane	3.845	83	55101	7.37	ug/L	#	83
55) Dibromomethane	4.055	93	25053	8.36	ug/L		98
56) 1,2-Dichloropropane	4.112	63	44152	7.35	ug/L		91
57) Bromodichloromethane	4.149	83	41940	8.25	ug/L		96
58) Methyl methacrylate	4.238	41	41690	5.01	ug/L	#	76
59) 1,4-Dioxane	4.259	88	30220	183.09	ug/L		80
60) 2-Chloroethyl vinyl ether	4.478	63	177220	36.61	ug/L		82
61) cis-1,3-Dichloropropene	4.525	75	54531	7.73	ug/L		79
64) Toluene	4.682	91	197103	9.31	ug/L		100
65) 2-Nitropropane	4.776	41	55377	23.57	ug/L		99
66) 4-Methyl-2-pentanone	4.891	43	365886	32.13	ug/L		91
67) trans-1,3-Dichloropropene	4.917	75	51575	8.51	ug/L		84
68) Tetrachloroethene	4.938	166	40506	7.89	ug/L		88
69) Ethyl methacrylate	5.032	69	60736	8.06	ug/L	#	78
70) 1,1,2-Trichloroethane	5.022	83	34075	9.13	ug/L		85
71) Dibromochloromethane	5.147	129	29481	8.93	ug/L		89
72) 1,3-Dichloropropane	5.194	76	73968	8.76	ug/L		82
73) 1,2-Dibromoethane	5.294	107	40675	9.13	ug/L		99
74) 3,3-dimethyl-1-butanol	5.414	57	766291	308.42	ug/L	#	87
75) 2-hexanone	5.430	43	417576	30.26	ug/L		82
76) 1-Chlorohexane	5.649	91	57928m	8.52	ug/L		
77) Ethylbenzene	5.681	91	213848	9.23	ug/L		95
78) Chlorobenzene	5.654	112	116184	9.31	ug/L		93
79) 1,1,1,2-Tetrachloroethane	5.696	131	34431	9.51	ug/L		97
80) m,p-Xylene	5.785	91	337237	18.43	ug/L		97
81) o-Xylene	6.078	91	169648	9.43	ug/L		98
82) Styrene	6.109	104	123237	9.13	ug/L		96
83) Bromoform	6.120	173	14855	8.14	ug/L		95
84) Isopropylbenzene	6.308	105	186958	9.03	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	17968	6.70	ug/L		92
88) n-Propylbenzene	6.611	91	224394	9.70	ug/L		100
89) Bromobenzene	6.575	156	47147	9.88	ug/L	#	82
90) 1,1,2,2-Tetrachloroethane	6.632	83	63942	10.13	ug/L		96
91) 1,3,5-Trimethylbenzene	6.758	105	159081	9.86	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

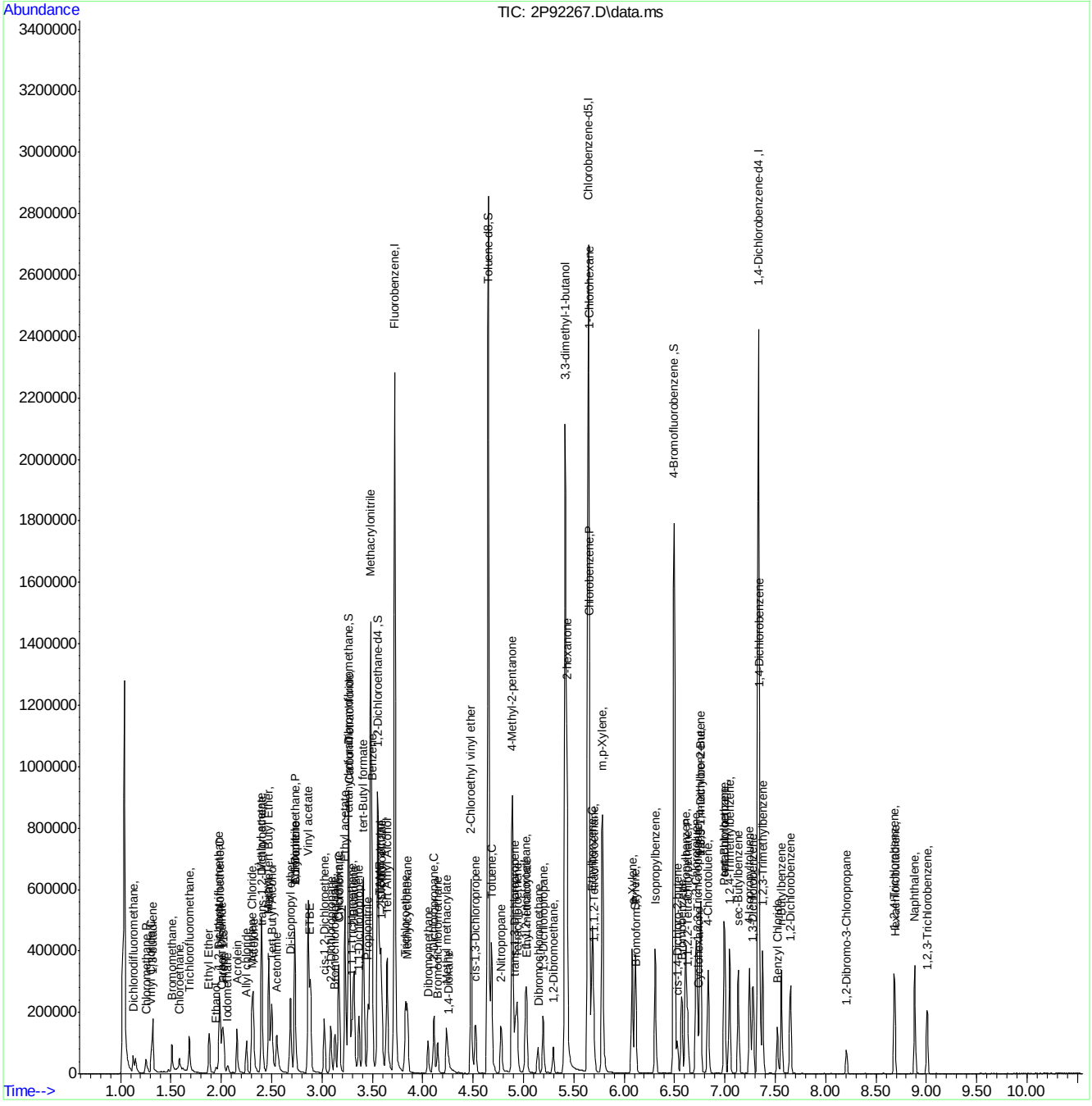
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.716	91	138409	9.86	ug/L		96
93) trans-1,4-Dichloro-2-B...	6.758	53	25118	7.23	ug/L		93
94) 1,2,3-Trichloropropane	6.726	110	24445	10.44	ug/L	#	75
95) Cyclohexanone	6.742	55	24028	39.78	ug/L		89
96) 4-Chlorotoluene	6.831	91	143924	9.80	ug/L		96
97) tert-Butylbenzene	6.993	91	87545	9.83	ug/L		91
99) 1,2,4-Trimethylbenzene	7.045	105	153377	9.78	ug/L		98
100) Pentachloroethane	6.998	167	15356	8.16	ug/L	#	48
101) sec-Butylbenzene	7.134	105	163120	9.48	ug/L		98
102) 4-Isopropyltoluene	7.244	119	145551	9.90	ug/L		97
103) 1,3-Dichlorobenzene	7.280	146	83984	9.71	ug/L		97
104) 1,2,3-Trimethylbenzene	7.374	105	157661	10.02	ug/L		97
105) 1,4-Dichlorobenzene	7.343	146	87924	9.52	ug/L		93
106) n-Butylbenzene	7.563	92	71211	9.59	ug/L		99
107) Benzyl Chloride	7.521	126	13387	9.02	ug/L		97
108) 1,2-Dichlorobenzene	7.651	146	77756	9.25	ug/L		96
109) 1,2-Dibromo-3-Chloropr...	8.206	75	12068	9.06	ug/L		81
110) Hexachlorobutadiene	8.687	225	13621	7.22	ug/L		84
111) 1,2,4-Trichlorobenzene	8.681	180	41466	8.91	ug/L		95
112) Naphthalene	8.885	128	165055	10.33	ug/L		100
113) 1,2,3-Trichlorobenzene	9.011	180	38421	8.74	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:09:52 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

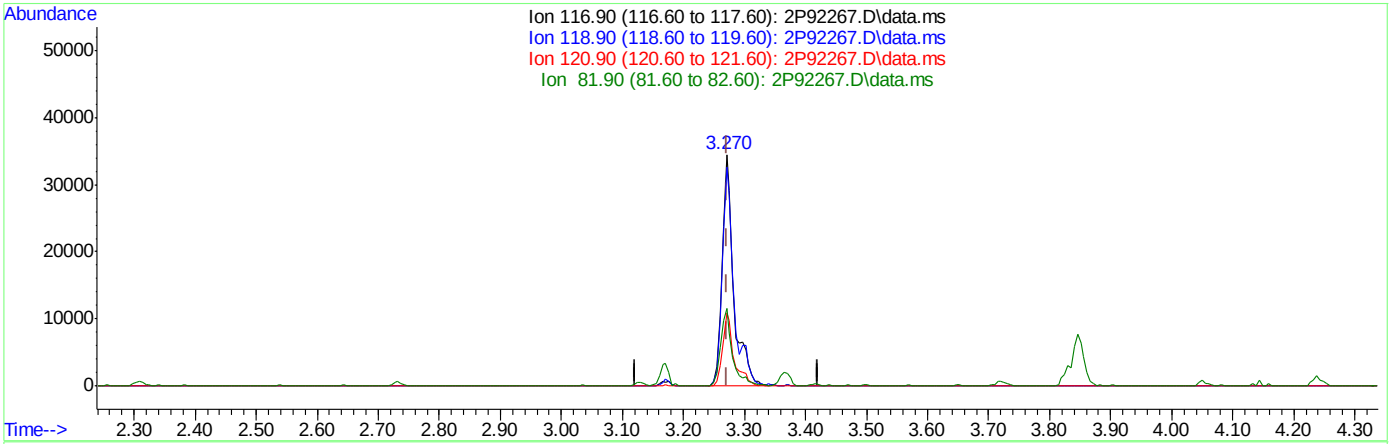
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92267.D **Analyst approved:** 08/24/22 11:11 Courtney Failla
Injection Time: 08/24/22 10:54 **Supervisor approved:** 08/25/22 11:34 Karen Watson

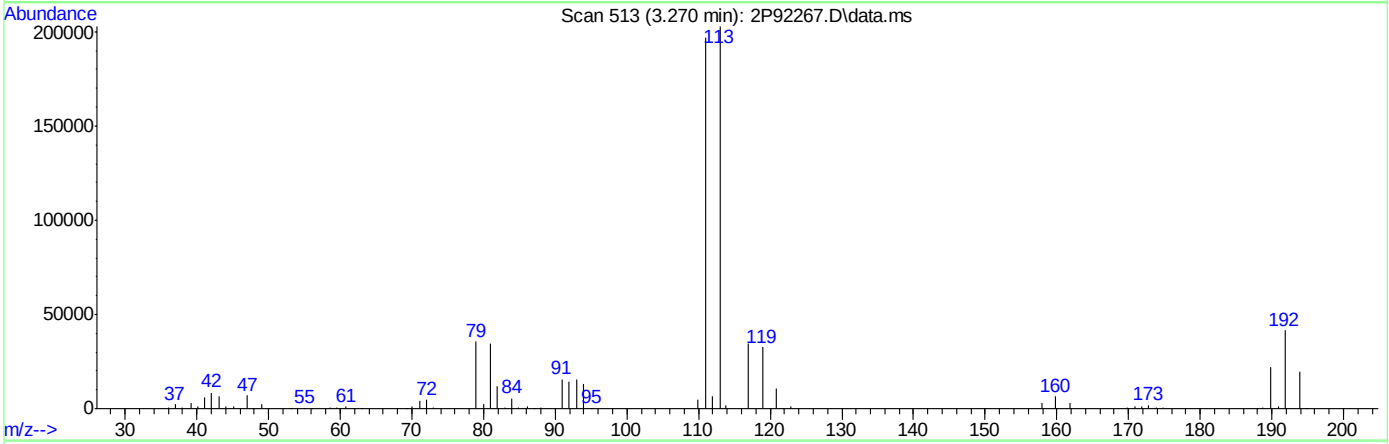
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 8.88ug/L

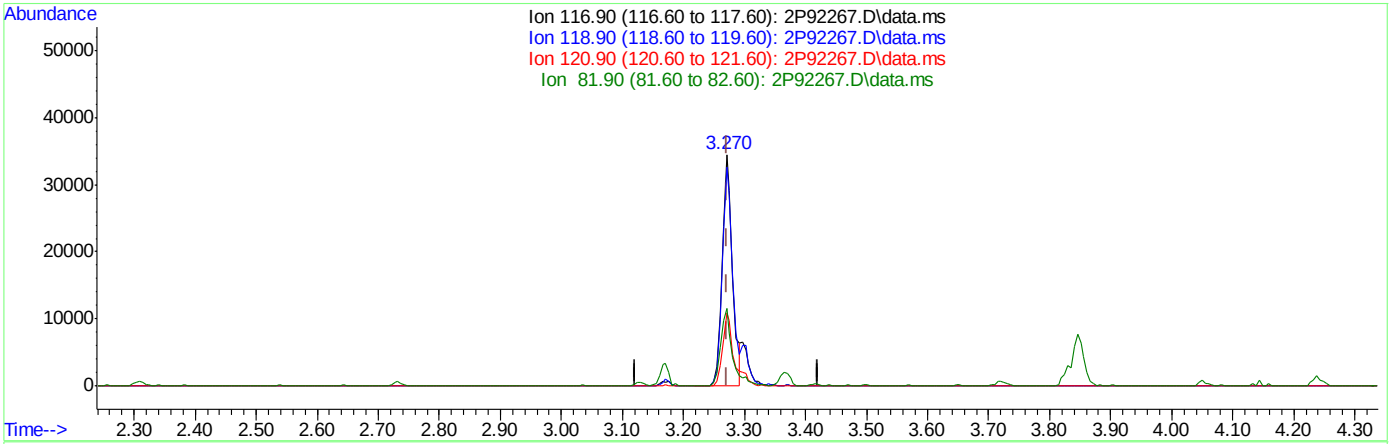
response 46995

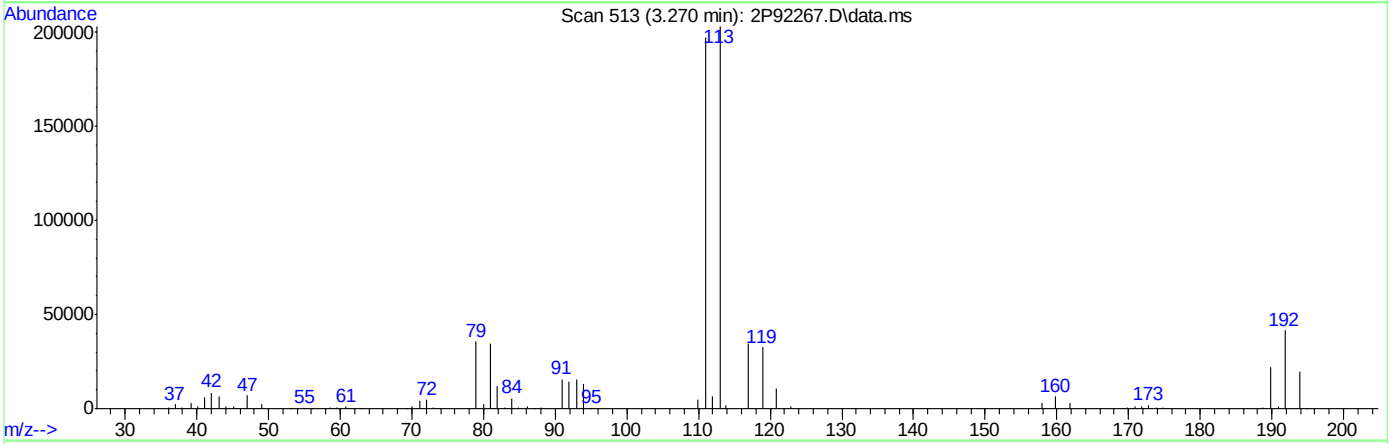
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.52
120.90	30.80	31.60
81.90	30.00	33.80

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 7.75ug/L m

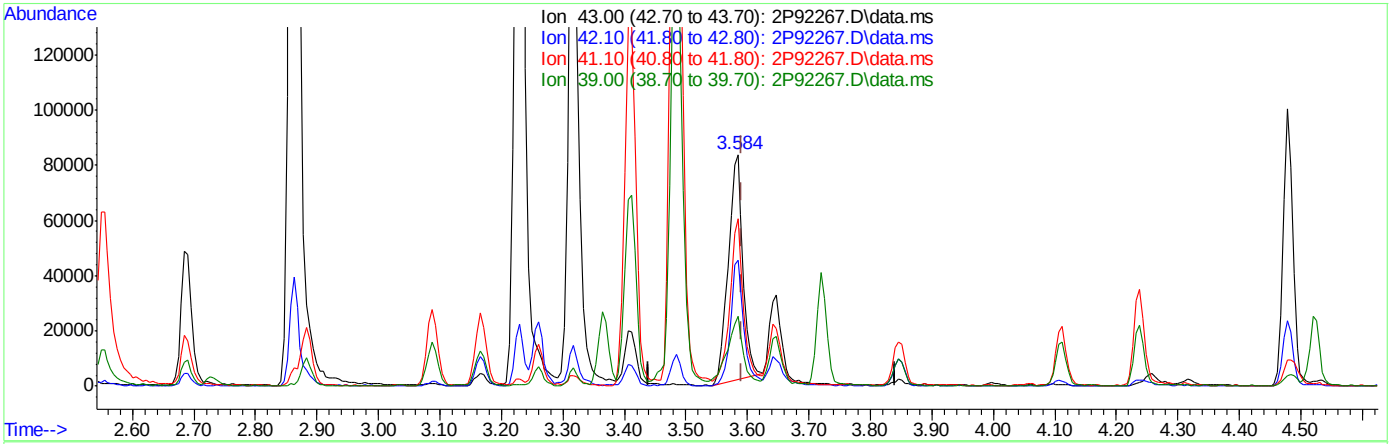
response 40996

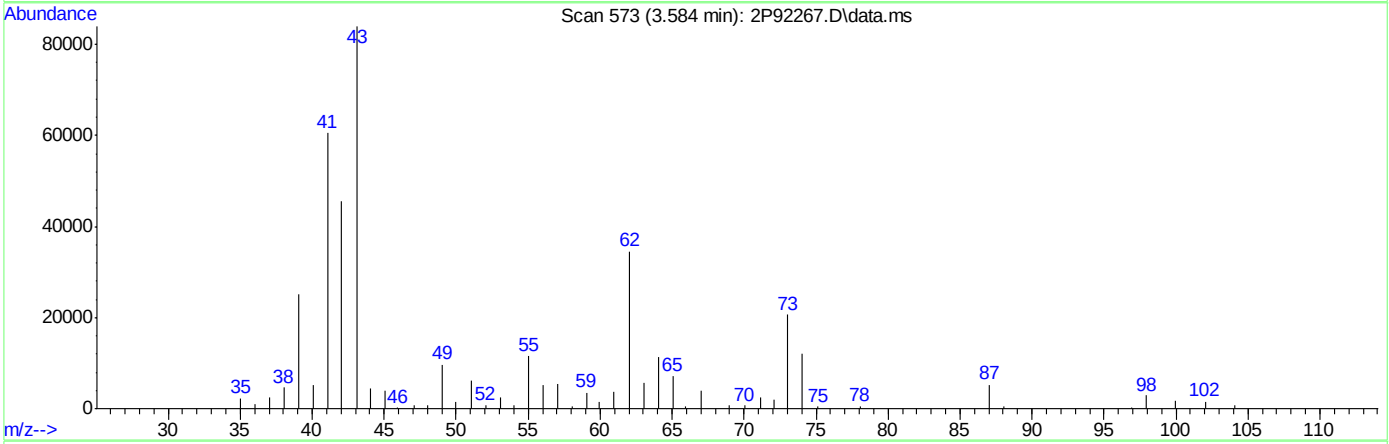
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.52
120.90	30.80	31.60
81.90	30.00	33.80

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 97.71ug/L

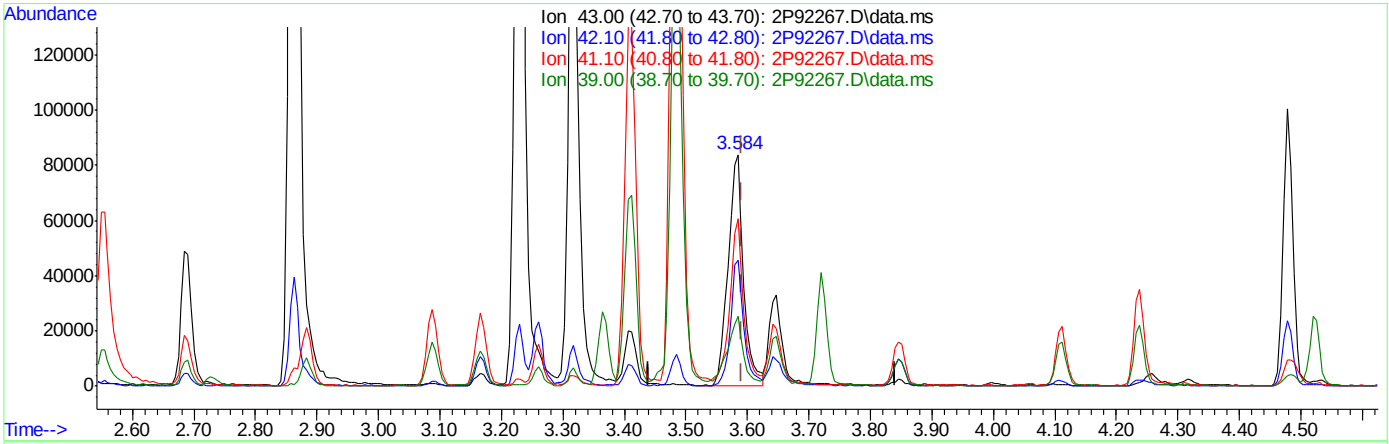
response 135320

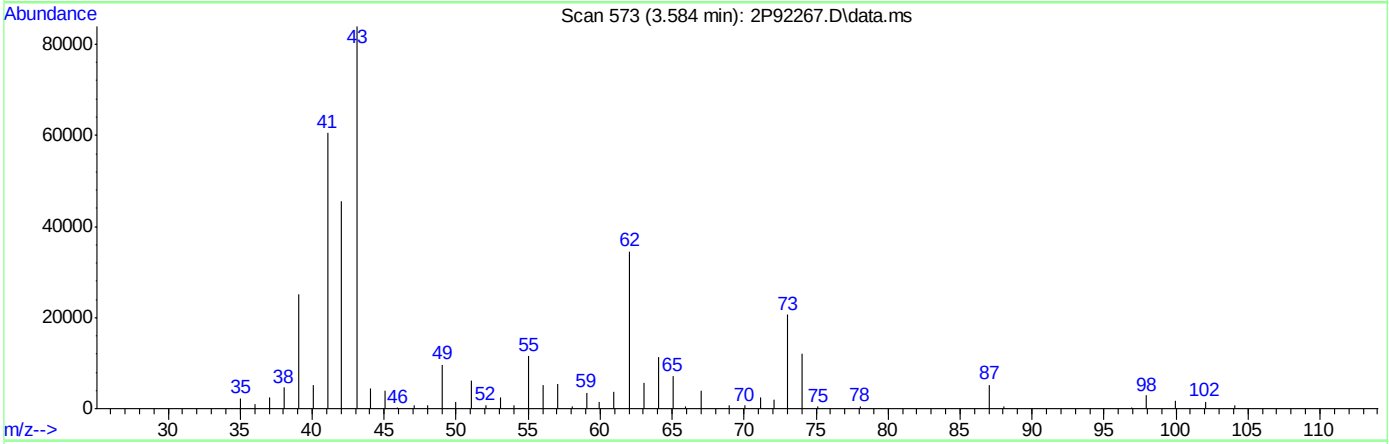
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	54.22
41.10	72.70	70.03
39.00	28.00	27.19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 106.86ug/L m

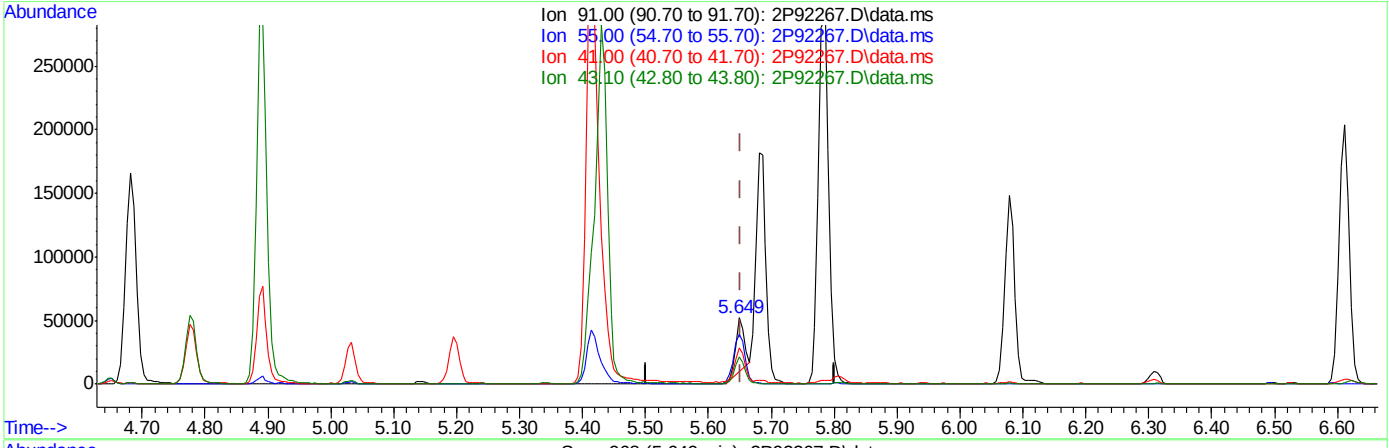
response 147999

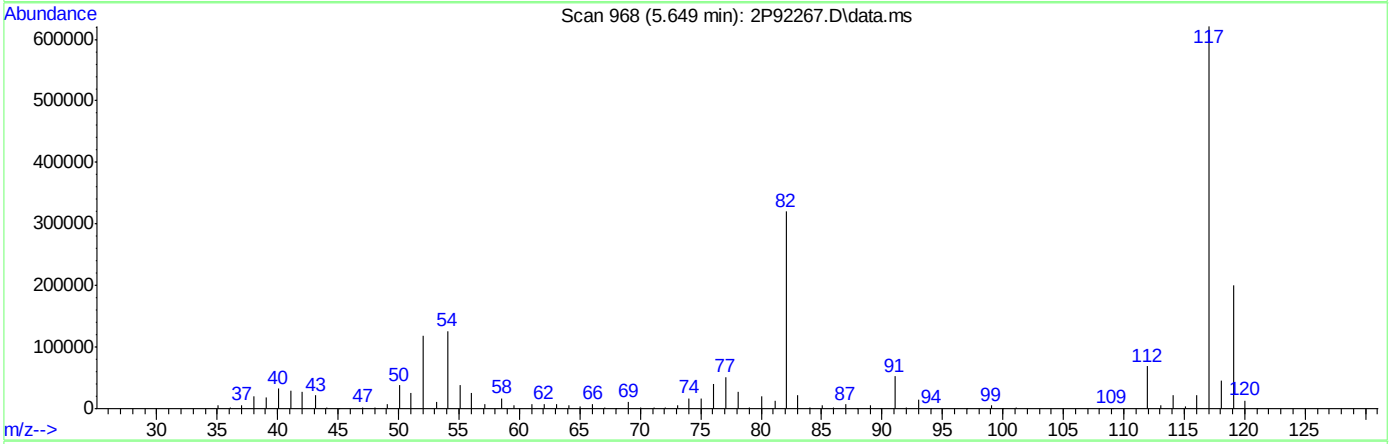
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	54.40
41.10	72.70	72.03
39.00	28.00	30.05

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 5.72ug/L

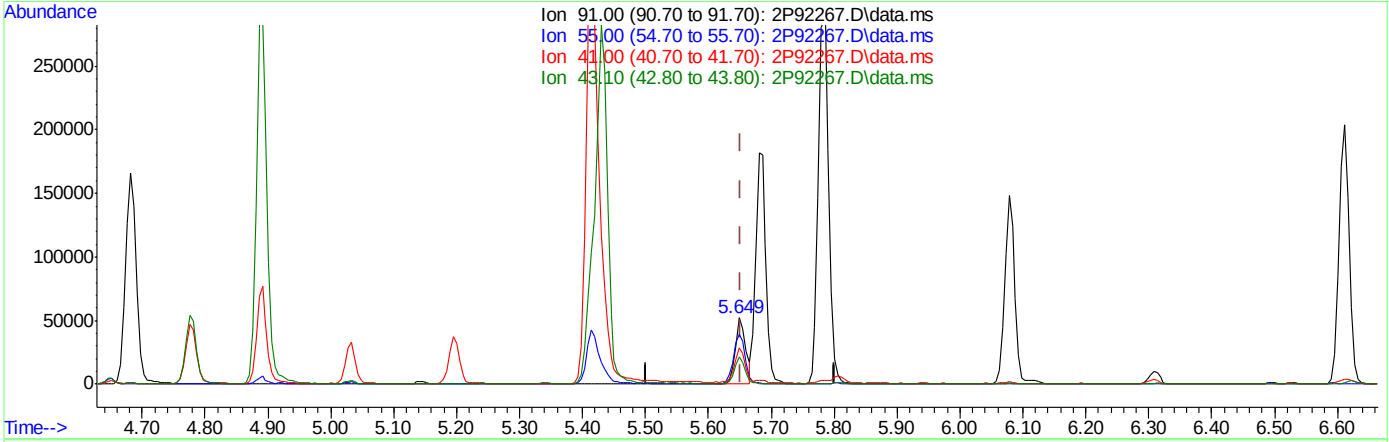
response 38889

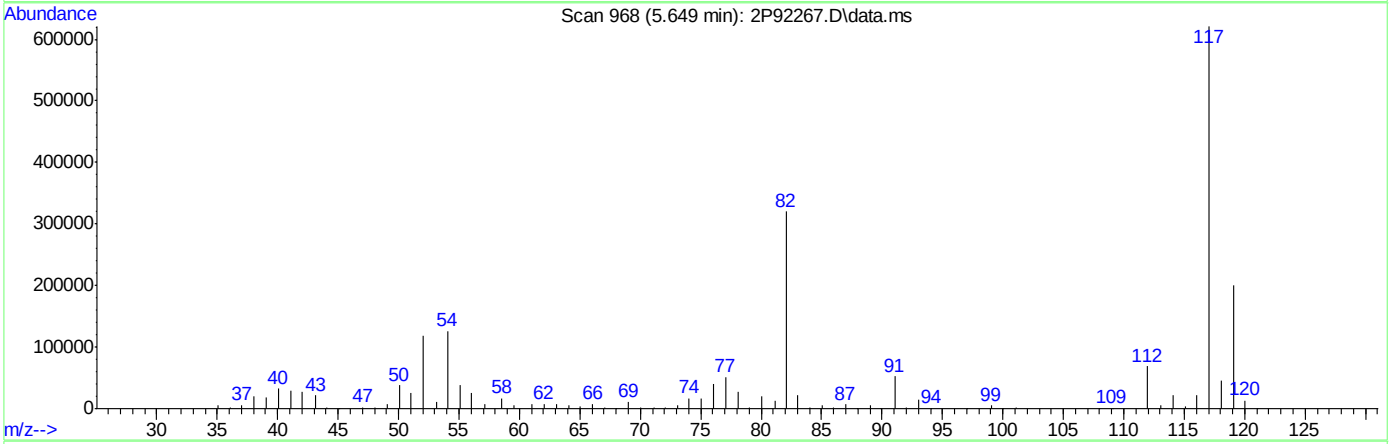
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	72.16#
41.00	83.00	51.98#
43.10	65.60	39.54#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92267.D
Acq On : 24 Aug 2022 10:54 am
Operator : courtnef
Sample : IC3560-3
Misc : MS52204,V2P3560,,,,,
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Aug 24 11:08:55 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92267.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 8.52ug/L m

response 57928

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	74.86#
41.00	83.00	55.14#
43.10	65.60	40.78#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.721	96	1325704	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	930860	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	422651	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.266	113	285574	47.67	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.34%				
49) 1,2-Dichloroethane-d4	3.554	65	393868	42.18	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 84.36%				
63) Toluene-d8	4.652	98	1284303	51.76	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.52%				
86) 4-Bromofluorobenzene	6.497	174	333389	47.45	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.90%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.128	85	77096	15.50	ug/L		98
3) Chloromethane	1.253	50	93714	12.69	ug/L		97
4) 1,3-butadiene	1.321	39	87202	13.18	ug/L		89
5) Vinyl Chloride	1.306	62	115463	17.42	ug/L		100
6) Bromomethane	1.510	94	73790	28.44	ug/L		98
7) Chloroethane	1.583	64	37143	16.25	ug/L		97
8) Trichlorofluoromethane	1.677	101	124851	21.09	ug/L		95
9) Ethyl Ether	1.881	59	109005	17.64	ug/L		84
10) Ethanol	1.959	45	69675	293.74	ug/L		96
11) 1,2-Dichlorotrifluoroe...	1.980	67	102439	19.01	ug/L		90
12) 1,1-Dichloroethene	1.985	61	151994	17.66	ug/L		90
13) Freon 113	2.017	101	90678	20.41	ug/L		95
14) Carbon Disulfide	2.006	76	244396	22.29	ug/L		89
15) Iodomethane	2.064	142	62420	10.29	ug/L		92
16) Acrolein	2.158	56	210466	97.36	ug/L		100
17) Allyl chloride	2.252	41	108742	13.96	ug/L		92
18) Methylene Chloride	2.304	49	154112	12.84	ug/L		77
19) Acetone	2.320	43	376457	81.24	ug/L		91
20) Methyl acetate	2.398	43	774276	73.89	ug/L		88
21) trans-1,2-Dichloroethene	2.404	61	154585	17.60	ug/L		82
22) Hexane	2.472	56	69763	15.32	ug/L	#	90
23) Methyl Tert Butyl Ether	2.472	73	358780	22.06	ug/L		85
24) Tert Butyl Alcohol	2.503	59	469044	191.97	ug/L		90
25) Acetonitrile	2.555	41	248077	146.67	ug/L		99
26) Di-isopropyl ether	2.686	45	322589	14.89	ug/L		92
27) Chloroprene	2.733	53	465554	13.59	ug/L		92
28) 1,1-Dichloroethane	2.733	63	203817	18.67	ug/L		95
29) Acrylonitrile	2.733	52	367659	82.91	ug/L		81
30) ETBE	2.885	59	387201	18.51	ug/L		91
31) Vinyl acetate	2.864	43	1320515	84.01	ug/L		99
32) cis-1,2-Dichloroethene	3.026	96	119758	22.72	ug/L	#	83
33) 2,2-Dichloropropane	3.088	77	154206	21.30	ug/L		98
34) Bromochloromethane	3.130	128	54354	23.11	ug/L	#	63
35) Cyclohexane	3.167	56	182281	16.26	ug/L	#	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.172	83	203626	21.14	ug/L		92
37) Ethyl acetate	3.230	43	1004635	79.07	ug/L		94
38) Tetrahydrofuran	3.261	42	76422	14.36	ug/L		88
40) Carbon Tetrachloride	3.271	117	124530m	22.99	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	174565	22.65	ug/L		94
42) 2-Butanone	3.318	43	638467	82.43	ug/L		75
43) 1,1-Dichloropropene	3.365	75	153922	21.33	ug/L		85
44) tert-Butyl formate	3.413	59	415583	105.24	ug/L		96
45) Propionitrile	3.460	54	408073	173.53	ug/L		99
46) Methacrylonitrile	3.486	41	1090165	147.60	ug/L		98
47) Benzene	3.496	78	482180	21.62	ug/L	#	68
48) TAME	3.569	73	354042	22.50	ug/L		85
50) Isobutyl alcohol	3.585	43	448045m	316.08	ug/L		
51) 1,2-Dichloroethane	3.590	62	173894	18.33	ug/L		93
52) Tert Amyl Alcohol	3.648	59	380919	206.90	ug/L		91
53) Trichloroethene	3.826	95	121308	22.23	ug/L		95
54) Methylcyclohexane	3.846	83	156889	20.51	ug/L	#	81
55) Dibromomethane	4.050	93	69383	22.61	ug/L		95
56) 1,2-Dichloropropane	4.113	63	120480	19.59	ug/L		88
57) Bromodichloromethane	4.144	83	124513	22.82	ug/L		96
58) Methyl methacrylate	4.239	41	136664	15.74	ug/L	#	76
59) 1,4-Dioxane	4.254	88	81389	481.77	ug/L		80
60) 2-Chloroethyl vinyl ether	4.479	63	496175	98.80	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	163437	21.87	ug/L		80
64) Toluene	4.683	91	521365	23.95	ug/L		100
65) 2-Nitropropane	4.777	41	202424	78.60	ug/L		97
66) 4-Methyl-2-pentanone	4.892	43	1036780	88.52	ug/L		92
67) trans-1,3-Dichloropropene	4.918	75	149978	23.29	ug/L		84
68) Tetrachloroethene	4.939	166	113299	21.46	ug/L		92
69) Ethyl methacrylate	5.028	69	188909	24.38	ug/L	#	76
70) 1,1,2-Trichloroethane	5.018	83	91877	23.92	ug/L		89
71) Dibromochloromethane	5.143	129	92491	25.87	ug/L		96
72) 1,3-Dichloropropane	5.195	76	199298	22.95	ug/L		80
73) 1,2-Dibromoethane	5.295	107	111178	24.26	ug/L		98
74) 3,3-dimethyl-1-butanol	5.415	57	2383970	932.90	ug/L	#	86
75) 2-hexanone	5.431	43	1225288	86.32	ug/L		86
76) 1-Chlorohexane	5.650	91	159255m	22.78	ug/L		
77) Ethylbenzene	5.681	91	575170	24.15	ug/L		96
78) Chlorobenzene	5.655	112	314726	24.52	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.697	131	97248	25.50	ug/L		96
80) m,p-Xylene	5.786	91	914430	48.58	ug/L		98
81) o-Xylene	6.079	91	454953	24.60	ug/L		97
82) Styrene	6.110	104	352756	25.40	ug/L		94
83) Bromoform	6.115	173	49656	24.19	ug/L		96
84) Isopropylbenzene	6.309	105	521551	24.50	ug/L		98
87) cis-1,4-Dichloro-2-butene	6.528	53	57642	20.01	ug/L	#	80
88) n-Propylbenzene	6.612	91	621145	26.18	ug/L		100
89) Bromobenzene	6.570	156	126861	25.91	ug/L		93
90) 1,1,2,2-Tetrachloroethane	6.628	83	175535	27.11	ug/L		95
91) 1,3,5-Trimethylbenzene	6.758	105	430610	26.01	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

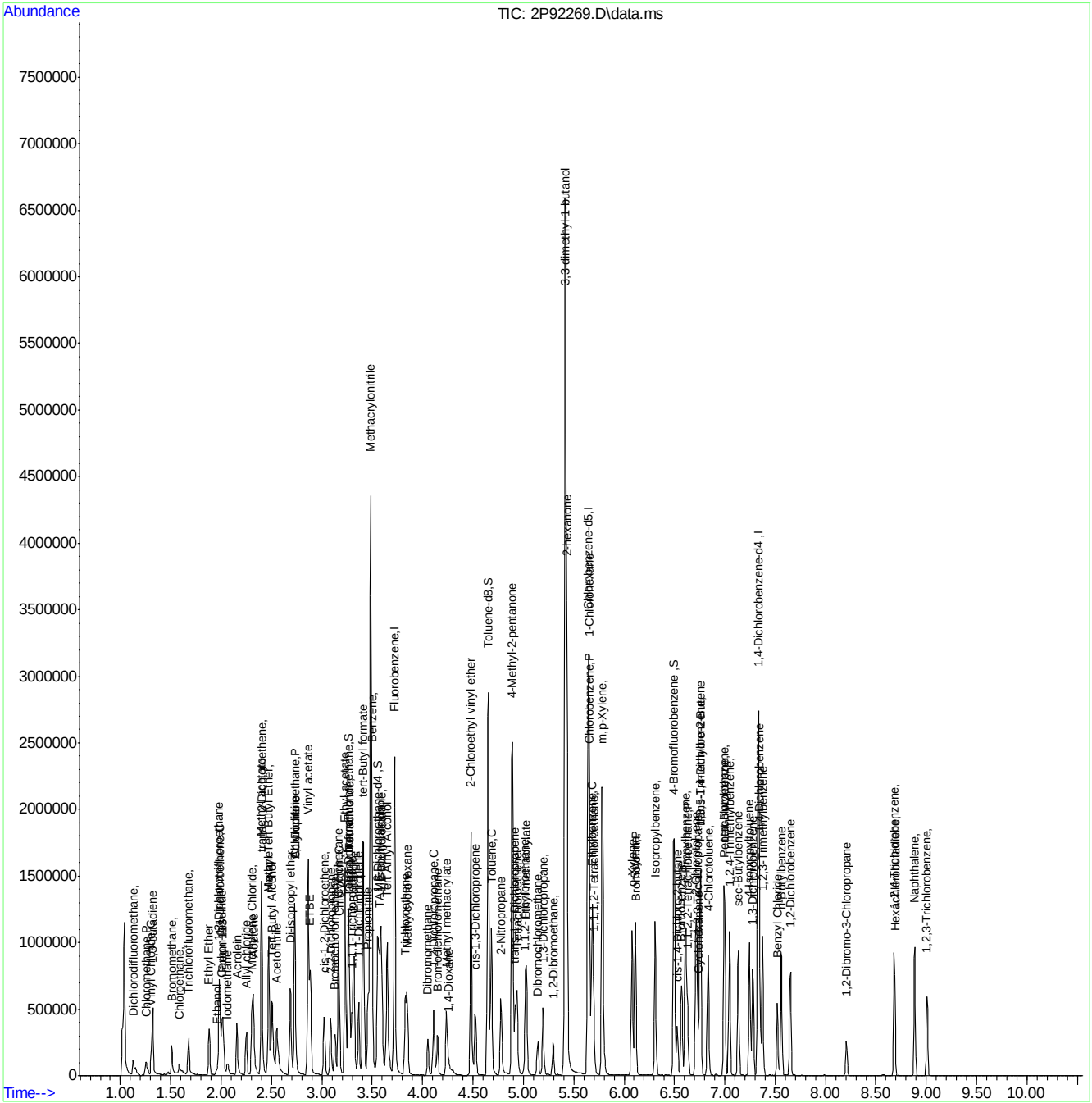
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.711	91	376298	26.13	ug/L		97
93) trans-1,4-Dichloro-2-B...	6.758	53	73989	20.12	ug/L	#	77
94) 1,2,3-Trichloropropane	6.727	110	64863	26.99	ug/L		81
95) Cyclohexanone	6.743	55	73475	118.56	ug/L		86
96) 4-Chlorotoluene	6.837	91	399875	26.55	ug/L		94
97) tert-Butylbenzene	6.994	91	239014	26.16	ug/L		93
99) 1,2,4-Trimethylbenzene	7.046	105	428428	26.62	ug/L		97
100) Pentachloroethane	6.999	167	54726	26.17	ug/L		94
101) sec-Butylbenzene	7.135	105	457520	25.91	ug/L		98
102) 4-Isopropyltoluene	7.245	119	407507	27.03	ug/L		97
103) 1,3-Dichlorobenzene	7.276	146	226641	25.54	ug/L		99
104) 1,2,3-Trimethylbenzene	7.375	105	424412	26.30	ug/L		96
105) 1,4-Dichlorobenzene	7.344	146	234307	24.72	ug/L		98
106) n-Butylbenzene	7.558	92	197921	25.99	ug/L		99
107) Benzyl Chloride	7.522	126	47558	27.49	ug/L		93
108) 1,2-Dichlorobenzene	7.652	146	215663	25.02	ug/L		97
109) 1,2-Dibromo-3-Chloropr...	8.207	75	39734	27.13	ug/L	#	77
110) Hexachlorobutadiene	8.688	225	36422	18.81	ug/L		85
111) 1,2,4-Trichlorobenzene	8.682	180	111484	23.35	ug/L		94
112) Naphthalene	8.886	128	473328	28.88	ug/L		99
113) 1,2,3-Trichlorobenzene	9.007	180	104125	23.10	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:41:33 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

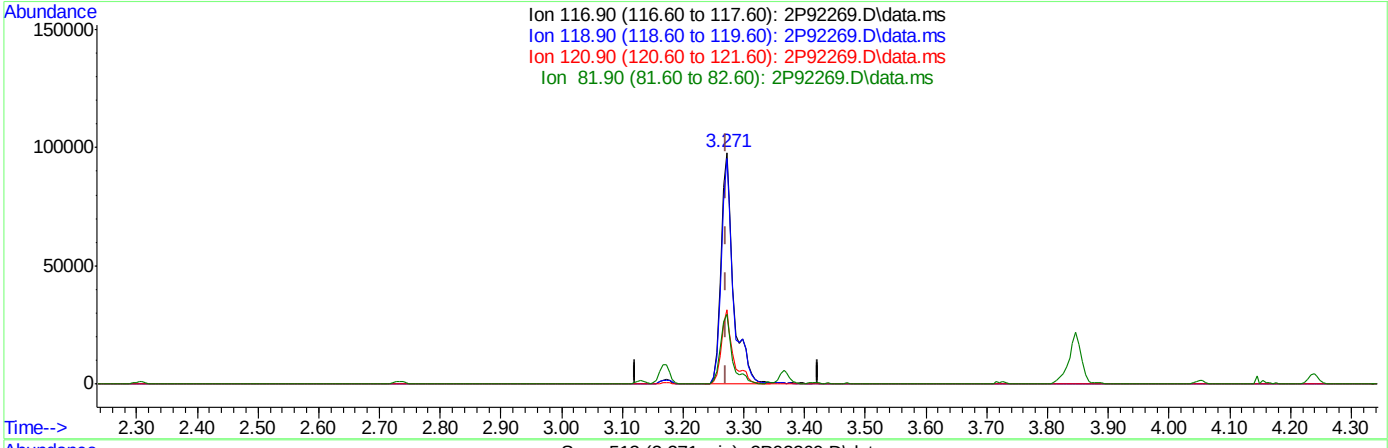
Sample Number: V2P3560-IC3560
Lab FileID: 2P92269.D
Injection Time: 08/24/22 11:26
Method: SW846 8260D
Analyst approved: 08/24/22 11:42 Courtney Failla
Supervisor approved: 08/25/22 11:34 Karen Watson

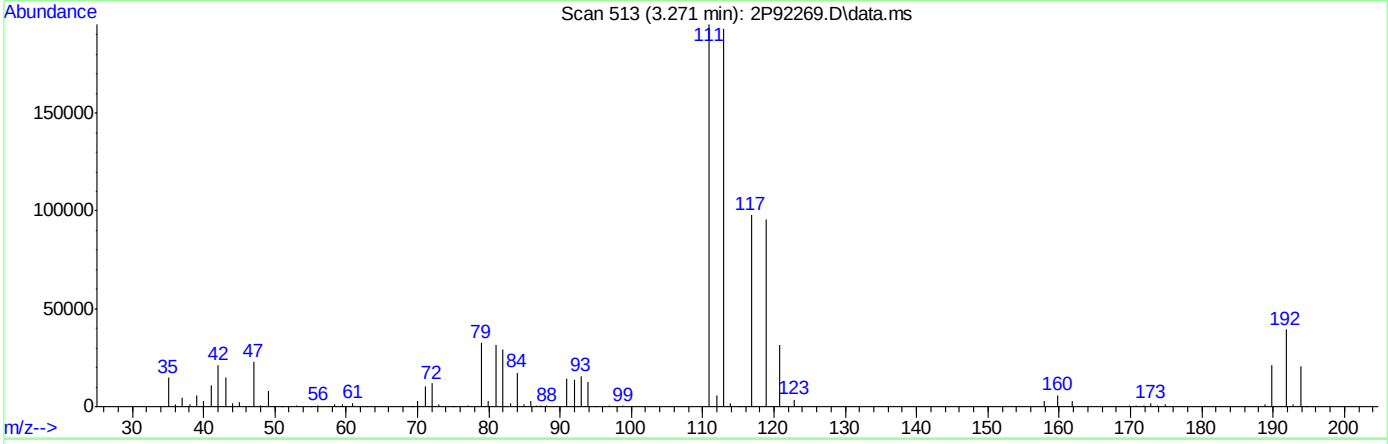
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.000) 26.06ug/L

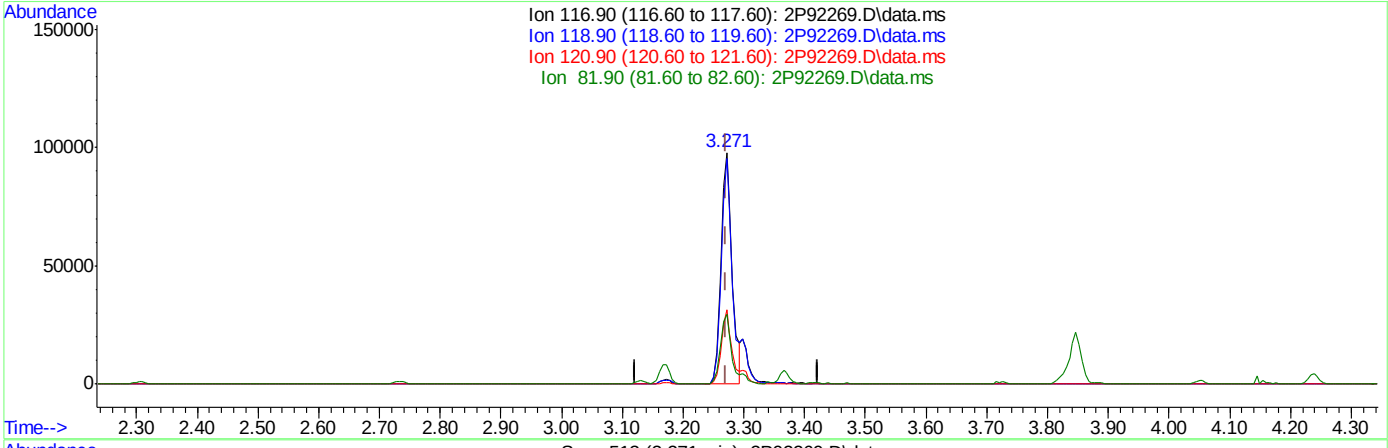
response 141131

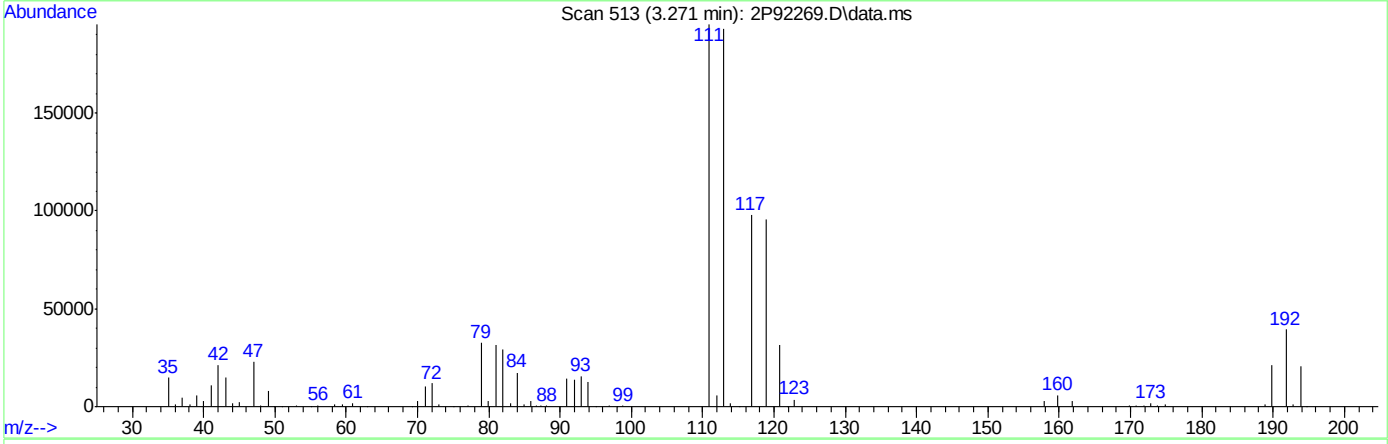
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.57
120.90	30.80	32.29
81.90	30.00	29.84

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (-0.000) 22.99ug/L m

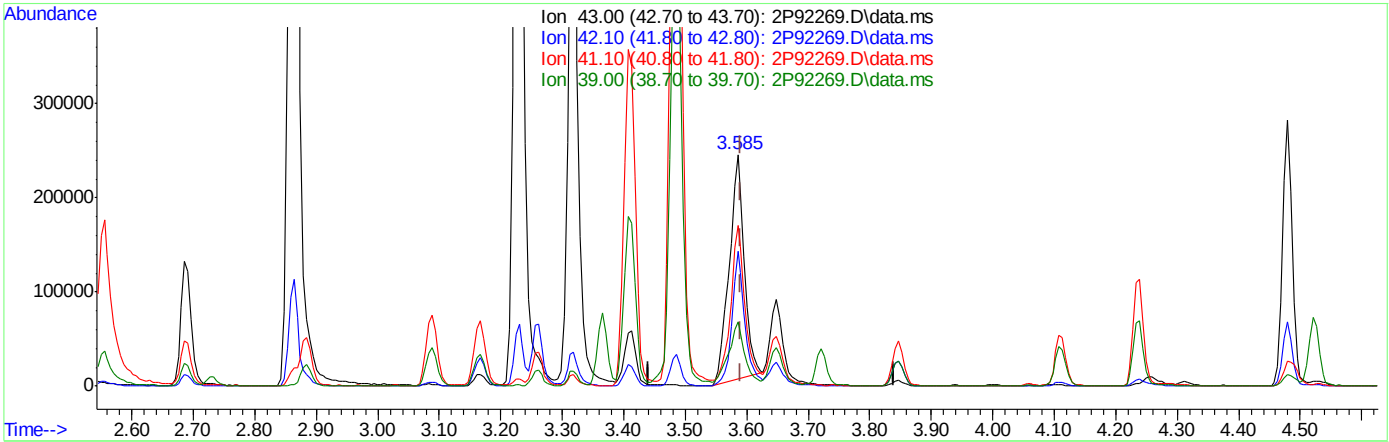
response 124530

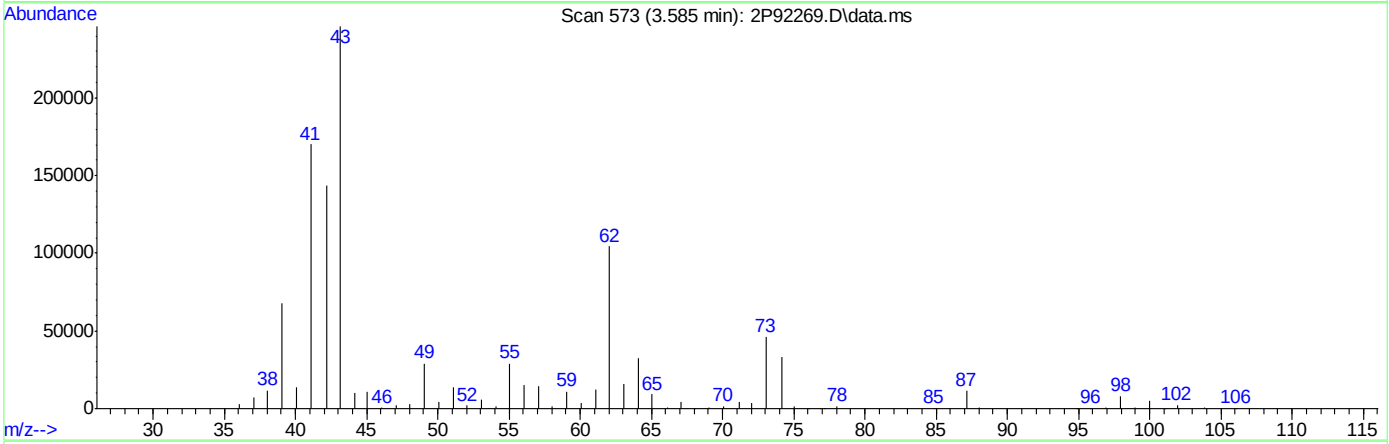
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	97.57
120.90	30.80	32.29
81.90	30.00	30.06

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(50) Isobutyl alcohol

3.585min (-0.006) 287.64ug/L

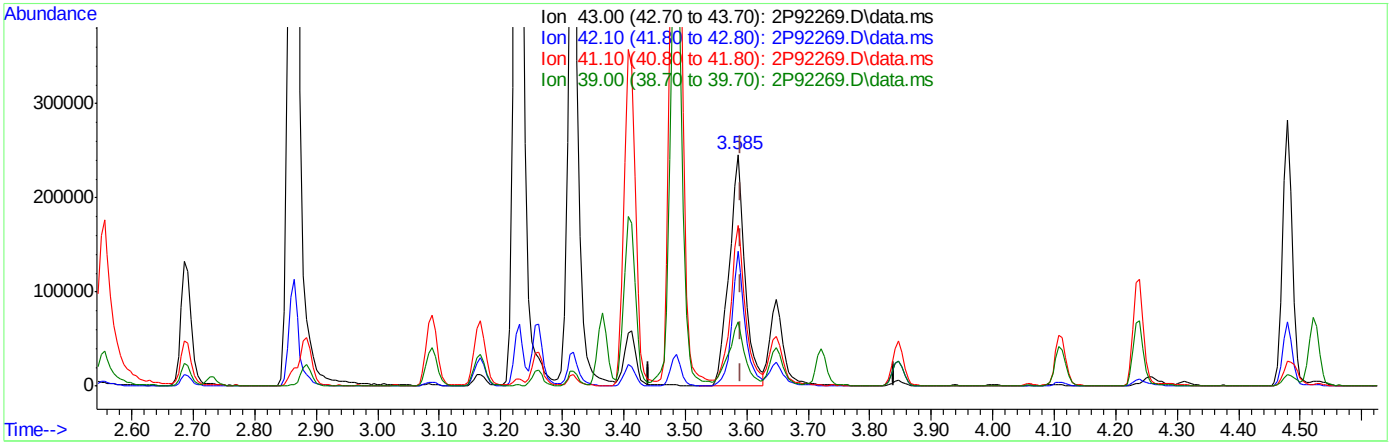
response 407736

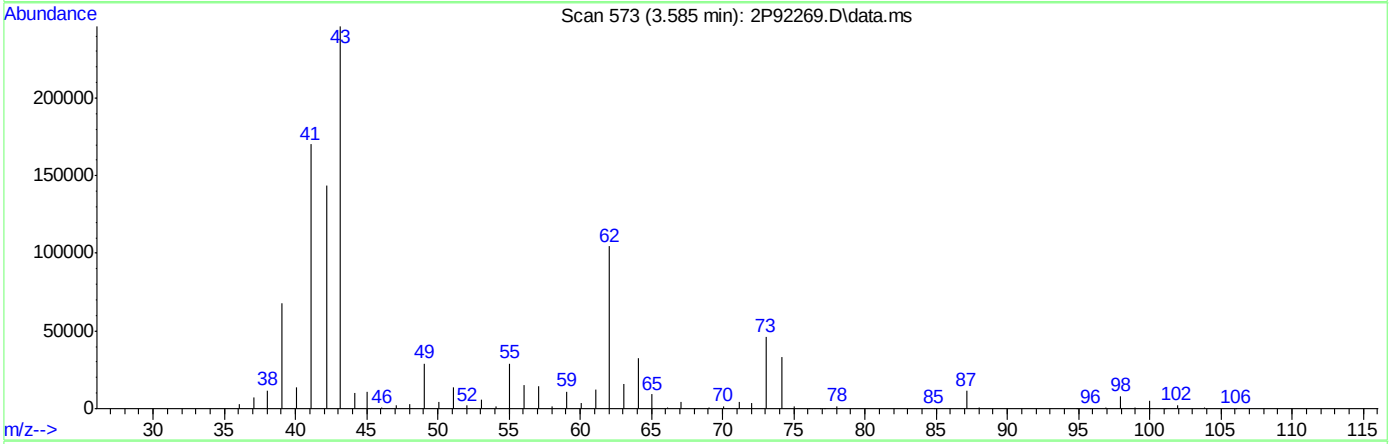
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	58.20
41.10	72.70	66.85
39.00	28.00	26.10

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(50) Isobutyl alcohol

3.585min (-0.006) 316.08ug/L m

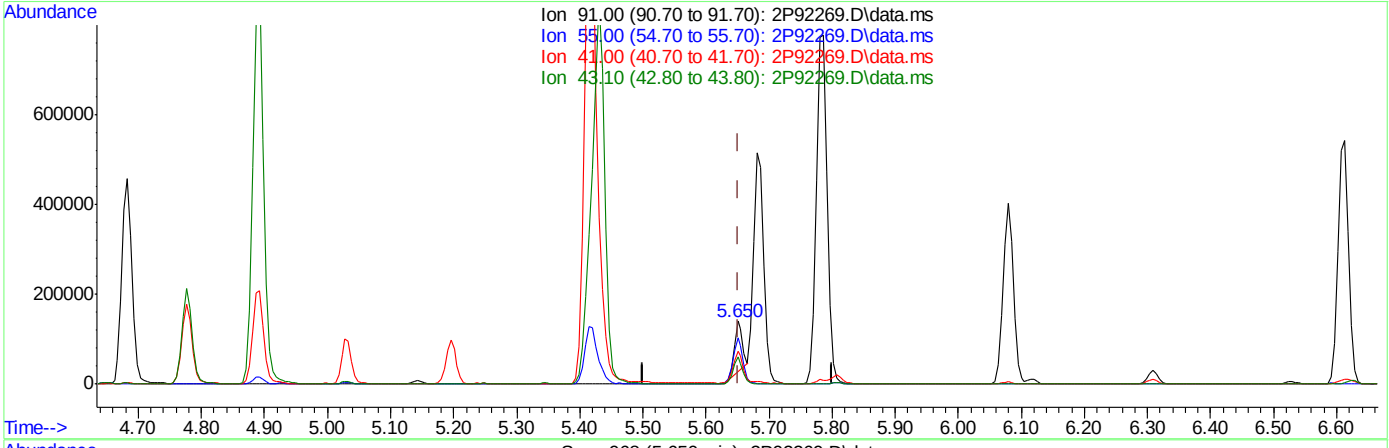
response 448045

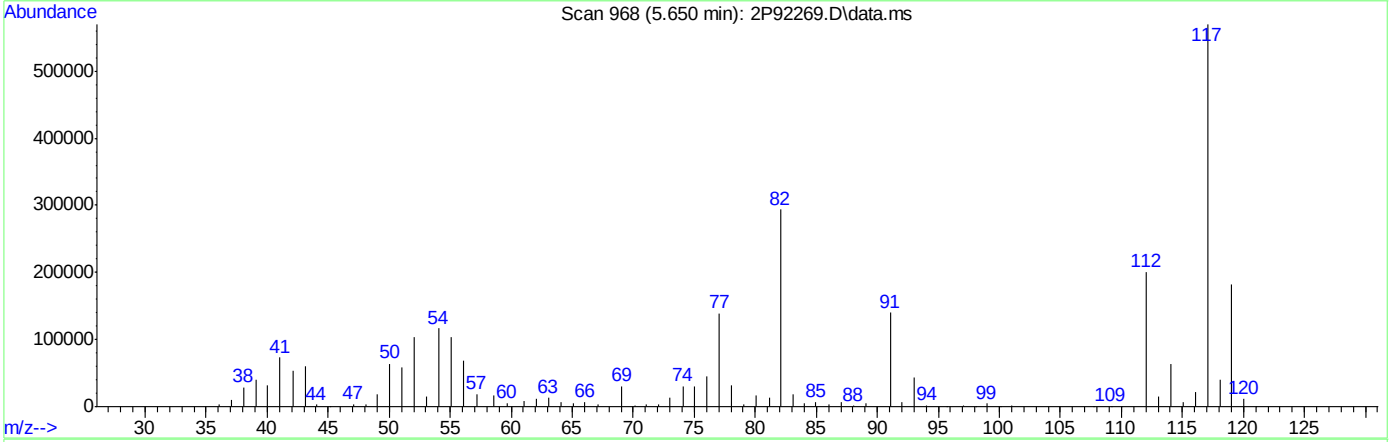
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	58.24
41.10	72.70	69.14
39.00	28.00	27.71

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(76) 1-Chlorohexane

5.650min (-0.001) 15.37ug/L

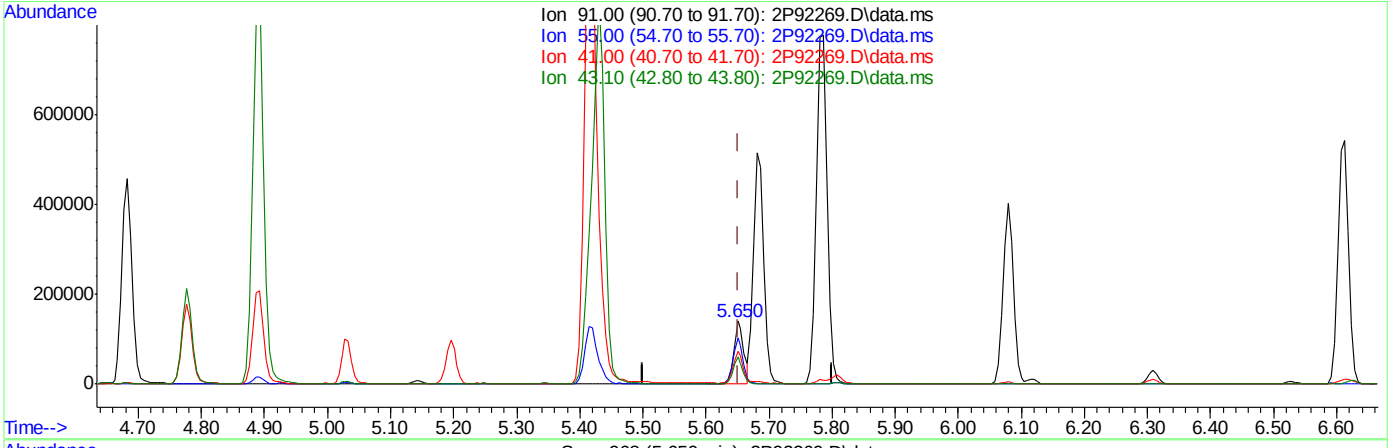
response 107400

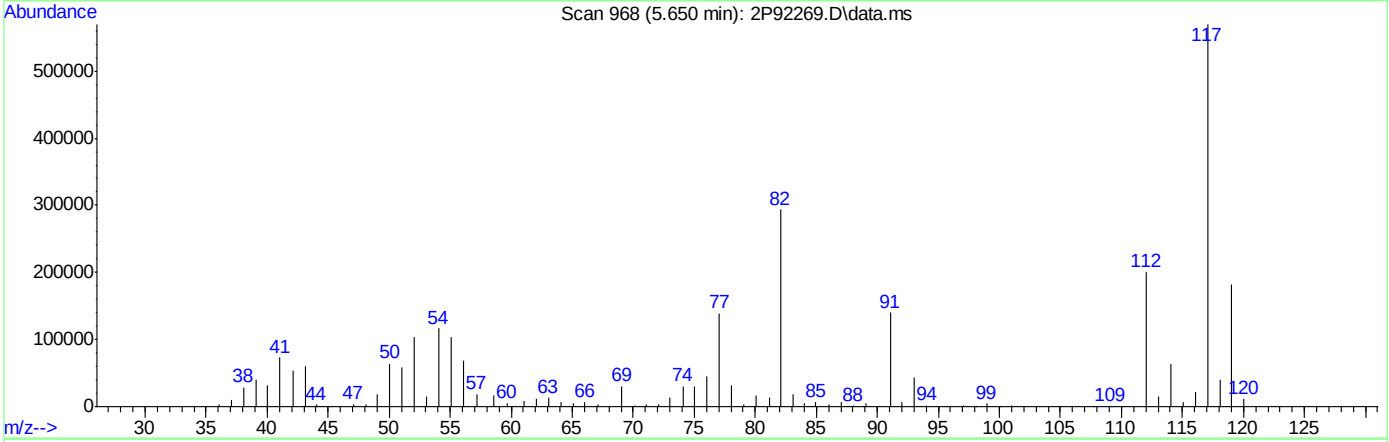
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	69.25#
41.00	83.00	49.14#
43.10	65.60	41.40#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92269.D
Acq On : 24 Aug 2022 11:26 am
Operator : courtnef
Sample : IC3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Aug 24 11:40:16 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92269.D\data.ms

(76) 1-Chlorohexane

5.650min (-0.001) 22.78ug/L m

response 159255

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	73.94#
41.00	83.00	52.20#
43.10	65.60	43.01#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.720	96	1362226	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.644	117	951717	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	439370	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.265	113	292655	47.54	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.08%				
49) 1,2-Dichloroethane-d4	3.553	65	413626	43.11	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 86.22%				
63) Toluene-d8	4.651	98	1320237	52.04	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 104.08%				
86) 4-Bromofluorobenzene	6.496	174	339626	46.50	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.00%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.127	85	159680	31.25	ug/L		98
3) Chloromethane	1.252	50	165955	21.88	ug/L		92
4) 1,3-butadiene	1.320	39	158185	23.23	ug/L		86
5) Vinyl Chloride	1.305	62	211254	31.03	ug/L		100
6) Bromomethane	1.509	94	118429	44.42	ug/L		99
7) Chloroethane	1.582	64	60604	25.80	ug/L		97
8) Trichlorofluoromethane	1.676	101	230991	37.97	ug/L		97
9) Ethyl Ether	1.880	59	191869	30.22	ug/L		84
10) Ethanol	1.963	45	114850m	480.53	ug/L		
11) 1,2-Dichlorotrifluoroe...	1.979	67	185736	33.54	ug/L		90
12) 1,1-Dichloroethene	1.984	61	270948	30.63	ug/L		87
13) Freon 113	2.016	101	177946	38.97	ug/L		96
14) Carbon Disulfide	2.005	76	462036	39.02	ug/L		86
15) Iodomethane	2.063	142	127120	20.28	ug/L		95
16) Acrolein	2.157	56	356140	158.99	ug/L		99
17) Allyl chloride	2.251	41	195990	24.48	ug/L		91
18) Methylene Chloride	2.303	49	249008	20.69	ug/L		76
19) Acetone	2.319	43	600710	126.80	ug/L		90
20) Methyl acetate	2.397	43	1297415	120.49	ug/L		89
21) trans-1,2-Dichloroethene	2.403	61	267114	29.60	ug/L		81
22) Hexane	2.470	56	141208	30.17	ug/L		91
23) Methyl Tert Butyl Ether	2.470	73	615215	36.81	ug/L		92
24) Tert Butyl Alcohol	2.507	59	767732	305.79	ug/L		89
25) Acetonitrile	2.554	41	380436	223.64	ug/L		96
26) Di-isopropyl ether	2.690	45	566157	25.42	ug/L		92
27) Chloroprene	2.732	53	778732	22.12	ug/L		91
28) 1,1-Dichloroethane	2.732	63	354298	31.59	ug/L		96
29) Acrylonitrile	2.732	52	608025	133.44	ug/L		81
30) ETBE	2.883	59	672969	31.31	ug/L		92
31) Vinyl acetate	2.863	43	2309020	142.96	ug/L		99
32) cis-1,2-Dichloroethene	3.025	96	208708	38.54	ug/L		85
33) 2,2-Dichloropropane	3.087	77	282200	36.69	ug/L		99
34) Bromochloromethane	3.129	128	92231	38.17	ug/L	#	67
35) Cyclohexane	3.166	56	344840	29.93	ug/L	#	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.171	83	359870	36.35	ug/L		92
37) Ethyl acetate	3.229	43	1688270	129.32	ug/L		94
38) Tetrahydrofuran	3.260	42	127818	23.37	ug/L		91
40) Carbon Tetrachloride	3.270	117	226621m	40.72	ug/L		
41) 1,1,1-Trichloroethane	3.297	97	311098	39.28	ug/L		93
42) 2-Butanone	3.317	43	1007592	126.31	ug/L		79
43) 1,1-Dichloropropene	3.364	75	271461	36.61	ug/L		84
44) tert-Butyl formate	3.412	59	790496	182.49	ug/L		93
45) Propionitrile	3.464	54	661145	271.68	ug/L		98
46) Methacrylonitrile	3.485	41	1834343	240.18	ug/L		98
47) Benzene	3.495	78	838308	36.58	ug/L		76
48) TAME	3.568	73	616154	38.11	ug/L		81
50) Isobutyl alcohol	3.584	43	731054m	501.90	ug/L		
51) 1,2-Dichloroethane	3.589	62	302289	31.01	ug/L		94
52) Tert Amyl Alcohol	3.652	59	634596	335.44	ug/L		89
53) Trichloroethene	3.830	95	211819	37.77	ug/L		93
54) Methylcyclohexane	3.845	83	308352	39.24	ug/L	#	82
55) Dibromomethane	4.049	93	120616	38.26	ug/L		93
56) 1,2-Dichloropropane	4.112	63	206603	32.69	ug/L		89
57) Bromodichloromethane	4.149	83	231330	39.22	ug/L		96
58) Methyl methacrylate	4.238	41	235387	25.91	ug/L	#	78
59) 1,4-Dioxane	4.258	88	127377	733.78	ug/L		81
60) 2-Chloroethyl vinyl ether	4.478	63	885147	168.96	ug/L		81
61) cis-1,3-Dichloropropene	4.525	75	298711	37.50	ug/L		76
64) Toluene	4.682	91	900051	40.44	ug/L		99
65) 2-Nitropropane	4.776	41	391161	139.11	ug/L		96
66) 4-Methyl-2-pentanone	4.891	43	1722379	143.84	ug/L		92
67) trans-1,3-Dichloropropene	4.922	75	275482	40.33	ug/L	#	65
68) Tetrachloroethene	4.938	166	194956	36.11	ug/L		90
69) Ethyl methacrylate	5.032	69	334716	42.26	ug/L	#	73
70) 1,1,2-Trichloroethane	5.022	83	157963	40.23	ug/L		85
71) Dibromochloromethane	5.142	129	170758	44.29	ug/L		95
72) 1,3-Dichloropropane	5.194	76	345339	38.90	ug/L		81
73) 1,2-Dibromoethane	5.294	107	194280	41.47	ug/L		92
74) 3,3-dimethyl-1-butanol	5.419	57	3980563	1523.55	ug/L	#	86
75) 2-hexanone	5.430	43	1985347	136.80	ug/L		76
76) 1-Chlorohexane	5.649	91	288409m	40.36	ug/L		
77) Ethylbenzene	5.686	91	1006237	41.32	ug/L		96
78) Chlorobenzene	5.654	112	539871	41.13	ug/L		94
79) 1,1,1,2-Tetrachloroethane	5.696	131	176443	44.04	ug/L		95
80) m,p-Xylene	5.785	91	1605683	83.44	ug/L		99
81) o-Xylene	6.078	91	790889	41.83	ug/L		99
82) Styrene	6.109	104	626072	44.09	ug/L		95
83) Bromoform	6.120	173	92559	40.56	ug/L		95
84) Isopropylbenzene	6.308	105	929375	42.70	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.527	53	104216	33.29	ug/L	#	76
88) n-Propylbenzene	6.611	91	1104132	44.76	ug/L		98
89) Bromobenzene	6.569	156	220000	43.23	ug/L		92
90) 1,1,2,2-Tetrachloroethane	6.632	83	298296	44.31	ug/L		95
91) 1,3,5-Trimethylbenzene	6.757	105	771308	44.81	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

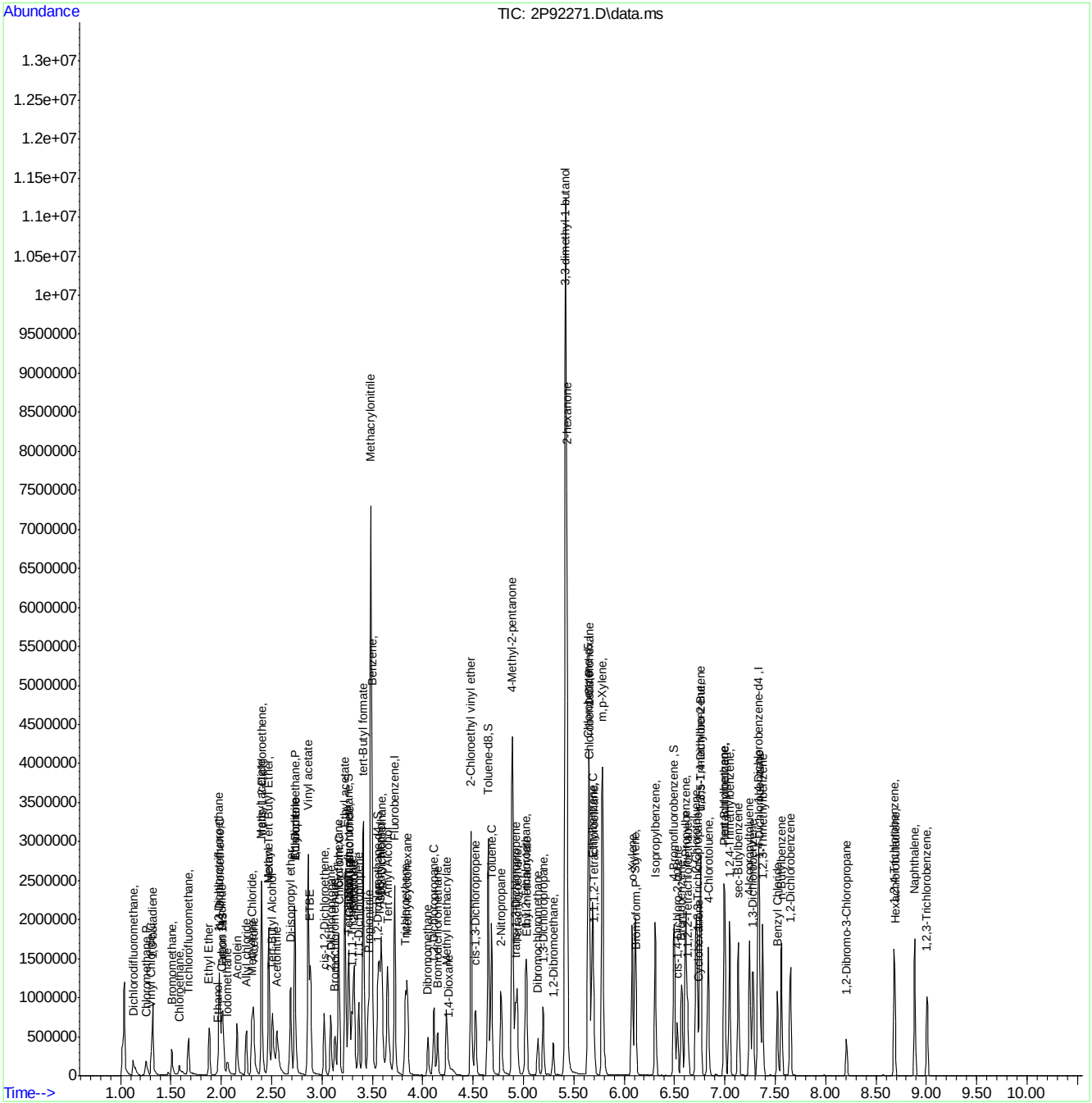
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.716	91	660067	44.09	ug/L		97
93)	trans-1,4-Dichloro-2-B...	6.757	53	130821	33.18	ug/L	#	73
94)	1,2,3-Trichloropropane	6.726	110	109718	43.92	ug/L		80
95)	Cyclohexanone	6.742	55	115127	178.71	ug/L		89
96)	4-Chlorotoluene	6.836	91	684076	43.68	ug/L		93
97)	tert-Butylbenzene	6.993	91	422484	44.48	ug/L		93
99)	1,2,4-Trimethylbenzene	7.045	105	748777	44.76	ug/L		98
100)	Pentachloroethane	6.998	167	97587	42.03	ug/L	#	89
101)	sec-Butylbenzene	7.134	105	829266	45.17	ug/L		98
102)	4-Isopropyltoluene	7.244	119	732772	46.76	ug/L		97
103)	1,3-Dichlorobenzene	7.280	146	390179	42.30	ug/L		96
104)	1,2,3-Trimethylbenzene	7.374	105	747003	44.53	ug/L		97
105)	1,4-Dichlorobenzene	7.343	146	411435	41.76	ug/L		98
106)	n-Butylbenzene	7.563	92	360016	45.48	ug/L		98
107)	Benzyl Chloride	7.521	126	99212	48.53	ug/L	#	91
108)	1,2-Dichlorobenzene	7.651	146	370843	41.39	ug/L		98
109)	1,2-Dibromo-3-Chloropr...	8.206	75	70256	43.50	ug/L	#	77
110)	Hexachlorobutadiene	8.687	225	70656	35.09	ug/L		93
111)	1,2,4-Trichlorobenzene	8.681	180	201331	40.56	ug/L		93
112)	Naphthalene	8.885	128	836609	49.10	ug/L		99
113)	1,2,3-Trichlorobenzene	9.005	180	185569	39.60	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:16:18 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

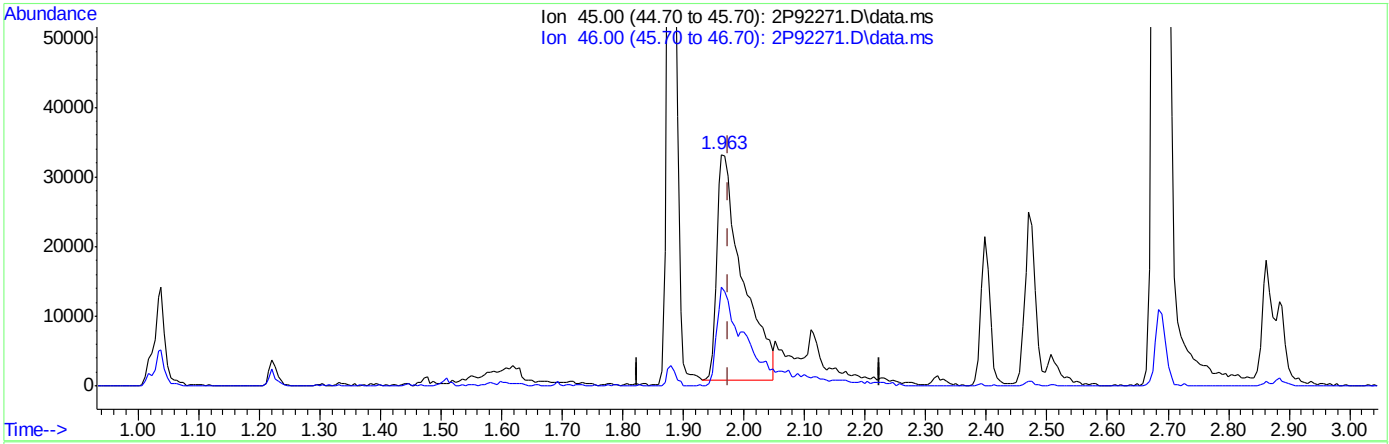
Sample Number: V2P3560-ICC3560 **Method:** SW846 8260D
Lab FileID: 2P92271.D **Analyst approved:** 08/24/22 12:17 Courtney Failla
Injection Time: 08/24/22 11:59 **Supervisor approved:** 08/25/22 11:34 Karen Watson

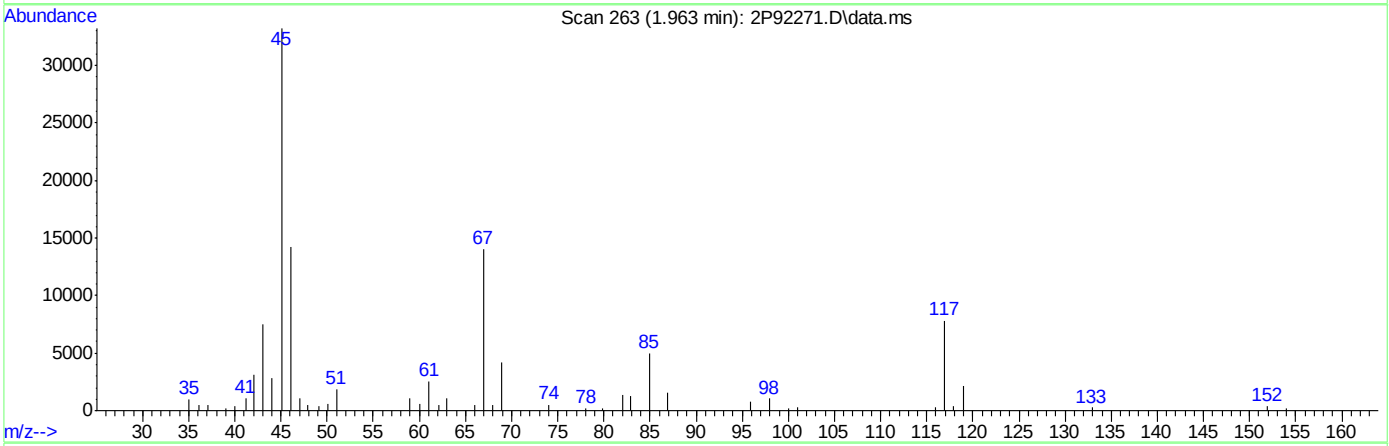
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.96	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.58	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(10) Ethanol

1.963min (-0.011) 391.35ug/L

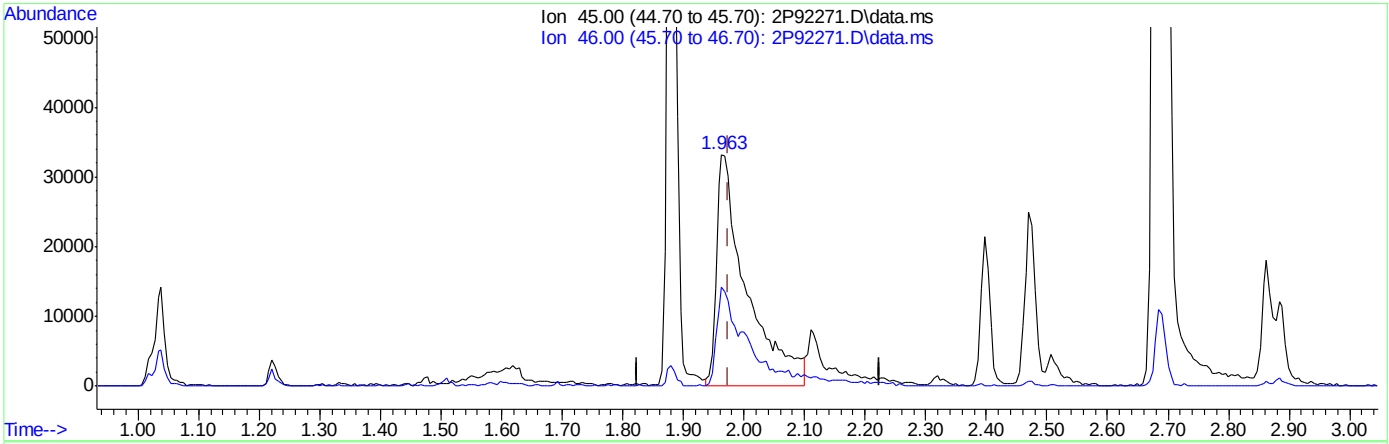
response 94418

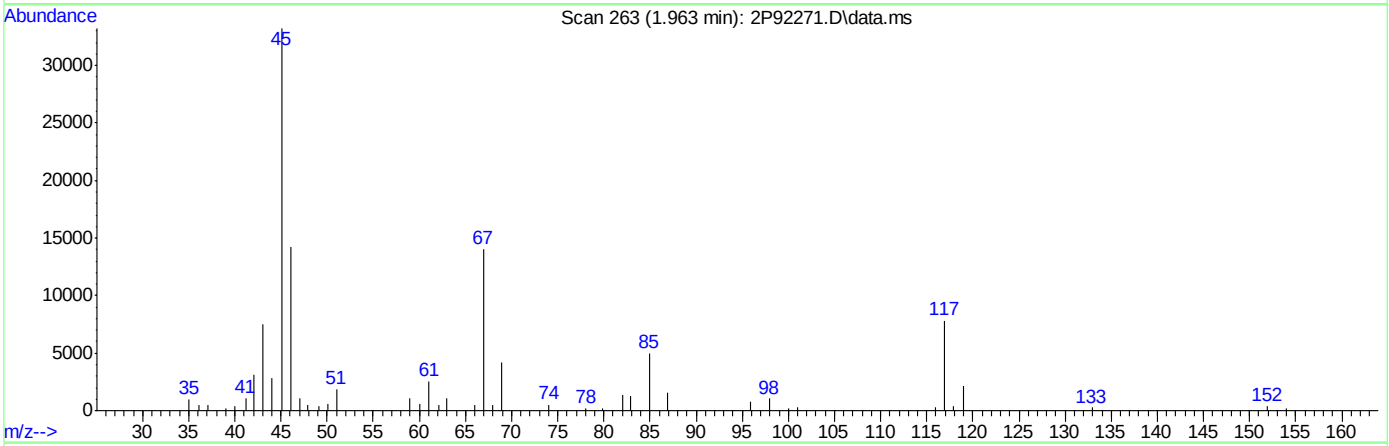
Ion	Exp%	Act%
45.00	100	100
46.00	41.80	43.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(10) Ethanol

1.963min (-0.011) 480.53ug/L m

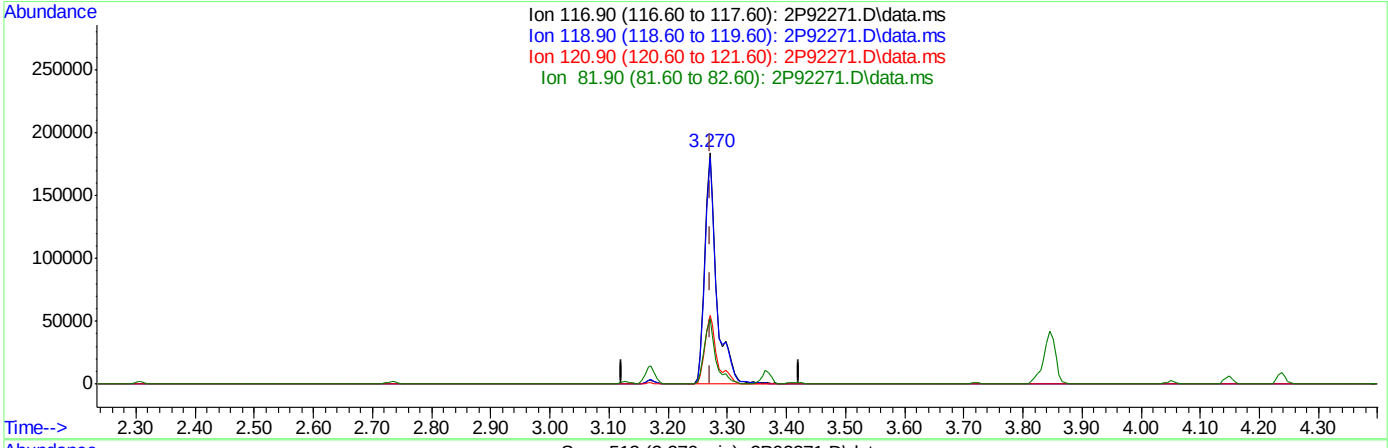
response 114850

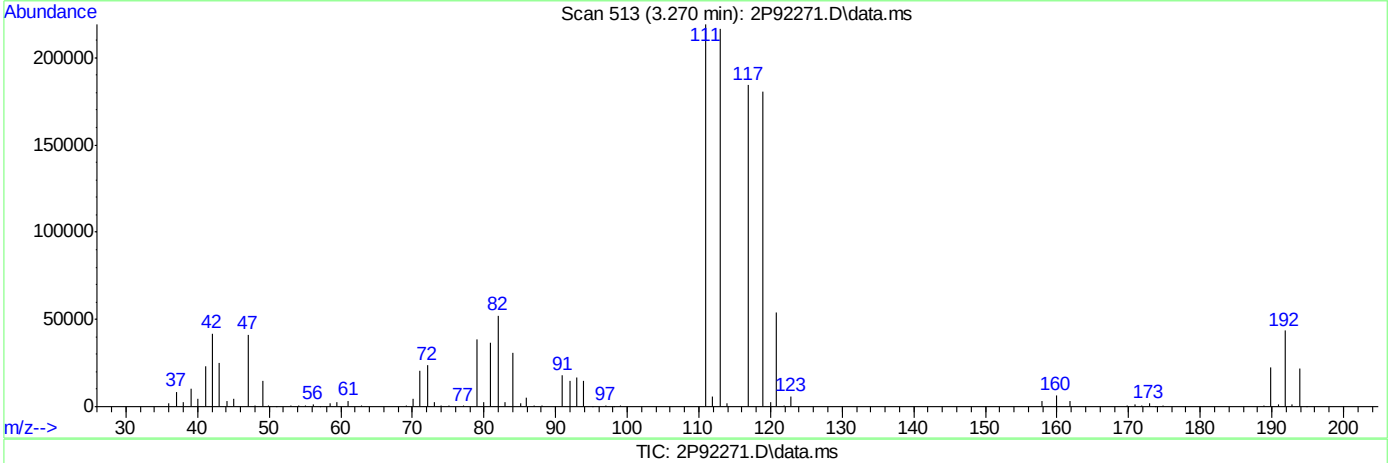
Ion	Exp%	Act%
45.00	100	100
46.00	41.80	42.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 46.91ug/L

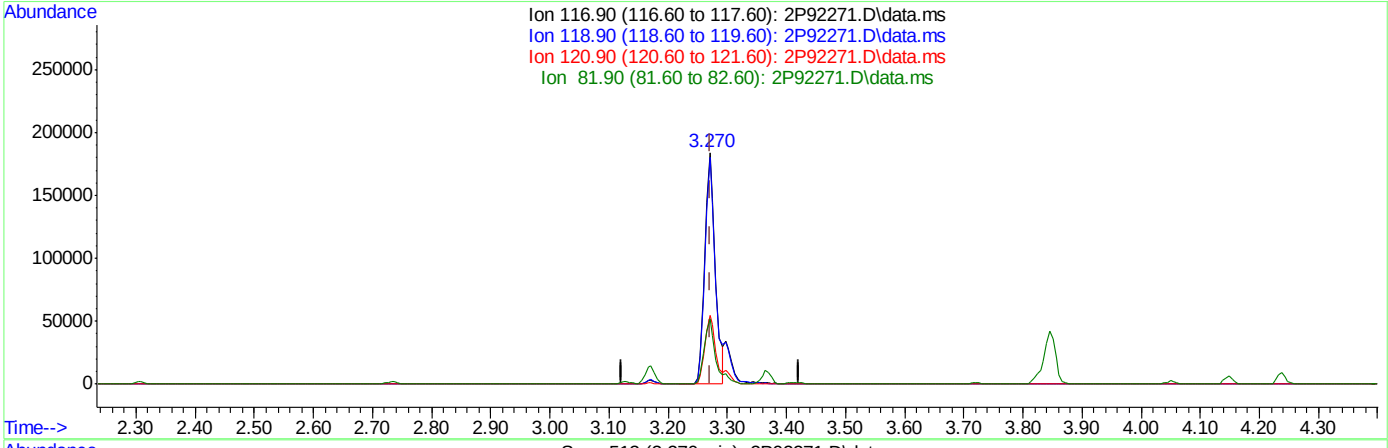
response 261066

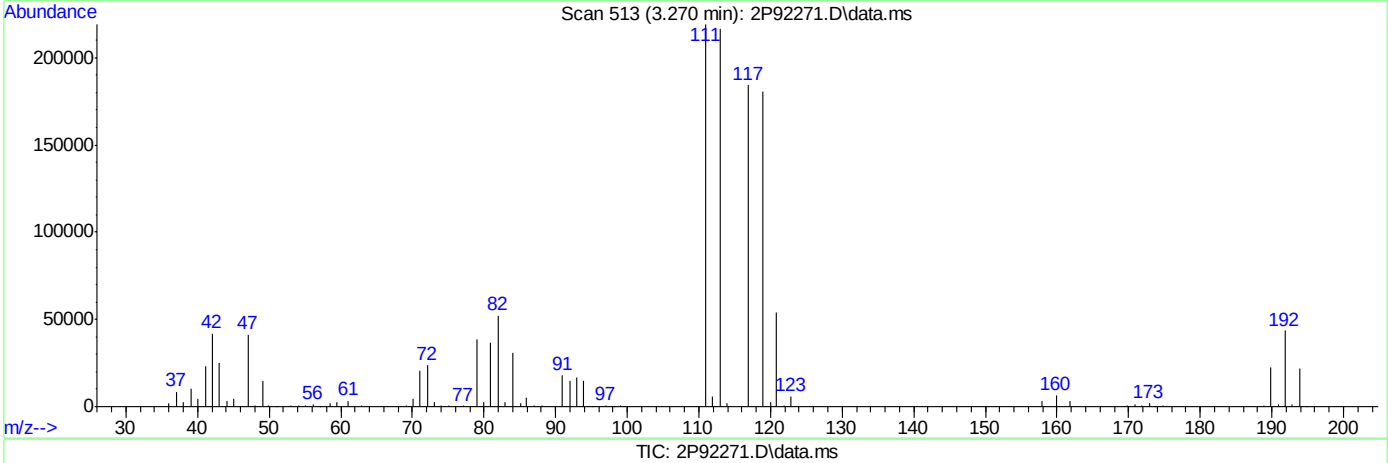
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.02
120.90	30.80	29.46
81.90	30.00	28.10

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.001) 40.72ug/L m

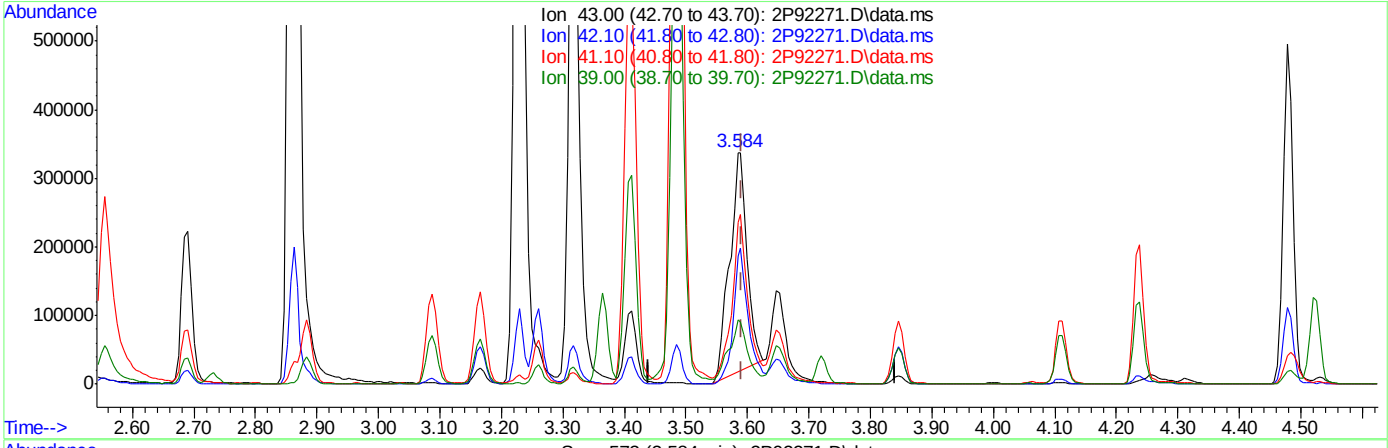
response 226621

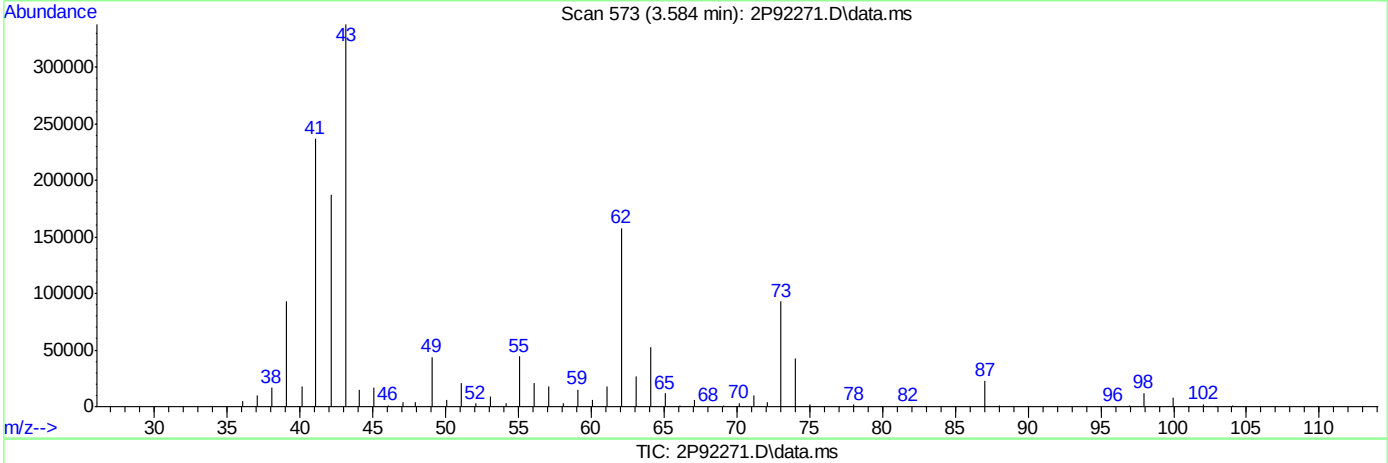
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.02
120.90	30.80	29.46
81.90	30.00	28.29

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 433.71ug/L

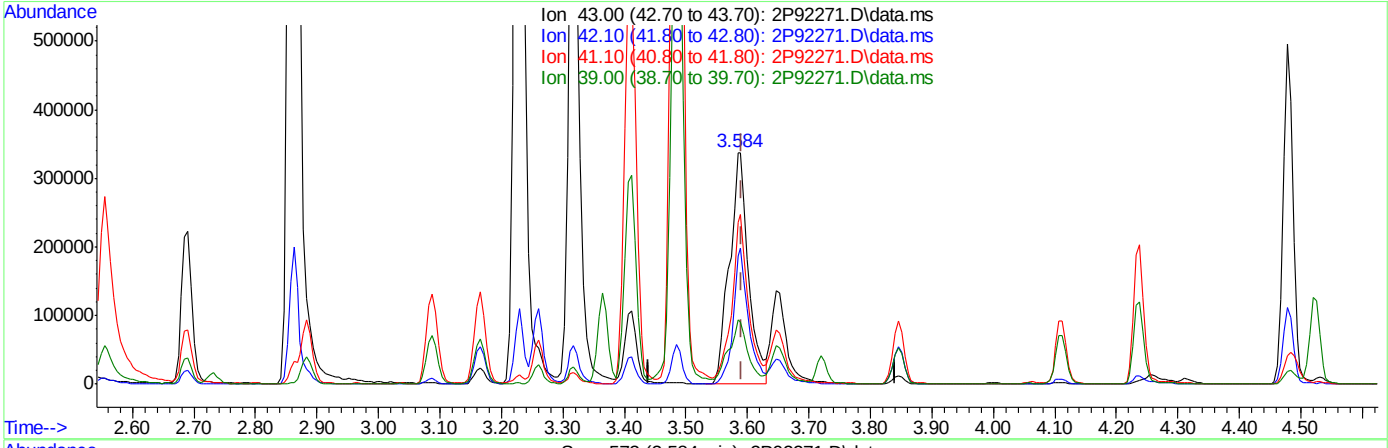
response 631729

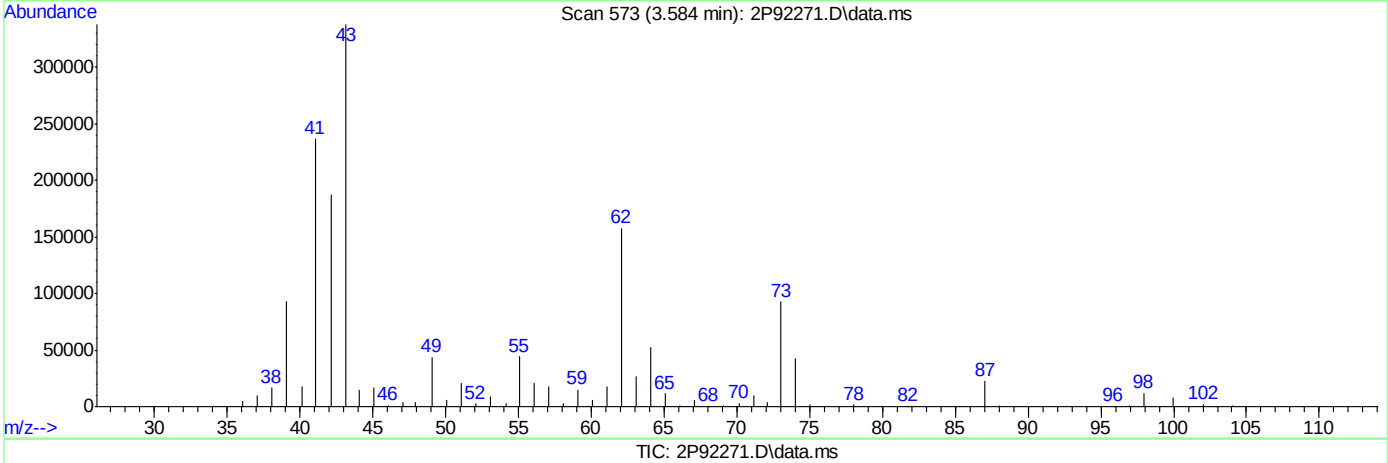
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	55.31
41.10	72.70	67.60
39.00	28.00	25.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(50) Isobutyl alcohol

3.584min (-0.007) 501.90ug/L m

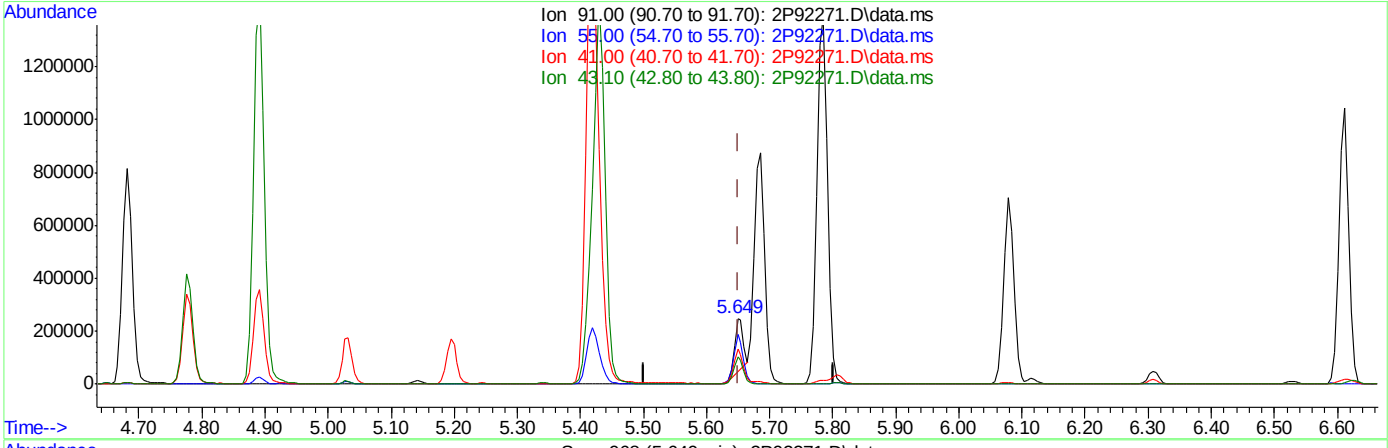
response 731054

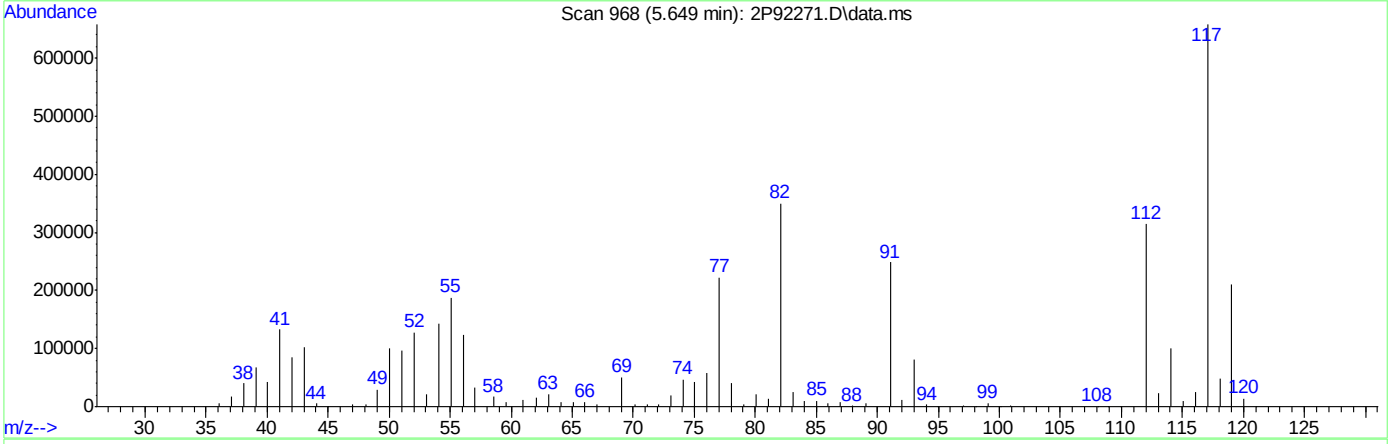
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	55.40
41.10	72.70	69.96
39.00	28.00	27.52

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 28.43ug/L

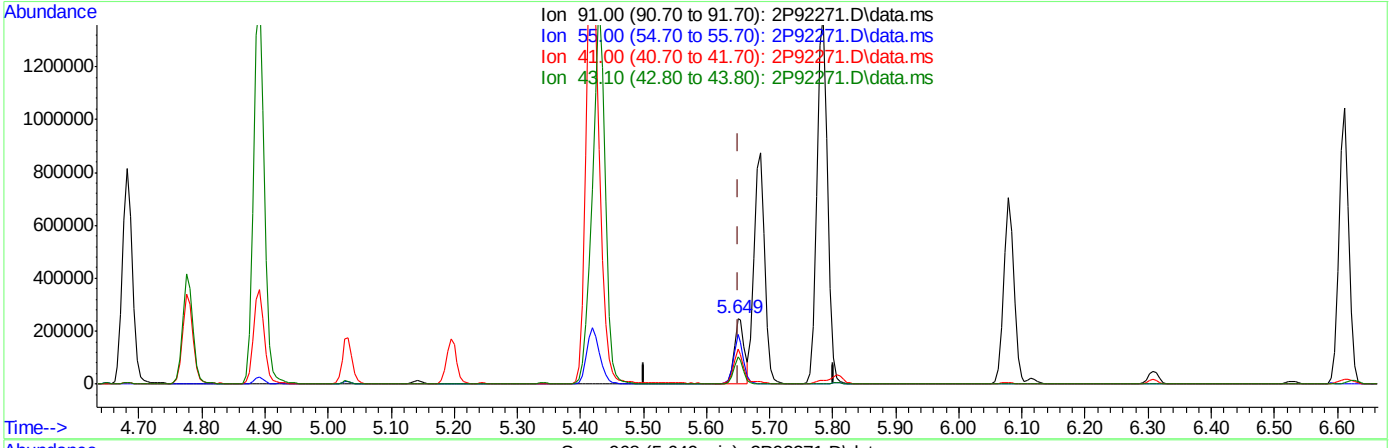
response 203197

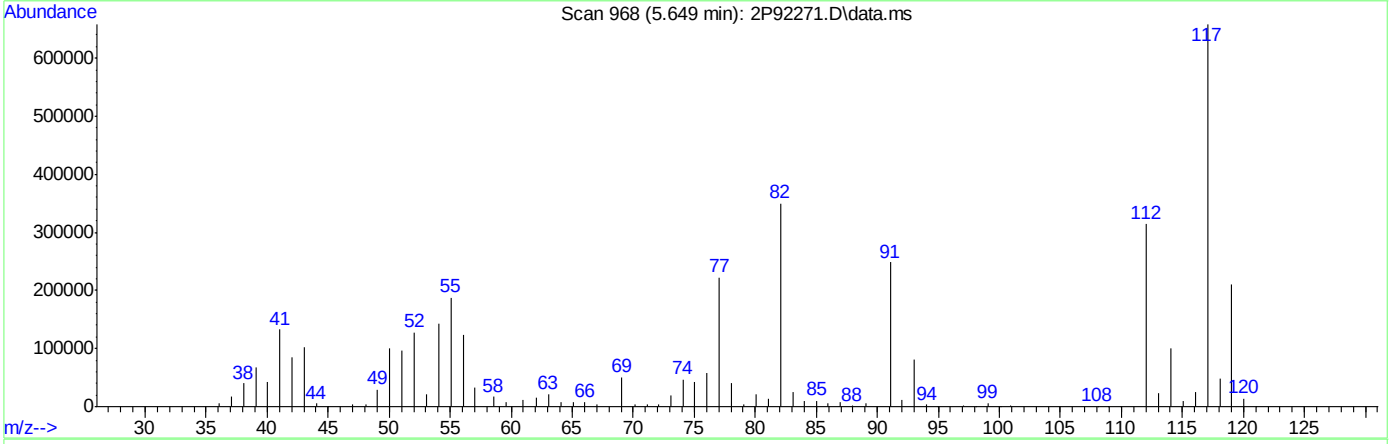
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	73.27#
41.00	83.00	51.28#
43.10	65.60	40.11#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92271.D
Acq On : 24 Aug 2022 11:59 am
Operator : courtnef
Sample : ICC3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Aug 24 12:12:57 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92271.D\data.ms

(76) 1-Chlorohexane

5.649min (-0.002) 40.36ug/L m

response 288409

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	75.64#
41.00	83.00	53.42#
43.10	65.60	41.26#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.722	96	1407409	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	1001645	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	454388	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.267	113	304281	47.84	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.68%				
49) 1,2-Dichloroethane-d4	3.554	65	407999	41.16	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 82.32%				
63) Toluene-d8	4.652	98	1355682	50.77	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.54%				
86) 4-Bromofluorobenzene	6.498	174	355278	47.03	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.123	85	278687	52.79	ug/L		94
3) Chloromethane	1.254	50	322422	41.14	ug/L		96
4) 1,3-butadiene	1.322	39	304455	43.11	ug/L		84
5) Vinyl Chloride	1.306	62	395255	56.19	ug/L		99
6) Bromomethane	1.510	94	208960	75.86	ug/L		98
7) Chloroethane	1.583	64	112565	46.38	ug/L		96
8) Trichlorofluoromethane	1.672	101	286225	45.54	ug/L		97
9) Ethyl Ether	1.881	59	383465	58.47	ug/L		82
10) Ethanol	1.981	45	179945	750.13	ug/L		99
11) 1,2-Dichlorotrifluoroe...	1.975	67	353484	61.79	ug/L		93
12) 1,1-Dichloroethene	1.981	61	525897	57.54	ug/L		89
13) Freon 113	2.012	101	326364	69.18	ug/L		95
14) Carbon Disulfide	1.996	76	929994	69.82	ug/L		91
15) Iodomethane	2.059	142	254172	38.88	ug/L		94
16) Acrolein	2.158	56	686082	291.20	ug/L		99
17) Allyl chloride	2.247	41	382785	46.28	ug/L		93
18) Methylene Chloride	2.305	49	467880	40.01	ug/L		73
19) Acetone	2.320	43	1136836	235.13	ug/L		91
20) Methyl acetate	2.399	43	2487846	223.62	ug/L		88
21) trans-1,2-Dichloroethene	2.404	61	527592	56.58	ug/L		78
22) Hexane	2.467	56	276353	57.15	ug/L	#	87
23) Methyl Tert Butyl Ether	2.472	73	1214409	70.33	ug/L		82
24) Tert Butyl Alcohol	2.519	59	1439064	554.79	ug/L		85
25) Acetonitrile	2.556	41	649984	387.71	ug/L		97
26) Di-isopropyl ether	2.692	45	1119409	48.65	ug/L		92
27) Chloroprene	2.733	53	1486197	40.86	ug/L		92
28) 1,1-Dichloroethane	2.728	63	688488	59.42	ug/L		96
29) Acrylonitrile	2.733	52	1157234	245.82	ug/L		81
30) ETBE	2.885	59	1323562	59.59	ug/L		91
31) Vinyl acetate	2.864	43	4429124	265.41	ug/L		99
32) cis-1,2-Dichloroethene	3.021	96	402612	71.96	ug/L		88
33) 2,2-Dichloropropane	3.089	77	568040	67.12	ug/L		98
34) Bromochloromethane	3.131	128	177311	71.02	ug/L	#	64
35) Cyclohexane	3.162	56	653455	54.89	ug/L	#	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.167	83	699841	68.42	ug/L		93
37) Ethyl acetate	3.230	43	3259262	241.63	ug/L		94
38) Tetrahydrofuran	3.261	42	245157	43.38	ug/L		89
40) Carbon Tetrachloride	3.272	117	440807m	76.66	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	602475	73.63	ug/L		92
42) 2-Butanone	3.319	43	1940078	234.09	ug/L		79
43) 1,1-Dichloropropene	3.366	75	518814	67.72	ug/L	#	79
44) tert-Butyl formate	3.413	59	1640040	327.56	ug/L		91
45) Propionitrile	3.465	54	1256296	491.90	ug/L		99
46) Methacrylonitrile	3.486	41	3515554	439.61	ug/L		96
47) Benzene	3.497	78	1644409	69.45	ug/L		78
48) TAME	3.570	73	1227634	73.49	ug/L		78
50) Isobutyl alcohol	3.596	43	1301441m	864.82	ug/L		
51) 1,2-Dichloroethane	3.591	62	580216	57.60	ug/L		93
52) Tert Amyl Alcohol	3.654	59	1226464	627.48	ug/L		86
53) Trichloroethene	3.826	95	413948	71.44	ug/L		95
54) Methylcyclohexane	3.847	83	589336	72.59	ug/L	#	80
55) Dibromomethane	4.051	93	236702	72.67	ug/L		94
56) 1,2-Dichloropropane	4.108	63	405831	62.15	ug/L		89
57) Bromodichloromethane	4.145	83	474801	71.10	ug/L		97
58) Methyl methacrylate	4.239	41	465072	47.71	ug/L	#	77
59) 1,4-Dioxane	4.265	88	229020	1276.96	ug/L		79
60) 2-Chloroethyl vinyl ether	4.480	63	1726933	309.73	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	615066	69.59	ug/L		78
64) Toluene	4.683	91	1767972	75.48	ug/L		100
65) 2-Nitropropane	4.778	41	858325	257.87	ug/L		97
66) 4-Methyl-2-pentanone	4.893	43	3330202	264.25	ug/L		91
67) trans-1,3-Dichloropropene	4.919	75	556698	72.51	ug/L		78
68) Tetrachloroethene	4.940	166	377812	66.50	ug/L		92
69) Ethyl methacrylate	5.034	69	661650	79.37	ug/L	#	72
70) 1,1,2-Trichloroethane	5.023	83	309443	74.88	ug/L		83
71) Dibromochloromethane	5.144	129	356313	79.81	ug/L		95
72) 1,3-Dichloropropane	5.196	76	678805	72.66	ug/L		80
73) 1,2-Dibromoethane	5.295	107	390890	79.28	ug/L		100
74) 3,3-dimethyl-1-butanol	5.426	57	7575345	2754.92	ug/L	#	86
75) 2-hexanone	5.431	43	3689641	241.56	ug/L	#	39
76) 1-Chlorohexane	5.651	91	574578m	76.40	ug/L		
77) Ethylbenzene	5.687	91	1966345	76.72	ug/L		96
78) Chlorobenzene	5.656	112	1070579	77.50	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.698	131	360610	81.15	ug/L		96
80) m,p-Xylene	5.781	91	3165996	156.32	ug/L		98
81) o-Xylene	6.079	91	1567775	78.78	ug/L		99
82) Styrene	6.111	104	1264188	84.59	ug/L		95
83) Bromoform	6.121	173	205699	73.70	ug/L		97
84) Isopropylbenzene	6.309	105	1828395	79.82	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	217724	61.57	ug/L	#	66
88) n-Propylbenzene	6.613	91	2184607	85.64	ug/L		99
89) Bromobenzene	6.571	156	433440	82.36	ug/L		88
90) 1,1,2,2-Tetrachloroethane	6.628	83	579536	83.25	ug/L		96
91) 1,3,5-Trimethylbenzene	6.759	105	1524602	85.64	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

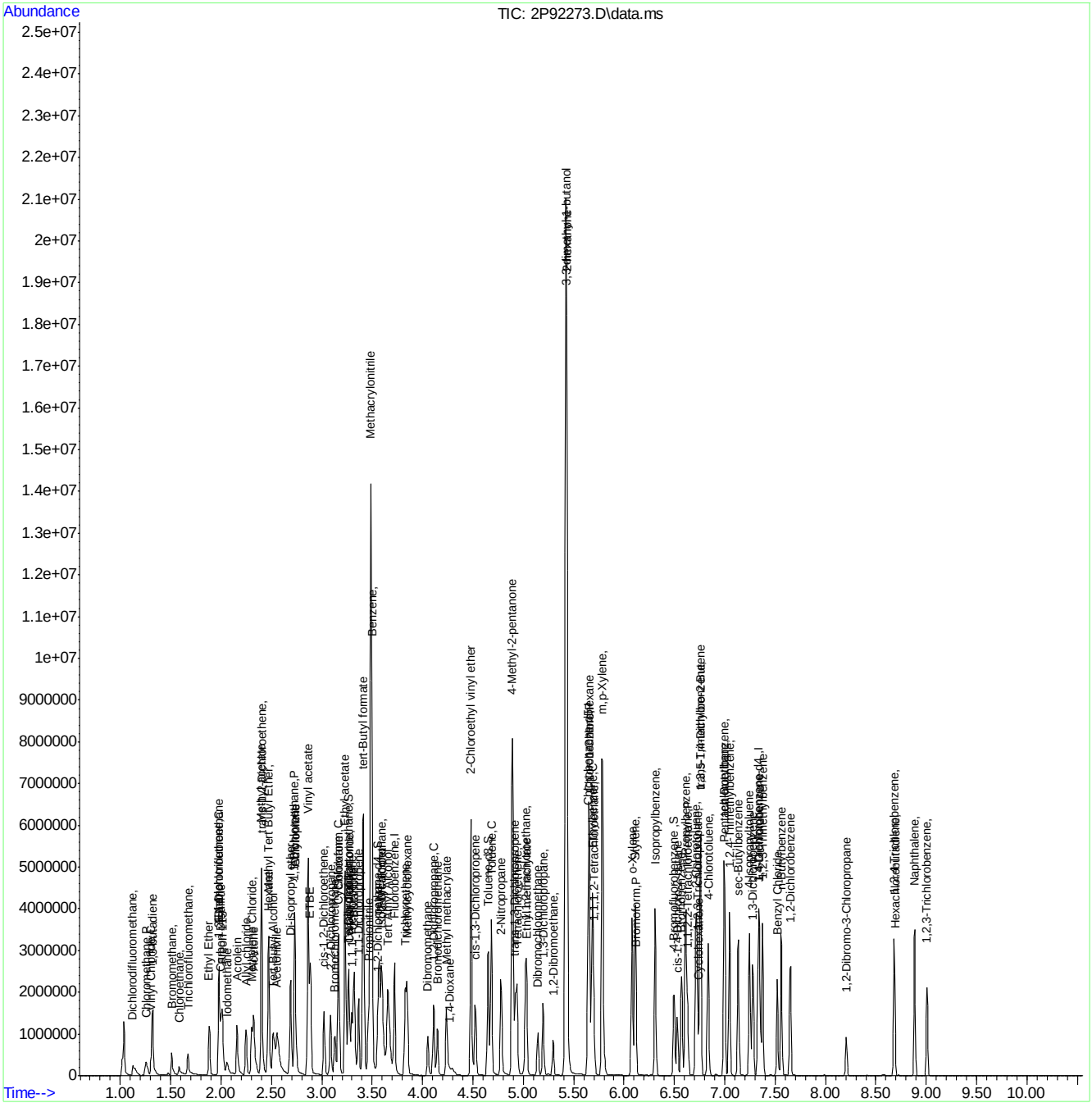
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 2-Chlorotoluene	6.712	91	1301038	84.03	ug/L		98
93) trans-1,4-Dichloro-2-B...	6.759	53	263986	60.86	ug/L	#	61
94) 1,2,3-Trichloropropane	6.728	110	213857	82.77	ug/L	#	78
95) Cyclohexanone	6.743	55	213329	320.20	ug/L		88
96) 4-Chlorotoluene	6.837	91	1366925	84.41	ug/L		94
97) tert-Butylbenzene	6.994	91	846098	86.13	ug/L		93
99) 1,2,4-Trimethylbenzene	7.047	105	1490286	86.13	ug/L		97
100) Pentachloroethane	6.999	167	201602	74.35	ug/L		96
101) sec-Butylbenzene	7.135	105	1629742	85.84	ug/L		98
102) 4-Isopropyltoluene	7.245	119	1449961	89.46	ug/L		96
103) 1,3-Dichlorobenzene	7.277	146	777359	81.49	ug/L		98
104) 1,2,3-Trimethylbenzene	7.376	105	1476951	85.13	ug/L		97
105) 1,4-Dichlorobenzene	7.345	146	793210	77.85	ug/L		98
106) n-Butylbenzene	7.559	92	709933	86.72	ug/L		98
107) Benzyl Chloride	7.522	126	220570	85.96	ug/L	#	86
108) 1,2-Dichlorobenzene	7.653	146	728220	78.58	ug/L		98
109) 1,2-Dibromo-3-Chloropr...	8.207	75	149907	79.68	ug/L	#	70
110) Hexachlorobutadiene	8.688	225	136790	65.70	ug/L		94
111) 1,2,4-Trichlorobenzene	8.683	180	396197	77.18	ug/L		94
112) Naphthalene	8.887	128	1702790	96.64	ug/L		99
113) 1,2,3-Trichlorobenzene	9.007	180	368584	76.06	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:43:25 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

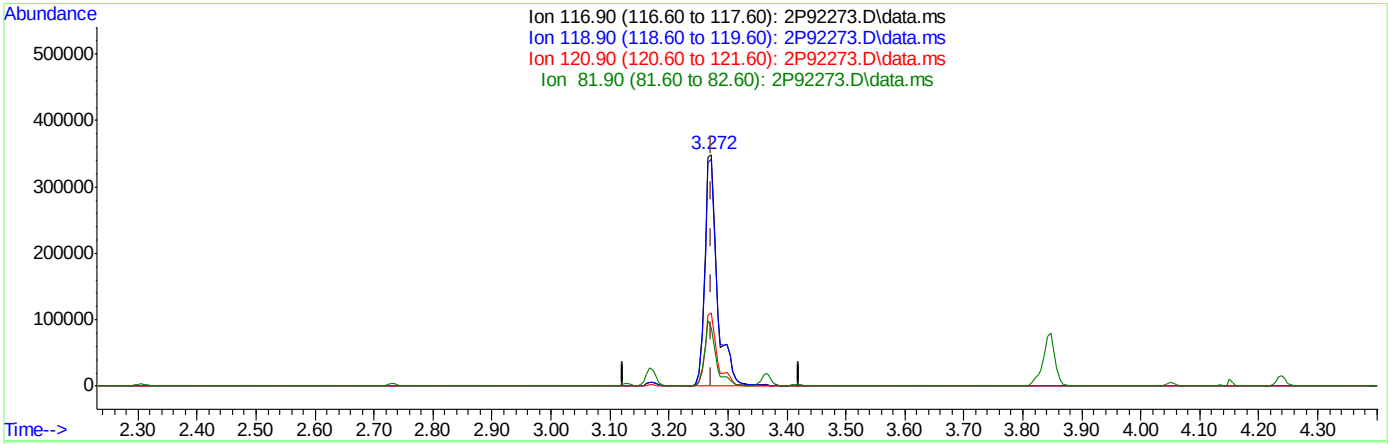
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92273.D **Analyst approved:** 08/24/22 12:44 Courtney Failla
Injection Time: 08/24/22 12:31 **Supervisor approved:** 08/25/22 11:34 Karen Watson

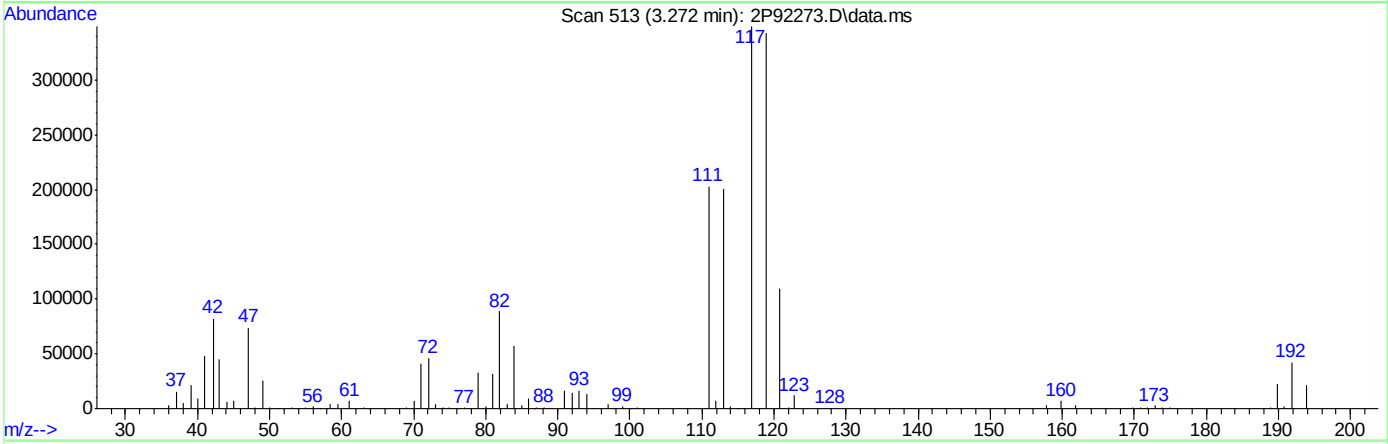
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.000) 89.96ug/L

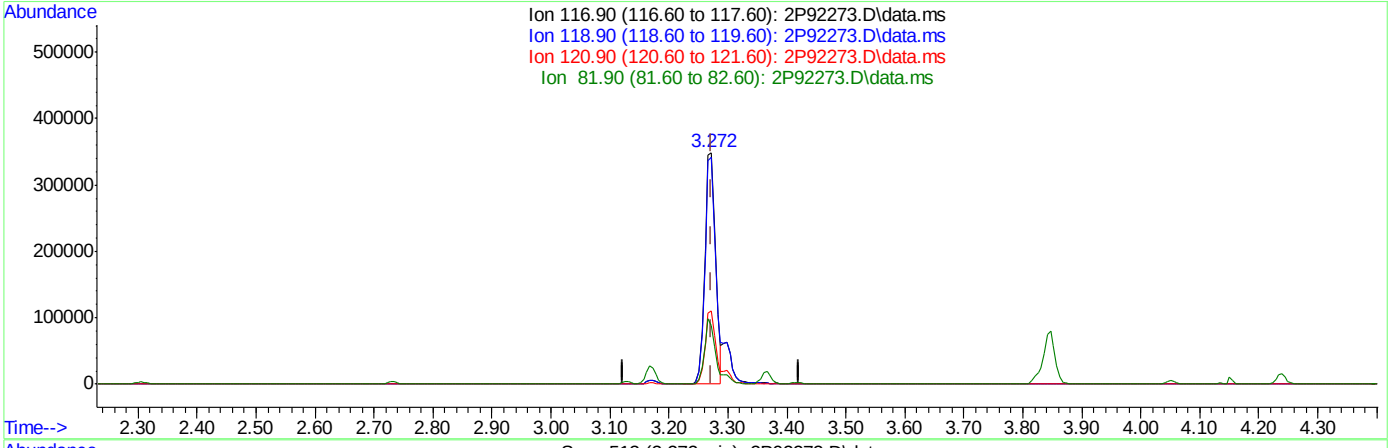
response 517268

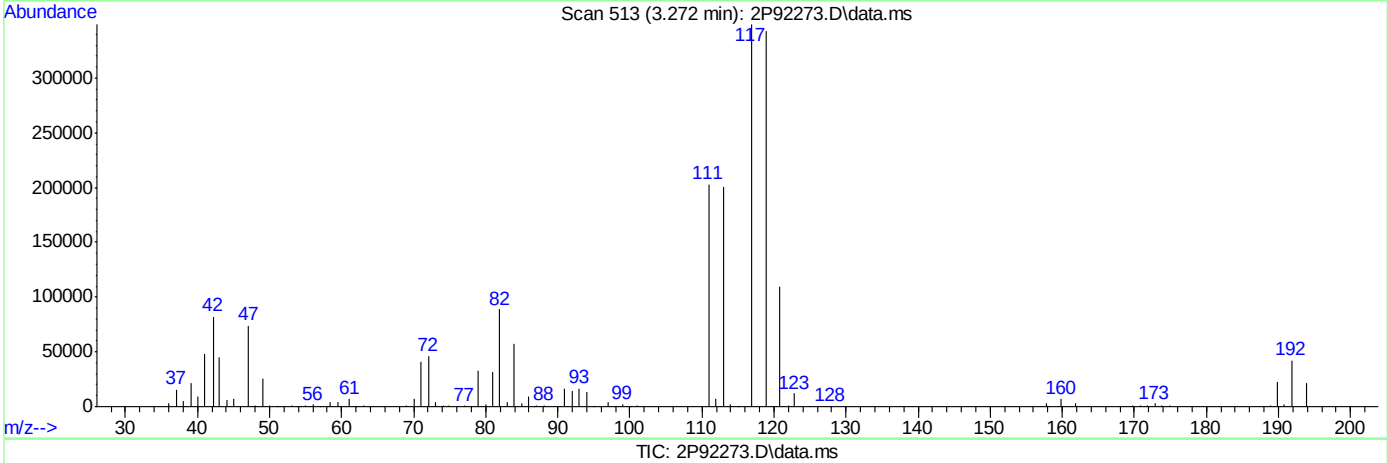
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.11
120.90	30.80	31.45
81.90	30.00	25.31

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.000) 76.66ug/L m

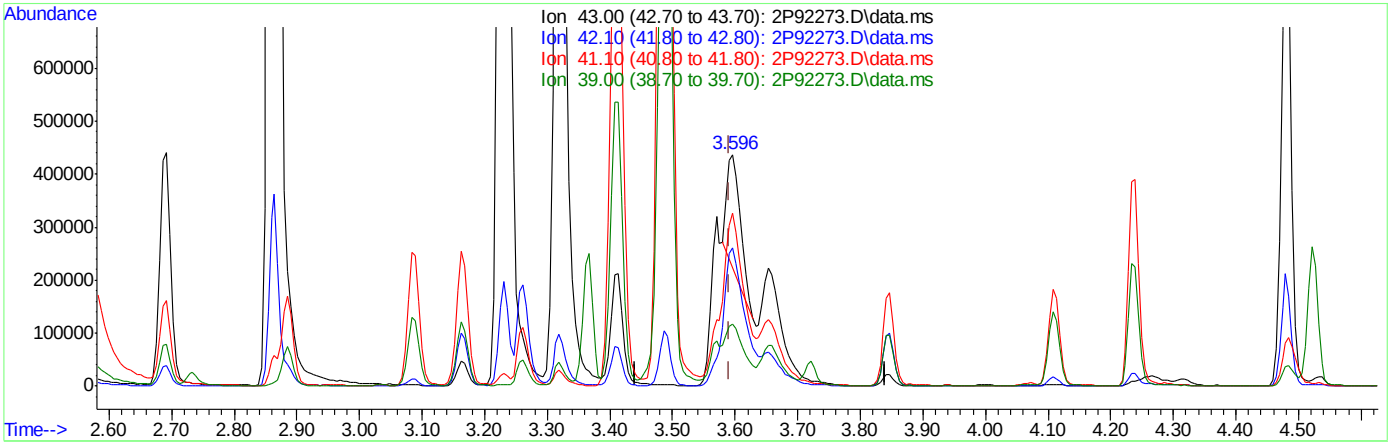
response 440807

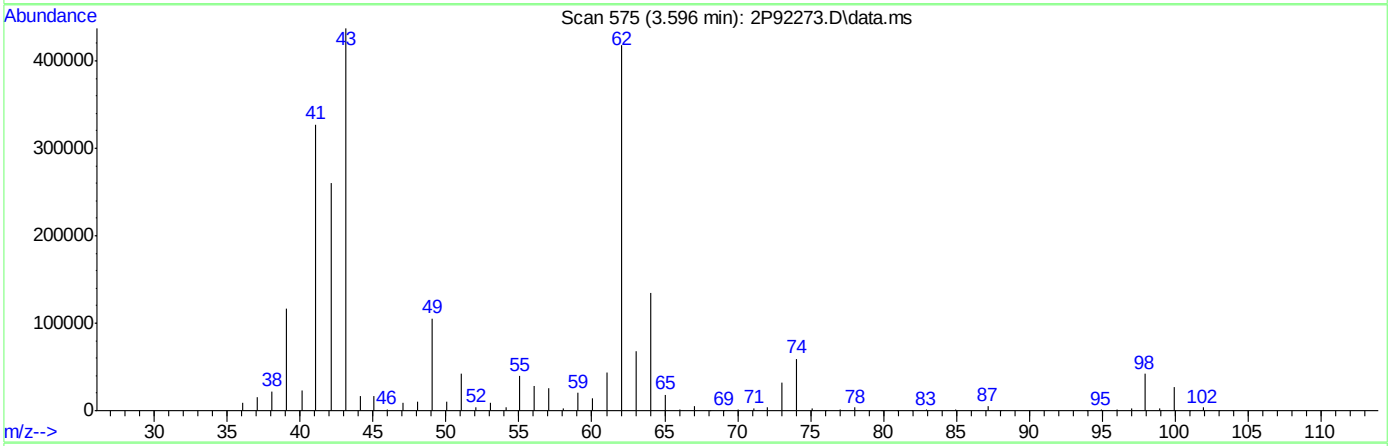
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	98.11
120.90	30.80	31.45
81.90	30.00	25.43

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(50) Isobutyl alcohol

3.596min (+0.005) 191.12ug/L

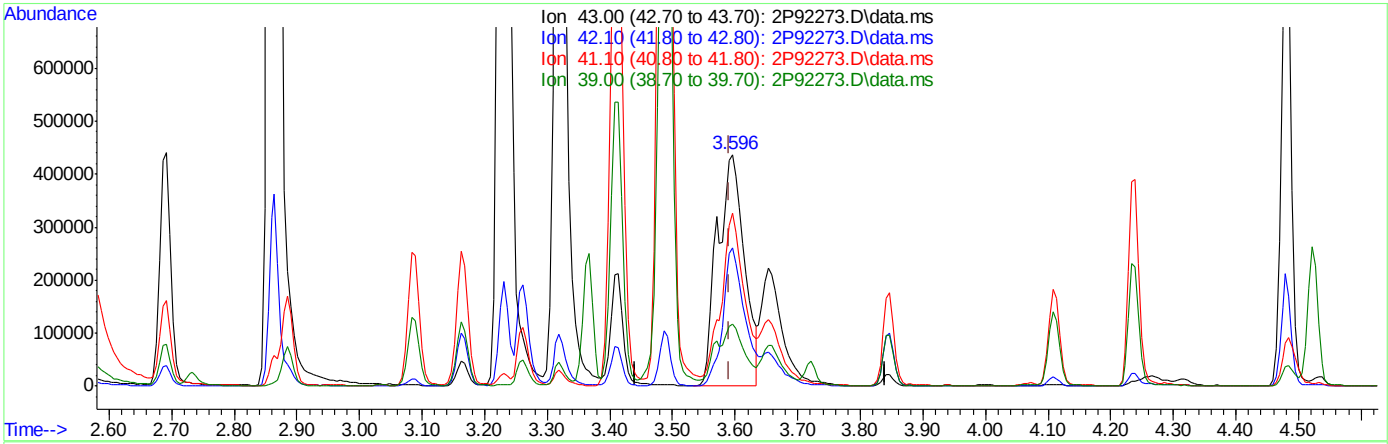
response 287609

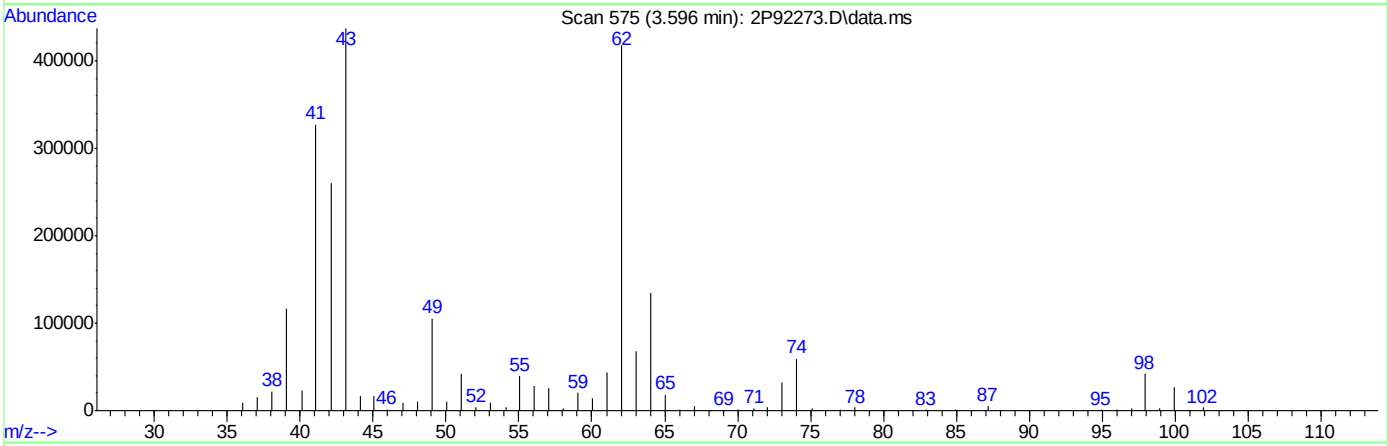
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	60.60
41.10	72.70	74.53
39.00	28.00	25.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(50) Isobutyl alcohol

3.596min (+0.005) 864.82ug/L m

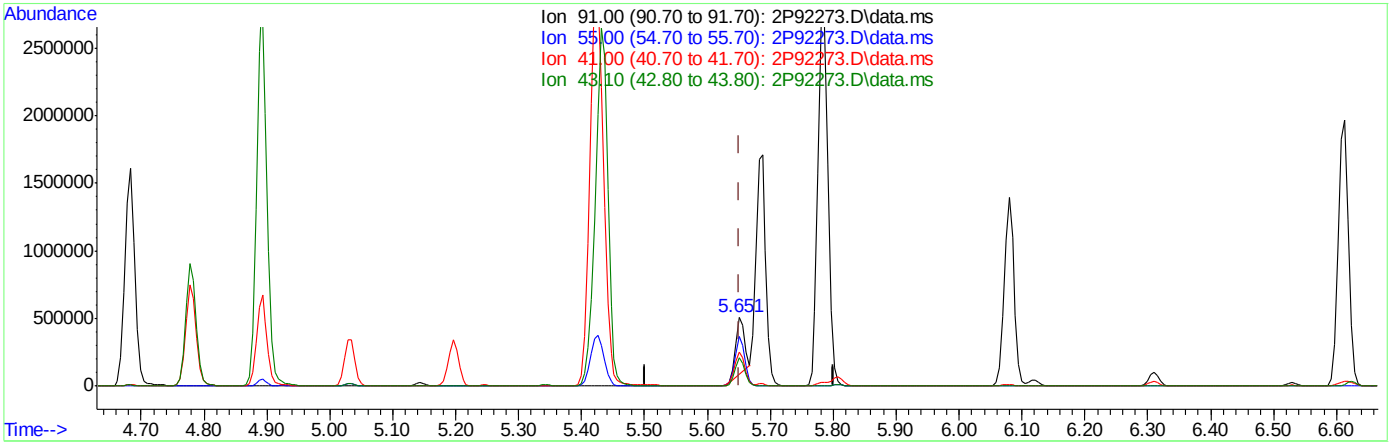
response 1301441

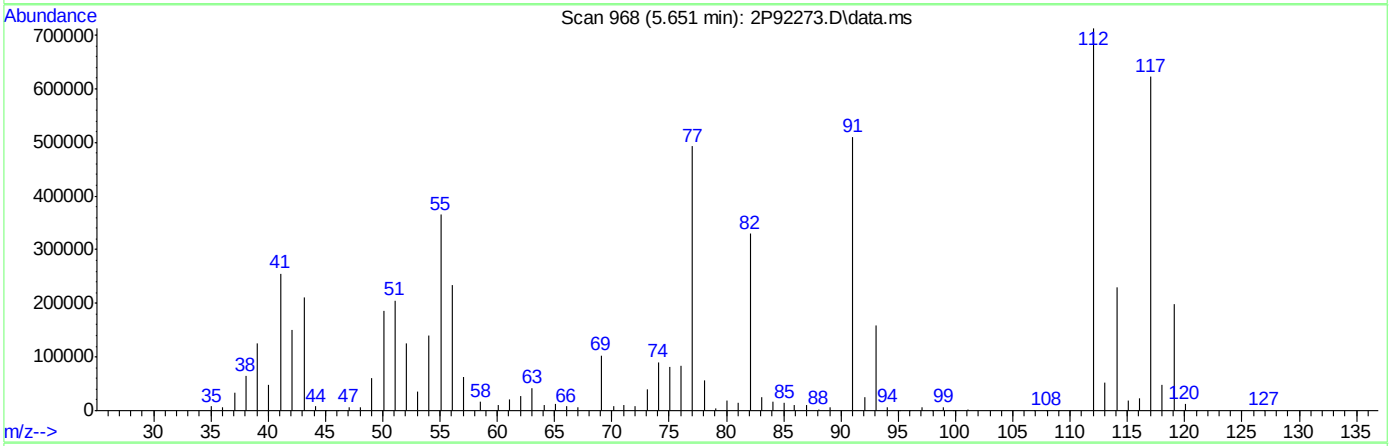
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	59.63
41.10	72.70	74.81
39.00	28.00	26.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(76) 1-Chlorohexane

5.651min (-0.001) 53.23ug/L

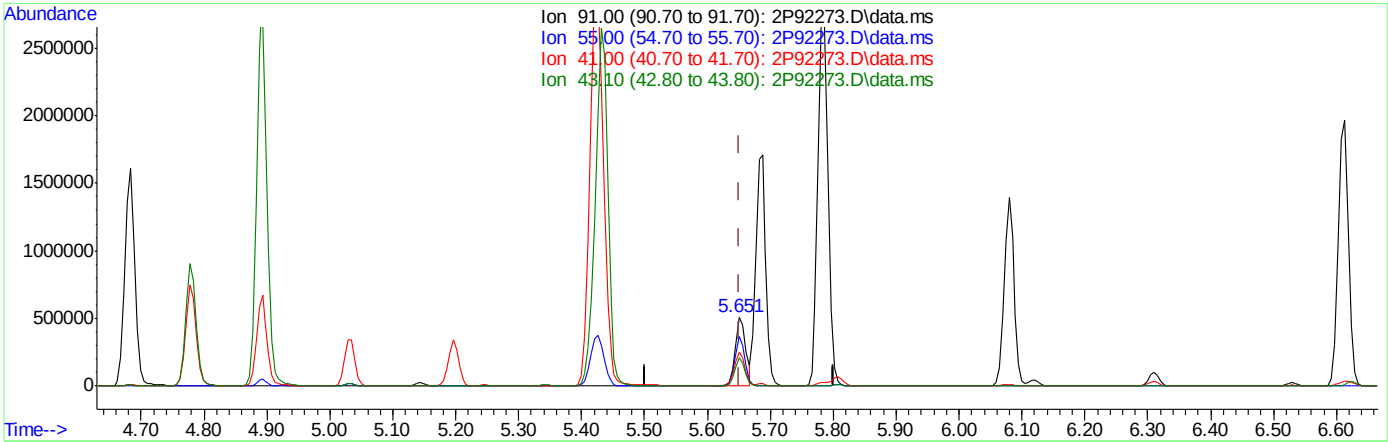
response 400352

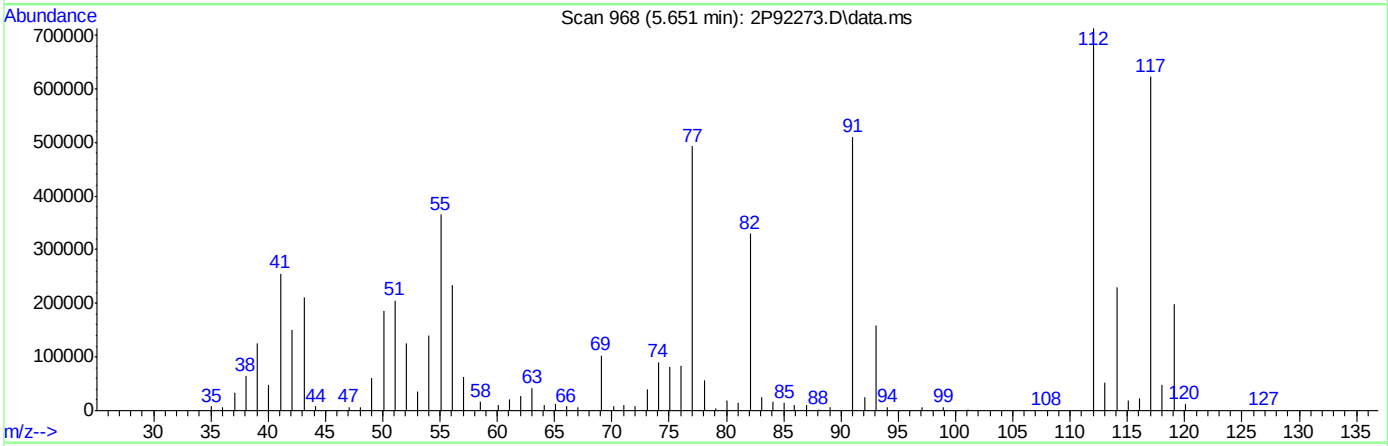
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	70.56#
41.00	83.00	48.82#
43.10	65.60	40.84#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92273.D
Acq On : 24 Aug 2022 12:31 pm
Operator : courtnef
Sample : IC3560-6
Misc : MS52204,V2P3560,,,,,
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Aug 24 12:42:19 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92273.D\data.ms

(76) 1-Chlorohexane

5.651min (-0.001) 76.40ug/L m

response 574578

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	71.59#
41.00	83.00	49.96#
43.10	65.60	41.20#

2P92275.D

Manual Integrations APPROVED (compounds with "m" flag)

Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	3.721	96	1448604	50.00	ug/L		0.00
62) Chlorobenzene-d5	5.645	117	1030693	50.00	ug/L		0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	456458	50.00	ug/L		0.00
System Monitoring Compounds							
39) Dibromofluoromethane	3.266	113	316577	48.36	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.72%				
49) 1,2-Dichloroethane-d4	3.554	65	423799	41.54	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 83.08%				
63) Toluene-d8	4.652	98	1416932	51.57	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 103.14%				
86) 4-Bromofluorobenzene	6.497	174	362690	47.80	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.123	85	403369	74.24	ug/L		96
3) Chloromethane	1.259	50	464809	57.62	ug/L		97
4) 1,3-butadiene	1.316	39	428849	58.83	ug/L		88
5) Vinyl Chloride	1.306	62	578889	79.95	ug/L		99
6) Bromomethane	1.510	94	289893	102.25	ug/L		98
7) Chloroethane	1.583	64	157131	62.90	ug/L		97
8) Trichlorofluoromethane	1.667	101	289930	44.82	ug/L		96
9) Ethyl Ether	1.881	59	487397	72.20	ug/L		77
10) Ethanol	1.996	45	234484	973.37	ug/L		91
11) 1,2-Dichlorotrifluoroe...	1.975	67	524281	89.03	ug/L		89
12) 1,1-Dichloroethene	1.975	61	783609	83.31	ug/L		88
13) Freon 113	2.006	101	487596	100.42	ug/L		97
14) Carbon Disulfide	1.991	76	1427913	97.12	ug/L		89
15) Iodomethane	2.059	142	363343	53.59	ug/L		94
16) Acrolein	2.158	56	991894	403.00	ug/L		99
17) Allyl chloride	2.247	41	582060	68.37	ug/L		92
18) Methylene Chloride	2.299	49	638185	55.95	ug/L		76
19) Acetone	2.325	43	1566267	317.71	ug/L		90
20) Methyl acetate	2.399	43	3497839	305.46	ug/L		88
21) trans-1,2-Dichloroethene	2.399	61	785353	81.83	ug/L		84
22) Hexane	2.467	56	418082	84.01	ug/L	#	83
23) Methyl Tert Butyl Ether	2.477	73	1750100	98.47	ug/L	#	56
24) Tert Butyl Alcohol	2.524	59	1960321	734.25	ug/L		81
25) Acetonitrile	2.561	41	1476501	1071.79	ug/L		97
26) Di-isopropyl ether	2.691	45	1612917	68.11	ug/L		92
27) Chloroprene	2.733	53	2133138	56.98	ug/L		92
28) 1,1-Dichloroethane	2.728	63	1002856	84.09	ug/L		96
29) Acrylonitrile	2.733	52	1659961	342.58	ug/L		80
30) ETBE	2.885	59	1914010	83.73	ug/L		91
31) Vinyl acetate	2.864	43	6405963	372.95	ug/L		98
32) cis-1,2-Dichloroethene	3.021	96	587168	101.97	ug/L		88
33) 2,2-Dichloropropane	3.083	77	855049	93.26	ug/L		99
34) Bromochloromethane	3.130	128	251747	97.97	ug/L	#	63
35) Cyclohexane	3.162	56	1001171	81.71	ug/L	#	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Chloroform	3.167	83	1022546	97.13	ug/L		94
37) Ethyl acetate	3.230	43	4648141	334.80	ug/L		93
38) Tetrahydrofuran	3.261	42	347454	59.73	ug/L		90
40) Carbon Tetrachloride	3.266	117	688315m	116.30	ug/L		
41) 1,1,1-Trichloroethane	3.298	97	903166	107.24	ug/L		92
42) 2-Butanone	3.319	43	2737606	319.53	ug/L		82
43) 1,1-Dichloropropene	3.366	75	775619	98.37	ug/L		81
44) tert-Butyl formate	3.413	59	2463630	441.32	ug/L		90
45) Propionitrile	3.470	54	1863638	698.74	ug/L		93
46) Methacrylonitrile	3.491	41	4992432	600.10	ug/L		93
47) Benzene	3.496	78	2410543	98.90	ug/L		86
48) TAME	3.570	73	1770465	102.97	ug/L		76
50) Isobutyl alcohol	3.601	43	1778010m	1147.90	ug/L		
51) 1,2-Dichloroethane	3.591	62	835675	80.60	ug/L		93
52) Tert Amyl Alcohol	3.659	59	1695550	842.81	ug/L		85
53) Trichloroethene	3.826	95	614815	103.09	ug/L		95
54) Methylcyclohexane	3.847	83	910970	109.01	ug/L	#	80
55) Dibromomethane	4.051	93	341144	101.76	ug/L		93
56) 1,2-Dichloropropane	4.108	63	594664	88.48	ug/L		89
57) Bromodichloromethane	4.145	83	707970	96.33	ug/L		95
58) Methyl methacrylate	4.239	41	692154	66.81	ug/L	#	79
59) 1,4-Dioxane	4.265	88	308127	1669.18	ug/L		79
60) 2-Chloroethyl vinyl ether	4.479	63	2513613	427.56	ug/L		80
61) cis-1,3-Dichloropropene	4.521	75	894613	93.54	ug/L		78
64) Toluene	4.683	91	2598286	107.80	ug/L		98
65) 2-Nitropropane	4.777	41	1254422	340.12	ug/L		96
66) 4-Methyl-2-pentanone	4.892	43	4677949	360.73	ug/L		90
67) trans-1,3-Dichloropropene	4.918	75	811103	97.78	ug/L		83
68) Tetrachloroethene	4.939	166	550983	94.24	ug/L		92
69) Ethyl methacrylate	5.033	69	974966	113.66	ug/L	#	72
70) 1,1,2-Trichloroethane	5.023	83	438235	103.06	ug/L		84
71) Dibromochloromethane	5.143	129	523793	106.67	ug/L		95
72) 1,3-Dichloropropane	5.196	76	975960	101.52	ug/L		79
73) 1,2-Dibromoethane	5.295	107	554857	109.36	ug/L		99
74) 3,3-dimethyl-1-butanol	5.426	57	10279666	3633.04	ug/L	#	85
75) 2-hexanone	5.436	43	4950878	314.99	ug/L	#	44
76) 1-Chlorohexane	5.656	91	852517m	110.16	ug/L		
77) Ethylbenzene	5.687	91	2890719	109.61	ug/L		96
78) Chlorobenzene	5.656	112	1561418	109.85	ug/L		92
79) 1,1,1,2-Tetrachloroethane	5.697	131	523351	110.08	ug/L		96
80) m,p-Xylene	5.786	91	4637003	222.49	ug/L		99
81) o-Xylene	6.079	91	2290163	111.83	ug/L		98
82) Styrene	6.110	104	1813515	117.93	ug/L		95
83) Bromoform	6.121	173	302716	96.26	ug/L		98
84) Isopropylbenzene	6.309	105	2696969	114.43	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	323231	85.03	ug/L	#	67
88) n-Propylbenzene	6.612	91	3191996	124.56	ug/L		99
89) Bromobenzene	6.571	156	614502	116.23	ug/L		94
90) 1,1,2,2-Tetrachloroethane	6.633	83	815986	116.68	ug/L		95
91) 1,3,5-Trimethylbenzene	6.759	105	2231418	124.78	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration

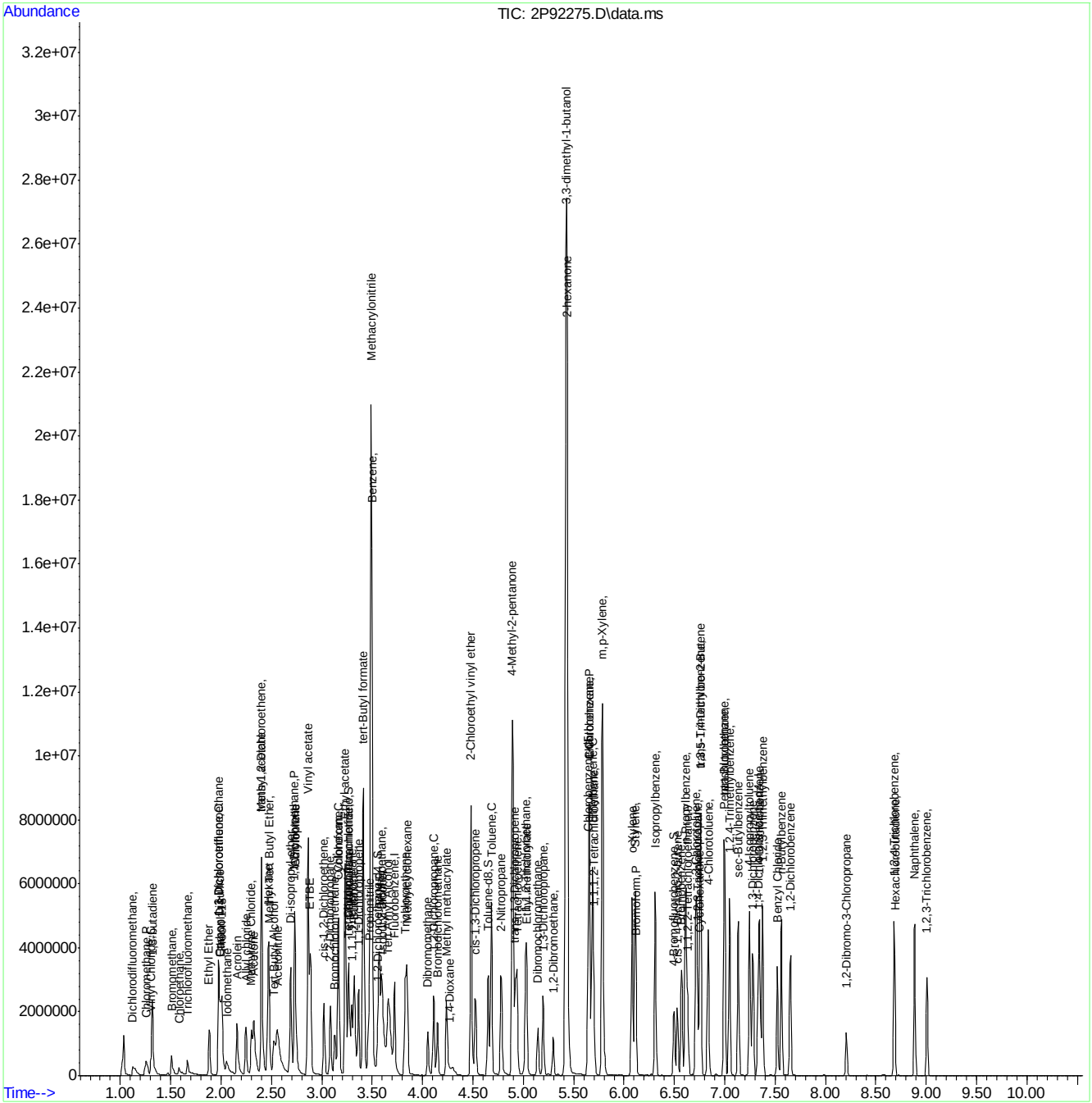
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.712	91	1892504	121.68	ug/L		100
93)	trans-1,4-Dichloro-2-B...	6.759	53	369178	81.16	ug/L	#	63
94)	1,2,3-Trichloropropane	6.727	110	296210	114.13	ug/L	#	79
95)	Cyclohexanone	6.748	55	288162	430.56	ug/L		87
96)	4-Chlorotoluene	6.837	91	1978875	121.64	ug/L		93
97)	tert-Butylbenzene	6.994	91	1246847	126.34	ug/L		90
99)	1,2,4-Trimethylbenzene	7.046	105	2155567	124.02	ug/L		99
100)	Pentachloroethane	6.999	167	301098	100.99	ug/L		97
101)	sec-Butylbenzene	7.135	105	2391039	125.36	ug/L		98
102)	4-Isopropyltoluene	7.245	119	2141309	131.52	ug/L		97
103)	1,3-Dichlorobenzene	7.276	146	1099976	114.79	ug/L		98
104)	1,2,3-Trimethylbenzene	7.376	105	2134898	122.50	ug/L		98
105)	1,4-Dichlorobenzene	7.344	146	1126792	110.09	ug/L		98
106)	n-Butylbenzene	7.564	92	1037609	126.17	ug/L		98
107)	Benzyl Chloride	7.522	126	325644	112.38	ug/L		93
108)	1,2-Dichlorobenzene	7.653	146	1027230	110.35	ug/L		97
109)	1,2-Dibromo-3-Chloropr...	8.207	75	215439	105.53	ug/L	#	70
110)	Hexachlorobutadiene	8.688	225	203747	97.41	ug/L		95
111)	1,2,4-Trichlorobenzene	8.683	180	571214	110.76	ug/L		94
112)	Naphthalene	8.886	128	2395122	135.32	ug/L		99
113)	1,2,3-Trichlorobenzene	9.007	180	523527	107.54	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration



Manual Integration Approval Summary

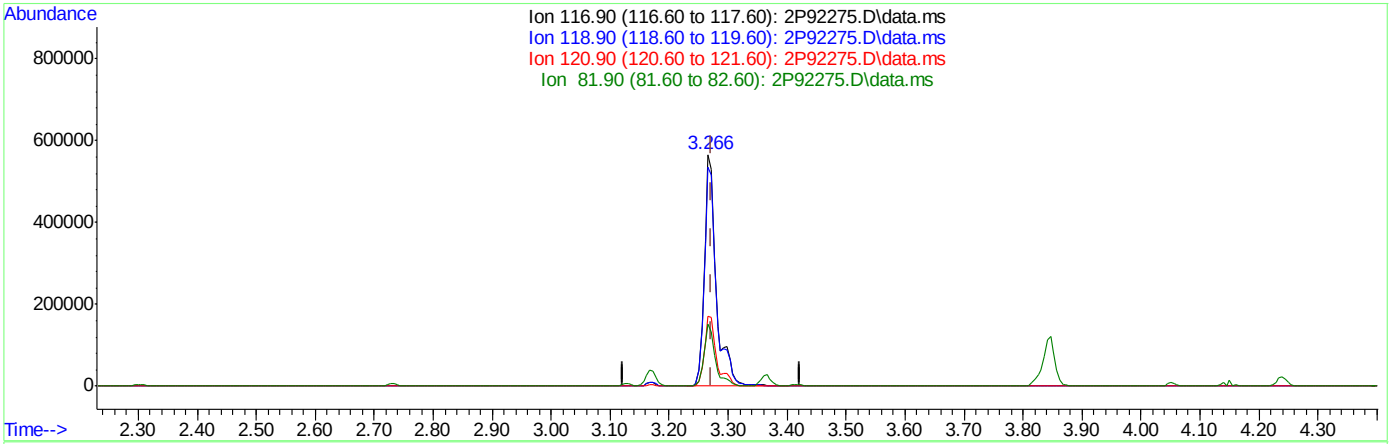
Sample Number: V2P3560-IC3560 **Method:** SW846 8260D
Lab FileID: 2P92275.D **Analyst approved:** 08/24/22 13:21 Courtney Failla
Injection Time: 08/24/22 13:04 **Supervisor approved:** 08/25/22 11:34 Karen Watson

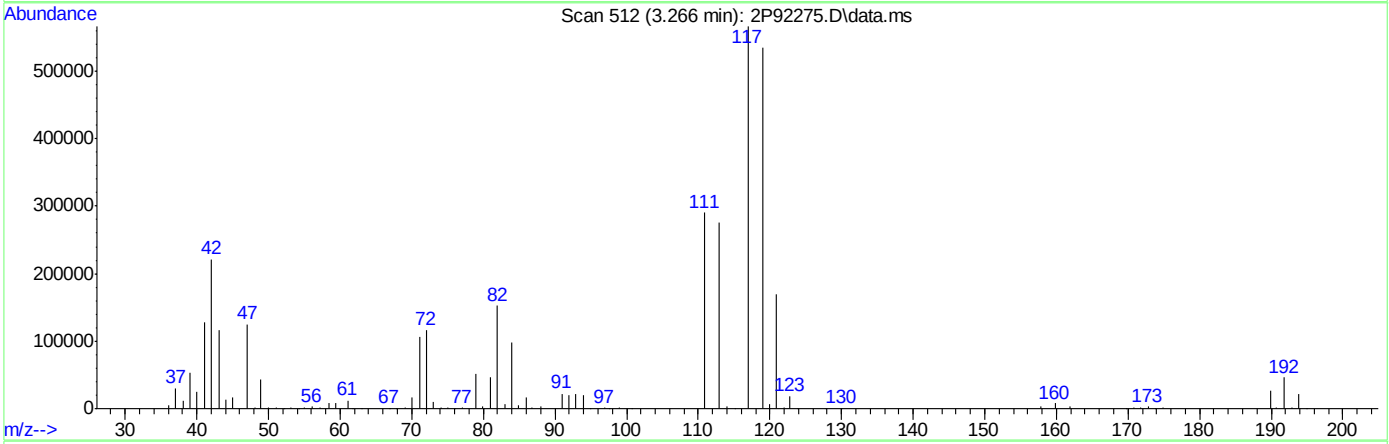
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.60	Poor instrument integration
1-Chlorohexane	544-10-5		5.66	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(40) Carbon Tetrachloride ( )

3.266min (-0.005) 135.06ug/L

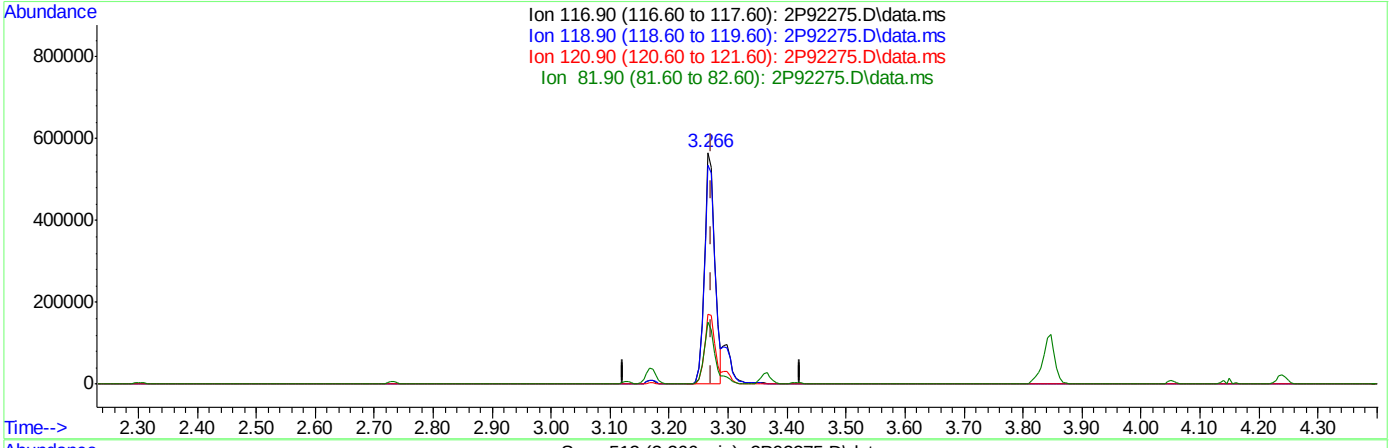
response 799364

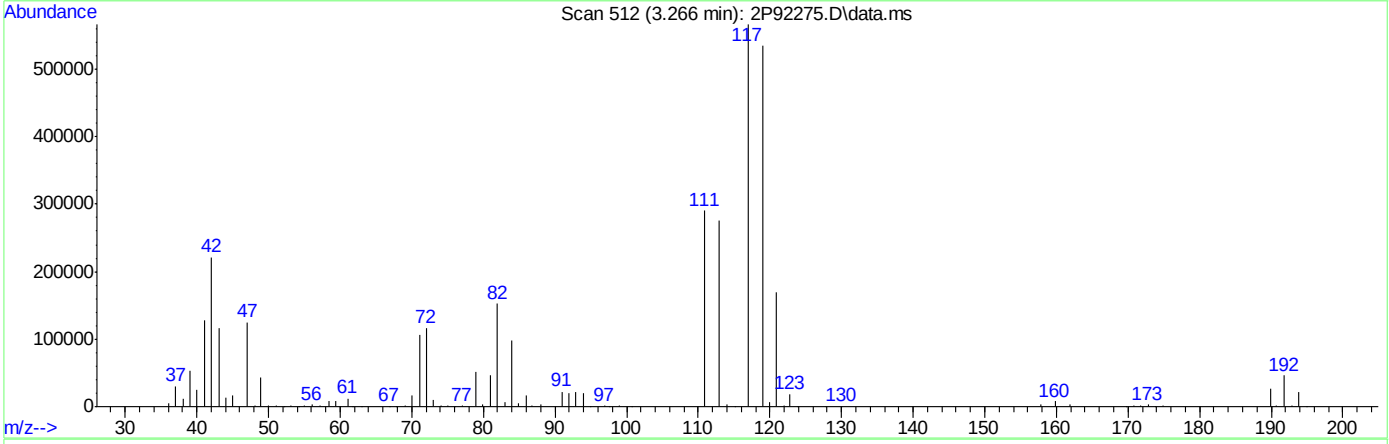
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.38
120.90	30.80	30.01
81.90	30.00	26.86

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(40) Carbon Tetrachloride ( )

3.266min (-0.005) 116.30ug/L m

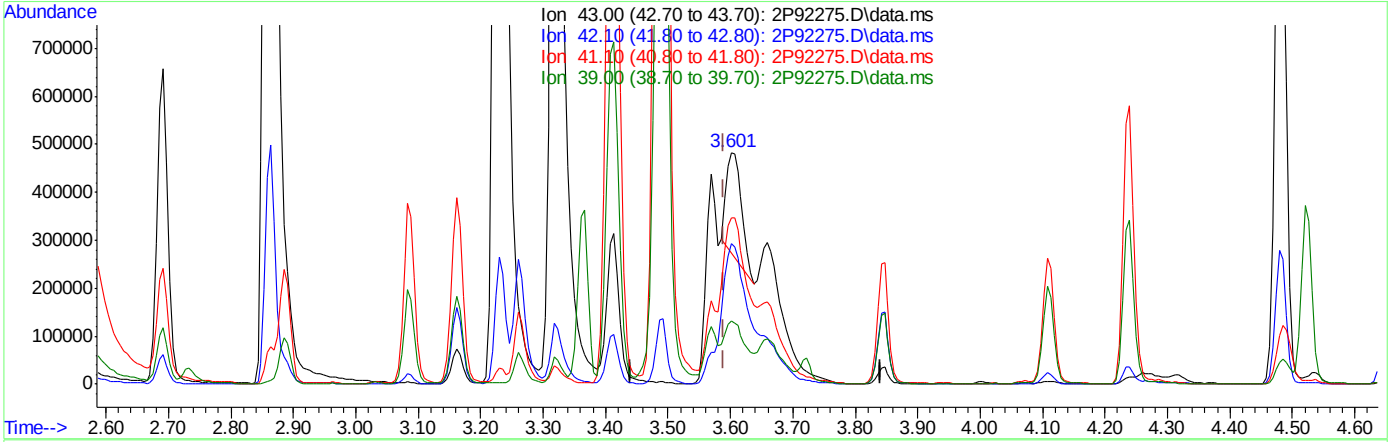
response 688315

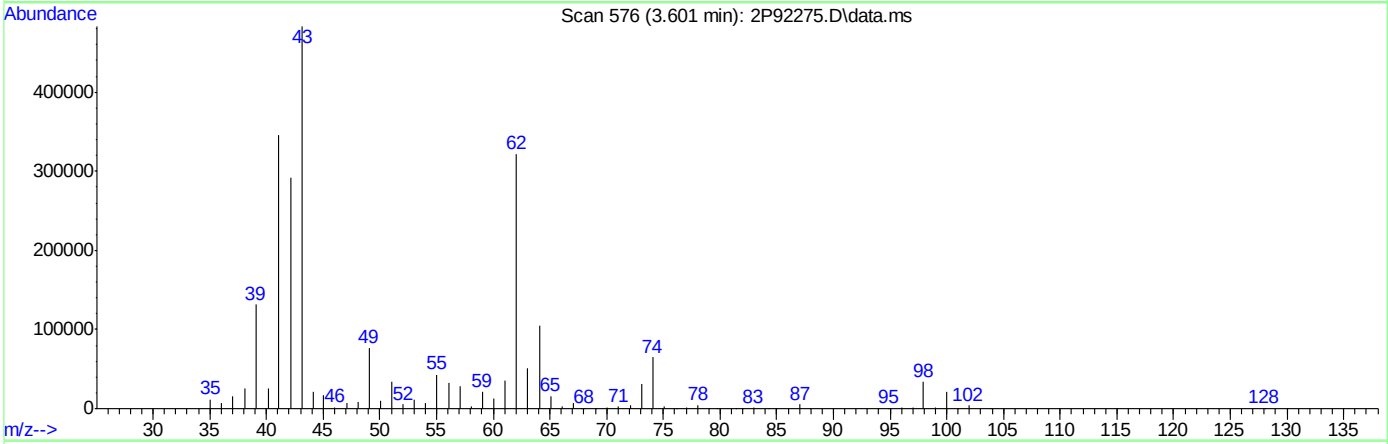
Ion	Exp%	Act%
116.90	100	100
118.90	96.30	94.38
120.90	30.80	30.01
81.90	30.00	26.93

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(50) Isobutyl alcohol

3.601min (+0.010) 229.58ug/L

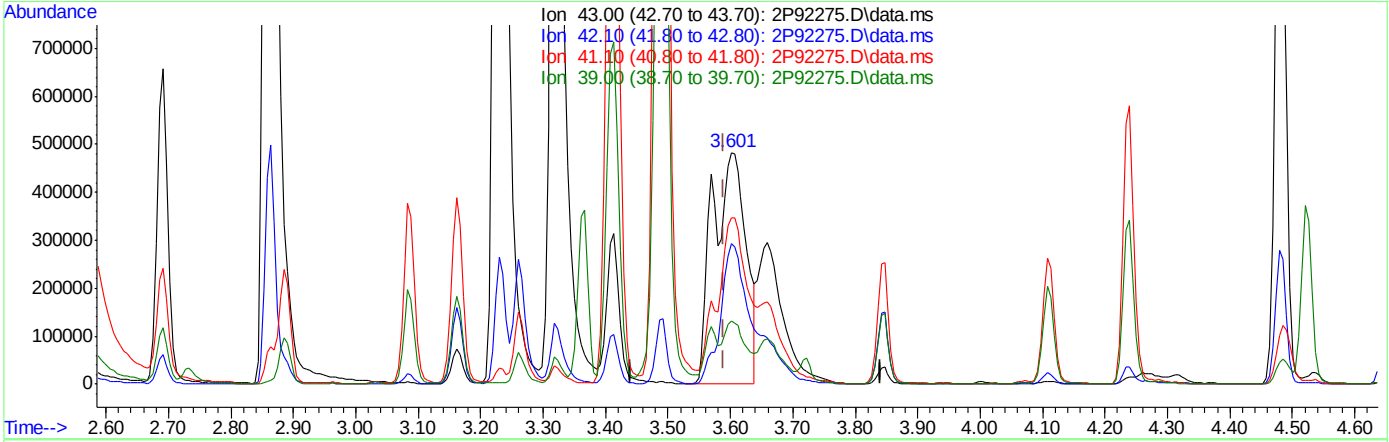
response 355600

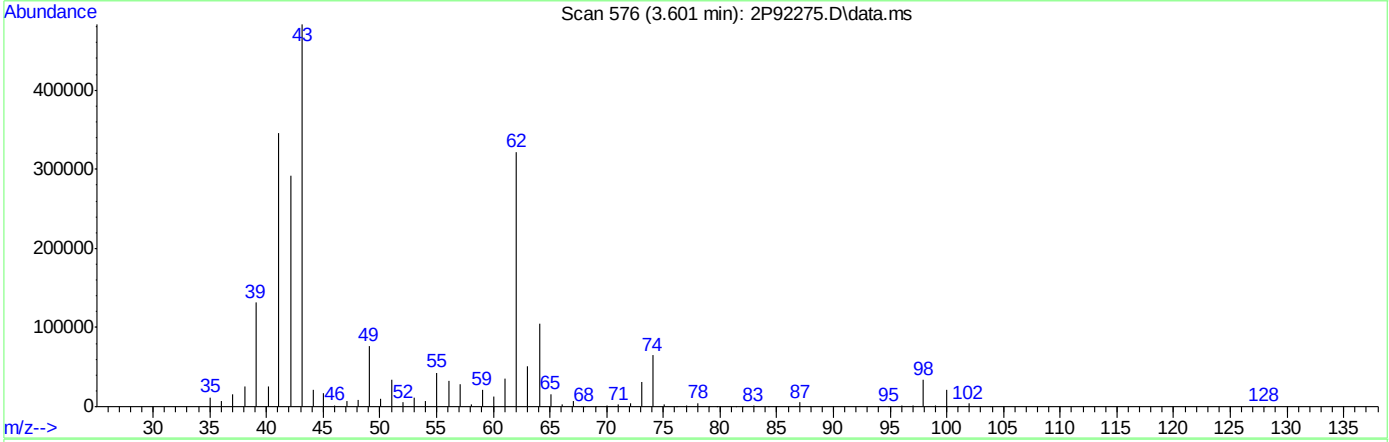
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	64.21
41.10	72.70	66.08
39.00	28.00	24.34

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(50) Isobutyl alcohol

3.601min (+0.010) 1147.90ug/L m

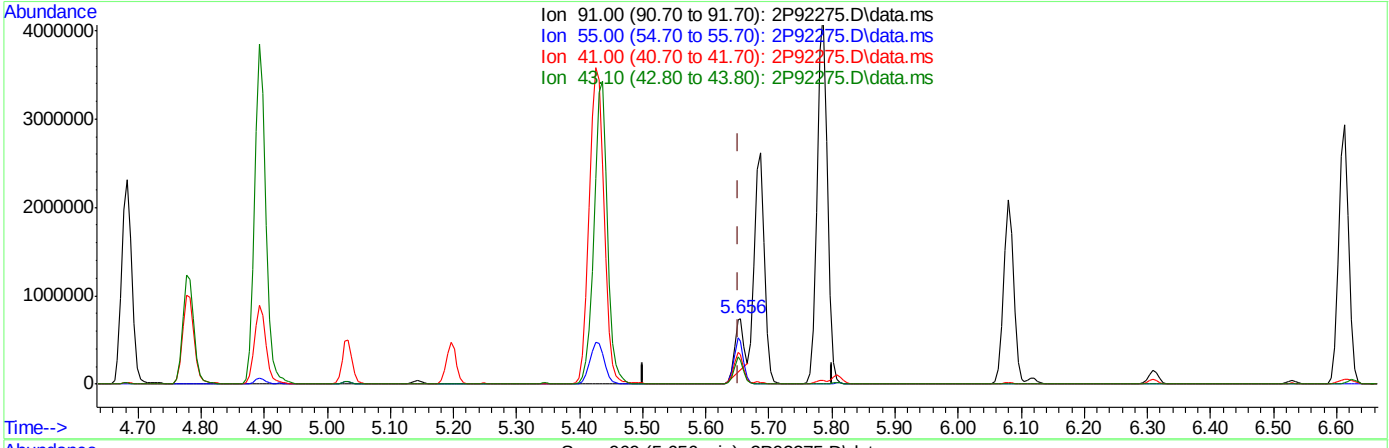
response 1778010

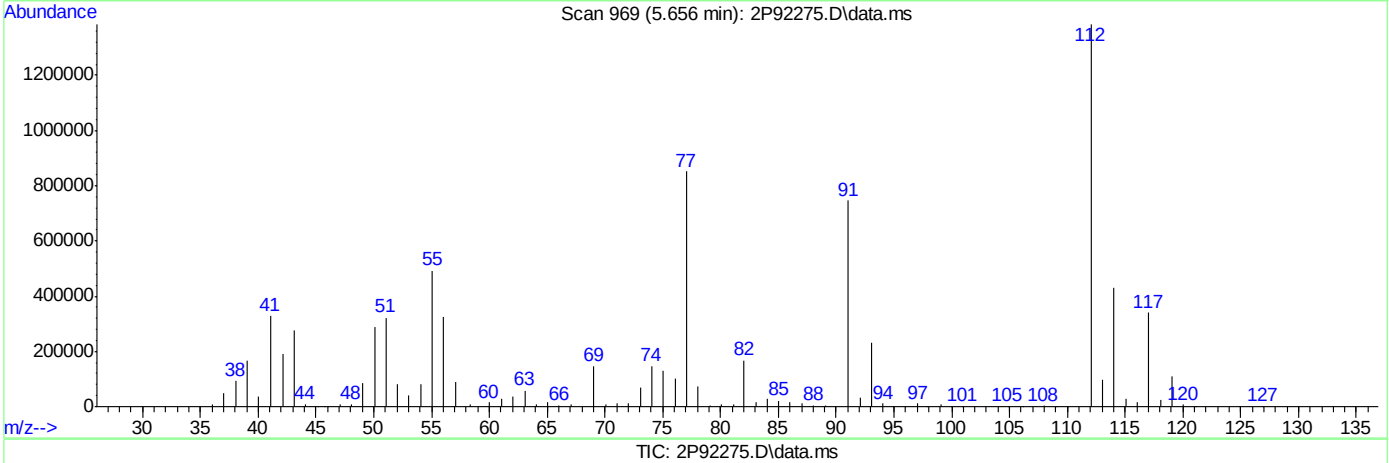
Ion	Exp%	Act%
43.00	100	100
42.10	59.70	60.47
41.10	72.70	71.64
39.00	28.00	27.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(76) 1-Chlorohexane

5.656min (+0.004) 78.56ug/L

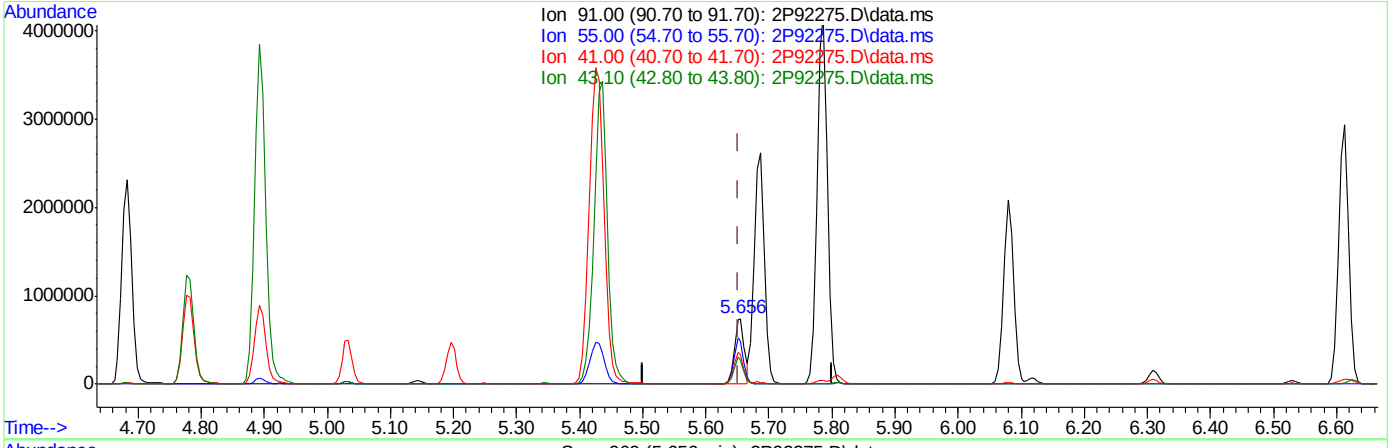
response 607981

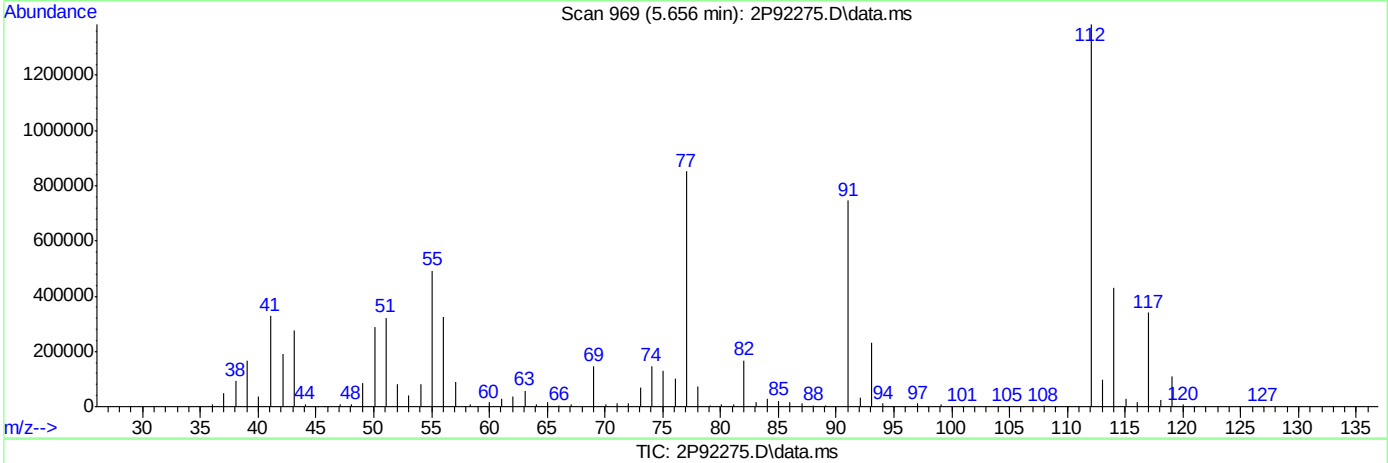
Ion	Exp%	Act%
91.00	100	100
55.00	103.70	64.37#
41.00	83.00	42.39#
43.10	65.60	35.78#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92275.D
Acq On : 24 Aug 2022 1:04 pm
Operator : courtnef
Sample : IC3560-7
Misc : MS52204,V2P3560,,,,,
ALS Vial : 58 Sample Multiplier: 1

Quant Time: Aug 24 13:14:46 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Aug 04 14:35:36 2022
Response via : Initial Calibration





TIC: 2P92275.D\data.ms

(76) 1-Chlorohexane

5.656min (+0.004) 110.16ug/L m

response 852517

Ion	Exp%	Act%
91.00	100	100
55.00	103.70	66.08#
41.00	83.00	44.08#
43.10	65.60	36.96#

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
08/25/22 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1393141	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.643	117	987081	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	446303	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	302671	51.12	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.24%			
49) 1,2-Dichloroethane-d4	3.552	65	425650	51.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.52%			
63) Toluene-d8	4.650	98	1358611	50.02	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.04%			
86) 4-Bromofluorobenzene	6.496	174	348971	50.13	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.26%			
Target Compounds						Qvalue
3) Chloromethane	1.252	50	153007	36.01	ug/L	97
4) 1,3-butadiene	1.320	39	147719	37.41	ug/L	96
5) Vinyl Chloride	1.304	62	188259	36.35	ug/L	98
6) Bromomethane	1.508	94	108687	33.91	ug/L	98
7) Chloroethane	1.581	64	58476	34.86	ug/L	97
8) Trichlorofluoromethane	1.670	101	195785	36.72	ug/L	99
9) Ethyl Ether	1.879	59	185108	38.19	ug/L	98
10) Ethanol	1.979	45	98674	698.39	ug/L	98
11) 1,2-Dichlorotrifluoroe...	1.979	67	194448	42.88	ug/L	97
12) 1,1-Dichloroethene	1.979	61	268516	40.55	ug/L	97
13) Freon 113	2.015	101	155540	36.93	ug/L	97
14) Carbon Disulfide	2.000	76	383036	34.35	ug/L	97
16) Acrolein	2.156	56	299581	169.00	ug/L	99
17) Allyl chloride	2.245	41	220442	46.28	ug/L	97
18) Methylene Chloride	2.303	49	230001	32.47	ug/L	100
19) Acetone	2.318	43	637443	200.83	ug/L	97
20) Methyl acetate	2.397	43	1272345	196.29	ug/L	100
21) trans-1,2-Dichloroethene	2.402	61	265616	39.59	ug/L	98
22) Hexane	2.470	56	141138	41.52	ug/L	92
23) Methyl Tert Butyl Ether	2.475	73	709564	46.41	ug/L	75
24) Tert Butyl Alcohol	2.512	59	687470	363.53	ug/L	98
25) Acetonitrile	2.554	41	344037	320.72	ug/L	99
26) Di-isopropyl ether	2.690	45	567187	39.95	ug/L	99
27) Chloroprene	2.731	53	1026922	50.78	ug/L	93
28) 1,1-Dichloroethane	2.731	63	360738	40.89	ug/L	100
29) Acrylonitrile	2.731	52	670568	209.71	ug/L	83
30) ETBE	2.883	59	612179	36.80	ug/L	97
31) Vinyl acetate	2.862	43	2320171	202.80	ug/L	100
32) cis-1,2-Dichloroethene	3.024	96	203500	38.68	ug/L	98
33) 2,2-Dichloropropane	3.087	77	260497	37.19	ug/L	98
34) Bromochloromethane	3.129	128	87073	36.61	ug/L	97
35) Cyclohexane	3.165	56	310530	37.16	ug/L	99
36) Chloroform	3.171	83	345092	38.98	ug/L	98
37) Ethyl acetate	3.228	43	1705507	197.09	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) Tetrahydrofuran	3.259	42	126514	38.29	ug/L	98
40) Carbon Tetrachloride	3.270	117	224473m	40.01	ug/L	
41) 1,1,1-Trichloroethane	3.296	97	297110	38.42	ug/L	99
42) 2-Butanone	3.317	43	1075112	199.87	ug/L	99
43) 1,1-Dichloropropene	3.364	75	255267	38.43	ug/L	98
44) tert-Butyl formate	3.411	59	672736	175.63	ug/L	99
45) Propionitrile	3.463	54	636097	373.49	ug/L	99
46) Methacrylonitrile	3.484	41	1759385	386.73	ug/L	99
47) Benzene	3.495	78	808049	38.11	ug/L	99
48) TAME	3.568	73	801478	53.00	ug/L	96
50) Isobutyl alcohol	3.589	43	742060m	851.71	ug/L	
51) 1,2-Dichloroethane	3.589	62	291680	38.43	ug/L	99
52) Tert Amyl Alcohol	3.652	59	561158	350.61	ug/L	98
53) Trichloroethene	3.824	95	205446	37.64	ug/L	93
54) Methylcyclohexane	3.845	83	285620	38.56	ug/L	99
55) Dibromomethane	4.054	93	112770	37.62	ug/L	90
56) 1,2-Dichloropropane	4.112	63	192709	37.41	ug/L	99
57) Bromodichloromethane	4.148	83	227821	39.63	ug/L	99
58) Methyl methacrylate	4.237	41	226759	38.54	ug/L	97
59) 1,4-Dioxane	4.263	88	127118	785.27	ug/L	95
60) 2-Chloroethyl vinyl ether	4.478	63	875983	204.42	ug/L	100
61) cis-1,3-Dichloropropene	4.525	75	290458	39.10	ug/L	98
64) Toluene	4.681	91	880532	37.78	ug/L	99
65) 2-Nitropropane	4.776	41	363441	191.13	ug/L	97
66) 4-Methyl-2-pentanone	4.891	43	1777459	197.71	ug/L	99
67) trans-1,3-Dichloropropene	4.922	75	281243	40.81	ug/L	84
68) Tetrachloroethene	4.938	166	189515	38.29	ug/L	98
69) Ethyl methacrylate	5.032	69	321629	38.36	ug/L	99
70) 1,1,2-Trichloroethane	5.021	83	151033	37.88	ug/L	98
71) Dibromochloromethane	5.142	129	158020	37.41	ug/L	96
72) 1,3-Dichloropropane	5.194	76	315917	35.65	ug/L	99
73) 1,2-Dibromoethane	5.293	107	192087	39.86	ug/L	91
74) 3,3-dimethyl-1-butanol	5.419	57	3829342	1907.86	ug/L	100
75) 2-hexanone	5.429	43	1976136	195.78	ug/L	90
76) 1-Chlorohexane	5.654	91	271934m	36.59	ug/L	
77) Ethylbenzene	5.685	91	968546	37.90	ug/L	100
78) Chlorobenzene	5.654	112	530424	38.01	ug/L	98
79) 1,1,1,2-Tetrachloroethane	5.696	131	171197	38.35	ug/L	98
80) m,p-Xylene	5.785	91	1535822	75.99	ug/L	99
81) o-Xylene	6.077	91	789768	39.70	ug/L	99
82) Styrene	6.109	104	605490	39.79	ug/L	98
83) Bromoform	6.119	173	88356	38.19	ug/L	99
84) Isopropylbenzene	6.307	105	899592	39.19	ug/L	99
87) cis-1,4-Dichloro-2-butene	6.527	53	98546	37.92	ug/L	94
88) n-Propylbenzene	6.611	91	1065654	38.92	ug/L	99
89) Bromobenzene	6.574	156	204252	36.89	ug/L	91
90) 1,1,2,2-Tetrachloroethane	6.632	83	290152	39.28	ug/L	98
91) 1,3,5-Trimethylbenzene	6.757	105	736217	38.62	ug/L	100
92) 2-Chlorotoluene	6.715	91	645623	39.07	ug/L	99
93) trans-1,4-Dichloro-2-B...	6.757	53	108937	34.41	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

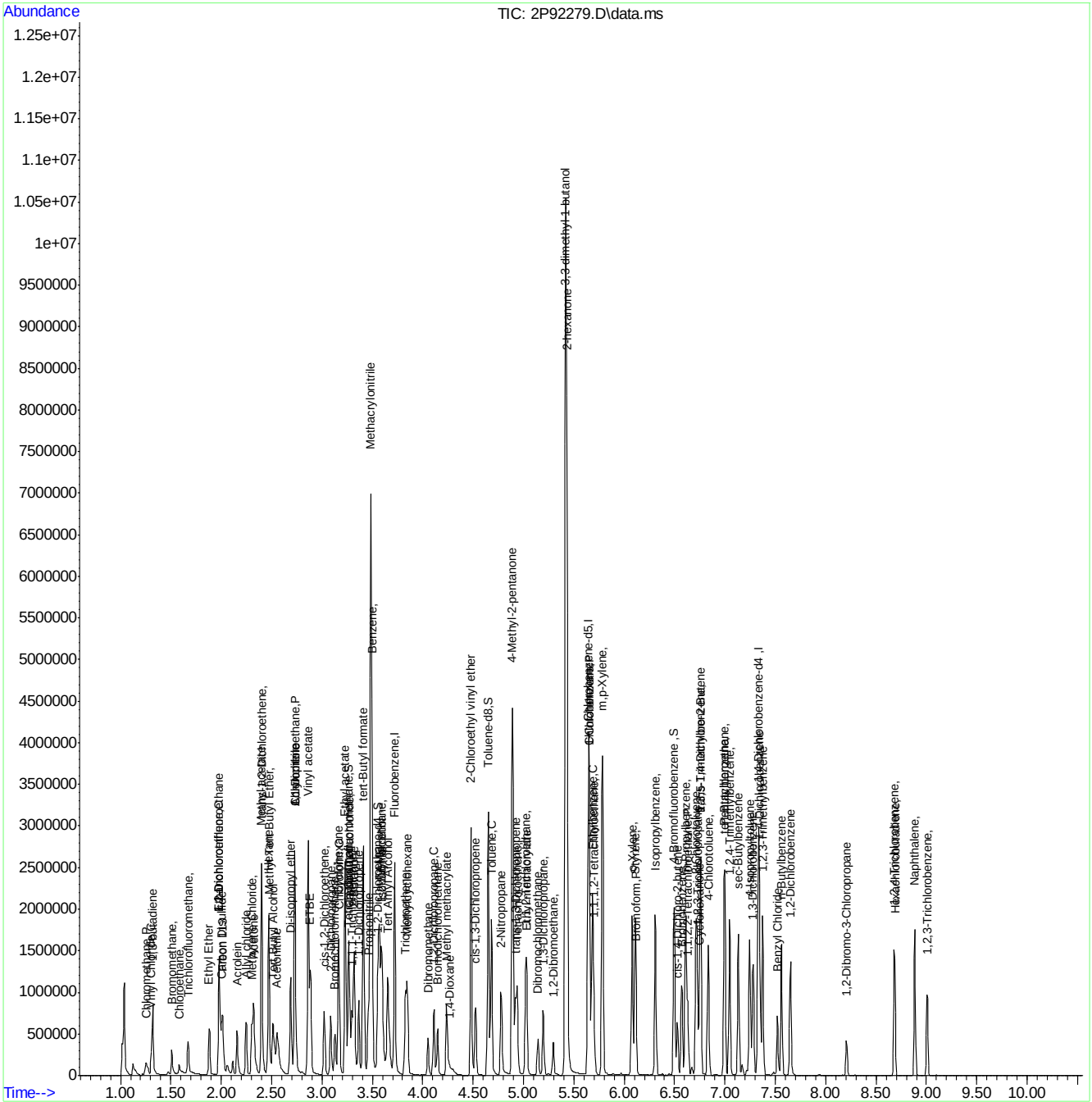
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	1,2,3-Trichloropropane	6.726	110	100012	36.30	ug/L	96
95)	Cyclohexanone	6.747	55	120517	208.91	ug/L	97
96)	4-Chlorotoluene	6.835	91	674992	38.75	ug/L	100
97)	tert-Butylbenzene	6.992	91	411422	39.30	ug/L	97
99)	1,2,4-Trimethylbenzene	7.045	105	731537	39.34	ug/L	99
100)	Pentachloroethane	6.997	167	100173	41.24	ug/L	96
101)	sec-Butylbenzene	7.133	105	829710	40.93	ug/L	99
102)	4-Isopropyltoluene	7.248	119	738675	40.15	ug/L	99
103)	1,3-Dichlorobenzene	7.280	146	389064	39.12	ug/L	98
104)	1,2,3-Trimethylbenzene	7.374	105	753617	40.40	ug/L	100
105)	1,4-Dichlorobenzene	7.343	146	395450	38.05	ug/L	97
106)	n-Butylbenzene	7.562	92	327645	36.65	ug/L	97
107)	Benzyl Chloride	7.520	126	65808	29.88	ug/L	93
108)	1,2-Dichlorobenzene	7.651	146	360833	38.65	ug/L	99
109)	1,2-Dibromo-3-Chloropr...	8.205	75	63487	36.46	ug/L	98
110)	Hexachlorobutadiene	8.686	225	65921	38.08	ug/L	97
111)	1,2,4-Trichlorobenzene	8.681	180	191794	38.62	ug/L	97
112)	Naphthalene	8.885	128	826973	39.13	ug/L	99
113)	1,2,3-Trichlorobenzene	9.010	180	177347	38.05	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:18:05 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration



Manual Integration Approval Summary

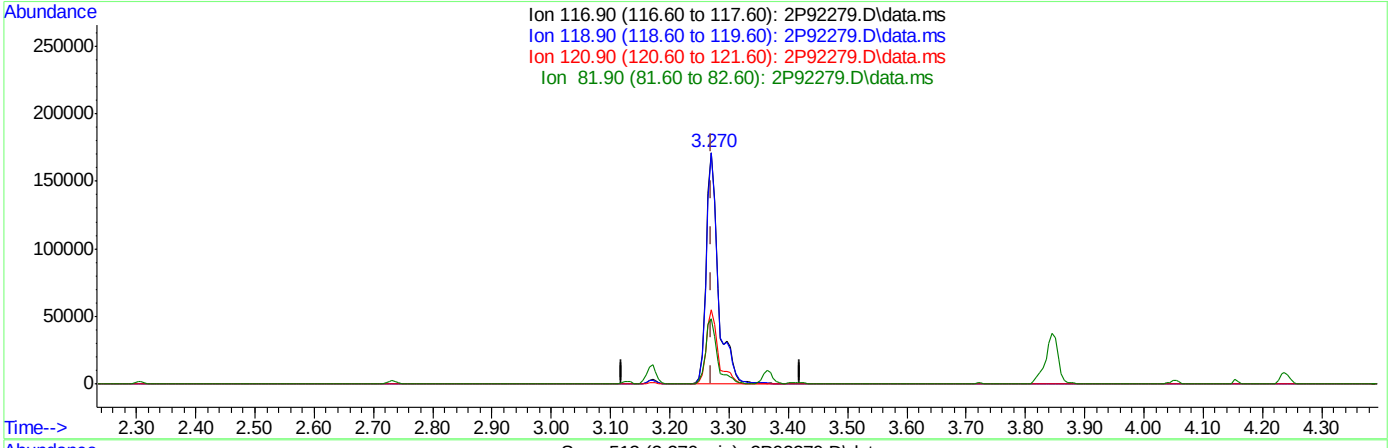
Sample Number: V2P3560-ICV3560 **Method:** SW846 8260D
Lab FileID: 2P92279.D **Analyst approved:** 08/24/22 15:20 Courtney Failla
Injection Time: 08/24/22 14:09 **Supervisor approved:** 08/25/22 11:34 Karen Watson

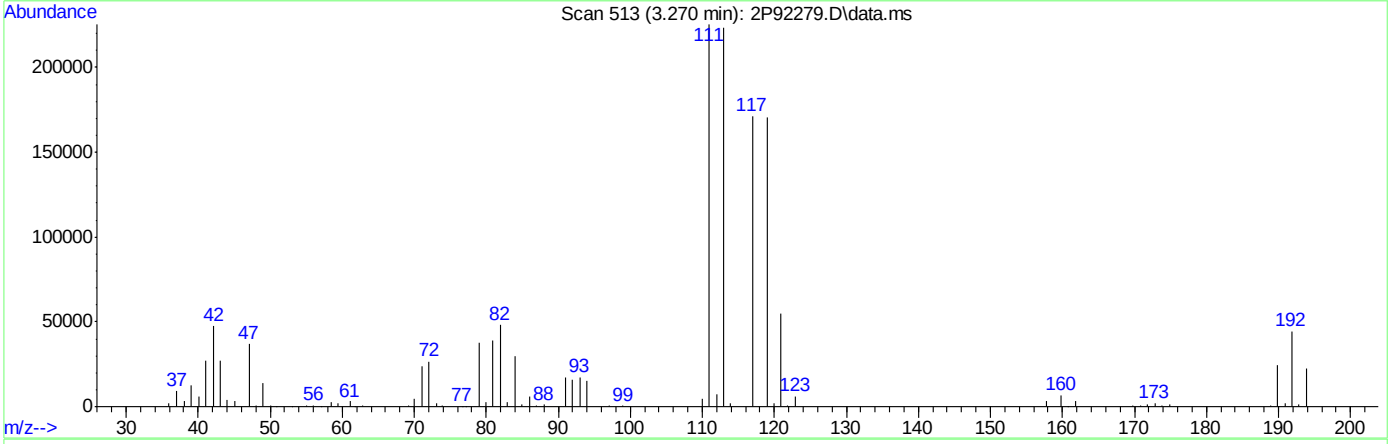
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 43.45ug/L

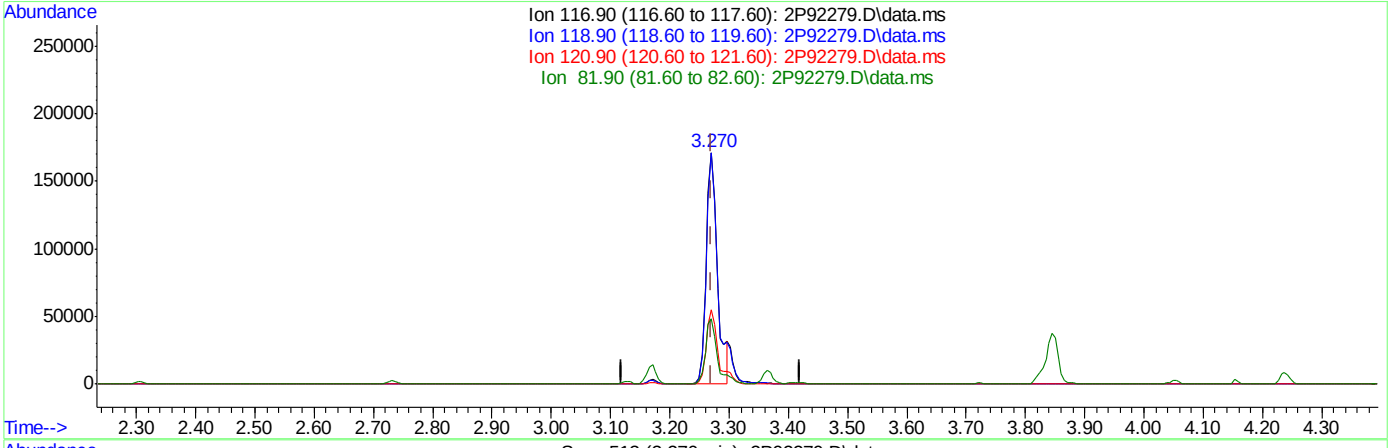
response 246422

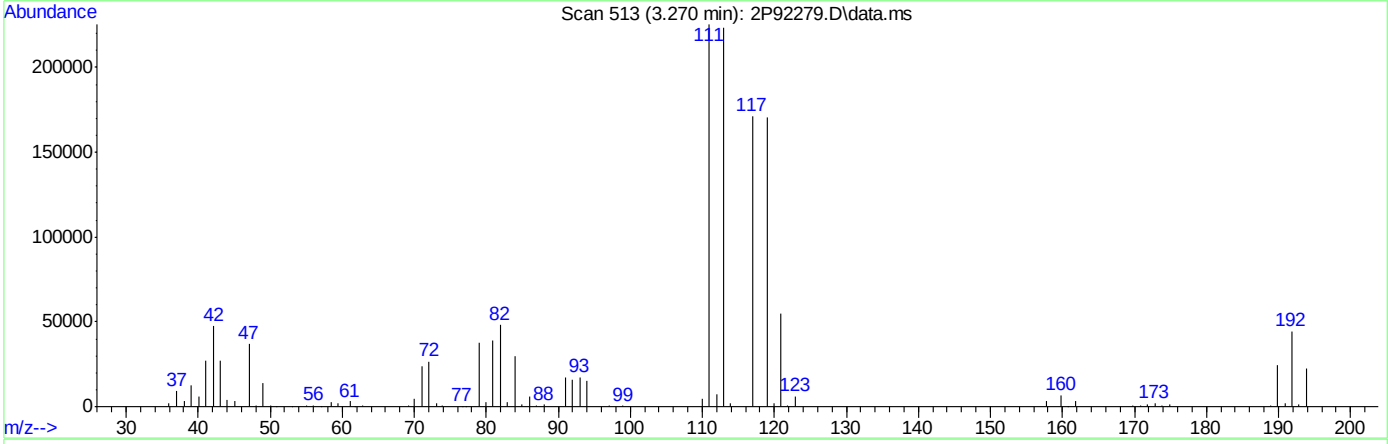
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	99.63
120.90	29.50	32.05
81.90	28.30	27.98

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(40) Carbon Tetrachloride ( )

3.270min (-0.000) 40.01ug/L m

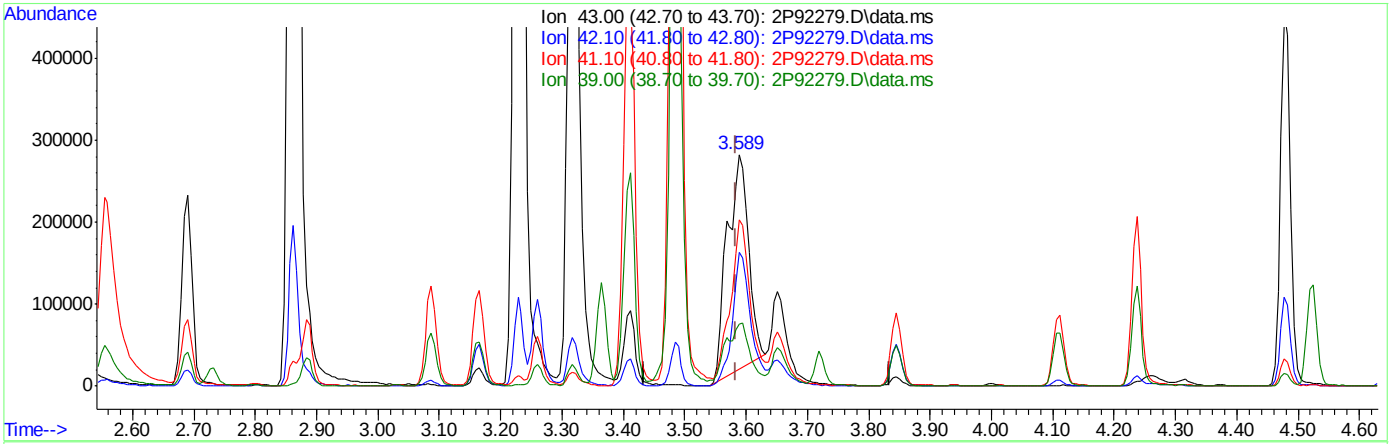
response 224473

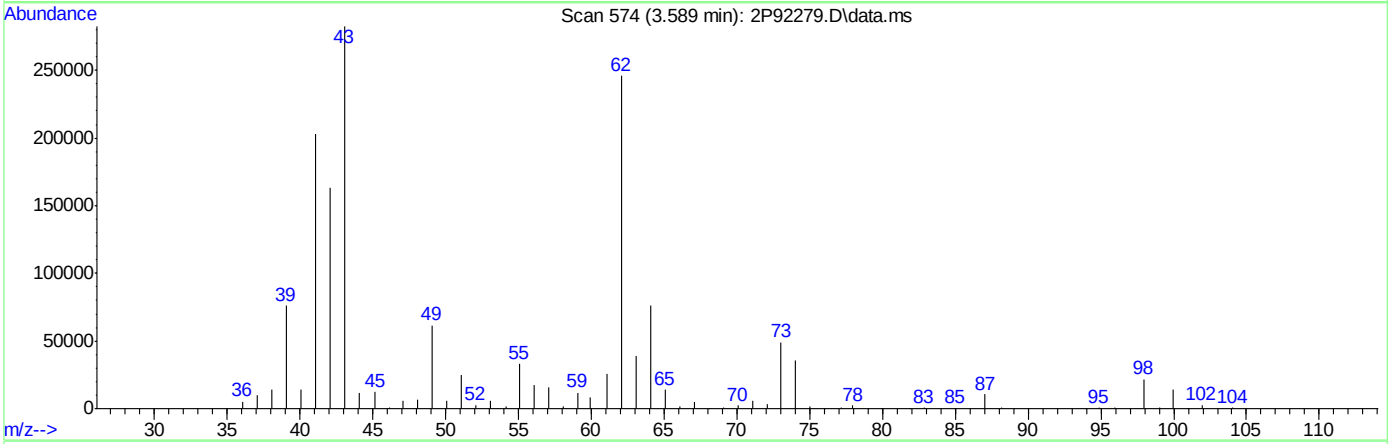
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	99.63
120.90	29.50	32.05
81.90	28.30	28.14

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 732.74ug/L

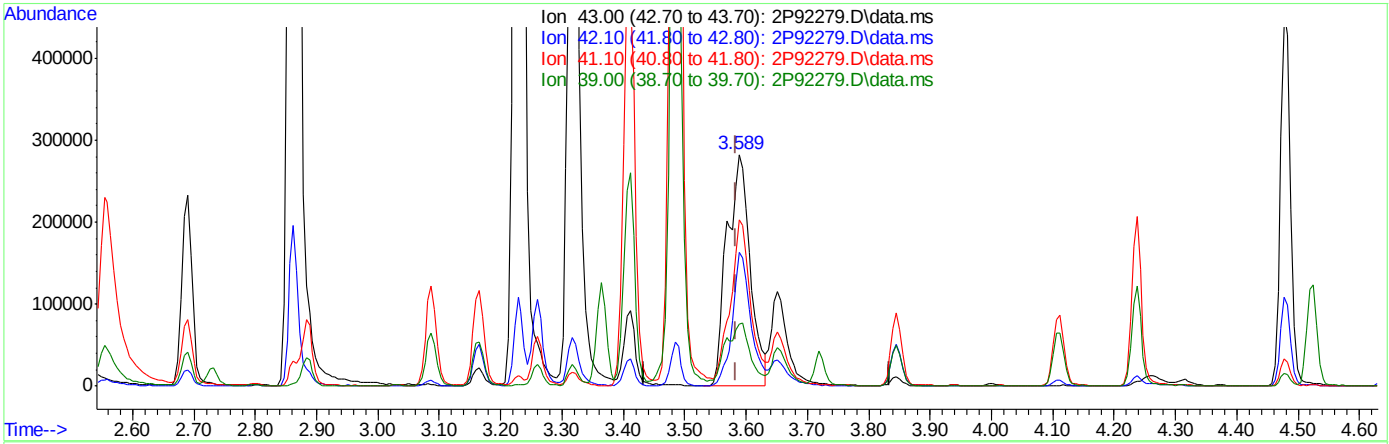
response 638409

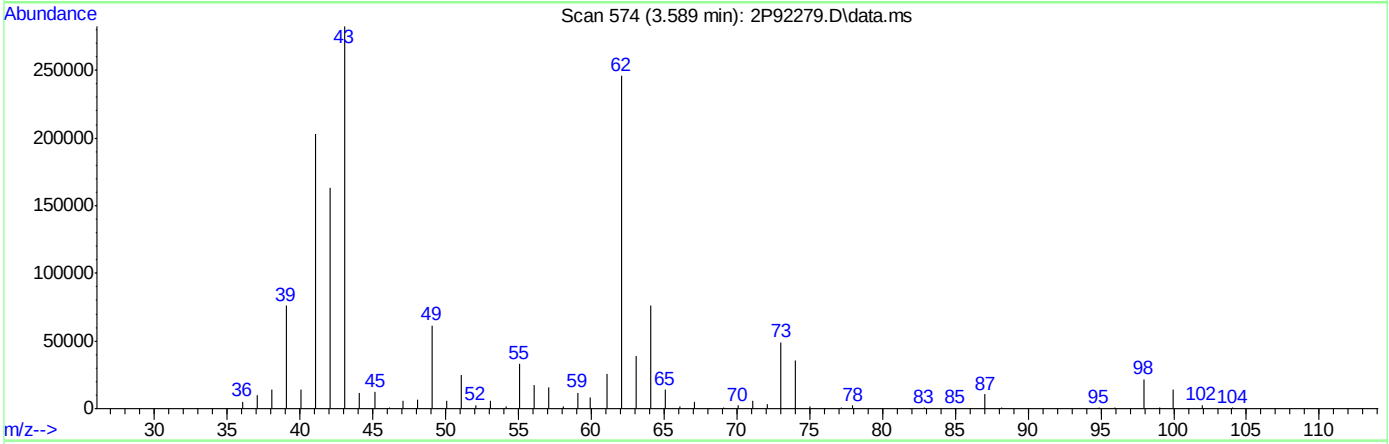
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.73
41.10	70.00	68.58
39.00	27.50	24.47

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(50) Isobutyl alcohol

3.589min (+0.005) 851.71ug/L m

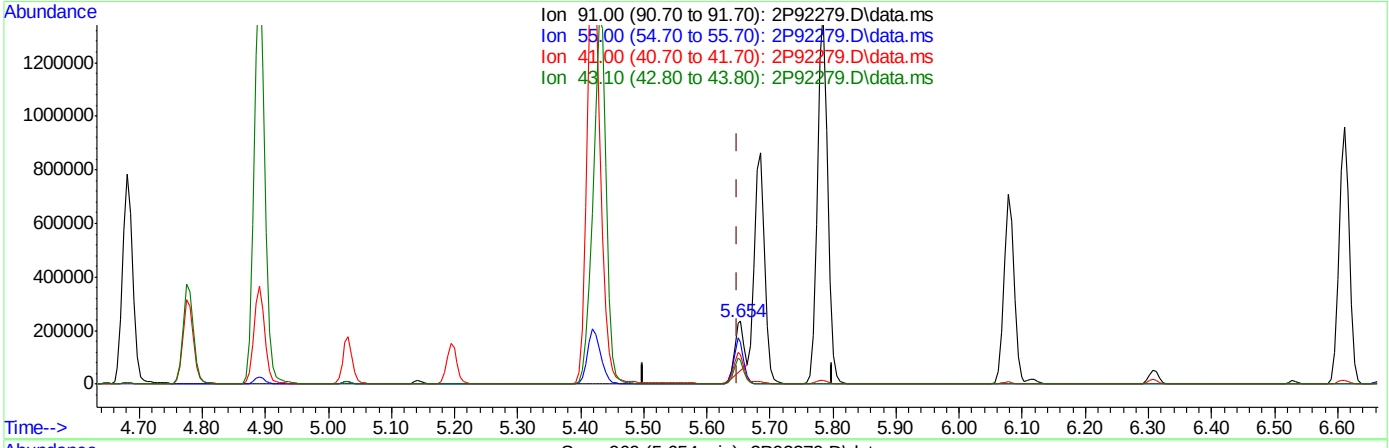
response 742060

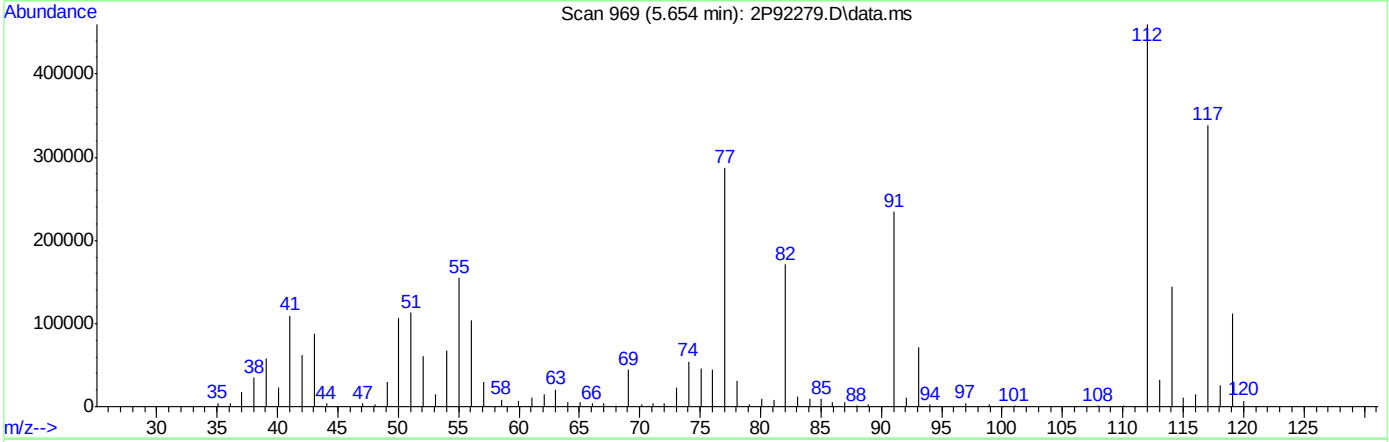
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	57.75
41.10	70.00	71.88
39.00	27.50	26.89

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.005) 26.16ug/L

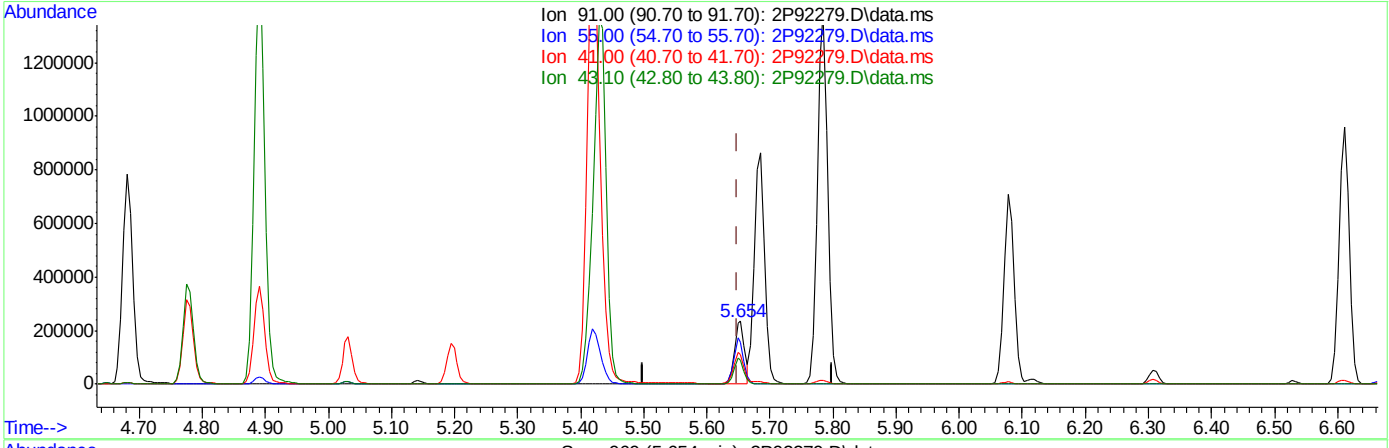
response 194418

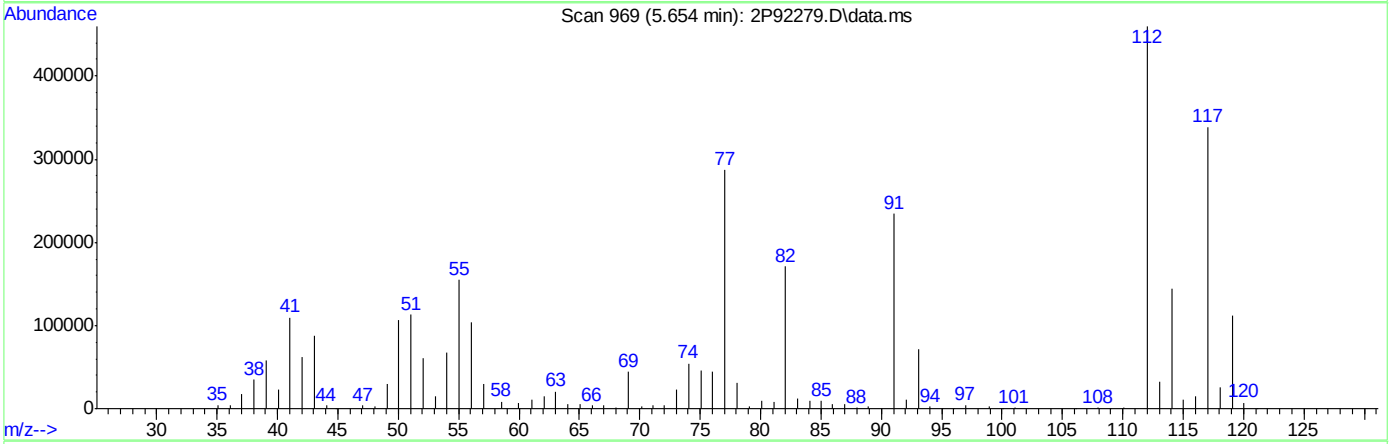
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	62.64
41.00	53.40	44.49
43.10	41.30	35.83

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92279.D
Acq On : 24 Aug 2022 2:09 pm
Operator : courtnef
Sample : ICV3560-5
Misc : MS52204,V2P3560,,,,,
ALS Vial : 60 Sample Multiplier: 1

Quant Time: Aug 24 15:15:22 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration





TIC: 2P92279.D\data.ms

(76) 1-Chlorohexane

5.654min (+0.005) 36.59ug/L m

response 271934

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	66.03
41.00	53.40	46.92
43.10	41.30	37.42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92281.D
Acq On : 24 Aug 2022 2:41 pm
Operator : courtnef
Sample : ICV3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Aug 24 15:19:03 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration

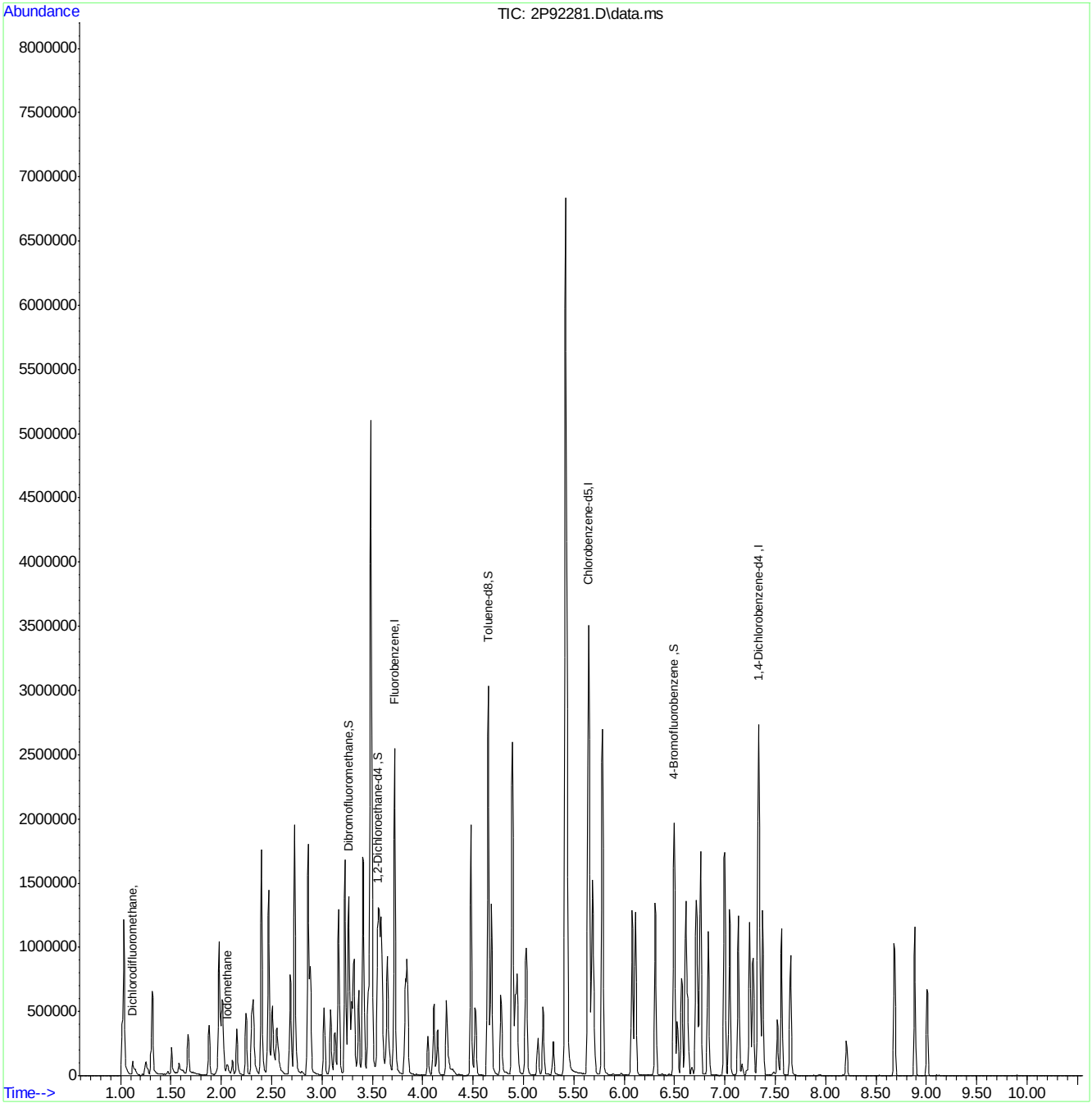
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.720	96	1387054	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.644	117	968239	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.332	152	448068	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.265	113	297557	50.47	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.94%			
49) 1,2-Dichloroethane-d4	3.553	65	415478	50.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.48%			
63) Toluene-d8	4.650	98	1333699	50.06	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.12%			
86) 4-Bromofluorobenzene	6.496	174	341929	48.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.86%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.122	85	79604	21.31	ug/L	95
15) Iodomethane	2.057	142	62007	22.82	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-08-24\
Data File : 2P92281.D
Acq On : 24 Aug 2022 2:41 pm
Operator : courtnef
Sample : ICV3560-4
Misc : MS52204,V2P3560,,,,,
ALS Vial : 61 Sample Multiplier: 1

Quant Time: Aug 24 15:19:03 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:30:01 2022
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.721	96	1124849	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.645	117	869549	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.333	152	414062	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.266	113	239762	50.15	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.30%			
49) 1,2-Dichloroethane-d4	3.553	65	305181	45.96	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 91.92%			
63) Toluene-d8	4.646	98	1127517	47.12	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 94.24%			
86) 4-Bromofluorobenzene	6.497	174	313421	48.53	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.06%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.122	85	142650	45.94	ug/L	98
3) Chloromethane	1.248	50	162760	47.44	ug/L	98
4) 1,3-butadiene	1.316	39	104759	32.86	ug/L	99
5) Vinyl Chloride	1.300	62	194579	46.54	ug/L	98
6) Bromomethane	1.504	94	100176	38.71	ug/L	99
7) Chloroethane	1.582	64	57946	43.41	ug/L	95
8) Trichlorofluoromethane	1.666	101	203010	53.95	ug/L	98
9) Ethyl Ether	1.880	59	179130	45.78	ug/L	98
10) Ethanol	1.969	45	106058	968.41	ug/L	97
11) 1,2-Dichlorotrifluoroe...	1.975	67	200937	54.88	ug/L	99
12) 1,1-Dichloroethene	1.980	61	238761	44.65	ug/L	99
13) Freon 113	2.011	101	155281	44.91	ug/L	97
14) Carbon Disulfide	2.001	76	359193	39.17	ug/L	99
15) Iodomethane	2.058	142	139850	55.41	ug/L	100
16) Acrolein	2.152	56	312323	218.21	ug/L	99
17) Allyl chloride	2.246	41	163430	42.50	ug/L	94
18) Methylene Chloride	2.299	49	223618	39.72	ug/L	98
19) Acetone	2.314	43	533247	208.29	ug/L	98
20) Methyl acetate	2.398	43	1214660	232.08	ug/L	98
21) trans-1,2-Dichloroethene	2.403	61	245822	45.38	ug/L	95
22) Hexane	2.466	56	131741	47.06	ug/L	95
23) Methyl Tert Butyl Ether	2.471	73	598919	48.51	ug/L	85
24) Tert Butyl Alcohol	2.508	59	729172	477.55	ug/L	97
25) Acetonitrile	2.555	41	357126	412.33	ug/L	98
26) Di-isopropyl ether	2.686	45	546553	47.68	ug/L	97
27) Chloroprene	2.727	53	717705	43.96	ug/L	98
28) 1,1-Dichloroethane	2.727	63	329734	46.29	ug/L	98
29) Acrylonitrile	2.727	52	559203	216.60	ug/L	98
30) ETBE	2.884	59	636647	47.40	ug/L	98
31) Vinyl acetate	2.858	43	2027836	219.52	ug/L	98
32) cis-1,2-Dichloroethene	3.020	96	193466	45.54	ug/L	95
33) 2,2-Dichloropropane	3.088	77	253061	43.84	ug/L	98
34) Bromochloromethane	3.125	128	86180	44.88	ug/L	95
35) Cyclohexane	3.161	56	296841	43.29	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Chloroform	3.167	83	331179	46.33	ug/L	99
37) Ethyl acetate	3.229	43	1554323	222.46	ug/L	99
38) Tetrahydrofuran	3.255	42	129992	48.73	ug/L	97
40) Carbon Tetrachloride	3.271	117	196250m	42.93	ug/L	
41) 1,1,1-Trichloroethane	3.297	97	281237	44.43	ug/L	99
42) 2-Butanone	3.313	43	910233	209.68	ug/L	98
43) 1,1-Dichloropropene	3.365	75	246322	45.92	ug/L	95
44) tert-Butyl formate	3.407	59	726049	225.40	ug/L	98
45) Propionitrile	3.459	54	623566	453.47	ug/L	98
46) Methacrylonitrile	3.485	41	1603882	436.63	ug/L	97
47) Benzene	3.496	78	794120	46.38	ug/L	85
48) TAME	3.569	73	580637	47.55	ug/L	98
50) Isobutyl alcohol	3.590	43	673510m	957.41	ug/L	
51) 1,2-Dichloroethane	3.590	62	268736	43.85	ug/L	98
52) Tert Amyl Alcohol	3.653	59	622757	477.43	ug/L	98
53) Trichloroethene	3.825	95	200006	45.39	ug/L	97
54) Methylcyclohexane	3.846	83	276229	45.21	ug/L	98
55) Dibromomethane	4.050	93	112963	46.67	ug/L	95
56) 1,2-Dichloropropane	4.108	63	199809	48.04	ug/L	96
57) Bromodichloromethane	4.144	83	208605	44.22	ug/L	99
58) Methyl methacrylate	4.233	41	201066	41.97	ug/L	97
59) 1,4-Dioxane	4.259	88	122026	933.61	ug/L	98
60) 2-Chloroethyl vinyl ether	4.479	63	760883	219.91	ug/L	98
61) cis-1,3-Dichloropropene	4.521	75	279050	45.58	ug/L	97
64) Toluene	4.683	91	862030	41.99	ug/L	100
65) 2-Nitropropane	4.777	41	339695	200.78	ug/L	98
66) 4-Methyl-2-pentanone	4.887	43	1579663	199.46	ug/L	99
67) trans-1,3-Dichloropropene	4.918	75	256383	42.09	ug/L	87
68) Tetrachloroethene	4.939	166	202982	46.55	ug/L	97
69) Ethyl methacrylate	5.028	69	299045	40.31	ug/L	94
70) 1,1,2-Trichloroethane	5.017	83	151715	43.20	ug/L	94
71) Dibromochloromethane	5.143	129	160886	42.46	ug/L	97
72) 1,3-Dichloropropane	5.195	76	328834	42.12	ug/L	96
73) 1,2-Dibromoethane	5.294	107	187475	44.17	ug/L	91
74) 3,3-dimethyl-1-butanol	5.420	57	3670750	2074.70	ug/L	99
75) 2-hexanone	5.430	43	1811918	203.77	ug/L	89
76) 1-Chlorohexane	5.650	91	279491m	42.69	ug/L	
77) Ethylbenzene	5.681	91	954505	42.40	ug/L	99
78) Chlorobenzene	5.655	112	531082	43.20	ug/L	97
79) 1,1,1,2-Tetrachloroethane	5.697	131	171730	43.16	ug/L	97
80) m,p-Xylene	5.781	91	1516058	85.15	ug/L	100
81) o-Xylene	6.079	91	748148	42.69	ug/L	98
82) Styrene	6.110	104	595204	44.40	ug/L	99
83) Bromoform	6.115	173	87143	41.98	ug/L	97
84) Isopropylbenzene	6.309	105	886877	43.86	ug/L	98
87) cis-1,4-Dichloro-2-butene	6.528	53	85027	35.58	ug/L	97
88) n-Propylbenzene	6.612	91	1051023	41.37	ug/L	98
89) Bromobenzene	6.570	156	218122	42.47	ug/L	95
90) 1,1,2,2-Tetrachloroethane	6.633	83	289214	42.20	ug/L	96
91) 1,3,5-Trimethylbenzene	6.758	105	732711	41.43	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

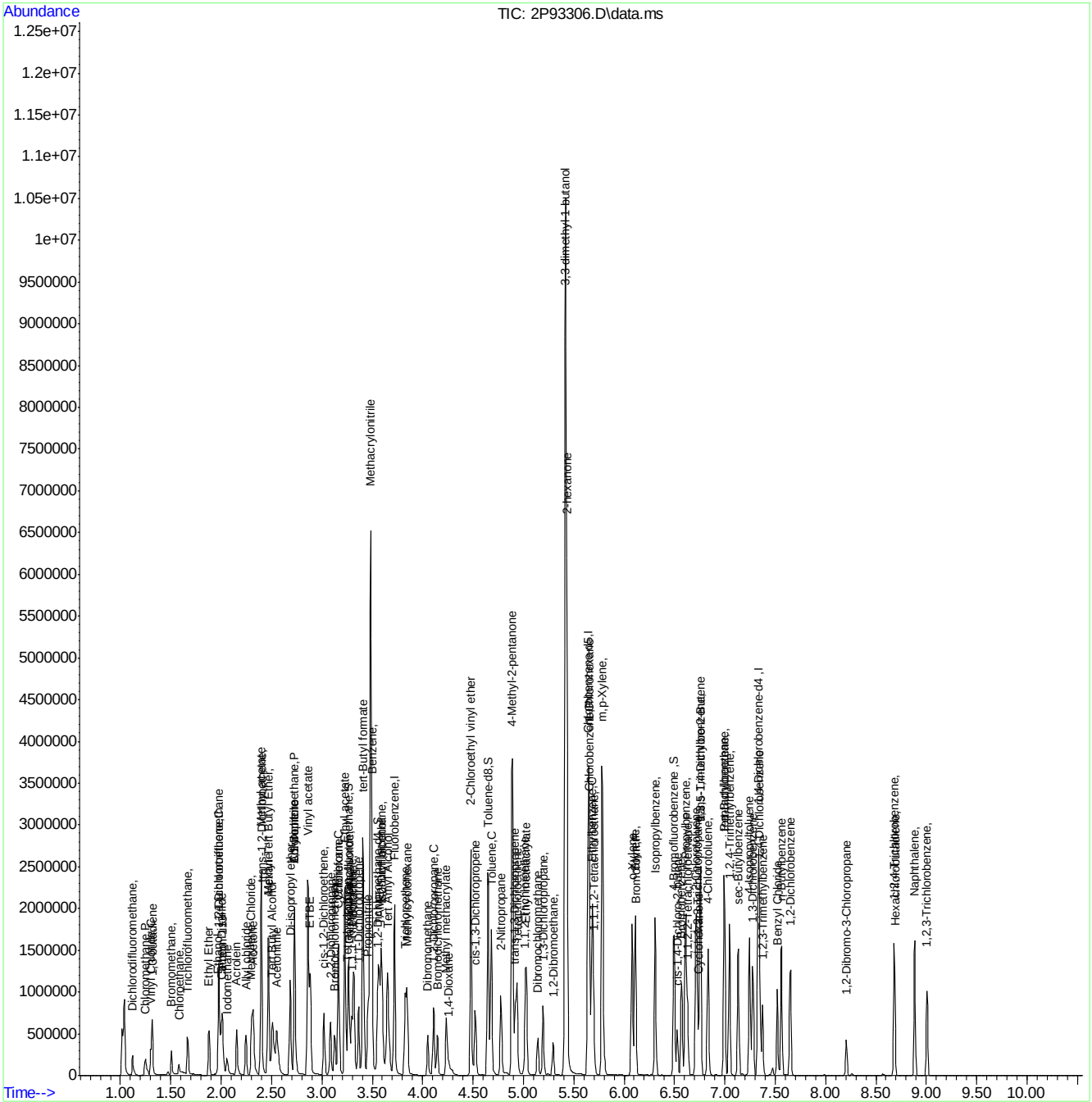
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	2-Chlorotoluene	6.711	91	628698	41.01	ug/L		98
93)	trans-1,4-Dichloro-2-B...	6.758	53	105242	35.83	ug/L		92
94)	1,2,3-Trichloropropane	6.727	110	106542	41.68	ug/L		93
95)	Cyclohexanone	6.742	55	114761	214.42	ug/L		96
96)	4-Chlorotoluene	6.831	91	658271	40.73	ug/L		97
97)	tert-Butylbenzene	6.993	91	394678	40.64	ug/L		98
99)	1,2,4-Trimethylbenzene	7.046	105	711817	41.26	ug/L		99
100)	Pentachloroethane	6.993	167	83451	37.59	ug/L	#	64
101)	sec-Butylbenzene	7.135	105	791824	42.10	ug/L		99
102)	4-Isopropyltoluene	7.244	119	713772	41.66	ug/L		99
103)	1,3-Dichlorobenzene	7.276	146	390794	42.35	ug/L		98
104)	1,2,3-Trimethylbenzene	7.375	105	354995	20.51	ug/L		99
105)	1,4-Dichlorobenzene	7.344	146	396827	41.16	ug/L		98
106)	n-Butylbenzene	7.563	92	339941	40.60	ug/L		96
107)	Benzyl Chloride	7.521	126	83760	38.57	ug/L		95
108)	1,2-Dichlorobenzene	7.652	146	366219	42.28	ug/L		98
109)	1,2-Dibromo-3-Chloropr...	8.206	75	65635	40.06	ug/L		89
110)	Hexachlorobutadiene	8.687	225	66911	41.31	ug/L		95
111)	1,2,4-Trichlorobenzene	8.682	180	197982	42.97	ug/L		96
112)	Naphthalene	8.886	128	809618	41.11	ug/L		100
113)	1,2,3-Trichlorobenzene	9.006	180	185670	42.93	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:39 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: V2P3586-CC3560
Lab FileID: 2P93306.D
Injection Time: 09/23/22 11:41

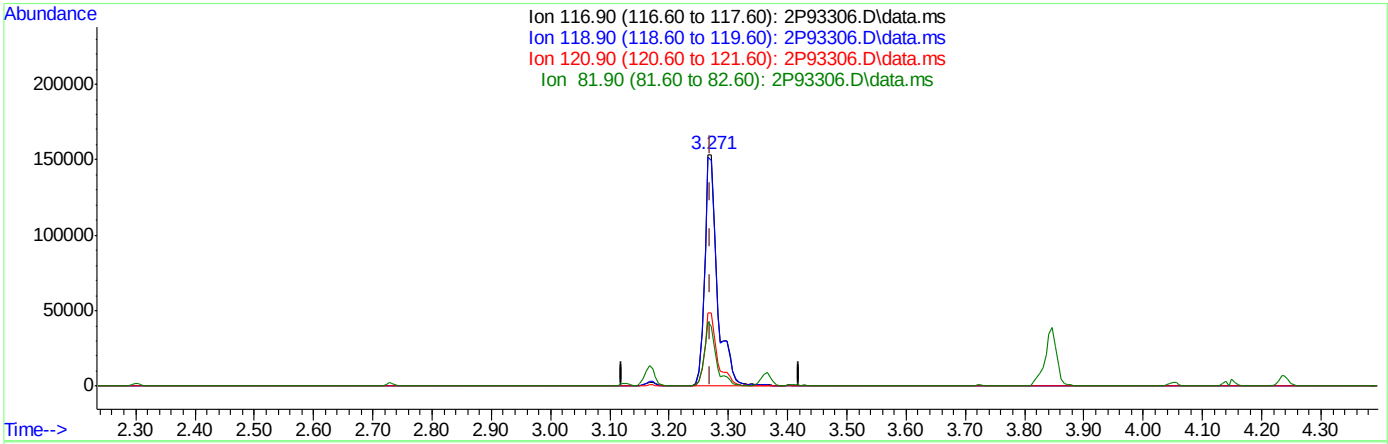
Method: SW846 8260D
Analyst approved: 09/26/22 11:58 Karen Watson
Supervisor approved: 09/26/22 12:39 Karen Watson

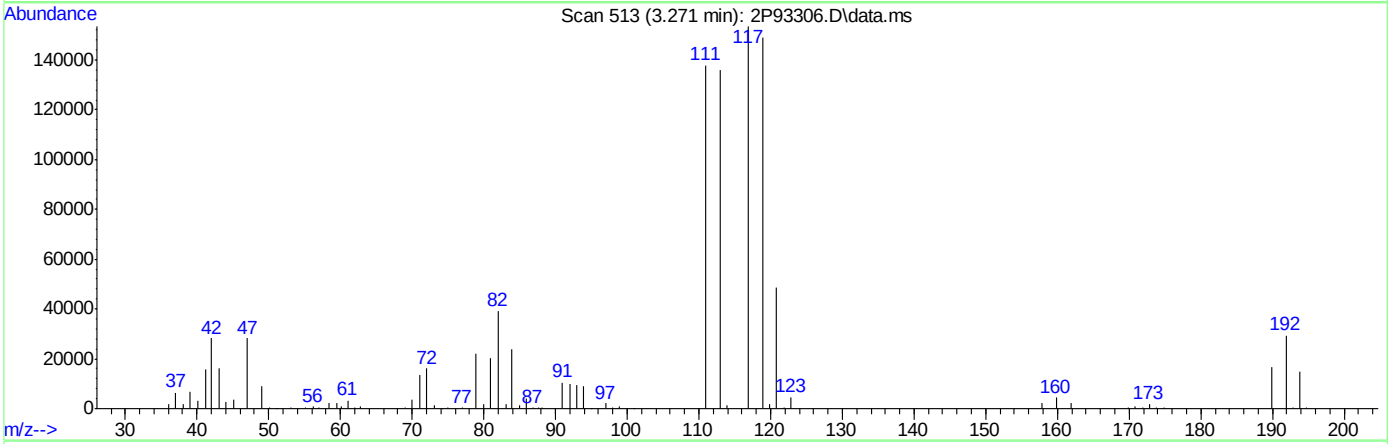
Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 49.50ug/L

response 230963

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.42

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
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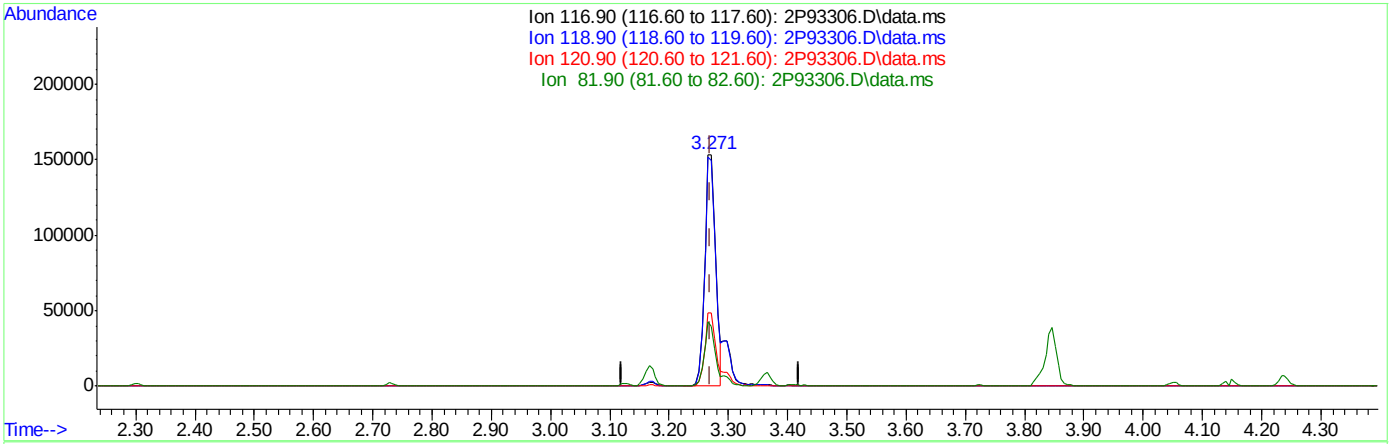
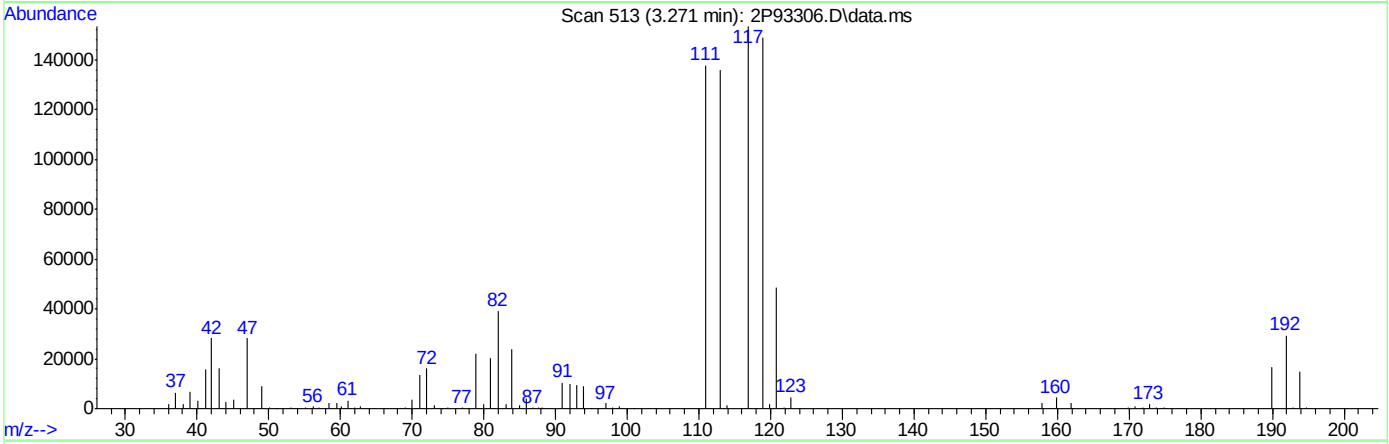
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(40) Carbon Tetrachloride ( )

3.271min (+0.001) 42.93ug/L m

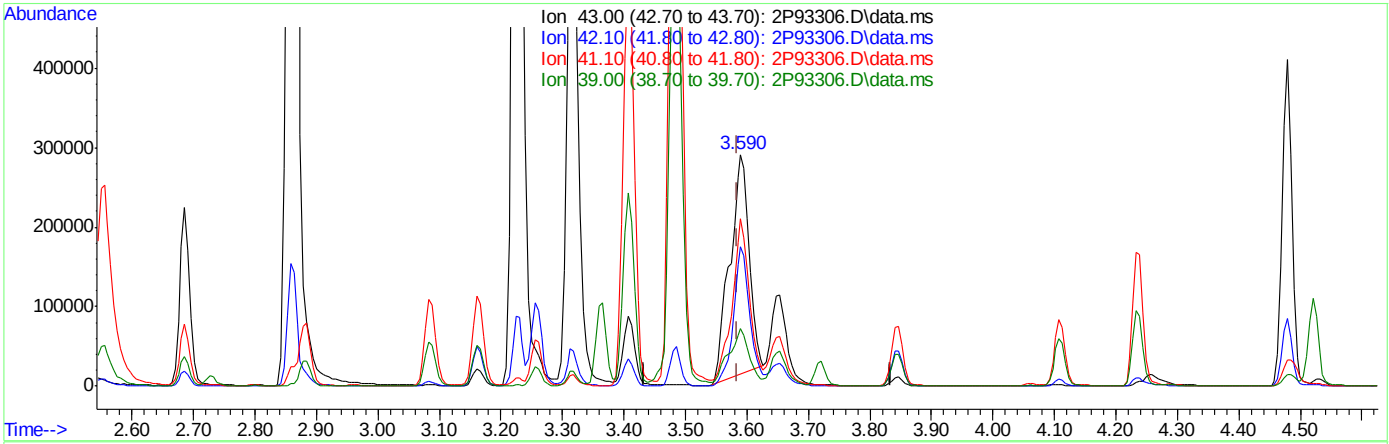
response 196250

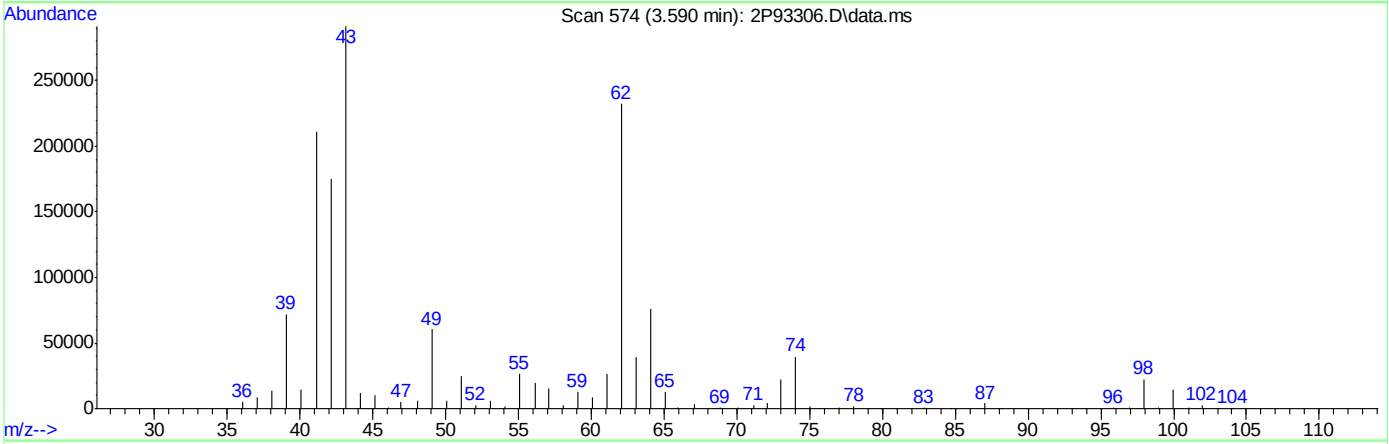
Ion	Exp%	Act%
116.90	100	100
118.90	98.00	97.21
120.90	29.50	31.82
81.90	28.30	25.66

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 857.25ug/L

response 603049

Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.32
41.10	70.00	70.12
39.00	27.50	23.11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
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Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
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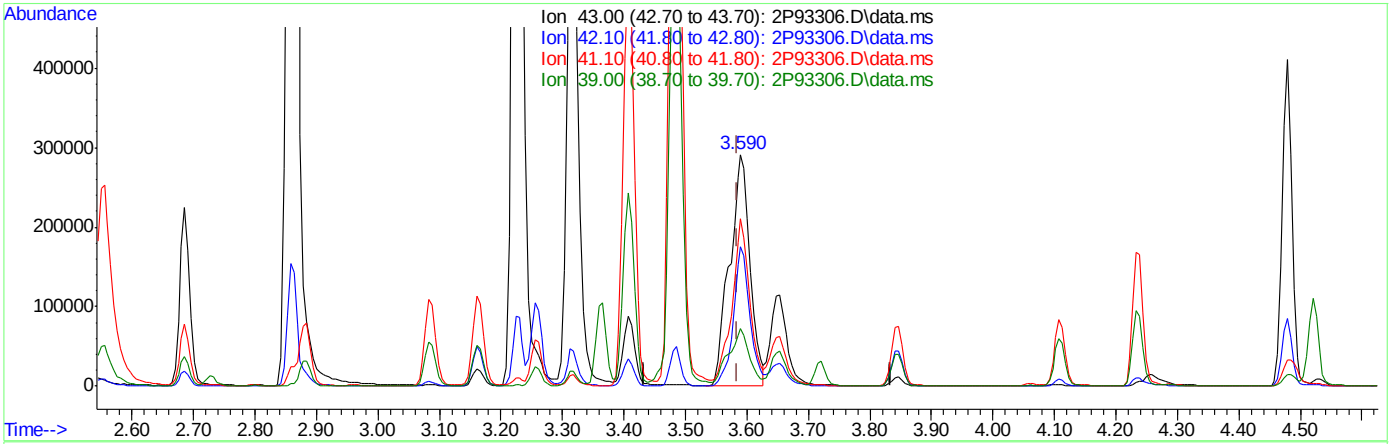
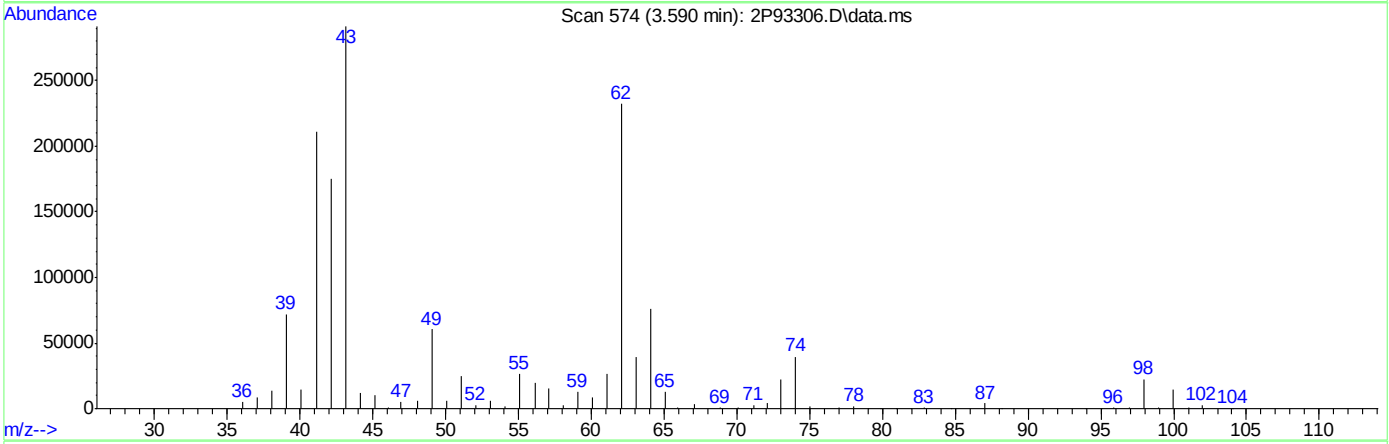




TIC: 2P93306.D\data.ms

(50) Isobutyl alcohol

3.590min (+0.006) 957.41ug/L m

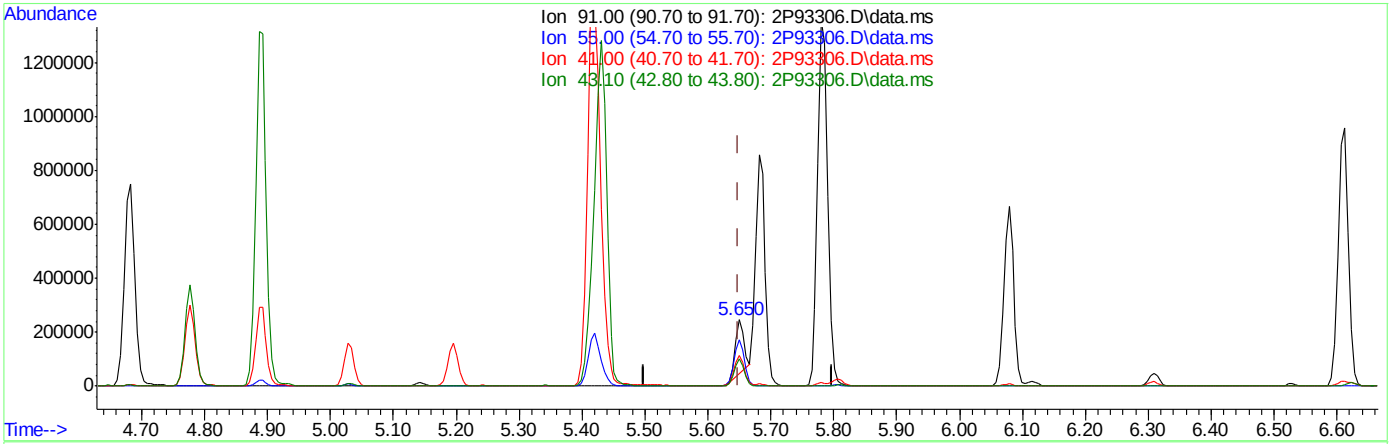
response 673510

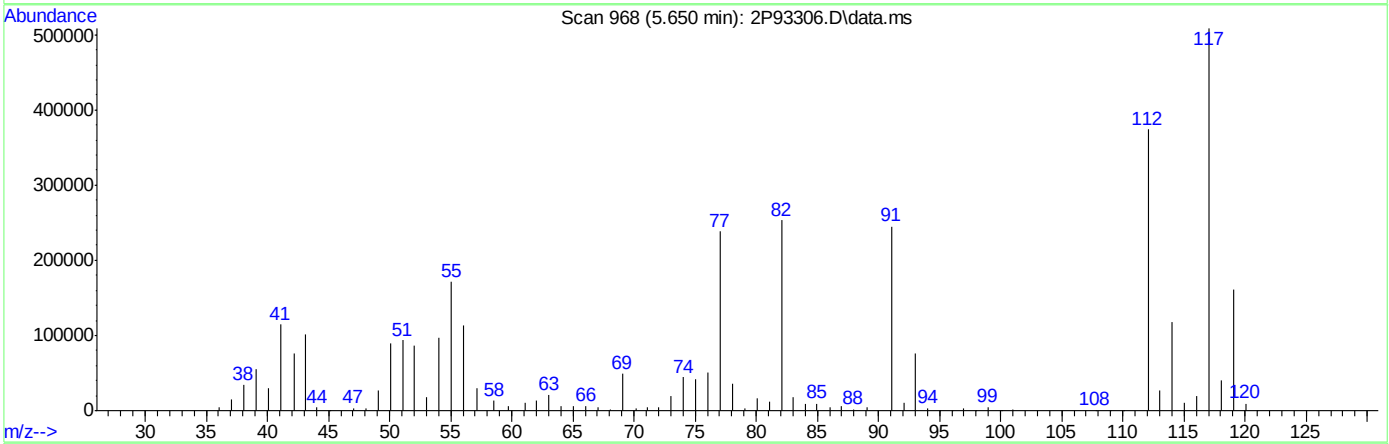
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.18
41.10	70.00	72.37
39.00	27.50	24.69

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Sep 23 11:55:08 2022
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 28.77ug/L

response 188381

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	68.79
41.00	53.40	45.28
43.10	41.30	41.18

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2022-09-23\
Data File : 2P93306.D
Acq On : 23 Sep 2022 11:41 am
Operator : courtnef
Sample : CC3560-5
Misc : MS52362,V2P3586,,,,,
ALS Vial : 52 Sample Multiplier: 1

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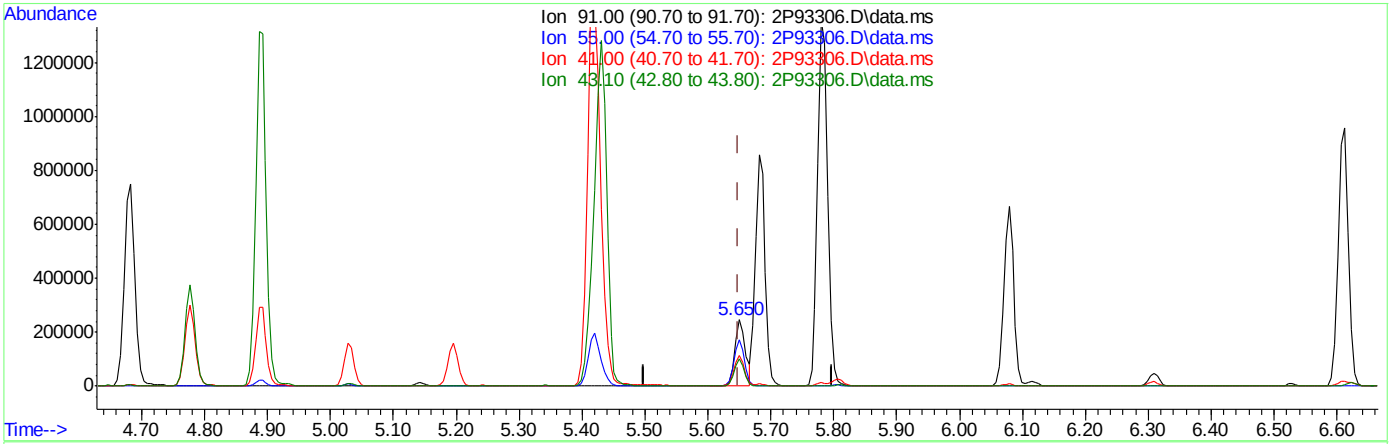
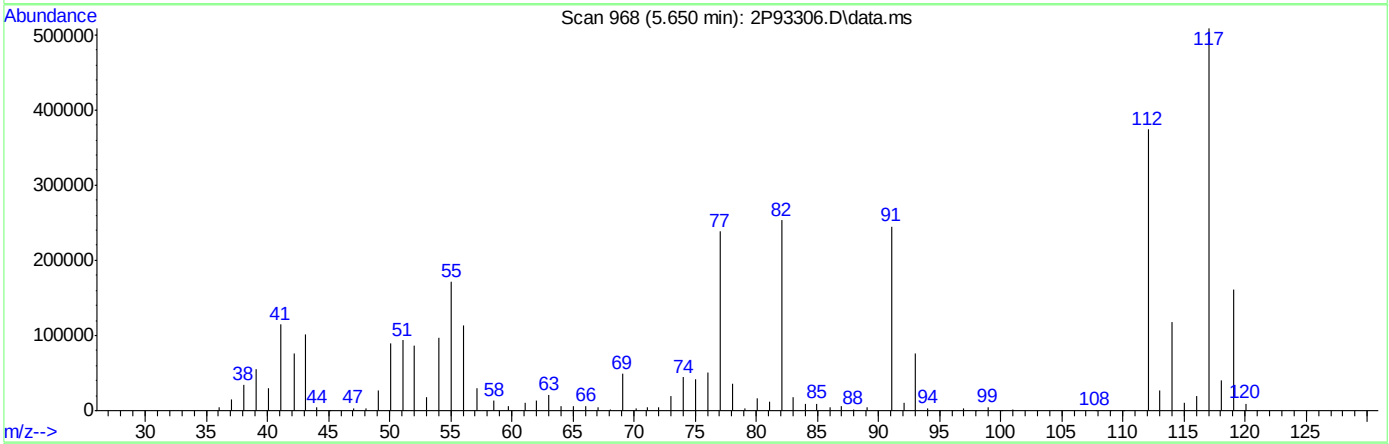
Quant Method : C:\msdchem\1\METHODS\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration





TIC: 2P93306.D\data.ms

(76) 1-Chlorohexane

5.650min (+0.001) 42.69ug/L m

response 279491

Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.94
41.00	53.40	46.67
43.10	41.30	41.65

Manual Integrations APPROVED (compounds with "m" flag)
Karen Watson
09/26/22 12:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	3.722	96	1159066	50.00	ug/L	0.00
62) Chlorobenzene-d5	5.646	117	895884	50.00	ug/L	0.00
85) 1,4-Dichlorobenzene-d4	7.334	152	428166	50.00	ug/L	0.00
System Monitoring Compounds						
39) Dibromofluoromethane	3.267	113	244758	49.68	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	99.36%		
49) 1,2-Dichloroethane-d4	3.555	65	323117	47.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery =	94.44%		
63) Toluene-d8	4.652	98	1155700	46.88	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery =	93.76%		
86) 4-Bromofluorobenzene	6.498	174	327441	49.03	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery =	98.06%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.129	85	138190	43.19	ug/L	99
3) Chloromethane	1.254	50	157899	44.66	ug/L	98
4) 1,3-butadiene	1.327	39	129413	39.39	ug/L	95
5) Vinyl Chloride	1.312	62	190985	44.33	ug/L	100
6) Bromomethane	1.516	94	77644	29.12	ug/L	99
7) Chloroethane	1.589	64	57362	41.58	ug/L	95
8) Trichlorofluoromethane	1.678	101	203795	51.51	ug/L	99
9) Ethyl Ether	1.887	59	184390	45.73	ug/L	98
10) Ethanol	1.971	45	105631m	930.61	ug/L	
11) 1,2-Dichlorotrifluoroe...	1.981	67	199645	52.92	ug/L	99
12) 1,1-Dichloroethene	1.986	61	235672	42.78	ug/L	96
13) Freon 113	2.023	101	151175	42.63	ug/L	94
14) Carbon Disulfide	2.007	76	356820	37.94	ug/L	99
15) Iodomethane	2.065	142	124851	49.20	ug/L	98
16) Acrolein	2.159	56	266446	180.66	ug/L	99
17) Allyl chloride	2.253	41	154878	39.08	ug/L	93
18) Methylene Chloride	2.305	49	225896	38.87	ug/L	98
19) Acetone	2.321	43	548391	207.87	ug/L	98
20) Methyl acetate	2.399	43	1258477	233.35	ug/L	100
21) trans-1,2-Dichloroethene	2.404	61	243904	43.70	ug/L	97
22) Hexane	2.472	56	119027	42.02	ug/L	95
23) Methyl Tert Butyl Ether	2.472	73	598427	47.04	ug/L	92
24) Tert Butyl Alcohol	2.509	59	772687	491.11	ug/L	97
25) Acetonitrile	2.556	41	357440	400.51	ug/L	98
26) Di-isopropyl ether	2.692	45	551982	46.73	ug/L	98
27) Chloroprene	2.734	53	733637	43.60	ug/L	97
28) 1,1-Dichloroethane	2.734	63	323506	44.08	ug/L	100
29) Acrylonitrile	2.734	52	575066	216.17	ug/L	99
30) ETBE	2.885	59	640208	46.26	ug/L	100
31) Vinyl acetate	2.865	43	1723063	181.02	ug/L	97
32) cis-1,2-Dichloroethene	3.027	96	192196	43.90	ug/L	99
33) 2,2-Dichloropropane	3.089	77	198382	34.35	ug/L	99
34) Bromochloromethane	3.131	128	85147	43.03	ug/L	98
35) Cyclohexane	3.168	56	296305	42.07	ug/L	97
36) Chloroform	3.173	83	326527	44.33	ug/L	99
37) Ethyl acetate	3.230	43	1568049	217.80	ug/L	98
38) Tetrahydrofuran	3.262	42	125736	45.74	ug/L	96
40) Carbon Tetrachloride	3.272	117	199573m	42.43	ug/L	
41) 1,1,1-Trichloroethane	3.298	97	273348	42.13	ug/L	99
42) 2-Butanone	3.319	43	917660	205.11	ug/L	99
43) 1,1-Dichloropropene	3.366	75	241375	43.67	ug/L	95
44) tert-Butyl formate	3.413	59	631873	195.11	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Propionitrile	3.461	54	635915	448.79	ug/L		97
46) Methacrylonitrile	3.487	41	1628797	430.33	ug/L		98
47) Benzene	3.497	78	779523	44.19	ug/L		93
48) TAME	3.570	73	580659	46.15	ug/L		98
50) Isobutyl alcohol	3.591	43	679168m	936.95	ug/L		
51) 1,2-Dichloroethane	3.591	62	270818	42.89	ug/L		97
52) Tert Amyl Alcohol	3.649	59	626378	466.41	ug/L		99
53) Trichloroethene	3.826	95	199682	43.98	ug/L		98
54) Methylcyclohexane	3.847	83	266114	42.62	ug/L		99
55) Dibromomethane	4.051	93	114177	45.78	ug/L		97
56) 1,2-Dichloropropane	4.109	63	200073	46.68	ug/L		95
57) Bromodichloromethane	4.145	83	206114	42.64	ug/L		99
58) Methyl methacrylate	4.234	41	207012	41.94	ug/L		95
59) 1,4-Dioxane	4.260	88	115303	856.13	ug/L		96
60) 2-Chloroethyl vinyl ether	4.480	63	764370	214.39	ug/L		97
61) cis-1,3-Dichloropropene	4.522	75	266208	42.60	ug/L		98
64) Toluene	4.684	91	853322	40.34	ug/L		99
65) 2-Nitropropane	4.778	41	340120	196.07	ug/L		99
66) 4-Methyl-2-pentanone	4.893	43	1608850	197.18	ug/L		97
67) trans-1,3-Dichloropropene	4.919	75	243919	39.17	ug/L		86
68) Tetrachloroethene	4.940	166	266200	59.26	ug/L		97
69) Ethyl methacrylate	5.029	69	300151	39.35	ug/L		94
70) 1,1,2-Trichloroethane	5.018	83	149451	41.30	ug/L		95
71) Dibromochloromethane	5.144	129	158664	40.88	ug/L		99
72) 1,3-Dichloropropane	5.196	76	333354	41.44	ug/L		95
73) 1,2-Dibromoethane	5.296	107	188021	42.99	ug/L		92
74) 3,3-dimethyl-1-butanol	5.421	57	3654864	2005.53	ug/L		98
75) 2-hexanone	5.431	43	1810510	197.63	ug/L		85
76) 1-Chlorohexane	5.651	91	268665m	39.83	ug/L		
77) Ethylbenzene	5.682	91	935665	40.34	ug/L		99
78) Chlorobenzene	5.656	112	520968	41.13	ug/L		95
79) 1,1,1,2-Tetrachloroethane	5.698	131	168902	41.38	ug/L		99
80) m,p-Xylene	5.782	91	1487061	81.06	ug/L		99
81) o-Xylene	6.080	91	747564	41.40	ug/L		99
82) Styrene	6.111	104	570920m	41.34	ug/L		
83) Bromoform	6.116	173	84325	39.84	ug/L		97
84) Isopropylbenzene	6.310	105	869324	41.73	ug/L		99
87) cis-1,4-Dichloro-2-butene	6.529	53	57489	24.34	ug/L		94
88) n-Propylbenzene	6.608	91	1027125	39.10	ug/L		99
89) Bromobenzene	6.571	156	213594	40.22	ug/L		94
90) 1,1,2,2-Tetrachloroethane	6.629	83	285621	40.30	ug/L		99
91) 1,3,5-Trimethylbenzene	6.759	105	714244	39.05	ug/L		98
92) 2-Chlorotoluene	6.712	91	616308	38.87	ug/L		100
93) trans-1,4-Dichloro-2-B...	6.759	53	79254	26.09	ug/L		96
94) 1,2,3-Trichloropropane	6.723	110	108872	41.19	ug/L		98
95) Cyclohexanone	6.744	55	113587	205.24	ug/L		96
96) 4-Chlorotoluene	6.833	91	643463	38.51	ug/L		96
97) tert-Butylbenzene	6.995	91	386675	38.50	ug/L		100
99) 1,2,4-Trimethylbenzene	7.047	105	705213	39.53	ug/L		98
100) Pentachloroethane	6.995	167	30699	14.76	ug/L	#	1
101) sec-Butylbenzene	7.131	105	771323	39.66	ug/L		99
102) 4-Isopropyltoluene	7.246	119	694973	39.45	ug/L		98
103) 1,3-Dichlorobenzene	7.277	146	383194	40.16	ug/L		99
104) 1,2,3-Trimethylbenzene	7.371	105	349905	19.55	ug/L		98
105) 1,4-Dichlorobenzene	7.345	146	392083	39.33	ug/L		98
106) n-Butylbenzene	7.559	92	331265	38.45	ug/L		97
107) Benzyl Chloride	7.523	126	52622	25.68	ug/L		94
108) 1,2-Dichlorobenzene	7.653	146	358396	40.02	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 22:06:13 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2-Dibromo-3-Chloropr...	8.208	75	64132	38.14	ug/L	86
110) Hexachlorobutadiene	8.689	225	64985	39.03	ug/L	94
111) 1,2,4-Trichlorobenzene	8.683	180	192059	40.31	ug/L	98
112) Naphthalene	8.882	128	804811	39.65	ug/L	100
113) 1,2,3-Trichlorobenzene	9.007	180	180854	40.44	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
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Operator : courtnef
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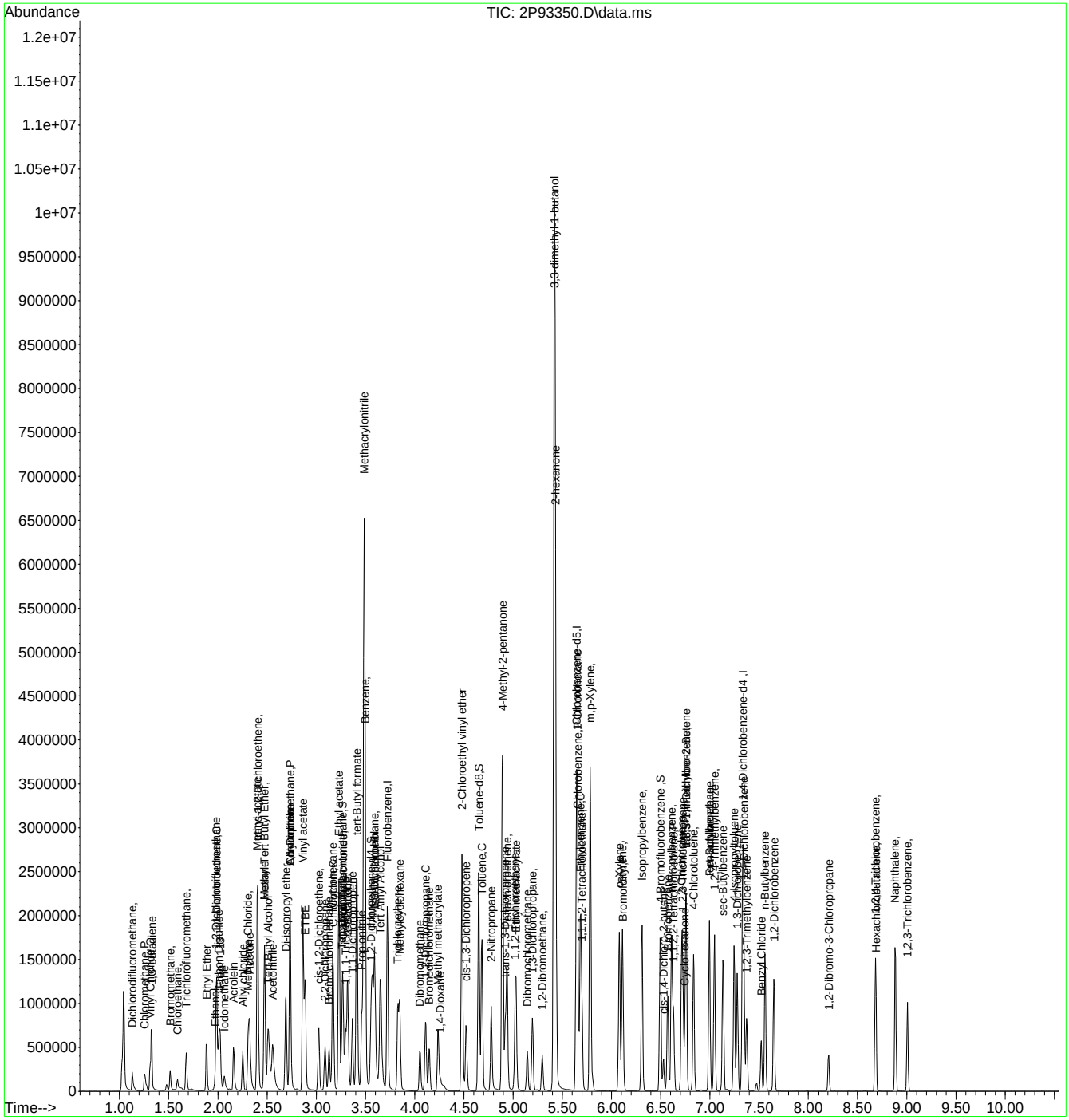

Manual Integration Approval Summary

Sample Number: V2P3586-ECC3560 **Method:** SW846 8260D
Lab FileID: 2P93350.D **Analyst approved:** 09/25/22 22:24 Antonette Clutario
Injection Time: 09/23/22 23:34 **Supervisor approved:** 09/26/22 12:39 Karen Watson

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		1.97	Poor instrument integration
Carbon Tetrachloride	56-23-5		3.27	Overlapping peak
Isobutyl Alcohol	78-83-1		3.59	Poor instrument integration
1-Chlorohexane	544-10-5		5.65	Poor instrument integration
Styrene	100-42-5		6.11	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
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Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
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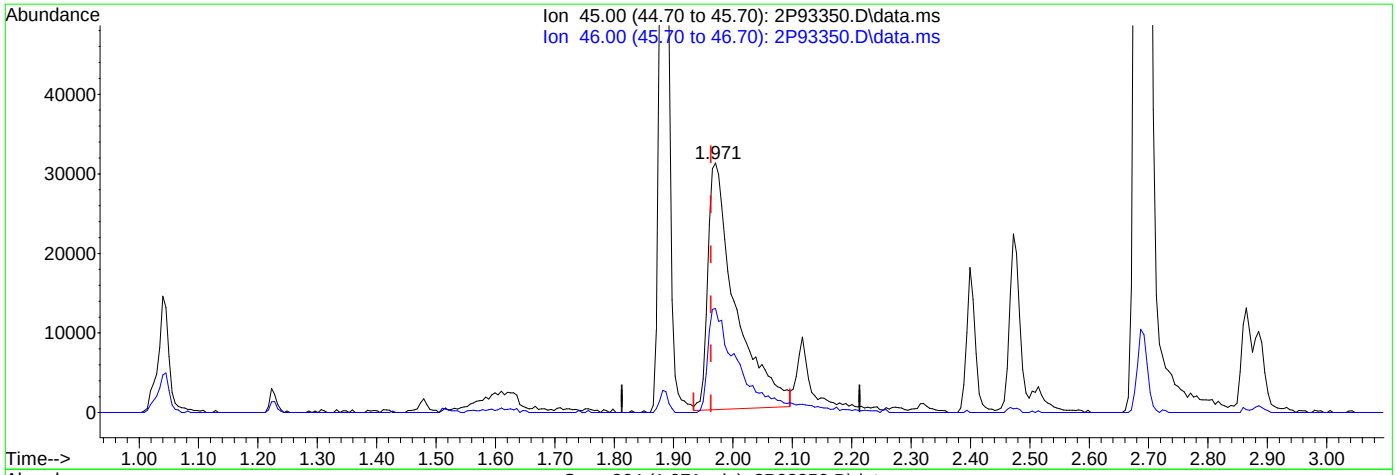
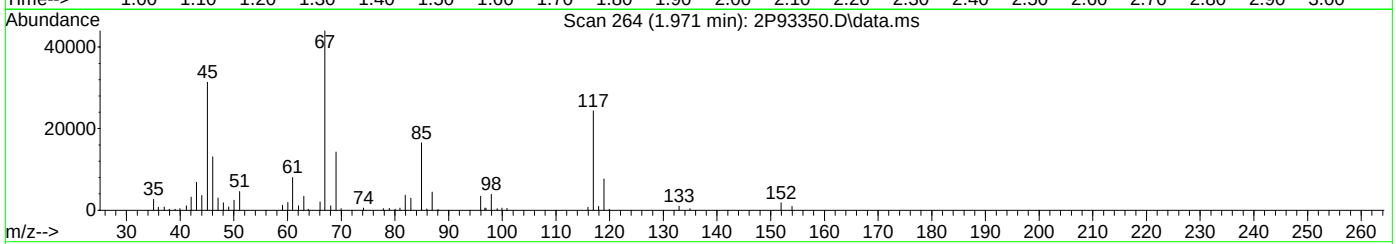
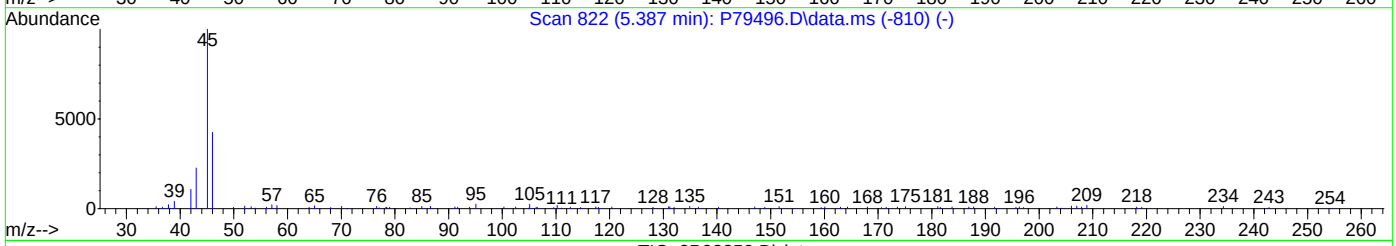
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(10) Ethanol

1.971min (+0.008) 880.75ug/L

response 100735

Ion	Exp%	Act%
45.00	100	100
46.00	42.70	42.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
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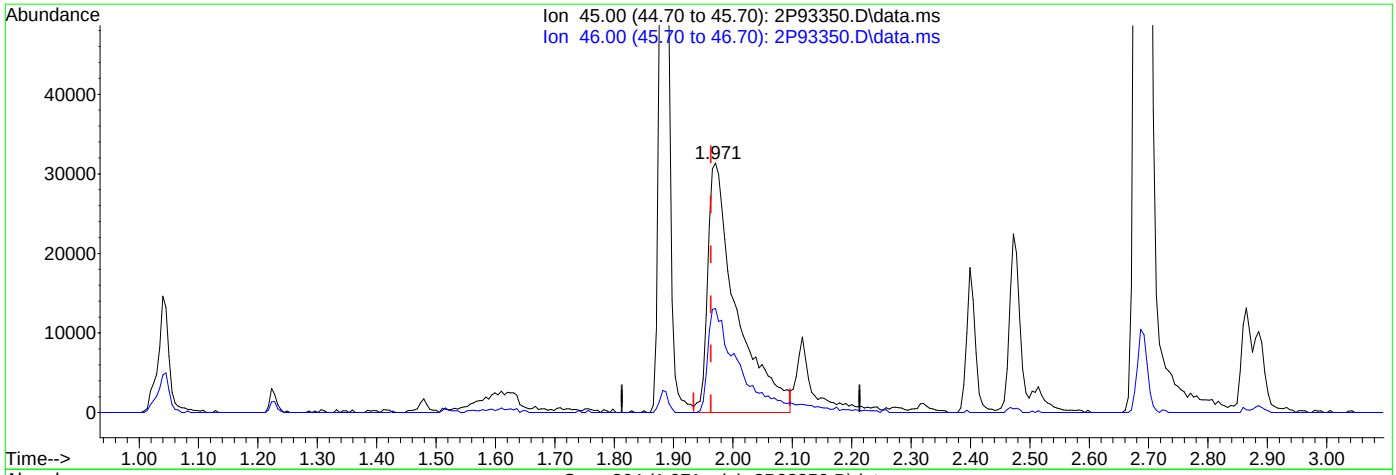

TIC: 2P93350.D\data.ms

(10) Ethanol

1.971min (+0.008) 930.61ug/L m

response 105631

Ion	Exp%	Act%
45.00	100	100
46.00	42.70	41.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
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Misc : MS52399,V2P3586,,,,,
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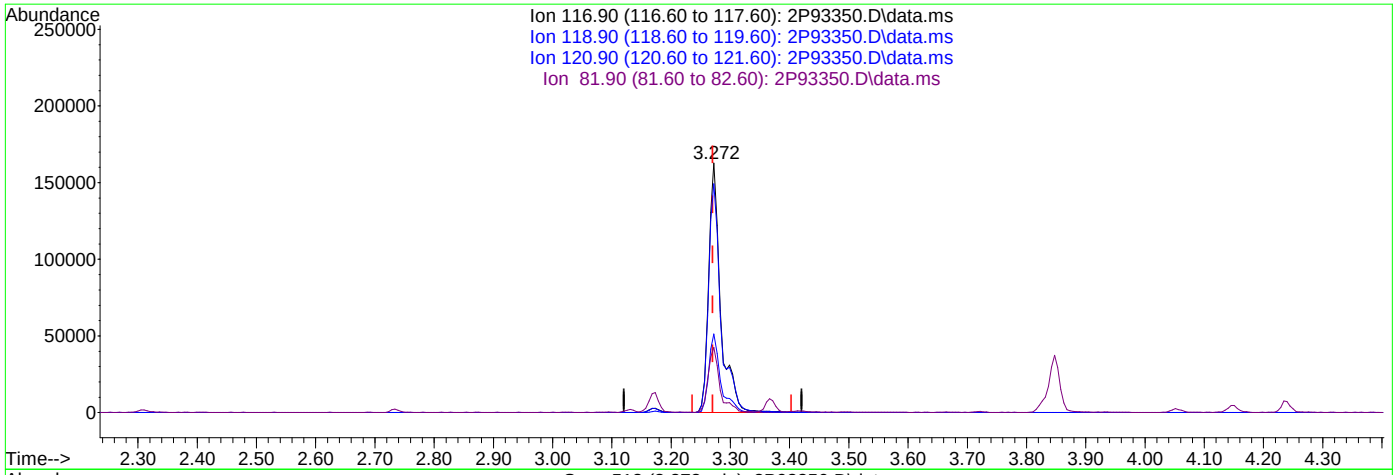

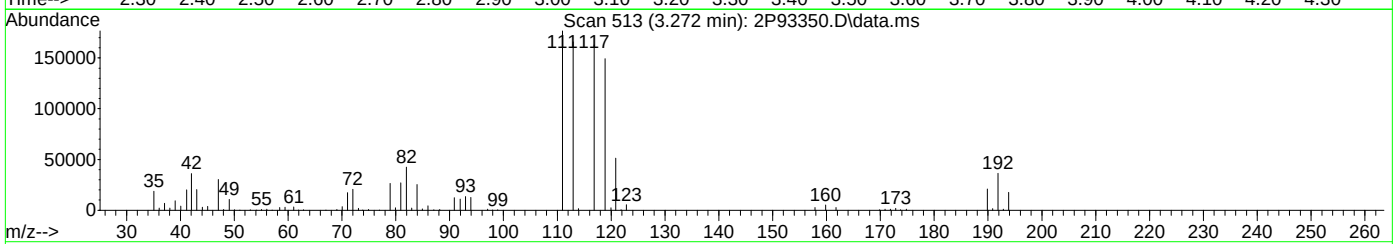

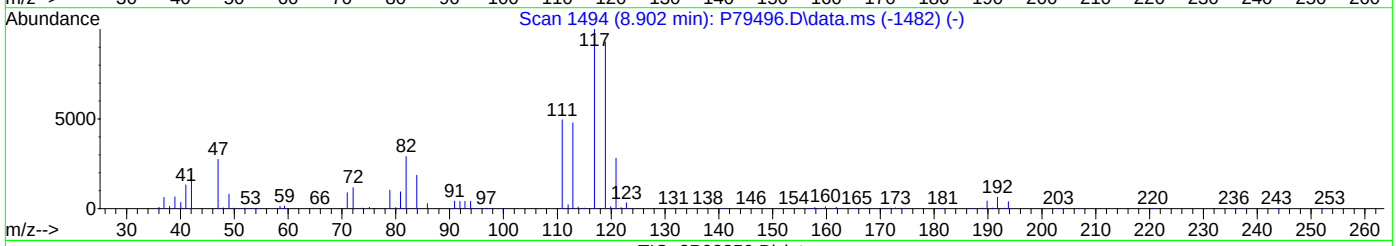

TIC: 2P93350.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 47.83ug/L

response 228794

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.63
120.90	29.50	31.52
81.90	28.30	25.91

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
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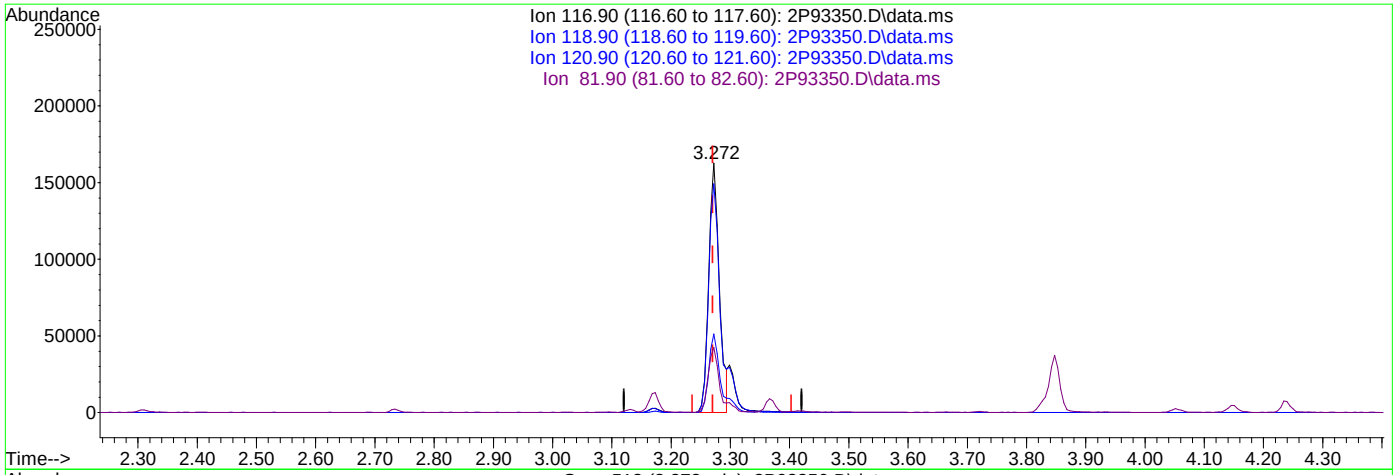

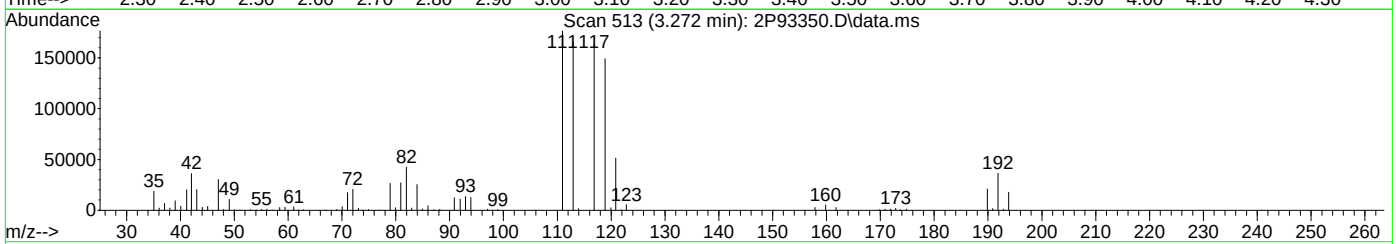

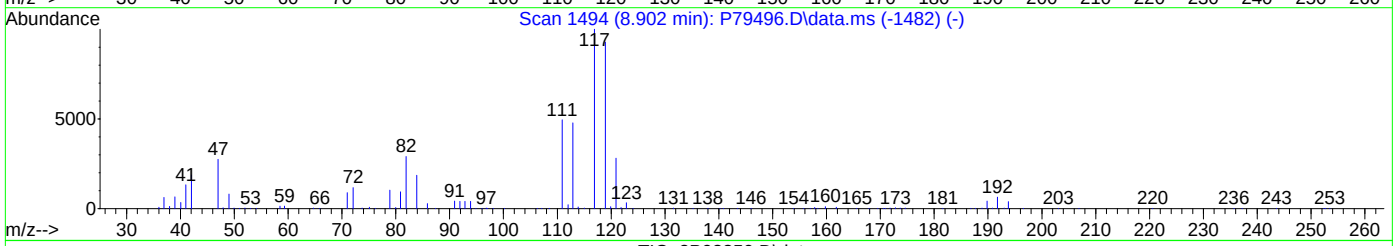

TIC: 2P93350.D\data.ms

(40) Carbon Tetrachloride ( )

3.272min (+0.002) 42.43ug/L m

response 199573

Ion	Exp%	Act%
116.90	100	100
118.90	98.00	91.63
120.90	29.50	31.52
81.90	28.30	26.08

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
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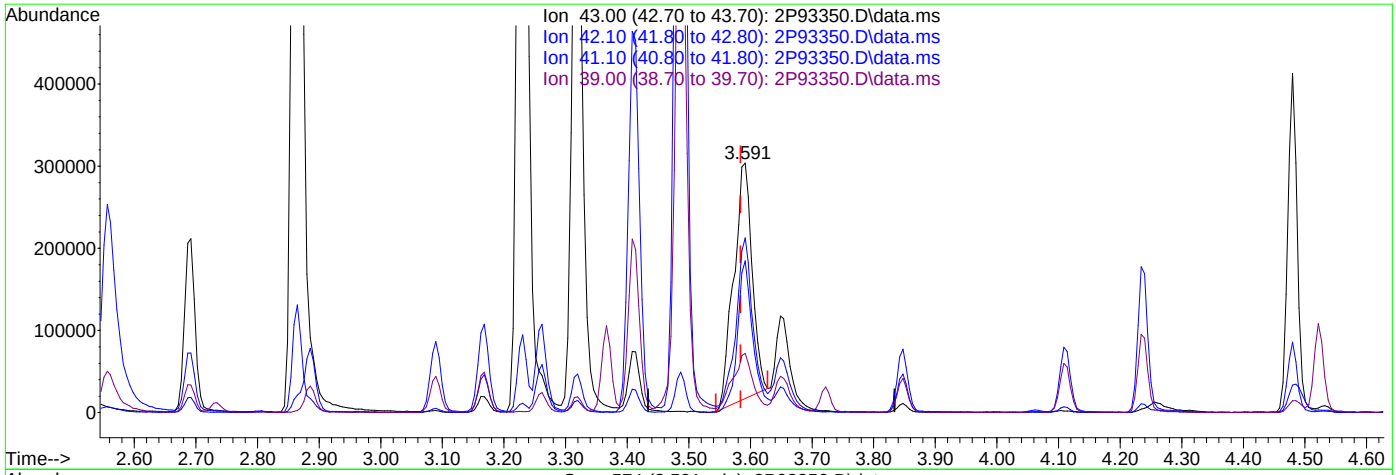
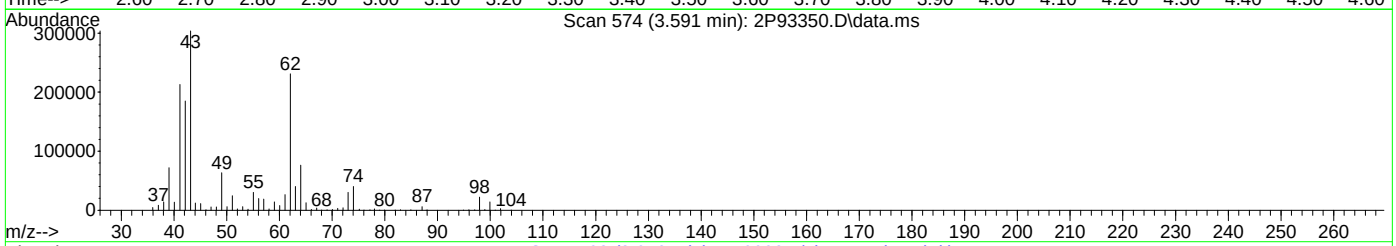
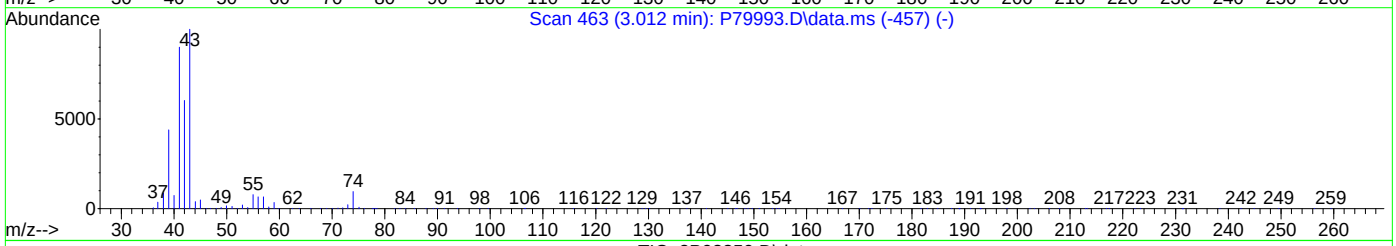
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.007) 830.85ug/L

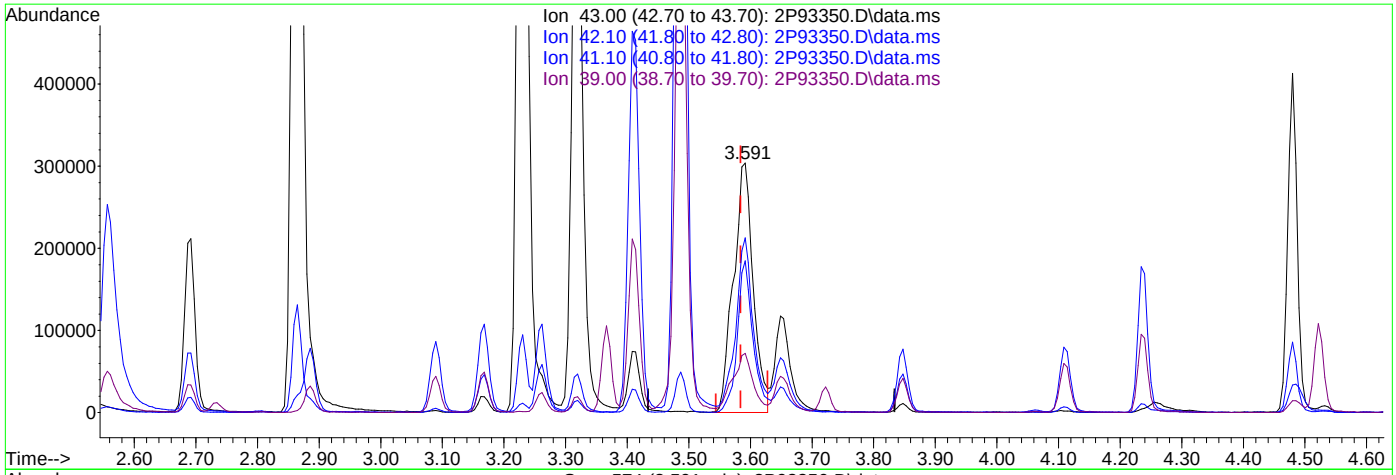
response 602258

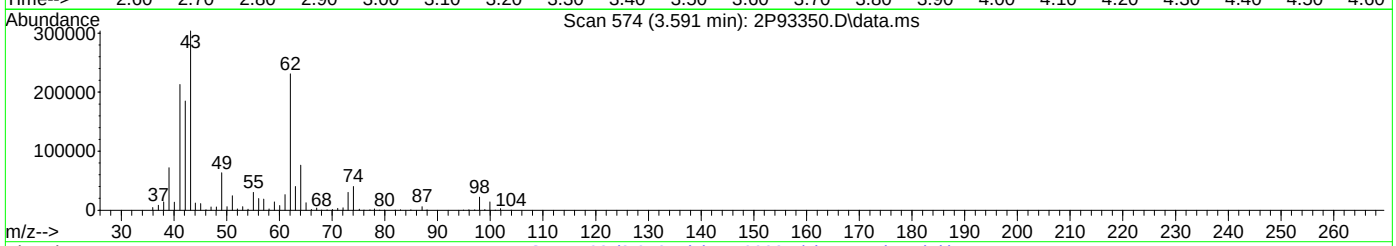
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.88
41.10	70.00	67.80
39.00	27.50	22.14

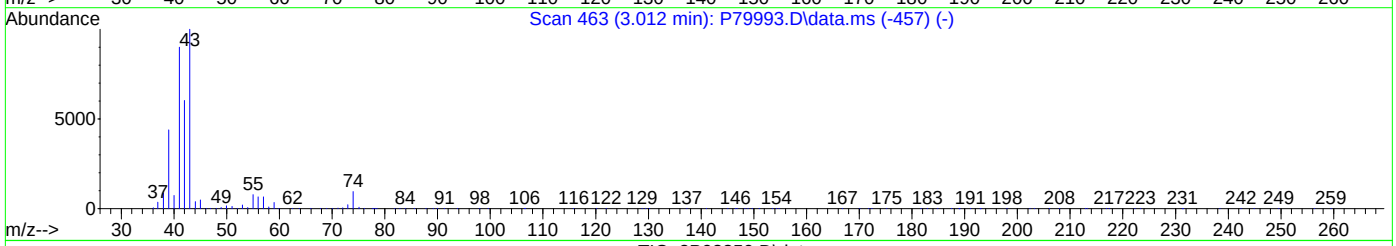
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(50) Isobutyl alcohol

3.591min (+0.007) 936.95ug/L m

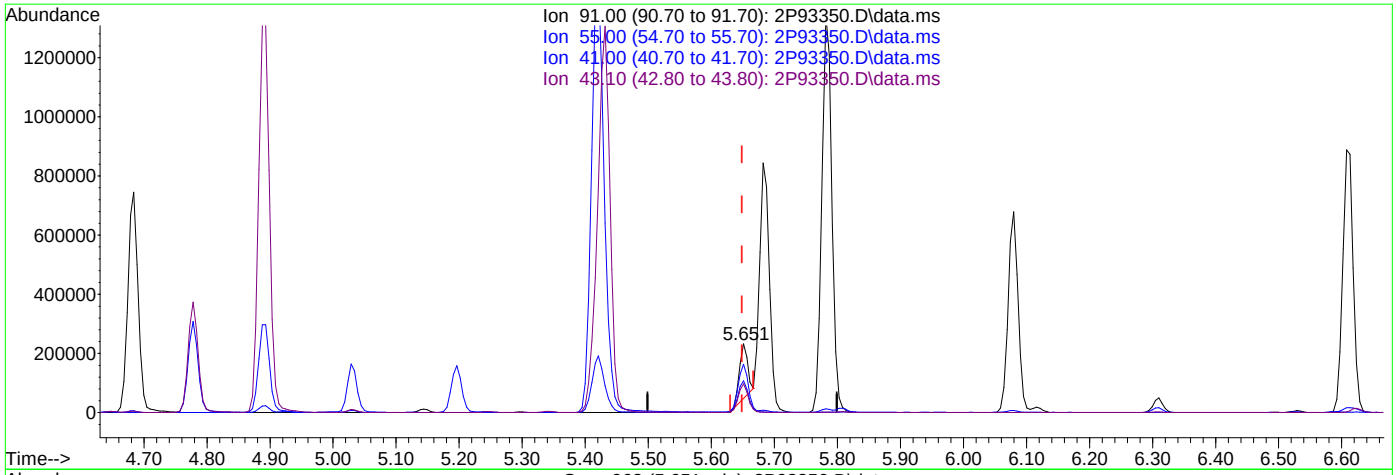
response 679168

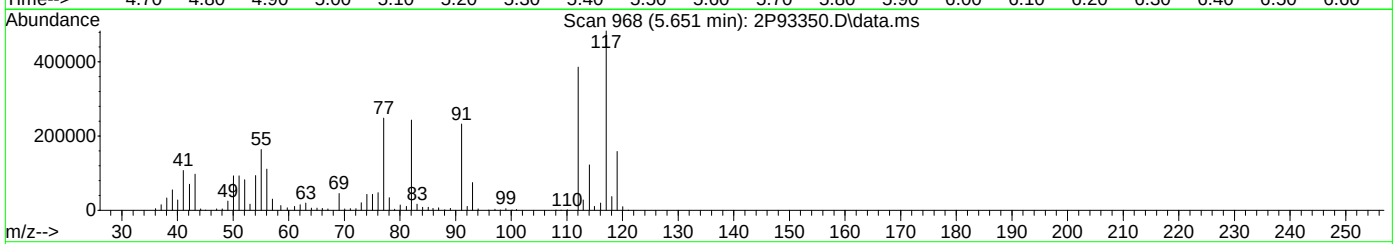
Ion	Exp%	Act%
43.00	100	100
42.10	55.40	60.80
41.10	70.00	70.02
39.00	27.50	23.72

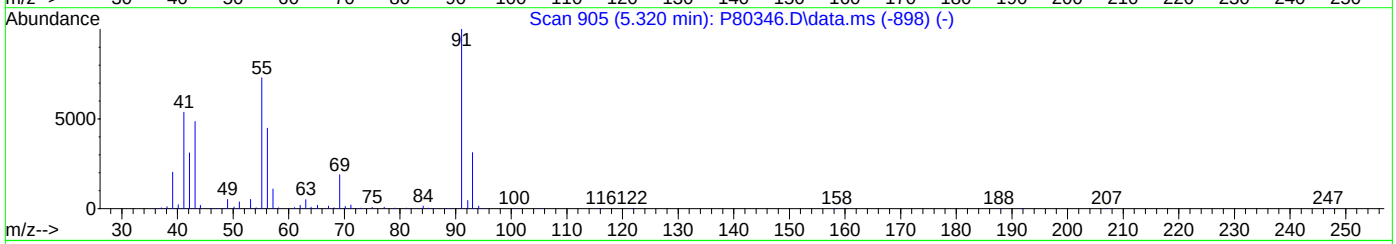
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 26.14ug/L

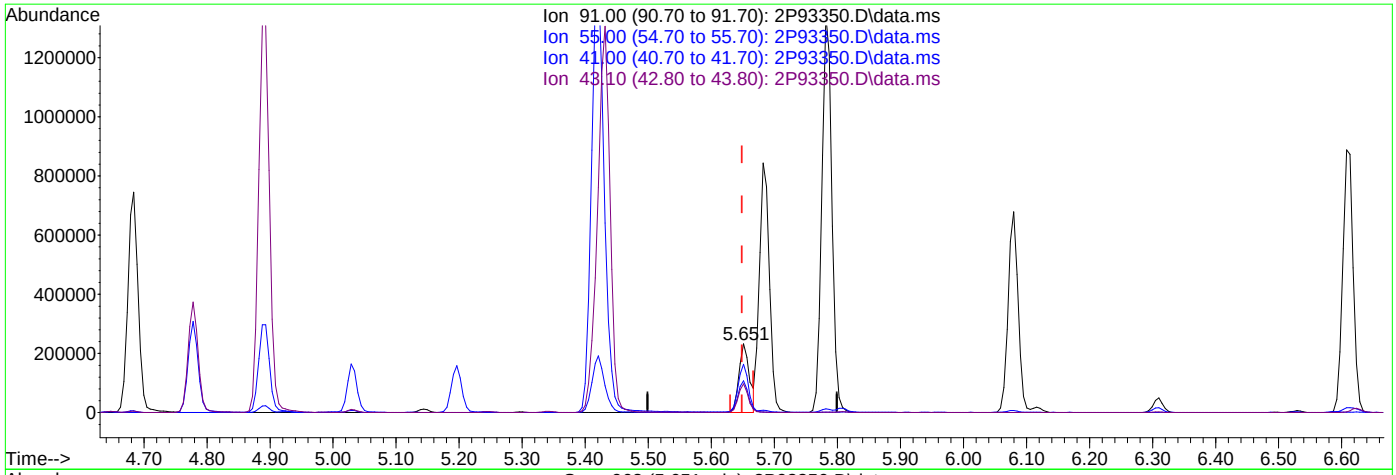
response 176347

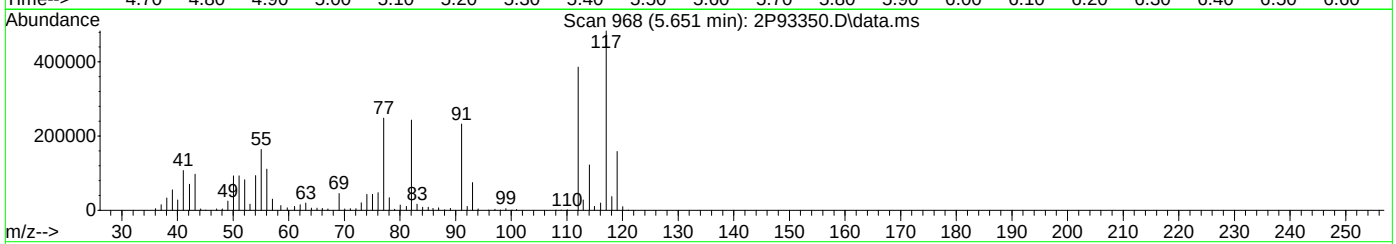
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	69.10
41.00	53.40	44.67
43.10	41.30	41.06

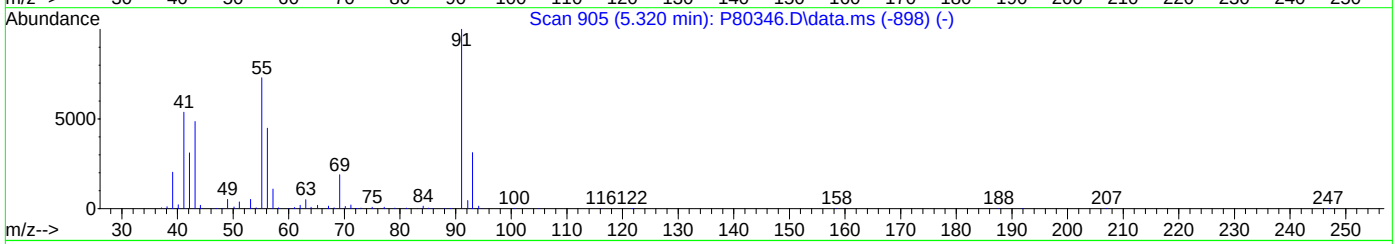
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(76) 1-Chlorohexane

5.651min (+0.002) 39.83ug/L m

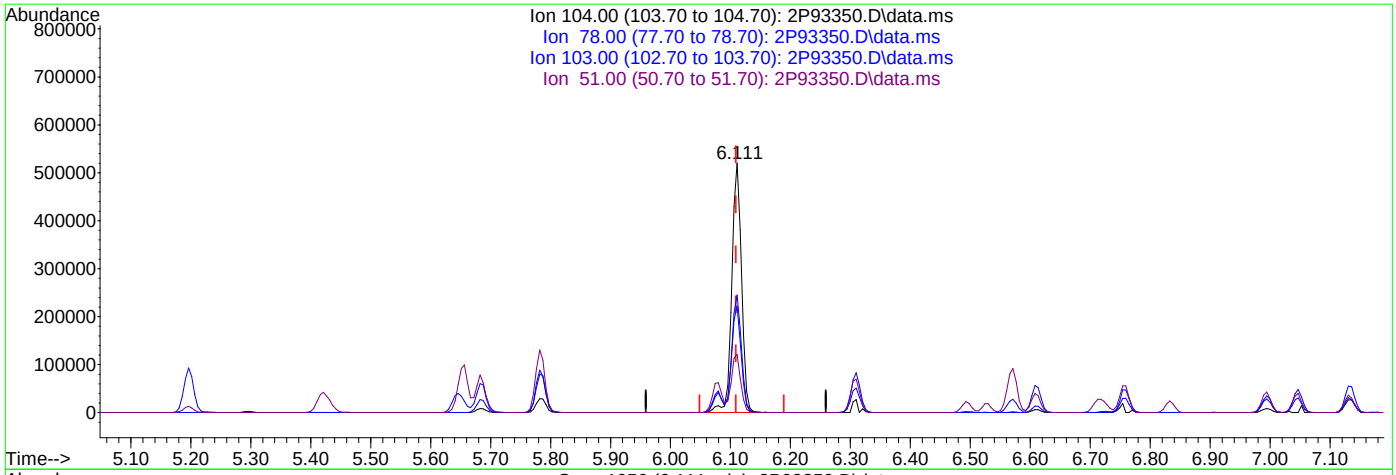
response 268665

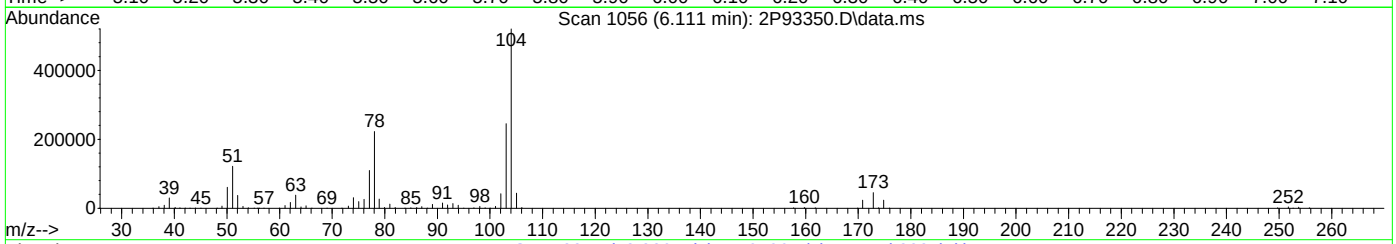
Ion	Exp%	Act%
91.00	100	100
55.00	75.60	70.33
41.00	53.40	46.02
43.10	41.30	41.60

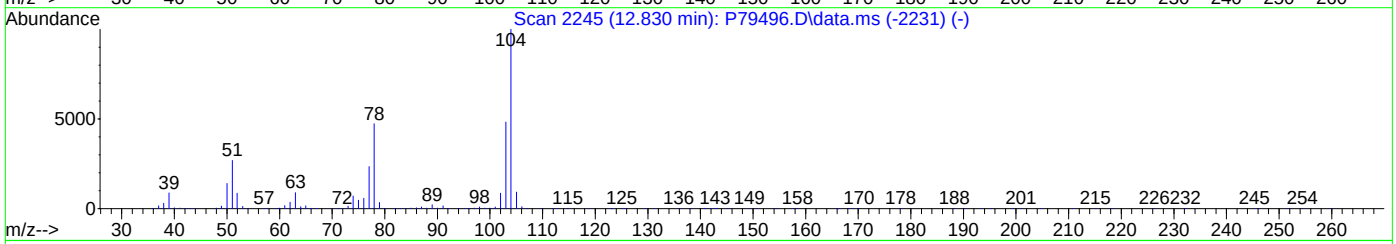
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 42.68ug/L

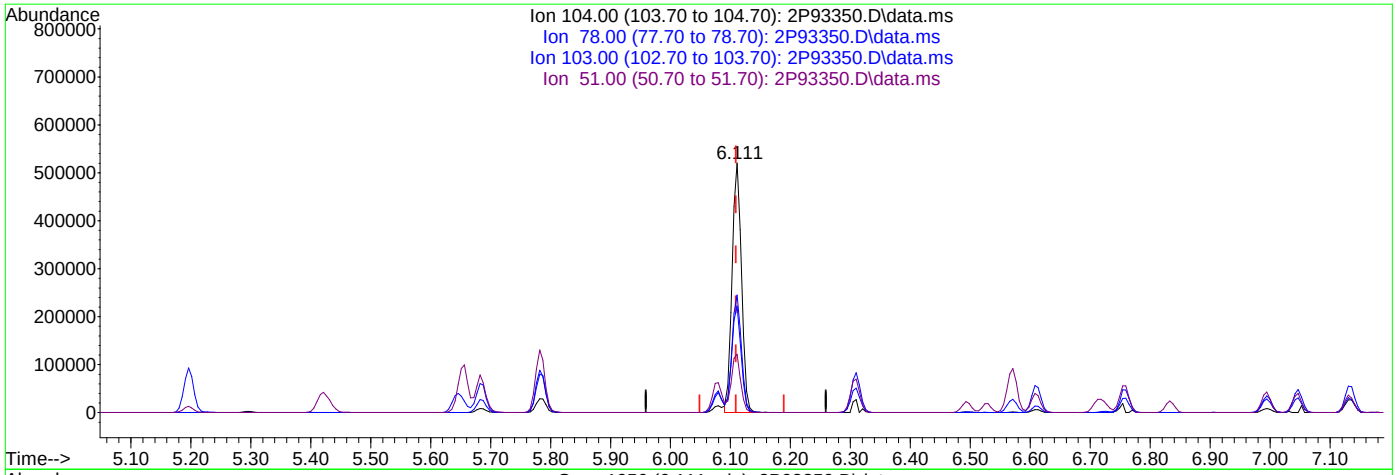
response 589410

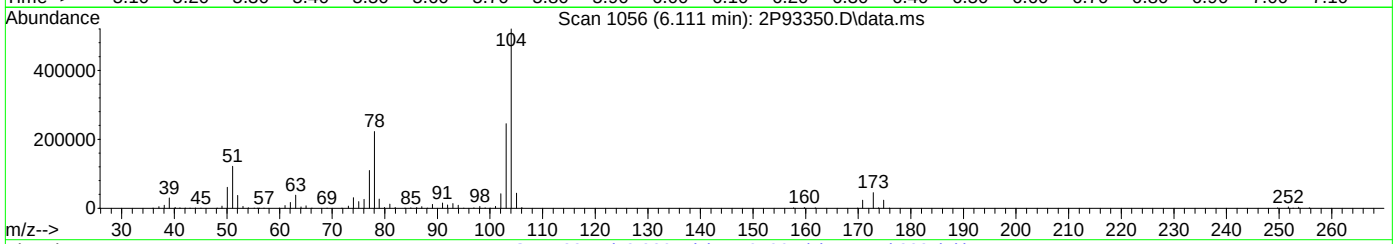
Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.75
103.00	48.00	47.12
51.00	24.10	23.40

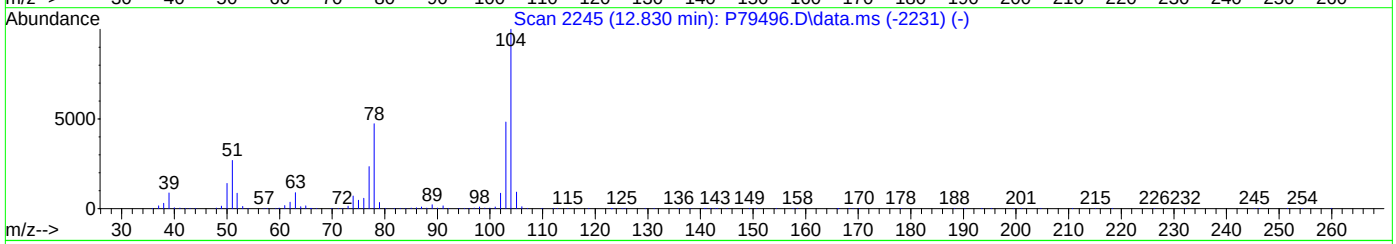
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\AntonetteC\2022\SEPTEMBER\09-26-2022\V2P3586-87\
Data File : 2P93350.D
Acq On : 23 Sep 2022 11:34 pm
Operator : courtnef
Sample : ECC3560-5
Misc : MS52399,V2P3586,,,,,
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Sep 25 21:00:23 2022
Quant Method : C:\msdchem\1\methods\V2P_2022-08-24.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Aug 24 14:29:43 2022
Response via : Initial Calibration







TIC: 2P93350.D\data.ms

(82) Styrene ( )

6.111min (+0.002) 41.34ug/L m

response 570920

Ion	Exp%	Act%
104.00	100	100
78.00	43.70	42.75
103.00	48.00	47.12
51.00	24.10	23.40

SGS -ORLANDO

MSVOA13-P-ANALYSIS LOG

DATE:	8/24/2022
COLUMN TYPE:	RTXVMS
DETECTOR:	5973MSD
INSTRUMENT:	MSVOA13-P
PURGE PRESSURE:	1.4PSI
PURGE VOLUME:	5mL
ANALYST: Courtney F	

METHODS:	8260
METHOD FILE:	V2P_2022-08-24.M
CALIB. DATE:	8/24/2022
EM VOLTAGE:	1529V
ACQ. METHOD:	RTXFAST
BFB RESPONSE:	2016445
V2P3560	

BFB: VS2392
ICAL/CC: VS2375, VS2376, VS2387
VS2386, VS2383, VS2393
ISTD/SUR: VS2392
ICV/QC: VS2349, VS2350, VS2394,
VS2389, VS2388, VS2385, VS2397
DATA REVIEWED BY: Courtney F / Antonette C

PH LOT: 1-12pH 212820
0-3pH 230320
KI PAPER LOT: 022018
AFA: VS2248B
SAMPLE ID VERIFIED BY:
Courtney F
Date: 8/24/2022

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
2P92261	BLANK	-	-	W	51	8260		-	-	-	Passed autofind ✓
2P92263	BFB/IC3560-1	-	-	W	52	8260		-	-	-	Passed autofind; 1uL→ 100mL ✓
2P92265	IC3560-2	-	-	W	53	8260		-	-	-	5uL→ 100mL ✓
2P92267	IC3560-3	-	-	W	54	8260		-	-	-	10uL→ 100mL ✓
2P92269	IC3560-4	-	-	W	55	8260		-	-	-	25uL→ 100mL ✓
2P92271	IC3560-5	-	-	W	56	8260		-	-	-	40uL→ 100mL ✓
2P92273	IC3560-6	-	-	W	57	8260		-	-	-	70uL→ 100mL ✓
2P92275	IC3560-7	-	-	W	58	8260		-	-	-	100uL→ 100mL ✓
2P92277	BLANK	-	-	W	59	8260		-	-	-	✓
2P92279A	ICV3560-5/CC3560-5	-	-	W	60	8260		-	-	-	50uL→ 100mL ✓
2P92281A	ICV3560-4/BS	-	-	W	61	8260		-	-	-	12.5uL→ 100mL ✓
2P92283	CC3560-1	-	-	W	62	8260	all low peaks present	-	-	-	1uL→ 100mL ✓
2P92285	MB	-	-	W	63	8260		-	-	-	ND ✓
2P92287	**FA98234-4**	1x	5	W	64	8260		1	N	1x	**MTBE hit (BS ↑)**
2P92289	FA98234-5	1x	5	W	65	8260		1	N	-	ND ✓
2P92291	**FA98234-6**	1x	5	W	66	8260		1	N	1x	**TAME and MTBE hits (ICV, CCV, BS ↑)**
2P92293	FA98234-7	20x	5	W	67	8260	2.5mL(-)50mL	1	N	-	✓
2P92295	**FA98234-8**	100x	5	W	68	8260	500uL(-)50mL	1	N	100x	**MTBE hit (BS ↑)**
2P92297	**FA98234-9**	20x	5	W	69	8260	2.5mL(-)50mL	1	N	20x	**MTBE hit (BS ↑)**
2P92299	FA98234-10	1x	5	W	70	8260		1	N	-	ND ✓
2P92301	**FA98254-8**	1x	5	W	71	8260		1	N	1x	**MTBE hit (BS ↑)**
2P92303	FA98254-9	5x	5	W	72	8260	10mL(-)50mL	1	N	-	✓
2P92305	FA98254-10	1x	5	W	73	8260		1	N	-	✓
2P92307	FA98254-9MS	5x	5	W	74	8260	20mL(-)100mL	1	N	-	12.5uL→ 100mL ✓
2P92309	FA98254-9MSD	5x	5	W	75	8260	20mL(-)100mL	1	N	-	12.5uL→ 100mL ✓
2P92311	ECC3560-5	-	-	W	76	8260		-	-	-	40uL→ 100mL ✓

8/25/22

* For NELAC purposes, Method 8260 includes anlytes by SOP MS005 Matrix. Designate "W" for Water "S" for Soil, "O" for Oil, "Liq" for Non-aquous Liquid, and "TCLP" or "SPLP" for Leachate

Manual Integration Rational SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor

Analyst's Signature:

SGS -ORLANDO **MSVOA13-2P ANALYSIS LOG**

Date:	09/23/2022
Column Type:	RTXVMS
Detector:	5973MSD
Instrument:	MSVOA13-1P
Purge Pressure:	1.4 PSI
Purge Volume:	5 mL
Analyst:	Courtney F

Method(s):*	8260
Method File:	V2P_2022-08-24.M
Calibration Date:	08/24/2022
Acq. Method:	RTXFAST
EM Voltage:	1435V
BFB Response:	1980145
Run ID:	**V2P3586-87**

BFB:	VS2448
ICAL/CC:	VS2444, VS2442, VS2420
VS2418, VS2440, VS2459	
ICV/QC:	VS2425, VS2426, VS2462
VS2422, VS2441, VS2451, VS2460	
ISTD/Surr.:	VS2448

(0-3) pH Paper Lot#:	405
(1-12) pH Paper Lot#:	160
KI Paper Lot#:	14-860
AFA Lot#:	VS2448E
Data processed by:	**Antonette C**
Sample ID Ver. by:	Courtney F
Date Verified:	09/23/2022

Data File	Sample ID	Dilution Factor	Vial #	Matrix	A.S. Pos.	Work Group	pH	CI? (Y/N)	RR	Comments / Manual Integrations (Peak# & Justification)
2P93304	BLANK	-	-	Water	51	-	-	-	-	Passed autofind ✓
2P93306	BFB/CC3560-5	-	-	Water	52	-	-	-	-	Passed autofind; 40uL (-) 100mL ✓
2P93308	BS	-	-	Water	53	-	-	-	-	12.5uL (-) 40mL ✓
2P93310	CC3560-1	-	-	Water	54	-	-	-	-	1uL (-) 100mL; all CCV low peaks present ✓
2P93312	MB	-	-	Water	55	-	-	-	-	ND ✓
2P93314	FA98824-9	1x	1	Water	56	MS52433	1	N	-	ND ✓
2P93316	FA98960-3	1x	3	Water	57	MS52418	1	N	-	MC only ✓
2P93318	FA98833-15	1x	3	Water	58	MS52418	1	N	-	CF ✓
2P93320	FA98813-11	1x	2	Water	59	MS52419	1	N	-	CF ✓
2P93322	FA98813-12	1x	2	Water	60	MS52419	1	N	-	CF ✓
2P93324	FA98732-4	5000x	1	Water	61	MS52395	1	N	-	10uL(-)50mL ; CF ✓
2P93326	FA98732-5	2500x	1	Water	62	MS52395	1	N	-	20uL(-)50mL; CF ✓
2P93328	FA98918-5	50x	9	Water	63	MS52399	6	N	-	1mL(-)50mL; CTC, cis1,4, trans1,4, MB, MC, MI only ✓
2P93330	**FA98833-29**	100x	2	Water	64	MS52426	1	N	**200x**	500uL(-)50mL; **TCE high**
2P93332	FA98833-30	5x	1	Water	65	MS52426	1	N	-	10mL(-)50mL: CF ✓
2P93334	FA98820-1A	1x	3	Water	66	MS52433	1	N	-	✓
2P93336	FA98820-2A	1x	5	Water	67	MS52433	1	N	-	✓
2P93338	FA98924-39	1x	4	Water	68	MS52433	1	N	-	✓
2P93340	**FA98819-1**	20x	2	Water	69	MS52434	1	N	**1x**	2.5mL(-)50mL; **target compounds low**
2P93342	FA98819-1MS	20x	2	Water	70	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93344	FA98819-MSD	20x	2	Water	71	MS52434	1	N	-	5mL(-)100mL; 12.5uL (-) 40mL ✓
2P93346	FA98918-5MS	50x	9	Water	72	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93348	FA98918-5MSD	50x	9	Water	73	MS52399	6	N	-	2mL(-)100mL; 12.5uL (-) 40mL ✓
2P93350	ECC3560-5	-	-	Water	74	-	-	-	-	40uL (-) 100mL ✓

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
G1R349-MB	1R9351.D	1	09/13/22	TD	n/a	n/a	G1R349

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA98820-1A, FA98820-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
G1R349-BS	1R9348.D	1	09/13/22	TD	n/a	n/a	G1R349
G1R349-BSD	1R9349.D	1	09/13/22	TD	n/a	n/a	G1R349

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA98820-1A, FA98820-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	114	106	104	96	9	62-139/30
74-84-0	Ethane	219	231	105	208	95	10	67-141/30
74-85-1	Ethene	290	313	108	281	97	11	68-141/30

8.2.1

8

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98770-6MS	1R9368.D	1	09/13/22	TD	n/a	n/a	G1R349
FA98770-6	1R9354.D	1	09/13/22	TD	n/a	n/a	G1R349

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA98820-1A, FA98820-2A

CAS No.	Compound	FA98770-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	31.6		108	136	97	62-139
74-84-0	Ethane	1.0 U		219	220	100	67-141
74-85-1	Ethene	1.0 U		290	295	102	68-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA98770-6DUP	1R9367.D	1	09/13/22	TD	n/a	n/a	G1R349
FA98770-6	1R9354.D	1	09/13/22	TD	n/a	n/a	G1R349

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA98820-1A, FA98820-2A

CAS No.	Compound	FA98770-6 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	31.6		26.1		19	30
74-84-0	Ethane	1.0 U		ND		nc	30
74-85-1	Ethene	1.0 U		ND		nc	30

* = Outside of Control Limits.

Initial Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R343-ICC343
Lab FileID: 1R9189.D

Response Factor Report VOA12

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration

Calibration Files
1 =1R9185.D 2 =1R9186.D 3 =1R9187.D 4 =1R9188.D
5 =1R9189.D 6 =1R9190.D 7 =1R9191.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) Methane	6.779	7.109	4.989	4.690	6.022	5.473	5.702	5.824 E5	15.24

---- Linear regr., Force(0,0) ---- Coefficient = 0.9995
Response Ratio = 0.00000 + 565740.14944 *A

2) Acetylene	1.129	1.165	0.819	0.849	1.165	1.157	1.362	1.092 E6	17.65

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 970320.11781 *A + 39.11268 *A^2

3) Ethylene	1.032	1.030	0.849	0.841	1.054	0.944	1.030	0.969 E6	9.44

---- Linear regr., Force(0,0) ---- Coefficient = 0.9984
Response Ratio = 0.00000 + 1012501.28927 *A

4) Ethane	1.132	1.017	0.824	0.846	1.031	0.961	1.026	0.977 E6	11.19

---- Linear regr., Force(0,0) ---- Coefficient = 0.9991
Response Ratio = 0.00000 + 1012570.12291 *A

5) Propane	2.119	1.361	1.022	1.085	1.242	1.191	1.337	1.337 E6	27.39

---- Linear regr., Force(0,0) ---- Coefficient = 0.9974
Response Ratio = 0.00000 + 1307086.61892 *A

(#) = Out of Range

RSK8-23-22.M Wed Aug 24 13:20:55 2022

8.5.1

Initial Calibration Verification

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R343-ICV343
Lab FileID: 1R9192.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\08-23-22\1R9192.D Vial: 10
Acq On : 23-Aug-22, 16:24:24 Operator: TRANGD
Sample : icv343-5 Inst : VOA12
Misc : gc23837,G1R343,38,20,500,5,1 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
		Amount	Calc.	%Drift			
1	Methane	1000.000	1049.521	-5.0	99	0.00	0.22- 0.72
2	Acetylene	1000.000	951.068	4.9	82	0.00	0.77- 1.17
3	Ethylene	1000.000	957.927	4.2	92	0.00	0.88- 1.68
4	Ethane	1000.000	981.110	1.9	96	0.00	1.25- 2.05
5	Propane	1000.000	966.863	3.3	102	0.00	3.79- 4.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1R9189.D RSK8-23-22.M Tue Aug 30 09:14:01 2022

8.5.2

8

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R349-CC343
Lab FileID: 1R9347.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\09-13-22\1R9347.D Vial: 1
Acq On : 13-Sep-22, 09:26:54 Operator: TRANGD
Sample : cc343-5 Inst : VOA12
Misc : gc23887,G1R349,38,20,500,5,1 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
		Amount	Calc.	%Drift			
1	Methane	1000.000	1042.777	-4.3	98	0.02	0.22- 0.72
2	Acetylene	1000.000	1155.721	-15.6#	101	0.03	0.77- 1.17
3	Ethylene	1000.000	1026.604	-2.7	99	0.03	0.88- 1.68
4	Ethane	1000.000	1001.078	-0.1	98	0.03	1.25- 2.05
5	Propane	1000.000	1003.329	-0.3	106	0.04	3.79- 4.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1R9189.D RSK8-23-22.M Wed Sep 14 11:09:48 2022

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R349-CC343
Lab FileID: 1R9358.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\09-13-22\1R9358.D Vial: 12
Acq On : 13-Sep-22, 12:15:52 Operator: TRANGD
Sample : cc343-5 Inst : VOA12
Misc : gc23887,G1R349,38,20,500,5,1 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	Methane	1000.000	929.400	7.1	87	0.02	0.22- 0.72
2	Acetylene	1000.000	1171.019	-17.1#	102	0.03	0.77- 1.17
3	Ethylene	1000.000	951.839	4.8	91	0.03	0.88- 1.68
4	Ethane	1000.000	923.359	7.7	91	0.04	1.25- 2.05
5	Propane	1000.000	994.267	0.6	105	0.04	3.79- 4.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1R9189.D RSK8-23-22.M Wed Sep 14 11:09:50 2022

8.5.4

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R349-CC343
Lab FileID: 1R9369.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\09-13-22\1R9369.D Vial: 23
Acq On : 13-Sep-22, 14:37:27 Operator: TRANGD
Sample : cc343-5 Inst : VOA12
Misc : gc23887,G1R349,38,20,500,5,1 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
		Amount	Calc.	%Drift			
1	Methane	1000.000	1020.410	-2.0	96	0.02	0.22- 0.72
2	Acetylene	1000.000	1217.299	-21.7#	106	0.03	0.77- 1.17
3	Ethylene	1000.000	1042.261	-4.2	100	0.03	0.88- 1.68
4	Ethane	1000.000	1019.420	-1.9	100	0.04	1.25- 2.05
5	Propane	1000.000	1028.672	-2.9	108	0.04	3.79- 4.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1R9189.D RSK8-23-22.M Wed Sep 14 11:09:52 2022

Continuing Calibration Summary

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Sample: G1R349-ECC343
Lab FileID: 1R9379.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\09-13-22\1R9379.D Vial: 33
Acq On : 13-Sep-22, 16:32:43 Operator: TRANGD
Sample : ecc343-4 Inst : VOA12
Misc : gc23887,G1R349,38,20,500,5,1 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\RSK8-23-22.M (ChemStation Integrator)
Title : Dissolved Gases in Water
Last Update : Wed Aug 24 09:01:53 2022
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	Methane	500.000	494.464	1.1	119	0.02	0.22- 0.72
2	Acetylene	500.000	586.124	-17.2#	137	0.03	0.77- 1.17
3	Ethylene	500.000	500.425	-0.1	121	0.04	0.88- 1.68
4	Ethane	500.000	491.718	1.7	118	0.04	1.25- 2.05
5	Propane	500.000	486.878	2.6	117	0.05	3.79- 4.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1R9188.D RSK8-23-22.M Wed Sep 14 11:10:21 2022

8.5.6

Run Sequence Report

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: G1R343	**Method:** SW846 8015C	**Instrument ID:** GC1R

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G1R343-IC343	1R9185.D	08/23/22 15:27	n/a	Initial cal 1
G1R343-IC343	1R9186.D	08/23/22 15:35	n/a	Initial cal 2
G1R343-IC343	1R9187.D	08/23/22 15:42	n/a	Initial cal 3
G1R343-IC343	1R9188.D	08/23/22 15:50	n/a	Initial cal 4
G1R343-ICC343	1R9189.D	08/23/22 15:58	n/a	Initial cal 5
G1R343-IC343	1R9190.D	08/23/22 16:06	n/a	Initial cal 6
G1R343-IC343	1R9191.D	08/23/22 16:15	n/a	Initial cal 7
G1R343-ICV343	1R9192.D	08/23/22 16:24	n/a	Initial cal verification 5

Run Sequence Report

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Run ID: G1R349 **Method:** RSKSOP-147/175 **Instrument ID:** GC1R

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
G1R349-CC343	1R9347.D	09/13/22 09:26	n/a	Continuing cal 5
G1R349-BS	1R9348.D	09/13/22 09:38	n/a	Blank Spike
G1R349-BSD	1R9349.D	09/13/22 09:50	n/a	Blank Spike Duplicate
G1R349-MB	1R9351.D	09/13/22 10:13	n/a	Method Blank
ZZZZZZ	1R9352.D	09/13/22 11:19	n/a	(unrelated sample)
ZZZZZZ	1R9353.D	09/13/22 11:26	n/a	(unrelated sample)
FA98770-6	1R9354.D	09/13/22 11:34	n/a	(used for QC only; not part of job FA98820)
ZZZZZZ	1R9355.D	09/13/22 11:41	n/a	(unrelated sample)
ZZZZZZ	1R9356.D	09/13/22 11:54	n/a	(unrelated sample)
ZZZZZZ	1R9357.D	09/13/22 12:05	n/a	(unrelated sample)
G1R349-CC343	1R9358.D	09/13/22 12:15	n/a	Continuing cal 5
ZZZZZZ	1R9360.D	09/13/22 13:15	n/a	(unrelated sample)
ZZZZZZ	1R9361.D	09/13/22 13:27	n/a	(unrelated sample)
ZZZZZZ	1R9362.D	09/13/22 13:36	n/a	(unrelated sample)
ZZZZZZ	1R9363.D	09/13/22 13:44	n/a	(unrelated sample)
ZZZZZZ	1R9364.D	09/13/22 13:51	n/a	(unrelated sample)
FA98820-1A	1R9365.D	09/13/22 13:59	n/a	EW-01
FA98820-2A	1R9366.D	09/13/22 14:07	n/a	EW-04
FA98770-6DUP	1R9367.D	09/13/22 14:16	n/a	Duplicate
FA98770-6MS	1R9368.D	09/13/22 14:29	n/a	Matrix Spike
G1R349-CC343	1R9369.D	09/13/22 14:37	n/a	Continuing cal 5
FA98820-1A	1R9371.D	09/13/22 15:04	n/a	EW-01
ZZZZZZ	1R9373.D	09/13/22 15:44	n/a	(unrelated sample)
ZZZZZZ	1R9374.D	09/13/22 15:51	n/a	(unrelated sample)
ZZZZZZ	1R9375.D	09/13/22 15:58	n/a	(unrelated sample)
ZZZZZZ	1R9376.D	09/13/22 16:09	n/a	(unrelated sample)
ZZZZZZ	1R9377.D	09/13/22 16:16	n/a	(unrelated sample)
ZZZZZZ	1R9378.D	09/13/22 16:24	n/a	(unrelated sample)
G1R349-ECC343	1R9379.D	09/13/22 16:32	n/a	Ending cal 4

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9365.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 13:59:51
Operator : TRANGD
Sample : FA98820-1A
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:48:43 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.432	11219876901	19832.209	ppmv
2)	Acetylene	0.000	0	N.D.	ppmv
3)	Ethylene	0.000	0	N.D.	ppmv d
4)	Ethane	1.689	3034279	2.997	ppmv m
5)	Propane	0.000	0	N.D.	ppmv d

(f)=RT Delta > 1/2 Window (m)=manual int.

9.1.1

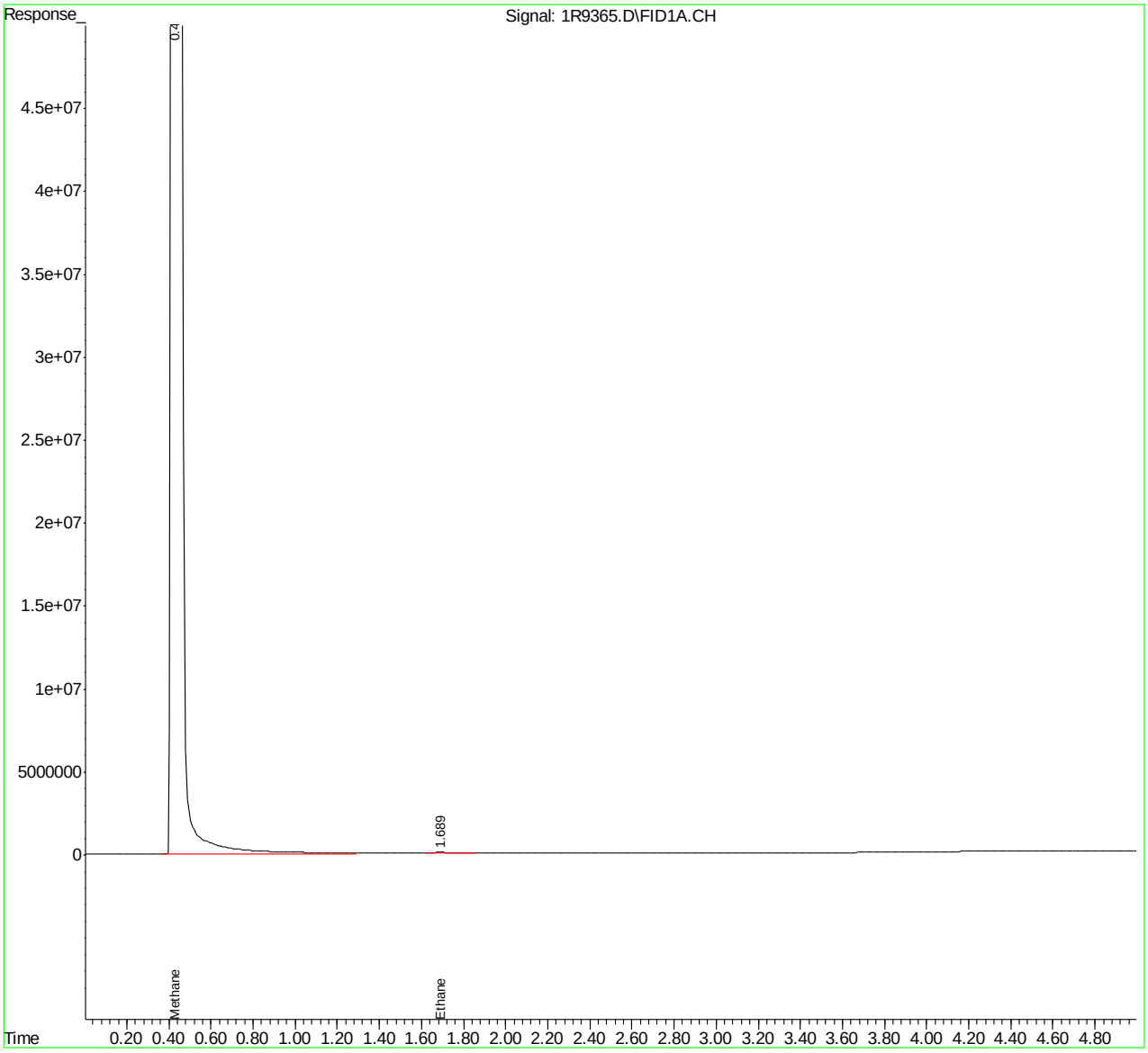
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9365.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 13:59:51
Operator : TRANGD
Sample : FA98820-1A
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:48:43 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number: FA98820-1A
Lab FileID: 1R9365.D
Injection Time: 09/13/22 13:59
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethane	74-84-0	1	1.69	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	FA98820-1A	**Sample Volume:**	38.0 ml
Lab FileID:	1R9365.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 13:59	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	19832.21	37600	2210	ug/l
Ethane	74-84-0	30	3	26300	0.68	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9371.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 15:04:37
Operator : TRANGD
Sample : FA98820-1A,10X
Misc : gc23887,G1R349,38,20,500,5,10
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:50:46 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.434	1079934862	1908.888	ppmv
2)	Acetylene	0.000	0	N.D.	ppmv
3)	Ethylene	0.000	0	N.D.	ppmv
4)	Ethane	0.000	0	N.D.	ppmv d
5)	Propane	0.000	0	N.D.	ppmv d

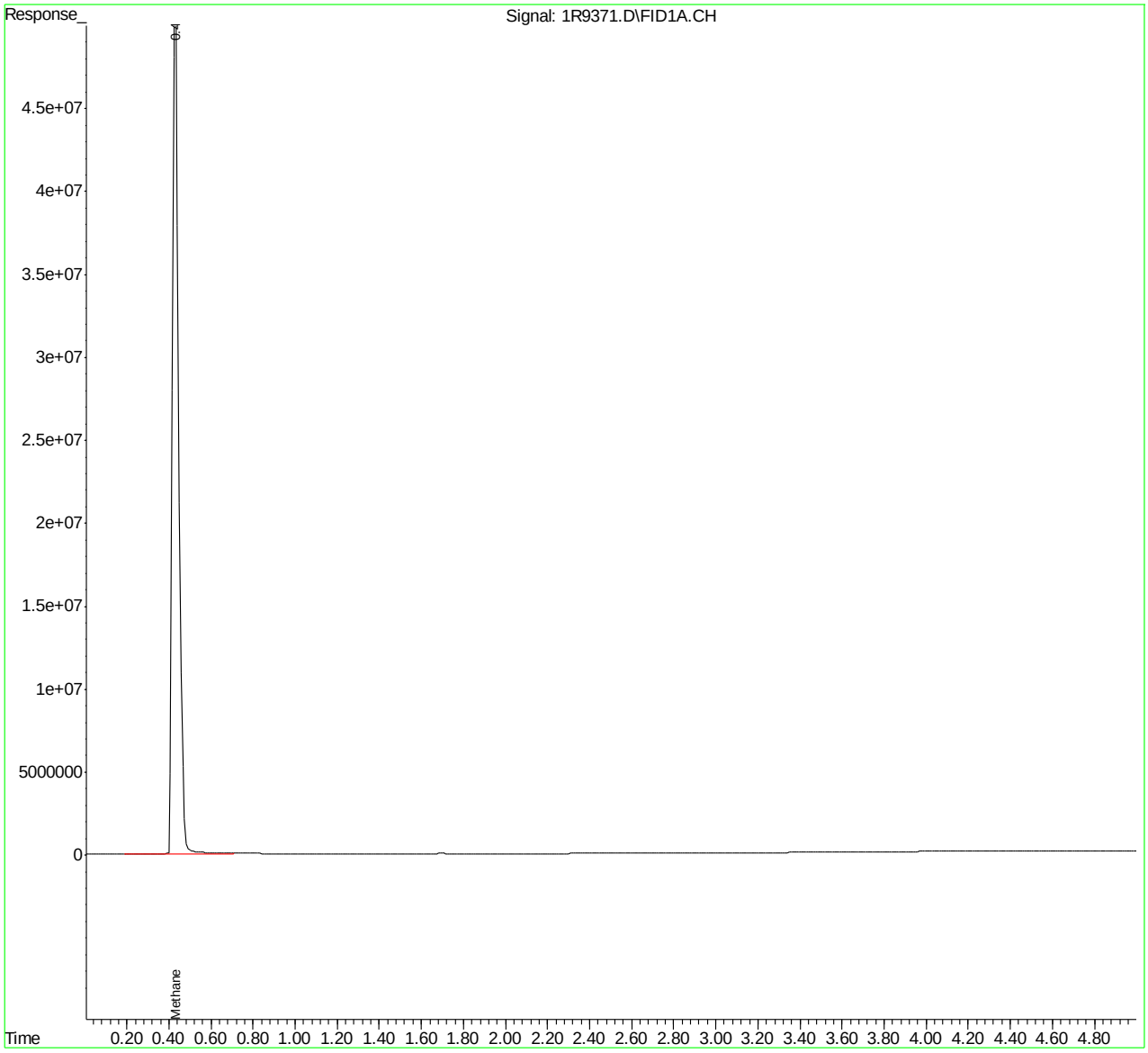
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9371.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 15:04:37
Operator : TRANGD
Sample : FA98820-1A,10X
Misc : gc23887,G1R349,38,20,500,5,10
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:50:46 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA98820-1A	**Sample Volume:**	38.0 ml
Lab FileID:	1R9371.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 15:04	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1908.89	37600	2120	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9366.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:07:09
Operator : TRANGD
Sample : FA98820-2A
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:05 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.434	5380222063	9510.059	ppmv
2)	Acetylene	0.000	0	N.D.	ppmv
3)	Ethylene	0.000	0	N.D.	ppmv d
4)	Ethane	1.691	615064	0.607	ppmv m
5)	Propane	0.000	0	N.D.	ppmv d

(f)=RT Delta > 1/2 Window (m)=manual int.

9.1.3

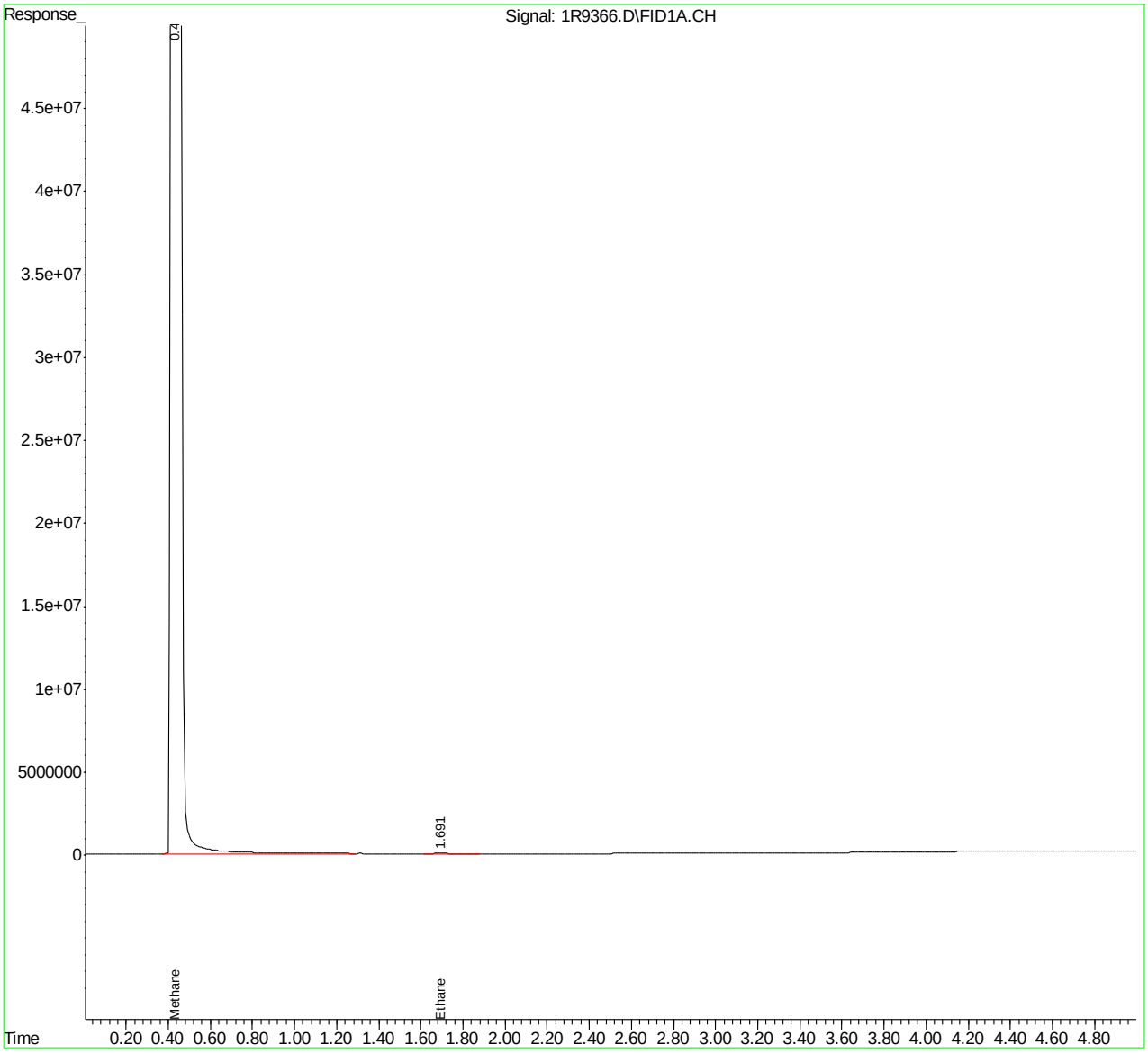
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9366.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:07:09
Operator : TRANGD
Sample : FA98820-2A
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:05 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number: FA98820-2A
Lab FileID: 1R9366.D
Injection Time: 09/13/22 14:07
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethane	74-84-0	1	1.69	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	FA98820-2A	**Sample Volume:**	38.0 ml
Lab FileID:	1R9366.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 14:07	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	9510.06	37600	1060	ug/l
Ethane	74-84-0	30	0.61	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9351.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 10:13:31
Operator : TRANGD
Sample : mb
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:42:24 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.402	670358	1.185	ppmv
2)	Acetylene	0.000	0	N.D.	ppmv d
3)	Ethylene	0.000	0	N.D.	ppmv d
4)	Ethane	0.000	0	N.D.	ppmv d
5)	Propane	0.000	0	N.D.	ppmv

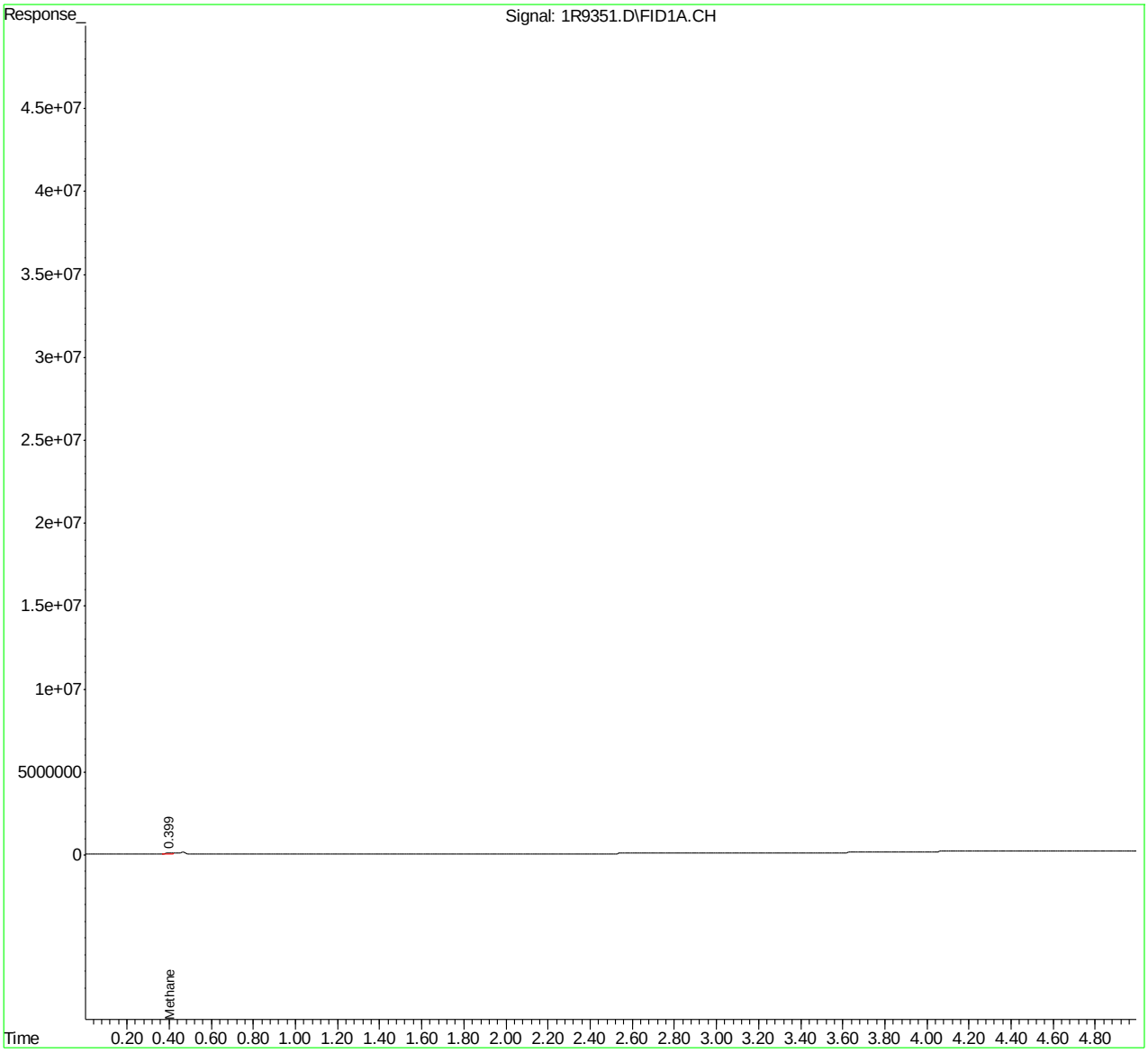
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9351.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 10:13:31
Operator : TRANGD
Sample : mb
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:42:24 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	G1R349-MB	**Sample Volume:**	38.0 ml
Lab FileID:	1R9351.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 10:13	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1.18	37600	0.0	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9348.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:38:52
Operator : TRANGD
Sample : bs
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:32:23 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.433	580100187	1025.383	ppmv
2)	Acetylene	0.995	1223404262	1202.535	ppmv
3)	Ethylene	1.312	1036857931	1024.056	ppmv
4)	Ethane	1.685	1026954958	1014.206	ppmv
5)	Propane	4.238	1362471306	1042.373	ppmv

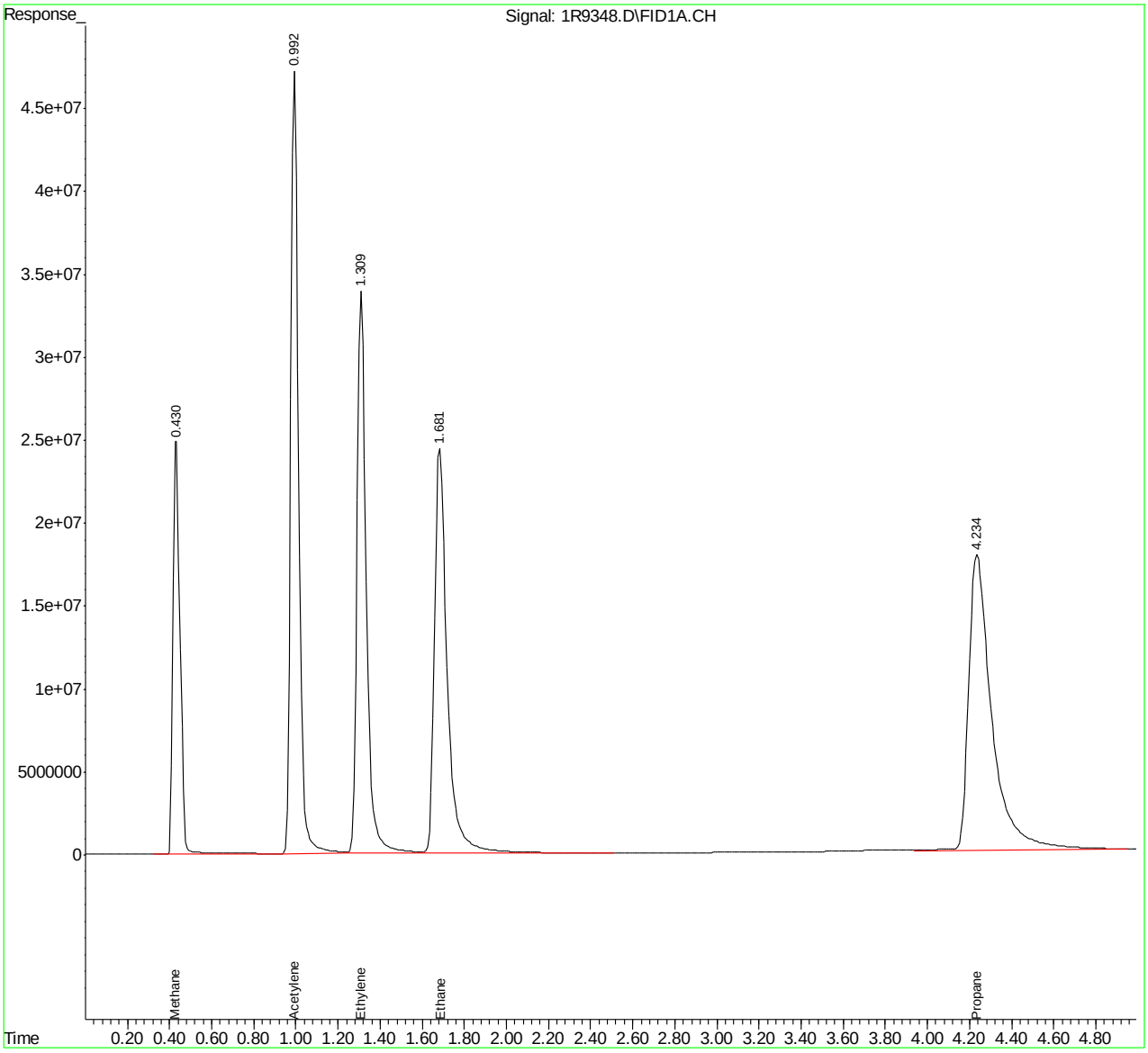
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9348.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:38:52
Operator : TRANGD
Sample : bs
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:32:23 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	G1R349-BS	**Sample Volume:**	38.0 ml
Lab FileID:	1R9348.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 09:38	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1025.38	37600	114	ug/l
Ethane	74-84-0	30	1014.21	26300	231	ug/l
Ethene	74-85-1	28	1024.06	10200	313	ug/l
Acetylene	74-86-2	26	1202.53	11940	316	ug/l
Propane	74-98-6	44	1042.37	31474	332	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9349.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:50:47
Operator : TRANGD
Sample : bsd
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:32:25 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.433	526631707	930.872	ppmv
2)	Acetylene	0.995	1101599282	1087.613	ppmv
3)	Ethylene	1.312	932602991	921.088	ppmv
4)	Ethane	1.686	927455304	915.942	ppmv
5)	Propane	4.241	1208554083	924.617	ppmv

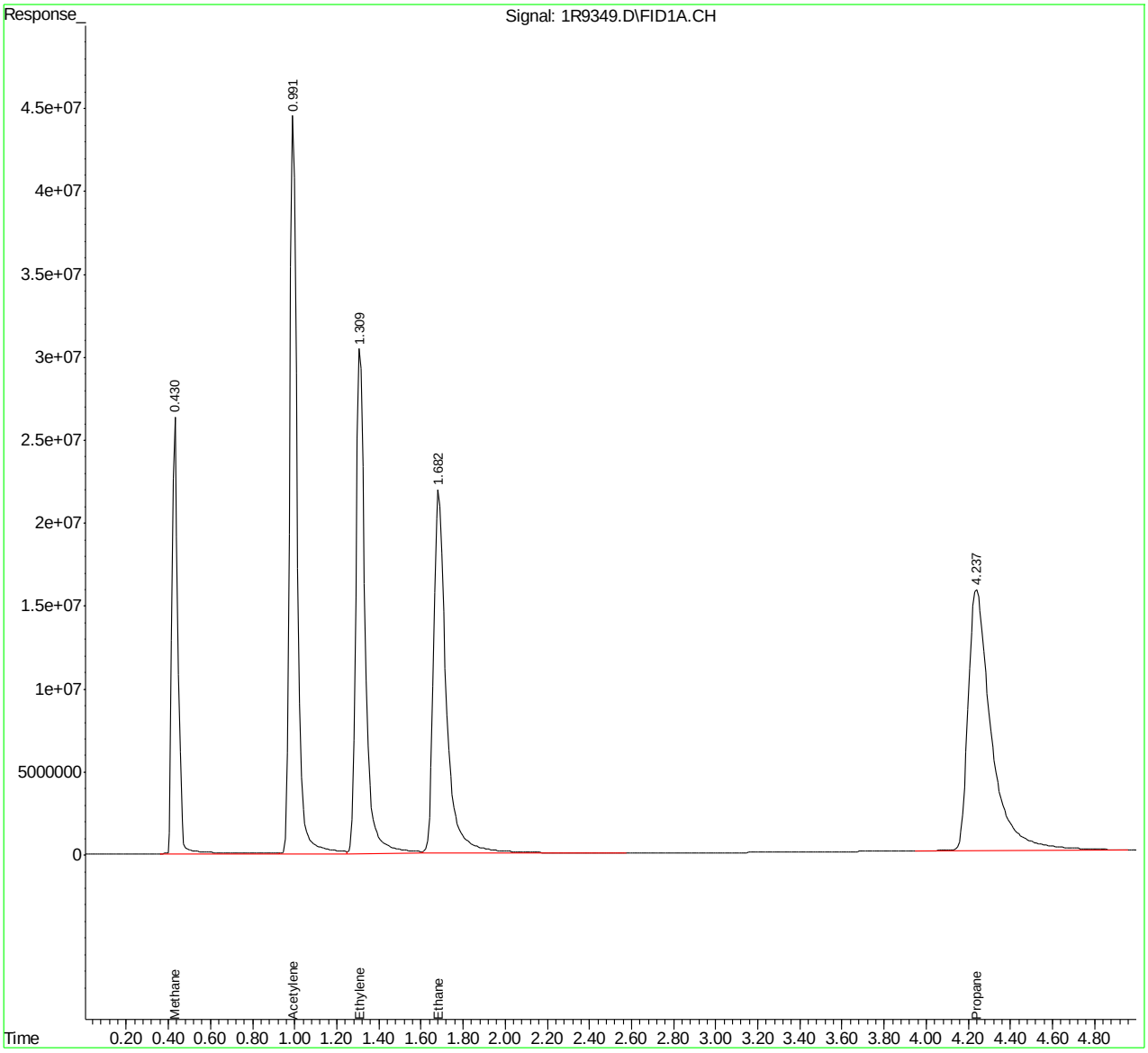
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9349.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:50:47
Operator : TRANGD
Sample : bsd
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:32:25 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	G1R349-BSD	**Sample Volume:**	38.0 ml
Lab FileID:	1R9349.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 09:50	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	930.87	37600	104	ug/l
Ethane	74-84-0	30	915.94	26300	208	ug/l
Ethene	74-85-1	28	921.09	10200	281	ug/l
Acetylene	74-86-2	26	1087.61	11940	286	ug/l
Propane	74-98-6	44	924.62	31474	294	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9368.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:29:43
Operator : TRANGD
Sample : FA98770-6ms
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:50 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.431	692163275	1223.465	ppmv	m
2)	Acetylene	0.995	1120201049	1105.227	ppmv	
3)	Ethylene	1.312	975964483	963.914	ppmv	
4)	Ethane	1.685	978580518	966.432	ppmv	
5)	Propane	4.240	1286654944	984.369	ppmv	

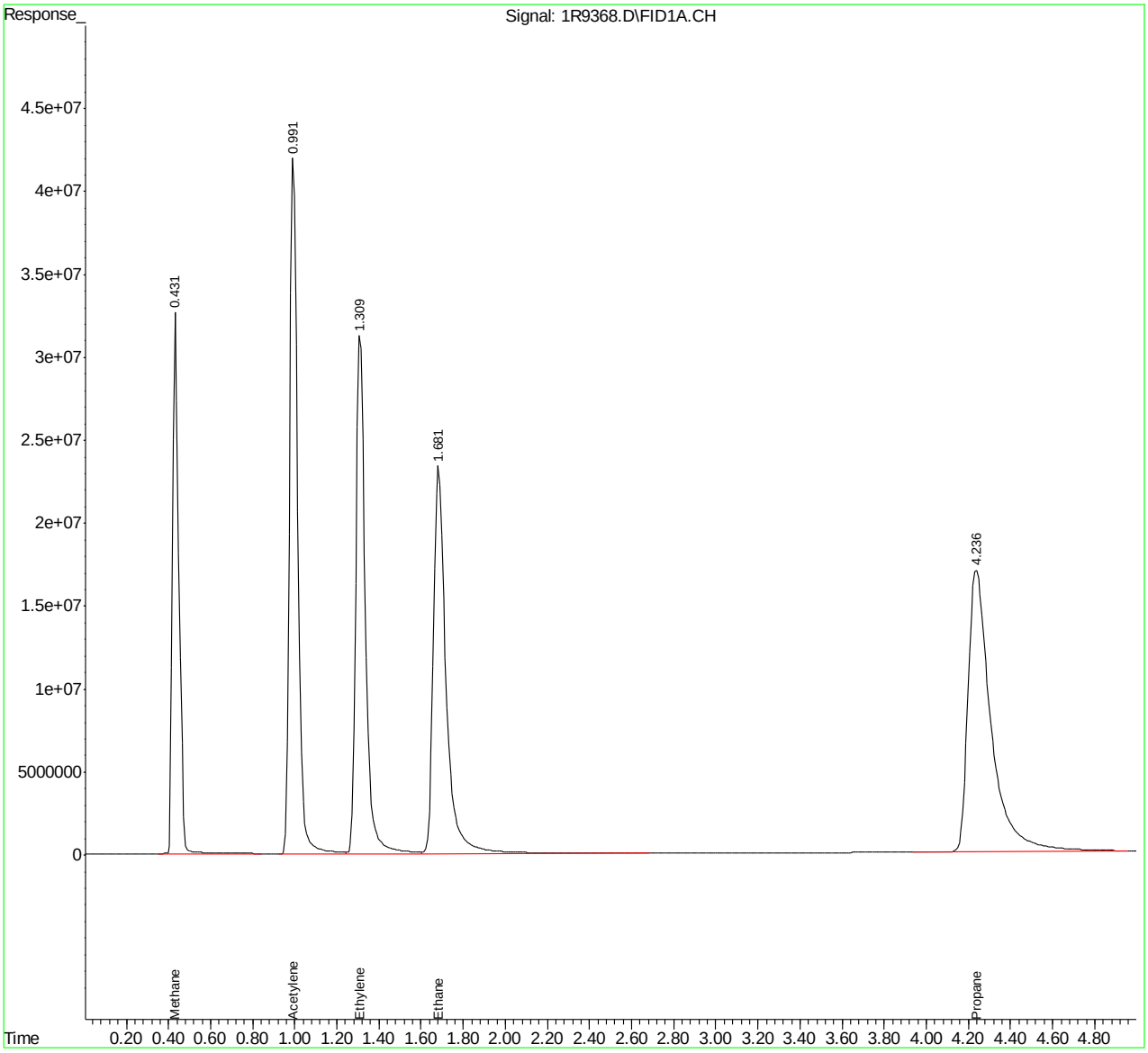
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9368.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:29:43
Operator : TRANGD
Sample : FA98770-6ms
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:50 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number: FA98770-6MS
Lab FileID: 1R9368.D
Injection Time: 09/13/22 14:29
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Methane	74-82-8	1	0.43	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	FA98770-6MS	**Sample Volume:**	38.0 ml
Lab FileID:	1R9368.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 14:29	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1223.47	37600	136	ug/l
Ethane	74-84-0	30	966.43	26300	220	ug/l
Ethene	74-85-1	28	963.91	10200	295	ug/l
Acetylene	74-86-2	26	1105.23	11940	291	ug/l
Propane	74-98-6	44	984.37	31474	313	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9367.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:16:36
Operator : TRANGD
Sample : FA98770-6dup
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:21 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.436	132973403	235.043	ppmv
2)	Acetylene	0.000	0	N.D.	ppmv
3)	Ethylene	0.000	0	N.D.	ppmv
4)	Ethane	0.000	0	N.D.	ppmv
5)	Propane	0.000	0	N.D.	ppmv d

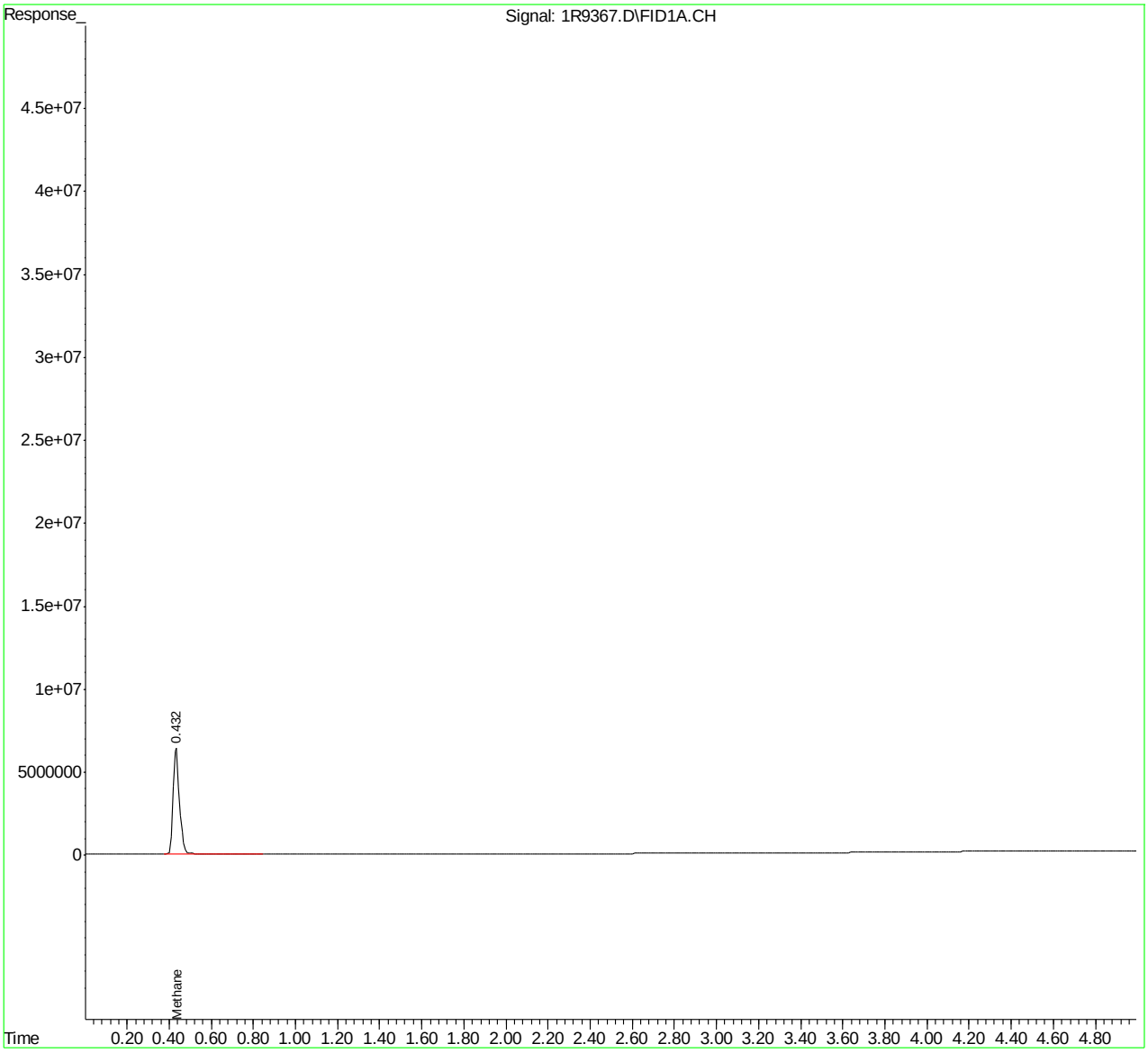
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9367.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:16:36
Operator : TRANGD
Sample : FA98770-6dup
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:49:21 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA98770-6DUP	**Sample Volume:**	38.0 ml
Lab FileID:	1R9367.D	**Headspace:**	5.0 ml
Injection Time:	09/13/22 14:16	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	235.04	37600	26.1	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9185.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:27:38
Operator : TRANGD
Sample : ic343-1
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:45:27 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc Units
Target Compounds				
1)	Methane	0.421	1016905	2.094 ppmv m
2)	Acetylene	0.981	1692888	1.705 ppmv m
3)	Ethylene	1.297	1548608	1.979 ppmv m
4)	Ethane	1.669	1697734	2.164 ppmv m
5)	Propane	4.226	3178105	3.249 ppmv m

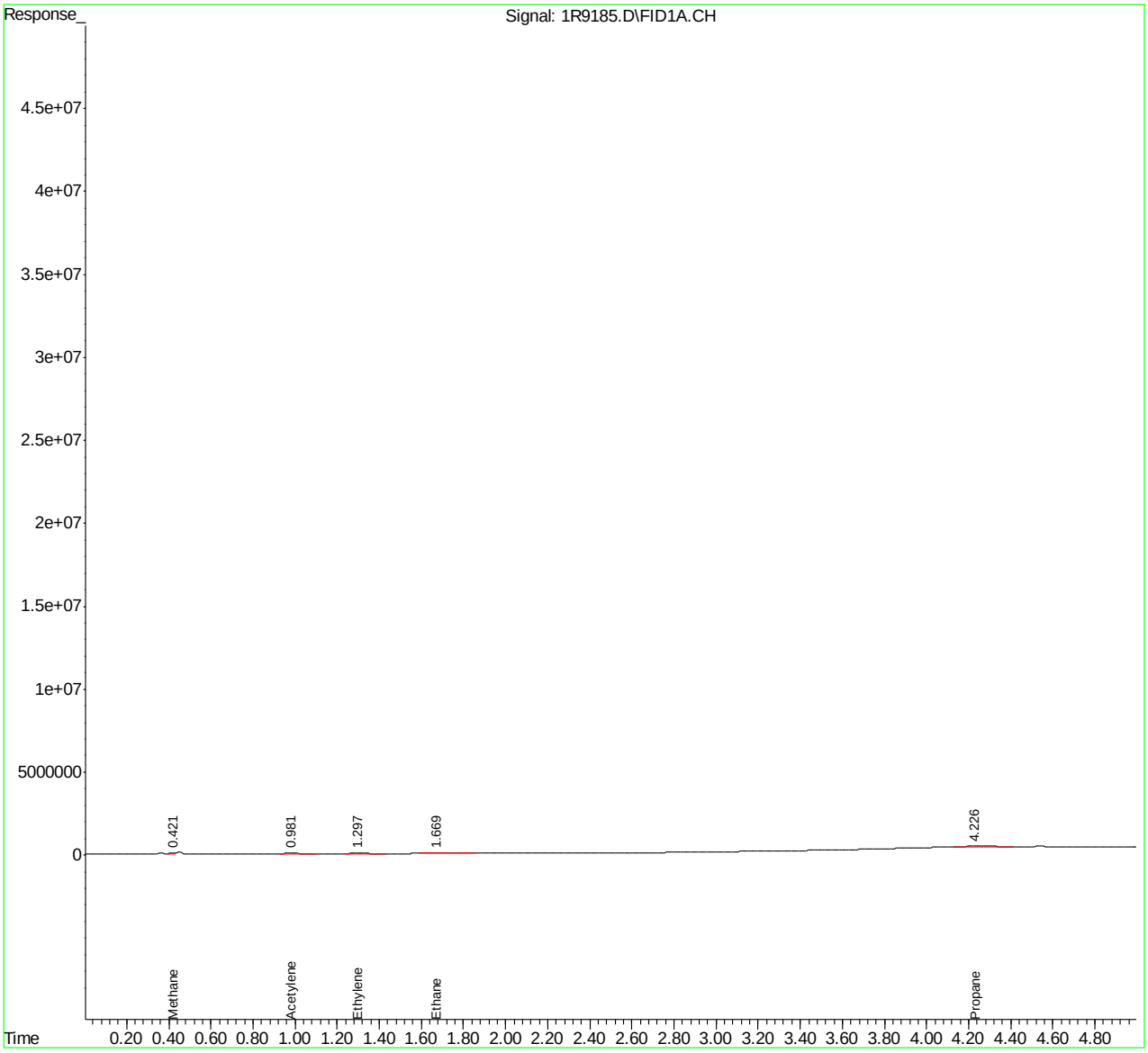
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9185.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:27:38
Operator : TRANGD
Sample : ic343-1
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:45:27 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9186.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:35:16
Operator : TRANGD
Sample : ic343-2
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:46:03 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.425	10663423	21.960	ppmv	
2)	Acetylene	0.977	17469100	17.594	ppmv	m
3)	Ethylene	1.294	15452527	19.745	ppmv	
4)	Ethane	1.661	15257897	19.447	ppmv	m
5)	Propane	4.211	20412236	20.864	ppmv	m

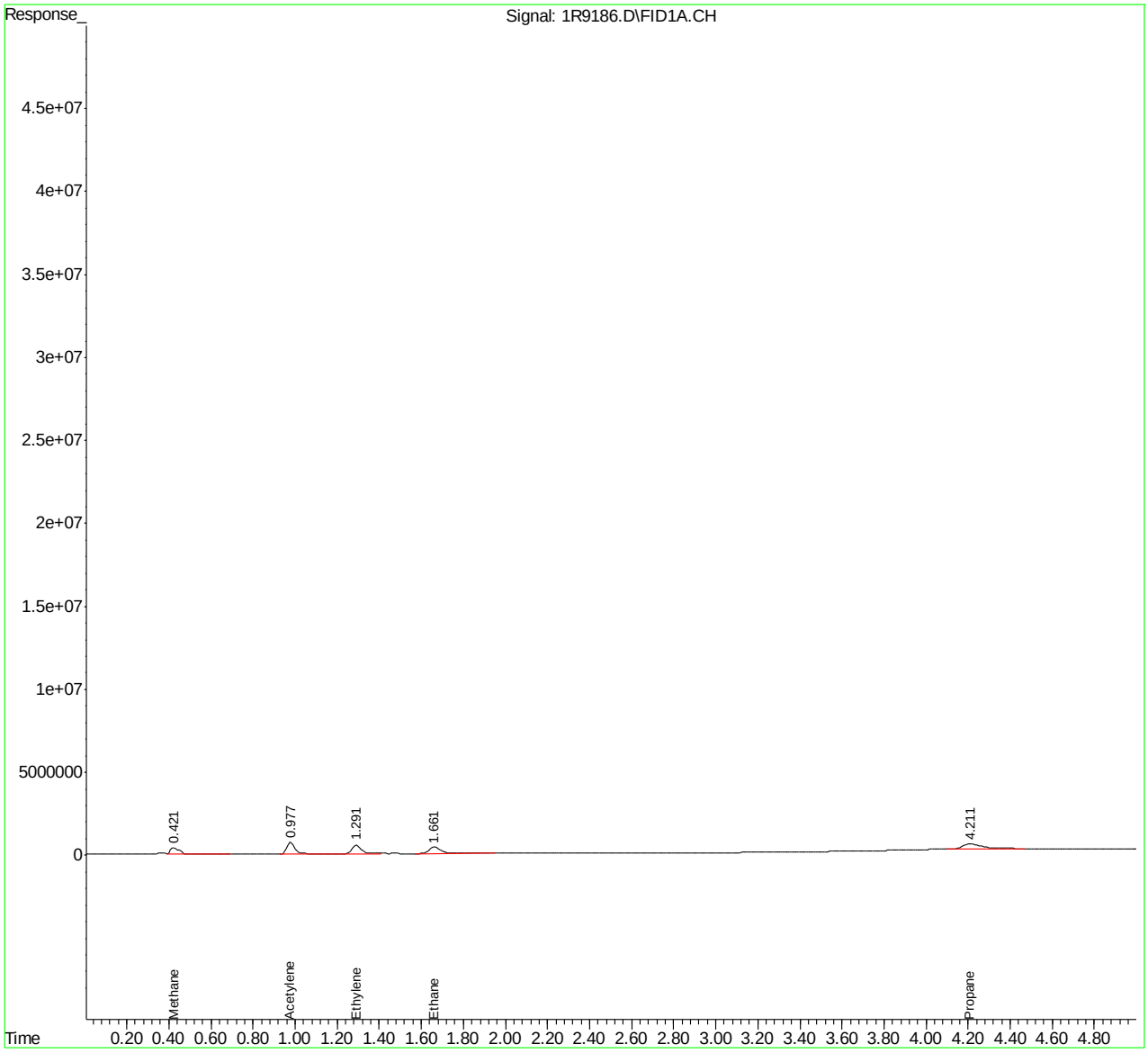
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9186.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:35:16
Operator : TRANGD
Sample : ic343-2
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:46:03 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9187.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:42:38
Operator : TRANGD
Sample : ic343-3
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:48:07 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.425	49893912	102.750	ppmv	
2)	Acetylene	0.979	81902309	82.486	ppmv	
3)	Ethylene	1.294	84911843	108.497	ppmv	
4)	Ethane	1.664	82412666	105.040	ppmv	
5)	Propane	4.210	102247534	104.513	ppmv	m

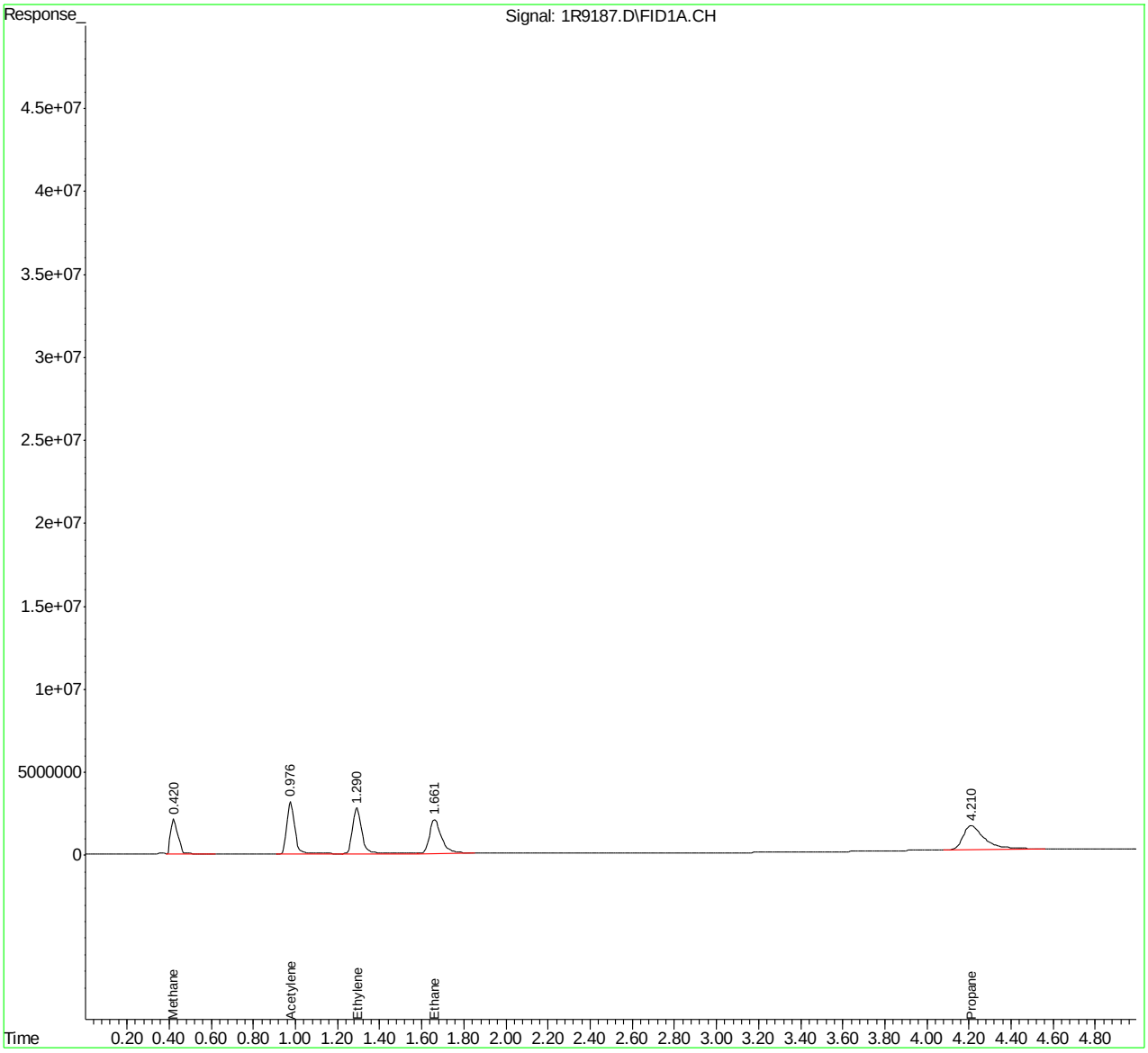
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9187.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:42:38
Operator : TRANGD
Sample : ic343-3
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:48:07 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 14:24:27 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9188.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:50:35
Operator : TRANGD
Sample : ic343-4
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:56:12 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 15:54:30 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.426	234500270	418.992	ppmv	
2)	Acetylene	0.977	424449645	401.926	ppmv	
3)	Ethylene	1.290	420303324	458.967	ppmv	
4)	Ethane	1.660	423057319	458.383	ppmv	
5)	Propane	4.204	542733298	421.338	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.4

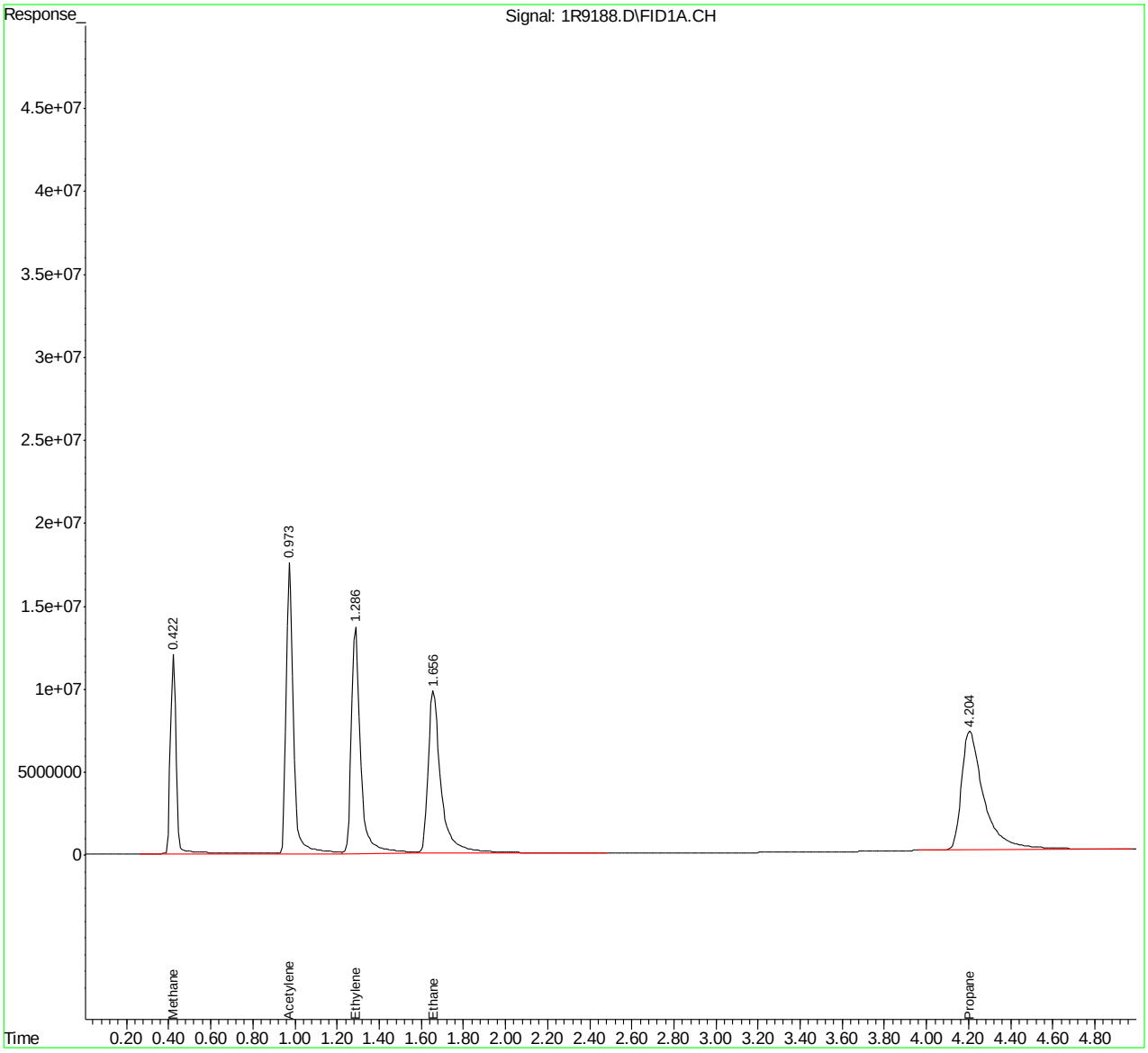
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9188.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:50:35
Operator : TRANGD
Sample : ic343-4
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 15:56:12 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 15:54:30 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9189.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:58:22
Operator : TRANGD
Sample : icc343-5
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:03:54 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 15:56:19 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.424	602227778	1090.582	ppmv	
2)	Acetylene	0.977	1165083268	1143.838	ppmv	
3)	Ethylene	1.289	1054031977	1167.222	ppmv	
4)	Ethane	1.657	1031441309	1131.343	ppmv	
5)	Propane	4.195	1242227752	983.515	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.5

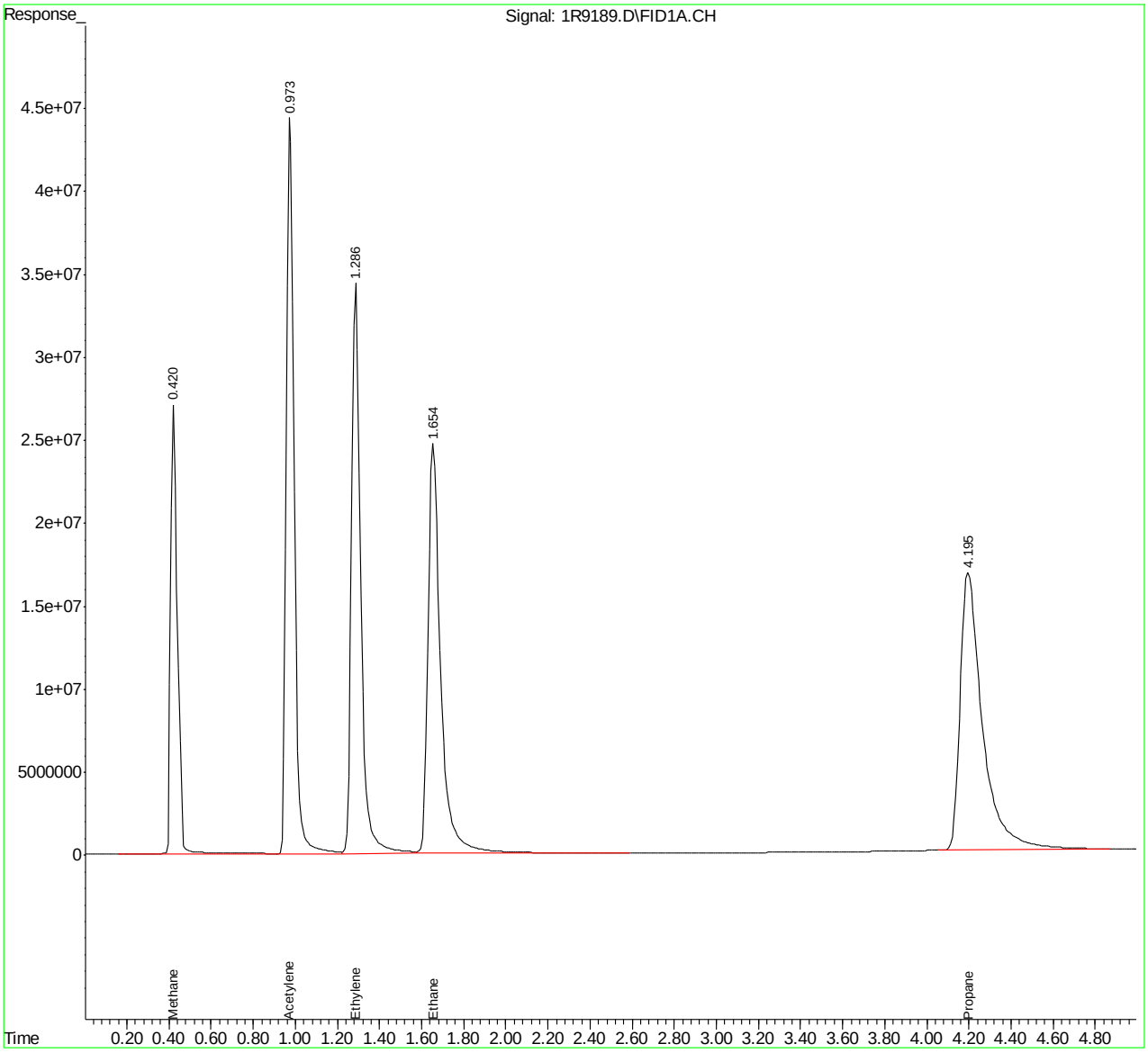
6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9189.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 15:58:22
Operator : TRANGD
Sample : icc343-5
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:03:54 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 15:56:19 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9190.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:06:19
Operator : TRANGD
Sample : ic343-6
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:13:29 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 16:04:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.424	2736255124	4851.651	ppmv
2)	Acetylene	0.969	5787373212	5641.337	ppmv
3)	Ethylene	1.270	4721902025	5143.260	ppmv
4)	Ethane	1.632	4803187401	5185.223	ppmv
5)	Propane	4.157	5953414650	4695.825	ppmv

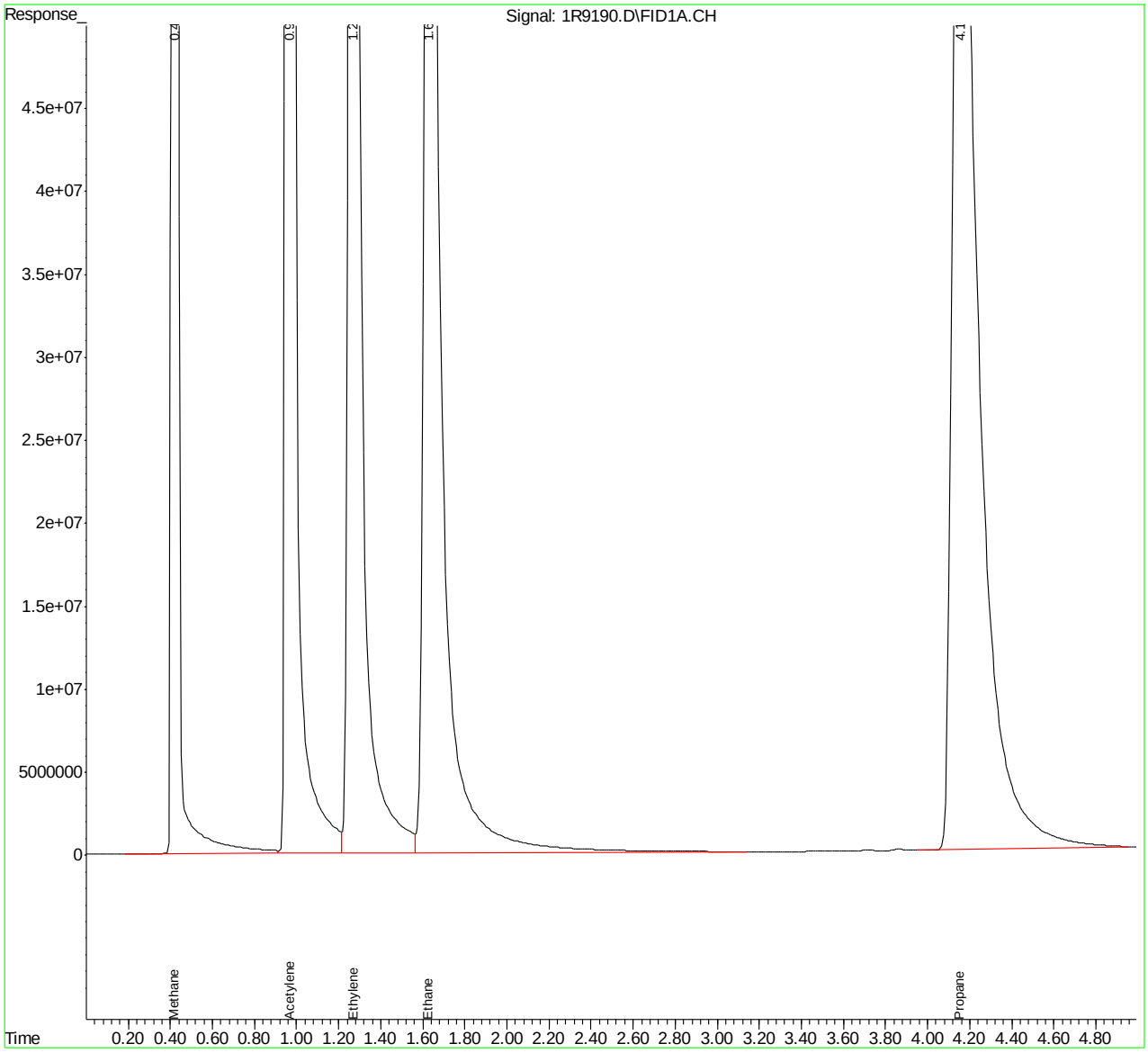
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9190.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:06:19
Operator : TRANGD
Sample : ic343-6
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:13:29 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 16:04:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9191.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:15:41
Operator : TRANGD
Sample : ic343-7
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:23:17 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 16:04:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.422	5702457543	10111.021	ppmv
2)	Acetylene	0.957	13623601056	13279.829	ppmv
3)	Ethylene	1.252	10295622382	11214.349	ppmv
4)	Ethane	1.607	10257995417	11073.895	ppmv
5)	Propane	4.108	13374185018	10549.045	ppmv

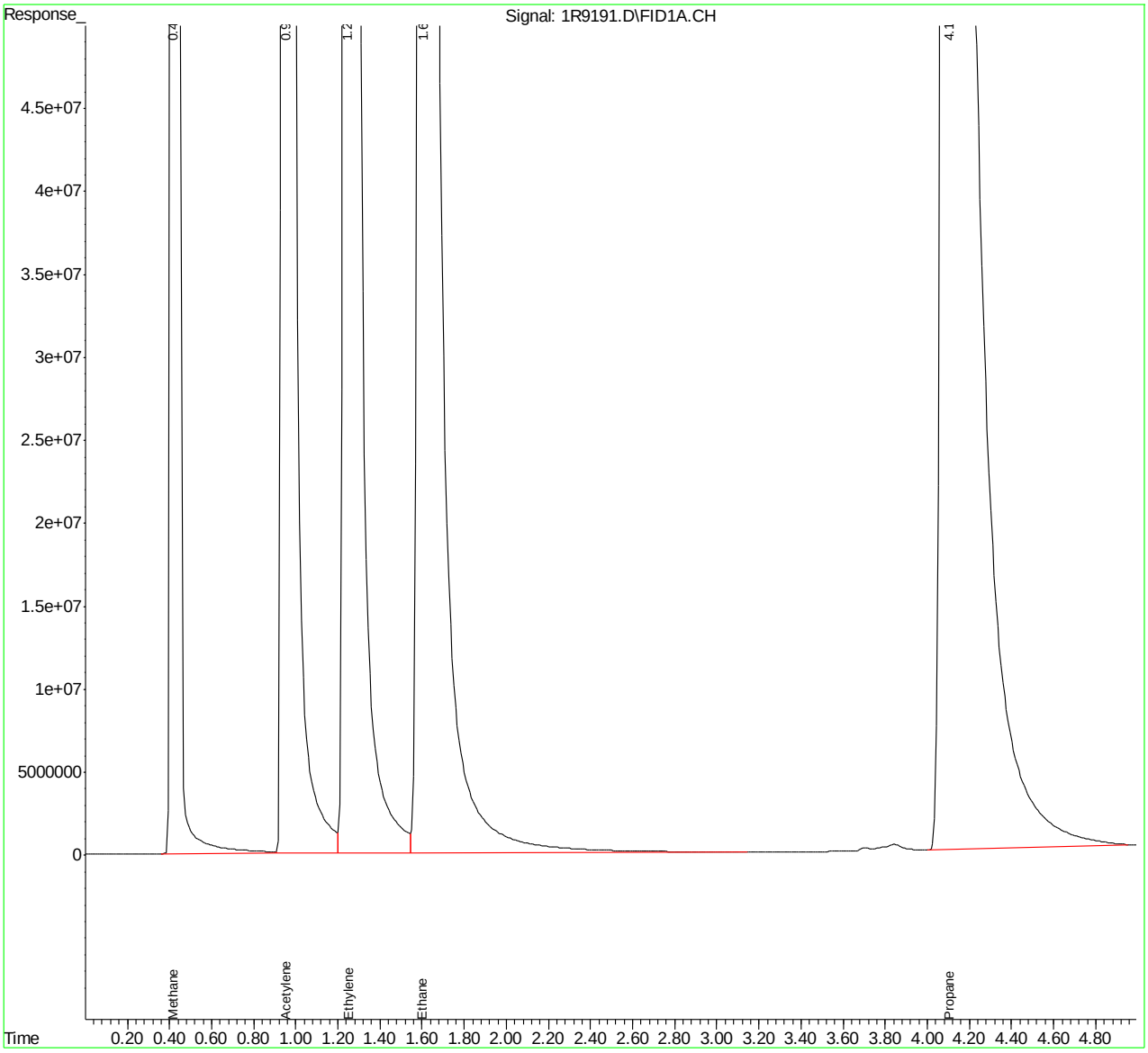
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9191.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:15:41
Operator : TRANGD
Sample : ic343-7
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 23 16:23:17 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Tue Aug 23 16:04:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9192.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:24:24
Operator : TRANGD
Sample : icv343-5
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 30 09:06:00 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.420	593756393	1049.521	ppmv
2)	Acetylene	0.969	958218591	951.068	ppmv
3)	Ethylene	1.284	969902545	957.927	ppmv
4)	Ethane	1.653	993442312	981.110	ppmv
5)	Propane	4.198	1263774272	966.863	ppmv

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.8

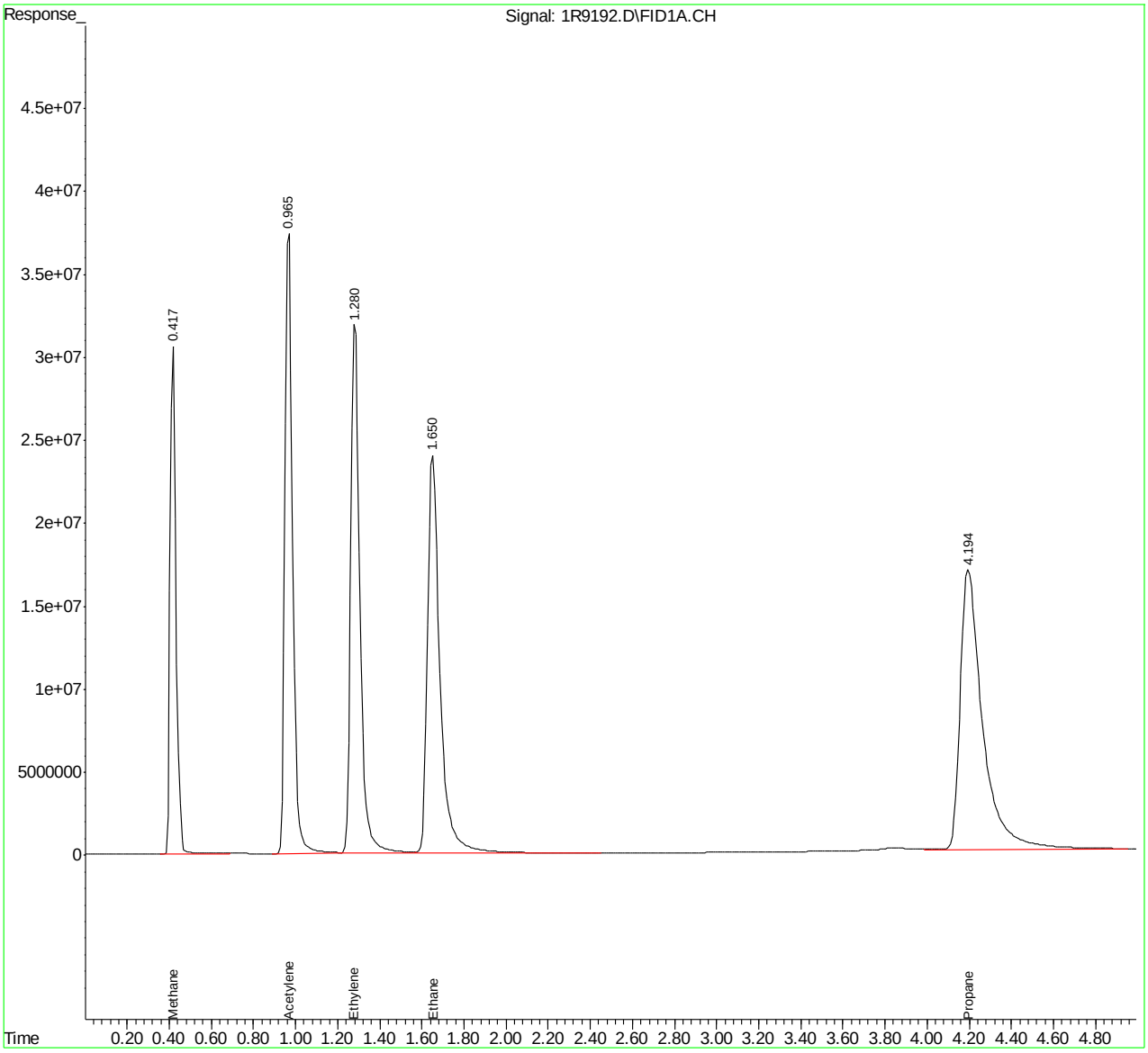
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\08-23-22\
Data File : 1R9192.D
Signal(s) : FID1A.CH
Acq On : 23-Aug-22, 16:24:24
Operator : TRANGD
Sample : icv343-5
Misc : gc23837,G1R343,38,20,500,5,1
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 30 09:06:00 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9347.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:26:54
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:34:44 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.434	589940895	1042.777	ppmv	
2)	Acetylene	0.995	1173661944	1155.721	ppmv	
3)	Ethylene	1.311	1039437565	1026.604	ppmv	
4)	Ethane	1.683	1013661758	1001.078	ppmv	
5)	Propane	4.233	1311438020	1003.329	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.9

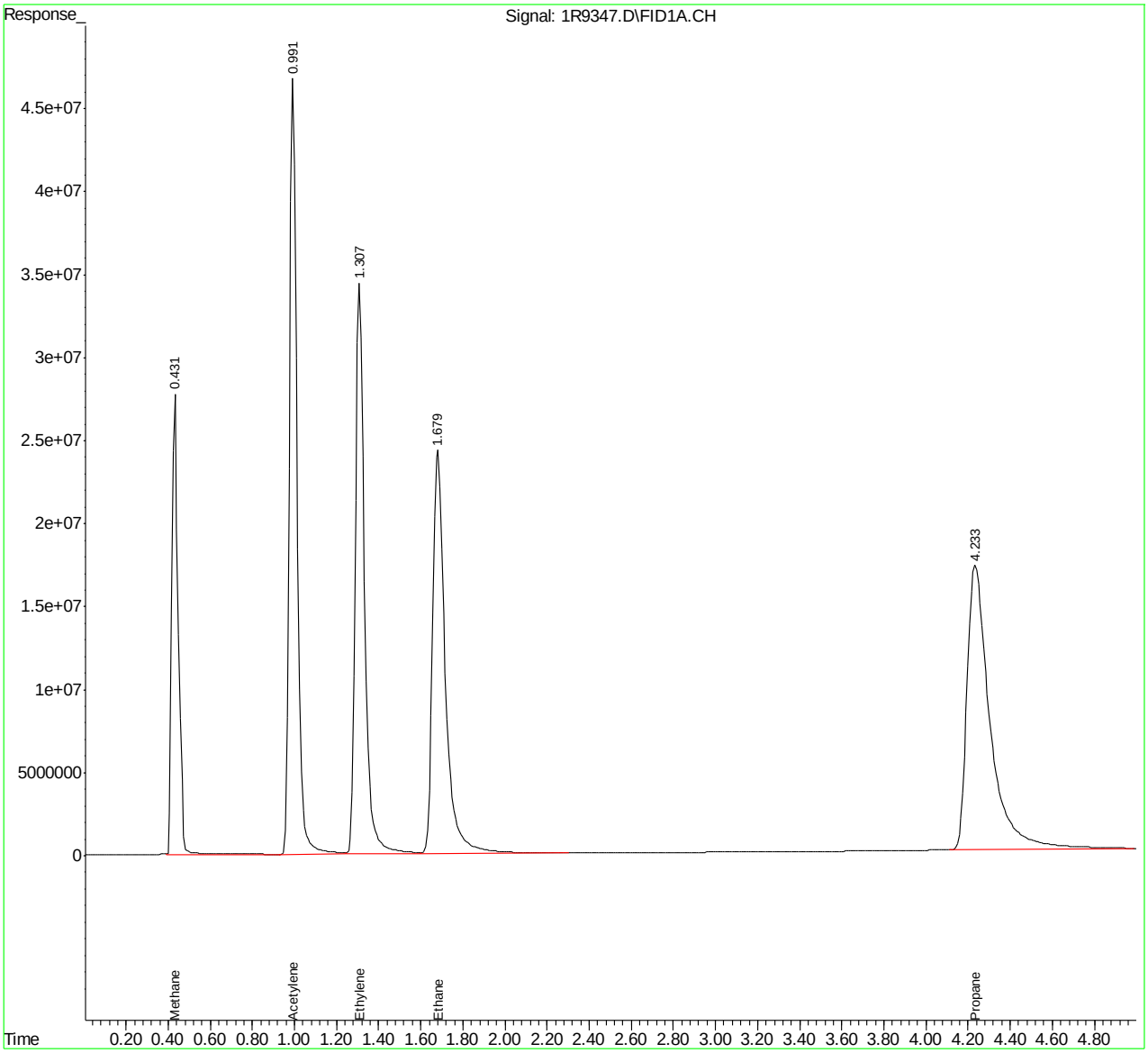
6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9347.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 09:26:54
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:34:44 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number: G1R349-CC343
Lab FileID: 1R9347.D
Injection Time: 09/13/22 09:26
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.23	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9358.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 12:15:52
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:45:34 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.434	525798973	929.400	ppmv	
2)	Acetylene	1.000	1189897610	1171.019	ppmv	
3)	Ethylene	1.313	963738497	951.839	ppmv	
4)	Ethane	1.685	934965376	923.359	ppmv	
5)	Propane	4.233	1299593668	994.267	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.10

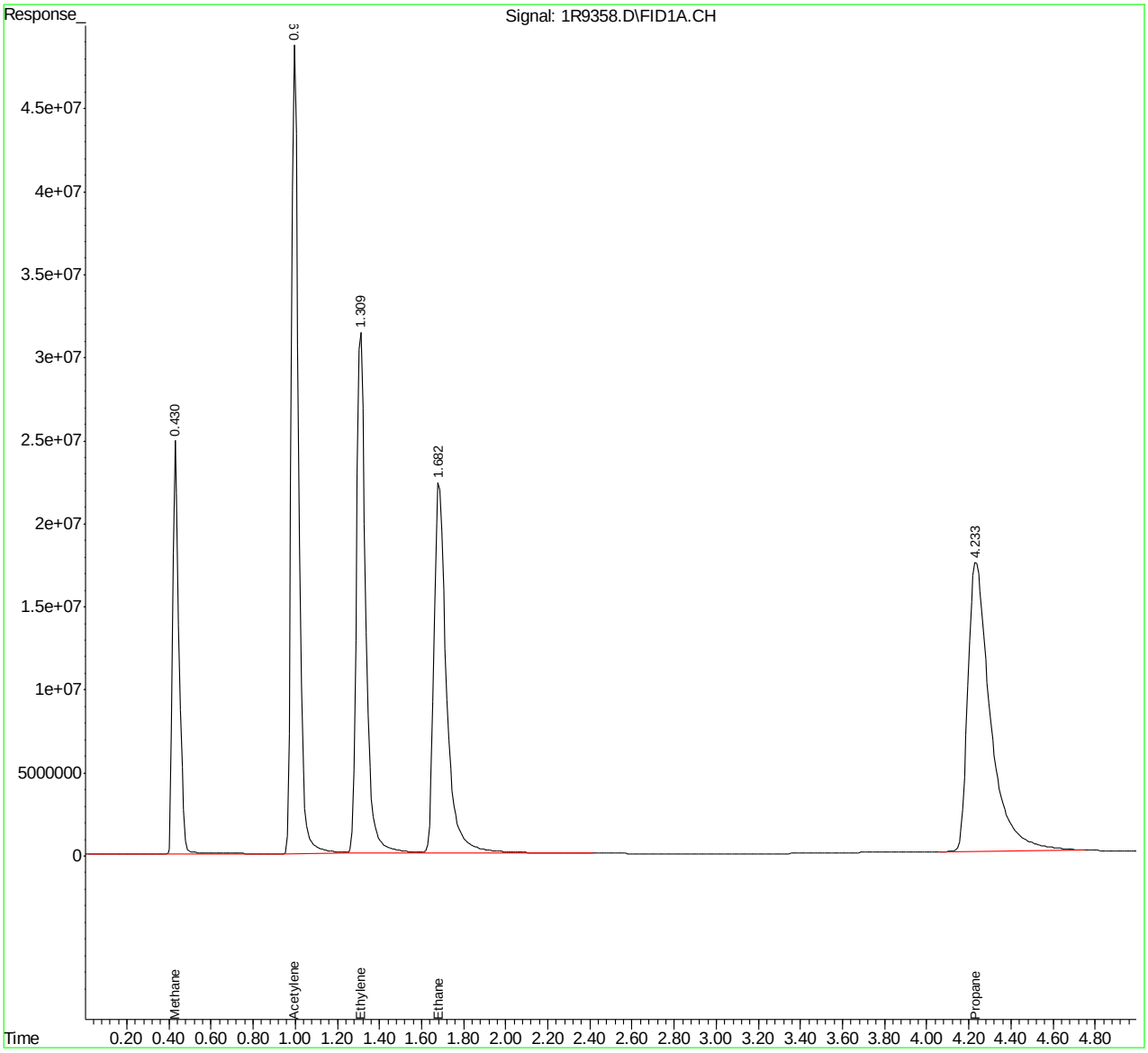
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9358.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 12:15:52
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:45:34 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



RSK8-23-22.M Wed Sep 14 11:24:00 2022 Page: 2

Manual Integration Approval Summary

Sample Number:	G1R349-CC343	**Method:**	RSKSOP-147/175
Lab FileID:	1R9358.D	**Analyst approved:**	09/14/22 11:17 Trang Diep
Injection Time:	09/13/22 12:15	**Supervisor approved:**	09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.23	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9369.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:37:27
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:50:22 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.435	577286732	1020.410	ppmv	
2)	Acetylene	1.000	1239127049	1217.299	ppmv	
3)	Ethylene	1.315	1055290553	1042.261	ppmv	
4)	Ethane	1.689	1032234590	1019.420	ppmv	
5)	Propane	4.237	1344563620	1028.672	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.11

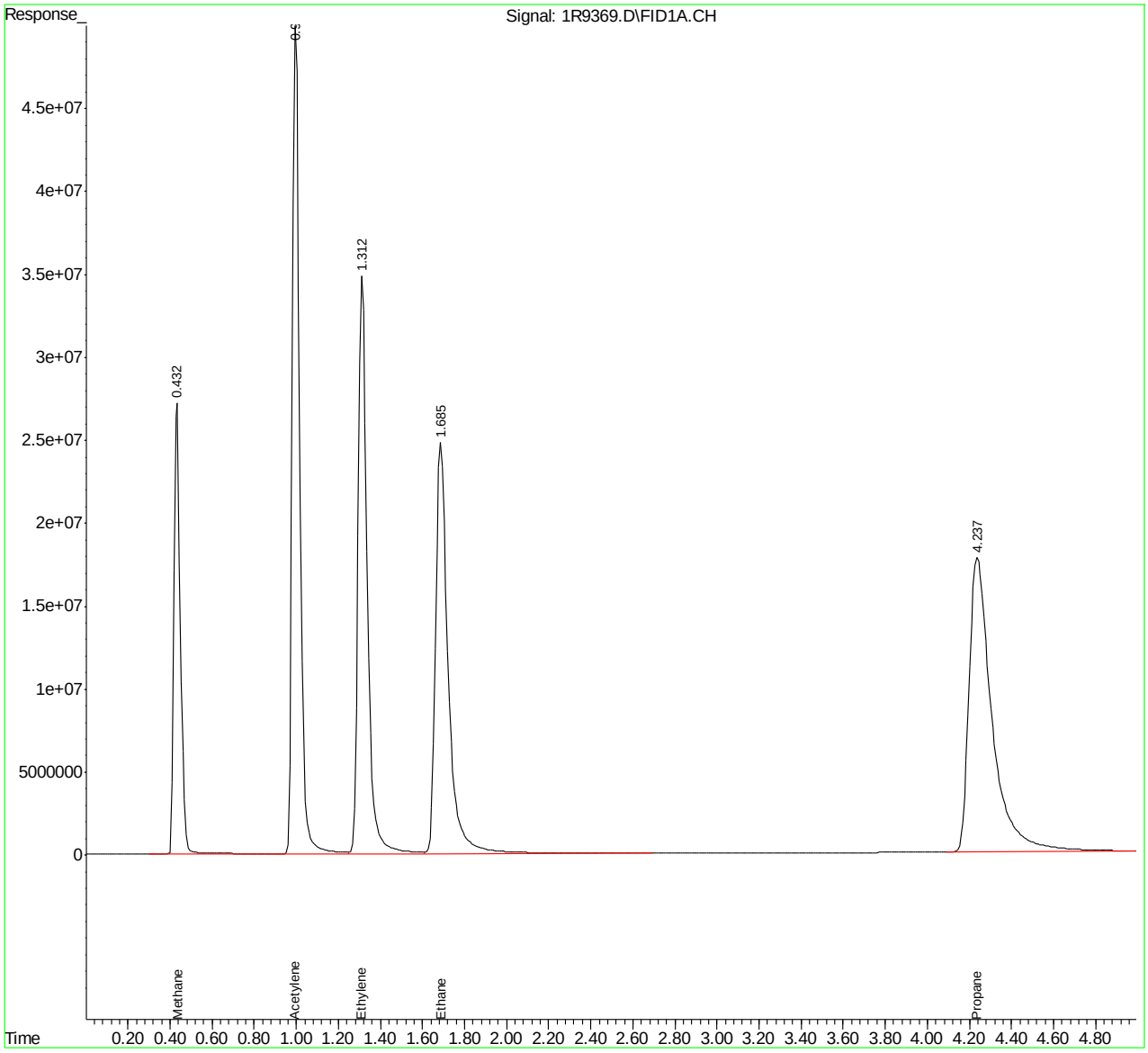
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9369.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 14:37:27
Operator : TRANGD
Sample : cc343-5
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:50:22 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



RSK8-23-22.M Wed Sep 14 11:24:22 2022 Page: 2

Manual Integration Approval Summary

Sample Number: G1R349-CC343
Lab FileID: 1R9369.D
Injection Time: 09/13/22 14:37
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.24	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Shanica O'Connor 09/15/22 16:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9379.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 16:32:43
Operator : TRANGD
Sample : ecc343-4
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 33 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:52:58 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Methane	0.436	279738112	494.464	ppmv	
2)	Acetylene	1.000	582164399	586.124	ppmv	
3)	Ethylene	1.316	506681416	500.425	ppmv	
4)	Ethane	1.691	497898650	491.718	ppmv	
5)	Propane	4.246	636392082	486.878	ppmv	m

(f)=RT Delta > 1/2 Window (m)=manual int.

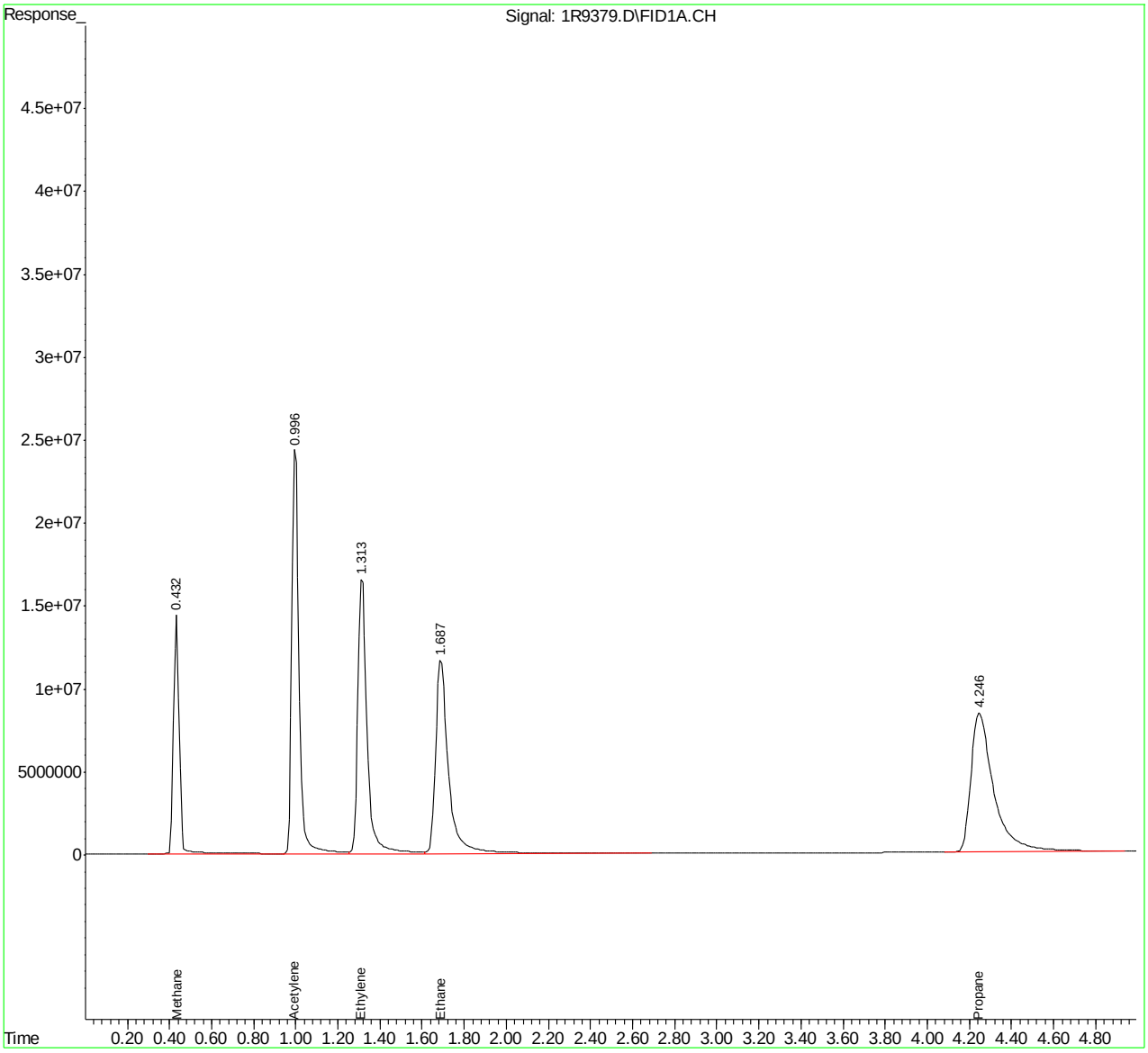
9.6.12
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\09-13-22\
Data File : 1R9379.D
Signal(s) : FID1A.CH
Acq On : 13-Sep-22, 16:32:43
Operator : TRANGD
Sample : ecc343-4
Misc : gc23887,G1R349,38,20,500,5,1
ALS Vial : 33 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 14 10:52:58 2022
Quant Method : C:\msdchem\1\METHODS\RSK8-23-22.M
Quant Title : Dissolved Gases in Water
QLast Update : Wed Aug 24 09:01:53 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : manual
Signal Phase : Carboxen 1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number: G1R349-ECC343
Lab FileID: 1R9379.D
Injection Time: 09/13/22 16:32
Method: RSKSOP-147/175
Analyst approved: 09/14/22 11:17 Trang Diep
Supervisor approved: 09/15/22 16:28 Shanica O'Connor

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.25	Poor instrument integration

SGS -ORLANDO

GC VOA12-1R ANALYSIS LOG

DATE: 8/23/22	METHODS: NEWRSK 147/175	STANDARDS:	PH LOT: 230320, 225320
COLUMN TYPE: C1006	METHOD FILE: RSK8-23-22.M	ICAL/CCV: 10973A,10447A, 11171A	KI PAPER LOT: 011819
DETECTOR: FID	CALIB. DATE: 8/23/22		AMBIENT TEMP. : 20C
INSTRUMENT: FID4-LL	DataAqcMeth: DGMEE2.M	ISTD/SURR: NA	THERM ID: 170563327
ANALYST : trangd			Sample ID Verified:TRANGD
	RUN ID: G1R343	ICV/QC: 9513	Reviewed: 8/23/22

DATA FILE	SAMPLE ID	DIL.	Vial #	MATRIX	FINAL VOLUME uL	STD CONC. PPM	MANUALLY INTEGRATED PEAKS, RATIONAL, PEAK #	PH	CL	RR	COMMENTS
1R9183	mb, helium	-	-	-	500	-		NA	NA	-	
1R9184	mb	-	-	-	500	-		NA	NA	-	
1R9185	ic342-1	-	-	W	500	15		NA	NA	-	500uL/5mL
1R9186	ic342-2	-	-	-	500	15		NA	NA	-	
1R9187	ic342-3	-	-	W	500	1000		NA	NA	-	500uL/5mL
1R9188	ic342-4	-	-	-	250	1000		NA	NA	-	
1R9189	icc342-5	-	-	-	500	1000		NA	NA	-	
1R9190	ic342-6	-	-	-	250	10000		NA	NA	-	
1R9191	ic342-7	-	-	-	500	10000		NA	NA	-	
1R9192	icv342-5	-	-	W	500	10000		NA	NA	-	passed
					70						
					6/23/22						

Analyst's Signature:

Trainee :

SGS -ORLANDO

GC VOA12-1R ANALYSIS LOG

DATE: 9/13/22	**METHODS:** NEWRSK 147/175	**STANDARDS:**	**PH LOT:** 230320, 225320
COLUMN TYPE: C1006	**METHOD FILE:** RSK8-23-22.M	**ICAL/CCV:** 10973A,10447A, 11171A	**KI PAPER LOT:** 011819
DETECTOR: FID	**CALIB. DATE:** 8/23/22		**AMBIENT TEMP. :** 20C
INSTRUMENT: FID4-LL	**DataAqcMeth:** DGMEE2.M	**ISTD/SURR:** NA	**THERM ID:** 170563327
ANALYST : trangd			**Sample ID Verified:** trangd
	RUN ID: G1R349	**ICV/QC:** 9513	**Reviewed:** 9/13/2022

DATA FILE	SAMPLE ID	DIL.	Vial #	MATRIX	FINAL VOLUME uL	STD CONC. PPM	MANUALLY INTEGRATED PEAKS, RATIONAL, PEAK #	PH	CL	RR	COMMENTS
1R9247	cc343-5	-	-	-	500	1000		-	-	-	passed
1R9248	bs	-	-	W	500	10000		-	-	-	passed
1R9249	bsd	-	-	W	500	10000		-	-	-	passed
1R9250	mb, helium	-	-	-	-	-		-	-	-	
1R9251	mb	-	-	W	500	-		-	-	-	ND
1R9252	FA98770-2	1X	2	W	500	-		1	N	10X	methane is high
1R9253	FA98770-5	1X	5	W	500	-		1	N	10x	methane is high
1R9254	FA98770-6	1X	1	W	500	-		1	N	-	
1R9255	FA98770-7	1X	1	W	500	-		1	N	-	
1R9256	FA98770-2	10X	3	W	500	-		1	N	-	500uL/5mL
1R9257	FA98770-5	10X	5	W	500	-		1	N	-	500uL/5mL
1R9258	cc343-5	-	-	-	500	1000		-	-	-	passed
1R9259	mb, helium	-	-	-	-	-		-	-	-	
1R9260	FA98770-10	1X	1	W	500	-		1	N	-	
1R9261	FA98770-8	1X	4	W	500	-		1	N	-	
1R9262	FA98770-9	1X	4	W	500	-		1	N	-	
1R9263	FA98770-12	1X	1	W	500	-		1	N	-	
1R9264	FA98770-13	1X	1	W	500	-		1	N	-	
1R9265	FA98820-1A	1X	1	W	500	-		1	N	10X	methane is high
1R9266	FA98820-2A	1X	1	W	500	-		1	N	-	
1R9267	FA98770-6dup	1X	2	W	500	-		1	N	-	
1R9268	FA98770-6ms	1X	1	W	500	10000		1	N	-	passed

Analyst's Signature: 

SGS -ORLANDO

GC VOA12-1R ANALYSIS LOG

DATE: 9/13/22	**METHODS:** NEWRSK 147/175	**STANDARDS:**	**PH LOT:** 230320, 225320
COLUMN TYPE: C1006	**METHOD FILE:** RSK8-23-22.M	**ICAL/CCV:** 10973A,10447A, 11171A	**KI PAPER LOT:** 011819
DETECTOR: FID	**CALIB. DATE:** 8/23/22		**AMBIENT TEMP. :** 20C
INSTRUMENT: FID4-LL	**DataAqcMeth:** DGMEE2.M	**ISTD/SURR:** NA	**THERM ID:** 170563327
ANALYST : trangd			**Sample ID Verified:** trangd
	RUN ID: G1R349	**ICV/QC:** 9513	**Reviewed:** 9/13/2022

DATA FILE	SAMPLE ID	DIL.	Vial #	MATRIX	FINAL VOLUME uL	STD CONC. PPM	MANUALLY INTEGRATED PEAKS, RATIONAL, PEAK #	PH	CL	RR	COMMENTS
1R9269	cc343-5	-	-	W	500	1000		-	-	-	passed
1R9270	mb, helium	-	-	-	-	-		-	-	-	
1R9271	FA98820-1A	10X	2	W	500	-		1	N	-	500uL/5mL
1R9272	FA98820-2A	10X	2	W	500	-		1	N	-	500uL/5mL; low; not used
1R9273	FA98770-1	1X	6	W	500	-		1	N	-	
1R9274	FA98770-3	1X	6	W	500	-		1	N	-	
1R9275	FA98770-4	1X	6	W	500	-		1	N	-	
1R9276	FA98780-2	1X	5	W	500	-		1	N	-	
1R9277	FA98780-3	1X	2	W	500	-		1	N	-	
1R9278	FA98780-4	1X	2	W	500	-		1	N	-	
1R9279	ecc343-4	-	-	W	250	1000		-	-	-	passed
1R9280	mb, helium	-	-	-	-	-		-	-	-	

TD 9/13/22

Analyst's Signature:

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:22	MA18915-STD1	1		STDA
08:26	MA18915-STD2	1		STDB
08:30	MA18915-STD3	1		STDC
08:34	MA18915-STD4	1		STDD
08:38	MA18915-STD5	1		STDE
08:42	MA18915-STD6	1		STDF
08:46	MA18915-STD7	1		STDG
08:50	MA18915-HSTD1	1		
08:54	MA18915-HSTD2	1		
08:57	MA18915-ICV1	1		
09:01	MA18915-ICB1	1		
09:05	MA18915-CRIA1	1		
09:09	MA18915-ICSA1	1		
09:13	MA18915-ICSAB1	1		
09:17	MA18915-CCV1	1		
09:20	MA18915-CCV2	1		
09:24	MA18915-CCB1	1		
10:25	MA18915-CCV3	1		
10:29	MA18915-CCV4	1		
10:32	MA18915-CCB2	1		
10:43	MA18915-CCV5	1		
10:47	MA18915-CCV6	1		
10:51	MA18915-CCB3	1		
10:58	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:06	ZZZZZZ	5		
11:10	ZZZZZZ	5		
11:13	MP41201-B1	5		
11:17	FA98739-26	200		(sample used for QC only; not part of login FA98820)
11:21	MP41201-D1	200		
11:25	MP41201-SD1	1000		
11:29	MP41201-S1	200		
11:32	MA18915-CCV7	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:36	MA18915-CCV8	1		
11:40	MA18915-CCB4	1		
11:44	MP41201-S2	200		
11:48	MP41201-PS1	200		
11:51	ZZZZZZ	200		
11:55	ZZZZZZ	200		
11:59	MP41201-MB1	1		
12:03	MP41211-MB1	2		
12:06	MP41211-B1	2		
12:10	FA98621-8	2		(sample used for QC only; not part of login FA98820)
12:14	MP41211-D1	2		
12:18	MP41211-SD1	10		
12:21	MA18915-CCV9	1		
12:25	MA18915-CCV10	1		
12:29	MA18915-CCB5	1		
12:33	MP41211-S1	2		
12:37	MP41211-S2	2		
12:40	MP41211-PS1	2		
12:44	FA98679-3	2		(sample used for QC only; not part of login FA98820)
12:48	MP41211-D2	2		
12:52	MP41211-SD2	10		
12:55	MP41211-S3	2		
12:59	MP41211-S4	2		
13:03	MP41211-PS1	2		
13:07	ZZZZZZ	2		
13:11	MA18915-CCV11	1		
13:14	MA18915-CCV12	1		
13:18	MA18915-CCB6	1		
13:22	ZZZZZZ	2		
13:26	ZZZZZZ	2		
13:29	ZZZZZZ	2		
13:33	ZZZZZZ	2		
13:37	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:48	ZZZZZZ	2		
13:52	ZZZZZZ	2		
13:56	ZZZZZZ	2		
14:00	MA18915-CCV13	1		
14:03	MA18915-CCV14	1		
14:07	MA18915-CCB7	1		
14:11	ZZZZZZ	2		
14:15	ZZZZZZ	2		
14:19	ZZZZZZ	2		
14:22	ZZZZZZ	2		
14:26	FA98820-1	2		
14:30	FA98820-2	2		
---------->	Last reportable sample/prep for job FA98820			
14:34	MA18915-CCV15	1		
14:37	MA18915-CCV16	1		
14:41	MA18915-CCB8	1		
---------->	Last reportable CCB for job FA98820			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:50	MA18915-HSTD1	1		
08:54	MA18915-HSTD2	1	X	
08:57	MA18915-ICV1	1	X	
09:01	MA18915-ICB1	1	X	
09:05	MA18915-CRIA1	1	X	
09:09	MA18915-ICSA1	1	X	
09:13	MA18915-ICSAB1	1	X	
09:17	MA18915-CCV1	1		
09:20	MA18915-CCV2	1	X	
09:24	MA18915-CCB1	1	X	
10:25	MA18915-CCV3	1		
10:29	MA18915-CCV4	1	X	
10:32	MA18915-CCB2	1	X	
10:43	MA18915-CCV5	1		
10:47	MA18915-CCV6	1	X	
10:51	MA18915-CCB3	1	X	
10:58	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:06	ZZZZZZ	5		
11:10	ZZZZZZ	5		
11:13	MP41201-B1	5	X	
11:17	FA98739-26	200		(a)
11:21	MP41201-D1	200	X	
11:25	MP41201-SD1	1000	X	
11:29	MP41201-S1	200	X	
11:32	MA18915-CCV7	1		
11:36	MA18915-CCV8	1	X	
11:40	MA18915-CCB4	1	X	
11:44	MP41201-S2	200	X	
11:48	MP41201-PS1	200	X	
11:51	ZZZZZZ	200		
11:55	ZZZZZZ	200		
11:59	MP41201-MB1	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Element: Dilution	As	
12:03	MP41211-MB1	2	X	
12:06	MP41211-B1	2	X	
12:10	FA98621-8	2	X	(a)
12:14	MP41211-D1	2	X	
12:18	MP41211-SD1	10	X	
12:21	MA18915-CCV9	1		
12:25	MA18915-CCV10	1	X	
12:29	MA18915-CCB5	1	X	
12:33	MP41211-S1	2	X	
12:37	MP41211-S2	2	X	
12:40	MP41211-PS1	2		
12:44	FA98679-3	2	X	(a)
12:48	MP41211-D2	2	X	
12:52	MP41211-SD2	10	X	
12:55	MP41211-S3	2	X	
12:59	MP41211-S4	2	X	
13:03	MP41211-PS1	2		
13:07	ZZZZZZ	2		
13:11	MA18915-CCV11	1		
13:14	MA18915-CCV12	1	X	
13:18	MA18915-CCB6	1	X	
13:22	ZZZZZZ	2		
13:26	ZZZZZZ	2		
13:29	ZZZZZZ	2		
13:33	ZZZZZZ	2		
13:37	ZZZZZZ	2		
13:41	ZZZZZZ	2		
13:45	ZZZZZZ	2		
13:48	ZZZZZZ	2		
13:52	ZZZZZZ	2		
13:56	ZZZZZZ	2		
14:00	MA18915-CCV13	1		
14:03	MA18915-CCV14	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Element: Dilution	As
14:07	MA18915-CCB7	1	X
14:11	ZZZZZZ	2	
14:15	ZZZZZZ	2	
14:19	ZZZZZZ	2	
14:22	ZZZZZZ	2	
14:26	FA98820-1	2	
14:30	FA98820-2	2	
14:34	MA18915-CCV15	1	
14:37	MA18915-CCV16	1	X
14:41	MA18915-CCB8	1	X

(a) Sample used for QC only; not part of login FA98820.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:22	MA18915-STD1	100	100	100	100	100	100	100
08:26	MA18915-STD2	95.2	92.6	92.6	92.4	92.9	92.5	92.4
08:30	MA18915-STD3	114.8	99.6	99.7	99.8	99.7	99.4	98.4
08:34	MA18915-STD4	105	101.1	100.9	100.1	100	100.5	99.7
08:38	MA18915-STD5	102.2	101.5	101.5	100.5	100	100.5	98.5
08:42	MA18915-STD6	117.7	100.8	100.3	100.5	98.5	100.1	96.6
08:46	MA18915-STD7	100.3	100.7	100.3	99.3	98.2	99.7	95.2
08:50	MA18915-HSTD1	107.6	100.9	100.7	100.3	99.5	100.5	97.2
08:54	MA18915-HSTD2	110	100.7	101.7	99.2	97.9	99.9	95.1
08:57	MA18915-ICV1	111.7	101.5	101.6	100.6	99	100.4	97.1
09:01	MA18915-ICB1	110.3	100	98.7	98.4	98	98.1	97.8
09:05	MA18915-CRIA1	113.1	100.5	99.1	98.2	98.7	98.4	97.5
09:09	MA18915-ICSA1	101.7	95.8	96.9	93.1	89.8	92.8	86
09:13	MA18915-ICSAB1	111.7	100.3	102.1	97.7	93.2	96.5	88.6
09:17	MA18915-CCV1	118.3	105.9	106.4	107.1	102.4	103.3	100.1
09:20	MA18915-CCV2	119.6	104.4	105.4	104.1	100.7	101.7	97.6
09:24	MA18915-CCB1	120.5	108	106.7	106.8	103	102.5	101.3
10:25	MA18915-CCV3	94.9	97.8	98	98.3	98.3	98.8	99.4
10:29	MA18915-CCV4	90.9	93.5	94.2	94.7	95	96.3	94.4
10:32	MA18915-CCB2	102.4	97.9	97.8	97.9	99	98.4	99.3
10:43	MA18915-CCV5	105.8	100.4	101	101.2	100.4	101.1	99.7
10:47	MA18915-CCV6	95.6	100.2	100.8	100.5	99.7	101.5	98.8
10:51	MA18915-CCB3	98.9	98.8	99.3	98.5	99.7	99.5	99.5
10:58	ZZZZZZ	98.8	98.5	97.3	97.1	97.1	96.6	96.3
11:02	ZZZZZZ	107	97.3	97.4	96	95.6	95.4	95.3
11:06	ZZZZZZ	103.1	97.7	96	97	96	96	95.3
11:10	ZZZZZZ	106.1	97.5	96.1	96.2	96.2	95.7	95.2
11:13	MP41201-B1	98.1	96.3	96.5	95.5	94.8	95.5	93
11:17	FA98739-26	98.2	100.2	98.7	99.5	100.9	99.6	105.2
11:21	MP41201-D1	96.1	98.6	99.2	98	99.7	99	104.9
11:25	MP41201-SD1	99.8	97.7	98	96.6	99	98.9	101
11:29	MP41201-S1	97.6	97.7	98	98	99.3	99.1	103.5
11:32	MA18915-CCV7	94.4	97.3	97	97.3	98.2	99.2	98.7

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
11:36	MA18915-CCV8	94	96.9	98	97	98.1	99.9	97.6
11:40	MA18915-CCB4	103.4	97.6	96.8	96.8	98.2	98.4	98.7
11:44	MP41201-S2	97.2	97.6	96.5	97.2	98.7	98.8	103.5
11:48	MP41201-PS1	98.2	97.4	97.3	97	99	98.6	103.9
11:51	ZZZZZZ	97.7	96.9	97.3	96.6	98.7	98.1	100.4
11:55	ZZZZZZ	91.7	96.4	97.4	96.6	98.3	98.2	100.1
11:59	MP41201-MB1	94.5	97.3	96.7	97.3	99.1	98.6	99.8
12:03	MP41211-MB1	95.2	90.7	90.1	90.3	90.7	91.3	92
12:06	MP41211-B1	95.9	90.9	91.3	90.8	90.2	92.1	89.3
12:10	FA98621-8	101.2	89.7	89.2	89.5	88.9	89.6	88.8
12:14	MP41211-D1	99.3	92.2	91.8	91.8	90.9	92.4	91.7
12:18	MP41211-SD1	96.2	98.1	96.9	97.2	97.5	97.3	97.7
12:21	MA18915-CCV9	96.9	97	97	97.7	97.6	98.3	97.2
12:25	MA18915-CCV10	95.4	96.1	96.3	95.9	95.7	96.8	95
12:29	MA18915-CCB5	93.2	96.4	95.7	95.6	96.3	96	96.8
12:33	MP41211-S1	90.1	88.9	88.4	88.5	87.1	88.9	86.2
12:37	MP41211-S2	94.9	88.6	87.9	88.1	87.4	89	86.4
12:40	MP41211-PS1	95.2	93.3	91.7	91.6	90.7	91.9	90.7
12:44	FA98679-3	92.6	92.2	91	90.5	91	91.7	90.6
12:48	MP41211-D2	90.5	85.9	85.6	85.5	84.8	85	84.5
12:52	MP41211-SD2	97.7	100.3	99.4	99.9	100.5	99.6	99.3
12:55	MP41211-S3	89.6	91.8	91.6	91.3	90	92.2	89.4
12:59	MP41211-S4	92.5	92.6	91.4	91.7	90.5	92.9	89.5
13:03	MP41211-PS1	97.9	94.9	94	93.6	91.8	93.5	91.8
13:07	ZZZZZZ	96.9	94.8	93.8	93.7	93.1	93.1	91.7
13:11	MA18915-CCV11	100.2	100.1	99	98.9	99.5	99.7	98.7
13:14	MA18915-CCV12	89.8	97.2	96.7	96.4	96.2	97	96
13:18	MA18915-CCB6	94.3	94.9	93.1	93.5	94.9	95	95.9
13:22	ZZZZZZ	89.9	90.5	89.8	89.4	89.9	90.4	90
13:26	ZZZZZZ	95	91.7	90.9	91.1	90.7	91.6	91.2
13:29	ZZZZZZ	98.5	93.3	92.7	92.2	91.6	92.2	91.3
13:33	ZZZZZZ	91	93.2	91.3	90.9	91.3	92.8	91.6
13:37	ZZZZZZ	92.5	92.6	91.7	91	91.9	92	91.7

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18915
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
13:41	ZZZZZZ	95.2	94	93.4	93	93.2	94.3	93.5
13:45	ZZZZZZ	105.9	92.8	92.4	91.9	91.7	93.3	92.7
13:48	ZZZZZZ	99.1	92.3	91.7	92	91.6	92.2	92.1
13:52	ZZZZZZ	96.1	92.2	91.1	90.9	91.1	91.9	92
13:56	ZZZZZZ	94	92.9	92.1	91.8	92.9	93.3	93
14:00	MA18915-CCV13	93.9	98.4	97.8	97.7	97.9	98.5	97.4
14:03	MA18915-CCV14	96.4	97.2	96.5	96.5	96.8	97.9	95.8
14:07	MA18915-CCB7	102.2	96.7	95.1	95	96.8	96.5	97.7
14:11	ZZZZZZ	97.2	90.4	89.3	89.3	90.8	91.2	91.2
14:15	ZZZZZZ	92.6	90.5	90.3	90.1	89.8	90.9	91.2
14:19	ZZZZZZ	98.5	89.8	88.7	88.2	89.5	90.7	90.5
14:22	ZZZZZZ	93.6	89.6	88.7	88.5	89	90.4	89.3
14:26	FA98820-1	97.8	88.1	88.1	86.5	85.7	89.4	88
14:30	FA98820-2	89	89.4	89.5	88.5	87.8	90.2	90
14:34	MA18915-CCV15	92.1	94.8	93.9	94.5	95.2	96.4	96
14:37	MA18915-CCV16	89.1	94.8	93.9	93.8	94	95.5	94.2
14:41	MA18915-CCB8	89.9	93.9	91.9	91.5	93.7	94.3	95.4

! = Outside limits.

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time: / Sample ID:			09:01 ICB1		09:24 CCB1		10:32 CCB2		10:51 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0140	<1.0	0.00941	<1.0	0.0190	<1.0	0.0229	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time: / Sample ID:			11:40 CCB4		12:29 CCB5		13:18 CCB6		14:07 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0177	<1.0	0.0216	<1.0	0.0286	<1.0	0.0224	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18915 Units: ug/l

Time:			14:41	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Aluminum	100	4.4	anr	
Antimony	1.0	.1	anr	
Arsenic	1.0	.1	0.0511	<1.0
Barium	1.0	.1	anr	
Beryllium	1.0	.1	anr	
Cadmium	1.0	.1	anr	
Calcium	100	7.2	anr	
Chromium	1.0	.1	anr	
Cobalt	1.0	.1	anr	
Copper	1.0	.1	anr	
Iron	100	7.9	anr	
Lead	1.0	.1	anr	
Magnesium	100	5.2	anr	
Manganese	1.0	.1	anr	
Molybdenum	1.0	.1		
Nickel	1.0	.1	anr	
Potassium	100	6.6	anr	
Selenium	1.0	.11	anr	
Silver	1.0	.1	anr	
Sodium	100	4.8	anr	
Strontium	1.0	.1		
Thallium	1.0	.1	anr	
Tin	1.0	.1		
Titanium	1.0	.3		
Vanadium	1.0	.1	anr	
Zinc	2.0	.29	anr	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		08:57			09:17			09:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	95.1	95.1				100	98.5	98.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		10:25			10:29			10:43	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	105	105.0			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		10:47			11:32			11:36	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	97.8	97.8				100	97.5	97.5
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		12:21			12:25				13:11		
Sample ID:	CCV	CCV9			CCV	CCV10			CCV	CCV11	
Metal	True	Results	% Rec		True	Results	% Rec		True	Results	% Rec
Aluminum											
Antimony											
Arsenic					100	100	100.0				
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Molybdenum											
Nickel											
Potassium											
Selenium											
Silver	anr										
Sodium											
Strontium											
Thallium											
Tin											
Titanium											
Vanadium											
Zinc											

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		13:14			14:00			14:03	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	98.1	98.1				100	98.6	98.6
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		14:34			14:37	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	98.6	98.6
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18915 Units: ug/l

Time:		08:50			08:54	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	193	96.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18915 Units: ug/l

Time:			09:05	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.978	97.8
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091522M1.CSV Date Analyzed: 09/15/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18915 Units: ug/l

Time:			09:09		09:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	93600	93.6	95400	95.4
Antimony			0.0683		0.113	
Arsenic		20	0.115		18.7	93.5
Barium			0.323		0.380	
Beryllium			0.00443		0.0290	
Cadmium		20	0.666		19.2	96.0
Calcium	100000	100000	93800	93.8	99200	99.2
Chromium		20	2.11*(a)		21.1	105.5
Cobalt		20	0.214		19.1	95.5
Copper		20	-0.483		18.1	90.5
Iron	100000	100000	95000	95.0	97500	97.5
Lead			0.191		0.120	
Magnesium	100000	100000	96200	96.2	99200	99.2
Manganese		20	1.07*(a)		19.8	99.0
Molybdenum	2000	2000	2000	100.0	2080	104.0
Nickel		20	0.212		18.7	93.5
Potassium	100000	100000	96900	96.9	101000	101.0
Selenium			0.272		0.299	
Silver		20	0.336		18.0	90.0
Sodium	100000	100000	97900	97.9	102000	102.0
Strontium			1.10*		1.18*	
Thallium			0.0129		0.00933	
Tin			0.0927		0.0734	
Titanium	2000	2000	1980	99.0	2050	102.5
Vanadium			0.0792		0.0611	
Zinc		20	0.399		20.7	103.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:48	MA18924-STD1	1		STDA
08:52	MA18924-STD2	1		STDB
08:56	MA18924-STD3	1		STDC
09:00	MA18924-STD4	1		STDD
09:04	MA18924-STD5	1		STDE
09:08	MA18924-STD6	1		STDF
09:12	MA18924-STD7	1		STDG
09:16	MA18924-HSTD1	1		
09:19	MA18924-HSTD2	1		
09:23	MA18924-ICV1	1		
09:27	MA18924-ICB1	1		
09:31	MA18924-CRIA1	1		
09:34	MA18924-ICSA1	1		
09:38	MA18924-ICSAB1	1		
09:42	MA18924-CCV1	1		
09:46	MA18924-CCV2	1		
09:50	MA18924-CCB1	1		
09:54	FA98820-1	50		
09:57	FA98820-2	50		
---------->	Last reportable sample/prep for job FA98820			
10:01	MP41217-MB1	5		
10:05	MP41217-B1	5		
10:09	FA98760-8	25		(sample used for QC only; not part of login FA98820)
10:12	MP41217-D1	25		
10:16	MP41217-SD1	125		
10:20	MP41217-S1	25		
10:24	MP41217-S2	25		
10:28	MP41217-PS1	25		
10:31	MA18924-CCV3	1		
10:35	MA18924-CCV4	1		
10:39	MA18924-CCB2	1		
---------->	Last reportable CCB for job FA98820			
10:43	ZZZZZZ	25		
10:47	ZZZZZZ	25		
10:50	ZZZZZZ	25		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:54	ZZZZZZ	25		
10:58	ZZZZZZ	25		
11:02	ZZZZZZ	25		
11:05	ZZZZZZ	25		
11:09	ZZZZZZ	25		
11:13	ZZZZZZ	25		
11:17	ZZZZZZ	25		
11:21	MA18924-CCV5	1		
11:24	MA18924-CCV6	1		
11:28	MA18924-CCB3	1		
11:32	ZZZZZZ	25		
11:36	ZZZZZZ	25		
11:40	ZZZZZZ	25		
11:43	ZZZZZZ	25		
11:47	ZZZZZZ	25		
11:51	ZZZZZZ	25		
11:55	ZZZZZZ	25		
11:58	ZZZZZZ	25		
12:02	ZZZZZZ	25		
12:06	MA18924-CCV7	1		
12:10	MA18924-CCV8	1		
12:14	MA18924-CCB4	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Element: Dilution	As	
09:16	MA18924-HSTD1	1		
09:19	MA18924-HSTD2	1	X	
09:23	MA18924-ICV1	1	X	
09:27	MA18924-ICB1	1	X	
09:31	MA18924-CRIA1	1	X	
09:34	MA18924-ICSA1	1	X	
09:38	MA18924-ICSAB1	1	X	
09:42	MA18924-CCV1	1		
09:46	MA18924-CCV2	1	X	
09:50	MA18924-CCB1	1	X	
09:54	FA98820-1	50	X	
09:57	FA98820-2	50	X	
10:01	MP41217-MB1	5	X	
10:05	MP41217-B1	5	X	
10:09	FA98760-8	25	X	(a)
10:12	MP41217-D1	25	X	
10:16	MP41217-SD1	125	X	
10:20	MP41217-S1	25	X	
10:24	MP41217-S2	25	X	
10:28	MP41217-PS1	25		
10:31	MA18924-CCV3	1		
10:35	MA18924-CCV4	1	X	
10:39	MA18924-CCB2	1	X	
10:43	ZZZZZZ	25		
10:47	ZZZZZZ	25		
10:50	ZZZZZZ	25		
10:54	ZZZZZZ	25		
10:58	ZZZZZZ	25		
11:02	ZZZZZZ	25		
11:05	ZZZZZZ	25		
11:09	ZZZZZZ	25		
11:13	ZZZZZZ	25		
11:17	ZZZZZZ	25		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Element: Dilution	As
11:21	MA18924-CCV5	1	
11:24	MA18924-CCV6	1	X
11:28	MA18924-CCB3	1	X
11:32	ZZZZZZ	25	
11:36	ZZZZZZ	25	
11:40	ZZZZZZ	25	
11:43	ZZZZZZ	25	
11:47	ZZZZZZ	25	
11:51	ZZZZZZ	25	
11:55	ZZZZZZ	25	
11:58	ZZZZZZ	25	
12:02	ZZZZZZ	25	
12:06	MA18924-CCV7	1	
12:10	MA18924-CCV8	1	X
12:14	MA18924-CCB4	1	X

(a) Sample used for QC only; not part of login FA98820.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:48	MA18924-STD1	100	100	100	100	100	100	100
08:52	MA18924-STD2	91.1	100.1	99.6	99.3	99.7	100.3	99.8
08:56	MA18924-STD3	98.9	100.4	99.9	99.3	99.4	100.3	99.8
09:00	MA18924-STD4	101.1	100.3	100.3	100.8	99.7	100.5	100.2
09:04	MA18924-STD5	106.3	99.8	100.1	99.4	98.7	100.6	98
09:08	MA18924-STD6	99.8	99.6	99.1	98.4	97.4	100.2	96.2
09:12	MA18924-STD7	91.8	98.1	96.7	96.6	95.3	98.2	94.2
09:16	MA18924-HSTD1	102.5	98.1	97.2	96.8	95.7	98.3	95.3
09:19	MA18924-HSTD2	91.3	96.6	96	95.7	94.3	97.3	92.7
09:23	MA18924-ICV1	105.4	96.8	96.2	95.9	94.4	97.1	93.7
09:27	MA18924-ICB1	101.7	95.2	94.1	93.9	93.2	94.8	94
09:31	MA18924-CRIA1	94.6	95.4	93.3	93.2	94.4	94.8	94
09:34	MA18924-ICSA1	87.2	91.7	91.5	88.1	85.5	89.9	83.2
09:38	MA18924-ICSAB1	95	92.6	93	89.8	86.6	90.9	84.1
09:42	MA18924-CCV1	101.2	97.5	98	97.7	95.7	97	94.8
09:46	MA18924-CCV2	93.6	97.6	97.3	97.3	93.9	96.3	92.8
09:50	MA18924-CCB1	101.3	91.4	90.8	91.1	88.6	88.5	88
09:54	FA98820-1	101.7	98.2	97.3	97.6	94	94.5	94
09:57	FA98820-2	99.3	98	96.4	96.2	94	93.6	93.4
10:01	MP41217-MB1	101.7	96.7	95.7	95.7	91.2	91.6	90.4
10:05	MP41217-B1	101	97.2	96.3	95.4	90.4	92.3	87.4
10:09	FA98760-8	98.9	100.7	97.7	98.2	93.6	94.1	91.5
10:12	MP41217-D1	101	100.4	97.3	97.5	94.3	94.4	91.1
10:16	MP41217-SD1	107.2	101.2	99.2	98.9	95.6	94.8	94.1
10:20	MP41217-S1	101.3	101.8	97.3	97.3	93.3	94.4	91.6
10:24	MP41217-S2	103.8	100.7	96.4	96	92	93.9	90
10:28	MP41217-PS1	104.7	100.1	97.1	97.1	93.7	94.4	91.3
10:31	MA18924-CCV3	101.2	98.8	96.9	96.1	92.4	93.7	91.5
10:35	MA18924-CCV4	97.7	97.7	96	95	91.2	93.1	89.6
10:39	MA18924-CCB2	101.5	96.4	93.9	93.9	91.6	91.4	90.4
10:43	ZZZZZZ	108.3	97.3	95.1	94.7	91.9	91.7	90.8
10:47	ZZZZZZ	109.6	98.4	95.9	95.9	92.6	92.7	92.2
10:50	ZZZZZZ	102.9	99.2	96.5	95.8	92.2	93.2	91.1

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
Analyst: DM Run ID: MA18924
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:54	ZZZZZZ	99.5	99	95.8	96.5	92.8	93.9	91.5
10:58	ZZZZZZ	98	98.4	95.6	94.8	91.8	93.1	90.7
11:02	ZZZZZZ	102.6	97.3	94.8	95	91.6	92.5	92.1
11:05	ZZZZZZ	97.6	97.9	94.6	94.2	91.6	93.2	91.1
11:09	ZZZZZZ	106.2	97.5	94.6	94.3	90.9	92.2	90.6
11:13	ZZZZZZ	110.5	97.2	94.3	94.4	91.1	92.1	91.2
11:17	ZZZZZZ	98.4	97.1	93.6	94.2	90.9	92.3	90.4
11:21	MA18924-CCV5	101.7	96.5	94.7	94.8	91.5	92.3	89.9
11:24	MA18924-CCV6	99.8	95.3	92.9	93.8	89.3	90.9	87.4
11:28	MA18924-CCB3	98.9	95.6	94.4	93.7	91.5	91.4	90.1
11:32	ZZZZZZ	103.3	97.4	94.5	93.9	91	91.9	91.2
11:36	ZZZZZZ	103.8	97.2	94	94	90.4	92.2	90
11:40	ZZZZZZ	102.9	95.8	92.7	92.8	90	91.3	89.1
11:43	ZZZZZZ	96.5	96	92.1	92.1	88.9	90.3	88.5
11:47	ZZZZZZ	99.7	95.5	91.6	91.6	88.7	90.2	87
11:51	ZZZZZZ	97.2	94.5	90.6	90.5	88.1	89.5	86.7
11:55	ZZZZZZ	102	93.6	90.1	90.5	87.9	88.7	87.1
11:58	ZZZZZZ	100.2	101.3	91.7	90.5	87.5	89.2	87.3
12:02	ZZZZZZ	103.5	101.7	92.5	91.7	87.7	89.9	87.8
12:06	MA18924-CCV7	96.6	95.4	92.9	92.6	89.4	90.3	88
12:10	MA18924-CCV8	100	95.3	92.7	92.7	89.1	90.8	87.4
12:14	MA18924-CCB4	108.9	94.4	92	91.5	88.9	88.9	88.5

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18924 Units: ug/l

Time: / Sample ID:			09:27 ICB1		09:50 CCB1		10:39 CCB2	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr					
Antimony	1.0	.1	anr					
Arsenic	1.0	.1	0.0310	<1.0	0.0316	<1.0	0.0299	<1.0
Barium	1.0	.1	anr					
Beryllium	1.0	.1	anr					
Cadmium	1.0	.1	anr					
Calcium	100	7.2	anr					
Chromium	1.0	.1	anr					
Cobalt	1.0	.1	anr					
Copper	1.0	.1	anr					
Iron	100	7.9	anr					
Lead	1.0	.1	anr					
Magnesium	100	5.2	anr					
Manganese	1.0	.1	anr					
Molybdenum	1.0	.1						
Nickel	1.0	.1	anr					
Potassium	100	6.6	anr					
Selenium	1.0	.11	anr					
Silver	1.0	.1	anr					
Sodium	100	4.8	anr					
Strontium	1.0	.1						
Thallium	1.0	.1	anr					
Tin	1.0	.1						
Titanium	1.0	.3						
Vanadium	1.0	.1	anr					
Zinc	2.0	.29	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18924 Units: ug/l

Time:		09:23			09:42			09:46	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	96.3	96.3				100	100	100.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18924 Units: ug/l

Time:		10:31			10:35	
Sample ID:	CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	99.6	99.6
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18924 Units: ug/l

Time:		09:16			09:19	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	196	98.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18924 Units: ug/l

Time:			09:31	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	1.03	103.0
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA091922M1.CSV Date Analyzed: 09/19/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18924 Units: ug/l

Time:			09:34		09:38	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	94400	94.4	97600	97.6
Antimony			0.0702		0.0732	
Arsenic		20	0.113		18.8	94.0
Barium			0.317		0.367	
Beryllium			0.00501		0.000470	
Cadmium		20	0.672		19.5	97.5
Calcium	100000	100000	91600	91.6	95500	95.5
Chromium		20	2.28*(a)		21.4	107.0
Cobalt		20	0.209		19.4	97.0
Copper		20	-1.61		17.2	86.0
Iron	100000	100000	96000	96.0	99900	99.9
Lead			0.211		0.133	
Magnesium	100000	100000	96500	96.5	101000	101.0
Manganese		20	1.04*(a)		20.1	100.5
Molybdenum	2000	2000	2020	101.0	2120	106.0
Nickel		20	0.223		18.9	94.5
Potassium	100000	100000	97200	97.2	102000	102.0
Selenium			0.343		0.252	
Silver		20	0.317		18.4	92.0
Sodium	100000	100000	91500	91.5	97500	97.5
Strontium			1.06*		1.18*	
Thallium			0.0104		0.00777	
Tin			0.104		0.0700	
Titanium	2000	2000	1980	99.0	2070	103.5
Vanadium			0.0751		0.0627	
Zinc		20	0.165		20.8	104.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:10	MA18931-STD1	1		STDA
10:15	MA18931-STD2	1		STDB
10:19	MA18931-STD3	1		STDC
10:23	MA18931-STD4	1		STDD
10:26	MA18931-STD5	1		STDE
10:30	MA18931-STD6	1		STDF
10:35	MA18931-STD7	1		STDG
10:41	MA18931-HSTD1	1		
10:47	MA18931-ICV1	1		
10:54	MA18931-ICB1	1		
10:58	MA18931-CRIA1	1		
11:05	MA18931-ICSA1	1		
11:15	MA18931-ICSAB1	1		
11:21	MA18931-CCV1	1		
11:27	MA18931-CCB1	1		
11:31	MP41231-MB1	1		
11:36	MP41231-B1	1		
11:41	MP41228-B1	1		
11:45	FA98986-4	1		(sample used for QC only; not part of login FA98820)
11:50	MP41231-D1	1		
11:55	MP41231-SD1	5		
12:00	MP41231-PS1	1		
12:04	MP41231-S1	1		
12:09	MP41231-S2	1		
12:13	ZZZZZZ	1		
12:18	MA18931-CCV2	1		
12:23	MA18931-CCB2	1		
14:18	MA18931-ICV2	1		
14:25	MA18931-CCV3	1		
14:35	MA18931-CCB3	1		
14:45	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:54	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:59	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:13	ZZZZZZ	5		
15:18	ZZZZZZ	1		
15:22	ZZZZZZ	5		
15:27	ZZZZZZ	5		
15:32	MA18931-CCV4	1		
15:36	MA18931-CCB4	1		
15:41	ZZZZZZ	5		
15:46	ZZZZZZ	5		
15:51	ZZZZZZ	5		
15:55	ZZZZZZ	5		
16:00	ZZZZZZ	5		
16:05	ZZZZZZ	5		
16:10	ZZZZZZ	5		
16:14	MP41228-MB1	1		
16:19	FA98999-1	1		(sample used for QC only; not part of login FA98820)
16:24	MP41228-D1	1		
16:29	MA18931-CCV5	1		
16:34	MA18931-CCB5	1		
16:38	MP41228-SD1	5		
16:43	MP41228-PS1	1		
16:48	MP41228-S1	1		
16:53	MP41228-S2	1		
16:57	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:22	ZZZZZZ	1		
17:26	MA18931-CCV6	1		
17:31	MA18931-CCB6	1		
17:36	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:41	ZZZZZZ	5		
17:46	ZZZZZZ	5		
17:51	ZZZZZZ	1		
17:56	FA98820-1A	1		
18:00	FA98820-2A	1		
---------->	Last reportable sample/prep for job FA98820			
18:05	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:15	ZZZZZZ	1		
18:20	ZZZZZZ	1		
18:25	MA18931-CCV7	1		
18:29	MA18931-CCB7	1		
---------->	Last reportable CCB for job FA98820			
18:34	ZZZZZZ	1		
18:39	MA18931-HSTD2	1		
18:44	MA18931-CCV8	1		
18:48	MA18931-CCB8	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Element: Dilution	Fe	Mn	
10:41	MA18931-HSTD1	1	X	X	
10:47	MA18931-ICV1	1	X	X	
10:54	MA18931-ICB1	1	X	X	
10:58	MA18931-CRIA1	1	X	X	
11:05	MA18931-ICSA1	1	X	X	
11:15	MA18931-ICSAB1	1	X	X	
11:21	MA18931-CCV1	1	X	X	
11:27	MA18931-CCB1	1	X	X	
11:31	MP41231-MB1	1			
11:36	MP41231-B1	1			
11:41	MP41228-B1	1	X	X	
11:45	FA98986-4	1			(a)
11:50	MP41231-D1	1			
11:55	MP41231-SD1	5			
12:00	MP41231-PS1	1			
12:04	MP41231-S1	1			
12:09	MP41231-S2	1			
12:13	ZZZZZZ	1			
12:18	MA18931-CCV2	1	X	X	
12:23	MA18931-CCB2	1	X	X	
14:18	MA18931-ICV2	1	X	X	
14:25	MA18931-CCV3	1	X	X	
14:35	MA18931-CCB3	1	X	X	
14:45	ZZZZZZ	1			
14:49	ZZZZZZ	1			
14:54	ZZZZZZ	1			
14:59	ZZZZZZ	1			
15:03	ZZZZZZ	1			
15:08	ZZZZZZ	1			
15:13	ZZZZZZ	5			
15:18	ZZZZZZ	1			
15:22	ZZZZZZ	5			
15:27	ZZZZZZ	5			
		Element:	Fe	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Element: Dilution	Fe	Mn	
15:32	MA18931-CCV4	1	X	X	
15:36	MA18931-CCB4	1	X	X	
15:41	ZZZZZZ	5			
15:46	ZZZZZZ	5			
15:51	ZZZZZZ	5			
15:55	ZZZZZZ	5			
16:00	ZZZZZZ	5			
16:05	ZZZZZZ	5			
16:10	ZZZZZZ	5			
16:14	MP41228-MB1	1	X	X	
16:19	FA98999-1	1	X		(a)
16:24	MP41228-D1	1	X	X	
16:29	MA18931-CCV5	1	X	X	
16:34	MA18931-CCB5	1	X	X	
16:38	MP41228-SD1	5	X	X	
16:43	MP41228-PS1	1	X	X	
16:48	MP41228-S1	1	X	X	
16:53	MP41228-S2	1	X	X	
16:57	ZZZZZZ	1			
17:02	ZZZZZZ	1			
17:07	ZZZZZZ	1			
17:12	ZZZZZZ	1			
17:22	ZZZZZZ	1			
17:26	MA18931-CCV6	1	X	X	
17:31	MA18931-CCB6	1	X	X	
17:36	ZZZZZZ	1			
17:41	ZZZZZZ	5			
17:46	ZZZZZZ	5			
17:51	ZZZZZZ	1			
17:56	FA98820-1A	1	X	X	
18:00	FA98820-2A	1	X	X	
18:05	ZZZZZZ	1			
18:10	ZZZZZZ	1			
		Element:	Fe	Mn	

REPORTED ELEMENTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Element: Dilution	F e	M n
18:15	ZZZZZZ	1		
18:20	ZZZZZZ	1		
18:25	MA18931-CCV7	1	X	X
18:29	MA18931-CCB7	1	X	X
18:34	ZZZZZZ	1		
18:39	MA18931-HSTD2	1		
18:44	MA18931-CCV8	1	X	X
18:48	MA18931-CCB8	1	X	X

(a) Sample used for QC only; not part of login FA98820.

Element:	F e	M n

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:10	MA18931-STD1	2905	20657	4416	959
10:15	MA18931-STD2	2871	20588	4359	933
10:19	MA18931-STD3	2882	20657	4450	941
10:23	MA18931-STD4	2864	20479	4457	929
10:26	MA18931-STD5	2823	20373	4427	904
10:30	MA18931-STD6	2746	20190	4402	873
10:35	MA18931-STD7	2630	19869	4377	830
10:41	MA18931-HSTD1	2650	19906	4377	832
10:47	MA18931-ICV1	2777	20281	4424	878
10:54	MA18931-ICB1	2910 R	20832 R	4473 R	960 R
10:58	MA18931-CRIA1	2871	20575	4441	934
11:05	MA18931-ICSA1	2524	18637	4255	785
11:15	MA18931-ICSAB1	2556	18734	4305	774
11:21	MA18931-CCV1	2760	20285	4385	872
11:27	MA18931-CCB1	2916	20786	4474	957
11:31	MP41231-MB1	2846	20269	4471	929
11:36	MP41231-B1	2763	20081	4419	880
11:41	MP41228-B1	2826	20571	4455	901
11:45	FA98986-4	3080	22005	4855	896
11:50	MP41231-D1	3024	21722	4779	898
11:55	MP41231-SD1	2959	21180	4570	945
12:00	MP41231-PS1	3065	21794	4869	884
12:04	MP41231-S1	3040	21902	4823	862
12:09	MP41231-S2	2974	21370	4765	855
12:13	ZZZZZZ	3025	21650	4841	908
12:18	MA18931-CCV2	2811	20616	4536	895
12:23	MA18931-CCB2	2923	20992	4530	973
14:18	MA18931-ICV2	2724	19735	4336	898
14:25	MA18931-CCV3	2731	19860	4309	901
14:35	MA18931-CCB3	2858	20028	4391	986
14:45	ZZZZZZ	2960	20806	4650	940
14:49	ZZZZZZ	2914	20489	4556	951
14:54	ZZZZZZ	3048	21363	4803	941

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:59	ZZZZZZ	2965	20910	4706	951
15:03	ZZZZZZ	3132	21999	4986	944
15:08	ZZZZZZ	3158	22283	5000	962
15:13	ZZZZZZ	3192	23202	5108	956
15:18	ZZZZZZ	3390	24084	5351	957
15:22	ZZZZZZ	3064	21932	4817	999
15:27	ZZZZZZ	3077	21929	4777	1004
15:32	MA18931-CCV4	2787	20464	4555	926
15:36	MA18931-CCB4	2892	20498	4494	1008
15:41	ZZZZZZ	3057	21754	4794	991
15:46	ZZZZZZ	2999	21290	4685	997
15:51	ZZZZZZ	3043	21699	4744	994
15:55	ZZZZZZ	3065	21891	4780	1007
16:00	ZZZZZZ	3019	21620	4686	1004
16:05	ZZZZZZ	3090	22197	4834	999
16:10	ZZZZZZ	2995	21478	4704	1008
16:14	MP41228-MB1	2925	20922	4571	1013
16:19	FA98999-1	2890	20935	4568	1003
16:24	MP41228-D1	2908	20768	4549	1003
16:29	MA18931-CCV5	2767	20317	4428	925
16:34	MA18931-CCB5	2894	20718	4491	1011
16:38	MP41228-SD1	2922	20757	4513	1013
16:43	MP41228-PS1	2861	20452	4507	977
16:48	MP41228-S1	2804	20351	4490	939
16:53	MP41228-S2	2828	20495	4495	945
16:57	ZZZZZZ	2786	20336	4453	929
17:02	ZZZZZZ	2830	20652	4517	968
17:07	ZZZZZZ	2784	20190	4395	942
17:12	ZZZZZZ	2768	20157	4444	936
17:22	ZZZZZZ	2781	20250	4387	929
17:26	MA18931-CCV6	2771	20283	4370	922
17:31	MA18931-CCB6	2920	20756	4421	1012
17:36	ZZZZZZ	2907	20812	4473	997

INTERNAL STANDARD SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
Analyst: LM Run ID: MA18931
Parameters: Fe,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:41	ZZZZZZ	2786	20039	4432	908
17:46	ZZZZZZ	2805	20217	4453	920
17:51	ZZZZZZ	2861	20574	4445	972
17:56	FA98820-1A	2849	20594	4461	972
18:00	FA98820-2A	2894	20684	4484	993
18:05	ZZZZZZ	2838	20433	4464	905
18:10	ZZZZZZ	2847	20647	4435	957
18:15	ZZZZZZ	2870	20791	4495	976
18:20	ZZZZZZ	2912	20822	4525	938
18:25	MA18931-CCV7	2777	20238	4317	920
18:29	MA18931-CCB7	2944	20869	4403	1006
18:34	ZZZZZZ	2916	20956	4498	1002
18:39	MA18931-HSTD2	2662	19915	4263	877
18:44	MA18931-CCV8	2782	20325	4311	919
18:48	MA18931-CCB8	2937	21031	4362	1004

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18931 Units: ug/l

Time: / Sample ID:			10:54 ICB1		11:27 CCB1		12:23 CCB2		14:35 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	anr							
Beryllium	5.0	.1	anr							
Cadmium	4.0	.1	anr							
Calcium	5000	50								
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	-0.400	<300	0.00	<300	5.30	<300	0.400	<300
Lead	20	1	anr							
Magnesium	5000	35	anr							
Manganese	15	.25	0.100	<15	0.00	<15	0.100	<15	0.00	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100								
Selenium	20	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: result < RL Run ID: MA18931 Units: ug/l

Time: / Sample ID:			15:36 CCB4		16:34 CCB5		17:31 CCB6		18:29 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	anr							
Beryllium	5.0	.1	anr							
Cadmium	4.0	.1	anr							
Calcium	5000	50								
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	4.80	<300	4.00	<300	3.90	<300	2.00	<300
Lead	20	1	anr							
Magnesium	5000	35	anr							
Manganese	15	.25	0.100	<15	0.100	<15	0.100	<15	0.100	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100								
Selenium	20	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		10:47			11:21			12:18	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39800	99.5	40000	40600	101.5	40000	40500	101.3
Lead	anr								
Magnesium	anr								
Manganese	2000	2090	104.5	2000	2050	102.5	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		14:18			14:25			15:32	
Sample ID:	ICV	ICV2		CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39700	99.3	40000	40500	101.3	40000	40500	101.3
Lead	anr								
Magnesium	anr								
Manganese	2000	2070	103.5	2000	2020	101.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA18931 Units: ug/l

Time:		16:29			17:26			18:25	
Sample ID:	CCV	CCV5		CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40500	101.3	40000	40700	101.8	40000	40800	102.0
Lead	anr								
Magnesium	anr								
Manganese	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA18931 Units: ug/l

Time:		10:41	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum			
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium			
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	80000	78800	98.5
Lead	anr		
Magnesium	anr		
Manganese	4000	3930	98.3
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA18931 Units: ug/l

Time:			10:58	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	400	200		
Antimony	10	5.0	anr	
Arsenic	20	10	anr	
Barium	400	200	anr	
Beryllium	10	5.0	anr	
Cadmium	10	5.0	anr	
Calcium	2000	1000		
Chromium	20	10	anr	
Cobalt	100	50	anr	
Copper	50	25	anr	
Iron	600	300	329	109.7
Lead	10	5.0	anr	
Magnesium	10000	5000	anr	
Manganese	30	15	16.2	108.0
Molybdenum	100	50	anr	
Nickel	80	40	anr	
Potassium	20000	10000		
Selenium	20	10	anr	
Silver	20	10	anr	
Sodium	20000	10000	anr	
Strontium	20	10		
Thallium	20	10	anr	
Tin	100	50		
Titanium	20	10		
Vanadium	100	50	anr	
Zinc	40	20	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB092122M1.ICP Date Analyzed: 09/21/22 Methods: SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA18931 Units: ug/l

Time:			11:05		11:15	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	513000	102.6	514000	102.8
Antimony		1000	1.90		942	94.2
Arsenic		1000	0.00		915	91.5
Barium		500	0.100		500	100.0
Beryllium		500	-0.100		497	99.4
Cadmium		1000	0.00		956	95.6
Calcium	500000	500000	456000	91.2	465000	93.0
Chromium		500	-0.400		486	97.2
Cobalt		500	0.00		476	95.2
Copper		500	1.80		560	112.0
Iron	200000	200000	471000	94.2	190000	95.0
Lead		1000	0.00		990	99.0
Magnesium	500000	500000	520000	104.0	521000	104.2
Manganese		500	-0.700		512	102.4
Molybdenum		1000	0.200		858	85.8
Nickel		1000	0.00		905	90.5
Potassium			197		-14.8	
Selenium		1000	0.00		883	88.3
Silver		1000	-0.600		993	99.3
Sodium			292		282	
Strontium		1000	0.300		931	93.1
Thallium		1000	0.00		860	86.0
Tin		1000	0.300		887	88.7
Titanium		1000	-0.400		988	98.8
Vanadium		500	-0.700		510	102.0
Zinc		1000	2.50		920	92.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.20	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22 09/14/22

Metal	FA98621-8 Original	DUP	RPD	QC Limits	FA98621-8 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	1.4	1.2	15.4	0-20	1.4	229	200	113.8	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	FA98621-8 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	1.4	230	200	114.3	0.4	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	234	200	117.0	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date:	09/14/22				09/14/22			
Metal	FA98621-8 Original	SDL 2:10	%DIF	QC Limits	FA98679-3 Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	1.36	0.00	100.0(a)	0-10	0.601	0.00	100.0(a)	0-10
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium	anr							
Manganese	anr							
Molybdenum								
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Strontium								
Thallium	anr							
Tin								
Titanium								
Vanadium	anr							
Zinc	anr							

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41211
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 09/14/22

Metal	Sample ml	Final ml	FA98621-8 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41211: FA98820-1, FA98820-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	.5	1		
Beryllium	4.0	.1	.2		
Cadmium	5.0	.1	.2		
Calcium	1000	50	50		
Chromium	10	.5	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	15	17	100	<300
Lead	5.0	1	1.1		
Magnesium	5000	35	35		
Manganese	15	.25	1	0.10	<15
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	100	200		
Selenium	10	2	2.9		
Silver	10	.5	.7		
Sodium	10000	250	500		
Strontium	10	.25	.5		
Thallium	10	1	1.4		
Tin	50	.5	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22 09/20/22

Metal	FA98999-1 Original	DUP	RPD	QC Limits	FA98999-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	31.6	26.8	16.4	0-20	31.6	26500	26000	101.8	80-120
Lead	anr								
Magnesium	anr								
Manganese	41.5	41.2	0.7	0-20	41.5	547	500	101.1	80-120
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/20/22

Metal	FA98999-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	31.6	26500	26000	101.8	0.0	20
Lead	anr					
Magnesium	anr					
Manganese	41.5	549	500	101.5	0.4	20
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	26600	26000	102.3	80-120
Lead	anr			
Magnesium	anr			
Manganese	527	500	105.4	80-120
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	FA98999-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	31.6	0.00	100.0(a)	0-10
Lead	anr			
Magnesium	anr			
Manganese	41.5	40.5	2.4	0-10
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA98820
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41228
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 09/20/22

Metal	Sample ml	Final ml	FA98999-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	31.6	30.968	2980	0.2	150	3000	98.3	80-120
Lead										
Magnesium										
Manganese	9.8	10	41.5	40.67	91	0.2	2.5	50	100.7	80-120
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41228: FA98820-1A, FA98820-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18915,MA18924

Instrument Detection Limits

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 01/30/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA18931

Instrument Linear Ranges

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18915,MA18924

Instrument Linear Ranges

Job Number: FA98820
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 12/01/21

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA18931

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:14
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.035	ug/l	61.85	4,925.97	2.910E-02	Pulse	0.50	3
As			1	-0.004	ug/l	-67.65	59.33	3.505E-04	Pulse	1.00	3
Mo			1	0.043	ug/l	37.08	292.00	1.166E-03	Pulse	0.50	3
Pb			1	-0.002	ug/l	-32.08	672.02	2.412E-04	Pulse	1.00	3
Be			1	-0.002	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.010	ug/l	97.99	280.00	1.116E-03	Pulse	0.50	3
Ba			1	-0.002	ug/l	-49.28	24.67	1.611E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	37.99	156.00	5.601E-05	Pulse	0.50	3
Sn			1	0.042	ug/l	85.00	486.70	3.180E-04	Pulse	0.30	3
Sr			1	0.021	ug/l	40.90	570.01	3.723E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	1700.12	338.00	1.213E-04	Pulse	0.50	3
Ca			1	5.874	ug/l	32.88	1,992.78	6.879E-04	Pulse	0.50	3
Ti			1	0.031	ug/l	60.75	12.00	3.943E-05	Pulse	0.50	3
Na			1	0.212	ug/l	46.80	21,196.51	6.944E-02	Pulse	1.00	3
Mg			1	0.019	ug/l	551.42	632.68	2.072E-03	Pulse	1.00	3
K			1	0.723	ug/l	146.27	94,598.34	3.099E-01	Pulse	1.00	3
V			1	-0.007	ug/l	-55.68	930.03	3.047E-03	Pulse	0.50	3
Mn			1	-0.001	ug/l	-389.75	478.68	2.829E-03	Pulse	0.50	3
Fe			1	8.657	ug/l	64.50	105,732.02	6.237E-01	Pulse	0.50	3
Co			1	0.001	ug/l	241.11	99.33	5.878E-04	Pulse	0.50	3
Ni			1	-0.018	ug/l	-54.23	488.01	2.882E-03	Pulse	0.50	3
Cu			1	0.346	ug/l	18.22	19,870.91	1.174E-01	Pulse	0.50	3
Zn			1	-0.301	ug/l	-12.76	2,231.47	8.927E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-35.01	0.67	2.636E-06	Pulse	0.50	3
Al			1	0.264	ug/l	47.97	1,120.37	3.670E-03	Pulse	1.00	3
Se			1	0.027	ug/l	112.37	37.67	1.506E-04	Pulse	3.00	3
Sb			1	0.013	ug/l	23.91	168.67	6.742E-04	Pulse	1.00	3
Se			1	-0.052	ug/l	-39.36	41.00	1.641E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,786,497.00	0.30	100.0	Pulse	0.50	3
1	Sc		305,240.61	0.88	100.0	Pulse	0.30	3
1	Ge		169,236.41	0.71	100.0	Pulse	0.30	3
1	In		1,531,133.17	0.31	100.0	Pulse	0.30	3
1	Tb		3,806,093.83	0.44	100.0	Pulse	0.50	3
1	Lu		2,896,331.92	0.49	100.0	Pulse	0.50	3
1	Ge		249,935.93	1.05	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,294.49	3.91	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:18
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	144.69	4,589.22	2.684E-02	Pulse	0.50	3
As			1	-0.003	ug/l	-163.33	61.00	3.563E-04	Pulse	1.00	3
Mo			1	0.002	ug/l	154.66	69.33	2.750E-04	Pulse	0.50	3
Pb			1	-0.003	ug/l	-27.83	661.35	2.351E-04	Pulse	1.00	3
Be			1	0.000	ug/l	-52655.42	0.17	5.420E-07	Pulse	2.00	3
Ag			1	0.003	ug/l	181.73	155.33	6.161E-04	Pulse	0.50	3
Ba			1	-0.001	ug/l	-325.76	28.00	1.813E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	53.83	48.00	1.708E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	4308.24	244.45	1.582E-04	Pulse	0.30	3
Sr			1	-0.003	ug/l	-273.42	377.34	2.445E-04	Pulse	0.50	3
[Pb]			1	0.002	ug/l	56.25	366.01	1.301E-04	Pulse	0.50	3
Ca			1	-4.450	ug/l	-46.23	1,476.73	5.072E-04	Pulse	0.50	3
Ti			1	-0.002	ug/l	-176.09	1.33	4.336E-06	Pulse	0.50	3
Na			1	0.120	ug/l	747.35	21,160.20	6.883E-02	Pulse	1.00	3
Mg			1	-0.219	ug/l	-2.72	390.00	1.269E-03	Pulse	1.00	3
K			1	0.640	ug/l	51.27	95,198.51	3.097E-01	Pulse	1.00	3
V			1	-0.002	ug/l	-450.36	986.70	3.209E-03	Pulse	0.50	3
Mn			1	-0.012	ug/l	-54.69	404.01	2.364E-03	Pulse	0.50	3
Fe			1	0.196	ug/l	48.19	21,936.43	1.283E-01	Pulse	0.50	3
Co			1	0.000	ug/l	-2445.34	86.67	5.059E-04	Pulse	0.50	3
Ni			1	-0.017	ug/l	-12.61	497.34	2.908E-03	Pulse	0.50	3
Cu			1	0.133	ug/l	27.24	17,447.89	1.021E-01	Pulse	0.50	3
Zn			1	-0.330	ug/l	-5.48	2,184.13	8.673E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	-177.89	2.67	1.054E-05	Pulse	0.50	3
Al			1	-0.238	ug/l	-44.03	897.36	2.919E-03	Pulse	1.00	3
Se			1	0.006	ug/l	612.10	35.33	1.404E-04	Pulse	3.00	3
Sb			1	0.002	ug/l	73.32	83.67	3.323E-04	Pulse	1.00	3
Se			1	0.016	ug/l	427.96	45.22	1.795E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,740.92	0.69	100.0	Pulse	0.50	3
1	Sc		307,439.08	0.02	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		170,994.39	2.00	100.0	Pulse	0.30	3
1	In		1,543,787.34	0.50	100.0	Pulse	0.30	3
1	Tb		3,827,790.92	1.03	100.0	Pulse	0.50	3
1	Lu		2,911,850.92	0.50	100.0	Pulse	0.50	3
1	Ge		251,845.03	0.93	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,234.49	5.34	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:22
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,598.56	2.665E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	66.00	3.824E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	56.67	2.223E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	748.35	2.632E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.17	5.438E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	---	107.33	4.207E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	31.33	2.017E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	36.67	1.289E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	244.45	1.575E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	403.34	2.599E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	340.00	1.196E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	1,710.08	5.851E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.00	6.469E-06	Pulse	0.50	3
Na			1	0.000	ug/l	---	21,167.47	6.802E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	625.34	2.009E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	95,666.85	3.074E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,016.70	3.265E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	496.01	2.874E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	20,153.79	1.168E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	88.00	5.097E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	584.68	3.388E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	15,955.29	9.246E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,965.57	1.162E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.00	1.567E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,019.03	3.275E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	35.11	1.375E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	66.00	2.587E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	44.89	1.759E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,843,165.75	0.75	100.0	Pulse	0.50	3
1	Sc		311,213.33	1.37	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		172,554.23	0.26	100.0	Pulse	0.30	3
1	In		1,551,977.89	0.43	100.0	Pulse	0.30	3
1	Tb		3,857,807.67	0.35	100.0	Pulse	0.50	3
1	Lu		2,922,466.75	0.43	100.0	Pulse	0.50	3
1	Ge		255,204.45	0.81	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,144.48	7.93	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:26
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.539	ug/l	4.39	10,204.69	6.387E-02	Pulse	0.50	3
As			1	0.510	ug/l	3.95	793.35	4.966E-03	Pulse	1.00	3
Mo			1	0.508	ug/l	6.34	2,706.21	1.149E-02	Pulse	0.50	3
Pb			1	0.516	ug/l	3.31	12,662.36	4.824E-03	Pulse	1.00	3
Be			1	0.536	ug/l	17.63	40.17	1.395E-04	Pulse	2.00	3
Ag			1	0.506	ug/l	2.07	8,576.01	3.639E-02	Pulse	0.50	3
Ba			1	0.482	ug/l	1.10	1,208.71	8.380E-04	Pulse	0.50	3
Tl			1	0.504	ug/l	2.11	16,453.95	6.267E-03	Pulse	0.50	3
Sn			1	0.489	ug/l	2.42	2,930.25	2.031E-03	Pulse	0.30	3
Sr			1	0.502	ug/l	3.00	4,190.48	2.906E-03	Pulse	0.50	3
[Pb]			1	0.515	ug/l	4.43	6,009.75	2.289E-03	Pulse	0.50	3
Ca			1	49.981	ug/l	4.62	3,952.41	1.460E-03	Pulse	0.50	3
Ti			1	0.651	ug/l	16.16	204.00	7.081E-04	Pulse	0.50	3
Na			1	52.069	ug/l	3.38	120,408.20	4.182E-01	Pulse	1.00	3
Mg			1	52.673	ug/l	2.31	51,886.83	1.802E-01	Pulse	1.00	3
K			1	66.525	ug/l	6.25	154,703.12	5.373E-01	Pulse	1.00	3
V			1	0.481	ug/l	4.94	5,233.39	1.817E-02	Pulse	0.50	3
Mn			1	0.526	ug/l	5.83	3,966.42	2.484E-02	Pulse	0.50	3
Fe			1	53.499	ug/l	3.41	519,029.88	3.249E+00	Pulse	0.50	3
Co			1	0.511	ug/l	2.37	8,501.23	5.321E-02	Pulse	0.50	3
Ni			1	0.532	ug/l	0.94	2,900.23	1.815E-02	Pulse	0.50	3
Cu			1	0.588	ug/l	8.32	21,544.04	1.348E-01	Pulse	0.50	3
Zn			1	0.178	ug/l	13.90	3,114.93	1.321E-02	Pulse	1.00	3
Cd			1	0.509	ug/l	5.83	1,321.39	5.610E-03	Pulse	0.50	3
Al			1	54.605	ug/l	3.33	24,458.61	8.496E-02	Pulse	1.00	3
Se			1	0.517	ug/l	9.39	91.66	3.892E-04	Pulse	3.00	3
Sb			1	0.501	ug/l	3.18	3,871.75	1.643E-02	Pulse	1.00	3
Se			1	0.417	ug/l	20.01	64.00	2.715E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,626,588.42	2.90	92.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		288,041.83	2.71	92.6	Pulse	0.30	3
1	Ge		159,840.90	2.92	92.6	Pulse	0.30	3
1	In		1,442,530.29	2.94	92.9	Pulse	0.30	3
1	Tb		3,568,774.50	2.47	92.5	Pulse	0.50	3
1	Lu		2,707,513.67	2.66	92.6	Pulse	0.50	3
1	Ge		235,793.92	3.09	92.4	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,090.03	7.05	95.2	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:30
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.964	ug/l	2.92	16,041.96	9.327E-02	Pulse	0.50	3
As			1	0.952	ug/l	3.89	1,538.73	8.947E-03	Pulse	1.00	3
Mo			1	0.935	ug/l	5.15	5,342.78	2.098E-02	Pulse	0.50	3
Pb			1	0.961	ug/l	1.35	24,516.50	8.761E-03	Pulse	1.00	3
Be			1	0.994	ug/l	4.42	80.00	2.580E-04	Pulse	2.00	3
Ag			1	0.964	ug/l	1.55	17,550.97	6.890E-02	Pulse	0.50	3
Ba			1	0.922	ug/l	2.34	2,451.51	1.584E-03	Pulse	0.50	3
Tl			1	0.971	ug/l	0.87	33,732.45	1.205E-02	Pulse	0.50	3
Sn			1	0.944	ug/l	6.76	5,842.08	3.774E-03	Pulse	0.30	3
Sr			1	0.944	ug/l	3.65	8,107.76	5.238E-03	Pulse	0.50	3
[Pb]			1	0.962	ug/l	2.64	11,672.68	4.171E-03	Pulse	0.50	3
Ca			1	93.489	ug/l	2.12	6,449.08	2.221E-03	Pulse	0.50	3
Ti			1	1.048	ug/l	13.04	352.00	1.135E-03	Pulse	0.50	3
Na			1	99.712	ug/l	1.03	229,073.21	7.387E-01	Pulse	1.00	3
Mg			1	99.845	ug/l	0.44	105,375.25	3.398E-01	Pulse	1.00	3
K			1	105.421	ug/l	0.51	208,322.01	6.718E-01	Pulse	1.00	3
V			1	0.967	ug/l	2.13	10,309.41	3.324E-02	Pulse	0.50	3
Mn			1	1.024	ug/l	1.11	7,855.62	4.567E-02	Pulse	0.50	3
Fe			1	100.744	ug/l	0.97	1,034,566.50	6.015E+00	Pulse	0.50	3
Co			1	0.987	ug/l	0.91	17,608.69	1.024E-01	Pulse	0.50	3
Ni			1	1.132	ug/l	2.67	5,978.27	3.476E-02	Pulse	0.50	3
Cu			1	0.908	ug/l	1.27	27,159.08	1.579E-01	Pulse	0.50	3
Zn			1	0.803	ug/l	0.68	4,787.94	1.880E-02	Pulse	1.00	3
Cd			1	0.936	ug/l	2.46	2,625.53	1.031E-02	Pulse	0.50	3
Al			1	99.485	ug/l	0.36	47,168.40	1.521E-01	Pulse	1.00	3
Se			1	0.940	ug/l	6.84	151.56	5.951E-04	Pulse	3.00	3
Sb			1	0.958	ug/l	1.92	7,941.39	3.118E-02	Pulse	1.00	3
Se			1	0.791	ug/l	15.22	91.00	3.572E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,798,629.50	1.17	98.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		310,111.60	0.18	99.6	Pulse	0.30	3
1	Ge		171,994.86	1.07	99.7	Pulse	0.30	3
1	In		1,547,904.38	0.26	99.7	Pulse	0.30	3
1	Tb		3,833,489.83	0.87	99.4	Pulse	0.50	3
1	Lu		2,903,343.25	0.83	99.3	Pulse	0.50	3
1	Ge		254,711.01	0.67	99.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,313.39	11.50	114.8	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:34
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.928	ug/l	0.28	124,033.61	7.127E-01	Pulse	0.50	3
As			1	9.710	ug/l	0.80	15,262.43	8.770E-02	Pulse	1.00	3
Mo			1	9.711	ug/l	0.67	55,095.13	2.157E-01	Pulse	0.50	3
Pb			1	9.662	ug/l	0.75	242,958.53	8.573E-02	Pulse	1.00	3
Be			1	9.671	ug/l	4.55	788.02	2.505E-03	Pulse	2.00	3
Ag			1	9.854	ug/l	1.07	178,805.70	7.001E-01	Pulse	0.50	3
Ba			1	9.746	ug/l	1.77	25,706.90	1.656E-02	Pulse	0.50	3
Tl			1	9.991	ug/l	1.29	351,078.95	1.239E-01	Pulse	0.50	3
Sn			1	9.727	ug/l	0.68	58,132.71	3.744E-02	Pulse	0.30	3
Sr			1	9.814	ug/l	0.41	80,771.60	5.202E-02	Pulse	0.50	3
[Pb]			1	9.704	ug/l	0.79	116,110.67	4.097E-02	Pulse	0.50	3
Ca			1	982.518	ug/l	0.64	52,349.41	1.778E-02	Pulse	0.50	3
Ti			1	9.584	ug/l	3.77	3,248.95	1.033E-02	Pulse	0.50	3
Na			1	996.334	ug/l	0.22	2,129,131.25	6.769E+00	Pulse	1.00	3
Mg			1	1017.026	ug/l	0.76	1,082,817.91	3.443E+00	Pulse	1.00	3
K			1	1006.978	ug/l	0.53	1,191,250.50	3.788E+00	Pulse	1.00	3
V			1	9.752	ug/l	0.35	96,137.63	3.057E-01	Pulse	0.50	3
Mn			1	9.984	ug/l	0.69	73,085.73	4.200E-01	Pulse	0.50	3
Fe			1	996.674	ug/l	0.58	10,175,543.00	5.847E+01	Analog	0.50	3
Co			1	10.075	ug/l	0.33	181,067.91	1.040E+00	Pulse	0.50	3
Ni			1	10.133	ug/l	0.58	49,464.22	2.842E-01	Pulse	0.50	3
Cu			1	10.072	ug/l	0.75	142,472.22	8.187E-01	Pulse	0.50	3
Zn			1	9.384	ug/l	1.20	24,393.38	9.552E-02	Pulse	1.00	3
Cd			1	10.065	ug/l	1.66	28,260.86	1.107E-01	Pulse	0.50	3
Al			1	991.949	ug/l	0.87	467,752.30	1.487E+00	Pulse	1.00	3
Se			1	9.997	ug/l	4.80	1,277.82	5.004E-03	Pulse	3.00	3
Sb			1	9.827	ug/l	0.92	81,064.55	3.174E-01	Pulse	1.00	3
Se			1	9.369	ug/l	1.46	593.12	2.322E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,834,250.58	1.01	99.7	Pulse	0.50	3
1	Sc		314,523.23	0.24	101.1	Pulse	0.30	3
1	Ge		174,022.78	0.30	100.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,552,747.40	0.31	100.0	Pulse	0.30	3
1	Tb		3,878,694.17	0.43	100.5	Pulse	0.50	3
1	Lu		2,943,927.33	0.23	100.7	Pulse	0.50	3
1	Ge		255,392.65	0.66	100.1	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,202.27	12.49	105.0	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 8:38
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.331	ug/l	0.75	625,954.68	3.574E+00	Pulse	0.50	3
As			1	51.115	ug/l	0.41	80,568.84	4.600E-01	Pulse	1.00	3
Mo			1	50.871	ug/l	0.51	289,519.68	1.129E+00	Pulse	0.50	3
Pb			1	50.524	ug/l	0.69	1,252,441.08	4.472E-01	Pulse	1.00	3
Be			1	51.941	ug/l	1.34	4,249.45	1.345E-02	Pulse	2.00	3
Ag			1	51.167	ug/l	0.54	931,696.69	3.634E+00	Pulse	0.50	3
Ba			1	50.936	ug/l	0.49	134,114.22	8.645E-02	Pulse	0.50	3
Tl			1	52.240	ug/l	0.55	1,814,133.75	6.477E-01	Pulse	0.50	3
Sn			1	50.261	ug/l	0.31	299,111.90	1.928E-01	Pulse	0.30	3
Sr			1	50.494	ug/l	0.07	413,564.51	2.666E-01	Pulse	0.50	3
[Pb]			1	50.720	ug/l	0.72	598,325.58	2.136E-01	Pulse	0.50	3
Ca			1	5098.814	ug/l	0.89	265,537.54	8.983E-02	Pulse	0.50	3
Ti			1	51.091	ug/l	1.01	17,384.39	5.504E-02	Pulse	0.50	3
Na			1	5168.302	ug/l	0.05	11,001,920.33	3.483E+01	Analog	1.00	3
Mg			1	5195.225	ug/l	0.45	5,552,460.17	1.758E+01	Analog	1.00	3
K			1	5127.401	ug/l	0.61	5,694,283.00	1.803E+01	Analog	1.00	3
V			1	50.896	ug/l	0.57	499,522.49	1.581E+00	Pulse	0.50	3
Mn			1	51.428	ug/l	0.44	376,799.01	2.151E+00	Pulse	0.50	3
Fe			1	5140.928	ug/l	0.48	52,738,038.67	3.011E+02	Analog	0.50	3
Co			1	51.880	ug/l	0.79	937,990.50	5.356E+00	Pulse	0.50	3
Ni			1	52.304	ug/l	0.65	254,493.80	1.453E+00	Pulse	0.50	3
Cu			1	52.197	ug/l	1.33	675,362.27	3.856E+00	Pulse	0.50	3
Zn			1	51.372	ug/l	0.50	120,735.79	4.709E-01	Pulse	1.00	3
Cd			1	51.815	ug/l	0.66	146,054.21	5.696E-01	Pulse	0.50	3
Al			1	5172.006	ug/l	0.21	2,444,966.58	7.740E+00	Pulse	1.00	3
Se			1	51.256	ug/l	1.97	6,432.97	2.509E-02	Pulse	3.00	3
Sb			1	51.210	ug/l	1.05	423,845.24	1.653E+00	Pulse	1.00	3
Se			1	51.423	ug/l	1.15	3,065.58	1.196E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,800,963.17	0.97	98.5	Pulse	0.50	3
1	Sc		315,872.09	0.49	101.5	Pulse	0.30	3
1	Ge		175,140.53	0.53	101.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,551,434.14	0.41	100.0	Pulse	0.30	3
1	Tb		3,877,281.67	0.21	100.5	Pulse	0.50	3
1	Lu		2,956,192.00	1.16	101.2	Pulse	0.50	3
1	Ge		256,409.47	0.62	100.5	Pulse	0.30	3
1	Te		7.33	110.22	1100.0	Pulse	0.50	3
1	Li		1,170.04	1.42	102.2	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:42
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.821	ug/l	0.30	1,222,221.96	7.063E+00	Pulse	0.50	3
As			1	101.785	ug/l	0.36	158,448.95	9.157E-01	Pulse	1.00	3
Mo			1	100.494	ug/l	0.80	571,804.44	2.230E+00	Pulse	0.50	3
Pb			1	101.148	ug/l	0.54	2,457,750.42	8.950E-01	Pulse	1.00	3
Be			1	101.373	ug/l	1.25	8,239.67	2.626E-02	Pulse	2.00	3
Ag			1	99.432	ug/l	0.34	1,810,243.21	7.061E+00	Pulse	0.50	3
Ba			1	101.710	ug/l	0.46	263,820.56	1.726E-01	Pulse	0.50	3
Tl			1	104.036	ug/l	0.85	3,542,346.58	1.290E+00	Pulse	0.50	3
Sn			1	100.712	ug/l	0.87	590,254.39	3.862E-01	Pulse	0.30	3
Sr			1	99.975	ug/l	0.80	806,336.12	5.275E-01	Pulse	0.50	3
[Pb]			1	100.901	ug/l	0.20	1,166,762.50	4.249E-01	Pulse	0.50	3
Ca			1	10185.256	ug/l	0.25	523,852.79	1.789E-01	Pulse	0.50	3
Ti			1	100.972	ug/l	0.47	34,132.99	1.088E-01	Pulse	0.50	3
Na			1	10215.338	ug/l	0.30	21,583,557.33	6.878E+01	Analog	1.00	3
Mg			1	10225.269	ug/l	0.13	10,856,796.33	3.460E+01	Analog	1.00	3
K			1	10146.612	ug/l	0.18	11,100,971.67	3.537E+01	Analog	1.00	3
V			1	101.955	ug/l	0.14	993,122.64	3.165E+00	Pulse	0.50	3
Mn			1	102.081	ug/l	0.83	738,434.52	4.268E+00	Pulse	0.50	3
Fe			1	10169.459	ug/l	0.42	103,052,696.00	5.955E+02	Analog	0.50	3
Co			1	102.382	ug/l	0.56	1,828,785.42	1.057E+01	Pulse	0.50	3
Ni			1	102.816	ug/l	0.40	493,713.66	2.853E+00	Pulse	0.50	3
Cu			1	102.748	ug/l	0.92	1,297,997.75	7.501E+00	Pulse	0.50	3
Zn			1	101.672	ug/l	0.47	236,007.04	9.206E-01	Pulse	1.00	3
Cd			1	101.758	ug/l	0.71	286,790.17	1.119E+00	Pulse	0.50	3
Al			1	10142.984	ug/l	0.28	4,762,789.33	1.518E+01	Pulse	1.00	3
Se			1	100.905	ug/l	1.24	12,628.83	4.926E-02	Pulse	3.00	3
Sb			1	100.759	ug/l	0.40	833,803.19	3.252E+00	Pulse	1.00	3
Se			1	101.624	ug/l	2.40	6,013.28	2.346E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,746,237.25	0.06	96.6	Pulse	0.50	3
1	Sc		313,820.16	0.14	100.8	Pulse	0.30	3
1	Ge		173,040.13	0.43	100.3	Pulse	0.30	3
1	In		1,528,539.73	0.52	98.5	Pulse	0.30	3
1	Tb		3,861,919.42	0.33	100.1	Pulse	0.50	3
1	Lu		2,928,859.75	0.30	100.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		256,377.95	0.62	100.5	Pulse	0.30	3
1	Te		16.67	55.43	2500.0	Pulse	0.50	3
1	Li		1,346.72	8.76	117.7	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:46
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.760	ug/l	0.57	2,382,022.25	1.376E+01	Pulse	0.50	3
As			1	198.844	ug/l	0.73	309,548.19	1.788E+00	Pulse	1.00	3
Mo			1	199.550	ug/l	0.85	1,122,781.25	4.429E+00	Pulse	0.50	3
Pb			1	199.312	ug/l	0.31	4,772,784.50	1.763E+00	Pulse	1.00	3
Be			1	198.845	ug/l	0.46	16,138.39	5.150E-02	Pulse	2.00	3
Ag			1	120.974	ug/l	0.57	2,178,039.83	8.591E+00	Pulse	0.50	3
Ba			1	198.924	ug/l	0.96	514,438.10	3.375E-01	Pulse	0.50	3
Tl			1	197.423	ug/l	0.87	6,625,448.83	2.448E+00	Analog	0.50	3
Sn			1	199.593	ug/l	1.15	1,166,143.49	7.652E-01	Pulse	0.30	3
Sr			1	199.898	ug/l	0.96	1,607,175.00	1.055E+00	Pulse	0.50	3
[Pb]			1	199.385	ug/l	1.03	2,272,151.67	8.394E-01	Pulse	0.50	3
Ca			1	19883.575	ug/l	0.43	1,021,465.98	3.486E-01	Pulse	0.50	3
Ti			1	199.261	ug/l	1.67	67,250.03	2.146E-01	Pulse	0.50	3
Na			1	19850.435	ug/l	0.87	41,857,797.33	1.336E+02	Analog	1.00	3
Mg			1	19837.702	ug/l	1.18	21,029,889.33	6.712E+01	Analog	1.00	3
K			1	19894.426	ug/l	1.01	21,639,919.33	6.906E+01	Analog	1.00	3
V			1	198.811	ug/l	1.36	1,932,629.79	6.168E+00	Pulse	0.50	3
Mn			1	198.603	ug/l	0.86	1,436,541.21	8.300E+00	Pulse	0.50	3
Fe			1	19880.193	ug/l	0.15	201,490,453.33	1.164E+03	Analog	0.50	3
Co			1	198.335	ug/l	0.64	3,543,518.17	2.047E+01	Pulse	0.50	3
Ni			1	198.009	ug/l	0.57	950,500.67	5.492E+00	Pulse	0.50	3
Cu			1	198.073	ug/l	1.24	2,487,944.92	1.437E+01	Pulse	0.50	3
Zn			1	198.854	ug/l	0.26	453,660.81	1.789E+00	Pulse	1.00	3
Cd			1	198.664	ug/l	1.05	553,690.08	2.184E+00	Pulse	0.50	3
Al			1	19885.900	ug/l	1.52	9,322,079.67	2.975E+01	Analog	1.00	3
Se			1	199.234	ug/l	0.83	24,625.34	9.713E-02	Pulse	3.00	3
Sb			1	199.327	ug/l	0.54	1,631,113.87	6.434E+00	Pulse	1.00	3
Se			1	198.865	ug/l	0.53	11,594.64	4.573E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,706,831.58	0.40	95.2	Pulse	0.50	3
1	Sc		313,370.42	1.37	100.7	Pulse	0.30	3
1	Ge		173,083.42	0.59	100.3	Pulse	0.30	3
1	In		1,524,140.21	0.82	98.2	Pulse	0.30	3
1	Tb		3,846,727.00	0.34	99.7	Pulse	0.50	3
1	Lu		2,930,145.92	0.36	100.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,534.36	0.45	99.3	Pulse	0.30	3
1	Te		19.33	33.25	2900.0	Pulse	0.50	3
1	Li		1,147.82	10.30	100.3	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:50
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.155	ug/l	1.00	1,182,857.75	6.810E+00	Pulse	0.50	3
As			1	98.092	ug/l	0.81	153,283.02	8.825E-01	Pulse	1.00	3
Mo			1	96.945	ug/l	1.02	550,781.71	2.152E+00	Pulse	0.50	3
Pb			1	97.123	ug/l	0.73	2,374,911.00	8.593E-01	Pulse	1.00	3
Be			1	98.454	ug/l	2.24	8,003.57	2.550E-02	Pulse	2.00	3
Ag			1	96.163	ug/l	0.84	1,748,100.25	6.829E+00	Pulse	0.50	3
Ba			1	96.284	ug/l	0.68	252,253.90	1.634E-01	Pulse	0.50	3
Tl			1	99.735	ug/l	1.10	3,417,399.83	1.237E+00	Pulse	0.50	3
Sn			1	96.785	ug/l	1.01	572,996.50	3.711E-01	Pulse	0.30	3
Sr			1	96.687	ug/l	0.17	787,690.90	5.102E-01	Pulse	0.50	3
[Pb]			1	97.047	ug/l	0.35	1,129,318.46	4.086E-01	Pulse	0.50	3
Ca			1	9740.412	ug/l	1.01	502,874.28	1.711E-01	Pulse	0.50	3
Ti			1	98.168	ug/l	2.26	33,189.41	1.057E-01	Pulse	0.50	3
Na			1	9923.511	ug/l	1.32	20,971,809.33	6.681E+01	Analog	1.00	3
Mg			1	9933.921	ug/l	1.48	10,549,500.33	3.361E+01	Analog	1.00	3
K			1	9879.671	ug/l	0.89	10,814,037.33	3.445E+01	Analog	1.00	3
V			1	97.720	ug/l	2.41	952,040.23	3.033E+00	Pulse	0.50	3
Mn			1	97.602	ug/l	1.03	708,736.69	4.080E+00	Pulse	0.50	3
Fe			1	9867.950	ug/l	0.68	100,378,664.00	5.779E+02	Analog	0.50	3
Co			1	98.294	ug/l	0.42	1,762,507.42	1.015E+01	Pulse	0.50	3
Ni			1	98.251	ug/l	0.94	473,613.81	2.727E+00	Pulse	0.50	3
Cu			1	98.921	ug/l	0.79	1,255,057.75	7.225E+00	Pulse	0.50	3
Zn			1	99.421	ug/l	1.09	230,497.32	9.004E-01	Pulse	1.00	3
Cd			1	97.985	ug/l	1.72	275,730.42	1.077E+00	Pulse	0.50	3
Al			1	9744.986	ug/l	1.53	4,576,810.67	1.458E+01	Pulse	1.00	3
Se			1	97.694	ug/l	1.59	12,209.56	4.770E-02	Pulse	3.00	3
Sb			1	97.537	ug/l	1.19	805,904.63	3.148E+00	Pulse	1.00	3
Se			1	97.179	ug/l	0.50	5,743.98	2.244E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,763,625.67	0.20	97.2	Pulse	0.50	3
1	Sc		313,912.29	1.07	100.9	Pulse	0.30	3
1	Ge		173,703.12	0.90	100.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,543,919.31	0.74	99.5	Pulse	0.30	3
1	Tb		3,878,652.25	0.53	100.5	Pulse	0.50	3
1	Lu		2,939,675.67	0.68	100.6	Pulse	0.50	3
1	Ge		256,001.55	1.06	100.3	Pulse	0.30	3
1	Te		8.00	86.60	1200.0	Pulse	0.50	3
1	Li		1,231.16	7.03	107.6	Pulse	0.30	3

Quantitation Report

File Name	011HSTD.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:54
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	192.274	ug/l	0.55	2,336,770.92	1.331E+01	Pulse	0.50	3
As			1	192.779	ug/l	1.11	304,317.40	1.734E+00	Pulse	1.00	3
Mo			1	194.487	ug/l	0.91	1,093,063.87	4.316E+00	Pulse	0.50	3
Pb			1	194.589	ug/l	0.56	4,652,088.33	1.721E+00	Pulse	1.00	3
Be			1	197.113	ug/l	1.49	15,999.11	5.105E-02	Pulse	2.00	3
Ag			1	110.173	ug/l	0.67	1,981,300.54	7.824E+00	Pulse	0.50	3
Ba			1	195.406	ug/l	0.95	503,521.15	3.316E-01	Pulse	0.50	3
Tl			1	198.021	ug/l	1.54	6,634,527.83	2.455E+00	Mix	0.50	3
Sn			1	194.589	ug/l	0.96	1,132,857.07	7.460E-01	Pulse	0.30	3
Sr			1	195.596	ug/l	0.86	1,566,934.04	1.032E+00	Pulse	0.50	3
[Pb]			1	195.102	ug/l	0.64	2,219,704.33	8.214E-01	Pulse	0.50	3
Ca			1	19336.395	ug/l	0.99	995,860.02	3.390E-01	Pulse	0.50	3
Ti			1	195.073	ug/l	2.00	65,846.05	2.101E-01	Pulse	0.50	3
Na			1	19711.966	ug/l	0.47	41,573,936.00	1.327E+02	Analog	1.00	3
Mg			1	19656.678	ug/l	1.08	20,841,606.00	6.650E+01	Analog	1.00	3
K			1	19567.010	ug/l	0.14	21,290,495.33	6.793E+01	Analog	1.00	3
V			1	194.861	ug/l	1.17	1,894,562.29	6.045E+00	Pulse	0.50	3
Mn			1	190.990	ug/l	0.99	1,400,853.04	7.982E+00	Pulse	0.50	3
Fe			1	19216.111	ug/l	0.41	197,490,560.00	1.125E+03	Analog	0.50	3
Co			1	190.859	ug/l	0.80	3,457,786.83	1.970E+01	Pulse	0.50	3
Ni			1	190.896	ug/l	0.78	929,231.54	5.295E+00	Pulse	0.50	3
Cu			1	191.864	ug/l	1.55	2,444,274.08	1.393E+01	Pulse	0.50	3
Zn			1	195.164	ug/l	0.76	444,786.46	1.756E+00	Pulse	1.00	3
Cd			1	195.381	ug/l	0.84	543,933.11	2.148E+00	Pulse	0.50	3
Al			1	19532.666	ug/l	0.90	9,158,542.00	2.922E+01	Analog	1.00	3
Se			1	193.910	ug/l	0.03	23,941.38	9.454E-02	Pulse	3.00	3
Sb			1	194.808	ug/l	0.65	1,592,328.62	6.288E+00	Pulse	1.00	3
Se			1	192.649	ug/l	0.31	11,220.85	4.431E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,702,431.17	0.69	95.1	Pulse	0.50	3
1	Sc		313,417.24	1.19	100.7	Pulse	0.30	3
1	Ge		175,513.09	0.75	101.7	Pulse	0.30	3
1	In		1,518,630.42	0.71	97.9	Pulse	0.30	3
1	Tb		3,853,799.42	0.41	99.9	Pulse	0.50	3
1	Lu		2,937,488.92	0.63	100.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,244.89	0.27	99.2	Pulse	0.30	3
1	Te		16.67	48.50	2500.0	Pulse	0.50	3
1	Li		1,258.94	11.41	110.0	Pulse	0.30	3

Quantitation Report

File Name	012_ICV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 8:57
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	94.177	ug/l	0.83	1,145,980.08	6.535E+00	Pulse	0.50	3
As			1	95.113	ug/l	0.27	150,052.87	8.557E-01	Pulse	1.00	3
Mo			1	94.283	ug/l	0.36	537,438.69	2.093E+00	Pulse	0.50	3
Pb			1	93.424	ug/l	0.47	2,282,398.58	8.266E-01	Pulse	1.00	3
Be			1	96.471	ug/l	2.06	7,894.53	2.499E-02	Pulse	2.00	3
Ag			1	46.822	ug/l	0.39	854,018.29	3.325E+00	Pulse	0.50	3
Ba			1	95.099	ug/l	1.19	248,033.28	1.614E-01	Pulse	0.50	3
Tl			1	96.199	ug/l	0.94	3,293,275.08	1.193E+00	Pulse	0.50	3
Sn			1	96.954	ug/l	1.09	571,398.22	3.718E-01	Pulse	0.30	3
Sr			1	95.826	ug/l	0.85	777,178.37	5.057E-01	Pulse	0.50	3
[Pb]			1	93.674	ug/l	0.27	1,089,073.21	3.944E-01	Pulse	0.50	3
Ca			1	9050.175	ug/l	0.24	465,895.30	1.590E-01	Pulse	0.50	3
Ti			1	97.334	ug/l	1.23	33,127.93	1.048E-01	Pulse	0.50	3
Na			1	9466.660	ug/l	0.88	20,140,422.67	6.374E+01	Analog	1.00	3
Mg			1	9884.870	ug/l	1.38	10,567,101.00	3.344E+01	Analog	1.00	3
K			1	9235.066	ug/l	0.89	10,181,671.00	3.222E+01	Analog	1.00	3
V			1	93.801	ug/l	1.76	920,013.27	2.912E+00	Pulse	0.50	3
Mn			1	94.068	ug/l	0.17	689,644.92	3.933E+00	Pulse	0.50	3
Fe			1	9589.210	ug/l	0.58	98,477,352.00	5.616E+02	Analog	0.50	3
Co			1	95.069	ug/l	0.56	1,720,943.29	9.814E+00	Pulse	0.50	3
Ni			1	94.603	ug/l	0.51	460,410.33	2.626E+00	Pulse	0.50	3
Cu			1	96.201	ug/l	0.82	1,232,632.67	7.029E+00	Pulse	0.50	3
Zn			1	96.467	ug/l	0.35	224,478.25	8.740E-01	Pulse	1.00	3
Cd			1	94.334	ug/l	1.07	266,336.64	1.037E+00	Pulse	0.50	3
Al			1	9423.977	ug/l	1.63	4,455,407.67	1.410E+01	Pulse	1.00	3
Se			1	93.900	ug/l	0.70	11,775.95	4.585E-02	Pulse	3.00	3
Sb			1	93.703	ug/l	0.48	776,810.85	3.025E+00	Pulse	1.00	3
Se			1	94.272	ug/l	0.94	5,591.60	2.177E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,761,048.17	0.63	97.1	Pulse	0.50	3
1	Sc		315,989.54	0.99	101.5	Pulse	0.30	3
1	Ge		175,358.25	0.19	101.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,536,994.07	0.46	99.0	Pulse	0.30	3
1	Tb		3,871,673.17	0.52	100.4	Pulse	0.50	3
1	Lu		2,930,335.33	0.29	100.3	Pulse	0.50	3
1	Ge		256,835.74	0.78	100.6	Pulse	0.30	3
1	Te		2.67	173.21	400.0	Pulse	0.50	3
1	Li		1,278.94	10.82	111.7	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:01
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.012	ug/l	83.00	4,676.58	2.746E-02	Pulse	0.50	3
As			1	0.014	ug/l	58.32	86.67	5.086E-04	Pulse	1.00	3
Mo			1	0.147	ug/l	27.03	874.69	3.484E-03	Pulse	0.50	3
Pb			1	0.068	ug/l	16.45	2,408.84	8.668E-04	Pulse	1.00	3
Be			1	0.027	ug/l	116.16	2.33	7.452E-06	Pulse	2.00	3
Ag			1	0.058	ug/l	30.07	1,138.71	4.535E-03	Pulse	0.50	3
Ba			1	0.004	ug/l	218.90	41.33	2.717E-05	Pulse	0.50	3
Tl			1	0.027	ug/l	7.33	968.03	3.482E-04	Pulse	0.50	3
Sn			1	0.197	ug/l	16.81	1,386.73	9.123E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	107.59	481.34	3.166E-04	Pulse	0.50	3
[Pb]			1	0.067	ug/l	15.13	1,115.37	4.013E-04	Pulse	0.50	3
Ca			1	-0.536	ug/l	-175.02	1,644.08	5.757E-04	Pulse	0.50	3
Ti			1	0.066	ug/l	72.13	24.00	7.747E-05	Pulse	0.50	3
Na			1	3.656	ug/l	9.78	28,813.96	9.261E-02	Pulse	1.00	3
Mg			1	0.958	ug/l	17.41	1,634.74	5.252E-03	Pulse	1.00	3
K			1	0.695	ug/l	412.41	96,378.54	3.098E-01	Pulse	1.00	3
V			1	0.011	ug/l	63.68	1,122.04	3.607E-03	Pulse	0.50	3
Mn			1	0.020	ug/l	34.61	632.68	3.717E-03	Pulse	0.50	3
Fe			1	1.114	ug/l	10.95	30,989.35	1.820E-01	Pulse	0.50	3
Co			1	0.006	ug/l	23.98	196.00	1.151E-03	Pulse	0.50	3
Ni			1	0.001	ug/l	609.82	580.01	3.406E-03	Pulse	0.50	3
Cu			1	-0.447	ug/l	-5.62	10,250.75	6.020E-02	Pulse	0.50	3
Zn			1	0.078	ug/l	35.25	3,095.26	1.232E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	10.89	25.33	1.009E-04	Pulse	0.50	3
Al			1	1.194	ug/l	144.17	1,569.57	5.061E-03	Pulse	1.00	3
Se			1	0.151	ug/l	69.70	53.00	2.111E-04	Pulse	3.00	3
Sb			1	0.051	ug/l	18.59	480.34	1.913E-03	Pulse	1.00	3
Se			1	0.119	ug/l	204.92	51.00	2.031E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,779,849.75	0.72	97.8	Pulse	0.50	3
1	Sc		311,120.79	0.97	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		170,272.16	0.76	98.7	Pulse	0.30	3
1	In		1,520,309.59	0.18	98.0	Pulse	0.30	3
1	Tb		3,783,335.50	0.43	98.1	Pulse	0.50	3
1	Lu		2,855,741.00	0.22	97.7	Pulse	0.50	3
1	Ge		251,173.77	0.25	98.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,262.27	5.10	110.3	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 9:05
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.025	ug/l	2.24	16,667.14	9.748E-02	Pulse	0.50	3
As			1	0.978	ug/l	1.49	1,568.40	9.173E-03	Pulse	1.00	3
Mo			1	1.047	ug/l	3.23	5,880.28	2.346E-02	Pulse	0.50	3
Pb			1	1.027	ug/l	0.74	25,929.59	9.351E-03	Pulse	1.00	3
Be			1	0.994	ug/l	8.70	80.67	2.579E-04	Pulse	2.00	3
Ag			1	1.064	ug/l	2.22	19,043.78	7.597E-02	Pulse	0.50	3
Ba			1	0.948	ug/l	6.35	2,494.18	1.628E-03	Pulse	0.50	3
Tl			1	1.024	ug/l	1.25	35,257.56	1.271E-02	Pulse	0.50	3
Sn			1	1.073	ug/l	9.15	6,543.45	4.272E-03	Pulse	0.30	3
Sr			1	0.977	ug/l	1.12	8,289.85	5.413E-03	Pulse	0.50	3
[Pb]			1	1.036	ug/l	1.29	12,426.55	4.481E-03	Pulse	0.50	3
Ca			1	90.875	ug/l	2.15	6,213.67	2.176E-03	Pulse	0.50	3
Ti			1	1.072	ug/l	4.44	363.34	1.162E-03	Pulse	0.50	3
Na			1	102.275	ug/l	0.51	236,418.94	7.559E-01	Pulse	1.00	3
Mg			1	103.923	ug/l	0.66	110,591.18	3.536E-01	Pulse	1.00	3
K			1	100.207	ug/l	1.27	204,461.92	6.537E-01	Pulse	1.00	3
V			1	0.980	ug/l	1.14	10,524.20	3.365E-02	Pulse	0.50	3
Mn			1	0.990	ug/l	1.50	7,566.83	4.425E-02	Pulse	0.50	3
Fe			1	104.147	ug/l	1.99	1,062,613.08	6.215E+00	Pulse	0.50	3
Co			1	1.038	ug/l	2.46	18,404.09	1.076E-01	Pulse	0.50	3
Ni			1	1.021	ug/l	0.24	5,416.11	3.168E-02	Pulse	0.50	3
Cu			1	0.611	ug/l	4.48	23,340.79	1.365E-01	Pulse	0.50	3
Zn			1	0.338	ug/l	6.18	3,669.69	1.464E-02	Pulse	1.00	3
Cd			1	1.024	ug/l	2.09	2,824.89	1.127E-02	Pulse	0.50	3
Al			1	99.263	ug/l	0.98	47,467.44	1.518E-01	Pulse	1.00	3
Se			1	1.074	ug/l	2.34	165.56	6.604E-04	Pulse	3.00	3
Sb			1	1.015	ug/l	2.28	8,276.21	3.302E-02	Pulse	1.00	3
Se			1	0.757	ug/l	6.23	87.55	3.493E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,773,023.33	0.55	97.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		312,757.63	0.31	100.5	Pulse	0.30	3
1	Ge		170,989.32	0.28	99.1	Pulse	0.30	3
1	In		1,531,331.92	0.50	98.7	Pulse	0.30	3
1	Tb		3,794,837.00	0.03	98.4	Pulse	0.50	3
1	Lu		2,855,849.00	0.42	97.7	Pulse	0.50	3
1	Ge		250,675.15	0.06	98.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,294.50	0.79	113.1	Pulse	0.30	3

Quantitation Report

File Name	015ICSA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:09
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.114	ug/l	2.64	28,876.01	1.728E-01	Pulse	0.50	3
As			1	0.115	ug/l	4.83	237.00	1.417E-03	Pulse	1.00	3
Mo			1	2003.436	ug/l	1.22	10,556,501.67	4.446E+01	Analog	0.50	3
Pb			1	0.191	ug/l	9.53	4,769.01	1.953E-03	Pulse	1.00	3
Be			1	0.004	ug/l	255.37	0.50	1.690E-06	Pulse	2.00	3
Ag			1	0.336	ug/l	5.67	5,766.25	2.426E-02	Pulse	0.50	3
Ba			1	0.323	ug/l	5.08	792.02	5.688E-04	Pulse	0.50	3
Tl			1	0.013	ug/l	1.28	422.01	1.727E-04	Pulse	0.50	3
Sn			1	0.093	ug/l	19.16	715.57	5.129E-04	Pulse	0.30	3
Sr			1	1.104	ug/l	2.25	8,473.93	6.084E-03	Pulse	0.50	3
[Pb]			1	0.196	ug/l	15.81	2,304.17	9.438E-04	Pulse	0.50	3
Ca			1	93766.340	ug/l	0.45	4,470,141.67	1.642E+00	Pulse	0.50	3
Ti			1	1975.421	ug/l	0.94	634,184.06	2.128E+00	Pulse	0.50	3
Na			1	97851.578	ug/l	0.15	196,185,200.00	6.582E+02	Analog	1.00	3
Mg			1	96164.074	ug/l	0.25	96,968,240.00	3.253E+02	Analog	1.00	3
K			1	96869.907	ug/l	0.54	99,870,400.00	3.351E+02	Analog	1.00	3
V			1	0.079	ug/l	9.58	1,704.75	5.721E-03	Pulse	0.50	3
Mn			1	1.073	ug/l	5.91	7,969.66	4.770E-02	Pulse	0.50	3
Fe			1	94967.057	ug/l	0.66	929,594,240.00	5.561E+03	Analog	0.50	3
Co			1	0.214	ug/l	1.35	3,782.39	2.263E-02	Pulse	0.50	3
Ni			1	0.212	ug/l	12.86	1,548.07	9.263E-03	Pulse	0.50	3
Cu			1	-0.483	ug/l	-1.61	9,631.09	5.760E-02	Pulse	0.50	3
Zn			1	0.399	ug/l	0.59	3,608.01	1.519E-02	Pulse	1.00	3
Cd			1	0.666	ug/l	4.17	1,741.42	7.337E-03	Pulse	0.50	3
Al			1	93556.020	ug/l	0.37	41,715,448.00	1.400E+02	Analog	1.00	3
Se			1	0.272	ug/l	17.13	64.11	2.698E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	10.26	586.01	2.463E-03	Pulse	1.00	3
Se			1	0.240	ug/l	19.89	54.89	2.310E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,444,550.50	2.13	86.0	Pulse	0.50	3
1	Sc		298,053.18	0.83	95.8	Pulse	0.30	3
1	Ge		167,191.31	1.93	96.9	Pulse	0.30	3
1	In		1,393,054.94	1.83	89.8	Pulse	0.30	3
1	Tb		3,578,801.42	1.30	92.8	Pulse	0.50	3
1	Lu		2,722,847.92	1.35	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,487.43	2.69	93.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,163.37	1.74	101.7	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:13
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.092	ug/l	0.82	261,376.20	1.484E+00	Pulse	0.50	3
As			1	18.748	ug/l	0.76	29,757.40	1.690E-01	Pulse	1.00	3
Mo			1	2084.739	ug/l	1.47	11,539,706.00	4.626E+01	Analog	0.50	3
Pb			1	0.120	ug/l	2.58	3,347.67	1.328E-03	Pulse	1.00	3
Be			1	0.029	ug/l	38.64	2.50	8.044E-06	Pulse	2.00	3
Ag			1	18.038	ug/l	0.90	319,579.22	1.281E+00	Pulse	0.50	3
Ba			1	0.380	ug/l	6.26	961.36	6.649E-04	Pulse	0.50	3
Tl			1	0.009	ug/l	4.03	324.00	1.285E-04	Pulse	0.50	3
Sn			1	0.073	ug/l	81.04	637.85	4.389E-04	Pulse	0.30	3
Sr			1	1.182	ug/l	1.68	9,397.02	6.496E-03	Pulse	0.50	3
[Pb]			1	0.125	ug/l	7.02	1,624.09	6.446E-04	Pulse	0.50	3
Ca			1	99246.659	ug/l	1.78	4,852,862.17	1.738E+00	Pulse	0.50	3
Ti			1	2047.446	ug/l	1.22	688,552.25	2.205E+00	Pulse	0.50	3
Na			1	101929.389	ug/l	1.73	214,054,112.00	6.857E+02	Analog	1.00	3
Mg			1	99176.839	ug/l	1.28	104,756,352.00	3.355E+02	Analog	1.00	3
K			1	101105.328	ug/l	1.30	109,185,477.33	3.497E+02	Analog	1.00	3
V			1	0.061	ug/l	2.01	1,610.74	5.159E-03	Pulse	0.50	3
Mn			1	19.835	ug/l	0.55	146,422.22	8.315E-01	Pulse	0.50	3
Fe			1	97539.781	ug/l	0.78	1,005,761,685.33	5.711E+03	Analog	0.50	3
Co			1	19.100	ug/l	0.84	347,290.52	1.972E+00	Pulse	0.50	3
Ni			1	18.702	ug/l	1.00	91,877.85	5.218E-01	Pulse	0.50	3
Cu			1	18.060	ug/l	1.10	245,591.19	1.395E+00	Pulse	0.50	3
Zn			1	20.684	ug/l	2.04	49,024.03	1.965E-01	Pulse	1.00	3
Cd			1	19.248	ug/l	1.73	52,780.21	2.116E-01	Pulse	0.50	3
Al			1	95359.628	ug/l	1.42	44,538,390.67	1.427E+02	Analog	1.00	3
Se			1	0.298	ug/l	13.70	70.56	2.828E-04	Pulse	3.00	3
Sb			1	0.113	ug/l	64.10	975.63	3.903E-03	Pulse	1.00	3
Se			1	0.177	ug/l	17.25	54.00	2.165E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,520,241.67	0.66	88.6	Pulse	0.50	3
1	Sc		312,261.49	2.09	100.3	Pulse	0.30	3
1	Ge		176,101.98	1.41	102.1	Pulse	0.30	3
1	In		1,446,580.36	1.36	93.2	Pulse	0.30	3
1	Tb		3,720,914.75	0.72	96.5	Pulse	0.50	3
1	Lu		2,792,779.83	0.93	95.6	Pulse	0.50	3
1	Ge		249,412.99	0.94	97.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		2.67	173.21	400.0	Pulse	0.50	3
1	Li		1,277.83	1.31	111.7	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:17
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.538	ug/l	1.48	658,742.19	3.588E+00	Pulse	0.50	3
As			1	50.374	ug/l	1.16	83,231.46	4.534E-01	Pulse	1.00	3
Mo			1	50.325	ug/l	1.48	305,306.01	1.117E+00	Pulse	0.50	3
Pb			1	50.054	ug/l	0.50	1,260,982.04	4.430E-01	Pulse	1.00	3
Be			1	51.805	ug/l	0.46	4,424.32	1.342E-02	Pulse	2.00	3
Ag			1	49.963	ug/l	1.25	969,767.17	3.548E+00	Pulse	0.50	3
Ba			1	49.913	ug/l	0.38	134,622.41	8.471E-02	Pulse	0.50	3
Tl			1	51.461	ug/l	0.63	1,816,128.21	6.380E-01	Pulse	0.50	3
Sn			1	50.180	ug/l	0.80	305,911.12	1.925E-01	Pulse	0.30	3
Sr			1	49.545	ug/l	0.94	415,684.28	2.616E-01	Pulse	0.50	3
[Pb]			1	50.093	ug/l	1.13	600,555.44	2.110E-01	Pulse	0.50	3
Ca			1	5208.461	ug/l	0.58	269,497.05	9.175E-02	Pulse	0.50	3
Ti			1	50.046	ug/l	2.98	17,776.09	5.391E-02	Pulse	0.50	3
Na			1	5245.881	ug/l	0.28	11,656,505.00	3.535E+01	Analog	1.00	3
Mg			1	5125.297	ug/l	0.62	5,717,971.00	1.734E+01	Analog	1.00	3
K			1	5181.897	ug/l	0.17	6,006,244.33	1.822E+01	Analog	1.00	3
V			1	51.583	ug/l	0.50	528,463.34	1.603E+00	Pulse	0.50	3
Mn			1	50.340	ug/l	1.24	386,604.40	2.106E+00	Pulse	0.50	3
Fe			1	5166.390	ug/l	0.78	55,554,341.33	3.026E+02	Analog	0.50	3
Co			1	51.947	ug/l	0.94	984,485.63	5.363E+00	Pulse	0.50	3
Ni			1	52.322	ug/l	1.05	266,860.52	1.454E+00	Pulse	0.50	3
Cu			1	52.294	ug/l	0.31	709,232.96	3.863E+00	Pulse	0.50	3
Zn			1	50.828	ug/l	1.21	127,370.79	4.660E-01	Pulse	1.00	3
Cd			1	49.570	ug/l	1.17	148,940.48	5.449E-01	Pulse	0.50	3
Al			1	4834.589	ug/l	1.25	2,385,764.75	7.236E+00	Pulse	1.00	3
Se			1	49.102	ug/l	0.59	6,571.24	2.404E-02	Pulse	3.00	3
Sb			1	48.644	ug/l	1.49	429,166.31	1.570E+00	Pulse	1.00	3
Se			1	48.133	ug/l	1.98	3,061.69	1.120E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,846,393.92	0.46	100.1	Pulse	0.50	3
1	Sc		329,726.37	0.17	105.9	Pulse	0.30	3
1	Ge		183,588.07	0.71	106.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,589,220.42	0.23	102.4	Pulse	0.30	3
1	Tb		3,984,456.92	0.85	103.3	Pulse	0.50	3
1	Lu		2,937,281.08	0.43	100.5	Pulse	0.50	3
1	Ge		273,329.82	0.75	107.1	Pulse	0.30	3
1	Te		6.67	45.83	1000.0	Pulse	0.50	3
1	Li		1,353.39	11.96	118.3	Pulse	0.30	3

Quantitation Report

File Name	018_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:20
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.419	ug/l	1.05	1,267,356.67	6.966E+00	Pulse	0.50	3
As			1	98.498	ug/l	1.04	161,207.80	8.861E-01	Pulse	1.00	3
Mo			1	99.417	ug/l	0.75	586,161.96	2.206E+00	Pulse	0.50	3
Pb			1	98.860	ug/l	0.70	2,427,025.83	8.747E-01	Pulse	1.00	3
Be			1	102.613	ug/l	0.15	8,638.84	2.658E-02	Pulse	2.00	3
Ag			1	97.646	ug/l	0.19	1,842,105.00	6.934E+00	Pulse	0.50	3
Ba			1	97.678	ug/l	0.67	259,024.36	1.658E-01	Pulse	0.50	3
Tl			1	102.510	ug/l	0.25	3,526,466.75	1.271E+00	Pulse	0.50	3
Sn			1	99.879	ug/l	0.81	598,479.35	3.830E-01	Pulse	0.30	3
Sr			1	98.259	ug/l	0.43	810,234.58	5.185E-01	Pulse	0.50	3
[Pb]			1	99.340	ug/l	0.53	1,160,596.13	4.183E-01	Pulse	0.50	3
Ca			1	10210.603	ug/l	0.50	525,566.06	1.793E-01	Pulse	0.50	3
Ti			1	99.045	ug/l	0.89	34,678.59	1.067E-01	Pulse	0.50	3
Na			1	10315.460	ug/l	0.67	22,574,135.33	6.945E+01	Analog	1.00	3
Mg			1	10111.377	ug/l	0.35	11,119,775.67	3.421E+01	Analog	1.00	3
K			1	10160.762	ug/l	0.48	11,513,850.67	3.542E+01	Analog	1.00	3
V			1	101.387	ug/l	0.51	1,022,904.06	3.147E+00	Pulse	0.50	3
Mn			1	98.168	ug/l	1.06	746,625.29	4.104E+00	Pulse	0.50	3
Fe			1	10059.591	ug/l	0.90	107,175,176.00	5.891E+02	Analog	0.50	3
Co			1	100.916	ug/l	1.02	1,895,191.54	1.042E+01	Pulse	0.50	3
Ni			1	100.558	ug/l	0.57	507,686.57	2.791E+00	Pulse	0.50	3
Cu			1	101.162	ug/l	1.06	1,343,869.46	7.387E+00	Pulse	0.50	3
Zn			1	100.180	ug/l	0.75	241,006.53	9.072E-01	Pulse	1.00	3
Cd			1	98.834	ug/l	1.23	288,634.18	1.087E+00	Pulse	0.50	3
Al			1	9589.754	ug/l	1.08	4,664,015.33	1.435E+01	Pulse	1.00	3
Se			1	97.261	ug/l	0.54	12,615.15	4.749E-02	Pulse	3.00	3
Sb			1	97.000	ug/l	1.02	831,753.15	3.131E+00	Pulse	1.00	3
Se			1	96.592	ug/l	1.62	5,925.04	2.230E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,774,614.58	0.33	97.6	Pulse	0.50	3
1	Sc		325,043.94	0.35	104.4	Pulse	0.30	3
1	Ge		181,929.99	0.43	105.4	Pulse	0.30	3
1	In		1,562,696.53	0.28	100.7	Pulse	0.30	3
1	Tb		3,923,350.17	0.11	101.7	Pulse	0.50	3
1	Lu		2,931,232.92	0.57	100.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		265,656.65	0.23	104.1	Pulse	0.30	3
1	Te		9.33	61.86	1400.0	Pulse	0.50	3
1	Li		1,368.94	8.38	119.6	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:24
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.037	ug/l	-12.44	4,432.52	2.407E-02	Pulse	0.50	3
As			1	0.009	ug/l	95.75	86.00	4.670E-04	Pulse	1.00	3
Mo			1	0.187	ug/l	24.23	1,190.05	4.371E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	19.91	1,164.71	4.045E-04	Pulse	1.00	3
Be			1	0.021	ug/l	28.06	2.00	5.954E-06	Pulse	2.00	3
Ag			1	0.035	ug/l	40.37	786.69	2.891E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	56.97	36.00	2.252E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	15.36	453.34	1.575E-04	Pulse	0.50	3
Sn			1	0.105	ug/l	24.25	894.47	5.591E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	138.18	430.68	2.693E-04	Pulse	0.50	3
[Pb]			1	0.015	ug/l	26.74	526.01	1.827E-04	Pulse	0.50	3
Ca			1	-9.587	ug/l	-6.79	1,221.38	4.173E-04	Pulse	0.50	3
Ti			1	0.038	ug/l	72.05	16.00	4.749E-05	Pulse	0.50	3
Na			1	4.571	ug/l	14.34	33,208.74	9.876E-02	Pulse	1.00	3
Mg			1	1.659	ug/l	15.16	2,563.17	7.622E-03	Pulse	1.00	3
K			1	-4.102	ug/l	-7.22	98,596.73	2.933E-01	Pulse	1.00	3
V			1	0.009	ug/l	24.89	1,192.71	3.547E-03	Pulse	0.50	3
Mn			1	-0.023	ug/l	-20.41	350.67	1.905E-03	Pulse	0.50	3
Fe			1	1.597	ug/l	14.26	38,730.60	2.103E-01	Pulse	0.50	3
Co			1	0.002	ug/l	56.44	124.00	6.731E-04	Pulse	0.50	3
Ni			1	-0.037	ug/l	-31.08	434.68	2.361E-03	Pulse	0.50	3
Cu			1	-0.633	ug/l	-1.81	8,617.28	4.679E-02	Pulse	0.50	3
Zn			1	-0.838	ug/l	-1.89	1,125.70	4.132E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	40.54	24.67	9.049E-05	Pulse	0.50	3
Al			1	0.018	ug/l	1871.31	1,110.36	3.301E-03	Pulse	1.00	3
Se			1	0.085	ug/l	41.19	48.78	1.790E-04	Pulse	3.00	3
Sb			1	0.030	ug/l	18.83	336.67	1.236E-03	Pulse	1.00	3
Se			1	-0.006	ug/l	-2689.28	47.56	1.747E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,880,385.25	0.89	101.3	Pulse	0.50	3
1	Sc		336,204.64	0.55	108.0	Pulse	0.30	3

Quantitation Report

1	Ge		184,171.40	0.53	106.7	Pulse	0.30	3
1	In		1,598,828.96	0.65	103.0	Pulse	0.30	3
1	Tb		3,955,027.83	0.64	102.5	Pulse	0.50	3
1	Lu		2,926,930.08	0.16	100.2	Pulse	0.50	3
1	Ge		272,431.87	0.54	106.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,378.94	2.56	120.5	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:28
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	021SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:32
Sample Name	FA98836-13
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	022SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:35
Sample Name	FA98836-14
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:39
Sample Name	FA98836-15
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:43
Sample Name	FA98836-16
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	025_BSP.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:47
Sample Name	MP41201-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	027CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:53
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.006	ug/l	176.48	4,778.60	2.521E-02	Pulse	0.50	3
As			1	-0.003	ug/l	-218.43	69.00	3.640E-04	Pulse	1.00	3
Mo			1	0.006	ug/l	37.75	168.00	6.046E-04	Pulse	0.50	3
Pb			1	0.005	ug/l	31.57	987.36	3.499E-04	Pulse	1.00	3
Be			1	0.022	ug/l	37.35	2.33	6.669E-06	Pulse	2.00	3
Ag			1	0.002	ug/l	64.03	125.33	4.509E-04	Pulse	0.50	3
Ba			1	0.012	ug/l	50.61	64.67	3.988E-05	Pulse	0.50	3
Tl			1	0.004	ug/l	29.17	289.33	1.025E-04	Pulse	0.50	3
Sn			1	0.002	ug/l	283.04	240.00	1.480E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	192.75	448.68	2.766E-04	Pulse	0.50	3
[Pb]			1	0.003	ug/l	44.85	485.34	1.720E-04	Pulse	0.50	3
Ca			1	1.788	ug/l	127.88	1,802.76	6.177E-04	Pulse	0.50	3
Ti			1	-0.005	ug/l	-390.38	6.00	1.744E-05	Pulse	0.50	3
Na			1	0.494	ug/l	16.24	28,994.87	8.308E-02	Pulse	1.00	3
Mg			1	0.100	ug/l	51.84	1,214.37	3.477E-03	Pulse	1.00	3
K			1	1.221	ug/l	144.27	106,435.41	3.050E-01	Pulse	1.00	3
V			1	0.002	ug/l	51.87	1,290.72	3.697E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-43.20	483.34	2.549E-03	Pulse	0.50	3
Fe			1	0.160	ug/l	15.54	20,763.78	1.095E-01	Pulse	0.50	3
Co			1	0.001	ug/l	71.25	86.67	4.575E-04	Pulse	0.50	3
Ni			1	0.005	ug/l	171.88	548.01	2.889E-03	Pulse	0.50	3
Cu			1	0.001	ug/l	1142.05	7,782.26	4.105E-02	Pulse	0.50	3
Zn			1	-0.032	ug/l	-36.73	2,815.88	1.014E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	19.13	16.67	6.005E-05	Pulse	0.50	3
Al			1	-0.054	ug/l	-223.16	1,684.41	4.828E-03	Pulse	1.00	3
Se			1	-0.017	ug/l	-37.78	35.89	1.292E-04	Pulse	3.00	3
Sb			1	0.006	ug/l	42.63	146.67	5.285E-04	Pulse	1.00	3
Se			1	-0.037	ug/l	-61.87	39.11	1.408E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,822,076.50	0.12	100.0	Pulse	0.50	3
1	Sc		349,041.73	1.84	100.0	Pulse	0.30	3
1	Ge		189,597.00	0.77	100.0	Pulse	0.30	3
1	In		1,621,817.33	0.15	100.0	Pulse	0.30	3
1	Tb		3,922,206.67	0.63	100.0	Pulse	0.50	3
1	Lu		2,919,136.75	0.41	100.0	Pulse	0.50	3
1	Ge		277,744.61	0.89	100.0	Pulse	0.30	3
1	Te		1.33	173.21	100.0	Pulse	0.50	3
1	Li		1,524.51	8.76	100.0	Pulse	0.30	3

Quantitation Report

File Name	028CALB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 9:57
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,689.25	2.480E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	73.33	3.877E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	134.67	4.836E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	867.36	3.044E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	9.537E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	---	96.00	3.445E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	32.67	2.024E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	143.33	5.029E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	224.45	1.391E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	432.01	2.676E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	457.34	1.605E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	1,710.75	5.855E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	8.00	2.284E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	27,928.05	7.981E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	1,102.70	3.151E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	105,307.01	3.009E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,270.05	3.629E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	508.01	2.685E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	19,019.99	1.006E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	60.00	3.169E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	521.34	2.757E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	7,746.24	4.097E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,901.89	1.041E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	4.00	1.434E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,715.74	4.903E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	38.22	1.371E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	98.33	3.530E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	41.45	1.488E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,849,157.08	1.08	100.0	Pulse	0.50	3
1	Sc		349,946.26	0.39	100.0	Pulse	0.30	3
1	Ge		189,124.22	0.88	100.0	Pulse	0.30	3
1	In		1,614,752.12	0.92	100.0	Pulse	0.30	3
1	Tb		3,947,660.00	0.85	100.0	Pulse	0.50	3
1	Lu		2,922,476.33	0.70	100.0	Pulse	0.50	3
1	Ge		278,689.27	0.53	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,450.06	4.39	100.0	Pulse	0.30	3

Quantitation Report

File Name 029CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:01
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.446	ug/l	0.64	10,376.12	5.474E-02	Pulse	0.50	3
As			1	0.435	ug/l	2.27	779.35	4.111E-03	Pulse	1.00	3
Mo			1	0.458	ug/l	2.70	2,804.22	1.000E-02	Pulse	0.50	3
Pb			1	0.467	ug/l	0.65	12,230.71	4.243E-03	Pulse	1.00	3
Be			1	0.483	ug/l	12.68	44.00	1.253E-04	Pulse	2.00	3
Ag			1	0.452	ug/l	2.26	8,539.32	3.045E-02	Pulse	0.50	3
Ba			1	0.464	ug/l	4.78	1,240.05	7.578E-04	Pulse	0.50	3
Tl			1	0.460	ug/l	1.05	15,988.83	5.547E-03	Pulse	0.50	3
Sn			1	0.473	ug/l	1.61	3,056.94	1.868E-03	Pulse	0.30	3
Sr			1	0.453	ug/l	2.50	4,203.15	2.569E-03	Pulse	0.50	3
[Pb]			1	0.478	ug/l	3.50	6,016.44	2.087E-03	Pulse	0.50	3
Ca			1	46.874	ug/l	2.00	4,202.47	1.429E-03	Pulse	0.50	3
Ti			1	0.492	ug/l	20.92	184.00	5.240E-04	Pulse	0.50	3
Na			1	46.822	ug/l	2.10	136,827.72	3.896E-01	Pulse	1.00	3
Mg			1	47.536	ug/l	0.38	55,676.92	1.585E-01	Pulse	1.00	3
K			1	52.952	ug/l	3.40	167,823.66	4.778E-01	Pulse	1.00	3
V			1	0.453	ug/l	2.92	5,981.61	1.703E-02	Pulse	0.50	3
Mn			1	0.482	ug/l	4.23	4,167.13	2.198E-02	Pulse	0.50	3
Fe			1	49.020	ug/l	0.07	538,048.25	2.838E+00	Pulse	0.50	3
Co			1	0.480	ug/l	0.88	9,062.81	4.781E-02	Pulse	0.50	3
Ni			1	0.500	ug/l	2.69	3,038.25	1.603E-02	Pulse	0.50	3
Cu			1	0.568	ug/l	2.97	15,210.01	8.024E-02	Pulse	0.50	3
Zn			1	0.144	ug/l	33.94	3,263.62	1.164E-02	Pulse	1.00	3
Cd			1	0.501	ug/l	2.22	1,432.06	5.107E-03	Pulse	0.50	3
Al			1	47.780	ug/l	1.25	25,184.82	7.170E-02	Pulse	1.00	3
Se			1	0.435	ug/l	19.57	93.78	3.343E-04	Pulse	3.00	3
Sb			1	0.448	ug/l	0.79	3,799.07	1.355E-02	Pulse	1.00	3
Se			1	0.388	ug/l	31.99	64.78	2.309E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,882,567.17	1.27	101.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		351,271.13	0.82	100.4	Pulse	0.30	3
1	Ge		189,566.07	0.76	100.2	Pulse	0.30	3
1	In		1,636,097.33	0.77	101.3	Pulse	0.30	3
1	Tb		3,978,753.75	0.42	100.8	Pulse	0.50	3
1	Lu		2,940,495.17	0.63	100.6	Pulse	0.50	3
1	Ge		280,431.07	0.51	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,418.95	6.85	97.9	Pulse	0.30	3

Quantitation Report

File Name 030CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:05
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.950	ug/l	1.64	16,881.33	8.853E-02	Pulse	0.50	3
As			1	0.912	ug/l	1.41	1,561.07	8.187E-03	Pulse	1.00	3
Mo			1	0.927	ug/l	3.17	5,538.83	1.976E-02	Pulse	0.50	3
Pb			1	0.948	ug/l	0.50	24,087.58	8.306E-03	Pulse	1.00	3
Be			1	1.010	ug/l	11.45	91.50	2.610E-04	Pulse	2.00	3
Ag			1	0.937	ug/l	1.46	17,591.69	6.275E-02	Pulse	0.50	3
Ba			1	0.935	ug/l	6.36	2,480.85	1.507E-03	Pulse	0.50	3
Tl			1	0.939	ug/l	0.39	32,689.14	1.127E-02	Pulse	0.50	3
Sn			1	0.937	ug/l	1.41	5,865.42	3.564E-03	Pulse	0.30	3
Sr			1	0.936	ug/l	1.55	8,276.52	5.028E-03	Pulse	0.50	3
[Pb]			1	0.927	ug/l	1.40	11,290.42	3.893E-03	Pulse	0.50	3
Ca			1	95.654	ug/l	1.60	6,832.55	2.307E-03	Pulse	0.50	3
Ti			1	0.936	ug/l	12.11	342.00	9.755E-04	Pulse	0.50	3
Na			1	97.268	ug/l	0.78	253,700.49	7.233E-01	Pulse	1.00	3
Mg			1	97.985	ug/l	0.43	113,429.17	3.234E-01	Pulse	1.00	3
K			1	103.467	ug/l	0.61	226,781.68	6.465E-01	Pulse	1.00	3
V			1	0.914	ug/l	1.34	10,772.33	3.071E-02	Pulse	0.50	3
Mn			1	1.020	ug/l	1.65	8,293.79	4.350E-02	Pulse	0.50	3
Fe			1	99.285	ug/l	0.48	1,076,486.87	5.646E+00	Pulse	0.50	3
Co			1	0.967	ug/l	0.58	18,320.01	9.608E-02	Pulse	0.50	3
Ni			1	1.122	ug/l	4.28	6,198.35	3.250E-02	Pulse	0.50	3
Cu			1	1.071	ug/l	2.56	21,916.45	1.149E-01	Pulse	0.50	3
Zn			1	0.878	ug/l	2.36	5,012.99	1.788E-02	Pulse	1.00	3
Cd			1	0.994	ug/l	4.30	2,838.90	1.013E-02	Pulse	0.50	3
Al			1	96.320	ug/l	0.66	48,954.32	1.396E-01	Pulse	1.00	3
Se			1	0.953	ug/l	9.82	159.33	5.684E-04	Pulse	3.00	3
Sb			1	0.935	ug/l	1.66	7,814.00	2.787E-02	Pulse	1.00	3
Se			1	0.972	ug/l	16.20	99.45	3.547E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,900,033.67	0.98	101.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		350,775.41	0.69	100.2	Pulse	0.30	3
1	Ge		190,680.34	0.47	100.8	Pulse	0.30	3
1	In		1,646,062.26	0.69	101.9	Pulse	0.30	3
1	Tb		3,994,704.00	0.46	101.2	Pulse	0.50	3
1	Lu		2,961,221.08	0.44	101.3	Pulse	0.50	3
1	Ge		280,349.14	0.45	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,395.61	9.20	96.2	Pulse	0.30	3

Quantitation Report

File Name 031CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:09
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.844	ug/l	0.67	130,573.86	6.852E-01	Pulse	0.50	3
As			1	9.635	ug/l	1.45	15,771.84	8.276E-02	Pulse	1.00	3
Mo			1	9.750	ug/l	0.36	56,925.29	2.031E-01	Pulse	0.50	3
Pb			1	9.570	ug/l	0.19	235,786.87	8.105E-02	Pulse	1.00	3
Be			1	9.537	ug/l	1.89	867.35	2.457E-03	Pulse	2.00	3
Ag			1	9.815	ug/l	0.32	183,198.45	6.537E-01	Pulse	0.50	3
Ba			1	9.598	ug/l	0.90	25,208.21	1.529E-02	Pulse	0.50	3
Tl			1	9.767	ug/l	0.37	339,779.02	1.168E-01	Pulse	0.50	3
Sn			1	9.648	ug/l	0.36	58,391.26	3.542E-02	Pulse	0.30	3
Sr			1	9.585	ug/l	0.46	80,776.99	4.899E-02	Pulse	0.50	3
[Pb]			1	9.506	ug/l	0.66	111,840.30	3.844E-02	Pulse	0.50	3
Ca			1	980.035	ug/l	2.30	54,398.95	1.823E-02	Pulse	0.50	3
Ti			1	9.682	ug/l	2.01	3,486.99	9.879E-03	Pulse	0.50	3
Na			1	979.522	ug/l	0.79	2,315,476.00	6.560E+00	Pulse	1.00	3
Mg			1	995.984	ug/l	0.83	1,150,046.25	3.258E+00	Pulse	1.00	3
K			1	993.106	ug/l	1.38	1,277,061.17	3.618E+00	Pulse	1.00	3
V			1	9.627	ug/l	0.79	101,924.08	2.887E-01	Pulse	0.50	3
Mn			1	9.930	ug/l	0.65	76,244.35	4.001E-01	Pulse	0.50	3
Fe			1	993.291	ug/l	0.50	10,590,652.00	5.557E+01	Analog	0.50	3
Co			1	10.042	ug/l	0.56	189,475.28	9.943E-01	Pulse	0.50	3
Ni			1	10.089	ug/l	1.62	51,503.56	2.703E-01	Pulse	0.50	3
Cu			1	10.208	ug/l	0.82	142,189.28	7.461E-01	Pulse	0.50	3
Zn			1	9.413	ug/l	1.33	25,349.95	9.046E-02	Pulse	1.00	3
Cd			1	9.944	ug/l	1.29	28,350.99	1.012E-01	Pulse	0.50	3
Al			1	976.347	ug/l	0.80	483,532.88	1.370E+00	Pulse	1.00	3
Se			1	9.802	ug/l	0.72	1,281.93	4.575E-03	Pulse	3.00	3
Sb			1	9.742	ug/l	1.55	80,455.26	2.871E-01	Pulse	1.00	3
Se			1	9.983	ug/l	2.35	634.67	2.265E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,909,287.92	0.73	102.1	Pulse	0.50	3
1	Sc		352,992.78	0.58	100.9	Pulse	0.30	3
1	Ge		190,570.49	0.73	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,648,718.89	0.75	102.1	Pulse	0.30	3
1	Tb		4,004,537.08	0.43	101.4	Pulse	0.50	3
1	Lu		2,985,140.33	1.11	102.1	Pulse	0.50	3
1	Ge		280,229.77	0.28	100.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,432.28	6.30	98.8	Pulse	0.30	3

Quantitation Report

File Name 032CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:13
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.370	ug/l	0.80	658,673.29	3.471E+00	Pulse	0.50	3
As			1	50.656	ug/l	0.95	82,257.89	4.335E-01	Pulse	1.00	3
Mo			1	50.693	ug/l	0.52	294,802.99	1.054E+00	Pulse	0.50	3
Pb			1	50.387	ug/l	0.78	1,211,724.62	4.254E-01	Pulse	1.00	3
Be			1	50.978	ug/l	1.62	4,595.52	1.313E-02	Pulse	2.00	3
Ag			1	50.487	ug/l	0.52	940,067.96	3.361E+00	Pulse	0.50	3
Ba			1	50.297	ug/l	1.11	130,138.93	8.004E-02	Pulse	0.50	3
Tl			1	51.546	ug/l	0.69	1,754,990.46	6.162E-01	Pulse	0.50	3
Sn			1	50.324	ug/l	0.21	299,397.56	1.841E-01	Pulse	0.30	3
Sr			1	50.262	ug/l	0.97	415,856.04	2.558E-01	Pulse	0.50	3
[Pb]			1	50.332	ug/l	1.56	577,780.46	2.029E-01	Pulse	0.50	3
Ca			1	5157.238	ug/l	1.14	276,550.36	9.342E-02	Pulse	0.50	3
Ti			1	50.218	ug/l	1.32	17,900.22	5.115E-02	Pulse	0.50	3
Na			1	5133.603	ug/l	0.65	11,913,936.00	3.404E+01	Analog	1.00	3
Mg			1	5114.082	ug/l	0.73	5,850,508.67	1.672E+01	Analog	1.00	3
K			1	5117.334	ug/l	0.95	6,087,401.00	1.739E+01	Analog	1.00	3
V			1	50.647	ug/l	0.07	526,228.40	1.504E+00	Pulse	0.50	3
Mn			1	51.590	ug/l	0.93	392,296.95	2.067E+00	Pulse	0.50	3
Fe			1	5166.116	ug/l	0.61	54,771,254.67	2.886E+02	Analog	0.50	3
Co			1	51.989	ug/l	1.03	976,548.84	5.146E+00	Pulse	0.50	3
Ni			1	52.007	ug/l	0.83	262,197.84	1.382E+00	Pulse	0.50	3
Cu			1	52.318	ug/l	0.55	693,641.27	3.655E+00	Pulse	0.50	3
Zn			1	51.055	ug/l	0.38	124,337.18	4.446E-01	Pulse	1.00	3
Cd			1	51.746	ug/l	0.32	147,214.64	5.264E-01	Pulse	0.50	3
Al			1	5130.976	ug/l	0.86	2,512,236.50	7.178E+00	Pulse	1.00	3
Se			1	51.119	ug/l	0.98	6,510.55	2.328E-02	Pulse	3.00	3
Sb			1	50.870	ug/l	0.38	418,837.70	1.498E+00	Pulse	1.00	3
Se			1	51.674	ug/l	2.24	3,104.92	1.110E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,848,411.42	1.02	100.0	Pulse	0.50	3
1	Sc		349,996.40	0.47	100.0	Pulse	0.30	3
1	Ge		189,771.85	0.90	100.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,625,950.35	0.51	100.7	Pulse	0.30	3
1	Tb		3,995,620.33	0.62	101.2	Pulse	0.50	3
1	Lu		2,960,595.75	0.93	101.3	Pulse	0.50	3
1	Ge		279,663.75	0.19	100.3	Pulse	0.30	3
1	Te		4.67	107.85	700.0	Pulse	0.50	3
1	Li		1,434.50	16.64	98.9	Pulse	0.30	3

Quantitation Report

File Name	033CALS.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:17
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.833	ug/l	1.69	1,284,917.04	6.923E+00	Pulse	0.50	3
As			1	101.750	ug/l	1.87	161,517.07	8.703E-01	Pulse	1.00	3
Mo			1	102.398	ug/l	1.56	584,927.56	2.129E+00	Pulse	0.50	3
Pb			1	100.646	ug/l	0.18	2,369,022.75	8.495E-01	Pulse	1.00	3
Be			1	100.901	ug/l	0.85	8,925.13	2.599E-02	Pulse	2.00	3
Ag			1	99.776	ug/l	1.29	1,825,250.79	6.643E+00	Pulse	0.50	3
Ba			1	100.906	ug/l	0.24	256,147.26	1.606E-01	Pulse	0.50	3
Tl			1	102.868	ug/l	0.17	3,429,180.67	1.230E+00	Pulse	0.50	3
Sn			1	99.770	ug/l	0.18	582,199.32	3.649E-01	Pulse	0.30	3
Sr			1	99.725	ug/l	0.19	809,196.81	5.072E-01	Pulse	0.50	3
[Pb]			1	100.765	ug/l	0.65	1,132,218.79	4.060E-01	Pulse	0.50	3
Ca			1	10207.483	ug/l	0.62	542,690.29	1.843E-01	Pulse	0.50	3
Ti			1	100.557	ug/l	1.16	35,166.19	1.024E-01	Pulse	0.50	3
Na			1	10224.038	ug/l	0.73	23,256,850.67	6.772E+01	Analog	1.00	3
Mg			1	10206.121	ug/l	1.15	11,456,102.67	3.336E+01	Analog	1.00	3
K			1	10191.997	ug/l	0.57	11,795,138.33	3.434E+01	Analog	1.00	3
V			1	101.306	ug/l	1.18	1,031,608.21	3.004E+00	Pulse	0.50	3
Mn			1	102.798	ug/l	1.43	764,041.35	4.117E+00	Pulse	0.50	3
Fe			1	10242.144	ug/l	1.04	106,187,013.33	5.721E+02	Analog	0.50	3
Co			1	103.312	ug/l	0.88	1,898,027.54	1.023E+01	Pulse	0.50	3
Ni			1	103.328	ug/l	1.21	509,005.29	2.743E+00	Pulse	0.50	3
Cu			1	103.477	ug/l	1.71	1,334,279.46	7.189E+00	Pulse	0.50	3
Zn			1	101.789	ug/l	1.09	240,717.94	8.761E-01	Pulse	1.00	3
Cd			1	102.120	ug/l	0.70	285,456.25	1.039E+00	Pulse	0.50	3
Al			1	10192.254	ug/l	1.15	4,895,283.83	1.425E+01	Mix	1.00	3
Se			1	101.808	ug/l	1.72	12,701.88	4.623E-02	Pulse	3.00	3
Sb			1	101.990	ug/l	1.02	824,965.37	3.002E+00	Pulse	1.00	3
Se			1	101.289	ug/l	1.23	5,940.37	2.162E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,788,872.58	0.26	97.9	Pulse	0.50	3
1	Sc		343,466.14	1.17	98.1	Pulse	0.30	3
1	Ge		185,623.08	1.69	98.1	Pulse	0.30	3
1	In		1,595,370.66	0.33	98.8	Pulse	0.30	3
1	Tb		3,935,268.83	0.82	99.7	Pulse	0.50	3
1	Lu		2,944,261.42	0.14	100.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		274,802.10	1.32	98.6	Pulse	0.30	3
1	Te		12.00	44.10	1800.0	Pulse	0.50	3
1	Li		1,404.50	9.76	96.9	Pulse	0.30	3

Quantitation Report

File Name 034CALS.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:21
Sample Name CALSTD-7
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	198.249	ug/l	1.50	2,480,872.75	1.332E+01	Pulse	0.50	3
As			1	198.980	ug/l	1.65	316,814.07	1.702E+00	Pulse	1.00	3
Mo			1	198.641	ug/l	1.51	1,129,070.21	4.129E+00	Pulse	0.50	3
Pb			1	199.602	ug/l	1.26	4,600,233.67	1.684E+00	Pulse	1.00	3
Be			1	199.328	ug/l	1.05	17,466.48	5.134E-02	Pulse	2.00	3
Ag			1	126.711	ug/l	1.78	2,306,661.83	8.436E+00	Pulse	0.50	3
Ba			1	199.493	ug/l	1.19	499,406.75	3.174E-01	Pulse	0.50	3
Tl			1	198.192	ug/l	2.73	6,469,779.67	2.369E+00	Mix	0.50	3
Sn			1	200.052	ug/l	0.87	1,151,106.31	7.316E-01	Pulse	0.30	3
Sr			1	200.093	ug/l	0.07	1,600,881.29	1.017E+00	Pulse	0.50	3
[Pb]			1	199.559	ug/l	0.99	2,195,455.42	8.039E-01	Pulse	0.50	3
Ca			1	19857.977	ug/l	0.64	1,050,812.06	3.580E-01	Pulse	0.50	3
Ti			1	199.684	ug/l	1.96	69,166.64	2.033E-01	Pulse	0.50	3
Na			1	19855.626	ug/l	0.78	44,719,205.33	1.314E+02	Analog	1.00	3
Mg			1	19868.636	ug/l	1.03	22,093,077.33	6.494E+01	Analog	1.00	3
K			1	19874.988	ug/l	0.85	22,689,145.33	6.668E+01	Analog	1.00	3
V			1	199.204	ug/l	0.83	2,008,458.50	5.903E+00	Pulse	0.50	3
Mn			1	198.207	ug/l	1.35	1,477,392.37	7.935E+00	Pulse	0.50	3
Fe			1	19837.741	ug/l	1.37	206,302,074.67	1.108E+03	Analog	0.50	3
Co			1	197.845	ug/l	1.58	3,646,019.17	1.958E+01	Pulse	0.50	3
Ni			1	197.829	ug/l	1.84	977,107.54	5.248E+00	Pulse	0.50	3
Cu			1	197.671	ug/l	1.88	2,550,034.25	1.370E+01	Pulse	0.50	3
Zn			1	198.873	ug/l	1.17	465,311.48	1.702E+00	Pulse	1.00	3
Cd			1	198.506	ug/l	1.34	552,157.19	2.019E+00	Pulse	0.50	3
Al			1	19872.336	ug/l	1.13	9,453,972.33	2.779E+01	Analog	1.00	3
Se			1	198.827	ug/l	1.55	24,650.39	9.015E-02	Pulse	3.00	3
Sb			1	198.801	ug/l	1.24	1,600,132.46	5.852E+00	Pulse	1.00	3
Se			1	198.938	ug/l	1.44	11,571.84	4.232E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,731,327.25	0.85	95.9	Pulse	0.50	3
1	Sc		340,271.31	1.72	97.2	Pulse	0.30	3
1	Ge		186,217.22	1.72	98.5	Pulse	0.30	3
1	In		1,573,465.59	0.55	97.4	Pulse	0.30	3
1	Tb		3,929,860.50	0.67	99.5	Pulse	0.50	3
1	Lu		2,934,988.83	0.24	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,472.28	1.37	98.1	Pulse	0.30	3
1	Te		14.00	42.86	2100.0	Pulse	0.50	3
1	Li		1,384.51	7.40	95.5	Pulse	0.30	3

Quantitation Report

File Name 035CCVA.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:25
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.807	ug/l	0.30	648,518.15	3.500E+00	Pulse	0.50	3
As			1	51.132	ug/l	0.30	81,065.30	4.376E-01	Pulse	1.00	3
Mo			1	51.289	ug/l	0.74	292,148.49	1.067E+00	Pulse	0.50	3
Pb			1	50.448	ug/l	0.83	1,206,514.79	4.259E-01	Pulse	1.00	3
Be			1	51.499	ug/l	0.60	4,538.18	1.326E-02	Pulse	2.00	3
Ag			1	50.568	ug/l	0.53	922,259.75	3.367E+00	Pulse	0.50	3
Ba			1	50.898	ug/l	0.11	128,598.13	8.100E-02	Pulse	0.50	3
Tl			1	51.257	ug/l	0.13	1,735,564.42	6.127E-01	Pulse	0.50	3
Sn			1	50.419	ug/l	0.65	292,908.79	1.845E-01	Pulse	0.30	3
Sr			1	50.338	ug/l	0.67	406,699.14	2.562E-01	Pulse	0.50	3
[Pb]			1	50.297	ug/l	0.48	574,221.21	2.027E-01	Pulse	0.50	3
Ca			1	5159.062	ug/l	1.37	272,149.40	9.345E-02	Pulse	0.50	3
Ti			1	50.661	ug/l	1.49	17,653.31	5.160E-02	Pulse	0.50	3
Na			1	5172.412	ug/l	1.71	11,733,126.33	3.430E+01	Analog	1.00	3
Mg			1	5155.590	ug/l	1.29	5,765,308.50	1.685E+01	Analog	1.00	3
K			1	5149.117	ug/l	1.22	5,986,841.83	1.750E+01	Analog	1.00	3
V			1	50.715	ug/l	0.82	515,095.78	1.506E+00	Pulse	0.50	3
Mn			1	51.771	ug/l	0.28	384,354.69	2.075E+00	Pulse	0.50	3
Fe			1	5189.939	ug/l	0.28	53,719,370.67	2.900E+02	Analog	0.50	3
Co			1	52.440	ug/l	0.59	961,709.12	5.191E+00	Pulse	0.50	3
Ni			1	52.625	ug/l	0.26	259,025.88	1.398E+00	Pulse	0.50	3
Cu			1	53.102	ug/l	0.41	687,244.40	3.709E+00	Pulse	0.50	3
Zn			1	52.428	ug/l	0.67	124,985.82	4.563E-01	Pulse	1.00	3
Cd			1	51.438	ug/l	0.30	143,335.13	5.233E-01	Pulse	0.50	3
Al			1	5134.760	ug/l	1.54	2,457,538.92	7.183E+00	Pulse	1.00	3
Se			1	51.559	ug/l	0.61	6,431.64	2.348E-02	Pulse	3.00	3
Sb			1	51.309	ug/l	0.94	413,785.31	1.511E+00	Pulse	1.00	3
Se			1	51.729	ug/l	0.74	3,044.36	1.111E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,832,612.08	0.50	99.4	Pulse	0.50	3
1	Sc		342,159.82	1.57	97.8	Pulse	0.30	3
1	Ge		185,271.64	0.62	98.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,587,695.04	0.35	98.3	Pulse	0.30	3
1	Tb		3,900,612.42	1.81	98.8	Mix	0.50	3
1	Lu		2,912,384.50	0.53	99.7	Pulse	0.50	3
1	Ge		273,927.14	0.17	98.3	Pulse	0.30	3
1	Te		8.00	25.00	1200.0	Pulse	0.50	3
1	Li		1,375.61	13.99	94.9	Pulse	0.30	3

Quantitation Report

File Name 036_CCV.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:29
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	104.712	ug/l	6.59	1,252,420.29	7.050E+00	Pulse	0.50	3
As			1	104.605	ug/l	6.95	158,930.84	8.947E-01	Pulse	1.00	3
Mo			1	104.416	ug/l	5.86	571,601.54	2.171E+00	Pulse	0.50	3
Pb			1	103.805	ug/l	6.98	2,349,881.42	8.761E-01	Pulse	1.00	3
Be			1	104.661	ug/l	5.14	8,802.91	2.696E-02	Pulse	2.00	3
Ag			1	102.918	ug/l	6.03	1,804,115.83	6.852E+00	Pulse	0.50	3
Ba			1	103.983	ug/l	6.97	252,992.96	1.655E-01	Pulse	0.50	3
Tl			1	106.079	ug/l	7.17	3,400,630.00	1.268E+00	Pulse	0.50	3
Sn			1	104.746	ug/l	6.77	585,880.55	3.831E-01	Pulse	0.30	3
Sr			1	103.581	ug/l	6.36	805,750.07	5.268E-01	Pulse	0.50	3
[Pb]			1	103.093	ug/l	6.99	1,114,027.96	4.153E-01	Pulse	0.50	3
Ca			1	10359.746	ug/l	6.27	529,453.00	1.871E-01	Pulse	0.50	3
Ti			1	105.169	ug/l	5.32	34,972.50	1.071E-01	Pulse	0.50	3
Na			1	10599.483	ug/l	6.68	22,911,412.00	7.020E+01	Analog	1.00	3
Mg			1	10522.705	ug/l	6.06	11,227,388.00	3.439E+01	Analog	1.00	3
K			1	10519.108	ug/l	7.41	11,562,132.33	3.544E+01	Analog	1.00	3
V			1	104.440	ug/l	5.73	1,011,036.08	3.097E+00	Pulse	0.50	3
Mn			1	105.187	ug/l	6.40	748,405.63	4.212E+00	Pulse	0.50	3
Fe			1	10531.690	ug/l	6.96	104,496,512.00	5.883E+02	Analog	0.50	3
Co			1	105.240	ug/l	6.53	1,850,694.54	1.042E+01	Pulse	0.50	3
Ni			1	106.144	ug/l	7.21	500,367.11	2.817E+00	Pulse	0.50	3
Cu			1	106.817	ug/l	6.29	1,318,483.91	7.420E+00	Pulse	0.50	3
Zn			1	105.361	ug/l	6.20	238,655.01	9.064E-01	Pulse	1.00	3
Cd			1	104.750	ug/l	6.34	280,532.93	1.066E+00	Pulse	0.50	3
Al			1	10477.793	ug/l	6.01	4,783,634.50	1.465E+01	Pulse	1.00	3
Se			1	104.774	ug/l	6.14	12,525.21	4.757E-02	Pulse	3.00	3
Sb			1	104.961	ug/l	6.17	813,484.94	3.090E+00	Pulse	1.00	3
Se			1	103.023	ug/l	7.61	5,785.55	2.199E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,690,389.17	6.57	94.4	Pulse	0.50	3
1	Sc		327,243.73	5.97	93.5	Pulse	0.30	3
1	Ge		178,159.58	6.41	94.2	Pulse	0.30	3
1	In		1,533,555.67	6.28	95.0	Pulse	0.30	3
1	Tb		3,802,911.42	6.54	96.3	Pulse	0.50	3
1	Lu		2,837,615.67	6.14	97.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		263,948.05	6.10	94.7	Pulse	0.30	3
1	Te		9.33	86.60	1400.0	Pulse	0.50	3
1	Li		1,317.83	11.98	90.9	Pulse	0.30	3

Quantitation Report

File Name 037_CCB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:32
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.021	ug/l	31.32	4,849.29	2.623E-02	Pulse	0.50	3
As			1	0.019	ug/l	24.82	101.67	5.499E-04	Pulse	1.00	3
Mo			1	0.109	ug/l	22.38	752.02	2.755E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	25.30	1,472.40	5.203E-04	Pulse	1.00	3
Be			1	0.023	ug/l	87.46	2.33	6.831E-06	Pulse	2.00	3
Ag			1	0.081	ug/l	9.32	1,569.41	5.750E-03	Pulse	0.50	3
Ba			1	0.002	ug/l	189.74	37.33	2.335E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	28.56	742.02	2.621E-04	Pulse	0.50	3
Sn			1	0.146	ug/l	15.62	1,076.71	6.735E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	161.48	444.68	2.782E-04	Pulse	0.50	3
[Pb]			1	0.022	ug/l	40.04	701.35	2.478E-04	Pulse	0.50	3
Ca			1	-9.540	ug/l	-17.81	1,199.38	4.138E-04	Pulse	0.50	3
Ti			1	0.010	ug/l	32.83	11.33	3.309E-05	Pulse	0.50	3
Na			1	0.218	ug/l	279.18	27,826.94	8.125E-02	Pulse	1.00	3
Mg			1	0.693	ug/l	27.57	1,854.09	5.415E-03	Pulse	1.00	3
K			1	-1.033	ug/l	-118.14	101,885.97	2.975E-01	Pulse	1.00	3
V			1	0.009	ug/l	46.97	1,336.72	3.903E-03	Pulse	0.50	3
Mn			1	-0.015	ug/l	-37.35	382.67	2.072E-03	Pulse	0.50	3
Fe			1	1.181	ug/l	15.78	30,785.70	1.666E-01	Pulse	0.50	3
Co			1	0.012	ug/l	30.11	274.67	1.488E-03	Pulse	0.50	3
Ni			1	-0.016	ug/l	-28.01	433.34	2.344E-03	Pulse	0.50	3
Cu			1	0.008	ug/l	241.63	7,674.21	4.152E-02	Pulse	0.50	3
Zn			1	-0.719	ug/l	-3.30	1,174.37	4.302E-03	Pulse	1.00	3
Cd			1	0.013	ug/l	12.88	39.33	1.441E-04	Pulse	0.50	3
Al			1	-1.495	ug/l	-17.90	963.02	2.813E-03	Pulse	1.00	3
Se			1	0.153	ug/l	32.61	56.33	2.064E-04	Pulse	3.00	3
Sb			1	0.040	ug/l	32.98	421.01	1.543E-03	Pulse	1.00	3
Se			1	0.099	ug/l	68.12	46.33	1.697E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,829,010.83	0.42	99.3	Pulse	0.50	3
1	Sc		342,521.11	0.85	97.9	Pulse	0.30	3
1	Ge		184,878.93	1.12	97.8	Pulse	0.30	3
1	In		1,598,631.95	0.01	99.0	Pulse	0.30	3
1	Tb		3,885,811.92	0.14	98.4	Pulse	0.50	3
1	Lu		2,899,122.92	0.34	99.2	Pulse	0.50	3
1	Ge		272,970.03	0.16	97.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,484.51	2.26	102.4	Pulse	0.30	3

Quantitation Report

File Name	038_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:36
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	040CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:43
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.731	ug/l	1.65	655,007.98	3.428E+00	Pulse	0.50	3
As			1	49.817	ug/l	1.33	81,453.18	4.263E-01	Pulse	1.00	3
Mo			1	49.763	ug/l	1.11	291,755.14	1.035E+00	Pulse	0.50	3
Pb			1	50.092	ug/l	0.42	1,201,066.63	4.229E-01	Pulse	1.00	3
Be			1	50.824	ug/l	1.12	4,600.69	1.309E-02	Pulse	2.00	3
Ag			1	49.463	ug/l	0.73	928,504.50	3.293E+00	Pulse	0.50	3
Ba			1	50.081	ug/l	0.89	129,169.36	7.970E-02	Pulse	0.50	3
Tl			1	50.860	ug/l	0.28	1,726,538.50	6.080E-01	Pulse	0.50	3
Sn			1	49.829	ug/l	1.07	295,514.96	1.823E-01	Pulse	0.30	3
Sr			1	49.938	ug/l	0.82	411,873.86	2.541E-01	Pulse	0.50	3
[Pb]			1	49.999	ug/l	0.48	572,333.04	2.015E-01	Pulse	0.50	3
Ca			1	5136.181	ug/l	0.45	276,406.14	9.304E-02	Pulse	0.50	3
Ti			1	49.779	ug/l	1.65	17,818.78	5.070E-02	Pulse	0.50	3
Na			1	5139.371	ug/l	0.22	11,977,877.00	3.408E+01	Analog	1.00	3
Mg			1	5120.081	ug/l	0.72	5,882,087.83	1.674E+01	Analog	1.00	3
K			1	5121.423	ug/l	0.32	6,118,159.83	1.741E+01	Analog	1.00	3
V			1	50.148	ug/l	1.01	523,241.23	1.489E+00	Pulse	0.50	3
Mn			1	50.919	ug/l	1.60	389,860.43	2.040E+00	Pulse	0.50	3
Fe			1	5113.902	ug/l	1.23	54,589,972.00	2.857E+02	Analog	0.50	3
Co			1	51.151	ug/l	1.38	967,424.65	5.063E+00	Pulse	0.50	3
Ni			1	51.069	ug/l	1.23	259,255.52	1.357E+00	Pulse	0.50	3
Cu			1	51.830	ug/l	1.50	691,964.44	3.622E+00	Pulse	0.50	3
Zn			1	51.072	ug/l	1.57	125,387.02	4.447E-01	Pulse	1.00	3
Cd			1	50.406	ug/l	0.79	144,570.60	5.128E-01	Pulse	0.50	3
Al			1	5084.742	ug/l	1.46	2,500,038.92	7.113E+00	Pulse	1.00	3
Se			1	50.450	ug/l	1.97	6,477.88	2.298E-02	Pulse	3.00	3
Sb			1	49.709	ug/l	1.22	412,612.64	1.463E+00	Pulse	1.00	3
Se			1	50.417	ug/l	0.27	3,055.13	1.084E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,839,927.25	1.17	99.7	Pulse	0.50	3
1	Sc		351,478.06	0.75	100.4	Pulse	0.30	3
1	Ge		191,083.69	0.92	101.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,620,721.98	0.35	100.4	Pulse	0.30	3
1	Tb		3,989,256.33	0.76	101.1	Pulse	0.50	3
1	Lu		2,970,950.75	0.49	101.7	Pulse	0.50	3
1	Ge		281,952.11	0.79	101.2	Pulse	0.30	3
1	Te		12.00	109.29	1800.0	Pulse	0.50	3
1	Li		1,534.51	3.78	105.8	Pulse	0.30	3

Quantitation Report

File Name	041_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:47
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.518	ug/l	1.36	1,264,041.96	6.634E+00	Pulse	0.50	3
As			1	97.755	ug/l	0.57	159,324.64	8.362E-01	Pulse	1.00	3
Mo			1	98.028	ug/l	0.59	571,012.88	2.038E+00	Pulse	0.50	3
Pb			1	98.451	ug/l	0.71	2,338,616.75	8.309E-01	Pulse	1.00	3
Be			1	98.984	ug/l	1.10	8,935.80	2.549E-02	Pulse	2.00	3
Ag			1	96.124	ug/l	0.44	1,793,084.42	6.400E+00	Pulse	0.50	3
Ba			1	98.086	ug/l	0.99	251,209.89	1.561E-01	Pulse	0.50	3
Tl			1	100.428	ug/l	0.48	3,378,476.58	1.200E+00	Pulse	0.50	3
Sn			1	98.548	ug/l	0.85	580,194.16	3.605E-01	Pulse	0.30	3
Sr			1	98.249	ug/l	0.36	804,321.50	4.997E-01	Pulse	0.50	3
[Pb]			1	98.067	ug/l	0.40	1,111,985.34	3.951E-01	Pulse	0.50	3
Ca			1	9913.775	ug/l	0.30	533,177.96	1.790E-01	Pulse	0.50	3
Ti			1	97.738	ug/l	0.55	34,884.99	9.952E-02	Pulse	0.50	3
Na			1	9945.474	ug/l	0.80	23,088,597.33	6.587E+01	Analog	1.00	3
Mg			1	9914.352	ug/l	0.55	11,357,672.67	3.240E+01	Analog	1.00	3
K			1	9914.053	ug/l	0.76	11,712,001.00	3.341E+01	Analog	1.00	3
V			1	97.827	ug/l	0.83	1,016,736.85	2.901E+00	Pulse	0.50	3
Mn			1	98.700	ug/l	0.50	753,157.37	3.953E+00	Pulse	0.50	3
Fe			1	9862.677	ug/l	0.66	104,973,589.33	5.509E+02	Analog	0.50	3
Co			1	98.998	ug/l	0.71	1,867,149.29	9.799E+00	Pulse	0.50	3
Ni			1	98.545	ug/l	0.64	498,402.34	2.616E+00	Pulse	0.50	3
Cu			1	99.233	ug/l	1.00	1,314,068.17	6.896E+00	Pulse	0.50	3
Zn			1	98.693	ug/l	0.62	238,080.39	8.497E-01	Pulse	1.00	3
Cd			1	97.788	ug/l	0.87	278,715.24	9.948E-01	Pulse	0.50	3
Al			1	9839.595	ug/l	0.57	4,823,232.50	1.376E+01	Pulse	1.00	3
Se			1	98.322	ug/l	0.68	12,510.42	4.465E-02	Pulse	3.00	3
Sb			1	98.019	ug/l	0.85	808,445.88	2.885E+00	Pulse	1.00	3
Se			1	99.077	ug/l	0.67	5,925.92	2.115E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,814,359.75	0.44	98.8	Pulse	0.50	3
1	Sc		350,512.96	0.71	100.2	Pulse	0.30	3
1	Ge		190,548.38	0.76	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,609,571.05	0.16	99.7	Pulse	0.30	3
1	Tb		4,005,883.67	0.25	101.5	Pulse	0.50	3
1	Lu		2,978,079.42	0.36	101.9	Pulse	0.50	3
1	Ge		280,186.04	0.15	100.5	Pulse	0.30	3
1	Te		4.00	100.00	600.0	Pulse	0.50	3
1	Li		1,385.61	10.73	95.6	Pulse	0.30	3

Quantitation Report

File Name	042_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:51
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.003	ug/l	802.21	4,696.59	2.503E-02	Pulse	0.50	3
As			1	0.023	ug/l	27.40	109.67	5.837E-04	Pulse	1.00	3
Mo			1	0.088	ug/l	20.22	634.01	2.311E-03	Pulse	0.50	3
Pb			1	0.017	ug/l	36.24	1,279.05	4.509E-04	Pulse	1.00	3
Be			1	0.013	ug/l	85.41	1.50	4.344E-06	Pulse	2.00	3
Ag			1	0.028	ug/l	8.27	603.34	2.196E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	200.63	35.33	2.194E-05	Pulse	0.50	3
Tl			1	0.010	ug/l	11.79	496.68	1.751E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	31.40	925.59	5.756E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	376.57	444.68	2.764E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	28.15	647.35	2.282E-04	Pulse	0.50	3
Ca			1	-7.508	ug/l	-24.05	1,312.72	4.504E-04	Pulse	0.50	3
Ti			1	0.002	ug/l	1344.93	8.67	2.494E-05	Pulse	0.50	3
Na			1	-0.717	ug/l	-46.02	25,968.44	7.507E-02	Pulse	1.00	3
Mg			1	0.227	ug/l	61.28	1,347.38	3.893E-03	Pulse	1.00	3
K			1	-1.338	ug/l	-28.20	102,544.00	2.965E-01	Pulse	1.00	3
V			1	0.010	ug/l	60.38	1,360.72	3.933E-03	Pulse	0.50	3
Mn			1	-0.016	ug/l	-11.66	387.34	2.063E-03	Pulse	0.50	3
Fe			1	0.596	ug/l	5.79	25,140.27	1.339E-01	Pulse	0.50	3
Co			1	0.007	ug/l	5.86	190.00	1.012E-03	Pulse	0.50	3
Ni			1	-0.022	ug/l	-21.35	410.01	2.183E-03	Pulse	0.50	3
Cu			1	-0.030	ug/l	-6.69	7,309.42	3.893E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-1.73	1,173.04	4.271E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	62.89	34.00	1.234E-04	Pulse	0.50	3
Al			1	-1.990	ug/l	-8.28	734.01	2.121E-03	Pulse	1.00	3
Se			1	0.037	ug/l	306.55	42.22	1.541E-04	Pulse	3.00	3
Sb			1	0.029	ug/l	25.94	334.00	1.218E-03	Pulse	1.00	3
Se			1	0.110	ug/l	66.55	47.22	1.720E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,836,038.25	0.69	99.5	Pulse	0.50	3
1	Sc		345,888.52	0.81	98.8	Pulse	0.30	3
1	Ge		187,762.02	1.17	99.3	Pulse	0.30	3
1	In		1,609,157.44	0.76	99.7	Pulse	0.30	3
1	Tb		3,927,826.50	0.84	99.5	Pulse	0.50	3
1	Lu		2,914,355.92	0.62	99.7	Pulse	0.50	3
1	Ge		274,641.90	1.28	98.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,434.51	4.32	98.9	Pulse	0.30	3

Quantitation Report

File Name	043_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 10:55
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name 044SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 10:58
Sample Name FA98836-13
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.355	ug/l	1.11	21,296.30	1.157E-01	Pulse	0.50	3
As			1	0.524	ug/l	6.89	896.36	4.869E-03	Pulse	1.00	3
Mo			1	0.497	ug/l	3.15	2,924.91	1.081E-02	Pulse	0.50	3
Pb			1	0.485	ug/l	2.52	12,067.60	4.398E-03	Pulse	1.00	3
Be			1	0.518	ug/l	10.40	46.33	1.344E-04	Pulse	2.00	3
Ag			1	0.935	ug/l	1.59	16,932.40	6.260E-02	Pulse	0.50	3
Ba			1	0.463	ug/l	6.95	1,186.71	7.566E-04	Pulse	0.50	3
Tl			1	0.445	ug/l	1.38	14,742.37	5.371E-03	Pulse	0.50	3
Sn			1	0.592	ug/l	2.77	3,614.82	2.305E-03	Pulse	0.30	3
Sr			1	0.495	ug/l	5.14	4,367.85	2.786E-03	Pulse	0.50	3
[Pb]			1	0.474	ug/l	4.85	5,680.96	2.069E-03	Pulse	0.50	3
Ca			1	47.308	ug/l	1.81	4,023.76	1.437E-03	Pulse	0.50	3
Ti			1	0.645	ug/l	4.87	234.00	6.790E-04	Pulse	0.50	3
Na			1	46.054	ug/l	0.32	132,489.60	3.845E-01	Pulse	1.00	3
Mg			1	23.488	ug/l	1.11	27,536.85	7.991E-02	Pulse	1.00	3
K			1	48.873	ug/l	2.64	159,945.09	4.642E-01	Pulse	1.00	3
V			1	0.722	ug/l	1.15	8,617.93	2.501E-02	Pulse	0.50	3
Mn			1	0.526	ug/l	3.39	4,367.17	2.372E-02	Pulse	0.50	3
Fe			1	27.307	ug/l	0.92	299,261.85	1.626E+00	Pulse	0.50	3
Co			1	0.484	ug/l	0.27	8,884.73	4.826E-02	Pulse	0.50	3
Ni			1	0.465	ug/l	5.20	2,776.88	1.508E-02	Pulse	0.50	3
Cu			1	1.160	ug/l	1.07	22,292.20	1.211E-01	Pulse	0.50	3
Zn			1	1.217	ug/l	5.82	5,616.16	2.076E-02	Pulse	1.00	3
Cd			1	0.477	ug/l	1.12	1,317.38	4.870E-03	Pulse	0.50	3
Al			1	4.288	ug/l	1.56	3,755.69	1.090E-02	Pulse	1.00	3
Se			1	0.421	ug/l	11.63	88.67	3.279E-04	Pulse	3.00	3
Sb			1	1.878	ug/l	0.96	15,050.16	5.564E-02	Pulse	1.00	3
Se			1	0.552	ug/l	15.98	71.89	2.658E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,744,394.50	0.95	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		344,606.45	1.13	98.5	Pulse	0.30	3
1	Ge		184,087.20	0.24	97.3	Pulse	0.30	3
1	In		1,567,866.61	1.09	97.1	Pulse	0.30	3
1	Tb		3,813,336.75	0.61	96.6	Pulse	0.50	3
1	Lu		2,800,112.08	0.41	95.8	Pulse	0.50	3
1	Ge		270,502.09	0.63	97.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,432.28	6.03	98.8	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:02
Sample Name FA98836-14
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.262	ug/l	3.09	20,171.78	1.095E-01	Pulse	0.50	3
As			1	0.344	ug/l	8.13	613.01	3.328E-03	Pulse	1.00	3
Mo			1	0.315	ug/l	4.70	1,880.77	7.031E-03	Pulse	0.50	3
Pb			1	0.321	ug/l	1.67	8,174.63	3.011E-03	Pulse	1.00	3
Be			1	0.361	ug/l	11.06	32.00	9.403E-05	Pulse	2.00	3
Ag			1	0.714	ug/l	0.78	12,803.78	4.788E-02	Pulse	0.50	3
Ba			1	0.302	ug/l	3.92	774.02	5.015E-04	Pulse	0.50	3
Tl			1	0.283	ug/l	1.57	9,329.91	3.436E-03	Pulse	0.50	3
Sn			1	0.428	ug/l	3.72	2,632.44	1.705E-03	Pulse	0.30	3
Sr			1	0.324	ug/l	1.31	2,958.91	1.917E-03	Pulse	0.50	3
[Pb]			1	0.291	ug/l	4.44	3,611.73	1.331E-03	Pulse	0.50	3
Ca			1	20.431	ug/l	8.78	2,652.86	9.532E-04	Pulse	0.50	3
Ti			1	0.951	ug/l	8.33	337.33	9.909E-04	Pulse	0.50	3
Na			1	16.218	ug/l	0.65	63,676.75	1.871E-01	Pulse	1.00	3
Mg			1	19.014	ug/l	0.40	22,220.63	6.529E-02	Pulse	1.00	3
K			1	23.103	ug/l	1.80	128,678.97	3.781E-01	Pulse	1.00	3
V			1	0.600	ug/l	0.37	7,286.05	2.141E-02	Pulse	0.50	3
Mn			1	0.340	ug/l	6.44	3,002.24	1.630E-02	Pulse	0.50	3
Fe			1	26.685	ug/l	1.50	293,083.54	1.591E+00	Pulse	0.50	3
Co			1	0.304	ug/l	2.17	5,602.16	3.041E-02	Pulse	0.50	3
Ni			1	0.311	ug/l	6.02	2,027.45	1.100E-02	Pulse	0.50	3
Cu			1	1.017	ug/l	1.91	20,490.20	1.112E-01	Pulse	0.50	3
Zn			1	0.990	ug/l	3.33	5,036.67	1.883E-02	Pulse	1.00	3
Cd			1	0.284	ug/l	4.78	776.02	2.903E-03	Pulse	0.50	3
Al			1	2.199	ug/l	9.43	2,715.19	7.977E-03	Pulse	1.00	3
Se			1	0.617	ug/l	5.94	111.34	4.163E-04	Pulse	3.00	3
Sb			1	1.218	ug/l	0.95	9,682.90	3.621E-02	Pulse	1.00	3
Se			1	0.569	ug/l	23.14	72.00	2.694E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,715,071.42	1.08	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		340,340.47	0.49	97.3	Pulse	0.30	3
1	Ge		184,214.11	0.51	97.4	Pulse	0.30	3
1	In		1,543,749.14	0.77	95.6	Pulse	0.30	3
1	Tb		3,765,183.67	1.32	95.4	Pulse	0.50	3
1	Lu		2,782,364.42	1.09	95.2	Pulse	0.50	3
1	Ge		267,411.54	1.06	96.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,551.18	4.34	107.0	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:06
Sample Name FA98836-15
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.737	ug/l	0.90	28,219.06	1.555E-01	Pulse	0.50	3
As			1	5.079	ug/l	3.39	1,647.07	9.073E-03	Pulse	1.00	3
Mo			1	4.932	ug/l	3.04	5,671.55	2.098E-02	Pulse	0.50	3
Pb			1	5.101	ug/l	1.60	24,200.76	8.912E-03	Pulse	1.00	3
Be			1	4.723	ug/l	8.18	83.50	2.442E-04	Pulse	2.00	3
Ag			1	6.434	ug/l	1.27	23,245.87	8.601E-02	Pulse	0.50	3
Ba			1	4.860	ug/l	5.46	2,428.84	1.567E-03	Pulse	0.50	3
Tl			1	4.948	ug/l	1.60	32,256.97	1.188E-02	Pulse	0.50	3
Sn			1	5.489	ug/l	2.53	6,435.61	4.153E-03	Pulse	0.30	3
Sr			1	4.983	ug/l	1.83	8,264.51	5.333E-03	Pulse	0.50	3
[Pb]			1	5.000	ug/l	1.65	11,371.81	4.187E-03	Pulse	0.50	3
Ca			1	542.759	ug/l	4.02	7,077.30	2.539E-03	Pulse	0.50	3
Ti			1	4.823	ug/l	7.66	343.34	1.005E-03	Pulse	0.50	3
Na			1	511.743	ug/l	0.44	258,688.10	7.569E-01	Pulse	1.00	3
Mg			1	516.651	ug/l	0.51	116,492.36	3.408E-01	Pulse	1.00	3
K			1	543.090	ug/l	1.00	226,839.77	6.637E-01	Pulse	1.00	3
V			1	6.444	ug/l	2.05	14,285.24	4.180E-02	Pulse	0.50	3
Mn			1	5.356	ug/l	1.40	8,268.46	4.555E-02	Pulse	0.50	3
Fe			1	557.126	ug/l	1.14	1,147,921.08	6.324E+00	Pulse	0.50	3
Co			1	5.213	ug/l	2.30	18,789.79	1.035E-01	Pulse	0.50	3
Ni			1	5.163	ug/l	0.51	5,470.79	3.014E-02	Pulse	0.50	3
Cu			1	9.974	ug/l	2.19	32,453.90	1.788E-01	Pulse	0.50	3
Zn			1	7.672	ug/l	3.98	6,341.05	2.346E-02	Pulse	1.00	3
Cd			1	4.974	ug/l	1.53	2,738.88	1.013E-02	Pulse	0.50	3
Al			1	489.131	ug/l	0.66	48,418.71	1.417E-01	Pulse	1.00	3
Se			1	4.914	ug/l	2.00	157.33	5.821E-04	Pulse	3.00	3
Sb			1	4.785	ug/l	2.99	7,708.96	2.852E-02	Pulse	1.00	3
Se			1	4.462	ug/l	17.97	91.33	3.379E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,715,638.58	0.16	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,778.69	0.73	97.7	Pulse	0.30	3
1	Ge		181,524.50	0.55	96.0	Pulse	0.30	3
1	In		1,549,650.46	1.13	96.0	Pulse	0.30	3
1	Tb		3,789,921.67	0.44	96.0	Pulse	0.50	3
1	Lu		2,787,580.67	1.13	95.4	Pulse	0.50	3
1	Ge		270,272.67	0.18	97.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,495.62	5.24	103.1	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:10
Sample Name FA98836-16
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	15.401	ug/l	0.66	42,057.81	2.314E-01	Pulse	0.50	3
As			1	10.146	ug/l	2.52	3,222.94	1.774E-02	Pulse	1.00	3
Mo			1	10.214	ug/l	3.33	11,512.23	4.294E-02	Pulse	0.50	3
Pb			1	10.129	ug/l	1.14	47,187.43	1.740E-02	Pulse	1.00	3
Be			1	10.635	ug/l	8.64	187.33	5.488E-04	Pulse	2.00	3
Ag			1	11.732	ug/l	0.71	41,969.24	1.565E-01	Pulse	0.50	3
Ba			1	9.777	ug/l	2.94	4,864.67	3.131E-03	Pulse	0.50	3
Tl			1	10.073	ug/l	1.55	65,459.71	2.413E-02	Pulse	0.50	3
Sn			1	10.314	ug/l	2.15	11,935.03	7.682E-03	Pulse	0.30	3
Sr			1	9.931	ug/l	1.82	16,100.88	1.036E-02	Pulse	0.50	3
[Pb]			1	10.124	ug/l	1.81	22,552.85	8.315E-03	Pulse	0.50	3
Ca			1	1063.629	ug/l	2.37	12,319.90	4.415E-03	Pulse	0.50	3
Ti			1	9.795	ug/l	3.65	688.68	2.017E-03	Pulse	0.50	3
Na			1	1044.260	ug/l	0.63	498,903.53	1.461E+00	Pulse	1.00	3
Mg			1	1044.598	ug/l	1.00	234,152.76	6.859E-01	Pulse	1.00	3
K			1	1070.680	ug/l	0.21	346,888.06	1.016E+00	Pulse	1.00	3
V			1	11.565	ug/l	0.21	24,621.51	7.213E-02	Pulse	0.50	3
Mn			1	10.742	ug/l	1.60	16,113.38	8.866E-02	Pulse	0.50	3
Fe			1	1093.110	ug/l	1.01	2,237,173.33	1.231E+01	Pulse	0.50	3
Co			1	10.442	ug/l	1.13	37,624.42	2.070E-01	Pulse	0.50	3
Ni			1	10.414	ug/l	1.01	10,536.90	5.798E-02	Pulse	0.50	3
Cu			1	13.635	ug/l	0.79	41,681.46	2.294E-01	Pulse	0.50	3
Zn			1	11.001	ug/l	3.84	7,807.59	2.912E-02	Pulse	1.00	3
Cd			1	10.241	ug/l	2.53	5,589.53	2.085E-02	Pulse	0.50	3
Al			1	1009.586	ug/l	1.23	98,039.49	2.872E-01	Pulse	1.00	3
Se			1	9.901	ug/l	7.23	277.12	1.034E-03	Pulse	3.00	3
Sb			1	9.830	ug/l	1.38	15,608.63	5.822E-02	Pulse	1.00	3
Se			1	9.425	ug/l	8.97	147.00	5.483E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,712,757.67	1.40	95.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,371.84	0.47	97.5	Pulse	0.30	3
1	Ge		181,729.17	0.54	96.1	Pulse	0.30	3
1	In		1,553,621.78	0.48	96.2	Pulse	0.30	3
1	Tb		3,778,674.00	0.50	95.7	Pulse	0.50	3
1	Lu		2,790,659.67	0.88	95.5	Pulse	0.50	3
1	Ge		268,093.79	0.32	96.2	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,537.84	10.88	106.1	Pulse	0.30	3

Quantitation Report

File Name	048_BSP.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:13
Sample Name	MP41201-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	511.582	ug/l	0.56	1,256,894.92	6.889E+00	Pulse	0.50	3
As			1	518.351	ug/l	0.37	161,791.01	8.867E-01	Pulse	1.00	3
Mo			1	504.014	ug/l	0.34	558,029.69	2.096E+00	Pulse	0.50	3
Pb			1	504.115	ug/l	0.29	2,254,153.50	8.510E-01	Pulse	1.00	3
Be			1	517.506	ug/l	0.78	8,985.65	2.666E-02	Pulse	2.00	3
Ag			1	264.564	ug/l	0.11	938,094.14	3.523E+00	Pulse	0.50	3
Ba			1	498.927	ug/l	0.56	242,953.77	1.588E-01	Pulse	0.50	3
Tl			1	496.426	ug/l	0.31	3,143,719.92	1.187E+00	Pulse	0.50	3
Sn			1	539.167	ug/l	0.09	603,499.89	3.944E-01	Pulse	0.30	3
Sr			1	499.942	ug/l	0.61	778,127.35	5.086E-01	Pulse	0.50	3
[Pb]			1	483.796	ug/l	0.69	1,032,674.04	3.898E-01	Pulse	0.50	3
Ca			1	50700.791	ug/l	0.39	514,151.80	1.831E-01	Pulse	0.50	3
Ti			1	515.799	ug/l	1.05	35,408.54	1.050E-01	Pulse	0.50	3
Na			1	50289.950	ug/l	0.12	22,456,389.33	6.662E+01	Analog	1.00	3
Mg			1	49832.584	ug/l	0.17	10,980,573.67	3.257E+01	Analog	1.00	3
K			1	49405.524	ug/l	0.28	11,226,692.67	3.330E+01	Analog	1.00	3
V			1	499.460	ug/l	0.26	998,446.63	2.962E+00	Pulse	0.50	3
Mn			1	504.260	ug/l	0.45	736,899.85	4.039E+00	Pulse	0.50	3
Fe			1	53848.764	ug/l	0.69	109,760,394.67	6.016E+02	Analog	0.50	3
Co			1	510.635	ug/l	0.23	1,844,396.29	1.011E+01	Pulse	0.50	3
Ni			1	504.460	ug/l	0.55	488,590.24	2.678E+00	Pulse	0.50	3
Cu			1	513.873	ug/l	0.81	1,302,930.79	7.141E+00	Pulse	0.50	3
Zn			1	595.132	ug/l	0.15	272,311.06	1.023E+00	Pulse	1.00	3
Cd			1	498.826	ug/l	0.29	270,237.44	1.015E+00	Pulse	0.50	3
Al			1	48657.411	ug/l	0.19	4,587,725.83	1.361E+01	Pulse	1.00	3
Se			1	505.670	ug/l	1.35	12,228.13	4.592E-02	Pulse	3.00	3
Sb			1	510.023	ug/l	0.17	799,564.94	3.003E+00	Pulse	1.00	3
Se			1	499.408	ug/l	1.64	5,677.07	2.132E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,649,026.25	1.09	93.0	Pulse	0.50	3
1	Sc		337,093.08	0.30	96.3	Pulse	0.30	3
1	Ge		182,454.66	0.41	96.5	Pulse	0.30	3
1	In		1,530,132.82	0.93	94.8	Pulse	0.30	3
1	Tb		3,768,705.42	1.17	95.5	Pulse	0.50	3
1	Lu		2,807,897.33	0.84	96.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		266,281.01	0.57	95.5	Pulse	0.30	3
1	Te		2.00	173.21	300.0	Pulse	0.50	3
1	Li		1,422.28	9.39	98.1	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:17
Sample Name FA98739-26
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3498.735	ug/l	1.22	223,694.33	1.198E+00	Pulse	0.50	3
As			1	18.058	ug/l	17.71	216.33	1.160E-03	Pulse	1.00	3
Mo			1	74.965	ug/l	7.91	2,294.15	8.274E-03	Pulse	0.50	3
Pb			1	293.478	ug/l	1.42	38,011.04	1.268E-02	Pulse	1.00	3
Be			1	4.796	ug/l	23.36	2.50	7.129E-06	Pulse	2.00	3
Ag			1	10202.746	ug/l	0.48	941,586.18	3.397E+00	Pulse	0.50	3
Ba			1	1233.713	ug/l	1.43	16,027.13	9.834E-03	Pulse	0.50	3
Tl			1	3.817	ug/l	17.76	834.02	2.784E-04	Pulse	0.50	3
Sn			1	342.601	ug/l	2.51	10,434.12	6.402E-03	Pulse	0.30	3
Sr			1	4581.976	ug/l	0.86	190,234.69	1.167E-01	Pulse	0.50	3
[Pb]			1	307.141	ug/l	1.41	19,013.91	6.345E-03	Pulse	0.50	3
Ca			1	985623.543	ug/l	1.08	261,879.41	8.929E-02	Pulse	0.50	3
Ti			1	374.224	ug/l	23.27	676.07	1.928E-03	Pulse	0.50	3
Na			1	35318.991	ug/l	0.32	437,817.75	1.248E+00	Pulse	1.00	3
Mg			1	89385.120	ug/l	0.81	513,470.12	1.464E+00	Pulse	1.00	3
K			1	34298.410	ug/l	5.96	306,490.21	8.737E-01	Pulse	1.00	3
V			1	28.856	ug/l	10.70	2,772.21	7.902E-03	Pulse	0.50	3
Mn			1	1495.022	ug/l	2.40	56,337.83	3.018E-01	Pulse	0.50	3
Fe			1	661445.791	ug/l	1.07	34,496,384.00	1.848E+02	Analog	0.50	3
Co			1	24.284	ug/l	4.15	2,302.15	1.234E-02	Pulse	0.50	3
Ni			1	340.571	ug/l	1.63	8,942.75	4.791E-02	Pulse	0.50	3
Cu			1	17051.028	ug/l	1.18	1,107,034.54	5.931E+00	Pulse	0.50	3
Zn			1	9689.966	ug/l	0.86	117,108.47	4.224E-01	Pulse	1.00	3
Cd			1	15.507	ug/l	8.16	222.67	8.031E-04	Pulse	0.50	3
Al			1	59384.254	ug/l	1.99	147,333.19	4.200E-01	Pulse	1.00	3
Se			1	21.582	ug/l	36.61	51.56	1.860E-04	Pulse	3.00	3
Sb			1	37.035	ug/l	5.33	1,609.07	5.803E-03	Pulse	1.00	3
Se			1	2.931	ug/l	490.48	42.11	1.519E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,996,717.58	0.63	105.2	Pulse	0.50	3
1	Sc		350,800.91	0.31	100.2	Pulse	0.30	3
1	Ge		186,674.70	0.86	98.7	Pulse	0.30	3
1	In		1,629,727.12	0.06	100.9	Pulse	0.30	3
1	Tb		3,930,312.42	0.24	99.6	Pulse	0.50	3
1	Lu		2,932,899.33	0.46	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		277,223.98	0.41	99.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,424.50	5.62	98.2	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:21
Sample Name MP41201-D1
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3447.708	ug/l	0.29	221,558.35	1.181E+00	Pulse	0.50	3
As			1	15.993	ug/l	8.61	201.00	1.071E-03	Pulse	1.00	3
Mo			1	77.903	ug/l	5.04	2,342.82	8.580E-03	Pulse	0.50	3
Pb			1	291.974	ug/l	0.62	37,730.05	1.262E-02	Pulse	1.00	3
Be			1	6.386	ug/l	61.69	3.17	9.177E-06	Pulse	2.00	3
Ag			1	10579.520	ug/l	0.27	961,918.84	3.522E+00	Pulse	0.50	3
Ba			1	1226.886	ug/l	0.85	15,739.53	9.780E-03	Pulse	0.50	3
Tl			1	1.073	ug/l	7.89	342.01	1.144E-04	Pulse	0.50	3
Sn			1	336.678	ug/l	1.35	10,129.51	6.294E-03	Pulse	0.30	3
Sr			1	3871.110	ug/l	0.48	158,780.84	9.866E-02	Pulse	0.50	3
[Pb]			1	308.174	ug/l	3.13	19,033.98	6.366E-03	Pulse	0.50	3
Ca			1	878871.080	ug/l	0.07	232,088.31	7.968E-02	Pulse	0.50	3
Ti			1	420.075	ug/l	53.19	746.17	2.161E-03	Pulse	0.50	3
Na			1	34085.705	ug/l	0.06	416,486.73	1.207E+00	Pulse	1.00	3
Mg			1	87818.054	ug/l	0.59	496,124.33	1.438E+00	Pulse	1.00	3
K			1	31787.753	ug/l	0.42	286,954.09	8.318E-01	Pulse	1.00	3
V			1	29.606	ug/l	2.44	2,764.21	8.013E-03	Pulse	0.50	3
Mn			1	1523.478	ug/l	0.96	57,683.82	3.075E-01	Pulse	0.50	3
Fe			1	650656.632	ug/l	0.23	34,097,022.67	1.818E+02	Analog	0.50	3
Co			1	23.527	ug/l	10.33	2,242.81	1.196E-02	Pulse	0.50	3
Ni			1	370.086	ug/l	1.88	9,720.47	5.182E-02	Pulse	0.50	3
Cu			1	16679.251	ug/l	0.79	1,088,309.54	5.802E+00	Pulse	0.50	3
Zn			1	10621.436	ug/l	0.99	126,194.53	4.620E-01	Pulse	1.00	3
Cd			1	18.051	ug/l	4.84	254.67	9.324E-04	Pulse	0.50	3
Al			1	60964.895	ug/l	1.29	148,702.81	4.311E-01	Pulse	1.00	3
Se			1	13.649	ug/l	44.87	45.89	1.680E-04	Pulse	3.00	3
Sb			1	38.247	ug/l	1.80	1,633.74	5.982E-03	Pulse	1.00	3
Se			1	-2.203	ug/l	-1004.95	40.00	1.464E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,989,455.67	0.81	104.9	Pulse	0.50	3
1	Sc		344,983.98	0.40	98.6	Pulse	0.30	3
1	Ge		187,561.71	0.75	99.2	Pulse	0.30	3
1	In		1,609,364.56	0.44	99.7	Pulse	0.30	3
1	Tb		3,907,338.50	0.32	99.0	Pulse	0.50	3
1	Lu		2,912,595.42	0.48	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,126.29	0.81	98.0	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,393.39	0.63	96.1	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:25
Sample Name	MP41201-SD1
Sample Type	Sample
Comment	
Prep Dilution	1000.000
Auto Dilution	N/A
Total Dilution	1000.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3259.209	ug/l	0.45	45,105.32	2.434E-01	Pulse	0.50	3
As			1	8.079	ug/l	68.18	84.67	4.568E-04	Pulse	1.00	3
Mo			1	57.489	ug/l	4.71	452.01	1.679E-03	Pulse	0.50	3
Pb			1	281.308	ug/l	2.02	7,703.41	2.678E-03	Pulse	1.00	3
Be			1	15.227	ug/l	77.61	1.67	4.875E-06	Pulse	2.00	3
Ag			1	9766.235	ug/l	0.53	175,157.39	6.505E-01	Pulse	0.50	3
Ba			1	1165.115	ug/l	1.97	2,996.26	1.874E-03	Pulse	0.50	3
Tl			1	-0.563	ug/l	-143.30	125.33	4.355E-05	Pulse	0.50	3
Sn			1	311.311	ug/l	3.70	2,042.35	1.277E-03	Pulse	0.30	3
Sr			1	4381.522	ug/l	0.66	36,039.63	2.254E-02	Pulse	0.50	3
[Pb]			1	288.275	ug/l	2.73	3,801.77	1.321E-03	Pulse	0.50	3
Ca			1	917561.232	ug/l	0.81	49,407.25	1.710E-02	Pulse	0.50	3
Ti			1	243.865	ug/l	29.94	92.67	2.711E-04	Pulse	0.50	3
Na			1	31278.965	ug/l	0.42	98,024.70	2.867E-01	Pulse	1.00	3
Mg			1	84457.981	ug/l	0.56	95,438.03	2.792E-01	Pulse	1.00	3
K			1	30888.611	ug/l	1.01	138,148.16	4.041E-01	Pulse	1.00	3
V			1	13.246	ug/l	10.00	1,374.72	4.021E-03	Pulse	0.50	3
Mn			1	1361.850	ug/l	1.86	10,594.25	5.719E-02	Pulse	0.50	3
Fe			1	621924.211	ug/l	0.13	6,453,791.17	3.483E+01	Analog	0.50	3
Co			1	21.380	ug/l	7.35	450.68	2.433E-03	Pulse	0.50	3
Ni			1	306.748	ug/l	4.47	2,018.11	1.089E-02	Pulse	0.50	3
Cu			1	16060.385	ug/l	0.64	213,154.74	1.150E+00	Pulse	0.50	3
Zn			1	8922.294	ug/l	0.35	23,233.96	8.629E-02	Pulse	1.00	3
Cd			1	15.381	ug/l	13.89	46.00	1.708E-04	Pulse	0.50	3
Al			1	53411.651	ug/l	1.14	27,203.80	7.957E-02	Pulse	1.00	3
Se			1	-11.251	ug/l	-88.84	35.56	1.320E-04	Pulse	3.00	3
Sb			1	29.077	ug/l	15.30	325.67	1.209E-03	Pulse	1.00	3
Se			1	-111.397	ug/l	-142.98	33.67	1.252E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,876,941.33	0.73	101.0	Pulse	0.50	3
1	Sc		341,868.92	0.10	97.7	Pulse	0.30	3
1	Ge		185,271.63	0.93	98.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,598,899.49	0.53	99.0	Pulse	0.30	3
1	Tb		3,904,890.92	0.66	98.9	Pulse	0.50	3
1	Lu		2,888,994.92	0.47	98.9	Pulse	0.50	3
1	Ge		269,256.85	0.77	96.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,447.84	5.64	99.8	Pulse	0.30	3

Quantitation Report

File Name 052SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:29
Sample Name MP41201-S1
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2839.895	ug/l	1.50	181,140.97	9.774E-01	Pulse	0.50	3
As			1	362.794	ug/l	1.00	2,946.23	1.590E-02	Pulse	1.00	3
Mo			1	382.827	ug/l	3.00	10,993.92	4.027E-02	Pulse	0.50	3
Pb			1	565.754	ug/l	0.55	71,252.44	2.417E-02	Pulse	1.00	3
Be			1	343.428	ug/l	19.95	151.67	4.432E-04	Pulse	2.00	3
Ag			1	6793.778	ug/l	0.92	617,578.48	2.262E+00	Pulse	0.50	3
Ba			1	1290.381	ug/l	2.05	16,498.88	1.028E-02	Pulse	0.50	3
Tl			1	314.007	ug/l	1.34	55,469.40	1.882E-02	Pulse	0.50	3
Sn			1	615.079	ug/l	0.52	18,262.44	1.138E-02	Pulse	0.30	3
Sr			1	3282.801	ug/l	1.40	134,283.20	8.371E-02	Pulse	0.50	3
[Pb]			1	563.869	ug/l	0.29	33,943.60	1.151E-02	Pulse	0.50	3
Ca			1	691959.304	ug/l	0.57	183,094.02	6.286E-02	Pulse	0.50	3
Ti			1	444.620	ug/l	2.46	782.02	2.286E-03	Pulse	0.50	3
Na			1	61661.545	ug/l	0.30	724,955.46	2.119E+00	Pulse	1.00	3
Mg			1	101546.703	ug/l	0.31	568,665.14	1.662E+00	Pulse	1.00	3
K			1	59472.529	ug/l	0.72	442,667.10	1.294E+00	Pulse	1.00	3
V			1	360.003	ug/l	1.20	19,476.40	5.694E-02	Pulse	0.50	3
Mn			1	1349.990	ug/l	2.59	50,558.80	2.728E-01	Pulse	0.50	3
Fe			1	544222.122	ug/l	1.37	28,183,748.67	1.521E+02	Analog	0.50	3
Co			1	366.350	ug/l	1.52	33,662.50	1.816E-01	Pulse	0.50	3
Ni			1	568.442	ug/l	2.03	14,477.46	7.812E-02	Pulse	0.50	3
Cu			1	13107.794	ug/l	1.28	846,719.06	4.569E+00	Pulse	0.50	3
Zn			1	6482.109	ug/l	0.65	78,108.55	2.860E-01	Pulse	1.00	3
Cd			1	351.199	ug/l	4.80	4,880.67	1.788E-02	Pulse	0.50	3
Al			1	77146.486	ug/l	0.96	186,141.08	5.442E-01	Pulse	1.00	3
Se			1	350.807	ug/l	5.65	254.23	9.312E-04	Pulse	3.00	3
Sb			1	331.086	ug/l	2.18	13,399.89	4.908E-02	Pulse	1.00	3
Se			1	360.488	ug/l	11.04	144.89	5.308E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,947,792.25	0.69	103.5	Pulse	0.50	3
1	Sc		342,061.35	0.53	97.7	Pulse	0.30	3
1	Ge		185,345.50	0.78	98.0	Pulse	0.30	3
1	In		1,604,240.00	0.30	99.3	Pulse	0.30	3
1	Tb		3,911,204.83	0.55	99.1	Pulse	0.50	3
1	Lu		2,912,632.58	0.19	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		273,065.04	0.95	98.0	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,415.62	14.02	97.6	Pulse	0.30	3

Quantitation Report

File Name	053CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:32
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.136	ug/l	0.58	633,794.98	3.455E+00	Pulse	0.50	3
As			1	50.346	ug/l	0.43	79,025.19	4.308E-01	Pulse	1.00	3
Mo			1	50.619	ug/l	0.69	285,420.73	1.053E+00	Pulse	0.50	3
Pb			1	50.061	ug/l	0.39	1,188,782.42	4.227E-01	Pulse	1.00	3
Be			1	50.099	ug/l	0.59	4,392.97	1.290E-02	Pulse	2.00	3
Ag			1	50.186	ug/l	0.30	906,042.50	3.341E+00	Pulse	0.50	3
Ba			1	50.196	ug/l	0.71	126,650.31	7.988E-02	Pulse	0.50	3
Tl			1	50.924	ug/l	0.61	1,712,109.79	6.087E-01	Pulse	0.50	3
Sn			1	49.946	ug/l	0.78	289,761.26	1.828E-01	Pulse	0.30	3
Sr			1	49.593	ug/l	1.43	400,128.77	2.524E-01	Pulse	0.50	3
[Pb]			1	49.999	ug/l	0.61	566,801.81	2.015E-01	Pulse	0.50	3
Ca			1	5067.089	ug/l	0.19	267,478.00	9.179E-02	Pulse	0.50	3
Ti			1	49.447	ug/l	2.73	17,145.53	5.036E-02	Pulse	0.50	3
Na			1	5144.089	ug/l	0.31	11,612,763.00	3.411E+01	Analog	1.00	3
Mg			1	5134.879	ug/l	0.90	5,714,165.50	1.678E+01	Analog	1.00	3
K			1	5112.428	ug/l	0.23	5,915,946.50	1.738E+01	Analog	1.00	3
V			1	50.092	ug/l	1.10	506,277.96	1.487E+00	Pulse	0.50	3
Mn			1	51.419	ug/l	0.62	377,939.49	2.060E+00	Pulse	0.50	3
Fe			1	5162.572	ug/l	0.22	52,904,442.67	2.884E+02	Analog	0.50	3
Co			1	51.847	ug/l	0.35	941,372.27	5.132E+00	Pulse	0.50	3
Ni			1	51.879	ug/l	0.93	252,827.52	1.378E+00	Pulse	0.50	3
Cu			1	52.541	ug/l	0.96	673,295.75	3.671E+00	Pulse	0.50	3
Zn			1	51.870	ug/l	0.48	122,439.60	4.515E-01	Pulse	1.00	3
Cd			1	51.335	ug/l	0.58	141,602.17	5.222E-01	Pulse	0.50	3
Al			1	5089.969	ug/l	0.83	2,424,262.67	7.121E+00	Pulse	1.00	3
Se			1	51.530	ug/l	0.88	6,362.84	2.347E-02	Pulse	3.00	3
Sb			1	50.777	ug/l	0.67	405,350.78	1.495E+00	Pulse	1.00	3
Se			1	51.046	ug/l	1.89	2,974.12	1.097E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,559.33	0.34	98.7	Pulse	0.50	3
1	Sc		340,449.33	0.21	97.3	Pulse	0.30	3
1	Ge		183,424.29	0.60	97.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,585,522.71	0.28	98.2	Pulse	0.30	3
1	Tb		3,917,312.17	0.20	99.2	Pulse	0.50	3
1	Lu		2,913,899.08	0.18	99.7	Pulse	0.50	3
1	Ge		271,164.40	1.01	97.3	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,368.94	1.89	94.4	Pulse	0.30	3

Quantitation Report

File Name 054_CCV.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:36
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.577	ug/l	0.99	1,230,658.04	6.638E+00	Pulse	0.50	3
As			1	97.511	ug/l	0.57	154,637.00	8.341E-01	Pulse	1.00	3
Mo			1	99.516	ug/l	1.86	559,323.40	2.069E+00	Pulse	0.50	3
Pb			1	98.482	ug/l	0.71	2,310,439.08	8.312E-01	Pulse	1.00	3
Be			1	99.174	ug/l	0.50	8,663.85	2.554E-02	Pulse	2.00	3
Ag			1	97.459	ug/l	1.27	1,754,198.91	6.489E+00	Pulse	0.50	3
Ba			1	98.297	ug/l	0.69	247,746.33	1.564E-01	Pulse	0.50	3
Tl			1	100.710	ug/l	0.44	3,346,099.83	1.204E+00	Pulse	0.50	3
Sn			1	98.053	ug/l	1.34	568,101.11	3.587E-01	Pulse	0.30	3
Sr			1	98.324	ug/l	1.00	792,128.54	5.001E-01	Pulse	0.50	3
[Pb]			1	98.409	ug/l	0.96	1,102,074.38	3.965E-01	Pulse	0.50	3
Ca			1	9803.335	ug/l	0.41	520,544.14	1.770E-01	Pulse	0.50	3
Ti			1	98.615	ug/l	0.53	34,061.52	1.004E-01	Pulse	0.50	3
Na			1	10027.713	ug/l	0.23	22,528,722.67	6.642E+01	Analog	1.00	3
Mg			1	10025.438	ug/l	0.72	11,114,241.00	3.277E+01	Analog	1.00	3
K			1	9989.281	ug/l	0.10	11,419,511.00	3.367E+01	Analog	1.00	3
V			1	98.461	ug/l	1.29	990,260.00	2.920E+00	Pulse	0.50	3
Mn			1	99.099	ug/l	0.73	735,773.42	3.969E+00	Pulse	0.50	3
Fe			1	9924.843	ug/l	0.40	102,783,800.00	5.544E+02	Analog	0.50	3
Co			1	99.317	ug/l	1.09	1,822,573.50	9.831E+00	Pulse	0.50	3
Ni			1	99.372	ug/l	1.03	489,009.58	2.638E+00	Pulse	0.50	3
Cu			1	99.913	ug/l	1.10	1,287,263.92	6.943E+00	Pulse	0.50	3
Zn			1	99.843	ug/l	1.45	232,366.89	8.595E-01	Pulse	1.00	3
Cd			1	99.634	ug/l	1.46	274,009.55	1.014E+00	Pulse	0.50	3
Al			1	9981.223	ug/l	1.13	4,734,637.00	1.396E+01	Pulse	1.00	3
Se			1	100.221	ug/l	1.50	12,303.62	4.551E-02	Pulse	3.00	3
Sb			1	99.789	ug/l	1.80	794,144.11	2.938E+00	Pulse	1.00	3
Se			1	98.878	ug/l	2.26	5,706.41	2.111E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,779,614.67	0.28	97.6	Pulse	0.50	3
1	Sc		339,202.82	0.71	96.9	Pulse	0.30	3
1	Ge		185,401.17	0.37	98.0	Pulse	0.30	3
1	In		1,583,995.56	0.33	98.1	Pulse	0.30	3
1	Tb		3,944,368.83	0.93	99.9	Pulse	0.50	3
1	Lu		2,940,169.58	0.31	100.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,370.61	0.79	97.0	Pulse	0.30	3
1	Te		4.67	49.49	700.0	Pulse	0.50	3
1	Li		1,363.39	6.32	94.0	Pulse	0.30	3

Quantitation Report

File Name 055_CCB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:40
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.034	ug/l	51.56	4,952.65	2.706E-02	Pulse	0.50	3
As			1	0.018	ug/l	19.28	98.67	5.390E-04	Pulse	1.00	3
Mo			1	0.096	ug/l	24.97	669.35	2.481E-03	Pulse	0.50	3
Pb			1	0.019	ug/l	44.26	1,297.39	4.615E-04	Pulse	1.00	3
Be			1	0.025	ug/l	46.17	2.50	7.324E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	21.97	386.67	1.434E-03	Pulse	0.50	3
Ba			1	0.003	ug/l	166.11	40.00	2.524E-05	Pulse	0.50	3
Tl			1	0.016	ug/l	22.98	662.68	2.357E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	21.93	910.03	5.739E-04	Pulse	0.30	3
Sr			1	0.009	ug/l	132.13	500.01	3.156E-04	Pulse	0.50	3
[Pb]			1	0.014	ug/l	43.94	614.68	2.186E-04	Pulse	0.50	3
Ca			1	-10.260	ug/l	-8.17	1,150.04	4.008E-04	Pulse	0.50	3
Ti			1	0.012	ug/l	171.56	12.00	3.515E-05	Pulse	0.50	3
Na			1	-0.727	ug/l	-64.92	25,611.66	7.500E-02	Pulse	1.00	3
Mg			1	0.820	ug/l	42.06	1,991.11	5.832E-03	Pulse	1.00	3
K			1	-2.303	ug/l	-11.58	100,142.72	2.932E-01	Pulse	1.00	3
V			1	0.016	ug/l	55.60	1,398.06	4.094E-03	Pulse	0.50	3
Mn			1	-0.018	ug/l	-23.56	356.00	1.945E-03	Pulse	0.50	3
Fe			1	1.353	ug/l	25.16	32,225.52	1.761E-01	Pulse	0.50	3
Co			1	0.014	ug/l	39.82	303.34	1.659E-03	Pulse	0.50	3
Ni			1	-0.013	ug/l	-32.82	441.34	2.412E-03	Pulse	0.50	3
Cu			1	-0.066	ug/l	-13.58	6,665.84	3.642E-02	Pulse	0.50	3
Zn			1	-0.738	ug/l	-0.81	1,116.70	4.140E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	34.91	35.33	1.310E-04	Pulse	0.50	3
Al			1	-1.252	ug/l	-27.93	1,076.36	3.152E-03	Pulse	1.00	3
Se			1	0.076	ug/l	26.74	46.22	1.714E-04	Pulse	3.00	3
Sb			1	0.032	ug/l	12.01	350.67	1.300E-03	Pulse	1.00	3
Se			1	-0.020	ug/l	-496.45	39.00	1.446E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,614.92	0.43	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		341,509.54	0.17	97.6	Pulse	0.30	3
1	Ge		183,032.20	0.63	96.8	Pulse	0.30	3
1	In		1,585,126.74	0.32	98.2	Pulse	0.30	3
1	Tb		3,886,195.83	0.23	98.4	Pulse	0.50	3
1	Lu		2,869,172.92	0.34	98.2	Pulse	0.50	3
1	Ge		269,708.26	0.17	96.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,498.96	4.32	103.4	Pulse	0.30	3

Quantitation Report

File Name	056SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:44
Sample Name	MP41201-S2
Sample Type	Sample
Comment	
Prep Dilution	200.000
Auto Dilution	N/A
Total Dilution	200.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4045.618	ug/l	1.64	252,261.61	1.382E+00	Pulse	0.50	3
As			1	479.523	ug/l	1.61	3,813.05	2.089E-02	Pulse	1.00	3
Mo			1	512.790	ug/l	2.38	14,558.34	5.378E-02	Pulse	0.50	3
Pb			1	728.797	ug/l	0.41	91,590.38	3.105E-02	Pulse	1.00	3
Be			1	444.055	ug/l	2.43	195.67	5.728E-04	Pulse	2.00	3
Ag			1	11304.193	ug/l	0.60	1,018,843.19	3.763E+00	Pulse	0.50	3
Ba			1	1718.380	ug/l	1.72	21,823.17	1.369E-02	Pulse	0.50	3
Tl			1	420.910	ug/l	1.11	74,353.07	2.521E-02	Pulse	0.50	3
Sn			1	791.972	ug/l	2.92	23,301.54	1.462E-02	Pulse	0.30	3
Sr			1	4382.324	ug/l	0.70	177,990.54	1.117E-01	Pulse	0.50	3
[Pb]			1	717.822	ug/l	1.62	43,112.13	1.461E-02	Pulse	0.50	3
Ca			1	862227.828	ug/l	1.27	227,854.59	7.819E-02	Pulse	0.50	3
Ti			1	1139.270	ug/l	79.92	1,989.09	5.822E-03	Pulse	0.50	3
Na			1	78330.535	ug/l	0.38	912,369.79	2.671E+00	Pulse	1.00	3
Mg			1	129938.674	ug/l	0.39	726,406.21	2.126E+00	Pulse	1.00	3
K			1	76220.426	ug/l	0.55	537,646.40	1.574E+00	Pulse	1.00	3
V			1	477.792	ug/l	0.92	25,408.55	7.438E-02	Pulse	0.50	3
Mn			1	1957.486	ug/l	1.97	71,996.37	3.944E-01	Pulse	0.50	3
Fe			1	674432.632	ug/l	0.98	34,400,438.67	1.884E+02	Analog	0.50	3
Co			1	497.333	ug/l	1.40	44,990.71	2.464E-01	Pulse	0.50	3
Ni			1	799.163	ug/l	2.10	19,844.87	1.087E-01	Pulse	0.50	3
Cu			1	17182.779	ug/l	0.49	1,091,035.96	5.976E+00	Pulse	0.50	3
Zn			1	10060.249	ug/l	1.09	118,634.05	4.382E-01	Pulse	1.00	3
Cd			1	475.654	ug/l	2.28	6,554.52	2.421E-02	Pulse	0.50	3
Al			1	102798.058	ug/l	1.17	247,146.92	7.235E-01	Pulse	1.00	3
Se			1	470.964	ug/l	2.18	325.78	1.203E-03	Pulse	3.00	3
Sb			1	452.237	ug/l	1.81	18,114.25	6.691E-02	Pulse	1.00	3
Se			1	482.639	ug/l	5.60	178.78	6.603E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,949,862.00	0.29	103.5	Pulse	0.50	3
1	Sc		341,615.81	0.09	97.6	Pulse	0.30	3
1	Ge		182,566.86	0.51	96.5	Pulse	0.30	3
1	In		1,594,145.18	0.27	98.7	Pulse	0.30	3
1	Tb		3,899,311.42	0.36	98.8	Pulse	0.50	3
1	Lu		2,914,298.75	0.37	99.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,747.92	0.50	97.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,410.06	12.10	97.2	Pulse	0.30	3

Quantitation Report

File Name 057SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:48
Sample Name MP41201-PS1
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3509.254	ug/l	0.71	221,074.01	1.202E+00	Pulse	0.50	3
As			1	107.722	ug/l	4.18	918.36	4.993E-03	Pulse	1.00	3
Mo			1	157.877	ug/l	4.96	4,566.57	1.689E-02	Pulse	0.50	3
Pb			1	371.856	ug/l	1.04	47,349.51	1.599E-02	Pulse	1.00	3
Be			1	74.781	ug/l	10.62	33.17	9.725E-05	Pulse	2.00	3
Ag			1	10096.038	ug/l	1.47	908,659.83	3.361E+00	Pulse	0.50	3
Ba			1	1288.410	ug/l	1.03	16,422.81	1.027E-02	Pulse	0.50	3
Tl			1	83.340	ug/l	1.46	14,898.51	5.031E-03	Pulse	0.50	3
Sn			1	423.486	ug/l	1.79	12,603.28	7.881E-03	Pulse	0.30	3
Sr			1	4639.599	ug/l	0.21	189,006.38	1.182E-01	Pulse	0.50	3
[Pb]			1	376.642	ug/l	0.73	22,932.68	7.745E-03	Pulse	0.50	3
Ca			1	960059.913	ug/l	0.45	252,369.85	8.699E-02	Pulse	0.50	3
Ti			1	358.947	ug/l	12.56	630.69	1.850E-03	Pulse	0.50	3
Na			1	43232.049	ug/l	0.61	514,844.42	1.510E+00	Pulse	1.00	3
Mg			1	96453.906	ug/l	0.23	538,526.36	1.579E+00	Pulse	1.00	3
K			1	41135.466	ug/l	1.10	336,876.97	9.879E-01	Pulse	1.00	3
V			1	112.421	ug/l	1.76	6,913.91	2.028E-02	Pulse	0.50	3
Mn			1	1521.578	ug/l	0.96	56,496.33	3.072E-01	Pulse	0.50	3
Fe			1	659214.481	ug/l	0.44	33,877,450.67	1.842E+02	Analog	0.50	3
Co			1	113.168	ug/l	2.80	10,360.14	5.632E-02	Pulse	0.50	3
Ni			1	422.746	ug/l	1.47	10,815.70	5.880E-02	Pulse	0.50	3
Cu			1	16787.362	ug/l	0.63	1,074,105.33	5.840E+00	Pulse	0.50	3
Zn			1	9785.623	ug/l	2.24	115,300.06	4.265E-01	Pulse	1.00	3
Cd			1	107.848	ug/l	3.52	1,486.74	5.500E-03	Pulse	0.50	3
Al			1	66243.536	ug/l	0.92	159,576.20	4.680E-01	Pulse	1.00	3
Se			1	85.863	ug/l	17.60	89.56	3.315E-04	Pulse	3.00	3
Sb			1	117.404	ug/l	1.43	4,766.62	1.763E-02	Pulse	1.00	3
Se			1	106.376	ug/l	26.49	70.67	2.615E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,961,040.92	1.14	103.9	Pulse	0.50	3
1	Sc		341,005.45	0.29	97.4	Pulse	0.30	3
1	Ge		183,934.46	0.18	97.3	Pulse	0.30	3
1	In		1,599,134.69	0.75	99.0	Pulse	0.30	3
1	Tb		3,890,929.92	0.76	98.6	Pulse	0.50	3
1	Lu		2,901,096.33	0.25	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		270,382.59	1.32	97.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,423.39	7.36	98.2	Pulse	0.30	3

Quantitation Report

File Name 058SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:51
Sample Name FA98739-27
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	15108.325	ug/l	0.98	936,927.89	5.093E+00	Pulse	0.50	3
As			1	165.426	ug/l	3.52	1,372.39	7.459E-03	Pulse	1.00	3
Mo			1	96.317	ug/l	3.56	2,826.22	1.049E-02	Pulse	0.50	3
Pb			1	600.680	ug/l	0.12	73,379.98	2.564E-02	Pulse	1.00	3
Be			1	5.762	ug/l	42.35	2.83	8.373E-06	Pulse	2.00	3
Ag			1	11347.092	ug/l	0.88	1,017,394.44	3.777E+00	Pulse	0.50	3
Ba			1	1914.930	ug/l	2.17	24,296.97	1.525E-02	Pulse	0.50	3
Tl			1	0.932	ug/l	30.50	303.34	1.060E-04	Pulse	0.50	3
Sn			1	120.923	ug/l	3.27	3,743.73	2.350E-03	Pulse	0.30	3
Sr			1	16459.272	ug/l	1.30	666,853.21	4.186E-01	Pulse	0.50	3
[Pb]			1	631.000	ug/l	0.67	36,817.47	1.287E-02	Pulse	0.50	3
Ca			1	3381990.214	ug/l	0.36	884,580.85	3.050E-01	Pulse	0.50	3
Ti			1	492.801	ug/l	0.80	858.02	2.531E-03	Pulse	0.50	3
Na			1	6495.225	ug/l	1.17	99,877.42	2.947E-01	Pulse	1.00	3
Mg			1	104340.775	ug/l	1.17	578,986.58	1.708E+00	Pulse	1.00	3
K			1	15190.119	ug/l	0.76	187,997.92	5.546E-01	Pulse	1.00	3
V			1	34.176	ug/l	1.43	2,945.57	8.689E-03	Pulse	0.50	3
Mn			1	3764.458	ug/l	0.71	139,078.27	7.559E-01	Pulse	0.50	3
Fe			1	1356210.068	ug/l	0.97	69,693,733.33	3.788E+02	Analog	0.50	3
Co			1	30.203	ug/l	4.35	2,808.21	1.526E-02	Pulse	0.50	3
Ni			1	465.032	ug/l	2.56	11,849.66	6.441E-02	Pulse	0.50	3
Cu			1	20648.050	ug/l	0.99	1,319,707.50	7.173E+00	Pulse	0.50	3
Zn			1	5600.943	ug/l	1.48	66,948.50	2.486E-01	Pulse	1.00	3
Cd			1	17.243	ug/l	9.50	240.00	8.914E-04	Pulse	0.50	3
Al			1	299177.827	ug/l	0.89	710,543.77	2.096E+00	Pulse	1.00	3
Se			1	8.892	ug/l	127.45	42.33	1.573E-04	Pulse	3.00	3
Sb			1	21.115	ug/l	3.45	932.03	3.460E-03	Pulse	1.00	3
Se			1	-11.186	ug/l	-136.41	36.89	1.369E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,861,457.67	0.08	100.4	Pulse	0.50	3
1	Sc		338,980.14	0.79	96.9	Pulse	0.30	3
1	Ge		183,977.34	0.12	97.3	Pulse	0.30	3
1	In		1,593,126.12	0.98	98.7	Pulse	0.30	3
1	Tb		3,872,600.83	0.26	98.1	Pulse	0.50	3
1	Lu		2,900,593.17	0.31	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,344.39	0.60	96.6	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,416.73	8.61	97.7	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 11:55
Sample Name FA98739-28
Sample Type Sample
Comment
Prep Dilution 200.000
Auto Dilution N/A
Total Dilution 200.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10480.032	ug/l	0.50	652,005.19	3.540E+00	Pulse	0.50	3
As			1	38.435	ug/l	5.04	374.00	2.031E-03	Pulse	1.00	3
Mo			1	70.387	ug/l	4.47	2,098.79	7.798E-03	Pulse	0.50	3
Pb			1	470.631	ug/l	0.78	57,482.06	2.016E-02	Pulse	1.00	3
Be			1	0.793	ug/l	167.49	0.67	1.975E-06	Pulse	2.00	3
Ag			1	9637.461	ug/l	1.05	863,535.77	3.208E+00	Pulse	0.50	3
Ba			1	1574.764	ug/l	2.02	19,912.96	1.255E-02	Pulse	0.50	3
Tl			1	0.575	ug/l	18.86	241.33	8.465E-05	Pulse	0.50	3
Sn			1	117.937	ug/l	4.89	3,642.61	2.295E-03	Pulse	0.30	3
Sr			1	12501.314	ug/l	0.95	504,745.91	3.180E-01	Pulse	0.50	3
[Pb]			1	504.305	ug/l	0.71	29,414.55	1.032E-02	Pulse	0.50	3
Ca			1	3220276.181	ug/l	0.66	838,177.08	2.904E-01	Pulse	0.50	3
Ti			1	590.334	ug/l	7.03	1,021.36	3.028E-03	Pulse	0.50	3
Na			1	5241.414	ug/l	1.26	85,421.99	2.532E-01	Pulse	1.00	3
Mg			1	98489.335	ug/l	0.88	544,045.73	1.612E+00	Pulse	1.00	3
K			1	13626.083	ug/l	1.84	178,311.26	5.285E-01	Pulse	1.00	3
V			1	33.286	ug/l	6.62	2,887.56	8.558E-03	Pulse	0.50	3
Mn			1	2974.341	ug/l	1.08	110,111.23	5.978E-01	Pulse	0.50	3
Fe			1	1085403.258	ug/l	0.28	55,841,102.67	3.032E+02	Analog	0.50	3
Co			1	27.446	ug/l	1.44	2,560.18	1.390E-02	Pulse	0.50	3
Ni			1	327.295	ug/l	1.47	8,499.89	4.615E-02	Pulse	0.50	3
Cu			1	16319.068	ug/l	0.64	1,045,696.48	5.678E+00	Pulse	0.50	3
Zn			1	4467.999	ug/l	1.88	53,936.70	2.004E-01	Pulse	1.00	3
Cd			1	10.193	ug/l	13.53	143.33	5.328E-04	Pulse	0.50	3
Al			1	222189.926	ug/l	0.49	525,683.56	1.558E+00	Pulse	1.00	3
Se			1	-1.849	ug/l	-283.03	35.78	1.330E-04	Pulse	3.00	3
Sb			1	19.854	ug/l	5.04	881.36	3.275E-03	Pulse	1.00	3
Se			1	-4.824	ug/l	-214.56	38.67	1.437E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,851,574.17	0.70	100.1	Pulse	0.50	3
1	Sc		337,412.97	1.08	96.4	Pulse	0.30	3
1	Ge		184,176.45	0.68	97.4	Pulse	0.30	3
1	In		1,587,154.83	0.57	98.3	Pulse	0.30	3
1	Tb		3,874,845.58	0.23	98.2	Pulse	0.50	3
1	Lu		2,886,089.33	0.61	98.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,163.63	0.58	96.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,330.05	2.05	91.7	Pulse	0.30	3

Quantitation Report

File Name	060_MB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 11:59
Sample Name	MP41201-MB1
Sample Type	MB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.017	ug/l	36.17	4,738.59	2.591E-02	Pulse	0.50	3
As			1	-0.008	ug/l	-23.30	58.67	3.209E-04	Pulse	1.00	3
Mo			1	-0.010	ug/l	-48.56	72.67	2.678E-04	Pulse	0.50	3
Pb			1	-0.006	ug/l	-25.27	725.69	2.552E-04	Pulse	1.00	3
Be			1	0.010	ug/l	68.42	1.17	3.425E-06	Pulse	2.00	3
Ag			1	0.007	ug/l	58.19	219.33	8.095E-04	Pulse	0.50	3
Ba			1	-0.008	ug/l	-26.07	12.00	7.503E-06	Pulse	0.50	3
Tl			1	-0.003	ug/l	-11.27	35.33	1.242E-05	Pulse	0.50	3
Sn			1	0.004	ug/l	146.33	244.45	1.528E-04	Pulse	0.30	3
Sr			1	0.009	ug/l	62.36	503.34	3.146E-04	Pulse	0.50	3
[Pb]			1	-0.016	ug/l	-18.55	275.33	9.680E-05	Pulse	0.50	3
Ca			1	-9.010	ug/l	-16.18	1,229.38	4.233E-04	Pulse	0.50	3
Ti			1	-0.011	ug/l	-52.15	4.00	1.173E-05	Pulse	0.50	3
Na			1	-2.939	ug/l	-3.62	20,546.84	6.036E-02	Pulse	1.00	3
Mg			1	0.395	ug/l	22.82	1,512.39	4.442E-03	Pulse	1.00	3
K			1	-1.740	ug/l	-20.41	100,453.70	2.951E-01	Pulse	1.00	3
V			1	-0.017	ug/l	-38.04	1,068.04	3.137E-03	Pulse	0.50	3
Mn			1	-0.030	ug/l	-1.45	269.33	1.473E-03	Pulse	0.50	3
Fe			1	0.722	ug/l	41.15	25,757.21	1.409E-01	Pulse	0.50	3
Co			1	-0.002	ug/l	-18.72	27.33	1.494E-04	Pulse	0.50	3
Ni			1	-0.024	ug/l	-6.41	386.67	2.114E-03	Pulse	0.50	3
Cu			1	-0.051	ug/l	-29.75	6,845.23	3.743E-02	Pulse	0.50	3
Zn			1	-0.679	ug/l	-2.22	1,256.38	4.636E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-89.78	1.33	4.895E-06	Pulse	0.50	3
Al			1	-2.073	ug/l	-3.74	682.34	2.005E-03	Pulse	1.00	3
Se			1	-0.013	ug/l	-111.24	35.56	1.312E-04	Pulse	3.00	3
Sb			1	-0.007	ug/l	-27.14	41.33	1.528E-04	Pulse	1.00	3
Se			1	-0.097	ug/l	-144.71	34.78	1.281E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,843,656.58	0.26	99.8	Pulse	0.50	3
1	Sc		340,395.70	0.77	97.3	Pulse	0.30	3
1	Ge		182,877.94	1.05	96.7	Pulse	0.30	3
1	In		1,600,050.77	0.36	99.1	Pulse	0.30	3
1	Tb		3,891,364.67	0.86	98.6	Pulse	0.50	3
1	Lu		2,904,669.08	0.60	99.4	Pulse	0.50	3
1	Ge		271,040.20	0.94	97.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,370.05	3.86	94.5	Pulse	0.30	3

Quantitation Report

File Name 061_MB.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:03
Sample Name MP41211-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.951	ug/l	1.39	21,095.41	1.238E-01	Pulse	0.50	3
As			1	0.199	ug/l	7.08	210.67	1.237E-03	Pulse	1.00	3
Mo			1	-0.007	ug/l	-173.64	102.67	4.080E-04	Pulse	0.50	3
Pb			1	0.075	ug/l	6.68	1,631.75	6.224E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1718.43	0.33	1.061E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	10.67	290.67	1.155E-03	Pulse	0.50	3
Ba			1	0.021	ug/l	18.70	54.67	3.733E-05	Pulse	0.50	3
Tl			1	-0.005	ug/l	-15.05	52.00	1.983E-05	Pulse	0.50	3
Sn			1	0.407	ug/l	9.45	1,295.61	8.839E-04	Pulse	0.30	3
Sr			1	0.025	ug/l	49.96	486.68	3.319E-04	Pulse	0.50	3
[Pb]			1	0.067	ug/l	19.94	774.69	2.955E-04	Pulse	0.50	3
Ca			1	3.007	ug/l	98.59	1,634.07	6.126E-04	Pulse	0.50	3
Ti			1	0.195	ug/l	12.95	38.67	1.218E-04	Pulse	0.50	3
Na			1	3.788	ug/l	11.87	29,301.34	9.234E-02	Pulse	1.00	3
Mg			1	0.636	ug/l	31.22	1,330.05	4.191E-03	Pulse	1.00	3
K			1	19.565	ug/l	0.59	105,854.20	3.336E-01	Pulse	1.00	3
V			1	0.901	ug/l	6.06	5,383.43	1.697E-02	Pulse	0.50	3
Mn			1	0.114	ug/l	14.93	846.02	4.966E-03	Pulse	0.50	3
Fe			1	9.596	ug/l	10.41	62,828.19	3.686E-01	Pulse	0.50	3
Co			1	0.000	ug/l	-342.72	51.33	3.009E-04	Pulse	0.50	3
Ni			1	0.115	ug/l	29.20	730.68	4.286E-03	Pulse	0.50	3
Cu			1	2.154	ug/l	1.92	19,660.67	1.154E-01	Pulse	0.50	3
Zn			1	4.325	ug/l	2.87	7,246.04	2.880E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	84.81	6.00	2.389E-05	Pulse	0.50	3
Al			1	-1.609	ug/l	-10.53	1,199.04	3.778E-03	Pulse	1.00	3
Se			1	-0.048	ug/l	-124.29	31.78	1.264E-04	Pulse	3.00	3
Sb			1	0.023	ug/l	36.37	172.67	6.865E-04	Pulse	1.00	3
Se			1	-0.057	ug/l	-364.96	35.89	1.427E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,621,487.58	0.29	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		317,306.64	0.98	90.7	Pulse	0.30	3
1	Ge		170,407.90	1.14	90.1	Pulse	0.30	3
1	In		1,465,142.96	1.04	90.7	Pulse	0.30	3
1	Tb		3,602,921.58	0.74	91.3	Pulse	0.50	3
1	Lu		2,667,684.75	0.64	91.3	Pulse	0.50	3
1	Ge		251,557.92	0.70	90.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,380.06	1.28	95.2	Pulse	0.30	3

Quantitation Report

File Name 062_BSP.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:06
Sample Name MP41211-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	230.439	ug/l	2.62	1,339,466.88	7.754E+00	Pulse	0.50	3
As			1	233.653	ug/l	2.04	172,599.92	9.992E-01	Pulse	1.00	3
Mo			1	228.721	ug/l	0.52	601,320.50	2.377E+00	Pulse	0.50	3
Pb			1	229.394	ug/l	1.34	2,463,476.42	9.680E-01	Pulse	1.00	3
Be			1	234.000	ug/l	0.44	9,583.42	3.013E-02	Pulse	2.00	3
Ag			1	103.408	ug/l	0.27	870,627.19	3.442E+00	Pulse	0.50	3
Ba			1	225.270	ug/l	1.29	261,073.08	1.792E-01	Pulse	0.50	3
Tl			1	223.625	ug/l	1.33	3,401,185.75	1.337E+00	Pulse	0.50	3
Sn			1	233.788	ug/l	1.43	622,820.76	4.275E-01	Pulse	0.30	3
Sr			1	224.935	ug/l	1.42	833,234.17	5.720E-01	Pulse	0.50	3
[Pb]			1	219.940	ug/l	1.35	1,127,503.17	4.430E-01	Pulse	0.50	3
Ca			1	21222.796	ug/l	0.90	516,094.94	1.916E-01	Pulse	0.50	3
Ti			1	232.539	ug/l	1.12	37,656.13	1.184E-01	Pulse	0.50	3
Na			1	21663.832	ug/l	0.25	22,815,573.33	7.174E+01	Analog	1.00	3
Mg			1	21462.798	ug/l	0.42	11,155,201.33	3.507E+01	Analog	1.00	3
K			1	21094.349	ug/l	0.30	11,299,188.67	3.553E+01	Analog	1.00	3
V			1	225.743	ug/l	1.42	1,064,376.02	3.346E+00	Pulse	0.50	3
Mn			1	227.941	ug/l	2.77	788,313.06	4.564E+00	Pulse	0.50	3
Fe			1	21410.483	ug/l	2.33	103,290,581.33	5.980E+02	Analog	0.50	3
Co			1	229.682	ug/l	2.68	1,963,481.25	1.137E+01	Pulse	0.50	3
Ni			1	228.292	ug/l	2.43	523,270.87	3.029E+00	Pulse	0.50	3
Cu			1	229.700	ug/l	2.45	1,377,582.46	7.975E+00	Pulse	0.50	3
Zn			1	223.638	ug/l	0.52	243,147.53	9.613E-01	Pulse	1.00	3
Cd			1	224.553	ug/l	0.92	288,888.34	1.142E+00	Pulse	0.50	3
Al			1	20788.290	ug/l	0.76	4,623,332.83	1.454E+01	Pulse	1.00	3
Se			1	222.720	ug/l	0.72	12,785.60	5.055E-02	Pulse	3.00	3
Sb			1	231.001	ug/l	0.84	859,955.85	3.400E+00	Pulse	1.00	3
Se			1	225.156	ug/l	1.15	6,073.30	2.401E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,544,691.42	1.40	89.3	Pulse	0.50	3
1	Sc		318,033.69	1.73	90.9	Pulse	0.30	3
1	Ge		172,740.44	0.82	91.3	Pulse	0.30	3
1	In		1,456,639.80	0.95	90.2	Pulse	0.30	3
1	Tb		3,634,930.08	0.85	92.1	Pulse	0.50	3
1	Lu		2,693,606.83	1.56	92.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,914.36	1.43	90.8	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,390.06	0.86	95.9	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:10
Sample Name	FA98621-8
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.100	ug/l	1.05	27,377.21	1.623E-01	Pulse	0.50	3
As			1	1.364	ug/l	1.96	1,048.36	6.217E-03	Pulse	1.00	3
Mo			1	0.223	ug/l	13.20	697.35	2.796E-03	Pulse	0.50	3
Pb			1	0.307	ug/l	10.56	4,050.49	1.602E-03	Pulse	1.00	3
Be			1	0.096	ug/l	71.42	4.17	1.331E-05	Pulse	2.00	3
Ag			1	0.038	ug/l	13.50	400.01	1.603E-03	Pulse	0.50	3
Ba			1	3.540	ug/l	5.09	4,071.81	2.836E-03	Pulse	0.50	3
Tl			1	0.062	ug/l	42.84	1,060.71	4.196E-04	Pulse	0.50	3
Sn			1	0.584	ug/l	8.52	1,731.21	1.206E-03	Pulse	0.30	3
Sr			1	12.516	ug/l	0.82	46,047.23	3.208E-02	Pulse	0.50	3
[Pb]			1	0.299	ug/l	14.52	1,927.45	7.622E-04	Pulse	0.50	3
Ca			1	3049.459	ug/l	0.94	72,784.72	2.803E-02	Pulse	0.50	3
Ti			1	12.590	ug/l	4.38	2,018.79	6.431E-03	Pulse	0.50	3
Na			1	4219.773	ug/l	1.77	4,405,874.17	1.404E+01	Mix	1.00	3
Mg			1	324.591	ug/l	1.13	167,460.98	5.335E-01	Pulse	1.00	3
K			1	188.249	ug/l	1.74	193,117.80	6.153E-01	Pulse	1.00	3
V			1	2.403	ug/l	1.57	12,308.57	3.922E-02	Pulse	0.50	3
Mn			1	1.676	ug/l	2.23	6,107.65	3.622E-02	Pulse	0.50	3
Fe			1	2354.253	ug/l	0.84	11,103,472.00	6.584E+01	Analog	0.50	3
Co			1	0.131	ug/l	23.50	1,145.37	6.795E-03	Pulse	0.50	3
Ni			1	0.630	ug/l	8.74	1,873.43	1.111E-02	Pulse	0.50	3
Cu			1	1.352	ug/l	1.59	14,781.68	8.766E-02	Pulse	0.50	3
Zn			1	7.643	ug/l	1.49	10,707.32	4.291E-02	Pulse	1.00	3
Cd			1	0.040	ug/l	76.64	54.00	2.170E-04	Pulse	0.50	3
Al			1	754.874	ug/l	0.12	167,154.88	5.326E-01	Pulse	1.00	3
Se			1	0.268	ug/l	24.33	49.33	1.977E-04	Pulse	3.00	3
Sb			1	0.141	ug/l	10.32	607.34	2.434E-03	Pulse	1.00	3
Se			1	0.487	ug/l	11.46	50.00	2.004E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,529,553.50	0.75	88.8	Pulse	0.50	3
1	Sc		313,865.54	0.60	89.7	Pulse	0.30	3
1	Ge		168,635.48	0.38	89.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,435,478.52	0.98	88.9	Pulse	0.30	3
1	Tb		3,537,970.67	0.63	89.6	Pulse	0.50	3
1	Lu		2,596,511.42	0.56	88.8	Pulse	0.50	3
1	Ge		249,527.50	0.70	89.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,467.84	3.70	101.2	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:14
Sample Name MP41211-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.720	ug/l	1.11	25,967.28	1.496E-01	Pulse	0.50	3
As			1	1.221	ug/l	0.56	973.36	5.607E-03	Pulse	1.00	3
Mo			1	0.144	ug/l	13.83	506.01	1.976E-03	Pulse	0.50	3
Pb			1	0.223	ug/l	3.85	3,250.65	1.245E-03	Pulse	1.00	3
Be			1	0.025	ug/l	55.46	1.33	4.124E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	19.76	278.00	1.086E-03	Pulse	0.50	3
Ba			1	3.145	ug/l	3.71	3,703.06	2.522E-03	Pulse	0.50	3
Tl			1	0.011	ug/l	25.78	303.34	1.161E-04	Pulse	0.50	3
Sn			1	0.677	ug/l	5.02	2,023.46	1.378E-03	Pulse	0.30	3
Sr			1	11.665	ug/l	0.90	43,935.55	2.992E-02	Pulse	0.50	3
[Pb]			1	0.208	ug/l	9.51	1,514.74	5.802E-04	Pulse	0.50	3
Ca			1	2802.572	ug/l	0.80	68,986.32	2.581E-02	Pulse	0.50	3
Ti			1	12.130	ug/l	2.69	2,000.14	6.197E-03	Pulse	0.50	3
Na			1	3827.240	ug/l	0.88	4,111,472.08	1.274E+01	Pulse	1.00	3
Mg			1	293.700	ug/l	0.07	155,919.30	4.831E-01	Pulse	1.00	3
K			1	164.601	ug/l	2.80	185,831.38	5.758E-01	Pulse	1.00	3
V			1	2.069	ug/l	0.32	11,058.49	3.426E-02	Pulse	0.50	3
Mn			1	1.488	ug/l	2.98	5,633.51	3.245E-02	Pulse	0.50	3
Fe			1	2165.864	ug/l	0.41	10,517,825.00	6.058E+01	Analog	0.50	3
Co			1	0.087	ug/l	5.75	806.69	4.646E-03	Pulse	0.50	3
Ni			1	0.573	ug/l	5.39	1,797.42	1.035E-02	Pulse	0.50	3
Cu			1	1.165	ug/l	1.87	14,101.83	8.123E-02	Pulse	0.50	3
Zn			1	6.602	ug/l	3.42	9,847.86	3.848E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	98.89	8.67	3.369E-05	Pulse	0.50	3
Al			1	681.773	ug/l	0.60	155,393.99	4.815E-01	Pulse	1.00	3
Se			1	0.208	ug/l	57.36	47.22	1.843E-04	Pulse	3.00	3
Sb			1	0.061	ug/l	5.15	321.00	1.254E-03	Pulse	1.00	3
Se			1	0.288	ug/l	65.30	45.89	1.793E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,611,571.42	0.54	91.7	Pulse	0.50	3
1	Sc		322,770.58	1.57	92.2	Pulse	0.30	3
1	Ge		173,612.70	0.67	91.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,468,559.94	0.76	90.9	Pulse	0.30	3
1	Tb		3,647,292.58	1.01	92.4	Pulse	0.50	3
1	Lu		2,673,113.67	1.37	91.5	Pulse	0.50	3
1	Ge		255,922.16	1.36	91.8	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,440.06	2.84	99.3	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:18
Sample Name MP41211-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.567	ug/l	7.20	6,469.76	3.532E-02	Pulse	0.50	3
As			1	0.474	ug/l	6.80	145.33	7.933E-04	Pulse	1.00	3
Mo			1	-0.077	ug/l	-62.95	87.33	3.228E-04	Pulse	0.50	3
Pb			1	0.032	ug/l	66.11	922.69	3.316E-04	Pulse	1.00	3
Be			1	0.038	ug/l	169.99	0.67	1.944E-06	Pulse	2.00	3
Ag			1	-0.007	ug/l	-163.19	80.00	2.953E-04	Pulse	0.50	3
Ba			1	0.993	ug/l	12.13	280.67	1.782E-04	Pulse	0.50	3
Tl			1	-0.012	ug/l	-47.90	99.33	3.573E-05	Pulse	0.50	3
Sn			1	0.117	ug/l	107.03	286.67	1.819E-04	Pulse	0.30	3
Sr			1	3.331	ug/l	1.32	3,086.93	1.961E-03	Pulse	0.50	3
[Pb]			1	-0.006	ug/l	-770.74	440.01	1.581E-04	Pulse	0.50	3
Ca			1	816.656	ug/l	2.26	5,856.89	2.055E-03	Pulse	0.50	3
Ti			1	4.010	ug/l	18.07	148.00	4.311E-04	Pulse	0.50	3
Na			1	1173.467	ug/l	0.80	293,878.34	8.561E-01	Pulse	1.00	3
Mg			1	86.432	ug/l	2.50	10,777.57	3.140E-02	Pulse	1.00	3
K			1	41.452	ug/l	28.18	108,051.07	3.148E-01	Pulse	1.00	3
V			1	0.693	ug/l	9.01	1,950.77	5.683E-03	Pulse	0.50	3
Mn			1	0.371	ug/l	18.85	764.02	4.170E-03	Pulse	0.50	3
Fe			1	680.461	ug/l	0.19	714,640.98	3.901E+00	Pulse	0.50	3
Co			1	0.002	ug/l	41.10	61.33	3.348E-04	Pulse	0.50	3
Ni			1	-0.006	ug/l	-1091.53	502.01	2.740E-03	Pulse	0.50	3
Cu			1	0.535	ug/l	30.55	8,182.42	4.467E-02	Pulse	0.50	3
Zn			1	-3.460	ug/l	-3.40	2,024.11	7.471E-03	Pulse	1.00	3
Cd			1	0.027	ug/l	40.60	11.33	4.179E-05	Pulse	0.50	3
Al			1	209.983	ug/l	2.29	11,760.49	3.426E-02	Pulse	1.00	3
Se			1	-0.158	ug/l	-72.96	35.22	1.300E-04	Pulse	3.00	3
Sb			1	-0.030	ug/l	-33.43	71.33	2.633E-04	Pulse	1.00	3
Se			1	-0.785	ug/l	-103.32	35.78	1.321E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,782,329.83	0.88	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		343,273.45	0.23	98.1	Pulse	0.30	3
1	Ge		183,199.76	0.36	96.9	Pulse	0.30	3
1	In		1,574,144.55	0.87	97.5	Pulse	0.30	3
1	Tb		3,842,135.42	0.65	97.3	Pulse	0.50	3
1	Lu		2,849,457.25	0.24	97.5	Pulse	0.50	3
1	Ge		270,976.43	1.46	97.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,394.50	4.30	96.2	Pulse	0.30	3

Quantitation Report

File Name	066CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:21
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.290	ug/l	1.32	635,510.31	3.466E+00	Pulse	0.50	3
As			1	50.531	ug/l	0.81	79,292.91	4.324E-01	Pulse	1.00	3
Mo			1	50.196	ug/l	1.24	284,141.17	1.044E+00	Pulse	0.50	3
Pb			1	50.334	ug/l	0.37	1,176,367.29	4.250E-01	Pulse	1.00	3
Be			1	51.289	ug/l	1.78	4,484.33	1.321E-02	Pulse	2.00	3
Ag			1	49.814	ug/l	0.81	902,819.37	3.317E+00	Pulse	0.50	3
Ba			1	50.403	ug/l	1.16	126,360.57	8.021E-02	Pulse	0.50	3
Tl			1	51.205	ug/l	0.52	1,694,289.04	6.121E-01	Pulse	0.50	3
Sn			1	49.915	ug/l	0.12	287,738.09	1.826E-01	Pulse	0.30	3
Sr			1	50.104	ug/l	0.65	401,683.03	2.550E-01	Pulse	0.50	3
[Pb]			1	50.320	ug/l	0.21	561,401.27	2.028E-01	Pulse	0.50	3
Ca			1	5079.415	ug/l	1.36	266,985.97	9.202E-02	Pulse	0.50	3
Ti			1	50.463	ug/l	1.05	17,447.78	5.140E-02	Pulse	0.50	3
Na			1	5208.155	ug/l	1.01	11,723,454.33	3.453E+01	Analog	1.00	3
Mg			1	5212.682	ug/l	1.27	5,784,114.83	1.704E+01	Analog	1.00	3
K			1	5179.569	ug/l	0.51	5,975,270.17	1.760E+01	Analog	1.00	3
V			1	50.515	ug/l	1.36	509,078.22	1.500E+00	Pulse	0.50	3
Mn			1	51.323	ug/l	0.70	377,125.50	2.057E+00	Pulse	0.50	3
Fe			1	5210.394	ug/l	0.52	53,378,716.00	2.911E+02	Analog	0.50	3
Co			1	51.692	ug/l	1.23	938,269.58	5.117E+00	Pulse	0.50	3
Ni			1	51.960	ug/l	1.40	253,139.84	1.380E+00	Pulse	0.50	3
Cu			1	52.189	ug/l	0.57	668,640.58	3.646E+00	Pulse	0.50	3
Zn			1	51.375	ug/l	0.70	121,772.09	4.473E-01	Pulse	1.00	3
Cd			1	50.727	ug/l	0.35	140,473.42	5.160E-01	Pulse	0.50	3
Al			1	5158.892	ug/l	1.29	2,450,015.00	7.217E+00	Pulse	1.00	3
Se			1	50.716	ug/l	1.20	6,287.70	2.310E-02	Pulse	3.00	3
Sb			1	50.330	ug/l	0.66	403,365.30	1.482E+00	Pulse	1.00	3
Se			1	51.167	ug/l	2.42	2,992.57	1.099E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,768,071.75	1.12	97.2	Pulse	0.50	3
1	Sc		339,488.82	0.55	97.0	Pulse	0.30	3
1	Ge		183,373.05	0.21	97.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,575,396.78	0.50	97.6	Pulse	0.30	3
1	Tb		3,882,043.75	0.94	98.3	Pulse	0.50	3
1	Lu		2,901,925.42	1.51	99.3	Pulse	0.50	3
1	Ge		272,219.77	0.85	97.7	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,405.62	8.42	96.9	Pulse	0.30	3

Quantitation Report

File Name	067_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:25
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.610	ug/l	0.37	1,233,498.46	6.774E+00	Pulse	0.50	3
As			1	100.062	ug/l	0.51	155,838.66	8.559E-01	Pulse	1.00	3
Mo			1	100.194	ug/l	0.71	556,630.71	2.083E+00	Pulse	0.50	3
Pb			1	100.231	ug/l	1.12	2,290,825.33	8.460E-01	Pulse	1.00	3
Be			1	99.442	ug/l	0.43	8,616.66	2.561E-02	Pulse	2.00	3
Ag			1	98.004	ug/l	0.47	1,743,557.71	6.525E+00	Pulse	0.50	3
Ba			1	100.340	ug/l	0.52	246,849.23	1.597E-01	Pulse	0.50	3
Tl			1	101.881	ug/l	0.42	3,297,875.42	1.218E+00	Pulse	0.50	3
Sn			1	99.954	ug/l	0.20	565,263.50	3.656E-01	Pulse	0.30	3
Sr			1	101.007	ug/l	0.27	794,276.23	5.137E-01	Pulse	0.50	3
[Pb]			1	100.022	ug/l	1.41	1,091,261.21	4.030E-01	Pulse	0.50	3
Ca			1	10101.491	ug/l	1.17	523,696.43	1.824E-01	Pulse	0.50	3
Ti			1	101.280	ug/l	1.44	34,697.30	1.031E-01	Pulse	0.50	3
Na			1	10241.003	ug/l	0.41	22,819,792.00	6.783E+01	Analog	1.00	3
Mg			1	10206.302	ug/l	0.49	11,222,983.67	3.336E+01	Analog	1.00	3
K			1	10182.832	ug/l	0.99	11,543,793.33	3.431E+01	Analog	1.00	3
V			1	99.708	ug/l	0.77	994,679.21	2.956E+00	Pulse	0.50	3
Mn			1	100.876	ug/l	0.41	735,539.21	4.040E+00	Pulse	0.50	3
Fe			1	10195.685	ug/l	0.27	103,697,837.33	5.695E+02	Analog	0.50	3
Co			1	101.447	ug/l	0.35	1,828,336.58	1.004E+01	Pulse	0.50	3
Ni			1	101.051	ug/l	0.25	488,361.93	2.682E+00	Pulse	0.50	3
Cu			1	101.878	ug/l	0.38	1,288,973.54	7.079E+00	Pulse	0.50	3
Zn			1	101.406	ug/l	0.25	233,228.75	8.728E-01	Pulse	1.00	3
Cd			1	100.923	ug/l	0.13	274,341.44	1.027E+00	Pulse	0.50	3
Al			1	10132.296	ug/l	1.09	4,767,385.83	1.417E+01	Mix	1.00	3
Se			1	101.579	ug/l	0.40	12,325.41	4.612E-02	Pulse	3.00	3
Sb			1	100.185	ug/l	0.60	788,089.92	2.949E+00	Pulse	1.00	3
Se			1	102.114	ug/l	0.66	5,823.67	2.179E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,708,117.42	1.13	95.0	Pulse	0.50	3
1	Sc		336,438.04	0.38	96.1	Pulse	0.30	3
1	Ge		182,080.53	0.70	96.3	Pulse	0.30	3
1	In		1,546,114.77	0.80	95.7	Pulse	0.30	3
1	Tb		3,823,139.17	0.48	96.8	Pulse	0.50	3
1	Lu		2,870,856.33	0.37	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		267,219.34	0.43	95.9	Pulse	0.30	3
1	Te		11.33	26.96	1700.0	Pulse	0.50	3
1	Li		1,383.39	2.78	95.4	Pulse	0.30	3

Quantitation Report

File Name	068_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:29
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.053	ug/l	20.10	5,130.69	2.834E-02	Pulse	0.50	3
As			1	0.022	ug/l	20.43	103.67	5.724E-04	Pulse	1.00	3
Mo			1	0.096	ug/l	20.32	662.02	2.487E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	35.35	1,214.05	4.404E-04	Pulse	1.00	3
Be			1	0.023	ug/l	62.04	2.33	6.899E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	12.03	328.67	1.232E-03	Pulse	0.50	3
Ba			1	0.005	ug/l	228.68	43.33	2.788E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	24.64	548.01	1.988E-04	Pulse	0.50	3
Sn			1	0.130	ug/l	19.93	955.59	6.146E-04	Pulse	0.30	3
Sr			1	0.005	ug/l	83.48	455.34	2.928E-04	Pulse	0.50	3
[Pb]			1	0.013	ug/l	39.74	588.01	2.132E-04	Pulse	0.50	3
Ca			1	-7.212	ug/l	-11.22	1,289.38	4.557E-04	Pulse	0.50	3
Ti			1	0.011	ug/l	116.82	11.33	3.367E-05	Pulse	0.50	3
Na			1	-0.731	ug/l	-52.36	25,290.92	7.497E-02	Pulse	1.00	3
Mg			1	0.508	ug/l	34.60	1,624.07	4.812E-03	Pulse	1.00	3
K			1	-0.318	ug/l	-134.09	101,140.46	2.999E-01	Pulse	1.00	3
V			1	0.011	ug/l	89.05	1,330.05	3.943E-03	Pulse	0.50	3
Mn			1	-0.018	ug/l	-37.53	358.67	1.979E-03	Pulse	0.50	3
Fe			1	1.002	ug/l	10.52	28,348.71	1.566E-01	Pulse	0.50	3
Co			1	0.009	ug/l	16.26	214.67	1.186E-03	Pulse	0.50	3
Ni			1	-0.020	ug/l	-59.64	403.34	2.230E-03	Pulse	0.50	3
Cu			1	-0.061	ug/l	-36.57	6,655.17	3.676E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-2.60	1,139.37	4.274E-03	Pulse	1.00	3
Cd			1	0.011	ug/l	47.65	33.33	1.247E-04	Pulse	0.50	3
Al			1	0.229	ug/l	1344.17	1,765.06	5.223E-03	Pulse	1.00	3
Se			1	0.061	ug/l	48.62	43.89	1.646E-04	Pulse	3.00	3
Sb			1	0.031	ug/l	17.45	335.33	1.259E-03	Pulse	1.00	3
Se			1	-0.038	ug/l	-143.24	37.56	1.408E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,757,296.58	0.41	96.8	Pulse	0.50	3
1	Sc		337,293.44	0.78	96.4	Pulse	0.30	3
1	Ge		181,081.44	1.48	95.7	Pulse	0.30	3
1	In		1,555,391.78	0.57	96.3	Pulse	0.30	3
1	Tb		3,788,727.83	0.80	96.0	Pulse	0.50	3
1	Lu		2,829,516.42	0.44	96.8	Pulse	0.50	3
1	Ge		266,543.64	1.24	95.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,351.16	7.14	93.2	Pulse	0.30	3

Quantitation Report

File Name 069SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:33
Sample Name MP41211-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	226.818	ug/l	0.11	1,275,814.04	7.633E+00	Pulse	0.50	3
As			1	228.665	ug/l	0.74	163,439.65	9.779E-01	Pulse	1.00	3
Mo			1	220.902	ug/l	0.26	566,344.37	2.296E+00	Pulse	0.50	3
Pb			1	223.436	ug/l	0.25	2,315,085.33	9.429E-01	Pulse	1.00	3
Be			1	225.459	ug/l	1.10	9,029.84	2.903E-02	Pulse	2.00	3
Ag			1	99.608	ug/l	0.28	817,893.81	3.316E+00	Pulse	0.50	3
Ba			1	223.119	ug/l	0.13	249,588.71	1.775E-01	Pulse	0.50	3
Tl			1	217.921	ug/l	0.12	3,197,917.75	1.302E+00	Pulse	0.50	3
Sn			1	225.445	ug/l	0.98	579,731.19	4.123E-01	Pulse	0.30	3
Sr			1	231.750	ug/l	0.52	828,643.25	5.893E-01	Pulse	0.50	3
[Pb]			1	212.776	ug/l	0.61	1,052,466.29	4.286E-01	Pulse	0.50	3
Ca			1	23339.544	ug/l	0.74	547,808.54	2.106E-01	Pulse	0.50	3
Ti			1	237.551	ug/l	1.52	37,607.99	1.209E-01	Pulse	0.50	3
Na			1	24709.444	ug/l	0.93	25,442,815.33	8.181E+01	Analog	1.00	3
Mg			1	20895.396	ug/l	1.06	10,619,139.33	3.415E+01	Analog	1.00	3
K			1	20424.797	ug/l	1.61	10,700,462.33	3.441E+01	Analog	1.00	3
V			1	220.072	ug/l	0.77	1,014,583.31	3.262E+00	Pulse	0.50	3
Mn			1	223.039	ug/l	0.81	746,419.09	4.466E+00	Pulse	0.50	3
Fe			1	22870.408	ug/l	0.41	106,760,160.00	6.387E+02	Analog	0.50	3
Co			1	224.958	ug/l	0.37	1,860,970.13	1.113E+01	Pulse	0.50	3
Ni			1	221.888	ug/l	0.61	492,150.99	2.944E+00	Pulse	0.50	3
Cu			1	223.002	ug/l	0.12	1,294,344.50	7.744E+00	Pulse	0.50	3
Zn			1	220.125	ug/l	0.37	233,424.92	9.464E-01	Pulse	1.00	3
Cd			1	217.209	ug/l	0.44	272,493.66	1.105E+00	Pulse	0.50	3
Al			1	20717.963	ug/l	0.94	4,505,284.17	1.449E+01	Pulse	1.00	3
Se			1	216.829	ug/l	1.41	12,138.51	4.922E-02	Pulse	3.00	3
Sb			1	221.237	ug/l	0.60	803,150.75	3.256E+00	Pulse	1.00	3
Se			1	217.623	ug/l	1.36	5,725.64	2.321E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,455,349.25	1.31	86.2	Pulse	0.50	3
1	Sc		311,033.15	2.23	88.9	Pulse	0.30	3
1	Ge		167,145.09	1.43	88.4	Pulse	0.30	3
1	In		1,406,078.62	1.05	87.1	Pulse	0.30	3
1	Tb		3,507,935.17	1.77	88.9	Pulse	0.50	3
1	Lu		2,600,641.17	1.13	89.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,649.25	1.24	88.5	Pulse	0.30	3
1	Te		3.33	91.65	500.0	Pulse	0.50	3
1	Li		1,306.72	9.28	90.1	Pulse	0.30	3

Quantitation Report

File Name 070SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:37
Sample Name MP41211-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	228.562	ug/l	1.44	1,278,959.17	7.691E+00	Pulse	0.50	3
As			1	230.045	ug/l	0.71	163,581.57	9.838E-01	Pulse	1.00	3
Mo			1	223.226	ug/l	0.93	569,756.94	2.320E+00	Pulse	0.50	3
Pb			1	222.478	ug/l	0.40	2,309,814.92	9.388E-01	Pulse	1.00	3
Be			1	228.122	ug/l	1.17	9,113.04	2.938E-02	Pulse	2.00	3
Ag			1	101.199	ug/l	0.19	827,179.94	3.369E+00	Pulse	0.50	3
Ba			1	222.141	ug/l	0.47	249,536.66	1.767E-01	Pulse	0.50	3
Tl			1	218.041	ug/l	0.86	3,206,051.92	1.303E+00	Pulse	0.50	3
Sn			1	225.043	ug/l	0.92	581,116.73	4.116E-01	Pulse	0.30	3
Sr			1	229.616	ug/l	0.46	824,421.62	5.839E-01	Pulse	0.50	3
[Pb]			1	212.972	ug/l	0.45	1,055,493.48	4.290E-01	Pulse	0.50	3
Ca			1	23526.391	ug/l	0.99	551,852.17	2.123E-01	Pulse	0.50	3
Ti			1	236.523	ug/l	0.82	37,356.22	1.204E-01	Pulse	0.50	3
Na			1	24970.655	ug/l	0.79	25,645,993.33	8.268E+01	Analog	1.00	3
Mg			1	21223.191	ug/l	0.95	10,758,646.67	3.468E+01	Analog	1.00	3
K			1	20706.890	ug/l	0.63	10,820,381.67	3.488E+01	Analog	1.00	3
V			1	221.006	ug/l	0.69	1,016,313.12	3.276E+00	Pulse	0.50	3
Mn			1	223.690	ug/l	0.98	744,711.88	4.479E+00	Pulse	0.50	3
Fe			1	23218.947	ug/l	0.52	107,826,053.33	6.485E+02	Analog	0.50	3
Co			1	226.197	ug/l	0.94	1,861,438.58	1.119E+01	Pulse	0.50	3
Ni			1	223.207	ug/l	0.78	492,503.57	2.962E+00	Pulse	0.50	3
Cu			1	226.029	ug/l	1.02	1,305,018.71	7.848E+00	Pulse	0.50	3
Zn			1	222.831	ug/l	0.55	235,204.46	9.579E-01	Pulse	1.00	3
Cd			1	216.174	ug/l	0.57	269,978.30	1.100E+00	Pulse	0.50	3
Al			1	21035.108	ug/l	0.99	4,562,742.00	1.471E+01	Pulse	1.00	3
Se			1	217.878	ug/l	0.34	12,143.29	4.946E-02	Pulse	3.00	3
Sb			1	221.927	ug/l	0.39	802,026.69	3.266E+00	Pulse	1.00	3
Se			1	220.226	ug/l	1.56	5,767.65	2.349E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,460,339.75	1.58	86.4	Pulse	0.50	3
1	Sc		310,205.11	1.15	88.6	Pulse	0.30	3
1	Ge		166,271.85	0.76	87.9	Pulse	0.30	3
1	In		1,411,937.58	0.95	87.4	Pulse	0.30	3
1	Tb		3,513,697.83	1.70	89.0	Pulse	0.50	3
1	Lu		2,599,312.75	1.64	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,531.25	1.12	88.1	Pulse	0.30	3
1	Te		4.67	49.49	700.0	Pulse	0.50	3
1	Li		1,375.61	4.13	94.9	Pulse	0.30	3

Quantitation Report

File Name	071SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:40
Sample Name	MP41211-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	26.182	ug/l	0.61	156,695.49	9.030E-01	Pulse	0.50	3
As			1	23.693	ug/l	1.89	17,642.46	1.017E-01	Pulse	1.00	3
Mo			1	21.998	ug/l	0.74	58,461.95	2.291E-01	Pulse	0.50	3
Pb			1	22.098	ug/l	0.59	241,727.84	9.353E-02	Pulse	1.00	3
Be			1	22.418	ug/l	4.99	943.19	2.888E-03	Pulse	2.00	3
Ag			1	5.365	ug/l	0.34	45,658.57	1.789E-01	Pulse	0.50	3
Ba			1	24.871	ug/l	1.78	29,015.88	1.980E-02	Pulse	0.50	3
Tl			1	21.435	ug/l	0.24	331,225.35	1.282E-01	Pulse	0.50	3
Sn			1	21.358	ug/l	0.56	57,409.27	3.918E-02	Pulse	0.30	3
Sr			1	33.556	ug/l	0.52	125,350.87	8.556E-02	Pulse	0.50	3
[Pb]			1	21.178	ug/l	0.80	110,636.69	4.281E-02	Pulse	0.50	3
Ca			1	5128.228	ug/l	0.49	125,231.39	4.674E-02	Pulse	0.50	3
Ti			1	37.932	ug/l	2.86	6,311.79	1.933E-02	Pulse	0.50	3
Na			1	6129.932	ug/l	0.32	6,647,227.50	2.036E+01	Analog	1.00	3
Mg			1	2517.194	ug/l	0.61	1,344,201.25	4.116E+00	Pulse	1.00	3
K			1	2301.780	ug/l	0.86	1,353,517.42	4.145E+00	Pulse	1.00	3
V			1	23.997	ug/l	1.15	117,221.35	3.590E-01	Pulse	0.50	3
Mn			1	23.681	ug/l	0.62	82,691.93	4.765E-01	Pulse	0.50	3
Fe			1	4391.836	ug/l	0.73	21,298,251.33	1.227E+02	Analog	0.50	3
Co			1	22.558	ug/l	1.02	193,782.63	1.117E+00	Pulse	0.50	3
Ni			1	23.362	ug/l	0.94	54,223.61	3.125E-01	Pulse	0.50	3
Cu			1	23.897	ug/l	0.69	150,332.11	8.664E-01	Pulse	0.50	3
Zn			1	29.306	ug/l	0.66	34,454.35	1.350E-01	Pulse	1.00	3
Cd			1	21.388	ug/l	1.57	27,765.46	1.088E-01	Pulse	0.50	3
Al			1	2845.892	ug/l	0.14	651,226.56	1.994E+00	Pulse	1.00	3
Se			1	21.761	ug/l	0.97	1,292.05	5.063E-03	Pulse	3.00	3
Sb			1	20.294	ug/l	0.59	76,300.39	2.990E-01	Pulse	1.00	3
Se			1	21.155	ug/l	1.64	610.01	2.391E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,584,602.58	0.72	90.7	Pulse	0.50	3
1	Sc		326,557.43	0.89	93.3	Pulse	0.30	3
1	Ge		173,519.06	0.77	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,465,112.62	0.74	90.7	Pulse	0.30	3
1	Tb		3,627,825.67	1.11	91.9	Pulse	0.50	3
1	Lu		2,679,239.42	1.04	91.7	Pulse	0.50	3
1	Ge		255,168.78	1.25	91.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,381.17	6.41	95.2	Pulse	0.30	3

Quantitation Report

File Name 072SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:44
Sample Name FA98679-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.889	ug/l	1.99	20,935.23	1.217E-01	Pulse	0.50	3
As			1	0.601	ug/l	0.71	508.68	2.957E-03	Pulse	1.00	3
Mo			1	0.719	ug/l	4.41	2,006.78	7.953E-03	Pulse	0.50	3
Pb			1	0.074	ug/l	3.99	1,590.75	6.163E-04	Pulse	1.00	3
Be			1	0.009	ug/l	211.84	0.67	2.060E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	14.42	271.33	1.075E-03	Pulse	0.50	3
Ba			1	3.392	ug/l	3.37	3,995.13	2.718E-03	Pulse	0.50	3
Tl			1	0.015	ug/l	53.29	364.01	1.412E-04	Pulse	0.50	3
Sn			1	0.449	ug/l	8.26	1,411.18	9.597E-04	Pulse	0.30	3
Sr			1	142.899	ug/l	0.71	534,086.42	3.635E-01	Pulse	0.50	3
[Pb]			1	0.068	ug/l	17.18	767.35	2.973E-04	Pulse	0.50	3
Ca			1	46699.512	ug/l	0.46	1,122,073.25	4.209E-01	Pulse	0.50	3
Ti			1	1.303	ug/l	44.14	220.67	6.863E-04	Pulse	0.50	3
Na			1	3757.150	ug/l	0.78	4,034,437.75	1.251E+01	Pulse	1.00	3
Mg			1	1696.724	ug/l	0.86	895,343.52	2.776E+00	Pulse	1.00	3
K			1	540.296	ug/l	1.11	388,113.77	1.203E+00	Pulse	1.00	3
V			1	1.105	ug/l	4.41	6,444.42	1.998E-02	Pulse	0.50	3
Mn			1	10.749	ug/l	1.72	37,464.02	2.178E-01	Pulse	0.50	3
Fe			1	130.347	ug/l	0.27	643,452.63	3.740E+00	Pulse	0.50	3
Co			1	0.134	ug/l	12.87	1,192.71	6.938E-03	Pulse	0.50	3
Ni			1	0.200	ug/l	7.23	931.36	5.412E-03	Pulse	0.50	3
Cu			1	0.542	ug/l	1.41	10,266.77	5.968E-02	Pulse	0.50	3
Zn			1	4.925	ug/l	4.30	7,911.96	3.135E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	33.46	14.00	5.549E-05	Pulse	0.50	3
Al			1	30.512	ug/l	14.91	8,453.62	2.623E-02	Pulse	1.00	3
Se			1	0.153	ug/l	23.08	43.33	1.717E-04	Pulse	3.00	3
Sb			1	0.097	ug/l	10.75	448.68	1.778E-03	Pulse	1.00	3
Se			1	0.341	ug/l	49.58	46.67	1.849E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,581,594.83	1.51	90.6	Pulse	0.50	3
1	Sc		322,562.19	1.12	92.2	Pulse	0.30	3
1	Ge		172,024.77	1.50	91.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,469,490.53	1.75	91.0	Pulse	0.30	3
1	Tb		3,619,844.67	1.26	91.7	Pulse	0.50	3
1	Lu		2,665,899.42	1.17	91.2	Pulse	0.50	3
1	Ge		252,335.33	0.11	90.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,343.39	7.74	92.6	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:48
Sample Name MP41211-D2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.273	ug/l	10.76	21,652.02	1.346E-01	Pulse	0.50	3
As			1	0.602	ug/l	18.83	474.01	2.959E-03	Pulse	1.00	3
Mo			1	0.761	ug/l	7.80	1,994.11	8.396E-03	Pulse	0.50	3
Pb			1	0.059	ug/l	21.81	1,323.39	5.532E-04	Pulse	1.00	3
Be			1	0.031	ug/l	33.02	1.50	4.942E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	34.03	256.67	1.086E-03	Pulse	0.50	3
Ba			1	3.729	ug/l	10.77	4,062.47	2.986E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	21.36	174.00	7.203E-05	Pulse	0.50	3
Sn			1	0.466	ug/l	9.12	1,352.28	9.916E-04	Pulse	0.30	3
Sr			1	157.144	ug/l	7.22	544,525.31	3.997E-01	Pulse	0.50	3
[Pb]			1	0.042	ug/l	25.39	588.68	2.460E-04	Pulse	0.50	3
Ca			1	51121.560	ug/l	7.45	1,138,177.42	4.607E-01	Pulse	0.50	3
Ti			1	2.082	ug/l	54.33	330.73	1.083E-03	Pulse	0.50	3
Na			1	4101.422	ug/l	8.25	4,081,353.83	1.365E+01	Pulse	1.00	3
Mg			1	1850.117	ug/l	8.00	905,297.77	3.026E+00	Pulse	1.00	3
K			1	607.621	ug/l	10.90	393,426.39	1.316E+00	Pulse	1.00	3
V			1	1.413	ug/l	10.82	7,336.73	2.455E-02	Pulse	0.50	3
Mn			1	11.597	ug/l	7.17	37,810.71	2.347E-01	Pulse	0.50	3
Fe			1	140.400	ug/l	7.80	647,557.56	4.021E+00	Pulse	0.50	3
Co			1	0.134	ug/l	14.56	1,118.70	6.968E-03	Pulse	0.50	3
Ni			1	0.179	ug/l	16.87	825.35	5.124E-03	Pulse	0.50	3
Cu			1	0.606	ug/l	26.14	9,961.27	6.190E-02	Pulse	0.50	3
Zn			1	4.618	ug/l	12.06	7,126.00	3.005E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	58.36	11.33	4.839E-05	Pulse	0.50	3
Al			1	33.149	ug/l	13.66	8,383.35	2.807E-02	Pulse	1.00	3
Se			1	0.233	ug/l	50.32	44.89	1.899E-04	Pulse	3.00	3
Sb			1	0.061	ug/l	12.59	300.33	1.253E-03	Pulse	1.00	3
Se			1	0.154	ug/l	146.93	39.00	1.651E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,406,601.92	9.68	84.5	Pulse	0.50	3
1	Sc		300,706.98	10.08	85.9	Pulse	0.30	3
1	Ge		161,831.34	10.12	85.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,368,683.94	9.77	84.8	Pulse	0.30	3
1	Tb		3,356,306.08	10.07	85.0	Pulse	0.50	3
1	Lu		2,482,632.92	9.96	84.9	Pulse	0.50	3
1	Ge		238,371.94	9.80	85.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,312.28	11.08	90.5	Pulse	0.30	3

Quantitation Report

File Name 074SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:52
Sample Name MP41211-SD2
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.352	ug/l	4.15	6,365.06	3.387E-02	Pulse	0.50	3
As			1	0.150	ug/l	129.84	97.00	5.159E-04	Pulse	1.00	3
Mo			1	0.159	ug/l	40.36	226.67	8.147E-04	Pulse	0.50	3
Pb			1	-0.025	ug/l	-49.16	801.02	2.832E-04	Pulse	1.00	3
Be			1	0.074	ug/l	150.59	1.00	2.849E-06	Pulse	2.00	3
Ag			1	-0.011	ug/l	-42.01	76.00	2.729E-04	Pulse	0.50	3
Ba			1	1.090	ug/l	6.92	314.00	1.936E-04	Pulse	0.50	3
Tl			1	-0.009	ug/l	-50.65	111.33	3.935E-05	Pulse	0.50	3
Sn			1	0.041	ug/l	209.67	250.00	1.542E-04	Pulse	0.30	3
Sr			1	52.145	ug/l	2.61	43,431.10	2.678E-02	Pulse	0.50	3
[Pb]			1	-0.113	ug/l	-8.88	324.67	1.148E-04	Pulse	0.50	3
Ca			1	17291.560	ug/l	0.40	92,486.10	3.171E-02	Pulse	0.50	3
Ti			1	0.913	ug/l	49.36	40.67	1.158E-04	Pulse	0.50	3
Na			1	1372.108	ug/l	0.17	346,711.12	9.875E-01	Pulse	1.00	3
Mg			1	627.160	ug/l	0.92	73,065.03	2.081E-01	Pulse	1.00	3
K			1	188.429	ug/l	1.47	127,750.70	3.639E-01	Pulse	1.00	3
V			1	0.713	ug/l	2.77	2,015.45	5.740E-03	Pulse	0.50	3
Mn			1	3.753	ug/l	4.46	3,326.97	1.770E-02	Pulse	0.50	3
Fe			1	48.083	ug/l	1.04	69,371.82	3.691E-01	Pulse	0.50	3
Co			1	0.040	ug/l	30.38	134.00	7.130E-04	Pulse	0.50	3
Ni			1	-0.241	ug/l	-17.89	398.01	2.118E-03	Pulse	0.50	3
Cu			1	0.248	ug/l	17.33	8,021.70	4.268E-02	Pulse	0.50	3
Zn			1	-4.517	ug/l	-10.58	1,829.42	6.572E-03	Pulse	1.00	3
Cd			1	-0.005	ug/l	-88.58	2.67	9.592E-06	Pulse	0.50	3
Al			1	-11.199	ug/l	-0.73	1,171.71	3.337E-03	Pulse	1.00	3
Se			1	-0.483	ug/l	-139.60	32.11	1.153E-04	Pulse	3.00	3
Sb			1	-0.031	ug/l	-82.26	73.00	2.623E-04	Pulse	1.00	3
Se			1	-0.372	ug/l	-241.21	39.22	1.409E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,828,460.58	0.46	99.3	Pulse	0.50	3
1	Sc		351,093.61	0.30	100.3	Pulse	0.30	3
1	Ge		187,935.58	0.24	99.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,622,174.94	0.52	100.5	Pulse	0.30	3
1	Tb		3,932,825.58	0.41	99.6	Pulse	0.50	3
1	Lu		2,916,601.83	0.34	99.8	Pulse	0.50	3
1	Ge		278,377.18	0.49	99.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,416.72	9.78	97.7	Pulse	0.30	3

Quantitation Report

File Name 075SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 12:55
Sample Name MP41211-S3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	219.146	ug/l	0.69	1,277,311.17	7.376E+00	Pulse	0.50	3
As			1	220.002	ug/l	0.83	162,938.20	9.409E-01	Pulse	1.00	3
Mo			1	216.511	ug/l	0.58	572,530.33	2.251E+00	Pulse	0.50	3
Pb			1	215.483	ug/l	1.60	2,315,121.42	9.093E-01	Pulse	1.00	3
Be			1	222.404	ug/l	0.59	9,200.41	2.864E-02	Pulse	2.00	3
Ag			1	95.825	ug/l	0.53	811,524.96	3.190E+00	Pulse	0.50	3
Ba			1	216.069	ug/l	1.16	249,781.86	1.719E-01	Pulse	0.50	3
Tl			1	210.529	ug/l	1.44	3,203,408.25	1.258E+00	Pulse	0.50	3
Sn			1	219.839	ug/l	1.20	584,190.78	4.020E-01	Pulse	0.30	3
Sr			1	347.003	ug/l	1.13	1,281,968.54	8.822E-01	Pulse	0.50	3
[Pb]			1	205.894	ug/l	1.91	1,055,954.00	4.148E-01	Pulse	0.50	3
Ca			1	61944.408	ug/l	0.46	1,511,405.00	5.581E-01	Pulse	0.50	3
Ti			1	220.345	ug/l	1.46	36,035.74	1.122E-01	Pulse	0.50	3
Na			1	23799.105	ug/l	0.44	25,313,728.67	7.880E+01	Analog	1.00	3
Mg			1	21616.119	ug/l	0.34	11,347,696.33	3.532E+01	Analog	1.00	3
K			1	20272.161	ug/l	0.87	10,972,048.00	3.416E+01	Analog	1.00	3
V			1	212.959	ug/l	0.62	1,014,153.27	3.157E+00	Pulse	0.50	3
Mn			1	223.332	ug/l	0.76	774,381.60	4.472E+00	Pulse	0.50	3
Fe			1	20090.515	ug/l	0.61	97,173,472.00	5.611E+02	Analog	0.50	3
Co			1	216.102	ug/l	1.07	1,852,199.58	1.070E+01	Pulse	0.50	3
Ni			1	213.918	ug/l	1.03	491,617.06	2.839E+00	Pulse	0.50	3
Cu			1	215.751	ug/l	0.96	1,297,704.37	7.493E+00	Pulse	0.50	3
Zn			1	210.859	ug/l	0.72	230,739.90	9.070E-01	Pulse	1.00	3
Cd			1	209.628	ug/l	1.02	271,246.17	1.066E+00	Pulse	0.50	3
Al			1	19370.466	ug/l	0.27	4,351,250.00	1.355E+01	Pulse	1.00	3
Se			1	210.836	ug/l	1.21	12,176.10	4.786E-02	Pulse	3.00	3
Sb			1	214.843	ug/l	0.73	804,435.79	3.162E+00	Pulse	1.00	3
Se			1	212.338	ug/l	1.06	5,762.76	2.265E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,546,013.00	0.35	89.4	Pulse	0.50	3
1	Sc		321,246.18	0.79	91.8	Pulse	0.30	3
1	Ge		173,177.75	0.29	91.6	Pulse	0.30	3
1	In		1,453,098.00	0.53	90.0	Pulse	0.30	3
1	Tb		3,640,047.42	0.29	92.2	Pulse	0.50	3
1	Lu		2,708,270.67	1.26	92.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		254,393.37	0.26	91.3	Pulse	0.30	3
1	Te		4.67	65.47	700.0	Pulse	0.50	3
1	Li		1,298.94	8.96	89.6	Pulse	0.30	3

Quantitation Report

File Name	076SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 12:59
Sample Name	MP41211-S4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	216.296	ug/l	1.44	1,258,570.00	7.280E+00	Pulse	0.50	3
As			1	218.162	ug/l	0.81	161,300.69	9.330E-01	Pulse	1.00	3
Mo			1	213.625	ug/l	1.73	567,438.81	2.221E+00	Pulse	0.50	3
Pb			1	211.659	ug/l	0.72	2,277,321.25	8.932E-01	Pulse	1.00	3
Be			1	214.803	ug/l	0.70	8,961.81	2.766E-02	Pulse	2.00	3
Ag			1	94.786	ug/l	1.66	806,344.13	3.155E+00	Pulse	0.50	3
Ba			1	211.464	ug/l	1.16	245,813.02	1.682E-01	Pulse	0.50	3
Tl			1	207.320	ug/l	0.98	3,158,905.00	1.239E+00	Pulse	0.50	3
Sn			1	215.556	ug/l	0.58	575,980.71	3.942E-01	Pulse	0.30	3
Sr			1	346.324	ug/l	0.10	1,286,516.00	8.805E-01	Pulse	0.50	3
[Pb]			1	201.658	ug/l	0.79	1,035,727.15	4.062E-01	Pulse	0.50	3
Ca			1	63077.848	ug/l	0.23	1,541,302.33	5.683E-01	Pulse	0.50	3
Ti			1	215.774	ug/l	0.56	35,592.97	1.099E-01	Pulse	0.50	3
Na			1	23493.233	ug/l	0.51	25,201,501.33	7.779E+01	Analog	1.00	3
Mg			1	21280.759	ug/l	0.48	11,266,814.00	3.478E+01	Analog	1.00	3
K			1	20035.279	ug/l	0.38	10,937,646.67	3.376E+01	Analog	1.00	3
V			1	208.716	ug/l	0.30	1,002,474.09	3.094E+00	Pulse	0.50	3
Mn			1	222.216	ug/l	0.99	769,201.00	4.449E+00	Pulse	0.50	3
Fe			1	20038.718	ug/l	0.57	96,760,072.00	5.597E+02	Analog	0.50	3
Co			1	214.081	ug/l	1.69	1,831,741.42	1.060E+01	Pulse	0.50	3
Ni			1	210.751	ug/l	2.17	483,506.12	2.797E+00	Pulse	0.50	3
Cu			1	212.337	ug/l	1.38	1,275,096.71	7.375E+00	Pulse	0.50	3
Zn			1	206.360	ug/l	1.55	226,893.09	8.879E-01	Pulse	1.00	3
Cd			1	204.626	ug/l	1.09	265,967.22	1.041E+00	Pulse	0.50	3
Al			1	19098.955	ug/l	0.19	4,326,857.33	1.336E+01	Pulse	1.00	3
Se			1	207.965	ug/l	1.77	12,064.69	4.721E-02	Pulse	3.00	3
Sb			1	211.504	ug/l	1.27	795,523.38	3.113E+00	Pulse	1.00	3
Se			1	207.731	ug/l	1.60	5,664.51	2.217E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,549,631.17	1.53	89.5	Pulse	0.50	3
1	Sc		323,985.06	1.03	92.6	Pulse	0.30	3
1	Ge		172,888.55	0.87	91.4	Pulse	0.30	3
1	In		1,461,084.18	0.50	90.5	Pulse	0.30	3
1	Tb		3,667,317.00	1.39	92.9	Pulse	0.50	3
1	Lu		2,712,217.50	1.01	92.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,556.39	0.69	91.7	Pulse	0.30	3
1	Te		4.67	89.21	700.0	Pulse	0.50	3
1	Li		1,341.16	3.28	92.5	Pulse	0.30	3

Quantitation Report

File Name 077SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:03
Sample Name MP41211-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	25.597	ug/l	0.56	157,029.56	8.834E-01	Pulse	0.50	3
As			1	23.699	ug/l	0.91	18,077.53	1.017E-01	Pulse	1.00	3
Mo			1	23.229	ug/l	0.97	63,092.08	2.419E-01	Pulse	0.50	3
Pb			1	22.238	ug/l	0.37	246,112.58	9.412E-02	Pulse	1.00	3
Be			1	22.992	ug/l	3.26	983.36	2.962E-03	Pulse	2.00	3
Ag			1	5.480	ug/l	1.71	47,664.90	1.827E-01	Pulse	0.50	3
Ba			1	25.678	ug/l	0.74	30,317.33	2.045E-02	Pulse	0.50	3
Tl			1	22.148	ug/l	1.41	346,270.19	1.324E-01	Pulse	0.50	3
Sn			1	21.821	ug/l	0.30	59,355.45	4.003E-02	Pulse	0.30	3
Sr			1	171.319	ug/l	0.13	646,031.13	4.357E-01	Pulse	0.50	3
[Pb]			1	21.239	ug/l	1.95	112,257.28	4.293E-02	Pulse	0.50	3
Ca			1	49938.903	ug/l	0.28	1,226,471.67	4.500E-01	Pulse	0.50	3
Ti			1	24.552	ug/l	5.27	4,157.80	1.252E-02	Pulse	0.50	3
Na			1	6117.193	ug/l	1.12	6,742,324.50	2.031E+01	Analog	1.00	3
Mg			1	3964.972	ug/l	0.90	2,151,457.58	6.482E+00	Pulse	1.00	3
K			1	2754.491	ug/l	1.07	1,626,679.37	4.901E+00	Pulse	1.00	3
V			1	23.692	ug/l	0.81	117,645.50	3.544E-01	Pulse	0.50	3
Mn			1	33.017	ug/l	1.11	117,921.83	6.634E-01	Pulse	0.50	3
Fe			1	2350.961	ug/l	0.23	11,687,355.00	6.575E+01	Analog	0.50	3
Co			1	22.872	ug/l	0.74	201,268.59	1.132E+00	Pulse	0.50	3
Ni			1	22.911	ug/l	0.38	54,478.93	3.065E-01	Pulse	0.50	3
Cu			1	23.616	ug/l	0.48	152,284.23	8.567E-01	Pulse	0.50	3
Zn			1	26.658	ug/l	1.57	32,282.59	1.238E-01	Pulse	1.00	3
Cd			1	21.911	ug/l	1.25	29,072.14	1.115E-01	Pulse	0.50	3
Al			1	2193.494	ug/l	0.71	510,581.14	1.538E+00	Pulse	1.00	3
Se			1	22.598	ug/l	1.56	1,369.94	5.252E-03	Pulse	3.00	3
Sb			1	20.814	ug/l	0.37	79,985.58	3.067E-01	Pulse	1.00	3
Se			1	22.071	ug/l	1.87	648.90	2.488E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,615,019.67	0.44	91.8	Pulse	0.50	3
1	Sc		331,934.94	1.33	94.9	Pulse	0.30	3
1	Ge		177,752.72	0.87	94.0	Pulse	0.30	3
1	In		1,482,712.86	1.11	91.8	Pulse	0.30	3
1	Tb		3,690,114.58	0.69	93.5	Pulse	0.50	3
1	Lu		2,725,278.17	0.76	93.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,825.17	0.52	93.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,418.95	0.83	97.9	Pulse	0.30	3

Quantitation Report

File Name	078SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:07
Sample Name	FA98621-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.995	ug/l	2.81	22,215.31	1.253E-01	Pulse	0.50	3
As			1	0.982	ug/l	5.72	813.35	4.585E-03	Pulse	1.00	3
Mo			1	0.875	ug/l	3.28	2,502.18	9.578E-03	Pulse	0.50	3
Pb			1	0.026	ug/l	21.53	1,083.37	4.146E-04	Pulse	1.00	3
Be			1	0.055	ug/l	50.59	2.67	8.066E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	8.67	229.33	8.777E-04	Pulse	0.50	3
Ba			1	3.714	ug/l	3.54	4,471.24	2.975E-03	Pulse	0.50	3
Tl			1	0.017	ug/l	40.74	390.00	1.495E-04	Pulse	0.50	3
Sn			1	0.442	ug/l	7.31	1,423.95	9.470E-04	Pulse	0.30	3
Sr			1	158.904	ug/l	1.17	607,594.15	4.042E-01	Pulse	0.50	3
[Pb]			1	0.022	ug/l	80.61	532.68	2.038E-04	Pulse	0.50	3
Ca			1	44958.665	ug/l	0.16	1,095,674.67	4.052E-01	Pulse	0.50	3
Ti			1	0.440	ug/l	21.19	82.00	2.469E-04	Pulse	0.50	3
Na			1	4451.668	ug/l	0.64	4,911,381.50	1.480E+01	Analog	1.00	3
Mg			1	2124.360	ug/l	0.15	1,152,669.92	3.474E+00	Pulse	1.00	3
K			1	1143.784	ug/l	1.32	733,493.21	2.211E+00	Pulse	1.00	3
V			1	1.615	ug/l	2.62	9,135.49	2.754E-02	Pulse	0.50	3
Mn			1	4.877	ug/l	0.98	17,789.49	1.003E-01	Pulse	0.50	3
Fe			1	83.298	ug/l	1.07	430,459.86	2.427E+00	Pulse	0.50	3
Co			1	0.124	ug/l	6.33	1,148.70	6.474E-03	Pulse	0.50	3
Ni			1	0.270	ug/l	7.36	1,125.37	6.342E-03	Pulse	0.50	3
Cu			1	0.470	ug/l	5.00	10,150.03	5.720E-02	Pulse	0.50	3
Zn			1	4.167	ug/l	1.88	7,349.41	2.813E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	26.11	21.33	8.164E-05	Pulse	0.50	3
Al			1	9.653	ug/l	14.39	3,862.73	1.165E-02	Pulse	1.00	3
Se			1	0.274	ug/l	11.40	52.00	1.991E-04	Pulse	3.00	3
Sb			1	0.226	ug/l	2.06	962.36	3.683E-03	Pulse	1.00	3
Se			1	0.265	ug/l	68.35	46.22	1.769E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,613,560.08	1.22	91.7	Pulse	0.50	3
1	Sc		331,762.85	1.17	94.8	Pulse	0.30	3
1	Ge		177,410.41	1.78	93.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,503,509.11	1.40	93.1	Pulse	0.30	3
1	Tb		3,675,846.33	1.01	93.1	Pulse	0.50	3
1	Lu		2,703,939.33	0.81	92.5	Pulse	0.50	3
1	Ge		261,244.75	0.87	93.7	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,404.50	14.62	96.9	Pulse	0.30	3

Quantitation Report

File Name	079CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:11
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.853	ug/l	0.98	643,097.42	3.436E+00	Pulse	0.50	3
As			1	49.755	ug/l	0.48	79,682.78	4.258E-01	Pulse	1.00	3
Mo			1	49.864	ug/l	0.75	285,895.25	1.037E+00	Pulse	0.50	3
Pb			1	49.302	ug/l	0.35	1,170,780.92	4.163E-01	Pulse	1.00	3
Be			1	50.369	ug/l	1.21	4,544.51	1.297E-02	Pulse	2.00	3
Ag			1	49.271	ug/l	0.34	904,501.63	3.280E+00	Pulse	0.50	3
Ba			1	49.122	ug/l	0.77	125,614.59	7.817E-02	Pulse	0.50	3
Tl			1	50.183	ug/l	0.18	1,687,148.79	5.999E-01	Pulse	0.50	3
Sn			1	48.431	ug/l	1.06	284,772.08	1.772E-01	Pulse	0.30	3
Sr			1	49.142	ug/l	0.94	401,854.00	2.501E-01	Pulse	0.50	3
[Pb]			1	49.329	ug/l	0.26	559,199.87	1.988E-01	Pulse	0.50	3
Ca			1	5082.874	ug/l	0.88	271,248.28	9.208E-02	Pulse	0.50	3
Ti			1	49.281	ug/l	0.74	17,581.93	5.019E-02	Pulse	0.50	3
Na			1	5148.400	ug/l	0.88	11,957,609.00	3.414E+01	Analog	1.00	3
Mg			1	5121.163	ug/l	1.16	5,863,059.00	1.674E+01	Analog	1.00	3
K			1	5126.650	ug/l	0.41	6,103,303.17	1.742E+01	Analog	1.00	3
V			1	49.506	ug/l	1.72	514,765.21	1.470E+00	Pulse	0.50	3
Mn			1	51.013	ug/l	0.70	382,568.57	2.044E+00	Pulse	0.50	3
Fe			1	5169.578	ug/l	0.40	54,050,846.67	2.888E+02	Analog	0.50	3
Co			1	51.177	ug/l	0.70	948,039.27	5.066E+00	Pulse	0.50	3
Ni			1	51.076	ug/l	0.21	253,964.82	1.357E+00	Pulse	0.50	3
Cu			1	51.755	ug/l	1.11	676,784.33	3.616E+00	Pulse	0.50	3
Zn			1	51.108	ug/l	0.20	122,710.13	4.450E-01	Pulse	1.00	3
Cd			1	50.264	ug/l	0.98	140,981.84	5.113E-01	Pulse	0.50	3
Al			1	5069.847	ug/l	1.31	2,484,195.25	7.093E+00	Pulse	1.00	3
Se			1	50.696	ug/l	0.82	6,366.06	2.309E-02	Pulse	3.00	3
Sb			1	49.694	ug/l	0.65	403,390.94	1.463E+00	Pulse	1.00	3
Se			1	50.642	ug/l	0.53	3,000.79	1.088E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,524.00	0.32	98.7	Pulse	0.50	3
1	Sc		350,285.10	1.14	100.1	Pulse	0.30	3
1	Ge		187,148.39	0.40	99.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,606,952.40	0.46	99.5	Pulse	0.30	3
1	Tb		3,937,603.75	0.56	99.7	Pulse	0.50	3
1	Lu		2,945,954.58	0.55	100.8	Pulse	0.50	3
1	Ge		275,724.95	0.30	98.9	Pulse	0.30	3
1	Te		4.67	24.74	700.0	Pulse	0.50	3
1	Li		1,453.39	6.54	100.2	Pulse	0.30	3

Quantitation Report

File Name	080_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:14
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.835	ug/l	0.50	1,216,800.88	6.655E+00	Pulse	0.50	3
As			1	98.101	ug/l	0.67	153,419.91	8.391E-01	Pulse	1.00	3
Mo			1	98.546	ug/l	0.75	550,575.27	2.049E+00	Pulse	0.50	3
Pb			1	98.034	ug/l	0.35	2,263,344.83	8.274E-01	Pulse	1.00	3
Be			1	98.794	ug/l	0.45	8,658.51	2.544E-02	Pulse	2.00	3
Ag			1	96.551	ug/l	0.68	1,727,452.25	6.428E+00	Pulse	0.50	3
Ba			1	98.889	ug/l	0.15	244,383.43	1.573E-01	Pulse	0.50	3
Tl			1	100.323	ug/l	0.83	3,280,098.58	1.199E+00	Pulse	0.50	3
Sn			1	98.291	ug/l	0.42	558,386.85	3.595E-01	Pulse	0.30	3
Sr			1	98.660	ug/l	0.12	779,363.27	5.018E-01	Pulse	0.50	3
[Pb]			1	98.121	ug/l	0.02	1,081,398.75	3.953E-01	Pulse	0.50	3
Ca			1	9958.691	ug/l	0.55	520,146.79	1.798E-01	Pulse	0.50	3
Ti			1	98.200	ug/l	1.83	34,023.47	9.999E-02	Pulse	0.50	3
Na			1	10133.773	ug/l	0.96	22,839,180.00	6.712E+01	Analog	1.00	3
Mg			1	10112.582	ug/l	1.22	11,246,532.00	3.305E+01	Analog	1.00	3
K			1	10030.692	ug/l	0.84	11,503,032.00	3.380E+01	Analog	1.00	3
V			1	97.611	ug/l	1.21	984,871.83	2.894E+00	Pulse	0.50	3
Mn			1	99.902	ug/l	0.43	731,467.38	4.001E+00	Pulse	0.50	3
Fe			1	10133.475	ug/l	0.53	103,491,234.67	5.660E+02	Analog	0.50	3
Co			1	99.506	ug/l	0.40	1,800,811.63	9.849E+00	Pulse	0.50	3
Ni			1	99.518	ug/l	0.87	482,951.12	2.641E+00	Pulse	0.50	3
Cu			1	99.574	ug/l	0.67	1,265,183.38	6.920E+00	Pulse	0.50	3
Zn			1	99.578	ug/l	0.46	230,375.03	8.573E-01	Pulse	1.00	3
Cd			1	98.687	ug/l	0.91	269,783.12	1.004E+00	Pulse	0.50	3
Al			1	10036.704	ug/l	1.54	4,776,054.33	1.404E+01	Mix	1.00	3
Se			1	99.593	ug/l	0.86	12,153.86	4.523E-02	Pulse	3.00	3
Sb			1	98.576	ug/l	0.41	779,822.37	2.902E+00	Pulse	1.00	3
Se			1	98.226	ug/l	1.05	5,635.28	2.097E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,735,469.17	1.24	96.0	Pulse	0.50	3
1	Sc		340,299.17	1.04	97.2	Pulse	0.30	3
1	Ge		182,833.47	0.27	96.7	Pulse	0.30	3
1	In		1,553,139.07	0.21	96.2	Pulse	0.30	3
1	Tb		3,828,787.42	0.40	97.0	Pulse	0.50	3
1	Lu		2,892,238.08	0.57	99.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		268,737.80	0.14	96.4	Pulse	0.30	3
1	Te		5.33	78.06	800.0	Pulse	0.50	3
1	Li		1,302.27	2.38	89.8	Pulse	0.30	3

Quantitation Report

File Name	081_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:18
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.039	ug/l	15.52	4,831.28	2.744E-02	Pulse	0.50	3
As			1	0.029	ug/l	6.86	111.33	6.320E-04	Pulse	1.00	3
Mo			1	0.089	ug/l	28.74	606.68	2.328E-03	Pulse	0.50	3
Pb			1	0.010	ug/l	113.29	1,057.70	3.883E-04	Pulse	1.00	3
Be			1	0.022	ug/l	41.81	2.17	6.529E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	49.28	264.00	1.015E-03	Pulse	0.50	3
Ba			1	0.003	ug/l	210.30	38.67	2.532E-05	Pulse	0.50	3
Tl			1	0.012	ug/l	59.94	514.01	1.891E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	13.00	883.36	5.760E-04	Pulse	0.30	3
Sr			1	0.005	ug/l	136.55	452.68	2.955E-04	Pulse	0.50	3
[Pb]			1	0.007	ug/l	138.80	518.68	1.903E-04	Pulse	0.50	3
Ca			1	-9.687	ug/l	-17.50	1,149.37	4.111E-04	Pulse	0.50	3
Ti			1	0.011	ug/l	187.39	11.33	3.418E-05	Pulse	0.50	3
Na			1	-0.977	ug/l	-93.31	24,362.82	7.334E-02	Pulse	1.00	3
Mg			1	0.406	ug/l	178.88	1,485.07	4.477E-03	Pulse	1.00	3
K			1	-1.973	ug/l	-53.35	97,795.11	2.943E-01	Pulse	1.00	3
V			1	0.009	ug/l	208.38	1,291.38	3.889E-03	Pulse	0.50	3
Mn			1	-0.021	ug/l	-31.27	321.34	1.826E-03	Pulse	0.50	3
Fe			1	0.934	ug/l	74.90	26,870.13	1.527E-01	Pulse	0.50	3
Co			1	0.008	ug/l	94.18	192.67	1.096E-03	Pulse	0.50	3
Ni			1	-0.018	ug/l	-71.37	402.01	2.285E-03	Pulse	0.50	3
Cu			1	-0.082	ug/l	-19.46	6,219.69	3.532E-02	Pulse	0.50	3
Zn			1	-0.722	ug/l	-4.06	1,112.37	4.271E-03	Pulse	1.00	3
Cd			1	0.009	ug/l	36.76	28.00	1.077E-04	Pulse	0.50	3
Al			1	-1.693	ug/l	-45.39	841.36	2.535E-03	Pulse	1.00	3
Se			1	0.048	ug/l	98.36	41.33	1.587E-04	Pulse	3.00	3
Sb			1	0.030	ug/l	9.89	326.00	1.251E-03	Pulse	1.00	3
Se			1	0.080	ug/l	51.82	43.22	1.658E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,731,720.00	1.69	95.9	Pulse	0.50	3
1	Sc		332,269.52	0.59	94.9	Pulse	0.30	3

Quantitation Report

1	Ge		176,119.55	1.40	93.1	Pulse	0.30	3
1	In		1,532,250.43	1.59	94.9	Pulse	0.30	3
1	Tb		3,748,903.75	0.95	95.0	Pulse	0.50	3
1	Lu		2,796,951.00	1.00	95.7	Pulse	0.50	3
1	Ge		260,540.67	1.31	93.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,367.83	4.88	94.3	Pulse	0.30	3

Quantitation Report

File Name	082SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:22
Sample Name	FA98621-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.251	ug/l	1.60	22,746.59	1.338E-01	Pulse	0.50	3
As			1	0.478	ug/l	5.46	413.34	2.432E-03	Pulse	1.00	3
Mo			1	1.192	ug/l	5.11	3,208.96	1.288E-02	Pulse	0.50	3
Pb			1	0.029	ug/l	19.24	1,090.04	4.249E-04	Pulse	1.00	3
Be			1	0.017	ug/l	123.57	1.00	3.148E-06	Pulse	2.00	3
Ag			1	0.034	ug/l	12.64	366.67	1.471E-03	Pulse	0.50	3
Ba			1	2.750	ug/l	1.12	3,205.63	2.208E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	13.50	193.33	7.535E-05	Pulse	0.50	3
Sn			1	1.059	ug/l	19.78	3,018.05	2.075E-03	Pulse	0.30	3
Sr			1	104.785	ug/l	1.14	387,094.87	2.666E-01	Pulse	0.50	3
[Pb]			1	0.017	ug/l	66.35	498.68	1.944E-04	Pulse	0.50	3
Ca			1	36094.804	ug/l	0.98	856,634.73	3.254E-01	Pulse	0.50	3
Ti			1	0.817	ug/l	33.73	138.67	4.386E-04	Pulse	0.50	3
Na			1	2568.668	ug/l	1.17	2,717,536.83	8.576E+00	Pulse	1.00	3
Mg			1	1827.300	ug/l	1.25	947,141.77	2.989E+00	Pulse	1.00	3
K			1	200.288	ug/l	1.99	201,339.79	6.354E-01	Pulse	1.00	3
V			1	1.722	ug/l	4.68	9,232.22	2.913E-02	Pulse	0.50	3
Mn			1	5.858	ug/l	1.69	20,378.02	1.199E-01	Pulse	0.50	3
Fe			1	101.083	ug/l	1.34	496,807.91	2.923E+00	Pulse	0.50	3
Co			1	0.092	ug/l	3.04	828.69	4.877E-03	Pulse	0.50	3
Ni			1	0.164	ug/l	10.84	839.35	4.937E-03	Pulse	0.50	3
Cu			1	0.439	ug/l	11.85	9,539.72	5.615E-02	Pulse	0.50	3
Zn			1	4.058	ug/l	2.02	6,892.24	2.767E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-1512.05	3.33	1.325E-05	Pulse	0.50	3
Al			1	35.106	ug/l	1.63	9,329.86	2.944E-02	Pulse	1.00	3
Se			1	0.425	ug/l	16.15	58.11	2.333E-04	Pulse	3.00	3
Sb			1	0.118	ug/l	5.36	520.01	2.088E-03	Pulse	1.00	3
Se			1	0.490	ug/l	15.18	50.00	2.007E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,565,589.67	0.77	90.0	Pulse	0.50	3
1	Sc		316,854.18	1.01	90.5	Pulse	0.30	3
1	Ge		169,925.68	1.74	89.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,451,950.36	1.85	89.9	Pulse	0.30	3
1	Tb		3,569,990.92	1.17	90.4	Pulse	0.50	3
1	Lu		2,632,008.33	1.31	90.1	Pulse	0.50	3
1	Ge		249,118.18	1.40	89.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,303.39	7.97	89.9	Pulse	0.30	3

Quantitation Report

File Name 083SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:26
Sample Name FA98621-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.093	ug/l	1.36	22,095.84	1.286E-01	Pulse	0.50	3
As			1	2.271	ug/l	4.25	1,734.75	1.010E-02	Pulse	1.00	3
Mo			1	1.261	ug/l	1.70	3,449.00	1.359E-02	Pulse	0.50	3
Pb			1	0.037	ug/l	17.32	1,193.71	4.596E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1034.74	0.33	1.041E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	22.49	273.33	1.077E-03	Pulse	0.50	3
Ba			1	1.870	ug/l	3.37	2,208.15	1.508E-03	Pulse	0.50	3
Tl			1	0.010	ug/l	13.93	289.33	1.114E-04	Pulse	0.50	3
Sn			1	0.431	ug/l	9.43	1,356.72	9.267E-04	Pulse	0.30	3
Sr			1	87.838	ug/l	0.99	327,290.99	2.235E-01	Pulse	0.50	3
[Pb]			1	0.029	ug/l	7.17	567.34	2.184E-04	Pulse	0.50	3
Ca			1	30904.529	ug/l	0.43	744,363.02	2.787E-01	Pulse	0.50	3
Ti			1	0.433	ug/l	26.41	78.00	2.432E-04	Pulse	0.50	3
Na			1	2739.629	ug/l	0.71	2,934,326.17	9.142E+00	Pulse	1.00	3
Mg			1	3713.024	ug/l	0.70	1,948,467.21	6.070E+00	Pulse	1.00	3
K			1	356.399	ug/l	0.70	287,631.87	8.961E-01	Pulse	1.00	3
V			1	1.379	ug/l	4.70	7,719.55	2.405E-02	Pulse	0.50	3
Mn			1	10.195	ug/l	2.68	35,519.03	2.067E-01	Pulse	0.50	3
Fe			1	728.682	ug/l	2.27	3,514,130.67	2.045E+01	Pulse	0.50	3
Co			1	0.115	ug/l	6.48	1,032.03	6.002E-03	Pulse	0.50	3
Ni			1	0.246	ug/l	12.89	1,034.70	6.023E-03	Pulse	0.50	3
Cu			1	0.403	ug/l	5.97	9,432.99	5.489E-02	Pulse	0.50	3
Zn			1	3.884	ug/l	1.66	6,835.22	2.693E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-121.94	2.00	7.884E-06	Pulse	0.50	3
Al			1	15.166	ug/l	6.77	4,977.00	1.550E-02	Pulse	1.00	3
Se			1	0.375	ug/l	19.42	56.33	2.220E-04	Pulse	3.00	3
Sb			1	0.102	ug/l	3.90	472.34	1.861E-03	Pulse	1.00	3
Se			1	0.534	ug/l	36.72	52.11	2.053E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,597,718.83	0.39	91.2	Pulse	0.50	3
1	Sc		320,976.48	0.50	91.7	Pulse	0.30	3
1	Ge		171,884.47	1.25	90.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,464,247.82	0.31	90.7	Pulse	0.30	3
1	Tb		3,616,401.33	0.59	91.6	Pulse	0.50	3
1	Lu		2,670,545.00	0.45	91.4	Pulse	0.50	3
1	Ge		253,828.39	0.33	91.1	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,377.83	4.01	95.0	Pulse	0.30	3

Quantitation Report

File Name	084SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:29
Sample Name	FA98621-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.178	ug/l	1.79	23,026.92	1.314E-01	Pulse	0.50	3
As			1	1.225	ug/l	1.76	986.03	5.626E-03	Pulse	1.00	3
Mo			1	0.885	ug/l	2.15	2,489.51	9.685E-03	Pulse	0.50	3
Pb			1	0.116	ug/l	1.86	2,061.46	7.925E-04	Pulse	1.00	3
Be			1	-0.003	ug/l	-199.89	0.17	5.110E-07	Pulse	2.00	3
Ag			1	0.015	ug/l	47.20	212.67	8.288E-04	Pulse	0.50	3
Ba			1	21.562	ug/l	2.52	25,407.82	1.717E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	49.95	144.00	5.536E-05	Pulse	0.50	3
Sn			1	0.382	ug/l	12.90	1,241.16	8.382E-04	Pulse	0.30	3
Sr			1	133.940	ug/l	0.26	504,161.78	3.407E-01	Pulse	0.50	3
[Pb]			1	0.104	ug/l	8.88	964.03	3.705E-04	Pulse	0.50	3
Ca			1	44571.581	ug/l	1.09	1,082,558.88	4.017E-01	Pulse	0.50	3
Ti			1	0.585	ug/l	12.34	104.67	3.207E-04	Pulse	0.50	3
Na			1	4193.796	ug/l	0.99	4,553,720.00	1.395E+01	Analog	1.00	3
Mg			1	2141.512	ug/l	0.76	1,143,168.71	3.502E+00	Pulse	1.00	3
K			1	174.093	ug/l	0.42	193,116.00	5.917E-01	Pulse	1.00	3
V			1	3.337	ug/l	0.70	17,314.36	5.305E-02	Pulse	0.50	3
Mn			1	40.391	ug/l	1.85	142,094.97	8.109E-01	Pulse	0.50	3
Fe			1	968.105	ug/l	1.03	4,755,027.83	2.713E+01	Pulse	0.50	3
Co			1	0.104	ug/l	7.89	958.03	5.470E-03	Pulse	0.50	3
Ni			1	0.166	ug/l	17.05	870.02	4.961E-03	Pulse	0.50	3
Cu			1	0.373	ug/l	16.19	9,435.00	5.385E-02	Pulse	0.50	3
Zn			1	7.083	ug/l	1.05	10,416.83	4.053E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	31.26	10.00	3.889E-05	Pulse	0.50	3
Al			1	45.807	ug/l	13.03	12,050.61	3.692E-02	Pulse	1.00	3
Se			1	0.259	ug/l	21.47	50.33	1.958E-04	Pulse	3.00	3
Sb			1	0.077	ug/l	21.34	382.67	1.488E-03	Pulse	1.00	3
Se			1	0.171	ug/l	32.73	42.89	1.669E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,601,134.67	1.00	91.3	Pulse	0.50	3
1	Sc		326,392.01	0.06	93.3	Pulse	0.30	3
1	Ge		175,253.14	1.28	92.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,479,761.64	1.01	91.6	Pulse	0.30	3
1	Tb		3,640,032.75	1.79	92.2	Pulse	0.50	3
1	Lu		2,694,899.25	1.01	92.2	Pulse	0.50	3
1	Ge		257,010.73	1.11	92.2	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,428.95	6.56	98.5	Pulse	0.30	3

Quantitation Report

File Name 085SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:33
Sample Name FA98621-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.332	ug/l	2.07	23,571.58	1.366E-01	Pulse	0.50	3
As			1	0.921	ug/l	4.23	746.68	4.326E-03	Pulse	1.00	3
Mo			1	1.246	ug/l	1.16	3,402.32	1.343E-02	Pulse	0.50	3
Pb			1	0.053	ug/l	9.14	1,376.06	5.271E-04	Pulse	1.00	3
Be			1	0.024	ug/l	28.00	1.33	4.085E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	3.71	212.00	8.370E-04	Pulse	0.50	3
Ba			1	7.005	ug/l	1.91	8,245.90	5.593E-03	Pulse	0.50	3
Tl			1	0.000	ug/l	265.62	138.67	5.317E-05	Pulse	0.50	3
Sn			1	0.396	ug/l	4.37	1,272.27	8.629E-04	Pulse	0.30	3
Sr			1	214.522	ug/l	0.75	804,325.14	5.455E-01	Pulse	0.50	3
[Pb]			1	0.041	ug/l	15.79	633.35	2.427E-04	Pulse	0.50	3
Ca			1	59127.054	ug/l	1.27	1,441,539.04	5.327E-01	Pulse	0.50	3
Ti			1	0.625	ug/l	21.74	111.33	3.411E-04	Pulse	0.50	3
Na			1	3730.289	ug/l	1.19	4,051,773.58	1.242E+01	Pulse	1.00	3
Mg			1	2461.973	ug/l	1.66	1,313,560.54	4.026E+00	Pulse	1.00	3
K			1	282.317	ug/l	0.90	252,019.89	7.724E-01	Pulse	1.00	3
V			1	1.629	ug/l	1.86	9,052.12	2.774E-02	Pulse	0.50	3
Mn			1	8.163	ug/l	1.08	28,657.09	1.660E-01	Pulse	0.50	3
Fe			1	192.279	ug/l	1.28	944,178.40	5.470E+00	Pulse	0.50	3
Co			1	0.197	ug/l	3.02	1,738.08	1.007E-02	Pulse	0.50	3
Ni			1	0.445	ug/l	10.60	1,493.40	8.652E-03	Pulse	0.50	3
Cu			1	0.413	ug/l	5.61	9,531.72	5.522E-02	Pulse	0.50	3
Zn			1	6.838	ug/l	1.20	10,002.93	3.949E-02	Pulse	1.00	3
Cd			1	0.011	ug/l	65.56	17.33	6.844E-05	Pulse	0.50	3
Al			1	90.007	ug/l	3.63	22,125.32	6.782E-02	Pulse	1.00	3
Se			1	0.227	ug/l	70.93	47.78	1.886E-04	Pulse	3.00	3
Sb			1	0.065	ug/l	17.29	333.33	1.317E-03	Pulse	1.00	3
Se			1	0.253	ug/l	120.22	44.44	1.756E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,609,854.83	0.93	91.6	Pulse	0.50	3
1	Sc		326,283.78	0.60	93.2	Pulse	0.30	3
1	Ge		172,618.95	0.35	91.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,474,420.22	0.11	91.3	Pulse	0.30	3
1	Tb		3,664,137.67	0.59	92.8	Pulse	0.50	3
1	Lu		2,706,165.33	1.13	92.6	Pulse	0.50	3
1	Ge		253,310.89	0.83	90.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,320.05	6.37	91.0	Pulse	0.30	3

Quantitation Report

File Name 086SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:37
Sample Name FA98621-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.161	ug/l	1.14	22,689.19	1.308E-01	Pulse	0.50	3
As			1	0.674	ug/l	4.69	567.01	3.270E-03	Pulse	1.00	3
Mo			1	2.469	ug/l	2.99	6,629.19	2.614E-02	Pulse	0.50	3
Pb			1	0.016	ug/l	23.52	972.03	3.721E-04	Pulse	1.00	3
Be			1	0.013	ug/l	145.88	0.83	2.570E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	20.67	191.33	7.543E-04	Pulse	0.50	3
Ba			1	4.470	ug/l	1.21	5,307.46	3.576E-03	Pulse	0.50	3
Tl			1	-0.004	ug/l	-0.21	68.00	2.603E-05	Pulse	0.50	3
Sn			1	0.398	ug/l	28.86	1,285.64	8.672E-04	Pulse	0.30	3
Sr			1	198.608	ug/l	1.56	749,524.08	5.051E-01	Pulse	0.50	3
[Pb]			1	0.012	ug/l	159.73	480.68	1.840E-04	Pulse	0.50	3
Ca			1	59052.374	ug/l	1.44	1,441,290.83	5.321E-01	Pulse	0.50	3
Ti			1	0.711	ug/l	30.21	124.67	3.847E-04	Pulse	0.50	3
Na			1	2655.480	ug/l	0.93	2,870,720.58	8.863E+00	Pulse	1.00	3
Mg			1	1552.422	ug/l	1.17	822,617.83	2.540E+00	Pulse	1.00	3
K			1	198.499	ug/l	0.98	204,836.48	6.324E-01	Pulse	1.00	3
V			1	2.049	ug/l	3.43	11,002.46	3.397E-02	Pulse	0.50	3
Mn			1	14.540	ug/l	0.57	50,914.98	2.936E-01	Pulse	0.50	3
Fe			1	742.799	ug/l	1.41	3,614,342.83	2.084E+01	Pulse	0.50	3
Co			1	0.173	ug/l	4.80	1,540.73	8.887E-03	Pulse	0.50	3
Ni			1	0.312	ug/l	1.21	1,196.04	6.897E-03	Pulse	0.50	3
Cu			1	0.382	ug/l	0.67	9,390.97	5.416E-02	Pulse	0.50	3
Zn			1	3.286	ug/l	1.78	6,184.00	2.439E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	189.54	7.33	2.890E-05	Pulse	0.50	3
Al			1	11.695	ug/l	6.34	4,235.82	1.308E-02	Pulse	1.00	3
Se			1	0.207	ug/l	49.18	46.67	1.840E-04	Pulse	3.00	3
Sb			1	0.398	ug/l	5.81	1,576.07	6.215E-03	Pulse	1.00	3
Se			1	0.118	ug/l	26.52	40.89	1.613E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,612,502.08	0.20	91.7	Pulse	0.50	3
1	Sc		323,892.00	0.32	92.6	Pulse	0.30	3
1	Ge		173,405.26	0.54	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,484,119.60	1.17	91.9	Pulse	0.30	3
1	Tb		3,631,558.33	0.65	92.0	Pulse	0.50	3
1	Lu		2,708,964.17	0.61	92.7	Pulse	0.50	3
1	Ge		253,578.82	0.47	91.0	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,341.16	5.97	92.5	Pulse	0.30	3

Quantitation Report

File Name	087SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:41
Sample Name	FA98621-7
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.244	ug/l	2.29	23,598.27	1.336E-01	Pulse	0.50	3
As			1	0.426	ug/l	7.26	390.00	2.208E-03	Pulse	1.00	3
Mo			1	1.144	ug/l	5.40	3,207.62	1.238E-02	Pulse	0.50	3
Pb			1	0.008	ug/l	17.46	897.03	3.369E-04	Pulse	1.00	3
Be			1	0.020	ug/l	89.45	1.17	3.539E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	20.48	199.33	7.687E-04	Pulse	0.50	3
Ba			1	2.632	ug/l	3.01	3,181.63	2.114E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-36.51	99.33	3.733E-05	Pulse	0.50	3
Sn			1	0.333	ug/l	6.66	1,124.49	7.471E-04	Pulse	0.30	3
Sr			1	105.036	ug/l	1.79	402,231.15	2.672E-01	Pulse	0.50	3
[Pb]			1	0.004	ug/l	200.61	450.68	1.693E-04	Pulse	0.50	3
Ca			1	36020.816	ug/l	0.21	892,697.83	3.248E-01	Pulse	0.50	3
Ti			1	0.775	ug/l	79.74	137.34	4.174E-04	Pulse	0.50	3
Na			1	2499.435	ug/l	0.43	2,746,791.00	8.347E+00	Pulse	1.00	3
Mg			1	1793.800	ug/l	0.74	965,601.33	2.934E+00	Pulse	1.00	3
K			1	186.676	ug/l	2.06	201,605.04	6.127E-01	Pulse	1.00	3
V			1	1.813	ug/l	1.90	10,028.60	3.048E-02	Pulse	0.50	3
Mn			1	5.400	ug/l	2.04	19,559.19	1.107E-01	Pulse	0.50	3
Fe			1	100.512	ug/l	2.25	513,481.80	2.907E+00	Pulse	0.50	3
Co			1	0.088	ug/l	3.71	822.02	4.655E-03	Pulse	0.50	3
Ni			1	0.965	ug/l	2.56	2,746.21	1.555E-02	Pulse	0.50	3
Cu			1	4.107	ug/l	1.92	32,292.28	1.828E-01	Pulse	0.50	3
Zn			1	4.481	ug/l	0.84	7,637.52	2.947E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	322.22	4.67	1.789E-05	Pulse	0.50	3
Al			1	17.601	ug/l	3.99	5,662.83	1.721E-02	Pulse	1.00	3
Se			1	0.390	ug/l	59.89	58.45	2.255E-04	Pulse	3.00	3
Sb			1	0.093	ug/l	12.12	445.68	1.720E-03	Pulse	1.00	3
Se			1	0.295	ug/l	24.26	46.67	1.800E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,663,129.42	1.00	93.5	Pulse	0.50	3
1	Sc		329,072.11	0.83	94.0	Pulse	0.30	3
1	Ge		176,623.16	0.70	93.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,505,221.08	1.07	93.2	Pulse	0.30	3
1	Tb		3,722,544.25	0.53	94.3	Pulse	0.50	3
1	Lu		2,748,646.08	0.70	94.1	Pulse	0.50	3
1	Ge		259,183.55	1.52	93.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,380.05	3.89	95.2	Pulse	0.30	3

Quantitation Report

File Name 088SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 13:45
Sample Name FA98621-10
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.454	ug/l	33.82	24,543.62	1.407E-01	Pulse	0.50	3
As			1	0.277	ug/l	5.49	274.67	1.572E-03	Pulse	1.00	3
Mo			1	2.509	ug/l	0.63	6,800.59	2.656E-02	Pulse	0.50	3
Pb			1	0.014	ug/l	22.70	965.03	3.654E-04	Pulse	1.00	3
Be			1	0.013	ug/l	145.33	0.83	2.564E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	31.42	218.00	8.513E-04	Pulse	0.50	3
Ba			1	22.632	ug/l	0.96	26,695.68	1.802E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	172.96	156.00	5.909E-05	Pulse	0.50	3
Sn			1	0.354	ug/l	6.83	1,166.16	7.870E-04	Pulse	0.30	3
Sr			1	563.328	ug/l	0.52	2,121,173.00	1.432E+00	Pulse	0.50	3
[Pb]			1	0.005	ug/l	66.29	449.34	1.702E-04	Pulse	0.50	3
Ca			1	36081.687	ug/l	1.44	884,422.35	3.253E-01	Pulse	0.50	3
Ti			1	0.702	ug/l	13.61	123.33	3.801E-04	Pulse	0.50	3
Na			1	9498.663	ug/l	0.96	10,227,568.33	3.150E+01	Analog	1.00	3
Mg			1	8370.491	ug/l	0.39	4,442,293.33	1.368E+01	Pulse	1.00	3
K			1	989.831	ug/l	0.55	634,471.25	1.954E+00	Pulse	1.00	3
V			1	1.089	ug/l	2.06	6,411.74	1.975E-02	Pulse	0.50	3
Mn			1	0.134	ug/l	4.34	936.70	5.362E-03	Pulse	0.50	3
Fe			1	5.941	ug/l	2.15	46,549.78	2.665E-01	Pulse	0.50	3
Co			1	0.093	ug/l	7.01	858.02	4.912E-03	Pulse	0.50	3
Ni			1	0.221	ug/l	2.30	994.03	5.691E-03	Pulse	0.50	3
Cu			1	1.761	ug/l	0.19	17,779.53	1.018E-01	Pulse	0.50	3
Zn			1	4.112	ug/l	2.52	7,144.66	2.790E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-315.74	2.67	1.051E-05	Pulse	0.50	3
Al			1	16.475	ug/l	0.85	5,331.72	1.642E-02	Pulse	1.00	3
Se			1	0.021	ug/l	332.06	36.33	1.419E-04	Pulse	3.00	3
Sb			1	0.056	ug/l	11.35	302.33	1.181E-03	Pulse	1.00	3
Se			1	-0.025	ug/l	-1067.09	37.45	1.461E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,641,377.25	0.92	92.7	Pulse	0.50	3
1	Sc		324,714.81	0.81	92.8	Pulse	0.30	3
1	Ge		174,667.89	0.63	92.4	Pulse	0.30	3
1	In		1,481,225.64	1.01	91.7	Pulse	0.30	3
1	Tb		3,682,001.75	1.48	93.3	Pulse	0.50	3
1	Lu		2,719,056.42	1.95	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		256,076.46	1.28	91.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,535.62	5.91	105.9	Pulse	0.30	3

Quantitation Report

File Name	089SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:48
Sample Name	FA98679-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.438	ug/l	1.86	24,305.15	1.401E-01	Pulse	0.50	3
As			1	4.506	ug/l	1.17	3,407.98	1.965E-02	Pulse	1.00	3
Mo			1	1.107	ug/l	2.52	3,072.27	1.199E-02	Pulse	0.50	3
Pb			1	0.224	ug/l	3.09	3,283.65	1.251E-03	Pulse	1.00	3
Be			1	0.021	ug/l	90.09	1.17	3.625E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	17.43	178.67	6.970E-04	Pulse	0.50	3
Ba			1	4.237	ug/l	0.51	5,017.39	3.391E-03	Pulse	0.50	3
Tl			1	-0.001	ug/l	-160.72	123.33	4.695E-05	Pulse	0.50	3
Sn			1	0.367	ug/l	13.92	1,198.94	8.103E-04	Pulse	0.30	3
Sr			1	66.471	ug/l	0.72	250,374.28	1.692E-01	Pulse	0.50	3
[Pb]			1	0.218	ug/l	2.04	1,575.41	6.000E-04	Pulse	0.50	3
Ca			1	24541.594	ug/l	0.13	595,489.75	2.215E-01	Pulse	0.50	3
Ti			1	2.330	ug/l	12.22	390.68	1.209E-03	Pulse	0.50	3
Na			1	2461.437	ug/l	0.46	2,655,309.75	8.222E+00	Pulse	1.00	3
Mg			1	492.069	ug/l	0.46	260,706.07	8.072E-01	Pulse	1.00	3
K			1	130.934	ug/l	3.46	167,799.38	5.196E-01	Pulse	1.00	3
V			1	3.667	ug/l	1.69	18,708.30	5.793E-02	Pulse	0.50	3
Mn			1	2.015	ug/l	1.63	7,460.79	4.301E-02	Pulse	0.50	3
Fe			1	1848.861	ug/l	0.50	8,971,874.00	5.173E+01	Analog	0.50	3
Co			1	0.131	ug/l	4.97	1,183.38	6.822E-03	Pulse	0.50	3
Ni			1	0.600	ug/l	3.63	1,858.10	1.071E-02	Pulse	0.50	3
Cu			1	0.748	ug/l	2.38	11,588.85	6.681E-02	Pulse	0.50	3
Zn			1	5.318	ug/l	1.48	8,465.20	3.303E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	46.47	8.67	3.382E-05	Pulse	0.50	3
Al			1	158.713	ug/l	1.24	37,416.49	1.158E-01	Pulse	1.00	3
Se			1	0.373	ug/l	16.37	56.78	2.215E-04	Pulse	3.00	3
Sb			1	0.129	ug/l	12.23	577.34	2.252E-03	Pulse	1.00	3
Se			1	0.560	ug/l	29.37	53.33	2.081E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,625,463.83	0.76	92.1	Pulse	0.50	3
1	Sc		322,975.33	0.99	92.3	Pulse	0.30	3
1	Ge		173,446.76	1.21	91.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,479,712.96	1.66	91.6	Pulse	0.30	3
1	Tb		3,638,589.50	1.07	92.2	Pulse	0.50	3
1	Lu		2,688,899.92	0.84	92.0	Pulse	0.50	3
1	Ge		256,301.35	0.25	92.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,436.72	3.27	99.1	Pulse	0.30	3

Quantitation Report

File Name	090SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:52
Sample Name	FA98679-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.012	ug/l	1.94	21,679.39	1.258E-01	Pulse	0.50	3
As			1	0.424	ug/l	12.81	379.34	2.201E-03	Pulse	1.00	3
Mo			1	1.192	ug/l	5.91	3,261.63	1.287E-02	Pulse	0.50	3
Pb			1	0.003	ug/l	81.71	827.69	3.158E-04	Pulse	1.00	3
Be			1	0.009	ug/l	212.86	0.67	2.067E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	37.80	159.33	6.290E-04	Pulse	0.50	3
Ba			1	4.295	ug/l	4.37	5,053.39	3.437E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-45.50	98.67	3.764E-05	Pulse	0.50	3
Sn			1	0.335	ug/l	3.51	1,104.48	7.510E-04	Pulse	0.30	3
Sr			1	201.660	ug/l	1.00	754,184.83	5.128E-01	Pulse	0.50	3
[Pb]			1	-0.013	ug/l	-51.27	352.00	1.343E-04	Pulse	0.50	3
Ca			1	58414.625	ug/l	0.80	1,420,439.29	5.263E-01	Pulse	0.50	3
Ti			1	0.604	ug/l	18.34	106.67	3.305E-04	Pulse	0.50	3
Na			1	3510.117	ug/l	1.08	3,773,423.08	1.169E+01	Pulse	1.00	3
Mg			1	2423.796	ug/l	0.79	1,279,420.13	3.964E+00	Pulse	1.00	3
K			1	970.652	ug/l	0.35	620,377.21	1.922E+00	Pulse	1.00	3
V			1	2.320	ug/l	0.63	12,258.56	3.798E-02	Pulse	0.50	3
Mn			1	1.987	ug/l	3.41	7,314.07	4.245E-02	Pulse	0.50	3
Fe			1	46.571	ug/l	1.13	241,396.33	1.401E+00	Pulse	0.50	3
Co			1	0.124	ug/l	2.12	1,108.71	6.435E-03	Pulse	0.50	3
Ni			1	0.176	ug/l	15.63	876.69	5.088E-03	Pulse	0.50	3
Cu			1	0.380	ug/l	7.52	9,320.27	5.410E-02	Pulse	0.50	3
Zn			1	5.543	ug/l	2.18	8,611.26	3.398E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-748.14	3.33	1.313E-05	Pulse	0.50	3
Al			1	9.161	ug/l	6.70	3,649.68	1.131E-02	Pulse	1.00	3
Se			1	1.047	ug/l	14.40	94.78	3.741E-04	Pulse	3.00	3
Sb			1	0.141	ug/l	4.64	613.68	2.422E-03	Pulse	1.00	3
Se			1	0.876	ug/l	26.90	61.22	2.417E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,620,817.83	0.34	92.0	Pulse	0.50	3
1	Sc		322,785.27	0.09	92.2	Pulse	0.30	3
1	Ge		172,297.94	0.32	91.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,470,706.99	1.34	91.1	Pulse	0.30	3
1	Tb		3,629,332.92	0.43	91.9	Pulse	0.50	3
1	Lu		2,698,949.00	0.98	92.4	Pulse	0.50	3
1	Ge		253,413.05	0.61	90.9	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,393.39	0.86	96.1	Pulse	0.30	3

Quantitation Report

File Name	091SMPL.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 13:56
Sample Name	FA98679-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.817	ug/l	1.78	26,612.15	1.528E-01	Pulse	0.50	3
As			1	0.769	ug/l	9.38	639.34	3.674E-03	Pulse	1.00	3
Mo			1	0.667	ug/l	5.11	1,898.77	7.419E-03	Pulse	0.50	3
Pb			1	0.304	ug/l	1.76	4,209.53	1.589E-03	Pulse	1.00	3
Be			1	0.012	ug/l	145.01	0.83	2.562E-06	Pulse	2.00	3
Ag			1	0.015	ug/l	11.63	215.33	8.414E-04	Pulse	0.50	3
Ba			1	1.679	ug/l	4.82	2,034.13	1.356E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-37.28	109.33	4.125E-05	Pulse	0.50	3
Sn			1	0.315	ug/l	4.96	1,072.26	7.149E-04	Pulse	0.30	3
Sr			1	94.708	ug/l	0.28	361,521.58	2.410E-01	Pulse	0.50	3
[Pb]			1	0.306	ug/l	2.68	2,060.14	7.775E-04	Pulse	0.50	3
Ca			1	30532.057	ug/l	0.17	752,536.25	2.754E-01	Pulse	0.50	3
Ti			1	12.267	ug/l	13.10	2,040.20	6.267E-03	Pulse	0.50	3
Na			1	2882.470	ug/l	0.66	3,126,748.75	9.614E+00	Pulse	1.00	3
Mg			1	787.740	ug/l	1.01	419,659.14	1.290E+00	Pulse	1.00	3
K			1	195.279	ug/l	3.09	203,912.61	6.270E-01	Pulse	1.00	3
V			1	3.162	ug/l	0.65	16,405.58	5.044E-02	Pulse	0.50	3
Mn			1	1.211	ug/l	1.24	4,685.92	2.691E-02	Pulse	0.50	3
Fe			1	584.307	ug/l	0.75	2,858,629.33	1.642E+01	Pulse	0.50	3
Co			1	0.164	ug/l	2.48	1,470.73	8.448E-03	Pulse	0.50	3
Ni			1	0.761	ug/l	9.97	2,235.47	1.284E-02	Pulse	0.50	3
Cu			1	0.508	ug/l	8.51	10,190.72	5.852E-02	Pulse	0.50	3
Zn			1	4.254	ug/l	3.68	7,294.72	2.850E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	86.71	10.67	4.161E-05	Pulse	0.50	3
Al			1	623.428	ug/l	1.16	143,323.48	4.407E-01	Pulse	1.00	3
Se			1	0.179	ug/l	89.48	45.45	1.777E-04	Pulse	3.00	3
Sb			1	0.074	ug/l	11.06	369.00	1.442E-03	Pulse	1.00	3
Se			1	0.435	ug/l	26.37	49.89	1.949E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,649,690.25	0.49	93.0	Pulse	0.50	3
1	Sc		325,242.76	1.42	92.9	Pulse	0.30	3
1	Ge		174,118.60	0.93	92.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,500,148.48	0.50	92.9	Pulse	0.30	3
1	Tb		3,684,181.33	0.63	93.3	Pulse	0.50	3
1	Lu		2,732,761.00	0.73	93.5	Pulse	0.50	3
1	Ge		255,921.74	0.83	91.8	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,363.39	7.46	94.0	Pulse	0.30	3

Quantitation Report

File Name	092CCVA.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:00
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.856	ug/l	1.72	635,573.73	3.437E+00	Pulse	0.50	3
As			1	50.111	ug/l	1.23	79,309.29	4.288E-01	Pulse	1.00	3
Mo			1	50.201	ug/l	1.40	284,193.87	1.044E+00	Pulse	0.50	3
Pb			1	50.050	ug/l	0.73	1,172,847.59	4.226E-01	Pulse	1.00	3
Be			1	50.607	ug/l	1.92	4,487.83	1.303E-02	Pulse	2.00	3
Ag			1	49.440	ug/l	0.89	896,208.48	3.292E+00	Pulse	0.50	3
Ba			1	50.068	ug/l	0.98	125,991.18	7.968E-02	Pulse	0.50	3
Tl			1	50.993	ug/l	0.39	1,691,771.83	6.095E-01	Pulse	0.50	3
Sn			1	49.057	ug/l	1.29	283,855.83	1.795E-01	Pulse	0.30	3
Sr			1	49.859	ug/l	1.01	401,211.18	2.537E-01	Pulse	0.50	3
[Pb]			1	50.056	ug/l	1.05	559,954.63	2.018E-01	Pulse	0.50	3
Ca			1	5131.174	ug/l	0.81	270,692.03	9.295E-02	Pulse	0.50	3
Ti			1	50.788	ug/l	2.41	17,810.12	5.173E-02	Pulse	0.50	3
Na			1	5211.111	ug/l	0.77	11,897,803.33	3.455E+01	Analog	1.00	3
Mg			1	5229.352	ug/l	0.79	5,885,645.50	1.709E+01	Analog	1.00	3
K			1	5189.331	ug/l	0.94	6,071,766.00	1.763E+01	Analog	1.00	3
V			1	49.804	ug/l	1.75	509,093.27	1.479E+00	Pulse	0.50	3
Mn			1	51.093	ug/l	1.57	378,658.62	2.047E+00	Pulse	0.50	3
Fe			1	5186.587	ug/l	2.02	53,589,834.67	2.898E+02	Analog	0.50	3
Co			1	51.150	ug/l	1.18	936,411.04	5.063E+00	Pulse	0.50	3
Ni			1	51.315	ug/l	0.98	252,152.31	1.363E+00	Pulse	0.50	3
Cu			1	51.286	ug/l	0.90	662,849.85	3.584E+00	Pulse	0.50	3
Zn			1	51.047	ug/l	1.19	121,021.39	4.445E-01	Pulse	1.00	3
Cd			1	50.780	ug/l	1.19	140,636.13	5.166E-01	Pulse	0.50	3
Al			1	5162.776	ug/l	1.53	2,486,906.17	7.223E+00	Pulse	1.00	3
Se			1	50.656	ug/l	2.45	6,280.37	2.307E-02	Pulse	3.00	3
Sb			1	50.256	ug/l	1.47	402,799.90	1.480E+00	Pulse	1.00	3
Se			1	51.081	ug/l	1.85	2,988.13	1.098E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,775,427.33	0.25	97.4	Pulse	0.50	3
1	Sc		344,342.81	0.72	98.4	Pulse	0.30	3
1	Ge		184,952.03	0.46	97.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,581,337.37	0.51	97.9	Pulse	0.30	3
1	Tb		3,887,566.67	0.70	98.5	Pulse	0.50	3
1	Lu		2,912,367.33	0.51	99.7	Pulse	0.50	3
1	Ge		272,261.64	0.89	97.7	Pulse	0.30	3
1	Te		9.33	86.60	1400.0	Pulse	0.50	3
1	Li		1,361.17	2.45	93.9	Pulse	0.30	3

Quantitation Report

File Name	093_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:03
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.981	ug/l	0.33	1,228,274.00	6.732E+00	Pulse	0.50	3
As			1	98.584	ug/l	0.11	153,849.32	8.433E-01	Pulse	1.00	3
Mo			1	98.791	ug/l	1.06	552,534.65	2.054E+00	Pulse	0.50	3
Pb			1	99.103	ug/l	0.52	2,284,216.08	8.364E-01	Pulse	1.00	3
Be			1	99.163	ug/l	1.27	8,686.02	2.554E-02	Pulse	2.00	3
Ag			1	96.340	ug/l	1.22	1,725,536.96	6.414E+00	Pulse	0.50	3
Ba			1	98.769	ug/l	1.21	245,677.09	1.572E-01	Pulse	0.50	3
Tl			1	100.713	ug/l	0.45	3,287,425.42	1.204E+00	Pulse	0.50	3
Sn			1	98.333	ug/l	0.61	562,268.09	3.597E-01	Pulse	0.30	3
Sr			1	98.980	ug/l	0.71	786,985.15	5.034E-01	Pulse	0.50	3
[Pb]			1	98.660	ug/l	0.82	1,085,518.34	3.975E-01	Pulse	0.50	3
Ca			1	10001.382	ug/l	0.55	523,689.04	1.806E-01	Pulse	0.50	3
Ti			1	98.712	ug/l	1.46	34,184.42	1.005E-01	Pulse	0.50	3
Na			1	10189.065	ug/l	1.51	22,950,830.00	6.748E+01	Analog	1.00	3
Mg			1	10217.337	ug/l	1.62	11,356,820.67	3.339E+01	Analog	1.00	3
K			1	10115.870	ug/l	1.02	11,593,969.00	3.409E+01	Analog	1.00	3
V			1	97.813	ug/l	1.46	986,389.42	2.900E+00	Pulse	0.50	3
Mn			1	100.505	ug/l	0.42	734,335.27	4.025E+00	Pulse	0.50	3
Fe			1	10188.204	ug/l	0.11	103,831,029.33	5.691E+02	Analog	0.50	3
Co			1	99.826	ug/l	0.29	1,802,772.71	9.881E+00	Pulse	0.50	3
Ni			1	100.041	ug/l	0.19	484,462.51	2.655E+00	Pulse	0.50	3
Cu			1	100.072	ug/l	0.39	1,268,800.29	6.954E+00	Pulse	0.50	3
Zn			1	99.824	ug/l	1.04	231,185.25	8.593E-01	Pulse	1.00	3
Cd			1	98.980	ug/l	0.91	270,882.35	1.007E+00	Pulse	0.50	3
Al			1	10125.989	ug/l	1.26	4,816,198.17	1.416E+01	Mix	1.00	3
Se			1	99.900	ug/l	1.16	12,204.67	4.536E-02	Pulse	3.00	3
Sb			1	98.941	ug/l	1.17	783,541.64	2.913E+00	Pulse	1.00	3
Se			1	99.991	ug/l	1.36	5,742.20	2.134E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,730,821.58	0.59	95.8	Pulse	0.50	3
1	Sc		340,144.66	1.63	97.2	Pulse	0.30	3
1	Ge		182,447.86	0.44	96.5	Pulse	0.30	3
1	In		1,563,259.38	0.22	96.8	Pulse	0.30	3
1	Tb		3,863,286.00	0.65	97.9	Pulse	0.50	3
1	Lu		2,899,555.67	0.21	99.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		269,051.37	1.44	96.5	Pulse	0.30	3
1	Te		7.33	56.77	1100.0	Pulse	0.50	3
1	Li		1,397.84	5.52	96.4	Pulse	0.30	3

Quantitation Report

File Name	094_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:07
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.056	ug/l	17.61	5,139.36	2.859E-02	Pulse	0.50	3
As			1	0.022	ug/l	34.87	104.00	5.788E-04	Pulse	1.00	3
Mo			1	0.090	ug/l	23.18	621.35	2.350E-03	Pulse	0.50	3
Pb			1	0.012	ug/l	34.67	1,128.04	4.054E-04	Pulse	1.00	3
Be			1	0.013	ug/l	147.01	1.50	4.426E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	16.83	308.00	1.163E-03	Pulse	0.50	3
Ba			1	0.002	ug/l	176.00	37.33	2.390E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	13.05	568.68	2.044E-04	Pulse	0.50	3
Sn			1	0.122	ug/l	25.44	914.47	5.846E-04	Pulse	0.30	3
Sr			1	0.001	ug/l	434.22	424.68	2.716E-04	Pulse	0.50	3
[Pb]			1	0.005	ug/l	72.38	502.68	1.806E-04	Pulse	0.50	3
Ca			1	-9.954	ug/l	-9.24	1,152.04	4.063E-04	Pulse	0.50	3
Ti			1	0.012	ug/l	82.00	12.00	3.549E-05	Pulse	0.50	3
Na			1	-1.088	ug/l	-43.27	24,572.02	7.261E-02	Pulse	1.00	3
Mg			1	0.502	ug/l	24.17	1,621.07	4.791E-03	Pulse	1.00	3
K			1	-2.144	ug/l	-74.38	99,422.57	2.938E-01	Pulse	1.00	3
V			1	0.019	ug/l	47.87	1,417.39	4.187E-03	Pulse	0.50	3
Mn			1	-0.015	ug/l	-32.63	375.34	2.089E-03	Pulse	0.50	3
Fe			1	0.995	ug/l	16.20	28,062.27	1.561E-01	Pulse	0.50	3
Co			1	0.009	ug/l	22.11	214.00	1.190E-03	Pulse	0.50	3
Ni			1	-0.013	ug/l	-39.97	432.68	2.407E-03	Pulse	0.50	3
Cu			1	-0.086	ug/l	-24.36	6,293.05	3.501E-02	Pulse	0.50	3
Zn			1	-0.715	ug/l	-3.02	1,147.04	4.333E-03	Pulse	1.00	3
Cd			1	0.012	ug/l	58.06	35.33	1.338E-04	Pulse	0.50	3
Al			1	-1.546	ug/l	-7.04	928.02	2.742E-03	Pulse	1.00	3
Se			1	0.031	ug/l	106.87	40.00	1.512E-04	Pulse	3.00	3
Sb			1	0.034	ug/l	23.78	356.33	1.348E-03	Pulse	1.00	3
Se			1	-0.018	ug/l	-489.62	38.33	1.449E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,783,100.83	0.20	97.7	Pulse	0.50	3
1	Sc		338,466.88	0.66	96.7	Pulse	0.30	3

Quantitation Report

1	Ge		179,769.66	0.81	95.1	Pulse	0.30	3
1	In		1,563,786.67	0.74	96.8	Pulse	0.30	3
1	Tb		3,807,927.67	0.30	96.5	Pulse	0.50	3
1	Lu		2,835,417.50	0.51	97.0	Pulse	0.50	3
1	Ge		264,677.93	0.79	95.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,482.29	1.06	102.2	Pulse	0.30	3

Quantitation Report

File Name 095SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:11
Sample Name FA98679-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.123	ug/l	1.35	21,869.60	1.296E-01	Pulse	0.50	3
As			1	0.498	ug/l	10.50	424.67	2.515E-03	Pulse	1.00	3
Mo			1	1.377	ug/l	2.08	3,679.71	1.479E-02	Pulse	0.50	3
Pb			1	0.025	ug/l	37.23	1,065.37	4.100E-04	Pulse	1.00	3
Be			1	0.030	ug/l	110.70	1.50	4.757E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	12.52	283.33	1.139E-03	Pulse	0.50	3
Ba			1	4.418	ug/l	1.23	5,184.76	3.535E-03	Pulse	0.50	3
Tl			1	0.009	ug/l	48.00	266.00	1.024E-04	Pulse	0.50	3
Sn			1	0.543	ug/l	19.66	1,662.31	1.133E-03	Pulse	0.30	3
Sr			1	206.948	ug/l	1.29	771,869.02	5.263E-01	Pulse	0.50	3
[Pb]			1	0.018	ug/l	39.68	510.01	1.962E-04	Pulse	0.50	3
Ca			1	59721.183	ug/l	1.37	1,440,443.37	5.381E-01	Pulse	0.50	3
Ti			1	0.912	ug/l	18.53	154.00	4.868E-04	Pulse	0.50	3
Na			1	3624.402	ug/l	0.06	3,817,903.42	1.207E+01	Pulse	1.00	3
Mg			1	2526.251	ug/l	0.66	1,306,912.50	4.131E+00	Pulse	1.00	3
K			1	1011.107	ug/l	0.48	629,382.92	1.990E+00	Pulse	1.00	3
V			1	2.151	ug/l	0.68	11,224.58	3.548E-02	Pulse	0.50	3
Mn			1	2.043	ug/l	2.42	7,353.42	4.356E-02	Pulse	0.50	3
Fe			1	32.873	ug/l	0.45	171,924.51	1.019E+00	Pulse	0.50	3
Co			1	0.135	ug/l	2.12	1,183.37	7.011E-03	Pulse	0.50	3
Ni			1	0.165	ug/l	14.87	834.69	4.943E-03	Pulse	0.50	3
Cu			1	0.577	ug/l	1.83	10,277.43	6.088E-02	Pulse	0.50	3
Zn			1	3.402	ug/l	1.52	6,190.34	2.488E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	43.30	16.00	6.438E-05	Pulse	0.50	3
Al			1	13.089	ug/l	16.45	4,444.02	1.405E-02	Pulse	1.00	3
Se			1	1.025	ug/l	15.35	91.89	3.692E-04	Pulse	3.00	3
Sb			1	0.234	ug/l	6.28	943.36	3.792E-03	Pulse	1.00	3
Se			1	1.311	ug/l	37.62	71.56	2.877E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,599,834.92	0.65	91.2	Pulse	0.50	3
1	Sc		316,357.60	0.89	90.4	Pulse	0.30	3
1	Ge		168,796.03	0.92	89.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,466,638.17	0.64	90.8	Pulse	0.30	3
1	Tb		3,599,445.92	0.86	91.2	Pulse	0.50	3
1	Lu		2,676,877.58	0.55	91.6	Pulse	0.50	3
1	Ge		248,812.58	0.54	89.3	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,410.06	7.61	97.2	Pulse	0.30	3

Quantitation Report

File Name 096SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:15
Sample Name FA98679-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.615	ug/l	0.49	24,946.63	1.461E-01	Pulse	0.50	3
As			1	7.248	ug/l	1.59	5,359.09	3.137E-02	Pulse	1.00	3
Mo			1	1.528	ug/l	2.55	4,109.13	1.637E-02	Pulse	0.50	3
Pb			1	0.371	ug/l	0.51	4,858.03	1.869E-03	Pulse	1.00	3
Be			1	0.034	ug/l	105.73	1.67	5.271E-06	Pulse	2.00	3
Ag			1	0.018	ug/l	30.03	234.00	9.326E-04	Pulse	0.50	3
Ba			1	4.834	ug/l	3.70	5,606.89	3.866E-03	Pulse	0.50	3
Tl			1	0.004	ug/l	44.09	193.33	7.441E-05	Pulse	0.50	3
Sn			1	0.428	ug/l	5.13	1,335.61	9.207E-04	Pulse	0.30	3
Sr			1	65.547	ug/l	0.94	242,049.20	1.669E-01	Pulse	0.50	3
[Pb]			1	0.371	ug/l	1.63	2,361.51	9.085E-04	Pulse	0.50	3
Ca			1	24441.768	ug/l	0.79	585,488.44	2.206E-01	Pulse	0.50	3
Ti			1	4.769	ug/l	18.48	776.08	2.450E-03	Pulse	0.50	3
Na			1	2520.826	ug/l	0.10	2,665,308.42	8.418E+00	Pulse	1.00	3
Mg			1	498.983	ug/l	0.18	259,156.85	8.185E-01	Pulse	1.00	3
K			1	164.885	ug/l	1.17	182,464.47	5.763E-01	Pulse	1.00	3
V			1	5.126	ug/l	0.79	25,180.23	7.953E-02	Pulse	0.50	3
Mn			1	3.115	ug/l	0.62	11,105.86	6.502E-02	Pulse	0.50	3
Fe			1	2770.410	ug/l	0.50	13,231,270.67	7.746E+01	Analog	0.50	3
Co			1	0.159	ug/l	3.37	1,398.05	8.184E-03	Pulse	0.50	3
Ni			1	0.627	ug/l	6.77	1,890.77	1.107E-02	Pulse	0.50	3
Cu			1	1.156	ug/l	4.60	13,816.98	8.089E-02	Pulse	0.50	3
Zn			1	7.552	ug/l	2.24	10,675.29	4.252E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	32.98	18.67	7.432E-05	Pulse	0.50	3
Al			1	256.459	ug/l	0.80	58,312.35	1.842E-01	Pulse	1.00	3
Se			1	0.315	ug/l	14.69	52.33	2.084E-04	Pulse	3.00	3
Sb			1	0.167	ug/l	2.99	707.02	2.817E-03	Pulse	1.00	3
Se			1	0.529	ug/l	25.63	51.44	2.049E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,599,615.75	0.76	91.2	Pulse	0.50	3
1	Sc		316,622.10	0.34	90.5	Pulse	0.30	3
1	Ge		170,804.55	0.71	90.3	Pulse	0.30	3
1	In		1,450,556.33	0.72	89.8	Pulse	0.30	3
1	Tb		3,587,723.83	0.73	90.9	Pulse	0.50	3
1	Lu		2,654,455.00	0.49	90.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,052.06	0.67	90.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,343.39	4.64	92.6	Pulse	0.30	3

Quantitation Report

File Name 097SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:19
Sample Name FA98679-8
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.937	ug/l	0.51	20,678.30	1.233E-01	Pulse	0.50	3
As			1	0.201	ug/l	8.84	209.33	1.248E-03	Pulse	1.00	3
Mo			1	0.006	ug/l	336.38	134.00	5.464E-04	Pulse	0.50	3
Pb			1	0.042	ug/l	2.41	1,244.05	4.825E-04	Pulse	1.00	3
Be			1	0.005	ug/l	248.64	0.50	1.592E-06	Pulse	2.00	3
Ag			1	0.013	ug/l	48.26	187.33	7.621E-04	Pulse	0.50	3
Ba			1	0.121	ug/l	26.96	168.67	1.167E-04	Pulse	0.50	3
Tl			1	-0.006	ug/l	-11.39	44.67	1.730E-05	Pulse	0.50	3
Sn			1	0.428	ug/l	6.64	1,331.17	9.207E-04	Pulse	0.30	3
Sr			1	0.109	ug/l	16.77	786.02	5.437E-04	Pulse	0.50	3
[Pb]			1	0.040	ug/l	12.88	624.01	2.420E-04	Pulse	0.50	3
Ca			1	27.831	ug/l	34.42	2,210.14	8.360E-04	Pulse	0.50	3
Ti			1	0.352	ug/l	37.36	63.33	2.018E-04	Pulse	0.50	3
Na			1	8.001	ug/l	2.85	33,407.03	1.063E-01	Pulse	1.00	3
Mg			1	2.366	ug/l	3.26	2,205.79	7.018E-03	Pulse	1.00	3
K			1	13.574	ug/l	2.93	101,719.06	3.236E-01	Pulse	1.00	3
V			1	1.080	ug/l	2.09	6,167.66	1.962E-02	Pulse	0.50	3
Mn			1	0.129	ug/l	3.04	883.36	5.269E-03	Pulse	0.50	3
Fe			1	12.367	ug/l	1.58	74,765.07	4.459E-01	Pulse	0.50	3
Co			1	0.024	ug/l	16.70	252.67	1.507E-03	Pulse	0.50	3
Ni			1	0.078	ug/l	10.18	635.34	3.790E-03	Pulse	0.50	3
Cu			1	0.432	ug/l	3.89	9,368.96	5.588E-02	Pulse	0.50	3
Zn			1	3.655	ug/l	3.67	6,376.73	2.595E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	229.01	5.33	2.176E-05	Pulse	0.50	3
Al			1	99.846	ug/l	1.27	23,478.77	7.470E-02	Pulse	1.00	3
Se			1	-0.073	ug/l	-308.65	29.55	1.206E-04	Pulse	3.00	3
Sb			1	0.043	ug/l	25.71	244.00	9.928E-04	Pulse	1.00	3
Se			1	-0.072	ug/l	-165.01	34.67	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,578,654.92	0.96	90.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		314,340.08	0.68	89.8	Pulse	0.30	3
1	Ge		167,668.23	0.33	88.7	Pulse	0.30	3
1	In		1,445,776.54	0.05	89.5	Pulse	0.30	3
1	Tb		3,578,724.08	1.04	90.7	Pulse	0.50	3
1	Lu		2,644,723.83	0.51	90.5	Pulse	0.50	3
1	Ge		245,728.44	1.38	88.2	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,427.84	4.24	98.5	Pulse	0.30	3

Quantitation Report

File Name 098SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:22
Sample Name FA98819-1B
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.952	ug/l	1.12	20,772.39	1.238E-01	Pulse	0.50	3
As			1	8.828	ug/l	2.40	6,396.74	3.813E-02	Pulse	1.00	3
Mo			1	0.171	ug/l	13.22	558.01	2.264E-03	Pulse	0.50	3
Pb			1	0.092	ug/l	1.39	1,757.76	6.909E-04	Pulse	1.00	3
Be			1	0.038	ug/l	67.65	1.83	5.848E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	4.51	170.67	6.921E-04	Pulse	0.50	3
Ba			1	16.160	ug/l	3.12	18,494.81	1.288E-02	Pulse	0.50	3
Tl			1	-0.004	ug/l	-32.51	66.00	2.596E-05	Pulse	0.50	3
Sn			1	0.359	ug/l	25.62	1,143.38	7.953E-04	Pulse	0.30	3
Sr			1	285.929	ug/l	0.44	1,044,288.79	7.270E-01	Pulse	0.50	3
[Pb]			1	0.083	ug/l	12.90	835.36	3.283E-04	Pulse	0.50	3
Ca			1	38570.372	ug/l	0.07	915,927.06	3.477E-01	Pulse	0.50	3
Ti			1	0.857	ug/l	17.65	144.00	4.592E-04	Pulse	0.50	3
Na			1	22587.889	ug/l	0.57	23,450,230.67	7.479E+01	Analog	1.00	3
Mg			1	5335.955	ug/l	0.75	2,734,749.50	8.722E+00	Pulse	1.00	3
K			1	7040.069	ug/l	0.83	3,780,528.67	1.206E+01	Pulse	1.00	3
V			1	1.036	ug/l	2.64	5,945.59	1.896E-02	Pulse	0.50	3
Mn			1	11.610	ug/l	1.30	39,426.46	2.350E-01	Pulse	0.50	3
Fe			1	233.310	ug/l	1.53	1,109,943.37	6.616E+00	Pulse	0.50	3
Co			1	0.433	ug/l	3.76	3,644.36	2.172E-02	Pulse	0.50	3
Ni			1	5.447	ug/l	2.86	12,578.10	7.497E-02	Pulse	0.50	3
Cu			1	16.321	ug/l	1.06	101,455.86	6.047E-01	Pulse	0.50	3
Zn			1	16.783	ug/l	2.58	20,162.53	8.178E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-268.80	2.67	1.084E-05	Pulse	0.50	3
Al			1	-2.477	ug/l	-0.86	994.36	3.171E-03	Pulse	1.00	3
Se			1	-0.049	ug/l	-198.49	31.11	1.262E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	15.88	332.33	1.348E-03	Pulse	1.00	3
Se			1	-0.072	ug/l	-295.47	34.78	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,544,112.00	0.67	89.3	Pulse	0.50	3
1	Sc		313,538.22	0.73	89.6	Pulse	0.30	3
1	Ge		167,778.59	0.15	88.7	Pulse	0.30	3
1	In		1,436,418.93	0.79	89.0	Pulse	0.30	3
1	Tb		3,568,403.17	1.52	90.4	Pulse	0.50	3
1	Lu		2,634,073.58	1.01	90.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,570.68	0.61	88.5	Pulse	0.30	3
1	Te		2.67	86.60	400.0	Pulse	0.50	3
1	Li		1,356.72	6.27	93.6	Pulse	0.30	3

Quantitation Report

File Name 099SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:26
Sample Name FA98820-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.009	ug/l	1.62	20,947.27	1.257E-01	Pulse	0.50	3
As			1	1488.689	ug/l	0.56	1,060,423.54	6.364E+00	Pulse	1.00	3
Mo			1	1.335	ug/l	3.69	3,461.00	1.436E-02	Pulse	0.50	3
Pb			1	0.005	ug/l	141.18	814.69	3.251E-04	Pulse	1.00	3
Be			1	0.043	ug/l	87.96	2.00	6.483E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	6.74	167.33	6.941E-04	Pulse	0.50	3
Ba			1	52.234	ug/l	0.74	57,506.89	4.157E-02	Pulse	0.50	3
Tl			1	-0.001	ug/l	-195.19	112.67	4.487E-05	Pulse	0.50	3
Sn			1	0.422	ug/l	6.94	1,261.16	9.114E-04	Pulse	0.30	3
Sr			1	393.903	ug/l	0.45	1,385,257.16	1.001E+00	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-94.72	395.34	1.577E-04	Pulse	0.50	3
Ca			1	47978.497	ug/l	0.28	1,127,894.79	4.324E-01	Pulse	0.50	3
Ti			1	1.429	ug/l	13.34	231.33	7.505E-04	Pulse	0.50	3
Na			1	14076.047	ug/l	0.49	14,372,971.00	4.664E+01	Analog	1.00	3
Mg			1	6943.660	ug/l	0.56	3,497,594.17	1.135E+01	Pulse	1.00	3
K			1	8487.210	ug/l	0.55	4,460,744.00	1.447E+01	Pulse	1.00	3
V			1	1.098	ug/l	4.56	6,130.32	1.989E-02	Pulse	0.50	3
Mn			1	2128.246	ug/l	0.83	7,096,210.67	4.259E+01	Analog	0.50	3
Fe			1	67721.997	ug/l	0.69	315,111,392.00	1.891E+03	Analog	0.50	3
Co			1	17.620	ug/l	0.45	145,348.36	8.723E-01	Pulse	0.50	3
Ni			1	6.526	ug/l	2.82	14,874.42	8.927E-02	Pulse	0.50	3
Cu			1	0.255	ug/l	6.08	8,293.80	4.978E-02	Pulse	0.50	3
Zn			1	14.172	ug/l	2.53	17,040.52	7.067E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	252.96	4.67	1.939E-05	Pulse	0.50	3
Al			1	4.381	ug/l	10.74	2,454.82	7.965E-03	Pulse	1.00	3
Se			1	-0.058	ug/l	-207.28	29.89	1.241E-04	Pulse	3.00	3
Sb			1	0.090	ug/l	7.25	405.67	1.682E-03	Pulse	1.00	3
Se			1	0.010	ug/l	1047.10	36.11	1.498E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,507,546.42	0.95	88.0	Pulse	0.50	3
1	Sc		308,174.10	0.39	88.1	Pulse	0.30	3
1	Ge		166,616.79	0.57	88.1	Pulse	0.30	3
1	In		1,383,275.85	1.01	85.7	Pulse	0.30	3
1	Tb		3,530,911.42	1.21	89.4	Pulse	0.50	3
1	Lu		2,608,559.50	1.80	89.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,097.16	0.49	86.5	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,417.84	9.55	97.8	Pulse	0.30	3

Quantitation Report

File Name 100SMPL.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:30
Sample Name FA98820-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.831	ug/l	2.69	20,277.21	1.198E-01	Pulse	0.50	3
As			1	2771.926	ug/l	1.21	2,006,392.91	1.185E+01	Pulse	1.00	3
Mo			1	2.034	ug/l	5.27	5,330.11	2.162E-02	Pulse	0.50	3
Pb			1	0.008	ug/l	14.02	866.02	3.377E-04	Pulse	1.00	3
Be			1	0.001	ug/l	1601.81	0.33	1.069E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	15.48	171.33	6.948E-04	Pulse	0.50	3
Ba			1	13.818	ug/l	1.59	15,616.09	1.101E-02	Pulse	0.50	3
Tl			1	0.001	ug/l	61.66	140.67	5.486E-05	Pulse	0.50	3
Sn			1	0.405	ug/l	5.67	1,247.83	8.801E-04	Pulse	0.30	3
Sr			1	169.668	ug/l	1.83	611,917.17	4.315E-01	Pulse	0.50	3
[Pb]			1	-0.007	ug/l	-48.35	374.68	1.461E-04	Pulse	0.50	3
Ca			1	23966.835	ug/l	1.66	570,534.25	2.163E-01	Pulse	0.50	3
Ti			1	0.960	ug/l	27.41	160.00	5.115E-04	Pulse	0.50	3
Na			1	5981.674	ug/l	0.75	6,212,587.50	1.987E+01	Analog	1.00	3
Mg			1	2856.690	ug/l	1.25	1,460,808.58	4.671E+00	Pulse	1.00	3
K			1	3443.684	ug/l	0.65	1,892,651.50	6.052E+00	Pulse	1.00	3
V			1	0.738	ug/l	3.95	4,550.55	1.455E-02	Pulse	0.50	3
Mn			1	2320.086	ug/l	1.16	7,860,827.83	4.643E+01	Analog	0.50	3
Fe			1	38707.012	ug/l	1.53	183,027,109.33	1.081E+03	Analog	0.50	3
Co			1	12.875	ug/l	1.53	107,937.15	6.375E-01	Pulse	0.50	3
Ni			1	5.380	ug/l	1.54	12,544.09	7.408E-02	Pulse	0.50	3
Cu			1	0.220	ug/l	9.58	8,222.44	4.856E-02	Pulse	0.50	3
Zn			1	15.558	ug/l	2.22	18,880.23	7.657E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	80.56	6.00	2.432E-05	Pulse	0.50	3
Al			1	-1.003	ug/l	-19.28	1,314.05	4.202E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-3122.83	33.67	1.365E-04	Pulse	3.00	3
Sb			1	0.133	ug/l	7.33	570.68	2.314E-03	Pulse	1.00	3
Se			1	-0.060	ug/l	-198.84	35.11	1.424E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,564,599.25	0.60	90.0	Pulse	0.50	3
1	Sc		312,727.06	0.47	89.4	Pulse	0.30	3
1	Ge		169,320.36	1.03	89.5	Pulse	0.30	3
1	In		1,418,174.25	0.66	87.8	Pulse	0.30	3
1	Tb		3,561,780.67	0.83	90.2	Pulse	0.50	3
1	Lu		2,637,947.75	0.66	90.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,592.57	0.41	88.5	Pulse	0.30	3
1	Te		3.33	124.90	500.0	Pulse	0.50	3
1	Li		1,290.05	10.32	89.0	Pulse	0.30	3

Quantitation Report

File Name 101CCVA.d
File Path D:\2022\xa091522m1.b
Method File
Method Path
Acq Time 9/15/2022 14:34
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/15/2022 12:12
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.752	ug/l	0.22	621,274.87	3.497E+00	Pulse	0.50	3
As			1	50.787	ug/l	0.90	77,219.52	4.346E-01	Pulse	1.00	3
Mo			1	50.432	ug/l	1.34	276,309.89	1.049E+00	Pulse	0.50	3
Pb			1	50.056	ug/l	0.77	1,156,320.92	4.226E-01	Pulse	1.00	3
Be			1	51.534	ug/l	3.87	4,400.81	1.327E-02	Pulse	2.00	3
Ag			1	50.081	ug/l	0.68	878,563.87	3.334E+00	Pulse	0.50	3
Ba			1	50.468	ug/l	0.52	123,453.94	8.031E-02	Pulse	0.50	3
Tl			1	51.175	ug/l	0.27	1,673,677.46	6.117E-01	Pulse	0.50	3
Sn			1	49.478	ug/l	1.05	278,292.89	1.810E-01	Pulse	0.30	3
Sr			1	49.842	ug/l	0.15	389,874.17	2.536E-01	Pulse	0.50	3
[Pb]			1	50.096	ug/l	0.68	552,441.77	2.019E-01	Pulse	0.50	3
Ca			1	5078.944	ug/l	1.11	263,654.58	9.201E-02	Pulse	0.50	3
Ti			1	49.287	ug/l	1.39	16,646.43	5.020E-02	Pulse	0.50	3
Na			1	5307.156	ug/l	1.07	11,669,145.00	3.519E+01	Analog	1.00	3
Mg			1	5310.219	ug/l	1.23	5,755,901.67	1.736E+01	Analog	1.00	3
K			1	5247.156	ug/l	0.28	5,911,846.17	1.783E+01	Analog	1.00	3
V			1	50.312	ug/l	1.43	495,304.09	1.494E+00	Pulse	0.50	3
Mn			1	51.586	ug/l	0.03	367,282.36	2.067E+00	Pulse	0.50	3
Fe			1	5301.383	ug/l	0.47	52,624,333.33	2.962E+02	Analog	0.50	3
Co			1	51.846	ug/l	0.54	911,854.60	5.132E+00	Pulse	0.50	3
Ni			1	52.347	ug/l	0.73	247,094.55	1.391E+00	Pulse	0.50	3
Cu			1	52.273	ug/l	0.75	648,912.06	3.652E+00	Pulse	0.50	3
Zn			1	51.649	ug/l	1.03	118,474.46	4.496E-01	Pulse	1.00	3
Cd			1	51.058	ug/l	0.74	136,853.14	5.194E-01	Pulse	0.50	3
Al			1	5217.111	ug/l	0.86	2,420,329.83	7.299E+00	Pulse	1.00	3
Se			1	50.841	ug/l	0.06	6,100.86	2.315E-02	Pulse	3.00	3
Sb			1	50.604	ug/l	1.00	392,541.68	1.490E+00	Pulse	1.00	3
Se			1	51.316	ug/l	1.32	2,905.33	1.103E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,735,995.17	0.24	96.0	Pulse	0.50	3
1	Sc		331,631.23	0.84	94.8	Pulse	0.30	3
1	Ge		177,676.22	0.58	93.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,537,151.12	0.37	95.2	Pulse	0.30	3
1	Tb		3,804,142.75	0.31	96.4	Pulse	0.50	3
1	Lu		2,865,587.50	0.16	98.1	Pulse	0.50	3
1	Ge		263,486.42	0.34	94.5	Pulse	0.30	3
1	Te		4.00	50.00	600.0	Pulse	0.50	3
1	Li		1,335.61	5.86	92.1	Pulse	0.30	3

Quantitation Report

File Name	102_CCV.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:37
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.506	ug/l	0.49	1,202,018.33	6.767E+00	Pulse	0.50	3
As			1	98.589	ug/l	0.47	149,787.82	8.433E-01	Pulse	1.00	3
Mo			1	99.842	ug/l	0.70	542,310.50	2.076E+00	Pulse	0.50	3
Pb			1	98.777	ug/l	0.68	2,236,427.75	8.337E-01	Pulse	1.00	3
Be			1	100.030	ug/l	0.88	8,547.63	2.576E-02	Pulse	2.00	3
Ag			1	97.549	ug/l	0.38	1,696,824.87	6.494E+00	Pulse	0.50	3
Ba			1	99.535	ug/l	0.94	240,491.34	1.584E-01	Pulse	0.50	3
Tl			1	100.888	ug/l	1.01	3,234,905.58	1.206E+00	Pulse	0.50	3
Sn			1	97.969	ug/l	0.23	544,157.62	3.583E-01	Pulse	0.30	3
Sr			1	99.264	ug/l	0.50	766,629.12	5.049E-01	Pulse	0.50	3
[Pb]			1	98.575	ug/l	0.53	1,065,401.29	3.972E-01	Pulse	0.50	3
Ca			1	10005.827	ug/l	0.99	511,237.85	1.807E-01	Pulse	0.50	3
Ti			1	98.599	ug/l	1.97	33,310.93	1.004E-01	Pulse	0.50	3
Na			1	10290.907	ug/l	0.36	22,613,848.00	6.816E+01	Analog	1.00	3
Mg			1	10254.506	ug/l	0.21	11,119,914.67	3.352E+01	Analog	1.00	3
K			1	10137.027	ug/l	0.61	11,333,487.00	3.416E+01	Analog	1.00	3
V			1	98.424	ug/l	0.73	968,297.94	2.918E+00	Pulse	0.50	3
Mn			1	100.376	ug/l	0.33	713,976.58	4.020E+00	Pulse	0.50	3
Fe			1	10219.084	ug/l	0.27	101,388,640.00	5.708E+02	Analog	0.50	3
Co			1	100.418	ug/l	0.76	1,765,458.21	9.940E+00	Pulse	0.50	3
Ni			1	100.656	ug/l	0.20	474,534.90	2.672E+00	Pulse	0.50	3
Cu			1	101.140	ug/l	0.30	1,248,315.37	7.028E+00	Pulse	0.50	3
Zn			1	100.799	ug/l	0.60	226,683.75	8.676E-01	Pulse	1.00	3
Cd			1	100.592	ug/l	0.61	267,366.59	1.023E+00	Pulse	0.50	3
Al			1	10122.076	ug/l	0.49	4,696,649.33	1.416E+01	Pulse	1.00	3
Se			1	99.898	ug/l	0.20	11,852.34	4.536E-02	Pulse	3.00	3
Sb			1	99.287	ug/l	0.17	763,646.75	2.923E+00	Pulse	1.00	3
Se			1	100.570	ug/l	0.84	5,608.49	2.147E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,682,701.33	1.24	94.2	Pulse	0.50	3
1	Sc		331,783.92	0.09	94.8	Pulse	0.30	3
1	Ge		177,619.70	0.60	93.9	Pulse	0.30	3
1	In		1,518,522.47	0.98	94.0	Pulse	0.30	3
1	Tb		3,769,178.83	0.80	95.5	Pulse	0.50	3
1	Lu		2,829,517.58	0.99	96.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		261,275.46	0.78	93.8	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,292.27	4.77	89.1	Pulse	0.30	3

Quantitation Report

File Name	103_CCB.d
File Path	D:\2022\xa091522m1.b
Method File	
Method Path	
Acq Time	9/15/2022 14:41
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/15/2022 12:12
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.064	ug/l	38.58	5,062.68	2.912E-02	Pulse	0.50	3
As			1	0.051	ug/l	31.69	143.33	8.242E-04	Pulse	1.00	3
Mo			1	0.095	ug/l	28.40	624.68	2.448E-03	Pulse	0.50	3
Pb			1	0.012	ug/l	70.90	1,099.37	4.043E-04	Pulse	1.00	3
Be			1	0.018	ug/l	105.77	1.83	5.567E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	21.87	321.34	1.261E-03	Pulse	0.50	3
Ba			1	0.012	ug/l	93.36	59.33	3.920E-05	Pulse	0.50	3
Tl			1	0.017	ug/l	34.66	682.02	2.508E-04	Pulse	0.50	3
Sn			1	0.114	ug/l	16.58	841.14	5.556E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	22.86	454.01	3.000E-04	Pulse	0.50	3
[Pb]			1	0.012	ug/l	101.18	570.68	2.099E-04	Pulse	0.50	3
Ca			1	-10.344	ug/l	-8.75	1,106.04	3.993E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	120.28	13.33	4.061E-05	Pulse	0.50	3
Na			1	-0.770	ug/l	-89.06	24,545.68	7.471E-02	Pulse	1.00	3
Mg			1	0.818	ug/l	67.88	1,914.10	5.823E-03	Pulse	1.00	3
K			1	-2.399	ug/l	-23.91	96,219.45	2.929E-01	Pulse	1.00	3
V			1	0.025	ug/l	28.61	1,436.73	4.374E-03	Pulse	0.50	3
Mn			1	-0.014	ug/l	-34.25	372.67	2.143E-03	Pulse	0.50	3
Fe			1	1.561	ug/l	31.45	32,659.23	1.878E-01	Pulse	0.50	3
Co			1	0.012	ug/l	27.94	264.67	1.522E-03	Pulse	0.50	3
Ni			1	-0.017	ug/l	-20.43	402.01	2.312E-03	Pulse	0.50	3
Cu			1	-0.092	ug/l	-15.74	6,022.29	3.464E-02	Pulse	0.50	3
Zn			1	-0.718	ug/l	-3.68	1,097.70	4.306E-03	Pulse	1.00	3
Cd			1	0.015	ug/l	78.47	42.00	1.652E-04	Pulse	0.50	3
Al			1	-1.206	ug/l	-38.92	1,057.03	3.216E-03	Pulse	1.00	3
Se			1	0.050	ug/l	23.45	40.78	1.599E-04	Pulse	3.00	3
Sb			1	0.034	ug/l	14.57	344.00	1.349E-03	Pulse	1.00	3
Se			1	-0.034	ug/l	-432.37	36.11	1.416E-04	Pulse	3.00	3

Quantitation Report

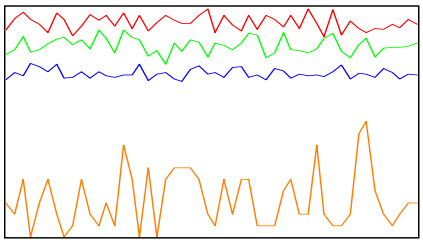
ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,719,468.92	1.14	95.4	Pulse	0.50	3
1	Sc		328,489.06	0.43	93.9	Pulse	0.30	3
1	Ge		173,848.92	0.42	91.9	Pulse	0.30	3
1	In		1,513,300.25	0.48	93.7	Pulse	0.30	3
1	Tb		3,721,545.25	0.72	94.3	Pulse	0.50	3
1	Lu		2,770,198.25	0.51	94.8	Pulse	0.50	3
1	Ge		254,979.03	0.55	91.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,303.38	4.86	89.9	Pulse	0.30	3

Tune Report

Batch Folder	D:\2022\xa091522m1.b
Acq. Date-Time	9/15/2022 8:06
Report Comment	0915
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1860	18603.27	5000.00	
89	2000	1662	16616.67	5000.00	
205	5000	3545	35449.40	5000.00	
78	20	3			

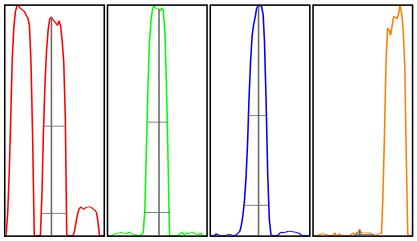
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.48	5.00	
89	4.18	5.00	
205	2.86	5.00	
78	74.94		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.20	2	
89	0.30	2	
205	0.70	2	
78	0.10	5	

Ratio	156/140	1.049	%
Ratio	70/140	3.065	%

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1846.47	58.95	58.9 - 59.1		0.65	0.766	0.900	
89	1627.02	89.05	88.9 - 89.1		0.59	0.737	0.900	

Tune Report

205	3542.32	205.00	204.9 - 205.1	0.53	0.746	0.900
78	8.25	77.95	-	0.14	0.548	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

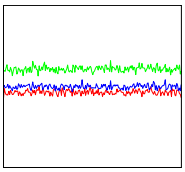
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-200.0 V	Cell Exit	-70 V
Omega Bias	-95 V	Deflect	2.2 V
Omega Lens	7.2 V	Plate Bias	-60 V

Cell Parameters

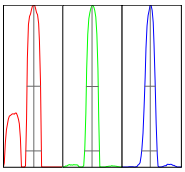
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	190 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



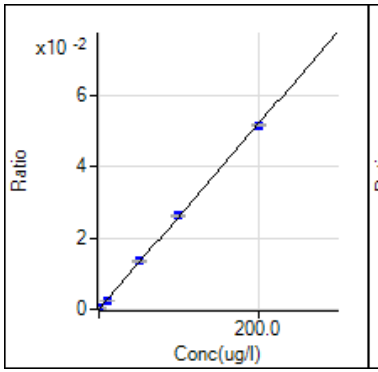
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2315.46	6067.34	4978.31
RSD%	3.1	2.8	2.7
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	0.97%	
Doubly Charged	70/140	4.15%	

Background			
Mass	7	89	205
Count	0.10	1.30	4.45



Resolution/Axis			
Mass	7	89	205
Height	2286	6045	4934
Axis	7.05	89.00	204.95
W-50%	0.68	0.59	0.52
W-10%	0.77	0.74	0.76
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

Calibration for D:\2022\xa091522m1.b\001CALB.d



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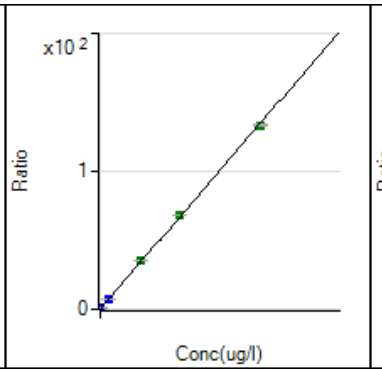
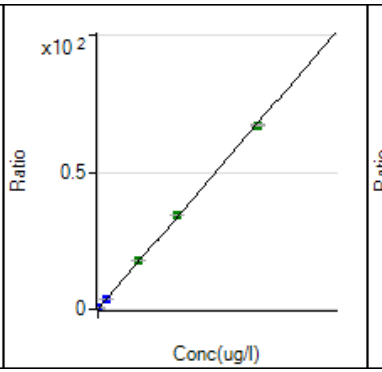
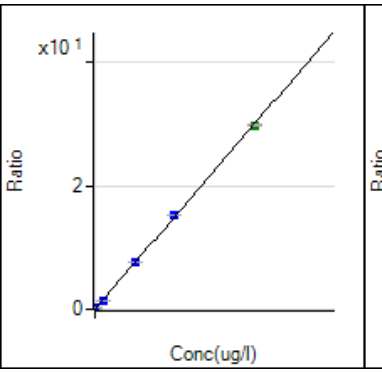
DL 0.01091
BEC 0.0021



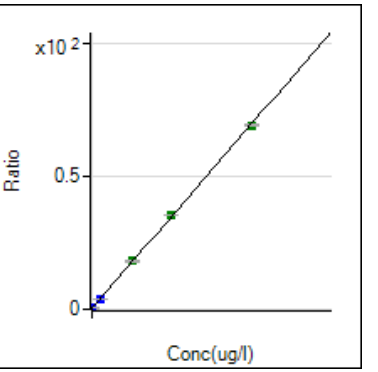
23 Na [2] / ISTD: 45 Sc
y = 6.726E-3 x + 6.802E-2
R 0.9999
DL 0.09463
BEC 10.11



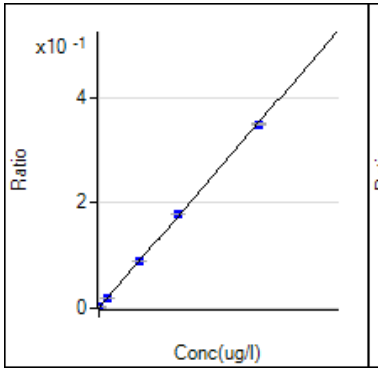
24 Mg [2] / ISTD: 45 Sc
y = 3.383E-3 x + 2.009E-3
R 0.9999
DL 0.05314
BEC 0.5939



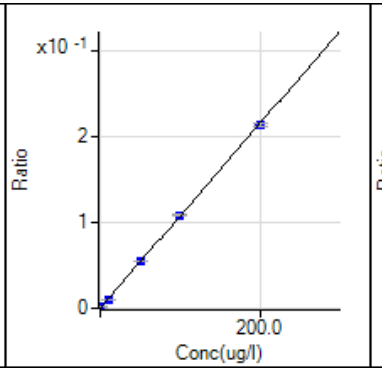
27 Al [2] / ISTD: 45 Sc
y = 1.496E-3 x + 3.275E-3
R 0.9999
DL 0.1047
BEC 2.189



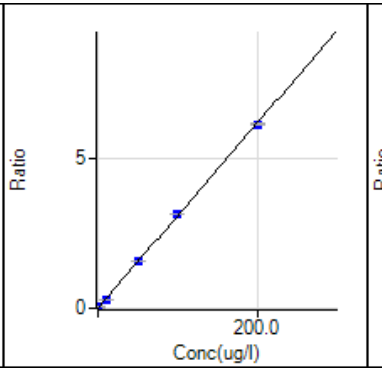
39 K [2] / ISTD: 45 Sc
y = 3.456E-3 x + 3.074E-1
R 0.9999
DL 3.603
BEC 88.96



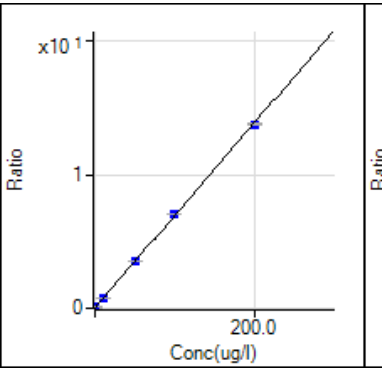
44 Ca [2] / ISTD: 175 Lu
y = 1.750E-5 x + 5.851E-4
R 0.9999
DL 3.636
BEC 33.43



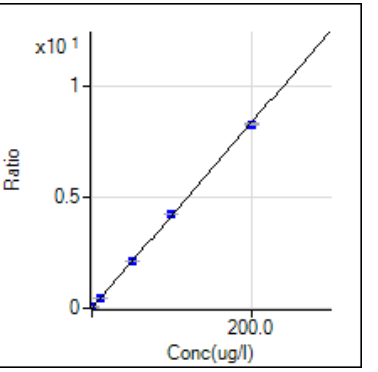
47 Ti [2] / ISTD: 45 Sc
y = 1.077E-3 x + 6.469E-6
R 1.0000
DL 0.01818
BEC 0.006006



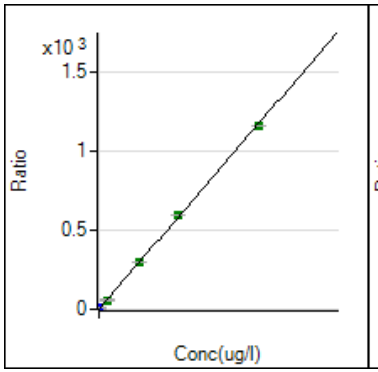
51 V [2] / ISTD: 45 Sc
y = 3.101E-2 x + 3.265E-3
R 0.9999
DL 0.02483
BEC 0.1053



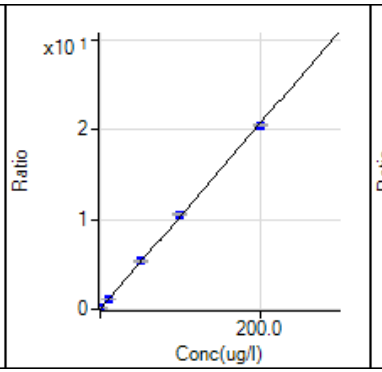
52 Cr [2] / ISTD: 72 Ge
y = 6.911E-2 x + 2.665E-2
R 0.9999
DL 0.04019
BEC 0.3856



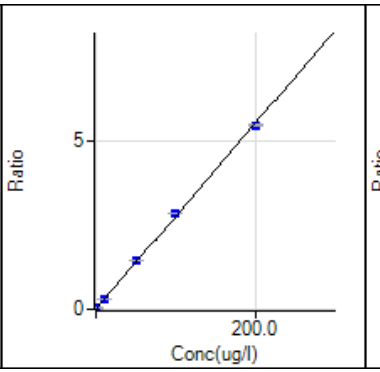
55 Mn [2] / ISTD: 72 Ge
y = 4.178E-2 x + 2.874E-3
R 0.9999
DL 0.006909
BEC 0.0688



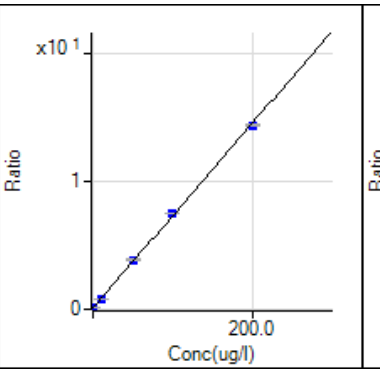
56 Fe [2] / ISTD: 72 Ge
y = 5.855E-2 x + 1.168E-1
R 0.9999
DL 0.09343
BEC 1.995



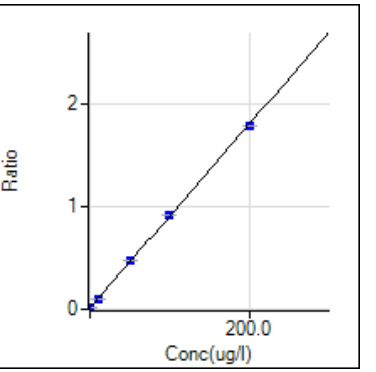
59 Co [2] / ISTD: 72 Ge
y = 1.032E-1 x + 5.097E-4
R 0.9998
DL 0.0045
BEC 0.004938



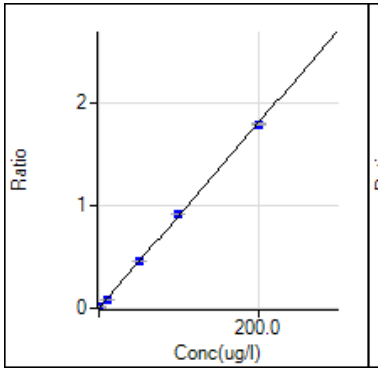
60 Ni [2] / ISTD: 72 Ge
y = 2.772E-2 x + 3.388E-3
R 0.9998
DL 0.02501
BEC 0.1222



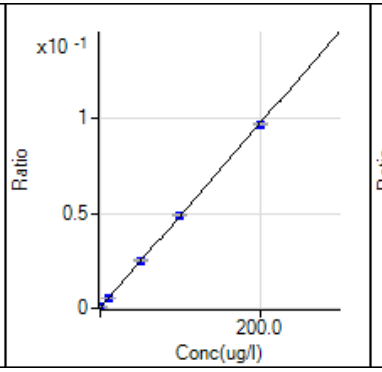
63 Cu [2] / ISTD: 72 Ge
y = 7.211E-2 x + 9.246E-2
R 0.9998
DL 0.1336
BEC 1.282



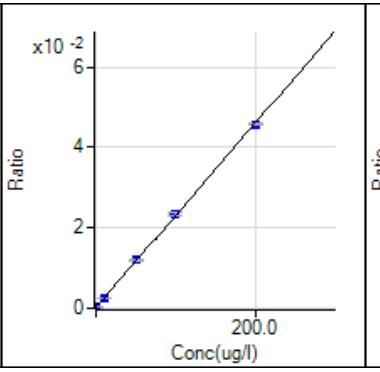
66 Zn [2] / ISTD: 74 Ge
y = 8.940E-3 x + 1.162E-2
R 0.9999
DL 0.0491
BEC 1.3



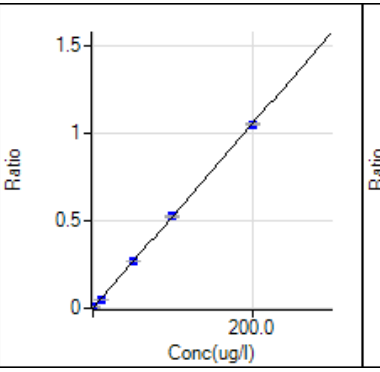
75 As [2] / ISTD: 72 Ge
y = 8.993E-3 x + 3.824E-4
R 0.9999
DL 0.02387
BEC 0.04252



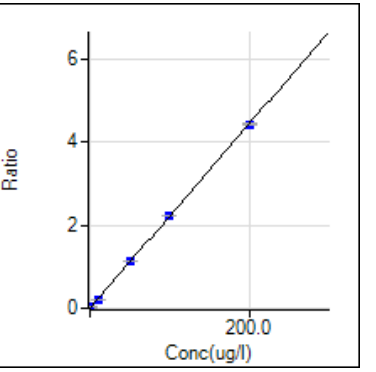
78 Se [2] / ISTD: 74 Ge
y = 4.868E-4 x + 1.375E-4
R 1.0000
DL 0.1002
BEC 0.2824



82 Se [2] / ISTD: 74 Ge
y = 2.291E-4 x + 1.759E-4
R 0.9999
DL 0.2438
BEC 0.768

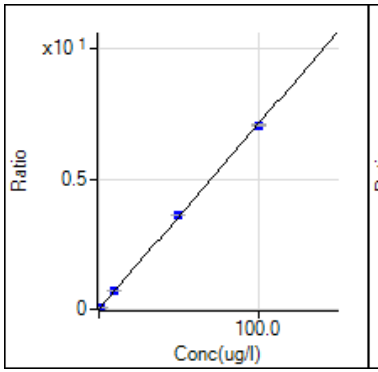


88 Sr [2] / ISTD: 115 In
y = 5.274E-3 x + 2.599E-4
R 1.0000
DL 0.005923
BEC 0.04928

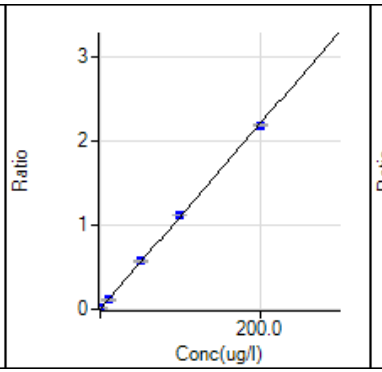


95 Mo [2] / ISTD: 74 Ge
y = 2.219E-2 x + 2.223E-4
R 1.0000
DL 0.01982
BEC 0.01002

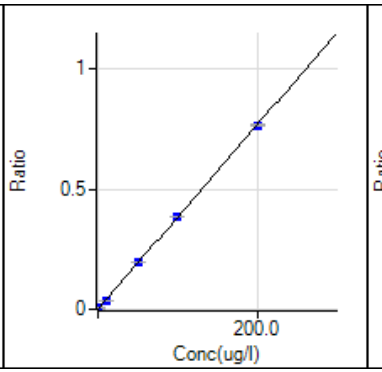
Calibration for D:\2022\xa091522m1.b\001CALB.d



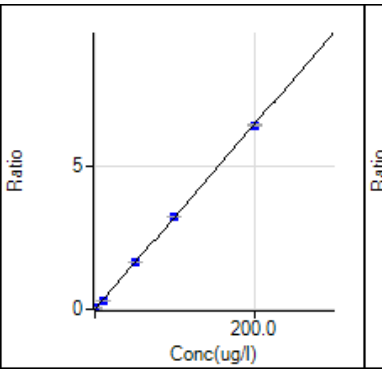
107 Ag [2] / ISTD: 74 Ge
y = 7.101E-2 x + 4.207E-4
R 0.9999
DL 0.0066
BEC 0.005924



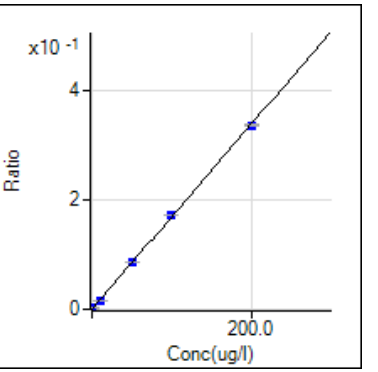
111 Cd [2] / ISTD: 74 Ge
y = 1.099E-2 x + 1.567E-5
R 0.9999
DL 3.443E-05
BEC 0.001426



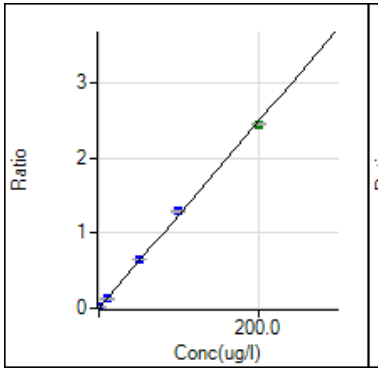
118 Sn [2] / ISTD: 115 In
y = 3.833E-3 x + 1.575E-4
R 1.0000
DL 0.001421
BEC 0.04109



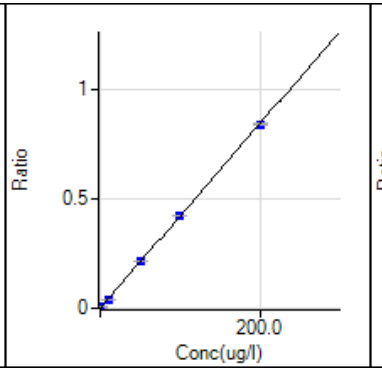
121 Sb [2] / ISTD: 74 Ge
y = 3.228E-2 x + 2.587E-4
R 1.0000
DL 0.001451
BEC 0.008015



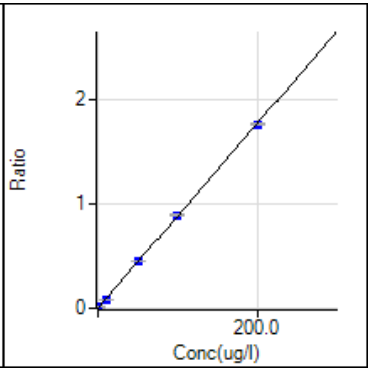
137 Ba [2] / ISTD: 115 In
y = 1.697E-3 x + 2.017E-5
R 0.9999
DL 0.01016
BEC 0.01189



205 Tl [2] / ISTD: 209 Bi
y = 1.240E-2 x + 1.289E-5
R 0.9996
DL 0.0002368
BEC 0.00104



206 [Pb] [2] / ISTD: 209 Bi
y = 4.209E-3 x + 1.196E-4
R 1.0000
DL 0.008844
BEC 0.02842



208 Pb [2] / ISTD: 209 Bi
y = 8.845E-3 x + 2.632E-4
R 1.0000
DL 0.005857
BEC 0.02975

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 8:40
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.006	ug/l	-186.22	4,446.52	2.507E-02	Pulse	0.50	3
As			1	0.012	ug/l	19.56	67.33	3.798E-04	Pulse	1.00	3
Mo			1	0.001	ug/l	106.84	50.67	1.921E-04	Pulse	0.50	3
Pb			1	-0.002	ug/l	-64.94	739.02	2.744E-04	Pulse	1.00	3
Be			1	-0.006	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	-0.001	ug/l	-256.25	69.33	2.631E-04	Pulse	0.50	3
Ba			1	-0.001	ug/l	-238.68	59.33	3.867E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	84.03	31.33	1.164E-05	Pulse	0.50	3
Sn			1	-0.001	ug/l	-752.86	214.45	1.397E-04	Pulse	0.30	3
Sr			1	-0.002	ug/l	-267.18	490.01	3.193E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	1201.95	380.67	1.414E-04	Pulse	0.50	3
Ca			1	1.337	ug/l	141.57	1,677.41	5.151E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	-20847.89	4.67	1.434E-05	Pulse	0.50	3
Na			1	0.030	ug/l	110.04	19,213.51		Pulse	1.00	3
Mg			1	0.004	ug/l	1894.30	920.02	2.826E-03	Pulse	1.00	3
K			1	-0.298	ug/l	-108.52	86,469.09	2.655E-01	Pulse	1.00	3
V			1	-0.004	ug/l	-95.65	1,054.03	3.236E-03	Pulse	0.50	3
Mn			1	-0.009	ug/l	-89.36	729.35	4.114E-03	Pulse	0.50	3
Fe			1	-0.217	ug/l	-14.38	13,609.47	7.675E-02	Pulse	0.50	3
Co			1	0.000	ug/l	550.48	44.67	2.517E-04	Pulse	0.50	3
Ni			1	0.011	ug/l	108.94	493.34	2.783E-03	Pulse	0.50	3
Cu			1	0.307	ug/l	18.61	36,124.98	2.037E-01	Pulse	0.50	3
Zn			1	2.759	ug/l	50.25	9,514.21	3.610E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-291.38	2.00	7.571E-06	Pulse	0.50	3
Al			1	-0.120	ug/l	-107.13	1,577.40	4.844E-03	Pulse	1.00	3
Se			1	-0.052	ug/l	-1.83	25.89	9.816E-05	Pulse	3.00	3
Sb			1	0.000	ug/l	-201.47	71.00	2.692E-04	Pulse	1.00	3
Se			1	-0.096	ug/l	-87.08	31.56	1.196E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,692,546.25	0.53	100.0	Pulse	0.50	3
1	Sc		325,652.51	0.40	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		177,324.97	0.59	100.0	Pulse	0.30	3
1	In		1,534,753.90	0.48	100.0	Pulse	0.30	3
1	Tb		3,804,350.58	0.53	100.0	Pulse	0.50	3
1	Lu		2,839,624.50	0.22	100.0	Pulse	0.50	3
1	Ge		263,739.49	0.31	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,471.18	8.18	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 8:44
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.003	ug/l	-35.71	4,458.52	2.522E-02	Pulse	0.50	3
As			1	0.006	ug/l	55.39	58.33	3.299E-04	Pulse	1.00	3
Mo			1	0.001	ug/l	400.97	49.33	1.893E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	-1469.15	787.02	2.937E-04	Pulse	1.00	3
Be			1	-0.004	ug/l	-84.97	0.17	5.100E-07	Pulse	2.00	3
Ag			1	-0.001	ug/l	-112.41	70.67	2.713E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	319.10	66.67	4.331E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	-116.39	18.67	6.956E-06	Pulse	0.50	3
Sn			1	0.005	ug/l	143.22	248.89	1.615E-04	Pulse	0.30	3
Sr			1	0.001	ug/l	868.42	511.34	3.320E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	3483.51	376.68	1.405E-04	Pulse	0.50	3
Ca			1	3.144	ug/l	66.09	1,768.08	5.426E-03	Pulse	0.50	3
Ti			1	0.096	ug/l	139.84	36.00	1.103E-04	Pulse	0.50	3
Na			1	0.211	ug/l	38.44	19,578.22		Pulse	1.00	3
Mg			1	0.095	ug/l	50.91	1,012.69	3.108E-03	Pulse	1.00	3
K			1	0.168	ug/l	512.86	86,997.35	2.670E-01	Pulse	1.00	3
V			1	0.005	ug/l	7.23	1,134.71	3.483E-03	Pulse	0.50	3
Mn			1	-0.002	ug/l	-243.59	774.02	4.378E-03	Pulse	0.50	3
Fe			1	-0.227	ug/l	-12.23	13,476.70	7.624E-02	Pulse	0.50	3
Co			1	0.000	ug/l	-315.89	38.67	2.186E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	256.70	459.34	2.599E-03	Pulse	0.50	3
Cu			1	0.105	ug/l	41.88	33,600.46	1.901E-01	Pulse	0.50	3
Zn			1	0.391	ug/l	18.51	4,283.82	1.645E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	-301.12	2.00	7.641E-06	Pulse	0.50	3
Al			1	0.315	ug/l	249.25	1,771.51	5.435E-03	Pulse	1.00	3
Se			1	-0.041	ug/l	-36.05	26.89	1.032E-04	Pulse	3.00	3
Sb			1	-0.002	ug/l	-113.90	59.00	2.267E-04	Pulse	1.00	3
Se			1	-0.077	ug/l	-126.67	32.22	1.236E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,680,419.08	0.66	100.0	Pulse	0.50	3
1	Sc		325,819.68	0.48	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		176,789.89	0.63	100.0	Pulse	0.30	3
1	In		1,540,995.60	0.80	100.0	Pulse	0.30	3
1	Tb		3,776,812.33	0.66	100.0	Pulse	0.50	3
1	Lu		2,825,695.92	0.94	100.0	Pulse	0.50	3
1	Ge		260,392.91	0.79	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,481.17	2.30	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 8:48
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,500.54	2.545E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	49.67	2.805E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	44.67	1.701E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	782.69	2.946E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.50	1.549E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	82.67	3.153E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	61.33	3.996E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	22.67	8.530E-06	Pulse	0.50	3
Sn			1	0.000	ug/l	---	221.11	1.443E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	503.34	3.284E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	372.68	1.402E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	1,606.07	4.949E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	---	4.67	1.441E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	19,153.45		Pulse	1.00	3
Mg			1	0.000	ug/l	---	912.69	2.813E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	86,487.86	2.665E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,086.70	3.350E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	791.35	4.475E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	15,716.37	8.884E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	40.67	2.299E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	440.68	2.491E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	32,374.36	1.830E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	3,463.32	1.321E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	2.67	1.017E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,625.07	5.007E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	31.89	1.216E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	73.00	2.783E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	36.67	1.398E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,656,641.33	0.64	100.0	Pulse	0.50	3
1	Sc		324,577.63	0.87	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		176,915.78	0.79	100.0	Pulse	0.30	3
1	In		1,533,555.39	0.79	100.0	Pulse	0.30	3
1	Tb		3,750,498.33	0.43	100.0	Pulse	0.50	3
1	Lu		2,827,350.58	1.10	100.0	Pulse	0.50	3
1	Ge		262,224.03	0.58	100.0	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,475.62	6.03	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 8:52
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.463	ug/l	3.10	9,924.56	5.634E-02	Pulse	0.50	3
As			1	0.463	ug/l	6.17	736.35	4.179E-03	Pulse	1.00	3
Mo			1	0.453	ug/l	3.30	2,488.84	9.562E-03	Pulse	0.50	3
Pb			1	0.469	ug/l	1.10	11,219.03	4.232E-03	Pulse	1.00	3
Be			1	0.474	ug/l	10.48	38.83	1.194E-04	Pulse	2.00	3
Ag			1	0.457	ug/l	1.53	7,861.03	3.020E-02	Pulse	0.50	3
Ba			1	0.463	ug/l	5.30	1,194.05	7.805E-04	Pulse	0.50	3
Tl			1	0.463	ug/l	0.37	14,846.46	5.600E-03	Pulse	0.50	3
Sn			1	0.474	ug/l	2.66	2,878.02	1.882E-03	Pulse	0.30	3
Sr			1	0.467	ug/l	2.07	4,115.13	2.690E-03	Pulse	0.50	3
[Pb]			1	0.479	ug/l	4.70	5,457.56	2.059E-03	Pulse	0.50	3
Ca			1	41.763	ug/l	6.72	3,667.02	1.129E-02	Pulse	0.50	3
Ti			1	0.448	ug/l	14.26	150.67	4.638E-04	Pulse	0.50	3
Na			1	49.072	ug/l	0.85	118,105.22		Pulse	1.00	3
Mg			1	48.716	ug/l	0.92	50,219.96	1.545E-01	Pulse	1.00	3
K			1	54.327	ug/l	0.83	143,091.98	4.403E-01	Pulse	1.00	3
V			1	0.442	ug/l	0.94	5,232.05	1.610E-02	Pulse	0.50	3
Mn			1	0.420	ug/l	4.54	3,721.71	2.113E-02	Pulse	0.50	3
Fe			1	49.221	ug/l	0.90	498,104.03	2.827E+00	Pulse	0.50	3
Co			1	0.480	ug/l	2.44	8,281.12	4.701E-02	Pulse	0.50	3
Ni			1	0.499	ug/l	0.83	2,727.53	1.548E-02	Pulse	0.50	3
Cu			1	0.293	ug/l	21.45	35,720.28	2.028E-01	Pulse	0.50	3
Zn			1	0.221	ug/l	14.42	3,915.74	1.505E-02	Pulse	1.00	3
Cd			1	0.472	ug/l	8.52	1,248.05	4.794E-03	Pulse	0.50	3
Al			1	49.065	ug/l	2.45	23,339.25	7.182E-02	Pulse	1.00	3
Se			1	0.483	ug/l	14.20	88.11	3.387E-04	Pulse	3.00	3
Sb			1	0.465	ug/l	1.28	3,636.03	1.397E-02	Pulse	1.00	3
Se			1	0.385	ug/l	24.12	57.45	2.207E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,651,015.58	1.02	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		324,986.91	0.74	100.1	Pulse	0.30	3
1	Ge		176,171.14	0.35	99.6	Pulse	0.30	3
1	In		1,529,695.18	0.60	99.7	Pulse	0.30	3
1	Tb		3,763,045.75	0.51	100.3	Pulse	0.50	3
1	Lu		2,816,268.58	0.69	99.6	Pulse	0.50	3
1	Ge		260,272.64	0.69	99.3	Pulse	0.30	3
1	Te		3.33	91.65	166.7	Pulse	0.50	3
1	Li		1,344.50	6.29	91.1	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 8:56
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.946	ug/l	2.72	15,651.63	8.855E-02	Pulse	0.50	3
As			1	0.939	ug/l	5.51	1,446.39	8.183E-03	Pulse	1.00	3
Mo			1	0.942	ug/l	2.86	5,130.72	1.971E-02	Pulse	0.50	3
Pb			1	0.958	ug/l	0.61	22,125.27	8.342E-03	Pulse	1.00	3
Be			1	1.001	ug/l	4.55	81.67	2.506E-04	Pulse	2.00	3
Ag			1	0.951	ug/l	0.91	16,260.46	6.247E-02	Pulse	0.50	3
Ba			1	0.946	ug/l	7.02	2,367.50	1.552E-03	Pulse	0.50	3
Tl			1	0.943	ug/l	1.50	30,219.26	1.139E-02	Pulse	0.50	3
Sn			1	0.946	ug/l	3.62	5,499.74	3.606E-03	Pulse	0.30	3
Sr			1	0.950	ug/l	0.91	7,831.65	5.136E-03	Pulse	0.50	3
[Pb]			1	0.956	ug/l	1.95	10,529.94	3.970E-03	Pulse	0.50	3
Ca			1	90.187	ug/l	1.86	6,074.96	1.863E-02	Pulse	0.50	3
Ti			1	1.011	ug/l	12.66	334.67	1.027E-03	Pulse	0.50	3
Na			1	102.969	ug/l	0.21	226,785.24		Pulse	1.00	3
Mg			1	99.647	ug/l	1.14	102,082.76	3.131E-01	Pulse	1.00	3
K			1	104.566	ug/l	0.26	195,945.17	6.011E-01	Pulse	1.00	3
V			1	0.945	ug/l	1.63	9,977.25	3.060E-02	Pulse	0.50	3
Mn			1	0.988	ug/l	1.44	7,713.55	4.364E-02	Pulse	0.50	3
Fe			1	98.635	ug/l	0.51	985,780.06	5.577E+00	Pulse	0.50	3
Co			1	0.975	ug/l	1.15	16,823.32	9.517E-02	Pulse	0.50	3
Ni			1	1.146	ug/l	2.82	5,718.86	3.235E-02	Pulse	0.50	3
Cu			1	0.670	ug/l	1.76	40,341.95	2.282E-01	Pulse	0.50	3
Zn			1	1.369	ug/l	1.74	6,393.73	2.457E-02	Pulse	1.00	3
Cd			1	0.923	ug/l	2.44	2,435.50	9.356E-03	Pulse	0.50	3
Al			1	99.678	ug/l	1.22	45,883.17	1.407E-01	Pulse	1.00	3
Se			1	0.940	ug/l	4.32	141.55	5.438E-04	Pulse	3.00	3
Sb			1	0.935	ug/l	1.53	7,230.76	2.778E-02	Pulse	1.00	3
Se			1	1.024	ug/l	7.90	92.33	3.548E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,652,341.08	0.20	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		326,003.94	0.68	100.4	Pulse	0.30	3
1	Ge		176,765.12	0.26	99.9	Pulse	0.30	3
1	In		1,524,960.91	0.45	99.4	Pulse	0.30	3
1	Tb		3,760,951.17	0.17	100.3	Pulse	0.50	3
1	Lu		2,830,387.75	0.85	100.1	Pulse	0.50	3
1	Ge		260,273.17	0.77	99.3	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,458.95	3.87	98.9	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:00
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.638	ug/l	0.96	118,575.36	6.684E-01	Pulse	0.50	3
As			1	9.587	ug/l	2.47	14,358.05	8.095E-02	Pulse	1.00	3
Mo			1	9.378	ug/l	0.43	51,480.23	1.947E-01	Pulse	0.50	3
Pb			1	9.610	ug/l	0.12	215,563.25	8.101E-02	Pulse	1.00	3
Be			1	9.454	ug/l	2.37	766.18	2.354E-03	Pulse	2.00	3
Ag			1	9.662	ug/l	0.45	167,139.82	6.321E-01	Pulse	0.50	3
Ba			1	9.704	ug/l	1.49	23,782.29	1.555E-02	Pulse	0.50	3
Tl			1	9.636	ug/l	0.76	309,509.29	1.163E-01	Pulse	0.50	3
Sn			1	9.638	ug/l	0.97	54,182.92	3.543E-02	Pulse	0.30	3
Sr			1	9.527	ug/l	0.77	74,248.31	4.855E-02	Pulse	0.50	3
[Pb]			1	9.544	ug/l	1.04	102,096.15	3.837E-02	Pulse	0.50	3
Ca			1	966.980	ug/l	0.72	49,367.74	1.517E-01	Pulse	0.50	3
Ti			1	9.469	ug/l	1.35	3,092.92	9.502E-03	Pulse	0.50	3
Na			1	1009.528	ug/l	0.11	2,054,815.16		Pulse	1.00	3
Mg			1	1008.140	ug/l	0.73	1,022,810.31	3.143E+00	Pulse	1.00	3
K			1	990.043	ug/l	0.44	1,117,792.12	3.434E+00	Pulse	1.00	3
V			1	9.677	ug/l	0.75	91,958.34	2.825E-01	Pulse	0.50	3
Mn			1	9.666	ug/l	1.46	68,766.23	3.877E-01	Pulse	0.50	3
Fe			1	971.635	ug/l	0.51	9,606,097.33	5.415E+01	Analog	0.50	3
Co			1	9.960	ug/l	0.72	172,066.78	9.699E-01	Pulse	0.50	3
Ni			1	9.901	ug/l	0.22	46,215.61	2.605E-01	Pulse	0.50	3
Cu			1	9.562	ug/l	1.71	146,928.20	8.283E-01	Pulse	0.50	3
Zn			1	9.029	ug/l	2.41	23,294.70	8.811E-02	Pulse	1.00	3
Cd			1	9.712	ug/l	0.30	26,014.94	9.839E-02	Pulse	0.50	3
Al			1	979.193	ug/l	0.77	435,644.62	1.338E+00	Pulse	1.00	3
Se			1	9.698	ug/l	3.18	1,183.37	4.476E-03	Pulse	3.00	3
Sb			1	9.533	ug/l	0.90	74,220.23	2.807E-01	Pulse	1.00	3
Se			1	9.456	ug/l	5.46	562.01	2.126E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,660,819.50	0.73	100.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		325,481.78	0.42	100.3	Pulse	0.30	3
1	Ge		177,405.41	0.97	100.3	Pulse	0.30	3
1	In		1,529,181.43	0.41	99.7	Pulse	0.30	3
1	Tb		3,768,589.67	0.36	100.5	Pulse	0.50	3
1	Lu		2,838,472.67	0.34	100.4	Pulse	0.50	3
1	Ge		264,401.33	0.30	100.8	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,491.17	5.10	101.1	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:04
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.382	ug/l	1.21	599,794.02	3.387E+00	Pulse	0.50	3
As			1	50.349	ug/l	0.98	75,078.67	4.239E-01	Pulse	1.00	3
Mo			1	50.468	ug/l	0.28	272,897.10	1.047E+00	Pulse	0.50	3
Pb			1	50.725	ug/l	0.14	1,110,367.29	4.264E-01	Pulse	1.00	3
Be			1	51.465	ug/l	0.85	4,147.42	1.281E-02	Pulse	2.00	3
Ag			1	50.543	ug/l	0.36	861,511.71	3.305E+00	Pulse	0.50	3
Ba			1	50.678	ug/l	0.13	122,655.13	8.105E-02	Pulse	0.50	3
Tl			1	51.046	ug/l	0.60	1,604,700.83	6.162E-01	Pulse	0.50	3
Sn			1	49.789	ug/l	0.52	276,072.22	1.824E-01	Pulse	0.30	3
Sr			1	49.763	ug/l	0.92	381,671.78	2.522E-01	Pulse	0.50	3
[Pb]			1	50.605	ug/l	0.20	528,304.25	2.029E-01	Pulse	0.50	3
Ca			1	5124.796	ug/l	0.47	253,401.77	7.826E-01	Pulse	0.50	3
Ti			1	50.469	ug/l	1.32	16,378.88	5.058E-02	Pulse	0.50	3
Na			1	5218.855	ug/l	0.31	10,542,706.67		Analog	1.00	3
Mg			1	5171.846	ug/l	0.29	5,216,342.00	1.611E+01	Analog	1.00	3
K			1	5118.531	ug/l	0.17	5,389,409.00	1.664E+01	Analog	1.00	3
V			1	51.051	ug/l	0.76	477,961.09	1.476E+00	Pulse	0.50	3
Mn			1	50.765	ug/l	1.16	357,203.96	2.017E+00	Pulse	0.50	3
Fe			1	5067.709	ug/l	0.72	49,954,262.67	2.821E+02	Analog	0.50	3
Co			1	51.205	ug/l	1.08	882,969.71	4.986E+00	Pulse	0.50	3
Ni			1	51.247	ug/l	0.66	236,968.78	1.338E+00	Pulse	0.50	3
Cu			1	51.381	ug/l	0.72	646,553.29	3.651E+00	Pulse	0.50	3
Zn			1	52.346	ug/l	0.79	116,618.18	4.474E-01	Pulse	1.00	3
Cd			1	51.391	ug/l	0.43	135,688.90	5.206E-01	Pulse	0.50	3
Al			1	5142.747	ug/l	0.29	2,269,344.58	7.008E+00	Pulse	1.00	3
Se			1	50.211	ug/l	0.96	5,907.02	2.266E-02	Pulse	3.00	3
Sb			1	50.878	ug/l	0.89	390,160.36	1.497E+00	Pulse	1.00	3
Se			1	49.593	ug/l	2.12	2,751.20	1.056E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,604,288.00	0.38	98.0	Pulse	0.50	3
1	Sc		323,801.94	0.26	99.8	Pulse	0.30	3
1	Ge		177,118.80	0.94	100.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,513,233.76	0.51	98.7	Pulse	0.30	3
1	Tb		3,773,884.08	0.41	100.6	Pulse	0.50	3
1	Lu		2,832,526.67	0.41	100.2	Pulse	0.50	3
1	Ge		260,641.96	0.58	99.4	Pulse	0.30	3
1	Te		2.67	86.60	133.3	Pulse	0.50	3
1	Li		1,567.85	1.37	106.3	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:08
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.644	ug/l	0.49	1,182,031.42	6.740E+00	Pulse	0.50	3
As			1	100.166	ug/l	0.47	147,857.24	8.431E-01	Pulse	1.00	3
Mo			1	101.307	ug/l	0.59	542,508.44	2.102E+00	Pulse	0.50	3
Pb			1	101.964	ug/l	0.41	2,189,570.33	8.567E-01	Pulse	1.00	3
Be			1	100.612	ug/l	0.73	8,097.44	2.504E-02	Pulse	2.00	3
Ag			1	99.763	ug/l	0.38	1,684,083.83	6.524E+00	Pulse	0.50	3
Ba			1	100.781	ug/l	0.81	240,660.02	1.612E-01	Pulse	0.50	3
Tl			1	102.263	ug/l	0.46	3,154,722.33	1.234E+00	Pulse	0.50	3
Sn			1	101.474	ug/l	0.44	555,053.47	3.717E-01	Pulse	0.30	3
Sr			1	100.807	ug/l	0.48	762,551.34	5.106E-01	Pulse	0.50	3
[Pb]			1	101.590	ug/l	0.77	1,040,405.65	4.071E-01	Pulse	0.50	3
Ca			1	10150.851	ug/l	0.35	499,728.58	1.545E+00	Pulse	0.50	3
Ti			1	100.337	ug/l	0.55	32,518.29	1.006E-01	Pulse	0.50	3
Na			1	10301.023	ug/l	0.45	20,790,639.33		Analog	1.00	3
Mg			1	10190.411	ug/l	0.72	10,264,414.33	3.174E+01	Analog	1.00	3
K			1	10143.686	ug/l	0.93	10,582,545.67	3.272E+01	Analog	1.00	3
V			1	101.120	ug/l	0.54	944,497.42	2.921E+00	Pulse	0.50	3
Mn			1	101.811	ug/l	0.43	708,606.38	4.040E+00	Pulse	0.50	3
Fe			1	10074.384	ug/l	1.10	98,320,384.00	5.606E+02	Analog	0.50	3
Co			1	101.196	ug/l	0.57	1,727,945.08	9.853E+00	Pulse	0.50	3
Ni			1	101.760	ug/l	0.48	465,499.71	2.654E+00	Pulse	0.50	3
Cu			1	101.845	ug/l	0.87	1,237,500.46	7.056E+00	Pulse	0.50	3
Zn			1	102.264	ug/l	0.68	222,391.38	8.615E-01	Pulse	1.00	3
Cd			1	101.101	ug/l	0.22	264,379.43	1.024E+00	Pulse	0.50	3
Al			1	10085.817	ug/l	0.89	4,443,459.17	1.374E+01	Pulse	1.00	3
Se			1	101.454	ug/l	0.75	11,789.18	4.567E-02	Pulse	3.00	3
Sb			1	101.392	ug/l	0.84	770,011.58	2.983E+00	Pulse	1.00	3
Se			1	101.537	ug/l	1.45	5,540.70	2.146E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,555,758.50	0.93	96.2	Pulse	0.50	3
1	Sc		323,399.71	0.17	99.6	Pulse	0.30	3
1	Ge		175,380.07	0.11	99.1	Pulse	0.30	3
1	In		1,493,401.43	0.54	97.4	Pulse	0.30	3
1	Tb		3,757,735.25	0.60	100.2	Pulse	0.50	3
1	Lu		2,822,627.92	0.39	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		258,145.60	0.73	98.4	Pulse	0.30	3
1	Te		6.00	57.74	300.0	Pulse	0.50	3
1	Li		1,473.40	2.97	99.8	Pulse	0.30	3

Quantitation Report

File Name 009CALS.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:12
Sample Name CALSTD-7
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.601	ug/l	0.68	2,281,660.33	1.334E+01	Pulse	0.50	3
As			1	199.851	ug/l	0.88	287,628.73	1.682E+00	Pulse	1.00	3
Mo			1	199.261	ug/l	0.74	1,047,013.67	4.133E+00	Pulse	0.50	3
Pb			1	198.856	ug/l	0.27	4,180,454.33	1.671E+00	Pulse	1.00	3
Be			1	199.355	ug/l	0.87	15,802.95	4.961E-02	Pulse	2.00	3
Ag			1	118.639	ug/l	1.80	1,965,277.46	7.758E+00	Pulse	0.50	3
Ba			1	199.455	ug/l	0.66	465,861.93	3.189E-01	Pulse	0.50	3
Tl			1	198.626	ug/l	0.54	5,999,778.00	2.398E+00	Pulse	0.50	3
Sn			1	199.334	ug/l	0.68	1,066,389.89	7.300E-01	Pulse	0.30	3
Sr			1	199.680	ug/l	0.80	1,477,073.04	1.011E+00	Pulse	0.50	3
[Pb]			1	199.077	ug/l	0.63	1,995,927.13	7.976E-01	Pulse	0.50	3
Ca			1	19895.096	ug/l	0.44	963,233.92	3.024E+00	Pulse	0.50	3
Ti			1	199.741	ug/l	0.76	63,757.17	2.002E-01	Pulse	0.50	3
Na			1	19794.286	ug/l	0.05	39,933,317.33		Analog	1.00	3
Mg			1	19861.431	ug/l	0.97	19,704,079.33	6.186E+01	Analog	1.00	3
K			1	19898.988	ug/l	0.22	20,367,406.00	6.394E+01	Analog	1.00	3
V			1	199.194	ug/l	0.67	1,831,575.37	5.750E+00	Pulse	0.50	3
Mn			1	198.920	ug/l	1.18	1,349,296.00	7.890E+00	Pulse	0.50	3
Fe			1	19947.308	ug/l	0.98	189,816,154.67	1.110E+03	Analog	0.50	3
Co			1	199.103	ug/l	0.62	3,315,141.17	1.938E+01	Pulse	0.50	3
Ni			1	198.813	ug/l	0.94	886,433.92	5.183E+00	Pulse	0.50	3
Cu			1	198.756	ug/l	0.73	2,325,219.25	1.360E+01	Pulse	0.50	3
Zn			1	198.329	ug/l	0.86	420,080.60	1.658E+00	Pulse	1.00	3
Cd			1	199.117	ug/l	0.69	510,931.72	2.017E+00	Pulse	0.50	3
Al			1	19922.449	ug/l	0.39	8,644,056.33	2.714E+01	Analog	1.00	3
Se			1	199.236	ug/l	0.50	22,689.09	8.957E-02	Pulse	3.00	3
Sb			1	199.108	ug/l	0.51	1,483,755.50	5.857E+00	Pulse	1.00	3
Se			1	199.361	ug/l	0.87	10,641.41	4.201E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,502,407.58	0.65	94.2	Pulse	0.50	3
1	Sc		318,557.24	1.05	98.1	Pulse	0.30	3
1	Ge		171,021.72	0.58	96.7	Pulse	0.30	3
1	In		1,460,852.96	0.31	95.3	Pulse	0.30	3
1	Tb		3,682,839.33	0.65	98.2	Pulse	0.50	3
1	Lu		2,790,585.83	0.15	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,315.92	1.01	96.6	Pulse	0.30	3
1	Te		17.33	48.04	866.7	Pulse	0.50	3
1	Li		1,354.50	11.74	91.8	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:16
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.102	ug/l	0.22	1,118,209.12	6.504E+00	Pulse	0.50	3
As			1	97.115	ug/l	1.30	140,537.14	8.174E-01	Pulse	1.00	3
Mo			1	97.778	ug/l	0.74	514,836.76	2.028E+00	Pulse	0.50	3
Pb			1	97.505	ug/l	0.29	2,074,422.21	8.193E-01	Pulse	1.00	3
Be			1	99.008	ug/l	0.88	7,842.01	2.464E-02	Pulse	2.00	3
Ag			1	95.816	ug/l	0.41	1,590,360.75	6.266E+00	Pulse	0.50	3
Ba			1	97.317	ug/l	0.46	228,497.10	1.556E-01	Pulse	0.50	3
Tl			1	97.348	ug/l	0.71	2,975,267.42	1.175E+00	Pulse	0.50	3
Sn			1	97.542	ug/l	1.11	524,629.98	3.573E-01	Pulse	0.30	3
Sr			1	96.957	ug/l	0.83	721,175.12	4.911E-01	Pulse	0.50	3
[Pb]			1	96.990	ug/l	0.84	984,139.04	3.887E-01	Pulse	0.50	3
Ca			1	9747.211	ug/l	0.76	472,288.43	1.484E+00	Pulse	0.50	3
Ti			1	97.213	ug/l	2.37	31,003.13	9.742E-02	Pulse	0.50	3
Na			1	9829.360	ug/l	0.10	19,839,554.67		Analog	1.00	3
Mg			1	9855.707	ug/l	0.60	9,769,543.33	3.070E+01	Analog	1.00	3
K			1	9827.770	ug/l	0.99	10,092,503.33	3.171E+01	Analog	1.00	3
V			1	97.836	ug/l	1.10	899,328.08	2.826E+00	Pulse	0.50	3
Mn			1	97.672	ug/l	0.67	666,485.88	3.876E+00	Pulse	0.50	3
Fe			1	9785.510	ug/l	0.91	93,626,973.33	5.445E+02	Analog	0.50	3
Co			1	98.536	ug/l	0.44	1,649,515.25	9.594E+00	Pulse	0.50	3
Ni			1	98.162	ug/l	0.85	440,247.49	2.560E+00	Pulse	0.50	3
Cu			1	98.594	ug/l	0.66	1,175,476.75	6.837E+00	Pulse	0.50	3
Zn			1	99.147	ug/l	0.51	212,107.50	8.357E-01	Pulse	1.00	3
Cd			1	98.441	ug/l	0.59	253,110.86	9.972E-01	Pulse	0.50	3
Al			1	9735.036	ug/l	1.08	4,220,816.92	1.326E+01	Pulse	1.00	3
Se			1	97.503	ug/l	0.78	11,141.57	4.390E-02	Pulse	3.00	3
Sb			1	97.381	ug/l	0.67	727,184.64	2.865E+00	Pulse	1.00	3
Se			1	98.169	ug/l	1.30	5,268.62	2.076E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,531,974.08	0.86	95.3	Pulse	0.50	3
1	Sc		318,261.55	0.45	98.1	Pulse	0.30	3
1	Ge		171,936.83	0.68	97.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,468,357.51	0.57	95.7	Pulse	0.30	3
1	Tb		3,687,433.33	0.39	98.3	Pulse	0.50	3
1	Lu		2,791,686.92	0.52	98.7	Pulse	0.50	3
1	Ge		253,815.65	0.39	96.8	Pulse	0.30	3
1	Te		8.67	113.84	433.3	Pulse	0.50	3
1	Li		1,512.29	5.10	102.5	Pulse	0.30	3

Quantitation Report

File Name	011HSTD.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:19
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	194.874	ug/l	0.74	2,213,279.33	1.303E+01	Pulse	0.50	3
As			1	196.466	ug/l	0.64	280,915.86	1.653E+00	Pulse	1.00	3
Mo			1	198.114	ug/l	0.64	1,030,983.38	4.110E+00	Pulse	0.50	3
Pb			1	197.119	ug/l	0.63	4,076,035.08	1.656E+00	Pulse	1.00	3
Be			1	198.477	ug/l	0.58	15,479.05	4.939E-02	Pulse	2.00	3
Ag			1	113.276	ug/l	0.53	1,858,338.21	7.408E+00	Pulse	0.50	3
Ba			1	196.413	ug/l	1.27	454,170.57	3.140E-01	Pulse	0.50	3
Tl			1	197.485	ug/l	0.74	5,867,531.00	2.384E+00	Pulse	0.50	3
Sn			1	196.962	ug/l	1.22	1,043,215.72	7.213E-01	Pulse	0.30	3
Sr			1	196.849	ug/l	0.99	1,441,646.50	9.968E-01	Pulse	0.50	3
[Pb]			1	198.024	ug/l	1.22	1,952,863.29	7.934E-01	Pulse	0.50	3
Ca			1	19682.989	ug/l	0.60	937,557.38	2.992E+00	Pulse	0.50	3
Ti			1	194.716	ug/l	0.94	61,147.54	1.951E-01	Pulse	0.50	3
Na			1	19523.804	ug/l	0.32	39,387,905.33		Analog	1.00	3
Mg			1	19844.303	ug/l	0.45	19,369,060.67	6.180E+01	Analog	1.00	3
K			1	19823.746	ug/l	0.57	19,962,132.00	6.370E+01	Analog	1.00	3
V			1	196.932	ug/l	0.63	1,781,509.84	5.685E+00	Pulse	0.50	3
Mn			1	195.134	ug/l	0.69	1,315,056.55	7.740E+00	Pulse	0.50	3
Fe			1	19651.439	ug/l	0.88	185,786,944.00	1.093E+03	Analog	0.50	3
Co			1	194.151	ug/l	0.71	3,211,690.67	1.890E+01	Pulse	0.50	3
Ni			1	194.900	ug/l	0.81	863,365.60	5.081E+00	Pulse	0.50	3
Cu			1	193.814	ug/l	0.38	2,253,503.00	1.326E+01	Pulse	0.50	3
Zn			1	194.784	ug/l	1.33	408,662.29	1.629E+00	Pulse	1.00	3
Cd			1	194.941	ug/l	0.99	495,398.56	1.975E+00	Pulse	0.50	3
Al			1	19805.338	ug/l	0.60	8,454,036.00	2.698E+01	Analog	1.00	3
Se			1	195.905	ug/l	0.59	22,095.40	8.808E-02	Pulse	3.00	3
Sb			1	195.552	ug/l	1.19	1,443,196.71	5.753E+00	Pulse	1.00	3
Se			1	195.508	ug/l	0.07	10,336.25	4.120E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,461,451.67	0.70	92.7	Pulse	0.50	3
1	Sc		313,392.59	0.26	96.6	Pulse	0.30	3
1	Ge		169,909.03	0.45	96.0	Pulse	0.30	3
1	In		1,446,308.38	0.55	94.3	Pulse	0.30	3
1	Tb		3,650,934.33	0.15	97.3	Pulse	0.50	3
1	Lu		2,761,641.17	0.53	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,874.02	0.43	95.7	Pulse	0.30	3
1	Te		10.00	20.00	500.0	Pulse	0.50	3
1	Li		1,346.72	1.79	91.3	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:23
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.382	ug/l	1.59	1,086,578.58	6.389E+00	Pulse	0.50	3
As			1	96.327	ug/l	1.44	137,894.39	8.108E-01	Pulse	1.00	3
Mo			1	96.488	ug/l	1.20	503,254.29	2.002E+00	Pulse	0.50	3
Pb			1	95.718	ug/l	0.50	2,001,442.79	8.043E-01	Pulse	1.00	3
Be			1	98.427	ug/l	1.37	7,694.62	2.449E-02	Pulse	2.00	3
Ag			1	47.055	ug/l	1.32	773,706.19	3.077E+00	Pulse	0.50	3
Ba			1	96.689	ug/l	0.58	223,721.30	1.546E-01	Pulse	0.50	3
Tl			1	95.547	ug/l	0.13	2,870,144.58	1.153E+00	Pulse	0.50	3
Sn			1	97.780	ug/l	0.32	518,234.58	3.581E-01	Pulse	0.30	3
Sr			1	96.904	ug/l	0.89	710,231.67	4.909E-01	Pulse	0.50	3
[Pb]			1	95.619	ug/l	0.92	953,496.42	3.832E-01	Pulse	0.50	3
Ca			1	9086.445	ug/l	0.41	434,667.98	1.384E+00	Pulse	0.50	3
Ti			1	98.475	ug/l	0.57	31,000.48	9.868E-02	Pulse	0.50	3
Na			1	9441.752	ug/l	0.22	19,057,962.67		Analog	1.00	3
Mg			1	10063.578	ug/l	1.11	9,845,641.00	3.134E+01	Analog	1.00	3
K			1	9375.997	ug/l	1.10	9,507,180.67	3.027E+01	Analog	1.00	3
V			1	95.617	ug/l	0.89	867,524.27	2.762E+00	Pulse	0.50	3
Mn			1	95.431	ug/l	1.27	644,186.31	3.787E+00	Pulse	0.50	3
Fe			1	9729.905	ug/l	1.26	92,090,997.33	5.414E+02	Analog	0.50	3
Co			1	96.730	ug/l	1.35	1,601,787.13	9.418E+00	Pulse	0.50	3
Ni			1	96.153	ug/l	1.23	426,597.26	2.508E+00	Pulse	0.50	3
Cu			1	97.526	ug/l	1.27	1,150,567.87	6.765E+00	Pulse	0.50	3
Zn			1	96.657	ug/l	0.34	204,917.90	8.150E-01	Pulse	1.00	3
Cd			1	95.426	ug/l	0.84	243,047.73	9.667E-01	Pulse	0.50	3
Al			1	9577.736	ug/l	0.59	4,098,707.58	1.305E+01	Pulse	1.00	3
Se			1	96.259	ug/l	0.44	10,896.55	4.334E-02	Pulse	3.00	3
Sb			1	94.812	ug/l	0.62	701,327.77	2.789E+00	Pulse	1.00	3
Se			1	95.092	ug/l	0.47	5,056.56	2.011E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,488,590.83	1.38	93.7	Pulse	0.50	3
1	Sc		314,137.19	1.09	96.8	Pulse	0.30	3
1	Ge		170,108.57	1.86	96.2	Pulse	0.30	3
1	In		1,446,955.64	0.79	94.4	Pulse	0.30	3
1	Tb		3,640,874.58	1.14	97.1	Pulse	0.50	3
1	Lu		2,725,432.33	0.89	96.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,429.12	0.48	95.9	Pulse	0.30	3
1	Te		2.00	173.21	100.0	Pulse	0.50	3
1	Li		1,555.62	7.67	105.4	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:27
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.009	ug/l	159.94	4,330.50	2.603E-02	Pulse	0.50	3
As			1	0.031	ug/l	6.99	90.00	5.408E-04	Pulse	1.00	3
Mo			1	0.160	ug/l	30.88	860.69	3.494E-03	Pulse	0.50	3
Pb			1	0.071	ug/l	13.68	2,216.15	8.876E-04	Pulse	1.00	3
Be			1	0.009	ug/l	151.87	1.17	3.754E-06	Pulse	2.00	3
Ag			1	0.028	ug/l	31.38	528.68	2.146E-03	Pulse	0.50	3
Ba			1	-0.001	ug/l	-899.36	55.33	3.871E-05	Pulse	0.50	3
Tl			1	0.026	ug/l	15.55	802.02	3.212E-04	Pulse	0.50	3
Sn			1	0.232	ug/l	25.37	1,422.29	9.945E-04	Pulse	0.30	3
Sr			1	0.005	ug/l	91.53	508.68	3.557E-04	Pulse	0.50	3
[Pb]			1	0.067	ug/l	4.76	1,022.70	4.096E-04	Pulse	0.50	3
Ca			1	1.099	ug/l	149.42	1,580.74	5.115E-03	Pulse	0.50	3
Ti			1	0.012	ug/l	58.30	8.00	2.593E-05	Pulse	0.50	3
Na			1	6.443	ug/l	6.91	32,144.65		Pulse	1.00	3
Mg			1	0.923	ug/l	18.20	1,757.41	5.687E-03	Pulse	1.00	3
K			1	4.296	ug/l	28.55	86,561.17	2.802E-01	Pulse	1.00	3
V			1	0.002	ug/l	369.28	1,048.70	3.394E-03	Pulse	0.50	3
Mn			1	-0.022	ug/l	-39.97	601.34	3.617E-03	Pulse	0.50	3
Fe			1	1.586	ug/l	10.23	29,453.72	1.771E-01	Pulse	0.50	3
Co			1	0.009	ug/l	12.57	177.33	1.066E-03	Pulse	0.50	3
Ni			1	0.033	ug/l	21.89	558.68	3.359E-03	Pulse	0.50	3
Cu			1	-0.486	ug/l	-8.67	24,987.49	1.502E-01	Pulse	0.50	3
Zn			1	0.228	ug/l	29.36	3,716.03	1.510E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	38.54	24.67	1.004E-04	Pulse	0.50	3
Al			1	-0.410	ug/l	-26.53	1,374.38	4.449E-03	Pulse	1.00	3
Se			1	0.150	ug/l	29.05	46.55	1.890E-04	Pulse	3.00	3
Sb			1	0.059	ug/l	5.63	496.34	2.016E-03	Pulse	1.00	3
Se			1	0.134	ug/l	84.74	41.34	1.681E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,496,706.33	0.68	94.0	Pulse	0.50	3
1	Sc		308,929.72	1.03	95.2	Pulse	0.30	3

Quantitation Report

1	Ge		166,401.11	1.35	94.1	Pulse	0.30	3
1	In		1,429,881.96	0.17	93.2	Pulse	0.30	3
1	Tb		3,553,969.67	0.27	94.8	Pulse	0.50	3
1	Lu		2,656,725.92	0.61	94.0	Pulse	0.50	3
1	Ge		246,160.03	0.93	93.9	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,500.06	7.06	101.7	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:31
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.037	ug/l	1.95	15,616.27	9.462E-02	Pulse	0.50	3
As			1	1.033	ug/l	1.93	1,480.73	8.972E-03	Pulse	1.00	3
Mo			1	1.062	ug/l	5.20	5,423.48	2.219E-02	Pulse	0.50	3
Pb			1	1.053	ug/l	0.65	22,807.15	9.136E-03	Pulse	1.00	3
Be			1	1.067	ug/l	12.43	82.67	2.670E-04	Pulse	2.00	3
Ag			1	1.054	ug/l	2.03	16,920.40	6.923E-02	Pulse	0.50	3
Ba			1	0.983	ug/l	4.67	2,331.49	1.611E-03	Pulse	0.50	3
Tl			1	1.034	ug/l	0.44	31,164.31	1.248E-02	Pulse	0.50	3
Sn			1	1.045	ug/l	1.88	5,745.38	3.970E-03	Pulse	0.30	3
Sr			1	0.947	ug/l	1.40	7,411.48	5.121E-03	Pulse	0.50	3
[Pb]			1	1.048	ug/l	0.11	10,833.45	4.340E-03	Pulse	0.50	3
Ca			1	89.316	ug/l	4.11	5,729.52	1.850E-02	Pulse	0.50	3
Ti			1	0.922	ug/l	10.80	290.67	9.387E-04	Pulse	0.50	3
Na			1	102.605	ug/l	0.39	226,051.85		Pulse	1.00	3
Mg			1	106.266	ug/l	1.39	103,353.95	3.338E-01	Pulse	1.00	3
K			1	104.800	ug/l	1.72	186,358.64	6.018E-01	Pulse	1.00	3
V			1	1.003	ug/l	3.00	9,993.91	3.227E-02	Pulse	0.50	3
Mn			1	0.952	ug/l	2.07	6,967.93	4.222E-02	Pulse	0.50	3
Fe			1	105.690	ug/l	1.62	985,129.60	5.969E+00	Pulse	0.50	3
Co			1	1.073	ug/l	3.54	17,272.39	1.047E-01	Pulse	0.50	3
Ni			1	1.092	ug/l	1.14	5,107.36	3.095E-02	Pulse	0.50	3
Cu			1	0.497	ug/l	10.40	35,735.60	2.165E-01	Pulse	0.50	3
Zn			1	0.045	ug/l	135.47	3,320.96	1.359E-02	Pulse	1.00	3
Cd			1	1.022	ug/l	4.78	2,532.18	1.036E-02	Pulse	0.50	3
Al			1	100.175	ug/l	1.41	43,794.43	1.414E-01	Pulse	1.00	3
Se			1	1.013	ug/l	5.40	140.89	5.765E-04	Pulse	3.00	3
Sb			1	1.031	ug/l	3.99	7,480.53	3.061E-02	Pulse	1.00	3
Se			1	0.969	ug/l	17.90	83.89	3.433E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,496,357.42	0.71	94.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		309,674.81	0.43	95.4	Pulse	0.30	3
1	Ge		165,039.60	0.45	93.3	Pulse	0.30	3
1	In		1,447,122.82	0.57	94.4	Pulse	0.30	3
1	Tb		3,556,979.00	0.48	94.8	Pulse	0.50	3
1	Lu		2,658,091.50	0.34	94.0	Pulse	0.50	3
1	Ge		244,433.73	0.46	93.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,395.61	8.62	94.6	Pulse	0.30	3

Quantitation Report

File Name	015ICSA.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:34
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.283	ug/l	2.68	28,761.17	1.777E-01	Pulse	0.50	3
As			1	0.113	ug/l	5.91	198.67	1.228E-03	Pulse	1.00	3
Mo			1	2023.919	ug/l	0.18	9,699,894.67	4.198E+01	Analog	0.50	3
Pb			1	0.211	ug/l	10.73	4,574.63	2.069E-03	Pulse	1.00	3
Be			1	0.005	ug/l	205.55	0.83	2.795E-06	Pulse	2.00	3
Ag			1	0.317	ug/l	3.80	4,868.65	2.106E-02	Pulse	0.50	3
Ba			1	0.317	ug/l	4.23	717.35	5.472E-04	Pulse	0.50	3
Tl			1	0.010	ug/l	13.03	295.34	1.335E-04	Pulse	0.50	3
Sn			1	0.104	ug/l	23.23	688.91	5.252E-04	Pulse	0.30	3
Sr			1	1.056	ug/l	0.79	7,436.82	5.674E-03	Pulse	0.50	3
[Pb]			1	0.216	ug/l	14.98	2,218.82	1.004E-03	Pulse	0.50	3
Ca			1	91615.828	ug/l	0.56	4,141,299.42	1.391E+01	Pulse	0.50	3
Ti			1	1982.150	ug/l	0.84	591,452.60	1.986E+00	Pulse	0.50	3
Na			1	91459.057	ug/l	0.30	184,441,658.67		Analog	1.00	3
Mg			1	96537.748	ug/l	0.67	89,533,024.00	3.007E+02	Analog	1.00	3
K			1	97189.027	ug/l	0.72	92,684,568.00	3.112E+02	Analog	1.00	3
V			1	0.075	ug/l	8.51	1,642.74	5.516E-03	Pulse	0.50	3
Mn			1	1.042	ug/l	3.78	7,412.11	4.580E-02	Pulse	0.50	3
Fe			1	96033.675	ug/l	0.65	864,731,840.00	5.343E+03	Analog	0.50	3
Co			1	0.209	ug/l	6.10	3,325.63	2.055E-02	Pulse	0.50	3
Ni			1	0.223	ug/l	2.84	1,345.38	8.312E-03	Pulse	0.50	3
Cu			1	-1.605	ug/l	-0.99	12,081.80	7.466E-02	Pulse	0.50	3
Zn			1	0.165	ug/l	28.76	3,368.30	1.458E-02	Pulse	1.00	3
Cd			1	0.672	ug/l	2.04	1,576.07	6.822E-03	Pulse	0.50	3
Al			1	94350.669	ug/l	0.47	38,264,170.67	1.285E+02	Analog	1.00	3
Se			1	0.343	ug/l	31.67	63.55	2.754E-04	Pulse	3.00	3
Sb			1	0.070	ug/l	4.49	541.34	2.342E-03	Pulse	1.00	3
Se			1	0.311	ug/l	35.10	47.44	2.051E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,210,223.67	1.61	83.2	Pulse	0.50	3
1	Sc		297,792.92	0.18	91.7	Pulse	0.30	3
1	Ge		161,839.17	1.13	91.5	Pulse	0.30	3
1	In		1,310,725.43	0.62	85.5	Pulse	0.30	3
1	Tb		3,373,073.75	0.77	89.9	Pulse	0.50	3
1	Lu		2,543,600.75	0.80	90.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		231,045.73	1.49	88.1	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,286.72	9.21	87.2	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:38
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.433	ug/l	0.62	239,367.17	1.455E+00	Pulse	0.50	3
As			1	18.821	ug/l	0.51	26,090.09	1.586E-01	Pulse	1.00	3
Mo			1	2123.495	ug/l	0.42	10,370,167.67	4.405E+01	Analog	0.50	3
Pb			1	0.133	ug/l	2.60	3,150.63	1.410E-03	Pulse	1.00	3
Be			1	0.000	ug/l	1420.60	0.50	1.667E-06	Pulse	2.00	3
Ag			1	18.368	ug/l	0.75	282,858.78	1.201E+00	Pulse	0.50	3
Ba			1	0.367	ug/l	5.31	832.02	6.270E-04	Pulse	0.50	3
Tl			1	0.008	ug/l	2.33	228.67	1.023E-04	Pulse	0.50	3
Sn			1	0.070	ug/l	21.11	532.24	4.007E-04	Pulse	0.30	3
Sr			1	1.180	ug/l	2.65	8,365.88	6.301E-03	Pulse	0.50	3
[Pb]			1	0.125	ug/l	5.34	1,435.40	6.427E-04	Pulse	0.50	3
Ca			1	95450.346	ug/l	0.56	4,356,574.67	1.449E+01	Pulse	0.50	3
Ti			1	2067.647	ug/l	0.97	622,986.79	2.072E+00	Pulse	0.50	3
Na			1	97488.614	ug/l	1.14	196,599,952.00		Analog	1.00	3
Mg			1	101170.561	ug/l	0.56	94,746,074.67	3.151E+02	Analog	1.00	3
K			1	101756.190	ug/l	0.42	97,981,786.67	3.259E+02	Analog	1.00	3
V			1	0.063	ug/l	5.98	1,550.74	5.157E-03	Pulse	0.50	3
Mn			1	20.121	ug/l	0.27	131,921.47	8.021E-01	Pulse	0.50	3
Fe			1	99862.362	ug/l	0.38	913,813,973.33	5.556E+03	Analog	0.50	3
Co			1	19.386	ug/l	0.71	310,466.94	1.888E+00	Pulse	0.50	3
Ni			1	18.868	ug/l	0.92	81,282.92	4.942E-01	Pulse	0.50	3
Cu			1	17.189	ug/l	0.98	220,890.90	1.343E+00	Pulse	0.50	3
Zn			1	20.806	ug/l	0.97	43,744.37	1.858E-01	Pulse	1.00	3
Cd			1	19.476	ug/l	1.07	46,450.72	1.973E-01	Pulse	0.50	3
Al			1	97604.503	ug/l	0.16	39,969,496.00	1.329E+02	Analog	1.00	3
Se			1	0.252	ug/l	43.19	55.22	2.348E-04	Pulse	3.00	3
Sb			1	0.073	ug/l	9.49	573.01	2.432E-03	Pulse	1.00	3
Se			1	0.307	ug/l	6.24	48.11	2.043E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,233,711.08	1.94	84.1	Pulse	0.50	3
1	Sc		300,695.52	0.59	92.6	Pulse	0.30	3
1	Ge		164,470.16	1.48	93.0	Pulse	0.30	3
1	In		1,327,442.55	1.15	86.6	Pulse	0.30	3
1	Tb		3,410,465.83	1.45	90.9	Pulse	0.50	3
1	Lu		2,554,195.58	1.30	90.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		235,440.22	1.54	89.8	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,401.17	5.54	95.0	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 9:42
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.441	ug/l	1.43	599,301.44	3.457E+00	Pulse	0.50	3
As			1	50.727	ug/l	1.93	74,033.70	4.271E-01	Pulse	1.00	3
Mo			1	52.141	ug/l	1.01	277,028.21	1.082E+00	Pulse	0.50	3
Pb			1	50.932	ug/l	0.85	1,078,422.91	4.281E-01	Pulse	1.00	3
Be			1	52.938	ug/l	1.86	4,169.93	1.318E-02	Pulse	2.00	3
Ag			1	51.012	ug/l	1.18	854,303.23	3.336E+00	Pulse	0.50	3
Ba			1	49.681	ug/l	1.66	116,567.23	7.946E-02	Pulse	0.50	3
Tl			1	51.230	ug/l	0.67	1,557,772.29	6.184E-01	Pulse	0.50	3
Sn			1	50.152	ug/l	1.11	269,564.04	1.838E-01	Pulse	0.30	3
Sr			1	49.084	ug/l	0.90	364,950.83	2.488E-01	Pulse	0.50	3
[Pb]			1	50.872	ug/l	1.03	513,720.19	2.039E-01	Pulse	0.50	3
Ca			1	5022.148	ug/l	0.76	242,742.05	7.670E-01	Pulse	0.50	3
Ti			1	49.917	ug/l	1.05	15,833.75	5.003E-02	Pulse	0.50	3
Na			1	5293.720	ug/l	0.66	10,693,669.67		Analog	1.00	3
Mg			1	5246.649	ug/l	0.24	5,171,927.17	1.634E+01	Analog	1.00	3
K			1	5208.906	ug/l	0.47	5,358,762.17	1.693E+01	Analog	1.00	3
V			1	52.267	ug/l	0.65	478,269.40	1.511E+00	Pulse	0.50	3
Mn			1	50.384	ug/l	1.17	347,006.66	2.002E+00	Pulse	0.50	3
Fe			1	5216.624	ug/l	1.08	50,328,553.33	2.903E+02	Analog	0.50	3
Co			1	52.303	ug/l	1.86	882,733.71	5.092E+00	Pulse	0.50	3
Ni			1	51.890	ug/l	1.52	234,833.62	1.355E+00	Pulse	0.50	3
Cu			1	51.312	ug/l	1.17	631,986.00	3.646E+00	Pulse	0.50	3
Zn			1	50.424	ug/l	0.70	110,502.17	4.315E-01	Pulse	1.00	3
Cd			1	51.121	ug/l	1.28	132,625.14	5.179E-01	Pulse	0.50	3
Al			1	4945.784	ug/l	0.54	2,133,137.00	6.740E+00	Pulse	1.00	3
Se			1	49.745	ug/l	0.85	5,750.75	2.245E-02	Pulse	3.00	3
Sb			1	49.978	ug/l	1.52	376,587.98	1.470E+00	Pulse	1.00	3
Se			1	50.077	ug/l	1.59	2,729.09	1.066E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,519,056.33	0.40	94.8	Pulse	0.50	3
1	Sc		316,471.22	0.94	97.5	Pulse	0.30	3
1	Ge		173,348.30	0.68	98.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,466,847.23	0.67	95.7	Pulse	0.30	3
1	Tb		3,636,960.08	0.29	97.0	Pulse	0.50	3
1	Lu		2,689,640.83	0.45	95.1	Pulse	0.50	3
1	Ge		256,094.08	0.95	97.7	Pulse	0.30	3
1	Te		4.67	65.47	233.3	Pulse	0.50	3
1	Li		1,493.40	5.50	101.2	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:46
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.885	ug/l	2.06	1,173,809.29	6.823E+00	Pulse	0.50	3
As			1	100.367	ug/l	1.46	145,347.16	8.448E-01	Pulse	1.00	3
Mo			1	101.532	ug/l	1.13	537,175.92	2.106E+00	Pulse	0.50	3
Pb			1	101.158	ug/l	0.55	2,096,182.58	8.500E-01	Pulse	1.00	3
Be			1	104.816	ug/l	1.90	8,264.84	2.608E-02	Pulse	2.00	3
Ag			1	99.161	ug/l	1.26	1,653,805.00	6.485E+00	Pulse	0.50	3
Ba			1	99.987	ug/l	0.47	230,312.11	1.599E-01	Pulse	0.50	3
Tl			1	101.565	ug/l	0.40	3,023,480.58	1.226E+00	Pulse	0.50	3
Sn			1	98.976	ug/l	1.27	522,233.76	3.625E-01	Pulse	0.30	3
Sr			1	98.482	ug/l	0.41	718,604.86	4.988E-01	Pulse	0.50	3
[Pb]			1	100.597	ug/l	0.65	994,184.92	4.031E-01	Pulse	0.50	3
Ca			1	9888.781	ug/l	0.75	477,034.31	1.505E+00	Pulse	0.50	3
Ti			1	98.304	ug/l	1.92	31,213.50	9.851E-02	Pulse	0.50	3
Na			1	10409.976	ug/l	0.22	21,010,336.67		Analog	1.00	3
Mg			1	10338.034	ug/l	1.07	10,202,562.67	3.220E+01	Analog	1.00	3
K			1	10287.930	ug/l	0.52	10,515,531.67	3.318E+01	Analog	1.00	3
V			1	102.247	ug/l	1.08	935,699.58	2.953E+00	Pulse	0.50	3
Mn			1	100.002	ug/l	1.99	682,807.42	3.969E+00	Pulse	0.50	3
Fe			1	10281.667	ug/l	1.61	98,441,026.67	5.721E+02	Analog	0.50	3
Co			1	102.285	ug/l	1.90	1,713,377.38	9.959E+00	Pulse	0.50	3
Ni			1	102.380	ug/l	2.31	459,418.10	2.670E+00	Pulse	0.50	3
Cu			1	101.044	ug/l	2.32	1,204,653.38	7.002E+00	Pulse	0.50	3
Zn			1	99.935	ug/l	1.49	214,791.96	8.422E-01	Pulse	1.00	3
Cd			1	99.115	ug/l	1.61	256,060.36	1.004E+00	Pulse	0.50	3
Al			1	9764.103	ug/l	1.00	4,214,831.00	1.330E+01	Pulse	1.00	3
Se			1	98.800	ug/l	0.56	11,345.14	4.448E-02	Pulse	3.00	3
Sb			1	97.852	ug/l	1.51	734,192.62	2.879E+00	Pulse	1.00	3
Se			1	98.379	ug/l	0.78	5,305.41	2.080E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,466,180.08	0.24	92.8	Pulse	0.50	3
1	Sc		316,879.31	0.91	97.6	Pulse	0.30	3
1	Ge		172,083.98	1.62	97.3	Pulse	0.30	3
1	In		1,440,524.04	0.31	93.9	Pulse	0.30	3
1	Tb		3,613,317.17	0.28	96.3	Pulse	0.50	3
1	Lu		2,669,946.00	0.30	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,059.38	1.06	97.3	Pulse	0.30	3
1	Te		5.33	57.28	266.7	Pulse	0.50	3
1	Li		1,381.17	4.57	93.6	Pulse	0.30	3

Quantitation Report

File Name 019_CCB.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:50
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.005	ug/l	-143.19	4,033.77	2.511E-02	Pulse	0.50	3
As			1	0.032	ug/l	52.40	87.33	5.462E-04	Pulse	1.00	3
Mo			1	0.206	ug/l	31.30	1,065.37	4.452E-03	Pulse	0.50	3
Pb			1	0.030	ug/l	28.78	1,280.05	5.496E-04	Pulse	1.00	3
Be			1	0.017	ug/l	67.02	1.67	5.677E-06	Pulse	2.00	3
Ag			1	0.029	ug/l	10.10	532.01	2.223E-03	Pulse	0.50	3
Ba			1	-0.016	ug/l	-18.79	20.00	1.482E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	12.00	392.68	1.686E-04	Pulse	0.50	3
Sn			1	0.104	ug/l	33.87	717.80	5.260E-04	Pulse	0.30	3
Sr			1	-0.015	ug/l	-39.92	340.67	2.508E-04	Pulse	0.50	3
[Pb]			1	0.030	ug/l	16.17	605.34	2.596E-04	Pulse	0.50	3
Ca			1	-8.515	ug/l	-22.22	1,082.70	3.656E-03	Pulse	0.50	3
Ti			1	0.062	ug/l	9.81	22.67	7.634E-05	Pulse	0.50	3
Na			1	6.180	ug/l	8.59	31,614.16		Pulse	1.00	3
Mg			1	2.105	ug/l	8.41	2,776.53	9.369E-03	Pulse	1.00	3
K			1	5.213	ug/l	40.85	83,941.00	2.832E-01	Pulse	1.00	3
V			1	0.018	ug/l	50.73	1,149.37	3.878E-03	Pulse	0.50	3
Mn			1	-0.072	ug/l	-6.96	260.67	1.622E-03	Pulse	0.50	3
Fe			1	2.307	ug/l	5.77	34,862.20	2.172E-01	Pulse	0.50	3
Co			1	0.004	ug/l	32.38	100.00	6.255E-04	Pulse	0.50	3
Ni			1	-0.025	ug/l	-40.87	293.33	1.832E-03	Pulse	0.50	3
Cu			1	-1.109	ug/l	-6.68	17,361.16	1.082E-01	Pulse	0.50	3
Zn			1	-1.099	ug/l	-1.15	976.36	4.090E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	24.79	20.00	8.394E-05	Pulse	0.50	3
Al			1	-0.309	ug/l	-52.94	1,359.71	4.586E-03	Pulse	1.00	3
Se			1	0.109	ug/l	5.36	40.78	1.707E-04	Pulse	3.00	3
Sb			1	0.037	ug/l	30.17	325.67	1.363E-03	Pulse	1.00	3
Se			1	0.085	ug/l	158.36	37.78	1.577E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,336,562.08	3.98	88.0	Pulse	0.50	3
1	Sc		296,598.57	3.27	91.4	Pulse	0.30	3

Quantitation Report

1	Ge		160,647.28	3.64	90.8	Pulse	0.30	3
1	In		1,357,987.58	4.21	88.6	Pulse	0.30	3
1	Tb		3,320,462.42	4.42	88.5	Pulse	0.50	3
1	Lu		2,456,074.42	4.55	86.9	Pulse	0.50	3
1	Ge		238,829.73	3.44	91.1	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,494.51	5.69	101.3	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:54
Sample Name FA98820-1
Sample Type Sample
Comment
Prep Dilution 50.000
Auto Dilution N/A
Total Dilution 50.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.146	ug/l	47.59	4,869.96	2.831E-02	Pulse	0.50	3
As			1	1554.083	ug/l	1.41	45,043.77	2.618E-01	Pulse	1.00	3
Mo			1	6.315	ug/l	22.20	714.02	2.790E-03	Pulse	0.50	3
Pb			1	0.891	ug/l	7.17	1,109.37	4.444E-04	Pulse	1.00	3
Be			1	0.739	ug/l	130.04	1.67	5.228E-06	Pulse	2.00	3
Ag			1	1.115	ug/l	19.92	454.01	1.774E-03	Pulse	0.50	3
Ba			1	49.916	ug/l	1.42	2,358.17	1.636E-03	Pulse	0.50	3
Tl			1	0.241	ug/l	14.79	166.67	6.680E-05	Pulse	0.50	3
Sn			1	2.577	ug/l	32.82	480.01	3.330E-04	Pulse	0.30	3
Sr			1	396.033	ug/l	1.63	58,268.02	4.042E-02	Pulse	0.50	3
[Pb]			1	0.845	ug/l	40.89	518.68	2.079E-04	Pulse	0.50	3
Ca			1	48074.401	ug/l	0.67	48,080.56	1.508E-01	Pulse	0.50	3
Ti			1	7.420	ug/l	8.10	52.00	1.631E-04	Pulse	0.50	3
Na			1	14490.151	ug/l	0.62	603,526.39		Pulse	1.00	3
Mg			1	7251.314	ug/l	0.99	144,864.95	4.545E-01	Pulse	1.00	3
K			1	8824.741	ug/l	0.93	264,940.48	8.312E-01	Pulse	1.00	3
V			1	1.097	ug/l	22.58	1,269.38	3.983E-03	Pulse	0.50	3
Mn			1	2181.477	ug/l	0.37	298,342.51	1.734E+00	Pulse	0.50	3
Fe			1	70614.472	ug/l	0.76	13,534,873.33	7.867E+01	Analog	0.50	3
Co			1	18.568	ug/l	1.51	6,260.37	3.639E-02	Pulse	0.50	3
Ni			1	5.341	ug/l	10.47	907.36	5.275E-03	Pulse	0.50	3
Cu			1	-35.484	ug/l	-2.83	23,245.31	1.351E-01	Pulse	0.50	3
Zn			1	-33.575	ug/l	-4.36	1,954.77	7.639E-03	Pulse	1.00	3
Cd			1	0.079	ug/l	76.04	6.67	2.610E-05	Pulse	0.50	3
Al			1	-19.062	ug/l	-44.46	1,430.39	4.488E-03	Pulse	1.00	3
Se			1	2.357	ug/l	139.75	36.56	1.428E-04	Pulse	3.00	3
Sb			1	0.769	ug/l	10.07	187.00	7.307E-04	Pulse	1.00	3
Se			1	5.252	ug/l	67.94	41.44	1.619E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,496,335.33	0.64	94.0	Pulse	0.50	3
1	Sc		318,746.05	0.33	98.2	Pulse	0.30	3
1	Ge		172,053.43	0.56	97.3	Pulse	0.30	3
1	In		1,441,475.60	0.19	94.0	Pulse	0.30	3
1	Tb		3,546,013.92	0.68	94.5	Pulse	0.50	3
1	Lu		2,602,319.92	0.23	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,920.76	0.56	97.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,500.07	3.46	101.7	Pulse	0.30	3

Quantitation Report

File Name 021SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 9:57
Sample Name FA98820-2
Sample Type Sample
Comment
Prep Dilution 50.000
Auto Dilution N/A
Total Dilution 50.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.961	ug/l	74.00	4,559.89	2.673E-02	Pulse	0.50	3
As			1	2922.319	ug/l	1.32	83,943.94	4.920E-01	Pulse	1.00	3
Mo			1	4.950	ug/l	22.31	561.35	2.224E-03	Pulse	0.50	3
Pb			1	0.624	ug/l	5.08	990.70	3.995E-04	Pulse	1.00	3
Be			1	0.110	ug/l	331.64	0.67	2.097E-06	Pulse	2.00	3
Ag			1	0.755	ug/l	9.80	328.67	1.302E-03	Pulse	0.50	3
Ba			1	12.888	ug/l	9.82	651.35	4.520E-04	Pulse	0.50	3
Tl			1	0.152	ug/l	26.93	112.00	4.513E-05	Pulse	0.50	3
Sn			1	1.263	ug/l	39.81	341.12	2.368E-04	Pulse	0.30	3
Sr			1	172.808	ug/l	2.04	25,682.76	1.782E-02	Pulse	0.50	3
[Pb]			1	0.718	ug/l	48.15	490.68	1.978E-04	Pulse	0.50	3
Ca			1	23523.120	ug/l	0.38	24,280.32	7.634E-02	Pulse	0.50	3
Ti			1	6.811	ug/l	12.08	48.00	1.509E-04	Pulse	0.50	3
Na			1	6209.926	ug/l	0.14	269,593.39		Pulse	1.00	3
Mg			1	2983.430	ug/l	1.08	60,001.38	1.886E-01	Pulse	1.00	3
K			1	3521.373	ug/l	0.46	156,434.19	4.918E-01	Pulse	1.00	3
V			1	0.850	ug/l	12.06	1,221.38	3.840E-03	Pulse	0.50	3
Mn			1	2395.529	ug/l	0.78	324,777.34	1.904E+00	Pulse	0.50	3
Fe			1	40341.032	ug/l	1.05	7,673,544.17	4.498E+01	Analog	0.50	3
Co			1	13.932	ug/l	2.02	4,667.25	2.736E-02	Pulse	0.50	3
Ni			1	4.346	ug/l	10.81	811.35	4.756E-03	Pulse	0.50	3
Cu			1	-37.832	ug/l	-2.12	22,508.45	1.319E-01	Pulse	0.50	3
Zn			1	-34.896	ug/l	-1.40	1,871.42	7.420E-03	Pulse	1.00	3
Cd			1	0.159	ug/l	86.14	10.67	4.230E-05	Pulse	0.50	3
Al			1	-101.487	ug/l	-4.07	713.35	2.243E-03	Pulse	1.00	3
Se			1	-0.306	ug/l	-360.99	30.00	1.189E-04	Pulse	3.00	3
Sb			1	0.563	ug/l	32.09	154.00	6.096E-04	Pulse	1.00	3
Se			1	0.087	ug/l	5473.68	35.33	1.402E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,479,997.17	0.57	93.4	Pulse	0.50	3
1	Sc		318,070.34	0.12	98.0	Pulse	0.30	3
1	Ge		170,600.54	0.12	96.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,440,918.94	0.69	94.0	Pulse	0.30	3
1	Tb		3,512,022.92	0.66	93.6	Pulse	0.50	3
1	Lu		2,594,119.58	0.72	91.8	Pulse	0.50	3
1	Ge		252,241.21	1.28	96.2	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,465.62	3.24	99.3	Pulse	0.30	3

Quantitation Report

File Name	022_MB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:01
Sample Name	MP41217-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.808	ug/l	2.84	12,916.98	7.625E-02	Pulse	0.50	3
As			1	0.358	ug/l	6.60	149.67	8.833E-04	Pulse	1.00	3
Mo			1	0.365	ug/l	25.10	423.34	1.683E-03	Pulse	0.50	3
Pb			1	0.443	ug/l	4.33	2,494.19	1.039E-03	Pulse	1.00	3
Be			1	0.022	ug/l	221.44	0.83	2.638E-06	Pulse	2.00	3
Ag			1	0.193	ug/l	32.00	714.69	2.840E-03	Pulse	0.50	3
Ba			1	1.418	ug/l	5.63	690.02	4.933E-04	Pulse	0.50	3
Tl			1	0.038	ug/l	4.20	242.00	1.008E-04	Pulse	0.50	3
Sn			1	28.099	ug/l	2.58	28,982.90	2.072E-02	Pulse	0.30	3
Sr			1	0.493	ug/l	2.80	1,157.37	8.275E-04	Pulse	0.50	3
[Pb]			1	0.466	ug/l	12.51	1,234.05	5.137E-04	Pulse	0.50	3
Ca			1	176.091	ug/l	3.27	3,231.61	1.029E-02	Pulse	0.50	3
Ti			1	1.337	ug/l	22.96	88.67	2.823E-04	Pulse	0.50	3
Na			1	32.778	ug/l	3.12	32,372.35		Pulse	1.00	3
Mg			1	23.991	ug/l	1.86	5,574.45	1.776E-02	Pulse	1.00	3
K			1	43.190	ug/l	8.94	92,338.49	2.941E-01	Pulse	1.00	3
V			1	1.291	ug/l	5.24	3,389.64	1.080E-02	Pulse	0.50	3
Mn			1	0.449	ug/l	25.10	1,361.39	8.035E-03	Pulse	0.50	3
Fe			1	40.353	ug/l	1.18	91,107.49	5.379E-01	Pulse	0.50	3
Co			1	0.048	ug/l	19.98	197.33	1.164E-03	Pulse	0.50	3
Ni			1	0.165	ug/l	33.19	568.01	3.353E-03	Pulse	0.50	3
Cu			1	9.661	ug/l	8.90	53,075.24	3.134E-01	Pulse	0.50	3
Zn			1	-0.587	ug/l	-31.40	3,069.58	1.224E-02	Pulse	1.00	3
Cd			1	0.033	ug/l	64.46	19.33	7.680E-05	Pulse	0.50	3
Al			1	11.817	ug/l	1.21	2,582.51	8.225E-03	Pulse	1.00	3
Se			1	0.147	ug/l	139.48	33.89	1.349E-04	Pulse	3.00	3
Sb			1	0.160	ug/l	0.52	306.67	1.222E-03	Pulse	1.00	3
Se			1	-0.037	ug/l	-1422.02	34.67	1.383E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,401,483.33	1.03	90.4	Pulse	0.50	3
1	Sc		313,971.43	1.08	96.7	Pulse	0.30	3
1	Ge		169,391.84	0.93	95.7	Pulse	0.30	3
1	In		1,398,806.40	1.01	91.2	Pulse	0.30	3
1	Tb		3,434,572.92	1.47	91.6	Pulse	0.50	3
1	Lu		2,513,172.92	0.55	88.9	Pulse	0.50	3
1	Ge		250,942.72	1.55	95.7	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,501.18	7.49	101.7	Pulse	0.30	3

Quantitation Report

File Name	023_BSP.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:05
Sample Name	MP41217-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	519.333	ug/l	1.69	1,184,599.38	6.955E+00	Pulse	0.50	3
As			1	523.020	ug/l	0.46	149,957.45	8.804E-01	Pulse	1.00	3
Mo			1	505.477	ug/l	1.68	524,870.26	2.097E+00	Pulse	0.50	3
Pb			1	519.423	ug/l	0.50	2,027,373.08	8.729E-01	Pulse	1.00	3
Be			1	541.093	ug/l	1.32	8,499.28	2.693E-02	Pulse	2.00	3
Ag			1	243.091	ug/l	0.53	795,730.04	3.180E+00	Pulse	0.50	3
Ba			1	507.222	ug/l	0.78	224,832.96	1.622E-01	Pulse	0.50	3
Tl			1	500.270	ug/l	0.49	2,805,139.17	1.208E+00	Pulse	0.50	3
Sn			1	544.845	ug/l	1.15	553,214.51	3.991E-01	Pulse	0.30	3
Sr			1	506.196	ug/l	0.75	710,772.91	5.128E-01	Pulse	0.50	3
[Pb]			1	499.684	ug/l	0.74	930,186.69	4.005E-01	Pulse	0.50	3
Ca			1	48739.071	ug/l	0.11	468,357.72	1.484E+00	Pulse	0.50	3
Ti			1	520.737	ug/l	1.21	32,939.00	1.044E-01	Pulse	0.50	3
Na			1	51668.390	ug/l	0.72	20,856,486.00		Analog	1.00	3
Mg			1	50924.925	ug/l	0.80	10,011,424.67	3.172E+01	Analog	1.00	3
K			1	50487.243	ug/l	0.39	10,280,158.67	3.258E+01	Analog	1.00	3
V			1	514.742	ug/l	0.54	938,363.29	2.973E+00	Pulse	0.50	3
Mn			1	504.474	ug/l	1.52	682,008.62	4.004E+00	Pulse	0.50	3
Fe			1	50301.750	ug/l	1.32	95,354,941.33	5.598E+02	Analog	0.50	3
Co			1	517.600	ug/l	1.96	1,716,695.29	1.008E+01	Pulse	0.50	3
Ni			1	510.811	ug/l	1.29	453,877.52	2.665E+00	Pulse	0.50	3
Cu			1	520.359	ug/l	1.81	1,227,449.21	7.206E+00	Pulse	0.50	3
Zn			1	498.059	ug/l	1.50	210,111.46	8.395E-01	Pulse	1.00	3
Cd			1	491.740	ug/l	1.47	249,334.12	9.963E-01	Pulse	0.50	3
Al			1	47427.141	ug/l	0.57	4,078,272.67	1.292E+01	Pulse	1.00	3
Se			1	493.273	ug/l	2.11	11,115.00	4.441E-02	Pulse	3.00	3
Sb			1	499.724	ug/l	1.13	735,904.75	2.940E+00	Pulse	1.00	3
Se			1	489.152	ug/l	1.02	5,177.37	2.069E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,322,609.33	0.71	87.4	Pulse	0.50	3
1	Sc		315,589.12	0.99	97.2	Pulse	0.30	3
1	Ge		170,326.53	0.28	96.3	Pulse	0.30	3
1	In		1,386,027.51	0.73	90.4	Pulse	0.30	3
1	Tb		3,460,272.75	1.05	92.3	Pulse	0.50	3
1	Lu		2,535,056.42	1.29	89.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,269.11	0.54	95.4	Pulse	0.30	3
1	Te		2.67	43.30	133.3	Pulse	0.50	3
1	Li		1,490.62	4.68	101.0	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:09
Sample Name	FA98460-8
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	982.182	ug/l	1.48	457,655.88	2.646E+00	Pulse	0.50	3
As			1	21.573	ug/l	7.18	1,304.05	7.541E-03	Pulse	1.00	3
Mo			1	14.426	ug/l	4.67	3,124.94	1.214E-02	Pulse	0.50	3
Pb			1	5012.082	ug/l	0.32	4,093,930.67	1.684E+00	Pulse	1.00	3
Be			1	3.680	ug/l	37.67	12.50	3.818E-05	Pulse	2.00	3
Ag			1	3.218	ug/l	4.19	2,247.48	8.731E-03	Pulse	0.50	3
Ba			1	32152.813	ug/l	1.07	2,951,937.33	2.056E+00	Pulse	0.50	3
Tl			1	0.769	ug/l	7.52	923.36	3.800E-04	Pulse	0.50	3
Sn			1	32.786	ug/l	5.10	7,101.42	4.946E-03	Pulse	0.30	3
Sr			1	4214.492	ug/l	1.35	1,225,676.42	8.537E-01	Pulse	0.50	3
[Pb]			1	5110.096	ug/l	0.62	1,990,609.00	8.190E-01	Pulse	0.50	3
Ca			1	1563673.779	ug/l	0.89	3,105,086.58	9.496E+00	Pulse	0.50	3
Ti			1	13550.000	ug/l	1.32	177,591.39	5.431E-01	Pulse	0.50	3
Na			1	11912.269	ug/l	1.04	979,972.67		Pulse	1.00	3
Mg			1	47050.687	ug/l	0.72	1,917,577.13	5.864E+00	Pulse	1.00	3
K			1	2519.908	ug/l	1.15	192,594.75	5.890E-01	Pulse	1.00	3
V			1	200.924	ug/l	1.73	76,919.29	2.352E-01	Pulse	0.50	3
Mn			1	4792.918	ug/l	1.52	1,315,044.83	7.604E+00	Pulse	0.50	3
Fe			1	77436.583	ug/l	1.46	29,817,851.33	1.724E+02	Analog	0.50	3
Co			1	18.569	ug/l	2.36	12,546.09	7.255E-02	Pulse	0.50	3
Ni			1	66.475	ug/l	1.72	12,413.33	7.178E-02	Pulse	0.50	3
Cu			1	220.053	ug/l	1.24	134,370.45	7.770E-01	Pulse	0.50	3
Zn			1	1439.627	ug/l	0.15	126,347.85	4.909E-01	Pulse	1.00	3
Cd			1	12.889	ug/l	1.67	1,346.72	5.233E-03	Pulse	0.50	3
Al			1	59197.563	ug/l	1.02	1,056,125.44	3.230E+00	Pulse	1.00	3
Se			1	10.440	ug/l	4.40	79.56	3.091E-04	Pulse	3.00	3
Sb			1	3.442	ug/l	3.08	1,114.04	4.328E-03	Pulse	1.00	3
Se			1	12.533	ug/l	16.34	63.11	2.451E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,430,724.00	1.15	91.5	Pulse	0.50	3
1	Sc		327,002.46	0.98	100.7	Pulse	0.30	3
1	Ge		172,932.05	0.39	97.7	Pulse	0.30	3
1	In		1,435,711.05	0.26	93.6	Pulse	0.30	3
1	Tb		3,528,469.17	1.32	94.1	Pulse	0.50	3
1	Lu		2,606,013.08	0.88	92.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		257,379.44	0.70	98.2	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,460.06	7.03	98.9	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 10:12
Sample Name MP41217-D1
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2156.880	ug/l	0.98	994,764.15	5.781E+00	Pulse	0.50	3
As			1	21.695	ug/l	6.60	1,304.71	7.582E-03	Pulse	1.00	3
Mo			1	15.332	ug/l	2.23	3,295.64	1.289E-02	Pulse	0.50	3
Pb			1	9811.091	ug/l	0.13	7,981,166.00	3.297E+00	Analog	1.00	3
Be			1	2.672	ug/l	31.94	9.17	2.815E-05	Pulse	2.00	3
Ag			1	1.260	ug/l	2.17	923.36	3.612E-03	Pulse	0.50	3
Ba			1	44365.903	ug/l	0.59	4,102,050.00	2.837E+00	Pulse	0.50	3
Tl			1	0.431	ug/l	12.74	524.68	2.168E-04	Pulse	0.50	3
Sn			1	31.700	ug/l	0.97	6,921.34	4.787E-03	Pulse	0.30	3
Sr			1	6059.831	ug/l	0.46	1,774,592.83	1.227E+00	Pulse	0.50	3
[Pb]			1	10013.497	ug/l	0.39	3,884,967.50	1.605E+00	Pulse	0.50	3
Ca			1	2112182.645	ug/l	0.68	4,178,543.25	1.283E+01	Pulse	0.50	3
Ti			1	18757.394	ug/l	1.28	244,945.42	7.518E-01	Pulse	0.50	3
Na			1	13580.084	ug/l	0.68	1,114,495.25		Pulse	1.00	3
Mg			1	86878.454	ug/l	0.64	3,527,142.25	1.083E+01	Pulse	1.00	3
K			1	2436.900	ug/l	1.14	188,440.80	5.784E-01	Pulse	1.00	3
V			1	97.442	ug/l	1.87	37,724.33	1.158E-01	Pulse	0.50	3
Mn			1	2836.950	ug/l	1.22	774,800.98	4.503E+00	Pulse	0.50	3
Fe			1	47402.486	ug/l	0.92	18,167,764.67	1.056E+02	Analog	0.50	3
Co			1	16.733	ug/l	1.49	11,251.96	6.539E-02	Pulse	0.50	3
Ni			1	55.840	ug/l	2.19	10,443.51	6.070E-02	Pulse	0.50	3
Cu			1	174.576	ug/l	1.28	112,576.10	6.543E-01	Pulse	0.50	3
Zn			1	8040.736	ug/l	1.22	685,402.79	2.681E+00	Pulse	1.00	3
Cd			1	11.489	ug/l	1.55	1,192.71	4.666E-03	Pulse	0.50	3
Al			1	49008.006	ug/l	1.34	871,388.27	2.675E+00	Pulse	1.00	3
Se			1	9.325	ug/l	7.69	73.89	2.891E-04	Pulse	3.00	3
Sb			1	3.082	ug/l	5.42	998.36	3.905E-03	Pulse	1.00	3
Se			1	13.101	ug/l	6.94	63.89	2.499E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,421,031.08	0.70	91.1	Pulse	0.50	3
1	Sc		325,822.37	0.85	100.4	Pulse	0.30	3
1	Ge		172,068.96	0.23	97.3	Pulse	0.30	3
1	In		1,445,890.36	0.63	94.3	Pulse	0.30	3
1	Tb		3,541,583.50	0.59	94.4	Pulse	0.50	3
1	Lu		2,630,542.75	0.23	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,639.74	0.59	97.5	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,490.07	0.67	101.0	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 10:16
Sample Name MP41217-SD1
Sample Type Sample
Comment
Prep Dilution 125.000
Auto Dilution N/A
Total Dilution 125.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	924.059	ug/l	1.07	91,043.81	5.186E-01	Pulse	0.50	3
As			1	19.728	ug/l	4.81	282.33	1.608E-03	Pulse	1.00	3
Mo			1	15.011	ug/l	17.29	690.02	2.661E-03	Pulse	0.50	3
Pb			1	4762.115	ug/l	0.29	800,323.52	3.203E-01	Pulse	1.00	3
Be			1	3.047	ug/l	50.19	2.50	7.615E-06	Pulse	2.00	3
Ag			1	3.688	ug/l	15.19	582.01	2.244E-03	Pulse	0.50	3
Ba			1	30380.353	ug/l	1.48	569,990.23	3.886E-01	Pulse	0.50	3
Tl			1	0.741	ug/l	8.24	200.00	8.006E-05	Pulse	0.50	3
Sn			1	31.614	ug/l	9.20	1,570.08	1.070E-03	Pulse	0.30	3
Sr			1	3914.460	ug/l	0.17	233,007.44	1.589E-01	Pulse	0.50	3
[Pb]			1	4850.349	ug/l	0.57	388,762.49	1.556E-01	Pulse	0.50	3
Ca			1	1490904.669	ug/l	0.68	595,817.77	1.815E+00	Pulse	0.50	3
Ti			1	12809.746	ug/l	2.64	33,716.99	1.027E-01	Pulse	0.50	3
Na			1	11339.113	ug/l	0.85	202,071.38		Pulse	1.00	3
Mg			1	45098.258	ug/l	0.96	369,821.65	1.126E+00	Pulse	1.00	3
K			1	2387.549	ug/l	1.50	107,553.04	3.276E-01	Pulse	1.00	3
V			1	192.952	ug/l	1.97	15,720.35	4.788E-02	Pulse	0.50	3
Mn			1	4529.292	ug/l	1.07	252,937.62	1.441E+00	Pulse	0.50	3
Fe			1	73523.654	ug/l	0.75	5,760,520.83	3.282E+01	Analog	0.50	3
Co			1	16.699	ug/l	5.64	2,323.48	1.324E-02	Pulse	0.50	3
Ni			1	61.980	ug/l	1.69	2,705.53	1.541E-02	Pulse	0.50	3
Cu			1	64.527	ug/l	2.19	38,239.72	2.178E-01	Pulse	0.50	3
Zn			1	1331.848	ug/l	2.67	26,347.29	1.016E-01	Pulse	1.00	3
Cd			1	12.656	ug/l	15.74	268.67	1.036E-03	Pulse	0.50	3
Al			1	56894.644	ug/l	1.70	205,144.27	6.248E-01	Pulse	1.00	3
Se			1	7.884	ug/l	68.03	38.89	1.499E-04	Pulse	3.00	3
Sb			1	2.624	ug/l	6.57	232.33	8.959E-04	Pulse	1.00	3
Se			1	7.278	ug/l	251.89	39.44	1.521E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,498,745.25	0.75	94.1	Pulse	0.50	3
1	Sc		328,314.56	0.21	101.2	Pulse	0.30	3
1	Ge		175,544.44	0.21	99.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,466,836.57	0.22	95.6	Pulse	0.30	3
1	Tb		3,555,364.58	0.62	94.8	Pulse	0.50	3
1	Lu		2,637,134.33	0.51	93.3	Pulse	0.50	3
1	Ge		259,342.17	0.13	98.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,581.18	8.54	107.2	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 10:20
Sample Name MP41217-S1
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1525.155	ug/l	1.50	704,608.64	4.095E+00	Pulse	0.50	3
As			1	538.089	ug/l	0.51	31,206.35	1.814E-01	Pulse	1.00	3
Mo			1	500.146	ug/l	0.15	105,914.58	4.151E-01	Pulse	0.50	3
Pb			1	5612.890	ug/l	0.45	4,588,387.83	1.886E+00	Pulse	1.00	3
Be			1	530.119	ug/l	1.24	1,744.58	5.278E-03	Pulse	2.00	3
Ag			1	244.178	ug/l	0.36	163,023.45	6.390E-01	Pulse	0.50	3
Ba			1	21370.097	ug/l	0.52	1,955,515.21	1.367E+00	Pulse	0.50	3
Tl			1	492.724	ug/l	0.70	578,777.73	2.379E-01	Pulse	0.50	3
Sn			1	548.322	ug/l	1.08	115,119.81	8.045E-02	Pulse	0.30	3
Sr			1	5144.943	ug/l	0.95	1,491,207.21	1.042E+00	Pulse	0.50	3
[Pb]			1	5709.603	ug/l	0.12	2,225,992.83	9.150E-01	Pulse	0.50	3
Ca			1	1688306.939	ug/l	0.36	3,388,581.17	1.025E+01	Pulse	0.50	3
Ti			1	10751.829	ug/l	0.69	142,434.45	4.309E-01	Pulse	0.50	3
Na			1	66014.727	ug/l	0.34	5,343,766.17		Analog	1.00	3
Mg			1	76059.062	ug/l	0.66	3,132,573.00	9.478E+00	Pulse	1.00	3
K			1	56208.119	ug/l	0.43	2,465,843.33	7.460E+00	Pulse	1.00	3
V			1	609.268	ug/l	1.47	233,480.29	7.064E-01	Pulse	0.50	3
Mn			1	4566.050	ug/l	1.24	1,246,433.79	7.245E+00	Pulse	0.50	3
Fe			1	111616.421	ug/l	0.51	42,754,021.33	2.485E+02	Analog	0.50	3
Co			1	533.274	ug/l	0.96	357,346.01	2.077E+00	Pulse	0.50	3
Ni			1	571.286	ug/l	0.67	102,881.94	5.980E-01	Pulse	0.50	3
Cu			1	722.376	ug/l	1.10	366,985.44	2.133E+00	Pulse	0.50	3
Zn			1	2195.824	ug/l	0.59	189,257.20	7.418E-01	Pulse	1.00	3
Cd			1	497.766	ug/l	0.82	51,459.89	2.017E-01	Pulse	0.50	3
Al			1	143274.916	ug/l	0.54	2,581,191.17	7.810E+00	Pulse	1.00	3
Se			1	498.283	ug/l	1.80	2,314.03	9.070E-03	Pulse	3.00	3
Sb			1	337.069	ug/l	0.53	101,260.69	3.969E-01	Pulse	1.00	3
Se			1	516.352	ug/l	1.68	1,142.37	4.478E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,432,714.25	0.44	91.6	Pulse	0.50	3
1	Sc		330,521.25	0.29	101.8	Pulse	0.30	3
1	Ge		172,051.84	0.27	97.3	Pulse	0.30	3
1	In		1,430,982.86	0.14	93.3	Pulse	0.30	3
1	Tb		3,540,656.75	0.54	94.4	Pulse	0.50	3
1	Lu		2,628,333.33	0.55	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		255,124.94	0.25	97.3	Pulse	0.30	3
1	Te		2.67	114.56	133.3	Pulse	0.50	3
1	Li		1,494.51	9.37	101.3	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa091922m2.b
Method File
Method Path
Acq Time 9/19/2022 10:24
Sample Name MP41217-S2
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 9/19/2022 12:49
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1304.126	ug/l	1.05	597,991.86	3.506E+00	Pulse	0.50	3
As			1	542.166	ug/l	0.51	31,172.33	1.828E-01	Pulse	1.00	3
Mo			1	514.508	ug/l	1.56	107,531.05	4.271E-01	Pulse	0.50	3
Pb			1	12259.782	ug/l	0.63	9,845,959.33	4.119E+00	Analog	1.00	3
Be			1	526.628	ug/l	2.01	1,713.24	5.244E-03	Pulse	2.00	3
Ag			1	253.782	ug/l	0.40	167,206.44	6.641E-01	Pulse	0.50	3
Ba			1	12181.019	ug/l	0.15	1,098,872.08	7.790E-01	Pulse	0.50	3
Tl			1	512.801	ug/l	0.32	591,844.73	2.476E-01	Pulse	0.50	3
Sn			1	567.072	ug/l	1.23	117,373.22	8.319E-02	Pulse	0.30	3
Sr			1	4363.623	ug/l	0.20	1,246,894.00	8.839E-01	Pulse	0.50	3
[Pb]			1	12772.947	ug/l	0.19	4,892,573.50	2.047E+00	Pulse	0.50	3
Ca			1	1806320.217	ug/l	0.37	3,583,842.50	1.097E+01	Pulse	0.50	3
Ti			1	6109.825	ug/l	1.09	80,015.77	2.449E-01	Pulse	0.50	3
Na			1	64746.388	ug/l	0.65	5,241,464.50		Analog	1.00	3
Mg			1	199395.987	ug/l	0.49	8,116,958.00	2.484E+01	Analog	1.00	3
K			1	52520.257	ug/l	0.43	2,283,339.58	6.988E+00	Pulse	1.00	3
V			1	630.921	ug/l	0.55	238,974.35	7.314E-01	Pulse	0.50	3
Mn			1	3022.744	ug/l	0.44	818,344.06	4.798E+00	Pulse	0.50	3
Fe			1	97560.308	ug/l	0.62	37,051,838.67	2.172E+02	Analog	0.50	3
Co			1	547.498	ug/l	0.54	363,727.96	2.132E+00	Pulse	0.50	3
Ni			1	574.405	ug/l	1.12	102,556.84	6.012E-01	Pulse	0.50	3
Cu			1	688.187	ug/l	0.76	348,109.66	2.041E+00	Pulse	0.50	3
Zn			1	1351.537	ug/l	0.77	116,237.00	4.617E-01	Pulse	1.00	3
Cd			1	521.876	ug/l	0.67	53,242.18	2.115E-01	Pulse	0.50	3
Al			1	111072.679	ug/l	0.86	1,978,533.50	6.055E+00	Pulse	1.00	3
Se			1	502.767	ug/l	0.66	2,303.81	9.150E-03	Pulse	3.00	3
Sb			1	349.400	ug/l	0.59	103,583.75	4.114E-01	Pulse	1.00	3
Se			1	502.796	ug/l	2.58	1,098.70	4.364E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,390,309.75	1.29	90.0	Pulse	0.50	3
1	Sc		326,736.13	0.48	100.7	Pulse	0.30	3
1	Ge		170,576.77	0.83	96.4	Pulse	0.30	3
1	In		1,410,704.01	1.16	92.0	Pulse	0.30	3
1	Tb		3,522,027.58	1.35	93.9	Pulse	0.50	3
1	Lu		2,600,536.00	1.27	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,775.55	0.69	96.0	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,532.29	5.35	103.8	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:28
Sample Name	MP41217-PS1
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	987.483	ug/l	1.04	456,900.50	2.661E+00	Pulse	0.50	3
As			1	33.323	ug/l	2.74	1,974.11	1.150E-02	Pulse	1.00	3
Mo			1	24.562	ug/l	1.56	5,230.08	2.055E-02	Pulse	0.50	3
Pb			1	4981.015	ug/l	0.65	4,060,671.83	1.674E+00	Pulse	1.00	3
Be			1	14.994	ug/l	9.85	49.00	1.508E-04	Pulse	2.00	3
Ag			1	5.499	ug/l	2.94	3,742.39	1.470E-02	Pulse	0.50	3
Ba			1	31768.400	ug/l	0.33	2,917,807.83	2.031E+00	Pulse	0.50	3
Tl			1	11.750	ug/l	2.65	13,781.57	5.682E-03	Pulse	0.50	3
Sn			1	44.306	ug/l	3.43	9,526.98	6.633E-03	Pulse	0.30	3
Sr			1	4159.082	ug/l	0.82	1,210,051.25	8.425E-01	Pulse	0.50	3
[Pb]			1	5095.727	ug/l	0.12	1,981,313.09	8.167E-01	Pulse	0.50	3
Ca			1	1549234.798	ug/l	0.56	3,057,135.50	9.408E+00	Pulse	0.50	3
Ti			1	13484.881	ug/l	0.85	175,626.78	5.405E-01	Pulse	0.50	3
Na			1	12940.543	ug/l	0.39	1,062,911.17		Pulse	1.00	3
Mg			1	47875.361	ug/l	0.57	1,938,886.00	5.967E+00	Pulse	1.00	3
K			1	3669.551	ug/l	3.84	239,194.10	7.361E-01	Pulse	1.00	3
V			1	211.321	ug/l	0.38	80,327.08	2.472E-01	Pulse	0.50	3
Mn			1	4759.856	ug/l	0.90	1,296,888.08	7.552E+00	Pulse	0.50	3
Fe			1	78186.723	ug/l	0.80	29,897,627.33	1.741E+02	Analog	0.50	3
Co			1	29.262	ug/l	2.12	19,608.60	1.142E-01	Pulse	0.50	3
Ni			1	78.246	ug/l	0.47	14,434.06	8.405E-02	Pulse	0.50	3
Cu			1	213.974	ug/l	1.40	130,621.36	7.606E-01	Pulse	0.50	3
Zn			1	1454.709	ug/l	0.60	126,224.84	4.959E-01	Pulse	1.00	3
Cd			1	23.675	ug/l	2.49	2,444.84	9.603E-03	Pulse	0.50	3
Al			1	60219.119	ug/l	0.75	1,067,537.29	3.285E+00	Pulse	1.00	3
Se			1	19.459	ug/l	7.38	119.89	4.711E-04	Pulse	3.00	3
Sb			1	13.465	ug/l	2.32	4,103.80	1.612E-02	Pulse	1.00	3
Se			1	24.461	ug/l	6.74	87.89	3.453E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,426,089.67	1.33	91.3	Pulse	0.50	3
1	Sc		324,941.87	0.19	100.1	Pulse	0.30	3
1	Ge		171,729.39	0.31	97.1	Pulse	0.30	3
1	In		1,436,277.69	0.58	93.7	Pulse	0.30	3
1	Tb		3,542,279.08	1.29	94.4	Pulse	0.50	3
1	Lu		2,613,320.75	0.64	92.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		254,539.92	1.18	97.1	Pulse	0.30	3
1	Te		2.67	114.56	133.3	Pulse	0.50	3
1	Li		1,545.63	5.95	104.7	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:31
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.635	ug/l	1.05	595,133.81	3.470E+00	Pulse	0.50	3
As			1	50.251	ug/l	0.68	72,558.03	4.231E-01	Pulse	1.00	3
Mo			1	50.524	ug/l	0.88	264,059.15	1.048E+00	Pulse	0.50	3
Pb			1	51.332	ug/l	1.27	1,048,340.68	4.315E-01	Pulse	1.00	3
Be			1	54.400	ug/l	2.30	4,339.96	1.354E-02	Pulse	2.00	3
Ag			1	50.015	ug/l	1.17	823,970.29	3.271E+00	Pulse	0.50	3
Ba			1	50.819	ug/l	0.69	115,125.57	8.128E-02	Pulse	0.50	3
Tl			1	51.441	ug/l	1.83	1,508,708.71	6.209E-01	Pulse	0.50	3
Sn			1	50.540	ug/l	0.84	262,293.00	1.852E-01	Pulse	0.30	3
Sr			1	50.314	ug/l	0.44	361,202.33	2.550E-01	Pulse	0.50	3
[Pb]			1	50.928	ug/l	1.25	496,048.32	2.042E-01	Pulse	0.50	3
Ca			1	5012.043	ug/l	0.72	245,381.79	7.655E-01	Pulse	0.50	3
Ti			1	49.205	ug/l	1.67	15,809.06	4.932E-02	Pulse	0.50	3
Na			1	5488.598	ug/l	0.27	11,086,629.67		Analog	1.00	3
Mg			1	5370.496	ug/l	0.43	5,362,508.17	1.673E+01	Analog	1.00	3
K			1	5298.995	ug/l	0.40	5,520,655.00	1.722E+01	Analog	1.00	3
V			1	51.062	ug/l	0.70	473,282.00	1.476E+00	Pulse	0.50	3
Mn			1	51.055	ug/l	0.73	347,859.85	2.028E+00	Pulse	0.50	3
Fe			1	5259.684	ug/l	0.85	50,202,532.00	2.927E+02	Analog	0.50	3
Co			1	51.761	ug/l	1.06	864,283.21	5.040E+00	Pulse	0.50	3
Ni			1	51.616	ug/l	1.12	231,102.41	1.348E+00	Pulse	0.50	3
Cu			1	50.265	ug/l	1.15	613,139.94	3.575E+00	Pulse	0.50	3
Zn			1	49.841	ug/l	1.27	107,483.98	4.267E-01	Pulse	1.00	3
Cd			1	50.241	ug/l	0.94	128,210.97	5.089E-01	Pulse	0.50	3
Al			1	5064.733	ug/l	1.01	2,212,568.00	6.902E+00	Pulse	1.00	3
Se			1	50.390	ug/l	1.77	5,729.64	2.274E-02	Pulse	3.00	3
Sb			1	49.440	ug/l	1.26	366,452.18	1.455E+00	Pulse	1.00	3
Se			1	49.488	ug/l	1.45	2,653.63	1.053E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,429,834.00	0.43	91.5	Pulse	0.50	3
1	Sc		320,565.04	0.27	98.8	Pulse	0.30	3
1	Ge		171,498.15	0.18	96.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,416,378.62	0.48	92.4	Pulse	0.30	3
1	Tb		3,513,863.75	0.28	93.7	Pulse	0.50	3
1	Lu		2,614,961.08	0.40	92.5	Pulse	0.50	3
1	Ge		251,921.90	0.53	96.1	Pulse	0.30	3
1	Te		4.00	132.29	200.0	Pulse	0.50	3
1	Li		1,493.40	4.75	101.2	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:35
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.444	ug/l	1.14	1,154,123.09	6.793E+00	Pulse	0.50	3
As			1	99.590	ug/l	0.77	142,405.65	8.382E-01	Pulse	1.00	3
Mo			1	100.178	ug/l	0.41	517,825.83	2.078E+00	Pulse	0.50	3
Pb			1	101.763	ug/l	0.90	2,035,663.04	8.551E-01	Pulse	1.00	3
Be			1	107.547	ug/l	2.64	8,483.60	2.676E-02	Pulse	2.00	3
Ag			1	98.306	ug/l	0.22	1,601,849.92	6.429E+00	Pulse	0.50	3
Ba			1	100.320	ug/l	0.97	224,396.42	1.604E-01	Pulse	0.50	3
Tl			1	101.843	ug/l	1.30	2,926,730.00	1.229E+00	Pulse	0.50	3
Sn			1	99.782	ug/l	1.12	511,259.27	3.655E-01	Pulse	0.30	3
Sr			1	99.789	ug/l	0.43	707,053.75	5.055E-01	Pulse	0.50	3
[Pb]			1	101.904	ug/l	0.87	972,188.81	4.084E-01	Pulse	0.50	3
Ca			1	9958.820	ug/l	1.61	480,607.59	1.516E+00	Pulse	0.50	3
Ti			1	98.167	ug/l	1.56	31,185.45	9.838E-02	Pulse	0.50	3
Na			1	10699.195	ug/l	0.28	21,593,532.00		Analog	1.00	3
Mg			1	10613.013	ug/l	2.13	10,478,131.67	3.306E+01	Analog	1.00	3
K			1	10465.191	ug/l	1.08	10,699,750.00	3.375E+01	Analog	1.00	3
V			1	101.648	ug/l	2.39	930,582.06	2.936E+00	Pulse	0.50	3
Mn			1	100.827	ug/l	0.73	679,785.90	4.001E+00	Pulse	0.50	3
Fe			1	10377.997	ug/l	0.77	98,109,730.67	5.775E+02	Analog	0.50	3
Co			1	101.591	ug/l	1.22	1,680,364.50	9.891E+00	Pulse	0.50	3
Ni			1	101.438	ug/l	0.63	449,495.07	2.646E+00	Pulse	0.50	3
Cu			1	100.325	ug/l	1.44	1,181,352.13	6.954E+00	Pulse	0.50	3
Zn			1	100.281	ug/l	0.57	210,574.41	8.451E-01	Pulse	1.00	3
Cd			1	98.993	ug/l	1.42	249,868.11	1.003E+00	Pulse	0.50	3
Al			1	9950.962	ug/l	2.10	4,297,279.17	1.356E+01	Pulse	1.00	3
Se			1	99.434	ug/l	0.86	11,153.47	4.476E-02	Pulse	3.00	3
Sb			1	98.102	ug/l	0.58	719,154.12	2.886E+00	Pulse	1.00	3
Se			1	99.774	ug/l	1.04	5,256.39	2.109E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,380,707.75	0.55	89.6	Pulse	0.50	3
1	Sc		317,041.71	1.29	97.7	Pulse	0.30	3
1	Ge		169,888.73	0.99	96.0	Pulse	0.30	3
1	In		1,398,803.21	0.62	91.2	Pulse	0.30	3
1	Tb		3,490,097.33	1.32	93.1	Pulse	0.50	3
1	Lu		2,593,753.92	0.39	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,172.78	0.62	95.0	Pulse	0.30	3
1	Te		11.33	44.41	566.7	Pulse	0.50	3
1	Li		1,441.17	7.61	97.7	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa091922m2.b
Method File	
Method Path	
Acq Time	9/19/2022 10:39
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	9/19/2022 12:49
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.008	ug/l	204.73	4,313.16	2.596E-02	Pulse	0.50	3
As			1	0.030	ug/l	52.64	88.33	5.321E-04	Pulse	1.00	3
Mo			1	0.091	ug/l	13.28	506.01	2.053E-03	Pulse	0.50	3
Pb			1	0.135	ug/l	13.97	3,428.02	1.429E-03	Pulse	1.00	3
Be			1	0.043	ug/l	17.47	3.83	1.226E-05	Pulse	2.00	3
Ag			1	0.025	ug/l	43.70	479.34	1.947E-03	Pulse	0.50	3
Ba			1	-0.008	ug/l	-114.29	38.67	2.769E-05	Pulse	0.50	3
Tl			1	0.019	ug/l	35.06	555.35	2.319E-04	Pulse	0.50	3
Sn			1	0.091	ug/l	22.17	668.91	4.759E-04	Pulse	0.30	3
Sr			1	-0.008	ug/l	-181.38	400.67	2.862E-04	Pulse	0.50	3
[Pb]			1	0.135	ug/l	11.66	1,631.42	6.802E-04	Pulse	0.50	3
Ca			1	-11.835	ug/l	-6.74	986.03	3.153E-03	Pulse	0.50	3
Ti			1	0.049	ug/l	56.15	20.00	6.392E-05	Pulse	0.50	3
Na			1	1.774	ug/l	52.31	22,730.24		Pulse	1.00	3
Mg			1	1.022	ug/l	74.42	1,875.10	5.996E-03	Pulse	1.00	3
K			1	2.970	ug/l	34.52	86,317.16	2.760E-01	Pulse	1.00	3
V			1	0.027	ug/l	63.23	1,290.71	4.126E-03	Pulse	0.50	3
Mn			1	-0.067	ug/l	-11.18	299.33	1.803E-03	Pulse	0.50	3
Fe			1	1.238	ug/l	67.09	26,172.00	1.577E-01	Pulse	0.50	3
Co			1	0.013	ug/l	62.97	248.67	1.500E-03	Pulse	0.50	3
Ni			1	-0.011	ug/l	-153.72	367.34	2.212E-03	Pulse	0.50	3
Cu			1	-1.487	ug/l	-0.98	13,733.56	8.266E-02	Pulse	0.50	3
Zn			1	-1.106	ug/l	-1.25	994.70	4.037E-03	Pulse	1.00	3
Cd			1	0.017	ug/l	92.80	46.00	1.871E-04	Pulse	0.50	3
Al			1	-1.051	ug/l	-74.54	1,118.04	3.575E-03	Pulse	1.00	3
Se			1	0.110	ug/l	25.96	42.11	1.710E-04	Pulse	3.00	3
Sb			1	0.036	ug/l	7.21	328.67	1.334E-03	Pulse	1.00	3
Se			1	0.011	ug/l	1468.56	35.00	1.421E-04	Pulse	3.00	3

Quantitation Report

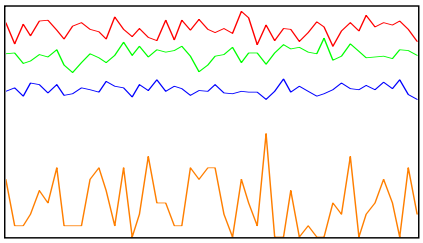
ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,400,301.92	1.16	90.4	Pulse	0.50	3
1	Sc		312,768.10	0.29	96.4	Pulse	0.30	3
1	Ge		166,152.81	0.62	93.9	Pulse	0.30	3
1	In		1,404,009.43	1.64	91.6	Pulse	0.30	3
1	Tb		3,426,286.08	0.81	91.4	Pulse	0.50	3
1	Lu		2,522,653.42	1.15	89.2	Pulse	0.50	3
1	Ge		246,353.49	0.64	93.9	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,497.84	3.81	101.5	Pulse	0.30	3

Tune Report

Batch Folder D:\2022\xa091922m1.b
Acq. Date-Time 9/19/2022 8:09
Report Comment 0919
Instrument Name G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1802	18022.33	5000.00	
89	2000	1581	15808.98	5000.00	
205	5000	3200	31997.67	5000.00	
78	20	3			

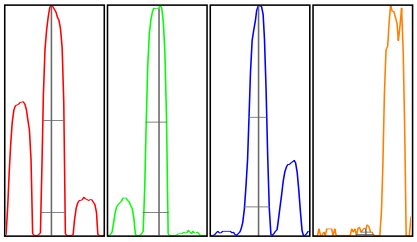
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	4.02	5.00	
89	3.83	5.00	
205	3.33	5.00	
78	82.50		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.10	2	
89	0.30	2	
205	0.60	2	
78	0.00	5	

Ratio	156/140	0.949 %	
Ratio	70/140	4.385 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1828.94	58.95	58.9 - 59.1		0.63	0.727	0.900	
89	1586.73	89.05	88.9 - 89.1		0.60	0.721	0.900	

Tune Report

205	3249.95	205.00	204.9 - 205.1	0.52	0.743	0.900
78	2.00	78.10	-	0.25	0.486	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

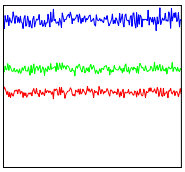
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-185.0 V	Cell Exit	-70 V
Omega Bias	-90 V	Deflect	2.2 V
Omega Lens	7.3 V	Plate Bias	-60 V

Cell Parameters

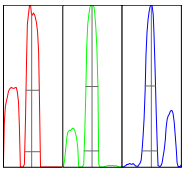
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	190 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



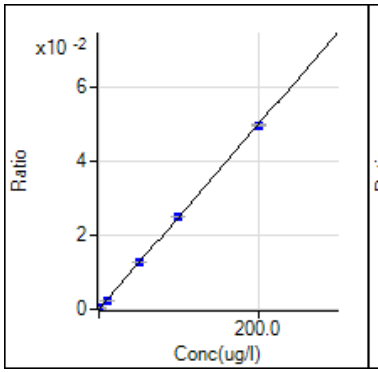
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	5000
Count	2315.58	6073.94	4551.42
RSD%	3.5	2.7	2.9
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.00%	
Doubly Charged	70/140	6.85%	

Background			
Mass	7	89	205
Count	0.15	1.00	4.10

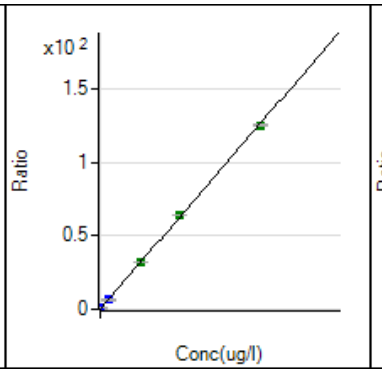


Resolution/Axis			
Mass	7	89	205
Height	2270	6029	4555
Axis	6.95	89.00	205.00
W-50%	0.67	0.59	0.51
W-10%	0.77	0.72	0.76
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

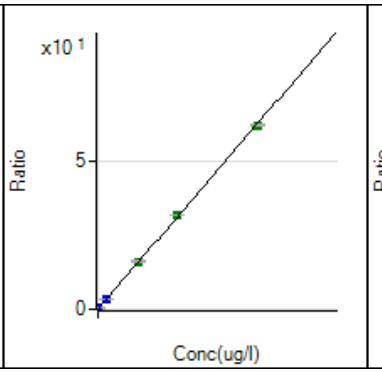
Calibration for D:\2022\xa091922m2.b\059_CCV.d



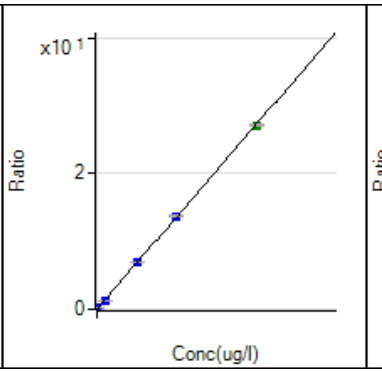
9 Be [2] / ISTD: 45 Sc
y = 2.488E-4 x + 1.549E-6
R 1.0000
DL 0.01875
BEC 0.006226



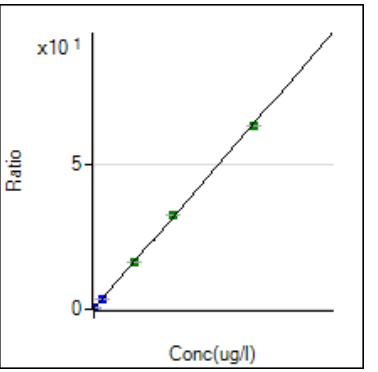
23 Na [2] / ISTD: 45 Sc
y = 6.306E-3 x + 5.901E-2
R 0.9999
DL 0.2995
BEC 9.358



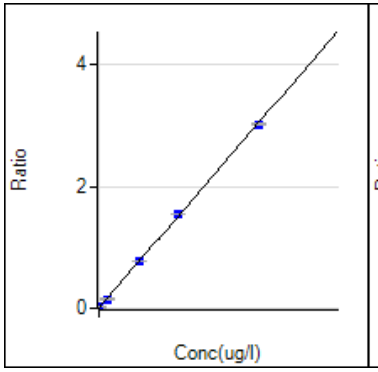
24 Mg [2] / ISTD: 45 Sc
y = 3.114E-3 x + 2.813E-3
R 0.9999
DL 0.1586
BEC 0.9031



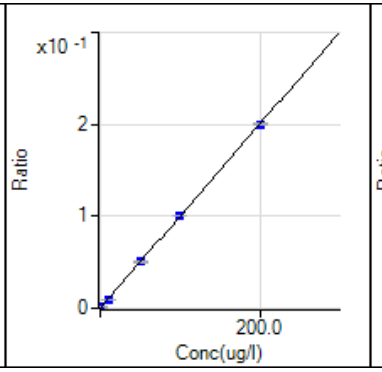
27 Al [2] / ISTD: 45 Sc
y = 1.362E-3 x + 5.007E-3
R 1.0000
DL 0.4508
BEC 3.677



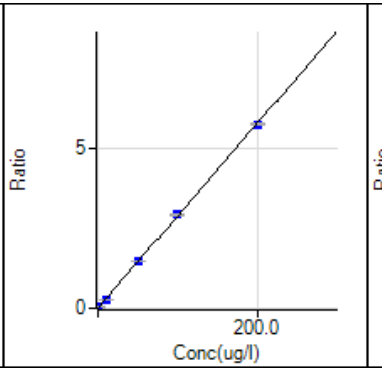
39 K [2] / ISTD: 45 Sc
y = 3.200E-3 x + 2.665E-1
R 0.9999
DL 2.38
BEC 83.28



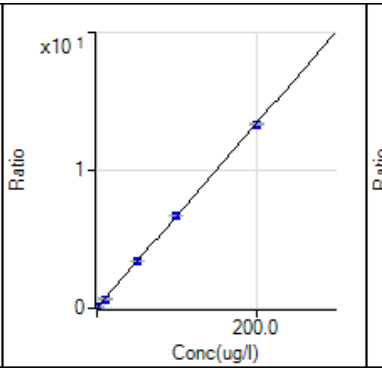
44 Ca [2] / ISTD: 45 Sc
y = 1.517E-4 x + 4.949E-3
R 0.9999
DL 1.294
BEC 32.61



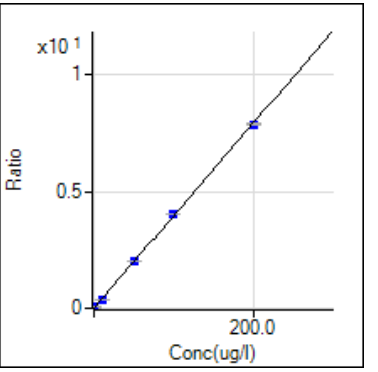
47 Ti [2] / ISTD: 45 Sc
y = 1.002E-3 x + 1.441E-5
R 1.0000
DL 0.02151
BEC 0.01438



51 V [2] / ISTD: 45 Sc
y = 2.885E-2 x + 3.350E-3
R 1.0000
DL 0.02807
BEC 0.1161

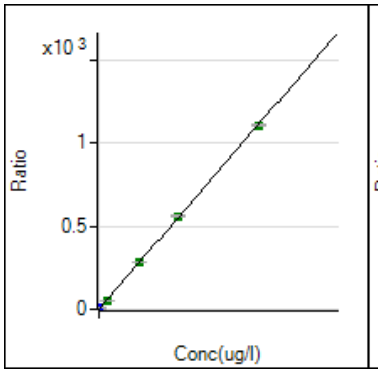


52 Cr [2] / ISTD: 72 Ge
y = 6.671E-2 x + 2.545E-2
R 1.0000
DL 0.06338
BEC 0.3814

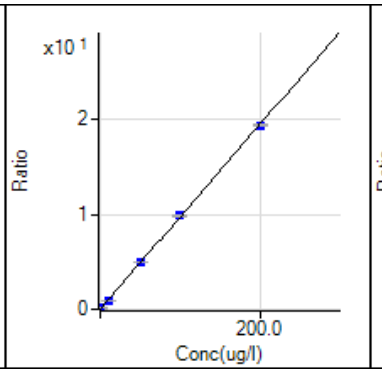


55 Mn [2] / ISTD: 72 Ge
y = 3.964E-2 x + 4.475E-3
R 0.9999
DL 0.05254
BEC 0.1129

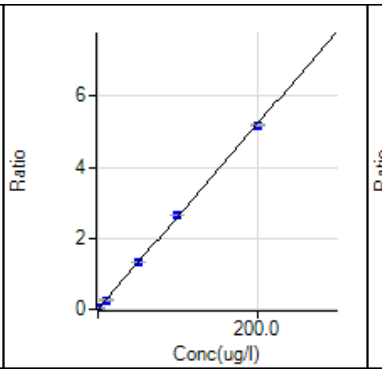
Calibration for D:\2022\xa091922m2.b\059_CCV.d



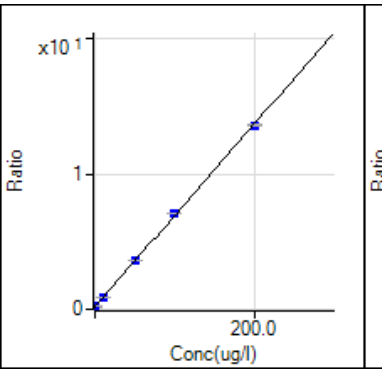
56 Fe [2] / ISTD: 72 Ge
y = 5.564E-2 x + 8.884E-2
R 1.0000
DL 0.06846
BEC 1.597



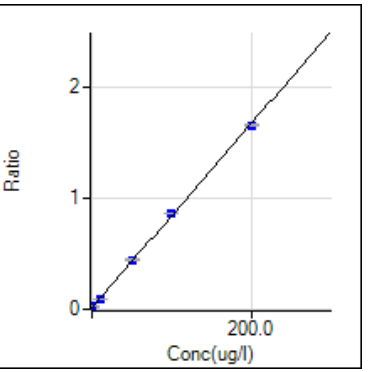
59 Co [2] / ISTD: 72 Ge
y = 9.736E-2 x + 2.299E-4
R 1.0000
DL 0.0007374
BEC 0.002361



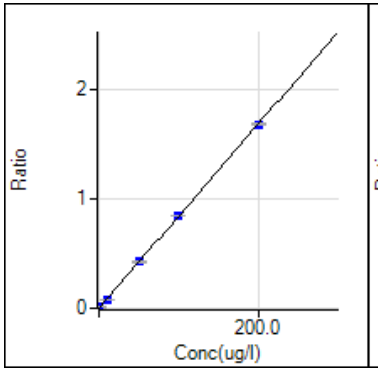
60 Ni [2] / ISTD: 72 Ge
y = 2.606E-2 x + 2.491E-3
R 0.9999
DL 0.01574
BEC 0.09559



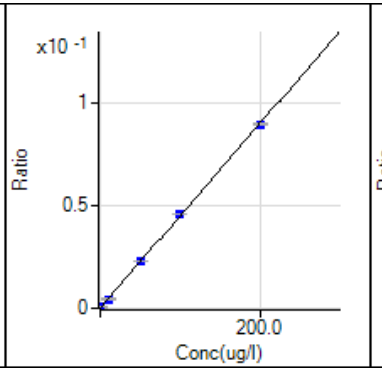
63 Cu [2] / ISTD: 72 Ge
y = 6.749E-2 x + 1.830E-1
R 0.9999
DL 0.04775
BEC 2.712



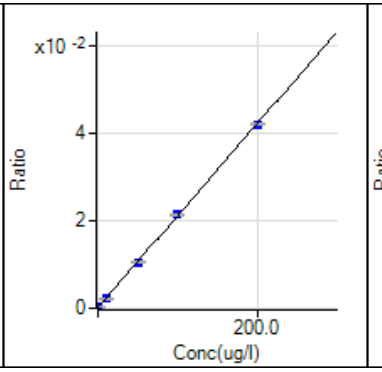
66 Zn [2] / ISTD: 74 Ge
y = 8.295E-3 x + 1.321E-2
R 0.9998
DL 0.3232
BEC 1.592



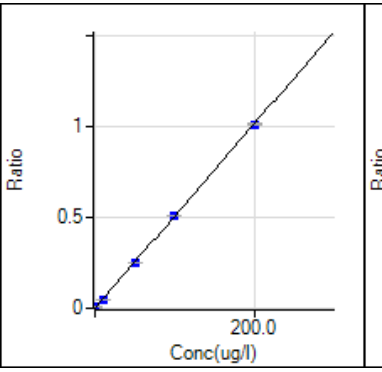
75 As [2] / ISTD: 72 Ge
y = 8.414E-3 x + 2.805E-4
R 1.0000
DL 0.02606
BEC 0.03333



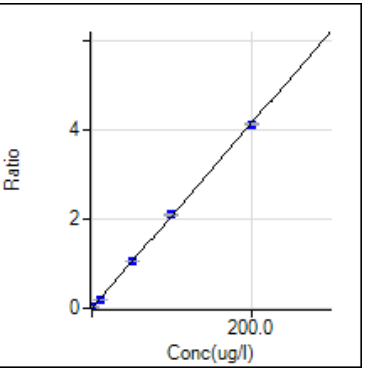
78 Se [2] / ISTD: 74 Ge
y = 4.490E-4 x + 1.216E-4
R 1.0000
DL 0.1109
BEC 0.2709



82 Se [2] / ISTD: 74 Ge
y = 2.100E-4 x + 1.398E-4
R 1.0000
DL 0.1645
BEC 0.6658

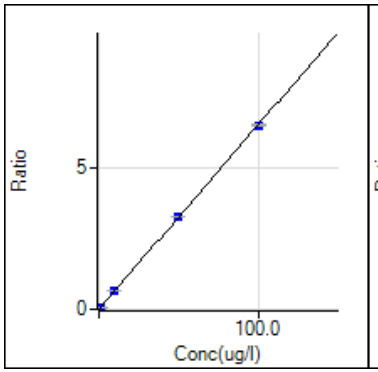


88 Sr [2] / ISTD: 115 In
y = 5.062E-3 x + 3.284E-4
R 1.0000
DL 0.02301
BEC 0.06487

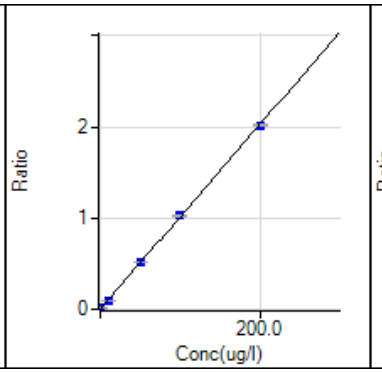


95 Mo [2] / ISTD: 74 Ge
y = 2.074E-2 x + 1.701E-4
R 1.0000
DL 0.01013
BEC 0.008199

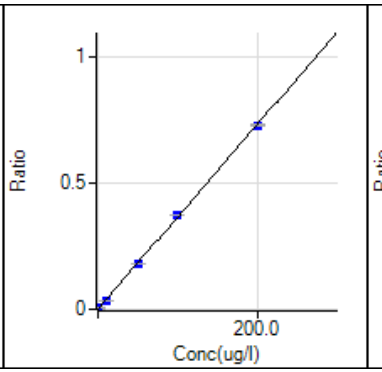
Calibration for D:\2022\xa091922m2.b\059_CCV.d



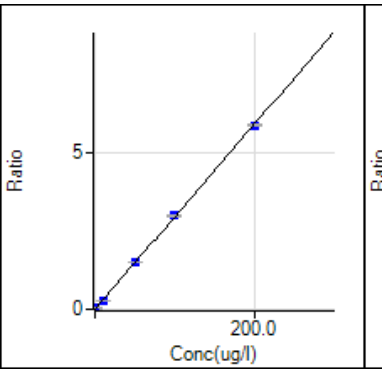
107 Ag [2] / ISTD: 74 Ge
y = 6.539E-2 x + 3.153E-4
R 1.0000
DL 0.001338
BEC 0.004821



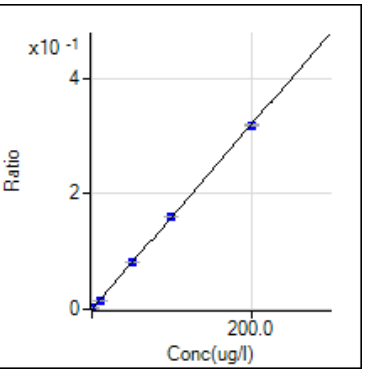
111 Cd [2] / ISTD: 74 Ge
y = 1.013E-2 x + 1.017E-5
R 0.9999
DL 0.001305
BEC 0.001004



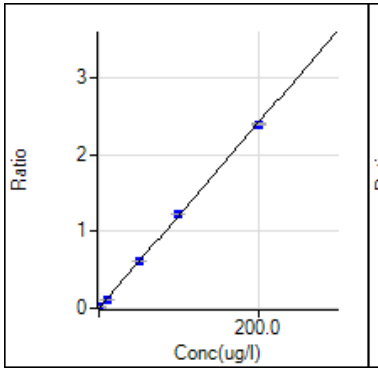
118 Sn [2] / ISTD: 115 In
y = 3.661E-3 x + 1.443E-4
R 1.0000
DL 0.03356
BEC 0.03942



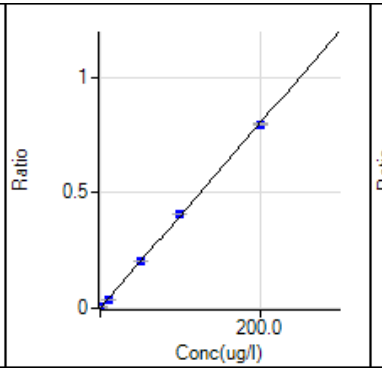
121 Sb [2] / ISTD: 74 Ge
y = 2.942E-2 x + 2.783E-4
R 0.9999
DL 0.008881
BEC 0.00946



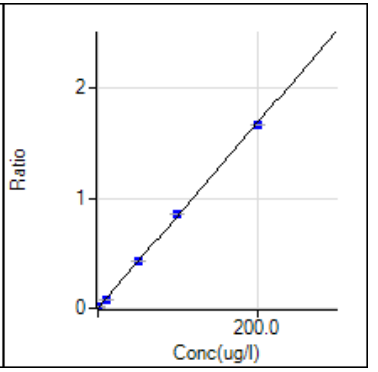
137 Ba [2] / ISTD: 115 In
y = 1.599E-3 x + 3.996E-5
R 1.0000
DL 0.02713
BEC 0.025



205 Tl [2] / ISTD: 209 Bi
y = 1.207E-2 x + 8.530E-6
R 0.9999
DL 0.001096
BEC 0.0007066



206 [Pb] [2] / ISTD: 209 Bi
y = 4.006E-3 x + 1.402E-4
R 0.9999
DL 0.01141
BEC 0.035



208 Pb [2] / ISTD: 209 Bi
y = 8.399E-3 x + 2.946E-4
R 0.9999
DL 0.001848
BEC 0.03507

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 9/21/2022 10:10:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0022**	**-.0027**	**-.0004**	**.0105**	**.0008**	**.0087**	**-.0010**	**-.0006**	**.0001**
Stddev	.0001	.0021	.0003	.0023	.0006	.0006	.0004	.0003	.0002
%RSD	4.987	78.50	70.80	21.85	81.91	7.459	40.70	40.56	275.4
#1	-.0021	-.0051	-.0006	.0102	.0015	.0082	-.0009	-.0009	.0000
#2	-.0022	-.0019	-.0005	.0085	.0003	.0094	-.0014	-.0005	-.0001
#3	-.0023	-.0011	-.0001	.0130	.0005	.0084	-.0006	-.0005	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0042**	**.0015**	**.0124**	**-.0037**	**-.0001**	**.0005**	**.0014**	**.0007**	**-.0003**
Stddev	.0002	.0003	.0037	.0027	.0006	.0001	.0002	.0032	.0004
%RSD	4.822	20.39	29.95	70.84	631.5	27.60	15.50	461.9	131.5
#1	.0040	.0013	.0102	-.0024	-.0004	.0006	.0014	-.0030	-.0006
#2	.0042	.0013	.0103	-.0068	.0006	.0004	.0011	.0029	.0001
#3	.0044	.0018	.0167	-.0020	-.0005	.0006	.0015	.0021	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0013**	**.0009**	**-.0001**	**.0078**	**.0001**	**.0012**	**.0018**	**.0009**	**-.0004**
Stddev	.0003	.0000	.0003	.0002	.0001	.0003	.0002	.0013	.0002
%RSD	20.46	1.476	293.7	2.552	81.13	22.13	9.851	138.3	54.30
#1	-.0013	.0009	-.0002	.0077	.0002	.0009	.0020	.0023	-.0002
#2	-.0010	.0009	-.0003	.0081	.0000	.0015	.0019	.0008	-.0006
#3	-.0015	.0009	.0002	.0078	.0001	.0012	.0016	-.0003	-.0006

Elem	Zn2062
Units	Cts/S
Avg	**.0053**
Stddev	.0001
%RSD	2.792
#1	.0055
#2	.0053
#3	.0052

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 9/21/2022 10:10:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**958.58**	**2904.5**	**20657.**	**4415.5**
Stddev	2.48	3.3	13.	56.4
%RSD	.25915	.11478	.06207	1.2771
#1	960.55	2906.0	20647.	4475.8
#2	955.79	2900.6	20671.	4406.6
#3	959.40	2906.8	20651.	4364.1

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 9/21/2022 10:15:36 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0046**	**.0391**	**.0015**	**3.632**	**.0640**	**.3964**	**.0331**	**.1626**	**.0080**
Stddev	.0003	.0013	.0000	.005	.0009	.0004	.0003	.0007	.0003
%RSD	6.954	3.359	2.957	.1427	1.375	.1130	.9022	.4003	3.889
#1	.0049	.0380	.0015	3.627	.0647	.3959	.0328	.1631	.0077
#2	.0047	.0406	.0014	3.631	.0644	.3968	.0334	.1627	.0083
#3	.0043	.0389	.0015	3.637	.0630	.3964	.0330	.1618	.0082

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0311**	**.0878**	**1.650**	**.0307**	**.2233**	**.0705**	**.0731**	**5.075**	**.0706**
Stddev	.0001	.0002	.005	.0038	.0002	.0003	.0001	.008	.0003
%RSD	.2767	.2375	.3144	12.48	.0976	.4919	.0910	.1618	.3678
#1	.0310	.0879	1.655	.0307	.2234	.0703	.0732	5.069	.0703
#2	.0311	.0876	1.650	.0268	.2230	.0704	.0730	5.084	.0708
#3	.0311	.0880	1.645	.0344	.2234	.0709	.0731	5.071	.0706

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0084**	**.0024**	**.0017**	**.0276**	**.2025**	**.0280**	**.0071**	**.0528**	**.0823**
Stddev	.0010	.0003	.0000	.0003	.0005	.0006	.0007	.0002	.0002
%RSD	11.52	12.80	2.498	.9881	.2288	2.303	9.561	.4207	.2906
#1	.0088	.0024	.0016	.0279	.2025	.0287	.0063	.0529	.0825
#2	.0073	.0027	.0017	.0275	.2020	.0279	.0073	.0526	.0820
#3	.0091	.0021	.0017	.0273	.2030	.0274	.0076	.0530	.0824

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**933.26**	**2871.4**	**20588.**	**4359.1**
Stddev	.68	8.7	25.	23.2
%RSD	.07254	.30143	.12063	.53143
#1	932.78	2862.2	20598.	4340.5
#2	934.03	2879.4	20560.	4385.0
#3	932.97	2872.5	20606.	4351.7

◀ Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 9/21/2022 10:19:23 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0183**	**.9667**	**.0502**	**4.244**	**2.971**	**1.846**	**1.599**	**.7706**	**.1924**
Stddev	.0001	.0013	.0003	.014	.004	.005	.002	.0014	.0001
%RSD	.5667	.1380	.6312	.3173	.1340	.2467	.1089	.1850	.0580
#1	.0181	.9657	.0499	4.230	2.966	1.843	1.600	.7708	.1924
#2	.0183	.9682	.0501	4.257	2.972	1.851	1.597	.7691	.1925
#3	.0183	.9662	.0505	4.246	2.974	1.844	1.601	.7719	.1923

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2541**	**1.373**	**.7916**	**.6326**	**.2113**	**1.097**	**.3374**	**2.624**	**.4191**
Stddev	.0012	.003	.0043	.0031	.0008	.003	.0008	.005	.0017
%RSD	.4857	.1788	.5426	.4888	.3576	.2634	.2295	.2053	.3962
#1	.2555	1.370	.7943	.6335	.2112	1.099	.3368	2.618	.4190
#2	.2535	1.375	.7938	.6351	.2121	1.097	.3371	2.626	.4175
#3	.2533	1.373	.7867	.6292	.2107	1.093	.3383	2.627	.4208

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4656**	**.0742**	**.0426**	**.1007**	**.1274**	**4.632**	**.6026**	**.1473**	**.2458**
Stddev	.0022	.0003	.0003	.0003	.0004	.011	.0014	.0013	.0015
%RSD	.4733	.4300	.7489	.2883	.3001	.2465	.2293	.8654	.6051
#1	.4681	.0744	.0427	.1006	.1272	4.620	.6037	.1461	.2469
#2	.4643	.0739	.0423	.1010	.1272	4.642	.6030	.1472	.2463
#3	.4643	.0744	.0429	.1005	.1278	4.633	.6011	.1486	.2441

Elem	Zn2062
Units	Cts/S
Avg	**.8894**
Stddev	.0018
%RSD	.2035
#1	.8906
#2	.8873
#3	.8902

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 10:19:23 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.18**	**2882.3**	**20657.**	**4450.0**
Stddev	1.11	6.6	87.	39.4
%RSD	.11844	.22747	.42163	.88529
#1	939.89	2883.9	20580.	4421.1
#2	941.87	2887.8	20639.	4494.9
#3	941.77	2875.1	20751.	4434.0

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 10:23:09 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0395**	**1.952**	**.1025**	**8.543**	**5.984**	**3.696**	**3.220**	**1.546**	**.3900**
Stddev	.0003	.011	.0003	.017	.027	.018	.004	.003	.0003
%RSD	.8478	.5598	.2647	.2025	.4458	.4993	.1258	.1660	.0706
#1	.0397	1.958	.1026	8.555	5.997	3.705	3.224	1.549	.3899
#2	.0398	1.940	.1027	8.523	5.953	3.675	3.218	1.546	.3898
#3	.0392	1.959	.1022	8.551	6.001	3.709	3.216	1.544	.3903

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5116**	**2.769**	**1.595**	**1.263**	**.4215**	**2.206**	**.6840**	**5.272**	**.8438**
Stddev	.0007	.006	.008	.002	.0025	.009	.0012	.029	.0015
%RSD	.1328	.2247	.4852	.1797	.6031	.3899	.1814	.5542	.1749
#1	.5110	2.772	1.594	1.266	.4210	2.205	.6854	5.278	.8454
#2	.5124	2.762	1.587	1.261	.4193	2.197	.6833	5.240	.8426
#3	.5115	2.773	1.603	1.263	.4243	2.214	.6831	5.297	.8432

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9414**	**.1490**	**.0860**	**.1973**	**.2568**	**9.334**	**1.216**	**.3020**	**.5015**
Stddev	.0015	.0002	.0002	.0005	.0006	.043	.005	.0018	.0013
%RSD	.1632	.1643	.2505	.2459	.2326	.4623	.4021	.6080	.2637
#1	.9417	.1493	.0863	.1970	.2566	9.348	1.211	.3040	.5012
#2	.9398	.1489	.0859	.1971	.2575	9.286	1.216	.3015	.5003
#3	.9428	.1488	.0859	.1979	.2563	9.369	1.220	.3004	.5029

Elem	Zn2062
Units	Cts/S
Avg	**1.780**
Stddev	.004
%RSD	.2127
#1	1.784
#2	1.780
#3	1.776

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 10:23:09 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.90**	**2863.6**	**20479.**	**4457.0**
Stddev	1.94	3.8	90.	40.4
%RSD	.20938	.13115	.43970	.90751
#1	927.89	2860.2	20520.	4462.5
#2	927.67	2862.9	20541.	4494.3
#3	931.14	2867.6	20376.	4414.0

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 10:26:55 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0853**	**3.919**	**.2110**	**17.42**	**12.22**	**7.419**	**6.554**	**3.138**	**.7873**
Stddev	.0002	.009	.0001	.04	.00	.017	.005	.003	.0031
%RSD	.1955	.2251	.0611	.2146	.0365	.2280	.0818	.0984	.3994
#1	.0853	3.924	.2109	17.46	12.22	7.433	6.559	3.142	.7909
#2	.0855	3.909	.2109	17.39	12.21	7.400	6.549	3.135	.7859
#3	.0851	3.925	.2111	17.42	12.22	7.423	6.553	3.138	.7850

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.041**	**5.575**	**3.212**	**2.622**	**.8470**	**4.472**	**1.394**	**10.60**	**1.706**
Stddev	.001	.013	.010	.006	.0028	.022	.001	.00	.002
%RSD	.0487	.2330	.3096	.2151	.3289	.4837	.0597	.0458	.0880
#1	1.042	5.583	3.224	2.622	.8501	4.495	1.394	10.60	1.706
#2	1.041	5.582	3.206	2.628	.8446	4.468	1.393	10.59	1.704
#3	1.041	5.560	3.207	2.616	.8463	4.453	1.395	10.60	1.706

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.936**	**.3054**	**.1773**	**.5315**	**.5302**	**19.36**	**2.519**	**.6188**	**1.032**
Stddev	.005	.0008	.0005	.0015	.0008	.01	.006	.0037	.006
%RSD	.2528	.2761	.2549	.2761	.1454	.0667	.2257	.5975	.5659
#1	1.942	.3057	.1775	.5319	.5303	19.37	2.525	.6229	1.038
#2	1.934	.3045	.1776	.5298	.5293	19.35	2.517	.6157	1.031
#3	1.933	.3061	.1768	.5327	.5308	19.37	2.513	.6178	1.027

Elem	Zn2062
Units	Cts/S
Avg	**3.604**
Stddev	.004
%RSD	.1099
#1	3.607
#2	3.606
#3	3.600

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 10:26:55 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.47**	**2822.9**	**20373.**	**4426.6**
Stddev	2.57	2.4	174.	6.7
%RSD	.28450	.08393	.85313	.15195
#1	902.49	2823.9	20178.	4419.9
#2	903.54	2820.2	20430.	4426.7
#3	907.38	2824.6	20512.	4433.3

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 10:30:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1726**	**7.828**	**.4301**	**34.88**	**24.40**	**14.85**	**13.12**	**6.294**	**1.562**
Stddev	.0007	.012	.0006	.09	.04	.05	.01	.002	.004
%RSD	.3855	.1526	.1328	.2465	.1766	.3542	.0604	.0336	.2861
#1	.1720	7.842	.4308	34.95	24.45	14.91	13.12	6.293	1.559
#2	.1733	7.819	.4296	34.90	24.38	14.82	13.12	6.297	1.567
#3	.1726	7.824	.4300	34.78	24.38	14.82	13.13	6.293	1.560

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.079**	**11.04**	**6.416**	**5.252**	**1.681**	**8.821**	**2.816**	**21.17**	**3.422**
Stddev	.008	.01	.012	.021	.006	.039	.001	.03	.002
%RSD	.3951	.1281	.1935	.4041	.3375	.4375	.0408	.1374	.0591
#1	2.071	11.06	6.427	5.269	1.687	8.809	2.816	21.21	3.422
#2	2.088	11.03	6.419	5.259	1.680	8.864	2.818	21.15	3.424
#3	2.077	11.03	6.403	5.228	1.676	8.790	2.816	21.16	3.420

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.904**	**.6177**	**.3570**	**1.070**	**1.062**	**38.74**	**5.025**	**1.241**	**2.054**
Stddev	.009	.0009	.0003	.000	.002	.09	.014	.009	.007
%RSD	.2325	.1405	.0749	.0362	.1606	.2253	.2745	.7439	.3292
#1	3.901	.6172	.3567	1.069	1.060	38.82	5.018	1.232	2.050
#2	3.897	.6173	.3572	1.070	1.064	38.76	5.041	1.242	2.062
#3	3.914	.6187	.3571	1.070	1.061	38.65	5.017	1.250	2.051

Elem	Zn2062
Units	Cts/S
Avg	**7.209**
Stddev	.007
%RSD	.0913
#1	7.205
#2	7.206
#3	7.217

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 10:30:28 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**872.79**	**2746.3**	**20190.**	**4401.9**
Stddev	3.08	4.4	87.	12.9
%RSD	.35250	.15863	.42919	.29365
#1	874.95	2748.4	20170.	4387.8
#2	874.14	2749.2	20116.	4413.2
#3	869.26	2741.3	20285.	4404.9

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 10:35:27 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3347**	**15.62**	**.8680**	**69.12**	**47.87**	**29.36**	**25.96**	**12.50**	**3.044**
Stddev	.0007	.03	.0053	.11	.13	.04	.12	.05	.006
%RSD	.2193	.1717	.6084	.1553	.2706	.1302	.4701	.4151	.1973
#1	.3353	15.65	.8739	69.20	48.02	29.39	26.10	12.56	3.051
#2	.3350	15.61	.8666	69.16	47.82	29.31	25.90	12.48	3.040
#3	.3339	15.60	.8636	68.99	47.78	29.37	25.88	12.47	3.040

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.127**	**21.54**	**12.86**	**10.48**	**3.311**	**17.03**	**5.658**	**42.01**	**6.766**
Stddev	.011	.05	.03	.01	.007	.12	.028	.09	.036
%RSD	.2655	.2534	.1997	.1401	.2129	.7216	.4871	.2214	.5356
#1	4.139	21.60	12.88	10.50	3.317	16.91	5.689	42.10	6.805
#2	4.122	21.55	12.87	10.48	3.303	17.15	5.648	42.02	6.757
#3	4.119	21.49	12.83	10.47	3.313	17.02	5.637	41.92	6.735

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.758**	**1.250**	**.7164**	**1.632**	**2.155**	**75.51**	**9.960**	**2.449**	**4.069**
Stddev	.043	.004	.0038	.006	.009	.87	.025	.033	.009
%RSD	.5603	.3299	.5239	.3863	.4346	1.149	.2531	1.343	.2317
#1	7.808	1.254	.7203	1.639	2.165	75.67	9.989	2.479	4.080
#2	7.731	1.248	.7162	1.627	2.153	74.58	9.945	2.453	4.062
#3	7.735	1.247	.7128	1.629	2.147	76.29	9.946	2.414	4.066

Elem	Zn2062
Units	Cts/S
Avg	**14.20**
Stddev	.06
%RSD	.4493
#1	14.27
#2	14.18
#3	14.14

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 10:35:27 Type: Cal
Method: 60102007_COMBO_09222021(v681) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	830.09	2630.0	19869.	4376.6
Stddev	3.99	8.4	69.	17.3
%RSD	.48064	.31853	.34842	.39484
#1	825.52	2620.6	19799.	4386.5
#2	831.88	2632.9	19872.	4386.7
#3	832.87	2636.6	19937.	4356.6

Zoom In Zoom Out

Sample Name: HSTD Acquired: 9/21/2022 10:41:14 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4903	80.01	4.012	3.976	3.965	79.34	3.970	3.981	3.930
Stddev	.0008	.27	.008	.016	.013	.29	.005	.006	.007
%RSD	.1725	.3353	.1957	.3898	.3248	.3600	.1232	.1588	.1910
#1	.4909	79.79	4.003	3.959	3.953	79.21	3.966	3.974	3.924
#2	.4907	80.31	4.016	3.990	3.979	79.66	3.971	3.982	3.938
#3	.4894	79.92	4.016	3.979	3.964	79.13	3.975	3.987	3.926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.007	78.82	79.97	4.000	79.34	3.931	3.998	80.14	3.935
Stddev	.002	.10	.28	.014	.18	.019	.005	.18	.001
%RSD	.0567	.1270	.3440	.3500	.2314	.4795	.1299	.2258	.0367
#1	4.005	78.75	79.71	3.987	79.22	3.909	3.993	79.94	3.934
#2	4.009	78.77	80.26	4.015	79.24	3.940	4.000	80.27	3.936
#3	4.008	78.93	79.96	3.998	79.55	3.943	4.003	80.23	3.936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.012	4.032	3.992	3.597	4.033	4.066	4.006	3.975	3.972
Stddev	.007	.006	.004	.010	.011	.032	.004	.013	.002
%RSD	.1867	.1425	.1127	.2796	.2625	.7775	.0871	.3375	.0486
#1	4.004	4.027	3.988	3.587	4.020	4.093	4.003	3.966	3.973
#2	4.019	4.030	3.990	3.598	4.038	4.075	4.010	3.970	3.973
#3	4.012	4.038	3.997	3.607	4.039	4.031	4.005	3.991	3.970
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 9/21/2022 10:41:14 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	3.950
Stddev	.004
%RSD	.1024
#1	3.947
#2	3.949
#3	3.955
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	831.89	2650.2	19906.	4376.9
Stddev	2.19	5.8	88.	17.6
%RSD	.26298	.21727	.44237	.40290
#1	834.40	2656.5	19995.	4356.6
#2	830.88	2649.1	19819.	4387.8
#3	830.40	2645.1	19904.	4386.4

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 10:47:28 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2558	40.49	2.032	2.062	2.078	38.99	2.048	2.057	2.072
Stddev	.0006	.23	.004	.007	.010	.24	.003	.004	.007
%RSD	.2512	.5737	.2154	.3211	.4823	.6243	.1621	.1899	.3485
#1	.2556	40.75	2.028	2.070	2.090	39.27	2.044	2.054	2.072
#2	.2566	40.39	2.030	2.059	2.072	38.83	2.048	2.057	2.079
#3	.2553	40.32	2.037	2.058	2.073	38.87	2.051	2.062	2.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.082	39.79	40.09	2.053	42.33	2.089	2.007	38.91	2.028
Stddev	.003	.06	.12	.009	.08	.004	.002	.14	.003
%RSD	.1320	.1615	.2978	.4269	.1862	.1789	.1055	.3642	.1339
#1	2.082	39.86	40.23	2.063	42.40	2.091	2.005	39.08	2.025
#2	2.079	39.77	40.02	2.048	42.33	2.091	2.007	38.82	2.028
#3	2.085	39.74	40.02	2.048	42.24	2.084	2.009	38.84	2.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.071	2.045	2.057	.1584	1.949	2.096	2.083	2.111	2.046
Stddev	.005	.002	.003	.0001	.005	.012	.001	.034	.005
%RSD	.2593	.0893	.1619	.0591	.2351	.5826	.0489	1.617	.2480
#1	2.066	2.046	2.057	.1584	1.950	2.110	2.083	2.150	2.049
#2	2.071	2.046	2.053	.1584	1.944	2.090	2.085	2.088	2.049
#3	2.077	2.043	2.060	.1585	1.953	2.089	2.083	2.096	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 10:47:28 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.050**
Stddev	.004
%RSD	.1702
#1	2.046
#2	2.053
#3	2.051
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**878.25**	**2776.7**	**20281.**	**4423.8**
Stddev	4.02	11.5	147.	22.9
%RSD	.45789	.41446	.72684	.51860
#1	882.86	2789.9	20298.	4401.7
#2	876.38	2769.4	20126.	4422.1
#3	875.50	2770.6	20420.	4447.5

Zoom In Zoom Out

Sample Name: ICB Acquired: 9/21/2022 10:54:04 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0034**	**-.0004**	**-.0001**	**.0000**	**.0025**	**.0000**	**.0000**	**.0001**
Stddev	.0003	.0089	.0004	.0002	.000	.0010	.0000	.000	.0000
%RSD	177.0	264.8	126.8	183.4	272.5	38.90	62.97	394.7	50.93
#1	.0000	-.0044	-.0003	-.0004	-.0001	.0020	.0000	.0000	.0001
#2	.0004	.0131	-.0008	.0000	.0000	.0036	.0000	-.0002	.0000
#3	.0000	.0014	.0001	.0000	.0000	.0018	.0001	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0004**	**-.0083**	F **.0028**	**-.0104**	**.0001**	**.0000**	**.0072**	**.0000**
Stddev	.0003	.0014	.0295	.0004	.0142	.0000	.0001	.0075	.000
%RSD	201.5	357.0	355.6	14.60	136.5	97.38	2582.	104.6	1935.
#1	.0001	-.0016	-.0387	.0024	.0059	.0001	.0001	.0027	.0001
#2	-.0001	.0011	-.0063	.0028	-.0168	.0000	-.0001	.0030	.0001
#3	-.0005	-.0007	.0202	.0032	-.0203	.0001	.0000	.0159	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0001**	**.0015**	**-.0003**	**.0001**	**.0000**	**-.0001**	**-.0006**	**.0000**
Stddev	.0003	.0008	.0004	.0003	.0004	.0001	.0000	.0011	.0002
%RSD	89.04	997.2	27.71	123.5	305.5	745.6	14.66	190.6	662.9
#1	-.0007	-.0009	.0012	.0001	.0003	-.0001	-.0001	-.0006	.0001
#2	-.0002	-.0001	.0020	-.0003	.0004	.0001	-.0001	-.0016	-.0001
#3	-.0001	.0007	.0014	-.0005	-.0003	.0000	-.0001	.0005	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB Acquired: 9/21/2022 10:54:04 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	7.082
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**959.55**	**2909.9**	**20832.**	**4473.3**
Stddev	2.26	18.6	113.	27.1
%RSD	.23573	.63955	.54037	.60589
#1	962.16	2927.0	20940.	4502.3
#2	958.15	2912.6	20715.	4448.7
#3	958.35	2890.1	20840.	4468.9

Zoom In Zoom Out

Sample Name: CRIA Acquired: 9/21/2022 10:58:46 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0090**	**.2157**	**.0094**	**.2089**	**.0052**	**1.043**	**.0052**	**.0518**	**.0106**
Stddev	.0002	.0112	.0009	.0003	.0001	.003	.0000	.0002	.0002
%RSD	2.612	5.197	9.931	.1526	1.455	.2394	.6617	.3712	1.889
#1	.0091	.2103	.0100	.2092	.0052	1.040	.0052	.0516	.0107
#2	.0092	.2286	.0084	.2090	.0053	1.045	.0052	.0520	.0103
#3	.0088	.2082	.0100	.2086	.0053	1.042	.0051	.0519	.0106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261**	**.3292**	**10.18**	F **.0133**	**5.290**	**.0162**	**.0509**	**9.655**	**.0415**
Stddev	.0001	.0034	.02	.0012	.008	.0000	.0002	.013	.0003
%RSD	.2351	1.026	.2142	8.940	.1483	.2151	.3102	.1333	.6763
#1	.0261	.3253	10.18	.0146	5.290	.0163	.0508	9.658	.0415
#2	.0262	.3314	10.20	.0124	5.281	.0162	.0511	9.666	.0418
#3	.0262	.3309	10.16	.0128	5.297	.0162	.0508	9.641	.0413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100					
Range				20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.0046**	**.0108**	**.0646**	**.0511**	**.0106**	**.0105**	**.0108**	**.0521**
Stddev	.0009	.0011	.0013	.0006	.0001	.0001	.0000	.0005	.0004
%RSD	15.40	23.64	12.00	.9011	.1672	.6614	.3485	4.464	.8141
#1	.0051	.0036	.0108	.0652	.0512	.0105	.0105	.0105	.0525
#2	.0050	.0057	.0121	.0646	.0511	.0106	.0104	.0114	.0516
#3	.0065	.0046	.0095	.0641	.0512	.0106	.0105	.0106	.0521
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRIA Acquired: 9/21/2022 10:58:46 Type: QC
Method: 60102007_COMBO_09222021(v681) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0218**
Stddev	.0000
%RSD	.2105
#1	.0218
#2	.0217
#3	.0218
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**933.66**	**2870.7**	**20575.**	**4440.9**
Stddev	.85	6.1	111.	19.2
%RSD	.09071	.21205	.53888	.43346
#1	934.61	2876.0	20473.	4418.8
#2	933.39	2864.1	20693.	4453.8
#3	932.98	2872.1	20559.	4450.1

Zoom In Zoom Out

Sample Name: ICSA Acquired: 9/21/2022 11:05:12 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**512.5**	**.0000**	**.0001**	**-.0001**	**455.9**	**.0000**	**.0000**	**-.0004**
Stddev	.0034	5.8	.0011	.0002	.0000	5.2	.001	.0000	.0001
%RSD	560.2	1.127	4123.	154.1	26.40	1.150	9379.	101.0	29.09
#1	.0018	516.1	-.0005	.0003	-.0001	461.7	-.0002	.0000	-.0006
#2	-.0045	505.9	-.0007	-.0001	-.0001	454.2	.0007	.0001	-.0004
#3	.0009	515.6	.0013	.0001	-.0001	451.7	-.0005	.0000	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**F 471.0**	**.1969**	**F .0027**	**519.5**	**-.0007**	**.0002**	**.2924**	**.0000**
Stddev	.0018	9.5	.0062	.0001	.4	.0001	.0002	.0057	.000
%RSD	100.1	2.013	3.143	3.835	.0827	19.65	77.43	1.953	1242.
#1	.0028	476.0	.2026	.0026	519.9	-.0008	.0003	.2906	.0000
#2	-.0003	460.0	.1903	.0026	519.1	-.0005	.0000	.2988	-.0003
#3	.0029	476.9	.1976	.0028	519.5	-.0007	.0003	.2879	.0002
Check ?	Chk Pass	Chk Fail	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit		240.0		.0010					
Low Limit		160.0		-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0019**	**.0000**	**.1854**	**.0003**	**.0003**	**-.0004**	**.0000**	**-.0007**
Stddev	.0028	.0024	.0023	.0010	.0005	.0001	.0002	.002	.0002
%RSD	282300.	120.9	61590.	.5379	157.2	28.00	36.67	334900.	34.23
#1	-.0025	.0011	.0025	.1844	.0007	.0003	-.0003	.0009	-.0008
#2	.0030	.0046	-.0004	.1864	-.0002	.0004	-.0004	.0011	-.0004
#3	-.0005	.0002	-.0021	.1853	.0005	.0003	-.0006	-.0019	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 9/21/2022 11:05:12 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0025**
Stddev	.0001
%RSD	2.496
#1	.0025
#2	.0026
#3	.0025
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**785.44**	**2523.9**	**18637.**	**4254.9**
Stddev	.70	6.3	39.	50.0
%RSD	.08968	.25151	.21155	1.1747
#1	785.87	2520.8	18597.	4232.3
#2	785.81	2531.2	18675.	4312.2
#3	784.62	2519.7	18639.	4220.3

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 9/21/2022 11:15:11 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9928**	**514.3**	**.9146**	**.4995**	**.4966**	**464.6**	**.9563**	**.4761**	**.4855**
Stddev	.0019	3.0	.0018	.0008	.0007	4.7	.0013	.0009	.0023
%RSD	.1891	.5777	.1966	.1578	.1329	1.003	.1351	.1984	.4672
#1	.9907	515.1	.9149	.4986	.4967	460.7	.9576	.4771	.4839
#2	.9941	516.7	.9127	.5001	.4973	463.3	.9550	.4753	.4881
#3	.9937	511.0	.9163	.4997	.4960	469.7	.9564	.4759	.4846
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5600**	**189.9**	**-.0148**	**.9852**	**521.2**	**.5116**	**.8581**	**.2824**	**.9050**
Stddev	.0015	.1	.0118	.0005	.3	.0015	.0005	.0037	.0019
%RSD	.2668	.0784	79.61	.0508	.0592	.2884	.0575	1.293	.2125
#1	.5592	190.0	-.0038	.9847	521.6	.5116	.8587	.2784	.9072
#2	.5590	189.7	-.0133	.9857	521.0	.5100	.8581	.2856	.9038
#3	.5617	189.9	-.0273	.9852	521.1	.5130	.8577	.2832	.9040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9900**	**.9421**	**.8825**	**.1450**	**.8874**	**.9309**	**.9881**	**.8604**	**.5101**
Stddev	.0025	.0058	.0026	.0005	.0009	.0017	.0011	.0026	.0002
%RSD	.2542	.6139	.2968	.3656	.0976	.1848	.1110	.2987	.0303
#1	.9929	.9430	.8840	.1447	.8879	.9307	.9871	.8625	.5103
#2	.9886	.9359	.8795	.1447	.8864	.9327	.9879	.8575	.5101
#3	.9884	.9473	.8840	.1456	.8879	.9293	.9893	.8613	.5100
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 9/21/2022 11:15:11 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	.9203
Stddev	.0016
%RSD	.1711
#1	.9220
#2	.9198
#3	.9190
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	773.92	2556.0	18734.	4304.6
Stddev	2.65	5.4	42.	17.9
%RSD	.34253	.21136	.22201	.41673
#1	770.92	2550.0	18765.	4304.0
#2	774.88	2560.2	18750.	4322.7
#3	775.95	2557.9	18686.	4286.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 11:21:32 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2545	40.43	1.991	2.024	2.042	40.39	2.016	2.015	2.013
Stddev	.0011	.16	.005	.002	.005	.23	.003	.003	.006
%RSD	.4514	.4057	.2707	.1014	.2623	.5754	.1288	.1236	.2803
#1	.2542	40.62	1.994	2.026	2.048	40.66	2.016	2.013	2.013
#2	.2558	40.32	1.985	2.023	2.040	40.27	2.013	2.013	2.019
#3	.2535	40.35	1.994	2.022	2.037	40.25	2.018	2.017	2.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.037	40.63	40.21	2.017	40.61	2.045	1.998	40.80	1.990
Stddev	.008	.08	.09	.009	.08	.005	.002	.07	.004
%RSD	.3836	.1870	.2334	.4581	.2054	.2690	.1163	.1653	.1927
#1	2.034	40.66	40.31	2.027	40.66	2.041	1.997	40.88	1.992
#2	2.032	40.67	40.20	2.014	40.65	2.044	1.996	40.75	1.986
#3	2.046	40.54	40.13	2.009	40.51	2.052	2.000	40.77	1.992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.025	2.004	1.993	2.373	1.994	2.067	2.036	2.022	2.002
Stddev	.001	.002	.005	.004	.004	.003	.004	.005	.007
%RSD	.0713	.0978	.2365	.1673	.2012	.1632	.1909	.2578	.3408
#1	2.024	2.002	1.991	2.374	1.997	2.070	2.033	2.022	1.995
#2	2.024	2.006	1.990	2.369	1.990	2.063	2.034	2.027	2.009
#3	2.027	2.002	1.999	2.377	1.997	2.068	2.041	2.016	2.002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 11:21:32 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	2.007
Stddev	.002
%RSD	.0918
#1	2.008
#2	2.006
#3	2.009
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	872.16	2760.3	20285.	4384.6
Stddev	2.56	8.3	109.	26.5
%RSD	.29315	.30046	.53539	.60522
#1	874.05	2764.6	20402.	4354.0
#2	873.19	2765.6	20187.	4399.8
#3	869.25	2750.8	20267.	4400.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 11:27:33 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0028	-.0002	-.0001	.0001	.0025	.0000	.0000	.0001
Stddev	.0003	.0014	.0011	.0002	.0001	.0033	.0001	.000	.0001
%RSD	5538.	50.36	480.0	132.5	49.62	130.0	167.7	720.5	109.9
#1	-.0002	.0034	-.0013	-.0002	.0001	-.0013	.0000	.0001	.0002
#2	.0003	.0037	.0009	-.0003	.0001	.0043	.0001	-.0001	.0000
#3	-.0001	.0012	-.0003	.0001	.0000	.0044	.0000	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0000	-.0050	F .0019	-.0153	.0000	-.0002	.0054	.0000
Stddev	.0006	.0012	.0094	.0003	.0210	.000	.0001	.0052	.000
%RSD	346.3	3141.	187.2	13.11	137.1	199.3	62.82	95.17	341.9
#1	.0007	.0006	.0040	.0017	-.0012	.0000	-.0001	.0045	-.0001
#2	-.0005	.0008	-.0148	.0019	-.0395	.0000	-.0001	.0110	.0001
#3	.0003	-.0013	-.0042	.0022	-.0053	.0000	-.0003	.0008	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0003	.0007	.0007	.0001	.0000	.0000	-.0009	-.0001
Stddev	.0005	.0016	.0005	.0005	.0002	.0000	.000	.0010	.0003
%RSD	834.5	470.1	70.88	71.46	208.1	85.71	263.8	110.5	238.5
#1	-.0005	-.0020	.0010	.0003	.0003	.0000	.0000	.0002	.0002
#2	.0004	-.0003	.0001	.0012	.0001	.0001	.0000	-.0014	-.0004
#3	-.0001	.0012	.0008	.0005	-.0001	.0001	.0000	-.0015	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 11:27:33 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0004**
Stddev	.0001
%RSD	22.33
#1	.0003
#2	.0003
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.11**	**2915.8**	**20786.**	**4474.0**
Stddev	.78	5.2	77.	34.3
%RSD	.08141	.17829	.37217	.76733
#1	957.30	2916.7	20867.	4446.4
#2	956.25	2910.2	20714.	4463.1
#3	957.77	2920.4	20776.	4512.4

Zoom In Zoom Out

Sample Name: MP41231-MB1 Acquired: 9/21/2022 11:31:59 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0251**	**-.0002**	**.0005**	**.0000**	**.0226**	**.0000**	**-.0001**	**.0006**
Stddev	.0001	.0099	.0005	.0002	.000	.0016	.000	.0001	.0003
%RSD	306.0	39.52	208.0	40.35	142.1	6.942	374.9	72.54	49.28
#1	-.0001	.0292	-.0003	.0005	-.0001	.0228	.0000	-.0001	.0006
#2	.0000	.0324	.0003	.0008	.0000	.0241	.0000	-.0002	.0003
#3	.0002	.0138	-.0007	.0003	.0000	.0210	-.0001	.0000	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0451**	**-.0024**	**.0007**	**.0162**	**.0007**	**-.0001**	**.0127**	**.0000**
Stddev	.0002	.0019	.0136	.0010	.0105	.0001	.0003	.0051	.0002
%RSD	28.15	4.144	560.7	160.1	64.49	10.13	473.6	40.41	835.4
#1	.0007	.0434	.0117	.0004	.0041	.0006	.0002	.0186	.0000
#2	.0010	.0447	-.0153	-.0002	.0219	.0007	-.0003	.0092	.0002
#3	.0006	.0471	-.0036	.0018	.0226	.0006	-.0001	.0103	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0011**	**.0026**	**.0147**	F **.0252**	**.0000**	**.0009**	**-.0031**	**.0001**
Stddev	.000	.0009	.0012	.0029	.0002	.000	.0001	.0006	.0001
%RSD	706.5	81.84	45.20	19.97	.8940	1225.	7.234	18.52	96.32
#1	-.0004	.0001	.0024	.0131	.0254	.0000	.0009	-.0025	.0000
#2	.0002	.0013	.0015	.0181	.0249	-.0001	.0010	-.0037	.0003
#3	.0000	.0020	.0039	.0129	.0252	.0000	.0009	-.0032	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.0250				
Low Limit					-.0250				

Zoom In Zoom Out

Sample Name: MP41231-MB1 Acquired: 9/21/2022 11:31:59 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0031**
Stddev	.0001
%RSD	1.889
#1	.0031
#2	.0031
#3	.0032
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.23**	**2846.1**	**20269.**	**4471.3**
Stddev	2.94	2.8	69.	20.3
%RSD	.31679	.09909	.33865	.45481
#1	927.28	2842.8	20320.	4493.8
#2	927.81	2847.7	20191.	4454.2
#3	932.62	2847.6	20297.	4466.0

Zoom In Zoom Out

Sample Name: MP41231-B1 Acquired: 9/21/2022 11:36:54 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0435**	**26.78**	**1.898**	**2.017**	**.0509**	**24.94**	**.0491**	**.4942**	**.2051**
Stddev	.0003	.10	.004	.007	.0000	.14	.0001	.0010	.0016
%RSD	.6388	.3876	.2129	.3587	.0913	.5812	.1276	.1930	.7718
#1	.0432	26.77	1.901	2.010	.0509	24.93	.0492	.4953	.2041
#2	.0437	26.69	1.893	2.018	.0508	24.81	.0490	.4934	.2069
#3	.0436	26.90	1.900	2.024	.0509	25.10	.0491	.4940	.2043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2576**	**26.06**	**24.51**	F **.0024**	**25.13**	**.5141**	**.4992**	**23.47**	**.4971**
Stddev	.0006	.05	.10	.0006	.06	.0022	.0011	.09	.0013
%RSD	.2318	.2106	.3897	23.98	.2372	.4197	.2170	.3831	.2529
#1	.2571	26.02	24.42	.0030	25.15	.5117	.4994	23.40	.4976
#2	.2582	26.04	24.50	.0020	25.06	.5158	.4980	23.44	.4956
#3	.2575	26.12	24.61	.0020	25.18	.5148	.5002	23.58	.4979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4885**	**.4841**	**1.892**	**.6043**	**.5162**	**.5241**	**.5247**	**1.952**	**.5018**
Stddev	.0002	.0016	.006	.0008	.0009	.0024	.0014	.014	.0011
%RSD	.0473	.3262	.3283	.1362	.1823	.4528	.2574	.7060	.2240
#1	.4886	.4827	1.898	.6050	.5173	.5224	.5232	1.965	.5005
#2	.4887	.4838	1.886	.6045	.5157	.5232	.5258	1.951	.5022
#3	.4882	.4858	1.890	.6034	.5156	.5268	.5251	1.938	.5027
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41231-B1 Acquired: 9/21/2022 11:36:54 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.4894**
Stddev	.0004
%RSD	.0856
#1	.4899
#2	.4891
#3	.4894
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**880.10**	**2762.9**	**20081.**	**4419.3**
Stddev	1.38	4.5	188.	47.2
%RSD	.15639	.16173	.93422	1.0686
#1	879.10	2757.7	20267.	4396.9
#2	879.52	2764.8	19892.	4473.6
#3	881.67	2766.0	20083.	4387.6

Zoom In Zoom Out

Sample Name: MP41228-B1 Acquired: 9/21/2022 11:41:26 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0455**	**27.49**	**1.969**	**2.074**	**.0523**	**25.58**	**.0509**	**.5094**	**.2108**
Stddev	.0003	.10	.002	.007	.0003	.12	.0002	.0005	.0006
%RSD	.6893	.3689	.0926	.3282	.4877	.4776	.4263	.0975	.2730
#1	.0451	27.61	1.969	2.082	.0526	25.71	.0507	.5095	.2103
#2	.0456	27.47	1.967	2.072	.0521	25.56	.0508	.5089	.2106
#3	.0457	27.41	1.971	2.069	.0522	25.47	.0512	.5099	.2114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2637**	**26.60**	**25.15**	F **.0009**	**25.82**	**.5267**	**.5125**	**24.03**	**.5112**
Stddev	.0003	.10	.08	.0012	.14	.0018	.0019	.06	.0009
%RSD	.1158	.3921	.3349	137.8	.5411	.3461	.3741	.2622	.1776
#1	.2634	26.72	25.24	.0023	25.98	.5246	.5117	24.10	.5103
#2	.2640	26.56	25.12	-.0001	25.75	.5273	.5110	24.03	.5112
#3	.2637	26.53	25.08	.0005	25.73	.5281	.5146	23.97	.5121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5049**	**.5025**	**1.967**	**.6360**	**.5075**	**.5384**	**.5374**	**2.041**	**.5118**
Stddev	.0009	.0014	.001	.0004	.0008	.0020	.0007	.010	.0022
%RSD	.1718	.2757	.0447	.0628	.1648	.3631	.1305	.4914	.4266
#1	.5058	.5029	1.966	.6356	.5068	.5406	.5366	2.052	.5104
#2	.5041	.5036	1.967	.6359	.5072	.5373	.5375	2.039	.5107
#3	.5047	.5009	1.967	.6364	.5084	.5372	.5380	2.032	.5143
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41228-B1 Acquired: 9/21/2022 11:41:26 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.5047**
Stddev	.0007
%RSD	.1369
#1	.5046
#2	.5040
#3	.5054
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**900.60**	**2826.2**	**20571.**	**4454.7**
Stddev	.98	4.9	76.	30.6
%RSD	.10827	.17304	.36841	.68630
#1	900.78	2825.4	20657.	4421.8
#2	901.47	2831.5	20515.	4482.3
#3	899.55	2821.9	20540.	4459.9

Zoom In Zoom Out

Sample Name: FA98986-4 Acquired: 9/21/2022 11:45:59 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**107.5**	**.0094**	**.1522**	**.0020**	**30.05**	**.0007**	**.0027**	**.0802**
Stddev	.0002	.5	.0001	.0003	.0001	.13	.0001	.0000	.0004
%RSD	10.93	.4750	.9867	.2266	4.973	.4481	10.54	1.672	.5072
#1	.0016	107.3	.0094	.1518	.0020	29.99	.0007	.0028	.0803
#2	.0015	107.2	.0093	.1523	.0021	29.96	.0007	.0027	.0805
#3	.0013	108.1	.0094	.1524	.0019	30.21	.0008	.0027	.0797

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0304**	**22.65**	**1.159**	**.0335**	**3.091**	**.1362**	**.0036**	**.2101**	**.0277**
Stddev	.0005	.10	.016	.0016	.021	.0003	.0000	.0057	.0003
%RSD	1.658	.4614	1.399	4.825	.6857	.2081	.8009	2.704	1.058
#1	.0299	22.56	1.168	.0316	3.094	.1360	.0036	.2082	.0274
#2	.0309	22.62	1.140	.0344	3.111	.1365	.0036	.2056	.0278
#3	.0305	22.77	1.168	.0345	3.068	.1361	.0036	.2165	.0280

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1670**	**.0018**	**.0021**	**12.99**	**.0274**	**.1178**	**1.153**	**-.0008**	**.0712**
Stddev	.0008	.0008	.0017	.01	.0003	.0008	.003	.0007	.0003
%RSD	.5067	43.34	80.94	.1136	.9260	.6413	.2198	91.29	.4502
#1	.1677	.0018	.0006	12.99	.0277	.1176	1.156	-.0012	.0713
#2	.1673	.0025	.0018	12.98	.0272	.1171	1.151	-.0011	.0714
#3	.1661	.0010	.0039	13.01	.0274	.1186	1.152	.0000	.0708

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1359**
Stddev	.0003
%RSD	.2013
#1	.1357
#2	.1362
#3	.1358

Zoom In Zoom Out

Sample Name: FA98986-4 Acquired: 9/21/2022 11:45:59 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**896.18**	**3080.0**	**22005.**	**4854.7**
Stddev	1.34	4.6	39.	79.6
%RSD	.14924	.15006	.17855	1.6400
#1	896.69	3076.5	21983.	4941.3
#2	894.66	3078.2	21982.	4838.0
#3	897.19	3085.2	22050.	4784.7

Zoom In Zoom Out

Sample Name: MP41231-D1 Acquired: 9/21/2022 11:50:41 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**88.42**	**.0077**	**.1246**	**.0015**	**24.20**	**.0010**	**.0022**	**.0681**
Stddev	.0003	.04	.0008	.0003	.0001	.03	.0001	.0001	.0004
%RSD	21.94	.0426	10.27	.2292	4.591	.1212	6.871	3.369	.5635
#1	.0012	88.38	.0070	.1245	.0016	24.22	.0011	.0022	.0684
#2	.0017	88.42	.0075	.1249	.0015	24.22	.0010	.0021	.0677
#3	.0012	88.46	.0086	.1244	.0015	24.17	.0009	.0022	.0683

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0270**	**19.56**	**.9805**	**.0277**	**2.641**	**.1127**	**.0028**	**.1648**	**.0233**
Stddev	.0003	.02	.0174	.0012	.026	.0004	.0001	.0022	.0001
%RSD	1.158	.0905	1.779	4.263	.9924	.3119	2.473	1.343	.2413
#1	.0267	19.53	.9990	.0281	2.634	.1128	.0027	.1672	.0234
#2	.0272	19.56	.9782	.0264	2.670	.1123	.0027	.1644	.0233
#3	.0273	19.57	.9643	.0286	2.619	.1129	.0029	.1628	.0233

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1473**	**.0020**	**.0025**	**14.21**	**.0270**	**.1033**	**.9776**	**-.0015**	**.0596**
Stddev	.0008	.0013	.0023	.00	.0003	.0004	.0032	.0008	.0006
%RSD	.5158	65.77	94.01	.0302	1.031	.4076	.3264	52.47	1.025
#1	.1482	.0034	.0013	14.21	.0271	.1035	.9766	-.0023	.0597
#2	.1467	.0017	.0009	14.21	.0273	.1028	.9750	-.0015	.0589
#3	.1471	.0009	.0051	14.22	.0267	.1035	.9811	-.0007	.0601

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1262**
Stddev	.0003
%RSD	.2629
#1	.1258
#2	.1263
#3	.1264

Zoom In Zoom Out

Sample Name: MP41231-D1 Acquired: 9/21/2022 11:50:41 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**898.40**	**3024.0**	**21722.**	**4779.1**
Stddev	2.56	4.4	161.	34.9
%RSD	.28461	.14393	.74154	.72943
#1	901.34	3029.0	21640.	4767.4
#2	896.80	3022.1	21908.	4751.5
#3	897.04	3021.0	21619.	4818.3

Zoom In Zoom Out

Sample Name: MP41231-SD1 Acquired: 9/21/2022 11:55:25 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**118.1**	**.0072**	**.1659**	**.0022**	**33.25**	**.0008**	**.0033**	**.0878**
Stddev	.0030	.5	.0015	.0010	.0001	.17	.0001	.0002	.0012
%RSD	218.5	.4342	20.23	.5854	2.565	.5043	9.509	7.246	1.402
#1	.0047	117.6	.0081	.1658	.0021	33.15	.0009	.0034	.0866
#2	-.0010	118.0	.0055	.1650	.0022	33.16	.0007	.0035	.0891
#3	.0004	118.6	.0081	.1669	.0022	33.44	.0008	.0031	.0877

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0327**	**25.13**	**1.158**	**.0390**	**3.436**	**.1516**	**.0023**	**.2099**	**.0300**
Stddev	.0017	.10	.133	.0021	.141	.0010	.0005	.0269	.0010
%RSD	5.081	.3929	11.49	5.272	4.100	.6741	23.14	12.80	3.250
#1	.0346	25.03	1.085	.0398	3.299	.1527	.0017	.2151	.0292
#2	.0320	25.13	1.076	.0367	3.580	.1514	.0026	.1808	.0298
#3	.0315	25.23	1.311	.0406	3.430	.1507	.0026	.2338	.0311

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1695**	**.0022**	**.0044**	**14.44**	**.0325**	**.1292**	**1.259**	**-.0034**	**.0782**
Stddev	.0012	.0063	.0099	.01	.0015	.0006	.004	.0043	.0018
%RSD	.6995	280.0	224.5	.0777	4.607	.4856	.3003	128.0	2.344
#1	.1706	-.0002	.0034	14.44	.0324	.1291	1.259	.0010	.0802
#2	.1683	-.0025	.0147	14.45	.0311	.1287	1.263	-.0035	.0777
#3	.1696	.0094	-.0049	14.43	.0341	.1299	1.256	-.0076	.0766

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1537**
Stddev	.0001
%RSD	.0809
#1	.1538
#2	.1537
#3	.1536

Zoom In Zoom Out

Sample Name: MP41231-SD1 Acquired: 9/21/2022 11:55:25 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**945.10**	**2959.1**	**21180.**	**4570.4**
Stddev	1.96	8.5	83.	31.0
%RSD	.20784	.28717	.38961	.67828
#1	946.88	2968.7	21106.	4606.2
#2	942.99	2952.5	21164.	4552.6
#3	945.42	2956.2	21269.	4552.4

Zoom In Zoom Out

Sample Name: MP41231-PS1 Acquired: 9/21/2022 12:00:12 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0425**	**107.6**	**.0941**	**.3710**	**.0473**	**33.84**	**.0445**	**.0466**	**.1243**
Stddev	.0005	.0	.0016	.0004	.0001	.03	.0001	.0001	.0001
%RSD	1.135	.0232	1.680	.1179	.2833	.0867	.1454	.2943	.1202
#1	.0425	107.6	.0945	.3706	.0473	33.81	.0445	.0465	.1242
#2	.0430	107.6	.0924	.3715	.0472	33.87	.0444	.0465	.1244
#3	.0420	107.6	.0954	.3708	.0475	33.83	.0445	.0468	.1244

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1231**	**24.77**	**9.645**	**.0349**	**7.569**	**.1806**	**.0874**	**8.355**	**.1142**
Stddev	.0004	.05	.012	.0007	.013	.0006	.0004	.010	.0003
%RSD	.3004	.1982	.1260	2.058	.1753	.3376	.4804	.1207	.2770
#1	.1230	24.71	9.634	.0346	7.583	.1803	.0869	8.360	.1143
#2	.1235	24.79	9.643	.0357	7.557	.1813	.0877	8.344	.1139
#3	.1228	24.80	9.658	.0344	7.568	.1803	.0874	8.363	.1145

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2130**	**.0882**	**.0846**	**13.20**	**.0703**	**.1604**	**1.255**	**.0921**	**.1152**
Stddev	.0015	.0007	.0011	.03	.0004	.0001	.004	.0013	.0004
%RSD	.7071	.7448	1.283	.2418	.5299	.0915	.2815	1.367	.3714
#1	.2146	.0884	.0857	13.23	.0707	.1605	1.254	.0917	.1148
#2	.2116	.0888	.0847	13.17	.0701	.1603	1.258	.0936	.1156
#3	.2128	.0875	.0836	13.21	.0701	.1603	1.251	.0912	.1151

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3464**
Stddev	.0006
%RSD	.1622
#1	.3461
#2	.3459
#3	.3470

Zoom In Zoom Out

Sample Name: MP41231-PS1 Acquired: 9/21/2022 12:00:12 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**884.11**	**3064.7**	**21794.**	**4868.9**
Stddev	1.88	2.8	71.	26.8
%RSD	.21273	.09244	.32750	.54991
#1	881.97	3067.8	21840.	4850.8
#2	884.87	3063.8	21712.	4856.2
#3	885.49	3062.4	21830.	4899.6

Zoom In Zoom Out

Sample Name: MP41231-S1 Acquired: 9/21/2022 12:04:49 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0419**	**141.5**	**1.690**	**2.014**	**.0490**	**59.40**	**.0455**	**.4487**	**.2718**
Stddev	.0005	.4	.003	.003	.0002	.26	.0001	.0006	.0007
%RSD	1.102	.3038	.1519	.1547	.3159	.4382	.2381	.1297	.2455
#1	.0420	142.0	1.691	2.017	.0492	59.66	.0455	.4492	.2717
#2	.0424	141.1	1.687	2.011	.0489	59.14	.0454	.4480	.2712
#3	.0414	141.5	1.692	2.015	.0490	59.38	.0456	.4489	.2725

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2794**	**53.03**	**24.14**	**.0434**	**26.75**	**.6216**	**.4433**	**22.03**	**.4802**
Stddev	.0007	.01	.02	.0002	.11	.0010	.0012	.02	.0011
%RSD	.2663	.0212	.1032	.4714	.4285	.1613	.2667	.1085	.2322
#1	.2785	53.03	24.16	.0435	26.82	.6205	.4439	22.06	.4794
#2	.2799	53.04	24.11	.0432	26.82	.6222	.4419	22.02	.4796
#3	.2798	53.02	24.16	.0436	26.62	.6222	.4441	22.01	.4815

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6701**	**.3091**	**1.701**	**10.62**	**.4624**	**.6242**	**1.423**	**1.980**	**.5364**
Stddev	.0012	.0008	.005	.03	.0003	.0025	.006	.011	.0016
%RSD	.1731	.2557	.2805	.2870	.0564	.4054	.4217	.5316	.3052
#1	.6690	.3083	1.703	10.65	.4621	.6270	1.416	1.969	.5352
#2	.6700	.3099	1.695	10.59	.4626	.6221	1.425	1.990	.5356
#3	.6713	.3092	1.704	10.63	.4625	.6235	1.428	1.982	.5382

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5958**
Stddev	.0018
%RSD	.2999
#1	.5972
#2	.5938
#3	.5965

Zoom In Zoom Out

Sample Name: MP41231-S1 Acquired: 9/21/2022 12:04:49 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**861.77**	**3039.5**	**21902.**	**4822.6**
Stddev	.93	3.6	107.	36.2
%RSD	.10811	.11773	.48672	.75116
#1	862.47	3035.4	22012.	4782.5
#2	860.72	3041.4	21893.	4852.9
#3	862.13	3041.8	21800.	4832.4

Zoom In Zoom Out

Sample Name: MP41231-S2 Acquired: 9/21/2022 12:09:21 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0412**	**138.4**	**1.703**	**2.039**	**.0488**	**90.09**	**.0454**	**.4491**	**.2708**
Stddev	.0009	.4	.006	.004	.0001	.21	.0002	.0009	.0007
%RSD	2.228	.2566	.3573	.2134	.2917	.2384	.3325	.1945	.2471
#1	.0414	138.1	1.707	2.035	.0490	90.17	.0453	.4488	.2702
#2	.0402	138.2	1.696	2.040	.0487	89.84	.0452	.4484	.2715
#3	.0421	138.8	1.707	2.043	.0488	90.25	.0455	.4501	.2706

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2757**	**47.26**	**23.99**	**.0445**	**26.58**	**.6090**	**.4452**	**21.96**	**.4788**
Stddev	.0002	.15	.04	.0008	.04	.0007	.0010	.06	.0015
%RSD	.0656	.3161	.1636	1.755	.1381	.1176	.2170	.2953	.3035
#1	.2758	47.15	23.95	.0442	26.56	.6082	.4462	21.90	.4791
#2	.2758	47.20	23.99	.0438	26.55	.6096	.4443	21.94	.4773
#3	.2755	47.43	24.02	.0453	26.62	.6092	.4452	22.03	.4801

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6675**	**.3251**	**1.708**	**13.76**	**.4602**	**.7528**	**1.373**	**1.931**	**.5388**
Stddev	.0022	.0006	.004	.01	.0006	.0013	.003	.007	.0004
%RSD	.3228	.1803	.2388	.0901	.1200	.1738	.1796	.3593	.0677
#1	.6664	.3252	1.708	13.75	.4596	.7513	1.374	1.925	.5392
#2	.6700	.3245	1.704	13.76	.4602	.7538	1.375	1.939	.5386
#3	.6662	.3257	1.712	13.77	.4607	.7533	1.370	1.929	.5385

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5966**
Stddev	.0012
%RSD	.2047
#1	.5970
#2	.5952
#3	.5975

Zoom In Zoom Out

Sample Name: MP41231-S2 Acquired: 9/21/2022 12:09:21 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**855.22**	**2974.2**	**21370.**	**4765.3**
Stddev	.79	6.7	17.	20.1
%RSD	.09237	.22477	.07971	.42274
#1	855.94	2969.9	21390.	4757.7
#2	854.37	2981.9	21364.	4788.1
#3	855.33	2970.8	21357.	4750.0

Zoom In Zoom Out

Sample Name: FA98986-5 Acquired: 9/21/2022 12:13:53 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**104.6**	**.0101**	**.2043**	**.0012**	**38.87**	**.0007**	**.0026**	**.0769**
Stddev	.0005	.6	.0006	.0008	.0000	.21	.0000	.0000	.0005
%RSD	26.47	.5262	5.739	.4090	3.041	.5526	5.147	1.613	.5997
#1	.0023	104.1	.0100	.2036	.0012	38.68	.0007	.0026	.0768
#2	.0015	104.5	.0096	.2042	.0013	38.83	.0007	.0026	.0765
#3	.0016	105.2	.0108	.2052	.0012	39.10	.0006	.0027	.0774

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0482**	**25.09**	**1.015**	**.0413**	**2.906**	**.1686**	**.0029**	**.2167**	**.0281**
Stddev	.0003	.02	.003	.0011	.028	.0009	.0001	.0049	.0002
%RSD	.5813	.0620	.2749	2.718	.9755	.5133	2.000	2.247	.6993
#1	.0481	25.08	1.015	.0404	2.920	.1676	.0029	.2116	.0279
#2	.0485	25.09	1.012	.0425	2.926	.1691	.0028	.2173	.0283
#3	.0480	25.11	1.018	.0408	2.874	.1692	.0028	.2213	.0280

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4531**	**.0014**	**.0023**	**15.64**	**.0288**	**.2069**	**1.151**	**-.0007**	**.0690**
Stddev	.0040	.0015	.0012	.02	.0002	.0009	.001	.0022	.0007
%RSD	.8728	102.1	52.15	.1021	.6754	.4441	.0483	303.4	1.082
#1	.4498	-.0001	.0026	15.62	.0287	.2060	1.151	-.0022	.0683
#2	.4521	.0016	.0010	15.64	.0286	.2070	1.150	.0018	.0689
#3	.4575	.0028	.0033	15.65	.0290	.2079	1.151	-.0018	.0698

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2580**
Stddev	.0009
%RSD	.3370
#1	.2572
#2	.2581
#3	.2589

Zoom In Zoom Out

Sample Name: FA98986-5 Acquired: 9/21/2022 12:13:53 Type: Unk
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.60**	**3025.2**	**21650.**	**4841.2**
Stddev	3.84	2.0	115.	25.3
%RSD	.42278	.06491	.52983	.52157
#1	909.33	3026.3	21779.	4859.3
#2	910.27	3026.3	21613.	4851.9
#3	903.20	3022.9	21559.	4812.3

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 12:18:36 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2564**	**40.28**	**2.008**	**2.033**	**2.032**	**40.20**	**2.014**	**2.016**	**2.019**
Stddev	.0015	.10	.013	.004	.003	.12	.004	.002	.003
%RSD	.5911	.2447	.6544	.2065	.1421	.3103	.1867	.1159	.1625
#1	.2548	40.23	1.993	2.033	2.031	40.12	2.010	2.014	2.017
#2	.2568	40.40	2.017	2.037	2.036	40.34	2.017	2.018	2.017
#3	.2577	40.23	2.015	2.028	2.031	40.14	2.016	2.017	2.022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**40.52**	**40.34**	**2.025**	**40.23**	**2.047**	**2.009**	**40.87**	**2.010**
Stddev	.005	.04	.06	.010	.08	.002	.006	.05	.010
%RSD	.2306	.1095	.1608	.4816	.1896	.0808	.2853	.1234	.4840
#1	2.047	40.51	40.28	2.023	40.30	2.048	2.003	40.86	1.999
#2	2.039	40.49	40.41	2.036	40.14	2.045	2.014	40.92	2.013
#3	2.038	40.57	40.33	2.016	40.24	2.046	2.011	40.82	2.018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.010**	**2.013**	**2.008**	**2.377**	**1.992**	**2.063**	**2.031**	**2.010**	**2.018**
Stddev	.006	.003	.009	.003	.005	.005	.003	.020	.006
%RSD	.3166	.1487	.4602	.1217	.2447	.2681	.1600	.9694	.2986
#1	2.014	2.010	1.998	2.376	1.986	2.064	2.035	2.000	2.016
#2	2.002	2.016	2.013	2.381	1.995	2.068	2.031	1.998	2.013
#3	2.013	2.014	2.014	2.375	1.993	2.057	2.028	2.033	2.025
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 12:18:36 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.003**
Stddev	.005
%RSD	.2395
#1	1.997
#2	2.005
#3	2.006
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**894.86**	**2810.5**	**20616.**	**4536.1**
Stddev	3.17	9.0	43.	37.8
%RSD	.35370	.32033	.20694	.83263
#1	894.27	2820.7	20662.	4564.5
#2	898.28	2807.2	20577.	4550.6
#3	892.03	2803.6	20610.	4493.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 12:23:07 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0071**	**.0000**	**.0001**	**.0002**	**.0064**	**.0001**	**.0001**	**.0000**
Stddev	.0007	.0034	.001	.0000	.0001	.0024	.0000	.0000	.0002
%RSD	10830.	47.17	8833.	66.90	48.83	37.60	31.64	9.626	458.3
#1	.0007	.0099	-.0005	.0001	.0003	.0087	.0001	.0001	-.0002
#2	.0000	.0080	.0012	.0000	.0002	.0039	.0001	.0002	.0001
#3	-.0007	.0034	-.0007	.0001	.0001	.0067	.0001	.0002	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0053**	**.0061**	F **.0013**	**.0055**	**.0001**	**.0001**	**-.0019**	**-.0001**
Stddev	.0003	.0002	.0226	.0002	.0162	.0000	.0001	.0020	.0001
%RSD	218.7	4.325	368.7	11.66	293.6	2.495	142.6	104.6	151.4
#1	-.0002	.0053	.0309	.0015	.0205	.0001	.0000	-.0030	-.0002
#2	.0002	.0056	.0010	.0012	.0076	.0001	.0001	-.0033	-.0001
#3	-.0004	.0051	-.0135	.0014	-.0116	.0001	.0001	.0004	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0005**	**.0001**	**.0025**	**.0001**	**.0001**	**.0003**	**.0002**	**-.0001**
Stddev	.0009	.0013	.0024	.0004	.0003	.0001	.0001	.0005	.0000
%RSD	264.4	271.6	1827.	14.75	500.4	46.75	28.72	279.3	71.08
#1	-.0013	-.0004	-.0024	.0023	-.0003	.0001	.0003	.0005	.0000
#2	.0005	-.0002	.0022	.0023	.0001	.0001	.0004	-.0004	-.0001
#3	-.0002	.0020	.0006	.0029	.0004	.0002	.0002	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 12:23:07 Type: QC
Method: 60102007_COMBO_09222021(v682) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0004**
Stddev	.0000
%RSD	10.82
#1	.0004
#2	.0004
#3	.0003

Check ? Chk Pass
High Limit
Low Limit

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**973.43**	**2923.1**	**20992.**	**4530.1**
Stddev	6.90	13.1	67.	1.8
%RSD	.70842	.44816	.32090	.04066
#1	981.14	2938.2	21070.	4529.7
#2	971.28	2915.9	20953.	4532.1
#3	967.86	2915.2	20954.	4528.5

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:42:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0008**	**-.0010**	**-.0001**	**.0046**	**.0000**	**.0035**	**-.0004**	**-.0003**	**.0000**
Stddev	.0001	.0009	.0000	.0001	.000	.0004	.0001	.0000	.0001
%RSD	8.331	85.67	14.89	2.687	238.5	10.33	17.46	7.468	328.1
#1	-.0009	-.0019	-.0001	.0047	-.0001	.0031	-.0003	-.0003	.0001
#2	-.0008	-.0001	-.0002	.0047	.0000	.0038	-.0004	-.0003	-.0001
#3	-.0007	-.0011	-.0001	.0044	.0000	.0034	-.0003	-.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0011**	**.0002**	**.0025**	**-.0025**	**-.0003**	**.0001**	**.0002**	**-.0081**	**-.0001**
Stddev	.0000	.0001	.0017	.0006	.0002	.0001	.0000	.0013	.0000
%RSD	3.922	64.84	66.72	22.60	74.54	57.25	24.34	15.88	31.45
#1	.0011	.0003	.0033	-.0021	-.0004	.0001	.0002	-.0092	-.0001
#2	.0011	.0000	.0036	-.0032	-.0004	.0001	.0001	-.0067	-.0001
#3	.0011	.0002	.0006	-.0023	.0000	.0000	.0002	-.0086	-.0001

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0001**	**.0004**	**.0000**	**.0032**	**.0001**	**-.0003**	**.0007**	**.0000**	**.0000**
Stddev	.0003	.0000	.000	.0002	.0000	.0004	.0000	.0002	.0000
%RSD	248.2	10.55	145.2	6.705	38.14	159.6	3.580	2074.	117.1
#1	-.0004	.0005	-.0001	.0034	.0001	-.0005	.0007	-.0002	.0000
#2	-.0001	.0004	-.0001	.0032	.0001	-.0005	.0008	.0000	.0001
#3	.0002	.0004	.0000	.0030	.0001	.0002	.0007	.0002	.0001

Elem	Zn2062
Units	Cts/S
Avg	**.0008**
Stddev	.0000
%RSD	3.550
#1	.0008
#2	.0008
#3	.0009

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:42:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3736.7**	**10840.**	**70697.**	**11393.**
Stddev	65.6	193.	675.	152.
%RSD	1.7564	1.7833	.95436	1.3301
#1	3668.9	10641.	70872.	11283.
#2	3799.9	11027.	71266.	11329.
#3	3741.2	10853.	69952.	11566.

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:48:07 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0022**	**-.0043**	**-.0004**	**.0100**	**.0009**	**.0089**	**-.0010**	**-.0006**	**.0001**
Stddev	.0001	.0028	.0002	.0009	.0004	.0005	.0002	.0003	.0003
%RSD	5.428	64.15	42.96	8.592	47.72	6.038	20.22	58.46	233.3
#1	-.0021	-.0071	-.0002	.0109	.0005	.0091	-.0010	-.0009	.0003
#2	-.0024	-.0016	-.0005	.0092	.0013	.0083	-.0008	-.0006	.0002
#3	-.0022	-.0042	-.0005	.0098	.0008	.0093	-.0012	-.0002	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0037**	**.0009**	**.0082**	**-.0026**	**-.0007**	**.0006**	**.0009**	**-.0056**	**-.0005**
Stddev	.0001	.0004	.0028	.0011	.0004	.0001	.0001	.0030	.0001
%RSD	3.565	37.73	33.68	40.74	58.34	13.27	12.81	54.24	29.89
#1	.0036	.0010	.0056	-.0038	-.0011	.0006	.0010	-.0055	-.0006
#2	.0036	.0013	.0078	-.0018	-.0003	.0006	.0008	-.0086	-.0003
#3	.0038	.0006	.0111	-.0022	-.0006	.0007	.0010	-.0026	-.0005

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0017**	**.0010**	**.0001**	**.0082**	**.0001**	**.0003**	**.0016**	**.0010**	**-.0005**
Stddev	.0010	.0001	.0001	.0003	.0002	.0009	.0002	.0008	.0001
%RSD	58.88	6.358	129.0	3.157	121.2	282.9	15.31	78.37	27.18
#1	-.0027	.0011	.0001	.0084	.0002	.0014	.0015	.0006	-.0004
#2	-.0016	.0009	.0000	.0079	.0003	-.0003	.0014	.0019	-.0007
#3	-.0008	.0010	.0002	.0082	.0000	-.0001	.0019	.0005	-.0004

Elem	Zn2062
Units	Cts/S
Avg	**.0050**
Stddev	.0001
%RSD	2.210
#1	.0050
#2	.0050
#3	.0052

Zoom In Zoom Out

Sample Name: STDA Acquired: 9/21/2022 13:48:07 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**978.13**	**2862.4**	**20361.**	**4350.2**
Stddev	4.39	16.6	57.	8.1
%RSD	.44886	.58059	.28230	.18617
#1	983.11	2881.4	20392.	4351.5
#2	974.82	2854.9	20398.	4341.5
#3	976.46	2850.8	20295.	4357.5

Zoom In Zoom Out

Sample Name: STDB Acquired: 9/21/2022 13:52:02 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0049**	**.0406**	**.0018**	**3.803**	**.0640**	**.4142**	**.0333**	**.1626**	**.0085**
Stddev	.0004	.0011	.0001	.010	.0011	.0012	.0006	.0001	.0002
%RSD	7.630	2.619	7.949	.2657	1.735	.2800	1.718	.0474	1.794
#1	.0045	.0413	.0017	3.802	.0628	.4135	.0329	.1627	.0083
#2	.0050	.0394	.0020	3.814	.0649	.4155	.0330	.1626	.0086
#3	.0052	.0411	.0019	3.794	.0644	.4135	.0339	.1626	.0086

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0311**	**.0851**	**1.732**	**.0302**	**.2080**	**.0734**	**.0750**	**5.170**	**.0737**
Stddev	.0003	.0006	.001	.0039	.0017	.0003	.0003	.020	.0001
%RSD	.8370	.6802	.0680	12.76	.8255	.4413	.4594	.3922	.1583
#1	.0313	.0858	1.731	.0294	.2071	.0737	.0750	5.166	.0736
#2	.0308	.0849	1.734	.0344	.2100	.0730	.0746	5.191	.0738
#3	.0312	.0847	1.732	.0268	.2070	.0735	.0753	5.151	.0736

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0072**	**.0027**	**.0019**	**.0276**	**.2189**	**.0277**	**.0066**	**.0573**	**.0830**
Stddev	.0005	.0002	.0001	.0001	.0000	.0005	.0005	.0004	.0002
%RSD	7.093	9.022	7.303	.4359	.0189	1.787	6.841	.7713	.2509
#1	.0075	.0030	.0017	.0276	.2189	.0283	.0069	.0569	.0831
#2	.0066	.0026	.0020	.0277	.2188	.0273	.0068	.0578	.0832
#3	.0075	.0026	.0019	.0275	.2189	.0276	.0061	.0571	.0828

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**953.96**	**2827.6**	**20052.**	**4336.1**
Stddev	.27	6.2	184.	23.1
%RSD	.02805	.21836	.91989	.53231
#1	953.66	2821.1	20129.	4343.5
#2	954.18	2833.3	19841.	4310.3
#3	954.04	2828.5	20185.	4354.6

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 13:56:26 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0186**	**1.022**	**.0518**	**4.464**	**2.998**	**1.940**	**1.600**	**.7736**	**.1949**
Stddev	.0002	.002	.0004	.004	.002	.001	.002	.0006	.0002
%RSD	1.102	.1624	.8118	.0872	.0697	.0244	.1165	.0736	.1198
#1	.0186	1.021	.0517	4.466	2.999	1.940	1.599	.7739	.1950
#2	.0184	1.024	.0514	4.460	2.996	1.939	1.602	.7739	.1950
#3	.0188	1.021	.0522	4.467	3.000	1.940	1.601	.7729	.1946

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2587**	**1.320**	**.8334**	**.6736**	**.1996**	**1.138**	**.3444**	**2.693**	**.4323**
Stddev	.0003	.001	.0028	.0039	.0013	.005	.0007	.011	.0007
%RSD	.1131	.0774	.3376	.5749	.6724	.4731	.2092	.4131	.1732
#1	.2590	1.319	.8308	.6752	.1980	1.137	.3436	2.684	.4332
#2	.2587	1.321	.8364	.6765	.2004	1.144	.3444	2.706	.4318
#3	.2585	1.320	.8328	.6692	.2003	1.133	.3451	2.689	.4321

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4482**	**.0749**	**.0427**	**.1008**	**.1272**	**4.964**	**.6033**	**.1471**	**.2624**
Stddev	.0015	.0005	.0005	.0001	.0003	.012	.0016	.0006	.0014
%RSD	.3437	.7044	1.206	.1299	.2461	.2325	.2612	.4009	.5186
#1	.4471	.0750	.0427	.1010	.1271	4.967	.6024	.1477	.2627
#2	.4474	.0743	.0421	.1009	.1275	4.951	.6051	.1471	.2635
#3	.4499	.0753	.0432	.1007	.1269	4.973	.6024	.1465	.2609

Elem	Zn2062
Units	Cts/S
Avg	**.8902**
Stddev	.0014
%RSD	.1534
#1	.8898
#2	.8890
#3	.8917

Zoom In Zoom Out

Sample Name: STDC Acquired: 9/21/2022 13:56:26 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**962.08**	**2861.3**	**20237.**	**4389.8**
Stddev	1.28	2.9	79.	18.0
%RSD	.13269	.10261	.39056	.41037
#1	963.31	2863.7	20216.	4409.2
#2	962.17	2862.3	20171.	4373.7
#3	960.76	2858.0	20325.	4386.4

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 14:00:00 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0393	2.056	.1055	8.946	6.019	3.880	3.211	1.548	.3918
Stddev	.0002	.001	.0008	.012	.003	.012	.004	.002	.0013
%RSD	.5067	.0536	.7414	.1334	.0530	.3137	.1278	.1418	.3333
#1	.0394	2.057	.1059	8.932	6.022	3.866	3.210	1.549	.3905
#2	.0395	2.057	.1046	8.950	6.016	3.887	3.207	1.546	.3931
#3	.0391	2.055	.1061	8.955	6.020	3.886	3.215	1.550	.3920

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.5202	2.631	1.663	1.366	.3938	2.285	.6984	5.390	.8714
Stddev	.0019	.004	.005	.003	.0003	.014	.0007	.004	.0029
%RSD	.3738	.1508	.3302	.1833	.0885	.6002	.1039	.0788	.3326
#1	.5188	2.626	1.659	1.367	.3938	2.273	.6989	5.390	.8713
#2	.5224	2.633	1.661	1.363	.3934	2.300	.6976	5.387	.8686
#3	.5193	2.633	1.669	1.368	.3941	2.282	.6988	5.395	.8744

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.9027	.1503	.0869	.1963	.2556	10.04	1.211	.2940	.5348
Stddev	.0054	.0003	.0003	.0008	.0004	.02	.006	.0015	.0026
%RSD	.6015	.2178	.3115	.3953	.1617	.2311	.4871	.4971	.4877
#1	.9082	.1507	.0871	.1971	.2557	10.02	1.208	.2956	.5320
#2	.9027	.1501	.0871	.1956	.2552	10.04	1.218	.2928	.5371
#3	.8973	.1502	.0866	.1960	.2560	10.06	1.207	.2936	.5352

Elem	Zn2062
Units	Cts/S
Avg	1.778
Stddev	.004
%RSD	.2155
#1	1.776
#2	1.776
#3	1.783

Zoom In Zoom Out

Sample Name: STDD Acquired: 9/21/2022 14:00:00 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	945.38	2813.1	19926.	4382.1
Stddev	4.98	4.3	196.	21.6
%RSD	.52686	.15241	.98598	.49302
#1	940.66	2809.9	20129.	4399.1
#2	944.90	2817.9	19736.	4389.3
#3	950.58	2811.3	19912.	4357.8

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 14:03:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0856	4.138	.2197	18.32	12.31	7.804	6.574	3.161	.7983
Stddev	.0006	.006	.0004	.04	.04	.016	.006	.003	.0010
%RSD	.6719	.1368	.1933	.1936	.2900	.2073	.0957	.0826	.1308
#1	.0862	4.140	.2201	18.36	12.35	7.818	6.577	3.162	.7990
#2	.0851	4.142	.2195	18.31	12.30	7.808	6.578	3.162	.7988
#3	.0855	4.132	.2193	18.28	12.27	7.786	6.566	3.158	.7971

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.060	5.334	3.370	2.840	.7992	4.645	1.434	10.88	1.775
Stddev	.005	.018	.010	.004	.0035	.001	.001	.02	.004
%RSD	.4307	.3409	.3010	.1416	.4328	.0111	.0948	.1996	.2268
#1	1.062	5.349	3.381	2.845	.8030	4.645	1.434	10.89	1.776
#2	1.055	5.339	3.369	2.837	.7985	4.646	1.435	10.90	1.779
#3	1.063	5.314	3.361	2.839	.7962	4.645	1.432	10.86	1.771

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.869	.3103	.1799	.5299	.5308	20.90	2.512	.6123	1.105
Stddev	.005	.0005	.0001	.0001	.0013	.06	.004	.0052	.001
%RSD	.2537	.1537	.0693	.0136	.2398	.3100	.1378	.8505	.0825
#1	1.869	.3102	.1799	.5300	.5322	20.97	2.514	.6075	1.104
#2	1.864	.3108	.1798	.5298	.5302	20.87	2.508	.6115	1.104
#3	1.873	.3099	.1800	.5299	.5299	20.85	2.515	.6178	1.106

Elem	Zn2062
Units	Cts/S
Avg	3.633
Stddev	.005
%RSD	.1362
#1	3.635
#2	3.637
#3	3.627

Zoom In Zoom Out

Sample Name: STDE Acquired: 9/21/2022 14:03:45 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	924.77	2779.3	19832.	4345.0
Stddev	1.22	11.3	104.	46.0
%RSD	.13205	.40690	.52253	1.0590
#1	923.40	2771.5	19856.	4311.6
#2	925.73	2774.1	19719.	4325.9
#3	925.19	2792.3	19922.	4397.5

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 14:07:44 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1750**	**8.273**	**.4443**	**36.68**	**24.58**	**15.58**	**13.09**	**6.304**	**1.580**
Stddev	.0006	.023	.0004	.04	.03	.05	.01	.003	.001
%RSD	.3330	.2778	.0806	.0981	.1120	.3263	.0692	.0436	.0468
#1	.1745	8.289	.4445	36.65	24.61	15.63	13.10	6.301	1.579
#2	.1748	8.283	.4439	36.68	24.56	15.58	13.09	6.306	1.580
#3	.1757	8.247	.4445	36.72	24.58	15.53	13.08	6.306	1.580

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.116**	**10.56**	**6.758**	**5.698**	**1.583**	**9.172**	**2.878**	**21.73**	**3.531**
Stddev	.004	.02	.006	.003	.006	.007	.001	.04	.002
%RSD	.1819	.1834	.0870	.0461	.3861	.0738	.0306	.1631	.0615
#1	2.119	10.58	6.765	5.700	1.589	9.177	2.877	21.77	3.533
#2	2.112	10.54	6.755	5.700	1.583	9.164	2.877	21.71	3.528
#3	2.117	10.55	6.754	5.695	1.577	9.174	2.879	21.71	3.531

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.747**	**.6263**	**.3613**	**1.065**	**1.055**	**42.09**	**5.010**	**1.223**	**2.207**
Stddev	.004	.0017	.0010	.001	.000	.04	.004	.012	.003
%RSD	.1058	.2701	.2664	.0985	.0345	.0861	.0728	.9417	.1305
#1	3.751	.6249	.3624	1.065	1.055	42.05	5.012	1.227	2.205
#2	3.743	.6258	.3611	1.064	1.055	42.12	5.006	1.232	2.210
#3	3.748	.6282	.3605	1.066	1.055	42.09	5.013	1.210	2.206

Elem	Zn2062
Units	Cts/S
Avg	**7.199**
Stddev	.008
%RSD	.1171
#1	7.205
#2	7.203
#3	7.190

Zoom In Zoom Out

Sample Name: STDF Acquired: 9/21/2022 14:07:44 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**893.15**	**2715.2**	**19644.**	**4351.9**
Stddev	1.30	4.5	59.	49.9
%RSD	.14535	.16603	.29928	1.1472
#1	893.29	2720.2	19625.	4299.7
#2	894.36	2713.9	19597.	4356.7
#3	891.78	2711.5	19710.	4399.2

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 14:11:35 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3380**	**16.60**	**.9022**	**72.91**	**48.35**	**30.98**	**25.93**	**12.53**	**3.106**
Stddev	.0012	.03	.0007	.06	.08	.03	.04	.03	.009
%RSD	.3418	.1983	.0813	.0762	.1668	.0937	.1534	.2121	.2847
#1	.3393	16.61	.9029	72.94	48.28	31.00	25.92	12.51	3.096
#2	.3370	16.63	.9014	72.95	48.44	30.98	25.90	12.52	3.110
#3	.3379	16.56	.9024	72.85	48.34	30.94	25.98	12.56	3.113

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.221**	**20.67**	**13.58**	**11.42**	**3.122**	**17.92**	**5.795**	**43.28**	**7.012**
Stddev	.014	.03	.01	.01	.016	.13	.005	.10	.011
%RSD	.3367	.1426	.0891	.1207	.5126	.7173	.0912	.2419	.1533
#1	4.207	20.64	13.57	11.43	3.104	17.80	5.797	43.22	7.021
#2	4.222	20.69	13.59	11.42	3.133	17.90	5.790	43.40	7.000
#3	4.235	20.69	13.57	11.41	3.130	18.05	5.800	43.21	7.015

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.453**	**1.266**	**.7277**	**1.624**	**2.148**	**84.06**	**9.983**	**2.416**	**4.414**
Stddev	.012	.002	.0003	.002	.003	1.24	.028	.009	.024
%RSD	.1559	.1882	.0377	.1259	.1204	1.480	.2846	.3526	.5432
#1	7.443	1.265	.7279	1.623	2.147	83.87	9.956	2.421	4.387
#2	7.451	1.265	.7274	1.623	2.145	85.38	9.981	2.421	4.423
#3	7.466	1.269	.7278	1.627	2.150	82.91	10.01	2.406	4.433

Elem	Zn2062
Units	Cts/S
Avg	**14.22**
Stddev	.03
%RSD	.1886
#1	14.23
#2	14.19
#3	14.25

Zoom In Zoom Out

Sample Name: STDG Acquired: 9/21/2022 14:11:35 Type: Cal
Method: 60102007_COMBO_09222021(v684) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**852.14**	**2607.2**	**19105.**	**4294.1**
Stddev	.73	4.6	137.	11.9
%RSD	.08531	.17540	.71685	.27814
#1	851.77	2604.6	19237.	4306.3
#2	852.98	2612.5	19114.	4282.4
#3	851.68	2604.6	18964.	4293.6

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 14:18:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2573**	**40.19**	**2.049**	**2.055**	**2.061**	**38.88**	**2.058**	**2.064**	**2.080**
Stddev	.0003	.21	.007	.007	.010	.18	.003	.003	.007
%RSD	.1253	.5340	.3353	.3626	.4860	.4661	.1585	.1267	.3189
#1	.2574	40.06	2.041	2.048	2.051	38.79	2.055	2.061	2.085
#2	.2576	40.07	2.055	2.054	2.060	38.77	2.061	2.066	2.083
#3	.2570	40.44	2.050	2.063	2.071	39.09	2.058	2.065	2.073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.060**	**39.73**	**40.10**	**2.049**	**42.13**	**2.071**	**2.022**	**38.59**	**2.055**
Stddev	.003	.12	.17	.008	.24	.009	.005	.17	.003
%RSD	.1545	.3086	.4142	.3903	.5598	.4545	.2354	.4285	.1659
#1	2.064	39.60	40.01	2.044	41.96	2.079	2.017	38.47	2.051
#2	2.059	39.73	40.01	2.045	42.03	2.074	2.025	38.51	2.058
#3	2.058	39.85	40.29	2.058	42.40	2.061	2.025	38.78	2.056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.072**	**2.048**	**2.079**	**.1592**	**1.957**	**2.053**	**2.070**	**2.152**	**2.046**
Stddev	.002	.004	.005	.0004	.004	.008	.001	.018	.009
%RSD	.0935	.1876	.2192	.2516	.1928	.4109	.0267	.8426	.4373
#1	2.074	2.044	2.076	.1593	1.953	2.046	2.071	2.144	2.053
#2	2.070	2.051	2.084	.1588	1.960	2.051	2.070	2.138	2.049
#3	2.072	2.048	2.076	.1596	1.958	2.063	2.070	2.172	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 9/21/2022 14:18:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.071**
Stddev	.004
%RSD	.2019
#1	2.067
#2	2.075
#3	2.070
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**897.82**	**2723.7**	**19735.**	**4336.4**
Stddev	.33	6.5	94.	36.2
%RSD	.03625	.24031	.47445	.83566
#1	897.46	2728.8	19635.	4328.2
#2	897.90	2716.3	19751.	4376.0
#3	898.10	2726.0	19820.	4305.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 14:25:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2576**	**39.93**	**2.005**	**2.004**	**2.018**	**40.23**	**2.021**	**2.014**	**2.032**
Stddev	.0004	.04	.006	.003	.003	.11	.003	.003	.005
%RSD	.1507	.0943	.2827	.1450	.1520	.2843	.1338	.1595	.2353
#1	.2581	39.96	1.998	2.003	2.016	40.28	2.018	2.011	2.035
#2	.2574	39.89	2.007	2.002	2.016	40.11	2.023	2.017	2.027
#3	.2574	39.92	2.009	2.007	2.021	40.32	2.022	2.016	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.994**	**40.52**	**40.12**	**2.013**	**40.45**	**2.017**	**2.011**	**40.21**	**2.027**
Stddev	.001	.06	.07	.006	.06	.003	.004	.06	.005
%RSD	.0250	.1379	.1679	.2943	.1418	.1415	.1908	.1387	.2405
#1	1.994	40.52	40.15	2.016	40.46	2.015	2.006	40.24	2.021
#2	1.995	40.46	40.05	2.006	40.50	2.016	2.013	40.15	2.030
#3	1.994	40.57	40.17	2.017	40.38	2.020	2.013	40.25	2.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.018**	**1.998**	**2.012**	**2.349**	**1.993**	**2.014**	**2.007**	**2.045**	**2.011**
Stddev	.006	.002	.005	.001	.003	.008	.002	.013	.002
%RSD	.2795	.1069	.2364	.0366	.1257	.4040	.0982	.6424	.0813
#1	2.024	1.996	2.007	2.348	1.990	2.012	2.008	2.042	2.009
#2	2.019	1.998	2.013	2.350	1.995	2.006	2.005	2.033	2.012
#3	2.013	2.000	2.016	2.349	1.993	2.022	2.009	2.059	2.011
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 14:25:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.030**
Stddev	.004
%RSD	.2025
#1	2.025
#2	2.033
#3	2.032
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**900.95**	**2731.3**	**19860.**	**4309.2**
Stddev	.86	13.5	107.	18.1
%RSD	.09508	.49316	.54002	.41933
#1	901.70	2746.8	19793.	4288.4
#2	900.01	2725.3	19983.	4320.7
#3	901.13	2721.9	19803.	4318.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 14:35:56 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0129**	**.0001**	**.0001**	**.0000**	**.0009**	**.0000**	**.0000**	**-.0002**
Stddev	.0004	.0032	.0009	.0001	.000	.0002	.000	.000	.0002
%RSD	320.5	24.74	598.4	229.0	464.0	21.91	113.9	307.3	139.6
#1	.0004	.0102	.0004	.0002	.0000	.0010	.0000	.0000	-.0004
#2	.0003	.0120	-.0008	-.0001	-.0001	.0007	-.0001	.0000	.0001
#3	-.0003	.0164	.0009	.0000	.0000	.0010	.0000	-.0002	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0004**	**.0103**	**.0006**	**.0212**	**.0000**	**.0001**	**.0064**	**-.0001**
Stddev	.0001	.0012	.0131	.0005	.0013	.000	.0001	.0020	.0000
%RSD	54.89	308.5	127.2	88.12	6.084	97.16	159.0	30.57	36.49
#1	.0001	.0015	-.0020	.0001	.0223	.0000	.0002	.0072	-.0001
#2	.0002	-.0009	.0089	.0011	.0198	.0000	-.0001	.0079	-.0001
#3	.0002	.0005	.0240	.0006	.0215	-.0001	.0001	.0042	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0009**	**-.0016**	**-.0006**	**.0000**	**.0001**	**.0001**	**.0007**	**.0003**
Stddev	.0002	.0012	.0018	.0005	.0002	.0000	.0001	.0011	.0003
%RSD	39.53	138.6	111.1	88.97	398.1	19.88	102.8	158.6	81.19
#1	-.0003	.0011	-.0036	-.0002	.0001	.0001	.0002	-.0005	.0000
#2	-.0007	-.0004	-.0001	-.0011	-.0002	.0001	.0000	.0017	.0004
#3	-.0007	.0020	-.0011	-.0004	.0002	.0001	.0001	.0008	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 14:35:56 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0001**
Stddev	.0001
%RSD	51.34
#1	.0001
#2	.0002
#3	.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**985.86**	**2857.5**	**20028.**	**4391.2**
Stddev	1.92	4.3	59.	12.1
%RSD	.19514	.15147	.29230	.27526
#1	988.00	2859.8	20082.	4405.0
#2	985.31	2852.5	20037.	4386.0
#3	984.28	2860.3	19966.	4382.5

Zoom In Zoom Out

Sample Name: FA98986-6 Acquired: 9/21/2022 14:45:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**107.0**	**.0069**	**.1174**	**.0011**	**6.463**	**.0002**	**.0019**	**.0766**
Stddev	.0002	.3	.0006	.0002	.0000	.018	.0000	.0000	.0005
%RSD	45.14	.2348	8.919	.1670	3.361	.2823	14.11	1.763	.6550
#1	.0003	106.8	.0073	.1172	.0011	6.466	.0002	.0019	.0761
#2	.0007	107.3	.0062	.1176	.0010	6.480	.0003	.0020	.0771
#3	.0003	106.9	.0071	.1174	.0011	6.444	.0002	.0019	.0768

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0879**	**18.53**	**1.363**	**.0434**	**2.723**	**.0906**	**.0030**	**.1887**	**.0260**
Stddev	.0005	.05	.006	.0003	.025	.0002	.0002	.0036	.0002
%RSD	.5198	.2626	.4762	.7359	.8982	.2746	7.606	1.896	.7530
#1	.0875	18.51	1.356	.0433	2.703	.0903	.0033	.1847	.0259
#2	.0878	18.59	1.364	.0432	2.750	.0908	.0030	.1897	.0259
#3	.0884	18.50	1.369	.0438	2.716	.0905	.0028	.1917	.0263

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1089**	**-.0004**	**-.0008**	**15.20**	**.0254**	**.1292**	**1.070**	**.0003**	**.0573**
Stddev	.0008	.0009	.0010	.02	.0003	.0005	.002	.0009	.0001
%RSD	.7288	198.8	127.6	.1323	1.051	.4209	.1726	296.3	.1727
#1	.1082	-.0009	-.0016	15.22	.0251	.1293	1.068	.0010	.0572
#2	.1088	-.0010	-.0010	15.18	.0257	.1296	1.071	-.0007	.0574
#3	.1098	.0006	.0003	15.20	.0253	.1286	1.071	.0007	.0572

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2354**
Stddev	.0003
%RSD	.1091
#1	.2355
#2	.2352
#3	.2357

Zoom In Zoom Out

Sample Name: FA98986-6 Acquired: 9/21/2022 14:45:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**939.72**	**2959.7**	**20806.**	**4649.9**
Stddev	2.25	6.5	22.	40.7
%RSD	.23945	.21874	.10778	.87518
#1	939.67	2962.7	20803.	4692.9
#2	941.99	2964.2	20785.	4612.0
#3	937.49	2952.3	20829.	4644.7

Zoom In Zoom Out

Sample Name: FA98986-7 Acquired: 9/21/2022 14:49:46 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**78.91**	**.0062**	**.1939**	**.0008**	**6.753**	**.0011**	**.0017**	**.0564**
Stddev	.0003	.30	.0007	.0006	.0000	.018	.0000	.0002	.0002
%RSD	18.01	.3746	10.64	.3268	3.410	.2588	.9913	9.515	.3161
#1	.0016	79.03	.0068	.1943	.0008	6.752	.0011	.0018	.0562
#2	.0017	79.13	.0062	.1943	.0009	6.772	.0011	.0015	.0566
#3	.0012	78.58	.0055	.1932	.0008	6.737	.0011	.0016	.0565

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0251**	**28.11**	**.8104**	**.0291**	**1.937**	**.0823**	**.0019**	**.2750**	**.0189**
Stddev	.0001	.05	.0130	.0010	.016	.0002	.0001	.0076	.0002
%RSD	.4776	.1948	1.604	3.518	.8483	.2029	7.020	2.778	.8090
#1	.0250	28.11	.7974	.0288	1.921	.0824	.0020	.2699	.0188
#2	.0252	28.16	.8234	.0282	1.937	.0822	.0018	.2713	.0189
#3	.0251	28.05	.8103	.0302	1.954	.0825	.0019	.2838	.0191

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2388**	**.0013**	**.0001**	**12.51**	**.0505**	**.1167**	**.7521**	**-.0010**	**.0471**
Stddev	.0014	.0005	.0018	.01	.0001	.0005	.0018	.0010	.0004
%RSD	.5686	37.72	3158.	.0708	.2673	.4587	.2372	95.47	.8606
#1	.2394	.0007	-.0018	12.52	.0504	.1169	.7506	-.0013	.0468
#2	.2399	.0016	.0003	12.51	.0504	.1172	.7516	.0000	.0470
#3	.2373	.0015	.0017	12.50	.0507	.1161	.7540	-.0019	.0476

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3451**
Stddev	.0002
%RSD	.0501
#1	.3450
#2	.3451
#3	.3453

Zoom In Zoom Out

Sample Name: FA98986-7 Acquired: 9/21/2022 14:49:46 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**950.63**	**2914.2**	**20489.**	**4555.9**
Stddev	3.45	4.9	87.	31.0
%RSD	.36341	.16964	.42688	.68103
#1	947.10	2908.6	20527.	4586.5
#2	950.76	2916.1	20551.	4524.4
#3	954.01	2918.0	20389.	4556.7

Zoom In Zoom Out

Sample Name: FA98986-9 Acquired: 9/21/2022 14:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**154.5**	**.0101**	**.1596**	**.0017**	**4.078**	**-.0006**	**.0053**	**.1100**
Stddev	.0005	.4	.0011	.0010	.0000	.007	.0000	.0001	.0006
%RSD	44.43	.2594	11.30	.6260	2.466	.1788	2.136	1.670	.5224
#1	.0005	154.4	.0108	.1594	.0017	4.074	-.0006	.0053	.1106
#2	.0013	154.9	.0108	.1607	.0017	4.087	-.0006	.0053	.1094
#3	.0013	154.1	.0088	.1588	.0016	4.074	-.0006	.0054	.1100

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0143**	**35.96**	**1.558**	**.0404**	**3.731**	**.1099**	**.0053**	**.1946**	**.0380**
Stddev	.0002	.06	.025	.0013	.022	.0002	.0001	.0037	.0001
%RSD	1.612	.1618	1.626	3.145	.5779	.2140	1.365	1.889	.3230
#1	.0141	35.93	1.572	.0413	3.738	.1097	.0054	.1911	.0380
#2	.0144	36.02	1.573	.0410	3.707	.1101	.0053	.1984	.0380
#3	.0145	35.91	1.528	.0390	3.749	.1099	.0053	.1944	.0382

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1052**	**-.0014**	**-.0016**	**13.60**	**.0265**	**.0932**	**1.449**	**.0006**	**.0856**
Stddev	.0009	.0007	.0011	.02	.0003	.0005	.002	.0016	.0001
%RSD	.8938	50.88	69.90	.1145	1.301	.5409	.1296	247.6	.1225
#1	.1045	-.0006	-.0024	13.60	.0267	.0932	1.447	-.0006	.0855
#2	.1049	-.0020	-.0003	13.59	.0261	.0938	1.451	.0001	.0857
#3	.1063	-.0015	-.0022	13.62	.0267	.0927	1.450	.0024	.0857

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0507**
Stddev	.0001
%RSD	.2235
#1	.0507
#2	.0506
#3	.0508

Zoom In Zoom Out

Sample Name: FA98986-9 Acquired: 9/21/2022 14:54:31 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.48**	**3048.3**	**21363.**	**4802.6**
Stddev	1.49	3.2	14.	15.7
%RSD	.15800	.10411	.06740	.32620
#1	942.69	3044.8	21379.	4791.5
#2	939.82	3049.1	21355.	4820.5
#3	941.93	3051.0	21353.	4795.8

Zoom In Zoom Out

Sample Name: FA98986-10 Acquired: 9/21/2022 14:59:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**116.6**	**.0189**	**.1463**	**.0013**	**5.003**	**.0002**	**.0039**	**.0810**
Stddev	.0001	.4	.0005	.0003	.0000	.016	.0000	.0001	.0003
%RSD	8.852	.3271	2.393	.1743	3.594	.3178	2.375	2.631	.4206
#1	.0014	116.4	.0185	.1465	.0013	4.987	.0002	.0038	.0806
#2	.0012	116.4	.0190	.1460	.0012	5.005	.0002	.0040	.0811
#3	.0012	117.1	.0194	.1465	.0013	5.018	.0002	.0038	.0813

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0343**	**35.38**	**1.125**	**.0385**	**3.054**	**.1556**	**.0041**	**.1637**	**.0304**
Stddev	.0001	.08	.004	.0004	.041	.0004	.0001	.0065	.0003
%RSD	.3332	.2356	.3669	1.005	1.351	.2835	2.680	3.998	1.111
#1	.0342	35.32	1.129	.0383	3.009	.1558	.0040	.1709	.0308
#2	.0344	35.34	1.125	.0390	3.062	.1559	.0040	.1622	.0304
#3	.0344	35.47	1.121	.0383	3.091	.1551	.0042	.1581	.0301

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3082**	**.0031**	**.0001**	**12.42**	**.0438**	**.1315**	**1.129**	**-.0006**	**.0772**
Stddev	.0004	.0008	.0019	.02	.0005	.0001	.003	.0005	.0003
%RSD	.1252	26.19	1848.	.1547	1.047	.0673	.2321	98.39	.3806
#1	.3078	.0032	-.0016	12.44	.0439	.1315	1.130	-.0011	.0769
#2	.3086	.0039	.0021	12.43	.0441	.1314	1.132	-.0006	.0775
#3	.3081	.0022	-.0002	12.40	.0432	.1316	1.127	.0000	.0771

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1874**
Stddev	.0002
%RSD	.1254
#1	.1873
#2	.1876
#3	.1872

Zoom In Zoom Out

Sample Name: FA98986-10 Acquired: 9/21/2022 14:59:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**951.48**	**2964.9**	**20910.**	**4706.1**
Stddev	.31	6.0	15.	64.7
%RSD	.03206	.20361	.07081	1.3749
#1	951.16	2958.5	20918.	4770.8
#2	951.49	2965.6	20893.	4706.1
#3	951.77	2970.6	20918.	4641.4

Zoom In Zoom Out

Sample Name: FA98986-11 Acquired: 9/21/2022 15:03:59 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**176.2**	**.0150**	**.1817**	**.0023**	**2.623**	**-.0007**	**.0067**	**.1222**
Stddev	.0005	1.1	.0012	.0007	.0001	.017	.0000	.0002	.0007
%RSD	58.78	.6194	8.039	.3810	2.185	.6446	6.811	2.515	.5350
#1	.0003	177.1	.0162	.1822	.0023	2.638	-.0006	.0066	.1215
#2	.0010	175.0	.0138	.1809	.0024	2.605	-.0007	.0069	.1223
#3	.0014	176.6	.0149	.1820	.0023	2.625	-.0007	.0065	.1228

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0161**	**47.59**	**1.697**	**.0466**	**4.451**	**.1375**	**.0057**	**.3024**	**.0437**
Stddev	.0003	.21	.010	.0007	.056	.0005	.0002	.0031	.0002
%RSD	1.829	.4511	.5663	1.511	1.254	.3391	3.890	1.022	.4513
#1	.0161	47.49	1.708	.0474	4.411	.1371	.0059	.2989	.0435
#2	.0159	47.45	1.691	.0463	4.428	.1380	.0056	.3048	.0438
#3	.0165	47.84	1.692	.0462	4.515	.1375	.0055	.3035	.0438

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1114**	**-.0022**	**.0015**	**14.94**	**.0260**	**.1480**	**1.446**	**.0012**	**.1090**
Stddev	.0025	.0006	.0012	.02	.0005	.0010	.003	.0010	.0007
%RSD	2.242	28.57	80.86	.1345	1.804	.6973	.1946	85.55	.6270
#1	.1093	-.0023	.0022	14.92	.0262	.1491	1.443	.0020	.1093
#2	.1142	-.0028	.0001	14.93	.0255	.1470	1.448	.0016	.1095
#3	.1108	-.0016	.0022	14.96	.0263	.1480	1.447	.0000	.1082

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1100**
Stddev	.0001
%RSD	.1183
#1	.1099
#2	.1101
#3	.1101

Zoom In Zoom Out

Sample Name: FA98986-11 Acquired: 9/21/2022 15:03:59 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.44**	**3132.0**	**21999.**	**4985.8**
Stddev	3.10	4.2	27.	13.3
%RSD	.32775	.13259	.12048	.26701
#1	943.06	3133.9	21983.	4984.4
#2	942.27	3127.2	22029.	4999.8
#3	947.98	3134.8	21984.	4973.2

Zoom In Zoom Out

Sample Name: FA98986-12 Acquired: 9/21/2022 15:08:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**131.2**	**.0107**	**.1614**	**.0015**	**3.571**	**-.0003**	**.0049**	**.1022**
Stddev	.0001	.5	.0003	.0005	.0000	.014	.0001	.0002	.0001
%RSD	25.09	.3622	3.234	.2823	2.970	.3981	20.45	3.837	.1088
#1	.0004	130.8	.0111	.1611	.0015	3.560	-.0003	.0047	.1024
#2	.0003	131.0	.0104	.1612	.0014	3.566	-.0002	.0048	.1022
#3	.0006	131.7	.0108	.1619	.0015	3.587	-.0004	.0051	.1021

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201**	**25.62**	**1.421**	**.0382**	**3.453**	**.1025**	**.0039**	**.1824**	**.0344**
Stddev	.0002	.06	.012	.0010	.006	.0003	.0000	.0037	.0002
%RSD	1.133	.2353	.8311	2.555	.1735	.2571	.8441	2.011	.6604
#1	.0203	25.61	1.432	.0373	3.460	.1028	.0039	.1865	.0346
#2	.0199	25.57	1.408	.0380	3.450	.1022	.0039	.1796	.0344
#3	.0199	25.69	1.422	.0392	3.449	.1026	.0039	.1809	.0342

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2937**	**.0041**	**.0002**	**10.25**	**.0583**	**.0900**	**1.406**	**-.0003**	**.0731**
Stddev	.0012	.0012	.0012	.02	.0003	.0003	.001	.0015	.0004
%RSD	.4079	27.86	548.3	.2020	.5195	.2996	.0506	558.9	.5367
#1	.2926	.0053	.0003	10.23	.0582	.0898	1.406	-.0017	.0735
#2	.2935	.0042	.0014	10.25	.0581	.0899	1.405	.0013	.0729
#3	.2950	.0030	-.0010	10.27	.0587	.0903	1.406	-.0004	.0728

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0604**
Stddev	.0001
%RSD	.2054
#1	.0603
#2	.0605
#3	.0605

Zoom In Zoom Out

Sample Name: FA98986-12 Acquired: 9/21/2022 15:08:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**962.45**	**3157.9**	**22283.**	**4999.9**
Stddev	2.25	6.8	19.	21.4
%RSD	.23388	.21556	.08680	.42718
#1	960.60	3150.1	22305.	5018.6
#2	964.96	3162.6	22272.	4976.6
#3	961.80	3161.1	22272.	5004.3

Zoom In Zoom Out

Sample Name: FA98825-2 Acquired: 9/21/2022 15:13:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0142**	**324.0**	**.1010**	**3.273**	**.0099**	**169.8**	**-.0067**	**.2630**	**.7633**
Stddev	.0012	.5	.0040	.003	.0002	.3	.0002	.0006	.0047
%RSD	8.612	.1398	3.966	.0993	2.016	.1630	3.003	.2386	.6199
#1	.0147	324.5	.0998	3.277	.0097	170.1	-.0069	.2624	.7583
#2	.0128	323.6	.1055	3.272	.0098	169.5	-.0065	.2629	.7677
#3	.0151	323.9	.0978	3.271	.0101	169.8	-.0066	.2637	.7640

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5859**	**520.5**	**27.59**	**.3275**	**154.2**	**12.19**	**.0037**	**7.340**	**.9303**
Stddev	.0025	1.3	.00	.0062	.8	.05	.0004	.043	.0023
%RSD	.4221	.2405	.0016	1.891	.4887	.4414	10.79	.5924	.2446
#1	.5864	521.9	27.59	.3278	155.0	12.13	.0035	7.350	.9286
#2	.5832	519.5	27.59	.3336	153.9	12.24	.0035	7.293	.9295
#3	.5880	520.2	27.59	.3212	153.6	12.21	.0042	7.378	.9329

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1641**	**-.0122**	**.0050**	**15.28**	**.0322**	**1.229**	**10.49**	**.0037**	**1.153**
Stddev	.0041	.0020	.0047	.02	.0009	.001	.01	.0108	.005
%RSD	2.469	16.69	94.12	.1510	2.770	.1085	.1287	293.2	.4498
#1	.1602	-.0114	.0079	15.25	.0316	1.229	10.48	.0101	1.148
#2	.1683	-.0107	-.0004	15.28	.0332	1.228	10.49	.0098	1.159
#3	.1638	-.0145	.0075	15.30	.0319	1.231	10.50	-.0088	1.153

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.132**
Stddev	.001
%RSD	.1279
#1	1.131
#2	1.133
#3	1.134

Zoom In Zoom Out

Sample Name: FA98825-2 Acquired: 9/21/2022 15:13:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**956.14**	**3192.1**	**23202.**	**5108.1**
Stddev	2.60	8.4	192.	19.3
%RSD	.27187	.26273	.82932	.37729
#1	959.10	3201.7	23413.	5088.1
#2	955.12	3188.5	23036.	5126.6
#3	954.20	3186.2	23156.	5109.6

Zoom In Zoom Out

Sample Name: FA98994-1 Acquired: 9/21/2022 15:18:06 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**95.22**	**.0156**	**.6274**	**.0021**	**3.461**	**-.0006**	**.0039**	**.1107**
Stddev	.0005	.23	.0004	.0014	.0001	.013	.0000	.0001	.0003
%RSD	42.67	.2364	2.769	.2205	3.873	.3715	6.682	2.000	.3107
#1	.0006	95.44	.0154	.6287	.0022	3.470	-.0006	.0039	.1107
#2	.0014	94.99	.0153	.6260	.0021	3.446	-.0007	.0038	.1103
#3	.0014	95.23	.0161	.6276	.0022	3.467	-.0006	.0039	.1109

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0106**	**32.29**	**2.588**	**.0326**	**4.917**	**.0964**	**.0090**	**.2012**	**.0135**
Stddev	.0002	.01	.007	.0010	.006	.0002	.0000	.0029	.0002
%RSD	2.189	.0330	.2567	3.193	.1263	.2444	.1612	1.450	1.490
#1	.0103	32.28	2.581	.0336	4.914	.0965	.0090	.2002	.0134
#2	.0107	32.30	2.587	.0315	4.914	.0962	.0090	.1989	.0135
#3	.0107	32.29	2.595	.0325	4.924	.0966	.0090	.2045	.0138

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0913**	**-.0008**	**.0035**	**14.44**	**.0228**	**.4356**	**1.369**	**-.0027**	**.1556**
Stddev	.0003	.0013	.0011	.01	.0002	.0010	.002	.0008	.0005
%RSD	.3319	161.5	29.82	.0957	.7167	.2364	.1082	30.93	.3074
#1	.0911	-.0021	.0028	14.45	.0229	.4367	1.367	-.0021	.1559
#2	.0911	.0004	.0031	14.43	.0228	.4346	1.370	-.0036	.1550
#3	.0917	-.0007	.0047	14.45	.0226	.4354	1.369	-.0023	.1558

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0442**
Stddev	.0001
%RSD	.1316
#1	.0441
#2	.0442
#3	.0442

Zoom In Zoom Out

Sample Name: FA98994-1 Acquired: 9/21/2022 15:18:06 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.13**	**3389.5**	**24084.**	**5351.4**
Stddev	1.93	.7	168.	27.5
%RSD	.20112	.02045	.69830	.51343
#1	955.18	3390.3	23896.	5319.7
#2	959.03	3389.2	24219.	5366.1
#3	957.17	3389.0	24138.	5368.4

Zoom In Zoom Out

Sample Name: FA98243-32T Acquired: 9/21/2022 15:22:50 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0075**	**133.0**	**.1201**	**.8315**	**.0050**	**46.76**	**.0085**	**.0430**	**.3844**
Stddev	.0016	.2	.0046	.0005	.0002	.03	.0002	.0003	.0013
%RSD	21.55	.1130	3.819	.0554	5.010	.0645	2.640	.6255	.3433
#1	.0064	132.8	.1221	.8314	.0052	46.73	.0084	.0432	.3847
#2	.0067	133.1	.1234	.8320	.0049	46.75	.0088	.0427	.3830
#3	.0093	132.9	.1149	.8311	.0047	46.79	.0084	.0429	.3856

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4484**	**193.4**	**8.561**	**.0929**	**17.20**	**2.819**	**.0175**	**1.075**	**.1524**
Stddev	.0021	.0	.070	.0064	.14	.009	.0005	.016	.0006
%RSD	.4741	.0240	.8220	6.903	.7981	.3118	2.999	1.513	.3650
#1	.4481	193.4	8.605	.1001	17.06	2.829	.0170	1.070	.1518
#2	.4507	193.5	8.597	.0907	17.34	2.817	.0181	1.093	.1529
#3	.4465	193.4	8.480	.0878	17.21	2.811	.0174	1.062	.1524

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.591**	**.0059**	**.0115**	**14.05**	**.0657**	**.2956**	**2.828**	**-.0063**	**.4502**
Stddev	.001	.0019	.0025	.01	.0006	.0008	.005	.0091	.0033
%RSD	.0378	32.76	21.40	.0507	.9724	.2632	.1922	145.7	.7392
#1	1.590	.0075	.0119	14.06	.0664	.2947	2.834	-.0168	.4541
#2	1.592	.0037	.0089	14.05	.0656	.2958	2.825	-.0009	.4486
#3	1.591	.0064	.0138	14.05	.0651	.2962	2.825	-.0011	.4480

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**2.571**
Stddev	.004
%RSD	.1669
#1	2.566
#2	2.572
#3	2.575

Zoom In Zoom Out

Sample Name: FA98243-32T Acquired: 9/21/2022 15:22:50 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**998.69**	**3064.1**	**21932.**	**4817.4**
Stddev	.05	2.5	135.	29.0
%RSD	.00523	.08254	.61486	.60244
#1	998.74	3066.0	21814.	4817.1
#2	998.68	3061.3	22079.	4846.6
#3	998.64	3065.2	21904.	4788.6

Zoom In Zoom Out

Sample Name: FA98243-35T Acquired: 9/21/2022 15:27:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061**	**127.4**	**.1425**	**.6213**	**.0050**	**16.73**	**.0036**	**.0317**	**.3044**
Stddev	.0016	.4	.0039	.0027	.0004	.06	.0002	.0003	.0016
%RSD	25.25	.3427	2.722	.4410	7.700	.3552	6.438	.8538	.5213
#1	.0055	127.2	.1418	.6223	.0047	16.66	.0038	.0314	.3027
#2	.0050	127.2	.1390	.6182	.0050	16.77	.0034	.0319	.3050
#3	.0079	128.0	.1467	.6233	.0055	16.75	.0034	.0319	.3057

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2651**	**178.2**	**8.408**	**.0936**	**11.79**	**1.748**	**.0131**	**1.361**	**.1170**
Stddev	.0010	.7	.101	.0038	.17	.007	.0006	.021	.0010
%RSD	.3590	.3849	1.206	4.052	1.422	.4233	4.794	1.583	.8403
#1	.2660	178.3	8.488	.0980	11.65	1.742	.0138	1.385	.1170
#2	.2641	177.5	8.294	.0911	11.75	1.757	.0127	1.354	.1180
#3	.2653	178.9	8.442	.0918	11.97	1.746	.0128	1.344	.1160

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.725**	**.0036**	**.0089**	**11.99**	**.0528**	**.1263**	**2.413**	**-.0073**	**.3809**
Stddev	.003	.0094	.0040	.01	.0021	.0009	.006	.0031	.0007
%RSD	.1798	262.2	44.53	.1175	3.977	.7054	.2608	41.74	.1761
#1	1.723	-.0043	.0043	11.97	.0516	.1255	2.409	-.0097	.3801
#2	1.728	.0011	.0108	11.99	.0552	.1262	2.420	-.0039	.3813
#3	1.723	.0140	.0115	12.00	.0516	.1273	2.409	-.0084	.3812

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.646**
Stddev	.004
%RSD	.2187
#1	1.642
#2	1.650
#3	1.646

Zoom In Zoom Out

Sample Name: FA98243-35T Acquired: 9/21/2022 15:27:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1004.3**	**3077.3**	**21929.**	**4776.5**
Stddev	4.3	2.0	49.	44.4
%RSD	.43186	.06599	.22392	.93051
#1	999.35	3075.6	21983.	4824.6
#2	1007.4	3079.5	21887.	4767.8
#3	1006.2	3076.7	21917.	4737.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 15:32:16 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2592**	**39.04**	**2.028**	**1.978**	**2.001**	**39.73**	**2.030**	**2.020**	**2.045**
Stddev	.0011	.12	.006	.003	.004	.08	.004	.002	.008
%RSD	.4232	.3121	.2805	.1744	.1941	.1973	.1957	.0987	.4066
#1	.2580	39.04	2.023	1.977	2.004	39.76	2.026	2.018	2.039
#2	.2595	38.93	2.026	1.975	1.996	39.64	2.030	2.019	2.054
#3	.2601	39.17	2.034	1.982	2.002	39.79	2.034	2.022	2.041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.960**	**40.48**	**39.58**	**1.979**	**40.11**	**2.005**	**2.027**	**39.48**	**2.063**
Stddev	.002	.07	.03	.003	.07	.008	.008	.11	.009
%RSD	.0999	.1608	.0806	.1630	.1787	.3934	.3729	.2902	.4579
#1	1.962	40.55	39.58	1.977	40.19	2.001	2.019	39.49	2.053
#2	1.959	40.42	39.56	1.977	40.04	2.014	2.028	39.37	2.066
#3	1.958	40.48	39.62	1.983	40.10	2.000	2.034	39.60	2.071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.009**	**1.993**	**2.022**	**2.339**	**1.992**	**2.002**	**1.986**	**2.024**	**2.018**
Stddev	.005	.008	.009	.002	.003	.004	.003	.021	.009
%RSD	.2339	.4001	.4253	.0676	.1341	.2157	.1586	1.053	.4187
#1	2.011	1.986	2.012	2.339	1.989	2.000	1.985	2.007	2.011
#2	2.003	1.992	2.026	2.338	1.992	2.000	1.990	2.016	2.028
#3	2.012	2.002	2.028	2.341	1.995	2.007	1.984	2.048	2.015
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 15:32:16 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.056**
Stddev	.004
%RSD	.2161
#1	2.051
#2	2.057
#3	2.059
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**925.54**	**2787.3**	**20464.**	**4555.1**
Stddev	3.15	8.6	154.	12.4
%RSD	.34024	.30771	.75428	.27311
#1	925.79	2794.9	20530.	4540.8
#2	928.55	2789.0	20287.	4563.5
#3	922.27	2778.0	20574.	4561.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 15:36:48 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0157**	**-.0001**	**.0002**	**.0002**	**.0052**	**.0001**	**.0001**	**.0002**
Stddev	.0003	.0077	.0008	.0000	.0001	.0011	.0000	.0000	.0002
%RSD	144.4	49.18	969.2	9.321	39.13	21.85	2.747	15.91	76.34
#1	.0004	.0184	-.0008	.0002	.0001	.0056	.0001	.0001	.0001
#2	-.0001	.0216	-.0001	.0002	.0003	.0062	.0001	.0001	.0002
#3	.0003	.0070	.0007	.0003	.0002	.0040	.0001	.0001	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0048**	**.0071**	**.0000**	**-.0077**	**.0001**	**.0004**	**.0060**	**-.0001**
Stddev	.0003	.0012	.0239	.001	.0034	.0001	.0001	.0073	.0001
%RSD	1091.	25.56	333.7	2079.	44.42	51.56	31.35	122.2	211.0
#1	-.0001	.0062	.0332	.0007	-.0098	.0002	.0003	.0106	.0000
#2	.0004	.0041	-.0136	-.0008	-.0037	.0001	.0005	-.0024	-.0002
#3	-.0002	.0040	.0018	.0000	-.0095	.0001	.0003	.0098	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0002**	**.0006**	**.0011**	**.0002**	**.0002**	**.0003**	**-.0002**	**.0002**
Stddev	.0004	.0008	.0008	.0004	.0002	.0001	.0002	.0005	.0002
%RSD	210.3	401.8	136.6	36.83	86.66	28.45	77.66	227.9	123.3
#1	.0002	-.0002	-.0003	.0011	.0004	.0003	.0004	.0000	.0004
#2	-.0003	.0006	.0010	.0007	.0002	.0003	.0003	.0001	.0001
#3	-.0005	-.0010	.0011	.0014	.0001	.0002	.0000	-.0008	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 15:36:48 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	19.55
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1007.5**	**2891.7**	**20498.**	**4494.3**
Stddev	2.4	1.8	21.	21.0
%RSD	.24092	.06107	.10094	.46761
#1	1006.1	2891.5	20502.	4515.7
#2	1006.1	2890.0	20475.	4473.7
#3	1010.3	2893.5	20516.	4493.5

Zoom In Zoom Out

Sample Name: FA98243-37T Acquired: 9/21/2022 15:41:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104**	**140.0**	**.1106**	**.9050**	**.0059**	**31.75**	**.0163**	**.0535**	**.5143**
Stddev	.0009	.3	.0024	.0009	.0001	.10	.0002	.0004	.0027
%RSD	8.284	.2009	2.130	.0993	1.881	.3126	1.244	.7372	.5214
#1	.0106	139.8	.1080	.9058	.0059	31.72	.0161	.0537	.5151
#2	.0111	140.3	.1125	.9040	.0060	31.87	.0165	.0537	.5113
#3	.0094	139.8	.1115	.9050	.0058	31.68	.0164	.0530	.5164

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5732**	**247.6**	**9.041**	**.1084**	**17.21**	**2.942**	**.0198**	**1.647**	**.2343**
Stddev	.0009	.4	.011	.0035	.11	.002	.0002	.009	.0025
%RSD	.1617	.1589	.1240	3.226	.6646	.0810	.9230	.5470	1.082
#1	.5723	247.4	9.034	.1124	17.09	2.940	.0196	1.642	.2367
#2	.5733	247.3	9.034	.1058	17.31	2.944	.0199	1.641	.2344
#3	.5741	248.0	9.054	.1071	17.24	2.943	.0199	1.657	.2317

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.824**	**.0053**	**.0104**	**12.34**	**.0778**	**.2149**	**2.926**	**-.0048**	**.5607**
Stddev	.016	.0051	.0065	.02	.0006	.0008	.003	.0060	.0034
%RSD	.2758	95.80	62.42	.1531	.7395	.3730	.1109	124.0	.6102
#1	5.818	.0004	.0052	12.32	.0773	.2141	2.924	-.0060	.5627
#2	5.811	.0106	.0177	12.34	.0778	.2156	2.926	-.0101	.5626
#3	5.842	.0049	.0084	12.36	.0784	.2152	2.930	.0017	.5567

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**3.990**
Stddev	.005
%RSD	.1143
#1	3.988
#2	3.988
#3	3.996

Zoom In Zoom Out

Sample Name: FA98243-37T Acquired: 9/21/2022 15:41:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**991.38**	**3056.8**	**21754.**	**4793.7**
Stddev	2.74	6.3	112.	26.7
%RSD	.27634	.20489	.51416	.55746
#1	992.16	3060.9	21820.	4800.5
#2	993.66	3060.0	21817.	4764.3
#3	988.34	3049.6	21625.	4816.4

Zoom In Zoom Out

Sample Name: FA98243-39T Acquired: 9/21/2022 15:46:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**98.08**	**.1146**	**.5329**	**.0044**	**11.61**	**.0035**	**.0242**	**.2784**
Stddev	.0019	.08	.0057	.0018	.0002	.02	.0001	.0004	.0027
%RSD	33.70	.0817	4.956	.3296	4.216	.1696	1.560	1.860	.9814
#1	.0077	97.98	.1191	.5312	.0042	11.63	.0035	.0247	.2800
#2	.0043	98.12	.1082	.5329	.0045	11.59	.0036	.0239	.2752
#3	.0047	98.13	.1165	.5347	.0045	11.61	.0035	.0239	.2798

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1968**	**149.5**	**7.997**	**.0710**	**9.456**	**1.477**	**.0130**	**.3875**	**.0934**
Stddev	.0018	.4	.093	.0015	.153	.001	.0004	.0193	.0004
%RSD	.9273	.2425	1.162	2.047	1.620	.0761	2.808	4.989	.4559
#1	.1984	150.0	8.102	.0696	9.627	1.476	.0130	.3675	.0936
#2	.1948	149.4	7.963	.0725	9.408	1.478	.0134	.4060	.0936
#3	.1972	149.3	7.926	.0709	9.332	1.477	.0127	.3891	.0929

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.283**	**.0017**	**.0037**	**14.49**	**.0425**	**.1017**	**1.989**	**-.0022**	**.2763**
Stddev	.006	.0067	.0040	.02	.0011	.0007	.005	.0046	.0012
%RSD	.4741	392.9	106.3	.1699	2.613	.6807	.2310	213.0	.4249
#1	1.286	.0093	.0013	14.48	.0438	.1014	1.991	-.0012	.2752
#2	1.276	-.0033	.0016	14.47	.0418	.1013	1.984	.0019	.2762
#3	1.288	-.0009	.0083	14.52	.0419	.1025	1.993	-.0072	.2775

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.286**
Stddev	.002
%RSD	.1433
#1	1.284
#2	1.288
#3	1.288

Zoom In Zoom Out

Sample Name: FA98243-39T Acquired: 9/21/2022 15:46:25 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**997.11**	**2998.8**	**21290.**	**4685.2**
Stddev	1.77	2.7	16.	41.5
%RSD	.17733	.09013	.07471	.88616
#1	995.64	3001.8	21309.	4649.8
#2	999.08	2996.5	21279.	4675.0
#3	996.62	2998.2	21283.	4730.9

Zoom In Zoom Out

Sample Name: FA98243-41T Acquired: 9/21/2022 15:51:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**115.3**	**.0826**	**.5980**	**.0047**	**18.28**	**.0059**	**.0401**	**.3310**
Stddev	.0008	.3	.0039	.0014	.0002	.06	.0001	.0005	.0012
%RSD	14.17	.2563	4.714	.2360	4.647	.3463	1.222	1.210	.3617
#1	.0056	115.2	.0786	.5967	.0046	18.26	.0060	.0401	.3306
#2	.0064	115.2	.0864	.5976	.0050	18.24	.0058	.0405	.3324
#3	.0048	115.7	.0830	.5995	.0046	18.35	.0059	.0395	.3301

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3320**	**195.5**	**6.722**	**.0759**	**10.94**	**1.909**	**.0135**	**1.006**	**.1534**
Stddev	.0016	.6	.171	.0058	.18	.003	.0007	.029	.0003
%RSD	.4815	.2954	2.550	7.692	1.645	.1717	5.209	2.875	.1990
#1	.3316	195.2	6.621	.0692	10.78	1.908	.0139	.9769	.1531
#2	.3307	195.2	6.626	.0793	10.91	1.907	.0139	1.008	.1537
#3	.3338	196.2	6.920	.0792	11.14	1.913	.0127	1.035	.1532

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.134**	**.0057**	**.0045**	**14.00**	**.0644**	**.1728**	**2.723**	**.0015**	**.4247**
Stddev	.025	.0080	.0037	.02	.0009	.0002	.003	.0091	.0023
%RSD	.3575	139.6	82.45	.1325	1.455	.1072	.0906	595.7	.5341
#1	7.119	.0027	.0088	13.98	.0645	.1726	2.725	.0069	.4233
#2	7.119	-.0003	.0024	14.02	.0654	.1728	2.721	-.0090	.4235
#3	7.163	.0148	.0023	14.01	.0635	.1730	2.725	.0066	.4273

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**2.279**
Stddev	.001
%RSD	.0509
#1	2.278
#2	2.278
#3	2.280

Zoom In Zoom Out

Sample Name: FA98243-41T Acquired: 9/21/2022 15:51:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**994.08**	**3042.5**	**21699.**	**4743.6**
Stddev	1.97	6.2	83.	37.2
%RSD	.19815	.20379	.38046	.78431
#1	992.95	3035.4	21791.	4786.6
#2	996.36	3045.1	21674.	4723.6
#3	992.95	3046.9	21631.	4720.7

Zoom In Zoom Out

Sample Name: FA98243-55T Acquired: 9/21/2022 15:55:54 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049**	**115.4**	**.1142**	**.4273**	**.0044**	**11.82**	**.0008**	**.0283**	**.2612**
Stddev	.0013	.6	.0021	.0006	.0000	.08	.0003	.0004	.0010
%RSD	25.60	.5178	1.823	.1351	1.056	.6897	37.40	1.446	.3771
#1	.0036	114.8	.1160	.4267	.0044	11.73	.0012	.0286	.2623
#2	.0061	115.9	.1146	.4277	.0044	11.89	.0006	.0286	.2610
#3	.0050	115.5	.1119	.4276	.0043	11.84	.0007	.0279	.2603

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1995**	**173.6**	**7.287**	**.0681**	**7.754**	**1.078**	**.0130**	**.2238**	**.0848**
Stddev	.0011	.2	.037	.0013	.034	.003	.0008	.0141	.0003
%RSD	.5512	.1330	.5063	1.980	.4397	.3049	6.296	6.305	.3108
#1	.1987	173.4	7.245	.0687	7.778	1.077	.0129	.2075	.0849
#2	.1990	173.9	7.315	.0665	7.769	1.074	.0122	.2318	.0849
#3	.2007	173.6	7.301	.0690	7.715	1.081	.0138	.2322	.0845

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.709**	**.0036**	**.0089**	**15.97**	**.0470**	**.0746**	**2.073**	**-.0015**	**.3332**
Stddev	.004	.0024	.0031	.02	.0008	.0004	.004	.0075	.0021
%RSD	.2480	66.44	35.01	.1026	1.602	.5802	.2015	493.3	.6426
#1	1.710	.0029	.0121	15.96	.0474	.0743	2.071	-.0040	.3346
#2	1.713	.0063	.0089	15.98	.0475	.0751	2.070	-.0074	.3307
#3	1.704	.0016	.0058	15.99	.0461	.0745	2.078	.0069	.3342

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**1.147**
Stddev	.003
%RSD	.2688
#1	1.148
#2	1.144
#3	1.150

Zoom In Zoom Out

Sample Name: FA98243-55T Acquired: 9/21/2022 15:55:54 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1007.4**	**3064.9**	**21891.**	**4779.6**
Stddev	1.2	5.8	62.	6.9
%RSD	.11818	.18961	.28265	.14374
#1	1007.5	3063.6	21915.	4784.6
#2	1008.6	3071.2	21937.	4782.5
#3	1006.2	3059.7	21821.	4771.8

Zoom In Zoom Out

Sample Name: FA98243-56T Acquired: 9/21/2022 16:00:38 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**69.78**	**.0863**	**.3849**	**.0031**	**13.04**	**-.0009**	**.0140**	**.1556**
Stddev	.0033	.04	.0059	.0009	.0002	.01	.0001	.0005	.0029
%RSD	71.71	.0638	6.837	.2302	7.670	.0825	14.02	3.395	1.870
#1	.0018	69.83	.0915	.3839	.0029	13.05	-.0008	.0146	.1574
#2	.0083	69.74	.0799	.3853	.0030	13.05	-.0008	.0138	.1522
#3	.0038	69.78	.0875	.3855	.0033	13.03	-.0010	.0137	.1572

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0696**	**95.10**	**8.497**	**.0461**	**7.958**	**1.181**	**.0072**	**.1946**	**.0433**
Stddev	.0012	.14	.071	.0027	.031	.003	.0003	.0147	.0008
%RSD	1.732	.1426	.8341	5.940	.3869	.2376	4.057	7.575	1.894
#1	.0692	95.17	8.496	.0442	7.928	1.180	.0075	.1787	.0426
#2	.0687	94.95	8.426	.0492	7.956	1.180	.0071	.2078	.0430
#3	.0710	95.19	8.568	.0449	7.989	1.184	.0069	.1973	.0442

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2540**	**.0018**	**.0041**	**14.26**	**.0350**	**.0676**	**1.652**	**-.0064**	**.1625**
Stddev	.0021	.0030	.0071	.01	.0012	.0001	.004	.0016	.0016
%RSD	.8183	169.5	171.6	.0917	3.434	.0769	.2505	25.17	.9957
#1	.2538	-.0017	.0063	14.27	.0349	.0677	1.648	-.0079	.1635
#2	.2562	.0039	.0099	14.24	.0339	.0676	1.650	-.0047	.1606
#3	.2521	.0032	-.0038	14.26	.0363	.0677	1.656	-.0067	.1633

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3991**
Stddev	.0003
%RSD	.0831
#1	.3989
#2	.3995
#3	.3990

Zoom In Zoom Out

Sample Name: FA98243-56T Acquired: 9/21/2022 16:00:38 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1004.2**	**3019.0**	**21620.**	**4686.2**
Stddev	2.3	8.9	65.	22.6
%RSD	.23238	.29640	.29968	.48247
#1	1005.9	3028.2	21695.	4669.4
#2	1005.2	3018.6	21580.	4711.9
#3	1001.5	3010.3	21586.	4677.4

Zoom In Zoom Out

Sample Name: FA98243-58T Acquired: 9/21/2022 16:05:26 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076**	**132.5**	**.1117**	**.8410**	**.0056**	**54.87**	**.0091**	**.0469**	**.7263**
Stddev	.0010	.4	.0011	.0027	.0003	.08	.0000	.0006	.0030
%RSD	13.59	.2843	.9903	.3259	5.281	.1387	.4952	1.307	.4156
#1	.0086	132.4	.1104	.8386	.0053	54.91	.0091	.0470	.7297
#2	.0078	132.1	.1121	.8405	.0058	54.79	.0092	.0475	.7240
#3	.0065	132.9	.1125	.8440	.0057	54.93	.0091	.0463	.7253

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4927**	**210.0**	**11.16**	**.1018**	**20.58**	**2.768**	**.0183**	**1.379**	**.1834**
Stddev	.0015	.4	.13	.0052	.12	.006	.0004	.012	.0011
%RSD	.2947	.1687	1.199	5.071	.5970	.2098	2.108	.8629	.5956
#1	.4916	209.6	11.08	.0968	20.72	2.762	.0186	1.366	.1839
#2	.4943	210.1	11.10	.1016	20.50	2.774	.0179	1.390	.1842
#3	.4921	210.3	11.32	.1071	20.53	2.769	.0185	1.380	.1822

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.208**	**.0102**	**.0144**	**16.15**	**.0669**	**.3265**	**2.904**	**-.0097**	**.4689**
Stddev	.007	.0062	.0020	.02	.0025	.0004	.012	.0043	.0034
%RSD	.2245	60.91	14.02	.1194	3.777	.1218	.3985	44.41	.7332
#1	3.205	.0128	.0128	16.14	.0688	.3263	2.894	-.0107	.4729
#2	3.203	.0147	.0166	16.17	.0640	.3262	2.917	-.0134	.4674
#3	3.216	.0031	.0137	16.14	.0678	.3269	2.900	-.0050	.4666

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**3.182**
Stddev	.010
%RSD	.3196
#1	3.173
#2	3.181
#3	3.193

Zoom In Zoom Out

Sample Name: FA98243-58T Acquired: 9/21/2022 16:05:26 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**998.70**	**3089.9**	**22197.**	**4834.2**
Stddev	1.97	8.6	52.	13.3
%RSD	.19688	.27856	.23245	.27456
#1	1000.1	3098.6	22186.	4849.5
#2	999.51	3089.7	22151.	4827.0
#3	996.46	3081.3	22253.	4826.1

Zoom In Zoom Out

Sample Name: FA98243-60T Acquired: 9/21/2022 16:10:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**71.25**	**.0315**	**.2621**	**.0028**	**3.286**	**-.0021**	**.0192**	**.1580**
Stddev	.0015	.28	.0037	.0005	.0002	.013	.0001	.0010	.0003
%RSD	58.33	.3986	11.91	.2069	7.873	.4027	6.617	5.045	.1638
#1	.0039	71.58	.0327	.2623	.0027	3.288	-.0022	.0189	.1579
#2	.0010	71.04	.0272	.2615	.0031	3.272	-.0021	.0185	.1583
#3	.0027	71.14	.0344	.2625	.0027	3.298	-.0019	.0203	.1577

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0420**	**104.1**	**6.972**	**.0480**	**6.699**	**.6223**	**.0069**	**.1581**	**.0428**
Stddev	.0013	.4	.080	.0024	.016	.0019	.0011	.0253	.0005
%RSD	3.176	.3548	1.145	4.988	.2408	.3044	15.52	15.98	1.205
#1	.0407	104.4	6.887	.0478	6.718	.6242	.0082	.1573	.0424
#2	.0434	104.2	6.983	.0505	6.688	.6221	.0062	.1333	.0434
#3	.0418	103.7	7.046	.0457	6.692	.6205	.0064	.1838	.0427

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5097**	**-.0014**	**-.0030**	**10.47**	**.0378**	**.0297**	**1.869**	**-.0075**	**.1649**
Stddev	.0042	.0023	.0057	.01	.0007	.0001	.005	.0048	.0008
%RSD	.8215	163.8	189.8	.0648	1.925	.4183	.2673	64.84	.4786
#1	.5049	-.0028	-.0035	10.47	.0386	.0296	1.874	-.0096	.1644
#2	.5125	-.0027	.0029	10.47	.0372	.0297	1.870	-.0019	.1659
#3	.5117	.0013	-.0083	10.48	.0377	.0298	1.864	-.0108	.1645

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.2262**
Stddev	.0003
%RSD	.1500
#1	.2259
#2	.2261
#3	.2266

Zoom In Zoom Out

Sample Name: FA98243-60T Acquired: 9/21/2022 16:10:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1008.4**	**2995.4**	**21478.**	**4703.8**
Stddev	.8	3.3	46.	20.8
%RSD	.08027	.11078	.21427	.44120
#1	1008.1	2998.3	21428.	4697.8
#2	1009.4	2996.1	21517.	4726.9
#3	1007.9	2991.8	21491.	4686.8

Zoom In Zoom Out

Sample Name: MP41228-MB1 Acquired: 9/21/2022 16:14:57 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0098**	**.0000**	**-.0001**	**.0000**	**-.0026**	**-.0001**	**-.0001**	**.0001**
Stddev	.0004	.0040	.0005	.0001	.000	.0015	.0001	.0001	.0004
%RSD	1492.	40.79	2023.	76.82	72.92	57.59	68.88	237.9	357.6
#1	-.0003	.0083	-.0005	-.0001	.0000	-.0014	.0000	.0000	-.0003
#2	.0005	.0143	.0001	-.0001	.0000	-.0042	-.0001	-.0002	.0004
#3	-.0001	.0067	.0005	.0000	-.0001	-.0021	-.0001	.0000	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1002**	**.0097**	**-.0001**	**.0138**	**.0001**	**-.0002**	**-.0051**	**-.0004**
Stddev	.000	.0017	.0209	.0008	.0108	.0000	.0001	.0009	.0002
%RSD	8685.	1.742	214.2	1470.	78.64	30.88	65.64	17.93	46.47
#1	-.0002	.0983	.0187	.0005	.0099	.0001	-.0001	-.0060	-.0005
#2	.0002	.1018	.0246	-.0009	.0054	.0001	-.0002	-.0042	-.0004
#3	.0000	.1006	-.0141	.0002	.0260	.0001	-.0003	-.0052	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0011**	**.0001**	**.0052**	**.0001**	**.0000**	**.0001**	**-.0020**	**.0003**
Stddev	.0008	.0008	.0008	.0003	.0004	.000	.0001	.0006	.0002
%RSD	273.5	74.12	1259.	5.602	248.3	442.8	40.23	31.83	59.73
#1	-.0009	.0011	.0009	.0055	.0005	.0000	.0001	-.0028	.0001
#2	-.0005	.0003	-.0006	.0051	-.0002	.0000	.0002	-.0018	.0002
#3	.0006	.0019	-.0001	.0049	.0001	-.0001	.0001	-.0015	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP41228-MB1 Acquired: 9/21/2022 16:14:57 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0014**
Stddev	.0001
%RSD	3.927
#1	.0014
#2	.0014
#3	.0013
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1013.2**	**2925.0**	**20922.**	**4571.2**
Stddev	2.6	4.6	182.	42.2
%RSD	.25653	.15837	.87076	.92298
#1	1010.7	2927.8	21052.	4540.2
#2	1013.0	2919.6	20999.	4554.1
#3	1015.9	2927.5	20713.	4619.2

Zoom In Zoom Out

Sample Name: FA98999-1 Acquired: 9/21/2022 16:19:52 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0795**	**.0002**	**.0160**	**.0002**	**14.52**	**.0014**	**.0000**	**.0026**
Stddev	.0003	.0069	.0000	.0002	.0001	.07	.0001	.000	.0003
%RSD	37.08	8.649	15.77	1.348	30.29	.4514	4.504	63.57	11.88
#1	.0007	.0798	.0002	.0162	.0002	14.46	.0015	-.0001	.0028
#2	.0004	.0862	.0002	.0161	.0003	14.59	.0014	.0000	.0023
#3	.0009	.0725	.0002	.0158	.0002	14.50	.0014	.0000	.0029

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0316**	**.6623**	**.0112**	**1.758**	**.0415**	**.0001**	**3.813**	**.0063**
Stddev	.0004	.0020	.0323	.0010	.017	.0002	.0001	.010	.0002
%RSD	105.2	6.477	4.871	9.285	.9468	.5780	67.35	.2661	2.720
#1	-.0007	.0339	.6561	.0107	1.740	.0413	.0000	3.804	.0061
#2	.0001	.0306	.6973	.0124	1.764	.0417	.0002	3.824	.0065
#3	-.0006	.0302	.6336	.0105	1.771	.0416	.0002	3.812	.0063

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0010**	**.0006**	**4.419**	**.0000**	**.0203**	**.0009**	**-.0012**	**.0004**
Stddev	.0005	.0008	.0018	.001	.000	.0001	.0002	.0007	.0001
%RSD	69.22	82.66	326.5	.0258	596.9	.5834	19.69	63.39	31.64
#1	-.0013	.0008	-.0001	4.418	.0002	.0201	.0012	-.0004	.0003
#2	-.0002	.0003	-.0008	4.420	-.0002	.0203	.0009	-.0012	.0003
#3	-.0007	.0019	.0026	4.419	-.0001	.0204	.0008	-.0019	.0005

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1011**
Stddev	.0001
%RSD	.1278
#1	.1010
#2	.1011
#3	.1012

Zoom In Zoom Out

Sample Name: FA98999-1 Acquired: 9/21/2022 16:19:52 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1002.9**	**2889.8**	**20935.**	**4568.3**
Stddev	3.7	9.9	151.	31.2
%RSD	.37138	.34259	.71999	.68210
#1	1007.2	2901.1	21100.	4603.2
#2	1000.2	2885.7	20900.	4558.8
#3	1001.4	2882.6	20804.	4543.1

Zoom In Zoom Out

Sample Name: MP41228-D1 Acquired: 9/21/2022 16:24:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0719**	**-.0007**	**.0158**	**.0002**	**14.37**	**.0014**	**.0000**	**.0027**
Stddev	.0003	.0032	.0007	.0001	.0001	.02	.0000	.000	.0002
%RSD	86.80	4.496	110.7	.7757	24.57	.1065	1.903	349.1	8.840
#1	.0002	.0697	.0000	.0159	.0002	14.38	.0014	-.0001	.0024
#2	.0001	.0705	-.0015	.0157	.0002	14.37	.0014	.0001	.0028
#3	.0006	.0756	-.0005	.0158	.0003	14.35	.0014	-.0001	.0028

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0268**	**.6347**	**.0115**	**1.717**	**.0412**	**.0001**	**3.759**	**.0064**
Stddev	.000	.0026	.0104	.0003	.017	.0001	.0001	.009	.0000
%RSD	432.0	9.700	1.641	2.639	.9984	.2074	111.8	.2322	.6361
#1	.0001	.0270	.6455	.0112	1.733	.0413	.0000	3.764	.0064
#2	-.0002	.0293	.6247	.0115	1.719	.0413	.0001	3.749	.0064
#3	.0001	.0241	.6341	.0118	1.699	.0411	.0002	3.763	.0064

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0002**	**.0003**	**4.337**	**.0001**	**.0200**	**.0008**	**-.0016**	**.0006**
Stddev	.0002	.0007	.0019	.007	.0000	.0001	.0001	.0012	.0002
%RSD	27.61	462.4	595.0	.1546	32.20	.4284	11.10	77.81	33.62
#1	-.0005	-.0001	.0002	4.335	.0001	.0201	.0009	-.0027	.0004
#2	-.0007	.0010	-.0016	4.332	.0002	.0200	.0007	-.0019	.0006
#3	-.0005	-.0004	.0023	4.344	.0001	.0199	.0007	-.0003	.0007

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1002**
Stddev	.0001
%RSD	.0971
#1	.1002
#2	.1001
#3	.1003

Zoom In Zoom Out

Sample Name: MP41228-D1 Acquired: 9/21/2022 16:24:42 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1003.0**	**2908.2**	**20768.**	**4548.9**
Stddev	2.0	5.9	66.	22.5
%RSD	.20151	.20240	.31742	.49550
#1	1002.6	2906.0	20836.	4524.0
#2	1005.2	2914.9	20765.	4554.9
#3	1001.3	2903.7	20704.	4567.8

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 16:29:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2602**	**39.39**	**2.027**	**1.986**	**2.000**	**40.22**	**2.028**	**2.018**	**2.060**
Stddev	.0008	.12	.002	.003	.002	.13	.001	.001	.005
%RSD	.3235	.2986	.1152	.1403	.1099	.3264	.0540	.0376	.2337
#1	.2592	39.45	2.027	1.989	2.003	40.30	2.028	2.018	2.057
#2	.2606	39.25	2.024	1.984	1.998	40.07	2.026	2.017	2.057
#3	.2608	39.46	2.029	1.986	2.000	40.30	2.029	2.019	2.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.936**	**40.53**	**39.98**	**2.005**	**39.94**	**2.003**	**2.036**	**39.49**	**2.082**
Stddev	.005	.10	.12	.005	.17	.009	.004	.10	.003
%RSD	.2711	.2468	.2997	.2584	.4262	.4400	.1749	.2464	.1468
#1	1.941	40.62	40.07	2.010	40.12	2.011	2.035	39.60	2.081
#2	1.930	40.55	39.84	2.000	39.90	1.994	2.033	39.42	2.079
#3	1.938	40.42	40.01	2.004	39.79	2.005	2.040	39.45	2.085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.991**	**1.989**	**2.028**	**2.319**	**1.992**	**2.041**	**1.969**	**2.074**	**2.037**
Stddev	.002	.000	.001	.002	.000	.006	.004	.012	.009
%RSD	.1050	.0150	.0614	.0767	.0032	.2732	.1954	.6002	.4163
#1	1.988	1.989	2.029	2.320	1.992	2.042	1.971	2.063	2.041
#2	1.993	1.989	2.027	2.317	1.992	2.035	1.964	2.072	2.027
#3	1.991	1.989	2.028	2.319	1.992	2.046	1.971	2.087	2.041
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 16:29:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.064**
Stddev	.001
%RSD	.0333
#1	2.064
#2	2.063
#3	2.064
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**925.37**	**2766.9**	**20317.**	**4428.3**
Stddev	1.44	3.7	137.	48.6
%RSD	.15600	.13376	.67592	1.0968
#1	927.03	2770.1	20203.	4379.1
#2	924.71	2767.9	20469.	4476.2
#3	924.38	2762.9	20279.	4429.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 16:34:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0111**	**.0002**	**.0002**	**.0001**	**.0041**	**.0000**	**.0000**	**.0002**
Stddev	.0008	.0079	.0009	.0001	.0000	.0014	.0000	.0001	.0002
%RSD	217.3	71.19	394.2	58.84	9.227	35.03	32.57	119.9	99.62
#1	-.0005	.0098	.0013	.0003	.0002	.0034	.0000	.0001	.0000
#2	.0006	.0039	.0000	.0003	.0001	.0031	.0000	.0000	.0005
#3	.0009	.0196	-.0006	.0001	.0001	.0057	.0001	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0040**	**.0222**	**.0006**	**-.0061**	**.0001**	**.0003**	**-.0004**	**-.0001**
Stddev	.001	.0007	.0073	.0010	.0055	.0000	.0002	.0097	.0000
%RSD	4460.	17.59	32.84	149.1	89.29	23.80	52.15	2601.	28.74
#1	-.0004	.0045	.0163	.0015	-.0016	.0001	.0005	.0098	-.0001
#2	-.0001	.0044	.0200	.0009	-.0123	.0001	.0004	-.0097	-.0001
#3	.0005	.0032	.0304	-.0004	-.0046	.0001	.0001	-.0012	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**-.0004**	**-.0002**	**.0004**	**.0002**	**.0002**	**-.0007**	**.0002**
Stddev	.0004	.0006	.0011	.0002	.0003	.0001	.0001	.0008	.0001
%RSD	233.3	294.4	283.6	131.5	80.84	33.92	55.98	115.1	63.29
#1	.0004	.0001	.0005	-.0003	.0003	.0002	.0003	.0000	.0003
#2	.0004	.0002	.0000	-.0003	.0001	.0001	.0001	-.0006	.0001
#3	-.0003	-.0010	-.0016	.0001	.0007	.0002	.0002	-.0015	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 16:34:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0001
%RSD	24.92
#1	.0003
#2	.0002
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1010.6**	**2894.1**	**20718.**	**4490.6**
Stddev	3.9	7.6	33.	32.5
%RSD	.38328	.26110	.16079	.72326
#1	1014.7	2900.1	20756.	4504.2
#2	1010.0	2896.5	20706.	4453.5
#3	1007.0	2885.6	20693.	4514.0

Zoom In Zoom Out

Sample Name: MP41228-SD1 Acquired: 9/21/2022 16:38:56 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0977**	**-.0014**	**.0152**	**.0003**	**14.14**	**.0015**	**.0000**	**.0018**
Stddev	.0018	.0209	.0009	.0004	.0002	.02	.0002	.000	.0011
%RSD	214.8	21.39	62.79	2.607	65.59	.1127	13.56	2244.	60.49
#1	-.0011	.1217	-.0016	.0156	.0005	14.14	.0013	.0004	.0030
#2	.0024	.0871	-.0004	.0148	.0001	14.13	.0014	-.0001	.0008
#3	.0011	.0841	-.0021	.0151	.0003	14.16	.0017	-.0003	.0017

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0308**	**.6625**	**.0120**	**1.732**	**.0405**	**.0000**	**3.724**	**.0060**
Stddev	.0015	.0043	.0932	.0027	.059	.0001	.000	.016	.0008
%RSD	183.9	13.94	14.07	22.34	3.407	.2456	653.3	.4237	13.39
#1	-.0007	.0280	.5841	.0141	1.693	.0405	.0002	3.739	.0064
#2	.0006	.0286	.6379	.0090	1.703	.0404	-.0004	3.708	.0051
#3	-.0023	.0357	.7655	.0130	1.800	.0406	.0001	3.726	.0065

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0029**	**-.0012**	**-.0009**	**4.299**	**.0013**	**.0199**	**.0013**	**-.0031**	**.0021**
Stddev	.0022	.0013	.0016	.014	.0026	.0002	.0007	.0033	.0012
%RSD	75.30	110.9	185.1	.3271	192.8	.8551	52.40	106.5	57.73
#1	-.0011	-.0025	.0004	4.283	.0043	.0197	.0012	-.0003	.0020
#2	-.0053	-.0013	-.0027	4.309	-.0006	.0199	.0007	-.0022	.0033
#3	-.0022	.0002	-.0003	4.306	.0003	.0201	.0020	-.0068	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0985**
Stddev	.0001
%RSD	.1157
#1	.0984
#2	.0985
#3	.0986

Zoom In Zoom Out

Sample Name: MP41228-SD1 Acquired: 9/21/2022 16:38:56 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1012.8**	**2921.5**	**20757.**	**4512.5**
Stddev	2.1	11.4	65.	18.2
%RSD	.20534	.39060	.31325	.40343
#1	1012.8	2930.9	20684.	4530.3
#2	1014.9	2924.9	20780.	4513.4
#3	1010.7	2908.8	20809.	4493.9

Zoom In Zoom Out

Sample Name: MP41228-PS1 Acquired: 9/21/2022 16:43:47 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0465**	**2.489**	**.0958**	**.2584**	**.0494**	**19.17**	**.0509**	**.0493**	**.0540**
Stddev	.0002	.024	.0014	.0015	.0004	.13	.0001	.0001	.0002
%RSD	.3363	.9573	1.424	.5687	.7410	.6947	.2842	.2825	.4344
#1	.0464	2.473	.0971	.2567	.0491	19.02	.0509	.0493	.0542
#2	.0467	2.478	.0944	.2590	.0493	19.19	.0507	.0492	.0538
#3	.0464	2.516	.0959	.2595	.0498	19.28	.0510	.0494	.0539

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0949**	**2.980**	**9.983**	**.0122**	**6.724**	**.0910**	**.0960**	**12.45**	**.1085**
Stddev	.0005	.017	.061	.0010	.048	.0002	.0004	.07	.0002
%RSD	.5273	.5699	.6115	8.325	.7106	.2232	.3726	.5608	.1939
#1	.0946	2.961	9.917	.0116	6.675	.0912	.0956	12.37	.1085
#2	.0955	2.994	9.996	.0133	6.726	.0909	.0963	12.49	.1083
#3	.0947	2.986	10.04	.0115	6.770	.0908	.0961	12.50	.1087

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0474**	**.0971**	**.0927**	**4.458**	**.0491**	**.0700**	**.0966**	**.0956**	**.0503**
Stddev	.0001	.0005	.0027	.009	.0005	.0005	.0001	.0012	.0004
%RSD	.1692	.5242	2.951	.2016	.9947	.7642	.1336	1.206	.7954
#1	.0473	.0965	.0914	4.452	.0492	.0694	.0965	.0945	.0504
#2	.0475	.0974	.0909	4.453	.0486	.0703	.0967	.0968	.0506
#3	.0475	.0974	.0959	4.468	.0495	.0704	.0967	.0954	.0499

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.3452**
Stddev	.0003
%RSD	.1013
#1	.3452
#2	.3455
#3	.3448

Zoom In Zoom Out

Sample Name: MP41228-PS1 Acquired: 9/21/2022 16:43:47 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**976.74**	**2860.8**	**20452.**	**4507.3**
Stddev	3.06	6.6	124.	67.5
%RSD	.31326	.23158	.60449	1.4985
#1	973.97	2853.2	20368.	4578.2
#2	980.03	2863.8	20393.	4499.9
#3	976.23	2865.5	20594.	4443.8

Zoom In Zoom Out

Sample Name: MP41228-S1 Acquired: 9/21/2022 16:48:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0443**	**26.82**	**1.963**	**2.000**	**.0506**	**39.27**	**.0512**	**.4971**	**.2110**
Stddev	.0001	.05	.006	.005	.0002	.03	.0001	.0005	.0007
%RSD	.2247	.1695	.3023	.2670	.3040	.0690	.1804	.1031	.3493
#1	.0442	26.78	1.958	1.997	.0504	39.24	.0511	.4966	.2102
#2	.0442	26.81	1.962	1.996	.0506	39.27	.0512	.4972	.2116
#3	.0444	26.87	1.970	2.006	.0507	39.30	.0513	.4976	.2113

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**26.50**	**25.56**	**.0117**	**27.00**	**.5467**	**.5146**	**26.94**	**.5256**
Stddev	.0011	.05	.05	.0013	.04	.0027	.0016	.04	.0036
%RSD	.4372	.1967	.1799	11.44	.1628	.4940	.3148	.1407	.6897
#1	.2486	26.55	25.54	.0131	27.01	.5458	.5128	26.95	.5214
#2	.2479	26.45	25.53	.0104	26.96	.5445	.5148	26.90	.5279
#3	.2501	26.51	25.62	.0118	27.05	.5497	.5161	26.97	.5275

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4883**	**.4887**	**1.948**	**5.014**	**.4986**	**.5435**	**.5163**	**2.020**	**.5088**
Stddev	.0013	.0017	.008	.004	.0002	.0013	.0015	.021	.0016
%RSD	.2664	.3381	.4020	.0696	.0464	.2309	.2924	1.047	.3144
#1	.4897	.4872	1.941	5.016	.4987	.5428	.5160	2.026	.5082
#2	.4872	.4886	1.946	5.010	.4984	.5429	.5149	1.997	.5076
#3	.4879	.4905	1.956	5.016	.4988	.5450	.5179	2.038	.5106

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.5994**
Stddev	.0020
%RSD	.3390
#1	.5972
#2	.5997
#3	.6012

Zoom In Zoom Out

Sample Name: MP41228-S1 Acquired: 9/21/2022 16:48:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.77**	**2803.5**	**20351.**	**4490.0**
Stddev	1.34	8.1	127.	16.6
%RSD	.14312	.28857	.62604	.36944
#1	937.27	2812.3	20397.	4478.1
#2	939.87	2801.8	20450.	4482.8
#3	939.16	2796.3	20208.	4508.9

Zoom In Zoom Out

Sample Name: MP41228-S2 Acquired: 9/21/2022 16:53:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0452**	**26.87**	**1.967**	**2.015**	**.0509**	**39.56**	**.0514**	**.4999**	**.2124**
Stddev	.0004	.07	.002	.003	.0003	.17	.0001	.0002	.0007
%RSD	.9411	.2588	.1182	.1613	.5483	.4326	.1136	.0441	.3195
#1	.0451	26.79	1.967	2.011	.0506	39.37	.0513	.5002	.2130
#2	.0457	26.93	1.964	2.017	.0512	39.71	.0514	.4998	.2117
#3	.0449	26.90	1.969	2.016	.0508	39.58	.0514	.4998	.2126

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**26.53**	**25.70**	**.0112**	**27.09**	**.5489**	**.5158**	**26.98**	**.5264**
Stddev	.0013	.03	.12	.0003	.18	.0022	.0006	.07	.0006
%RSD	.5063	.1081	.4539	2.899	.6482	.3979	.1095	.2561	.1054
#1	.2502	26.50	25.56	.0110	26.96	.5508	.5153	26.91	.5268
#2	.2477	26.53	25.76	.0110	27.29	.5465	.5156	27.04	.5258
#3	.2488	26.56	25.76	.0115	27.02	.5494	.5164	27.01	.5266

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4918**	**.4913**	**1.960**	**5.049**	**.5005**	**.5481**	**.5168**	**2.040**	**.5113**
Stddev	.0007	.0006	.002	.002	.0009	.0019	.0006	.012	.0010
%RSD	.1523	.1277	.0778	.0402	.1700	.3477	.1251	.5665	.1902
#1	.4927	.4910	1.962	5.048	.5014	.5461	.5170	2.041	.5124
#2	.4915	.4921	1.959	5.048	.4997	.5499	.5161	2.028	.5107
#3	.4913	.4909	1.960	5.051	.5006	.5484	.5173	2.051	.5108

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.6015**
Stddev	.0006
%RSD	.0916
#1	.6013
#2	.6021
#3	.6011

Zoom In Zoom Out

Sample Name: MP41228-S2 Acquired: 9/21/2022 16:53:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.51**	**2827.5**	**20495.**	**4495.2**
Stddev	.82	1.0	99.	36.2
%RSD	.08717	.03689	.48271	.80590
#1	945.45	2828.5	20416.	4523.8
#2	943.95	2826.5	20606.	4454.4
#3	944.12	2827.5	20462.	4507.2

Zoom In Zoom Out

Sample Name: FA98969-10 Acquired: 9/21/2022 16:57:36 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0160**	**.0188**	**.0535**	**.0000**	**94.01**	**.0000**	**.0000**	**-.0003**
Stddev	.0004	.0048	.0002	.0002	.000	.10	.000	.0002	.0002
%RSD	104.0	29.83	1.001	.3147	33.98	.1098	146.5	364.1	68.75
#1	.0007	.0107	.0188	.0536	.0000	94.11	-.0001	-.0001	-.0004
#2	.0000	.0172	.0189	.0533	.0000	93.90	.0000	.0002	-.0002
#3	.0003	.0200	.0186	.0536	.0000	94.01	.0000	.0000	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0182**	**.2873**	**.0061**	**78.08**	**.0123**	**.0135**	**35.59**	**.0039**
Stddev	.0001	.0022	.0279	.0003	.24	.0000	.0002	.07	.0000
%RSD	17.45	12.12	9.724	4.865	.3021	.3576	1.327	.1849	1.132
#1	-.0006	.0169	.2554	.0059	78.17	.0124	.0137	35.61	.0039
#2	-.0005	.0208	.2988	.0060	77.81	.0124	.0133	35.52	.0039
#3	-.0008	.0170	.3076	.0065	78.26	.0123	.0134	35.64	.0038

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**.0007**	**-.0002**	**8.545**	**.0007**	**.6646**	**.0008**	**-.0013**	**.0181**
Stddev	.0005	.0012	.0003	.012	.0003	.0007	.0003	.0012	.0002
%RSD	39.41	169.5	136.6	.1408	39.73	.1091	35.52	99.44	1.273
#1	-.0017	-.0007	.0001	8.551	.0008	.6643	.0010	.0001	.0178
#2	-.0008	.0011	-.0004	8.531	.0009	.6641	.0005	-.0015	.0182
#3	-.0017	.0017	-.0005	8.552	.0004	.6655	.0008	-.0024	.0182

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0065**
Stddev	.0000
%RSD	.6152
#1	.0066
#2	.0065
#3	.0065

Zoom In Zoom Out

Sample Name: FA98969-10 Acquired: 9/21/2022 16:57:36 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.89**	**2786.3**	**20336.**	**4453.1**
Stddev	1.32	8.1	147.	31.9
%RSD	.14228	.28987	.72490	.71727
#1	930.42	2792.7	20331.	4468.5
#2	928.23	2788.9	20486.	4474.4
#3	928.04	2777.2	20192.	4416.4

Zoom In Zoom Out

Sample Name: FA98969-11 Acquired: 9/21/2022 17:02:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.3829**	**.0020**	**.0135**	**.0000**	**80.87**	**-.0001**	**.0000**	**.0010**
Stddev	.0001	.0074	.0004	.0001	.000	.35	.0000	.000	.0002
%RSD	15.74	1.921	19.81	.9805	118.0	.4389	32.27	1204.	14.74
#1	.0007	.3778	.0020	.0135	.0000	80.65	.0000	.0000	.0010
#2	.0010	.3797	.0024	.0133	.0000	80.69	-.0001	.0000	.0012
#3	.0009	.3914	.0016	.0136	.0000	81.28	-.0001	.0000	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.1261**	**.1981**	**.0022**	**11.54**	**.0010**	**.0041**	**1.047**	**.0012**
Stddev	.0002	.0022	.0246	.0004	.10	.0001	.0002	.001	.0003
%RSD	3.008	1.754	12.39	16.41	.8517	6.138	3.885	.0900	23.44
#1	.0058	.1236	.1898	.0025	11.43	.0011	.0040	1.048	.0014
#2	.0054	.1278	.2257	.0023	11.57	.0010	.0041	1.047	.0009
#3	.0056	.1269	.1788	.0018	11.62	.0009	.0043	1.047	.0013

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0013**	**.0008**	**.0012**	**2.394**	**.0001**	**.8502**	**.0045**	**-.0018**	**.0099**
Stddev	.0004	.0011	.0003	.005	.0001	.0031	.0001	.0006	.0002
%RSD	26.71	143.6	27.68	.1968	151.2	.3704	2.827	36.22	1.566
#1	-.0011	.0009	.0015	2.393	.0001	.8491	.0044	-.0010	.0100
#2	-.0012	-.0004	.0009	2.390	.0000	.8478	.0045	-.0022	.0097
#3	-.0017	.0018	.0013	2.399	.0002	.8538	.0046	-.0020	.0100

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0206**
Stddev	.0001
%RSD	.2648
#1	.0206
#2	.0205
#3	.0206

Zoom In Zoom Out

Sample Name: FA98969-11 Acquired: 9/21/2022 17:02:28 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**967.66**	**2829.7**	**20652.**	**4517.2**
Stddev	1.65	5.2	31.	43.3
%RSD	.17094	.18322	.14806	.95861
#1	968.94	2834.5	20673.	4551.7
#2	965.79	2824.2	20666.	4531.3
#3	968.24	2830.4	20617.	4468.6

Zoom In Zoom Out

Sample Name: FA98969-12 Acquired: 9/21/2022 17:07:20 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0369**	**.0027**	**.0430**	**.0001**	**82.79**	**-.0001**	**-.0002**	**.0001**
Stddev	.0001	.0081	.0006	.0001	.0000	.05	.0000	.0001	.0002
%RSD	157.0	22.07	21.40	.2235	40.96	.0554	19.81	40.62	167.4
#1	.0001	.0276	.0029	.0430	.0001	82.76	-.0001	-.0002	.0001
#2	-.0001	.0428	.0021	.0430	.0000	82.77	-.0001	-.0001	.0004
#3	-.0002	.0402	.0032	.0428	.0000	82.84	-.0001	-.0002	-.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.7081**	**3.000**	**.0055**	**45.83**	**.1036**	**.0013**	**23.15**	**.0002**
Stddev	.0003	.0014	.007	.0011	.09	.0006	.0001	.02	.0002
%RSD	376.9	.1967	.2275	20.23	.1972	.6139	8.837	.0955	98.94
#1	.0003	.7069	3.007	.0055	45.80	.1030	.0013	23.13	.0004
#2	-.0004	.7096	2.998	.0065	45.94	.1035	.0011	23.16	.0000
#3	-.0001	.7078	2.994	.0043	45.76	.1043	.0013	23.17	.0004

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0003**	**-.0002**	**10.29**	**.0003**	**.6416**	**.0012**	**-.0015**	**.0008**
Stddev	.0009	.0011	.0006	.02	.0001	.0022	.0001	.0002	.0002
%RSD	117.2	376.3	257.5	.2209	29.89	.3385	5.885	16.35	20.91
#1	-.0017	.0010	.0000	10.29	.0004	.6400	.0012	-.0018	.0006
#2	-.0002	.0008	.0002	10.27	.0002	.6406	.0013	-.0014	.0009
#3	-.0003	-.0010	-.0009	10.31	.0004	.6440	.0012	-.0013	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0109**
Stddev	.0001
%RSD	.8010
#1	.0108
#2	.0108
#3	.0109

Zoom In Zoom Out

Sample Name: FA98969-12 Acquired: 9/21/2022 17:07:20 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**941.97**	**2783.7**	**20190.**	**4394.5**
Stddev	1.91	4.4	59.	22.7
%RSD	.20257	.15807	.29296	.51610
#1	943.02	2781.7	20244.	4388.7
#2	943.11	2788.7	20200.	4375.2
#3	939.77	2780.7	20127.	4419.5

Zoom In Zoom Out

Sample Name: FA98969-13 Acquired: 9/21/2022 17:12:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0087**	**.0035**	**.0277**	**.0000**	**84.95**	**-.0001**	**.0000**	**-.0001**
Stddev	.0000	.0098	.0008	.0002	.000	.39	.0000	.000	.0005
%RSD	7.805	112.6	22.05	.5875	415.4	.4608	14.55	225.0	351.0
#1	.0006	-.0019	.0043	.0277	.0000	84.56	-.0001	.0000	.0001
#2	.0005	.0107	.0028	.0278	.0000	85.35	-.0001	-.0001	-.0007
#3	.0005	.0173	.0034	.0275	-.0001	84.94	-.0001	.0000	.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.1710**	**.9660**	**.0061**	**47.50**	**.0200**	**.0030**	**26.85**	**.0008**
Stddev	.0002	.0007	.0282	.0010	.25	.0001	.0002	.09	.0001
%RSD	31.78	.3871	2.924	16.83	.5314	.2835	7.821	.3180	13.77
#1	-.0007	.1703	.9444	.0069	47.38	.0200	.0028	26.77	.0007
#2	-.0004	.1716	.9555	.0049	47.79	.0201	.0031	26.94	.0009
#3	-.0004	.1712	.9979	.0063	47.34	.0200	.0032	26.83	.0007

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**.0002**	**-.0011**	**8.585**	**.0000**	**.4696**	**.0005**	**-.0008**	**.0009**
Stddev	.0004	.0015	.0006	.009	.000	.0023	.0002	.0009	.0001
%RSD	29.35	898.8	55.09	.0993	15460.	.4813	40.39	104.6	10.83
#1	-.0019	.0005	-.0015	8.577	-.0003	.4671	.0003	-.0018	.0010
#2	-.0014	.0015	-.0004	8.584	.0003	.4712	.0004	-.0007	.0009
#3	-.0011	-.0015	-.0015	8.594	.0000	.4706	.0007	.0000	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0100**
Stddev	.0001
%RSD	.5450
#1	.0101
#2	.0100
#3	.0100

Zoom In Zoom Out

Sample Name: FA98969-13 Acquired: 9/21/2022 17:12:11 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**935.53**	**2767.8**	**20157.**	**4444.4**
Stddev	1.48	4.1	44.	29.7
%RSD	.15809	.14941	.21877	.66890
#1	933.96	2772.5	20158.	4466.5
#2	936.91	2765.9	20201.	4410.6
#3	935.71	2764.9	20113.	4456.2

Zoom In Zoom Out

Sample Name: FA98969-14 Acquired: 9/21/2022 17:17:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0323**	**.0088**	**.0529**	**-.0001**	**224.8**	**-.0001**	**.0004**	**.0009**
Stddev	.0001	.0013	.0006	.0002	.0000	1.3	.0000	.0001	.0001
%RSD	40.33	3.884	6.847	.4095	71.27	.5994	12.74	27.51	9.228
#1	.0002	.0322	.0092	.0530	.0000	226.3	-.0001	.0004	.0010
#2	.0004	.0336	.0091	.0526	.0000	224.1	-.0001	.0003	.0008
#3	.0004	.0311	.0081	.0529	-.0001	223.9	-.0001	.0005	.0010

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0576**	**2.489**	**.0167**	**26.12**	**.1127**	**.0299**	F **152.5**	**.0047**
Stddev	.0004	.0009	.026	.0015	.08	.0000	.0002	3.7	.0002
%RSD	58.84	1.598	1.063	9.086	.2917	.0403	.5425	2.417	3.823
#1	.0010	.0582	2.468	.0173	26.16	.1127	.0299	153.2	.0047
#2	.0002	.0566	2.519	.0178	26.18	.1127	.0301	155.8	.0045
#3	.0008	.0582	2.481	.0149	26.04	.1128	.0297	148.5	.0049

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0039**	**.0007**	**-.0011**	**8.811**	**.0002**	**1.378**	**.0009**	**-.0012**	**.0038**
Stddev	.0006	.0015	.0018	.020	.0002	.006	.0001	.0015	.0003
%RSD	15.36	197.8	163.8	.2285	73.19	.4544	10.44	123.3	7.027
#1	-.0040	-.0009	-.0016	8.800	.0004	1.384	.0009	.0003	.0040
#2	-.0044	.0013	.0009	8.799	.0001	1.371	.0009	-.0027	.0035
#3	-.0032	.0019	-.0026	8.834	.0001	1.378	.0008	-.0012	.0039

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0122**
Stddev	.0001
%RSD	.6563
#1	.0121
#2	.0123
#3	.0122

Zoom In Zoom Out

Sample Name: FA98969-14 Acquired: 9/21/2022 17:17:02 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**877.24**	**2639.5**	**19250.**	**4224.4**
Stddev	1.27	4.8	100.	25.8
%RSD	.14524	.18140	.51843	.61001
#1	878.16	2634.9	19230.	4220.0
#2	875.79	2639.3	19162.	4201.1
#3	877.78	2644.4	19358.	4252.0

Zoom In Zoom Out

Sample Name: FA98969-15 Acquired: 9/21/2022 17:22:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0150**	**.2033**	**.0341**	**.0000**	**85.82**	**-.0001**	**-.0001**	**.0000**
Stddev	.0005	.0103	.0015	.0000	.000	.28	.0000	.0000	.000
%RSD	95.31	68.58	.7219	.1447	222.8	.3318	23.45	14.01	1291.
#1	.0009	.0243	.2034	.0342	.0000	86.10	-.0001	-.0001	.0002
#2	-.0001	.0039	.2047	.0341	-.0001	85.53	-.0001	-.0001	.0000
#3	.0008	.0169	.2018	.0341	.0000	85.84	-.0001	-.0001	-.0002

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.4338**	**1.047**	**.0033**	**54.65**	**.0288**	**.0175**	**31.68**	**.0011**
Stddev	.0004	.0045	.004	.0006	.09	.0000	.0003	.06	.0001
%RSD	101.7	1.040	.4098	17.01	.1725	.1122	1.527	.1788	6.312
#1	-.0004	.4320	1.043	.0039	54.56	.0288	.0173	31.73	.0011
#2	.0000	.4304	1.052	.0029	54.65	.0288	.0178	31.62	.0010
#3	-.0006	.4389	1.046	.0031	54.75	.0288	.0174	31.67	.0011

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**-.0006**	**-.0018**	**9.772**	**.0002**	**.5970**	**.0006**	**-.0007**	**.0008**
Stddev	.0006	.0016	.0007	.006	.0005	.0015	.0001	.0008	.0002
%RSD	35.07	254.1	38.04	.0649	314.8	.2501	21.82	114.3	18.60
#1	-.0019	-.0024	-.0014	9.766	.0007	.5986	.0006	-.0015	.0009
#2	-.0023	.0005	-.0015	9.773	-.0001	.5956	.0004	-.0009	.0007
#3	-.0011	.0001	-.0027	9.778	-.0001	.5967	.0007	.0002	.0009

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0117**
Stddev	.0001
%RSD	.4470
#1	.0117
#2	.0116
#3	.0117

Zoom In Zoom Out

Sample Name: FA98969-15 Acquired: 9/21/2022 17:22:09 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.07**	**2780.7**	**20250.**	**4387.2**
Stddev	2.19	4.6	62.	14.7
%RSD	.23529	.16536	.30552	.33413
#1	930.49	2775.9	20243.	4400.7
#2	930.18	2781.2	20315.	4389.3
#3	926.56	2785.0	20192.	4371.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 17:26:59 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2612**	**38.95**	**2.013**	**1.971**	**1.990**	**39.74**	**2.035**	**2.019**	**2.065**
Stddev	.0007	.03	.003	.002	.001	.08	.002	.003	.006
%RSD	.2613	.0807	.1362	.1169	.0580	.2035	.1177	.1563	.2786
#1	.2617	38.92	2.015	1.969	1.990	39.70	2.037	2.022	2.064
#2	.2604	38.98	2.010	1.974	1.990	39.83	2.033	2.016	2.060
#3	.2614	38.95	2.014	1.970	1.988	39.69	2.037	2.019	2.071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.927**	**40.74**	**39.85**	**1.974**	**40.36**	**1.995**	**2.033**	**39.45**	**2.082**
Stddev	.005	.04	.09	.003	.06	.008	.002	.01	.002
%RSD	.2473	.1019	.2261	.1743	.1571	.4230	.0851	.0192	.1077
#1	1.931	40.70	39.78	1.974	40.42	2.000	2.034	39.46	2.084
#2	1.922	40.75	39.95	1.978	40.29	1.986	2.031	39.45	2.081
#3	1.928	40.78	39.81	1.971	40.37	2.001	2.033	39.44	2.080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.015**	**1.979**	**2.018**	**2.312**	**1.994**	**2.006**	**1.970**	**2.067**	**2.020**
Stddev	.006	.004	.002	.006	.001	.003	.002	.015	.011
%RSD	.3101	.1845	.0785	.2495	.0696	.1413	.0930	.7130	.5470
#1	2.008	1.983	2.016	2.318	1.993	2.004	1.972	2.050	2.025
#2	2.020	1.977	2.018	2.307	1.993	2.009	1.970	2.079	2.007
#3	2.016	1.977	2.019	2.310	1.995	2.005	1.969	2.072	2.027
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 17:26:59 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.080**
Stddev	.003
%RSD	.1376
#1	2.080
#2	2.078
#3	2.083
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**921.74**	**2771.4**	**20283.**	**4370.1**
Stddev	4.11	5.3	136.	28.6
%RSD	.44543	.19253	.67284	.65424
#1	926.45	2772.8	20262.	4396.2
#2	918.91	2775.9	20430.	4339.5
#3	919.85	2765.5	20159.	4374.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 17:31:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0085**	**.0002**	**.0002**	**.0002**	**.0041**	**.0000**	**.0000**	**.0000**
Stddev	.0003	.0051	.0004	.0001	.0001	.0018	.0000	.000	.001
%RSD	104.6	59.80	274.8	56.40	35.58	44.89	112.9	14890.	3903.
#1	.0005	.0048	-.0002	.0003	.0002	.0043	.0000	.0000	-.0005
#2	.0004	.0143	.0001	.0002	.0002	.0021	.0000	-.0001	-.0001
#3	-.0001	.0063	.0006	.0001	.0001	.0058	.0001	.0001	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0039**	**-.0016**	**-.0008**	**.0074**	**.0001**	**.0004**	**.0209**	**-.0001**
Stddev	.000	.0043	.0076	.0007	.0019	.0001	.0001	.0049	.0001
%RSD	209.6	109.9	468.6	86.73	25.29	135.3	37.56	23.27	39.44
#1	.0000	.0079	.0004	-.0002	.0074	.0001	.0003	.0262	-.0002
#2	.0000	-.0006	.0048	-.0006	.0092	.0000	.0005	.0166	-.0001
#3	-.0002	.0045	-.0100	-.0016	.0055	.0001	.0003	.0200	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0004**	**-.0001**	**.0006**	**.0001**	**.0002**	**.0002**	**-.0002**	**.0002**
Stddev	.0004	.0008	.0014	.0004	.0004	.0000	.0000	.0004	.0003
%RSD	120.3	208.3	1731.	78.05	242.1	17.81	29.05	164.7	166.5
#1	-.0008	-.0002	-.0006	.0009	.0005	.0002	.0002	-.0001	-.0002
#2	.0001	.0013	-.0011	.0008	-.0002	.0002	.0002	.0000	.0003
#3	-.0003	.0001	.0014	.0001	.0002	.0001	.0001	-.0007	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 17:31:32 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0003**
Stddev	.0001
%RSD	31.35
#1	.0003
#2	.0002
#3	.0003
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1011.7**	**2919.9**	**20756.**	**4421.2**
Stddev	.7	5.1	82.	44.5
%RSD	.07101	.17303	.39454	1.0070
#1	1012.5	2922.1	20676.	4403.2
#2	1011.3	2923.4	20840.	4388.6
#3	1011.2	2914.1	20752.	4472.0

Zoom In Zoom Out

Sample Name: FA98994-11 Acquired: 9/21/2022 17:36:27 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.6031**	**-.0003**	**.0800**	**.0003**	**7.601**	**-.0001**	**.0002**	**.0002**
Stddev	.0007	.0104	.0006	.0002	.0001	.021	.0000	.0002	.0002
%RSD	293.3	1.731	184.5	.2310	21.26	.2741	30.70	78.17	110.5
#1	.0011	.6112	.0002	.0800	.0002	7.577	-.0001	.0000	.0000
#2	.0000	.6068	-.0002	.0798	.0004	7.614	-.0001	.0003	.0003
#3	-.0003	.5913	-.0010	.0802	.0003	7.611	-.0001	.0003	.0001

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**2.531**	**1.403**	**.0024**	**5.660**	**.0163**	**.0001**	**8.081**	**-.0003**
Stddev	.0003	.003	.018	.0013	.033	.0001	.0002	.017	.0001
%RSD	78.56	.1151	1.273	56.16	.5774	.4869	209.6	.2123	45.55
#1	-.0005	2.532	1.386	.0038	5.642	.0164	.0001	8.062	-.0004
#2	-.0001	2.527	1.421	.0011	5.641	.0163	.0004	8.094	-.0001
#3	-.0007	2.533	1.401	.0022	5.698	.0164	-.0001	8.087	-.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0012**	**.0008**	**2.155**	**.0003**	**.0467**	**.0019**	**-.0012**	**.0017**
Stddev	.0005	.0008	.0012	.003	.0002	.0002	.0001	.0006	.0002
%RSD	86.49	65.66	155.3	.1198	63.07	.3272	4.283	47.19	9.934
#1	-.0005	.0013	-.0006	2.153	.0002	.0466	.0019	-.0006	.0017
#2	-.0001	.0020	.0017	2.158	.0001	.0468	.0019	-.0017	.0015
#3	-.0011	.0004	.0013	2.153	.0004	.0468	.0018	-.0012	.0018

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0059**
Stddev	.0001
%RSD	.9702
#1	.0059
#2	.0059
#3	.0060

Zoom In Zoom Out

Sample Name: FA98994-11 Acquired: 9/21/2022 17:36:27 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**997.09**	**2906.6**	**20812.**	**4473.0**
Stddev	2.63	6.4	132.	17.8
%RSD	.26351	.21968	.63269	.39838
#1	997.16	2911.3	20917.	4490.3
#2	999.69	2909.2	20854.	4473.9
#3	994.43	2899.3	20664.	4454.7

Zoom In Zoom Out

Sample Name: FA98788-1 Acquired: 9/21/2022 17:41:19 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**5.959**	**.0194**	**.2306**	**.0001**	**54.37**	**.0016**	**.0317**	**.1055**
Stddev	.0010	.033	.0055	.0004	.0003	.07	.0001	.0005	.0018
%RSD	271.9	.5587	28.53	.1914	362.9	.1363	8.383	1.578	1.720
#1	.0016	5.971	.0161	.2305	.0005	54.34	.0015	.0318	.1035
#2	-.0003	5.985	.0162	.2311	.0000	54.45	.0017	.0312	.1071
#3	-.0001	5.922	.0257	.2302	-.0002	54.32	.0017	.0322	.1059

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0508**	**13.47**	**80.03**	**.0133**	**13.68**	**.1444**	**1.135**	F **1233.**	**.1488**
Stddev	.0001	.04	.27	.0040	.08	.0004	.004	6.	.0009
%RSD	.1432	.2895	.3431	29.68	.5892	.2556	.3051	.4683	.5897
#1	.0507	13.46	79.71	.0110	13.74	.1443	1.135	1239.	.1494
#2	.0509	13.51	80.23	.0179	13.59	.1448	1.131	1233.	.1478
#3	.0509	13.44	80.13	.0111	13.72	.1441	1.138	1228.	.1491

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5298**	**.0228**	**-.0028**	**12.52**	**.0335**	**.3869**	**.0750**	**-.0063**	**.0130**
Stddev	.0036	.0069	.0110	.01	.0006	.0012	.0007	.0014	.0004
%RSD	.6746	30.03	386.9	.1017	1.666	.3041	.8820	23.05	2.828
#1	.5267	.0266	-.0111	12.51	.0328	.3868	.0757	-.0076	.0127
#2	.5337	.0269	.0096	12.53	.0338	.3882	.0747	-.0047	.0130
#3	.5289	.0149	-.0070	12.53	.0338	.3859	.0745	-.0065	.0134

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.4429**
Stddev	.0013
%RSD	.3009
#1	.4424
#2	.4418
#3	.4444

Zoom In Zoom Out

Sample Name: FA98788-1 Acquired: 9/21/2022 17:41:19 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**908.42**	**2785.9**	**20039.**	**4431.7**
Stddev	1.73	6.9	58.	18.2
%RSD	.19043	.24672	.28947	.41126
#1	910.35	2788.2	20106.	4422.5
#2	907.93	2791.3	20008.	4452.6
#3	906.99	2778.2	20003.	4419.8

Zoom In Zoom Out

Sample Name: FA98788-2 Acquired: 9/21/2022 17:46:14 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**1.687**	**.0107**	**.1375**	**-.0001**	**16.97**	**.0003**	**.0234**	**.0499**
Stddev	.0035	.001	.0009	.0002	.0006	.02	.0002	.0003	.0010
%RSD	561.5	.0822	8.377	.1733	896.9	.1122	74.96	1.304	2.004
#1	-.0025	1.686	.0109	.1374	.0003	16.99	.0001	.0237	.0489
#2	.0045	1.687	.0115	.1373	.0002	16.95	.0005	.0231	.0508
#3	-.0001	1.688	.0097	.1378	-.0008	16.97	.0003	.0234	.0502

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0640**	**1.648**	**66.13**	**.0113**	**9.314**	**.0201**	**.3263**	F **944.6**	**.0957**
Stddev	.0005	.007	.19	.0026	.080	.0003	.0002	28.0	.0015
%RSD	.7218	.4229	.2906	22.68	.8573	1.593	.0583	2.967	1.560
#1	.0635	1.654	65.99	.0139	9.264	.0202	.3265	959.7	.0965
#2	.0643	1.640	66.05	.0087	9.272	.0197	.3263	912.3	.0966
#3	.0642	1.651	66.35	.0114	9.406	.0203	.3261	961.8	.0940

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1268**	**.0260**	**-.0004**	**11.92**	**.0219**	**.1893**	**.0493**	**-.0041**	**.0217**
Stddev	.0027	.0041	.0042	.02	.0014	.0010	.0007	.0039	.0004
%RSD	2.168	15.83	939.6	.1446	6.186	.5525	1.476	93.46	1.871
#1	.1240	.0213	-.0031	11.90	.0204	.1906	.0496	-.0055	.0216
#2	.1269	.0288	.0044	11.93	.0223	.1887	.0499	.0002	.0214
#3	.1295	.0280	-.0027	11.92	.0230	.1888	.0485	-.0072	.0222

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.1107**
Stddev	.0009
%RSD	.7837
#1	.1097
#2	.1112
#3	.1112

Zoom In Zoom Out

Sample Name: FA98788-2 Acquired: 9/21/2022 17:46:14 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**919.99**	**2804.5**	**20217.**	**4452.7**
Stddev	2.32	4.4	70.	48.8
%RSD	.25202	.15711	.34440	1.0955
#1	922.01	2808.8	20193.	4413.9
#2	917.46	2804.8	20295.	4507.5
#3	920.50	2800.0	20162.	4436.8

Zoom In Zoom Out

Sample Name: FA98819-1 Acquired: 9/21/2022 17:51:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0128**	**.0086**	**.0160**	**.0000**	**39.10**	**-.0001**	**.0002**	**.0002**
Stddev	.0001	.0006	.0005	.0000	.000	.10	.0000	.0001	.0001
%RSD	83.97	4.444	5.512	.2739	177.7	.2601	38.00	30.38	77.23
#1	.0001	.0124	.0083	.0160	.0000	39.18	-.0002	.0002	.0000
#2	.0003	.0124	.0091	.0160	.0000	38.99	-.0001	.0002	.0003
#3	.0000	.0134	.0083	.0160	.0000	39.14	-.0001	.0003	.0003

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0147**	**.2303**	**6.995**	**.0019**	**5.327**	**.0118**	**.0001**	**19.98**	**.0050**
Stddev	.0006	.0019	.035	.0003	.011	.0001	.0000	.07	.0002
%RSD	3.902	.8377	.5048	15.39	.2021	.7283	31.28	.3709	3.996
#1	.0147	.2296	7.021	.0022	5.336	.0118	.0001	20.04	.0048
#2	.0141	.2288	6.955	.0017	5.315	.0117	.0002	19.90	.0050
#3	.0153	.2325	7.009	.0017	5.329	.0118	.0001	20.00	.0052

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0010**	**-.0006**	**5.299**	**.0005**	**.2947**	**.0007**	**-.0006**	**.0005**
Stddev	.0011	.0019	.0010	.008	.0003	.0013	.0002	.0009	.0003
%RSD	120.6	188.0	156.5	.1450	64.22	.4275	22.34	153.9	73.30
#1	-.0022	.0027	-.0016	5.296	.0007	.2953	.0009	-.0017	.0001
#2	-.0001	.0012	.0004	5.307	.0001	.2932	.0006	-.0001	.0005
#3	-.0005	-.0010	-.0007	5.293	.0006	.2955	.0006	-.0001	.0008

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0185**
Stddev	.0000
%RSD	.2107
#1	.0185
#2	.0186
#3	.0185

Zoom In Zoom Out

Sample Name: FA98819-1 Acquired: 9/21/2022 17:51:15 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**972.42**	**2860.9**	**20574.**	**4444.6**
Stddev	1.51	2.6	87.	41.5
%RSD	.15492	.09070	.42198	.93327
#1	973.07	2861.2	20548.	4445.1
#2	973.49	2858.2	20671.	4485.8
#3	970.70	2863.4	20503.	4402.9

Zoom In Zoom Out

Sample Name: FA98820-1A Acquired: 9/21/2022 17:56:07 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0154**	**1.508**	**.0532**	**.0000**	**48.76**	**-.0013**	**.0168**	**.0004**
Stddev	.0005	.0077	.005	.0001	.0000	.14	.0001	.0001	.0003
%RSD	38.19	50.15	.3191	.1013	62.84	.2960	3.846	.6879	88.02
#1	.0008	.0065	1.503	.0533	.0000	48.88	-.0014	.0166	.0000
#2	.0015	.0197	1.507	.0532	.0001	48.60	-.0013	.0168	.0006
#3	.0019	.0200	1.513	.0532	.0000	48.79	-.0013	.0169	.0004

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**66.94**	**8.398**	**.0003**	**6.789**	**2.167**	**.0009**	**12.34**	**.0051**
Stddev	.0001	.04	.028	.0006	.021	.001	.0001	.00	.0002
%RSD	36.60	.0575	.3347	164.1	.3169	.0426	10.19	.0270	4.729
#1	.0002	66.92	8.430	.0007	6.795	2.167	.0009	12.34	.0048
#2	.0003	66.93	8.377	-.0003	6.806	2.168	.0008	12.34	.0052
#3	.0004	66.99	8.387	.0007	6.765	2.166	.0009	12.34	.0053

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**.0002**	**.0024**	**6.316**	**.0001**	**.3927**	**.0006**	**.0011**	**.0002**
Stddev	.0007	.0007	.0007	.013	.0003	.0001	.0001	.0009	.0003
%RSD	35.52	294.6	30.04	.2023	184.9	.0198	16.83	89.36	179.8
#1	-.0026	-.0006	.0021	6.317	.0000	.3928	.0005	.0000	.0003
#2	-.0012	.0006	.0019	6.302	.0000	.3927	.0006	.0012	-.0002
#3	-.0022	.0007	.0033	6.328	.0004	.3927	.0007	.0019	.0004

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0127**
Stddev	.0001
%RSD	.4685
#1	.0127
#2	.0126
#3	.0126

Zoom In Zoom Out

Sample Name: FA98820-1A Acquired: 9/21/2022 17:56:07 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**971.61**	**2848.8**	**20594.**	**4461.2**
Stddev	1.06	1.1	70.	24.0
%RSD	.10863	.03954	.33843	.53894
#1	970.72	2850.1	20618.	4455.5
#2	971.35	2848.2	20516.	4487.5
#3	972.78	2848.1	20649.	4440.5

Zoom In Zoom Out

Sample Name: FA98820-2A Acquired: 9/21/2022 18:00:57 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0076**	**2.745**	**.0144**	**.0000**	**23.66**	**-.0009**	**.0122**	**.0006**
Stddev	.0001	.0093	.001	.0001	.0001	.11	.0000	.0000	.0003
%RSD	10.73	123.2	.0325	.9321	192.5	.4509	2.851	.1096	42.10
#1	.0008	-.0023	2.745	.0145	.0000	23.62	-.0009	.0122	.0005
#2	.0010	.0163	2.746	.0143	.0001	23.78	-.0009	.0122	.0005
#3	.0010	.0088	2.744	.0145	.0000	23.57	-.0008	.0122	.0009

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**37.29**	**3.249**	**-.0017**	**2.745**	**2.338**	**.0015**	**5.112**	**.0045**
Stddev	.0000	.10	.030	.0007	.013	.001	.0001	.025	.0001
%RSD	136.7	.2812	.9268	40.24	.4889	.0206	8.857	.4871	2.664
#1	.0000	37.22	3.244	-.0009	2.738	2.338	.0015	5.092	.0046
#2	.0000	37.41	3.281	-.0021	2.761	2.339	.0014	5.140	.0044
#3	.0001	37.23	3.222	-.0020	2.737	2.338	.0017	5.104	.0045

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0001**	**.0022**	**4.909**	**.0001**	**.1674**	**.0003**	**.0005**	**-.0006**
Stddev	.0002	.0017	.0001	.001	.0001	.0007	.0001	.0007	.0002
%RSD	43.69	1349.	6.729	.0129	71.44	.4288	41.02	161.9	35.15
#1	-.0004	.0014	.0023	4.908	.0002	.1671	.0002	-.0002	-.0007
#2	-.0004	-.0018	.0022	4.909	.0001	.1682	.0005	.0013	-.0003
#3	-.0008	.0007	.0020	4.910	.0000	.1669	.0003	.0002	-.0006

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0141**
Stddev	.0001
%RSD	.4238
#1	.0140
#2	.0140
#3	.0141

Zoom In Zoom Out

Sample Name: FA98820-2A Acquired: 9/21/2022 18:00:57 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**993.37**	**2893.7**	**20684.**	**4484.0**
Stddev	1.04	6.1	33.	18.0
%RSD	.10448	.21165	.15967	.40239
#1	993.96	2900.1	20702.	4502.1
#2	993.99	2893.2	20646.	4466.0
#3	992.18	2887.9	20705.	4483.7

Zoom In Zoom Out

Sample Name: FA98825-1 Acquired: 9/21/2022 18:05:48 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**13.83**	**.0042**	**.2356**	**.0003**	**67.51**	**-.0005**	**.0110**	**.0414**
Stddev	.0000	.04	.0012	.0005	.0001	.14	.0000	.0001	.0003
%RSD	5.617	.3049	27.99	.2102	37.83	.2074	9.128	.5216	.6813
#1	.0004	13.88	.0041	.2359	.0004	67.62	-.0005	.0110	.0415
#2	.0005	13.81	.0055	.2351	.0002	67.35	-.0004	.0109	.0416
#3	.0005	13.81	.0032	.2360	.0003	67.56	-.0005	.0109	.0411

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0332**	**24.04**	**4.768**	**.0419**	**61.53**	**.4779**	**.0061**	F **95.69**	**.0744**
Stddev	.0003	.05	.006	.0013	.09	.0005	.0001	.20	.0003
%RSD	.7996	.2129	.1274	3.160	.1452	.1131	1.926	.2131	.4341
#1	.0334	24.03	4.772	.0407	61.46	.4778	.0062	95.76	.0741
#2	.0333	23.99	4.761	.0433	61.50	.4784	.0063	95.46	.0742
#3	.0329	24.09	4.770	.0417	61.63	.4774	.0060	95.86	.0747

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**-.0008**	**.0047**	**32.03**	**.0012**	**.6149**	**.3949**	**-.0012**	**.0542**
Stddev	.0004	.0009	.0010	.04	.0002	.0006	.0004	.0017	.0003
%RSD	14.91	115.4	21.07	.1288	20.88	.0972	.1036	139.6	.4882
#1	.0025	.0002	.0057	32.00	.0014	.6153	.3954	-.0013	.0539
#2	.0033	-.0016	.0038	32.00	.0012	.6142	.3949	.0005	.0545
#3	.0028	-.0010	.0046	32.07	.0009	.6150	.3945	-.0028	.0541

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0650**
Stddev	.0003
%RSD	.4100
#1	.0647
#2	.0650
#3	.0652

Zoom In Zoom Out

Sample Name: FA98825-1 Acquired: 9/21/2022 18:05:48 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.89**	**2837.9**	**20433.**	**4463.7**
Stddev	.89	1.6	58.	19.5
%RSD	.09876	.05792	.28560	.43749
#1	905.69	2839.4	20384.	4466.9
#2	905.04	2838.2	20418.	4481.5
#3	903.92	2836.2	20498.	4442.8

Zoom In Zoom Out

Sample Name: FA99026-1 Acquired: 9/21/2022 18:10:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.4647**	**.0010**	**.0274**	**.0000**	**91.73**	**-.0001**	**.0000**	**.0034**
Stddev	.0003	.0100	.0004	.0001	.0001	.38	.0001	.0002	.0003
%RSD	107.7	2.149	34.80	.4308	137.4	.4091	58.64	750.3	9.902
#1	.0004	.4659	.0008	.0273	.0000	91.84	-.0002	.0001	.0034
#2	-.0001	.4542	.0009	.0275	.0001	92.03	.0000	-.0002	.0030
#3	.0004	.4740	.0014	.0275	.0001	91.31	-.0001	.0002	.0037

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**1.257**	**3.435**	**.0020**	**13.39**	**.0287**	**.0009**	**9.925**	**.0000**
Stddev	.0001	.004	.017	.0005	.09	.0001	.0001	.011	.0001
%RSD	90.03	.3200	.4815	26.68	.7029	.1770	12.05	.1080	261.4
#1	-.0001	1.258	3.430	.0015	13.48	.0287	.0010	9.933	-.0001
#2	-.0002	1.260	3.421	.0026	13.41	.0287	.0009	9.928	.0000
#3	.0000	1.252	3.453	.0020	13.29	.0288	.0007	9.913	.0002

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**-.0007**	**-.0007**	**5.593**	**.0001**	**.6046**	**.0061**	**-.0016**	**.0058**
Stddev	.0001	.0010	.0008	.001	.0004	.0008	.0004	.0010	.0003
%RSD	11.21	146.8	106.6	.0186	243.8	.1300	5.883	66.80	5.191
#1	-.0011	-.0017	-.0011	5.594	.0000	.6046	.0058	-.0013	.0057
#2	-.0010	.0003	.0002	5.592	-.0001	.6053	.0060	-.0007	.0061
#3	-.0012	-.0006	-.0013	5.593	.0006	.6038	.0065	-.0027	.0055

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0048**
Stddev	.0000
%RSD	.3074
#1	.0048
#2	.0048
#3	.0048

Zoom In Zoom Out

Sample Name: FA99026-1 Acquired: 9/21/2022 18:10:33 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.11**	**2847.1**	**20647.**	**4435.1**
Stddev	1.63	4.5	106.	34.1
%RSD	.17038	.15784	.51197	.76955
#1	955.35	2842.8	20756.	4436.6
#2	957.38	2846.8	20545.	4400.2
#3	958.58	2851.8	20639.	4468.4

Zoom In Zoom Out

Sample Name: FA99026-2 Acquired: 9/21/2022 18:15:24 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.1623**	**.0014**	**.0242**	**.0000**	**51.76**	**-.0001**	**.0000**	**.0032**
Stddev	.0006	.0058	.0008	.0003	.0000	.37	.0000	.000	.0001
%RSD	312.9	3.568	56.47	1.268	129.6	.7082	8.252	1781.	4.620
#1	.0008	.1576	.0011	.0244	.0000	51.77	-.0001	.0001	.0032
#2	-.0001	.1687	.0008	.0242	.0001	52.12	-.0001	.0000	.0034
#3	-.0001	.1605	.0023	.0238	.0000	51.39	-.0001	.0000	.0031

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.9361**	**3.366**	**.0016**	**9.083**	**.0151**	**.0036**	**4.951**	**.0001**
Stddev	.0001	.0044	.002	.0014	.027	.0000	.0002	.018	.0003
%RSD	40.46	.4649	.0642	86.80	.2983	.2225	4.498	.3573	350.5
#1	-.0003	.9400	3.366	.0012	9.114	.0151	.0038	4.956	.0004
#2	-.0002	.9369	3.363	.0031	9.069	.0150	.0035	4.966	-.0002
#3	-.0004	.9314	3.368	.0004	9.066	.0150	.0036	4.931	.0000

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0005**	**.0003**	**6.246**	**.0009**	**.2817**	**.0021**	**-.0010**	**.0078**
Stddev	.0005	.0008	.0019	.010	.0005	.0012	.0002	.0003	.0003
%RSD	101.0	172.8	702.8	.1650	54.56	.4173	9.622	34.36	3.972
#1	-.0005	.0000	-.0013	6.257	.0010	.2818	.0023	-.0009	.0082
#2	.0000	.0001	-.0002	6.244	.0013	.2828	.0019	-.0014	.0078
#3	-.0010	.0014	.0023	6.236	.0003	.2804	.0020	-.0007	.0075

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0051**
Stddev	.0000
%RSD	.4073
#1	.0051
#2	.0051
#3	.0051

Zoom In Zoom Out

Sample Name: FA99026-2 Acquired: 9/21/2022 18:15:24 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**976.44**	**2870.3**	**20791.**	**4494.8**
Stddev	1.37	7.9	113.	33.0
%RSD	.14003	.27631	.54448	.73328
#1	975.06	2878.9	20919.	4509.3
#2	976.46	2868.8	20748.	4457.1
#3	977.79	2863.2	20705.	4518.0

Zoom In Zoom Out

Sample Name: FA99026-3 Acquired: 9/21/2022 18:20:16 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**1.962**	**.0005**	**.0378**	**.0002**	**34.29**	**.0001**	**.0003**	**.0098**
Stddev	.0003	.009	.0004	.0001	.0001	.11	.0000	.0000	.0003
%RSD	114.9	.4744	85.60	.2741	30.51	.3147	41.60	10.27	2.784
#1	.0002	1.970	.0010	.0379	.0003	34.31	.0000	.0003	.0100
#2	.0006	1.951	.0001	.0379	.0001	34.39	.0001	.0003	.0095
#3	.0000	1.964	.0004	.0377	.0003	34.17	.0001	.0003	.0099

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**1.123**	**6.035**	**.0024**	**7.175**	**.0067**	**.0004**	**74.81**	**.0007**
Stddev	.0003	.001	.039	.0005	.016	.0001	.0001	.15	.0001
%RSD	65.30	.1269	.6439	19.70	.2256	.9042	15.98	.1971	21.49
#1	.0007	1.122	6.071	.0025	7.192	.0067	.0003	74.86	.0007
#2	.0004	1.125	6.040	.0019	7.171	.0066	.0004	74.92	.0005
#3	.0001	1.124	5.994	.0028	7.160	.0067	.0004	74.64	.0008

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**-.0011**	**-.0010**	**4.884**	**.0004**	**.2339**	**.0160**	**-.0008**	**.0135**
Stddev	.0004	.0012	.0016	.007	.0001	.0004	.0001	.0006	.0003
%RSD	17.44	106.6	157.7	.1350	12.99	.1806	.3802	83.01	2.011
#1	.0022	-.0025	.0008	4.884	.0004	.2339	.0159	-.0004	.0136
#2	.0030	-.0002	-.0020	4.877	.0004	.2344	.0159	-.0015	.0132
#3	.0023	-.0006	-.0019	4.890	.0005	.2335	.0160	-.0004	.0137

Elem	Zn2062
IS Ref	(Y_2243)
Units	ppm
Avg	**.0047**
Stddev	.0001
%RSD	2.288
#1	.0046
#2	.0048
#3	.0047

Zoom In Zoom Out

Sample Name: FA99026-3 Acquired: 9/21/2022 18:20:16 Type: Unk
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.26**	**2911.6**	**20822.**	**4524.8**
Stddev	2.77	.8	33.	30.3
%RSD	.29493	.02723	.15764	.66931
#1	940.23	2911.4	20841.	4491.0
#2	935.09	2910.9	20840.	4533.9
#3	939.45	2912.5	20784.	4549.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 18:25:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2607**	**38.99**	**2.016**	**1.969**	**1.993**	**39.94**	**2.043**	**2.023**	**2.072**
Stddev	.0004	.04	.007	.001	.003	.02	.003	.003	.004
%RSD	.1628	.0918	.3692	.0717	.1429	.0454	.1482	.1414	.1910
#1	.2606	39.02	2.013	1.968	1.990	39.92	2.042	2.022	2.068
#2	.2603	39.01	2.011	1.968	1.996	39.96	2.040	2.021	2.073
#3	.2612	38.95	2.025	1.971	1.993	39.93	2.046	2.027	2.076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.934**	**40.79**	**39.94**	**1.979**	**40.57**	**2.010**	**2.028**	**39.50**	**2.076**
Stddev	.005	.09	.08	.002	.08	.006	.004	.02	.002
%RSD	.2870	.2177	.1918	.1011	.1989	.2898	.1747	.0545	.0711
#1	1.929	40.75	39.99	1.981	40.54	2.006	2.027	39.51	2.076
#2	1.931	40.89	39.99	1.980	40.66	2.008	2.024	39.51	2.074
#3	1.940	40.73	39.86	1.977	40.51	2.017	2.031	39.47	2.077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.029**	**1.981**	**2.021**	**2.322**	**2.004**	**2.008**	**1.979**	**2.075**	**2.025**
Stddev	.005	.002	.008	.004	.003	.002	.004	.023	.003
%RSD	.2453	.0849	.4054	.1576	.1250	.1024	.2199	1.095	.1415
#1	2.027	1.981	2.015	2.319	2.002	2.007	1.974	2.060	2.022
#2	2.025	1.980	2.017	2.321	2.004	2.006	1.978	2.063	2.025
#3	2.034	1.983	2.030	2.326	2.007	2.010	1.983	2.101	2.028
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 9/21/2022 18:25:05 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**2.088**
Stddev	.002
%RSD	.1018
#1	2.089
#2	2.086
#3	2.090
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.46**	**2777.1**	**20238.**	**4316.6**
Stddev	2.71	4.2	74.	42.2
%RSD	.29471	.15079	.36577	.97749
#1	921.89	2778.8	20306.	4277.6
#2	922.15	2780.2	20250.	4310.9
#3	917.33	2772.4	20159.	4361.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 18:29:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0035**	**.0000**	**.0000**	**.0001**	**.0038**	**.0000**	**.0000**	**.0002**
Stddev	.0001	.0026	.0008	.0001	.0000	.0011	.0000	.0002	.0002
%RSD	67.49	74.33	6866.	283.5	23.75	28.78	650.6	450.0	102.1
#1	-.0001	.0018	.0008	.0001	.0001	.0047	.0000	-.0002	.0004
#2	-.0001	.0066	.0001	.0000	.0001	.0040	.0000	.0002	.0001
#3	-.0002	.0022	-.0008	-.0001	.0001	.0026	.0000	.0002	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0020**	**.0153**	F **.0012**	**.0051**	**.0001**	**.0004**	**.0224**	**-.0001**
Stddev	.000	.0007	.0084	.0005	.0070	.0000	.0000	.0036	.0002
%RSD	1006.	32.65	54.86	41.99	135.4	97.15	7.653	16.08	196.6
#1	-.0001	.0015	.0160	.0009	.0010	.0001	.0004	.0193	-.0003
#2	.0000	.0018	.0065	.0018	.0012	.0000	.0004	.0215	.0000
#3	.0000	.0027	.0232	.0009	.0132	.0001	.0004	.0263	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0005**	**-.0006**	**.0001**	**.0000**	**.0001**	**.0002**	**-.0001**	**.0000**
Stddev	.0005	.0006	.0026	.0003	.0003	.0000	.0000	.0014	.0001
%RSD	208.9	125.3	467.3	261.6	809.4	20.57	14.80	1203.	764.1
#1	.0002	-.0002	-.0033	.0005	-.0003	.0001	.0002	.0001	.0000
#2	-.0002	.0010	-.0002	.0000	.0001	.0001	.0002	.0012	.0001
#3	.0008	.0008	.0019	-.0001	.0002	.0002	.0002	-.0017	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 9/21/2022 18:29:37 Type: QC
Method: 60102007_COMBO_09222021(v684) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062
Units	ppm
Avg	**.0002**
Stddev	.0000
%RSD	10.96
#1	.0002
#2	.0003
#3	.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1006.4**	**2943.6**	**20869.**	**4402.5**
Stddev	.8	3.8	26.	42.6
%RSD	.08043	.12778	.12528	.96836
#1	1007.2	2947.8	20899.	4353.6
#2	1005.6	2942.2	20850.	4431.8
#3	1006.3	2940.7	20858.	4422.2

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000328	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000028	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000031	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000625	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000068	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000003	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000009	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	-0.000176	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000021	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	0.000008	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	0.000001	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000038	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No
Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Fe	0.000045	0.000000	No
				Mo	-0.002189	0.000000	No
				Cu	0.000467	0.000000	No
				Ti	0.000036	0.000000	No
				Si	0.000043	0.000000	No
				Ca	0.000012	0.000000	No
				Cr	-0.000260	0.000000	No
				Mg	0.000002	0.000000	No
	Sb 206.833 {463}	☒	11	Fe	-0.000001	0.000000	No
				Cr	0.011486	0.000000	No
				Mo	-0.002538	0.000000	No
				V	-0.000441	0.000000	No
				Sn	-0.008695	0.000000	No
				Ti	0.000278	0.000000	No
				Ca	0.000001	0.000000	No
				Ni	-0.000818	0.000000	No
				Al	0.000005	0.000000	No
				Mn	-0.000133	0.000000	No
				Mg	-0.000002	0.000000	No
	Se 196.090 {472}	☒	12	Fe	-0.000018	0.000000	No
				Ca	0.000006	0.000000	No
				Mn	0.000331	0.000000	No
				Mo	0.000111	0.000000	No
				Al	0.000001	0.000000	No
				V	0.000000	0.000000	No
				Zn	0.000000	0.000000	No
				Sr	-0.000111	0.000000	No
				As	0.000125	0.000000	No
				Cd	-0.000250	0.000000	No
				Mg	0.000002	0.000000	No
				Cr	-0.000326	0.000000	No
	Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
	Sn 189.989 {477}	☒	1	Fe	0.000005	0.000000	No
	Sr 407.771 { 83}	☒	2	Ca	0.000002	0.000000	No
				Al	0.000012	0.000000	No
	Ti 334.941 {101}	☒	1	Ca	-0.000011	0.000000	No
	Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
				Fe	-0.000014	0.000000	No
				Al	0.000000	0.000000	No
				Ba	-0.000051	0.000000	No
				Ti	-0.000648	0.000000	No
				Sb	0.000167	0.000000	No
				Ca	0.000001	0.000000	No
				Cr	0.000340	0.000000	No
				Mg	-0.000002	0.000000	No
				V	0.000015	0.000000	No
	V 292.402 {115}	☒	5	Fe	0.000005	0.000000	No
				Cr	-0.003634	0.000000	No
				Mo	-0.009536	0.000000	No
				Ti	0.000303	0.000000	No
				Mn	-0.000333	0.000000	No
	Y 224.306 {450}*	☒	None				
	Y 360.073 { 94}*	☒	None				
	Y 371.030 { 91}*	☒	None				
	Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
				Al	0.000014	0.000000	No
				Ca	0.000003	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Fe	-0.000010	0.000000	No
				As	0.001105	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.002194	0.757281	0.000000	1.000000
Al 396.152 { 85}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.002678	0.195112	0.000000	1.000000
As 189.042 {478}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000411	0.214818	0.000000	1.000000
Ba 455.403 { 74}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.010592	17.320847	0.000000	1.000000
Be 313.042 {108}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000766	12.053619	0.000000	1.000000
Ca 317.933 {106}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.008693	0.368659	0.000000	1.000000
Cd 226.502 {449}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000980	6.502092	0.000000	1.000000
Co 228.616 {447}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000613	3.127143	0.000000	1.000000
Cr 267.716 {126}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000081	0.771123	0.000000	1.000000
Cu 324.754 {104}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.004214	1.035422	0.000000	1.000000
Fe 259.940 {130}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001502	0.272878	0.000000	1.000000
In 230.606 {446}*	9/21/2022 11:14:44	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.012378	0.160299	0.000000	1.000000
Li 670.784 { 50}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.003739	2.616743	0.000000	1.000000
Mg 279.079 {121}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000075	0.041848	0.000000	1.000000
Mn 257.610 {131}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000521	4.337771	0.000000	1.000000
Mo 202.030 {467}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001351	1.404505	0.000000	1.000000
Na 589.592 { 57}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000634	0.525760	0.000000	1.000000
Ni 231.604 {445}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000294	1.697818	0.000000	1.000000
Pb 220.353 {453}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.001264	1.932504	0.000000	1.000000
Sb 206.833 {463}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000924	0.308837	0.000000	1.000000
Se 196.090 {472}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000085	0.178082	0.000000	1.000000
Si 212.412 {459}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.007815	0.450550	0.000000	1.000000
Sn 189.989 {477}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000116	0.533010	0.000000	1.000000
Sr 407.771 { 83}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001215	19.038276	0.000000	1.000000
Ti 334.941 {101}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.001830	2.492694	0.000000	1.000000
Tl 190.856 {477}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.000933	0.611101	0.000000	1.000000
V 292.402 {115}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	-0.000431	1.033818	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	9/21/2022 11:14:44	9/21/2022 10:38:50	Linear	1/Conc	0.005336	3.568774	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999773	0.000054	0.000570	0.001901	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999995	0.000125	0.008943	0.029808	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999833	0.000041	0.001037	0.003456	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999951	0.008104	0.000152	0.000507	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999950	0.000888	0.000069	0.000230	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999978	0.001140	0.002548	0.008493	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999977	0.000323	0.000057	0.000189	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999981	0.000452	0.000127	0.000425	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999901	0.000113	0.000346	0.001153	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999968	0.000137	0.000373	0.001245	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999900	0.000987	0.001871	0.006238	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999968	0.001380	0.022717	0.075723	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.999827	0.000481	0.001363	0.004543	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999883	0.000675	0.016017	0.053391	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999796	0.001119	0.000054	0.000181	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999927	0.000397	0.000171	0.000572	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999953	0.005456	0.006644	0.022147	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999979	0.000229	0.000233	0.000778	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999947	0.000147	0.000624	0.002080	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999860	0.000038	0.001244	0.004148	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999926	0.000022	0.001982	0.006606	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.990490	0.003369	0.000599	0.001998	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999888	0.000186	0.000357	0.001191	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999898	0.002837	0.000083	0.000276	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999942	0.000280	0.000162	0.000542	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999935	0.000073	0.001088	0.003626	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999950	0.000239	0.000342	0.001141	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999965	0.000440	0.000074	0.000248	OK.	1.000000	0.000000	1	0

SGS Orlando

Date:	09/14/22
Time	16:48

[24hr]

Analysts Name:	Adam K
MP Batch ID:	41211
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	62047	ACC1321	0.05	MU45274
Conc. HCl (B)	22C1662007	ACC1319	0.2	KU15244
NA	NA	MET7268	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	94	**Corr. Factor**	-2	**Corrected Observed Temp. C**	92
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2204135

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	DOUBLE QC
	NA	Spike Blank(SB)	50	50	NA	
	22	Matrix Spike(MS)	50	50	Y	
	22	Matrix Spike Dup(MSD)	50	50	Y	
	22	Duplicate(DUP)	50	50	Y	
1(QC) C	22	FA98621-8	50	50	Y	
2	10	Matrix Spike(MS)	50	50	Y	
3	10	Matrix Spike Dup(MSD)	50	50	Y	
4	10	Duplicate(DUP)	50	50	Y	
5	10	FA98679-3	50	50	Y	
6	8	FA98621-1	50	50	Y	
7	8	FA98621-2	50	50	Y	
8	8	FA98621-3	50	50	Y	
9	8	FA98621-4	50	50	Y	
10	8	FA98621-5	50	50	Y	
11	10	FA98621-6	50	50	Y	
12	8	FA98621-7	50	50	Y	
13	10	FA98621-10	50	50	Y	
14	4	FA98679-1	50	50	Y	
15	4	FA98679-2	50	50	Y	
16	4	FA98679-4	50	50	Y	
17	4	FA98679-5	50	50	Y	
18	4	FA98679-6	50	50	Y	
19	4	FA98679-8	50	50	Y	
20	7	FA98819-1B	50	50	Y	
21 [D]	7	FA98820-1	50	50	Y	
22 [D]	8	FA98820-2	50	50	Y	
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

SGS Orlando

Date:	09/20/22
Time	15:21

[24hr]

Analysts Name:	Adam K
MP Batch ID:	41228
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	62047	ACC1334	0.5	KU15244
Conc. HCl (B)	22C1662007	ACC1319	0.25	KU15244
NA	NA	MET7294	0.25	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	95	**Corr. Factor**	-2	**Corrected Observed Temp. C**	93
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2204135

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	2	Matrix Spike(MS)	50	50	Y	
	2	Matrix Spike Dup(MSD)	50	50	Y	
	2	Duplicate(DUP)	50	50	Y	
1(QC) C	2	FA98999-1	50	50	Y	
2	8	FA98969-10	50	50	Y	
3	8	FA98969-11	50	50	Y	
4	8	FA98969-12	50	50	Y	
5	8	FA98969-13	50	50	Y	
6	8	FA98969-14	50	50	Y	
7	8	FA98969-15	50	50	Y	
8	12	FA98994-11	50	50	Y	
9	4	FA98788-1	50	50	Y	
10	4	FA98788-2	50	50	Y	
11	7	FA98819-1	50	50	Y	
12	7	FA98820-1A	50	50	Y	
13	8	FA98820-2A	50	50	Y	
14	9	FA98825-1	50	50	Y	
15	10	FA99026-1	50	50	Y	
16	10	FA99026-2	50	50	Y	
17	10	FA99026-3	50	50	Y	
18	8	FA99026-4	50	50	Y	
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FA99549



Sampling Date: 10/07/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **106**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FA99549

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA99549-1	10/07/22	10:15	JR	10/08/22	AQ	Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FA99549

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 10/18/2022 10:03:53

On 10/08/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA99549 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP41335

Sample(s) FA99625-1ADUP, FA99625-1AMS, FA99625-1AMSD, FA99625-1ASDL were used as the QC samples for metals.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA99549
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 10/07/22

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA99549-1	**EFFLUENT**					
Arsenic		24.4	2.0	1.0	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FA99549-1	**Date Sampled:**	10/07/22
Matrix:	AQ - Water	**Date Received:**	10/08/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	24.4	2.0	1.0	0.21	ug/l	2	10/15/22	10/17/22	JC	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18981
(2) Prep QC Batch: MP41335

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS North America Inc - Orlando
Chain of Custody

FA99549

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	LAB USE ONLY
1	Effluent	10/7/22	10:15	JR	aq	1					x					X	

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
x 5 Day- Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements
5-Day Rush on Arsenic Samples

INITIAL ASSESSMENT

LABEL VERIFICATION SGS Service Center Northborough, MA

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	SOVCON	10-7-22 1445	2 (SC)	3	10/9/22 1700	4
5	Relinquished by/Affiliation	Date Time: 1030 10/8/22	6	7	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.2 CS# 19027

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

5.1 5

FA99549: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA99549 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 10/8/2022 10:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 3799

Therm ID: IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 10/8/2022 10:30:00 A Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FA99549
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 10/07/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP41335	SW846 6020B						
MP41335-B1	7440-38-2	Arsenic	BSP	REC	110	%	84-116
MP41335-S1*	7440-38-2	Arsenic	MS	REC	110	%	84-116
MP41335-S2*	7440-38-2	Arsenic	MSD	REC	110	%	84-116
MP41335-S2*	7440-38-2	Arsenic	MSD	RPD	0	%	20
MP41335-D1*	7440-38-2	Arsenic	DUP	RPD	2.5	%	20

* Sample used for QC is not from job FA99549

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:27	MA18981-STD1	1		STDA
09:31	MA18981-STD2	1		STDB
09:35	MA18981-STD3	1		STDC
09:39	MA18981-STD4	1		STDD
09:43	MA18981-STD5	1		STDE
09:47	MA18981-STD6	1		STDF
09:51	MA18981-STD7	1		STDG
09:54	MA18981-HSTD1	1		
09:58	MA18981-HSTD2	1		
10:02	MA18981-ICV1	1		
10:06	MA18981-ICB1	1		
10:10	MA18981-CRIA1	1		
10:13	MA18981-ICSA1	1		
10:17	MA18981-ICSAB1	1		
10:21	MA18981-CCV1	1		
10:25	MA18981-CCV2	1		
10:29	MA18981-CCB1	1		
10:32	MP41335-MB1	2		
10:36	MP41335-B1	2		
10:40	FA99625-1A	2		(sample used for QC only; not part of login FA99549)
10:44	MP41335-D1	2		
10:48	MP41335-SD1	10		
10:52	MP41335-S1	2		
10:55	MP41335-S2	2		
10:59	MP41335-PS1	2		
11:03	ZZZZZZ	2		
11:07	FA99549-1	2		
---------->	Last reportable sample/prep for job FA99549			
11:11	MA18981-CCV3	1		
11:15	MA18981-CCV4	1		
11:18	MA18981-CCB2	1		
---------->	Last reportable CCB for job FA99549			
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:30	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:34	ZZZZZZ	2		
11:37	ZZZZZZ	2		
11:41	ZZZZZZ	2		
11:45	ZZZZZZ	2		
11:49	ZZZZZZ	2		
11:53	ZZZZZZ	2		
11:56	ZZZZZZ	2		
12:00	MA18981-CCV5	1		
12:04	MA18981-CCV6	1		
12:08	MA18981-CCB3	1		
12:12	ZZZZZZ	2		
12:15	ZZZZZZ	2		
12:19	ZZZZZZ	2		
12:31	ZZZZZZ	2		
12:34	ZZZZZZ	2		
12:38	MP41337-MB1	5		
12:42	MP41337-B1	5		
12:46	FA99547-1	5		(sample used for QC only; not part of login FA99549)
12:49	MA18981-CCV7	1		
12:53	MA18981-CCV8	1		
12:57	MA18981-CCB4	1		
13:01	MP41337-D1	5		
13:05	MP41337-SD1	25		
13:08	MP41337-S1	5		
13:12	MP41337-S2	5		
13:16	MP41337-PS1	5		
13:20	ZZZZZZ	5		
13:24	ZZZZZZ	10		
13:27	ZZZZZZ	10		
13:31	ZZZZZZ	10		
13:35	ZZZZZZ	10		
13:39	MA18981-CCV9	1		
13:43	MA18981-CCV10	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:46	MA18981-CCB5	1		
13:50	ZZZZZZ	10		
13:54	ZZZZZZ	5		
13:58	ZZZZZZ	5		
14:02	ZZZZZZ	5		
14:05	ZZZZZZ	5		
14:09	ZZZZZZ	5		
14:13	ZZZZZZ	5		
14:17	ZZZZZZ	5		
14:21	ZZZZZZ	5		
14:24	ZZZZZZ	5		
14:28	MA18981-CCV11	1		
14:32	MA18981-CCV12	1		
14:36	MA18981-CCB6	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Element: Dilution	As	
09:54	MA18981-HSTD1	1		
09:58	MA18981-HSTD2	1	X	
10:02	MA18981-ICV1	1	X	
10:06	MA18981-ICB1	1	X	
10:10	MA18981-CRIA1	1	X	
10:13	MA18981-ICSA1	1	X	
10:17	MA18981-ICSAB1	1	X	
10:21	MA18981-CCV1	1		
10:25	MA18981-CCV2	1	X	
10:29	MA18981-CCB1	1	X	
10:32	MP41335-MB1	2	X	
10:36	MP41335-B1	2	X	
10:40	FA99625-1A	2	X	(a)
10:44	MP41335-D1	2	X	
10:48	MP41335-SD1	10	X	
10:52	MP41335-S1	2	X	
10:55	MP41335-S2	2	X	
10:59	MP41335-PS1	2		
11:03	ZZZZZZ	2		
11:07	FA99549-1	2	X	
11:11	MA18981-CCV3	1		
11:15	MA18981-CCV4	1	X	
11:18	MA18981-CCB2	1	X	
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:30	ZZZZZZ	2		
11:34	ZZZZZZ	2		
11:37	ZZZZZZ	2		
11:41	ZZZZZZ	2		
11:45	ZZZZZZ	2		
11:49	ZZZZZZ	2		
11:53	ZZZZZZ	2		
11:56	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Element: Dilution	As	
12:00	MA18981-CCV5	1		
12:04	MA18981-CCV6	1	X	
12:08	MA18981-CCB3	1	X	
12:12	ZZZZZZ	2		
12:15	ZZZZZZ	2		
12:19	ZZZZZZ	2		
12:31	ZZZZZZ	2		
12:34	ZZZZZZ	2		
12:38	MP41337-MB1	5	X	
12:42	MP41337-B1	5	X	
12:46	FA99547-1	5		(a)
12:49	MA18981-CCV7	1		
12:53	MA18981-CCV8	1	X	
12:57	MA18981-CCB4	1	X	
13:01	MP41337-D1	5	X	
13:05	MP41337-SD1	25	X	
13:08	MP41337-S1	5	X	
13:12	MP41337-S2	5	X	
13:16	MP41337-PS1	5		
13:20	ZZZZZZ	5		
13:24	ZZZZZZ	10		
13:27	ZZZZZZ	10		
13:31	ZZZZZZ	10		
13:35	ZZZZZZ	10		
13:39	MA18981-CCV9	1		
13:43	MA18981-CCV10	1	X	
13:46	MA18981-CCB5	1	X	
13:50	ZZZZZZ	10		
13:54	ZZZZZZ	5		
13:58	ZZZZZZ	5		
14:02	ZZZZZZ	5		
14:05	ZZZZZZ	5		
14:09	ZZZZZZ	5		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Element: Dilution	As
14:13	ZZZZZZ	5	
14:17	ZZZZZZ	5	
14:21	ZZZZZZ	5	
14:24	ZZZZZZ	5	
14:28	MA18981-CCV11	1	
14:32	MA18981-CCV12	1	X
14:36	MA18981-CCB6	1	X

(a) Sample used for QC only; not part of login FA99549.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
09:27	MA18981-STD1	100	100	100	100	100	100	100
09:31	MA18981-STD2	98.4	100.3	99.8	100.1	100	98.8	98.9
09:35	MA18981-STD3	94.4	100	99.9	100.7	100.3	99.3	99.5
09:39	MA18981-STD4	103.6	100.5	100.4	100.6	100.2	100.1	99.4
09:43	MA18981-STD5	100.8	98.9	98.5	98.3	97	97.9	96.6
09:47	MA18981-STD6	96.4	96.4	96.3	96.2	94.7	97.5	94.4
09:51	MA18981-STD7	92	94.7	94.5	93.7	92.3	95.4	91.1
09:54	MA18981-HSTD1	93.7	94.9	94.7	94.6	93.5	96.2	93.5
09:58	MA18981-HSTD2	96.4	93	94.3	93.5	92.1	94.5	91.1
10:02	MA18981-ICV1	102.9	93.8	94.8	94.4	92.9	95.3	92.9
10:06	MA18981-ICB1	100	95.6	94.8	95.9	95.5	95.6	95.8
10:10	MA18981-CRIA1	93.6	97.1	97.2	96.1	96.9	96.6	96.7
10:13	MA18981-ICSA1	87.7	92.3	92.5	89.5	85.7	89.5	83.2
10:17	MA18981-ICSAB1	87	92.3	93.9	90.9	86.1	90.2	83.6
10:21	MA18981-CCV1	109.8	93.6	95.9	95.5	93	95.1	94.2
10:25	MA18981-CCV2	105.1	93.1	94.8	95.6	91.2	94.7	93.1
10:29	MA18981-CCB1	101	93.7	94.8	95.4	93	93.9	94.9
10:32	MP41335-MB1	104.1	92.7	92.3	92.8	88.9	90.7	91
10:36	MP41335-B1	104.9	92	91.8	91.4	87.2	90.7	87.4
10:40	FA99625-1A	97.4	91.5	91.2	90.3	84.7	88.7	84.8
10:44	MP41335-D1	102.2	92.4	91.5	91	85	88.4	85.1
10:48	MP41335-SD1	99.3	97.2	97.8	97.6	92.8	93.2	92.2
10:52	MP41335-S1	96.4	91.3	90.5	90.3	84.2	88	82.5
10:55	MP41335-S2	101.3	91	90.6	89.4	84.2	87.8	82.5
10:59	MP41335-PS1	98.5	91.5	89.9	90	83.5	87.1	83
11:03	ZZZZZZ	107.6	92.6	92.6	92.4	86	89	85.6
11:07	FA99549-1	106.1	94.1	93.9	94	88.1	89.5	87.1
11:11	MA18981-CCV3	106.7	101.7	101.9	101.9	94.7	94.8	92.9
11:15	MA18981-CCV4	107.6	101.7	101.2	100.7	94.1	94.4	90.5
11:18	MA18981-CCB2	112.3	100.2	98.6	98.8	94.7	92.8	92.7
11:22	ZZZZZZ	113.3	104	96.9	95.5	89	91.5	89.2
11:26	ZZZZZZ	108	95.2	94.1	94.4	88.2	88.5	87.6
11:30	ZZZZZZ	101.9	94	93.4	93.2	87.3	89	86.2

INTERNAL STANDARD SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
11:34	ZZZZZZ	116.3	97.7	95.6	96	87.7	89.3	84.9
11:37	ZZZZZZ	113.9	104.5	96.8	95.5	89.1	91.1	88.9
11:41	ZZZZZZ	114.3	116.3	96.6	94.6	86.4	90.4	86.6
11:45	ZZZZZZ	105.5	94.9	92.8	92.4	85.8	86.4	85.3
11:49	ZZZZZZ	111.4	95.7	95.4	93.9	86.5	87.4	85.4
11:53	ZZZZZZ	105.2	98.7	97.2	95.1	87.5	88.7	85.9
11:56	ZZZZZZ	108	96.5	94.1	92.2	84.7	88.8	82.3
12:00	MA18981-CCV5	111.9	104	103.6	103.4	95.3	94.2	92
12:04	MA18981-CCV6	104.5	101.4	101	100.5	92.6	92.3	89.1
12:08	MA18981-CCB3	108.3	101.9	100.8	100.7	94.1	91.2	90.9
12:12	ZZZZZZ	103.3	93.1	90.8	91.1	84.7	86.3	83.4
12:15	ZZZZZZ	107	94.9	92.5	92.3	87	87.3	87.6
12:19	ZZZZZZ	107.8	94.8	94	93.2	87.5	87.2	87.5
12:31	ZZZZZZ	109.9	92.9	90.6	90.5	85.2	88.2	87.1
12:34	ZZZZZZ	110.7	93.7	91.2	90.7	85.7	88.2	86.9
12:38	MP41337-MB1	113.6	96.1	93.7	94	88.3	88.6	88.8
12:42	MP41337-B1	107.1	92.9	92.4	92.2	85.4	87.7	83.9
12:46	FA99547-1	121.1	98.7	95.3	95.1	88	88.5	87.9
12:49	MA18981-CCV7	114.8	104.5	101.7	101.7	93.8	93.2	90.3
12:53	MA18981-CCV8	117.9	103	101.2	100.2	93.1	91.9	88.5
12:57	MA18981-CCB4	112.6	102.4	101.2	100.5	94.5	91.9	91
13:01	MP41337-D1	111.6	100.1	96.2	95.9	88.7	88.9	88.6
13:05	MP41337-SD1	117.9	104.8	101.6	101.8	93.7	91.1	91.1
13:08	MP41337-S1	110.5	98.9	95.2	94.4	86.2	87.5	83.2
13:12	MP41337-S2	111.2	98	93.6	93.5	85.9	86.9	82.7
13:16	MP41337-PS1	119.6	100.5	95.5	95.7	87.8	87.9	86.4
13:20	ZZZZZZ	114.2	97.3	94.4	94.4	86.2	85.1	84.9
13:24	ZZZZZZ	129.2	113.6	104.4	103.1	94.5	93.5	91
13:27	ZZZZZZ	112.9	125.4	101.8	97.9	88.8	88.9	85.6
13:31	ZZZZZZ	107.5	114.7	104.1	98.3	88.2	92.2	84.5
13:35	ZZZZZZ	113.8	108.1	98.9	97.6	88.1	87.5	85
13:39	MA18981-CCV9	112	102.6	101.3	100.8	92.6	91	88.5
13:43	MA18981-CCV10	110.7	98.8	98.3	97.9	90.1	90	86.7

INTERNAL STANDARD SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
Analyst: JC Run ID: MA18981
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
13:46	MA18981-CCB5	112.9	100.8	98.7	98.8	91.9	89	88.1
13:50	ZZZZZZ	110.3	113.7	97.3	95.4	87.9	87.7	85.4
13:54	ZZZZZZ	110.1	102	92	91.6	84.3	85.7	83.9
13:58	ZZZZZZ	111.5	99.7	91.2	90.3	83.8	85.1	84
14:02	ZZZZZZ	116.5	98.1	91	90.3	83.7	84.8	83.6
14:05	ZZZZZZ	111.1	100.6	91.4	90.3	83.4	84.3	82.5
14:09	ZZZZZZ	114.2	95.6	92.4	90.8	83.9	84.7	83.8
14:13	ZZZZZZ	116	96.8	92.5	91.9	84.3	84.7	83.6
14:17	ZZZZZZ	105.2	100.3	92.2	91.7	83.6	84	82.6
14:21	ZZZZZZ	109.2	100.7	92.1	90.6	83	83.9	82.1
14:24	ZZZZZZ	112.8	97	92	91.4	83.8	83.5	83
14:28	MA18981-CCV11	108.4	100.3	96.9	98.6	89.3	88.2	86.3
14:32	MA18981-CCV12	100.5	96.4	95.6	95.2	88	88.2	84.9
14:36	MA18981-CCB6	104.1	97.1	96.3	96.4	89.1	88	87.3

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA18981 Units: ug/l

Time: / Sample ID:			10:06 ICB1		10:29 CCB1		11:18 CCB2	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4						
Antimony	1.0	.1	anr					
Arsenic	1.0	.1	0.0551	<1.0	0.0371	<1.0	0.0293	<1.0
Barium	1.0	.1	anr					
Beryllium	1.0	.1	anr					
Cadmium	1.0	.1	anr					
Calcium	100	7.2						
Chromium	1.0	.1	anr					
Cobalt	1.0	.1						
Copper	1.0	.1	anr					
Iron	100	7.9						
Lead	1.0	.1	anr					
Magnesium	100	5.2						
Manganese	1.0	.1						
Molybdenum	1.0	.1						
Nickel	1.0	.1	anr					
Potassium	100	6.6						
Selenium	1.0	.11	anr					
Silver	1.0	.1	anr					
Sodium	100	4.8						
Strontium	1.0	.1						
Thallium	1.0	.1	anr					
Tin	1.0	.1						
Titanium	1.0	.3						
Vanadium	1.0	.1						
Zinc	2.0	.29	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18981 Units: ug/l

Time:		10:02			10:21			10:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	100	102	102.0				100	100	100.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt									
Copper	anr								
Iron									
Lead	anr								
Magnesium									
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18981 Units: ug/l

Time:		11:11			11:15	
Sample ID:	CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	99.3	99.3
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA18981 Units: ug/l

Time:		09:54			09:58	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	200	100.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA18981 Units: ug/l

Time:			10:10	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100		
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	1.01	101.0
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100		
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0		
Copper	1.0	1.0	anr	
Iron	100	100		
Lead	1.0	1.0	anr	
Magnesium	100	100		
Manganese	1.0	1.0		
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100		
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100		
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0		
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA101722M1.CSV Date Analyzed: 10/17/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA18981 Units: ug/l

Time:			10:13		10:17	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	97100	97.1	97400	97.4
Antimony			0.0814		0.0798	
Arsenic		20	0.139		20.3	101.5
Barium			0.514		0.518	
Beryllium			0.0209		0.0230	
Cadmium		20	0.658		20.9	104.5
Calcium	100000	100000	96800	96.8	97900	97.9
Chromium		20	2.16*(a)		22.5	112.5
Cobalt		20	0.253		20.5	102.5
Copper		20	0.199		19.7	98.5
Iron	100000	100000	98400	98.4	97900	97.9
Lead			0.0915		0.0635	
Magnesium	100000	100000	99200	99.2	100000	100.0
Manganese		20	0.949		21.0	105.0
Molybdenum	2000	2000	2050	102.5	2060	103.0
Nickel		20	0.407		20.2	101.0
Potassium	100000	100000	100000	100.0	102000	102.0
Selenium			0.153		0.152	
Silver		20	0.0359		19.4	97.0
Sodium	100000	100000	101000	101.0	102000	102.0
Strontium			0.844		0.838	
Thallium			0.0108		0.00704	
Tin			0.0945		0.0665	
Titanium	2000	2000	2020	101.0	2030	101.5
Vanadium			0.0291		0.0417	
Zinc		20	0.940		21.2	106.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41335
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 10/15/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.26	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP41335: FA99549-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41335
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 10/15/22 10/15/22

Metal	FA99625-1A Original	DUP	RPD	QC Limits	FA99625-1A Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	16.0	16.4	2.5	0-20	16.0	236	200	110.0	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt									
Copper	anr								
Iron									
Lead	anr								
Magnesium									
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc	anr								

Associated samples MP41335: FA99549-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41335 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/15/22

Metal	FA99625-1A Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	16.0	236	200	110.0	0.0	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron						
Lead	anr					
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP41335: FA99549-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41335
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 10/15/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	220	200	110.0	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP41335: FA99549-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA99549
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41335
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 10/15/22

Metal	FA99625-1A Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	16.0	16.4	2.6	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP41335: FA99549-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA99549
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA18981

Instrument Linear Ranges

Job Number: FA99549
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA18981

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:19
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.197	ug/l	85.54	7,236.79	4.074E-02	Pulse	0.50	3
As			1	0.004	ug/l	102.95	92.33	5.193E-04	Pulse	1.00	3
Mo			1	0.076	ug/l	28.61	538.01	2.046E-03	Pulse	0.50	3
Pb			1	0.005	ug/l	44.07	702.68	2.533E-04	Pulse	1.00	3
Be			1	-0.002	ug/l	-173.89	0.17	5.095E-07	Pulse	2.00	3
Ag			1	0.002	ug/l	66.89	114.67	4.363E-04	Pulse	0.50	3
Ba			1	0.015	ug/l	21.33	86.67	5.327E-05	Pulse	0.50	3
Tl			1	0.004	ug/l	32.83	231.33	8.341E-05	Pulse	0.50	3
Sn			1	0.087	ug/l	47.45	1,136.71	6.982E-04	Pulse	0.30	3
Sr			1	0.004	ug/l	50.18	412.68	2.537E-04	Pulse	0.50	3
[Pb]			1	0.006	ug/l	48.06	317.34	1.143E-04	Pulse	0.50	3
Ca			1	0.150	ug/l	693.30	498.68	1.526E-03	Pulse	0.50	3
Ti			1	0.052	ug/l	120.54	26.67	8.158E-05	Pulse	0.50	3
Na			1	-0.059	ug/l	-17.62	17,543.66	5.368E-02	Pulse	1.00	3
Mg			1	0.729	ug/l	85.12	1,283.39	3.926E-03	Pulse	1.00	3
K			1	-0.090	ug/l	-942.96	101,429.63	3.103E-01	Pulse	1.00	3
V			1	0.007	ug/l	104.83	2,884.22	8.825E-03	Pulse	0.50	3
Mn			1	0.007	ug/l	105.25	448.01	2.519E-03	Pulse	0.50	3
Fe			1	14.852	ug/l	82.14	184,207.18	1.039E+00	Pulse	0.50	3
Co			1	-0.001	ug/l	-169.17	173.33	9.752E-04	Pulse	0.50	3
Ni			1	-0.022	ug/l	-37.82	657.34	3.697E-03	Pulse	0.50	3
Cu			1	0.021	ug/l	44.66	4,305.83	2.422E-02	Pulse	0.50	3
Zn			1	1.184	ug/l	80.72	3,651.46	1.388E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	104.45	4.00	1.527E-05	Pulse	0.50	3
Al			1	1.460	ug/l	64.45	1,771.75	5.421E-03	Pulse	1.00	3
Se			1	0.012	ug/l	338.86	48.44	1.844E-04	Pulse	3.00	3
Sb			1	0.012	ug/l	28.03	227.33	8.647E-04	Pulse	1.00	3
Se			1	0.032	ug/l	460.68	42.44	1.616E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,774,808.92	0.34	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		326,832.93	0.13	100.0	Pulse	0.30	3
1	Ge		177,819.32	0.54	100.0	Pulse	0.30	3
1	In		1,626,589.55	0.58	100.0	Pulse	0.30	3
1	Tb		3,944,595.75	0.60	100.0	Pulse	0.50	3
1	Lu		2,979,608.42	0.18	100.0	Pulse	0.50	3
1	Ge		262,796.39	0.52	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,284.49	7.57	100.0	Pulse	0.30	3

Quantitation Report

File Name 002CALB.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:23
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.004	ug/l	-260.61	4,717.92	2.632E-02	Pulse	0.50	3
As			1	0.000	ug/l	-3711.43	86.00	4.798E-04	Pulse	1.00	3
Mo			1	0.003	ug/l	96.79	96.67	3.664E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	-1839.69	576.68	2.086E-04	Pulse	1.00	3
Be			1	-0.002	ug/l	-174.96	0.17	5.111E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	-387.42	79.33	3.003E-04	Pulse	0.50	3
Ba			1	0.004	ug/l	157.24	54.67	3.380E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	-178.34	64.67	2.337E-05	Pulse	0.50	3
Sn			1	-0.003	ug/l	-423.83	541.12	3.348E-04	Pulse	0.30	3
Sr			1	0.002	ug/l	206.44	393.34	2.435E-04	Pulse	0.50	3
[Pb]			1	0.004	ug/l	85.09	286.00	1.034E-04	Pulse	0.50	3
Ca			1	1.403	ug/l	33.80	571.34	1.738E-03	Pulse	0.50	3
Ti			1	0.005	ug/l	291.80	9.33	2.847E-05	Pulse	0.50	3
Na			1	0.071	ug/l	178.06	17,955.21	5.462E-02	Pulse	1.00	3
Mg			1	0.020	ug/l	104.32	435.01	1.324E-03	Pulse	1.00	3
K			1	-0.304	ug/l	-157.84	101,761.99	3.095E-01	Pulse	1.00	3
V			1	-0.004	ug/l	-44.66	2,779.54	8.455E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	-797.34	394.01	2.197E-03	Pulse	0.50	3
Fe			1	0.208	ug/l	18.15	25,175.62	1.404E-01	Pulse	0.50	3
Co			1	-0.001	ug/l	-28.26	168.00	9.370E-04	Pulse	0.50	3
Ni			1	-0.021	ug/l	-67.09	669.35	3.731E-03	Pulse	0.50	3
Cu			1	0.002	ug/l	496.89	4,078.45	2.275E-02	Pulse	0.50	3
Zn			1	0.013	ug/l	150.70	962.03	3.646E-03	Pulse	1.00	3
Cd			1	0.001	ug/l	156.88	3.33	1.264E-05	Pulse	0.50	3
Al			1	0.268	ug/l	34.17	1,157.37	3.521E-03	Pulse	1.00	3
Se			1	-0.020	ug/l	-151.92	44.56	1.690E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	2372.99	124.67	4.728E-04	Pulse	1.00	3
Se			1	-0.003	ug/l	-1628.33	40.56	1.538E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,765,146.42	0.54	100.0	Pulse	0.50	3
1	Sc		328,737.56	0.81	100.0	Pulse	0.30	3
1	Ge		179,276.27	1.18	100.0	Pulse	0.30	3
1	In		1,615,677.75	0.45	100.0	Pulse	0.30	3
1	Tb		3,914,507.08	0.52	100.0	Pulse	0.50	3
1	Lu		2,972,026.00	0.60	100.0	Pulse	0.50	3
1	Ge		263,755.84	1.05	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,188.93	5.33	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa101722m1.b
Method File	
Method Path	
Acq Time	10/17/2022 9:27
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	10/17/2022 9:52
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	4,739.27	2.661E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	85.67	4.810E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	78.00	2.968E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	579.68	2.090E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	1.017E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	84.67	3.222E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	43.33	2.676E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	72.67	2.621E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	560.01	3.459E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	376.01	2.322E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	240.67	8.676E-05	Pulse	0.50	3
Ca			1	0.000	ug/l	---	492.01	1.501E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	---	7.33	2.236E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	17,742.16	5.411E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	410.01	1.250E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	101,867.23	3.107E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	2,818.22	8.595E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	393.34	2.209E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	22,739.96	1.277E-01	Pulse	0.50	3
Co			1	0.000	ug/l	---	188.67	1.060E-03	Pulse	0.50	3
Ni			1	0.000	ug/l	---	768.02	4.311E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	4,031.10	2.263E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	927.02	3.529E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	0.67	2.535E-06	Pulse	0.50	3
Al			1	0.000	ug/l	---	1,014.36	3.094E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	46.89	1.785E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	123.67	4.707E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	40.56	1.544E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,773,346.50	0.50	100.0	Pulse	0.50	3
1	Sc		327,893.60	0.04	100.0	Pulse	0.30	3
1	Ge		178,118.87	0.37	100.0	Pulse	0.30	3
1	In		1,619,583.27	0.28	100.0	Pulse	0.30	3
1	Tb		3,928,542.92	0.56	100.0	Pulse	0.50	3
1	Lu		2,959,926.75	0.57	100.0	Pulse	0.50	3
1	Ge		262,679.38	0.21	100.0	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,187.82	3.62	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:31
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.485	ug/l	3.81	10,931.76	6.148E-02	Pulse	0.50	3
As			1	0.506	ug/l	5.30	876.35	4.928E-03	Pulse	1.00	3
Mo			1	0.480	ug/l	3.30	2,996.92	1.140E-02	Pulse	0.50	3
Pb			1	0.478	ug/l	2.46	13,010.96	4.742E-03	Pulse	1.00	3
Be			1	0.491	ug/l	7.62	39.33	1.196E-04	Pulse	2.00	3
Ag			1	0.491	ug/l	1.59	9,258.34	3.520E-02	Pulse	0.50	3
Ba			1	0.481	ug/l	4.00	1,436.07	8.864E-04	Pulse	0.50	3
Tl			1	0.481	ug/l	0.14	17,670.47	6.440E-03	Pulse	0.50	3
Sn			1	0.442	ug/l	2.19	3,457.02	2.135E-03	Pulse	0.30	3
Sr			1	0.479	ug/l	5.03	4,693.94	2.899E-03	Pulse	0.50	3
[Pb]			1	0.474	ug/l	2.07	6,130.46	2.234E-03	Pulse	0.50	3
Ca			1	48.334	ug/l	1.39	3,188.27	9.697E-03	Pulse	0.50	3
Ti			1	0.488	ug/l	9.72	188.67	5.741E-04	Pulse	0.50	3
Na			1	47.264	ug/l	0.67	130,897.13	3.981E-01	Pulse	1.00	3
Mg			1	49.028	ug/l	0.92	59,558.01	1.811E-01	Pulse	1.00	3
K			1	46.753	ug/l	2.87	158,841.88	4.831E-01	Pulse	1.00	3
V			1	0.500	ug/l	4.23	8,029.01	2.442E-02	Pulse	0.50	3
Mn			1	0.471	ug/l	6.69	4,053.77	2.279E-02	Pulse	0.50	3
Fe			1	49.284	ug/l	0.91	560,226.75	3.150E+00	Pulse	0.50	3
Co			1	0.496	ug/l	0.77	9,581.73	5.388E-02	Pulse	0.50	3
Ni			1	0.464	ug/l	3.09	3,095.59	1.741E-02	Pulse	0.50	3
Cu			1	0.627	ug/l	1.64	12,310.62	6.923E-02	Pulse	0.50	3
Zn			1	0.560	ug/l	3.13	2,217.13	8.429E-03	Pulse	1.00	3
Cd			1	0.501	ug/l	6.19	1,478.06	5.620E-03	Pulse	0.50	3
Al			1	47.706	ug/l	1.14	26,016.88	7.913E-02	Pulse	1.00	3
Se			1	0.396	ug/l	2.35	97.11	3.692E-04	Pulse	3.00	3
Sb			1	0.466	ug/l	3.40	4,204.82	1.599E-02	Pulse	1.00	3
Se			1	0.403	ug/l	15.00	64.66	2.459E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,743,827.00	0.96	98.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		328,794.77	0.87	100.3	Pulse	0.30	3
1	Ge		177,838.41	0.72	99.8	Pulse	0.30	3
1	In		1,619,688.65	1.07	100.0	Pulse	0.30	3
1	Tb		3,882,912.25	0.87	98.8	Pulse	0.50	3
1	Lu		2,945,191.92	0.97	99.5	Pulse	0.50	3
1	Ge		263,028.05	0.88	100.1	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,168.93	8.86	98.4	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:35
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.009	ug/l	0.79	17,649.35	9.918E-02	Pulse	0.50	3
As			1	1.017	ug/l	5.60	1,677.08	9.424E-03	Pulse	1.00	3
Mo			1	0.944	ug/l	3.10	5,848.27	2.211E-02	Pulse	0.50	3
Pb			1	0.973	ug/l	0.86	26,042.43	9.439E-03	Pulse	1.00	3
Be			1	1.047	ug/l	9.95	83.33	2.542E-04	Pulse	2.00	3
Ag			1	1.018	ug/l	1.99	19,222.62	7.266E-02	Pulse	0.50	3
Ba			1	0.950	ug/l	8.14	2,802.89	1.724E-03	Pulse	0.50	3
Tl			1	0.973	ug/l	0.92	35,891.59	1.301E-02	Pulse	0.50	3
Sn			1	0.945	ug/l	1.47	6,774.62	4.169E-03	Pulse	0.30	3
Sr			1	0.986	ug/l	2.01	9,292.98	5.718E-03	Pulse	0.50	3
[Pb]			1	0.974	ug/l	1.15	12,409.86	4.498E-03	Pulse	0.50	3
Ca			1	101.250	ug/l	0.25	6,122.98	1.867E-02	Pulse	0.50	3
Ti			1	0.948	ug/l	11.94	358.67	1.094E-03	Pulse	0.50	3
Na			1	99.102	ug/l	1.39	254,276.33	7.754E-01	Pulse	1.00	3
Mg			1	100.302	ug/l	1.66	121,092.61	3.693E-01	Pulse	1.00	3
K			1	98.751	ug/l	1.99	221,326.02	6.749E-01	Pulse	1.00	3
V			1	0.997	ug/l	1.38	13,165.13	4.015E-02	Pulse	0.50	3
Mn			1	1.021	ug/l	0.73	8,329.82	4.681E-02	Pulse	0.50	3
Fe			1	101.373	ug/l	0.52	1,129,119.87	6.345E+00	Pulse	0.50	3
Co			1	1.027	ug/l	2.27	19,655.99	1.105E-01	Pulse	0.50	3
Ni			1	0.960	ug/l	1.95	5,594.16	3.144E-02	Pulse	0.50	3
Cu			1	1.098	ug/l	2.45	18,542.28	1.042E-01	Pulse	0.50	3
Zn			1	1.831	ug/l	1.29	5,170.70	1.954E-02	Pulse	1.00	3
Cd			1	1.013	ug/l	2.57	3,003.59	1.135E-02	Pulse	0.50	3
Al			1	99.170	ug/l	1.80	52,844.16	1.612E-01	Pulse	1.00	3
Se			1	0.909	ug/l	5.78	163.00	6.162E-04	Pulse	3.00	3
Sb			1	0.966	ug/l	1.47	8,645.71	3.268E-02	Pulse	1.00	3
Se			1	0.959	ug/l	11.85	98.44	3.721E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,759,100.25	1.11	99.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		327,948.29	1.21	100.0	Pulse	0.30	3
1	Ge		177,954.75	0.21	99.9	Pulse	0.30	3
1	In		1,625,172.37	0.68	100.3	Pulse	0.30	3
1	Tb		3,901,120.00	0.53	99.3	Pulse	0.50	3
1	Lu		2,959,255.17	0.18	100.0	Pulse	0.50	3
1	Ge		264,578.06	0.59	100.7	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,121.15	5.98	94.4	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:39
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.163	ug/l	0.61	135,369.47	7.572E-01	Pulse	0.50	3
As			1	10.102	ug/l	0.12	15,970.00	8.933E-02	Pulse	1.00	3
Mo			1	9.816	ug/l	0.55	60,011.42	2.271E-01	Pulse	0.50	3
Pb			1	9.821	ug/l	0.92	257,454.42	9.339E-02	Pulse	1.00	3
Be			1	9.986	ug/l	2.22	795.85	2.416E-03	Pulse	2.00	3
Ag			1	10.285	ug/l	1.60	193,246.64	7.313E-01	Pulse	0.50	3
Ba			1	9.738	ug/l	1.17	28,280.06	1.743E-02	Pulse	0.50	3
Tl			1	10.029	ug/l	1.16	369,028.34	1.339E-01	Pulse	0.50	3
Sn			1	9.864	ug/l	0.71	65,313.16	4.025E-02	Pulse	0.30	3
Sr			1	9.783	ug/l	0.29	88,710.10	5.466E-02	Pulse	0.50	3
[Pb]			1	9.767	ug/l	1.13	122,211.34	4.433E-02	Pulse	0.50	3
Ca			1	1008.963	ug/l	1.30	56,849.84	1.726E-01	Pulse	0.50	3
Ti			1	9.733	ug/l	4.84	3,629.69	1.102E-02	Pulse	0.50	3
Na			1	1009.508	ug/l	1.15	2,438,050.42	7.402E+00	Pulse	1.00	3
Mg			1	1015.919	ug/l	1.40	1,228,226.25	3.729E+00	Pulse	1.00	3
K			1	1026.389	ug/l	1.39	1,349,387.00	4.097E+00	Pulse	1.00	3
V			1	10.073	ug/l	1.49	107,786.44	3.272E-01	Pulse	0.50	3
Mn			1	10.251	ug/l	0.29	80,414.46	4.498E-01	Pulse	0.50	3
Fe			1	1019.189	ug/l	0.23	11,197,378.67	6.264E+01	Analog	0.50	3
Co			1	10.388	ug/l	0.37	197,981.17	1.107E+00	Pulse	0.50	3
Ni			1	10.307	ug/l	0.18	52,819.67	2.955E-01	Pulse	0.50	3
Cu			1	10.574	ug/l	1.04	144,523.20	8.085E-01	Pulse	0.50	3
Zn			1	10.345	ug/l	0.15	24,845.62	9.401E-02	Pulse	1.00	3
Cd			1	10.054	ug/l	1.35	29,773.87	1.127E-01	Pulse	0.50	3
Al			1	1015.866	ug/l	1.44	534,323.71	1.622E+00	Pulse	1.00	3
Se			1	9.986	ug/l	4.77	1,317.60	4.987E-03	Pulse	3.00	3
Sb			1	9.857	ug/l	0.92	86,941.08	3.290E-01	Pulse	1.00	3
Se			1	9.874	ug/l	2.25	633.34	2.396E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,756,727.08	0.53	99.4	Pulse	0.50	3
1	Sc		329,412.08	1.26	100.5	Pulse	0.30	3
1	Ge		178,771.24	0.55	100.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,622,819.00	0.22	100.2	Pulse	0.30	3
1	Tb		3,931,838.00	0.71	100.1	Pulse	0.50	3
1	Lu		2,977,413.67	0.51	100.6	Pulse	0.50	3
1	Ge		264,282.91	1.32	100.6	Pulse	0.30	3
1	Te		2.67	86.60	400.0	Pulse	0.50	3
1	Li		1,230.05	2.93	103.6	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:43
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.616	ug/l	0.61	643,152.71	3.666E+00	Pulse	0.50	3
As			1	50.154	ug/l	0.48	77,486.14	4.416E-01	Pulse	1.00	3
Mo			1	49.811	ug/l	0.39	297,198.40	1.151E+00	Pulse	0.50	3
Pb			1	49.375	ug/l	0.80	1,256,127.54	4.687E-01	Pulse	1.00	3
Be			1	49.414	ug/l	1.51	3,873.70	1.195E-02	Pulse	2.00	3
Ag			1	51.030	ug/l	0.76	936,455.10	3.627E+00	Pulse	0.50	3
Ba			1	49.790	ug/l	0.51	139,826.17	8.899E-02	Pulse	0.50	3
Tl			1	50.674	ug/l	0.46	1,812,636.00	6.763E-01	Pulse	0.50	3
Sn			1	49.794	ug/l	0.76	317,002.15	2.018E-01	Pulse	0.30	3
Sr			1	49.851	ug/l	0.85	436,181.95	2.776E-01	Pulse	0.50	3
[Pb]			1	49.502	ug/l	0.54	601,275.33	2.243E-01	Pulse	0.50	3
Ca			1	5036.614	ug/l	0.69	277,351.89	8.556E-01	Pulse	0.50	3
Ti			1	48.709	ug/l	0.63	17,852.82	5.507E-02	Pulse	0.50	3
Na			1	5035.465	ug/l	0.75	11,898,290.33	3.671E+01	Analog	1.00	3
Mg			1	5044.577	ug/l	0.74	6,000,627.67	1.851E+01	Analog	1.00	3
K			1	5038.887	ug/l	0.92	6,125,953.00	1.890E+01	Analog	1.00	3
V			1	50.075	ug/l	1.07	516,279.62	1.593E+00	Pulse	0.50	3
Mn			1	50.800	ug/l	0.56	389,578.40	2.220E+00	Pulse	0.50	3
Fe			1	5060.903	ug/l	0.39	54,483,421.33	3.105E+02	Analog	0.50	3
Co			1	51.017	ug/l	0.32	953,583.81	5.435E+00	Pulse	0.50	3
Ni			1	51.514	ug/l	0.61	256,068.80	1.459E+00	Pulse	0.50	3
Cu			1	51.724	ug/l	0.96	678,411.52	3.867E+00	Pulse	0.50	3
Zn			1	51.229	ug/l	0.58	116,592.55	4.516E-01	Pulse	1.00	3
Cd			1	50.728	ug/l	0.46	146,767.68	5.685E-01	Pulse	0.50	3
Al			1	4983.755	ug/l	0.59	2,575,971.00	7.947E+00	Pulse	1.00	3
Se			1	50.016	ug/l	0.44	6,265.03	2.427E-02	Pulse	3.00	3
Sb			1	49.464	ug/l	0.28	425,771.61	1.649E+00	Pulse	1.00	3
Se			1	50.962	ug/l	0.59	3,027.35	1.173E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,680,145.67	0.57	96.6	Pulse	0.50	3
1	Sc		324,171.39	0.82	98.9	Pulse	0.30	3
1	Ge		175,462.28	0.68	98.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,571,258.76	0.95	97.0	Pulse	0.30	3
1	Tb		3,847,354.58	0.51	97.9	Pulse	0.50	3
1	Lu		2,927,115.92	0.30	98.9	Pulse	0.50	3
1	Ge		258,185.57	0.26	98.3	Pulse	0.30	3
1	Te		8.67	58.08	1300.0	Pulse	0.50	3
1	Li		1,197.82	6.11	100.8	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:47
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.818	ug/l	0.83	1,234,935.54	7.203E+00	Pulse	0.50	3
As			1	99.248	ug/l	0.27	149,751.03	8.734E-01	Pulse	1.00	3
Mo			1	98.715	ug/l	0.16	576,367.92	2.281E+00	Pulse	0.50	3
Pb			1	97.981	ug/l	0.83	2,433,930.42	9.298E-01	Pulse	1.00	3
Be			1	100.053	ug/l	0.65	7,648.94	2.420E-02	Pulse	2.00	3
Ag			1	99.457	ug/l	1.07	1,786,171.79	7.069E+00	Pulse	0.50	3
Ba			1	98.470	ug/l	0.59	269,768.33	1.760E-01	Pulse	0.50	3
Tl			1	100.595	ug/l	0.56	3,514,300.92	1.343E+00	Pulse	0.50	3
Sn			1	97.774	ug/l	1.32	606,816.87	3.958E-01	Pulse	0.30	3
Sr			1	98.487	ug/l	0.55	840,452.65	5.482E-01	Pulse	0.50	3
[Pb]			1	98.087	ug/l	0.94	1,163,376.08	4.445E-01	Pulse	0.50	3
Ca			1	9940.227	ug/l	0.67	533,293.71	1.687E+00	Pulse	0.50	3
Ti			1	98.640	ug/l	0.55	35,247.61	1.115E-01	Pulse	0.50	3
Na			1	9975.666	ug/l	0.50	22,968,521.33	7.266E+01	Analog	1.00	3
Mg			1	9990.155	ug/l	0.66	11,587,603.00	3.666E+01	Analog	1.00	3
K			1	9946.434	ug/l	0.34	11,695,923.33	3.700E+01	Analog	1.00	3
V			1	99.405	ug/l	0.62	996,709.83	3.153E+00	Pulse	0.50	3
Mn			1	99.887	ug/l	0.85	748,148.25	4.364E+00	Pulse	0.50	3
Fe			1	9952.029	ug/l	0.84	104,671,568.00	6.105E+02	Analog	0.50	3
Co			1	99.934	ug/l	1.29	1,825,072.46	1.064E+01	Pulse	0.50	3
Ni			1	99.974	ug/l	0.81	484,907.25	2.828E+00	Pulse	0.50	3
Cu			1	100.594	ug/l	0.34	1,285,648.12	7.498E+00	Pulse	0.50	3
Zn			1	99.769	ug/l	0.19	221,384.01	8.761E-01	Pulse	1.00	3
Cd			1	99.602	ug/l	0.36	282,028.60	1.116E+00	Pulse	0.50	3
Al			1	9918.138	ug/l	0.59	4,997,985.50	1.581E+01	Analog	1.00	3
Se			1	99.500	ug/l	0.51	12,153.30	4.810E-02	Pulse	3.00	3
Sb			1	98.349	ug/l	0.46	828,391.79	3.278E+00	Pulse	1.00	3
Se			1	99.426	ug/l	1.08	5,743.42	2.273E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,617,608.50	0.40	94.4	Pulse	0.50	3
1	Sc		316,107.30	1.01	96.4	Pulse	0.30	3
1	Ge		171,455.26	0.23	96.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,533,076.54	0.72	94.7	Pulse	0.30	3
1	Tb		3,830,286.83	0.75	97.5	Pulse	0.50	3
1	Lu		2,882,384.17	0.08	97.4	Pulse	0.50	3
1	Ge		252,685.96	0.38	96.2	Pulse	0.30	3
1	Te		14.67	47.89	2200.0	Pulse	0.50	3
1	Li		1,144.49	5.06	96.4	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa101722m1.b
Method File	
Method Path	
Acq Time	10/17/2022 9:51
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	10/17/2022 9:52
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.929	ug/l	0.85	2,424,607.08	1.440E+01	Pulse	0.50	3
As			1	200.332	ug/l	0.55	296,765.58	1.763E+00	Pulse	1.00	3
Mo			1	200.699	ug/l	0.44	1,141,252.54	4.637E+00	Pulse	0.50	3
Pb			1	201.175	ug/l	0.49	4,824,746.33	1.909E+00	Pulse	1.00	3
Be			1	200.121	ug/l	0.29	15,033.21	4.840E-02	Pulse	2.00	3
Ag			1	127.285	ug/l	0.44	2,226,515.42	9.047E+00	Pulse	0.50	3
Ba			1	200.831	ug/l	0.80	536,668.79	3.589E-01	Pulse	0.50	3
Tl			1	199.533	ug/l	0.72	6,730,531.83	2.663E+00	Analog	0.50	3
Sn			1	201.172	ug/l	0.65	1,217,430.09	8.141E-01	Pulse	0.30	3
Sr			1	200.805	ug/l	0.80	1,671,234.50	1.118E+00	Pulse	0.50	3
[Pb]			1	201.093	ug/l	0.24	2,302,791.75	9.111E-01	Pulse	0.50	3
Ca			1	20020.283	ug/l	0.08	1,055,058.75	3.396E+00	Pulse	0.50	3
Ti			1	201.016	ug/l	0.63	70,578.31	2.272E-01	Pulse	0.50	3
Na			1	20002.837	ug/l	0.59	45,241,697.33	1.456E+02	Analog	1.00	3
Mg			1	19992.983	ug/l	0.19	22,788,495.33	7.336E+01	Analog	1.00	3
K			1	20015.756	ug/l	0.31	23,031,370.00	7.414E+01	Analog	1.00	3
V			1	200.275	ug/l	0.38	1,970,723.71	6.344E+00	Pulse	0.50	3
Mn			1	199.844	ug/l	0.42	1,469,603.87	8.728E+00	Pulse	0.50	3
Fe			1	20007.795	ug/l	0.66	206,636,432.00	1.227E+03	Analog	0.50	3
Co			1	199.759	ug/l	0.03	3,582,623.17	2.128E+01	Pulse	0.50	3
Ni			1	199.620	ug/l	0.68	950,134.40	5.643E+00	Pulse	0.50	3
Cu			1	199.243	ug/l	0.75	2,496,971.42	1.483E+01	Pulse	0.50	3
Zn			1	199.787	ug/l	0.38	430,916.99	1.751E+00	Pulse	1.00	3
Cd			1	200.014	ug/l	0.51	551,623.44	2.241E+00	Pulse	0.50	3
Al			1	20044.209	ug/l	0.30	9,924,889.33	3.195E+01	Analog	1.00	3
Se			1	200.247	ug/l	0.23	23,777.96	9.661E-02	Pulse	3.00	3
Sb			1	200.967	ug/l	0.19	1,648,606.04	6.699E+00	Pulse	1.00	3
Se			1	200.053	ug/l	0.59	11,217.29	4.558E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,527,488.17	0.51	91.1	Pulse	0.50	3
1	Sc		310,632.48	0.50	94.7	Pulse	0.30	3
1	Ge		168,379.92	0.52	94.5	Pulse	0.30	3
1	In		1,495,481.16	0.29	92.3	Pulse	0.30	3
1	Tb		3,746,135.50	0.43	95.4	Pulse	0.50	3
1	Lu		2,851,162.33	0.35	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,112.27	0.25	93.7	Pulse	0.30	3
1	Te		18.00	29.40	2700.0	Pulse	0.50	3
1	Li		1,093.37	6.49	92.0	Pulse	0.30	3

Quantitation Report

File Name 010HSAG.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:54
Sample Name HSTD (Ag)
Sample Type HSTD _Ag
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.353	ug/l	1.64	1,220,882.04	7.241E+00	Pulse	0.50	3
As			1	100.229	ug/l	1.10	148,717.02	8.820E-01	Pulse	1.00	3
Mo			1	99.935	ug/l	0.19	573,614.90	2.309E+00	Pulse	0.50	3
Pb			1	99.047	ug/l	0.39	2,436,641.00	9.400E-01	Pulse	1.00	3
Be			1	100.764	ug/l	1.24	7,580.08	2.437E-02	Pulse	2.00	3
Ag			1	101.476	ug/l	0.75	1,791,640.41	7.212E+00	Pulse	0.50	3
Ba			1	99.473	ug/l	1.43	269,307.71	1.778E-01	Pulse	0.50	3
Tl			1	102.254	ug/l	0.40	3,537,645.42	1.365E+00	Pulse	0.50	3
Sn			1	99.737	ug/l	0.90	611,732.58	4.038E-01	Pulse	0.30	3
Sr			1	98.888	ug/l	0.60	833,963.34	5.505E-01	Pulse	0.50	3
[Pb]			1	99.009	ug/l	0.61	1,163,010.71	4.486E-01	Pulse	0.50	3
Ca			1	10029.161	ug/l	1.12	529,503.59	1.702E+00	Pulse	0.50	3
Ti			1	98.354	ug/l	1.76	34,583.12	1.112E-01	Pulse	0.50	3
Na			1	10080.447	ug/l	0.96	22,840,311.33	7.343E+01	Analog	1.00	3
Mg			1	10066.939	ug/l	1.11	11,490,812.33	3.694E+01	Analog	1.00	3
K			1	10053.103	ug/l	0.67	11,632,234.33	3.739E+01	Analog	1.00	3
V			1	100.210	ug/l	0.79	988,801.44	3.179E+00	Pulse	0.50	3
Mn			1	100.449	ug/l	1.22	739,853.98	4.388E+00	Pulse	0.50	3
Fe			1	10024.430	ug/l	1.36	103,680,549.33	6.149E+02	Analog	0.50	3
Co			1	100.959	ug/l	0.86	1,813,201.79	1.075E+01	Pulse	0.50	3
Ni			1	100.616	ug/l	1.19	479,910.31	2.846E+00	Pulse	0.50	3
Cu			1	101.190	ug/l	1.29	1,271,736.67	7.543E+00	Pulse	0.50	3
Zn			1	99.856	ug/l	0.77	217,825.98	8.769E-01	Pulse	1.00	3
Cd			1	100.819	ug/l	1.09	280,644.74	1.130E+00	Pulse	0.50	3
Al			1	9938.077	ug/l	1.27	4,928,243.83	1.584E+01	Analog	1.00	3
Se			1	99.752	ug/l	1.13	11,977.53	4.822E-02	Pulse	3.00	3
Sb			1	99.690	ug/l	0.78	825,490.23	3.323E+00	Pulse	1.00	3
Se			1	100.356	ug/l	0.56	5,698.74	2.294E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,592,281.08	0.68	93.5	Pulse	0.50	3
1	Sc		311,081.33	0.69	94.9	Pulse	0.30	3
1	Ge		168,611.48	0.53	94.7	Pulse	0.30	3
1	In		1,515,045.74	0.35	93.5	Pulse	0.30	3
1	Tb		3,777,551.83	0.14	96.2	Pulse	0.50	3
1	Lu		2,852,175.08	0.48	96.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,413.07	0.40	94.6	Pulse	0.30	3
1	Te		4.00	100.00	600.0	Pulse	0.50	3
1	Li		1,113.37	8.10	93.7	Pulse	0.30	3

Quantitation Report

File Name 011HSTD.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 9:58
Sample Name HSTD
Sample Type HSTD
Comment =std 6
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.385	ug/l	1.50	2,411,951.00	1.436E+01	Pulse	0.50	3
As			1	199.785	ug/l	0.41	295,221.64	1.758E+00	Pulse	1.00	3
Mo			1	201.195	ug/l	0.58	1,142,006.00	4.649E+00	Pulse	0.50	3
Pb			1	200.652	ug/l	0.68	4,811,365.17	1.904E+00	Pulse	1.00	3
Be			1	203.684	ug/l	1.60	15,021.53	4.926E-02	Pulse	2.00	3
Ag			1	120.477	ug/l	0.25	2,103,607.58	8.563E+00	Pulse	0.50	3
Ba			1	199.846	ug/l	0.85	532,746.31	3.571E-01	Pulse	0.50	3
Tl			1	201.072	ug/l	1.24	6,780,928.67	2.684E+00	Analog	0.50	3
Sn			1	200.505	ug/l	1.19	1,210,464.74	8.114E-01	Pulse	0.30	3
Sr			1	199.473	ug/l	0.31	1,656,162.33	1.110E+00	Pulse	0.50	3
[Pb]			1	199.548	ug/l	0.53	2,284,662.83	9.041E-01	Pulse	0.50	3
Ca			1	20181.115	ug/l	0.96	1,044,141.85	3.424E+00	Pulse	0.50	3
Ti			1	201.394	ug/l	2.29	69,414.86	2.276E-01	Pulse	0.50	3
Na			1	20362.821	ug/l	0.94	45,217,168.00	1.483E+02	Analog	1.00	3
Mg			1	20283.233	ug/l	1.28	22,697,448.00	7.443E+01	Analog	1.00	3
K			1	20293.730	ug/l	0.79	22,924,563.33	7.517E+01	Analog	1.00	3
V			1	202.495	ug/l	1.71	1,956,090.17	6.414E+00	Pulse	0.50	3
Mn			1	198.422	ug/l	1.29	1,455,477.87	8.666E+00	Pulse	0.50	3
Fe			1	19983.789	ug/l	1.10	205,872,010.67	1.226E+03	Analog	0.50	3
Co			1	198.297	ug/l	1.03	3,547,428.25	2.112E+01	Pulse	0.50	3
Ni			1	199.112	ug/l	0.95	945,347.41	5.629E+00	Pulse	0.50	3
Cu			1	198.305	ug/l	1.53	2,478,984.50	1.476E+01	Pulse	0.50	3
Zn			1	199.757	ug/l	0.40	430,074.52	1.751E+00	Pulse	1.00	3
Cd			1	201.477	ug/l	0.19	554,647.40	2.258E+00	Pulse	0.50	3
Al			1	20163.119	ug/l	1.62	9,801,383.00	3.214E+01	Analog	1.00	3
Se			1	200.871	ug/l	0.88	23,808.22	9.691E-02	Pulse	3.00	3
Sb			1	200.281	ug/l	0.67	1,640,003.58	6.676E+00	Pulse	1.00	3
Se			1	200.650	ug/l	0.98	11,229.97	4.571E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,527,064.75	0.99	91.1	Pulse	0.50	3
1	Sc		304,988.08	1.02	93.0	Pulse	0.30	3
1	Ge		167,962.66	0.61	94.3	Pulse	0.30	3
1	In		1,491,869.07	0.16	92.1	Pulse	0.30	3
1	Tb		3,713,383.58	0.41	94.5	Pulse	0.50	3
1	Lu		2,823,006.17	0.25	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,665.69	0.32	93.5	Pulse	0.30	3
1	Te		12.67	24.12	1900.0	Pulse	0.50	3
1	Li		1,144.48	2.99	96.4	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:02
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.138	ug/l	1.06	1,231,678.29	7.298E+00	Pulse	0.50	3
As			1	102.224	ug/l	1.35	151,830.95	8.996E-01	Pulse	1.00	3
Mo			1	102.264	ug/l	0.61	585,686.98	2.363E+00	Pulse	0.50	3
Pb			1	99.624	ug/l	1.14	2,436,625.83	9.454E-01	Pulse	1.00	3
Be			1	104.124	ug/l	0.07	7,747.47	2.518E-02	Pulse	2.00	3
Ag			1	50.845	ug/l	0.80	895,760.42	3.614E+00	Pulse	0.50	3
Ba			1	102.368	ug/l	1.01	275,346.56	1.829E-01	Pulse	0.50	3
Tl			1	102.561	ug/l	1.38	3,527,756.67	1.369E+00	Pulse	0.50	3
Sn			1	102.621	ug/l	0.90	625,318.85	4.154E-01	Pulse	0.30	3
Sr			1	102.021	ug/l	0.78	854,769.85	5.679E-01	Pulse	0.50	3
[Pb]			1	100.012	ug/l	1.19	1,167,949.50	4.532E-01	Pulse	0.50	3
Ca			1	9785.694	ug/l	0.86	511,004.94	1.661E+00	Pulse	0.50	3
Ti			1	103.311	ug/l	1.07	35,928.85	1.168E-01	Pulse	0.50	3
Na			1	10259.560	ug/l	0.43	22,991,864.67	7.473E+01	Analog	1.00	3
Mg			1	10744.194	ug/l	1.18	12,129,363.67	3.943E+01	Analog	1.00	3
K			1	10117.001	ug/l	0.57	11,577,480.33	3.763E+01	Analog	1.00	3
V			1	102.168	ug/l	1.52	996,978.75	3.241E+00	Pulse	0.50	3
Mn			1	101.038	ug/l	1.17	744,967.73	4.414E+00	Pulse	0.50	3
Fe			1	10333.818	ug/l	0.79	106,991,832.00	6.339E+02	Analog	0.50	3
Co			1	102.192	ug/l	1.05	1,837,228.25	1.089E+01	Pulse	0.50	3
Ni			1	101.435	ug/l	1.07	484,317.12	2.870E+00	Pulse	0.50	3
Cu			1	102.838	ug/l	0.99	1,293,738.25	7.665E+00	Pulse	0.50	3
Zn			1	103.122	ug/l	0.68	224,427.55	9.055E-01	Pulse	1.00	3
Cd			1	100.856	ug/l	0.21	280,127.47	1.130E+00	Pulse	0.50	3
Al			1	10269.326	ug/l	1.15	5,036,653.83	1.637E+01	Analog	1.00	3
Se			1	102.556	ug/l	0.43	12,285.61	4.957E-02	Pulse	3.00	3
Sb			1	101.102	ug/l	0.10	835,322.81	3.370E+00	Pulse	1.00	3
Se			1	102.507	ug/l	0.95	5,807.00	2.343E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,577,326.75	0.35	92.9	Pulse	0.50	3
1	Sc		307,675.79	0.82	93.8	Pulse	0.30	3
1	Ge		168,784.69	0.71	94.8	Pulse	0.30	3
1	In		1,505,179.11	0.18	92.9	Pulse	0.30	3
1	Tb		3,745,112.08	0.15	95.3	Pulse	0.50	3
1	Lu		2,844,741.25	0.51	96.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,857.97	0.46	94.4	Pulse	0.30	3
1	Te		4.00	100.00	600.0	Pulse	0.50	3
1	Li		1,222.27	8.35	102.9	Pulse	0.30	3

Quantitation Report

File Name 013_ICB.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:06
Sample Name ICB
Sample Type ICB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.030	ug/l	73.49	4,857.29	2.878E-02	Pulse	0.50	3
As			1	0.055	ug/l	19.41	163.00	9.659E-04	Pulse	1.00	3
Mo			1	0.143	ug/l	21.45	909.36	3.608E-03	Pulse	0.50	3
Pb			1	0.068	ug/l	14.55	2,262.49	8.521E-04	Pulse	1.00	3
Be			1	0.057	ug/l	43.39	4.67	1.488E-05	Pulse	2.00	3
Ag			1	0.021	ug/l	13.69	448.01	1.779E-03	Pulse	0.50	3
Ba			1	0.016	ug/l	48.20	84.67	5.475E-05	Pulse	0.50	3
Tl			1	0.045	ug/l	13.84	1,670.09	6.291E-04	Pulse	0.50	3
Sn			1	0.202	ug/l	18.66	1,796.77	1.161E-03	Pulse	0.30	3
Sr			1	0.028	ug/l	30.91	602.68	3.899E-04	Pulse	0.50	3
[Pb]			1	0.068	ug/l	18.64	1,053.37	3.968E-04	Pulse	0.50	3
Ca			1	0.184	ug/l	459.39	480.01	1.532E-03	Pulse	0.50	3
Ti			1	0.042	ug/l	58.47	22.00	7.026E-05	Pulse	0.50	3
Na			1	4.527	ug/l	24.17	27,290.62	8.706E-02	Pulse	1.00	3
Mg			1	3.093	ug/l	19.48	3,950.08	1.260E-02	Pulse	1.00	3
K			1	2.373	ug/l	53.42	100,112.70	3.194E-01	Pulse	1.00	3
V			1	-0.057	ug/l	-26.08	2,130.12	6.796E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	76.36	455.34	2.699E-03	Pulse	0.50	3
Fe			1	2.565	ug/l	19.29	48,082.64	2.850E-01	Pulse	0.50	3
Co			1	0.027	ug/l	27.13	658.02	3.901E-03	Pulse	0.50	3
Ni			1	-0.052	ug/l	-14.80	478.68	2.836E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	-3322.99	3,817.73	2.262E-02	Pulse	0.50	3
Zn			1	-0.113	ug/l	-12.45	640.34	2.542E-03	Pulse	1.00	3
Cd			1	0.039	ug/l	33.85	110.00	4.372E-04	Pulse	0.50	3
Al			1	2.011	ug/l	24.76	1,974.44	6.298E-03	Pulse	1.00	3
Se			1	0.086	ug/l	37.17	55.45	2.200E-04	Pulse	3.00	3
Sb			1	0.069	ug/l	13.25	701.68	2.784E-03	Pulse	1.00	3
Se			1	0.099	ug/l	105.22	44.56	1.768E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,656,619.08	0.77	95.8	Pulse	0.50	3
1	Sc		313,405.08	0.34	95.6	Pulse	0.30	3
1	Ge		168,801.15	0.61	94.8	Pulse	0.30	3
1	In		1,546,788.06	0.69	95.5	Pulse	0.30	3
1	Tb		3,756,473.83	0.57	95.6	Pulse	0.50	3
1	Lu		2,829,764.08	0.42	95.6	Pulse	0.50	3
1	Ge		251,913.87	0.71	95.9	Pulse	0.30	3
1	Te		1.33	86.60	200.0	Pulse	0.50	3
1	Li		1,187.82	15.72	100.0	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:10
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.976	ug/l	3.17	16,747.21	9.674E-02	Pulse	0.50	3
As			1	1.007	ug/l	0.67	1,617.07	9.341E-03	Pulse	1.00	3
Mo			1	1.032	ug/l	3.57	6,092.34	2.413E-02	Pulse	0.50	3
Pb			1	0.992	ug/l	1.94	25,810.77	9.620E-03	Pulse	1.00	3
Be			1	0.994	ug/l	8.51	76.83	2.414E-04	Pulse	2.00	3
Ag			1	1.038	ug/l	1.90	18,703.43	7.406E-02	Pulse	0.50	3
Ba			1	0.951	ug/l	5.96	2,707.55	1.726E-03	Pulse	0.50	3
Tl			1	0.989	ug/l	1.98	35,494.00	1.323E-02	Pulse	0.50	3
Sn			1	1.008	ug/l	4.03	6,936.91	4.422E-03	Pulse	0.30	3
Sr			1	0.972	ug/l	2.89	8,848.76	5.641E-03	Pulse	0.50	3
[Pb]			1	0.996	ug/l	2.56	12,341.80	4.600E-03	Pulse	0.50	3
Ca			1	101.387	ug/l	1.22	5,949.59	1.869E-02	Pulse	0.50	3
Ti			1	0.968	ug/l	7.29	355.33	1.117E-03	Pulse	0.50	3
Na			1	103.298	ug/l	0.81	256,502.78	8.060E-01	Pulse	1.00	3
Mg			1	100.748	ug/l	2.14	118,036.92	3.709E-01	Pulse	1.00	3
K			1	97.826	ug/l	1.37	213,716.19	6.715E-01	Pulse	1.00	3
V			1	0.899	ug/l	0.68	11,784.25	3.703E-02	Pulse	0.50	3
Mn			1	0.985	ug/l	2.53	7,824.26	4.520E-02	Pulse	0.50	3
Fe			1	100.271	ug/l	0.59	1,086,655.50	6.277E+00	Pulse	0.50	3
Co			1	1.022	ug/l	1.93	19,035.38	1.100E-01	Pulse	0.50	3
Ni			1	0.935	ug/l	3.09	5,315.41	3.071E-02	Pulse	0.50	3
Cu			1	1.088	ug/l	1.70	17,909.65	1.035E-01	Pulse	0.50	3
Zn			1	1.056	ug/l	3.78	3,223.27	1.276E-02	Pulse	1.00	3
Cd			1	1.002	ug/l	1.48	2,836.23	1.123E-02	Pulse	0.50	3
Al			1	98.700	ug/l	2.28	51,045.18	1.604E-01	Pulse	1.00	3
Se			1	0.959	ug/l	5.94	161.78	6.405E-04	Pulse	3.00	3
Sb			1	0.997	ug/l	2.56	8,511.32	3.371E-02	Pulse	1.00	3
Se			1	1.070	ug/l	3.65	100.33	3.973E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,683,065.67	0.94	96.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		318,266.71	0.99	97.1	Pulse	0.30	3
1	Ge		173,106.74	0.58	97.2	Pulse	0.30	3
1	In		1,568,759.76	0.59	96.9	Pulse	0.30	3
1	Tb		3,796,253.17	1.25	96.6	Pulse	0.50	3
1	Lu		2,844,271.08	0.38	96.1	Pulse	0.50	3
1	Ge		252,531.42	0.66	96.1	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,112.26	2.70	93.6	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:13
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.164	ug/l	1.61	30,011.73	1.822E-01	Pulse	0.50	3
As			1	0.139	ug/l	8.10	281.33	1.708E-03	Pulse	1.00	3
Mo			1	2053.773	ug/l	0.30	11,159,069.67	4.745E+01	Analog	0.50	3
Pb			1	0.091	ug/l	6.23	2,483.85	1.077E-03	Pulse	1.00	3
Be			1	0.021	ug/l	50.80	1.83	6.071E-06	Pulse	2.00	3
Ag			1	0.036	ug/l	27.34	676.68	2.874E-03	Pulse	0.50	3
Ba			1	0.514	ug/l	7.57	1,312.06	9.459E-04	Pulse	0.50	3
Tl			1	0.011	ug/l	15.55	392.01	1.700E-04	Pulse	0.50	3
Sn			1	0.095	ug/l	23.83	1,011.14	7.282E-04	Pulse	0.30	3
Sr			1	0.844	ug/l	2.16	6,840.60	4.931E-03	Pulse	0.50	3
[Pb]			1	0.097	ug/l	10.46	1,212.72	5.260E-04	Pulse	0.50	3
Ca			1	96828.436	ug/l	0.31	4,967,353.50	1.642E+01	Analog	0.50	3
Ti			1	2018.292	ug/l	0.13	689,999.75	2.281E+00	Pulse	0.50	3
Na			1	100994.810	ug/l	0.40	222,375,232.00	7.352E+02	Analog	1.00	3
Mg			1	99170.870	ug/l	0.67	110,070,312.00	3.639E+02	Analog	1.00	3
K			1	100490.432	ug/l	0.52	112,221,277.33	3.710E+02	Analog	1.00	3
V			1	0.029	ug/l	26.46	2,878.89	9.515E-03	Pulse	0.50	3
Mn			1	0.949	ug/l	0.65	7,190.69	4.365E-02	Pulse	0.50	3
Fe			1	98366.560	ug/l	0.71	993,948,437.33	6.033E+03	Analog	0.50	3
Co			1	0.253	ug/l	1.74	4,621.90	2.805E-02	Pulse	0.50	3
Ni			1	0.407	ug/l	2.18	2,604.18	1.581E-02	Pulse	0.50	3
Cu			1	0.199	ug/l	3.53	6,164.34	3.742E-02	Pulse	0.50	3
Zn			1	0.940	ug/l	4.41	2,763.53	1.175E-02	Pulse	1.00	3
Cd			1	0.657	ug/l	5.30	1,732.76	7.370E-03	Pulse	0.50	3
Al			1	97121.155	ug/l	0.16	46,826,304.00	1.548E+02	Analog	1.00	3
Se			1	0.153	ug/l	29.78	59.33	2.524E-04	Pulse	3.00	3
Sb			1	0.081	ug/l	0.96	749.02	3.185E-03	Pulse	1.00	3
Se			1	0.254	ug/l	39.49	49.89	2.120E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,306,261.67	0.54	83.2	Pulse	0.50	3
1	Sc		302,496.10	1.05	92.3	Pulse	0.30	3
1	Ge		164,746.25	1.00	92.5	Pulse	0.30	3
1	In		1,387,530.33	1.01	85.7	Pulse	0.30	3
1	Tb		3,517,121.50	0.52	89.5	Pulse	0.50	3
1	Lu		2,675,058.33	0.59	90.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		235,173.74	0.97	89.5	Pulse	0.30	3
1	Te		5.33	86.60	800.0	Pulse	0.50	3
1	Li		1,042.26	10.34	87.7	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa101722m1.b
Method File	
Method Path	
Acq Time	10/17/2022 10:17
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	10/17/2022 9:52
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.496	ug/l	1.02	274,948.46	1.644E+00	Pulse	0.50	3
As			1	20.320	ug/l	1.34	29,972.74	1.792E-01	Pulse	1.00	3
Mo			1	2061.811	ug/l	0.65	11,368,548.67	4.764E+01	Analog	0.50	3
Pb			1	0.063	ug/l	1.21	1,881.11	8.111E-04	Pulse	1.00	3
Be			1	0.023	ug/l	101.28	2.00	6.574E-06	Pulse	2.00	3
Ag			1	19.444	ug/l	0.52	329,883.51	1.382E+00	Pulse	0.50	3
Ba			1	0.518	ug/l	2.66	1,327.39	9.521E-04	Pulse	0.50	3
Tl			1	0.007	ug/l	22.14	278.67	1.201E-04	Pulse	0.50	3
Sn			1	0.066	ug/l	20.76	856.69	6.147E-04	Pulse	0.30	3
Sr			1	0.838	ug/l	1.28	6,826.59	4.896E-03	Pulse	0.50	3
[Pb]			1	0.066	ug/l	5.88	899.36	3.878E-04	Pulse	0.50	3
Ca			1	97934.399	ug/l	0.47	5,024,795.00	1.661E+01	Analog	0.50	3
Ti			1	2032.013	ug/l	0.61	694,794.36	2.297E+00	Pulse	0.50	3
Na			1	101795.711	ug/l	0.29	224,171,701.33	7.410E+02	Analog	1.00	3
Mg			1	100179.531	ug/l	0.51	111,209,461.33	3.676E+02	Analog	1.00	3
K			1	101606.153	ug/l	0.45	113,479,445.33	3.751E+02	Analog	1.00	3
V			1	0.042	ug/l	11.57	2,998.91	9.913E-03	Pulse	0.50	3
Mn			1	20.995	ug/l	0.64	153,684.68	9.189E-01	Pulse	0.50	3
Fe			1	97949.147	ug/l	0.57	1,004,745,450.67	6.007E+03	Analog	0.50	3
Co			1	20.542	ug/l	0.52	366,095.33	2.189E+00	Pulse	0.50	3
Ni			1	20.198	ug/l	0.74	96,141.81	5.748E-01	Pulse	0.50	3
Cu			1	19.736	ug/l	0.45	249,091.86	1.489E+00	Pulse	0.50	3
Zn			1	21.206	ug/l	0.41	45,107.82	1.890E-01	Pulse	1.00	3
Cd			1	20.867	ug/l	0.80	55,809.02	2.338E-01	Pulse	0.50	3
Al			1	97437.032	ug/l	0.27	46,984,898.67	1.553E+02	Analog	1.00	3
Se			1	0.152	ug/l	19.22	60.00	2.515E-04	Pulse	3.00	3
Sb			1	0.080	ug/l	12.60	747.68	3.131E-03	Pulse	1.00	3
Se			1	0.075	ug/l	29.19	40.89	1.714E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,319,228.58	0.63	83.6	Pulse	0.50	3
1	Sc		302,532.87	1.12	92.3	Pulse	0.30	3
1	Ge		167,245.15	0.71	93.9	Pulse	0.30	3
1	In		1,394,414.18	1.27	86.1	Pulse	0.30	3
1	Tb		3,543,763.25	0.67	90.2	Pulse	0.50	3
1	Lu		2,674,310.67	1.30	90.4	Pulse	0.50	3
1	Ge		238,656.23	1.24	90.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,033.37	6.67	87.0	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa101722m1.b
Method File	
Method Path	
Acq Time	10/17/2022 10:21
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	10/17/2022 9:52
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.265	ug/l	1.00	609,453.00	3.568E+00	Pulse	0.50	3
As			1	49.129	ug/l	0.63	73,882.05	4.326E-01	Pulse	1.00	3
Mo			1	50.151	ug/l	1.37	290,859.73	1.159E+00	Pulse	0.50	3
Pb			1	49.132	ug/l	0.52	1,218,904.75	4.664E-01	Pulse	1.00	3
Be			1	51.142	ug/l	3.62	3,795.36	1.237E-02	Pulse	2.00	3
Ag			1	50.916	ug/l	0.07	908,316.98	3.619E+00	Pulse	0.50	3
Ba			1	48.970	ug/l	0.52	131,830.86	8.752E-02	Pulse	0.50	3
Tl			1	50.278	ug/l	0.39	1,753,838.83	6.710E-01	Pulse	0.50	3
Sn			1	49.372	ug/l	0.72	301,333.40	2.001E-01	Pulse	0.30	3
Sr			1	47.935	ug/l	0.24	402,092.19	2.670E-01	Pulse	0.50	3
[Pb]			1	48.858	ug/l	0.40	578,738.46	2.214E-01	Pulse	0.50	3
Ca			1	4923.470	ug/l	0.70	256,688.64	8.364E-01	Pulse	0.50	3
Ti			1	49.184	ug/l	0.73	17,066.12	5.561E-02	Pulse	0.50	3
Na			1	5148.518	ug/l	0.57	11,517,158.67	3.753E+01	Analog	1.00	3
Mg			1	5072.770	ug/l	1.14	5,712,660.83	1.861E+01	Analog	1.00	3
K			1	5056.746	ug/l	0.59	5,819,967.33	1.896E+01	Analog	1.00	3
V			1	50.504	ug/l	0.86	492,946.11	1.606E+00	Pulse	0.50	3
Mn			1	48.785	ug/l	0.71	364,183.63	2.132E+00	Pulse	0.50	3
Fe			1	4987.580	ug/l	0.66	52,265,013.33	3.060E+02	Analog	0.50	3
Co			1	50.191	ug/l	0.15	913,185.37	5.347E+00	Pulse	0.50	3
Ni			1	50.376	ug/l	0.40	243,763.48	1.427E+00	Pulse	0.50	3
Cu			1	50.477	ug/l	0.39	644,555.77	3.774E+00	Pulse	0.50	3
Zn			1	49.776	ug/l	0.82	110,154.13	4.389E-01	Pulse	1.00	3
Cd			1	49.683	ug/l	0.66	139,737.03	5.567E-01	Pulse	0.50	3
Al			1	4786.967	ug/l	1.21	2,342,429.17	7.633E+00	Pulse	1.00	3
Se			1	48.086	ug/l	2.11	5,856.34	2.334E-02	Pulse	3.00	3
Sb			1	49.181	ug/l	0.39	411,519.74	1.640E+00	Pulse	1.00	3
Se			1	47.802	ug/l	1.15	2,762.76	1.101E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,613,616.08	0.70	94.2	Pulse	0.50	3
1	Sc		306,901.89	0.64	93.6	Pulse	0.30	3
1	Ge		170,791.64	0.50	95.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,506,236.40	0.29	93.0	Pulse	0.30	3
1	Tb		3,737,388.50	0.24	95.1	Pulse	0.50	3
1	Lu		2,776,470.50	0.05	93.8	Pulse	0.50	3
1	Ge		250,984.70	0.72	95.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,304.50	7.63	109.8	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:25
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.540	ug/l	0.90	1,224,835.96	7.255E+00	Pulse	0.50	3
As			1	100.263	ug/l	1.09	148,968.64	8.824E-01	Pulse	1.00	3
Mo			1	100.285	ug/l	1.19	581,765.94	2.317E+00	Pulse	0.50	3
Pb			1	99.683	ug/l	1.19	2,441,207.92	9.460E-01	Pulse	1.00	3
Be			1	105.018	ug/l	1.08	7,749.14	2.540E-02	Pulse	2.00	3
Ag			1	101.226	ug/l	1.01	1,806,324.04	7.195E+00	Pulse	0.50	3
Ba			1	100.725	ug/l	1.31	265,962.31	1.800E-01	Pulse	0.50	3
Tl			1	102.737	ug/l	0.99	3,538,432.50	1.371E+00	Pulse	0.50	3
Sn			1	101.217	ug/l	0.63	605,479.75	4.098E-01	Pulse	0.30	3
Sr			1	98.222	ug/l	0.25	807,914.52	5.468E-01	Pulse	0.50	3
[Pb]			1	99.134	ug/l	1.22	1,159,195.88	4.492E-01	Pulse	0.50	3
Ca			1	9925.257	ug/l	1.04	514,010.13	1.685E+00	Pulse	0.50	3
Ti			1	98.721	ug/l	2.43	34,050.19	1.116E-01	Pulse	0.50	3
Na			1	10353.412	ug/l	0.69	23,010,073.33	7.541E+01	Analog	1.00	3
Mg			1	10212.789	ug/l	1.05	11,434,581.33	3.748E+01	Analog	1.00	3
K			1	10162.210	ug/l	0.68	11,532,572.00	3.780E+01	Analog	1.00	3
V			1	102.294	ug/l	0.78	990,017.06	3.245E+00	Pulse	0.50	3
Mn			1	98.759	ug/l	0.86	728,396.92	4.314E+00	Pulse	0.50	3
Fe			1	10075.898	ug/l	1.04	104,354,480.00	6.181E+02	Analog	0.50	3
Co			1	101.827	ug/l	0.82	1,831,236.83	1.085E+01	Pulse	0.50	3
Ni			1	101.463	ug/l	0.31	484,615.45	2.870E+00	Pulse	0.50	3
Cu			1	101.992	ug/l	0.83	1,283,531.00	7.602E+00	Pulse	0.50	3
Zn			1	99.378	ug/l	0.87	219,103.75	8.727E-01	Pulse	1.00	3
Cd			1	99.989	ug/l	0.89	281,308.11	1.120E+00	Pulse	0.50	3
Al			1	9629.412	ug/l	1.20	4,683,982.00	1.535E+01	Pulse	1.00	3
Se			1	97.509	ug/l	0.22	11,834.32	4.714E-02	Pulse	3.00	3
Sb			1	98.578	ug/l	0.97	825,006.21	3.286E+00	Pulse	1.00	3
Se			1	95.507	ug/l	2.31	5,483.12	2.184E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,580,618.67	0.23	93.1	Pulse	0.50	3
1	Sc		305,128.87	0.47	93.1	Pulse	0.30	3
1	Ge		168,840.14	0.99	94.8	Pulse	0.30	3
1	In		1,477,653.48	0.99	91.2	Pulse	0.30	3
1	Tb		3,720,528.58	0.42	94.7	Pulse	0.50	3
1	Lu		2,778,034.25	0.20	93.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,061.67	0.19	95.6	Pulse	0.30	3
1	Te		2.67	114.56	400.0	Pulse	0.50	3
1	Li		1,248.93	5.76	105.1	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa101722m1.b
Method File	
Method Path	
Acq Time	10/17/2022 10:29
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	10/17/2022 9:52
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.010	ug/l	-141.37	4,369.84	2.587E-02	Pulse	0.50	3
As			1	0.037	ug/l	22.55	136.33	8.071E-04	Pulse	1.00	3
Mo			1	0.200	ug/l	22.76	1,232.05	4.911E-03	Pulse	0.50	3
Pb			1	0.039	ug/l	22.96	1,522.07	5.787E-04	Pulse	1.00	3
Be			1	0.054	ug/l	14.34	4.33	1.410E-05	Pulse	2.00	3
Ag			1	0.032	ug/l	33.64	654.68	2.616E-03	Pulse	0.50	3
Ba			1	0.020	ug/l	35.59	94.00	6.242E-05	Pulse	0.50	3
Tl			1	0.032	ug/l	29.28	1,196.72	4.554E-04	Pulse	0.50	3
Sn			1	0.111	ug/l	9.44	1,198.94	7.964E-04	Pulse	0.30	3
Sr			1	0.020	ug/l	34.33	519.34	3.450E-04	Pulse	0.50	3
[Pb]			1	0.043	ug/l	22.00	744.69	2.831E-04	Pulse	0.50	3
Ca			1	1.756	ug/l	31.04	552.68	1.798E-03	Pulse	0.50	3
Ti			1	0.088	ug/l	84.68	37.33	1.214E-04	Pulse	0.50	3
Na			1	12.694	ug/l	11.45	45,020.79	1.465E-01	Pulse	1.00	3
Mg			1	4.423	ug/l	15.02	5,371.07	1.748E-02	Pulse	1.00	3
K			1	3.882	ug/l	46.09	99,882.31	3.250E-01	Pulse	1.00	3
V			1	-0.029	ug/l	-66.82	2,362.15	7.686E-03	Pulse	0.50	3
Mn			1	0.014	ug/l	75.92	476.68	2.822E-03	Pulse	0.50	3
Fe			1	3.721	ug/l	15.79	60,107.92	3.559E-01	Pulse	0.50	3
Co			1	0.018	ug/l	35.92	509.34	3.015E-03	Pulse	0.50	3
Ni			1	-0.039	ug/l	-35.78	540.68	3.200E-03	Pulse	0.50	3
Cu			1	0.009	ug/l	183.61	3,937.75	2.331E-02	Pulse	0.50	3
Zn			1	-0.049	ug/l	-35.33	776.35	3.098E-03	Pulse	1.00	3
Cd			1	0.034	ug/l	14.33	94.67	3.780E-04	Pulse	0.50	3
Al			1	3.182	ug/l	21.81	2,508.83	8.166E-03	Pulse	1.00	3
Se			1	0.044	ug/l	81.91	50.11	1.999E-04	Pulse	3.00	3
Sb			1	0.063	ug/l	9.79	640.34	2.554E-03	Pulse	1.00	3
Se			1	0.056	ug/l	328.90	41.89	1.672E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,633,232.75	1.17	94.9	Pulse	0.50	3
1	Sc		307,356.96	0.56	93.7	Pulse	0.30	3
1	Ge		168,916.43	0.31	94.8	Pulse	0.30	3
1	In		1,505,430.46	0.37	93.0	Pulse	0.30	3
1	Tb		3,690,612.50	0.23	93.9	Pulse	0.50	3
1	Lu		2,746,215.58	0.36	92.8	Pulse	0.50	3
1	Ge		250,582.03	0.78	95.4	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,200.05	11.89	101.0	Pulse	0.30	3

Quantitation Report

File Name 020_MB.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:32
Sample Name MP41335-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.166	ug/l	2.09	17,168.24	1.045E-01	Pulse	0.50	3
As			1	0.260	ug/l	6.30	266.67	1.623E-03	Pulse	1.00	3
Mo			1	0.441	ug/l	6.53	1,312.72	5.387E-03	Pulse	0.50	3
Pb			1	0.195	ug/l	7.17	2,857.25	1.132E-03	Pulse	1.00	3
Be			1	0.082	ug/l	104.92	3.33	1.096E-05	Pulse	2.00	3
Ag			1	0.033	ug/l	12.16	368.01	1.510E-03	Pulse	0.50	3
Ba			1	0.018	ug/l	43.10	62.00	4.307E-05	Pulse	0.50	3
Tl			1	0.025	ug/l	19.38	482.68	1.914E-04	Pulse	0.50	3
Sn			1	2.070	ug/l	3.91	6,524.54	4.532E-03	Pulse	0.30	3
Sr			1	0.113	ug/l	9.88	785.35	5.456E-04	Pulse	0.50	3
[Pb]			1	0.181	ug/l	15.20	1,251.38	4.961E-04	Pulse	0.50	3
Ca			1	114.280	ug/l	4.24	3,400.31	1.119E-02	Pulse	0.50	3
Ti			1	0.438	ug/l	32.97	82.00	2.700E-04	Pulse	0.50	3
Na			1	33.129	ug/l	17.22	53,072.83	1.747E-01	Pulse	1.00	3
Mg			1	13.317	ug/l	24.17	7,802.26	2.568E-02	Pulse	1.00	3
K			1	11.239	ug/l	46.03	100,703.82	3.314E-01	Pulse	1.00	3
V			1	1.344	ug/l	2.97	9,073.46	2.986E-02	Pulse	0.50	3
Mn			1	0.108	ug/l	18.08	749.35	4.559E-03	Pulse	0.50	3
Fe			1	18.446	ug/l	18.29	113,921.26	6.933E-01	Pulse	0.50	3
Co			1	0.012	ug/l	26.27	280.00	1.704E-03	Pulse	0.50	3
Ni			1	-0.106	ug/l	-7.03	461.34	2.807E-03	Pulse	0.50	3
Cu			1	3.667	ug/l	1.37	26,107.63	1.589E-01	Pulse	0.50	3
Zn			1	9.974	ug/l	1.28	11,487.76	4.715E-02	Pulse	1.00	3
Cd			1	0.025	ug/l	27.98	35.33	1.449E-04	Pulse	0.50	3
Al			1	12.232	ug/l	26.90	3,901.40	1.284E-02	Pulse	1.00	3
Se			1	0.137	ug/l	96.61	51.56	2.115E-04	Pulse	3.00	3
Sb			1	0.218	ug/l	14.93	997.70	4.096E-03	Pulse	1.00	3
Se			1	0.022	ug/l	1065.14	38.22	1.569E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,523,913.33	0.79	91.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		303,883.53	0.25	92.7	Pulse	0.30	3
1	Ge		164,327.00	0.32	92.3	Pulse	0.30	3
1	In		1,439,708.55	0.34	88.9	Pulse	0.30	3
1	Tb		3,562,446.50	0.62	90.7	Pulse	0.50	3
1	Lu		2,617,564.75	1.12	88.4	Pulse	0.50	3
1	Ge		243,657.58	0.61	92.8	Pulse	0.30	3
1	Te		2.00	173.21	300.0	Pulse	0.50	3
1	Li		1,236.71	0.97	104.1	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:36
Sample Name MP41335-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	216.678	ug/l	0.97	1,277,888.34	7.815E+00	Pulse	0.50	3
As			1	220.063	ug/l	0.68	158,321.19	9.683E-01	Pulse	1.00	3
Mo			1	212.227	ug/l	0.93	588,797.17	2.452E+00	Pulse	0.50	3
Pb			1	212.135	ug/l	0.48	2,438,743.83	1.007E+00	Pulse	1.00	3
Be			1	223.548	ug/l	1.02	8,150.63	2.703E-02	Pulse	2.00	3
Ag			1	100.086	ug/l	0.53	854,180.52	3.557E+00	Pulse	0.50	3
Ba			1	210.849	ug/l	0.56	266,005.62	1.884E-01	Pulse	0.50	3
Tl			1	210.288	ug/l	0.31	3,400,075.92	1.403E+00	Pulse	0.50	3
Sn			1	218.907	ug/l	0.86	625,604.58	4.431E-01	Pulse	0.30	3
Sr			1	205.129	ug/l	0.61	806,110.21	5.709E-01	Pulse	0.50	3
[Pb]			1	204.212	ug/l	0.43	1,120,999.04	4.627E-01	Pulse	0.50	3
Ca			1	19424.884	ug/l	0.81	497,007.48	1.649E+00	Pulse	0.50	3
Ti			1	210.146	ug/l	0.86	35,810.61	1.188E-01	Pulse	0.50	3
Na			1	20735.622	ug/l	1.38	22,766,467.33	7.552E+01	Analog	1.00	3
Mg			1	20179.905	ug/l	0.66	11,162,601.67	3.702E+01	Analog	1.00	3
K			1	19992.016	ug/l	1.59	11,209,756.00	3.718E+01	Analog	1.00	3
V			1	215.531	ug/l	0.64	1,030,438.75	3.418E+00	Pulse	0.50	3
Mn			1	208.559	ug/l	0.82	744,856.92	4.555E+00	Pulse	0.50	3
Fe			1	20183.484	ug/l	1.20	101,223,304.00	6.191E+02	Analog	0.50	3
Co			1	218.824	ug/l	0.37	1,905,623.83	1.165E+01	Pulse	0.50	3
Ni			1	214.614	ug/l	0.72	496,316.27	3.035E+00	Pulse	0.50	3
Cu			1	218.721	ug/l	0.76	1,332,630.00	8.150E+00	Pulse	0.50	3
Zn			1	216.071	ug/l	1.07	227,751.68	9.484E-01	Pulse	1.00	3
Cd			1	207.425	ug/l	1.12	279,087.47	1.162E+00	Pulse	0.50	3
Al			1	18696.325	ug/l	0.96	4,493,007.00	1.490E+01	Pulse	1.00	3
Se			1	201.113	ug/l	0.70	11,671.78	4.861E-02	Pulse	3.00	3
Sb			1	210.650	ug/l	0.36	843,103.27	3.511E+00	Pulse	1.00	3
Se			1	200.121	ug/l	1.09	5,493.02	2.287E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,422,903.00	1.16	87.4	Pulse	0.50	3
1	Sc		301,508.13	1.22	92.0	Pulse	0.30	3
1	Ge		163,512.74	0.51	91.8	Pulse	0.30	3
1	In		1,412,009.95	1.04	87.2	Pulse	0.30	3
1	Tb		3,564,056.42	0.77	90.7	Pulse	0.50	3
1	Lu		2,617,278.42	0.87	88.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,139.76	0.48	91.4	Pulse	0.30	3
1	Te		4.00	50.00	600.0	Pulse	0.50	3
1	Li		1,245.60	2.15	104.9	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:40
Sample Name FA99625-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.374	ug/l	2.83	24,010.11	1.479E-01	Pulse	0.50	3
As			1	16.011	ug/l	1.00	11,510.47	7.089E-02	Pulse	1.00	3
Mo			1	2.040	ug/l	3.09	5,658.87	2.386E-02	Pulse	0.50	3
Pb			1	2.270	ug/l	1.04	25,800.40	1.098E-02	Pulse	1.00	3
Be			1	0.176	ug/l	20.89	6.67	2.226E-05	Pulse	2.00	3
Ag			1	0.055	ug/l	13.51	539.34	2.277E-03	Pulse	0.50	3
Ba			1	50.626	ug/l	1.10	62,089.29	4.526E-02	Pulse	0.50	3
Tl			1	0.086	ug/l	31.45	1,401.40	5.973E-04	Pulse	0.50	3
Sn			1	2.367	ug/l	2.01	7,042.53	5.133E-03	Pulse	0.30	3
Sr			1	346.037	ug/l	0.68	1,321,207.38	9.629E-01	Pulse	0.50	3
[Pb]			1	2.285	ug/l	0.91	12,369.17	5.262E-03	Pulse	0.50	3
Ca			1	58114.804	ug/l	0.51	1,478,230.67	4.929E+00	Pulse	0.50	3
Ti			1	4.656	ug/l	6.23	796.02	2.653E-03	Pulse	0.50	3
Na			1	190066.678	ug/l	0.57	207,464,037.33	6.918E+02	Analog	1.00	3
Mg			1	9461.620	ug/l	0.83	5,206,339.17	1.736E+01	Analog	1.00	3
K			1	6780.690	ug/l	0.73	3,843,749.08	1.282E+01	Pulse	1.00	3
V			1	1.788	ug/l	6.12	11,060.49	3.688E-02	Pulse	0.50	3
Mn			1	7411.013	ug/l	0.64	26,268,084.00	1.618E+02	Analog	0.50	3
Fe			1	28182.556	ug/l	0.62	140,336,186.67	8.644E+02	Analog	0.50	3
Co			1	1.112	ug/l	1.10	9,783.16	6.026E-02	Pulse	0.50	3
Ni			1	1.940	ug/l	5.30	5,146.70	3.171E-02	Pulse	0.50	3
Cu			1	14.528	ug/l	0.98	91,326.43	5.625E-01	Pulse	0.50	3
Zn			1	9.474	ug/l	0.47	10,665.29	4.496E-02	Pulse	1.00	3
Cd			1	0.086	ug/l	28.02	114.00	4.818E-04	Pulse	0.50	3
Al			1	605.976	ug/l	0.47	145,759.87	4.860E-01	Pulse	1.00	3
Se			1	0.327	ug/l	17.69	61.00	2.573E-04	Pulse	3.00	3
Sb			1	0.456	ug/l	5.52	1,912.77	8.068E-03	Pulse	1.00	3
Se			1	0.393	ug/l	35.51	47.22	1.990E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,350,756.00	1.16	84.8	Pulse	0.50	3
1	Sc		299,911.89	1.05	91.5	Pulse	0.30	3
1	Ge		162,360.53	1.58	91.2	Pulse	0.30	3
1	In		1,372,074.98	0.96	84.7	Pulse	0.30	3
1	Tb		3,485,725.83	1.72	88.7	Pulse	0.50	3
1	Lu		2,547,744.17	1.11	86.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,204.96	1.69	90.3	Pulse	0.30	3
1	Te		2.00	100.00	300.0	Pulse	0.50	3
1	Li		1,156.71	9.50	97.4	Pulse	0.30	3

Quantitation Report

File Name 023SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:44
Sample Name MP41335-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.377	ug/l	1.35	24,122.25	1.480E-01	Pulse	0.50	3
As			1	16.354	ug/l	2.11	11,799.64	7.240E-02	Pulse	1.00	3
Mo			1	1.885	ug/l	1.48	5,274.76	2.207E-02	Pulse	0.50	3
Pb			1	2.210	ug/l	0.45	25,224.21	1.069E-02	Pulse	1.00	3
Be			1	0.023	ug/l	146.54	1.17	3.816E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	8.20	295.33	1.235E-03	Pulse	0.50	3
Ba			1	51.323	ug/l	1.32	63,123.39	4.588E-02	Pulse	0.50	3
Tl			1	0.019	ug/l	15.87	364.01	1.544E-04	Pulse	0.50	3
Sn			1	1.449	ug/l	2.00	4,507.25	3.276E-03	Pulse	0.30	3
Sr			1	350.853	ug/l	0.50	1,343,356.04	9.763E-01	Pulse	0.50	3
[Pb]			1	2.186	ug/l	0.57	11,885.48	5.038E-03	Pulse	0.50	3
Ca			1	58610.646	ug/l	0.71	1,505,923.79	4.971E+00	Pulse	0.50	3
Ti			1	4.477	ug/l	4.57	773.35	2.552E-03	Pulse	0.50	3
Na			1	193702.373	ug/l	0.99	213,565,445.33	7.050E+02	Analog	1.00	3
Mg			1	9598.290	ug/l	1.09	5,334,899.33	1.761E+01	Analog	1.00	3
K			1	6864.620	ug/l	1.46	3,929,359.00	1.297E+01	Pulse	1.00	3
V			1	1.614	ug/l	0.70	10,337.42	3.412E-02	Pulse	0.50	3
Mn			1	7562.976	ug/l	0.38	26,911,158.00	1.651E+02	Analog	0.50	3
Fe			1	28623.772	ug/l	0.06	143,084,848.00	8.779E+02	Analog	0.50	3
Co			1	1.032	ug/l	2.86	9,126.84	5.600E-02	Pulse	0.50	3
Ni			1	1.612	ug/l	6.20	4,413.19	2.707E-02	Pulse	0.50	3
Cu			1	5.141	ug/l	1.27	34,821.97	2.137E-01	Pulse	0.50	3
Zn			1	9.354	ug/l	0.77	10,621.26	4.444E-02	Pulse	1.00	3
Cd			1	0.024	ug/l	27.11	33.33	1.393E-04	Pulse	0.50	3
Al			1	570.932	ug/l	0.76	138,772.64	4.581E-01	Pulse	1.00	3
Se			1	0.180	ug/l	46.92	53.00	2.217E-04	Pulse	3.00	3
Sb			1	0.370	ug/l	4.80	1,587.41	6.641E-03	Pulse	1.00	3
Se			1	0.188	ug/l	53.08	42.00	1.758E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,359,327.83	0.99	85.1	Pulse	0.50	3
1	Sc		302,957.46	1.31	92.4	Pulse	0.30	3
1	Ge		162,987.14	0.46	91.5	Pulse	0.30	3
1	In		1,375,923.56	0.52	85.0	Pulse	0.30	3
1	Tb		3,472,802.58	1.54	88.4	Pulse	0.50	3
1	Lu		2,544,059.00	1.94	86.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,024.25	0.49	91.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,213.38	5.94	102.2	Pulse	0.30	3

Quantitation Report

File Name 024SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:48
Sample Name MP41335-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.092	ug/l	1.17	8,507.88	4.883E-02	Pulse	0.50	3
As			1	16.434	ug/l	4.48	2,601.52	1.494E-02	Pulse	1.00	3
Mo			1	1.872	ug/l	5.08	1,185.38	4.622E-03	Pulse	0.50	3
Pb			1	2.131	ug/l	1.28	5,700.62	2.231E-03	Pulse	1.00	3
Be			1	-0.042	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.026	ug/l	11.68	130.67	5.095E-04	Pulse	0.50	3
Ba			1	49.418	ug/l	0.59	13,315.57	8.857E-03	Pulse	0.50	3
Tl			1	0.021	ug/l	35.75	137.33	5.371E-05	Pulse	0.50	3
Sn			1	0.559	ug/l	20.67	860.03	5.719E-04	Pulse	0.30	3
Sr			1	339.028	ug/l	0.36	283,958.46	1.889E-01	Pulse	0.50	3
[Pb]			1	2.224	ug/l	3.82	2,796.24	1.094E-03	Pulse	0.50	3
Ca			1	58911.309	ug/l	1.01	318,950.45	1.001E+00	Pulse	0.50	3
Ti			1	5.040	ug/l	10.26	188.67	5.919E-04	Pulse	0.50	3
Na			1	194639.362	ug/l	0.29	45,180,332.00	1.417E+02	Analog	1.00	3
Mg			1	9453.611	ug/l	0.94	1,106,227.17	3.470E+00	Pulse	1.00	3
K			1	6970.034	ug/l	0.41	918,674.35	2.882E+00	Pulse	1.00	3
V			1	0.718	ug/l	12.75	3,464.32	1.087E-02	Pulse	0.50	3
Mn			1	7529.464	ug/l	1.76	5,727,501.50	3.288E+01	Analog	0.50	3
Fe			1	28363.572	ug/l	1.13	30,327,660.00	1.741E+02	Analog	0.50	3
Co			1	0.980	ug/l	1.02	2,004.11	1.150E-02	Pulse	0.50	3
Ni			1	1.091	ug/l	20.11	1,287.38	7.394E-03	Pulse	0.50	3
Cu			1	6.644	ug/l	4.30	12,542.78	7.201E-02	Pulse	0.50	3
Zn			1	8.517	ug/l	3.12	2,815.21	1.098E-02	Pulse	1.00	3
Cd			1	0.035	ug/l	41.89	10.67	4.165E-05	Pulse	0.50	3
Al			1	614.810	ug/l	0.61	32,225.56	1.011E-01	Pulse	1.00	3
Se			1	-0.090	ug/l	-147.89	44.67	1.742E-04	Pulse	3.00	3
Sb			1	0.517	ug/l	8.06	562.68	2.194E-03	Pulse	1.00	3
Se			1	-0.253	ug/l	-440.47	38.11	1.486E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,555,764.67	0.53	92.2	Pulse	0.50	3
1	Sc		318,793.17	0.39	97.2	Pulse	0.30	3
1	Ge		174,225.75	1.15	97.8	Pulse	0.30	3
1	In		1,503,446.19	0.40	92.8	Pulse	0.30	3
1	Tb		3,662,556.50	0.74	93.2	Pulse	0.50	3
1	Lu		2,678,282.42	0.86	90.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		256,424.09	0.48	97.6	Pulse	0.30	3
1	Te		2.00	173.21	300.0	Pulse	0.50	3
1	Li		1,178.93	8.51	99.3	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:52
Sample Name MP41335-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	218.693	ug/l	0.73	1,271,760.71	7.888E+00	Pulse	0.50	3
As			1	235.746	ug/l	0.45	167,234.08	1.037E+00	Pulse	1.00	3
Mo			1	215.588	ug/l	1.36	590,462.48	2.491E+00	Pulse	0.50	3
Pb			1	216.107	ug/l	0.51	2,346,250.08	1.025E+00	Pulse	1.00	3
Be			1	224.661	ug/l	1.28	8,129.29	2.717E-02	Pulse	2.00	3
Ag			1	97.329	ug/l	1.52	820,016.54	3.459E+00	Pulse	0.50	3
Ba			1	260.629	ug/l	0.73	317,643.47	2.329E-01	Pulse	0.50	3
Tl			1	213.275	ug/l	0.62	3,256,466.17	1.423E+00	Pulse	0.50	3
Sn			1	221.049	ug/l	0.84	610,311.82	4.474E-01	Pulse	0.30	3
Sr			1	542.621	ug/l	0.64	2,059,496.59	1.510E+00	Pulse	0.50	3
[Pb]			1	208.139	ug/l	0.52	1,078,950.00	4.716E-01	Pulse	0.50	3
Ca			1	75963.954	ug/l	0.64	1,927,915.96	6.442E+00	Pulse	0.50	3
Ti			1	215.583	ug/l	1.39	36,464.49	1.218E-01	Pulse	0.50	3
Na			1	206412.088	ug/l	0.73	224,812,309.33	7.512E+02	Analog	1.00	3
Mg			1	29238.496	ug/l	0.29	16,053,507.33	5.364E+01	Analog	1.00	3
K			1	26713.129	ug/l	0.88	14,836,911.00	4.958E+01	Analog	1.00	3
V			1	218.153	ug/l	0.28	1,035,179.94	3.459E+00	Pulse	0.50	3
Mn			1	7443.604	ug/l	0.58	26,201,103.33	1.625E+02	Analog	0.50	3
Fe			1	47298.110	ug/l	0.72	233,871,861.33	1.451E+03	Analog	0.50	3
Co			1	217.207	ug/l	0.41	1,865,156.91	1.157E+01	Pulse	0.50	3
Ni			1	213.193	ug/l	0.46	486,158.85	3.015E+00	Pulse	0.50	3
Cu			1	216.056	ug/l	0.85	1,298,060.46	8.051E+00	Pulse	0.50	3
Zn			1	213.305	ug/l	1.14	221,975.29	9.363E-01	Pulse	1.00	3
Cd			1	201.808	ug/l	0.64	268,062.74	1.131E+00	Pulse	0.50	3
Al			1	19180.075	ug/l	0.20	4,575,188.67	1.529E+01	Pulse	1.00	3
Se			1	199.849	ug/l	0.63	11,450.76	4.830E-02	Pulse	3.00	3
Sb			1	207.038	ug/l	1.45	818,044.56	3.451E+00	Pulse	1.00	3
Se			1	202.159	ug/l	0.70	5,477.68	2.311E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,288,089.92	0.76	82.5	Pulse	0.50	3
1	Sc		299,262.57	0.76	91.3	Pulse	0.30	3
1	Ge		161,232.02	0.31	90.5	Pulse	0.30	3
1	In		1,364,040.88	0.53	84.2	Pulse	0.30	3
1	Tb		3,458,641.92	1.42	88.0	Pulse	0.50	3
1	Lu		2,529,073.67	0.44	85.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,077.63	0.56	90.3	Pulse	0.30	3
1	Te		3.33	91.65	500.0	Pulse	0.50	3
1	Li		1,145.60	6.26	96.4	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:55
Sample Name MP41335-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	219.344	ug/l	1.62	1,277,143.54	7.911E+00	Pulse	0.50	3
As			1	235.928	ug/l	1.14	167,578.96	1.038E+00	Pulse	1.00	3
Mo			1	217.771	ug/l	0.16	590,822.58	2.516E+00	Pulse	0.50	3
Pb			1	217.236	ug/l	0.38	2,357,342.08	1.031E+00	Pulse	1.00	3
Be			1	225.903	ug/l	0.49	8,151.14	2.732E-02	Pulse	2.00	3
Ag			1	98.991	ug/l	0.16	826,160.46	3.518E+00	Pulse	0.50	3
Ba			1	261.713	ug/l	0.84	318,840.15	2.338E-01	Pulse	0.50	3
Tl			1	213.364	ug/l	0.08	3,256,234.08	1.424E+00	Pulse	0.50	3
Sn			1	220.305	ug/l	0.24	608,034.04	4.459E-01	Pulse	0.30	3
Sr			1	550.822	ug/l	1.37	2,089,668.33	1.533E+00	Pulse	0.50	3
[Pb]			1	207.855	ug/l	0.93	1,077,008.83	4.709E-01	Pulse	0.50	3
Ca			1	77652.868	ug/l	0.10	1,965,197.38	6.586E+00	Pulse	0.50	3
Ti			1	216.318	ug/l	1.23	36,483.20	1.223E-01	Pulse	0.50	3
Na			1	213164.764	ug/l	0.26	231,512,394.67	7.758E+02	Analog	1.00	3
Mg			1	29876.210	ug/l	0.24	16,356,897.00	5.481E+01	Analog	1.00	3
K			1	27196.957	ug/l	0.35	15,061,292.00	5.047E+01	Analog	1.00	3
V			1	218.703	ug/l	0.75	1,034,836.89	3.468E+00	Pulse	0.50	3
Mn			1	7604.491	ug/l	1.31	26,801,865.33	1.660E+02	Analog	0.50	3
Fe			1	48143.213	ug/l	2.00	238,347,525.33	1.476E+03	Analog	0.50	3
Co			1	216.506	ug/l	2.20	1,861,418.50	1.153E+01	Pulse	0.50	3
Ni			1	211.733	ug/l	1.54	483,450.00	2.995E+00	Pulse	0.50	3
Cu			1	216.830	ug/l	1.19	1,304,378.79	8.080E+00	Pulse	0.50	3
Zn			1	214.619	ug/l	1.13	221,226.73	9.421E-01	Pulse	1.00	3
Cd			1	204.251	ug/l	0.62	268,748.43	1.144E+00	Pulse	0.50	3
Al			1	19409.508	ug/l	0.17	4,616,725.17	1.547E+01	Pulse	1.00	3
Se			1	203.566	ug/l	1.35	11,552.38	4.920E-02	Pulse	3.00	3
Sb			1	209.244	ug/l	0.64	818,968.73	3.487E+00	Pulse	1.00	3
Se			1	202.755	ug/l	0.58	5,441.67	2.317E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,286,980.58	0.84	82.5	Pulse	0.50	3
1	Sc		298,408.41	0.13	91.0	Pulse	0.30	3
1	Ge		161,447.20	0.78	90.6	Pulse	0.30	3
1	In		1,363,596.16	1.42	84.2	Pulse	0.30	3
1	Tb		3,448,571.25	1.72	87.8	Pulse	0.50	3
1	Lu		2,531,595.75	1.12	85.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		234,833.00	0.50	89.4	Pulse	0.30	3
1	Te		3.33	124.90	500.0	Pulse	0.50	3
1	Li		1,203.38	7.10	101.3	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 10:59
Sample Name MP41335-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	25.195	ug/l	0.14	149,236.91	9.323E-01	Pulse	0.50	3
As			1	38.377	ug/l	0.73	27,094.11	1.693E-01	Pulse	1.00	3
Mo			1	22.975	ug/l	0.48	62,832.57	2.657E-01	Pulse	0.50	3
Pb			1	22.991	ug/l	0.72	251,396.17	1.093E-01	Pulse	1.00	3
Be			1	21.702	ug/l	3.73	787.19	2.625E-03	Pulse	2.00	3
Ag			1	5.045	ug/l	2.40	42,478.38	1.796E-01	Pulse	0.50	3
Ba			1	71.209	ug/l	0.93	86,072.49	6.364E-02	Pulse	0.50	3
Tl			1	20.704	ug/l	0.73	317,907.08	1.382E-01	Pulse	0.50	3
Sn			1	21.673	ug/l	1.84	59,741.12	4.418E-02	Pulse	0.30	3
Sr			1	369.854	ug/l	0.47	1,391,811.21	1.029E+00	Pulse	0.50	3
[Pb]			1	22.170	ug/l	0.21	115,736.53	5.031E-02	Pulse	0.50	3
Ca			1	60479.977	ug/l	0.28	1,538,319.00	5.130E+00	Pulse	0.50	3
Ti			1	25.561	ug/l	0.64	4,338.50	1.447E-02	Pulse	0.50	3
Na			1	195961.058	ug/l	0.19	213,890,885.33	7.132E+02	Analog	1.00	3
Mg			1	11770.252	ug/l	0.42	6,476,399.83	2.160E+01	Analog	1.00	3
K			1	9043.153	ug/l	0.74	5,095,103.83	1.699E+01	Analog	1.00	3
V			1	23.472	ug/l	0.80	113,916.99	3.799E-01	Pulse	0.50	3
Mn			1	7598.910	ug/l	0.31	26,556,932.67	1.659E+02	Analog	0.50	3
Fe			1	30786.188	ug/l	0.88	151,149,104.00	9.442E+02	Analog	0.50	3
Co			1	22.624	ug/l	0.81	193,041.84	1.206E+00	Pulse	0.50	3
Ni			1	23.112	ug/l	0.29	52,943.34	3.307E-01	Pulse	0.50	3
Cu			1	26.936	ug/l	1.02	163,845.53	1.024E+00	Pulse	0.50	3
Zn			1	30.878	ug/l	0.98	32,768.72	1.386E-01	Pulse	1.00	3
Cd			1	19.739	ug/l	2.23	26,151.81	1.106E-01	Pulse	0.50	3
Al			1	2547.693	ug/l	0.27	609,816.88	2.033E+00	Pulse	1.00	3
Se			1	20.023	ug/l	1.01	1,182.37	5.000E-03	Pulse	3.00	3
Sb			1	19.311	ug/l	0.23	76,217.71	3.223E-01	Pulse	1.00	3
Se			1	19.983	ug/l	4.64	572.90	2.423E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,300,695.25	1.41	83.0	Pulse	0.50	3
1	Sc		299,896.31	0.31	91.5	Pulse	0.30	3
1	Ge		160,080.54	0.26	89.9	Pulse	0.30	3
1	In		1,352,360.47	0.71	83.5	Pulse	0.30	3
1	Tb		3,421,659.25	1.85	87.1	Pulse	0.50	3
1	Lu		2,497,376.33	1.06	84.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,494.35	1.08	90.0	Pulse	0.30	3
1	Te		2.67	173.21	400.0	Pulse	0.50	3
1	Li		1,170.04	4.66	98.5	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 11:03
Sample Name FA99625-2A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.521	ug/l	3.27	19,326.25	1.172E-01	Pulse	0.50	3
As			1	12.529	ug/l	1.22	9,164.88	5.558E-02	Pulse	1.00	3
Mo			1	2.647	ug/l	1.98	7,490.86	3.088E-02	Pulse	0.50	3
Pb			1	0.216	ug/l	8.99	2,928.26	1.234E-03	Pulse	1.00	3
Be			1	0.261	ug/l	165.35	10.00	3.255E-05	Pulse	2.00	3
Ag			1	0.010	ug/l	24.59	162.00	6.684E-04	Pulse	0.50	3
Ba			1	11.747	ug/l	0.55	14,658.63	1.052E-02	Pulse	0.50	3
Tl			1	0.022	ug/l	16.00	404.67	1.705E-04	Pulse	0.50	3
Sn			1	1.155	ug/l	6.53	3,734.85	2.682E-03	Pulse	0.30	3
Sr			1	177.975	ug/l	0.70	690,158.37	4.954E-01	Pulse	0.50	3
[Pb]			1	0.242	ug/l	2.35	1,506.74	6.347E-04	Pulse	0.50	3
Ca			1	29400.449	ug/l	0.91	757,722.12	2.494E+00	Pulse	0.50	3
Ti			1	1.161	ug/l	37.98	206.67	6.786E-04	Pulse	0.50	3
Na			1	32039.460	ug/l	1.07	35,435,325.33	1.167E+02	Analog	1.00	3
Mg			1	4602.391	ug/l	1.35	2,565,257.17	8.445E+00	Pulse	1.00	3
K			1	2953.386	ug/l	1.19	1,749,000.21	5.758E+00	Pulse	1.00	3
V			1	0.561	ug/l	3.19	5,308.07	1.747E-02	Pulse	0.50	3
Mn			1	12956.483	ug/l	0.97	46,642,636.00	2.829E+02	Analog	0.50	3
Fe			1	30661.309	ug/l	0.62	155,065,952.00	9.404E+02	Analog	0.50	3
Co			1	0.071	ug/l	12.39	798.02	4.837E-03	Pulse	0.50	3
Ni			1	0.144	ug/l	12.88	1,045.36	6.341E-03	Pulse	0.50	3
Cu			1	1.626	ug/l	0.94	13,696.87	8.306E-02	Pulse	0.50	3
Zn			1	2.281	ug/l	4.97	3,277.33	1.351E-02	Pulse	1.00	3
Cd			1	0.016	ug/l	34.63	22.00	9.093E-05	Pulse	0.50	3
Al			1	9.993	ug/l	6.97	3,357.96	1.106E-02	Pulse	1.00	3
Se			1	1.495	ug/l	167.51	131.81	5.384E-04	Pulse	3.00	3
Sb			1	0.176	ug/l	11.50	825.03	3.398E-03	Pulse	1.00	3
Se			1	1.142	ug/l	170.93	69.34	2.840E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,374,349.50	0.83	85.6	Pulse	0.50	3
1	Sc		303,784.18	1.05	92.6	Pulse	0.30	3
1	Ge		164,903.36	0.81	92.6	Pulse	0.30	3
1	In		1,393,256.19	0.97	86.0	Pulse	0.30	3
1	Tb		3,497,343.33	1.46	89.0	Pulse	0.50	3
1	Lu		2,529,466.75	1.21	85.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,587.28	1.24	92.4	Pulse	0.30	3
1	Te		4.67	107.85	700.0	Pulse	0.50	3
1	Li		1,277.83	7.90	107.6	Pulse	0.30	3

Quantitation Report

File Name 029SMPL.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 11:07
Sample Name FA99549-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.318	ug/l	0.40	18,392.03	1.099E-01	Pulse	0.50	3
As			1	24.375	ug/l	0.07	18,017.48	1.077E-01	Pulse	1.00	3
Mo			1	0.285	ug/l	1.98	884.69	3.583E-03	Pulse	0.50	3
Pb			1	0.170	ug/l	1.61	2,448.18	1.013E-03	Pulse	1.00	3
Be			1	0.041	ug/l	94.73	1.83	5.937E-06	Pulse	2.00	3
Ag			1	0.008	ug/l	9.39	154.00	6.238E-04	Pulse	0.50	3
Ba			1	23.522	ug/l	1.32	30,016.17	2.104E-02	Pulse	0.50	3
Tl			1	0.014	ug/l	16.29	288.67	1.197E-04	Pulse	0.50	3
Sn			1	1.277	ug/l	2.90	4,178.28	2.930E-03	Pulse	0.30	3
Sr			1	302.643	ug/l	0.45	1,201,412.63	8.422E-01	Pulse	0.50	3
[Pb]			1	0.174	ug/l	10.00	1,164.05	4.816E-04	Pulse	0.50	3
Ca			1	39477.310	ug/l	0.50	1,032,962.44	3.349E+00	Pulse	0.50	3
Ti			1	1.174	ug/l	10.10	211.33	6.858E-04	Pulse	0.50	3
Na			1	26364.467	ug/l	0.79	29,611,724.67	9.600E+01	Analog	1.00	3
Mg			1	5515.375	ug/l	0.23	3,121,721.25	1.012E+01	Pulse	1.00	3
K			1	7721.369	ug/l	0.78	4,488,473.67	1.455E+01	Pulse	1.00	3
V			1	0.858	ug/l	4.78	6,840.56	2.217E-02	Pulse	0.50	3
Mn			1	1688.304	ug/l	0.57	6,168,004.50	3.686E+01	Analog	0.50	3
Fe			1	708.795	ug/l	0.62	3,658,460.33	2.186E+01	Pulse	0.50	3
Co			1	15.423	ug/l	1.27	137,618.45	8.224E-01	Pulse	0.50	3
Ni			1	5.839	ug/l	1.36	14,519.48	8.677E-02	Pulse	0.50	3
Cu			1	19.863	ug/l	1.45	127,287.80	7.607E-01	Pulse	0.50	3
Zn			1	24.297	ug/l	0.45	27,100.98	1.098E-01	Pulse	1.00	3
Cd			1	0.008	ug/l	38.40	11.33	4.588E-05	Pulse	0.50	3
Al			1	5.366	ug/l	7.32	2,274.47	7.370E-03	Pulse	1.00	3
Se			1	-0.016	ug/l	-133.74	43.11	1.747E-04	Pulse	3.00	3
Sb			1	0.135	ug/l	4.58	673.34	2.727E-03	Pulse	1.00	3
Se			1	-0.029	ug/l	-395.66	37.33	1.511E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,415,892.00	1.87	87.1	Pulse	0.50	3
1	Sc		308,473.87	1.61	94.1	Pulse	0.30	3
1	Ge		167,329.30	0.72	93.9	Pulse	0.30	3
1	In		1,426,467.20	0.91	88.1	Pulse	0.30	3
1	Tb		3,517,823.00	1.53	89.5	Pulse	0.50	3
1	Lu		2,558,231.92	1.27	86.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,866.61	1.03	94.0	Pulse	0.30	3
1	Te		2.00	173.21	300.0	Pulse	0.50	3
1	Li		1,260.05	5.96	106.1	Pulse	0.30	3

Quantitation Report

File Name 030CCVA.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 11:11
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.145	ug/l	1.01	659,234.86	3.632E+00	Pulse	0.50	3
As			1	48.734	ug/l	0.49	77,893.85	4.291E-01	Pulse	1.00	3
Mo			1	47.970	ug/l	0.97	296,758.41	1.109E+00	Pulse	0.50	3
Pb			1	49.089	ug/l	1.32	1,200,967.08	4.660E-01	Pulse	1.00	3
Be			1	49.948	ug/l	1.72	4,028.57	1.208E-02	Pulse	2.00	3
Ag			1	48.998	ug/l	0.42	932,317.42	3.483E+00	Pulse	0.50	3
Ba			1	48.709	ug/l	1.38	133,548.15	8.706E-02	Pulse	0.50	3
Tl			1	50.631	ug/l	1.18	1,741,628.71	6.758E-01	Pulse	0.50	3
Sn			1	49.258	ug/l	1.19	306,180.04	1.996E-01	Pulse	0.30	3
Sr			1	49.098	ug/l	0.60	419,434.23	2.734E-01	Pulse	0.50	3
[Pb]			1	49.065	ug/l	1.29	573,109.58	2.224E-01	Pulse	0.50	3
Ca			1	4920.003	ug/l	1.41	278,750.81	8.358E-01	Pulse	0.50	3
Ti			1	48.396	ug/l	0.32	18,249.85	5.472E-02	Pulse	0.50	3
Na			1	5307.043	ug/l	0.69	12,900,956.33	3.868E+01	Analog	1.00	3
Mg			1	5157.156	ug/l	0.78	6,311,564.00	1.892E+01	Analog	1.00	3
K			1	5198.709	ug/l	0.43	6,499,389.33	1.949E+01	Analog	1.00	3
V			1	50.347	ug/l	0.68	534,051.08	1.601E+00	Pulse	0.50	3
Mn			1	49.504	ug/l	0.64	392,757.09	2.164E+00	Pulse	0.50	3
Fe			1	5057.008	ug/l	0.71	56,322,642.67	3.103E+02	Analog	0.50	3
Co			1	50.500	ug/l	0.87	976,543.81	5.380E+00	Pulse	0.50	3
Ni			1	50.290	ug/l	0.44	258,638.84	1.425E+00	Pulse	0.50	3
Cu			1	50.459	ug/l	0.88	684,814.42	3.773E+00	Pulse	0.50	3
Zn			1	49.276	ug/l	1.18	116,316.07	4.345E-01	Pulse	1.00	3
Cd			1	47.374	ug/l	0.40	142,113.03	5.309E-01	Pulse	0.50	3
Al			1	4780.633	ug/l	1.16	2,542,262.25	7.623E+00	Pulse	1.00	3
Se			1	47.572	ug/l	1.25	6,180.67	2.309E-02	Pulse	3.00	3
Sb			1	46.660	ug/l	1.17	416,438.80	1.556E+00	Pulse	1.00	3
Se			1	47.182	ug/l	1.54	2,909.11	1.087E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,577,426.50	0.75	92.9	Pulse	0.50	3
1	Sc		333,522.59	0.61	101.7	Pulse	0.30	3
1	Ge		181,520.17	0.26	101.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,534,041.68	0.25	94.7	Pulse	0.30	3
1	Tb		3,722,618.92	0.50	94.8	Pulse	0.50	3
1	Lu		2,741,589.58	0.35	92.6	Pulse	0.50	3
1	Ge		267,697.54	0.18	101.9	Pulse	0.30	3
1	Te		3.33	34.64	500.0	Pulse	0.50	3
1	Li		1,267.83	6.45	106.7	Pulse	0.30	3

Quantitation Report

File Name 031_CCV.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 11:15
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.212	ug/l	1.10	1,316,121.92	7.303E+00	Pulse	0.50	3
As			1	99.264	ug/l	1.86	157,423.76	8.736E-01	Pulse	1.00	3
Mo			1	97.918	ug/l	1.46	598,463.11	2.263E+00	Pulse	0.50	3
Pb			1	100.286	ug/l	0.63	2,389,695.92	9.517E-01	Pulse	1.00	3
Be			1	102.800	ug/l	0.25	8,287.36	2.486E-02	Pulse	2.00	3
Ag			1	98.629	ug/l	1.96	1,854,192.59	7.010E+00	Pulse	0.50	3
Ba			1	98.618	ug/l	0.68	268,672.85	1.762E-01	Pulse	0.50	3
Tl			1	103.420	ug/l	0.26	3,465,819.50	1.380E+00	Pulse	0.50	3
Sn			1	100.336	ug/l	0.86	619,267.68	4.062E-01	Pulse	0.30	3
Sr			1	99.977	ug/l	0.77	848,433.79	5.565E-01	Pulse	0.50	3
[Pb]			1	100.272	ug/l	0.67	1,140,850.08	4.544E-01	Pulse	0.50	3
Ca			1	9910.972	ug/l	1.04	560,749.40	1.682E+00	Pulse	0.50	3
Ti			1	97.702	ug/l	1.07	36,816.50	1.104E-01	Pulse	0.50	3
Na			1	10674.794	ug/l	0.36	25,918,556.00	7.775E+01	Analog	1.00	3
Mg			1	10401.904	ug/l	0.98	12,723,588.33	3.817E+01	Analog	1.00	3
K			1	10522.279	ug/l	0.11	13,042,401.67	3.912E+01	Analog	1.00	3
V			1	101.274	ug/l	0.96	1,070,818.25	3.212E+00	Pulse	0.50	3
Mn			1	99.405	ug/l	1.28	782,594.90	4.343E+00	Pulse	0.50	3
Fe			1	10251.299	ug/l	0.81	113,331,042.67	6.289E+02	Analog	0.50	3
Co			1	101.600	ug/l	0.68	1,950,395.54	1.082E+01	Pulse	0.50	3
Ni			1	101.158	ug/l	1.47	515,714.82	2.862E+00	Pulse	0.50	3
Cu			1	101.072	ug/l	1.11	1,357,758.34	7.534E+00	Pulse	0.50	3
Zn			1	99.625	ug/l	1.77	231,407.62	8.749E-01	Pulse	1.00	3
Cd			1	96.154	ug/l	2.08	284,995.85	1.077E+00	Pulse	0.50	3
Al			1	9948.204	ug/l	1.02	5,286,606.00	1.586E+01	Analog	1.00	3
Se			1	97.039	ug/l	2.46	12,407.58	4.691E-02	Pulse	3.00	3
Sb			1	94.813	ug/l	2.02	835,964.14	3.161E+00	Pulse	1.00	3
Se			1	97.432	ug/l	2.30	5,892.13	2.228E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,511,006.00	1.06	90.5	Pulse	0.50	3
1	Sc		333,353.79	0.38	101.7	Pulse	0.30	3
1	Ge		180,225.91	0.71	101.2	Pulse	0.30	3
1	In		1,524,534.21	0.11	94.1	Pulse	0.30	3
1	Tb		3,710,286.17	0.64	94.4	Pulse	0.50	3
1	Lu		2,724,961.58	0.81	92.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		264,536.01	1.03	100.7	Pulse	0.30	3
1	Te		0.67	173.21	100.0	Pulse	0.50	3
1	Li		1,277.83	6.22	107.6	Pulse	0.30	3

Quantitation Report

File Name 032_CCB.d
File Path D:\2022\xa101722m1.b
Method File
Method Path
Acq Time 10/17/2022 11:18
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 10/17/2022 9:52
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.010	ug/l	-93.29	4,542.55	2.586E-02	Pulse	0.50	3
As			1	0.029	ug/l	18.32	129.67	7.383E-04	Pulse	1.00	3
Mo			1	0.090	ug/l	20.08	614.02	2.365E-03	Pulse	0.50	3
Pb			1	0.032	ug/l	33.76	1,315.39	5.123E-04	Pulse	1.00	3
Be			1	0.034	ug/l	81.46	3.00	9.123E-06	Pulse	2.00	3
Ag			1	0.023	ug/l	34.88	508.68	1.961E-03	Pulse	0.50	3
Ba			1	0.013	ug/l	71.16	76.00	4.955E-05	Pulse	0.50	3
Tl			1	0.022	ug/l	36.32	806.69	3.144E-04	Pulse	0.50	3
Sn			1	0.102	ug/l	11.32	1,160.05	7.566E-04	Pulse	0.30	3
Sr			1	0.016	ug/l	63.19	489.34	3.192E-04	Pulse	0.50	3
[Pb]			1	0.033	ug/l	25.86	604.68	2.354E-04	Pulse	0.50	3
Ca			1	0.477	ug/l	217.59	519.34	1.581E-03	Pulse	0.50	3
Ti			1	0.020	ug/l	68.77	14.67	4.465E-05	Pulse	0.50	3
Na			1	13.014	ug/l	8.69	48,878.35	1.488E-01	Pulse	1.00	3
Mg			1	1.777	ug/l	40.46	2,552.18	7.772E-03	Pulse	1.00	3
K			1	6.051	ug/l	20.16	109,361.95	3.330E-01	Pulse	1.00	3
V			1	-0.077	ug/l	-10.60	2,024.78	6.165E-03	Pulse	0.50	3
Mn			1	0.035	ug/l	6.76	656.01	3.734E-03	Pulse	0.50	3
Fe			1	1.121	ug/l	55.09	34,525.51	1.964E-01	Pulse	0.50	3
Co			1	0.009	ug/l	77.12	362.67	2.062E-03	Pulse	0.50	3
Ni			1	-0.038	ug/l	-23.85	568.01	3.232E-03	Pulse	0.50	3
Cu			1	0.025	ug/l	31.96	4,302.49	2.449E-02	Pulse	0.50	3
Zn			1	-0.066	ug/l	-34.85	766.02	2.952E-03	Pulse	1.00	3
Cd			1	0.019	ug/l	53.65	56.67	2.185E-04	Pulse	0.50	3
Al			1	0.954	ug/l	72.09	1,515.06	4.614E-03	Pulse	1.00	3
Se			1	0.044	ug/l	132.17	51.89	1.999E-04	Pulse	3.00	3
Sb			1	0.043	ug/l	8.29	493.68	1.903E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-3577.05	39.89	1.537E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,571,127.33	1.00	92.7	Pulse	0.50	3

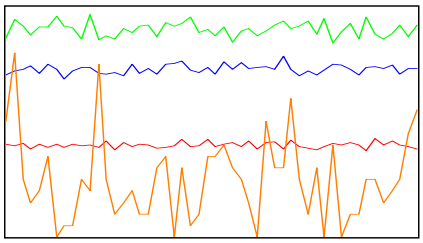
Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		328,424.35	0.27	100.2	Pulse	0.30	3
1	Ge		175,672.07	0.62	98.6	Pulse	0.30	3
1	In		1,533,219.11	0.22	94.7	Pulse	0.30	3
1	Tb		3,647,596.00	0.31	92.8	Pulse	0.50	3
1	Lu		2,684,946.08	0.46	90.7	Pulse	0.50	3
1	Ge		259,510.39	0.30	98.8	Pulse	0.30	3
1	Te		1.33	173.21	200.0	Pulse	0.50	3
1	Li		1,333.39	5.52	112.3	Pulse	0.30	3

Tune Report

Batch Folder	D:\2022\xa101722m1.b
Acq. Date-Time	10/17/2022 9:07
Report Comment	101722
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	1993	19934.98	5000.00	
89	2000	1802	18018.74	5000.00	
205	5000	3641	36413.60	5000.00	
78	20	5			

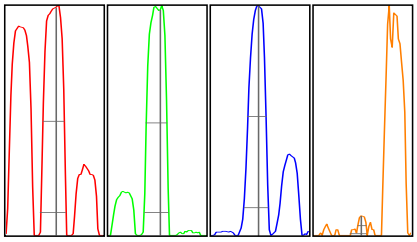
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.24	5.00	
89	3.47	5.00	
205	2.66	5.00	
78	74.44		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.00	2	
89	0.30	2	
205	1.20	2	
78	0.00	5	

Ratio	156/140	0.999 %	
Ratio	70/140	4.968 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1972.59	59.05	58.9 - 59.1		0.63	0.768	0.900	
89	1793.44	89.10	88.9 - 89.1		0.61	0.751	0.900	

Tune Report

205	3629.25	205.00	204.9 - 205.1	0.53	0.746	0.900
78	7.00	78.00	-	0.22	0.475	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

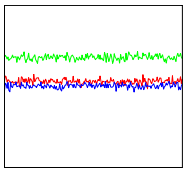
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-185.0 V	Cell Exit	-70 V
Omega Bias	-105 V	Deflect	2.0 V
Omega Lens	6.0 V	Plate Bias	-60 V

Cell Parameters

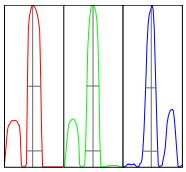
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	2655.20	6782.34	5024.99
RSD%	2.8	2.3	2.7
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.04%	
Doubly Charged	70/140	8.95%	

Background			
Mass	7	89	205
Count	0.05	1.35	6.30

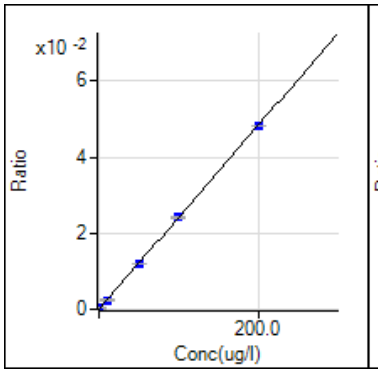


Resolution/Axis			
Mass	7	89	205
Height	2645	6710	4985
Axis	6.95	89.00	204.95
W-50%	0.67	0.60	0.52
W-10%	0.77	0.75	0.74
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

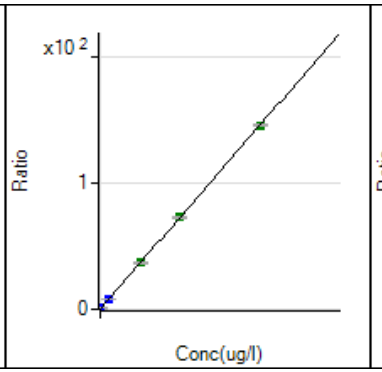
7.1.2

7

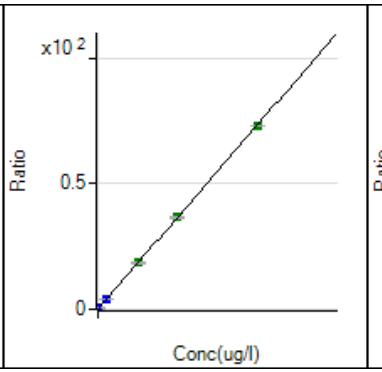
Calibration for D:\2022\xa101722m1.b\001CALB.d



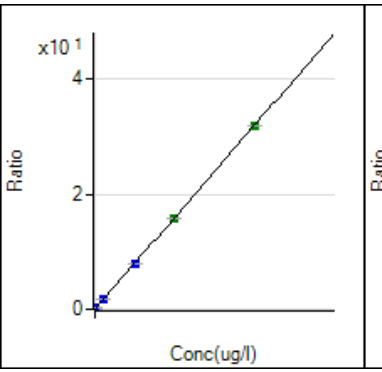
9 Be [2] / ISTD: 45 Sc
y = 2.418E-4 x + 1.017E-6
R 1.0000
DL 0.02185
BEC 0.004206



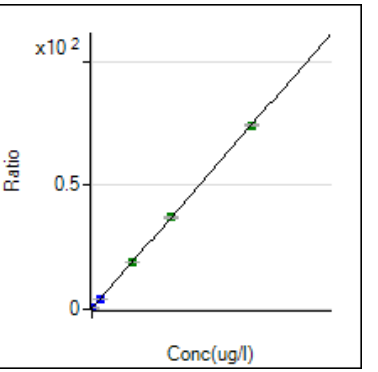
23 Na [2] / ISTD: 45 Sc
y = 7.279E-3 x + 5.411E-2
R 1.0000
DL 0.0854
BEC 7.434



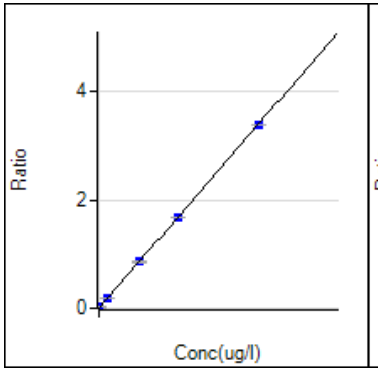
24 Mg [2] / ISTD: 45 Sc
y = 3.669E-3 x + 1.250E-3
R 1.0000
DL 0.02603
BEC 0.3408



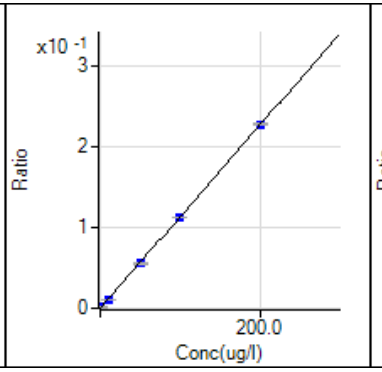
27 Al [2] / ISTD: 45 Sc
y = 1.594E-3 x + 3.094E-3
R 1.0000
DL 0.3871
BEC 1.941



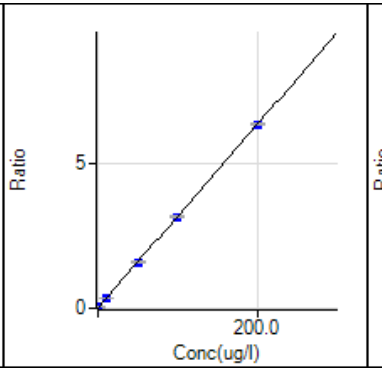
39 K [2] / ISTD: 45 Sc
y = 3.689E-3 x + 3.107E-1
R 1.0000
DL 1.695
BEC 84.22



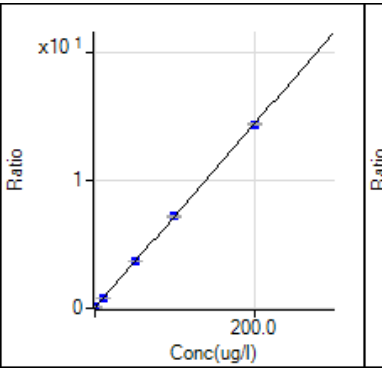
44 Ca [2] / ISTD: 45 Sc
y = 1.696E-4 x + 1.501E-3
R 1.0000
DL 0.1059
BEC 8.849



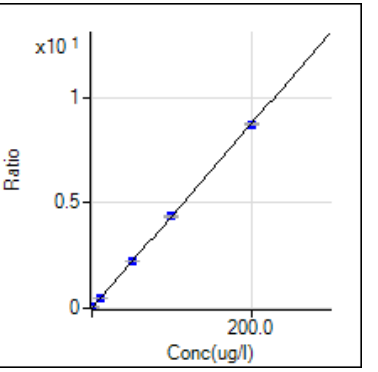
47 Ti [2] / ISTD: 45 Sc
y = 1.130E-3 x + 2.236E-5
R 0.9999
DL 0.03369
BEC 0.01979



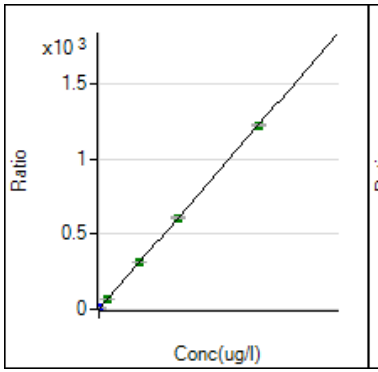
51 V [2] / ISTD: 45 Sc
y = 3.163E-2 x + 8.595E-3
R 1.0000
DL 0.02046
BEC 0.2717



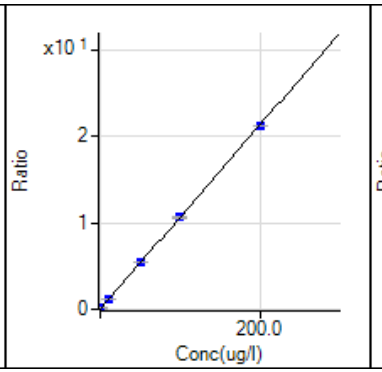
52 Cr [2] / ISTD: 72 Ge
y = 7.189E-2 x + 2.661E-2
R 1.0000
DL 0.03209
BEC 0.3701



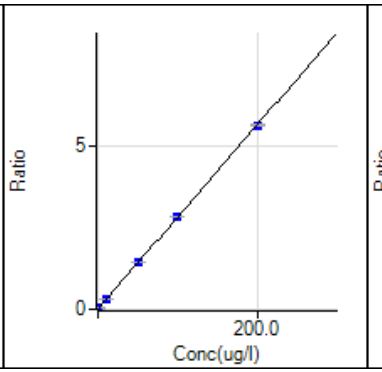
55 Mn [2] / ISTD: 72 Ge
y = 4.366E-2 x + 2.209E-3
R 1.0000
DL 0.02394
BEC 0.05059



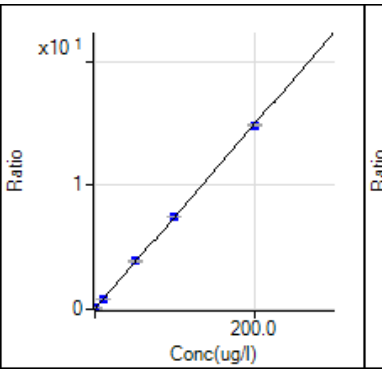
56 Fe [2] / ISTD: 72 Ge
y = 6.133E-2 x + 1.277E-1
R 1.0000
DL 0.03652
BEC 2.082



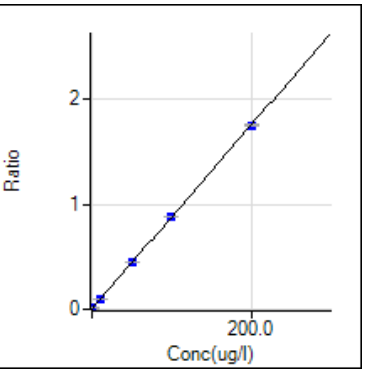
59 Co [2] / ISTD: 72 Ge
y = 1.065E-1 x + 1.060E-3
R 1.0000
DL 0.00609
BEC 0.00995



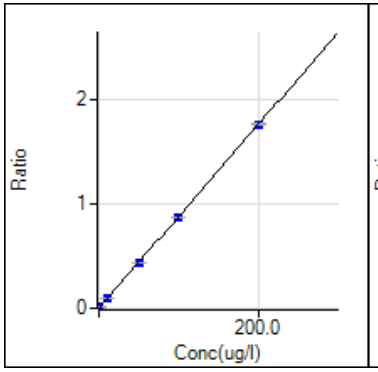
60 Ni [2] / ISTD: 72 Ge
y = 2.825E-2 x + 4.311E-3
R 1.0000
DL 0.03596
BEC 0.1526



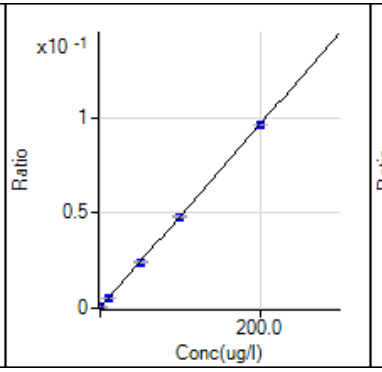
63 Cu [2] / ISTD: 72 Ge
y = 7.432E-2 x + 2.263E-2
R 1.0000
DL 0.03734
BEC 0.3045



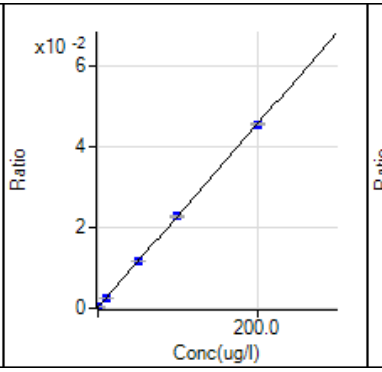
66 Zn [2] / ISTD: 74 Ge
y = 8.746E-3 x + 3.529E-3
R 1.0000
DL 0.08434
BEC 0.4035



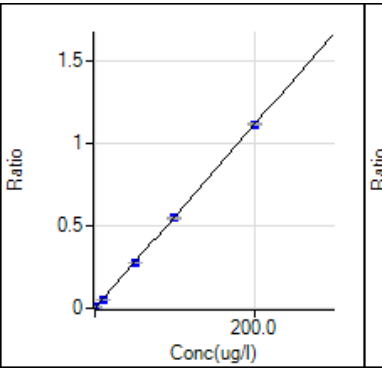
75 As [2] / ISTD: 72 Ge
y = 8.796E-3 x + 4.810E-4
R 1.0000
DL 0.00281
BEC 0.05468



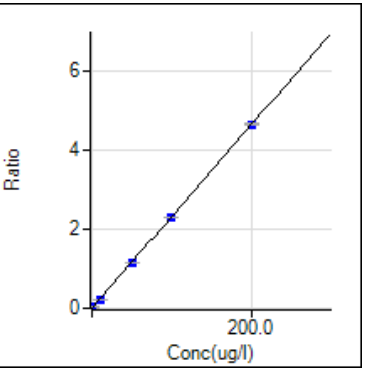
78 Se [2] / ISTD: 74 Ge
y = 4.816E-4 x + 1.785E-4
R 1.0000
DL 0.02184
BEC 0.3707



82 Se [2] / ISTD: 74 Ge
y = 2.271E-4 x + 1.544E-4
R 1.0000
DL 0.3878
BEC 0.6799

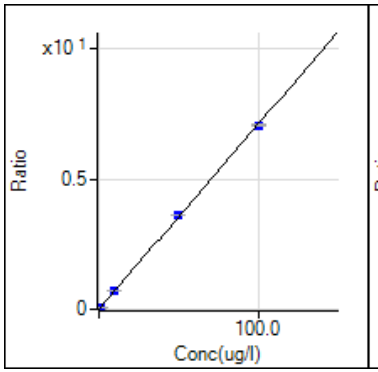


88 Sr [2] / ISTD: 115 In
y = 5.564E-3 x + 2.322E-4
R 1.0000
DL 0.01187
BEC 0.04173

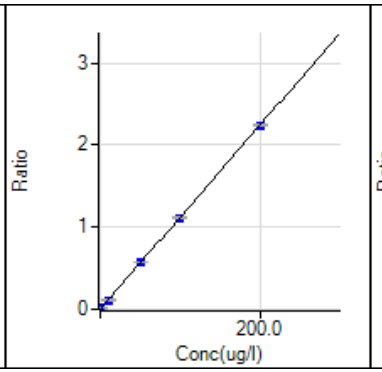


95 Mo [2] / ISTD: 74 Ge
y = 2.310E-2 x + 2.968E-4
R 1.0000
DL 0.009968
BEC 0.01285

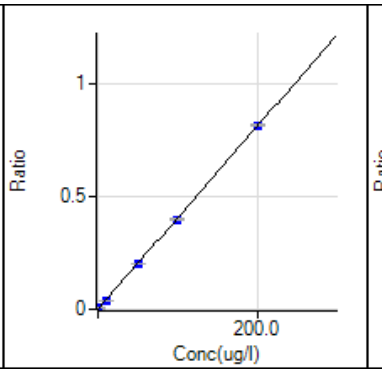
Calibration for D:\2022\xa101722m1.b\001CALB.d



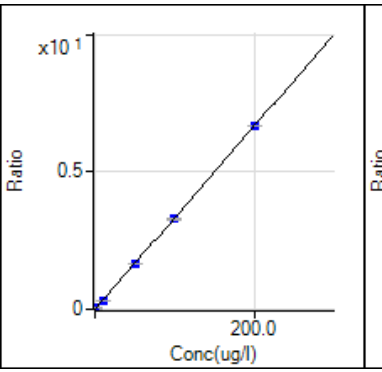
107 Ag [2] / ISTD: 74 Ge
y = 7.107E-2 x + 3.222E-4
R 0.9999
DL 0.002747
BEC 0.004534



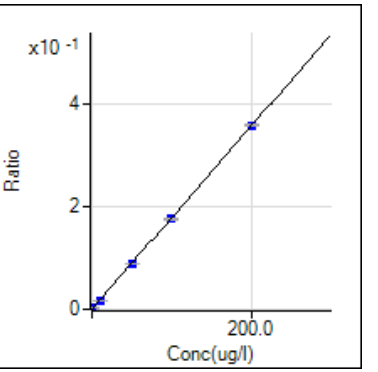
111 Cd [2] / ISTD: 74 Ge
y = 1.121E-2 x + 2.535E-6
R 1.0000
DL 0.001175
BEC 0.0002262



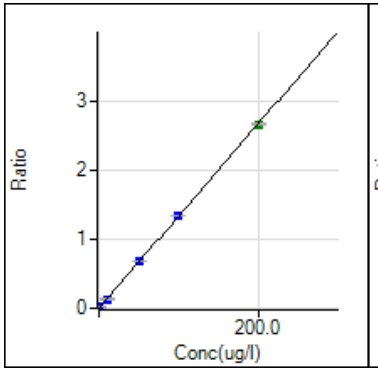
118 Sn [2] / ISTD: 115 In
y = 4.045E-3 x + 3.459E-4
R 0.9999
DL 0.03901
BEC 0.0855



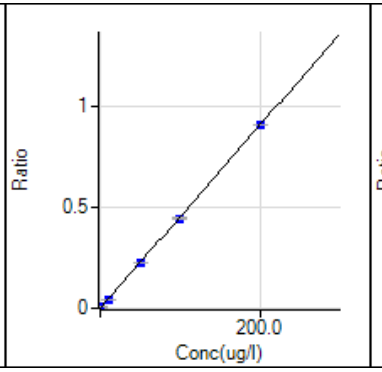
121 Sb [2] / ISTD: 74 Ge
y = 3.333E-2 x + 4.707E-4
R 0.9999
DL 0.006055
BEC 0.01412



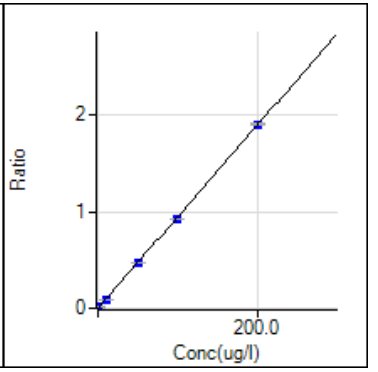
137 Ba [2] / ISTD: 115 In
y = 1.787E-3 x + 2.676E-5
R 1.0000
DL 0.008468
BEC 0.01498



205 Tl [2] / ISTD: 209 Bi
y = 1.335E-2 x + 2.621E-5
R 1.0000
DL 0.002055
BEC 0.001964



206 [Pb] [2] / ISTD: 209 Bi
y = 4.530E-3 x + 8.676E-5
R 0.9999
DL 0.004345
BEC 0.01915



208 Pb [2] / ISTD: 209 Bi
y = 9.488E-3 x + 2.090E-4
R 0.9999
DL 0.002135
BEC 0.02203

SGS Orlando

Date:	10/15/22
Time	15:15

[24hr]

Analysts Name:	Adam K
MP Batch ID:	41335
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	62047	ACC1321	0.05	MU45274
Conc. HCl (B)	22C1662007	ACC1319	0.2	KU15244
NA	NA	MET7308	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	10	**Therm ID**	6071	**Temp. C**		**Corr. Factor**	-2	**Corrected Observed Temp. C**	-2
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2204135

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	11	Matrix Spike(MS)	50	50	Y	
	11	Matrix Spike Dup(MSD)	50	50	Y	
	11	Duplicate(DUP)	50	50	Y	
1(QC) C	11	FA99625-1A	50	50	Y	
2	11	FA99625-2A	50	50	Y	
3	1	FA99549-1	50	50	Y	
4	1	FA99466-8	50	50	Y	
5	1	FA99466-9	50	50	Y	
6	1	FA99466-10	50	50	Y	
7	1	FA99466-11	50	50	Y	
8	4	FA99466-12	50	50	Y	
9	4	FA99466-13	50	50	Y	
10	1	FA99466-14	50	50	Y	
11	1	FA99466-15	50	50	Y	
12	1	FA99466-16	50	50	Y	
13	4	FA99466-17	50	50	Y	
14	1	FA99466-18	50	50	Y	
15	1	FA99466-19	50	50	Y	
16	1	FA99466-20	50	50	Y	
17	4	FA99619-1	50	50	Y	
18	4	FA99619-2	50	50	Y	
19	8	FA99592-1	50	50	Y	
20	8	FA99592-2	50	50	Y	
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FC389

Sampling Date: 11/04/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: **190**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FC389

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC389-1	11/04/22	13:00	JR	11/05/22	AQ	Water	EFFLUENT

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FC389

Site: Shepley's Hill (SHL); Devens, MA **Report Date:** 11/14/2022 4:38:21 PM

On 11/05/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC389 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP41455

Sample(s) FA99205-1FRMS, FA99205-1FRMSD, FA99205-1FRSDL, FA99205-1FRDUP were used as the QC samples for metals.

RPD(s) for Duplicate for Arsenic are outside control limits for sample MP41455-D1. RPD acceptable due to low duplicate and sample concentrations.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Summary of Hits

Job Number: FC389
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 11/04/22

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC389-1	**EFFLUENT**					
Arsenic		19.4	2.0	1.0	ug/l	SW846 6020A

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FC389-1	**Date Sampled:**	11/04/22
Matrix:	AQ - Water	**Date Received:**	11/05/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	19.4	2.0	1.0	0.21	ug/l	2	11/08/22	11/11/22	DM	SW846 6020A [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19039
(2) Prep QC Batch: MP41455

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FC389

SGS

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	LAB USE ONLY
1	Effluent	11/4/22	13:00	JWR	aq	1					x					X	

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business)
7 Day
x 5 Day- Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Approved By: / Date:

RUSH

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements
5-Day Rush on Arsenic Samples

SGS Service Center
Northborough, MA 11/4

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		11-4-22 1458	2 Thelma Flug	3 Thelma Flug	10/4/22 1700	4 Fed Ex
5	Relinquished by/Affiliation	Date Time: 11/5/22 1200	6	7	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.6 IR1

CS# 025472

http://www.sgs.com/en/terms-and-conditions

ATP - SGS COC - Revised 02-07-22.xlsx Rev 031318

FC389: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FC389 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 11/5/2022 12:00:00 PM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 4681

Therm ID: IR 1; **Therm CF:** 0.6; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 11/5/2022 12:00:00 P Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FC389
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 11/04/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP41455	SW846 6020A						
MP41455-B1	7440-38-2	Arsenic	BSP	REC	115.5	%	84-116
MP41455-S1*	7440-38-2	Arsenic	MS	REC	116.5	%	84-116
MP41455-S2*	7440-38-2	Arsenic	MSD	REC	117	%	84-116
MP41455-S2*	7440-38-2	Arsenic	MSD	RPD	7.1	%	20
MP41455-D1*	7440-38-2	Arsenic	DUP	RPD	200 [a]	%	20

(a) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FC389

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:12	MA19039-STD1	1		STDA
08:16	MA19039-STD2	1		STDB
08:20	MA19039-STD3	1		STDC
08:24	MA19039-STD4	1		STDD
08:28	MA19039-STD5	1		STDE
08:32	MA19039-STD6	1		STDF
08:36	MA19039-STD7	1		STDG
08:40	MA19039-HSTD1	1		
08:44	MA19039-HSTD2	1		
08:47	MA19039-ICV1	1		
08:51	MA19039-ICB1	1		
08:55	MA19039-CRIA1	1		
08:59	MA19039-ICSA1	1		
09:03	MA19039-ICSAB1	1		
09:07	MA19039-CCV1	1		
09:10	MA19039-CCV2	1		
09:14	MA19039-CCB1	1		
09:18	MA19039-CRIA2	1		
09:22	MP41457-MB1	5		
09:25	MP41457-B1	5		
09:29	FC142-1A	10		(sample used for QC only; not part of login FC389)
09:33	MP41457-D1	10		
09:37	MP41457-SD1	50		
09:41	MP41457-S1	10		
09:45	MP41457-S2	10		
09:48	MP41457-PS1	10		
09:52	ZZZZZZ	10		
09:56	MA19039-CCV3	1		
10:00	MA19039-CCV4	1		
10:04	MA19039-CCB2	1		
10:07	ZZZZZZ	10		
10:11	ZZZZZZ	10		
10:15	ZZZZZZ	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:19	ZZZZZZ	10		
10:23	ZZZZZZ	10		
10:26	MP41455-MB1	2		
10:30	MP41455-B1	2		
10:34	FA99205-1FR	2		(sample used for QC only; not part of login FC389)
10:38	MP41455-D1	2		
10:42	MP41455-SD1	10		
10:45	MA19039-CCV5	1		
10:49	MA19039-CCV6	1		
10:53	MA19039-CCB3	1		
10:57	MP41455-S1	2		
11:01	MP41455-S2	2		
11:04	MP41455-PS1	2		
11:08	ZZZZZZ	2		
11:12	ZZZZZZ	2		
11:16	ZZZZZZ	2		
11:20	ZZZZZZ	2		
11:28	ZZZZZZ	2		
11:32	FC389-1	2		
11:36	ZZZZZZ	2		
11:39	MA19039-CCV7	1		
11:43	MA19039-CCV8	1		
11:47	MA19039-CCB4	1		
11:51	FA99205-1FR	100		(sample used for QC only; not part of login FC389)
11:55	MP41455-D1	100		
11:58	MP41455-SD1	500		
12:02	MP41455-S1	100		
12:06	MP41455-S2	100		
12:10	MP41455-PS1	100		
---------->	Last reportable sample/prep for job FC389			
12:13	ZZZZZZ	100		
12:17	ZZZZZZ	100		
12:21	ZZZZZZ	100		
12:25	ZZZZZZ	100		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:29	MA19039-CCV9	1		
12:32	MA19039-CCV10	1		
12:36	MA19039-CCB5	1		
---------->	Last reportable CCB for job FC389			
13:01	MA19039-CCV11	1		
13:05	MA19039-CCB6	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Element: Dilution	As	
08:40	MA19039-HSTD1	1		
08:44	MA19039-HSTD2	1	X	
08:47	MA19039-ICV1	1	X	
08:51	MA19039-ICB1	1	X	
08:55	MA19039-CRIA1	1	X	
08:59	MA19039-ICSA1	1	X	
09:03	MA19039-ICSAB1	1	X	
09:07	MA19039-CCV1	1		
09:10	MA19039-CCV2	1	X	
09:14	MA19039-CCB1	1	X	
09:18	MA19039-CRIA2	1		
09:22	MP41457-MB1	5	X	
09:25	MP41457-B1	5	X	
09:29	FC142-1A	10	X	(a)
09:33	MP41457-D1	10	X	
09:37	MP41457-SD1	50	X	
09:41	MP41457-S1	10	X	
09:45	MP41457-S2	10	X	
09:48	MP41457-PS1	10		
09:52	ZZZZZZ	10		
09:56	MA19039-CCV3	1		
10:00	MA19039-CCV4	1	X	
10:04	MA19039-CCB2	1	X	
10:07	ZZZZZZ	10		
10:11	ZZZZZZ	10		
10:15	ZZZZZZ	10		
10:19	ZZZZZZ	10		
10:23	ZZZZZZ	10		
10:26	MP41455-MB1	2	X	
10:30	MP41455-B1	2	X	
10:34	FA99205-1FR	2	X	(a)
10:38	MP41455-D1	2	X	
10:42	MP41455-SD1	10	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Element: Dilution	As	
10:45	MA19039-CCV5	1		
10:49	MA19039-CCV6	1	X	
10:53	MA19039-CCB3	1	X	
10:57	MP41455-S1	2	X	
11:01	MP41455-S2	2	X	
11:04	MP41455-PS1	2		
11:08	ZZZZZZ	2		
11:12	ZZZZZZ	2		
11:16	ZZZZZZ	2		
11:20	ZZZZZZ	2		
11:28	ZZZZZZ	2		
11:32	FC389-1	2	X	
11:36	ZZZZZZ	2		
11:39	MA19039-CCV7	1		
11:43	MA19039-CCV8	1	X	
11:47	MA19039-CCB4	1	X	
11:51	FA99205-1FR	100		(a)
11:55	MP41455-D1	100		
11:58	MP41455-SD1	500		
12:02	MP41455-S1	100		
12:06	MP41455-S2	100		
12:10	MP41455-PS1	100		
12:13	ZZZZZZ	100		
12:17	ZZZZZZ	100		
12:21	ZZZZZZ	100		
12:25	ZZZZZZ	100		
12:29	MA19039-CCV9	1		
12:32	MA19039-CCV10	1	X	
12:36	MA19039-CCB5	1	X	
13:01	MA19039-CCV11	1	X	
13:05	MA19039-CCB6	1	X	

(a) Sample used for QC only; not part of login FC389.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:12	MA19039-STD1	100	100	100	100	100	100	100
08:16	MA19039-STD2	106.6	100.3	99.7	100.5	100.6	100	99.6
08:20	MA19039-STD3	94.3	100.7	100.3	100.8	100.4	99.7	99.1
08:24	MA19039-STD4	99.6	101.1	99.7	100.9	100.3	99.6	98.9
08:28	MA19039-STD5	100.1	100.4	98.3	99.4	97.9	99.4	96.6
08:32	MA19039-STD6	95.9	97.2	96.1	96.1	94.9	96.4	92.9
08:36	MA19039-STD7	89.2	94.5	93.2	93.8	91.3	93.8	89.2
08:40	MA19039-HSTD1	101	94.4	92.9	93.6	91.3	93.8	90.1
08:44	MA19039-HSTD2	98.5	93.8	92.5	91.7	89.5	92.6	87.6
08:47	MA19039-ICV1	113.9	93.7	92.3	92	90	92.4	88.8
08:51	MA19039-ICB1	102.9	94.6	92.5	92.6	92	92.3	91.9
08:55	MA19039-CRIA1	113.3	95.5	93.9	93.7	93.3	93.2	92.5
08:59	MA19039-ICSA1	94.5	90.3	88	86	82.4	86	79.9
09:03	MA19039-ICSAB1	95	90	88.4	86.5	81.7	86.3	80.2
09:07	MA19039-CCV1	111.8	92.1	92.6	92.4	89.6	91.9	89.8
09:10	MA19039-CCV2	107	91.3	90.4	91	87.9	90.5	87.5
09:14	MA19039-CCB1	118.6	91.2	91	89.8	88.7	89.7	89.5
09:18	MA19039-CRIA2	No results reported for the elements associated with this internal standard.						
09:22	MP41457-MB1	111.1	91.3	89.5	90.3	87	88.4	88.4
09:25	MP41457-B1	108.1	89.4	87.4	87.8	84.2	88	84.3
09:29	FC142-1A	115.3	124.3	91.4	88.5	84.7	88	85.1
09:33	MP41457-D1	109.8	123.7	91.3	88.3	84.8	88.1	84.5
09:37	MP41457-SD1	118.8	100	92.2	92	89	89.9	89.1
09:41	MP41457-S1	103.6	126.7	90.9	87.5	83.6	86.9	82.6
09:45	MP41457-S2	106.9	124.3	89.8	87.3	82.3	86.2	82.2
09:48	MP41457-PS1	114.4	122	89.8	87.1	83	86.3	82.6
09:52	ZZZZZZ	108.4	129.8	89.4	85.4	81.9	85.4	82.3
09:56	MA19039-CCV3	117.5	93.1	92.5	93	88.5	89.6	87.5
10:00	MA19039-CCV4	105.5	93.6	92.7	92.2	87.9	89.3	85.5
10:04	MA19039-CCB2	119.5	94.2	93	92.7	89.3	88.6	87.6
10:07	ZZZZZZ	102.4	139.3 !a	91.3	88.7	83.3	86.4	81.7
10:11	ZZZZZZ	110.6	124.4	89.2	87.5	82	85.2	82.1
10:15	ZZZZZZ	111.3	119.2	89.4	86.5	82.4	85.2	81.4

INTERNAL STANDARD SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:19	ZZZZZZ	105	129.8	89.7	86.3	81.5	84.8	80
10:23	ZZZZZZ	103.6	114.4	89	86.5	82.9	84.7	82.7
10:26	MP41455-MB1	117.1	90	87.2	87.6	83.2	83.9	82.3
10:30	MP41455-B1	109.9	89.7	87.5	88	82.5	83.6	79.3
10:34	FA99205-1FR	114	84.8	78.4	78.5	73	74.9	67.8 !a
10:38	MP41455-D1	123.1	85.2	79.7	79.9	73.4	75.7	68.5 !a
10:42	MP41455-SD1	116	90.1	88.3	88.6	82	84.4	79.5
10:45	MA19039-CCV5	119.5	87.4	86.4	87.2	83.4	86	84.4
10:49	MA19039-CCV6	112.7	85.3	86	85.6	81	84.3	82.2
10:53	MA19039-CCB3	111.5	85.4	84.9	85.2	81.9	83.6	84
10:57	MP41455-S1	127	82.4	77.5	77.9	71.9	75.3	67.9 !a
11:01	MP41455-S2	119.5	83.6	78.3	78.3	72.1	75.3	67.6 !a
11:04	MP41455-PS1	125.9	84.3	79.3	79.1	72.4	75.5	68 !
11:08	ZZZZZZ	121.7	83	78.4	79.4	73.7	77	71
11:12	ZZZZZZ	114.1	83	77.9	79.3	73.5	76.7	70.9
11:16	ZZZZZZ	133.5 !	82.4	76.7	77.2	71.3	74	66.7 !a
11:20	ZZZZZZ	115.4	80.8	75.9	76.2	70.7	74	67.8 !a
11:28	ZZZZZZ	105.3	74.6	75.3	75.5	72.7	77.3	77.3
11:32	FC389-1	107.3	77	77.6	77.7	74.4	78.1	77.3
11:36	ZZZZZZ	110.1	77	77.6	77.9	75.4	78.3	78.9
11:39	MA19039-CCV7	107	76.4	78.2	78.2	75.6	80.2	80.1
11:43	MA19039-CCV8	112.5	75.9	77	78.2	74.9	79.1	78.3
11:47	MA19039-CCB4	111.6	76	77.7	78	75.8	79	80.7
11:51	FA99205-1FR	109	79.9	81.1	81.1	78.6	81	80.8
11:55	MP41455-D1	113.4	82.1	82.9	83.9	79.9	81.6	81.8
11:58	MP41455-SD1	114.4	82.4	84.1	83.7	80.6	81.9	83.9
12:02	MP41455-S1	116.7	81.8	82.8	82.7	78.6	80.8	81
12:06	MP41455-S2	105.5	81.5	82.4	82.5	78.8	81	80.8
12:10	MP41455-PS1	115.4	80.5	81.1	81.4	78	79.7	80
12:13	ZZZZZZ	108.8	82.3	83.4	83.3	79.6	80.9	82
12:17	ZZZZZZ	127.9	81.9	82.6	82.2	79	80.7	81.3
12:21	ZZZZZZ	123.4	81.6	82.3	82.5	78.3	80.8	81
12:25	ZZZZZZ	115	82	81.9	83.3	79.2	80.7	81.3

INTERNAL STANDARD SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
Analyst: DM Run ID: MA19039
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
12:29	MA19039-CCV9	117.2	79.8	80	80.1	76.5	79.8	79.2
12:32	MA19039-CCV10	109.5	78.7	79.3	79.3	75.3	79.1	77.4
12:36	MA19039-CCB5	116	78.5	79.3	79.4	76.1	78.5	79.6
13:01	MA19039-CCV11	108.3	81	81.8	80.8	76.4	79.7	77.4
13:05	MA19039-CCB6	112.7	78.7	78.5	79.1	75.4	77.5	78.5

! = Outside limits.

LEGEND: Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

(a) No sample results reported from this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA19039 Units: ug/l

Time: / Sample ID:			08:51 ICB1		09:14 CCB1		10:04 CCB2		10:53 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0306	<1.0	0.0156	<1.0	0.0164	<1.0	0.0379	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1	anr							
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA19039 Units: ug/l

Time: / Sample ID:			11:47 CCB4		12:36 CCB5	
Metal	RL	IDL	raw	final	raw	final
Aluminum	100	4.4	anr			
Antimony	1.0	.1	anr			
Arsenic	1.0	.1	0.0403	<1.0	0.0226	<1.0
Barium	1.0	.1	anr			
Beryllium	1.0	.1	anr			
Cadmium	1.0	.1	anr			
Calcium	100	7.2	anr			
Chromium	1.0	.1	anr			
Cobalt	1.0	.1	anr			
Copper	1.0	.1	anr			
Iron	100	7.9	anr			
Lead	1.0	.1	anr			
Magnesium	100	5.2	anr			
Manganese	1.0	.1	anr			
Molybdenum	1.0	.1	anr			
Nickel	1.0	.1	anr			
Potassium	100	6.6	anr			
Selenium	1.0	.11	anr			
Silver	1.0	.1	anr			
Sodium	100	4.8	anr			
Strontium	1.0	.1				
Thallium	1.0	.1	anr			
Tin	1.0	.1	anr			
Titanium	1.0	.3				
Vanadium	1.0	.1	anr			
Zinc	2.0	.29	anr			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA19039 Units: ug/l

Time:		08:47			09:07			09:10	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	104	104.0				100	101	101.0
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA19039 Units: ug/l

Time:		09:56			10:00			10:45	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	99.5	99.5			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA19039 Units: ug/l

Time:		10:49			11:39			11:43	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	98.0	98.0				100	98.9	98.9
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA19039 Units: ug/l

Time:		12:29			12:32	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	99.0	99.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA19039 Units: ug/l

Time:		08:40			08:44	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	196	98.0
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA19039 Units: ug/l

Time:			08:55	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.979	97.9
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0	anr	
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0	anr	
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA111122M1.CSV Date Analyzed: 11/11/22 Methods: SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA19039 Units: ug/l

Time:			08:59		09:03	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	104000	104.0	97200	97.2
Antimony			0.0938		0.0886	
Arsenic		20	0.141		19.1	95.5
Barium			0.530		0.510	
Beryllium			0.0316		0.0158	
Cadmium		20	0.609		19.7	98.5
Calcium	100000	100000	103000	103.0	95900	95.9
Chromium		20	2.34		21.9	109.5
Cobalt		20	0.250		20.0	100.0
Copper		20	0.185		19.2	96.0
Iron	100000	100000	107000	107.0	100000	100.0
Lead			0.0200		0.0722	
Magnesium	100000	100000	106000	106.0	99700	99.7
Manganese		20	0.697		20.7	103.5
Molybdenum	2000	2000	2200	110.0	2050	102.5
Nickel		20	0.430		19.5	97.5
Potassium	100000	100000	106000	106.0	99700	99.7
Selenium			0.256		0.165	
Silver		20	0.0422		18.4	92.0
Sodium	100000	100000	109000	109.0	102000	102.0
Strontium			0.855		0.813	
Thallium			0.0167		0.00882	
Tin			0.114		0.0791	
Titanium	2000	2000	2070	103.5	1930	96.5
Vanadium			0.148		0.124	
Zinc		20	0.402		20.5	102.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 11/08/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.20	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 11/08/22 11/08/22

Metal	FA99205-1FR Original	DUP	RPD	QC Limits	FA99205-1FR Original	MS	Spikelot MPICPMS1 % Rec	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	0.0	2.0	200.0(a)	0-20	0.0	233	200 116.5	80-120
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium	anr							
Manganese	anr							
Molybdenum	anr							
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Strontium								
Thallium	anr							
Tin	anr							
Titanium								
Vanadium	anr							
Zinc	anr							

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/08/22

Metal	FA99205-1FR Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.0	234	200	117.0	7.1	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin	anr					
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 11/08/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	231	200	115.5	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/08/22

Metal	FA99205-1FR Original	SDL 2:10	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.00	2.06	NC	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FC389
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41455
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 11/08/22

Metal	Sample ml	Final ml	FA99205-1FR Raw	FA99205-1FR Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41455: FC389-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FC389
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA19039

Instrument Linear Ranges

Job Number: FC389
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA19039

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:04
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.029	ug/l	108.77	3,084.92	2.312E-02	Pulse	0.50	3
As			1	-0.014	ug/l	-45.51	50.67	3.794E-04	Pulse	1.00	3
Mo			1	0.038	ug/l	24.40	188.67	9.455E-04	Pulse	0.50	3
Pb			1	0.005	ug/l	52.05	2,174.48	5.676E-04	Pulse	1.00	3
Be			1	0.012	ug/l	115.47	1.17		Pulse	2.00	3
Ag			1	-0.009	ug/l	-40.83	730.02	3.658E-03	Pulse	0.50	3
Ba			1	0.015	ug/l	33.33	102.67	7.533E-05	Pulse	0.50	3
Tl			1	0.002	ug/l	47.52	134.67	3.517E-05	Pulse	0.50	3
Sn			1	0.022	ug/l	68.70	511.12	3.752E-04	Pulse	0.30	3
Sr			1	-0.001	ug/l	-324.00	481.34	3.533E-04	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-201.85	1,033.37	3.555E-04	Pulse	0.50	3
Ca			1	3.580	ug/l	44.54	533.34	2.578E-03	Pulse	0.50	3
Ti			1	0.073	ug/l	61.63	21.33	1.032E-04	Pulse	0.50	3
Na			1	0.872	ug/l	34.23	14,961.91	1.121E-01	Pulse	1.00	3
Mg			1	0.311	ug/l	39.52	1,834.09	8.865E-03	Pulse	1.00	3
K			1	-0.069	ug/l	-964.25	57,109.04	2.760E-01	Pulse	1.00	3
V			1	-0.005	ug/l	-370.61	1,523.40	7.364E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	444.79	1,750.75	1.312E-02	Pulse	0.50	3
Fe			1	14.095	ug/l	82.07	481,453.85	3.608E+00	Pulse	0.50	3
Co			1	0.001	ug/l	270.86	134.00	1.007E-03	Pulse	0.50	3
Ni			1	0.002	ug/l	996.35	1,869.43	1.401E-02	Pulse	0.50	3
Cu			1	0.032	ug/l	31.57	3,920.41	2.938E-02	Pulse	0.50	3
Zn			1	0.112	ug/l	74.69	2,159.79	1.082E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	109.34	26.00	1.303E-04	Pulse	0.50	3
Al			1	1.058	ug/l	47.57	1,098.03	5.309E-03	Pulse	1.00	3
Se			1	0.077	ug/l	47.33	30.22	1.514E-04	Pulse	3.00	3
Sb			1	0.009	ug/l	53.78	148.00	7.416E-04	Pulse	1.00	3
Se			1	0.191	ug/l	48.54	34.78	1.742E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,906,699.08	0.41	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		206,904.93	0.44	100.0	Pulse	0.30	3
1	Ge		133,436.30	1.32	100.0	Pulse	0.30	3
1	In		1,362,496.82	0.47	100.0	Pulse	0.30	3
1	Tb		3,830,707.67	0.40	100.0	Pulse	0.50	3
1	Lu		2,943,551.33	0.23	100.0	Pulse	0.50	3
1	Ge		199,600.40	0.27	100.0	Pulse	0.30	3
1	Te		1.33	173.21	100.0	Pulse	0.50	3
1	Li		671.13	5.26	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 8:08
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.003	ug/l	-361.30	2,865.55	2.134E-02	Pulse	0.50	3
As			1	-0.006	ug/l	-67.93	59.00	4.393E-04	Pulse	1.00	3
Mo			1	0.002	ug/l	66.84	40.00	2.001E-04	Pulse	0.50	3
Pb			1	-0.002	ug/l	-299.19	2,029.13	5.293E-04	Pulse	1.00	3
Be			1	0.000	ug/l	1181192048408040000.00	0.67		Pulse	2.00	3
Ag			1	0.002	ug/l	118.62	880.69	4.406E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	288.90	72.67	5.302E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	321.51	65.33	1.704E-05	Pulse	0.50	3
Sn			1	-0.018	ug/l	-48.56	315.56	2.303E-04	Pulse	0.30	3
Sr			1	-0.008	ug/l	-149.33	444.01	3.244E-04	Pulse	0.50	3
[Pb]			1	-0.008	ug/l	-25.18	953.70	3.291E-04	Pulse	0.50	3
Ca			1	0.282	ug/l	542.97	439.34	2.111E-03	Pulse	0.50	3
Ti			1	0.066	ug/l	26.93	20.00	9.625E-05	Pulse	0.50	3
Na			1	0.263	ug/l	36.11	14,336.79	1.068E-01	Pulse	1.00	3
Mg			1	0.085	ug/l	137.49	1,709.07	8.218E-03	Pulse	1.00	3
K			1	-0.018	ug/l	-3497.26	57,442.67	2.762E-01	Pulse	1.00	3
V			1	-0.006	ug/l	-290.06	1,526.07	7.339E-03	Pulse	0.50	3
Mn			1	-0.009	ug/l	-82.74	1,698.75	1.265E-02	Pulse	0.50	3
Fe			1	0.627	ug/l	33.10	398,660.02	2.969E+00	Pulse	0.50	3
Co			1	0.002	ug/l	88.71	140.67	1.048E-03	Pulse	0.50	3
Ni			1	0.002	ug/l	1530.24	1,880.10	1.400E-02	Pulse	0.50	3
Cu			1	-0.015	ug/l	-131.05	3,557.68	2.650E-02	Pulse	0.50	3
Zn			1	-0.075	ug/l	-11.66	1,898.43	9.497E-03	Pulse	1.00	3
Cd			1	0.006	ug/l	117.27	33.33	1.670E-04	Pulse	0.50	3
Al			1	0.052	ug/l	281.31	844.35	4.060E-03	Pulse	1.00	3
Se			1	0.092	ug/l	41.37	31.33	1.568E-04	Pulse	3.00	3
Sb			1	0.001	ug/l	287.96	98.00	4.901E-04	Pulse	1.00	3
Se			1	0.008	ug/l	480.21	28.22	1.412E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,897,476.58	0.08	100.0	Pulse	0.50	3
1	Sc		208,005.67	0.83	100.0	Pulse	0.30	3
1	Ge		134,275.78	0.32	100.0	Pulse	0.30	3
1	In		1,369,773.42	0.76	100.0	Pulse	0.30	3
1	Tb		3,833,200.75	0.09	100.0	Pulse	0.50	3
1	Lu		2,958,520.25	0.11	100.0	Pulse	0.50	3
1	Ge		199,888.19	0.63	100.0	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		768.91	13.27	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 8:12
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	2,907.56	2.151E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	65.00	4.812E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	31.33	1.553E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	2,070.80	5.382E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.67		Pulse	2.00	3
Ag			1	0.000	ug/l	---	858.02	4.251E-03	Pulse	0.50	3
Ba			1	0.000	ug/l	---	69.33	5.060E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	58.67	1.525E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	404.45	2.951E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	492.68	3.594E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	1,049.37	3.612E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	434.01	2.071E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	---	6.67	3.179E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	14,118.31	1.044E-01	Pulse	1.00	3
Mg			1	0.000	ug/l	---	1,671.41	7.975E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	57,890.25	2.762E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,575.40	7.517E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	1,752.09	1.296E-02	Pulse	0.50	3
Fe			1	0.000	ug/l	---	397,319.37	2.939E+00	Pulse	0.50	3
Co			1	0.000	ug/l	---	118.67	8.781E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	1,886.77	1.396E-02	Pulse	0.50	3
Cu			1	0.000	ug/l	---	3,708.37	2.743E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,024.11	1.003E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	21.33	1.057E-04	Pulse	0.50	3
Al			1	0.000	ug/l	---	837.35	3.995E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	24.67	1.222E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	92.67	4.591E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	28.22	1.398E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,905,637.08	0.33	100.0	Pulse	0.50	3
1	Sc		209,585.40	0.22	100.0	Pulse	0.30	3
1	Ge		135,179.55	0.58	100.0	Pulse	0.30	3
1	In		1,370,764.95	0.21	100.0	Pulse	0.30	3
1	Tb		3,847,203.42	0.49	100.0	Pulse	0.50	3
1	Lu		2,965,385.92	0.12	100.0	Pulse	0.50	3
1	Ge		201,836.94	0.13	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		793.35	7.39	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:16
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.502	ug/l	6.35	6,671.83	4.953E-02	Pulse	0.50	3
As			1	0.494	ug/l	3.31	566.01	4.201E-03	Pulse	1.00	3
Mo			1	0.499	ug/l	2.60	2,120.13	1.046E-02	Pulse	0.50	3
Pb			1	0.513	ug/l	1.02	13,643.11	3.548E-03	Pulse	1.00	3
Be			1	0.501	ug/l	16.08	21.83		Pulse	2.00	3
Ag			1	0.511	ug/l	1.90	7,913.71	3.903E-02	Pulse	0.50	3
Ba			1	0.510	ug/l	1.13	1,207.38	8.758E-04	Pulse	0.50	3
Tl			1	0.500	ug/l	1.08	16,440.57	4.275E-03	Pulse	0.50	3
Sn			1	0.493	ug/l	3.59	2,866.91	2.080E-03	Pulse	0.30	3
Sr			1	0.491	ug/l	0.77	3,396.32	2.464E-03	Pulse	0.50	3
[Pb]			1	0.490	ug/l	3.85	6,471.91	2.236E-03	Pulse	0.50	3
Ca			1	50.875	ug/l	5.29	1,948.77	9.268E-03	Pulse	0.50	3
Ti			1	0.466	ug/l	3.94	102.67	4.882E-04	Pulse	0.50	3
Na			1	49.648	ug/l	1.48	73,199.35	5.433E-01	Pulse	1.00	3
Mg			1	51.058	ug/l	0.90	32,396.74	1.541E-01	Pulse	1.00	3
K			1	52.300	ug/l	0.33	89,089.67	4.237E-01	Pulse	1.00	3
V			1	0.515	ug/l	4.62	4,715.25	2.243E-02	Pulse	0.50	3
Mn			1	0.530	ug/l	6.66	4,104.45	3.047E-02	Pulse	0.50	3
Fe			1	51.504	ug/l	1.36	725,475.25	5.385E+00	Pulse	0.50	3
Co			1	0.513	ug/l	1.77	6,120.99	4.543E-02	Pulse	0.50	3
Ni			1	0.533	ug/l	2.59	3,526.33	2.617E-02	Pulse	0.50	3
Cu			1	0.541	ug/l	6.50	8,148.41	6.049E-02	Pulse	0.50	3
Zn			1	0.588	ug/l	4.28	2,873.55	1.417E-02	Pulse	1.00	3
Cd			1	0.522	ug/l	2.98	1,132.04	5.584E-03	Pulse	0.50	3
Al			1	50.594	ug/l	1.64	14,048.26	6.682E-02	Pulse	1.00	3
Se			1	0.499	ug/l	18.90	62.89	3.104E-04	Pulse	3.00	3
Sb			1	0.502	ug/l	2.53	3,415.99	1.684E-02	Pulse	1.00	3
Se			1	0.484	ug/l	20.57	46.00	2.267E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,893,990.00	0.47	99.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		210,265.18	0.80	100.3	Pulse	0.30	3
1	Ge		134,728.52	0.49	99.7	Pulse	0.30	3
1	In		1,378,636.44	0.31	100.6	Pulse	0.30	3
1	Tb		3,845,854.58	0.25	100.0	Pulse	0.50	3
1	Lu		2,960,053.83	0.37	99.8	Pulse	0.50	3
1	Ge		202,784.73	1.34	100.5	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		845.58	9.53	106.6	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:20
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.013	ug/l	0.59	10,591.56	7.809E-02	Pulse	0.50	3
As			1	0.989	ug/l	4.47	1,075.70	7.930E-03	Pulse	1.00	3
Mo			1	1.018	ug/l	1.82	4,306.51	2.117E-02	Pulse	0.50	3
Pb			1	1.029	ug/l	1.60	25,196.17	6.569E-03	Pulse	1.00	3
Be			1	0.978	ug/l	7.26	42.00		Pulse	2.00	3
Ag			1	1.034	ug/l	1.12	15,176.22	7.459E-02	Pulse	0.50	3
Ba			1	1.012	ug/l	2.00	2,325.49	1.689E-03	Pulse	0.50	3
Tl			1	1.014	ug/l	0.56	33,199.42	8.655E-03	Pulse	0.50	3
Sn			1	1.016	ug/l	3.61	5,467.52	3.972E-03	Pulse	0.30	3
Sr			1	0.997	ug/l	1.10	6,373.76	4.630E-03	Pulse	0.50	3
[Pb]			1	1.011	ug/l	1.31	12,181.70	4.232E-03	Pulse	0.50	3
Ca			1	102.164	ug/l	3.10	3,487.66	1.652E-02	Pulse	0.50	3
Ti			1	1.114	ug/l	13.03	236.67	1.122E-03	Pulse	0.50	3
Na			1	99.366	ug/l	1.34	133,296.64	9.828E-01	Pulse	1.00	3
Mg			1	102.076	ug/l	1.01	63,336.48	3.001E-01	Pulse	1.00	3
K			1	103.784	ug/l	1.64	120,076.44	5.689E-01	Pulse	1.00	3
V			1	1.002	ug/l	3.26	7,707.54	3.652E-02	Pulse	0.50	3
Mn			1	1.073	ug/l	3.35	6,565.79	4.841E-02	Pulse	0.50	3
Fe			1	102.353	ug/l	1.94	1,057,779.29	7.799E+00	Pulse	0.50	3
Co			1	1.036	ug/l	2.00	12,314.61	9.079E-02	Pulse	0.50	3
Ni			1	1.082	ug/l	2.13	5,252.73	3.873E-02	Pulse	0.50	3
Cu			1	1.040	ug/l	3.74	12,348.64	9.105E-02	Pulse	0.50	3
Zn			1	0.935	ug/l	9.82	3,379.64	1.661E-02	Pulse	1.00	3
Cd			1	1.013	ug/l	3.87	2,186.14	1.074E-02	Pulse	0.50	3
Al			1	100.855	ug/l	0.47	27,276.56	1.292E-01	Pulse	1.00	3
Se			1	1.113	ug/l	3.11	110.22	5.418E-04	Pulse	3.00	3
Sb			1	1.003	ug/l	3.49	6,757.91	3.321E-02	Pulse	1.00	3
Se			1	0.942	ug/l	17.01	62.89	3.090E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,878,150.00	0.80	99.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		211,079.25	0.82	100.7	Pulse	0.30	3
1	Ge		135,631.52	0.74	100.3	Pulse	0.30	3
1	In		1,376,593.35	0.62	100.4	Pulse	0.30	3
1	Tb		3,835,923.08	0.30	99.7	Pulse	0.50	3
1	Lu		2,962,163.58	0.25	99.9	Pulse	0.50	3
1	Ge		203,458.31	0.48	100.8	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		747.80	6.81	94.3	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:24
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.030	ug/l	0.83	78,447.40	5.818E-01	Pulse	0.50	3
As			1	10.079	ug/l	1.75	10,303.45	7.642E-02	Pulse	1.00	3
Mo			1	9.704	ug/l	0.50	40,826.86	2.005E-01	Pulse	0.50	3
Pb			1	10.033	ug/l	0.35	227,312.48	5.935E-02	Pulse	1.00	3
Be			1	10.296	ug/l	5.36	435.84		Pulse	2.00	3
Ag			1	9.918	ug/l	0.57	138,298.51	6.791E-01	Pulse	0.50	3
Ba			1	9.740	ug/l	1.12	21,753.73	1.582E-02	Pulse	0.50	3
Tl			1	10.012	ug/l	0.30	326,656.56	8.529E-02	Pulse	0.50	3
Sn			1	9.700	ug/l	1.04	48,692.06	3.541E-02	Pulse	0.30	3
Sr			1	9.700	ug/l	0.54	57,640.82	4.191E-02	Pulse	0.50	3
[Pb]			1	9.691	ug/l	0.87	107,666.46	3.747E-02	Pulse	0.50	3
Ca			1	1002.787	ug/l	1.36	30,496.96	1.439E-01	Pulse	0.50	3
Ti			1	9.770	ug/l	0.73	2,033.45	9.596E-03	Pulse	0.50	3
Na			1	987.780	ug/l	0.80	1,191,305.41	8.836E+00	Pulse	1.00	3
Mg			1	1007.605	ug/l	0.64	612,666.61	2.891E+00	Pulse	1.00	3
K			1	1015.346	ug/l	0.32	665,269.13	3.140E+00	Pulse	1.00	3
V			1	9.865	ug/l	0.93	62,103.51	2.931E-01	Pulse	0.50	3
Mn			1	9.764	ug/l	0.88	45,231.04	3.355E-01	Pulse	0.50	3
Fe			1	948.938	ug/l	0.50	6,471,285.00	4.800E+01	Analog	0.50	3
Co			1	10.210	ug/l	0.92	119,609.86	8.872E-01	Pulse	0.50	3
Ni			1	10.313	ug/l	0.67	33,722.61	2.501E-01	Pulse	0.50	3
Cu			1	10.334	ug/l	0.58	88,897.66	6.594E-01	Pulse	0.50	3
Zn			1	9.247	ug/l	1.29	15,298.73	7.513E-02	Pulse	1.00	3
Cd			1	10.081	ug/l	1.61	21,582.59	1.060E-01	Pulse	0.50	3
Al			1	995.935	ug/l	1.03	262,885.92	1.241E+00	Pulse	1.00	3
Se			1	9.903	ug/l	1.21	785.35	3.857E-03	Pulse	3.00	3
Sb			1	9.885	ug/l	0.98	65,801.05	3.231E-01	Pulse	1.00	3
Se			1	9.782	ug/l	3.71	386.23	1.897E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,873,603.08	0.38	98.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		211,904.42	0.60	101.1	Pulse	0.30	3
1	Ge		134,822.67	0.58	99.7	Pulse	0.30	3
1	In		1,375,226.16	0.44	100.3	Pulse	0.30	3
1	Tb		3,830,072.33	0.20	99.6	Pulse	0.50	3
1	Lu		2,964,817.42	0.24	100.0	Pulse	0.50	3
1	Ge		203,641.88	0.57	100.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		790.02	1.84	99.6	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:28
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.241	ug/l	0.45	375,990.24	2.828E+00	Pulse	0.50	3
As			1	50.043	ug/l	0.58	50,189.13	3.775E-01	Pulse	1.00	3
Mo			1	49.470	ug/l	0.29	204,852.22	1.021E+00	Pulse	0.50	3
Pb			1	50.166	ug/l	0.32	1,126,509.21	2.946E-01	Pulse	1.00	3
Be			1	51.795	ug/l	0.26	2,189.79		Pulse	2.00	3
Ag			1	49.805	ug/l	0.27	680,500.44	3.393E+00	Pulse	0.50	3
Ba			1	49.648	ug/l	0.41	107,893.39	8.042E-02	Pulse	0.50	3
Tl			1	49.808	ug/l	0.31	1,622,168.75	4.242E-01	Pulse	0.50	3
Sn			1	49.904	ug/l	0.79	242,751.30	1.809E-01	Pulse	0.30	3
Sr			1	50.178	ug/l	0.74	288,855.26	2.153E-01	Pulse	0.50	3
[Pb]			1	49.406	ug/l	0.74	531,868.88	1.895E-01	Pulse	0.50	3
Ca			1	5016.111	ug/l	0.55	149,710.09	7.117E-01	Pulse	0.50	3
Ti			1	48.959	ug/l	2.20	10,089.29	4.796E-02	Pulse	0.50	3
Na			1	4973.575	ug/l	0.19	5,858,786.00	4.407E+01	Analog	1.00	3
Mg			1	4998.898	ug/l	0.65	3,010,954.00	1.431E+01	Pulse	1.00	3
K			1	5061.721	ug/l	0.48	3,060,971.08	1.455E+01	Pulse	1.00	3
V			1	49.504	ug/l	0.46	303,036.41	1.440E+00	Pulse	0.50	3
Mn			1	50.397	ug/l	1.44	223,039.03	1.678E+00	Pulse	0.50	3
Fe			1	4979.810	ug/l	0.17	31,826,631.33	2.394E+02	Analog	0.50	3
Co			1	50.540	ug/l	0.39	583,328.81	4.388E+00	Pulse	0.50	3
Ni			1	51.124	ug/l	0.35	157,496.64	1.185E+00	Pulse	0.50	3
Cu			1	51.331	ug/l	0.60	420,951.11	3.166E+00	Pulse	0.50	3
Zn			1	50.083	ug/l	0.44	72,718.83	3.626E-01	Pulse	1.00	3
Cd			1	50.250	ug/l	0.41	105,856.70	5.278E-01	Pulse	0.50	3
Al			1	4965.992	ug/l	0.58	1,298,025.29	6.170E+00	Pulse	1.00	3
Se			1	49.916	ug/l	1.07	3,799.38	1.895E-02	Pulse	3.00	3
Sb			1	49.790	ug/l	0.81	326,030.09	1.626E+00	Pulse	1.00	3
Se			1	50.331	ug/l	2.31	1,840.87	9.180E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,806,266.08	0.65	96.6	Pulse	0.50	3
1	Sc		210,375.96	0.77	100.4	Pulse	0.30	3
1	Ge		132,941.54	0.30	98.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,341,644.15	0.71	97.9	Pulse	0.30	3
1	Tb		3,823,774.00	0.74	99.4	Pulse	0.50	3
1	Lu		2,948,879.33	0.67	99.4	Pulse	0.50	3
1	Ge		200,545.74	0.53	99.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		794.47	7.22	100.1	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:32
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.411	ug/l	1.15	731,353.06	5.631E+00	Pulse	0.50	3
As			1	100.630	ug/l	0.79	98,537.10	7.587E-01	Pulse	1.00	3
Mo			1	100.423	ug/l	0.03	402,248.48	2.073E+00	Pulse	0.50	3
Pb			1	100.718	ug/l	0.84	2,192,483.67	5.910E-01	Pulse	1.00	3
Be			1	100.827	ug/l	1.19	4,262.12		Pulse	2.00	3
Ag			1	100.105	ug/l	0.57	1,322,333.75	6.816E+00	Pulse	0.50	3
Ba			1	100.513	ug/l	0.93	211,659.45	1.628E-01	Pulse	0.50	3
Tl			1	100.367	ug/l	0.64	3,171,592.67	8.549E-01	Pulse	0.50	3
Sn			1	99.586	ug/l	0.36	469,207.86	3.608E-01	Pulse	0.30	3
Sr			1	100.505	ug/l	0.44	560,379.87	4.309E-01	Pulse	0.50	3
[Pb]			1	99.931	ug/l	0.45	1,034,208.29	3.830E-01	Pulse	0.50	3
Ca			1	10062.631	ug/l	0.73	290,252.18	1.426E+00	Pulse	0.50	3
Ti			1	100.154	ug/l	1.28	19,968.20	9.807E-02	Pulse	0.50	3
Na			1	10018.783	ug/l	1.09	11,516,471.00	8.867E+01	Analog	1.00	3
Mg			1	10051.274	ug/l	0.73	5,857,881.00	2.877E+01	Analog	1.00	3
K			1	10080.561	ug/l	0.74	5,844,257.83	2.870E+01	Analog	1.00	3
V			1	100.549	ug/l	1.22	594,123.33	2.918E+00	Pulse	0.50	3
Mn			1	100.724	ug/l	0.69	433,836.67	3.340E+00	Pulse	0.50	3
Fe			1	10032.620	ug/l	1.24	62,255,238.67	4.793E+02	Analog	0.50	3
Co			1	101.044	ug/l	0.93	1,139,291.34	8.772E+00	Pulse	0.50	3
Ni			1	101.159	ug/l	1.01	302,687.49	2.330E+00	Pulse	0.50	3
Cu			1	101.425	ug/l	1.47	809,092.12	6.230E+00	Pulse	0.50	3
Zn			1	101.933	ug/l	0.12	141,161.94	7.276E-01	Pulse	1.00	3
Cd			1	100.954	ug/l	0.21	205,716.70	1.060E+00	Pulse	0.50	3
Al			1	10101.188	ug/l	0.66	2,554,559.08	1.255E+01	Pulse	1.00	3
Se			1	100.585	ug/l	0.57	7,382.65	3.805E-02	Pulse	3.00	3
Sb			1	100.734	ug/l	0.25	638,029.33	3.289E+00	Pulse	1.00	3
Se			1	100.343	ug/l	0.67	3,523.66	1.816E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,700,427.50	0.42	92.9	Pulse	0.50	3
1	Sc		203,613.56	0.72	97.2	Pulse	0.30	3
1	Ge		129,893.33	1.44	96.1	Pulse	0.30	3
1	In		1,300,552.03	1.01	94.9	Pulse	0.30	3
1	Tb		3,710,128.08	0.19	96.4	Pulse	0.50	3
1	Lu		2,885,825.75	0.17	97.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		194,004.82	0.41	96.1	Pulse	0.30	3
1	Te		5.33	78.06		Pulse	0.50	3
1	Li		761.13	9.80	95.9	Pulse	0.30	3

Quantitation Report

File Name 009CALS.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:36
Sample Name CALSTD-7
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.733	ug/l	0.34	1,408,345.79	1.118E+01	Pulse	0.50	3
As			1	199.670	ug/l	0.80	189,569.75	1.505E+00	Pulse	1.00	3
Mo			1	199.936	ug/l	0.54	781,383.67	4.128E+00	Pulse	0.50	3
Pb			1	199.598	ug/l	0.11	4,224,287.00	1.171E+00	Pulse	1.00	3
Be			1	199.123	ug/l	0.83	8,416.58		Pulse	2.00	3
Ag			1	141.903	ug/l	0.52	1,828,610.04	9.660E+00	Pulse	0.50	3
Ba			1	199.844	ug/l	0.47	404,918.41	3.235E-01	Pulse	0.50	3
Tl			1	199.864	ug/l	0.67	6,142,961.50	1.702E+00	Pulse	0.50	3
Sn			1	200.246	ug/l	0.56	907,524.17	7.252E-01	Pulse	0.30	3
Sr			1	199.718	ug/l	0.48	1,071,145.71	8.559E-01	Pulse	0.50	3
[Pb]			1	200.198	ug/l	0.46	1,986,871.38	7.669E-01	Pulse	0.50	3
Ca			1	19964.504	ug/l	1.39	559,876.75	2.826E+00	Pulse	0.50	3
Ti			1	200.194	ug/l	1.87	38,827.02	1.960E-01	Pulse	0.50	3
Na			1	19997.830	ug/l	0.66	22,282,526.67	1.769E+02	Analog	1.00	3
Mg			1	19974.245	ug/l	1.01	11,324,812.33	5.717E+01	Analog	1.00	3
K			1	19943.497	ug/l	0.65	11,196,706.33	5.652E+01	Analog	1.00	3
V			1	199.857	ug/l	1.18	1,147,544.92	5.793E+00	Pulse	0.50	3
Mn			1	199.550	ug/l	0.30	832,008.29	6.605E+00	Pulse	0.50	3
Fe			1	19991.275	ug/l	0.18	119,954,680.00	9.522E+02	Analog	0.50	3
Co			1	199.332	ug/l	0.24	2,179,776.33	1.730E+01	Pulse	0.50	3
Ni			1	199.123	ug/l	0.39	576,193.71	4.574E+00	Pulse	0.50	3
Cu			1	198.938	ug/l	0.45	1,535,965.67	1.219E+01	Pulse	0.50	3
Zn			1	199.051	ug/l	0.25	267,156.66	1.411E+00	Pulse	1.00	3
Cd			1	199.456	ug/l	0.23	396,548.41	2.095E+00	Pulse	0.50	3
Al			1	19958.105	ug/l	1.29	4,910,041.83	2.479E+01	Mix	1.00	3
Se			1	199.733	ug/l	0.91	14,281.10	7.544E-02	Pulse	3.00	3
Sb			1	199.691	ug/l	0.44	1,234,006.17	6.519E+00	Pulse	1.00	3
Se			1	199.757	ug/l	2.11	6,818.00	3.602E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,590,832.33	0.55	89.2	Pulse	0.50	3
1	Sc		198,122.53	1.34	94.5	Pulse	0.30	3
1	Ge		125,975.25	0.65	93.2	Pulse	0.30	3
1	In		1,251,512.80	0.72	91.3	Pulse	0.30	3
1	Tb		3,608,704.67	0.24	93.8	Pulse	0.50	3
1	Lu		2,789,444.25	0.73	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		189,295.88	0.34	93.8	Pulse	0.30	3
1	Te		12.67	79.47		Pulse	0.50	3
1	Li		707.79	3.53	89.2	Pulse	0.30	3

Quantitation Report

File Name 010HSAG.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:40
Sample Name HSTD (Ag)
Sample Type HSTD _Ag
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.896	ug/l	1.50	703,559.85	5.602E+00	Pulse	0.50	3
As			1	99.400	ug/l	0.39	94,117.20	7.494E-01	Pulse	1.00	3
Mo			1	99.242	ug/l	0.24	387,190.91	2.049E+00	Pulse	0.50	3
Pb			1	99.609	ug/l	0.41	2,108,252.83	5.844E-01	Pulse	1.00	3
Be			1	99.478	ug/l	0.83	4,205.10		Pulse	2.00	3
Ag			1	98.839	ug/l	0.22	1,271,687.34	6.730E+00	Pulse	0.50	3
Ba			1	99.548	ug/l	0.44	201,792.31	1.612E-01	Pulse	0.50	3
Tl			1	99.629	ug/l	0.36	3,060,982.42	8.486E-01	Pulse	0.50	3
Sn			1	99.339	ug/l	1.01	450,534.32	3.599E-01	Pulse	0.30	3
Sr			1	99.505	ug/l	0.64	534,054.27	4.266E-01	Pulse	0.50	3
[Pb]			1	98.749	ug/l	0.44	991,019.06	3.785E-01	Pulse	0.50	3
Ca			1	9923.831	ug/l	0.22	278,167.18	1.406E+00	Pulse	0.50	3
Ti			1	98.799	ug/l	0.77	19,142.03	9.675E-02	Pulse	0.50	3
Na			1	10027.574	ug/l	0.90	11,145,684.67	8.875E+01	Analog	1.00	3
Mg			1	9978.893	ug/l	0.24	5,651,512.83	2.856E+01	Analog	1.00	3
K			1	9959.706	ug/l	0.43	5,611,701.50	2.836E+01	Analog	1.00	3
V			1	99.101	ug/l	0.86	569,066.96	2.876E+00	Pulse	0.50	3
Mn			1	99.758	ug/l	1.79	415,463.92	3.308E+00	Pulse	0.50	3
Fe			1	10020.128	ug/l	1.36	60,123,138.67	4.787E+02	Analog	0.50	3
Co			1	99.913	ug/l	1.41	1,089,280.12	8.674E+00	Pulse	0.50	3
Ni			1	100.545	ug/l	1.53	290,911.89	2.316E+00	Pulse	0.50	3
Cu			1	100.112	ug/l	1.13	772,296.92	6.149E+00	Pulse	0.50	3
Zn			1	100.110	ug/l	0.37	135,069.83	7.148E-01	Pulse	1.00	3
Cd			1	99.303	ug/l	0.39	197,093.40	1.043E+00	Pulse	0.50	3
Al			1	9962.957	ug/l	0.55	2,448,471.08	1.237E+01	Pulse	1.00	3
Se			1	99.168	ug/l	0.35	7,089.65	3.752E-02	Pulse	3.00	3
Sb			1	98.923	ug/l	0.56	610,284.48	3.230E+00	Pulse	1.00	3
Se			1	99.645	ug/l	1.07	3,408.42	1.804E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,618,546.08	0.50	90.1	Pulse	0.50	3
1	Sc		197,858.27	0.66	94.4	Pulse	0.30	3
1	Ge		125,592.81	0.58	92.9	Pulse	0.30	3
1	In		1,251,870.16	0.32	91.3	Pulse	0.30	3
1	Tb		3,607,237.92	0.35	93.8	Pulse	0.50	3
1	Lu		2,801,233.83	0.52	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		188,962.76	0.45	93.6	Pulse	0.30	3
1	Te		3.33	91.65		Pulse	0.50	3
1	Li		801.13	1.27	101.0	Pulse	0.30	3

Quantitation Report

File Name	011HSTD.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 8:44
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	196.434	ug/l	1.43	1,374,709.12	1.100E+01	Pulse	0.50	3
As			1	195.766	ug/l	0.32	184,475.66	1.475E+00	Pulse	1.00	3
Mo			1	199.613	ug/l	1.19	762,877.02	4.121E+00	Pulse	0.50	3
Pb			1	196.634	ug/l	0.84	4,107,253.00	1.153E+00	Pulse	1.00	3
Be			1	195.635	ug/l	0.39	8,269.18		Pulse	2.00	3
Ag			1	139.948	ug/l	0.64	1,763,590.21	9.527E+00	Pulse	0.50	3
Ba			1	198.549	ug/l	0.61	394,219.13	3.215E-01	Pulse	0.50	3
Tl			1	196.666	ug/l	0.62	5,965,728.67	1.675E+00	Pulse	0.50	3
Sn			1	197.695	ug/l	1.42	877,993.09	7.159E-01	Pulse	0.30	3
Sr			1	197.450	ug/l	0.57	1,037,730.19	8.462E-01	Pulse	0.50	3
[Pb]			1	198.983	ug/l	1.01	1,940,247.42	7.622E-01	Pulse	0.50	3
Ca			1	19595.830	ug/l	1.65	545,414.10	2.774E+00	Pulse	0.50	3
Ti			1	194.735	ug/l	2.54	37,483.77	1.907E-01	Pulse	0.50	3
Na			1	19780.239	ug/l	0.64	21,875,152.67	1.750E+02	Analog	1.00	3
Mg			1	19716.017	ug/l	1.29	11,094,327.67	5.643E+01	Analog	1.00	3
K			1	19725.694	ug/l	0.63	10,991,866.00	5.590E+01	Analog	1.00	3
V			1	196.036	ug/l	1.29	1,117,182.83	5.682E+00	Pulse	0.50	3
Mn			1	197.763	ug/l	1.22	818,374.61	6.546E+00	Pulse	0.50	3
Fe			1	19855.072	ug/l	1.40	118,243,373.33	9.457E+02	Analog	0.50	3
Co			1	196.490	ug/l	1.60	2,132,518.25	1.706E+01	Pulse	0.50	3
Ni			1	196.432	ug/l	1.23	564,156.96	4.512E+00	Pulse	0.50	3
Cu			1	195.675	ug/l	1.14	1,499,486.33	1.199E+01	Pulse	0.50	3
Zn			1	199.451	ug/l	0.76	261,777.30	1.414E+00	Pulse	1.00	3
Cd			1	197.794	ug/l	1.18	384,549.00	2.077E+00	Pulse	0.50	3
Al			1	19638.597	ug/l	1.60	4,795,123.50	2.439E+01	Pulse	1.00	3
Se			1	197.856	ug/l	0.12	13,834.66	7.473E-02	Pulse	3.00	3
Sb			1	198.183	ug/l	1.05	1,197,619.88	6.470E+00	Pulse	1.00	3
Se			1	198.471	ug/l	1.32	6,624.49	3.579E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,545,408.83	0.32	87.6	Pulse	0.50	3
1	Sc		196,632.52	1.07	93.8	Pulse	0.30	3
1	Ge		125,032.73	0.71	92.5	Pulse	0.30	3
1	In		1,226,380.30	0.29	89.5	Pulse	0.30	3
1	Tb		3,561,503.67	0.37	92.6	Pulse	0.50	3
1	Lu		2,750,236.67	0.23	92.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,115.84	0.56	91.7	Pulse	0.30	3
1	Te		14.00	37.80		Pulse	0.50	3
1	Li		781.13	7.02	98.5	Pulse	0.30	3

Quantitation Report

File Name 012_ICV.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:47
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	103.859	ug/l	1.36	726,825.06	5.824E+00	Pulse	0.50	3
As			1	104.318	ug/l	0.96	98,154.91	7.864E-01	Pulse	1.00	3
Mo			1	105.041	ug/l	1.34	402,855.73	2.169E+00	Pulse	0.50	3
Pb			1	103.620	ug/l	0.48	2,161,901.92	6.080E-01	Pulse	1.00	3
Be			1	103.501	ug/l	0.93	4,375.14		Pulse	2.00	3
Ag			1	48.327	ug/l	0.21	611,658.29	3.293E+00	Pulse	0.50	3
Ba			1	99.677	ug/l	1.23	199,218.38	1.614E-01	Pulse	0.50	3
Tl			1	103.025	ug/l	0.61	3,120,322.58	8.775E-01	Pulse	0.50	3
Sn			1	97.151	ug/l	1.51	434,438.98	3.520E-01	Pulse	0.30	3
Sr			1	103.917	ug/l	0.62	549,895.54	4.455E-01	Pulse	0.50	3
[Pb]			1	102.670	ug/l	0.57	1,015,340.00	3.935E-01	Pulse	0.50	3
Ca			1	9824.771	ug/l	1.24	273,389.73	1.392E+00	Pulse	0.50	3
Ti			1	101.348	ug/l	1.28	19,493.07	9.924E-02	Pulse	0.50	3
Na			1	10406.686	ug/l	1.34	11,494,270.00	9.210E+01	Analog	1.00	3
Mg			1	10658.468	ug/l	1.03	5,992,379.00	3.051E+01	Analog	1.00	3
K			1	10242.795	ug/l	0.90	5,727,788.17	2.916E+01	Analog	1.00	3
V			1	102.829	ug/l	1.34	586,124.27	2.984E+00	Pulse	0.50	3
Mn			1	103.960	ug/l	1.60	430,195.96	3.447E+00	Pulse	0.50	3
Fe			1	10255.258	ug/l	1.63	61,140,749.33	4.899E+02	Analog	0.50	3
Co			1	104.419	ug/l	1.65	1,131,291.87	9.065E+00	Pulse	0.50	3
Ni			1	103.591	ug/l	1.22	297,805.80	2.386E+00	Pulse	0.50	3
Cu			1	104.583	ug/l	1.82	801,581.00	6.423E+00	Pulse	0.50	3
Zn			1	104.874	ug/l	0.72	139,008.96	7.483E-01	Pulse	1.00	3
Cd			1	103.818	ug/l	0.52	202,559.52	1.090E+00	Pulse	0.50	3
Al			1	10281.263	ug/l	1.13	2,508,283.58	1.277E+01	Pulse	1.00	3
Se			1	103.854	ug/l	1.11	7,297.84	3.929E-02	Pulse	3.00	3
Sb			1	103.583	ug/l	0.84	628,191.86	3.382E+00	Pulse	1.00	3
Se			1	103.445	ug/l	1.26	3,477.54	1.872E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,580,420.92	0.45	88.8	Pulse	0.50	3
1	Sc		196,426.10	0.61	93.7	Pulse	0.30	3
1	Ge		124,812.32	0.85	92.3	Pulse	0.30	3
1	In		1,234,326.09	0.39	90.0	Pulse	0.30	3
1	Tb		3,555,945.33	0.33	92.4	Pulse	0.50	3
1	Lu		2,743,599.58	0.19	92.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,762.94	0.78	92.0	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		903.36	5.80	113.9	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 8:51
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.045	ug/l	29.23	3,006.24	2.404E-02	Pulse	0.50	3
As			1	0.031	ug/l	27.22	89.00	7.117E-04	Pulse	1.00	3
Mo			1	0.123	ug/l	26.93	504.68	2.702E-03	Pulse	0.50	3
Pb			1	0.032	ug/l	12.52	2,580.87	7.271E-04	Pulse	1.00	3
Be			1	0.087	ug/l	77.54	4.33		Pulse	2.00	3
Ag			1	0.012	ug/l	49.37	944.03	5.053E-03	Pulse	0.50	3
Ba			1	0.019	ug/l	29.41	102.67	8.143E-05	Pulse	0.50	3
Tl			1	0.050	ug/l	17.99	1,574.08	4.436E-04	Pulse	0.50	3
Sn			1	0.132	ug/l	13.64	975.59	7.735E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	111.31	488.01	3.869E-04	Pulse	0.50	3
[Pb]			1	0.022	ug/l	43.36	1,189.38	4.455E-04	Pulse	0.50	3
Ca			1	0.750	ug/l	257.66	432.01	2.177E-03	Pulse	0.50	3
Ti			1	0.022	ug/l	94.24	10.67	5.369E-05	Pulse	0.50	3
Na			1	4.855	ug/l	16.67	18,428.80	1.474E-01	Pulse	1.00	3
Mg			1	1.035	ug/l	35.91	2,169.46	1.094E-02	Pulse	1.00	3
K			1	2.857	ug/l	8.10	56,367.88	2.843E-01	Pulse	1.00	3
V			1	0.015	ug/l	100.93	1,578.74	7.963E-03	Pulse	0.50	3
Mn			1	0.042	ug/l	61.48	1,793.43	1.434E-02	Pulse	0.50	3
Fe			1	4.446	ug/l	20.39	393,991.14	3.150E+00	Pulse	0.50	3
Co			1	0.020	ug/l	30.47	332.00	2.655E-03	Pulse	0.50	3
Ni			1	0.035	ug/l	69.85	1,844.76	1.475E-02	Pulse	0.50	3
Cu			1	0.053	ug/l	23.15	3,836.39	3.068E-02	Pulse	0.50	3
Zn			1	-0.042	ug/l	-32.43	1,818.09	9.733E-03	Pulse	1.00	3
Cd			1	0.027	ug/l	45.51	72.67	3.889E-04	Pulse	0.50	3
Al			1	1.044	ug/l	8.20	1,049.36	5.292E-03	Pulse	1.00	3
Se			1	0.144	ug/l	63.93	33.00	1.767E-04	Pulse	3.00	3
Sb			1	0.059	ug/l	7.61	446.68	2.391E-03	Pulse	1.00	3
Se			1	0.199	ug/l	43.65	32.78	1.755E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,670,473.67	0.50	91.9	Pulse	0.50	3
1	Sc		198,286.40	0.80	94.6	Pulse	0.30	3
1	Ge		125,061.37	0.29	92.5	Pulse	0.30	3
1	In		1,261,182.66	0.45	92.0	Pulse	0.30	3
1	Tb		3,549,784.00	0.56	92.3	Pulse	0.50	3
1	Lu		2,721,831.50	0.32	91.8	Pulse	0.50	3
1	Ge		186,802.61	0.21	92.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		816.69	7.49	102.9	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:55
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.046	ug/l	1.25	10,146.66	7.992E-02	Pulse	0.50	3
As			1	0.979	ug/l	5.49	997.69	7.857E-03	Pulse	1.00	3
Mo			1	1.056	ug/l	4.08	4,149.14	2.195E-02	Pulse	0.50	3
Pb			1	1.057	ug/l	0.97	24,153.00	6.736E-03	Pulse	1.00	3
Be			1	1.037	ug/l	7.98	44.50		Pulse	2.00	3
Ag			1	1.037	ug/l	2.96	14,148.76	7.483E-02	Pulse	0.50	3
Ba			1	0.980	ug/l	1.58	2,094.13	1.638E-03	Pulse	0.50	3
Tl			1	1.034	ug/l	1.27	31,622.47	8.820E-03	Pulse	0.50	3
Sn			1	1.091	ug/l	4.53	5,427.51	4.244E-03	Pulse	0.30	3
Sr			1	1.004	ug/l	0.56	5,956.96	4.659E-03	Pulse	0.50	3
[Pb]			1	1.004	ug/l	2.43	11,308.42	4.205E-03	Pulse	0.50	3
Ca			1	103.437	ug/l	1.69	3,343.63	1.670E-02	Pulse	0.50	3
Ti			1	0.923	ug/l	5.47	187.33	9.358E-04	Pulse	0.50	3
Na			1	105.972	ug/l	1.34	132,195.52	1.041E+00	Pulse	1.00	3
Mg			1	104.673	ug/l	0.80	61,555.98	3.075E-01	Pulse	1.00	3
K			1	105.640	ug/l	1.00	114,926.76	5.741E-01	Pulse	1.00	3
V			1	1.017	ug/l	1.55	7,396.09	3.695E-02	Pulse	0.50	3
Mn			1	1.045	ug/l	3.58	6,027.62	4.748E-02	Pulse	0.50	3
Fe			1	103.717	ug/l	1.50	998,445.48	7.864E+00	Pulse	0.50	3
Co			1	1.056	ug/l	1.72	11,752.26	9.257E-02	Pulse	0.50	3
Ni			1	1.037	ug/l	3.05	4,787.94	3.771E-02	Pulse	0.50	3
Cu			1	1.048	ug/l	2.04	11,618.19	9.151E-02	Pulse	0.50	3
Zn			1	1.013	ug/l	8.30	3,244.61	1.716E-02	Pulse	1.00	3
Cd			1	1.031	ug/l	5.11	2,068.12	1.093E-02	Pulse	0.50	3
Al			1	102.140	ug/l	1.57	26,187.45	1.308E-01	Pulse	1.00	3
Se			1	1.109	ug/l	11.92	102.11	5.405E-04	Pulse	3.00	3
Sb			1	1.035	ug/l	1.54	6,472.48	3.423E-02	Pulse	1.00	3
Se			1	1.168	ug/l	7.79	66.11	3.495E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,689,122.00	0.37	92.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		200,177.61	0.09	95.5	Pulse	0.30	3
1	Ge		126,962.94	0.59	93.9	Pulse	0.30	3
1	In		1,278,710.75	0.36	93.3	Pulse	0.30	3
1	Tb		3,585,418.08	0.47	93.2	Pulse	0.50	3
1	Lu		2,748,423.00	0.93	92.7	Pulse	0.50	3
1	Ge		189,083.83	1.39	93.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		898.92	18.55	113.3	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 8:59
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.339	ug/l	2.10	18,110.42	1.522E-01	Pulse	0.50	3
As			1	0.141	ug/l	7.20	184.00	1.546E-03	Pulse	1.00	3
Mo			1	2197.294	ug/l	0.76	7,874,618.83	4.536E+01	Analog	0.50	3
Pb			1	0.020	ug/l	71.09	2,169.81	6.554E-04	Pulse	1.00	3
Be			1	0.032	ug/l	0.00	2.00		Pulse	2.00	3
Ag			1	0.042	ug/l	18.00	1,236.71	7.120E-03	Pulse	0.50	3
Ba			1	0.530	ug/l	1.77	1,026.70	9.085E-04	Pulse	0.50	3
Tl			1	0.017	ug/l	22.60	520.68	1.575E-04	Pulse	0.50	3
Sn			1	0.114	ug/l	24.43	801.13	7.086E-04	Pulse	0.30	3
Sr			1	0.855	ug/l	2.17	4,543.90	4.021E-03	Pulse	0.50	3
[Pb]			1	0.027	ug/l	75.22	1,076.71	4.631E-04	Pulse	0.50	3
Ca			1	102695.901	ug/l	0.15	2,748,718.17	1.453E+01	Pulse	0.50	3
Ti			1	2069.277	ug/l	0.39	383,232.46	2.026E+00	Pulse	0.50	3
Na			1	108685.372	ug/l	0.56	114,331,274.67	9.609E+02	Analog	1.00	3
Mg			1	105709.681	ug/l	0.31	57,229,530.67	3.025E+02	Analog	1.00	3
K			1	106143.470	ug/l	0.43	56,679,010.67	2.996E+02	Analog	1.00	3
V			1	0.148	ug/l	12.56	2,232.14	1.180E-02	Pulse	0.50	3
Mn			1	0.697	ug/l	4.00	4,281.15	3.598E-02	Pulse	0.50	3
Fe			1	106894.128	ug/l	0.73	604,303,872.00	5.079E+03	Analog	0.50	3
Co			1	0.250	ug/l	1.89	2,686.86	2.258E-02	Pulse	0.50	3
Ni			1	0.430	ug/l	3.82	2,833.55	2.381E-02	Pulse	0.50	3
Cu			1	0.185	ug/l	12.56	4,613.90	3.878E-02	Pulse	0.50	3
Zn			1	0.402	ug/l	10.89	2,231.80	1.286E-02	Pulse	1.00	3
Cd			1	0.609	ug/l	6.03	1,128.71	6.505E-03	Pulse	0.50	3
Al			1	103948.959	ug/l	0.25	24,419,059.33	1.291E+02	Analog	1.00	3
Se			1	0.256	ug/l	10.59	38.00	2.188E-04	Pulse	3.00	3
Sb			1	0.094	ug/l	3.72	611.01	3.520E-03	Pulse	1.00	3
Se			1	0.222	ug/l	75.06	31.22	1.796E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,322,532.08	1.11	79.9	Pulse	0.50	3
1	Sc		189,183.59	0.72	90.3	Pulse	0.30	3
1	Ge		118,985.46	0.22	88.0	Pulse	0.30	3
1	In		1,130,168.78	0.64	82.4	Pulse	0.30	3
1	Tb		3,308,876.42	0.74	86.0	Pulse	0.50	3
1	Lu		2,567,657.75	0.54	86.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		173,594.76	1.20	86.0	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		750.02	6.93	94.5	Pulse	0.30	3

Quantitation Report

File Name 016ICSB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:03
Sample Name ICSAB
Sample Type ICSAB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.885	ug/l	0.56	148,726.96	1.244E+00	Pulse	0.50	3
As			1	19.138	ug/l	0.66	17,293.80	1.447E-01	Pulse	1.00	3
Mo			1	2052.601	ug/l	0.27	7,402,022.50	4.238E+01	Analog	0.50	3
Pb			1	0.072	ug/l	10.52	3,194.31	9.617E-04	Pulse	1.00	3
Be			1	0.016	ug/l	156.12	1.33		Pulse	2.00	3
Ag			1	18.370	ug/l	0.64	219,080.52	1.254E+00	Pulse	0.50	3
Ba			1	0.510	ug/l	2.07	981.36	8.763E-04	Pulse	0.50	3
Tl			1	0.009	ug/l	1.67	300.00	9.034E-05	Pulse	0.50	3
Sn			1	0.079	ug/l	17.88	651.13	5.813E-04	Pulse	0.30	3
Sr			1	0.813	ug/l	3.07	4,301.84	3.841E-03	Pulse	0.50	3
[Pb]			1	0.065	ug/l	18.18	1,418.73	6.085E-04	Pulse	0.50	3
Ca			1	95935.876	ug/l	0.49	2,560,118.92	1.357E+01	Pulse	0.50	3
Ti			1	1934.465	ug/l	0.88	357,201.31	1.894E+00	Pulse	0.50	3
Na			1	102053.883	ug/l	0.40	107,854,789.33	9.023E+02	Analog	1.00	3
Mg			1	99743.619	ug/l	0.25	53,837,513.33	2.854E+02	Analog	1.00	3
K			1	99709.568	ug/l	0.78	53,085,958.67	2.815E+02	Analog	1.00	3
V			1	0.124	ug/l	5.31	2,097.45	1.112E-02	Pulse	0.50	3
Mn			1	20.654	ug/l	0.47	83,105.64	6.952E-01	Pulse	0.50	3
Fe			1	100381.116	ug/l	0.58	570,151,872.00	4.769E+03	Analog	0.50	3
Co			1	19.972	ug/l	0.41	207,345.89	1.734E+00	Pulse	0.50	3
Ni			1	19.503	ug/l	0.94	55,060.54	4.606E-01	Pulse	0.50	3
Cu			1	19.228	ug/l	0.03	143,837.39	1.203E+00	Pulse	0.50	3
Zn			1	20.504	ug/l	1.29	26,965.80	1.544E-01	Pulse	1.00	3
Cd			1	19.666	ug/l	0.82	36,095.07	2.066E-01	Pulse	0.50	3
Al			1	97242.790	ug/l	0.30	22,775,597.33	1.207E+02	Analog	1.00	3
Se			1	0.165	ug/l	47.50	32.22	1.846E-04	Pulse	3.00	3
Sb			1	0.089	ug/l	6.31	585.34	3.351E-03	Pulse	1.00	3
Se			1	0.086	ug/l	53.06	27.11	1.552E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,330,172.67	1.34	80.2	Pulse	0.50	3
1	Sc		188,620.56	1.09	90.0	Pulse	0.30	3
1	Ge		119,542.45	1.07	88.4	Pulse	0.30	3
1	In		1,119,907.91	0.42	81.7	Pulse	0.30	3
1	Tb		3,320,896.00	0.76	86.3	Pulse	0.50	3
1	Lu		2,548,601.83	0.59	85.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		174,671.87	0.52	86.5	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		753.35	12.17	95.0	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 9:07
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.039	ug/l	1.28	359,741.89	2.873E+00	Pulse	0.50	3
As			1	50.104	ug/l	1.40	47,331.25	3.780E-01	Pulse	1.00	3
Mo			1	51.921	ug/l	0.74	199,851.37	1.072E+00	Pulse	0.50	3
Pb			1	51.993	ug/l	1.08	1,079,636.38	3.053E-01	Pulse	1.00	3
Be			1	51.014	ug/l	1.85	2,156.78		Pulse	2.00	3
Ag			1	51.728	ug/l	0.78	656,958.14	3.524E+00	Pulse	0.50	3
Ba			1	50.436	ug/l	0.69	100,353.19	8.169E-02	Pulse	0.50	3
Tl			1	51.505	ug/l	0.78	1,551,193.25	4.387E-01	Pulse	0.50	3
Sn			1	51.444	ug/l	0.39	229,129.63	1.865E-01	Pulse	0.30	3
Sr			1	51.090	ug/l	0.44	269,289.37	2.192E-01	Pulse	0.50	3
[Pb]			1	50.832	ug/l	0.77	508,874.23	1.950E-01	Pulse	0.50	3
Ca			1	5085.158	ug/l	0.80	139,316.58	7.214E-01	Pulse	0.50	3
Ti			1	51.500	ug/l	1.60	9,741.78	5.045E-02	Pulse	0.50	3
Na			1	5204.067	ug/l	1.19	5,773,596.17	4.611E+01	Analog	1.00	3
Mg			1	5168.649	ug/l	0.48	2,857,797.42	1.480E+01	Pulse	1.00	3
K			1	5176.693	ug/l	0.20	2,872,503.50	1.487E+01	Pulse	1.00	3
V			1	51.454	ug/l	0.66	289,082.22	1.497E+00	Pulse	0.50	3
Mn			1	50.521	ug/l	1.60	210,595.30	1.682E+00	Pulse	0.50	3
Fe			1	5148.218	ug/l	1.04	30,979,922.00	2.474E+02	Analog	0.50	3
Co			1	51.394	ug/l	0.75	558,753.96	4.462E+00	Pulse	0.50	3
Ni			1	51.906	ug/l	1.42	150,588.44	1.203E+00	Pulse	0.50	3
Cu			1	52.280	ug/l	1.22	403,776.27	3.224E+00	Pulse	0.50	3
Zn			1	52.811	ug/l	1.70	71,170.76	3.818E-01	Pulse	1.00	3
Cd			1	51.329	ug/l	0.65	100,508.76	5.392E-01	Pulse	0.50	3
Al			1	5024.897	ug/l	0.99	1,205,680.58	6.243E+00	Pulse	1.00	3
Se			1	50.312	ug/l	1.24	3,559.67	1.910E-02	Pulse	3.00	3
Sb			1	50.324	ug/l	1.45	306,303.69	1.643E+00	Pulse	1.00	3
Se			1	50.980	ug/l	1.45	1,732.86	9.296E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,609,721.33	0.35	89.8	Pulse	0.50	3
1	Sc		193,115.26	0.13	92.1	Pulse	0.30	3
1	Ge		125,230.78	1.22	92.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,228,458.18	1.16	89.6	Pulse	0.30	3
1	Tb		3,535,936.17	0.48	91.9	Pulse	0.50	3
1	Lu		2,678,961.08	0.52	90.3	Pulse	0.50	3
1	Ge		186,416.48	0.94	92.4	Pulse	0.30	3
1	Te		2.67	86.60		Pulse	0.50	3
1	Li		886.69	6.80	111.8	Pulse	0.30	3

Quantitation Report

File Name 018_CCV.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:10
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.704	ug/l	1.39	704,090.12	5.759E+00	Pulse	0.50	3
As			1	100.758	ug/l	0.61	92,874.11	7.596E-01	Pulse	1.00	3
Mo			1	102.669	ug/l	0.83	389,192.19	2.120E+00	Pulse	0.50	3
Pb			1	103.177	ug/l	1.05	2,108,561.42	6.054E-01	Pulse	1.00	3
Be			1	102.496	ug/l	0.93	4,332.63		Pulse	2.00	3
Ag			1	102.062	ug/l	0.37	1,275,888.58	6.949E+00	Pulse	0.50	3
Ba			1	102.242	ug/l	1.57	199,448.22	1.656E-01	Pulse	0.50	3
Tl			1	102.358	ug/l	0.90	3,036,618.75	8.718E-01	Pulse	0.50	3
Sn			1	102.537	ug/l	0.49	447,518.84	3.715E-01	Pulse	0.30	3
Sr			1	101.632	ug/l	0.92	524,928.46	4.357E-01	Pulse	0.50	3
[Pb]			1	101.276	ug/l	1.10	987,324.35	3.881E-01	Pulse	0.50	3
Ca			1	10129.624	ug/l	1.25	274,494.39	1.435E+00	Pulse	0.50	3
Ti			1	99.139	ug/l	2.93	18,568.81	9.708E-02	Pulse	0.50	3
Na			1	10430.357	ug/l	1.24	11,285,063.67	9.231E+01	Analog	1.00	3
Mg			1	10341.884	ug/l	1.34	5,662,382.33	2.960E+01	Analog	1.00	3
K			1	10306.204	ug/l	0.74	5,612,368.50	2.934E+01	Analog	1.00	3
V			1	102.572	ug/l	1.37	569,381.67	2.977E+00	Pulse	0.50	3
Mn			1	102.073	ug/l	1.55	413,784.06	3.385E+00	Pulse	0.50	3
Fe			1	10428.189	ug/l	1.50	60,896,398.67	4.981E+02	Analog	0.50	3
Co			1	103.429	ug/l	1.04	1,097,736.59	8.979E+00	Pulse	0.50	3
Ni			1	103.838	ug/l	1.56	292,412.81	2.392E+00	Pulse	0.50	3
Cu			1	104.053	ug/l	1.45	781,258.13	6.390E+00	Pulse	0.50	3
Zn			1	103.113	ug/l	1.65	135,115.49	7.359E-01	Pulse	1.00	3
Cd			1	101.520	ug/l	1.38	195,773.91	1.066E+00	Pulse	0.50	3
Al			1	9961.047	ug/l	1.41	2,366,648.00	1.237E+01	Pulse	1.00	3
Se			1	98.538	ug/l	1.49	6,844.78	3.728E-02	Pulse	3.00	3
Sb			1	100.562	ug/l	1.43	602,771.04	3.283E+00	Pulse	1.00	3
Se			1	101.607	ug/l	0.19	3,376.41	1.839E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,543,823.33	0.29	87.5	Pulse	0.50	3
1	Sc		191,294.01	0.65	91.3	Pulse	0.30	3
1	Ge		122,268.62	1.44	90.4	Pulse	0.30	3
1	In		1,204,746.79	0.14	87.9	Pulse	0.30	3
1	Tb		3,483,200.67	0.29	90.5	Pulse	0.50	3
1	Lu		2,650,073.92	0.40	89.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		183,606.70	0.47	91.0	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		848.92	13.63	107.0	Pulse	0.30	3

Quantitation Report

File Name 019_CCB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:14
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.006	ug/l	337.08	2,689.53	2.187E-02	Pulse	0.50	3
As			1	0.016	ug/l	73.52	73.67	5.989E-04	Pulse	1.00	3
Mo			1	0.162	ug/l	28.38	634.02	3.495E-03	Pulse	0.50	3
Pb			1	0.035	ug/l	16.19	2,564.20	7.434E-04	Pulse	1.00	3
Be			1	0.047	ug/l	52.04	2.67		Pulse	2.00	3
Ag			1	0.017	ug/l	56.87	982.70	5.427E-03	Pulse	0.50	3
Ba			1	0.021	ug/l	14.96	103.33	8.497E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	27.09	898.70	2.607E-04	Pulse	0.50	3
Sn			1	0.083	ug/l	7.20	725.57	5.967E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	149.66	492.01	4.045E-04	Pulse	0.50	3
[Pb]			1	0.035	ug/l	20.85	1,288.06	4.952E-04	Pulse	0.50	3
Ca			1	0.257	ug/l	613.54	402.68	2.108E-03	Pulse	0.50	3
Ti			1	0.017	ug/l	141.47	9.33	4.878E-05	Pulse	0.50	3
Na			1	10.947	ug/l	7.67	24,748.24	2.012E-01	Pulse	1.00	3
Mg			1	1.458	ug/l	39.72	2,322.14	1.215E-02	Pulse	1.00	3
K			1	2.731	ug/l	18.29	54,251.68	2.839E-01	Pulse	1.00	3
V			1	0.058	ug/l	19.35	1,754.75	9.182E-03	Pulse	0.50	3
Mn			1	0.030	ug/l	71.99	1,716.08	1.395E-02	Pulse	0.50	3
Fe			1	2.084	ug/l	3.35	373,700.95	3.038E+00	Pulse	0.50	3
Co			1	0.016	ug/l	39.65	274.00	2.229E-03	Pulse	0.50	3
Ni			1	-0.047	ug/l	-41.77	1,584.74	1.288E-02	Pulse	0.50	3
Cu			1	0.011	ug/l	166.98	3,458.99	2.812E-02	Pulse	0.50	3
Zn			1	-0.007	ug/l	-1547.34	1,807.42	9.979E-03	Pulse	1.00	3
Cd			1	0.010	ug/l	96.09	37.33	2.066E-04	Pulse	0.50	3
Al			1	0.800	ug/l	78.40	953.69	4.988E-03	Pulse	1.00	3
Se			1	0.125	ug/l	28.66	30.67	1.693E-04	Pulse	3.00	3
Sb			1	0.063	ug/l	8.07	457.68	2.526E-03	Pulse	1.00	3
Se			1	-0.010	ug/l	-1118.22	25.00	1.380E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,601,276.00	0.47	89.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		191,082.52	0.56	91.2	Pulse	0.30	3
1	Ge		123,002.94	0.32	91.0	Pulse	0.30	3
1	In		1,216,037.80	0.31	88.7	Pulse	0.30	3
1	Tb		3,449,695.08	0.58	89.7	Pulse	0.50	3
1	Lu		2,618,587.25	0.45	88.3	Pulse	0.50	3
1	Ge		181,159.21	0.77	89.8	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		941.14	10.95	118.6	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:18
Sample Name CRIA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.286	ug/l	1.06	73,278.73	5.961E-01	Pulse	0.50	3
As			1	9.800	ug/l	1.20	9,135.52	7.431E-02	Pulse	1.00	3
Mo			1	10.048	ug/l	0.81	38,500.68	2.076E-01	Pulse	0.50	3
Pb			1	10.393	ug/l	0.24	212,871.73	6.146E-02	Pulse	1.00	3
Be			1	10.004	ug/l	6.67	423.50		Pulse	2.00	3
Ag			1	10.267	ug/l	1.13	130,362.64	7.029E-01	Pulse	0.50	3
Ba			1	9.785	ug/l	1.85	19,513.86	1.589E-02	Pulse	0.50	3
Tl			1	10.277	ug/l	0.51	303,199.02	8.754E-02	Pulse	0.50	3
Sn			1	9.947	ug/l	0.98	44,590.62	3.630E-02	Pulse	0.30	3
Sr			1	9.817	ug/l	1.74	52,088.81	4.241E-02	Pulse	0.50	3
[Pb]			1	9.790	ug/l	0.32	99,045.68	3.785E-02	Pulse	0.50	3
Ca			1	989.533	ug/l	0.90	27,303.60	1.421E-01	Pulse	0.50	3
Ti			1	9.697	ug/l	2.51	1,830.76	9.524E-03	Pulse	0.50	3
Na			1	1035.144	ug/l	0.57	1,137,705.96	9.255E+00	Pulse	1.00	3
Mg			1	1037.475	ug/l	1.13	572,083.77	2.977E+00	Pulse	1.00	3
K			1	1026.840	ug/l	1.15	609,590.63	3.172E+00	Pulse	1.00	3
V			1	10.141	ug/l	1.18	57,862.62	3.011E-01	Pulse	0.50	3
Mn			1	9.978	ug/l	2.46	42,110.09	3.426E-01	Pulse	0.50	3
Fe			1	994.946	ug/l	0.54	6,168,984.17	5.018E+01	Analog	0.50	3
Co			1	10.469	ug/l	0.70	111,818.57	9.096E-01	Pulse	0.50	3
Ni			1	10.311	ug/l	1.10	30,742.35	2.501E-01	Pulse	0.50	3
Cu			1	10.673	ug/l	1.13	83,606.32	6.801E-01	Pulse	0.50	3
Zn			1	10.777	ug/l	1.54	15,931.92	8.590E-02	Pulse	1.00	3
Cd			1	10.055	ug/l	0.55	19,605.72	1.057E-01	Pulse	0.50	3
Al			1	997.220	ug/l	0.95	238,738.73	1.242E+00	Pulse	1.00	3
Se			1	9.867	ug/l	2.49	712.68	3.843E-03	Pulse	3.00	3
Sb			1	9.876	ug/l	0.91	59,873.63	3.228E-01	Pulse	1.00	3
Se			1	9.841	ug/l	6.66	353.78	1.907E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,617,014.42	1.09	90.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		192,202.98	1.49	91.7	Pulse	0.30	3
1	Ge		122,928.95	0.38	90.9	Pulse	0.30	3
1	In		1,228,205.75	1.10	89.6	Pulse	0.30	3
1	Tb		3,463,410.42	0.84	90.0	Pulse	0.50	3
1	Lu		2,644,229.92	1.05	89.2	Pulse	0.50	3
1	Ge		185,464.38	0.70	91.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		831.13	5.63	104.8	Pulse	0.30	3

Quantitation Report

File Name	021_MB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 9:22
Sample Name	MP41457-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.581	ug/l	2.24	8,789.34	7.269E-02	Pulse	0.50	3
As			1	0.648	ug/l	23.99	176.33	1.458E-03	Pulse	1.00	3
Mo			1	0.547	ug/l	21.48	440.01	2.412E-03	Pulse	0.50	3
Pb			1	-0.158	ug/l	-10.79	1,197.71	3.524E-04	Pulse	1.00	3
Be			1	0.355	ug/l	9.62	3.67		Pulse	2.00	3
Ag			1	0.049	ug/l	53.66	894.69	4.913E-03	Pulse	0.50	3
Ba			1	-0.042	ug/l	-31.96	44.00	3.690E-05	Pulse	0.50	3
Tl			1	0.092	ug/l	12.11	585.34	1.723E-04	Pulse	0.50	3
Sn			1	27.889	ug/l	0.83	24,422.90	2.049E-02	Pulse	0.30	3
Sr			1	-0.094	ug/l	-37.13	332.67	2.792E-04	Pulse	0.50	3
[Pb]			1	-0.171	ug/l	-26.31	591.35	2.302E-04	Pulse	0.50	3
Ca			1	-24.911	ug/l	-35.37	261.33	1.366E-03	Pulse	0.50	3
Ti			1	0.586	ug/l	48.60	28.00	1.465E-04	Pulse	0.50	3
Na			1	64.080	ug/l	3.55	26,328.89	2.177E-01	Pulse	1.00	3
Mg			1	6.106	ug/l	13.70	2,193.79	1.147E-02	Pulse	1.00	3
K			1	14.546	ug/l	42.35	54,408.45	2.844E-01	Pulse	1.00	3
V			1	4.045	ug/l	3.23	5,916.92	3.093E-02	Pulse	0.50	3
Mn			1	8.090	ug/l	3.92	8,030.34	6.641E-02	Pulse	0.50	3
Fe			1	-251.689	ug/l	-0.49	66,378.11	5.489E-01	Pulse	0.50	3
Co			1	0.066	ug/l	31.36	244.00	2.018E-03	Pulse	0.50	3
Ni			1	-0.042	ug/l	-344.27	1,664.74	1.377E-02	Pulse	0.50	3
Cu			1	2.009	ug/l	7.08	6,288.38	5.200E-02	Pulse	0.50	3
Zn			1	-1.790	ug/l	-14.44	1,368.38	7.508E-03	Pulse	1.00	3
Cd			1	0.028	ug/l	62.15	30.00	1.645E-04	Pulse	0.50	3
Al			1	-0.826	ug/l	-66.30	725.01	3.790E-03	Pulse	1.00	3
Se			1	0.334	ug/l	124.50	26.89	1.474E-04	Pulse	3.00	3
Sb			1	0.389	ug/l	10.06	546.34	2.999E-03	Pulse	1.00	3
Se			1	-0.076	ug/l	-672.70	25.00	1.371E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,567,882.92	0.88	88.4	Pulse	0.50	3
1	Sc		191,306.17	0.67	91.3	Pulse	0.30	3
1	Ge		120,919.63	0.24	89.5	Pulse	0.30	3
1	In		1,192,206.65	0.63	87.0	Pulse	0.30	3
1	Tb		3,399,885.58	0.94	88.4	Pulse	0.50	3
1	Lu		2,561,645.50	1.15	86.4	Pulse	0.50	3
1	Ge		182,202.68	1.02	90.3	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		881.13	6.52	111.1	Pulse	0.30	3

Quantitation Report

File Name 022_BSP.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:25
Sample Name MP41457-B1
Sample Type BSP
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	533.788	ug/l	0.51	707,458.25	5.986E+00	Pulse	0.50	3
As			1	537.132	ug/l	1.09	95,722.03	8.099E-01	Pulse	1.00	3
Mo			1	524.221	ug/l	0.46	383,513.95	2.165E+00	Pulse	0.50	3
Pb			1	521.602	ug/l	0.22	2,071,060.38	6.121E-01	Pulse	1.00	3
Be			1	531.627	ug/l	1.65	4,494.50		Pulse	2.00	3
Ag			1	259.727	ug/l	0.55	626,983.14	3.539E+00	Pulse	0.50	3
Ba			1	517.092	ug/l	0.38	193,221.03	1.675E-01	Pulse	0.50	3
Tl			1	496.984	ug/l	0.57	2,864,657.83	8.466E-01	Pulse	0.50	3
Sn			1	538.482	ug/l	0.36	450,171.93	3.901E-01	Pulse	0.30	3
Sr			1	501.042	ug/l	0.35	495,726.87	4.296E-01	Pulse	0.50	3
[Pb]			1	493.125	ug/l	0.28	925,950.39	3.780E-01	Pulse	0.50	3
Ca			1	50747.436	ug/l	0.95	269,315.08	1.438E+00	Pulse	0.50	3
Ti			1	500.058	ug/l	1.19	18,343.30	9.794E-02	Pulse	0.50	3
Na			1	54269.672	ug/l	0.13	11,352,709.67	9.605E+01	Analog	1.00	3
Mg			1	52560.718	ug/l	0.46	5,635,951.83	3.009E+01	Analog	1.00	3
K			1	51916.302	ug/l	0.62	5,536,206.83	2.956E+01	Analog	1.00	3
V			1	522.653	ug/l	0.58	568,184.11	3.033E+00	Pulse	0.50	3
Mn			1	517.869	ug/l	0.77	405,912.08	3.434E+00	Pulse	0.50	3
Fe			1	53417.050	ug/l	0.67	60,306,833.33	5.102E+02	Analog	0.50	3
Co			1	536.527	ug/l	0.46	1,101,004.42	9.315E+00	Pulse	0.50	3
Ni			1	531.161	ug/l	0.38	289,179.88	2.447E+00	Pulse	0.50	3
Cu			1	534.277	ug/l	0.68	775,571.81	6.562E+00	Pulse	0.50	3
Zn			1	516.579	ug/l	0.86	130,633.95	7.374E-01	Pulse	1.00	3
Cd			1	513.160	ug/l	0.66	190,984.26	1.078E+00	Pulse	0.50	3
Al			1	49583.533	ug/l	0.61	2,307,146.42	1.232E+01	Pulse	1.00	3
Se			1	506.779	ug/l	0.79	6,793.21	3.834E-02	Pulse	3.00	3
Sb			1	517.676	ug/l	0.45	598,859.17	3.380E+00	Pulse	1.00	3
Se			1	496.256	ug/l	1.47	3,183.04	1.797E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,449,736.25	0.82	84.3	Pulse	0.50	3
1	Sc		187,310.13	0.68	89.4	Pulse	0.30	3
1	Ge		118,192.80	0.34	87.4	Pulse	0.30	3
1	In		1,153,851.62	0.63	84.2	Pulse	0.30	3
1	Tb		3,383,686.92	0.68	88.0	Pulse	0.50	3
1	Lu		2,556,363.25	0.79	86.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		177,174.90	1.11	87.8	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		857.80	9.21	108.1	Pulse	0.30	3

Quantitation Report

File Name 023SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:29
Sample Name FC142-1A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1174.071	ug/l	0.48	813,369.21	6.581E+00	Pulse	0.50	3
As			1	55.645	ug/l	1.83	5,241.06	4.241E-02	Pulse	1.00	3
Mo			1	31.678	ug/l	2.85	11,710.36	6.555E-02	Pulse	0.50	3
Pb			1	220.076	ug/l	0.47	438,767.78	1.295E-01	Pulse	1.00	3
Be			1	11.988	ug/l	14.78	51.33		Pulse	2.00	3
Ag			1	0.915	ug/l	10.92	1,870.77	1.047E-02	Pulse	0.50	3
Ba			1	1188.072	ug/l	0.42	223,227.44	1.924E-01	Pulse	0.50	3
Tl			1	2.469	ug/l	3.61	7,173.52	2.118E-03	Pulse	0.50	3
Sn			1	46.406	ug/l	0.69	19,836.30	1.709E-02	Pulse	0.30	3
Sr			1	309.280	ug/l	0.28	154,157.87	1.328E-01	Pulse	0.50	3
[Pb]			1	219.023	ug/l	1.32	208,224.48	8.422E-02	Pulse	0.50	3
Ca			1	104228.561	ug/l	1.09	384,623.15	1.476E+00	Pulse	0.50	3
Ti			1	10606.924	ug/l	1.28	270,492.13	1.038E+00	Pulse	0.50	3
Na			1	1405.104	ug/l	1.13	166,427.48	1.347E+00	Pulse	1.00	3
Mg			1	47571.880	ug/l	0.82	3,548,261.42	1.362E+01	Pulse	1.00	3
K			1	13771.010	ug/l	0.56	1,083,582.83	4.160E+00	Pulse	1.00	3
V			1	2586.306	ug/l	1.02	1,952,177.71	7.494E+00	Pulse	0.50	3
Mn			1	14632.934	ug/l	0.47	5,976,117.33	4.835E+01	Analog	0.50	3
Fe			1	1113953.146	ug/l	0.67	654,190,805.33	5.292E+03	Analog	0.50	3
Co			1	741.357	ug/l	0.72	795,517.48	6.436E+00	Pulse	0.50	3
Ni			1	670.738	ug/l	1.23	191,584.14	1.550E+00	Pulse	0.50	3
Cu			1	955.132	ug/l	0.77	725,351.00	5.868E+00	Pulse	0.50	3
Zn			1	853.177	ug/l	0.66	109,088.84	6.107E-01	Pulse	1.00	3
Cd			1	2.317	ug/l	12.09	453.34	2.539E-03	Pulse	0.50	3
Al			1	311570.063	ug/l	0.95	10,079,006.33	3.869E+01	Analog	1.00	3
Se			1	31.359	ug/l	8.42	233.12	1.305E-03	Pulse	3.00	3
Sb			1	2.139	ug/l	0.67	1,329.38	7.442E-03	Pulse	1.00	3
Se			1	64.534	ug/l	3.50	232.00	1.299E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,472,195.58	0.85	85.1	Pulse	0.50	3
1	Sc		260,501.36	0.41	124.3	Pulse	0.30	3
1	Ge		123,603.36	0.91	91.4	Pulse	0.30	3
1	In		1,160,448.88	1.33	84.7	Pulse	0.30	3
1	Tb		3,387,055.50	1.22	88.0	Pulse	0.50	3
1	Lu		2,572,195.00	1.10	86.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		178,638.30	1.24	88.5	Pulse	0.30	3
1	Te		4.67	24.74		Pulse	0.50	3
1	Li		914.47	9.59	115.3	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 9:33
Sample Name	MP41457-D1
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1146.423	ug/l	1.99	793,259.15	6.426E+00	Pulse	0.50	3
As			1	72.579	ug/l	1.59	6,809.89	5.516E-02	Pulse	1.00	3
Mo			1	25.627	ug/l	3.72	9,460.41	5.306E-02	Pulse	0.50	3
Pb			1	240.451	ug/l	0.53	479,288.39	1.415E-01	Pulse	1.00	3
Be			1	10.450	ug/l	15.03	44.83		Pulse	2.00	3
Ag			1	0.735	ug/l	2.23	1,649.41	9.251E-03	Pulse	0.50	3
Ba			1	1118.410	ug/l	0.28	210,521.63	1.811E-01	Pulse	0.50	3
Tl			1	2.326	ug/l	1.42	6,762.03	1.996E-03	Pulse	0.50	3
Sn			1	165.264	ug/l	1.41	69,891.02	6.012E-02	Pulse	0.30	3
Sr			1	422.791	ug/l	0.82	210,962.56	1.815E-01	Pulse	0.50	3
[Pb]			1	240.340	ug/l	1.52	226,838.65	9.238E-02	Pulse	0.50	3
Ca			1	147449.951	ug/l	1.23	541,237.85	2.088E+00	Pulse	0.50	3
Ti			1	10222.509	ug/l	1.19	259,418.95	1.001E+00	Pulse	0.50	3
Na			1	1351.705	ug/l	0.75	160,408.39	1.299E+00	Pulse	1.00	3
Mg			1	37052.492	ug/l	1.34	2,750,568.83	1.061E+01	Pulse	1.00	3
K			1	6714.710	ug/l	1.02	562,484.02	2.170E+00	Pulse	1.00	3
V			1	2654.537	ug/l	1.53	1,993,806.08	7.692E+00	Pulse	0.50	3
Mn			1	13179.443	ug/l	1.07	5,376,040.67	4.355E+01	Analog	0.50	3
Fe			1	1103252.009	ug/l	1.28	647,078,698.67	5.242E+03	Analog	0.50	3
Co			1	525.655	ug/l	1.32	563,384.29	4.564E+00	Pulse	0.50	3
Ni			1	571.356	ug/l	0.85	163,249.86	1.322E+00	Pulse	0.50	3
Cu			1	952.609	ug/l	1.20	722,526.77	5.853E+00	Pulse	0.50	3
Zn			1	890.024	ug/l	1.31	113,503.99	6.366E-01	Pulse	1.00	3
Cd			1	5.702	ug/l	1.71	1,086.71	6.094E-03	Pulse	0.50	3
Al			1	298216.038	ug/l	1.34	9,599,827.33	3.703E+01	Analog	1.00	3
Se			1	29.650	ug/l	7.72	221.11	1.240E-03	Pulse	3.00	3
Sb			1	1.852	ug/l	4.94	1,160.04	6.505E-03	Pulse	1.00	3
Se			1	65.088	ug/l	7.08	233.34	1.309E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,455,444.83	0.25	84.5	Pulse	0.50	3
1	Sc		259,255.26	1.41	123.7	Pulse	0.30	3
1	Ge		123,459.25	1.05	91.3	Pulse	0.30	3
1	In		1,162,508.98	0.45	84.8	Pulse	0.30	3
1	Tb		3,387,531.67	1.07	88.1	Pulse	0.50	3
1	Lu		2,542,785.25	0.61	85.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		178,305.41	0.48	88.3	Pulse	0.30	3
1	Te		2.00	173.21		Pulse	0.50	3
1	Li		871.14	10.72	109.8	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:37
Sample Name MP41457-SD1
Sample Type Sample
Comment
Prep Dilution 50.000
Auto Dilution N/A
Total Dilution 50.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1215.819	ug/l	1.38	171,991.79	1.380E+00	Pulse	0.50	3
As			1	57.386	ug/l	3.09	1,137.70	9.128E-03	Pulse	1.00	3
Mo			1	32.280	ug/l	4.09	2,504.18	1.348E-02	Pulse	0.50	3
Pb			1	221.246	ug/l	0.96	91,609.45	2.648E-02	Pulse	1.00	3
Be			1	9.661	ug/l	24.74	8.83		Pulse	2.00	3
Ag			1	0.909	ug/l	16.32	1,019.36	5.489E-03	Pulse	0.50	3
Ba			1	1167.697	ug/l	0.58	46,157.92	3.785E-02	Pulse	0.50	3
Tl			1	2.613	ug/l	4.93	1,592.75	4.604E-04	Pulse	0.50	3
Sn			1	44.641	ug/l	1.79	4,300.53	3.527E-03	Pulse	0.30	3
Sr			1	302.756	ug/l	0.40	32,065.79	2.630E-02	Pulse	0.50	3
[Pb]			1	216.776	ug/l	0.16	43,901.40	1.696E-02	Pulse	0.50	3
Ca			1	135485.171	ug/l	0.80	80,735.37	3.854E-01	Pulse	0.50	3
Ti			1	13717.352	ug/l	1.20	56,268.38	2.686E-01	Pulse	0.50	3
Na			1	1579.742	ug/l	1.92	47,830.38	3.837E-01	Pulse	1.00	3
Mg			1	62140.328	ug/l	0.94	746,702.15	3.564E+00	Pulse	1.00	3
K			1	17630.092	ug/l	0.35	266,174.10	1.271E+00	Pulse	1.00	3
V			1	3341.862	ug/l	1.12	406,880.62	1.942E+00	Pulse	0.50	3
Mn			1	15164.714	ug/l	1.02	1,250,300.41	1.003E+01	Pulse	0.50	3
Fe			1	1158313.988	ug/l	1.27	137,471,157.33	1.103E+03	Analog	0.50	3
Co			1	780.126	ug/l	1.30	168,909.04	1.355E+00	Pulse	0.50	3
Ni			1	700.534	ug/l	0.52	41,729.47	3.348E-01	Pulse	0.50	3
Cu			1	1019.137	ug/l	1.62	158,770.14	1.274E+00	Pulse	0.50	3
Zn			1	829.356	ug/l	0.57	23,549.00	1.268E-01	Pulse	1.00	3
Cd			1	2.283	ug/l	18.91	108.67	5.852E-04	Pulse	0.50	3
Al			1	399438.864	ug/l	0.99	2,078,896.71	9.924E+00	Pulse	1.00	3
Se			1	35.517	ug/l	10.32	72.44	3.901E-04	Pulse	3.00	3
Sb			1	2.049	ug/l	13.13	333.67	1.797E-03	Pulse	1.00	3
Se			1	55.178	ug/l	17.25	62.78	3.380E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,588,309.50	0.77	89.1	Pulse	0.50	3
1	Sc		209,494.54	0.26	100.0	Pulse	0.30	3
1	Ge		124,638.83	0.27	92.2	Pulse	0.30	3
1	In		1,219,343.53	0.56	89.0	Pulse	0.30	3
1	Tb		3,459,885.25	0.24	89.9	Pulse	0.50	3
1	Lu		2,613,017.00	0.85	88.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		185,716.75	0.09	92.0	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		942.25	22.28	118.8	Pulse	0.30	3

Quantitation Report

File Name 026SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:41
Sample Name MP41457-S1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1778.331	ug/l	0.93	1,223,060.96	9.956E+00	Pulse	0.50	3
As			1	495.992	ug/l	0.12	45,968.59	3.742E-01	Pulse	1.00	3
Mo			1	411.487	ug/l	1.02	150,078.82	8.497E-01	Pulse	0.50	3
Pb			1	722.974	ug/l	0.70	1,419,441.96	4.243E-01	Pulse	1.00	3
Be			1	546.506	ug/l	2.12	2,310.47		Pulse	2.00	3
Ag			1	261.700	ug/l	0.63	315,289.43	1.785E+00	Pulse	0.50	3
Ba			1	1602.847	ug/l	1.04	297,252.27	2.595E-01	Pulse	0.50	3
Tl			1	501.569	ug/l	0.58	1,429,006.38	4.272E-01	Pulse	0.50	3
Sn			1	556.160	ug/l	0.57	230,940.42	2.016E-01	Pulse	0.30	3
Sr			1	763.888	ug/l	0.65	375,232.43	3.276E-01	Pulse	0.50	3
[Pb]			1	700.751	ug/l	0.44	644,952.58	2.687E-01	Pulse	0.50	3
Ca			1	87283.083	ug/l	0.21	328,445.56	1.237E+00	Pulse	0.50	3
Ti			1	10170.652	ug/l	0.53	264,407.08	9.957E-01	Pulse	0.50	3
Na			1	54378.983	ug/l	1.12	5,917,943.50	4.818E+01	Analog	1.00	3
Mg			1	72946.857	ug/l	0.53	5,545,448.67	2.088E+01	Analog	1.00	3
K			1	41737.680	ug/l	0.32	3,199,091.50	1.205E+01	Pulse	1.00	3
V			1	3491.686	ug/l	0.31	2,686,089.33	1.011E+01	Pulse	0.50	3
Mn			1	17679.399	ug/l	1.37	7,175,440.50	5.841E+01	Analog	0.50	3
Fe			1	1338555.827	ug/l	1.11	781,152,554.67	6.359E+03	Analog	0.50	3
Co			1	1356.059	ug/l	0.92	1,446,089.17	1.177E+01	Pulse	0.50	3
Ni			1	1286.293	ug/l	0.64	363,576.28	2.960E+00	Pulse	0.50	3
Cu			1	1629.738	ug/l	0.85	1,227,656.50	9.994E+00	Pulse	0.50	3
Zn			1	1396.248	ug/l	0.40	175,391.88	9.930E-01	Pulse	1.00	3
Cd			1	513.969	ug/l	0.48	95,363.75	5.399E-01	Pulse	0.50	3
Al			1	399067.443	ug/l	0.53	13,159,938.33	4.956E+01	Analog	1.00	3
Se			1	469.786	ug/l	3.82	3,151.04	1.784E-02	Pulse	3.00	3
Sb			1	190.666	ug/l	0.60	110,015.26	6.229E-01	Pulse	1.00	3
Se			1	502.397	ug/l	1.54	1,618.63	9.163E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,400,541.17	0.16	82.6	Pulse	0.50	3
1	Sc		265,563.59	0.62	126.7	Pulse	0.30	3
1	Ge		122,851.79	1.08	90.9	Pulse	0.30	3
1	In		1,145,448.98	0.26	83.6	Pulse	0.30	3
1	Tb		3,345,010.75	0.57	86.9	Pulse	0.50	3
1	Lu		2,520,042.67	0.23	85.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		176,634.21	0.33	87.5	Pulse	0.30	3
1	Te		6.67	69.28		Pulse	0.50	3
1	Li		822.25	6.99	103.6	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:45
Sample Name MP41457-S2
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2616.573	ug/l	0.46	1,777,205.21	1.464E+01	Pulse	0.50	3
As			1	521.344	ug/l	1.39	47,743.29	3.933E-01	Pulse	1.00	3
Mo			1	596.262	ug/l	1.80	216,980.03	1.231E+00	Pulse	0.50	3
Pb			1	732.993	ug/l	0.83	1,426,296.54	4.302E-01	Pulse	1.00	3
Be			1	534.161	ug/l	1.94	2,258.29		Pulse	2.00	3
Ag			1	240.618	ug/l	1.08	289,316.23	1.642E+00	Pulse	0.50	3
Ba			1	1782.669	ug/l	0.95	325,698.69	2.886E-01	Pulse	0.50	3
Tl			1	510.221	ug/l	0.72	1,440,740.08	4.346E-01	Pulse	0.50	3
Sn			1	572.258	ug/l	0.95	234,099.34	2.074E-01	Pulse	0.30	3
Sr			1	816.034	ug/l	0.37	394,880.54	3.499E-01	Pulse	0.50	3
[Pb]			1	707.512	ug/l	0.42	647,544.85	2.713E-01	Pulse	0.50	3
Ca			1	105034.620	ug/l	0.22	387,666.28	1.488E+00	Pulse	0.50	3
Ti			1	11084.578	ug/l	0.80	282,729.01	1.085E+00	Pulse	0.50	3
Na			1	55535.431	ug/l	0.51	5,972,587.00	4.920E+01	Analog	1.00	3
Mg			1	88609.408	ug/l	0.23	6,608,596.67	2.536E+01	Analog	1.00	3
K			1	43437.943	ug/l	0.37	3,263,552.58	1.253E+01	Pulse	1.00	3
V			1	3156.733	ug/l	0.93	2,382,785.25	9.145E+00	Pulse	0.50	3
Mn			1	17121.887	ug/l	0.95	6,867,574.00	5.657E+01	Analog	0.50	3
Fe			1	1270317.362	ug/l	0.49	732,652,266.67	6.035E+03	Analog	0.50	3
Co			1	1153.154	ug/l	0.62	1,215,293.25	1.001E+01	Pulse	0.50	3
Ni			1	2804.129	ug/l	0.84	781,255.75	6.435E+00	Pulse	0.50	3
Cu			1	1564.084	ug/l	0.66	1,164,480.17	9.592E+00	Pulse	0.50	3
Zn			1	1462.430	ug/l	0.39	183,226.95	1.040E+00	Pulse	1.00	3
Cd			1	525.369	ug/l	0.58	97,267.53	5.519E-01	Pulse	0.50	3
Al			1	406260.430	ug/l	0.31	13,144,340.33	5.045E+01	Analog	1.00	3
Se			1	493.673	ug/l	1.68	3,302.51	1.874E-02	Pulse	3.00	3
Sb			1	194.816	ug/l	0.64	112,164.45	6.364E-01	Pulse	1.00	3
Se			1	543.832	ug/l	1.67	1,746.19	9.908E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,387,225.33	0.70	82.2	Pulse	0.50	3
1	Sc		260,547.54	0.15	124.3	Pulse	0.30	3
1	Ge		121,402.71	0.76	89.8	Pulse	0.30	3
1	In		1,128,472.01	0.26	82.3	Pulse	0.30	3
1	Tb		3,315,234.92	0.39	86.2	Pulse	0.50	3
1	Lu		2,494,624.42	0.72	84.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		176,255.15	0.86	87.3	Pulse	0.30	3
1	Te		4.00	50.00		Pulse	0.50	3
1	Li		847.80	3.20	106.9	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:48
Sample Name MP41457-PS1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1214.449	ug/l	1.37	826,060.09	6.806E+00	Pulse	0.50	3
As			1	67.071	ug/l	0.92	6,191.67	5.101E-02	Pulse	1.00	3
Mo			1	42.592	ug/l	2.54	15,481.73	8.809E-02	Pulse	0.50	3
Pb			1	233.780	ug/l	0.25	456,943.80	1.376E-01	Pulse	1.00	3
Be			1	19.914	ug/l	8.94	84.83		Pulse	2.00	3
Ag			1	3.243	ug/l	4.36	4,624.59	2.632E-02	Pulse	0.50	3
Ba			1	1215.817	ug/l	0.45	223,871.13	1.969E-01	Pulse	0.50	3
Tl			1	12.521	ug/l	0.43	35,469.28	1.068E-02	Pulse	0.50	3
Sn			1	56.433	ug/l	0.55	23,566.28	2.072E-02	Pulse	0.30	3
Sr			1	322.704	ug/l	0.71	157,609.57	1.386E-01	Pulse	0.50	3
[Pb]			1	232.997	ug/l	0.64	215,060.45	8.957E-02	Pulse	0.50	3
Ca			1	106368.550	ug/l	0.68	385,152.41	1.507E+00	Pulse	0.50	3
Ti			1	10795.281	ug/l	1.26	270,135.04	1.057E+00	Pulse	0.50	3
Na			1	2429.166	ug/l	0.41	273,308.76	2.252E+00	Pulse	1.00	3
Mg			1	49325.893	ug/l	0.82	3,610,046.92	1.412E+01	Pulse	1.00	3
K			1	14734.871	ug/l	0.42	1,132,759.34	4.431E+00	Pulse	1.00	3
V			1	2654.931	ug/l	0.87	1,966,370.50	7.693E+00	Pulse	0.50	3
Mn			1	14963.350	ug/l	1.08	6,000,691.83	4.944E+01	Analog	0.50	3
Fe			1	1146243.652	ug/l	1.08	660,965,248.00	5.446E+03	Analog	0.50	3
Co			1	770.720	ug/l	1.17	812,081.40	6.691E+00	Pulse	0.50	3
Ni			1	697.247	ug/l	0.92	195,487.24	1.611E+00	Pulse	0.50	3
Cu			1	991.967	ug/l	0.79	739,577.50	6.093E+00	Pulse	0.50	3
Zn			1	876.988	ug/l	1.12	110,281.87	6.274E-01	Pulse	1.00	3
Cd			1	12.621	ug/l	2.04	2,348.16	1.336E-02	Pulse	0.50	3
Al			1	318417.654	ug/l	0.74	10,107,450.33	3.954E+01	Analog	1.00	3
Se			1	39.971	ug/l	4.63	286.34	1.630E-03	Pulse	3.00	3
Sb			1	11.130	ug/l	0.85	6,467.14	3.679E-02	Pulse	1.00	3
Se			1	75.979	ug/l	1.41	264.45	1.504E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,401,056.25	0.99	82.6	Pulse	0.50	3
1	Sc		255,618.02	0.21	122.0	Pulse	0.30	3
1	Ge		121,373.60	0.28	89.8	Pulse	0.30	3
1	In		1,137,215.62	0.67	83.0	Pulse	0.30	3
1	Tb		3,321,247.42	0.90	86.3	Pulse	0.50	3
1	Lu		2,497,097.00	0.76	84.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		175,785.63	1.44	87.1	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		907.80	6.32	114.4	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 9:52
Sample Name	FC142-2A
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1302.229	ug/l	1.44	881,468.83	7.296E+00	Pulse	0.50	3
As			1	54.507	ug/l	1.69	5,019.33	4.155E-02	Pulse	1.00	3
Mo			1	64.875	ug/l	0.85	23,114.23	1.341E-01	Pulse	0.50	3
Pb			1	186.873	ug/l	0.43	361,617.55	1.101E-01	Pulse	1.00	3
Be			1	12.106	ug/l	8.81	51.83		Pulse	2.00	3
Ag			1	0.597	ug/l	16.06	1,432.73	8.312E-03	Pulse	0.50	3
Ba			1	829.970	ug/l	0.39	150,878.31	1.344E-01	Pulse	0.50	3
Tl			1	2.270	ug/l	1.69	6,402.55	1.949E-03	Pulse	0.50	3
Sn			1	54.992	ug/l	2.10	22,679.60	2.020E-02	Pulse	0.30	3
Sr			1	170.712	ug/l	0.87	82,494.16	7.349E-02	Pulse	0.50	3
[Pb]			1	185.026	ug/l	0.63	170,295.62	7.121E-02	Pulse	0.50	3
Ca			1	17192.127	ug/l	1.42	66,744.03	2.453E-01	Pulse	0.50	3
Ti			1	8971.488	ug/l	0.48	239,011.07	8.783E-01	Pulse	0.50	3
Na			1	1016.935	ug/l	0.28	121,218.56	1.003E+00	Pulse	1.00	3
Mg			1	16840.214	ug/l	0.04	1,313,573.04	4.827E+00	Pulse	1.00	3
K			1	3925.599	ug/l	1.18	376,410.51	1.383E+00	Pulse	1.00	3
V			1	3417.618	ug/l	0.47	2,694,299.33	9.900E+00	Pulse	0.50	3
Mn			1	16583.690	ug/l	0.64	6,619,409.33	5.479E+01	Analog	0.50	3
Fe			1	1507425.736	ug/l	0.70	865,084,181.33	7.161E+03	Analog	0.50	3
Co			1	739.689	ug/l	1.02	775,767.00	6.422E+00	Pulse	0.50	3
Ni			1	571.892	ug/l	0.48	159,898.54	1.324E+00	Pulse	0.50	3
Cu			1	1100.961	ug/l	0.71	816,659.35	6.760E+00	Pulse	0.50	3
Zn			1	731.148	ug/l	0.65	90,452.25	5.247E-01	Pulse	1.00	3
Cd			1	1.302	ug/l	3.28	254.00	1.473E-03	Pulse	0.50	3
Al			1	340745.330	ug/l	0.14	11,515,048.67	4.231E+01	Analog	1.00	3
Se			1	25.306	ug/l	8.87	185.67	1.077E-03	Pulse	3.00	3
Sb			1	1.633	ug/l	5.26	998.36	5.789E-03	Pulse	1.00	3
Se			1	48.272	ug/l	0.39	173.55	1.007E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,391,551.00	0.70	82.3	Pulse	0.50	3
1	Sc		272,134.51	0.74	129.8	Pulse	0.30	3
1	Ge		120,806.86	0.15	89.4	Pulse	0.30	3
1	In		1,122,568.11	0.80	81.9	Pulse	0.30	3
1	Tb		3,284,893.83	0.59	85.4	Pulse	0.50	3
1	Lu		2,458,633.25	0.96	82.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		172,380.46	1.30	85.4	Pulse	0.30	3
1	Te		18.00	66.67		Pulse	0.50	3
1	Li		860.02	4.47	108.4	Pulse	0.30	3

Quantitation Report

File Name 030CCVA.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 9:56
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.191	ug/l	1.38	360,221.18	2.881E+00	Pulse	0.50	3
As			1	49.455	ug/l	0.71	46,642.88	3.731E-01	Pulse	1.00	3
Mo			1	50.008	ug/l	0.18	193,737.97	1.033E+00	Pulse	0.50	3
Pb			1	51.111	ug/l	0.76	1,035,108.87	3.002E-01	Pulse	1.00	3
Be			1	51.866	ug/l	1.16	2,192.79		Pulse	2.00	3
Ag			1	50.561	ug/l	0.40	646,325.12	3.445E+00	Pulse	0.50	3
Ba			1	49.111	ug/l	0.82	96,548.01	7.955E-02	Pulse	0.50	3
Tl			1	50.336	ug/l	1.36	1,478,550.37	4.287E-01	Pulse	0.50	3
Sn			1	50.286	ug/l	0.87	221,285.07	1.823E-01	Pulse	0.30	3
Sr			1	49.942	ug/l	0.88	260,086.68	2.143E-01	Pulse	0.50	3
[Pb]			1	49.434	ug/l	1.12	482,316.53	1.896E-01	Pulse	0.50	3
Ca			1	4899.284	ug/l	1.16	135,582.86	6.951E-01	Pulse	0.50	3
Ti			1	50.164	ug/l	0.89	9,584.37	4.914E-02	Pulse	0.50	3
Na			1	5236.908	ug/l	0.13	5,800,352.00	4.640E+01	Analog	1.00	3
Mg			1	5068.971	ug/l	1.27	2,830,799.67	1.451E+01	Pulse	1.00	3
K			1	5049.402	ug/l	0.83	2,831,226.42	1.452E+01	Pulse	1.00	3
V			1	50.690	ug/l	1.46	287,667.99	1.475E+00	Pulse	0.50	3
Mn			1	50.040	ug/l	0.05	208,258.94	1.666E+00	Pulse	0.50	3
Fe			1	5178.125	ug/l	0.62	31,106,682.00	2.488E+02	Analog	0.50	3
Co			1	51.666	ug/l	0.25	560,766.54	4.486E+00	Pulse	0.50	3
Ni			1	51.689	ug/l	0.49	149,725.22	1.198E+00	Pulse	0.50	3
Cu			1	52.295	ug/l	0.38	403,218.62	3.225E+00	Pulse	0.50	3
Zn			1	50.602	ug/l	0.82	68,724.70	3.663E-01	Pulse	1.00	3
Cd			1	49.742	ug/l	0.20	98,038.16	5.225E-01	Pulse	0.50	3
Al			1	4851.650	ug/l	1.44	1,175,810.38	6.028E+00	Pulse	1.00	3
Se			1	48.484	ug/l	0.97	3,453.43	1.841E-02	Pulse	3.00	3
Sb			1	48.321	ug/l	0.35	296,045.66	1.578E+00	Pulse	1.00	3
Se			1	48.781	ug/l	0.93	1,670.19	8.901E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,543,296.92	0.49	87.5	Pulse	0.50	3
1	Sc		195,041.97	0.48	93.1	Pulse	0.30	3
1	Ge		125,012.45	1.06	92.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,213,639.12	0.65	88.5	Pulse	0.30	3
1	Tb		3,448,532.00	0.51	89.6	Pulse	0.50	3
1	Lu		2,610,768.25	0.42	88.0	Pulse	0.50	3
1	Ge		187,625.37	1.18	93.0	Pulse	0.30	3
1	Te		3.33	69.28		Pulse	0.50	3
1	Li		932.25	5.24	117.5	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:00
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	103.043	ug/l	1.38	723,849.69	5.778E+00	Pulse	0.50	3
As			1	99.461	ug/l	1.53	93,937.90	7.499E-01	Pulse	1.00	3
Mo			1	102.253	ug/l	1.72	392,781.70	2.111E+00	Pulse	0.50	3
Pb			1	102.544	ug/l	0.96	2,065,855.92	6.017E-01	Pulse	1.00	3
Be			1	106.199	ug/l	2.00	4,489.16		Pulse	2.00	3
Ag			1	101.609	ug/l	1.29	1,287,177.13	6.918E+00	Pulse	0.50	3
Ba			1	100.793	ug/l	0.88	196,593.24	1.632E-01	Pulse	0.50	3
Tl			1	102.134	ug/l	0.91	2,986,912.50	8.699E-01	Pulse	0.50	3
Sn			1	101.671	ug/l	1.10	443,668.64	3.683E-01	Pulse	0.30	3
Sr			1	102.097	ug/l	0.77	527,243.26	4.377E-01	Pulse	0.50	3
[Pb]			1	100.939	ug/l	0.52	961,376.08	3.868E-01	Pulse	0.50	3
Ca			1	10010.831	ug/l	0.99	278,259.81	1.418E+00	Pulse	0.50	3
Ti			1	100.562	ug/l	1.49	19,320.87	9.847E-02	Pulse	0.50	3
Na			1	10688.978	ug/l	1.27	11,850,491.33	9.459E+01	Analog	1.00	3
Mg			1	10508.087	ug/l	0.63	5,901,470.33	3.008E+01	Analog	1.00	3
K			1	10428.012	ug/l	0.26	5,824,098.83	2.968E+01	Analog	1.00	3
V			1	102.559	ug/l	0.78	583,963.62	2.976E+00	Pulse	0.50	3
Mn			1	101.969	ug/l	1.44	423,588.83	3.381E+00	Pulse	0.50	3
Fe			1	10523.561	ug/l	1.18	62,970,113.33	5.026E+02	Analog	0.50	3
Co			1	104.476	ug/l	1.60	1,136,195.29	9.070E+00	Pulse	0.50	3
Ni			1	104.628	ug/l	1.61	301,903.10	2.410E+00	Pulse	0.50	3
Cu			1	104.754	ug/l	1.34	805,946.56	6.433E+00	Pulse	0.50	3
Zn			1	103.929	ug/l	1.92	137,986.01	7.417E-01	Pulse	1.00	3
Cd			1	100.488	ug/l	2.74	196,355.06	1.055E+00	Pulse	0.50	3
Al			1	9879.019	ug/l	0.90	2,407,597.50	1.227E+01	Pulse	1.00	3
Se			1	99.420	ug/l	1.47	6,998.17	3.761E-02	Pulse	3.00	3
Sb			1	98.281	ug/l	1.99	596,951.50	3.209E+00	Pulse	1.00	3
Se			1	101.023	ug/l	1.93	3,401.97	1.828E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,485,173.08	0.16	85.5	Pulse	0.50	3
1	Sc		196,208.22	0.34	93.6	Pulse	0.30	3
1	Ge		125,286.33	0.90	92.7	Pulse	0.30	3
1	In		1,204,545.65	0.12	87.9	Pulse	0.30	3
1	Tb		3,433,654.33	0.18	89.3	Pulse	0.50	3
1	Lu		2,583,158.00	0.29	87.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		186,067.84	0.93	92.2	Pulse	0.30	3
1	Te		3.33	34.64		Pulse	0.50	3
1	Li		836.69	13.32	105.5	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:04
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.013	ug/l	149.01	2,794.21	2.224E-02	Pulse	0.50	3
As			1	0.016	ug/l	73.21	76.00	6.049E-04	Pulse	1.00	3
Mo			1	0.093	ug/l	19.45	388.67	2.077E-03	Pulse	0.50	3
Pb			1	0.030	ug/l	8.37	2,436.18	7.149E-04	Pulse	1.00	3
Be			1	0.039	ug/l	121.24	2.33		Pulse	2.00	3
Ag			1	0.009	ug/l	34.65	908.69	4.854E-03	Pulse	0.50	3
Ba			1	0.020	ug/l	29.19	100.67	8.222E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	17.19	900.70	2.645E-04	Pulse	0.50	3
Sn			1	0.071	ug/l	41.21	674.46	5.506E-04	Pulse	0.30	3
Sr			1	0.013	ug/l	65.39	508.01	4.152E-04	Pulse	0.50	3
[Pb]			1	0.023	ug/l	19.80	1,142.71	4.489E-04	Pulse	0.50	3
Ca			1	0.977	ug/l	111.87	436.01	2.209E-03	Pulse	0.50	3
Ti			1	0.026	ug/l	150.43	11.33	5.758E-05	Pulse	0.50	3
Na			1	3.630	ug/l	23.33	17,156.23	1.365E-01	Pulse	1.00	3
Mg			1	0.815	ug/l	45.19	2,034.11	1.031E-02	Pulse	1.00	3
K			1	2.881	ug/l	39.33	56,117.57	2.843E-01	Pulse	1.00	3
V			1	0.051	ug/l	25.05	1,775.42	8.996E-03	Pulse	0.50	3
Mn			1	0.040	ug/l	48.68	1,795.42	1.429E-02	Pulse	0.50	3
Fe			1	3.509	ug/l	9.73	390,289.39	3.106E+00	Pulse	0.50	3
Co			1	0.012	ug/l	17.75	238.00	1.894E-03	Pulse	0.50	3
Ni			1	-0.232	ug/l	-2.42	1,085.37	8.637E-03	Pulse	0.50	3
Cu			1	0.029	ug/l	72.53	3,667.03	2.918E-02	Pulse	0.50	3
Zn			1	-0.022	ug/l	-66.40	1,848.09	9.873E-03	Pulse	1.00	3
Cd			1	0.016	ug/l	25.00	51.33	2.741E-04	Pulse	0.50	3
Al			1	0.349	ug/l	137.72	874.02	4.429E-03	Pulse	1.00	3
Se			1	0.120	ug/l	22.00	31.33	1.674E-04	Pulse	3.00	3
Sb			1	0.036	ug/l	13.07	308.33	1.648E-03	Pulse	1.00	3
Se			1	0.144	ug/l	71.50	31.00	1.656E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,546,184.92	0.68	87.6	Pulse	0.50	3
1	Sc		197,370.54	0.77	94.2	Pulse	0.30	3
1	Ge		125,664.40	0.17	93.0	Pulse	0.30	3
1	In		1,224,052.73	0.68	89.3	Pulse	0.30	3
1	Tb		3,407,771.67	0.66	88.6	Pulse	0.50	3
1	Lu		2,570,513.75	1.00	86.7	Pulse	0.50	3
1	Ge		187,180.84	0.38	92.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		947.81	5.09	119.5	Pulse	0.30	3

Quantitation Report

File Name	033SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:07
Sample Name	FC142-3A
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1343.994	ug/l	0.72	929,693.23	7.530E+00	Pulse	0.50	3
As			1	36.843	ug/l	1.55	3,486.66	2.824E-02	Pulse	1.00	3
Mo			1	2.380	ug/l	1.11	907.36	5.069E-03	Pulse	0.50	3
Pb			1	227.843	ug/l	0.61	445,660.16	1.341E-01	Pulse	1.00	3
Be			1	18.337	ug/l	6.10	78.17		Pulse	2.00	3
Ag			1	0.764	ug/l	12.24	1,691.42	9.447E-03	Pulse	0.50	3
Ba			1	2272.384	ug/l	0.47	420,312.57	3.679E-01	Pulse	0.50	3
Tl			1	2.280	ug/l	1.34	6,505.93	1.958E-03	Pulse	0.50	3
Sn			1	39.032	ug/l	3.40	16,478.56	1.442E-02	Pulse	0.30	3
Sr			1	151.493	ug/l	1.40	74,558.77	6.525E-02	Pulse	0.50	3
[Pb]			1	228.465	ug/l	0.36	208,614.05	8.784E-02	Pulse	0.50	3
Ca			1	12697.313	ug/l	0.53	53,027.14	1.817E-01	Pulse	0.50	3
Ti			1	18092.163	ug/l	0.50	516,898.73	1.771E+00	Pulse	0.50	3
Na			1	2076.157	ug/l	1.59	239,495.72	1.940E+00	Pulse	1.00	3
Mg			1	50971.679	ug/l	0.28	4,259,299.67	1.459E+01	Pulse	1.00	3
K			1	19825.373	ug/l	0.97	1,712,381.17	5.867E+00	Pulse	1.00	3
V			1	3056.251	ug/l	0.19	2,584,147.92	8.854E+00	Pulse	0.50	3
Mn			1	22446.480	ug/l	1.16	9,156,342.67	7.416E+01	Analog	0.50	3
Fe			1	1358502.760	ug/l	1.14	796,818,709.33	6.454E+03	Analog	0.50	3
Co			1	1072.683	ug/l	1.17	1,149,727.29	9.312E+00	Pulse	0.50	3
Ni			1	687.447	ug/l	0.89	196,095.16	1.588E+00	Pulse	0.50	3
Cu			1	1659.608	ug/l	0.71	1,256,447.58	1.018E+01	Pulse	0.50	3
Zn			1	1138.093	ug/l	0.44	145,194.88	8.112E-01	Pulse	1.00	3
Cd			1	1.797	ug/l	6.87	356.67	1.993E-03	Pulse	0.50	3
Al			1	381232.967	ug/l	0.39	13,816,776.33	4.734E+01	Analog	1.00	3
Se			1	28.176	ug/l	5.87	212.00	1.185E-03	Pulse	3.00	3
Sb			1	1.126	ug/l	9.87	739.68	4.134E-03	Pulse	1.00	3
Se			1	73.749	ug/l	0.54	262.11	1.464E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,374,999.67	0.09	81.7	Pulse	0.50	3
1	Sc		291,851.56	0.82	139.3	Pulse	0.30	3
1	Ge		123,472.59	0.91	91.3	Pulse	0.30	3
1	In		1,142,513.26	0.76	83.3	Pulse	0.30	3
1	Tb		3,323,351.08	0.65	86.4	Pulse	0.50	3
1	Lu		2,502,591.67	0.65	84.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		178,984.55	0.84	88.7	Pulse	0.30	3
1	Te		2.67	43.30		Pulse	0.50	3
1	Li		812.24	10.39	102.4	Pulse	0.30	3

Quantitation Report

File Name 034SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:11
Sample Name FC142-4A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1329.634	ug/l	1.15	898,021.10	7.450E+00	Pulse	0.50	3
As			1	72.819	ug/l	1.68	6,671.84	5.535E-02	Pulse	1.00	3
Mo			1	45.797	ug/l	1.27	16,734.15	9.470E-02	Pulse	0.50	3
Pb			1	543.663	ug/l	0.46	1,046,516.33	3.192E-01	Pulse	1.00	3
Be			1	7.611	ug/l	22.92	32.83		Pulse	2.00	3
Ag			1	0.927	ug/l	1.40	1,865.43	1.056E-02	Pulse	0.50	3
Ba			1	2067.523	ug/l	0.43	376,347.95	3.347E-01	Pulse	0.50	3
Tl			1	5.829	ug/l	0.74	16,325.80	4.980E-03	Pulse	0.50	3
Sn			1	62.891	ug/l	0.66	25,927.21	2.306E-02	Pulse	0.30	3
Sr			1	441.096	ug/l	1.57	212,824.24	1.893E-01	Pulse	0.50	3
[Pb]			1	537.784	ug/l	0.34	492,036.69	2.063E-01	Pulse	0.50	3
Ca			1	53778.554	ug/l	1.30	198,914.83	7.628E-01	Pulse	0.50	3
Ti			1	9729.211	ug/l	0.82	248,370.21	9.524E-01	Pulse	0.50	3
Na			1	1459.738	ug/l	0.71	168,142.70	1.395E+00	Pulse	1.00	3
Mg			1	38624.416	ug/l	1.03	2,884,240.67	1.106E+01	Pulse	1.00	3
K			1	5120.965	ug/l	0.69	448,610.32	1.720E+00	Pulse	1.00	3
V			1	2650.472	ug/l	1.16	2,002,616.58	7.680E+00	Pulse	0.50	3
Mn			1	12810.133	ug/l	0.92	5,102,515.33	4.233E+01	Pulse	0.50	3
Fe			1	1137175.102	ug/l	1.08	651,285,141.33	5.403E+03	Analog	0.50	3
Co			1	482.543	ug/l	0.84	505,027.29	4.189E+00	Pulse	0.50	3
Ni			1	775.882	ug/l	1.11	215,868.67	1.791E+00	Pulse	0.50	3
Cu			1	1231.202	ug/l	1.11	910,897.79	7.556E+00	Pulse	0.50	3
Zn			1	1636.586	ug/l	0.85	205,353.28	1.162E+00	Pulse	1.00	3
Cd			1	4.660	ug/l	4.63	883.36	4.999E-03	Pulse	0.50	3
Al			1	318165.568	ug/l	1.24	10,302,821.33	3.951E+01	Analog	1.00	3
Se			1	28.974	ug/l	4.04	214.67	1.215E-03	Pulse	3.00	3
Sb			1	2.530	ug/l	1.71	1,540.40	8.718E-03	Pulse	1.00	3
Se			1	58.350	ug/l	4.87	209.89	1.188E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,385,402.25	0.97	82.1	Pulse	0.50	3
1	Sc		260,777.46	0.85	124.4	Pulse	0.30	3
1	Ge		120,548.65	0.56	89.2	Pulse	0.30	3
1	In		1,124,353.12	1.30	82.0	Pulse	0.30	3
1	Tb		3,278,141.25	0.61	85.2	Pulse	0.50	3
1	Lu		2,458,587.75	0.98	82.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		176,696.94	0.14	87.5	Pulse	0.30	3
1	Te		8.00	25.00		Pulse	0.50	3
1	Li		877.80	4.10	110.6	Pulse	0.30	3

Quantitation Report

File Name	035SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:15
Sample Name	FC142-5A
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1117.431	ug/l	0.84	756,966.23	6.264E+00	Pulse	0.50	3
As			1	53.717	ug/l	0.52	4,948.64	4.095E-02	Pulse	1.00	3
Mo			1	20.312	ug/l	1.40	7,351.46	4.209E-02	Pulse	0.50	3
Pb			1	207.656	ug/l	0.63	400,675.20	1.223E-01	Pulse	1.00	3
Be			1	9.188	ug/l	13.63	39.50		Pulse	2.00	3
Ag			1	0.571	ug/l	14.55	1,422.06	8.135E-03	Pulse	0.50	3
Ba			1	919.165	ug/l	0.62	168,153.11	1.488E-01	Pulse	0.50	3
Tl			1	2.155	ug/l	0.29	6,063.76	1.850E-03	Pulse	0.50	3
Sn			1	38.640	ug/l	2.49	16,137.16	1.428E-02	Pulse	0.30	3
Sr			1	320.774	ug/l	0.50	155,640.57	1.378E-01	Pulse	0.50	3
[Pb]			1	207.870	ug/l	0.94	189,054.87	7.995E-02	Pulse	0.50	3
Ca			1	105635.723	ug/l	0.25	373,961.57	1.496E+00	Pulse	0.50	3
Ti			1	10502.439	ug/l	0.33	256,936.57	1.028E+00	Pulse	0.50	3
Na			1	1229.974	ug/l	0.26	144,007.15	1.192E+00	Pulse	1.00	3
Mg			1	39102.393	ug/l	0.20	2,798,248.25	1.120E+01	Pulse	1.00	3
K			1	6678.642	ug/l	0.86	539,665.37	2.160E+00	Pulse	1.00	3
V			1	2611.806	ug/l	0.39	1,891,187.34	7.568E+00	Pulse	0.50	3
Mn			1	12376.858	ug/l	0.56	4,942,005.00	4.090E+01	Pulse	0.50	3
Fe			1	1094821.485	ug/l	0.64	628,573,141.33	5.202E+03	Analog	0.50	3
Co			1	467.374	ug/l	1.11	490,357.78	4.058E+00	Pulse	0.50	3
Ni			1	527.212	ug/l	0.75	147,580.26	1.221E+00	Pulse	0.50	3
Cu			1	909.171	ug/l	1.25	675,160.94	5.587E+00	Pulse	0.50	3
Zn			1	881.989	ug/l	1.91	110,200.67	6.309E-01	Pulse	1.00	3
Cd			1	1.896	ug/l	14.11	366.67	2.097E-03	Pulse	0.50	3
Al			1	281711.750	ug/l	0.24	8,742,541.33	3.498E+01	Analog	1.00	3
Se			1	32.456	ug/l	4.37	235.22	1.346E-03	Pulse	3.00	3
Sb			1	1.258	ug/l	6.30	797.69	4.567E-03	Pulse	1.00	3
Se			1	70.898	ug/l	3.89	246.78	1.413E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,364,753.08	1.48	81.4	Pulse	0.50	3
1	Sc		249,904.59	1.12	119.2	Pulse	0.30	3
1	Ge		120,839.27	0.60	89.4	Pulse	0.30	3
1	In		1,129,750.41	1.04	82.4	Pulse	0.30	3
1	Tb		3,277,040.58	0.58	85.2	Pulse	0.50	3
1	Lu		2,442,821.00	1.03	82.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		174,682.50	1.54	86.5	Pulse	0.30	3
1	Te		8.00	100.00		Pulse	0.50	3
1	Li		883.36	0.65	111.3	Pulse	0.30	3

Quantitation Report

File Name 036SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:19
Sample Name FC142-6A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1515.545	ug/l	2.05	1,028,722.04	8.488E+00	Pulse	0.50	3
As			1	54.692	ug/l	1.53	5,053.01	4.169E-02	Pulse	1.00	3
Mo			1	5.635	ug/l	5.30	2,052.79	1.179E-02	Pulse	0.50	3
Pb			1	208.240	ug/l	0.81	399,998.73	1.226E-01	Pulse	1.00	3
Be			1	11.239	ug/l	9.72	48.17		Pulse	2.00	3
Ag			1	0.699	ug/l	5.11	1,568.07	9.005E-03	Pulse	0.50	3
Ba			1	1351.227	ug/l	0.55	244,331.38	2.188E-01	Pulse	0.50	3
Tl			1	3.155	ug/l	1.18	8,814.97	2.702E-03	Pulse	0.50	3
Sn			1	50.666	ug/l	0.15	20,811.87	1.864E-02	Pulse	0.30	3
Sr			1	716.349	ug/l	0.70	343,094.18	3.072E-01	Pulse	0.50	3
[Pb]			1	210.645	ug/l	0.25	188,435.03	8.101E-02	Pulse	0.50	3
Ca			1	229899.379	ug/l	0.88	885,155.71	3.254E+00	Pulse	0.50	3
Ti			1	15671.511	ug/l	0.88	417,292.23	1.534E+00	Pulse	0.50	3
Na			1	1586.997	ug/l	2.21	182,677.71	1.507E+00	Pulse	1.00	3
Mg			1	54794.313	ug/l	0.95	4,267,089.17	1.569E+01	Pulse	1.00	3
K			1	12110.809	ug/l	0.37	1,004,117.29	3.691E+00	Pulse	1.00	3
V			1	2995.896	ug/l	0.98	2,360,858.67	8.680E+00	Pulse	0.50	3
Mn			1	22476.696	ug/l	2.05	8,999,675.33	7.426E+01	Analog	0.50	3
Fe			1	1274076.772	ug/l	1.78	733,581,269.33	6.053E+03	Analog	0.50	3
Co			1	691.529	ug/l	1.60	727,622.83	6.004E+00	Pulse	0.50	3
Ni			1	652.225	ug/l	1.69	182,713.85	1.508E+00	Pulse	0.50	3
Cu			1	1459.271	ug/l	1.60	1,084,892.71	8.951E+00	Pulse	0.50	3
Zn			1	1091.186	ug/l	0.66	135,520.67	7.782E-01	Pulse	1.00	3
Cd			1	2.466	ug/l	5.33	469.34	2.695E-03	Pulse	0.50	3
Al			1	359320.984	ug/l	0.77	12,136,916.00	4.462E+01	Analog	1.00	3
Se			1	30.610	ug/l	6.13	222.33	1.277E-03	Pulse	3.00	3
Sb			1	1.365	ug/l	2.28	856.02	4.915E-03	Pulse	1.00	3
Se			1	74.227	ug/l	8.44	256.45	1.473E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,325,917.92	0.96	80.0	Pulse	0.50	3
1	Sc		272,014.35	0.85	129.8	Pulse	0.30	3
1	Ge		121,221.52	1.78	89.7	Pulse	0.30	3
1	In		1,116,782.87	0.54	81.5	Pulse	0.30	3
1	Tb		3,262,335.50	0.44	84.8	Pulse	0.50	3
1	Lu		2,431,852.25	0.79	82.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		174,147.42	0.59	86.3	Pulse	0.30	3
1	Te		4.67	89.21		Pulse	0.50	3
1	Li		833.35	7.88	105.0	Pulse	0.30	3

Quantitation Report

File Name 037SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:23
Sample Name FC142-7A
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	654.730	ug/l	0.76	442,600.29	3.679E+00	Pulse	0.50	3
As			1	87.204	ug/l	2.51	7,961.66	6.618E-02	Pulse	1.00	3
Mo			1	6.416	ug/l	3.93	2,338.82	1.340E-02	Pulse	0.50	3
Pb			1	1276.761	ug/l	0.58	2,441,030.08	7.490E-01	Pulse	1.00	3
Be			1	9.780	ug/l	22.40	42.00		Pulse	2.00	3
Ag			1	1.185	ug/l	4.87	2,149.47	1.232E-02	Pulse	0.50	3
Ba			1	1790.723	ug/l	0.42	329,278.96	2.899E-01	Pulse	0.50	3
Tl			1	21.143	ug/l	0.50	58,744.23	1.802E-02	Pulse	0.50	3
Sn			1	142.337	ug/l	1.31	58,853.76	5.182E-02	Pulse	0.30	3
Sr			1	551.371	ug/l	0.67	268,656.16	2.365E-01	Pulse	0.50	3
[Pb]			1	1267.697	ug/l	0.64	1,167,716.50	4.857E-01	Pulse	0.50	3
Ca			1	130377.948	ug/l	0.69	442,658.81	1.846E+00	Pulse	0.50	3
Ti			1	8867.730	ug/l	0.88	208,121.73	8.681E-01	Pulse	0.50	3
Na			1	2505.772	ug/l	1.18	279,030.22	2.320E+00	Pulse	1.00	3
Mg			1	28690.229	ug/l	0.44	1,970,188.83	8.218E+00	Pulse	1.00	3
K			1	9781.558	ug/l	0.58	727,532.86	3.035E+00	Pulse	1.00	3
V			1	2235.599	ug/l	0.34	1,553,263.41	6.479E+00	Pulse	0.50	3
Mn			1	11690.379	ug/l	0.29	4,647,072.17	3.863E+01	Pulse	0.50	3
Fe			1	913513.416	ug/l	0.45	522,178,794.67	4.341E+03	Analog	0.50	3
Co			1	320.755	ug/l	0.52	335,047.96	2.785E+00	Pulse	0.50	3
Ni			1	245.130	ug/l	0.56	69,208.94	5.753E-01	Pulse	0.50	3
Cu			1	1411.490	ug/l	0.71	1,041,660.54	8.659E+00	Pulse	0.50	3
Zn			1	3129.849	ug/l	0.27	386,365.32	2.213E+00	Pulse	1.00	3
Cd			1	11.609	ug/l	6.12	2,146.13	1.230E-02	Pulse	0.50	3
Al			1	270753.125	ug/l	0.49	8,060,892.83	3.362E+01	Analog	1.00	3
Se			1	23.863	ug/l	5.97	178.44	1.022E-03	Pulse	3.00	3
Sb			1	6.836	ug/l	0.92	3,975.44	2.277E-02	Pulse	1.00	3
Se			1	42.750	ug/l	14.04	158.44	9.077E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,404,017.75	0.58	82.7	Pulse	0.50	3
1	Sc		239,746.64	0.47	114.4	Pulse	0.30	3
1	Ge		120,299.39	0.39	89.0	Pulse	0.30	3
1	In		1,135,774.75	0.98	82.9	Pulse	0.30	3
1	Tb		3,259,284.17	1.14	84.7	Pulse	0.50	3
1	Lu		2,432,235.33	0.77	82.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		174,554.60	0.62	86.5	Pulse	0.30	3
1	Te		8.67	87.37		Pulse	0.50	3
1	Li		822.24	2.85	103.6	Pulse	0.30	3

Quantitation Report

File Name 038_MB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:26
Sample Name MP41455-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.931	ug/l	1.46	12,181.17	1.034E-01	Pulse	0.50	3
As			1	0.198	ug/l	11.69	144.67	1.227E-03	Pulse	1.00	3
Mo			1	0.045	ug/l	25.10	110.00	6.217E-04	Pulse	0.50	3
Pb			1	-0.016	ug/l	-195.42	1,585.08	4.914E-04	Pulse	1.00	3
Be			1	0.016	ug/l	300.00	1.00		Pulse	2.00	3
Ag			1	0.003	ug/l	438.45	767.35	4.338E-03	Pulse	0.50	3
Ba			1	0.007	ug/l	648.42	64.00	5.632E-05	Pulse	0.50	3
Tl			1	0.005	ug/l	28.87	122.00	3.778E-05	Pulse	0.50	3
Sn			1	0.811	ug/l	5.49	2,010.13	1.763E-03	Pulse	0.30	3
Sr			1	-0.027	ug/l	-14.09	343.34	3.011E-04	Pulse	0.50	3
[Pb]			1	-0.020	ug/l	-159.60	770.02	3.226E-04	Pulse	0.50	3
Ca			1	-0.042	ug/l	-8900.45	390.01	2.068E-03	Pulse	0.50	3
Ti			1	0.881	ug/l	47.48	87.33	4.632E-04	Pulse	0.50	3
Na			1	7.712	ug/l	8.81	16,322.64	1.385E-01	Pulse	1.00	3
Mg			1	0.798	ug/l	81.86	1,719.41	9.117E-03	Pulse	1.00	3
K			1	-1.094	ug/l	-66.84	51,812.53	2.747E-01	Pulse	1.00	3
V			1	1.690	ug/l	3.22	6,030.95	3.197E-02	Pulse	0.50	3
Mn			1	0.142	ug/l	205.47	1,796.76	1.530E-02	Pulse	0.50	3
Fe			1	-51.885	ug/l	-42.07	200,494.45	1.707E+00	Pulse	0.50	3
Co			1	0.018	ug/l	87.50	196.00	1.665E-03	Pulse	0.50	3
Ni			1	-0.321	ug/l	-5.53	1,212.04	1.029E-02	Pulse	0.50	3
Cu			1	1.531	ug/l	3.88	8,746.68	7.423E-02	Pulse	0.50	3
Zn			1	0.731	ug/l	12.06	2,228.80	1.260E-02	Pulse	1.00	3
Cd			1	-0.012	ug/l	-26.90	7.33	4.148E-05	Pulse	0.50	3
Al			1	10.999	ug/l	62.98	2,040.45	1.082E-02	Pulse	1.00	3
Se			1	-0.098	ug/l	-91.08	18.33	1.037E-04	Pulse	3.00	3
Sb			1	0.025	ug/l	40.27	154.00	8.703E-04	Pulse	1.00	3
Se			1	-0.150	ug/l	-220.23	22.33	1.263E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,390,898.08	1.19	82.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		188,633.98	0.35	90.0	Pulse	0.30	3
1	Ge		117,858.65	1.94	87.2	Pulse	0.30	3
1	In		1,140,305.61	1.09	83.2	Pulse	0.30	3
1	Tb		3,228,471.75	1.01	83.9	Pulse	0.50	3
1	Lu		2,389,267.58	1.09	80.6	Pulse	0.50	3
1	Ge		176,863.02	0.39	87.6	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		928.92	13.20	117.1	Pulse	0.30	3

Quantitation Report

File Name 039_BSP.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:30
Sample Name MP41455-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	231.987	ug/l	1.03	769,236.98	6.502E+00	Pulse	0.50	3
As			1	230.607	ug/l	0.64	102,844.60	8.692E-01	Pulse	1.00	3
Mo			1	223.404	ug/l	0.67	409,485.24	2.306E+00	Pulse	0.50	3
Pb			1	223.999	ug/l	0.21	2,112,715.75	6.571E-01	Pulse	1.00	3
Be			1	233.058	ug/l	2.06	4,925.76		Pulse	2.00	3
Ag			1	102.203	ug/l	0.35	618,151.66	3.481E+00	Pulse	0.50	3
Ba			1	218.846	ug/l	1.15	200,397.70	1.772E-01	Pulse	0.50	3
Tl			1	213.407	ug/l	0.86	2,921,981.33	9.088E-01	Pulse	0.50	3
Sn			1	220.216	ug/l	0.46	451,162.15	3.989E-01	Pulse	0.30	3
Sr			1	217.568	ug/l	0.86	527,474.94	4.664E-01	Pulse	0.50	3
[Pb]			1	213.501	ug/l	0.65	942,634.54	4.091E-01	Pulse	0.50	3
Ca			1	20357.295	ug/l	1.08	270,992.81	1.442E+00	Pulse	0.50	3
Ti			1	215.620	ug/l	1.27	19,840.05	1.056E-01	Pulse	0.50	3
Na			1	22643.953	ug/l	1.25	11,853,955.33	1.002E+02	Analog	1.00	3
Mg			1	21779.671	ug/l	0.52	5,858,087.00	3.117E+01	Analog	1.00	3
K			1	21365.487	ug/l	0.63	5,713,642.33	3.040E+01	Analog	1.00	3
V			1	227.061	ug/l	0.22	619,046.02	3.294E+00	Pulse	0.50	3
Mn			1	222.976	ug/l	0.89	437,268.93	3.696E+00	Pulse	0.50	3
Fe			1	21911.853	ug/l	1.01	61,900,549.33	5.232E+02	Analog	0.50	3
Co			1	232.129	ug/l	1.32	1,192,075.87	1.008E+01	Pulse	0.50	3
Ni			1	229.816	ug/l	0.99	312,992.61	2.645E+00	Pulse	0.50	3
Cu			1	231.906	ug/l	1.54	842,165.81	7.118E+00	Pulse	0.50	3
Zn			1	221.505	ug/l	0.27	140,216.33	7.897E-01	Pulse	1.00	3
Cd			1	212.488	ug/l	0.72	198,141.11	1.116E+00	Pulse	0.50	3
Al			1	19877.685	ug/l	0.43	2,320,101.17	1.234E+01	Pulse	1.00	3
Se			1	211.996	ug/l	1.07	7,118.77	4.009E-02	Pulse	3.00	3
Sb			1	215.331	ug/l	0.49	624,090.83	3.515E+00	Pulse	1.00	3
Se			1	212.907	ug/l	0.56	3,419.64	1.926E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,304,198.42	0.61	79.3	Pulse	0.50	3
1	Sc		187,940.64	0.52	89.7	Pulse	0.30	3
1	Ge		118,323.75	0.94	87.5	Pulse	0.30	3
1	In		1,131,104.88	0.85	82.5	Pulse	0.30	3
1	Tb		3,215,350.42	1.14	83.6	Pulse	0.50	3
1	Lu		2,408,602.67	1.01	81.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		177,554.84	0.52	88.0	Pulse	0.30	3
1	Te		1.33	86.60		Pulse	0.50	3
1	Li		872.25	9.38	109.9	Pulse	0.30	3

Quantitation Report

File Name	040SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:34
Sample Name	FA99205-1FR
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.079	ug/l	3.70	11,390.68	1.075E-01	Pulse	0.50	3
As			1	2.240	ug/l	3.61	945.03	8.920E-03	Pulse	1.00	3
Mo			1	1.851	ug/l	1.86	3,050.93	1.926E-02	Pulse	0.50	3
Pb			1	0.323	ug/l	23.20	4,273.55	1.485E-03	Pulse	1.00	3
Be			1	0.229	ug/l	84.68	5.50		Pulse	2.00	3
Ag			1	0.095	ug/l	27.41	1,182.71	7.467E-03	Pulse	0.50	3
Ba			1	23.609	ug/l	0.82	19,180.85	1.916E-02	Pulse	0.50	3
Tl			1	0.125	ug/l	32.37	1,568.75	5.464E-04	Pulse	0.50	3
Sn			1	0.780	ug/l	4.06	1,707.87	1.706E-03	Pulse	0.30	3
Sr			1	7195.167	ug/l	0.77	15,427,461.33	1.541E+01	Analog	0.50	3
[Pb]			1	0.339	ug/l	14.80	1,990.79	1.011E-03	Pulse	0.50	3
Ca			1	429518.309	ug/l	1.08	5,398,800.50	3.038E+01	Analog	0.50	3
Ti			1	1.042	ug/l	23.59	96.00	5.417E-04	Pulse	0.50	3
Na			1	1764985.135	ug/l	0.37	826,720,213.33	7.801E+03	Analog	1.00	3
Mg			1	457745.753	ug/l	1.06	116,382,240.00	6.549E+02	Analog	1.00	3
K			1	60950.231	ug/l	1.34	15,319,969.00	8.622E+01	Analog	1.00	3
V			1	3.759	ug/l	2.73	11,007.80	6.193E-02	Pulse	0.50	3
Mn			1	9482.233	ug/l	0.58	16,597,519.00	1.566E+02	Analog	0.50	3
Fe			1	956.736	ug/l	0.66	2,718,574.92	2.565E+01	Pulse	0.50	3
Co			1	4.162	ug/l	3.22	19,232.23	1.815E-01	Pulse	0.50	3
Ni			1	9.501	ug/l	3.33	13,006.40	1.227E-01	Pulse	0.50	3
Cu			1	1.941	ug/l	5.66	9,195.55	8.679E-02	Pulse	0.50	3
Zn			1	7.780	ug/l	1.60	5,926.25	3.741E-02	Pulse	1.00	3
Cd			1	0.091	ug/l	28.80	92.67	5.855E-04	Pulse	0.50	3
Al			1	7.181	ug/l	42.55	1,499.06	8.453E-03	Pulse	1.00	3
Se			1	2.153	ug/l	8.42	83.67	5.281E-04	Pulse	3.00	3
Sb			1	0.249	ug/l	8.96	715.35	4.517E-03	Pulse	1.00	3
Se			1	2.654	ug/l	18.64	59.89	3.782E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,971,183.13	1.72	67.8	Pulse	0.50	3
1	Sc		177,722.33	1.95	84.8	Pulse	0.30	3
1	Ge		105,975.40	1.35	78.4	Pulse	0.30	3
1	In		1,001,090.55	0.89	73.0	Pulse	0.30	3
1	Tb		2,880,403.67	1.57	74.9	Pulse	0.50	3
1	Lu		2,176,776.50	1.59	73.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		158,397.72	0.50	78.5	Pulse	0.30	3
1	Te		8.67	93.26		Pulse	0.50	3
1	Li		904.47	3.76	114.0	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:38
Sample Name MP41455-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.118	ug/l	2.53	11,702.21	1.086E-01	Pulse	0.50	3
As			1	1.965	ug/l	3.12	849.69	7.882E-03	Pulse	1.00	3
Mo			1	1.740	ug/l	4.48	2,920.90	1.811E-02	Pulse	0.50	3
Pb			1	0.025	ug/l	65.21	1,778.10	6.108E-04	Pulse	1.00	3
Be			1	0.079	ug/l	91.65	2.33		Pulse	2.00	3
Ag			1	0.049	ug/l	8.61	956.70	5.931E-03	Pulse	0.50	3
Ba			1	23.101	ug/l	0.64	18,858.52	1.875E-02	Pulse	0.50	3
Tl			1	0.039	ug/l	9.51	524.68	1.800E-04	Pulse	0.50	3
Sn			1	0.590	ug/l	2.63	1,370.06	1.362E-03	Pulse	0.30	3
Sr			1	7109.295	ug/l	0.23	15,317,122.67	1.523E+01	Analog	0.50	3
[Pb]			1	0.053	ug/l	33.91	919.36	4.622E-04	Pulse	0.50	3
Ca			1	427888.507	ug/l	0.74	5,407,047.83	3.027E+01	Analog	0.50	3
Ti			1	0.906	ug/l	24.06	84.67	4.750E-04	Pulse	0.50	3
Na			1	1743620.410	ug/l	1.00	830,460,672.00	7.707E+03	Analog	1.00	3
Mg			1	455708.641	ug/l	1.00	116,480,904.00	6.520E+02	Analog	1.00	3
K			1	60518.443	ug/l	1.20	15,292,683.67	8.561E+01	Analog	1.00	3
V			1	4.231	ug/l	2.65	12,285.24	6.875E-02	Pulse	0.50	3
Mn			1	9344.293	ug/l	1.12	16,631,557.33	1.543E+02	Analog	0.50	3
Fe			1	921.056	ug/l	1.33	2,673,082.00	2.481E+01	Pulse	0.50	3
Co			1	4.085	ug/l	1.84	19,199.53	1.782E-01	Pulse	0.50	3
Ni			1	9.257	ug/l	3.44	12,923.01	1.199E-01	Pulse	0.50	3
Cu			1	1.624	ug/l	5.98	8,304.48	7.710E-02	Pulse	0.50	3
Zn			1	6.875	ug/l	3.63	5,521.13	3.423E-02	Pulse	1.00	3
Cd			1	0.025	ug/l	2.36	38.00	2.356E-04	Pulse	0.50	3
Al			1	1.254	ug/l	14.23	852.69	4.774E-03	Pulse	1.00	3
Se			1	1.971	ug/l	4.45	79.67	4.938E-04	Pulse	3.00	3
Sb			1	0.159	ug/l	2.87	492.01	3.051E-03	Pulse	1.00	3
Se			1	2.614	ug/l	22.27	60.44	3.746E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,990,144.79	1.34	68.5	Pulse	0.50	3
1	Sc		178,663.78	1.97	85.2	Pulse	0.30	3
1	Ge		107,770.88	2.08	79.7	Pulse	0.30	3
1	In		1,005,909.34	1.08	73.4	Pulse	0.30	3
1	Tb		2,913,237.33	1.57	75.7	Pulse	0.50	3
1	Lu		2,196,697.75	1.59	74.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		161,301.54	1.30	79.9	Pulse	0.30	3
1	Te		5.33	43.30		Pulse	0.50	3
1	Li		976.70	11.36	123.1	Pulse	0.30	3

Quantitation Report

File Name 042SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:42
Sample Name MP41455-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.785	ug/l	12.46	4,425.86	3.707E-02	Pulse	0.50	3
As			1	2.064	ug/l	22.12	243.00	2.036E-03	Pulse	1.00	3
Mo			1	1.773	ug/l	3.15	682.68	3.816E-03	Pulse	0.50	3
Pb			1	-0.518	ug/l	-5.43	762.02	2.348E-04	Pulse	1.00	3
Be			1	0.118	ug/l	230.94	1.17		Pulse	2.00	3
Ag			1	0.002	ug/l	2062.24	763.35	4.266E-03	Pulse	0.50	3
Ba			1	24.175	ug/l	5.01	4,451.23	3.964E-03	Pulse	0.50	3
Tl			1	0.042	ug/l	14.75	166.67	5.132E-05	Pulse	0.50	3
Sn			1	-0.081	ug/l	-235.84	298.90	2.658E-04	Pulse	0.30	3
Sr			1	7095.157	ug/l	0.22	3,414,862.33	3.040E+00	Pulse	0.50	3
[Pb]			1	-0.551	ug/l	-16.67	347.34	1.504E-04	Pulse	0.50	3
Ca			1	438483.710	ug/l	0.22	1,171,241.08	6.205E+00	Pulse	0.50	3
Ti			1	1.189	ug/l	22.92	28.00	1.482E-04	Pulse	0.50	3
Na			1	1742765.643	ug/l	1.07	183,967,610.67	1.541E+03	Analog	1.00	3
Mg			1	483681.110	ug/l	0.10	26,128,066.00	1.384E+02	Analog	1.00	3
K			1	61392.980	ug/l	0.44	3,320,105.42	1.759E+01	Pulse	1.00	3
V			1	9.541	ug/l	5.88	6,630.49	3.514E-02	Pulse	0.50	3
Mn			1	9314.587	ug/l	1.32	3,675,450.92	3.078E+01	Pulse	0.50	3
Fe			1	484.190	ug/l	2.48	625,495.63	5.238E+00	Pulse	0.50	3
Co			1	4.132	ug/l	1.07	4,387.85	3.675E-02	Pulse	0.50	3
Ni			1	6.355	ug/l	4.09	3,404.31	2.851E-02	Pulse	0.50	3
Cu			1	1.862	ug/l	4.05	4,635.91	3.882E-02	Pulse	0.50	3
Zn			1	-1.891	ug/l	-28.65	1,555.73	8.697E-03	Pulse	1.00	3
Cd			1	-0.069	ug/l	-15.62	6.00	3.356E-05	Pulse	0.50	3
Al			1	-14.611	ug/l	-0.52	411.68	2.181E-03	Pulse	1.00	3
Se			1	2.196	ug/l	24.52	36.67	2.050E-04	Pulse	3.00	3
Sb			1	0.145	ug/l	32.12	167.00	9.332E-04	Pulse	1.00	3
Se			1	1.274	ug/l	58.03	29.11	1.627E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,309,143.83	0.48	79.5	Pulse	0.50	3
1	Sc		188,764.10	1.01	90.1	Pulse	0.30	3
1	Ge		119,411.41	0.96	88.3	Pulse	0.30	3
1	In		1,123,413.70	1.30	82.0	Pulse	0.30	3
1	Tb		3,246,076.33	1.31	84.4	Pulse	0.50	3
1	Lu		2,434,077.50	1.14	82.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		178,895.92	0.50	88.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		920.03	8.07	116.0	Pulse	0.30	3

Quantitation Report

File Name	043CCVA.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:45
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	51.138	ug/l	0.34	336,062.87	2.878E+00	Pulse	0.50	3
As			1	49.150	ug/l	1.41	43,290.42	3.708E-01	Pulse	1.00	3
Mo			1	50.642	ug/l	2.21	183,890.23	1.046E+00	Pulse	0.50	3
Pb			1	51.869	ug/l	1.51	1,007,227.31	3.046E-01	Pulse	1.00	3
Be			1	50.494	ug/l	1.31	2,134.78		Pulse	2.00	3
Ag			1	51.184	ug/l	1.65	613,279.58	3.487E+00	Pulse	0.50	3
Ba			1	48.792	ug/l	0.07	90,393.94	7.903E-02	Pulse	0.50	3
Tl			1	51.226	ug/l	1.48	1,442,808.04	4.363E-01	Pulse	0.50	3
Sn			1	50.179	ug/l	1.64	208,077.27	1.819E-01	Pulse	0.30	3
Sr			1	49.533	ug/l	0.45	243,101.99	2.125E-01	Pulse	0.50	3
[Pb]			1	49.838	ug/l	0.36	468,664.28	1.912E-01	Pulse	0.50	3
Ca			1	4912.719	ug/l	0.88	127,619.48	6.970E-01	Pulse	0.50	3
Ti			1	48.394	ug/l	1.43	8,680.61	4.741E-02	Pulse	0.50	3
Na			1	5487.498	ug/l	0.92	5,676,134.17	4.861E+01	Analog	1.00	3
Mg			1	5131.783	ug/l	0.93	2,690,160.08	1.469E+01	Pulse	1.00	3
K			1	5024.487	ug/l	0.64	2,645,029.33	1.445E+01	Pulse	1.00	3
V			1	50.528	ug/l	0.96	269,166.69	1.470E+00	Pulse	0.50	3
Mn			1	50.393	ug/l	1.12	195,870.05	1.678E+00	Pulse	0.50	3
Fe			1	5220.897	ug/l	0.28	29,288,691.33	2.509E+02	Analog	0.50	3
Co			1	51.895	ug/l	0.63	526,027.65	4.505E+00	Pulse	0.50	3
Ni			1	51.758	ug/l	0.93	140,016.76	1.199E+00	Pulse	0.50	3
Cu			1	52.359	ug/l	0.24	377,033.69	3.229E+00	Pulse	0.50	3
Zn			1	50.712	ug/l	2.23	64,546.00	3.670E-01	Pulse	1.00	3
Cd			1	50.253	ug/l	1.53	92,840.45	5.279E-01	Pulse	0.50	3
Al			1	4818.048	ug/l	0.88	1,096,074.54	5.986E+00	Pulse	1.00	3
Se			1	48.107	ug/l	0.43	3,213.05	1.826E-02	Pulse	3.00	3
Sb			1	48.604	ug/l	1.62	279,113.71	1.587E+00	Pulse	1.00	3
Se			1	49.050	ug/l	2.51	1,573.84	8.950E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,451,397.00	0.44	84.4	Pulse	0.50	3
1	Sc		183,106.45	1.61	87.4	Pulse	0.30	3
1	Ge		116,756.29	0.65	86.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,143,758.63	0.89	83.4	Pulse	0.30	3
1	Tb		3,307,151.58	1.17	86.0	Pulse	0.50	3
1	Lu		2,479,490.17	0.70	83.6	Pulse	0.50	3
1	Ge		175,914.51	2.28	87.2	Pulse	0.30	3
1	Te		3.33	69.28		Pulse	0.50	3
1	Li		947.81	7.79	119.5	Pulse	0.30	3

Quantitation Report

File Name 044_CCV.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:49
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.301	ug/l	2.28	666,798.79	5.737E+00	Pulse	0.50	3
As			1	98.037	ug/l	1.23	85,916.88	7.391E-01	Pulse	1.00	3
Mo			1	102.691	ug/l	0.12	366,419.09	2.120E+00	Pulse	0.50	3
Pb			1	104.737	ug/l	0.94	1,993,923.00	6.145E-01	Pulse	1.00	3
Be			1	100.717	ug/l	0.70	4,257.45		Pulse	2.00	3
Ag			1	102.748	ug/l	0.48	1,209,037.13	6.996E+00	Pulse	0.50	3
Ba			1	100.652	ug/l	0.39	180,953.71	1.630E-01	Pulse	0.50	3
Tl			1	104.188	ug/l	0.83	2,879,344.58	8.874E-01	Pulse	0.50	3
Sn			1	102.998	ug/l	0.55	414,283.63	3.731E-01	Pulse	0.30	3
Sr			1	100.521	ug/l	0.17	478,491.06	4.310E-01	Pulse	0.50	3
[Pb]			1	101.274	ug/l	0.63	926,748.33	3.881E-01	Pulse	0.50	3
Ca			1	9929.539	ug/l	1.08	251,535.25	1.407E+00	Pulse	0.50	3
Ti			1	98.611	ug/l	0.98	17,266.96	9.656E-02	Pulse	0.50	3
Na			1	10790.653	ug/l	1.36	11,100,265.67	9.549E+01	Analog	1.00	3
Mg			1	10659.746	ug/l	0.63	5,455,804.00	3.051E+01	Analog	1.00	3
K			1	10427.373	ug/l	0.27	5,307,267.67	2.968E+01	Analog	1.00	3
V			1	103.091	ug/l	0.88	534,947.21	2.992E+00	Pulse	0.50	3
Mn			1	100.634	ug/l	1.73	387,909.18	3.337E+00	Pulse	0.50	3
Fe			1	10535.422	ug/l	1.71	58,492,650.67	5.032E+02	Analog	0.50	3
Co			1	103.228	ug/l	2.00	1,041,642.77	8.961E+00	Pulse	0.50	3
Ni			1	103.453	ug/l	2.03	276,996.01	2.383E+00	Pulse	0.50	3
Cu			1	103.916	ug/l	2.10	741,833.29	6.382E+00	Pulse	0.50	3
Zn			1	102.974	ug/l	0.83	127,018.41	7.350E-01	Pulse	1.00	3
Cd			1	100.902	ug/l	0.55	183,162.88	1.060E+00	Pulse	0.50	3
Al			1	9796.395	ug/l	0.62	2,175,773.42	1.217E+01	Pulse	1.00	3
Se			1	97.456	ug/l	0.55	6,372.40	3.687E-02	Pulse	3.00	3
Sb			1	98.383	ug/l	0.61	555,107.98	3.212E+00	Pulse	1.00	3
Se			1	98.459	ug/l	0.83	3,080.36	1.782E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,387,711.42	0.40	82.2	Pulse	0.50	3
1	Sc		178,807.98	0.46	85.3	Pulse	0.30	3
1	Ge		116,250.04	0.81	86.0	Pulse	0.30	3
1	In		1,110,289.33	0.70	81.0	Pulse	0.30	3
1	Tb		3,244,730.08	0.41	84.3	Pulse	0.50	3
1	Lu		2,433,155.58	0.56	82.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		172,821.11	0.57	85.6	Pulse	0.30	3
1	Te		4.67	65.47		Pulse	0.50	3
1	Li		894.47	5.94	112.7	Pulse	0.30	3

Quantitation Report

File Name 045_CCB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 10:53
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.032	ug/l	101.36	2,672.20	2.328E-02	Pulse	0.50	3
As			1	0.038	ug/l	54.90	88.00	7.666E-04	Pulse	1.00	3
Mo			1	0.148	ug/l	5.64	552.01	3.209E-03	Pulse	0.50	3
Pb			1	0.075	ug/l	33.09	3,151.30	9.791E-04	Pulse	1.00	3
Be			1	0.130	ug/l	10.50	6.17		Pulse	2.00	3
Ag			1	0.056	ug/l	51.64	1,384.06	8.046E-03	Pulse	0.50	3
Ba			1	0.051	ug/l	33.23	150.00	1.336E-04	Pulse	0.50	3
Tl			1	0.066	ug/l	37.45	1,862.12	5.785E-04	Pulse	0.50	3
Sn			1	0.123	ug/l	30.79	833.36	7.421E-04	Pulse	0.30	3
Sr			1	0.043	ug/l	59.12	610.01	5.433E-04	Pulse	0.50	3
[Pb]			1	0.066	ug/l	35.34	1,495.41	6.127E-04	Pulse	0.50	3
Ca			1	5.056	ug/l	72.09	498.68	2.786E-03	Pulse	0.50	3
Ti			1	0.006	ug/l	235.04	6.67	3.723E-05	Pulse	0.50	3
Na			1	42.838	ug/l	9.38	55,449.17	4.831E-01	Pulse	1.00	3
Mg			1	8.382	ug/l	29.18	5,719.19	3.196E-02	Pulse	1.00	3
K			1	4.988	ug/l	57.59	51,932.61	2.903E-01	Pulse	1.00	3
V			1	0.043	ug/l	122.24	1,565.41	8.749E-03	Pulse	0.50	3
Mn			1	0.127	ug/l	19.89	1,967.44	1.714E-02	Pulse	0.50	3
Fe			1	6.348	ug/l	29.88	371,928.27	3.241E+00	Pulse	0.50	3
Co			1	0.056	ug/l	42.90	655.35	5.708E-03	Pulse	0.50	3
Ni			1	-0.338	ug/l	-11.49	714.02	6.221E-03	Pulse	0.50	3
Cu			1	0.050	ug/l	46.11	3,498.33	3.047E-02	Pulse	0.50	3
Zn			1	0.011	ug/l	221.01	1,738.75	1.011E-02	Pulse	1.00	3
Cd			1	0.062	ug/l	24.57	130.67	7.597E-04	Pulse	0.50	3
Al			1	4.354	ug/l	49.94	1,682.41	9.401E-03	Pulse	1.00	3
Se			1	0.150	ug/l	36.63	30.78	1.789E-04	Pulse	3.00	3
Sb			1	0.074	ug/l	10.86	495.34	2.880E-03	Pulse	1.00	3
Se			1	0.052	ug/l	176.92	25.67	1.492E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,440,953.17	0.22	84.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		178,902.82	0.64	85.4	Pulse	0.30	3
1	Ge		114,780.08	0.98	84.9	Pulse	0.30	3
1	In		1,122,807.94	0.15	81.9	Pulse	0.30	3
1	Tb		3,218,096.33	0.15	83.6	Pulse	0.50	3
1	Lu		2,394,396.83	0.41	80.7	Pulse	0.50	3
1	Ge		172,016.02	0.04	85.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		884.47	7.94	111.5	Pulse	0.30	3

Quantitation Report

File Name	046SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 10:57
Sample Name	MP41455-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	222.695	ug/l	1.71	653,894.54	6.242E+00	Pulse	0.50	3
As			1	233.059	ug/l	1.70	92,026.51	8.784E-01	Pulse	1.00	3
Mo			1	220.754	ug/l	0.54	358,333.95	2.279E+00	Pulse	0.50	3
Pb			1	208.247	ug/l	0.68	1,769,135.13	6.109E-01	Pulse	1.00	3
Be			1	192.851	ug/l	1.40	4,076.08		Pulse	2.00	3
Ag			1	91.927	ug/l	1.03	492,421.44	3.132E+00	Pulse	0.50	3
Ba			1	234.815	ug/l	1.17	187,264.31	1.901E-01	Pulse	0.50	3
Tl			1	198.697	ug/l	0.73	2,450,436.67	8.462E-01	Pulse	0.50	3
Sn			1	218.704	ug/l	0.66	390,250.84	3.961E-01	Pulse	0.30	3
Sr			1	6839.782	ug/l	1.12	14,431,174.33	1.465E+01	Analog	0.50	3
[Pb]			1	209.902	ug/l	1.02	793,263.64	4.022E-01	Pulse	0.50	3
Ca			1	414954.037	ug/l	0.36	5,069,008.50	2.935E+01	Analog	0.50	3
Ti			1	209.591	ug/l	1.87	17,719.36	1.026E-01	Pulse	0.50	3
Na			1	1625330.202	ug/l	1.73	752,581,504.00	7.184E+03	Analog	1.00	3
Mg			1	443139.111	ug/l	0.25	109,497,053.33	6.340E+02	Analog	1.00	3
K			1	76202.455	ug/l	0.61	18,602,350.00	1.077E+02	Analog	1.00	3
V			1	218.306	ug/l	0.16	546,939.27	3.167E+00	Pulse	0.50	3
Mn			1	8914.363	ug/l	1.21	15,424,627.33	1.472E+02	Analog	0.50	3
Fe			1	22350.612	ug/l	1.49	55,895,885.33	5.336E+02	Analog	0.50	3
Co			1	221.407	ug/l	1.70	1,006,766.58	9.610E+00	Pulse	0.50	3
Ni			1	219.248	ug/l	1.40	264,445.53	2.524E+00	Pulse	0.50	3
Cu			1	208.527	ug/l	1.93	670,813.38	6.403E+00	Pulse	0.50	3
Zn			1	213.867	ug/l	0.69	119,944.71	7.628E-01	Pulse	1.00	3
Cd			1	199.991	ug/l	0.67	165,142.05	1.050E+00	Pulse	0.50	3
Al			1	18887.089	ug/l	0.41	2,025,663.00	1.173E+01	Pulse	1.00	3
Se			1	233.673	ug/l	0.85	6,946.71	4.418E-02	Pulse	3.00	3
Sb			1	209.773	ug/l	0.90	538,387.83	3.424E+00	Pulse	1.00	3
Se			1	240.989	ug/l	1.52	3,424.42	2.178E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,972,181.63	1.45	67.9	Pulse	0.50	3
1	Sc		172,695.32	2.50	82.4	Pulse	0.30	3
1	Ge		104,754.36	1.37	77.5	Pulse	0.30	3
1	In		985,245.90	2.61	71.9	Pulse	0.30	3
1	Tb		2,896,145.83	2.04	75.3	Pulse	0.50	3
1	Lu		2,184,893.83	2.28	73.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		157,245.40	2.18	77.9	Pulse	0.30	3
1	Te		5.33	57.28		Pulse	0.50	3
1	Li		1,007.81	14.01	127.0	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:01
Sample Name MP41455-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	224.002	ug/l	0.25	664,740.29	6.278E+00	Pulse	0.50	3
As			1	234.242	ug/l	1.11	93,471.64	8.829E-01	Pulse	1.00	3
Mo			1	222.875	ug/l	0.59	363,453.05	2.301E+00	Pulse	0.50	3
Pb			1	210.743	ug/l	1.02	1,791,182.63	6.182E-01	Pulse	1.00	3
Be			1	198.901	ug/l	0.76	4,203.94		Pulse	2.00	3
Ag			1	92.620	ug/l	1.06	498,454.63	3.155E+00	Pulse	0.50	3
Ba			1	239.272	ug/l	0.87	191,533.43	1.937E-01	Pulse	0.50	3
Tl			1	200.731	ug/l	1.21	2,476,624.92	8.548E-01	Pulse	0.50	3
Sn			1	221.105	ug/l	1.27	395,961.58	4.005E-01	Pulse	0.30	3
Sr			1	7429.900	ug/l	1.48	15,733,818.00	1.591E+01	Analog	0.50	3
[Pb]			1	212.317	ug/l	0.35	799,119.63	4.068E-01	Pulse	0.50	3
Ca			1	451715.013	ug/l	0.35	5,597,719.00	3.195E+01	Analog	0.50	3
Ti			1	209.178	ug/l	1.51	17,941.56	1.024E-01	Pulse	0.50	3
Na			1	1765821.075	ug/l	0.68	826,326,720.00	7.805E+03	Analog	1.00	3
Mg			1	478183.221	ug/l	0.34	119,865,066.67	6.842E+02	Analog	1.00	3
K			1	81303.463	ug/l	0.41	20,131,996.00	1.149E+02	Analog	1.00	3
V			1	219.806	ug/l	0.42	558,652.33	3.189E+00	Pulse	0.50	3
Mn			1	9651.931	ug/l	0.60	16,878,836.33	1.594E+02	Analog	0.50	3
Fe			1	22521.493	ug/l	0.37	56,922,988.00	5.376E+02	Analog	0.50	3
Co			1	222.916	ug/l	0.21	1,024,413.44	9.676E+00	Pulse	0.50	3
Ni			1	221.327	ug/l	0.14	269,785.42	2.548E+00	Pulse	0.50	3
Cu			1	209.539	ug/l	0.60	681,218.58	6.434E+00	Pulse	0.50	3
Zn			1	216.090	ug/l	0.91	121,737.44	7.707E-01	Pulse	1.00	3
Cd			1	201.120	ug/l	0.46	166,851.26	1.056E+00	Pulse	0.50	3
Al			1	18950.222	ug/l	0.45	2,061,880.84	1.177E+01	Pulse	1.00	3
Se			1	242.891	ug/l	1.37	7,253.38	4.592E-02	Pulse	3.00	3
Sb			1	211.422	ug/l	0.39	545,179.00	3.451E+00	Pulse	1.00	3
Se			1	245.493	ug/l	1.21	3,504.55	2.219E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,964,226.54	1.18	67.6	Pulse	0.50	3
1	Sc		175,192.11	0.55	83.6	Pulse	0.30	3
1	Ge		105,875.98	1.10	78.3	Pulse	0.30	3
1	In		988,869.82	2.01	72.1	Pulse	0.30	3
1	Tb		2,897,791.67	2.60	75.3	Pulse	0.50	3
1	Lu		2,191,199.17	1.90	73.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		157,969.80	0.91	78.3	Pulse	0.30	3
1	Te		6.00	57.74		Pulse	0.50	3
1	Li		947.81	1.74	119.5	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:04
Sample Name MP41455-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	24.528	ug/l	0.81	75,774.88	7.066E-01	Pulse	0.50	3
As			1	24.594	ug/l	2.76	9,985.62	9.313E-02	Pulse	1.00	3
Mo			1	23.401	ug/l	2.11	38,588.85	2.417E-01	Pulse	0.50	3
Pb			1	20.276	ug/l	0.87	174,149.25	5.997E-02	Pulse	1.00	3
Be			1	19.480	ug/l	3.26	412.33		Pulse	2.00	3
Ag			1	4.043	ug/l	0.46	22,645.15	1.418E-01	Pulse	0.50	3
Ba			1	44.378	ug/l	1.36	35,687.72	3.597E-02	Pulse	0.50	3
Tl			1	19.495	ug/l	0.98	241,143.49	8.304E-02	Pulse	0.50	3
Sn			1	20.674	ug/l	1.11	37,414.68	3.771E-02	Pulse	0.30	3
Sr			1	7199.851	ug/l	0.89	15,299,883.67	1.542E+01	Analog	0.50	3
[Pb]			1	20.429	ug/l	1.39	77,936.23	3.947E-02	Pulse	0.50	3
Ca			1	429286.980	ug/l	1.48	5,364,249.50	3.037E+01	Analog	0.50	3
Ti			1	21.184	ug/l	4.20	1,836.76	1.040E-02	Pulse	0.50	3
Na			1	1737877.427	ug/l	0.75	823,680,618.67	7.681E+03	Analog	1.00	3
Mg			1	458682.066	ug/l	1.81	115,929,282.67	6.563E+02	Analog	1.00	3
K			1	62764.307	ug/l	1.94	15,681,142.33	8.877E+01	Analog	1.00	3
V			1	26.693	ug/l	1.67	69,574.52	3.939E-01	Pulse	0.50	3
Mn			1	9352.990	ug/l	0.75	16,566,179.00	1.545E+02	Analog	0.50	3
Fe			1	3157.285	ug/l	0.62	8,353,419.83	7.790E+01	Analog	0.50	3
Co			1	25.221	ug/l	0.80	117,470.34	1.095E+00	Pulse	0.50	3
Ni			1	29.806	ug/l	0.45	38,095.36	3.552E-01	Pulse	0.50	3
Cu			1	22.058	ug/l	0.89	75,264.33	7.019E-01	Pulse	0.50	3
Zn			1	28.265	ug/l	0.64	17,486.92	1.095E-01	Pulse	1.00	3
Cd			1	19.719	ug/l	1.66	16,548.08	1.037E-01	Pulse	0.50	3
Al			1	1949.925	ug/l	1.72	214,554.60	1.215E+00	Pulse	1.00	3
Se			1	25.583	ug/l	2.66	789.57	4.946E-03	Pulse	3.00	3
Sb			1	19.337	ug/l	1.40	50,461.88	3.161E-01	Pulse	1.00	3
Se			1	27.216	ug/l	6.34	412.34	2.584E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,974,759.00	1.62	68.0	Pulse	0.50	3
1	Sc		176,702.85	2.75	84.3	Pulse	0.30	3
1	Ge		107,238.14	1.61	79.3	Pulse	0.30	3
1	In		992,230.41	1.84	72.4	Pulse	0.30	3
1	Tb		2,904,422.67	1.89	75.5	Pulse	0.50	3
1	Lu		2,183,585.58	1.81	73.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		159,676.14	1.62	79.1	Pulse	0.30	3
1	Te		10.67	70.99		Pulse	0.50	3
1	Li		998.92	1.90	125.9	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:08
Sample Name FA99205-2FR
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.645	ug/l	2.09	13,075.74	1.233E-01	Pulse	0.50	3
As			1	1.166	ug/l	10.89	516.34	4.872E-03	Pulse	1.00	3
Mo			1	3.576	ug/l	1.98	5,938.96	3.707E-02	Pulse	0.50	3
Pb			1	-0.098	ug/l	-1.63	742.35	2.506E-04	Pulse	1.00	3
Be			1	0.095	ug/l	125.83	2.67		Pulse	2.00	3
Ag			1	0.001	ug/l	641.00	686.02	4.281E-03	Pulse	0.50	3
Ba			1	21.651	ug/l	0.94	17,752.05	1.757E-02	Pulse	0.50	3
Tl			1	0.042	ug/l	8.79	570.01	1.926E-04	Pulse	0.50	3
Sn			1	0.519	ug/l	4.78	1,246.72	1.234E-03	Pulse	0.30	3
Sr			1	3402.542	ug/l	0.99	7,361,342.83	7.288E+00	Analog	0.50	3
[Pb]			1	-0.095	ug/l	-6.52	368.01	1.785E-04	Pulse	0.50	3
Ca			1	265182.354	ug/l	1.38	3,264,089.33	1.876E+01	Pulse	0.50	3
Ti			1	0.578	ug/l	23.92	54.67	3.148E-04	Pulse	0.50	3
Na			1	1008227.393	ug/l	1.02	472,498,666.67	4.456E+03	Analog	1.00	3
Mg			1	159397.607	ug/l	1.10	39,687,198.67	2.281E+02	Analog	1.00	3
K			1	4552.613	ug/l	1.29	1,165,072.88	6.695E+00	Pulse	1.00	3
V			1	4.711	ug/l	5.25	13,168.49	7.570E-02	Pulse	0.50	3
Mn			1	4.740	ug/l	9.18	9,678.44	9.125E-02	Pulse	0.50	3
Fe			1	-97.291	ug/l	-0.47	66,719.22	6.293E-01	Pulse	0.50	3
Co			1	0.561	ug/l	5.30	2,674.86	2.522E-02	Pulse	0.50	3
Ni			1	1.585	ug/l	6.28	3,404.31	3.211E-02	Pulse	0.50	3
Cu			1	2.089	ug/l	2.55	9,679.13	9.129E-02	Pulse	0.50	3
Zn			1	6.596	ug/l	2.50	5,326.74	3.325E-02	Pulse	1.00	3
Cd			1	0.046	ug/l	56.31	55.33	3.457E-04	Pulse	0.50	3
Al			1	4.666	ug/l	11.40	1,199.04	6.892E-03	Pulse	1.00	3
Se			1	6.064	ug/l	1.26	202.78	1.266E-03	Pulse	3.00	3
Sb			1	0.163	ug/l	8.24	500.34	3.122E-03	Pulse	1.00	3
Se			1	6.084	ug/l	10.96	110.00	6.862E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,061,945.50	1.01	71.0	Pulse	0.50	3
1	Sc		174,028.84	1.40	83.0	Pulse	0.30	3
1	Ge		106,031.40	0.74	78.4	Pulse	0.30	3
1	In		1,010,133.53	1.28	73.7	Pulse	0.30	3
1	Tb		2,962,234.33	1.40	77.0	Pulse	0.50	3
1	Lu		2,218,407.58	1.34	74.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		160,227.29	0.83	79.4	Pulse	0.30	3
1	Te		5.33	94.37		Pulse	0.50	3
1	Li		965.58	8.86	121.7	Pulse	0.30	3

Quantitation Report

File Name	050SMPL.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 11:12
Sample Name	FA99205-3FR
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.792	ug/l	3.97	13,413.97	1.274E-01	Pulse	0.50	3
As			1	1.222	ug/l	4.73	535.34	5.085E-03	Pulse	1.00	3
Mo			1	3.577	ug/l	2.50	5,930.96	3.708E-02	Pulse	0.50	3
Pb			1	-0.116	ug/l	-3.61	584.34	1.980E-04	Pulse	1.00	3
Be			1	0.016	ug/l	150.00	1.00		Pulse	2.00	3
Ag			1	0.001	ug/l	698.75	685.35	4.284E-03	Pulse	0.50	3
Ba			1	19.133	ug/l	3.48	15,646.12	1.554E-02	Pulse	0.50	3
Tl			1	0.026	ug/l	4.48	374.68	1.269E-04	Pulse	0.50	3
Sn			1	0.445	ug/l	13.89	1,110.04	1.101E-03	Pulse	0.30	3
Sr			1	3559.527	ug/l	1.12	7,679,405.50	7.624E+00	Analog	0.50	3
[Pb]			1	-0.122	ug/l	-2.86	262.67	1.276E-04	Pulse	0.50	3
Ca			1	276434.206	ug/l	0.25	3,403,552.67	1.955E+01	Pulse	0.50	3
Ti			1	0.741	ug/l	11.89	68.67	3.947E-04	Pulse	0.50	3
Na			1	1052240.139	ug/l	1.95	489,685,664.00	4.651E+03	Analog	1.00	3
Mg			1	166424.637	ug/l	0.35	41,447,689.33	2.381E+02	Analog	1.00	3
K			1	4656.125	ug/l	0.16	1,190,783.71	6.841E+00	Pulse	1.00	3
V			1	4.618	ug/l	1.15	12,940.31	7.435E-02	Pulse	0.50	3
Mn			1	3.640	ug/l	2.55	7,694.88	7.308E-02	Pulse	0.50	3
Fe			1	-105.456	ug/l	-0.24	45,850.56	4.354E-01	Pulse	0.50	3
Co			1	0.601	ug/l	5.90	2,836.88	2.695E-02	Pulse	0.50	3
Ni			1	1.596	ug/l	10.39	3,391.64	3.224E-02	Pulse	0.50	3
Cu			1	1.744	ug/l	2.90	8,502.57	8.075E-02	Pulse	0.50	3
Zn			1	5.251	ug/l	5.01	4,559.55	2.851E-02	Pulse	1.00	3
Cd			1	0.035	ug/l	48.71	46.67	2.905E-04	Pulse	0.50	3
Al			1	2.944	ug/l	12.07	1,013.36	5.823E-03	Pulse	1.00	3
Se			1	6.248	ug/l	3.60	208.00	1.300E-03	Pulse	3.00	3
Sb			1	0.135	ug/l	16.76	424.68	2.656E-03	Pulse	1.00	3
Se			1	6.533	ug/l	18.17	116.00	7.266E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,058,841.58	1.31	70.9	Pulse	0.50	3
1	Sc		174,054.57	0.77	83.0	Pulse	0.30	3
1	Ge		105,323.27	2.68	77.9	Pulse	0.30	3
1	In		1,007,346.45	1.64	73.5	Pulse	0.30	3
1	Tb		2,950,120.92	1.90	76.7	Pulse	0.50	3
1	Lu		2,218,916.08	1.21	74.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		159,978.65	2.09	79.3	Pulse	0.30	3
1	Te		5.33	108.25		Pulse	0.50	3
1	Li		905.58	14.36	114.1	Pulse	0.30	3

Quantitation Report

File Name 051SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:16
Sample Name FA99117-1FR
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.656	ug/l	0.41	12,812.23	1.236E-01	Pulse	0.50	3
As			1	1.075	ug/l	14.75	469.01	4.531E-03	Pulse	1.00	3
Mo			1	1.014	ug/l	8.26	1,654.75	1.062E-02	Pulse	0.50	3
Pb			1	0.016	ug/l	18.61	1,667.42	5.854E-04	Pulse	1.00	3
Be			1	0.063	ug/l	37.50	2.00		Pulse	2.00	3
Ag			1	0.006	ug/l	170.75	692.68	4.444E-03	Pulse	0.50	3
Ba			1	10.010	ug/l	1.37	7,965.77	8.152E-03	Pulse	0.50	3
Tl			1	0.099	ug/l	4.64	1,244.05	4.368E-04	Pulse	0.50	3
Sn			1	0.373	ug/l	10.46	948.92	9.706E-04	Pulse	0.30	3
Sr			1	8911.297	ug/l	0.98	18,650,472.67	1.909E+01	Analog	0.50	3
[Pb]			1	0.015	ug/l	26.35	756.69	3.903E-04	Pulse	0.50	3
Ca			1	419561.003	ug/l	1.22	5,121,721.17	2.968E+01	Analog	0.50	3
Ti			1	0.638	ug/l	13.60	59.33	3.443E-04	Pulse	0.50	3
Na			1	1933970.066	ug/l	0.62	885,791,872.00	8.548E+03	Analog	1.00	3
Mg			1	467819.396	ug/l	1.34	115,514,602.67	6.694E+02	Analog	1.00	3
K			1	12159.411	ug/l	1.49	3,006,386.25	1.742E+01	Pulse	1.00	3
V			1	4.696	ug/l	2.07	13,027.72	7.549E-02	Pulse	0.50	3
Mn			1	47.507	ug/l	1.17	82,646.33	7.976E-01	Pulse	0.50	3
Fe			1	-101.913	ug/l	-0.12	53,842.26	5.196E-01	Pulse	0.50	3
Co			1	0.557	ug/l	1.38	2,596.18	2.505E-02	Pulse	0.50	3
Ni			1	2.114	ug/l	2.25	3,954.42	3.816E-02	Pulse	0.50	3
Cu			1	2.305	ug/l	4.71	10,144.04	9.792E-02	Pulse	0.50	3
Zn			1	4.666	ug/l	2.28	4,121.78	2.645E-02	Pulse	1.00	3
Cd			1	0.040	ug/l	21.74	49.33	3.164E-04	Pulse	0.50	3
Al			1	0.223	ug/l	148.79	714.01	4.134E-03	Pulse	1.00	3
Se			1	9.806	ug/l	1.00	307.11	1.971E-03	Pulse	3.00	3
Sb			1	0.186	ug/l	14.24	545.01	3.495E-03	Pulse	1.00	3
Se			1	10.775	ug/l	1.78	172.56	1.107E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,938,386.16	1.13	66.7	Pulse	0.50	3
1	Sc		172,609.98	2.27	82.4	Pulse	0.30	3
1	Ge		103,629.43	1.44	76.7	Pulse	0.30	3
1	In		977,198.95	1.11	71.3	Pulse	0.30	3
1	Tb		2,848,472.17	1.17	74.0	Pulse	0.50	3
1	Lu		2,153,333.00	1.59	72.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		155,817.83	1.02	77.2	Pulse	0.30	3
1	Te		10.00	80.00		Pulse	0.50	3
1	Li		1,058.92	6.42	133.5	Pulse	0.30	3

Quantitation Report

File Name 052SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:20
Sample Name FA99117-2FR
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.943	ug/l	3.59	10,644.92	1.037E-01	Pulse	0.50	3
As			1	1.286	ug/l	1.26	546.68	5.325E-03	Pulse	1.00	3
Mo			1	3.228	ug/l	1.08	5,151.39	3.348E-02	Pulse	0.50	3
Pb			1	-0.029	ug/l	-18.40	1,288.38	4.523E-04	Pulse	1.00	3
Be			1	-0.016	ug/l	-173.21	0.33		Pulse	2.00	3
Ag			1	0.007	ug/l	84.84	688.68	4.477E-03	Pulse	0.50	3
Ba			1	43.326	ug/l	0.64	34,057.29	3.512E-02	Pulse	0.50	3
Tl			1	0.075	ug/l	5.89	948.03	3.328E-04	Pulse	0.50	3
Sn			1	0.448	ug/l	12.27	1,072.26	1.107E-03	Pulse	0.30	3
Sr			1	5837.948	ug/l	1.06	12,124,723.33	1.250E+01	Analog	0.50	3
[Pb]			1	-0.035	ug/l	-35.23	582.01	2.951E-04	Pulse	0.50	3
Ca			1	493496.202	ug/l	0.74	5,909,751.00	3.491E+01	Analog	0.50	3
Ti			1	0.765	ug/l	27.47	68.67	4.064E-04	Pulse	0.50	3
Na			1	1422298.185	ug/l	2.23	645,170,026.67	6.287E+03	Analog	1.00	3
Mg			1	339026.740	ug/l	0.76	82,124,378.67	4.851E+02	Analog	1.00	3
K			1	12352.622	ug/l	0.81	2,995,479.67	1.769E+01	Pulse	1.00	3
V			1	4.829	ug/l	4.76	13,101.77	7.741E-02	Pulse	0.50	3
Mn			1	1158.764	ug/l	2.37	1,965,398.75	1.915E+01	Pulse	0.50	3
Fe			1	-76.594	ug/l	-1.62	115,003.68	1.121E+00	Pulse	0.50	3
Co			1	1.873	ug/l	1.42	8,431.86	8.215E-02	Pulse	0.50	3
Ni			1	9.971	ug/l	2.28	13,149.16	1.281E-01	Pulse	0.50	3
Cu			1	2.004	ug/l	0.79	9,106.84	8.871E-02	Pulse	0.50	3
Zn			1	14.502	ug/l	1.17	9,398.29	6.108E-02	Pulse	1.00	3
Cd			1	0.107	ug/l	23.20	102.67	6.666E-04	Pulse	0.50	3
Al			1	9.074	ug/l	2.01	1,630.41	9.629E-03	Pulse	1.00	3
Se			1	2.212	ug/l	2.36	83.00	5.393E-04	Pulse	3.00	3
Sb			1	0.253	ug/l	5.87	706.02	4.588E-03	Pulse	1.00	3
Se			1	2.340	ug/l	20.47	53.89	3.500E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		1,971,450.88	1.14	67.8	Pulse	0.50	3
1	Sc		169,306.89	1.26	80.8	Pulse	0.30	3
1	Ge		102,655.52	2.04	75.9	Pulse	0.30	3
1	In		969,745.90	1.58	70.7	Pulse	0.30	3
1	Tb		2,848,715.25	1.09	74.0	Pulse	0.50	3
1	Lu		2,147,934.83	1.37	72.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		153,894.53	1.48	76.2	Pulse	0.30	3
1	Te		10.67	28.64		Pulse	0.50	3
1	Li		915.58	8.78	115.4	Pulse	0.30	3

Quantitation Report

File Name 053SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:28
Sample Name FC180-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.247	ug/l	4.88	8,577.92	8.426E-02	Pulse	0.50	3
As			1	0.942	ug/l	10.68	410.34	4.029E-03	Pulse	1.00	3
Mo			1	0.044	ug/l	25.02	93.33	6.118E-04	Pulse	0.50	3
Pb			1	0.518	ug/l	2.28	6,112.10	2.055E-03	Pulse	1.00	3
Be			1	0.047	ug/l	175.59	1.67		Pulse	2.00	3
Ag			1	-0.002	ug/l	-146.13	637.34	4.183E-03	Pulse	0.50	3
Ba			1	36.196	ug/l	0.49	29,262.95	2.935E-02	Pulse	0.50	3
Tl			1	0.025	ug/l	9.81	360.01	1.211E-04	Pulse	0.50	3
Sn			1	1.588	ug/l	4.24	3,161.40	3.170E-03	Pulse	0.30	3
Sr			1	18.613	ug/l	1.93	40,107.07	4.023E-02	Pulse	0.50	3
[Pb]			1	0.483	ug/l	6.60	2,890.93	1.286E-03	Pulse	0.50	3
Ca			1	1986.179	ug/l	0.24	22,283.96	1.426E-01	Pulse	0.50	3
Ti			1	0.615	ug/l	15.35	52.00	3.327E-04	Pulse	0.50	3
Na			1	3012.018	ug/l	2.05	1,366,043.33	1.342E+01	Pulse	1.00	3
Mg			1	1231.213	ug/l	0.80	276,623.04	1.770E+00	Pulse	1.00	3
K			1	1953.984	ug/l	0.70	473,865.30	3.031E+00	Pulse	1.00	3
V			1	2.904	ug/l	13.00	7,747.58	4.955E-02	Pulse	0.50	3
Mn			1	100.855	ug/l	1.22	170,914.42	1.679E+00	Pulse	0.50	3
Fe			1	19468.310	ug/l	0.73	47,360,006.67	4.652E+02	Analog	0.50	3
Co			1	2.507	ug/l	1.10	11,166.58	1.097E-01	Pulse	0.50	3
Ni			1	0.620	ug/l	14.57	2,144.12	2.106E-02	Pulse	0.50	3
Cu			1	4.145	ug/l	1.53	15,696.42	1.542E-01	Pulse	0.50	3
Zn			1	33.340	ug/l	1.52	19,414.43	1.274E-01	Pulse	1.00	3
Cd			1	-0.014	ug/l	-55.73	4.67	3.045E-05	Pulse	0.50	3
Al			1	-0.105	ug/l	-52.53	614.34	3.930E-03	Pulse	1.00	3
Se			1	0.140	ug/l	87.96	22.67	1.486E-04	Pulse	3.00	3
Sb			1	0.043	ug/l	13.13	178.00	1.168E-03	Pulse	1.00	3
Se			1	-0.152	ug/l	-97.36	19.22	1.262E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,246,363.00	1.28	77.3	Pulse	0.50	3
1	Sc		156,320.13	0.21	74.6	Pulse	0.30	3
1	Ge		101,817.55	0.68	75.3	Pulse	0.30	3
1	In		997,122.57	0.96	72.7	Pulse	0.30	3
1	Tb		2,974,276.50	1.59	77.3	Pulse	0.50	3
1	Lu		2,201,166.17	1.51	74.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		152,396.35	0.91	75.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		835.58	4.27	105.3	Pulse	0.30	3

Quantitation Report

File Name 054SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:32
Sample Name FC389-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.326	ug/l	1.96	9,073.46	8.648E-02	Pulse	0.50	3
As			1	19.449	ug/l	3.19	7,738.24	7.375E-02	Pulse	1.00	3
Mo			1	0.292	ug/l	5.47	496.68	3.170E-03	Pulse	0.50	3
Pb			1	-0.029	ug/l	-9.20	1,357.06	4.518E-04	Pulse	1.00	3
Be			1	-0.016	ug/l	-173.21	0.33		Pulse	2.00	3
Ag			1	-0.002	ug/l	-193.43	654.68	4.175E-03	Pulse	0.50	3
Ba			1	24.111	ug/l	1.94	19,958.34	1.957E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	11.03	120.67	4.020E-05	Pulse	0.50	3
Sn			1	0.352	ug/l	11.86	951.14	9.319E-04	Pulse	0.30	3
Sr			1	291.337	ug/l	0.56	637,019.73	6.244E-01	Pulse	0.50	3
[Pb]			1	-0.049	ug/l	-7.92	602.68	2.683E-04	Pulse	0.50	3
Ca			1	39012.280	ug/l	0.87	445,702.77	2.761E+00	Pulse	0.50	3
Ti			1	0.762	ug/l	3.26	65.33	4.046E-04	Pulse	0.50	3
Na			1	24976.054	ug/l	0.56	11,593,441.67	1.105E+02	Analog	1.00	3
Mg			1	5509.243	ug/l	0.65	1,273,572.71	7.891E+00	Pulse	1.00	3
K			1	7465.755	ug/l	1.15	1,743,547.00	1.080E+01	Pulse	1.00	3
V			1	2.707	ug/l	0.60	7,536.81	4.669E-02	Pulse	0.50	3
Mn			1	1712.496	ug/l	0.91	2,968,960.42	2.830E+01	Pulse	0.50	3
Fe			1	434.165	ug/l	1.04	1,389,928.42	1.325E+01	Pulse	0.50	3
Co			1	14.859	ug/l	1.21	67,755.76	6.458E-01	Pulse	0.50	3
Ni			1	4.903	ug/l	5.77	7,355.42	7.009E-02	Pulse	0.50	3
Cu			1	13.392	ug/l	1.08	45,840.87	4.369E-01	Pulse	0.50	3
Zn			1	11.910	ug/l	1.88	8,143.73	5.195E-02	Pulse	1.00	3
Cd			1	-0.016	ug/l	-17.90	3.33	2.138E-05	Pulse	0.50	3
Al			1	25.511	ug/l	4.46	3,199.93	1.983E-02	Pulse	1.00	3
Se			1	0.081	ug/l	22.18	21.56	1.375E-04	Pulse	3.00	3
Sb			1	0.088	ug/l	10.09	298.00	1.899E-03	Pulse	1.00	3
Se			1	-0.210	ug/l	-169.92	19.00	1.209E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,246,114.25	1.33	77.3	Pulse	0.50	3
1	Sc		161,419.88	2.12	77.0	Pulse	0.30	3
1	Ge		104,918.57	0.65	77.6	Pulse	0.30	3
1	In		1,020,251.73	1.41	74.4	Pulse	0.30	3
1	Tb		3,004,505.92	1.97	78.1	Pulse	0.50	3
1	Lu		2,252,265.00	1.80	76.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		156,780.37	1.50	77.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		851.13	15.70	107.3	Pulse	0.30	3

Quantitation Report

File Name 055SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:36
Sample Name FC355-7
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.479	ug/l	1.76	9,522.35	9.076E-02	Pulse	0.50	3
As			1	0.253	ug/l	4.06	150.67	1.436E-03	Pulse	1.00	3
Mo			1	0.017	ug/l	52.23	52.67	3.345E-04	Pulse	0.50	3
Pb			1	-0.097	ug/l	-3.53	765.02	2.541E-04	Pulse	1.00	3
Be			1	0.016	ug/l	0.00	1.00		Pulse	2.00	3
Ag			1	-0.001	ug/l	-307.70	661.35	4.204E-03	Pulse	0.50	3
Ba			1	-0.034	ug/l	-35.99	24.00	2.327E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	4.11	86.67	2.878E-05	Pulse	0.50	3
Sn			1	0.378	ug/l	5.55	1,011.15	9.786E-04	Pulse	0.30	3
Sr			1	0.043	ug/l	23.86	465.34	4.505E-04	Pulse	0.50	3
[Pb]			1	-0.103	ug/l	-10.95	376.01	1.639E-04	Pulse	0.50	3
Ca			1	-3.350	ug/l	-103.70	296.00	1.834E-03	Pulse	0.50	3
Ti			1	0.408	ug/l	30.99	37.33	2.314E-04	Pulse	0.50	3
Na			1	199.127	ug/l	4.78	103,267.63	9.846E-01	Pulse	1.00	3
Mg			1	14.941	ug/l	5.81	4,737.90	2.935E-02	Pulse	1.00	3
K			1	-4.807	ug/l	-55.36	43,497.97	2.694E-01	Pulse	1.00	3
V			1	2.754	ug/l	1.61	7,648.19	4.737E-02	Pulse	0.50	3
Mn			1	-0.099	ug/l	-65.03	1,186.71	1.132E-02	Pulse	0.50	3
Fe			1	-110.924	ug/l	-0.08	32,063.04	3.056E-01	Pulse	0.50	3
Co			1	-0.003	ug/l	-45.85	80.00	7.623E-04	Pulse	0.50	3
Ni			1	-0.773	ug/l	-6.67	536.01	5.107E-03	Pulse	0.50	3
Cu			1	1.135	ug/l	1.89	6,518.46	6.212E-02	Pulse	0.50	3
Zn			1	4.383	ug/l	3.88	4,004.42	2.546E-02	Pulse	1.00	3
Cd			1	-0.014	ug/l	-9.88	4.67	2.969E-05	Pulse	0.50	3
Al			1	-0.079	ug/l	-343.55	637.01	3.946E-03	Pulse	1.00	3
Se			1	-0.060	ug/l	-83.19	17.45	1.109E-04	Pulse	3.00	3
Sb			1	0.031	ug/l	12.77	152.00	9.665E-04	Pulse	1.00	3
Se			1	-0.070	ug/l	-215.57	21.00	1.335E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,292,051.00	1.01	78.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		161,452.36	0.85	77.0	Pulse	0.30	3
1	Ge		104,921.91	1.37	77.6	Pulse	0.30	3
1	In		1,033,108.22	0.65	75.4	Pulse	0.30	3
1	Tb		3,011,103.83	0.86	78.3	Pulse	0.50	3
1	Lu		2,242,878.58	0.67	75.6	Pulse	0.50	3
1	Ge		157,305.40	0.55	77.9	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		873.36	3.82	110.1	Pulse	0.30	3

Quantitation Report

File Name	056CCVA.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 11:39
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.359	ug/l	2.33	299,576.84	2.835E+00	Pulse	0.50	3
As			1	48.597	ug/l	1.58	38,747.06	3.666E-01	Pulse	1.00	3
Mo			1	51.094	ug/l	1.49	166,550.68	1.055E+00	Pulse	0.50	3
Pb			1	53.137	ug/l	1.06	962,910.73	3.120E-01	Pulse	1.00	3
Be			1	47.078	ug/l	1.94	1,990.43		Pulse	2.00	3
Ag			1	52.410	ug/l	0.65	563,682.29	3.571E+00	Pulse	0.50	3
Ba			1	48.817	ug/l	0.58	81,941.39	7.907E-02	Pulse	0.50	3
Tl			1	52.536	ug/l	1.55	1,380,870.04	4.475E-01	Pulse	0.50	3
Sn			1	50.486	ug/l	1.31	189,683.95	1.830E-01	Pulse	0.30	3
Sr			1	48.737	ug/l	0.86	216,718.68	2.091E-01	Pulse	0.50	3
[Pb]			1	50.087	ug/l	1.20	447,033.78	1.921E-01	Pulse	0.50	3
Ca			1	4908.674	ug/l	0.73	111,502.54	6.965E-01	Pulse	0.50	3
Ti			1	49.698	ug/l	2.51	7,794.90	4.868E-02	Pulse	0.50	3
Na			1	5377.929	ug/l	1.16	5,035,543.00	4.765E+01	Analog	1.00	3
Mg			1	5152.859	ug/l	0.33	2,362,038.75	1.475E+01	Pulse	1.00	3
K			1	5015.831	ug/l	0.44	2,308,855.33	1.442E+01	Pulse	1.00	3
V			1	51.199	ug/l	0.69	238,479.00	1.490E+00	Pulse	0.50	3
Mn			1	49.130	ug/l	1.44	172,886.94	1.636E+00	Pulse	0.50	3
Fe			1	5203.213	ug/l	1.42	26,422,711.33	2.500E+02	Analog	0.50	3
Co			1	51.159	ug/l	1.51	469,409.54	4.442E+00	Pulse	0.50	3
Ni			1	51.163	ug/l	1.86	125,295.06	1.186E+00	Pulse	0.50	3
Cu			1	52.055	ug/l	1.60	339,317.28	3.211E+00	Pulse	0.50	3
Zn			1	50.927	ug/l	0.91	58,183.25	3.685E-01	Pulse	1.00	3
Cd			1	51.079	ug/l	0.82	84,706.37	5.366E-01	Pulse	0.50	3
Al			1	4818.287	ug/l	0.47	958,497.79	5.987E+00	Pulse	1.00	3
Se			1	47.533	ug/l	1.40	2,849.21	1.805E-02	Pulse	3.00	3
Sb			1	49.250	ug/l	1.39	253,868.87	1.608E+00	Pulse	1.00	3
Se			1	48.307	ug/l	0.76	1,391.83	8.816E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,326,603.75	0.20	80.1	Pulse	0.50	3
1	Sc		160,104.60	0.54	76.4	Pulse	0.30	3
1	Ge		105,698.45	1.28	78.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,036,274.75	0.20	75.6	Pulse	0.30	3
1	Tb		3,086,061.67	0.59	80.2	Pulse	0.50	3
1	Lu		2,305,562.42	0.12	77.7	Pulse	0.50	3
1	Ge		157,874.58	0.53	78.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		848.91	10.58	107.0	Pulse	0.30	3

Quantitation Report

File Name	057_CCV.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 11:43
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.787	ug/l	1.37	599,669.87	5.764E+00	Pulse	0.50	3
As			1	98.901	ug/l	1.37	77,576.56	7.456E-01	Pulse	1.00	3
Mo			1	104.079	ug/l	1.49	339,056.99	2.149E+00	Pulse	0.50	3
Pb			1	107.220	ug/l	0.72	1,913,868.12	6.291E-01	Pulse	1.00	3
Be			1	93.266	ug/l	1.55	3,942.55		Pulse	2.00	3
Ag			1	104.579	ug/l	1.57	1,123,465.71	7.120E+00	Pulse	0.50	3
Ba			1	100.477	ug/l	0.32	167,062.40	1.627E-01	Pulse	0.50	3
Tl			1	106.184	ug/l	0.77	2,751,525.67	9.044E-01	Pulse	0.50	3
Sn			1	102.988	ug/l	0.48	383,107.96	3.731E-01	Pulse	0.30	3
Sr			1	98.994	ug/l	0.30	435,806.84	4.244E-01	Pulse	0.50	3
[Pb]			1	101.720	ug/l	0.76	886,358.23	3.898E-01	Pulse	0.50	3
Ca			1	9926.888	ug/l	0.77	223,727.40	1.406E+00	Pulse	0.50	3
Ti			1	98.898	ug/l	0.37	15,406.75	9.684E-02	Pulse	0.50	3
Na			1	10850.497	ug/l	0.57	9,990,495.67	9.602E+01	Analog	1.00	3
Mg			1	10761.433	ug/l	0.80	4,900,269.83	3.080E+01	Analog	1.00	3
K			1	10041.506	ug/l	0.30	4,548,828.67	2.859E+01	Pulse	1.00	3
V			1	103.710	ug/l	1.00	478,783.33	3.010E+00	Pulse	0.50	3
Mn			1	100.544	ug/l	1.12	346,898.92	3.334E+00	Pulse	0.50	3
Fe			1	10613.574	ug/l	1.03	52,741,222.67	5.069E+02	Analog	0.50	3
Co			1	103.674	ug/l	1.17	936,382.84	9.000E+00	Pulse	0.50	3
Ni			1	103.786	ug/l	1.59	248,727.25	2.391E+00	Pulse	0.50	3
Cu			1	104.402	ug/l	1.38	667,096.37	6.412E+00	Pulse	0.50	3
Zn			1	102.501	ug/l	2.16	115,432.63	7.316E-01	Pulse	1.00	3
Cd			1	102.976	ug/l	1.89	170,652.01	1.082E+00	Pulse	0.50	3
Al			1	9731.472	ug/l	0.80	1,922,948.34	1.209E+01	Pulse	1.00	3
Se			1	94.616	ug/l	0.86	5,649.28	3.580E-02	Pulse	3.00	3
Sb			1	99.715	ug/l	1.93	513,637.74	3.255E+00	Pulse	1.00	3
Se			1	96.369	ug/l	1.61	2,753.09	1.745E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,273,692.25	0.31	78.3	Pulse	0.50	3
1	Sc		159,086.56	0.15	75.9	Pulse	0.30	3
1	Ge		104,044.92	0.34	77.0	Pulse	0.30	3
1	In		1,026,823.36	0.55	74.9	Pulse	0.30	3
1	Tb		3,042,378.67	0.43	79.1	Pulse	0.50	3
1	Lu		2,280,406.33	0.40	76.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		157,795.95	0.91	78.2	Pulse	0.30	3
1	Te		5.33	94.37		Pulse	0.50	3
1	Li		892.25	4.73	112.5	Pulse	0.30	3

Quantitation Report

File Name 058_CCB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:47
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.005	ug/l	-285.84	2,228.13	2.122E-02	Pulse	0.50	3
As			1	0.040	ug/l	23.38	82.33	7.846E-04	Pulse	1.00	3
Mo			1	0.121	ug/l	8.58	418.01	2.654E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	43.79	2,271.82	7.469E-04	Pulse	1.00	3
Be			1	0.028	ug/l	24.74	1.83		Pulse	2.00	3
Ag			1	0.024	ug/l	56.83	925.36	5.881E-03	Pulse	0.50	3
Ba			1	0.018	ug/l	70.94	83.33	8.029E-05	Pulse	0.50	3
Tl			1	0.043	ug/l	50.59	1,164.05	3.824E-04	Pulse	0.50	3
Sn			1	0.092	ug/l	24.83	651.13	6.265E-04	Pulse	0.30	3
Sr			1	0.003	ug/l	362.79	387.34	3.730E-04	Pulse	0.50	3
[Pb]			1	0.019	ug/l	74.98	1,018.70	4.346E-04	Pulse	0.50	3
Ca			1	0.573	ug/l	431.90	342.67	2.152E-03	Pulse	0.50	3
Ti			1	0.032	ug/l	81.53	10.00	6.287E-05	Pulse	0.50	3
Na			1	62.897	ug/l	2.91	69,326.11	6.604E-01	Pulse	1.00	3
Mg			1	5.224	ug/l	19.82	3,650.01	2.292E-02	Pulse	1.00	3
K			1	4.881	ug/l	17.24	46,175.35	2.900E-01	Pulse	1.00	3
V			1	0.074	ug/l	14.03	1,537.40	9.655E-03	Pulse	0.50	3
Mn			1	0.073	ug/l	20.93	1,613.41	1.537E-02	Pulse	0.50	3
Fe			1	2.232	ug/l	28.03	319,643.30	3.045E+00	Pulse	0.50	3
Co			1	0.020	ug/l	72.51	276.00	2.629E-03	Pulse	0.50	3
Ni			1	-0.467	ug/l	-4.04	343.34	3.271E-03	Pulse	0.50	3
Cu			1	-0.002	ug/l	-608.17	2,864.23	2.729E-02	Pulse	0.50	3
Zn			1	-0.084	ug/l	-56.21	1,486.73	9.441E-03	Pulse	1.00	3
Cd			1	0.023	ug/l	43.34	54.67	3.474E-04	Pulse	0.50	3
Al			1	1.325	ug/l	81.59	898.02	5.641E-03	Pulse	1.00	3
Se			1	0.078	ug/l	17.47	23.89	1.517E-04	Pulse	3.00	3
Sb			1	0.046	ug/l	17.21	307.67	1.956E-03	Pulse	1.00	3
Se			1	-0.016	ug/l	-469.82	21.56	1.370E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,344,897.75	0.55	80.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		159,239.80	0.55	76.0	Pulse	0.30	3
1	Ge		104,969.86	0.42	77.7	Pulse	0.30	3
1	In		1,039,034.20	0.65	75.8	Pulse	0.30	3
1	Tb		3,041,076.42	0.37	79.0	Pulse	0.50	3
1	Lu		2,277,407.58	0.53	76.8	Pulse	0.50	3
1	Ge		157,464.33	0.96	78.0	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		885.58	9.98	111.6	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:51
Sample Name FA99205-1FR
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.633	ug/l	45.30	2,456.83	2.242E-02	Pulse	0.50	3
As			1	2.338	ug/l	23.45	72.00	6.573E-04	Pulse	1.00	3
Mo			1	8.823	ug/l	16.64	324.00	1.977E-03	Pulse	0.50	3
Pb			1	2.880	ug/l	10.07	2,203.15	7.070E-04	Pulse	1.00	3
Be			1	3.549	ug/l	101.84	2.17		Pulse	2.00	3
Ag			1	0.646	ug/l	84.59	768.02	4.691E-03	Pulse	0.50	3
Ba			1	24.825	ug/l	11.55	488.01	4.525E-04	Pulse	0.50	3
Tl			1	1.309	ug/l	38.64	394.01	1.268E-04	Pulse	0.50	3
Sn			1	2.694	ug/l	51.89	423.34	3.926E-04	Pulse	0.30	3
Sr			1	6576.711	ug/l	0.80	304,010.27	2.821E-01	Pulse	0.50	3
[Pb]			1	1.698	ug/l	74.06	1,000.03	4.262E-04	Pulse	0.50	3
Ca			1	423919.028	ug/l	1.65	100,825.37	6.017E-01	Pulse	0.50	3
Ti			1	9.766	ug/l	38.67	21.33	1.274E-04	Pulse	0.50	3
Na			1	1669566.879	ug/l	0.54	16,188,015.00	1.477E+02	Analog	1.00	3
Mg			1	461810.430	ug/l	1.54	2,215,536.08	1.322E+01	Pulse	1.00	3
K			1	60962.630	ug/l	0.83	334,324.03	1.995E+00	Pulse	1.00	3
V			1	18.677	ug/l	23.98	2,166.13	1.292E-02	Pulse	0.50	3
Mn			1	8994.231	ug/l	0.57	327,074.46	2.984E+00	Pulse	0.50	3
Fe			1	926.366	ug/l	6.79	370,360.31	3.379E+00	Pulse	0.50	3
Co			1	4.879	ug/l	8.74	560.01	5.113E-03	Pulse	0.50	3
Ni			1	-35.975	ug/l	-4.50	627.34	5.721E-03	Pulse	0.50	3
Cu			1	27.016	ug/l	3.41	4,817.96	4.396E-02	Pulse	0.50	3
Zn			1	459.093	ug/l	0.55	6,934.59	4.235E-02	Pulse	1.00	3
Cd			1	0.738	ug/l	96.01	30.00	1.832E-04	Pulse	0.50	3
Al			1	89.250	ug/l	31.45	854.69	5.103E-03	Pulse	1.00	3
Se			1	6.071	ug/l	65.26	23.78	1.451E-04	Pulse	3.00	3
Sb			1	1.943	ug/l	9.03	179.00	1.093E-03	Pulse	1.00	3
Se			1	6.011	ug/l	145.70	24.67	1.506E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,346,601.42	0.87	80.8	Pulse	0.50	3
1	Sc		167,544.17	0.92	79.9	Pulse	0.30	3
1	Ge		109,606.96	1.64	81.1	Pulse	0.30	3
1	In		1,077,681.17	1.26	78.6	Pulse	0.30	3
1	Tb		3,116,475.33	1.36	81.0	Pulse	0.50	3
1	Lu		2,323,361.58	1.48	78.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		163,749.89	0.98	81.1	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		864.47	2.57	109.0	Pulse	0.30	3

Quantitation Report

File Name 060SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:55
Sample Name MP41455-D1
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.281	ug/l	25.71	2,553.51	2.278E-02	Pulse	0.50	3
As			1	2.021	ug/l	51.69	71.00	6.334E-04	Pulse	1.00	3
Mo			1	2.777	ug/l	17.37	123.33	7.286E-04	Pulse	0.50	3
Pb			1	0.495	ug/l	23.96	1,781.43	5.672E-04	Pulse	1.00	3
Be			1	0.394	ug/l	624.50	0.83		Pulse	2.00	3
Ag			1	-0.353	ug/l	-92.80	678.68	4.011E-03	Pulse	0.50	3
Ba			1	24.802	ug/l	14.19	495.34	4.521E-04	Pulse	0.50	3
Tl			1	0.342	ug/l	4.87	139.33	4.436E-05	Pulse	0.50	3
Sn			1	-1.905	ug/l	-45.95	247.78	2.261E-04	Pulse	0.30	3
Sr			1	6572.587	ug/l	0.84	308,738.35	2.819E-01	Pulse	0.50	3
[Pb]			1	-0.471	ug/l	-150.58	815.36	3.431E-04	Pulse	0.50	3
Ca			1	425727.194	ug/l	1.68	103,937.38	6.043E-01	Pulse	0.50	3
Ti			1	5.856	ug/l	30.66	15.33	8.912E-05	Pulse	0.50	3
Na			1	1669694.775	ug/l	0.82	16,554,069.67	1.477E+02	Analog	1.00	3
Mg			1	459543.842	ug/l	1.31	2,263,168.50	1.316E+01	Pulse	1.00	3
K			1	60291.189	ug/l	0.80	339,942.12	1.976E+00	Pulse	1.00	3
V			1	25.905	ug/l	6.74	2,582.85	1.502E-02	Pulse	0.50	3
Mn			1	8961.415	ug/l	1.71	333,217.30	2.973E+00	Pulse	0.50	3
Fe			1	831.449	ug/l	14.11	373,655.63	3.334E+00	Pulse	0.50	3
Co			1	4.074	ug/l	7.84	494.68	4.415E-03	Pulse	0.50	3
Ni			1	-39.875	ug/l	-9.34	540.68	4.828E-03	Pulse	0.50	3
Cu			1	6.525	ug/l	14.15	3,522.33	3.142E-02	Pulse	0.50	3
Zn			1	92.469	ug/l	10.05	2,799.54	1.654E-02	Pulse	1.00	3
Cd			1	-0.034	ug/l	-1322.13	17.33	1.022E-04	Pulse	0.50	3
Al			1	-54.536	ug/l	-26.64	570.68	3.318E-03	Pulse	1.00	3
Se			1	-1.803	ug/l	-330.27	19.56	1.154E-04	Pulse	3.00	3
Sb			1	0.028	ug/l	1304.66	79.33	4.681E-04	Pulse	1.00	3
Se			1	-13.562	ug/l	-94.19	19.55	1.155E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,375,594.58	0.71	81.8	Pulse	0.50	3
1	Sc		172,000.66	0.45	82.1	Pulse	0.30	3
1	Ge		112,078.49	0.81	82.9	Pulse	0.30	3
1	In		1,095,139.61	0.81	79.9	Pulse	0.30	3
1	Tb		3,140,884.25	1.00	81.6	Pulse	0.50	3
1	Lu		2,357,894.25	0.40	79.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		169,244.02	0.86	83.9	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		900.03	3.70	113.4	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 11:58
Sample Name MP41455-SD1
Sample Type Sample
Comment
Prep Dilution 500.000
Auto Dilution N/A
Total Dilution 500.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-1.655	ug/l	-249.55	2,423.49	2.132E-02	Pulse	0.50	3
As			1	1.756	ug/l	115.97	57.67	5.076E-04	Pulse	1.00	3
Mo			1	5.910	ug/l	48.11	67.33	3.993E-04	Pulse	0.50	3
Pb			1	5.034	ug/l	24.08	1,881.77	5.972E-04	Pulse	1.00	3
Be			1	1.972	ug/l	173.21	0.83		Pulse	2.00	3
Ag			1	-0.994	ug/l	-133.88	695.35	4.116E-03	Pulse	0.50	3
Ba			1	27.818	ug/l	28.08	155.33	1.407E-04	Pulse	0.50	3
Tl			1	0.819	ug/l	16.60	92.00	2.920E-05	Pulse	0.50	3
Sn			1	-10.323	ug/l	-57.18	243.33	2.204E-04	Pulse	0.30	3
Sr			1	6603.688	ug/l	0.60	62,869.96	5.694E-02	Pulse	0.50	3
[Pb]			1	-0.582	ug/l	-441.30	869.36	3.567E-04	Pulse	0.50	3
Ca			1	432707.113	ug/l	1.02	21,506.44	1.245E-01	Pulse	0.50	3
Ti			1	9.400	ug/l	37.88	8.67	5.019E-05	Pulse	0.50	3
Na			1	1627906.531	ug/l	1.30	3,282,454.25	2.889E+01	Pulse	1.00	3
Mg			1	475567.705	ug/l	0.96	471,548.24	2.730E+00	Pulse	1.00	3
K			1	62850.814	ug/l	1.00	108,951.60	6.307E-01	Pulse	1.00	3
V			1	106.071	ug/l	2.23	2,359.49	1.366E-02	Pulse	0.50	3
Mn			1	9036.363	ug/l	1.97	69,310.05	6.100E-01	Pulse	0.50	3
Fe			1	307.449	ug/l	193.91	337,308.35	2.968E+00	Pulse	0.50	3
Co			1	3.894	ug/l	31.53	176.67	1.554E-03	Pulse	0.50	3
Ni			1	-234.453	ug/l	-1.29	366.01	3.221E-03	Pulse	0.50	3
Cu			1	65.522	ug/l	8.16	4,028.43	3.545E-02	Pulse	0.50	3
Zn			1	87.675	ug/l	37.05	1,902.10	1.126E-02	Pulse	1.00	3
Cd			1	1.919	ug/l	15.12	24.67	1.460E-04	Pulse	0.50	3
Al			1	-189.146	ug/l	-6.45	609.01	3.525E-03	Pulse	1.00	3
Se			1	-1.450	ug/l	-1327.87	20.45	1.211E-04	Pulse	3.00	3
Sb			1	-1.224	ug/l	-131.24	64.00	3.792E-04	Pulse	1.00	3
Se			1	-57.936	ug/l	-39.90	20.11	1.190E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,436,885.83	0.55	83.9	Pulse	0.50	3
1	Sc		172,749.25	0.53	82.4	Pulse	0.30	3
1	Ge		113,646.69	1.07	84.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,104,223.67	0.09	80.6	Pulse	0.30	3
1	Tb		3,151,039.58	0.52	81.9	Pulse	0.50	3
1	Lu		2,359,399.17	0.44	79.6	Pulse	0.50	3
1	Ge		168,902.04	0.89	83.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		907.80	6.21	114.4	Pulse	0.30	3

Quantitation Report

File Name 062SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:02
Sample Name MP41455-S1
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	213.740	ug/l	1.34	15,780.40	1.409E-01	Pulse	0.50	3
As			1	217.509	ug/l	3.51	1,888.43	1.687E-02	Pulse	1.00	3
Mo			1	215.994	ug/l	0.45	7,470.19	4.475E-02	Pulse	0.50	3
Pb			1	230.315	ug/l	0.88	43,631.38	1.404E-02	Pulse	1.00	3
Be			1	208.605	ug/l	1.64	88.83		Pulse	2.00	3
Ag			1	99.863	ug/l	2.38	12,053.28	7.220E-02	Pulse	0.50	3
Ba			1	235.473	ug/l	2.77	4,162.49	3.862E-03	Pulse	0.50	3
Tl			1	217.346	ug/l	0.74	57,578.32	1.853E-02	Pulse	0.50	3
Sn			1	212.980	ug/l	3.91	8,626.52	8.005E-03	Pulse	0.30	3
Sr			1	6415.873	ug/l	0.73	296,574.78	2.752E-01	Pulse	0.50	3
[Pb]			1	205.286	ug/l	0.73	19,355.64	8.221E-03	Pulse	0.50	3
Ca			1	417708.449	ug/l	0.78	101,607.34	5.930E-01	Pulse	0.50	3
Ti			1	214.154	ug/l	5.03	364.67	2.128E-03	Pulse	0.50	3
Na			1	1588732.545	ug/l	1.17	15,736,692.00	1.405E+02	Analog	1.00	3
Mg			1	453358.336	ug/l	0.88	2,224,392.58	1.298E+01	Pulse	1.00	3
K			1	76829.909	ug/l	0.54	418,592.36	2.443E+00	Pulse	1.00	3
V			1	244.047	ug/l	2.95	13,393.29	7.816E-02	Pulse	0.50	3
Mn			1	8600.922	ug/l	1.39	319,575.55	2.854E+00	Pulse	0.50	3
Fe			1	21206.792	ug/l	1.55	1,456,709.09	1.301E+01	Pulse	0.50	3
Co			1	227.418	ug/l	1.66	22,202.71	1.983E-01	Pulse	0.50	3
Ni			1	181.619	ug/l	2.70	6,220.36	5.555E-02	Pulse	0.50	3
Cu			1	237.695	ug/l	2.45	19,345.04	1.728E-01	Pulse	0.50	3
Zn			1	225.086	ug/l	1.01	4,319.49	2.587E-02	Pulse	1.00	3
Cd			1	222.540	ug/l	4.35	3,919.10	2.348E-02	Pulse	0.50	3
Al			1	19524.321	ug/l	0.82	42,226.40	2.464E-01	Pulse	1.00	3
Se			1	209.580	ug/l	3.31	152.33	9.126E-04	Pulse	3.00	3
Sb			1	214.512	ug/l	2.55	11,766.44	7.048E-02	Pulse	1.00	3
Se			1	187.068	ug/l	7.66	79.44	4.758E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,354,372.67	0.80	81.0	Pulse	0.50	3
1	Sc		171,355.17	0.04	81.8	Pulse	0.30	3
1	Ge		111,978.13	1.34	82.8	Pulse	0.30	3
1	In		1,077,662.56	0.47	78.6	Pulse	0.30	3
1	Tb		3,107,753.25	0.61	80.8	Pulse	0.50	3
1	Lu		2,331,509.75	0.49	78.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		166,942.64	0.34	82.7	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		925.58	11.02	116.7	Pulse	0.30	3

Quantitation Report

File Name 063SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:06
Sample Name MP41455-S2
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	224.696	ug/l	2.20	16,377.55	1.470E-01	Pulse	0.50	3
As			1	217.336	ug/l	3.07	1,877.43	1.686E-02	Pulse	1.00	3
Mo			1	219.893	ug/l	3.51	7,588.89	4.555E-02	Pulse	0.50	3
Pb			1	228.336	ug/l	2.17	43,366.38	1.392E-02	Pulse	1.00	3
Be			1	220.041	ug/l	2.17	93.67		Pulse	2.00	3
Ag			1	97.767	ug/l	0.33	11,792.43	7.078E-02	Pulse	0.50	3
Ba			1	240.214	ug/l	1.80	4,255.85	3.939E-03	Pulse	0.50	3
Tl			1	215.978	ug/l	1.37	57,342.82	1.841E-02	Pulse	0.50	3
Sn			1	224.643	ug/l	3.00	9,104.54	8.427E-03	Pulse	0.30	3
Sr			1	6887.122	ug/l	0.90	319,131.29	2.954E-01	Pulse	0.50	3
[Pb]			1	204.814	ug/l	2.29	19,260.85	8.203E-03	Pulse	0.50	3
Ca			1	448557.594	ug/l	1.92	108,777.81	6.366E-01	Pulse	0.50	3
Ti			1	196.777	ug/l	4.52	334.67	1.958E-03	Pulse	0.50	3
Na			1	1720038.378	ug/l	0.71	16,948,611.33	1.522E+02	Analog	1.00	3
Mg			1	489389.509	ug/l	1.28	2,394,367.25	1.401E+01	Pulse	1.00	3
K			1	81563.212	ug/l	1.04	440,239.61	2.576E+00	Pulse	1.00	3
V			1	244.573	ug/l	3.80	13,380.60	7.831E-02	Pulse	0.50	3
Mn			1	9230.668	ug/l	0.57	341,092.90	3.062E+00	Pulse	0.50	3
Fe			1	21327.750	ug/l	1.51	1,455,496.83	1.307E+01	Pulse	0.50	3
Co			1	227.012	ug/l	2.92	22,045.88	1.979E-01	Pulse	0.50	3
Ni			1	181.723	ug/l	1.08	6,190.35	5.557E-02	Pulse	0.50	3
Cu			1	230.814	ug/l	1.56	18,779.15	1.686E-01	Pulse	0.50	3
Zn			1	239.578	ug/l	1.58	4,480.86	2.689E-02	Pulse	1.00	3
Cd			1	219.030	ug/l	2.56	3,850.41	2.311E-02	Pulse	0.50	3
Al			1	19788.687	ug/l	1.38	42,669.34	2.497E-01	Pulse	1.00	3
Se			1	206.505	ug/l	2.17	150.11	9.010E-04	Pulse	3.00	3
Sb			1	218.438	ug/l	1.61	11,957.23	7.176E-02	Pulse	1.00	3
Se			1	201.730	ug/l	4.95	83.66	5.022E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,347,965.00	0.45	80.8	Pulse	0.50	3
1	Sc		170,886.80	0.67	81.5	Pulse	0.30	3
1	Ge		111,393.63	0.58	82.4	Pulse	0.30	3
1	In		1,080,427.56	0.48	78.8	Pulse	0.30	3
1	Tb		3,114,771.00	0.26	81.0	Pulse	0.50	3
1	Lu		2,324,572.50	0.42	78.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		166,611.91	0.57	82.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		836.69	3.47	105.5	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:10
Sample Name MP41455-PS1
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	14.124	ug/l	6.34	3,224.28	2.940E-02	Pulse	0.50	3
As			1	13.873	ug/l	27.32	167.00	1.526E-03	Pulse	1.00	3
Mo			1	13.342	ug/l	14.99	478.01	2.910E-03	Pulse	0.50	3
Pb			1	11.716	ug/l	7.81	3,755.42	1.225E-03	Pulse	1.00	3
Be			1	10.647	ug/l	55.92	5.17		Pulse	2.00	3
Ag			1	2.186	ug/l	14.17	942.70	5.739E-03	Pulse	0.50	3
Ba			1	35.592	ug/l	4.89	670.01	6.268E-04	Pulse	0.50	3
Tl			1	10.721	ug/l	3.30	2,849.58	9.284E-04	Pulse	0.50	3
Sn			1	8.034	ug/l	20.90	626.68	5.859E-04	Pulse	0.30	3
Sr			1	6801.410	ug/l	3.49	311,547.83	2.917E-01	Pulse	0.50	3
[Pb]			1	9.632	ug/l	8.62	1,695.42	7.300E-04	Pulse	0.50	3
Ca			1	441844.422	ug/l	4.39	105,673.87	6.271E-01	Pulse	0.50	3
Ti			1	23.320	ug/l	69.14	43.33	2.601E-04	Pulse	0.50	3
Na			1	1743361.202	ug/l	2.68	16,910,241.67	1.542E+02	Analog	1.00	3
Mg			1	479573.154	ug/l	4.01	2,313,978.42	1.373E+01	Pulse	1.00	3
K			1	63835.767	ug/l	3.61	349,973.58	2.076E+00	Pulse	1.00	3
V			1	39.559	ug/l	4.35	3,198.94	1.897E-02	Pulse	0.50	3
Mn			1	9291.960	ug/l	2.71	337,988.87	3.082E+00	Pulse	0.50	3
Fe			1	2041.491	ug/l	14.97	428,539.65	3.909E+00	Pulse	0.50	3
Co			1	15.006	ug/l	8.50	1,523.40	1.390E-02	Pulse	0.50	3
Ni			1	-19.203	ug/l	-9.25	1,048.70	9.562E-03	Pulse	0.50	3
Cu			1	20.101	ug/l	13.43	4,355.18	3.973E-02	Pulse	0.50	3
Zn			1	19.230	ug/l	13.35	1,870.76	1.138E-02	Pulse	1.00	3
Cd			1	11.064	ug/l	12.30	208.00	1.268E-03	Pulse	0.50	3
Al			1	1042.721	ug/l	7.25	2,854.54	1.694E-02	Pulse	1.00	3
Se			1	9.401	ug/l	28.33	25.89	1.577E-04	Pulse	3.00	3
Sb			1	9.694	ug/l	11.02	595.34	3.624E-03	Pulse	1.00	3
Se			1	11.919	ug/l	121.58	26.44	1.612E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,323,551.58	2.49	80.0	Pulse	0.50	3
1	Sc		168,655.02	3.07	80.5	Pulse	0.30	3
1	Ge		109,693.86	2.16	81.1	Pulse	0.30	3
1	In		1,068,587.63	2.46	78.0	Pulse	0.30	3
1	Tb		3,067,460.25	2.98	79.7	Pulse	0.50	3
1	Lu		2,291,929.25	2.65	77.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		164,364.43	2.43	81.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		915.58	6.61	115.4	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:13
Sample Name FA99205-2FR
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.434	ug/l	98.02	2,512.84	2.231E-02	Pulse	0.50	3
As			1	0.405	ug/l	167.52	57.67	5.117E-04	Pulse	1.00	3
Mo			1	3.398	ug/l	18.32	144.00	8.567E-04	Pulse	0.50	3
Pb			1	0.585	ug/l	45.65	1,781.76	5.725E-04	Pulse	1.00	3
Be			1	1.972	ug/l	103.92	1.50		Pulse	2.00	3
Ag			1	-0.090	ug/l	-339.52	704.69	4.190E-03	Pulse	0.50	3
Ba			1	21.100	ug/l	5.74	428.01	3.922E-04	Pulse	0.50	3
Tl			1	0.105	ug/l	83.86	75.33	2.423E-05	Pulse	0.50	3
Sn			1	-1.712	ug/l	-27.01	254.45	2.331E-04	Pulse	0.30	3
Sr			1	3269.291	ug/l	0.97	153,239.47	1.404E-01	Pulse	0.50	3
[Pb]			1	-0.982	ug/l	-37.75	770.69	3.236E-04	Pulse	0.50	3
Ca			1	279547.433	ug/l	0.93	68,570.88	3.975E-01	Pulse	0.50	3
Ti			1	3.872	ug/l	110.90	12.00	6.969E-05	Pulse	0.50	3
Na			1	1006749.761	ug/l	1.56	10,037,785.00	8.910E+01	Analog	1.00	3
Mg			1	164947.318	ug/l	0.91	815,588.98	4.728E+00	Pulse	1.00	3
K			1	5222.894	ug/l	1.39	73,052.76	4.235E-01	Pulse	1.00	3
V			1	21.927	ug/l	1.79	2,391.49	1.386E-02	Pulse	0.50	3
Mn			1	5.767	ug/l	42.84	1,675.41	1.487E-02	Pulse	0.50	3
Fe			1	-194.438	ug/l	-33.18	320,746.46	2.847E+00	Pulse	0.50	3
Co			1	0.549	ug/l	21.88	152.67	1.355E-03	Pulse	0.50	3
Ni			1	-45.085	ug/l	-3.22	409.34	3.635E-03	Pulse	0.50	3
Cu			1	8.331	ug/l	21.25	3,665.70	3.253E-02	Pulse	0.50	3
Zn			1	7.178	ug/l	60.81	1,771.42	1.053E-02	Pulse	1.00	3
Cd			1	-0.026	ug/l	-663.28	17.33	1.030E-04	Pulse	0.50	3
Al			1	-58.101	ug/l	-14.20	564.68	3.274E-03	Pulse	1.00	3
Se			1	0.878	ug/l	88.94	21.11	1.255E-04	Pulse	3.00	3
Sb			1	-0.386	ug/l	-23.28	56.00	3.331E-04	Pulse	1.00	3
Se			1	-4.695	ug/l	-432.92	22.11	1.314E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,382,355.25	0.62	82.0	Pulse	0.50	3
1	Sc		172,497.19	0.45	82.3	Pulse	0.30	3
1	Ge		112,676.86	1.71	83.4	Pulse	0.30	3
1	In		1,091,414.96	0.15	79.6	Pulse	0.30	3
1	Tb		3,112,072.25	0.54	80.9	Pulse	0.50	3
1	Lu		2,340,397.67	0.54	78.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		168,179.01	0.64	83.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		863.36	11.97	108.8	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:17
Sample Name FA99205-3FR
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.220	ug/l	144.39	2,415.50	2.163E-02	Pulse	0.50	3
As			1	1.104	ug/l	35.34	63.00	5.644E-04	Pulse	1.00	3
Mo			1	3.396	ug/l	14.95	142.00	8.564E-04	Pulse	0.50	3
Pb			1	0.662	ug/l	103.80	1,790.77	5.770E-04	Pulse	1.00	3
Be			1	1.972	ug/l	60.00	1.50		Pulse	2.00	3
Ag			1	-0.116	ug/l	-280.39	692.02	4.172E-03	Pulse	0.50	3
Ba			1	19.346	ug/l	16.24	394.01	3.638E-04	Pulse	0.50	3
Tl			1	0.124	ug/l	40.55	80.00	2.578E-05	Pulse	0.50	3
Sn			1	-2.343	ug/l	-26.76	227.78	2.103E-04	Pulse	0.30	3
Sr			1	3298.340	ug/l	1.07	153,451.42	1.417E-01	Pulse	0.50	3
[Pb]			1	-1.368	ug/l	-87.32	729.35	3.088E-04	Pulse	0.50	3
Ca			1	283148.931	ug/l	1.15	69,092.06	4.026E-01	Pulse	0.50	3
Ti			1	7.079	ug/l	95.75	17.33	1.011E-04	Pulse	0.50	3
Na			1	1021186.475	ug/l	0.83	10,091,982.33	9.038E+01	Analog	1.00	3
Mg			1	168537.847	ug/l	0.66	829,008.61	4.831E+00	Pulse	1.00	3
K			1	5344.586	ug/l	1.95	73,264.58	4.269E-01	Pulse	1.00	3
V			1	19.384	ug/l	3.71	2,252.80	1.313E-02	Pulse	0.50	3
Mn			1	6.154	ug/l	14.81	1,674.75	1.499E-02	Pulse	0.50	3
Fe			1	-192.859	ug/l	-27.54	318,002.22	2.848E+00	Pulse	0.50	3
Co			1	0.034	ug/l	499.12	101.33	9.077E-04	Pulse	0.50	3
Ni			1	-44.865	ug/l	-2.24	411.34	3.685E-03	Pulse	0.50	3
Cu			1	4.765	ug/l	5.66	3,388.97	3.035E-02	Pulse	0.50	3
Zn			1	-1.523	ug/l	-147.95	1,645.41	9.921E-03	Pulse	1.00	3
Cd			1	0.295	ug/l	80.76	22.67	1.367E-04	Pulse	0.50	3
Al			1	-63.958	ug/l	-14.45	549.34	3.201E-03	Pulse	1.00	3
Se			1	-0.955	ug/l	-735.03	19.67	1.186E-04	Pulse	3.00	3
Sb			1	-0.446	ug/l	-51.73	52.00	3.135E-04	Pulse	1.00	3
Se			1	3.829	ug/l	178.70	24.34	1.467E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,362,278.17	0.24	81.3	Pulse	0.50	3
1	Sc		171,608.62	0.60	81.9	Pulse	0.30	3
1	Ge		111,671.84	1.15	82.6	Pulse	0.30	3
1	In		1,083,305.48	0.24	79.0	Pulse	0.30	3
1	Tb		3,103,955.42	0.34	80.7	Pulse	0.50	3
1	Lu		2,314,724.92	0.36	78.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		165,845.81	0.21	82.2	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,014.48	7.51	127.9	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:21
Sample Name FA99117-1FR
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.096	ug/l	98.86	2,585.52	2.324E-02	Pulse	0.50	3
As			1	0.737	ug/l	45.12	59.67	5.367E-04	Pulse	1.00	3
Mo			1	1.323	ug/l	21.01	71.33	4.284E-04	Pulse	0.50	3
Pb			1	0.675	ug/l	41.52	1,795.10	5.778E-04	Pulse	1.00	3
Be			1	-0.394	ug/l	-300.00	0.50		Pulse	2.00	3
Ag			1	-0.197	ug/l	-96.21	685.35	4.117E-03	Pulse	0.50	3
Ba			1	9.609	ug/l	20.54	221.33	2.061E-04	Pulse	0.50	3
Tl			1	0.068	ug/l	112.10	65.33	2.103E-05	Pulse	0.50	3
Sn			1	-2.267	ug/l	-66.40	228.89	2.131E-04	Pulse	0.30	3
Sr			1	8432.520	ug/l	0.66	388,287.96	3.616E-01	Pulse	0.50	3
[Pb]			1	-0.588	ug/l	-58.36	796.69	3.386E-04	Pulse	0.50	3
Ca			1	420148.682	ug/l	0.33	101,997.40	5.964E-01	Pulse	0.50	3
Ti			1	4.338	ug/l	58.99	12.67	7.426E-05	Pulse	0.50	3
Na			1	1894069.726	ug/l	1.66	18,629,398.00	1.675E+02	Analog	1.00	3
Mg			1	482077.195	ug/l	0.79	2,360,516.67	1.380E+01	Pulse	1.00	3
K			1	13179.787	ug/l	0.80	110,799.04	6.479E-01	Pulse	1.00	3
V			1	24.034	ug/l	15.13	2,476.83	1.447E-02	Pulse	0.50	3
Mn			1	48.524	ug/l	5.06	3,223.61	2.899E-02	Pulse	0.50	3
Fe			1	-192.861	ug/l	-80.49	316,620.83	2.848E+00	Pulse	0.50	3
Co			1	0.222	ug/l	153.43	119.33	1.071E-03	Pulse	0.50	3
Ni			1	-44.530	ug/l	-3.54	418.01	3.762E-03	Pulse	0.50	3
Cu			1	9.631	ug/l	8.44	3,705.70	3.332E-02	Pulse	0.50	3
Zn			1	0.460	ug/l	2280.79	1,675.08	1.006E-02	Pulse	1.00	3
Cd			1	0.712	ug/l	140.26	30.00	1.805E-04	Pulse	0.50	3
Al			1	-49.509	ug/l	-43.00	578.34	3.380E-03	Pulse	1.00	3
Se			1	7.577	ug/l	77.92	25.11	1.508E-04	Pulse	3.00	3
Sb			1	-0.486	ug/l	-7.82	50.00	3.004E-04	Pulse	1.00	3
Se			1	-7.939	ug/l	-87.34	20.89	1.256E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,352,552.50	0.44	81.0	Pulse	0.50	3
1	Sc		171,021.96	1.22	81.6	Pulse	0.30	3
1	Ge		111,208.63	1.24	82.3	Pulse	0.30	3
1	In		1,073,836.28	0.44	78.3	Pulse	0.30	3
1	Tb		3,106,915.50	0.23	80.8	Pulse	0.50	3
1	Lu		2,315,907.92	0.19	78.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		166,430.23	0.75	82.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		978.92	2.58	123.4	Pulse	0.30	3

Quantitation Report

File Name 068SMPL.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:25
Sample Name FA99117-2FR
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.133	ug/l	33.03	2,513.50	2.270E-02	Pulse	0.50	3
As			1	0.166	ug/l	670.11	54.67	4.937E-04	Pulse	1.00	3
Mo			1	7.428	ug/l	2.10	284.00	1.689E-03	Pulse	0.50	3
Pb			1	0.402	ug/l	51.36	1,744.42	5.618E-04	Pulse	1.00	3
Be			1	-0.394	ug/l	-300.00	0.50		Pulse	2.00	3
Ag			1	-0.241	ug/l	-175.63	687.35	4.087E-03	Pulse	0.50	3
Ba			1	38.115	ug/l	6.78	725.35	6.676E-04	Pulse	0.50	3
Tl			1	0.096	ug/l	96.82	72.67	2.343E-05	Pulse	0.50	3
Sn			1	-2.561	ug/l	-47.44	220.00	2.024E-04	Pulse	0.30	3
Sr			1	5302.293	ug/l	0.18	247,108.53	2.275E-01	Pulse	0.50	3
[Pb]			1	-0.090	ug/l	-961.36	845.36	3.577E-04	Pulse	0.50	3
Ca			1	484265.835	ug/l	0.69	118,098.49	6.871E-01	Pulse	0.50	3
Ti			1	2.714	ug/l	117.98	10.00	5.836E-05	Pulse	0.50	3
Na			1	1376148.610	ug/l	0.57	13,481,905.00	1.218E+02	Analog	1.00	3
Mg			1	338224.577	ug/l	0.99	1,664,851.25	9.687E+00	Pulse	1.00	3
K			1	13154.597	ug/l	1.89	111,230.48	6.472E-01	Pulse	1.00	3
V			1	24.291	ug/l	3.42	2,500.84	1.455E-02	Pulse	0.50	3
Mn			1	1139.196	ug/l	2.77	43,102.90	3.893E-01	Pulse	0.50	3
Fe			1	-24.697	ug/l	-445.10	324,155.72	2.927E+00	Pulse	0.50	3
Co			1	1.742	ug/l	9.50	264.67	2.390E-03	Pulse	0.50	3
Ni			1	-35.822	ug/l	-5.07	637.34	5.756E-03	Pulse	0.50	3
Cu			1	7.824	ug/l	36.14	3,567.68	3.222E-02	Pulse	0.50	3
Zn			1	8.441	ug/l	43.18	1,786.42	1.062E-02	Pulse	1.00	3
Cd			1	-0.025	ug/l	-2240.76	17.33	1.030E-04	Pulse	0.50	3
Al			1	-64.886	ug/l	-20.60	548.01	3.190E-03	Pulse	1.00	3
Se			1	4.727	ug/l	127.58	23.56	1.400E-04	Pulse	3.00	3
Sb			1	-0.623	ug/l	-12.73	43.00	2.557E-04	Pulse	1.00	3
Se			1	-21.942	ug/l	-41.81	16.89	1.004E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,363,276.00	0.43	81.3	Pulse	0.50	3
1	Sc		171,880.59	1.09	82.0	Pulse	0.30	3
1	Ge		110,730.10	0.11	81.9	Pulse	0.30	3
1	In		1,086,231.21	0.64	79.2	Pulse	0.30	3
1	Tb		3,104,979.83	0.48	80.7	Pulse	0.50	3
1	Lu		2,326,308.00	0.53	78.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		168,172.38	0.18	83.3	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		912.25	12.97	115.0	Pulse	0.30	3

Quantitation Report

File Name	069CCVA.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:29
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.833	ug/l	0.34	309,427.00	2.861E+00	Pulse	0.50	3
As			1	48.521	ug/l	0.35	39,585.10	3.661E-01	Pulse	1.00	3
Mo			1	50.629	ug/l	0.25	168,929.49	1.045E+00	Pulse	0.50	3
Pb			1	52.632	ug/l	1.51	948,601.27	3.091E-01	Pulse	1.00	3
Be			1	48.392	ug/l	1.96	2,045.94		Pulse	2.00	3
Ag			1	51.720	ug/l	0.53	569,381.94	3.524E+00	Pulse	0.50	3
Ba			1	49.311	ug/l	1.08	83,780.48	7.987E-02	Pulse	0.50	3
Tl			1	52.072	ug/l	1.23	1,361,254.42	4.435E-01	Pulse	0.50	3
Sn			1	50.983	ug/l	0.46	193,896.12	1.848E-01	Pulse	0.30	3
Sr			1	49.382	ug/l	0.45	222,269.86	2.119E-01	Pulse	0.50	3
[Pb]			1	49.798	ug/l	0.31	439,816.65	1.910E-01	Pulse	0.50	3
Ca			1	4903.699	ug/l	0.35	116,397.34	6.957E-01	Pulse	0.50	3
Ti			1	49.904	ug/l	2.41	8,177.73	4.888E-02	Pulse	0.50	3
Na			1	5494.645	ug/l	0.36	5,263,942.00	4.868E+01	Analog	1.00	3
Mg			1	5165.531	ug/l	0.67	2,474,204.25	1.479E+01	Pulse	1.00	3
K			1	5025.028	ug/l	0.26	2,416,938.58	1.445E+01	Pulse	1.00	3
V			1	50.712	ug/l	0.77	246,836.51	1.475E+00	Pulse	0.50	3
Mn			1	49.535	ug/l	0.40	178,349.56	1.649E+00	Pulse	0.50	3
Fe			1	5249.134	ug/l	0.36	27,272,137.33	2.522E+02	Analog	0.50	3
Co			1	51.619	ug/l	0.55	484,635.04	4.482E+00	Pulse	0.50	3
Ni			1	51.282	ug/l	0.30	128,504.49	1.188E+00	Pulse	0.50	3
Cu			1	52.171	ug/l	0.32	347,975.19	3.218E+00	Pulse	0.50	3
Zn			1	50.783	ug/l	0.91	59,390.61	3.675E-01	Pulse	1.00	3
Cd			1	50.347	ug/l	0.17	85,461.79	5.289E-01	Pulse	0.50	3
Al			1	4846.112	ug/l	0.79	1,007,331.62	6.021E+00	Pulse	1.00	3
Se			1	47.880	ug/l	2.44	2,937.45	1.818E-02	Pulse	3.00	3
Sb			1	48.761	ug/l	0.38	257,282.70	1.592E+00	Pulse	1.00	3
Se			1	48.276	ug/l	2.61	1,423.83	8.811E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,302,373.00	0.61	79.2	Pulse	0.50	3
1	Sc		167,298.51	0.64	79.8	Pulse	0.30	3
1	Ge		108,140.68	0.16	80.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,048,971.52	0.74	76.5	Pulse	0.30	3
1	Tb		3,069,409.08	0.67	79.8	Pulse	0.50	3
1	Lu		2,294,174.83	0.40	77.4	Pulse	0.50	3
1	Ge		161,594.01	0.54	80.1	Pulse	0.30	3
1	Te		2.67	114.56		Pulse	0.50	3
1	Li		930.02	2.93	117.2	Pulse	0.30	3

Quantitation Report

File Name	070_CCV.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:32
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	102.844	ug/l	0.45	617,890.66	5.767E+00	Pulse	0.50	3
As			1	98.978	ug/l	0.62	79,950.91	7.462E-01	Pulse	1.00	3
Mo			1	102.945	ug/l	1.00	340,214.72	2.125E+00	Pulse	0.50	3
Pb			1	105.990	ug/l	1.00	1,892,843.08	6.219E-01	Pulse	1.00	3
Be			1	96.398	ug/l	1.14	4,074.91		Pulse	2.00	3
Ag			1	103.543	ug/l	0.45	1,128,451.62	7.050E+00	Pulse	0.50	3
Ba			1	100.753	ug/l	0.61	168,428.23	1.631E-01	Pulse	0.50	3
Tl			1	104.699	ug/l	1.67	2,714,338.33	8.917E-01	Pulse	0.50	3
Sn			1	103.263	ug/l	1.46	386,204.79	3.741E-01	Pulse	0.30	3
Sr			1	100.139	ug/l	1.07	443,226.24	4.293E-01	Pulse	0.50	3
[Pb]			1	101.516	ug/l	0.73	875,450.40	3.891E-01	Pulse	0.50	3
Ca			1	9950.637	ug/l	0.90	232,649.45	1.410E+00	Pulse	0.50	3
Ti			1	101.585	ug/l	1.17	16,416.90	9.948E-02	Pulse	0.50	3
Na			1	11050.442	ug/l	1.00	10,477,109.00	9.779E+01	Analog	1.00	3
Mg			1	10884.788	ug/l	0.96	5,141,776.67	3.116E+01	Analog	1.00	3
K			1	10575.397	ug/l	0.41	4,967,530.67	3.010E+01	Analog	1.00	3
V			1	103.438	ug/l	1.27	495,383.35	3.002E+00	Pulse	0.50	3
Mn			1	100.531	ug/l	0.87	357,181.86	3.334E+00	Pulse	0.50	3
Fe			1	10665.293	ug/l	0.72	54,576,096.00	5.094E+02	Analog	0.50	3
Co			1	103.579	ug/l	0.68	963,401.38	8.992E+00	Pulse	0.50	3
Ni			1	103.218	ug/l	1.59	254,754.33	2.378E+00	Pulse	0.50	3
Cu			1	104.040	ug/l	0.57	684,620.19	6.390E+00	Pulse	0.50	3
Zn			1	103.846	ug/l	0.79	118,624.27	7.411E-01	Pulse	1.00	3
Cd			1	101.642	ug/l	0.87	170,884.36	1.068E+00	Pulse	0.50	3
Al			1	9830.524	ug/l	1.55	2,015,097.92	1.221E+01	Pulse	1.00	3
Se			1	96.897	ug/l	0.47	5,868.46	3.666E-02	Pulse	3.00	3
Sb			1	98.854	ug/l	1.01	516,586.93	3.227E+00	Pulse	1.00	3
Se			1	97.468	ug/l	0.88	2,824.54	1.765E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,250,192.00	0.23	77.4	Pulse	0.50	3
1	Sc		165,042.62	0.68	78.7	Pulse	0.30	3
1	Ge		107,146.39	1.02	79.3	Pulse	0.30	3
1	In		1,032,396.52	0.44	75.3	Pulse	0.30	3
1	Tb		3,043,895.75	0.18	79.1	Pulse	0.50	3
1	Lu		2,275,016.17	0.28	76.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		160,065.81	0.06	79.3	Pulse	0.30	3
1	Te		4.00	0.00		Pulse	0.50	3
1	Li		868.91	2.47	109.5	Pulse	0.30	3

Quantitation Report

File Name 071_CCB.d
File Path D:\2022\xa111122m1.b
Method File
Method Path
Acq Time 11/11/2022 12:36
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 11/11/2022 12:55
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.003	ug/l	-281.95	2,285.47	2.133E-02	Pulse	0.50	3
As			1	0.023	ug/l	69.01	70.00	6.517E-04	Pulse	1.00	3
Mo			1	0.109	ug/l	18.49	384.67	2.401E-03	Pulse	0.50	3
Pb			1	0.033	ug/l	27.54	2,216.15	7.345E-04	Pulse	1.00	3
Be			1	0.099	ug/l	27.71	4.83		Pulse	2.00	3
Ag			1	0.015	ug/l	56.43	840.69	5.248E-03	Pulse	0.50	3
Ba			1	0.027	ug/l	35.39	98.67	9.466E-05	Pulse	0.50	3
Tl			1	0.044	ug/l	30.09	1,179.38	3.917E-04	Pulse	0.50	3
Sn			1	0.094	ug/l	20.09	664.46	6.367E-04	Pulse	0.30	3
Sr			1	0.018	ug/l	67.09	456.68	4.381E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	21.61	989.37	4.276E-04	Pulse	0.50	3
Ca			1	-0.337	ug/l	-346.53	332.67	2.023E-03	Pulse	0.50	3
Ti			1	0.058	ug/l	59.07	14.67	8.860E-05	Pulse	0.50	3
Na			1	41.218	ug/l	4.70	50,232.89	4.688E-01	Pulse	1.00	3
Mg			1	4.048	ug/l	22.47	3,212.93	1.956E-02	Pulse	1.00	3
K			1	5.620	ug/l	39.99	48,064.14	2.921E-01	Pulse	1.00	3
V			1	0.072	ug/l	29.21	1,578.74	9.598E-03	Pulse	0.50	3
Mn			1	0.037	ug/l	30.06	1,518.73	1.417E-02	Pulse	0.50	3
Fe			1	1.509	ug/l	79.57	322,704.66	3.011E+00	Pulse	0.50	3
Co			1	0.017	ug/l	47.05	251.34	2.355E-03	Pulse	0.50	3
Ni			1	-0.484	ug/l	-0.39	308.67	2.879E-03	Pulse	0.50	3
Cu			1	-0.017	ug/l	-91.23	2,828.89	2.640E-02	Pulse	0.50	3
Zn			1	-0.030	ug/l	-120.02	1,572.73	9.818E-03	Pulse	1.00	3
Cd			1	0.022	ug/l	42.44	53.33	3.331E-04	Pulse	0.50	3
Al			1	1.323	ug/l	77.61	924.69	5.638E-03	Pulse	1.00	3
Se			1	0.062	ug/l	119.07	23.34	1.456E-04	Pulse	3.00	3
Sb			1	0.044	ug/l	9.20	305.00	1.904E-03	Pulse	1.00	3
Se			1	-0.083	ug/l	-92.83	20.00	1.249E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,314,199.75	1.05	79.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		164,623.35	2.43	78.5	Pulse	0.30	3
1	Ge		107,205.75	2.21	79.3	Pulse	0.30	3
1	In		1,043,104.02	0.72	76.1	Pulse	0.30	3
1	Tb		3,018,500.83	1.63	78.5	Pulse	0.50	3
1	Lu		2,249,381.83	0.78	75.9	Pulse	0.50	3
1	Ge		160,182.22	0.42	79.4	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		920.03	3.78	116.0	Pulse	0.30	3

Quantitation Report

File Name	072CCVA.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:40
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	073_CCV.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:44
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	074_CCB.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:47
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

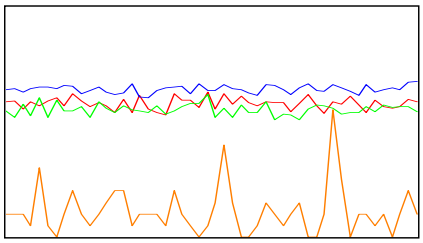
File Name	075_CCV.d
File Path	D:\2022\xa111122m1.b
Method File	
Method Path	
Acq Time	11/11/2022 12:57
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	11/11/2022 12:55
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Tune Report

Batch Folder	D:\2022\xa111122m1.b
Acq. Date-Time	11/11/2022 7:58
Report Comment	1111
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	2000	1159	11591.04	5000.00	
89	2000	1106	11064.42	5000.00	
205	5000	3207	32070.19	5000.00	
78	20	2			

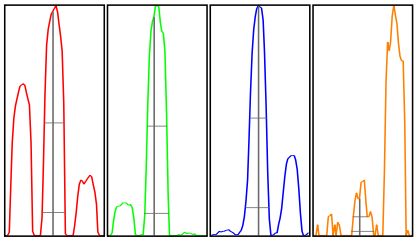
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	4.33	5.00	
89	4.35	5.00	
205	2.52	5.00	
78	92.49		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.00	2	
89	0.20	2	
205	0.30	2	
78	0.10	5	

Ratio	156/140	1.114 %	
Ratio	70/140	2.749 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	1152.39	59.00	58.9 - 59.1		0.58	0.688	0.900	
89	1101.87	88.95	88.9 - 89.1		0.57	0.722	0.900	

Tune Report

205	3190.87	205.00	204.9 - 205.1	0.49	0.711	0.900
78	3.50	77.95	-	0.40	0.630	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

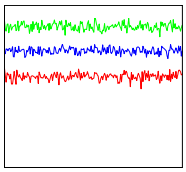
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-190.0 V	Cell Exit	-70 V
Omega Bias	-105 V	Deflect	2.8 V
Omega Lens	7.8 V	Plate Bias	-60 V

Cell Parameters

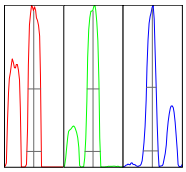
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



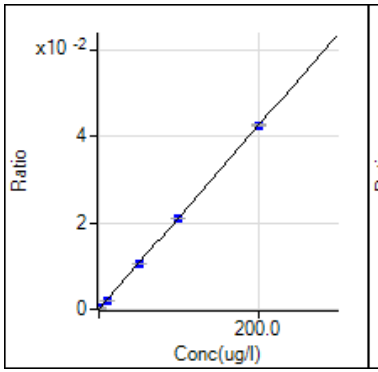
Sensitivity			
Mass	7	89	205
Range	2000	5000	5000
Count	1120.83	4342.05	3598.80
RSD%	3.9	2.6	2.6
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	1.34%	
Doubly Charged	70/140	6.07%	

Background			
Mass	7	89	205
Count	0.30	0.55	3.80

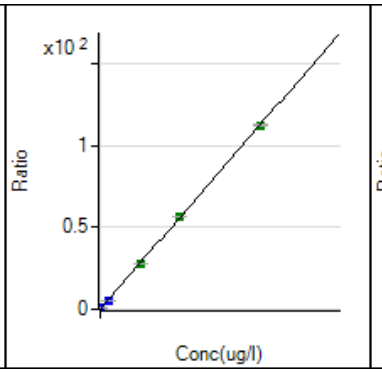


Resolution/Axis			
Mass	7	89	205
Height	1108	4202	3478
Axis	7.00	89.00	205.00
W-50%	0.63	0.59	0.48
W-10%	0.72	0.76	0.73
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

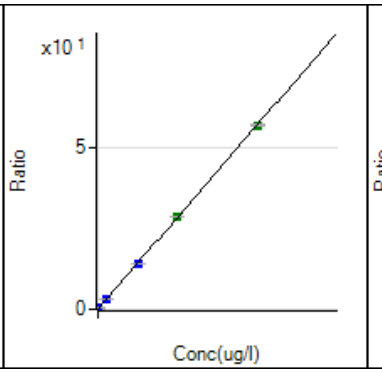
Calibration for D:\2022\xa111122m1.b\044_CCV.d



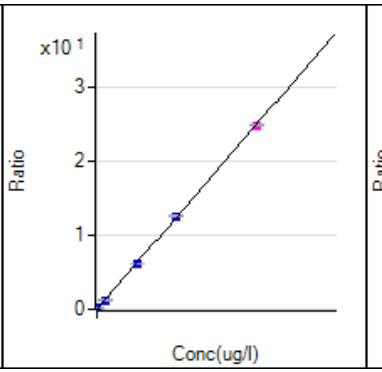
9 Be [2] / ISTD: 45 Sc
y = 2.116E-4 x + 3.185E-6
R 1.0000
DL 0.03911
BEC 0.01505



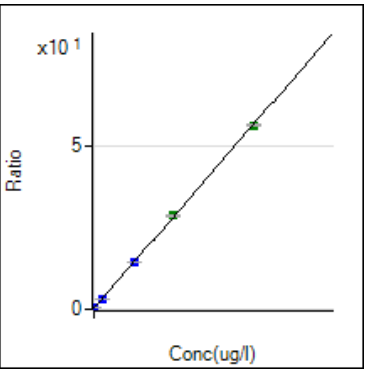
23 Na [2] / ISTD: 45 Sc
y = 5.623E-3 x + 6.736E-2
R 1.0000
DL 0.2992
BEC 11.98



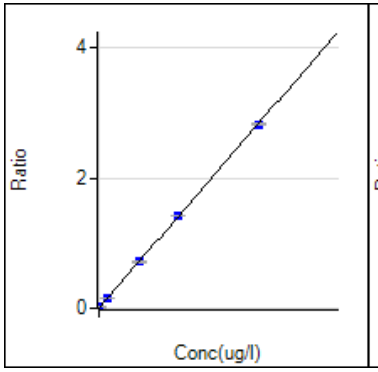
24 Mg [2] / ISTD: 45 Sc
y = 2.862E-3 x + 7.975E-3
R 1.0000
DL 0.2626
BEC 2.787



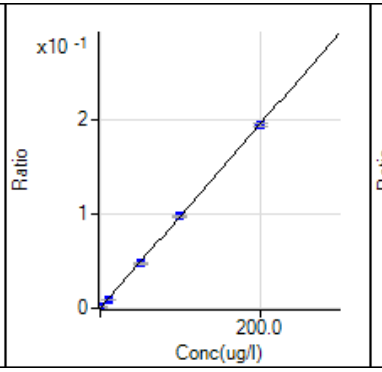
27 Al [2] / ISTD: 45 Sc
y = 1.242E-3 x + 3.995E-3
R 1.0000
DL 0.1748
BEC 3.218



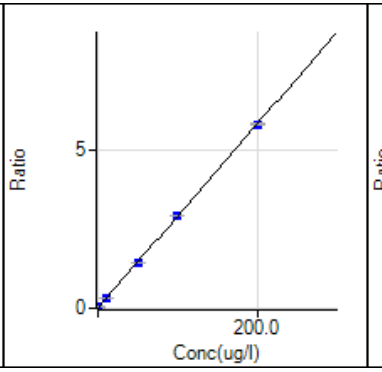
39 K [2] / ISTD: 45 Sc
y = 2.820E-3 x + 2.762E-1
R 1.0000
DL 2.311
BEC 97.95



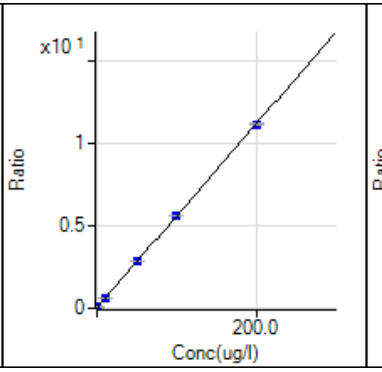
44 Ca [2] / ISTD: 45 Sc
y = 1.415E-4 x + 2.071E-3
R 1.0000
DL 4.879
BEC 14.64



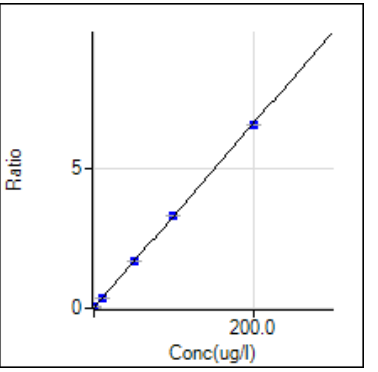
47 Ti [2] / ISTD: 45 Sc
y = 9.789E-4 x + 3.179E-5
R 1.0000
DL 0.08937
BEC 0.03248



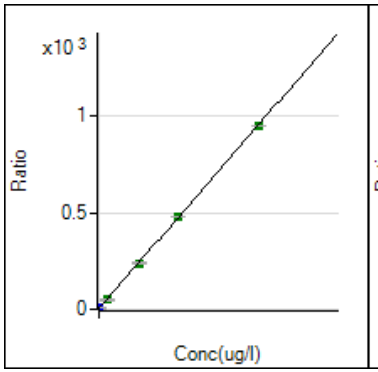
51 V [2] / ISTD: 45 Sc
y = 2.895E-2 x + 7.517E-3
R 1.0000
DL 0.03732
BEC 0.2597



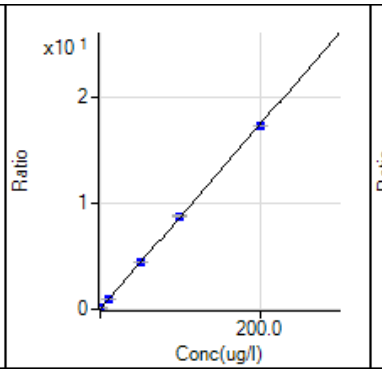
52 Cr [2] / ISTD: 72 Ge
y = 5.587E-2 x + 2.151E-2
R 1.0000
DL 0.02161
BEC 0.385



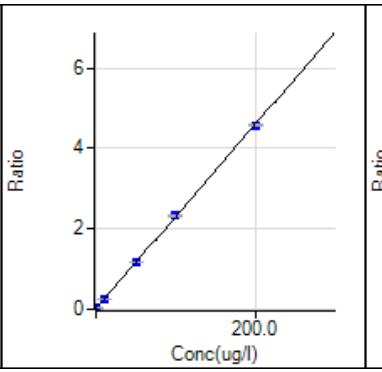
55 Mn [2] / ISTD: 72 Ge
y = 3.303E-2 x + 1.296E-2
R 1.0000
DL 0.04828
BEC 0.3924



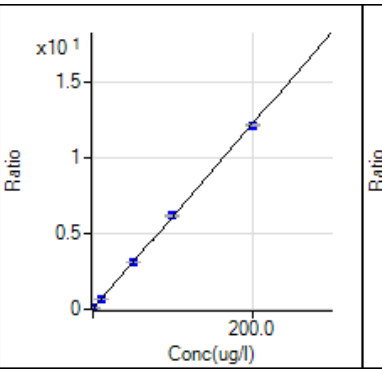
56 Fe [2] / ISTD: 72 Ge
y = 4.748E-2 x + 2.939E0
R 1.0000
DL 0.95
BEC 61.9



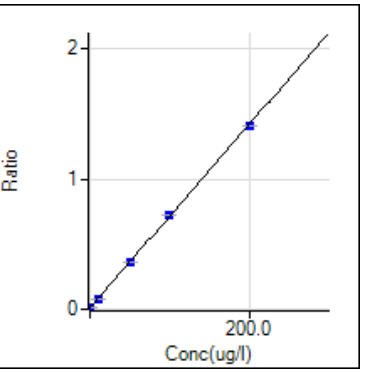
59 Co [2] / ISTD: 72 Ge
y = 8.680E-2 x + 8.781E-4
R 1.0000
DL 0.003691
BEC 0.01012



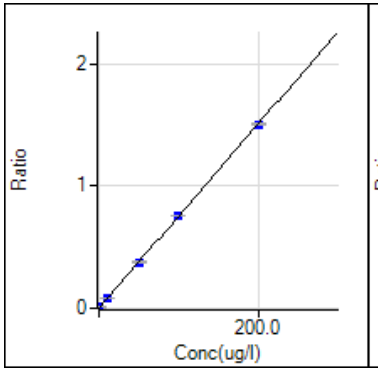
60 Ni [2] / ISTD: 72 Ge
y = 2.290E-2 x + 1.396E-2
R 1.0000
DL 0.06223
BEC 0.6096



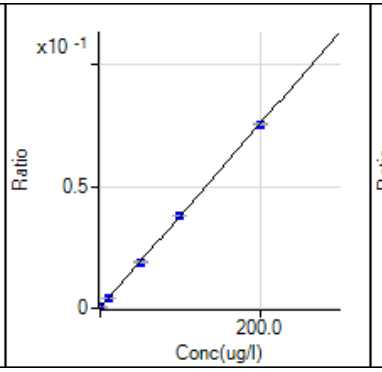
63 Cu [2] / ISTD: 72 Ge
y = 6.115E-2 x + 2.743E-2
R 0.9999
DL 0.03991
BEC 0.4486



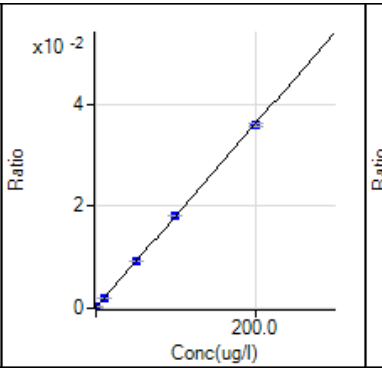
66 Zn [2] / ISTD: 74 Ge
y = 7.040E-3 x + 1.003E-2
R 0.9999
DL 0.09946
BEC 1.425



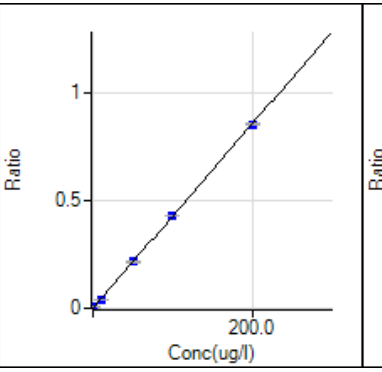
75 As [2] / ISTD: 72 Ge
y = 7.534E-3 x + 4.812E-4
R 1.0000
DL 0.05878
BEC 0.06386



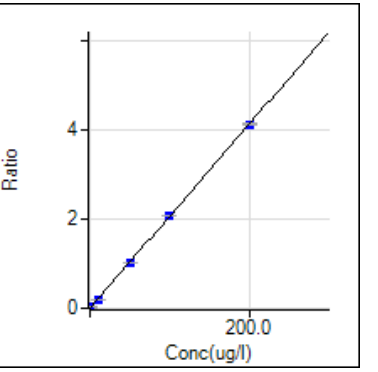
78 Se [2] / ISTD: 74 Ge
y = 3.771E-4 x + 1.222E-4
R 1.0000
DL 0.07092
BEC 0.3241



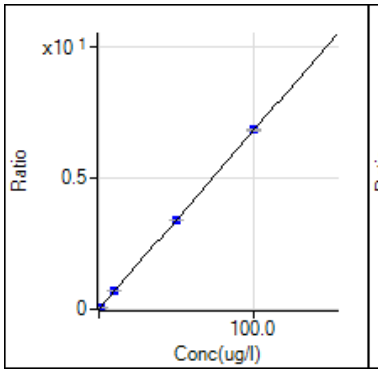
82 Se [2] / ISTD: 74 Ge
y = 1.796E-4 x + 1.398E-4
R 1.0000
DL 0.337
BEC 0.7785



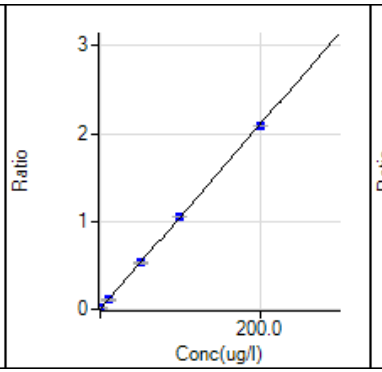
88 Sr [2] / ISTD: 115 In
y = 4.284E-3 x + 3.594E-4
R 1.0000
DL 0.009217
BEC 0.0839



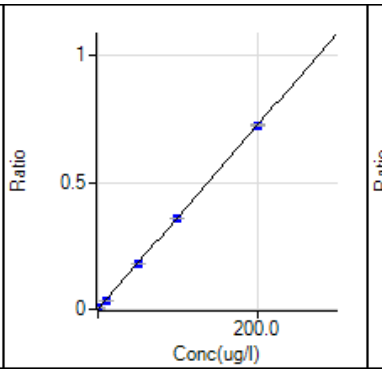
95 Mo [2] / ISTD: 74 Ge
y = 2.065E-2 x + 1.553E-4
R 1.0000
DL 0.005827
BEC 0.00752



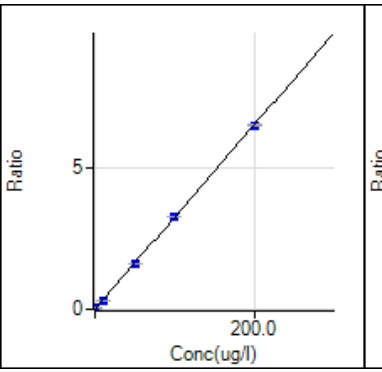
107 Ag [2] / ISTD: 74 Ge
y = 6.805E-2 x + 4.251E-3
R 1.0000
DL 0.005611
BEC 0.06248



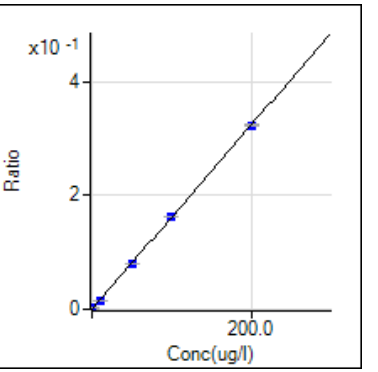
111 Cd [2] / ISTD: 74 Ge
y = 1.050E-2 x + 1.057E-4
R 1.0000
DL 0.01181
BEC 0.01007



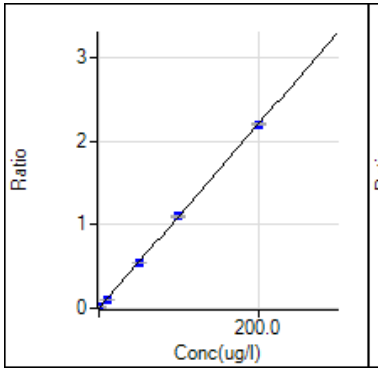
118 Sn [2] / ISTD: 115 In
y = 3.620E-3 x + 2.951E-4
R 1.0000
DL 0.02536
BEC 0.08152



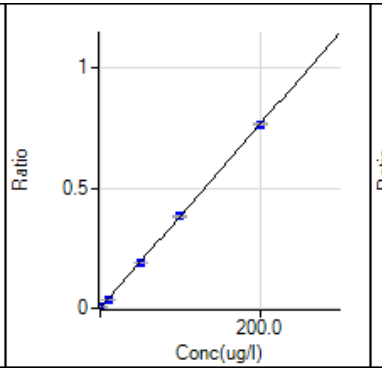
121 Sb [2] / ISTD: 74 Ge
y = 3.264E-2 x + 4.591E-4
R 1.0000
DL 0.0009444
BEC 0.01406



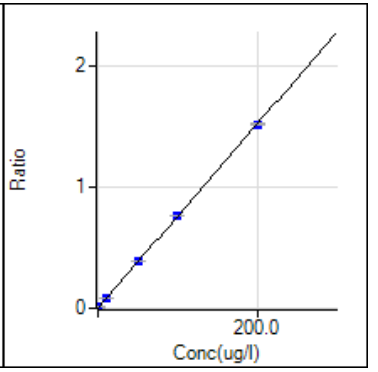
137 Ba [2] / ISTD: 115 In
y = 1.619E-3 x + 5.060E-5
R 1.0000
DL 0.03217
BEC 0.03126



205 Tl [2] / ISTD: 175 Lu
y = 1.101E-2 x + 1.978E-5
R 1.0000
DL 0.000105
BEC 0.001797



206 [Pb] [2] / ISTD: 209 Bi
y = 3.829E-3 x + 3.612E-4
R 1.0000
DL 0.01262
BEC 0.09433



208 Pb [2] / ISTD: 175 Lu
y = 7.576E-3 x + 6.983E-4
R 1.0000
DL 0.01816
BEC 0.09218

SGS Orlando

Date:	11/08/22
[24hr] **Time**	15:21

Analysts Name:	Adam K
MP Batch ID:	41455
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	22330073	ACC1321	0.05	MU45274
Conc. HCl (B)	22C1662007	ACC1346	0.2	KU15244
NA	NA	MET7308	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercury	**Temp. C**	96	**Corr. Factor**	-2	**Corrected Observed Temp. C**	94
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2208066

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	1	Matrix Spike(MS)	50	50	Y	
	1	Matrix Spike Dup(MSD)	50	50	Y	
	1	Duplicate(DUP)	50	50	Y	
1(QC) C	1	FA99205-1FR	50	50	Y	
2	1	FA99205-2FR	50	50	Y	
3	1	FA99205-3FR	50	50	Y	
4	1	FA99117-1FR	50	50	Y	
5	1	FA99117-2FR	50	50	Y	
6	4	FC180-1	50	50	Y	
7	1	FC389-1	50	50	Y	
8	1	FC355-7	50	50	Y	
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Sovereign Consulting

Shepley's Hill (SHL); Devens, MA

AC001.J01

SGS Job Number: FC1186



Sampling Date: 12/09/22

Report to:

Sovereign Consulting
9 Payson Rd Suite 150
Foxborough, MA 02035
spassafaro@sovcon.com

ATTN: Steve Passafaro

Total number of pages in report: 543

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Evita Martinez 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Sovereign Consulting

Job No: FC1186

Shepley's Hill (SHL); Devens, MA
Project No: AC001.J01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC1186-1	12/09/22	10:30	JR	12/10/22	AQ	Water	EFFLUENT
FC1186-1A	12/09/22	10:30	JR	12/10/22	AQ	Water	EFFLUENT
FC1186-2	12/09/22	10:45	JR	12/10/22	AQ	Water	INFLUENT EW-01
FC1186-2A	12/09/22	10:45	JR	12/10/22	AQ	Water	INFLUENT EW-01
FC1186-3	12/09/22	11:00	JR	12/10/22	AQ	Water	INFLUENT EW-04
FC1186-3A	12/09/22	11:00	JR	12/10/22	AQ	Water	INFLUENT EW-04

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Sovereign Consulting **Job No:** FC1186

Site: Shepley's Hill (SHL); Devens, MA **Report Date** 12/21/2022 12:43:35

On 12/10/2022, 3 Samples were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC1186 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP41606

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples FC1010-1DUP, FC1010-1MS, FC1010-1MSD, FC1010-1PS, FC1010-1SDL were used as the QC samples for metals.
- RPDs for Serial Dilution for Barium, Iron are outside control limits for sample MP41606-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 6020B

Matrix: AQ **Batch ID:** MP41607

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples FC1138-1DUP, FC1138-1MS, FC1138-1MSD, FC1138-1SDL were used as the QC samples for metals.
- RPD for Serial Dilution for Arsenic is outside control limits for sample MP41607-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP38306

- All samples were prepped within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples FC1196-12MS, FC1196-12MSD were used as the QC samples for Chloride, Sulfate, Chloride.

Matrix: AQ **Batch ID:** R58586

- FC1186-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** N:GP44067

- FC1186-1 for Nitrogen, Nitrate + Nitrite: Analysis performed at SGS Dayton, NJ.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** N:R200974

- FC1186-1 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite) Analysis performed at SGS Dayton, NJ.

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** N:GN36485

- FC1186-1 for Nitrogen, Nitrite: Analysis performed at SGS Dayton, NJ.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Gabriela Benitez, QA Coordinator *(Signature on File)*

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	SGS Orlando, FL	**Job No:**	FC1186
Site:	SCMAW: Shepley's Hill (SHL); Devens, MA	**Report Date**	12/16/2022 3:12:30 P

On 12/09/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FC1186 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** GP44067

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56876-2DUP, JD56876-2MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.
- Matrix Spike Recovery(s) for Nitrogen, Nitrate + Nitrite are outside control limits. Spike recovery indicates possible matrix interference.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** R200974

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- FC1186-1 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

General Chemistry By Method SM4500NO2 B-11

Matrix: AQ **Batch ID:** GN36485

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56902-1MS, JD56902-1MSD were used as the QC samples for Nitrogen, Nitrite.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: FC1186
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 12/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC1186-1	**EFFLUENT**					
Barium		22.6 J	200	5.0	ug/l	SW846 6010D
Magnesium		5030	5000	100	ug/l	SW846 6010D
Manganese		1690	15	2.0	ug/l	SW846 6010D
Chloride		26.8	2.0	1.0	mg/l	EPA 300/SW846 9056A
Sulfate		5.9	2.0	1.0	mg/l	EPA 300/SW846 9056A
FC1186-1A	**EFFLUENT**					
Arsenic		13.4	2.0	1.0	ug/l	SW846 6020B
FC1186-2	**INFLUENT EW-01**					
Iron		63900	300	50	ug/l	SW846 6010D
Manganese		2090	15	2.0	ug/l	SW846 6010D
FC1186-2A	**INFLUENT EW-01**					
Arsenic		1490	2.0	1.0	ug/l	SW846 6020B
FC1186-3	**INFLUENT EW-04**					
Iron		32200	300	50	ug/l	SW846 6010D
Manganese		2070	15	2.0	ug/l	SW846 6010D
FC1186-3A	**INFLUENT EW-04**					
Arsenic		2810	100	50	ug/l	SW846 6020B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: EFFLUENT
Lab Sample ID: FC1186-1
Matrix: AQ - Water
Project: Shepley's Hill (SHL); Devens, MA

Date Sampled: 12/09/22
Date Received: 12/10/22
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Barium	22.6 J	200	5.0	1.0	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]
Magnesium	5030	5000	100	35	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	1690	15	2.0	1.0	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19106
(2) Prep QC Batch: MP41606

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FC1186-1	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Chloride	26.8	2.0	1.0	0.80	mg/l	1	12/14/22 09:47	GT	EPA 300/SW846 9056A
Nitrogen, Nitrate [a]	0.10 U	0.11	0.10	0.093	mg/l	1	12/13/22 15:22	ANJ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite [b]	0.095 U	0.10	0.095	0.090	mg/l	1	12/13/22 15:22	ANJ	EPA 353.2/LACHAT
Nitrogen, Nitrate + Nitrite [c]	0.11 U	0.12	0.11	0.096	mg/l	1	12/13/22 15:22	ANJ	EPA 300/SW846 9056A
Nitrogen, Nitrite [b]	0.0050 U	0.010	0.0050	0.0030	mg/l	1	12/10/22 12:40	ANJ	SM4500NO2 B-11
Sulfate	5.9	2.0	1.0	0.60	mg/l	1	12/14/22 09:47	GT	EPA 300/SW846 9056A

(a) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite) Analysis performed at SGS Dayton, NJ.
(b) Analysis performed at SGS Dayton, NJ.
(c) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	EFFLUENT		
Lab Sample ID:	FC1186-1A	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	13.4	2.0	1.0	0.21	ug/l	2	12/15/22	12/16/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19101
(2) Prep QC Batch: MP41607

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-01		
Lab Sample ID:	FC1186-2	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	63900	300	50	17	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2090	15	2.0	1.0	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19106
(2) Prep QC Batch: MP41606

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-01		
Lab Sample ID:	FC1186-2A	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1490	2.0	1.0	0.21	ug/l	2	12/15/22	12/16/22	DM	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19101
(2) Prep QC Batch: MP41607

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-04		
Lab Sample ID:	FC1186-3	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	32200	300	50	17	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]
Manganese	2070	15	2.0	1.0	ug/l	1	12/15/22	12/16/22	LM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19106
(2) Prep QC Batch: MP41606

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	INFLUENT EW-04		
Lab Sample ID:	FC1186-3A	**Date Sampled:**	12/09/22
Matrix:	AQ - Water	**Date Received:**	12/10/22
		Percent Solids:	n/a
Project:	Shepley's Hill (SHL); Devens, MA		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2810	100	50	11	ug/l	100	12/15/22	12/22/22	JC	SW846 6020B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA19123
(2) Prep QC Batch: MP41607

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FC1186

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devens, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
1	Effluent	12/9/22	10:30	JWR	W	4		x			x					X	X	X	X	X		
2	Influent EW-01	12/9/22	10:45	JWR	W	2					x					X					X	
3	Influent EW-04	12/9/22	11:00	JWR	W	2					x					X					X	

INITIAL ASSESSMENT

LABEL VERIFICATION ZD

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid

Turnaround Time (Business days)

- X 10 Day (Business)
- 7 Day
- X 5 Day - Arsenic Only
- 3 Day *RUSH*
- 2 Day *RUSH*
- 1 Day *RUSH*
- Other

Approved By: / Date:

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [X] FULLT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples
*Nitrate volume direct sub to Dayton for analysis from MASC TF 12/12

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		12-9-22 1735	2 Thermo Fisher (SC)	3 Thermo Fisher	12/9/22 1700	4 FedEx
5	Relinquished by/Affiliation	Date Time:	6 12/10/22 930	7	Date Time:	8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): #s 02594 0.8 CTR

http://www.sgs.com/en/terms-and-conditions

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FC1186: Chain of Custody
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FC1186

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: Sovereign Consulting Inc.
Address: 9 Payson Road, Suite 150
City: Foxborough State: MA Zip: 02035
Project Contact: Steven Passafaro Email: spassafaro@sovcon.com
Phone #: 508-339-3200
Sampler(s) Name(s) (Printed)
Sampler 1: Sovereign Staff

Project Information

Project Name: Shepley's Hill (SHL), Devons, MA
Street:
City: Devens State: MA
Project # AC001.J02
Fax #
Client Purchase Order #

Analytical Information

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAC	DI WATER	MEOH	Total Arsenic - 6020A	Total Ba, Mn, Mg - 6010C	Chloride 300.0	Nitrate - 353.2	Sulfate - 300.0	Total Fe & Mn - 6010C	LAB USE ONLY
	Effluent	12/9/22	10:30	JWR	w	4		x			x					X	X	X	X	X		
	Influent EW-01	12/9/22	10:45	JWR	w	2					x					X					X	
	Influent EW-04	12/9/22	11:00	JWR	w	2					x					X					X	

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

Turnaround Time (Business days)

X 10 Day (Business) Approved By: / Date:
7 Day
X 5 Day - Arsenic Only
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

☐ COMMERCIAL "A" (RESULTS ONLY)
☐ COMMERCIAL "B" (RESULTS PLUS QC)
☐ REDT1 (EPA LEVEL 3)
☒ FULLT1 (EPA LEVEL 4)
☒ EDD'S

Comments / Remarks

See Project QAPP for all specific project requirements.
5-Day Rush on Arsenic Samples

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 [signature]	12-7-22 12:35	2 Thelma Fleeley	3		4
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

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5.1
5

FC1186: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: FC1186 **Client:** SOVEREIGN CONSULTING INC. **Project:** SHEPLEY'S HILL (SHL), DEVENS, MA

Date / Time Received: 12/10/2022 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 9304 4372 5265

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.8);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SAMUELM Date: 12/10/2022 9:30:00 A Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1186
Account: Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA
Collected: 12/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP41606	SW846 6010D						
MP41606-B1	7440-39-3	Barium	BSP	REC	101	%	88-113
MP41606-B1	7439-89-6	Iron	BSP	REC	101.2	%	87-115
MP41606-B1	7439-95-4	Magnesium	BSP	REC	100.4	%	85-113
MP41606-B1	7439-96-5	Manganese	BSP	REC	103	%	90-114
MP41606-S1*	7440-39-3	Barium	MS	REC	97.8	%	88-113
MP41606-S1*	7439-89-6	Iron	MS	REC	98.6	%	87-115
MP41606-S1*	7439-95-4	Magnesium	MS	REC	96.7	%	85-113
MP41606-S1*	7439-96-5	Manganese	MS	REC	96.2	%	90-114
MP41606-S2*	7440-39-3	Barium	MSD	REC	100.8	%	88-113
MP41606-S2*	7440-39-3	Barium	MSD	RPD	3	%	20
MP41606-S2*	7439-89-6	Iron	MSD	REC	102.1	%	87-115
MP41606-S2*	7439-89-6	Iron	MSD	RPD	3.4	%	20
MP41606-S2*	7439-95-4	Magnesium	MSD	REC	101.9	%	85-113
MP41606-S2*	7439-95-4	Magnesium	MSD	RPD	4.1	%	20
MP41606-S2*	7439-96-5	Manganese	MSD	REC	101.6	%	90-114
MP41606-S2*	7439-96-5	Manganese	MSD	RPD	5	%	20
MP41606-D1*	7440-39-3	Barium	DUP	RPD	2.2	%	20
MP41606-D1*	7439-89-6	Iron	DUP	RPD	4.3	%	20
MP41606-D1*	7439-95-4	Magnesium	DUP	RPD	1.5	%	20
MP41606-D1*	7439-96-5	Manganese	DUP	RPD	1.9	%	20
MP41607	SW846 6020B						
MP41607-B1	7440-38-2	Arsenic	BSP	REC	111	%	84-116
MP41607-S1*	7440-38-2	Arsenic	MS	REC	113.8	%	84-116
MP41607-S2*	7440-38-2	Arsenic	MSD	REC	111.8	%	84-116
MP41607-S2*	7440-38-2	Arsenic	MSD	RPD	1.8	%	20
MP41607-D1*	7440-38-2	Arsenic	DUP	RPD	16.4	%	20
GP38306	EPA 300/SW846 9056A						
GP38306-B1	16887-00-6	Chloride	BSP	REC	99.6	%	87-111
GP38306-B1	14808-79-8	Sulfate	BSP	REC	99.2	%	87-112
GP38306-S1*	16887-00-6	Chloride	MS	REC	107.8	%	87-111
GP38306-S1*	14808-79-8	Sulfate	MS	REC	100.6	%	87-112
GP38306-S2*	16887-00-6	Chloride	MSD	RPD	0	%	15
GP38306-S2*	16887-00-6	Chloride	MSD	REC	107.8	%	87-111
GP38306-S2*	14808-79-8	Sulfate	MSD	RPD	0	%	15
GP38306-S2*	14808-79-8	Sulfate	MSD	REC	100.6	%	87-112

* Sample used for QC is not from job FC1186

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:45	MA19101-STD1	1		STDA
08:49	MA19101-STD2	1		STDB
08:53	MA19101-STD3	1		STDC
08:57	MA19101-STD4	1		STDD
09:01	MA19101-STD5	1		STDE
09:05	MA19101-STD6	1		STDF
09:09	MA19101-STD7	1		STDG
09:21	MA19101-STD8	1		STDA
09:28	MA19101-HSTD1	1		
09:32	MA19101-ICV1	1		
09:36	MA19101-ICB1	1		
09:40	MA19101-CRIA1	1		
09:44	MA19101-ICSA1	1		
09:47	MA19101-ICSAB1	1		
09:51	MA19101-CCV1	1		
09:55	MA19101-CCV2	1		
09:59	MA19101-CCB1	1		
10:03	MA19101-HSTD2	1		
10:07	ZZZZZZ	250		
10:10	FC674-2	500		(sample used for QC only; not part of login FC1186)
10:14	MP41570-D1	500		
10:18	MP41570-SD1	2500		
10:22	MP41570-S1	500		
10:26	MP41570-S2	500		
10:29	MP41570-PS1	500		
10:33	ZZZZZZ	25		
10:37	ZZZZZZ	500		
10:41	ZZZZZZ	25		
10:45	MA19101-CCV3	1		
10:48	MA19101-CCV4	1		
10:52	MA19101-CCB2	1		
10:56	ZZZZZZ	25		
11:34	MA19101-CCV5	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:38	MA19101-CCV6	1		
11:41	MA19101-CCB3	1		
12:23	MA19101-CCV7	1		
12:27	MA19101-CCV8	1		
12:30	MA19101-CCB4	1		
12:42	MP41607-MB1	2		
12:46	MP41607-B1	2		
12:49	FC1138-1	2		(sample used for QC only; not part of login FC1186)
12:53	MP41607-D1	2		
12:57	MP41607-SD1	10		
13:01	MP41607-S1	2		
13:05	MP41607-S2	2		
13:08	MP41607-PS1	2		
13:12	MA19101-CCV9	1		
13:16	MA19101-CCV10	1		
13:20	MA19101-CCB5	1		
13:24	ZZZZZZ	2		
13:27	ZZZZZZ	2		
13:31	ZZZZZZ	2		
13:35	ZZZZZZ	2		
13:39	ZZZZZZ	2		
13:42	ZZZZZZ	2		
13:46	ZZZZZZ	2		
13:50	ZZZZZZ	2		
13:54	ZZZZZZ	2		
13:58	ZZZZZZ	2		
14:01	MA19101-CCV11	1		
14:05	MA19101-CCV12	1		
14:09	MA19101-CCB6	1		
14:13	ZZZZZZ	2		
14:17	ZZZZZZ	2		
14:20	FC1186-1A	2		
14:24	FC1186-2A	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:28	FC1186-3A	2		
----------->	Last reportable sample/prep for job FC1186			
14:32	MP41609-MB1	5		
14:36	MP41609-B1	5		
14:39	FC957-1	5		(sample used for QC only; not part of login FC1186)
14:43	MP41609-D1	5		
14:47	MP41609-SD1	25		
14:51	MA19101-CCV13	1		
14:55	MA19101-CCV14	1		
14:58	MA19101-CCB7	1		
----------->	Last reportable CCB for job FC1186			
15:02	MP41609-S1	5		
15:06	MP41609-S2	5		
15:10	MP41609-PS1	5		
15:14	ZZZZZZ	5		
15:17	ZZZZZZ	5		
15:21	ZZZZZZ	5		
15:25	ZZZZZZ	5		
15:29	ZZZZZZ	5		
15:32	ZZZZZZ	5		
15:36	ZZZZZZ	5		
15:40	MA19101-CCV15	1		
15:44	MA19101-CCV16	1		
15:48	MA19101-CCB8	1		
15:51	ZZZZZZ	5		
15:55	ZZZZZZ	5		
15:59	ZZZZZZ	5		
16:03	ZZZZZZ	5		
16:07	ZZZZZZ	5		
16:10	ZZZZZZ	5		
16:14	ZZZZZZ	5		
16:18	ZZZZZZ	5		
16:22	ZZZZZZ	5		
16:25	ZZZZZZ	5		
16:29	MA19101-CCV17	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:33	MA19101-CCV18	1		
16:37	MA19101-CCB9	1		
16:41	ZZZZZZ	5		
16:44	ZZZZZZ	50		
16:48	ZZZZZZ	50		
16:52	ZZZZZZ	100		
16:56	MA19101-CCV19	1		
17:00	MA19101-CCV20	1		
17:03	MA19101-CCB10	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Element: Dilution	As	
09:28	MA19101-HSTD1	1	X	
09:32	MA19101-ICV1	1	X	
09:36	MA19101-ICB1	1	X	
09:40	MA19101-CRIA1	1	X	
09:44	MA19101-ICSA1	1	X	
09:47	MA19101-ICSAB1	1	X	
09:51	MA19101-CCV1	1		
09:55	MA19101-CCV2	1	X	
09:59	MA19101-CCB1	1	X	
10:03	MA19101-HSTD2	1		
10:07	ZZZZZZ	250		
10:10	FC674-2	500		(a)
10:14	MP41570-D1	500		
10:18	MP41570-SD1	2500		
10:22	MP41570-S1	500		
10:26	MP41570-S2	500		
10:29	MP41570-PS1	500		
10:33	ZZZZZZ	25		
10:37	ZZZZZZ	500		
10:41	ZZZZZZ	25		
10:45	MA19101-CCV3	1		
10:48	MA19101-CCV4	1	X	
10:52	MA19101-CCB2	1	X	
10:56	ZZZZZZ	25		
11:34	MA19101-CCV5	1		
11:38	MA19101-CCV6	1	X	
11:41	MA19101-CCB3	1	X	
12:23	MA19101-CCV7	1		
12:27	MA19101-CCV8	1	X	
12:30	MA19101-CCB4	1	X	
12:42	MP41607-MB1	2	X	
12:46	MP41607-B1	2	X	
12:49	FC1138-1	2	X	(a)
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Element: Dilution	As	
12:53	MP41607-D1	2	X	
12:57	MP41607-SD1	10	X	
13:01	MP41607-S1	2	X	
13:05	MP41607-S2	2	X	
13:08	MP41607-PS1	2		
13:12	MA19101-CCV9	1		
13:16	MA19101-CCV10	1	X	
13:20	MA19101-CCB5	1	X	
13:24	ZZZZZZ	2		
13:27	ZZZZZZ	2		
13:31	ZZZZZZ	2		
13:35	ZZZZZZ	2		
13:39	ZZZZZZ	2		
13:42	ZZZZZZ	2		
13:46	ZZZZZZ	2		
13:50	ZZZZZZ	2		
13:54	ZZZZZZ	2		
13:58	ZZZZZZ	2		
14:01	MA19101-CCV11	1		
14:05	MA19101-CCV12	1	X	
14:09	MA19101-CCB6	1	X	
14:13	ZZZZZZ	2		
14:17	ZZZZZZ	2		
14:20	FC1186-1A	2	X	
14:24	FC1186-2A	2	X	
14:28	FC1186-3A	2		
14:32	MP41609-MB1	5	X	
14:36	MP41609-B1	5	X	
14:39	FC957-1	5	X	(a)
14:43	MP41609-D1	5	X	
14:47	MP41609-SD1	25	X	
14:51	MA19101-CCV13	1		
14:55	MA19101-CCV14	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Element: Dilution	As
14:58	MA19101-CCB7	1	X
15:02	MP41609-S1	5	X
15:06	MP41609-S2	5	X
15:10	MP41609-PS1	5	
15:14	ZZZZZZ	5	
15:17	ZZZZZZ	5	
15:21	ZZZZZZ	5	
15:25	ZZZZZZ	5	
15:29	ZZZZZZ	5	
15:32	ZZZZZZ	5	
15:36	ZZZZZZ	5	
15:40	MA19101-CCV15	1	
15:44	MA19101-CCV16	1	X
15:48	MA19101-CCB8	1	X
15:51	ZZZZZZ	5	
15:55	ZZZZZZ	5	
15:59	ZZZZZZ	5	
16:03	ZZZZZZ	5	
16:07	ZZZZZZ	5	
16:10	ZZZZZZ	5	
16:14	ZZZZZZ	5	
16:18	ZZZZZZ	5	
16:22	ZZZZZZ	5	
16:25	ZZZZZZ	5	
16:29	MA19101-CCV17	1	
16:33	MA19101-CCV18	1	X
16:37	MA19101-CCB9	1	X
16:41	ZZZZZZ	5	
16:44	ZZZZZZ	50	
16:48	ZZZZZZ	50	
16:52	ZZZZZZ	100	
16:56	MA19101-CCV19	1	
17:00	MA19101-CCV20	1	X
		Element:	As

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Dilution	Element: As
17:03	MA19101-CCB10	1	X

(a) Sample used for QC only; not part of login FC1186.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
08:45	MA19101-STD1	100	100	100	100	100	100	100
08:49	MA19101-STD2	100.6	101.5	100.5	100.4	100.5	100	100.1
08:53	MA19101-STD3	97.5	101.2	99.7	99.8	100.3	100.9	100.5
08:57	MA19101-STD4	91.5	102	101.7	101.7	100.8	101.6	101.2
09:01	MA19101-STD5	97.5	102.9	102.1	101.3	100.8	101.5	99.2
09:05	MA19101-STD6	105.8	102.4	102	101.1	99.7	102.1	98.2
09:09	MA19101-STD7	90.3	98.9	98.5	97.8	96.8	99.8	94.9
09:21	MA19101-STD8	100	100	100	100	100	100	100
09:28	MA19101-HSTD1	88.3	96.4	97.3	97	96	99.2	96.4
09:32	MA19101-ICV1	101	98	98.5	98.9	97.9	100.9	98.9
09:36	MA19101-ICB1	91.8	98.7	98.8	99.7	99.6	101	100.8
09:40	MA19101-CRIA1	90.6	98.7	98.8	99.4	100	101.1	100.6
09:44	MA19101-ICSA1	80.3	91.2	91.6	89.5	87.9	93.3	87.9
09:47	MA19101-ICSAB1	81.7	92.1	92.8	91.2	88.2	94.8	88.8
09:51	MA19101-CCV1	85.1	95.8	97.3	97.9	97.4	100.4	100.1
09:55	MA19101-CCV2	89.4	96.3	98.3	98.2	96.3	100.1	98
09:59	MA19101-CCB1	100.4	99	98.5	99.9	98.1	99.4	99.9
10:03	MA19101-HSTD2	89.7	97.7	99.7	100.1	96.9	100.7	97.7
10:07	ZZZZZZ	86.8	101.4	102	102.5	100.6	100.9	101.6
10:10	FC674-2	95.7	103.4	103.4	104.3	101.8	100.6	99.3
10:14	MP41570-D1	98.2	103.7	103.7	104.8	101.3	100.4	98.5
10:18	MP41570-SD1	93.8	104.8	104.6	105.4	102.5	100.6	100.8
10:22	MP41570-S1	95.9	105.5	105.1	106.6	103.2	101.2	99.9
10:26	MP41570-S2	95.8	106.8	107.2	107.5	103.6	101.5	99.9
10:29	MP41570-PS1	No results reported for the elements associated with this internal standard.						
10:33	ZZZZZZ	93.9	105.7	105.2	105.4	101.4	100.8	98.7
10:37	ZZZZZZ	87	106.2	105.6	105.9	102.7	101.4	98.8
10:41	ZZZZZZ	99.7	106.7	105.5	105.8	101.9	101	97.7
10:45	MA19101-CCV3	93.6	105.4	105.1	105.1	100.6	101.3	99.3
10:48	MA19101-CCV4	98.2	103.6	103.1	102.8	99.3	100.4	97
10:52	MA19101-CCB2	99.3	104.9	102.8	103.5	101.3	99.8	98.8
10:56	ZZZZZZ	101.6	105.2	104.1	104.8	101.3	99.9	97.6
11:34	MA19101-CCV5	99.6	107.7	105.7	105.9	101	100.7	97.4

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
11:38	MA19101-CCV6	91.9	106.7	104.3	105.3	99.9	100.2	95.4
11:41	MA19101-CCB3	95.1	106.9	105.2	105.3	101.2	98.5	97.3
12:23	MA19101-CCV7	94	112.2	108.9	108.4	103	100.7	97
12:27	MA19101-CCV8	96.4	111	107.5	108.4	102	101	96
12:30	MA19101-CCB4	104.9	111.5	107.6	108.1	102.8	99.8	97.2
12:42	MP41607-MB1	99.7	108.2	104.3	104.3	97.9	96	92.6
12:46	MP41607-B1	101.4	109.9	105.8	105.7	97.6	97.2	90.6
12:49	FC1138-1	104.1	109.6	104.7	105.5	97.7	96.2	92.8
12:53	MP41607-D1	114.3	110.2	105.9	106.2	98.4	97.7	93.6
12:57	MP41607-SD1	103.2	112	109.3	109.5	103.4	100.5	98.3
13:01	MP41607-S1	100.3	111.6	107.4	107.5	98.4	97.6	90
13:05	MP41607-S2	91.4	109.9	105.5	105.8	97	96.7	89.9
13:08	MP41607-PS1	No results reported for the elements associated with this internal standard.						
13:12	MA19101-CCV9	103.6	112.1	109.1	109.1	102.8	101.3	97.5
13:16	MA19101-CCV10	93	111.4	108.7	108.5	101.3	101.5	95.6
13:20	MA19101-CCB5	102.5	111.8	109	109.2	103.7	100.5	97.8
13:24	ZZZZZZ	97.5	109.9	106.9	106.6	99.7	97.8	95.1
13:27	ZZZZZZ	112.8	109.8	106	106.1	99.1	96.9	93.8
13:31	ZZZZZZ	107.5	110.1	107.1	106.7	99.5	97.4	94.7
13:35	ZZZZZZ	106.5	110.3	106.6	106.2	98.7	96.6	93.6
13:39	ZZZZZZ	108.3	109.7	105.6	106.2	98.2	96.7	92.7
13:42	ZZZZZZ	107	110.5	106.1	106	99.3	96.9	93.8
13:46	ZZZZZZ	98.8	104.7	101.7	101.5	92.6	95.3	88.5
13:50	ZZZZZZ	99	106.5	102.9	103.5	95.4	96	90.2
13:54	ZZZZZZ	103.3	108.3	104.1	104.3	96.9	95.9	92.8
13:58	ZZZZZZ	97.7	106.4	102	102.3	93.7	95	88.9
14:01	MA19101-CCV11	101.9	113.7	110	110.6	103.9	102.5	98
14:05	MA19101-CCV12	95.1	112.7	109	109.3	101.3	101.7	95.8
14:09	MA19101-CCB6	106.2	111.1	107.4	108.3	102	99.9	97
14:13	ZZZZZZ	99.2	106.7	102.5	102.8	95.2	95.8	90.6
14:17	ZZZZZZ	107.9	107	103.6	103.5	96.1	95.5	92.3
14:20	FC1186-1A	103.6	107.4	103.1	103.6	96.3	96.7	91.4
14:24	FC1186-2A	107.2	107	104.1	103.5	95.5	95.4	89.8

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
14:28	FC1186-3A	106.2	107.3	103.9	104	96.4	96.1	91.5
14:32	MP41609-MB1	104.9	109.5	105.1	104.9	97.9	96.8	93.5
14:36	MP41609-B1	101.6	111.8	106.5	107.3	98.4	97.7	91.5
14:39	FC957-1	106.5	121.7	108.1	107.3	99.7	98	93.2
14:43	MP41609-D1	101.7	120.1	108.2	106.9	98.4	97.7	93
14:47	MP41609-SD1	106.4	116.2	109.8	110.4	103.2	100.2	97.1
14:51	MA19101-CCV13	104.8	115.2	111.4	111.4	103.4	102.3	97.1
14:55	MA19101-CCV14	106.3	113.8	109.9	109.4	102.9	101.9	95.3
14:58	MA19101-CCB7	100.6	116.2	111.9	111.8	105.6	101.4	97
15:02	MP41609-S1	97	116.9	105.6	104.6	97.2	98.4	90.8
15:06	MP41609-S2	102	115.8	105.3	104.6	96.8	98.4	91.2
15:10	MP41609-PS1	101.7	117.3	105.9	106.1	99.1	98.7	93.8
15:14	ZZZZZZ	110.8	110.2	105.5	104.3	97.4	98.4	92.6
15:17	ZZZZZZ	97.8	113.5	107.5	107.3	98.8	98.7	94
15:21	ZZZZZZ	105.6	116.6	109.9	109.6	101.7	99.1	96.1
15:25	ZZZZZZ	108	115.9	108.8	109.3	101.4	98.3	94.9
15:29	ZZZZZZ	108.3	116.7	110.1	109.9	101.8	99.3	94.6
15:32	ZZZZZZ	110.1	117.8	110.6	110.6	102.4	99.4	95.2
15:36	ZZZZZZ	107.3	116.6	110.2	108.6	101.2	99.7	94.6
15:40	MA19101-CCV15	95.1	120	114.4	115.1	105.6	103.6	97.1
15:44	MA19101-CCV16	104.9	116.2	111.6	111.1	103.1	102.4	95
15:48	MA19101-CCB8	102.2	116.5	111.3	111.8	104.7	101.3	96.7
15:51	ZZZZZZ	101.3	113.9	107.5	107.9	100.5	98.4	94.6
15:55	ZZZZZZ	102.5	112.2	105.2	105.7	98.2	97.8	92.6
15:59	ZZZZZZ	108.3	119.7	108.6	107.7	99.9	98.9	93.4
16:03	ZZZZZZ	112.8	119.1	108.2	106.6	99.1	98.1	92.9
16:07	ZZZZZZ	104	113.3	107.2	107.6	100.1	97.8	94.2
16:10	ZZZZZZ	108.9	120.3	108.5	107.4	99.6	98.2	92.7
16:14	ZZZZZZ	109.3	113.5	106.6	107	98.7	98.1	93.1
16:18	ZZZZZZ	110.9	119.5	107.1	107	99.2	97.9	92.8
16:22	ZZZZZZ	103.6	114.1	107	107.3	99.9	97.6	93.7
16:25	ZZZZZZ	110.8	118.9	105.8	104.7	97.2	96.8	91.9
16:29	MA19101-CCV17	102.3	112.2	109.3	108.8	101	101.3	95.8

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
Analyst: DM Run ID: MA19101
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
16:33	MA19101-CCV18	105.9	112	108.8	108.9	102.4	101.4	95.5
16:37	MA19101-CCB9	110.9	114.6	110.9	111	104.2	100.4	96.5
16:41	ZZZZZZ	112.1	113.3	105.4	106.2	98.4	97.4	93.9
16:44	ZZZZZZ	98.4	112.4	108.8	108.6	101.5	101.4	95.8
16:48	ZZZZZZ	102.9	112.6	108.1	108.1	101.7	100.3	95.2
16:52	ZZZZZZ	103.8	114.6	110.4	111.4	104.2	100.5	97
16:56	MA19101-CCV19	100.9	116.4	112.2	111.2	104.3	102.4	96.2
17:00	MA19101-CCV20	99.9	114.3	110.3	110.3	103.1	101.9	95.4
17:03	MA19101-CCB10	107.8	115.5	110.2	110.9	104.5	100.8	96.3

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA19101 Units: ug/l

Time: / Sample ID:			09:36 ICB1		09:59 CCB1		10:52 CCB2		11:41 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0407	<1.0	0.0242	<1.0	0.0276	<1.0	0.0240	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA19101 Units: ug/l

Time: / Sample ID:			12:30 CCB4		13:20 CCB5		14:09 CCB6		14:58 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr							
Antimony	1.0	.1	anr							
Arsenic	1.0	.1	0.0301	<1.0	0.0379	<1.0	0.0333	<1.0	0.0367	<1.0
Barium	1.0	.1	anr							
Beryllium	1.0	.1	anr							
Cadmium	1.0	.1	anr							
Calcium	100	7.2	anr							
Chromium	1.0	.1	anr							
Cobalt	1.0	.1	anr							
Copper	1.0	.1	anr							
Iron	100	7.9	anr							
Lead	1.0	.1	anr							
Magnesium	100	5.2	anr							
Manganese	1.0	.1	anr							
Molybdenum	1.0	.1								
Nickel	1.0	.1	anr							
Potassium	100	6.6	anr							
Selenium	1.0	.11	anr							
Silver	1.0	.1	anr							
Sodium	100	4.8	anr							
Strontium	1.0	.1								
Thallium	1.0	.1	anr							
Tin	1.0	.1								
Titanium	1.0	.3								
Vanadium	1.0	.1	anr							
Zinc	2.0	.29	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		09:32			09:51			09:55	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	96.2	96.2				100	95.1	95.1
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		10:45			10:48			11:34	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	94.2	94.2			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		11:38			12:23			12:27	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	95.6	95.6				100	94.1	94.1
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		13:12			13:16			14:01	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic				100	93.3	93.3			
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		14:05			14:51			14:55	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	93.2	93.2				100	93.1	93.1
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19101 Units: ug/l

Time:		09:28			10:03	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	200	195	97.5			
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver						
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA19101 Units: ug/l

Time:			09:40	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.972	97.2
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA121622M2.CSV Date Analyzed: 12/16/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA19101 Units: ug/l

Time:			09:44		09:47	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	93900	93.9	92700	92.7
Antimony			0.0634		0.0563	
Arsenic		20	0.126		19.2	96.0
Barium			0.525		0.536	
Beryllium			-0.00685		0.00427	
Cadmium		20	0.602		19.9	99.5
Calcium	100000	100000	95600	95.6	95600	95.6
Chromium		20	2.17*(a)		21.3	106.5
Cobalt		20	0.211		19.4	97.0
Copper		20	-1.19		17.2	86.0
Iron	100000	100000	97900	97.9	98100	98.1
Lead			0.0262		0.0242	
Magnesium	100000	100000	97200	97.2	96800	96.8
Manganese		20	0.850		19.9	99.5
Molybdenum	2000	2000	2040	102.0	2040	102.0
Nickel		20	0.486		19.5	97.5
Potassium	100000	100000	96700	96.7	96600	96.6
Selenium			0.173		0.0710	
Silver		20	0.0204		19.2	96.0
Sodium	100000	100000	98100	98.1	98200	98.2
Strontium			0.838		0.848	
Thallium			0.0479		0.0223	
Tin			0.0620		0.0366	
Titanium	2000	2000	1990	99.5	1990	99.5
Vanadium			0.108		0.0988	
Zinc		20	0.739		19.8	99.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	MA19106-STD1	1		STDA
09:09	MA19106-STD2	1		STDB
09:13	MA19106-STD3	1		STDC
09:18	MA19106-STD4	1		STDD
09:23	MA19106-STD5	1		STDE
09:26	MA19106-STD6	1		STDF
09:35	MA19106-STD7	1		STDG
09:40	MA19106-CRIA1	1		
09:46	MA19106-CRIA2	1		
09:53	MA19106-HSTD1	1		
10:00	MA19106-ICV1	1		
10:11	MA19106-ICB1	1		
10:16	MA19106-ICSA1	1		
10:26	MA19106-ICSAB1	1		
10:32	MA19106-CCV1	1		
10:39	MA19106-CCB1	1		
10:44	MP41605-MB1	1		
10:49	MP41605-B1	1		
10:54	FC1015-3	1		(sample used for QC only; not part of login FC1186)
10:58	MP41605-D1	1		
11:03	MP41605-SD1	5		
11:08	MP41605-PS1	1		
11:13	MP41605-S1	1		
11:17	MP41605-S2	1		
11:22	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:37	MA19106-CCV2	1		
11:44	MA19106-CCB2	1		
11:48	ZZZZZZ	1		
11:58	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:08	ZZZZZZ	1		
12:13	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:18	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:37	MA19106-CCV3	1		
13:30	MA19106-CCB3	1		
14:23	MA19106-CCV4	1		
14:29	MA19106-CCB4	1		
14:37	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:56	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:11	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:21	ZZZZZZ	2		
15:26	MA19106-CCV5	1		
15:30	MA19106-CCB5	1		
15:40	ZZZZZZ	5		
16:23	MA19106-CCV6	1		
16:27	MA19106-CCB6	1		
16:42	MP41606-MB1	1		
16:52	FC1010-1	1		(sample used for QC only; not part of login FC1186)
16:57	MP41606-D1	1		
17:02	MP41606-SD1	5		
17:06	MP41606-PS1	1		
17:11	MP41606-S1	1		
17:16	MP41606-S2	1		
17:20	MA19106-CCV7	1		
17:25	MA19106-CCB7	1		
17:30	ZZZZZZ	1		
17:35	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:40	ZZZZZZ	1		
17:44	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:54	ZZZZZZ	1		
17:59	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:09	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:19	MA19106-CCV8	1		
18:23	MA19106-CCB8	1		
18:28	ZZZZZZ	1		
18:33	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:43	ZZZZZZ	5		
18:48	ZZZZZZ	5		
18:53	FC1186-1	1		
18:58	FC1186-2	1		
19:02	FC1186-3	1		
---------->	Last reportable sample/prep for job FC1186			
19:07	ZZZZZZ	100		
19:12	ZZZZZZ	100		
19:17	MA19106-CCV9	1		
19:22	MA19106-CCB9	1		
---------->	Last reportable CCB for job FC1186			
19:27	MP41604-MB1	1		
19:32	MP41604-B1	1		
20:05	ZZZZZZ	5		
20:10	ZZZZZZ	5		
20:15	MA19106-CCV10	1		
20:19	MA19106-CCB10	1		
20:24	ZZZZZZ	5		
20:29	ZZZZZZ	5		
20:34	ZZZZZZ	5		
20:39	ZZZZZZ	5		
20:44	ZZZZZZ	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:49	ZZZZZZ	5		
20:54	ZZZZZZ	5		
20:59	ZZZZZZ	5		
21:03	ZZZZZZ	5		
21:08	MA19106-CCV11	1		
21:13	MA19106-CCB11	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
09:40	MA19106-CRIA1	1	X	X	X	X	
09:46	MA19106-CRIA2	1					
09:53	MA19106-HSTD1	1	X	X	X	X	
10:00	MA19106-ICV1	1	X	X	X	X	
10:11	MA19106-ICB1	1	X	X	X	X	
10:16	MA19106-ICSA1	1	X	X	X	X	
10:26	MA19106-ICSAB1	1	X	X	X	X	
10:32	MA19106-CCV1	1	X	X	X	X	
10:39	MA19106-CCB1	1	X	X	X	X	
10:44	MP41605-MB1	1			X		
10:49	MP41605-B1	1			X		
10:54	FC1015-3	1			X		(a)
10:58	MP41605-D1	1			X		
11:03	MP41605-SD1	5			X		
11:08	MP41605-PS1	1			X		
11:13	MP41605-S1	1			X		
11:17	MP41605-S2	1			X		
11:22	ZZZZZZ	1					
11:27	ZZZZZZ	1					
11:37	MA19106-CCV2	1	X	X	X	X	
11:44	MA19106-CCB2	1	X	X	X	X	
11:48	ZZZZZZ	1					
11:58	ZZZZZZ	1					
12:03	ZZZZZZ	1					
12:08	ZZZZZZ	1					
12:13	ZZZZZZ	1					
12:18	ZZZZZZ	1					
12:23	ZZZZZZ	1					
12:28	ZZZZZZ	1					
12:32	ZZZZZZ	1					
12:37	MA19106-CCV3	1	X	X	X	X	
13:30	MA19106-CCB3	1	X	X	X	X	
14:23	MA19106-CCV4	1	X	X	X	X	
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
14:29	MA19106-CCB4	1	X	X	X	X	
14:37	ZZZZZZ	1					
14:42	ZZZZZZ	1					
14:47	ZZZZZZ	1					
14:56	ZZZZZZ	1					
15:01	ZZZZZZ	1					
15:06	ZZZZZZ	1					
15:11	ZZZZZZ	1					
15:16	ZZZZZZ	1					
15:21	ZZZZZZ	2					
15:26	MA19106-CCV5	1	X	X	X	X	
15:30	MA19106-CCB5	1	X	X	X	X	
15:40	ZZZZZZ	5					
16:23	MA19106-CCV6	1	X	X	X	X	
16:27	MA19106-CCB6	1	X	X	X	X	
16:42	MP41606-MB1	1	X	X	X	X	
16:52	FC1010-1	1		X		X	(a)
16:57	MP41606-D1	1	X	X	X	X	
17:02	MP41606-SD1	5	X	X	X	X	
17:06	MP41606-PS1	1	X	X	X	X	
17:11	MP41606-S1	1	X	X	X	X	
17:16	MP41606-S2	1	X	X	X	X	
17:20	MA19106-CCV7	1	X	X	X	X	
17:25	MA19106-CCB7	1	X	X	X	X	
17:30	ZZZZZZ	1					
17:35	ZZZZZZ	1					
17:40	ZZZZZZ	1					
17:44	ZZZZZZ	1					
17:49	ZZZZZZ	1					
17:54	ZZZZZZ	1					
17:59	ZZZZZZ	1					
18:04	ZZZZZZ	1					
18:09	ZZZZZZ	1					
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n
18:14	ZZZZZZ	1				
18:19	MA19106-CCV8	1	X	X	X	X
18:23	MA19106-CCB8	1	X	X	X	X
18:28	ZZZZZZ	1				
18:33	ZZZZZZ	1				
18:38	ZZZZZZ	1				
18:43	ZZZZZZ	5				
18:48	ZZZZZZ	5				
18:53	FC1186-1	1	X		X	X
18:58	FC1186-2	1		X		X
19:02	FC1186-3	1		X		X
19:07	ZZZZZZ	100				
19:12	ZZZZZZ	100				
19:17	MA19106-CCV9	1	X	X	X	X
19:22	MA19106-CCB9	1	X	X	X	X
19:27	MP41604-MB1	1	X			
19:32	MP41604-B1	1	X			
20:05	ZZZZZZ	5				
20:10	ZZZZZZ	5				
20:15	MA19106-CCV10	1	X	X	X	X
20:19	MA19106-CCB10	1	X	X	X	X
20:24	ZZZZZZ	5				
20:29	ZZZZZZ	5				
20:34	ZZZZZZ	5				
20:39	ZZZZZZ	5				
20:44	ZZZZZZ	5				
20:49	ZZZZZZ	5				
20:54	ZZZZZZ	5				
20:59	ZZZZZZ	5				
21:03	ZZZZZZ	5				
21:08	MA19106-CCV11	1	X	X	X	X
21:13	MA19106-CCB11	1	X	X	X	X

(a) Sample used for QC only; not part of login FC1186.

Element:	B a	F e	M g	M n

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:05	MA19106-STD1	2210	21261	3101	957
09:09	MA19106-STD2	2233	20197	3020	921
09:13	MA19106-STD3	2288	20169	3002	927
09:18	MA19106-STD4	2221	20620	3075	912
09:23	MA19106-STD5	2171	20679	3068	879
09:26	MA19106-STD6	2198	19916	2995	844
09:35	MA19106-STD7	2084	19811	3023	785
09:40	MA19106-CRIA1	2147	20939	3071	923
09:46	MA19106-CRIA2	2264			
09:53	MA19106-HSTD1	2031	19739	3011	771
10:00	MA19106-ICV1	2115	19793	2989	822
10:11	MA19106-ICB1	2163 R	20757 R	3068 R	938 R
10:16	MA19106-ICSA1	1949	17464	2810	781
10:26	MA19106-ICSAB1	1905	17954	2869	728
10:32	MA19106-CCV1	2123	19466	2908	814
10:39	MA19106-CCB1	2253	19626	2881	929
10:44	MP41605-MB1	2166	20411	3005	920
10:49	MP41605-B1	2174	19641	2921	850
10:54	FC1015-3	2214	19275	2873	882
10:58	MP41605-D1	2174	19672	2891	888
11:03	MP41605-SD1	2209	20087	2933	920
11:08	MP41605-PS1	2242	19794	2993	882
11:13	MP41605-S1	2226	19013	2930	841
11:17	MP41605-S2	2163	20125	3080	851
11:22	ZZZZZZ	2188	20306	3041	892
11:27	ZZZZZZ	2233	19658	3011	884
11:37	MA19106-CCV2	2141	20015	3014	831
11:44	MA19106-CCB2	2309	20064	2966	944
11:48	ZZZZZZ	2178	19903	3072	889
11:58	ZZZZZZ	2258	19867	3110	899
12:03	ZZZZZZ	2312	19706	2841	917
12:08	ZZZZZZ	2265	19640	2954	901
12:13	ZZZZZZ	2246	20200	3053	913

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:18	ZZZZZZ	2261	19323	2957	873
12:23	ZZZZZZ	2344	19552	2933	923
12:28	ZZZZZZ	2309	19191	2906	889
12:32	ZZZZZZ	2301	19830	2997	914
12:37	MA19106-CCV3	2236	19672	2930	839
13:30	MA19106-CCB3	2316	19999	2892	951
14:23	MA19106-CCV4	2348	18760	2781	852
14:29	MA19106-CCB4	2479	19659	2853	976
14:37	ZZZZZZ	2355	19200	2865	880
14:42	ZZZZZZ	2383	19188	2852	902
14:47	ZZZZZZ	2385	18862	2801	899
14:56	ZZZZZZ	2389	18834	2822	906
15:01	ZZZZZZ	2408	18729	2845	914
15:06	ZZZZZZ	2426	19229	2864	933
15:11	ZZZZZZ	2402	18896	2803	912
15:16	ZZZZZZ	2436	19047	2833	930
15:21	ZZZZZZ	2321	18171	2786	831
15:26	MA19106-CCV5	2405	18743	2786	865
15:30	MA19106-CCB5	2535	19388	2860	983
15:40	ZZZZZZ	2496	19154	2832	938
16:23	MA19106-CCV6	2403	18618	2811	860
16:27	MA19106-CCB6	2524	19210	2817	975
16:42	MP41606-MB1	2581	19918	2976	988
16:52	FC1010-1	2473	18992	2890	907
16:57	MP41606-D1	2467	18903	2879	912
17:02	MP41606-SD1	2573	19733	2949	981
17:06	MP41606-PS1	2488	19041	2922	905
17:11	MP41606-S1	2459	18878	2872	873
17:16	MP41606-S2	2431	18655	2844	862
17:20	MA19106-CCV7	2469	19235	2865	883
17:25	MA19106-CCB7	2567	19612	2894	992
17:30	ZZZZZZ	2449	19259	2967	900
17:35	ZZZZZZ	2509	19417	2919	929

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:40	ZZZZZZ	2489	19416	2941	930
17:44	ZZZZZZ	2462	19119	2910	906
17:49	ZZZZZZ	2522	19554	2915	960
17:54	ZZZZZZ	2477	19101	2872	924
17:59	ZZZZZZ	2573	20051	2947	992
18:04	ZZZZZZ	2506	19423	2970	946
18:09	ZZZZZZ	2478	19009	2916	887
18:14	ZZZZZZ	2516	19349	3013	919
18:19	MA19106-CCV8	2461	19157	2887	882
18:23	MA19106-CCB8	2610	19946	2938	1006
18:28	ZZZZZZ	2504	19385	2919	929
18:33	ZZZZZZ	2446	18758	2856	888
18:38	ZZZZZZ	2552	19430	2916	976
18:43	ZZZZZZ	2411	18287	2867	848
18:48	ZZZZZZ	2426	18468	2877	857
18:53	FC1186-1	2493	19196	2901	934
18:58	FC1186-2	2537	19588	2927	951
19:02	FC1186-3	2516	19441	2997	961
19:07	ZZZZZZ	2525	20413	3039	993
19:12	ZZZZZZ	2541	20140	2965	991
19:17	MA19106-CCV9	2445	19377	2938	883
19:22	MA19106-CCB9	2564	19798	2930	996
19:27	MP41604-MB1	2530	19986	2987	989
19:32	MP41604-B1	2407	20302	3031	913
20:05	ZZZZZZ	2300	18668	2897	814
20:10	ZZZZZZ	2390	19023	2940	863
20:15	MA19106-CCV10	2334	20625	3091	874
20:19	MA19106-CCB10	2459	20629	3031	991
20:24	ZZZZZZ	2297	18911	2946	821
20:29	ZZZZZZ	2419	19586	2999	887
20:34	ZZZZZZ	2289	20344	3107	852
20:39	ZZZZZZ	2238	19288	2997	806
20:44	ZZZZZZ	2289	19083	2958	817

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19106
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:49	ZZZZZZ	2306	19071	2950	777
20:54	ZZZZZZ	2362	21703	3216	956
20:59	ZZZZZZ	2225	19446	2979	868
21:03	ZZZZZZ	2306	19227	2961	832
21:08	MA19106-CCV11	2313	19833	3010	866
21:13	MA19106-CCB11	2418	21008	3069	995

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: result < RL Run ID: MA19106 Units: ug/l

Time: / Sample ID:			10:11 ICB1		10:39 CCB1		11:44 CCB2		13:30 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	0.00	<200	0.300	<200	0.300	<200	-0.700	<200
Beryllium	5.0	.1	anr							
Boron	100	5								
Cadmium	4.0	.1	anr							
Calcium	5000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	-2.20	<300	-0.800	<300	-0.600	<300	-0.900	<300
Lead	20	1	anr							
Magnesium	5000	35	-12.6	<5000	6.60	<5000	-9.60	<5000	-8.60	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.100	<15	0.100	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100	anr							
Selenium	20	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5	anr							
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: result < RL Run ID: MA19106 Units: ug/l

Time: / Sample ID:			14:29 CCB4		15:30 CCB5		16:27 CCB6		17:25 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	20	1	anr							
Arsenic	10	1.3	anr							
Barium	200	.5	0.100	<200	0.300	<200	0.300	<200	0.00	<200
Beryllium	5.0	.1	anr							
Boron	100	5								
Cadmium	4.0	.1	anr							
Calcium	5000	50	anr							
Chromium	10	.5	anr							
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	15	-0.100	<300	-0.400	<300	1.80	<300	-0.900	<300
Lead	20	1	anr							
Magnesium	5000	35	-11.2	<5000	3.00	<5000	17.6	<5000	-3.20	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.100	<15	0.00	<15
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	100	anr							
Selenium	20	2	anr							
Silver	10	.5	anr							
Sodium	10000	250	anr							
Strontium	10	.25								
Thallium	10	1	anr							
Tin	50	.5	anr							
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: result < RL Run ID: MA19106 Units: ug/l

Time: / Sample ID:			18:23 CCB8		19:22 CCB9	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	14	anr			
Antimony	20	1	anr			
Arsenic	10	1.3	anr			
Barium	200	.5	0.400	<200	0.100	<200
Beryllium	5.0	.1	anr			
Boron	100	5				
Cadmium	4.0	.1	anr			
Calcium	5000	50	anr			
Chromium	10	.5	anr			
Cobalt	50	.2	anr			
Copper	25	1	anr			
Iron	300	15	1.90	<300	-1.30	<300
Lead	20	1	anr			
Magnesium	5000	35	-13.9	<5000	-3.50	<5000
Manganese	15	.25	0.00	<15	0.00	<15
Molybdenum	50	.3	anr			
Nickel	40	.4	anr			
Potassium	10000	100	anr			
Selenium	20	2	anr			
Silver	10	.5	anr			
Sodium	10000	250	anr			
Strontium	10	.25				
Thallium	10	1	anr			
Tin	50	.5	anr			
Titanium	10	.5				
Vanadium	50	.5	anr			
Zinc	20	3	anr			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA19106 Units: ug/l

Time:		10:00			10:32			11:37	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2080	104.0	2000	2030	101.5	2000	2080	104.0
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40400	101.0	40000	40400	101.0	40000	40800	102.0
Lead	anr								
Magnesium	40000	41600	104.0	40000	40200	100.5	40000	40400	101.0
Manganese	2000	2070	103.5	2000	2050	102.5	2000	2020	101.0
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA19106 Units: ug/l

Time:		12:37			14:23			15:26	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2080	104.0	2000	2010	100.5	2000	2050	102.5
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40900	102.3	40000	40000	100.0	40000	40700	101.8
Lead	anr								
Magnesium	40000	42400	106.0	40000	40000	100.0	40000	40300	100.8
Manganese	2000	2160	108.0	2000	2040	102.0	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA19106 Units: ug/l

Time:		16:23			17:20			18:19	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2060	103.0	2000	2080	104.0	2000	2100	105.0
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40800	102.0	40000	41200	103.0	40000	41500	103.8
Lead	anr								
Magnesium	40000	40300	100.8	40000	40600	101.5	40000	40800	102.0
Manganese	2000	2070	103.5	2000	2070	103.5	2000	2080	104.0
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA19106 Units: ug/l

Time:		19:17	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	2020	101.0
Beryllium	anr		
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	39900	99.8
Lead	anr		
Magnesium	40000	39800	99.5
Manganese	2000	2020	101.0
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA19106 Units: ug/l

Time:		09:53	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	4000	4110	102.8
Beryllium	anr		
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	80000	79500	99.4
Lead	anr		
Magnesium	80000	78600	98.3
Manganese	4000	3850	96.3
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA19106 Units: ug/l

Time:			09:40		09:46	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	anr			
Antimony	10	5.0				
Arsenic	20	10	anr			
Barium	400	200	191	95.5		
Beryllium	10	5.0	anr			
Boron	100	50				
Cadmium	10	5.0	anr			
Calcium	2000	1000	anr			
Chromium	20	10	anr			
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	293	97.7		
Lead	10	5.0	anr			
Magnesium	10000	5000	4620	92.4		
Manganese	30	15	14.0	93.3		
Molybdenum	100	50	anr			
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	anr			
Silver	20	10	anr			
Sodium	20000	10000	anr			
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50	anr			
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SB121622M1.ICP Date Analyzed: 12/16/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA19106 Units: ug/l

Time:			10:16		10:26	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	540000	108.0	529000	105.8
Antimony		1000	1.70		941	94.1
Arsenic		1000	0.00		936	93.6
Barium		500	-0.200		511	102.2
Beryllium		500	0.100		480	96.0
Boron		1000	0.300		16.4	1.6*
Cadmium		1000	0.00		949	94.9
Calcium	500000	500000	468000	93.6	463000	92.6
Chromium		500	0.200		483	96.6
Cobalt		500	-0.100		470	94.0
Copper		500	0.00		545	109.0
Iron	500000	200000	513000	102.6	193000	96.5
Lead		1000	0.00		956	95.6
Magnesium	500000	500000	521000	104.2	515000	103.0
Manganese		500	0.300		488	97.6
Molybdenum		1000	-0.900		885	88.5
Nickel		1000	0.00		909	90.9
Potassium			40.8		121	
Selenium		1000	-1.50		886	88.6
Silver		1000	-0.100		1060	106.0
Sodium			237		224	
Strontium		1000	0.100		928	92.8
Thallium		1000	0.00		843	84.3
Tin		1000	-0.500		844	84.4
Titanium		1000	0.00		1010	101.0
Vanadium		500	-0.400		510	102.0
Zinc		1000	0.300		927	92.7

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:50	MA19108-STD1	1		STDC
09:54	MA19108-STD2	1		STDD
09:58	MA19108-STD3	1		STDE
10:02	MA19108-STD4	1		STDF
10:06	MA19108-STD5	1		STDG
10:14	MA19108-STD6	1		STDA
10:19	MA19108-STD7	1		STDB
10:23	MA19108-STD8	1		STDB
10:33	MA19108-CRIA1	1		
10:40	MA19108-HSTD1	1		
10:47	MA19108-ICV1	1		
10:53	MA19108-ICB1	1		
10:57	MA19108-ICSA1	1		
11:07	MA19108-ICSAB1	1		
11:14	MA19108-CCV1	1		
11:20	MA19108-CCB1	1		
11:24	MP41606-B1	1		
---------->	Last reportable sample/prep for job FC1186			
11:29	FC1201-8	1		(sample used for QC only; not part of login FC1186)
11:34	MP41604-D1	1		
11:40	MP41604-S1	1		
11:45	MP41604-S2	1		
11:51	MP41604-PS1	1		
11:56	MP41604-SD1	5		
12:01	ZZZZZZ	5		
12:06	ZZZZZZ	10		
12:11	ZZZZZZ	10		
12:17	MA19108-CCV2	1		
12:22	MA19108-CCB2	1		
---------->	Last reportable CCB for job FC1186			
12:27	ZZZZZZ	10		
12:32	ZZZZZZ	20		
12:37	ZZZZZZ	10		
12:42	ZZZZZZ	10		
12:47	ZZZZZZ	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:52	ZZZZZZ	20		
12:58	ZZZZZZ	20		
13:03	ZZZZZZ	50		
13:08	ZZZZZZ	20		
13:13	ZZZZZZ	10		
13:18	MA19108-CCV3	1		
13:23	MA19108-CCB3	1		
13:28	FC1201-8	5		(sample used for QC only; not part of login FC1186)
13:33	MP41604-D1	5		
13:38	MP41604-S1	5		
13:43	MP41604-S2	5		
13:48	MP41604-PS1	5		
13:53	MP41604-SD1	25		
13:58	ZZZZZZ	2		
14:03	ZZZZZZ	5		
14:08	ZZZZZZ	5		
14:13	ZZZZZZ	1		
14:18	MA19108-CCV4	1		
14:23	MA19108-CCB4	1		
14:28	MP41603-B1	1		
14:33	ZZZZZZ	5		
14:44	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:54	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:09	MP41615-MB1	1		
15:14	MP41615-B1	1		
15:26	MA19108-CCV5	1		
15:34	MA19108-CCB5	1		
15:39	FC1199-5L	1		(sample used for QC only; not part of login FC1186)
15:44	MP41615-D1	1		
15:49	MP41615-SD1	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:54	MP41615-S1	1		
15:59	MP41615-S2	1		
16:04	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:19	ZZZZZZ	1		
16:24	ZZZZZZ	1		
16:29	MA19108-CCV6	1		
16:34	MA19108-CCB6	1		
16:39	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:49	ZZZZZZ	1		
16:54	ZZZZZZ	1		
16:59	ZZZZZZ	1		
17:04	ZZZZZZ	1		
17:09	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:24	ZZZZZZ	1		
17:30	MA19108-CCV7	1		
17:35	MA19108-CCB7	1		
17:40	ZZZZZZ	1		
17:45	ZZZZZZ	1		
17:50	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:00	MP41615-MB2	1		
18:05	MP41615-B2	1		
18:10	MP41615-MB3	1		
18:15	MP41615-B3	1		
18:20	MP41615-MB4	1		
18:25	MP41615-B4	1		
18:30	MA19108-CCV8	1		
18:35	MA19108-CCB8	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:40	MP41616-MB1	1		
18:45	MP41616-B1	1		
18:50	FC1199-19L	1		(sample used for QC only; not part of login FC1186)
18:55	MP41616-D1	1		
19:00	MP41616-SD1	5		
19:05	MP41616-S1	1		
19:10	MP41616-S2	1		
19:15	ZZZZZZ	1		
19:20	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:30	MA19108-CCV9	1		
19:35	MA19108-CCB9	1		
19:40	ZZZZZZ	1		
19:45	ZZZZZZ	1		
19:50	ZZZZZZ	1		
19:55	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:05	ZZZZZZ	1		
20:10	ZZZZZZ	1		
20:15	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:25	ZZZZZZ	1		
20:30	MA19108-CCV10	1		
20:35	MA19108-CCB10	1		
20:40	ZZZZZZ	1		
20:45	ZZZZZZ	1		
20:50	ZZZZZZ	1		
20:55	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:05	ZZZZZZ	1		
21:10	MP41616-MB2	1		
21:15	MP41616-B2	1		
21:20	MP41617-MB1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:25	MP41617-B1	1		
21:30	MA19108-CCV11	1		
21:35	MA19108-CCB11	1		
21:40	FC1199-23L	1		(sample used for QC only; not part of login FC1186)
21:45	MP41617-D1	1		
21:50	MP41617-SD1	5		
21:56	MP41617-S1	1		
22:00	MP41617-S2	1		
22:05	ZZZZZZ	1		
22:10	ZZZZZZ	1		
22:15	ZZZZZZ	1		
22:20	ZZZZZZ	1		
22:25	ZZZZZZ	1		
22:30	MA19108-CCV12	1		
22:35	MA19108-CCB12	1		
22:41	ZZZZZZ	1		
22:46	ZZZZZZ	1		
22:51	ZZZZZZ	1		
22:56	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:06	MP41617-MB2	1		
23:11	MP41617-B2	1		
23:16	MA19108-CCV13	1		
23:21	MA19108-CCB13	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
10:33	MA19108-CRIA1	1	X	X	X	X	
10:40	MA19108-HSTD1	1	X	X	X	X	
10:47	MA19108-ICV1	1	X	X	X	X	
10:53	MA19108-ICB1	1	X	X	X	X	
10:57	MA19108-ICSA1	1	X	X	X	X	
11:07	MA19108-ICSAB1	1	X	X	X	X	
11:14	MA19108-CCV1	1	X	X	X	X	
11:20	MA19108-CCB1	1	X	X	X	X	
11:24	MP41606-B1	1	X	X	X	X	
11:29	FC1201-8	1					(a)
11:34	MP41604-D1	1					
11:40	MP41604-S1	1					
11:45	MP41604-S2	1					
11:51	MP41604-PS1	1					
11:56	MP41604-SD1	5					
12:01	ZZZZZZ	5					
12:06	ZZZZZZ	10					
12:11	ZZZZZZ	10					
12:17	MA19108-CCV2	1	X	X	X	X	
12:22	MA19108-CCB2	1	X	X	X	X	
12:27	ZZZZZZ	10					
12:32	ZZZZZZ	20					
12:37	ZZZZZZ	10					
12:42	ZZZZZZ	10					
12:47	ZZZZZZ	10					
12:52	ZZZZZZ	20					
12:58	ZZZZZZ	20					
13:03	ZZZZZZ	50					
13:08	ZZZZZZ	20					
13:13	ZZZZZZ	10					
13:18	MA19108-CCV3	1	X	X	X	X	
13:23	MA19108-CCB3	1	X	X	X	X	
13:28	FC1201-8	5					(a)
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
13:33	MP41604-D1	5	X				
13:38	MP41604-S1	5	X				
13:43	MP41604-S2	5	X				
13:48	MP41604-PS1	5	X				
13:53	MP41604-SD1	25	X				
13:58	ZZZZZZ	2					
14:03	ZZZZZZ	5					
14:08	ZZZZZZ	5					
14:13	ZZZZZZ	1					
14:18	MA19108-CCV4	1	X	X	X	X	
14:23	MA19108-CCB4	1	X	X	X	X	
14:28	MP41603-B1	1	X	X	X	X	
14:33	ZZZZZZ	5					
14:44	ZZZZZZ	1					
14:49	ZZZZZZ	1					
14:54	ZZZZZZ	1					
14:59	ZZZZZZ	1					
15:04	ZZZZZZ	1					
15:09	MP41615-MB1	1	X	X	X	X	
15:14	MP41615-B1	1	X	X	X	X	
15:26	MA19108-CCV5	1	X	X	X	X	
15:34	MA19108-CCB5	1	X	X	X	X	
15:39	FC1199-5L	1	X	X	X	X	(a)
15:44	MP41615-D1	1	X	X	X	X	
15:49	MP41615-SD1	5	X	X	X	X	
15:54	MP41615-S1	1	X	X	X	X	
15:59	MP41615-S2	1	X	X	X	X	
16:04	ZZZZZZ	1					
16:09	ZZZZZZ	1					
16:14	ZZZZZZ	1					
16:19	ZZZZZZ	1					
16:24	ZZZZZZ	1					
16:29	MA19108-CCV6	1	X	X	X	X	
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
16:34	MA19108-CCB6	1	X	X	X	X	
16:39	ZZZZZZ	1					
16:44	ZZZZZZ	1					
16:49	ZZZZZZ	1					
16:54	ZZZZZZ	1					
16:59	ZZZZZZ	1					
17:04	ZZZZZZ	1					
17:09	ZZZZZZ	1					
17:14	ZZZZZZ	1					
17:19	ZZZZZZ	1					
17:24	ZZZZZZ	1					
17:30	MA19108-CCV7	1	X	X	X	X	
17:35	MA19108-CCB7	1	X	X	X	X	
17:40	ZZZZZZ	1					
17:45	ZZZZZZ	1					
17:50	ZZZZZZ	1					
17:55	ZZZZZZ	1					
18:00	MP41615-MB2	1	X	X	X	X	
18:05	MP41615-B2	1	X	X	X	X	
18:10	MP41615-MB3	1	X	X	X	X	
18:15	MP41615-B3	1	X	X	X	X	
18:20	MP41615-MB4	1	X	X	X	X	
18:25	MP41615-B4	1	X	X	X	X	
18:30	MA19108-CCV8	1	X	X	X	X	
18:35	MA19108-CCB8	1	X	X	X	X	
18:40	MP41616-MB1	1	X	X	X	X	
18:45	MP41616-B1	1	X	X	X	X	
18:50	FC1199-19L	1	X	X	X	X	(a)
18:55	MP41616-D1	1	X	X	X	X	
19:00	MP41616-SD1	5	X	X	X	X	
19:05	MP41616-S1	1	X	X	X	X	
19:10	MP41616-S2	1	X	X	X	X	
19:15	ZZZZZZ	1					
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n	
19:20	ZZZZZZ	1					
19:25	ZZZZZZ	1					
19:30	MA19108-CCV9	1	X	X	X	X	
19:35	MA19108-CCB9	1	X	X	X	X	
19:40	ZZZZZZ	1					
19:45	ZZZZZZ	1					
19:50	ZZZZZZ	1					
19:55	ZZZZZZ	1					
20:00	ZZZZZZ	1					
20:05	ZZZZZZ	1					
20:10	ZZZZZZ	1					
20:15	ZZZZZZ	1					
20:20	ZZZZZZ	1					
20:25	ZZZZZZ	1					
20:30	MA19108-CCV10	1	X	X	X	X	
20:35	MA19108-CCB10	1	X	X	X	X	
20:40	ZZZZZZ	1					
20:45	ZZZZZZ	1					
20:50	ZZZZZZ	1					
20:55	ZZZZZZ	1					
21:00	ZZZZZZ	1					
21:05	ZZZZZZ	1					
21:10	MP41616-MB2	1	X	X	X	X	
21:15	MP41616-B2	1	X	X	X	X	
21:20	MP41617-MB1	1	X	X	X	X	
21:25	MP41617-B1	1	X	X	X	X	
21:30	MA19108-CCV11	1	X	X	X	X	
21:35	MA19108-CCB11	1	X	X	X	X	
21:40	FC1199-23L	1	X	X	X	X	(a)
21:45	MP41617-D1	1	X	X	X	X	
21:50	MP41617-SD1	5	X	X	X	X	
21:56	MP41617-S1	1	X	X	X	X	
22:00	MP41617-S2	1	X	X	X	X	
		Element:	B a	F e	M g	M n	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Element: Dilution	B a	F e	M g	M n
22:05	ZZZZZZ	1				
22:10	ZZZZZZ	1				
22:15	ZZZZZZ	1				
22:20	ZZZZZZ	1				
22:25	ZZZZZZ	1				
22:30	MA19108-CCV12	1	X	X	X	X
22:35	MA19108-CCB12	1	X	X	X	X
22:41	ZZZZZZ	1				
22:46	ZZZZZZ	1				
22:51	ZZZZZZ	1				
22:56	ZZZZZZ	1				
23:01	ZZZZZZ	1				
23:06	MP41617-MB2	1	X	X	X	X
23:11	MP41617-B2	1	X	X	X	X
23:16	MA19108-CCV13	1	X	X	X	X
23:21	MA19108-CCB13	1	X	X	X	X

(a) Sample used for QC only; not part of login FC1186.

Element:	B a	F e	M g	M n

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:50	MA19108-STD1	7672	43783	6913	3024
09:54	MA19108-STD2	7561	43411	6918	2935
09:58	MA19108-STD3	7430	42859	6786	2839
10:02	MA19108-STD4	7182	41831	6664	2670
10:06	MA19108-STD5	6898	41056	6582	2468
10:14	MA19108-STD6	7649	44111	6830	3165
10:19	MA19108-STD7	7443	42785	6752	2995
10:23	MA19108-STD8	7488	43203	6814	2997
10:33	MA19108-CRIA1	7487	43120	6661	3010
10:40	MA19108-HSTD1	6877	40876	6746	2462
10:47	MA19108-ICV1	7219	41602	6840	2661
10:53	MA19108-ICB1	7475 R	43331 R	6783 R	3082 R
10:57	MA19108-ICSA1	6622	37408	6438	2111
11:07	MA19108-ICSAB1	6667	38184	6594	2231
11:14	MA19108-CCV1	7177	42146	6770	2668
11:20	MA19108-CCB1	7566	43793	6796	3141
11:24	MP41606-B1	7589	43620	6984	2877
11:29	FC1201-8	9990 !a	55855 !a	9481 !a	2615
11:34	MP41604-D1	10572 !a	59836 !a	9979 !a	2584
11:40	MP41604-S1	10152 !a	57043 !a	9796 !a	2466
11:45	MP41604-S2	15003 !a	83506 !a	15046 !a	2165
11:51	MP41604-PS1	10030 !a	55631 !a	9448 !a	2594
11:56	MP41604-SD1	8235	46267	7584	2956
12:01	ZZZZZZ	8012	45986	7541	2727
12:06	ZZZZZZ	7166	41236	6932	2660
12:11	ZZZZZZ	7568	43021	7263	2827
12:17	MA19108-CCV2	7199	41624	6884	2630
12:22	MA19108-CCB2	7620	43951	6961	3100
12:27	ZZZZZZ	7356	42038	7048	2720
12:32	ZZZZZZ	7462	42748	7037	2861
12:37	ZZZZZZ	7659	43527	7185	2896
12:42	ZZZZZZ	7210	41546	6984	2662
12:47	ZZZZZZ	7232	41786	6933	2677

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:52	ZZZZZZ	7527	42697	7049	2740
12:58	ZZZZZZ	7761	44735	7136	2982
13:03	ZZZZZZ	7517	42792	6892	2882
13:08	ZZZZZZ	7799	44383	7104	3094
13:13	ZZZZZZ	7315	42301	6975	2721
13:18	MA19108-CCV3	7200	41611	6846	2630
13:23	MA19108-CCB3	7552	43372	6818	3077
13:28	FC1201-8	8126	46224	7463	2910
13:33	MP41604-D1	8120	46315	7460	2899
13:38	MP41604-S1	8074	45861	7385	2819
13:43	MP41604-S2	9144	51221	8562	2686
13:48	MP41604-PS1	8050	45550	7353	2891
13:53	MP41604-SD1	7717	44131	6981	3038
13:58	ZZZZZZ	7739	43575	7233	2678
14:03	ZZZZZZ	7501	42439	7029	2681
14:08	ZZZZZZ	7502	43331	6998	2866
14:13	ZZZZZZ	7605	43391	6942	2920
14:18	MA19108-CCV4	7224	41805	6856	2639
14:23	MA19108-CCB4	7627	44193	6928	3120
14:28	MP41603-B1	7448	42200	6873	2778
14:33	ZZZZZZ	7264	41694	7054	2563
14:44	ZZZZZZ	8012	45263	7351	2975
14:49	ZZZZZZ	8083	46301	7340	3040
14:54	ZZZZZZ	7816	44657	7255	2924
14:59	ZZZZZZ	8152	46698	7595	2811
15:04	ZZZZZZ	7920	45899	7187	3119
15:09	MP41615-MB1	7785	44934	7014	3150
15:14	MP41615-B1	7554	43056	7001	2823
15:26	MA19108-CCV5	7294	42257	6964	2654
15:34	MA19108-CCB5	7720	44376	7013	3142
15:39	FC1199-5L	7751	44578	7101	3062
15:44	MP41615-D1	7750	44255	7015	3065
15:49	MP41615-SD1	7774	44900	7112	3137

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:54	MP41615-S1	7532	43173	7078	2802
15:59	MP41615-S2	7508	43352	7001	2823
16:04	ZZZZZZ	7697	44344	7040	3064
16:09	ZZZZZZ	7638	44780	7116	3019
16:14	ZZZZZZ	7754	44911	7123	3071
16:19	ZZZZZZ	7669	44322	7119	2947
16:24	ZZZZZZ	7772	45040	7197	3103
16:29	MA19108-CCV6	7336	42698	6994	2695
16:34	MA19108-CCB6	7714	44968	7109	3178
16:39	ZZZZZZ	7792	45359	7224	3084
16:44	ZZZZZZ	7808	45238	7172	3136
16:49	ZZZZZZ	7763	45226	7204	3094
16:54	ZZZZZZ	7780	45414	7256	3083
16:59	ZZZZZZ	7849	45512	7320	3056
17:04	ZZZZZZ	7800	44839	7260	2970
17:09	ZZZZZZ	7832	45580	7195	3080
17:14	ZZZZZZ	7845	45713	7225	3109
17:19	ZZZZZZ	7764	45258	7238	3114
17:24	ZZZZZZ	7777	45051	7132	3101
17:30	MA19108-CCV7	7182	42900	7019	2671
17:35	MA19108-CCB7	7725	45567	7039	3194
17:40	ZZZZZZ	7794	45286	7197	3119
17:45	ZZZZZZ	7794	45175	7213	3075
17:50	ZZZZZZ	7710	44955	7158	3119
17:55	ZZZZZZ	7644	44659	7102	3094
18:00	MP41615-MB2	7787	45814	7209	3189
18:05	MP41615-B2	7574	43867	7099	2852
18:10	MP41615-MB3	7834	45930	7278	3229
18:15	MP41615-B3	7536	43770	7059	2859
18:20	MP41615-MB4	7797	45717	7184	3194
18:25	MP41615-B4	7577	43919	7084	2854
18:30	MA19108-CCV8	7278	42716	6993	2703
18:35	MA19108-CCB8	7722	45275	7081	3190

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:40	MP41616-MB1	7786	45656	7131	3184
18:45	MP41616-B1	7563	44161	7149	2885
18:50	FC1199-19L	7749	45413	7205	3162
18:55	MP41616-D1	7756	45186	7165	3148
19:00	MP41616-SD1	7836	45555	7256	3202
19:05	MP41616-S1	7549	43886	7170	2853
19:10	MP41616-S2	7562	43756	7154	2855
19:15	ZZZZZZ	7798	45256	7233	3102
19:20	ZZZZZZ	7858	45810	7305	3095
19:25	ZZZZZZ	7844	45480	7197	3075
19:30	MA19108-CCV9	7318	42847	7019	2695
19:35	MA19108-CCB9	7776	45762	7177	3205
19:40	ZZZZZZ	8282	47852	7788	2881
19:45	ZZZZZZ	7915	45537	7282	2979
19:50	ZZZZZZ	7783	45488	7198	3125
19:55	ZZZZZZ	7726	45244	7110	3127
20:00	ZZZZZZ	7765	45426	7179	3116
20:05	ZZZZZZ	7801	45674	7211	3124
20:10	ZZZZZZ	7776	45436	7227	3081
20:15	ZZZZZZ	7644	44775	7131	3100
20:20	ZZZZZZ	7696	45334	7175	3144
20:25	ZZZZZZ	7763	45513	7095	3114
20:30	MA19108-CCV10	7308	42724	7029	2694
20:35	MA19108-CCB10	7730	45632	7136	3205
20:40	ZZZZZZ	7737	45465	7174	3104
20:45	ZZZZZZ	7766	45206	7101	3118
20:50	ZZZZZZ	7836	45646	7227	3070
20:55	ZZZZZZ	7753	45481	7137	3121
21:00	ZZZZZZ	7743	45259	7174	3089
21:05	ZZZZZZ	7690	44881	7162	3016
21:10	MP41616-MB2	7729	45949	7086	3196
21:15	MP41616-B2	7538	43737	7077	2867
21:20	MP41617-MB1	7779	45961	7228	3212

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
Analyst: LM Run ID: MA19108
Parameters: Ba,Fe,Mg,Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:25	MP41617-B1	7530	43966	6991	2888
21:30	MA19108-CCV11	7275	42478	6724	2693
21:35	MA19108-CCB11	7716	45637	7105	3197
21:40	FC1199-23L	7645	45203	7129	3117
21:45	MP41617-D1	7704	45030	7129	3125
21:50	MP41617-SD1	7735	45769	7150	3202
21:56	MP41617-S1	7421	44027	6982	2859
22:00	MP41617-S2	7426	44099	6950	2891
22:05	ZZZZZZ	7650	45804	7069	3122
22:10	ZZZZZZ	7563	45294	6955	3118
22:15	ZZZZZZ	7591	45406	6951	3133
22:20	ZZZZZZ	7647	45716	7002	3132
22:25	ZZZZZZ	7881	45729	7360	3024
22:30	MA19108-CCV12	7331	42539	7095	2703
22:35	MA19108-CCB12	7734	45708	7115	3224
22:41	ZZZZZZ	7701	45443	7111	3145
22:46	ZZZZZZ	7637	45374	7079	3102
22:51	ZZZZZZ	7650	45470	7020	3093
22:56	ZZZZZZ	7844	46046	7271	3175
23:01	ZZZZZZ	7814	45836	7320	3111
23:06	MP41617-MB2	7795	46515	7222	3244
23:11	MP41617-B2	7510	44522	7093	2914
23:16	MA19108-CCV13	7225	43206	6931	2734
23:21	MA19108-CCB13	7667	45555	6963	3228

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

(a) No sample results reported from this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
QC Limits: result < RL Run ID: MA19108 Units: ug/l

Time: / Sample ID: / Metal	RL	IDL	10:53 ICB1 raw	final	11:20 CCB1 raw	final	12:22 CCB2 raw	final
Aluminum	200	14	anr					
Antimony	20	1	anr					
Arsenic	10	1.3	anr					
Barium	200	.5	0.00	<200	0.100	<200	0.400	<200
Beryllium	5.0	.1	anr					
Boron	100	5						
Cadmium	4.0	.1	anr					
Calcium	5000	50	anr					
Chromium	10	.5	anr					
Cobalt	50	.2	anr					
Copper	25	1	anr					
Iron	300	15	-0.300	<300	2.70	<300	5.30	<300
Lead	20	1	anr					
Magnesium	5000	35	16.4	<5000	-1.80	<5000	12.6	<5000
Manganese	15	.25	0.00	<15	0.00	<15	0.00	<15
Molybdenum	50	.3	anr					
Nickel	40	.4	anr					
Potassium	10000	100	anr					
Selenium	20	2	anr					
Silver	10	.5	anr					
Sodium	10000	250	anr					
Strontium	10	.25	anr					
Thallium	10	1	anr					
Tin	50	.5	anr					
Titanium	10	.5						
Vanadium	50	.5	anr					
Zinc	20	3	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA19108 Units: ug/l

Time:		10:47			11:14			12:17	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2010	100.5	2000	2060	103.0	2000	2020	101.0
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39800	99.5	40000	40400	101.0	40000	39800	99.5
Lead	anr								
Magnesium	40000	39500	98.8	40000	40400	101.0	40000	38800	97.0
Manganese	2000	2060	103.0	2000	2070	103.5	2000	2070	103.5
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA19108 Units: ug/l

Time:		10:40	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	4000	3950	98.8
Beryllium	anr		
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	80000	78400	98.0
Lead	anr		
Magnesium	80000	78200	97.8
Manganese	4000	3960	99.0
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium	anr		
Thallium	anr		
Tin	anr		
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA19108 Units: ug/l

Time:			10:33	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	400	200	anr	
Antimony	10	5.0	anr	
Arsenic	20	10	anr	
Barium	400	200	186	93.0
Beryllium	10	5.0	anr	
Boron	100	50		
Cadmium	10	5.0	anr	
Calcium	2000	1000	anr	
Chromium	20	10	anr	
Cobalt	100	50	anr	
Copper	50	25	anr	
Iron	600	300	289	96.3
Lead	10	5.0	anr	
Magnesium	10000	5000	4820	96.4
Manganese	30	15	14.4	96.0
Molybdenum	100	50	anr	
Nickel	80	40	anr	
Potassium	20000	10000	anr	
Selenium	20	10	anr	
Silver	20	10	anr	
Sodium	20000	10000	anr	
Strontium	20	10	anr	
Thallium	20	10	anr	
Tin	100	50	anr	
Titanium	20	10		
Vanadium	100	50	anr	
Zinc	40	20	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: SA121922M1.ICP Date Analyzed: 12/19/22 Methods: SW846 6010C, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA19108 Units: ug/l

Time:			10:57		11:07	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	502000	100.4	509000	101.8
Antimony		1000	0.00		928	92.8
Arsenic		1000	-1.90		918	91.8
Barium		500	0.100		487	97.4
Beryllium		500	0.00		489	97.8
Boron		1000	0.300		-20.0	0.0*
Cadmium		1000	0.00		942	94.2
Calcium	500000	500000	451000	90.2	454000	90.8
Chromium		500	-0.200		483	96.6
Cobalt		500	-0.900		459	91.8
Copper		500	0.500		526	105.2
Iron	500000	200000	490000	98.0	188000	94.0
Lead		1000	0.100		1070	107.0
Magnesium	500000	500000	497000	99.4	512000	102.4
Manganese		500	0.00		502	100.4
Molybdenum		1000	-0.100		868	86.8
Nickel		1000	0.00		894	89.4
Potassium			145		39.4	
Selenium		1000	0.00		872	87.2
Silver		1000	-0.100		1090	109.0
Sodium			310		285	
Strontium		1000	-0.200		918	91.8
Thallium		1000	0.00		910	91.0
Tin		1000	0.700		847	84.7
Titanium		1000	0.800		1010	101.0
Vanadium		500	0.00		507	101.4
Zinc		1000	1.20		920	92.0

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:59	MA19123-STD1	1		STDA
11:03	MA19123-STD2	1		STDB
11:07	MA19123-STD3	1		STDC
11:11	MA19123-STD4	1		STDD
11:15	MA19123-STD5	1		STDE
11:19	MA19123-STD6	1		STDF
11:23	MA19123-STD7	1		STDG
11:27	MA19123-HSTD1	1		
11:31	MA19123-HSTD2	1		
11:35	MA19123-ICV1	1		
11:39	MA19123-ICB1	1		
11:42	MA19123-CRIA1	1		
11:46	MA19123-ICSA1	1		
11:50	MA19123-ICSAB1	1		
11:54	MA19123-CCV1	1		
11:58	MA19123-CCV2	1		
12:02	MA19123-CCB1	1		
12:09	ZZZZZZ	100		
12:17	FC1186-3A	100		
---------->	Last reportable sample/prep for job FC1186			
12:20	MP41610-MB1	5		
12:24	MP41610-B1	5		
12:28	FC993-8	5		(sample used for QC only; not part of login FC1186)
12:32	MP41610-D1	5		
12:36	MP41610-SD1	25		
12:39	MP41610-S1	5		
12:43	MA19123-CCV3	1		
12:47	MA19123-CCV4	1		
12:51	MA19123-CCB2	1		
---------->	Last reportable CCB for job FC1186			
12:55	MP41610-S2	5		
12:58	MP41610-PS1	5		
13:02	ZZZZZZ	5		
13:06	ZZZZZZ	5		
13:10	ZZZZZZ	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:14	ZZZZZZ	5		
13:17	ZZZZZZ	5		
13:21	ZZZZZZ	5		
13:25	ZZZZZZ	5		
13:29	ZZZZZZ	5		
13:33	MA19123-CCV5	1		
13:36	MA19123-CCV6	1		
13:40	MA19123-CCB3	1		
13:44	ZZZZZZ	5		
13:48	ZZZZZZ	5		
13:52	ZZZZZZ	5		
13:55	ZZZZZZ	5		
13:59	ZZZZZZ	5		
14:03	ZZZZZZ	5		
14:07	ZZZZZZ	5		
14:11	ZZZZZZ	5		
14:14	ZZZZZZ	5		
14:18	ZZZZZZ	5		
14:22	MA19123-CCV7	1		
14:26	MA19123-CCV8	1		
14:30	MA19123-CCB4	1		
14:33	ZZZZZZ	5		
14:41	MP41614-MB1	5		
14:45	MP41629-MB1	2		
14:48	MP41614-B1	5		
14:52	FC993-13	5		(sample used for QC only; not part of login FC1186)
14:56	MP41614-D1	5		
15:00	MP41614-SD1	25		
15:04	MP41614-S1	5		
15:07	MP41614-S2	5		
15:11	MA19123-CCV9	1		
15:15	MA19123-CCV10	1		
15:19	MA19123-CCB5	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:23	MP41614-PS1	5		
15:26	ZZZZZZ	5		
15:30	ZZZZZZ	5		
15:42	ZZZZZZ	5		
15:46	ZZZZZZ	5		
15:49	ZZZZZZ	5		
15:53	ZZZZZZ	5		
15:57	ZZZZZZ	5		
16:01	MA19123-CCV11	1		
16:05	MA19123-CCV12	1		
16:08	MA19123-CCB6	1		
16:12	ZZZZZZ	5		
16:16	ZZZZZZ	5		
16:20	ZZZZZZ	5		
16:23	ZZZZZZ	5		
16:27	ZZZZZZ	5		
16:31	ZZZZZZ	5		
16:35	ZZZZZZ	5		
16:38	ZZZZZZ	5		
16:42	ZZZZZZ	5		
16:46	MP41629-B1	2		
16:50	MA19123-CCV13	1		
16:54	MA19123-CCV14	1		
16:57	MA19123-CCB7	1		
17:01	FC1093-3	2		(sample used for QC only; not part of login FC1186)
17:05	MP41629-D1	2		
17:09	MP41629-SD1	10		
17:13	MP41629-S1	2		
17:16	MP41629-S2	2		
17:20	MP41629-PS1	2		
17:24	ZZZZZZ	2		
17:28	ZZZZZZ	2		
17:32	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:35	ZZZZZZ	2		
17:39	MA19123-CCV15	1		
17:43	MA19123-CCV16	1		
17:47	MA19123-CCB8	1		
17:50	ZZZZZZ	2		
17:54	ZZZZZZ	2		
17:58	ZZZZZZ	2		
18:02	ZZZZZZ	2		
18:06	ZZZZZZ	2		
18:09	ZZZZZZ	2		
18:13	ZZZZZZ	2		
18:17	ZZZZZZ	2		
18:21	ZZZZZZ	2		
18:25	ZZZZZZ	2		
18:28	MA19123-CCV17	1		
18:32	MA19123-CCV18	1		
18:36	MA19123-CCB9	1		
18:40	ZZZZZZ	2		
18:43	FC993-8	10		(sample used for QC only; not part of login FC1186)
18:47	MP41610-D1	10		
18:51	MP41610-SD1	50		
18:55	MP41610-S1	10		
18:59	MP41610-S2	10		
19:02	MP41610-PS1	10		
19:06	ZZZZZZ	50		
19:10	ZZZZZZ	10		
19:14	ZZZZZZ	10		
19:18	MA19123-CCV19	1		
19:21	MA19123-CCV20	1		
19:25	MA19123-CCB10	1		
19:29	ZZZZZZ	10		
19:33	ZZZZZZ	10		
19:37	ZZZZZZ	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:40	ZZZZZZ	10		
19:44	ZZZZZZ	10		
19:48	ZZZZZZ	10		
19:52	MA19123-CCV21	1		
19:55	MA19123-CCV22	1		
19:59	MA19123-CCB11	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Element: Dilution	As	
11:27	MA19123-HSTD1	1		
11:31	MA19123-HSTD2	1	X	
11:35	MA19123-ICV1	1	X	
11:39	MA19123-ICB1	1	X	
11:42	MA19123-CRIA1	1	X	
11:46	MA19123-ICSA1	1	X	
11:50	MA19123-ICSAB1	1	X	
11:54	MA19123-CCV1	1		
11:58	MA19123-CCV2	1	X	
12:02	MA19123-CCB1	1	X	
12:09	ZZZZZZ	100		
12:17	FC1186-3A	100	X	
12:20	MP41610-MB1	5	X	
12:24	MP41610-B1	5	X	
12:28	FC993-8	5	X	(a)
12:32	MP41610-D1	5	X	
12:36	MP41610-SD1	25	X	
12:39	MP41610-S1	5	X	
12:43	MA19123-CCV3	1		
12:47	MA19123-CCV4	1	X	
12:51	MA19123-CCB2	1	X	
12:55	MP41610-S2	5	X	
12:58	MP41610-PS1	5		
13:02	ZZZZZZ	5		
13:06	ZZZZZZ	5		
13:10	ZZZZZZ	5		
13:14	ZZZZZZ	5		
13:17	ZZZZZZ	5		
13:21	ZZZZZZ	5		
13:25	ZZZZZZ	5		
13:29	ZZZZZZ	5		
13:33	MA19123-CCV5	1		
13:36	MA19123-CCV6	1	X	
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Element: Dilution	As	
13:40	MA19123-CCB3	1	X	
13:44	ZZZZZZ	5		
13:48	ZZZZZZ	5		
13:52	ZZZZZZ	5		
13:55	ZZZZZZ	5		
13:59	ZZZZZZ	5		
14:03	ZZZZZZ	5		
14:07	ZZZZZZ	5		
14:11	ZZZZZZ	5		
14:14	ZZZZZZ	5		
14:18	ZZZZZZ	5		
14:22	MA19123-CCV7	1		
14:26	MA19123-CCV8	1	X	
14:30	MA19123-CCB4	1	X	
14:33	ZZZZZZ	5		
14:41	MP41614-MB1	5	X	
14:45	MP41629-MB1	2	X	
14:48	MP41614-B1	5	X	
14:52	FC993-13	5	X	(a)
14:56	MP41614-D1	5	X	
15:00	MP41614-SD1	25	X	
15:04	MP41614-S1	5	X	
15:07	MP41614-S2	5	X	
15:11	MA19123-CCV9	1		
15:15	MA19123-CCV10	1	X	
15:19	MA19123-CCB5	1	X	
15:23	MP41614-PS1	5		
15:26	ZZZZZZ	5		
15:30	ZZZZZZ	5		
15:42	ZZZZZZ	5		
15:46	ZZZZZZ	5		
15:49	ZZZZZZ	5		
15:53	ZZZZZZ	5		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Element: Dilution	As	
15:57	ZZZZZZ	5		
16:01	MA19123-CCV11	1		
16:05	MA19123-CCV12	1	X	
16:08	MA19123-CCB6	1	X	
16:12	ZZZZZZ	5		
16:16	ZZZZZZ	5		
16:20	ZZZZZZ	5		
16:23	ZZZZZZ	5		
16:27	ZZZZZZ	5		
16:31	ZZZZZZ	5		
16:35	ZZZZZZ	5		
16:38	ZZZZZZ	5		
16:42	ZZZZZZ	5		
16:46	MP41629-B1	2	X	
16:50	MA19123-CCV13	1		
16:54	MA19123-CCV14	1	X	
16:57	MA19123-CCB7	1	X	
17:01	FC1093-3	2	X	(a)
17:05	MP41629-D1	2	X	
17:09	MP41629-SD1	10	X	
17:13	MP41629-S1	2	X	
17:16	MP41629-S2	2	X	
17:20	MP41629-PS1	2		
17:24	ZZZZZZ	2		
17:28	ZZZZZZ	2		
17:32	ZZZZZZ	2		
17:35	ZZZZZZ	2		
17:39	MA19123-CCV15	1		
17:43	MA19123-CCV16	1	X	
17:47	MA19123-CCB8	1	X	
17:50	ZZZZZZ	2		
17:54	ZZZZZZ	2		
17:58	ZZZZZZ	2		
		Element:	As	

REPORTED ELEMENTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Element: Dilution	As
18:02	ZZZZZZ	2	
18:06	ZZZZZZ	2	
18:09	ZZZZZZ	2	
18:13	ZZZZZZ	2	
18:17	ZZZZZZ	2	
18:21	ZZZZZZ	2	
18:25	ZZZZZZ	2	
18:28	MA19123-CCV17	1	
18:32	MA19123-CCV18	1	X
18:36	MA19123-CCB9	1	X
18:40	ZZZZZZ	2	
18:43	FC993-8	10	(a)
18:47	MP41610-D1	10	
18:51	MP41610-SD1	50	
18:55	MP41610-S1	10	
18:59	MP41610-S2	10	
19:02	MP41610-PS1	10	
19:06	ZZZZZZ	50	
19:10	ZZZZZZ	10	
19:14	ZZZZZZ	10	
19:18	MA19123-CCV19	1	
19:21	MA19123-CCV20	1	X
19:25	MA19123-CCB10	1	X
19:29	ZZZZZZ	10	
19:33	ZZZZZZ	10	
19:37	ZZZZZZ	10	
19:40	ZZZZZZ	10	
19:44	ZZZZZZ	10	
19:48	ZZZZZZ	10	
19:52	MA19123-CCV21	1	
19:55	MA19123-CCV22	1	X
19:59	MA19123-CCB11	1	X

(a) Sample used for QC only; not part of login FC1186.

Element: As

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
10:59	MA19123-STD1	100	100	100	100	100	100	100
11:03	MA19123-STD2	100.8	100.9	100.6	100.7	99.5	100.3	100
11:07	MA19123-STD3	91.6	101.6	101.8	101.5	100.7	100.3	100
11:11	MA19123-STD4	109.5	102.4	101.9	101.7	100.8	101.5	100.8
11:15	MA19123-STD5	104.1	103.7	102.9	102.4	100.4	101	99.5
11:19	MA19123-STD6	99.2	101.6	101.4	100.7	99.1	100.3	97
11:23	MA19123-STD7	92.2	99.1	98.5	98.5	95.2	98.1	94
11:27	MA19123-HSTD1	97.1	99.7	99.3	98.6	95.6	98.2	95.2
11:31	MA19123-HSTD2	94.1	97.5	97.3	96.8	94	96.9	92.7
11:35	MA19123-ICV1	107.7	98.6	98.2	97.3	94.8	97.5	94.6
11:39	MA19123-ICB1	101.5	99.8	99.5	98.5	96.7	97.6	96.8
11:42	MA19123-CRIA1	104.9	101.5	100	99.5	98.4	98.4	97.8
11:46	MA19123-ICSA1	93.5	96.4	95	92	87.6	90.4	83.4
11:50	MA19123-ICSAB1	91.2	96.4	96.5	92.5	87.5	91.7	84.2
11:54	MA19123-CCV1	94.9	98.3	99.3	98	94.8	96.9	95.4
11:58	MA19123-CCV2	103.9	98.7	98.1	98	93.4	96.3	93
12:02	MA19123-CCB1	113.7	100	100	99.7	95	95.9	95.6
12:09	ZZZZZZ	107.7	100.5	100.4	99.5	96.5	96.5	97
12:17	FC1186-3A	111.4	102.7	102.5	101.4	97.7	96.6	96.4
12:20	MP41610-MB1	106.3	103.6	100.7	100.3	94.7	94.3	93.4
12:24	MP41610-B1	114.3	102.9	100.4	99.7	93	94.5	89.7
12:28	FC993-8	109.2	105.3	101	100.6	93.6	94.7	92.9
12:32	MP41610-D1	113.2	107.7	103.9	102.5	95.6	95.4	93.8
12:36	MP41610-SD1	118.8	107.4	105.2	103.9	97.6	97	95.3
12:39	MP41610-S1	116.1	105	100.2	100.1	91.6	93.4	88
12:43	MA19123-CCV3	106.4	105.4	103.8	102.6	95.7	96.2	93.1
12:47	MA19123-CCV4	116.4	103.3	101.5	101.4	95	95.8	91.7
12:51	MA19123-CCB2	113	105.1	102.9	102	97.1	95.7	94.1
12:55	MP41610-S2	113	103.4	99.2	98.4	90.4	92.1	87.1
12:58	MP41610-PS1	111.5	104.6	100.9	99.8	92.7	93.3	91
13:02	ZZZZZZ	124	105.6	100.7	100.4	93	92.6	90.7
13:06	ZZZZZZ	121.9	107.1	101.9	101.2	93.8	93.1	91.1
13:10	ZZZZZZ	119.1	106.7	101.8	100.8	92.8	91.8	90.5

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
13:14	ZZZZZZ	112.1	105.9	100	99.5	91.5	91.3	89.6
13:17	ZZZZZZ	114.4	105.6	99.5	98.7	90.5	91	88.7
13:21	ZZZZZZ	118	105	99.5	98.6	91.2	91.6	89.5
13:25	ZZZZZZ	118	105	98.2	97.3	90.3	91.3	89.3
13:29	ZZZZZZ	114.8	102.9	98.8	99.1	90.8	90.6	89
13:33	MA19123-CCV5	113.3	102.7	100.2	99.8	93.6	94.7	91
13:36	MA19123-CCV6	106.4	102.7	100	99.7	92.9	94.1	91.1
13:40	MA19123-CCB3	115.7	104.4	100.9	100.4	94.9	93.8	92.4
13:44	ZZZZZZ	115.4	105.2	101.2	99.7	92.6	92.3	90.5
13:48	ZZZZZZ	117.2	104	98.6	97.7	90.9	91.1	89.3
13:52	ZZZZZZ	120.2	104.9	98	97.1	90.5	90.3	88.2
13:55	ZZZZZZ	105.5	103.7	96.7	96.6	89.4	90	88.3
13:59	ZZZZZZ	119.3	102.8	96.5	95.3	89.2	89.8	88.5
14:03	ZZZZZZ	116.4	101.3	96.2	95.5	88.8	89.5	87.7
14:07	ZZZZZZ	116.3	101.5	95.9	95.3	88.8	89.6	87.4
14:11	ZZZZZZ	120.8	102	95.4	95.7	88.8	89.4	87.2
14:14	ZZZZZZ	119.6	102.1	95.9	94.9	88.4	88.1	86.5
14:18	ZZZZZZ	116.1	105.7	95.1	94.1	87.4	88.8	86.1
14:22	MA19123-CCV7	115	100.4	97.1	97.3	91.2	92.5	90.2
14:26	MA19123-CCV8	107.9	100	98.5	97.7	91.3	93	89
14:30	MA19123-CCB4	108.3	102	98.5	97.9	93	92.2	90.4
14:33	ZZZZZZ	113.8	101	96.4	96.2	89.3	88.9	87.7
14:41	MP41614-MB1	115.2	101.3	98	97.2	89	89	87
14:45	MP41629-MB1	113.7	101.3	96.5	96	88.5	88	86.2
14:48	MP41614-B1	110.6	100.7	97.6	96.5	88.9	90.2	85.2
14:52	FC993-13	118.3	109.3	96.4	95.6	88.3	89	86.4
14:56	MP41614-D1	127.5	108.5	94.6	93.7	86.8	88.3	85.3
15:00	MP41614-SD1	111.3	100.5	95.1	95.4	89.5	89.5	88.4
15:04	MP41614-S1	113.4	104.8	93	92.1	84.9	88.1	83.1
15:07	MP41614-S2	113.3	106.3	93.5	92	85	88.6	83.3
15:11	MA19123-CCV9	107.8	99.1	97.3	96.5	90.9	91.7	89.2
15:15	MA19123-CCV10	103.8	99.9	97.5	97.1	90.7	92.1	88.5
15:19	MA19123-CCB5	110.3	101.5	97.6	97.4	92.3	90.9	89.7

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
15:23	MP41614-PS1	107	109.5	96.4	95.8	88.7	89.4	86.8
15:26	ZZZZZZ	111	101.4	96	94.8	88.7	89.1	87.1
15:30	ZZZZZZ	116.9	102.4	96.1	94.8	87.6	88.1	85.6
15:42	ZZZZZZ	115.5	96.9	92.6	92	85.7	86.8	85.7
15:46	ZZZZZZ	120.2	101.9	95.5	93.5	87	87.9	85.2
15:49	ZZZZZZ	122.5	103.1	96.5	95.1	88.3	88.1	85.1
15:53	ZZZZZZ	119.6	103.8	96.9	96.4	89	88	86.1
15:57	ZZZZZZ	111.9	104.6	97.5	96.5	89.1	88.3	86
16:01	MA19123-CCV11	112.3	103.8	100.7	100.1	92.5	91.6	88.3
16:05	MA19123-CCV12	110	102.1	98.5	98.8	91	91.4	87.2
16:08	MA19123-CCB6	109.4	103.7	100.4	99.8	94.2	91.3	89
16:12	ZZZZZZ	110.9	107.5	96.3	95.4	88.1	87.7	84.8
16:16	ZZZZZZ	115.9	104	95.9	95.4	88.8	88.1	86
16:20	ZZZZZZ	116.9	101.3	95.2	93.5	87	87	84.9
16:23	ZZZZZZ	118	98.5	91.8	91.6	85.5	85.9	84
16:27	ZZZZZZ	115.5	99.6	91.2	90.5	83.7	84.9	82.6
16:31	ZZZZZZ	124.7	97.1	91.1	89.7	83.7	84.5	83
16:35	ZZZZZZ	120.3	95.5	90.1	89	83.2	84.2	82
16:38	ZZZZZZ	120.5	95.4	89.5	89.4	82.5	83.5	82.1
16:42	ZZZZZZ	117	94.7	88.8	88	82	83.5	81.9
16:46	MP41629-B1	111.8	95	90.9	90.8	83.8	86	81.3
16:50	MA19123-CCV13	107.8	98.9	95.7	94.9	89.3	90.1	86.4
16:54	MA19123-CCV14	112.1	96.9	94.2	93.7	87.8	89.3	85.3
16:57	MA19123-CCB7	104.3	98.9	94.8	93.7	89.4	88.4	86.6
17:01	FC1093-3	101.5	97.1	93.8	93.2	86	86.5	83.9
17:05	MP41629-D1	106.7	97.1	93.7	93.2	86.3	86.4	83.6
17:09	MP41629-SD1	112.4	100.1	96.2	95.4	89.6	88.5	86.2
17:13	MP41629-S1	101.9	96.5	93	92.1	84.6	86.1	80.7
17:16	MP41629-S2	106.6	94.9	91	90.7	83.2	85.6	80
17:20	MP41629-PS1	112.1	93.8	89.9	89.9	83.5	85.1	81.5
17:24	ZZZZZZ	112.5	94.6	91	90.2	84	85.3	82.5
17:28	ZZZZZZ	113.8	95.1	91	90.7	84.4	85.5	82.9
17:32	ZZZZZZ	115.3	96.4	92	91.5	85.3	84.6	82.2

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
17:35	ZZZZZZ	110.5	90.2	86.2	85.4	79.3	78.5	76.4
17:39	MA19123-CCV15	108.3	100.2	94.8	94.4	88.6	88.8	85.3
17:43	MA19123-CCV16	104.2	95.5	92.2	91.4	86.4	87.4	83.7
17:47	MA19123-CCB8	108.6	95.6	92.4	90.7	87	86.5	84.8
17:50	ZZZZZZ	107.2	94.4	89.8	89.8	83.7	83.8	82.5
17:54	ZZZZZZ	116.6	94	89.6	88.8	82.5	83.2	80.4
17:58	ZZZZZZ	119.2	95.8	90.5	89.9	83.5	83.6	80.7
18:02	ZZZZZZ	108.2	95.9	90.3	90.3	83.7	83.5	81.9
18:06	ZZZZZZ	120.1	95.9	91.6	90.6	84.1	83.3	81.2
18:09	ZZZZZZ	112	96.4	91.9	91.5	84.4	84	81.6
18:13	ZZZZZZ	114.6	96.6	91.8	90.6	84.4	83.5	81.8
18:17	ZZZZZZ	116.2	96.9	91.7	91.8	84.4	83.7	82.1
18:21	ZZZZZZ	115.7	96.8	91.6	91.3	84.4	84.1	81.7
18:25	ZZZZZZ	111.5	97	91.3	90.6	83.1	82.6	80.4
18:28	MA19123-CCV17	108	98.1	93.3	92.9	86.8	87.2	83.9
18:32	MA19123-CCV18	101.7	94.5	90.8	90.2	84.4	86.3	82.5
18:36	MA19123-CCB9	101.6	94.4	90.4	89.5	85.3	85	83.1
18:40	ZZZZZZ	116.6	94.2	88.2	87.9	82.3	82.6	81.7
18:43	FC993-8	114.1	95.8	89.8	89	84.2	84.3	83.1
18:47	MP41610-D1	117.2	95.9	90.2	89.6	84.4	84.8	83.3
18:51	MP41610-SD1	116.5	95.2	89.9	89.3	84.4	85	83.8
18:55	MP41610-S1	107.6	94.8	90.4	88.7	82.4	84.3	80.6
18:59	MP41610-S2	111.8	94.1	89.1	88.4	82.7	84	80.4
19:02	MP41610-PS1	No results reported for the elements associated with this internal standard.						
19:06	ZZZZZZ	112.2	94	90.2	88.9	84.1	84.3	83
19:10	ZZZZZZ	110.9	93.8	88.7	87.6	82.3	83.6	82.2
19:14	ZZZZZZ	115.2	94.1	88.6	88.1	82.9	83.3	82.1
19:18	MA19123-CCV19	104	94.3	91.3	90.5	84.8	86.1	83
19:21	MA19123-CCV20	106.1	93.2	90	89.4	83.2	85.4	81.1
19:25	MA19123-CCB10	113.1	94.5	89.3	89.8	84.9	84.5	82.7
19:29	ZZZZZZ	111.6	94.7	89	88.5	83.1	83.6	82.3
19:33	ZZZZZZ	118.1	94.8	88.7	88.7	83.1	83.7	81.5
19:37	ZZZZZZ	114.6	95.1	89.2	88.6	82.9	83.2	81.6

INTERNAL STANDARD SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
Analyst: JC Run ID: MA19123
Parameters: As

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7
19:40	ZZZZZZ	123	95.1	89.2	88.1	82.5	82.7	81.7
19:44	ZZZZZZ	112.1	94.9	88.8	88	82.7	82.7	81.4
19:48	ZZZZZZ	110.8	97.6	89.1	88.3	82.8	83.2	81.1
19:52	MA19123-CCV21	111.7	95.1	90.5	90.3	84.5	85.2	82.2
19:55	MA19123-CCV22	104.7	93.6	89.1	87.9	83.4	84.9	80.7
19:59	MA19123-CCB11	110.9	93.7	89.4	88.9	84.3	83.4	81.7

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: result < RL Run ID: MA19123 Units: ug/l

Time: / Sample ID:			11:39 ICB1		12:02 CCB1		12:51 CCB2	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4	anr					
Antimony	1.0	.1	anr					
Arsenic	1.0	.1	0.0210	<1.0	0.00951	<1.0	0.0258	<1.0
Barium	1.0	.1	anr					
Beryllium	1.0	.1	anr					
Cadmium	1.0	.1	anr					
Calcium	100	7.2	anr					
Chromium	1.0	.1	anr					
Cobalt	1.0	.1	anr					
Copper	1.0	.1	anr					
Iron	100	7.9	anr					
Lead	1.0	.1	anr					
Magnesium	100	5.2	anr					
Manganese	1.0	.1	anr					
Molybdenum	1.0	.1						
Nickel	1.0	.1	anr					
Potassium	100	6.6	anr					
Selenium	1.0	.11	anr					
Silver	1.0	.1	anr					
Sodium	100	4.8	anr					
Strontium	1.0	.1						
Thallium	1.0	.1	anr					
Tin	1.0	.1						
Titanium	1.0	.3						
Vanadium	1.0	.1	anr					
Zinc	2.0	.29	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19123 Units: ug/l

Time:		11:35			11:54			11:58	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	100	95.8	95.8				100	94.6	94.6
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19123 Units: ug/l

Time:		12:43			12:47	
Sample ID:	CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				100	94.5	94.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: 90 to 110 % Recovery Run ID: MA19123 Units: ug/l

Time:		11:27			11:31	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony						
Arsenic				200	195	97.5
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA19123 Units: ug/l

Time:			11:42	
Sample ID:	CRI	CRIA	CRIA1	
Metal	True	True	Results	% Rec
Aluminum	100	100	anr	
Antimony	1.0	1.0	anr	
Arsenic	1.0	1.0	0.992	99.2
Barium	1.0	1.0	anr	
Beryllium	1.0	1.0	anr	
Cadmium	1.0	1.0	anr	
Calcium	100	100	anr	
Chromium	1.0	1.0	anr	
Cobalt	1.0	1.0	anr	
Copper	1.0	1.0	anr	
Iron	100	100	anr	
Lead	1.0	1.0	anr	
Magnesium	100	100	anr	
Manganese	1.0	1.0	anr	
Molybdenum	1.0	1.0		
Nickel	1.0	1.0	anr	
Potassium	100	100	anr	
Selenium	1.0	1.0	anr	
Silver	1.0	1.0	anr	
Sodium	100	100	anr	
Strontium	1.0	1.0		
Thallium	1.0	1.0	anr	
Tin	1.0	1.0		
Titanium	1.0	1.0		
Vanadium	1.0	1.0	anr	
Zinc	1.0	1.0	anr	

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: XA122222M1.CSV Date Analyzed: 12/22/22 Methods: SW846 6020B
QC Limits: 80 to 120 % Recovery Run ID: MA19123 Units: ug/l

Time:			11:46		11:50	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	95800	95.8	94700	94.7
Antimony			0.0829		0.0860	
Arsenic		20	0.102		18.9	94.5
Barium			0.561		0.531	
Beryllium			0.0481		0.0252	
Cadmium		20	0.573		19.5	97.5
Calcium	100000	100000	95800	95.8	95100	95.1
Chromium		20	2.12*(a)		21.3	106.5
Cobalt		20	0.191		19.2	96.0
Copper		20	-0.921		17.6	88.0
Iron	100000	100000	97800	97.8	98800	98.8
Lead			0.0172		0.0165	
Magnesium	100000	100000	99000	99.0	99400	99.4
Manganese		20	0.746		19.5	97.5
Molybdenum	2000	2000	2070	103.5	2090	104.5
Nickel		20	0.453		19.2	96.0
Potassium	100000	100000	98700	98.7	101000	101.0
Selenium			0.183		0.140	
Silver		20	0.0146		18.8	94.0
Sodium	100000	100000	99900	99.9	101000	101.0
Strontium			0.848		0.855	
Thallium			0.0661		0.0555	
Tin			0.119		0.106	
Titanium	2000	2000	1990	99.5	1990	99.5
Vanadium			0.0689		0.0766	
Zinc		20	1.03		19.9	99.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 12/15/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	.5	1	0.30	<200
Beryllium	4.0	.1	.2		
Boron	100	5	10		
Cadmium	5.0	.1	.2		
Calcium	1000	50	50		
Chromium	10	.5	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	15	17	19.8	<300
Lead	5.0	1	1.1		
Magnesium	5000	35	35	-0.20	<5000
Manganese	15	.25	1	0.10	<15
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	100	200		
Selenium	10	2	2.9		
Silver	10	.5	.7		
Sodium	10000	250	500		
Strontium	10	.25	.5		
Thallium	10	1	1.4		
Tin	50	.5	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date:			12/15/22					12/15/22	
Metal	FC1010-1 Original	DUP	RPD	QC Limits	FC1010-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	4.6	4.7	2.2	0-20	4.6	1960	2000	97.8	80-120
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	52.2	54.5	4.3	0-20	52.2	25700	26000	98.6	80-120
Lead	anr								
Magnesium	6620	6520	1.5	0-20	6620	30800	25000	96.7	80-120
Manganese	42.0	41.2	1.9	0-20	42.0	523	500	96.2	80-120
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/15/22

Metal	FC1010-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	4.6	2020	2000	100.8	3.0	20
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	52.2	26600	26000	102.1	3.4	20
Lead	anr					
Magnesium	6620	32100	25000	101.9	4.1	20
Manganese	42.0	550	500	101.6	5.0	20
Molybdenum	anr					
Nickel	anr					
Potassium	anr					
Selenium	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Tin	anr					
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 12/15/22

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	2020	2000	101.0	80-120
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	26300	26000	101.2	80-120
Lead	anr			
Magnesium	25100	25000	100.4	80-120
Manganese	515	500	103.0	80-120
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/15/22

Metal	FC1010-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	4.60	5.80	26.1 (a)	0-10
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	52.2	0.00	100.0(a)	0-10
Lead	anr			
Magnesium	6620	6970	5.3	0-10
Manganese	42.0	44.0	4.8	0-10
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41606
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 12/15/22

Metal	Sample ml	Final ml	FC1010-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium	9.8	10	4.6	4.508	242.4	0.2	12.5	250	95.2	80-120
Beryllium										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	52.2	51.156	2930	0.2	150	3000	96.0	80-120
Lead										
Magnesium	9.8	10	6618	6485.64	11730	0.2	250	5000	104.9	80-120
Manganese	9.8	10	42	41.16	91.8	0.2	2.5	50	101.3	80-120
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP41606: FC1186-1, FC1186-2, FC1186-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41607
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 12/15/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22		
Antimony	2.0	.2	.2		
Arsenic	2.0	.2	.21	0.16	<2.0
Barium	2.0	.2	.2		
Beryllium	2.0	.2	.2		
Cadmium	2.0	.2	.2		
Calcium	200	14	36		
Chromium	2.0	.2	.2		
Cobalt	2.0	.2	.2		
Copper	2.0	.2	.2		
Iron	200	16	23		
Lead	2.0	.2	.2		
Magnesium	200	10	19		
Manganese	2.0	.2	.2		
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2		
Potassium	200	13	75		
Selenium	2.0	.22	.22		
Silver	2.0	.2	.2		
Sodium	200	9.6	24		
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2		
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24		
Zinc	4.0	.58	1.7		

Associated samples MP41607: FC1186-1A, FC1186-2A, FC1186-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41607
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date:			12/15/22					12/15/22	
Metal	FC1138-1 Original	DUP	RPD	QC Limits	FC1138-1 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	0.33	0.28	16.4	0-20	0.33	228	200	113.8	80-120
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt									
Copper									
Iron									
Lead	anr								
Magnesium									
Manganese	anr								
Molybdenum									
Nickel									
Potassium									
Selenium	anr								
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP41607: FC1186-1A, FC1186-2A, FC1186-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41607 Methods: SW846 6020B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/15/22

Metal	FC1138-1 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	0.33	224	200	111.8	1.8	20
Barium	anr					
Beryllium	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper						
Iron						
Lead	anr					
Magnesium						
Manganese	anr					
Molybdenum						
Nickel						
Potassium						
Selenium	anr					
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP41607: FC1186-1A, FC1186-2A, FC1186-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41607
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 12/15/22

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	222	200	111.0	80-120
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron				
Lead	anr			
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP41607: FC1186-1A, FC1186-2A, FC1186-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

QC Batch ID: MP41607
Matrix Type: AQUEOUS

Methods: SW846 6020B
Units: ug/l

Prep Date: 12/15/22

Metal	FC1138-1 Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.333	0.00	100.0(a)	0-10
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron				
Lead	anr			
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP41607: FC1186-1A, FC1186-2A, FC1186-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Instrument Detection Limits

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA19101,MA19123

Instrument Detection Limits

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE1 **Effective Date:** 09/01/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Boron	5
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA19108

Instrument Detection Limits

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 09/01/22

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	.5
Beryllium	.1
Boron	5
Cadmium	.1
Calcium	50
Chromium	.5
Cobalt	.2
Copper	1
Iron	15
Lead	1
Lithium	.5
Magnesium	35
Manganese	.25
Molybdenum	.3
Nickel	.4
Potassium	100
Selenium	2
Silicon	5
Silver	.5
Sodium	250
Strontium	.25
Sulfur	5
Thallium	1
Tin	.5
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA19106

Instrument Linear Ranges

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA19101,MA19123

Instrument Linear Ranges

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE1 **Effective Date:** 09/01/22

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Boron	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA19108

Instrument Linear Ranges

Job Number: FC1186
Account: SCMAW Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Instrument ID: SSTRACE2 **Effective Date:** 09/01/22

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Boron	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Lithium	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA19106

Metals Analysis

Raw Data

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 8:37
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.047	ug/l	13.81	4,350.50	1.958E-02	Pulse	0.50	3
As			1	-0.001	ug/l	-211.66	69.67	3.135E-04	Pulse	1.00	3
Mo			1	-0.038	ug/l	-1.72	56.67	2.991E-05	Pulse	0.50	3
Pb			1	0.002	ug/l	99.42	1,692.75	5.330E-04	Pulse	1.00	3
Be			1	-0.034	ug/l	-41.99	1.00	4.502E-06	Pulse	2.00	3
Ag			1	-0.002	ug/l	-53.90	85.33	4.507E-05	Pulse	0.50	3
Ba			1	0.009	ug/l	45.33	41.33	2.180E-05	Pulse	0.50	3
Tl			1	-0.014	ug/l	-1.66	73.33	2.307E-05	Pulse	0.50	3
Sn			1	-0.022	ug/l	-60.44	445.56	2.354E-04	Pulse	0.30	3
Sr			1	0.028	ug/l	9.20	734.02	3.872E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	-3291.34	811.35	2.554E-04	Pulse	0.50	3
Ca			1	32.968	ug/l	1.43	2,258.81	1.016E-02	Pulse	0.50	3
Ti			1	-0.006	ug/l	-129.16	7.33	3.300E-05	Pulse	0.50	3
Na			1	3.802	ug/l	1.76	41,281.61	1.858E-01	Pulse	1.00	3
Mg			1	1.717	ug/l	2.94	3,002.23	1.351E-02	Pulse	1.00	3
K			1	4.790	ug/l	10.15	85,906.39	3.866E-01	Pulse	1.00	3
V			1	0.018	ug/l	40.17	1,337.39	6.018E-03	Pulse	0.50	3
Mn			1	0.107	ug/l	2.49	1,133.37	5.100E-03	Pulse	0.50	3
Fe			1	0.073	ug/l	35.57	16,329.55	7.348E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-46.07	84.00	3.780E-04	Pulse	0.50	3
Ni			1	0.034	ug/l	19.59	312.00	1.404E-03	Pulse	0.50	3
Cu			1	1.656	ug/l	2.40	56,006.73	2.520E-01	Pulse	0.50	3
Zn			1	0.985	ug/l	4.98	4,494.53	1.348E-02	Pulse	1.00	3
Cd			1	-0.003	ug/l	-0.37	4.00	2.111E-06	Pulse	0.50	3
Al			1	1.415	ug/l	4.83	1,110.04	4.995E-03	Pulse	1.00	3
Se			1	-0.072	ug/l	-68.48	46.55	1.396E-04	Pulse	3.00	3
Sb			1	-0.020	ug/l	-3.15	65.00	3.429E-05	Pulse	1.00	3
Se			1	-0.111	ug/l	-80.74	40.11	1.203E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,176,558.25	1.20	100.0	Pulse	0.50	3
1	Sc		381,432.61	0.47	100.0	Pulse	0.30	3
1	Ge		222,226.72	0.07	100.0	Pulse	0.30	3
1	In		1,895,109.64	0.96	100.0	Pulse	0.30	3
1	Tb		4,596,095.00	1.03	100.0	Pulse	0.50	3
1	Lu		3,276,085.33	0.90	100.0	Pulse	0.50	3
1	Ge		333,402.63	0.37	100.0	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,188.93	14.10	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 8:41
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.046	ug/l	37.65	4,341.17	1.952E-02	Pulse	0.50	3
As			1	-0.005	ug/l	-70.77	63.00	2.832E-04	Pulse	1.00	3
Mo			1	-0.037	ug/l	-4.02	60.67	3.215E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	-245.84	1,637.08	5.165E-04	Pulse	1.00	3
Be			1	-0.045	ug/l	-21.07	0.33	1.495E-06	Pulse	2.00	3
Ag			1	-0.002	ug/l	-49.66	93.33	4.949E-05	Pulse	0.50	3
Ba			1	0.010	ug/l	35.77	45.33	2.405E-05	Pulse	0.50	3
Tl			1	-0.014	ug/l	-1.55	74.67	2.357E-05	Pulse	0.50	3
Sn			1	-0.026	ug/l	-12.02	415.57	2.203E-04	Pulse	0.30	3
Sr			1	0.032	ug/l	12.84	767.35	4.068E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	-1643.14	805.36	2.542E-04	Pulse	0.50	3
Ca			1	29.244	ug/l	4.92	2,058.12	9.255E-03	Pulse	0.50	3
Ti			1	0.027	ug/l	37.55	20.00	8.985E-05	Pulse	0.50	3
Na			1	3.839	ug/l	9.36	41,385.48	1.861E-01	Pulse	1.00	3
Mg			1	1.461	ug/l	7.36	2,738.19	1.231E-02	Pulse	1.00	3
K			1	4.631	ug/l	24.39	85,778.89	3.858E-01	Pulse	1.00	3
V			1	0.018	ug/l	12.66	1,341.38	6.033E-03	Pulse	0.50	3
Mn			1	0.092	ug/l	6.28	1,022.03	4.596E-03	Pulse	0.50	3
Fe			1	-0.021	ug/l	-121.16	15,266.69	6.866E-02	Pulse	0.50	3
Co			1	-0.002	ug/l	-40.11	77.33	3.474E-04	Pulse	0.50	3
Ni			1	0.026	ug/l	17.34	263.33	1.184E-03	Pulse	0.50	3
Cu			1	1.260	ug/l	2.40	50,152.82	2.255E-01	Pulse	0.50	3
Zn			1	0.981	ug/l	0.83	4,423.84	1.346E-02	Pulse	1.00	3
Cd			1	-0.003	ug/l	-62.80	6.00	3.176E-06	Pulse	0.50	3
Al			1	1.105	ug/l	1.89	970.36	4.363E-03	Pulse	1.00	3
Se			1	0.024	ug/l	100.21	57.89	1.761E-04	Pulse	3.00	3
Sb			1	-0.021	ug/l	-2.54	55.33	2.932E-05	Pulse	1.00	3
Se			1	-0.147	ug/l	-52.30	37.44	1.139E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,169,942.92	0.65	100.0	Pulse	0.50	3
1	Sc		381,452.79	0.45	100.0	Pulse	0.30	3
1	Ge		222,380.41	0.78	100.0	Pulse	0.30	3
1	In		1,886,487.91	0.64	100.0	Pulse	0.30	3
1	Tb		4,606,980.67	1.04	100.0	Pulse	0.50	3
1	Lu		3,280,887.75	0.81	100.0	Pulse	0.50	3
1	Ge		328,740.19	0.52	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,157.82	11.02	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 8:45
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.050	ug/l	3.87	4,440.52	1.976E-02	Pulse	0.50	3
As			1	-0.009	ug/l	-29.68	56.33	2.506E-04	Pulse	1.00	3
Mo			1	-0.036	ug/l	-3.24	73.33	3.848E-05	Pulse	0.50	3
Pb			1	0.001	ug/l	129.51	1,680.09	5.269E-04	Pulse	1.00	3
Be			1	-0.045	ug/l	-20.59	0.33	1.465E-06	Pulse	2.00	3
Ag			1	-0.003	ug/l	-45.01	78.67	4.126E-05	Pulse	0.50	3
Ba			1	0.006	ug/l	29.38	34.00	1.784E-05	Pulse	0.50	3
Tl			1	-0.015	ug/l	-1.90	64.67	2.030E-05	Pulse	0.50	3
Sn			1	-0.030	ug/l	-30.64	395.56	2.077E-04	Pulse	0.30	3
Sr			1	0.034	ug/l	11.53	793.35	4.165E-04	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-432.07	798.02	2.501E-04	Pulse	0.50	3
Ca			1	31.286	ug/l	5.19	2,192.13	9.754E-03	Pulse	0.50	3
Ti			1	0.008	ug/l	109.03	12.67	5.639E-05	Pulse	0.50	3
Na			1	3.698	ug/l	9.81	41,525.09	1.848E-01	Pulse	1.00	3
Mg			1	1.596	ug/l	1.70	2,909.22	1.294E-02	Pulse	1.00	3
K			1	5.189	ug/l	23.55	87,331.27	3.886E-01	Pulse	1.00	3
V			1	0.024	ug/l	23.97	1,421.39	6.326E-03	Pulse	0.50	3
Mn			1	0.094	ug/l	6.70	1,046.03	4.653E-03	Pulse	0.50	3
Fe			1	-0.024	ug/l	-74.92	15,404.81	6.854E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-84.08	94.67	4.215E-04	Pulse	0.50	3
Ni			1	0.024	ug/l	14.54	253.33	1.127E-03	Pulse	0.50	3
Cu			1	0.992	ug/l	6.34	46,658.09	2.076E-01	Pulse	0.50	3
Zn			1	0.998	ug/l	3.32	4,555.21	1.358E-02	Pulse	1.00	3
Cd			1	-0.004	ug/l	-36.90	3.33	1.743E-06	Pulse	0.50	3
Al			1	1.246	ug/l	4.73	1,045.03	4.650E-03	Pulse	1.00	3
Se			1	-0.031	ug/l	-98.77	52.11	1.554E-04	Pulse	3.00	3
Sb			1	-0.019	ug/l	-2.23	69.00	3.622E-05	Pulse	1.00	3
Se			1	-0.175	ug/l	-16.20	36.56	1.089E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,189,164.50	1.21	100.0	Pulse	0.50	3
1	Sc		383,805.94	0.18	100.0	Pulse	0.30	3
1	Ge		224,760.84	1.09	100.0	Pulse	0.30	3
1	In		1,905,196.73	0.91	100.0	Pulse	0.30	3
1	Tb		4,627,001.50	1.27	100.0	Pulse	0.50	3
1	Lu		3,332,764.17	1.31	100.0	Pulse	0.50	3
1	Ge		335,520.14	0.99	100.0	Pulse	0.30	3
1	Te		2.67	86.60	100.0	Pulse	0.50	3
1	Li		1,217.82	7.71	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 8:49
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.488	ug/l	3.24	10,598.92	4.694E-02	Pulse	0.50	3
As			1	0.446	ug/l	1.87	825.35	3.655E-03	Pulse	1.00	3
Mo			1	0.413	ug/l	1.56	3,138.94	1.640E-03	Pulse	0.50	3
Pb			1	0.425	ug/l	1.39	12,730.07	3.987E-03	Pulse	1.00	3
Be			1	0.397	ug/l	14.06	27.83	1.233E-04	Pulse	2.00	3
Ag			1	0.471	ug/l	1.39	9,691.90	5.064E-03	Pulse	0.50	3
Ba			1	0.425	ug/l	0.99	1,265.38	6.612E-04	Pulse	0.50	3
Tl			1	0.442	ug/l	2.52	16,746.87	5.246E-03	Pulse	0.50	3
Sn			1	0.407	ug/l	4.41	3,412.56	1.783E-03	Pulse	0.30	3
Sr			1	0.446	ug/l	3.29	4,548.56	2.377E-03	Pulse	0.50	3
[Pb]			1	0.423	ug/l	2.09	6,052.43	1.895E-03	Pulse	0.50	3
Ca			1	48.668	ug/l	4.09	3,160.94	1.400E-02	Pulse	0.50	3
Ti			1	0.420	ug/l	6.59	169.33	7.498E-04	Pulse	0.50	3
Na			1	45.048	ug/l	0.75	130,356.75	5.773E-01	Pulse	1.00	3
Mg			1	46.719	ug/l	0.68	50,636.67	2.242E-01	Pulse	1.00	3
K			1	53.118	ug/l	0.73	142,816.40	6.324E-01	Pulse	1.00	3
V			1	0.473	ug/l	1.81	6,517.78	2.886E-02	Pulse	0.50	3
Mn			1	0.482	ug/l	2.37	4,167.79	1.846E-02	Pulse	0.50	3
Fe			1	46.982	ug/l	0.42	555,289.73	2.459E+00	Pulse	0.50	3
Co			1	0.454	ug/l	2.50	9,873.21	4.372E-02	Pulse	0.50	3
Ni			1	0.476	ug/l	2.50	2,846.22	1.260E-02	Pulse	0.50	3
Cu			1	0.865	ug/l	3.68	44,963.48	1.991E-01	Pulse	0.50	3
Zn			1	0.001	ug/l	1245.14	2,123.12	6.300E-03	Pulse	1.00	3
Cd			1	0.448	ug/l	6.26	1,422.73	7.435E-04	Pulse	0.50	3
Al			1	45.087	ug/l	1.72	21,192.22	9.384E-02	Pulse	1.00	3
Se			1	0.390	ug/l	13.88	105.78	3.139E-04	Pulse	3.00	3
Sb			1	0.419	ug/l	2.02	4,067.12	2.125E-03	Pulse	1.00	3
Se			1	0.249	ug/l	18.76	62.00	1.840E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,193,036.92	1.02	100.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		389,454.38	0.51	101.5	Pulse	0.30	3
1	Ge		225,825.48	0.31	100.5	Pulse	0.30	3
1	In		1,913,829.44	0.24	100.5	Pulse	0.30	3
1	Tb		4,626,791.00	0.85	100.0	Pulse	0.50	3
1	Lu		3,322,038.08	0.43	99.7	Pulse	0.50	3
1	Ge		336,975.25	0.20	100.4	Pulse	0.30	3
1	Te		0.67	173.21	25.0	Pulse	0.50	3
1	Li		1,225.60	5.03	100.6	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 8:53
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.012	ug/l	1.69	17,790.13	7.941E-02	Pulse	0.50	3
As			1	0.993	ug/l	3.51	1,736.08	7.750E-03	Pulse	1.00	3
Mo			1	0.895	ug/l	1.77	6,427.12	3.364E-03	Pulse	0.50	3
Pb			1	0.920	ug/l	1.58	25,714.94	8.023E-03	Pulse	1.00	3
Be			1	0.979	ug/l	25.20	63.67	2.842E-04	Pulse	2.00	3
Ag			1	0.992	ug/l	0.34	20,235.04	1.059E-02	Pulse	0.50	3
Ba			1	0.951	ug/l	3.13	2,809.56	1.470E-03	Pulse	0.50	3
Tl			1	0.938	ug/l	1.49	35,058.47	1.094E-02	Pulse	0.50	3
Sn			1	0.936	ug/l	2.03	7,050.29	3.690E-03	Pulse	0.30	3
Sr			1	0.943	ug/l	2.41	9,068.21	4.746E-03	Pulse	0.50	3
[Pb]			1	0.921	ug/l	2.24	12,263.09	3.825E-03	Pulse	0.50	3
Ca			1	96.590	ug/l	2.42	5,756.19	2.569E-02	Pulse	0.50	3
Ti			1	0.886	ug/l	9.83	343.33	1.532E-03	Pulse	0.50	3
Na			1	96.849	ug/l	0.46	239,463.35	1.069E+00	Pulse	1.00	3
Mg			1	98.848	ug/l	0.69	104,911.20	4.683E-01	Pulse	1.00	3
K			1	105.069	ug/l	0.46	200,882.71	8.967E-01	Pulse	1.00	3
V			1	0.972	ug/l	0.93	12,069.75	5.388E-02	Pulse	0.50	3
Mn			1	0.988	ug/l	0.43	8,175.74	3.649E-02	Pulse	0.50	3
Fe			1	98.948	ug/l	0.54	1,142,871.21	5.102E+00	Pulse	0.50	3
Co			1	0.992	ug/l	1.35	21,264.35	9.492E-02	Pulse	0.50	3
Ni			1	0.987	ug/l	2.51	5,730.20	2.558E-02	Pulse	0.50	3
Cu			1	1.161	ug/l	0.79	49,033.28	2.189E-01	Pulse	0.50	3
Zn			1	0.586	ug/l	3.01	3,538.00	1.057E-02	Pulse	1.00	3
Cd			1	0.943	ug/l	0.49	2,970.92	1.555E-03	Pulse	0.50	3
Al			1	96.962	ug/l	0.23	44,665.03	1.994E-01	Pulse	1.00	3
Se			1	0.959	ug/l	3.91	177.11	5.289E-04	Pulse	3.00	3
Sb			1	0.920	ug/l	2.30	8,613.70	4.508E-03	Pulse	1.00	3
Se			1	0.730	ug/l	19.21	90.11	2.692E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,205,435.25	1.63	100.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		388,518.99	0.54	101.2	Pulse	0.30	3
1	Ge		224,024.80	0.54	99.7	Pulse	0.30	3
1	In		1,910,678.67	0.96	100.3	Pulse	0.30	3
1	Tb		4,670,441.50	0.61	100.9	Pulse	0.50	3
1	Lu		3,323,598.25	0.98	99.7	Pulse	0.50	3
1	Ge		334,893.11	0.70	99.8	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,187.82	0.58	97.5	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 8:57
Sample Name CALSTD-4
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.233	ug/l	0.82	148,759.69	6.508E-01	Pulse	0.50	3
As			1	10.029	ug/l	0.43	17,219.74	7.534E-02	Pulse	1.00	3
Mo			1	9.778	ug/l	1.10	67,431.08	3.510E-02	Pulse	0.50	3
Pb			1	9.866	ug/l	0.73	261,386.33	8.099E-02	Pulse	1.00	3
Be			1	10.057	ug/l	6.92	637.84	2.791E-03	Pulse	2.00	3
Ag			1	10.583	ug/l	0.61	215,827.63	1.123E-01	Pulse	0.50	3
Ba			1	9.808	ug/l	0.68	28,977.80	1.508E-02	Pulse	0.50	3
Tl			1	10.177	ug/l	0.78	376,915.24	1.168E-01	Pulse	0.50	3
Sn			1	9.910	ug/l	0.72	69,248.70	3.605E-02	Pulse	0.30	3
Sr			1	9.883	ug/l	0.70	90,874.30	4.730E-02	Pulse	0.50	3
[Pb]			1	9.834	ug/l	0.72	123,824.31	3.837E-02	Pulse	0.50	3
Ca			1	1010.042	ug/l	0.84	56,835.76	2.487E-01	Pulse	0.50	3
Ti			1	10.228	ug/l	5.35	3,937.75	1.723E-02	Pulse	0.50	3
Na			1	1009.633	ug/l	0.25	2,224,595.00	9.733E+00	Pulse	1.00	3
Mg			1	1025.677	ug/l	0.09	1,098,982.13	4.808E+00	Pulse	1.00	3
K			1	1021.471	ug/l	0.22	1,270,515.79	5.559E+00	Pulse	1.00	3
V			1	10.055	ug/l	1.23	116,512.19	5.097E-01	Pulse	0.50	3
Mn			1	10.246	ug/l	0.36	83,670.12	3.661E-01	Pulse	0.50	3
Fe			1	1015.299	ug/l	0.19	11,817,347.33	5.170E+01	Analog	0.50	3
Co			1	10.371	ug/l	0.20	225,690.99	9.874E-01	Pulse	0.50	3
Ni			1	10.515	ug/l	1.82	61,095.87	2.673E-01	Pulse	0.50	3
Cu			1	10.262	ug/l	0.43	189,258.63	8.280E-01	Pulse	0.50	3
Zn			1	9.780	ug/l	1.21	26,520.51	7.770E-02	Pulse	1.00	3
Cd			1	10.068	ug/l	0.78	31,761.19	1.653E-02	Pulse	0.50	3
Al			1	995.631	ug/l	0.45	463,455.02	2.028E+00	Pulse	1.00	3
Se			1	10.046	ug/l	2.38	1,351.16	3.959E-03	Pulse	3.00	3
Sb			1	9.848	ug/l	0.40	90,311.62	4.701E-02	Pulse	1.00	3
Se			1	9.795	ug/l	1.86	640.01	1.875E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,227,423.75	0.49	101.2	Pulse	0.50	3
1	Sc		391,334.68	1.11	102.0	Pulse	0.30	3
1	Ge		228,568.94	0.28	101.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,921,193.19	0.65	100.8	Pulse	0.30	3
1	Tb		4,701,712.67	0.72	101.6	Pulse	0.50	3
1	Lu		3,366,350.08	1.26	101.0	Pulse	0.50	3
1	Ge		341,321.61	0.90	101.7	Pulse	0.30	3
1	Te		1.33	173.21	50.0	Pulse	0.50	3
1	Li		1,114.48	8.68	91.5	Pulse	0.30	3

Quantitation Report

File Name 007CALS.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:01
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	47.881	ug/l	0.38	684,846.07	2.984E+00	Pulse	0.50	3
As			1	47.038	ug/l	0.60	80,828.59	3.522E-01	Pulse	1.00	3
Mo			1	46.286	ug/l	0.43	317,809.25	1.655E-01	Pulse	0.50	3
Pb			1	46.891	ug/l	0.20	1,211,600.62	3.830E-01	Pulse	1.00	3
Be			1	46.135	ug/l	1.33	2,926.55	1.275E-02	Pulse	2.00	3
Ag			1	49.262	ug/l	0.32	1,003,592.02	5.227E-01	Pulse	0.50	3
Ba			1	46.519	ug/l	0.74	137,292.26	7.150E-02	Pulse	0.50	3
Tl			1	48.348	ug/l	0.60	1,752,965.50	5.541E-01	Pulse	0.50	3
Sn			1	46.453	ug/l	0.54	322,179.73	1.678E-01	Pulse	0.30	3
Sr			1	46.966	ug/l	0.29	429,768.28	2.238E-01	Pulse	0.50	3
[Pb]			1	46.845	ug/l	1.00	575,122.86	1.818E-01	Pulse	0.50	3
Ca			1	4752.010	ug/l	0.26	266,691.18	1.162E+00	Pulse	0.50	3
Ti			1	47.354	ug/l	1.41	18,267.88	7.960E-02	Pulse	0.50	3
Na			1	4755.866	ug/l	0.07	10,394,447.67	4.529E+01	Analog	1.00	3
Mg			1	4758.040	ug/l	0.20	5,114,429.33	2.228E+01	Analog	1.00	3
K			1	4768.172	ug/l	0.28	5,650,096.33	2.462E+01	Analog	1.00	3
V			1	47.254	ug/l	0.39	545,466.35	2.377E+00	Pulse	0.50	3
Mn			1	47.825	ug/l	0.22	391,055.20	1.704E+00	Pulse	0.50	3
Fe			1	4730.236	ug/l	0.13	55,224,104.00	2.406E+02	Analog	0.50	3
Co			1	48.103	ug/l	0.24	1,050,742.94	4.578E+00	Pulse	0.50	3
Ni			1	48.405	ug/l	0.35	281,981.63	1.229E+00	Pulse	0.50	3
Cu			1	48.521	ug/l	0.29	777,671.54	3.388E+00	Pulse	0.50	3
Zn			1	47.478	ug/l	0.75	119,916.88	3.530E-01	Pulse	1.00	3
Cd			1	46.928	ug/l	0.37	147,899.24	7.703E-02	Pulse	0.50	3
Al			1	4761.376	ug/l	0.37	2,223,635.42	9.689E+00	Pulse	1.00	3
Se			1	47.430	ug/l	2.21	6,138.77	1.807E-02	Pulse	3.00	3
Sb			1	46.647	ug/l	0.22	426,626.32	2.222E-01	Pulse	1.00	3
Se			1	47.270	ug/l	1.54	2,892.44	8.514E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,163,676.08	0.73	99.2	Pulse	0.50	3
1	Sc		394,846.81	0.47	102.9	Pulse	0.30	3
1	Ge		229,506.92	0.32	102.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,920,057.56	0.68	100.8	Pulse	0.30	3
1	Tb		4,695,024.17	0.46	101.5	Pulse	0.50	3
1	Lu		3,394,955.33	0.77	101.9	Pulse	0.50	3
1	Ge		339,723.37	0.73	101.3	Pulse	0.30	3
1	Te		4.00	50.00	150.0	Pulse	0.50	3
1	Li		1,187.82	2.70	97.5	Pulse	0.30	3

Quantitation Report

File Name 008CALS.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:05
Sample Name CALSTD-6
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.931	ug/l	0.70	1,381,043.71	6.024E+00	Pulse	0.50	3
As			1	96.223	ug/l	0.42	165,095.30	7.201E-01	Pulse	1.00	3
Mo			1	96.242	ug/l	0.38	653,574.75	3.440E-01	Pulse	0.50	3
Pb			1	96.021	ug/l	0.88	2,455,475.58	7.837E-01	Pulse	1.00	3
Be			1	95.558	ug/l	0.28	6,052.07	2.640E-02	Pulse	2.00	3
Ag			1	100.311	ug/l	0.50	2,022,119.84	1.064E+00	Pulse	0.50	3
Ba			1	96.433	ug/l	0.11	281,608.71	1.482E-01	Pulse	0.50	3
Tl			1	99.464	ug/l	1.12	3,570,945.67	1.140E+00	Pulse	0.50	3
Sn			1	97.177	ug/l	0.49	666,277.89	3.507E-01	Pulse	0.30	3
Sr			1	97.247	ug/l	0.55	880,032.52	4.632E-01	Pulse	0.50	3
[Pb]			1	95.502	ug/l	0.71	1,160,413.58	3.703E-01	Pulse	0.50	3
Ca			1	9606.863	ug/l	0.88	538,107.85	2.347E+00	Pulse	0.50	3
Ti			1	96.834	ug/l	0.77	37,307.40	1.627E-01	Pulse	0.50	3
Na			1	9632.734	ug/l	0.06	20,996,058.00	9.158E+01	Analog	1.00	3
Mg			1	9665.791	ug/l	0.16	10,377,636.00	4.526E+01	Analog	1.00	3
K			1	9660.600	ug/l	0.30	11,350,357.00	4.951E+01	Analog	1.00	3
V			1	96.479	ug/l	0.49	1,111,312.29	4.847E+00	Pulse	0.50	3
Mn			1	96.979	ug/l	0.33	791,818.06	3.454E+00	Pulse	0.50	3
Fe			1	9623.862	ug/l	0.39	112,220,962.67	4.895E+02	Analog	0.50	3
Co			1	96.859	ug/l	0.57	2,113,342.50	9.218E+00	Pulse	0.50	3
Ni			1	97.228	ug/l	0.61	565,677.73	2.467E+00	Pulse	0.50	3
Cu			1	97.109	ug/l	0.51	1,522,350.00	6.640E+00	Pulse	0.50	3
Zn			1	97.464	ug/l	0.26	243,659.69	7.180E-01	Pulse	1.00	3
Cd			1	96.338	ug/l	0.57	300,434.43	1.581E-01	Pulse	0.50	3
Al			1	9693.258	ug/l	0.48	4,521,679.17	1.972E+01	Pulse	1.00	3
Se			1	97.076	ug/l	0.30	12,492.63	3.681E-02	Pulse	3.00	3
Sb			1	96.301	ug/l	0.27	871,285.96	4.586E-01	Pulse	1.00	3
Se			1	96.297	ug/l	1.08	5,836.78	1.720E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,133,342.25	0.61	98.2	Pulse	0.50	3
1	Sc		393,079.70	1.07	102.4	Pulse	0.30	3
1	Ge		229,265.91	0.52	102.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,899,991.03	0.31	99.7	Pulse	0.30	3
1	Tb		4,724,395.50	0.99	102.1	Pulse	0.50	3
1	Lu		3,386,660.92	0.58	101.6	Pulse	0.50	3
1	Ge		339,359.10	0.54	101.1	Pulse	0.30	3
1	Te		11.33	44.41	425.0	Pulse	0.50	3
1	Li		1,288.94	6.89	105.8	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:09
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.053	ug/l	0.62	2,776,979.83	1.254E+01	Pulse	0.50	3
As			1	202.628	ug/l	0.20	335,780.70	1.516E+00	Pulse	1.00	3
Mo			1	202.819	ug/l	0.66	1,337,068.50	7.247E-01	Pulse	0.50	3
Pb			1	202.774	ug/l	0.58	5,004,591.67	1.654E+00	Pulse	1.00	3
Be			1	203.185	ug/l	0.28	12,428.29	5.611E-02	Pulse	2.00	3
Ag			1	162.876	ug/l	0.74	3,188,109.25	1.728E+00	Pulse	0.50	3
Ba			1	202.664	ug/l	0.12	574,654.73	3.115E-01	Pulse	0.50	3
Tl			1	200.673	ug/l	0.32	6,955,108.33	2.299E+00	Analog	0.50	3
Sn			1	202.304	ug/l	0.08	1,346,213.94	7.297E-01	Pulse	0.30	3
Sr			1	202.141	ug/l	0.45	1,775,749.50	9.625E-01	Pulse	0.50	3
[Pb]			1	203.046	ug/l	0.59	2,381,038.67	7.871E-01	Pulse	0.50	3
Ca			1	20258.084	ug/l	0.16	1,095,633.96	4.947E+00	Pulse	0.50	3
Ti			1	202.234	ug/l	0.47	75,257.58	3.398E-01	Pulse	0.50	3
Na			1	20244.213	ug/l	0.30	42,590,388.00	1.923E+02	Analog	1.00	3
Mg			1	20226.325	ug/l	0.14	20,977,110.67	9.471E+01	Analog	1.00	3
K			1	20226.550	ug/l	0.55	22,869,564.00	1.033E+02	Analog	1.00	3
V			1	202.444	ug/l	0.35	2,251,416.58	1.017E+01	Pulse	0.50	3
Mn			1	202.042	ug/l	0.33	1,593,329.54	7.194E+00	Pulse	0.50	3
Fe			1	20254.758	ug/l	0.25	228,148,266.67	1.030E+03	Analog	0.50	3
Co			1	202.026	ug/l	0.25	4,258,235.33	1.923E+01	Pulse	0.50	3
Ni			1	201.759	ug/l	0.31	1,133,881.12	5.120E+00	Pulse	0.50	3
Cu			1	201.801	ug/l	0.14	3,022,498.33	1.365E+01	Pulse	0.50	3
Zn			1	201.912	ug/l	0.53	486,054.22	1.481E+00	Pulse	1.00	3
Cd			1	202.596	ug/l	0.52	613,488.40	3.325E-01	Pulse	0.50	3
Al			1	20213.273	ug/l	0.89	9,108,061.67	4.112E+01	Analog	1.00	3
Se			1	202.103	ug/l	0.79	25,098.09	7.646E-02	Pulse	3.00	3
Sb			1	202.696	ug/l	0.21	1,780,470.83	9.651E-01	Pulse	1.00	3
Se			1	202.546	ug/l	1.37	11,824.44	3.602E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,025,066.58	0.56	94.9	Pulse	0.50	3
1	Sc		379,489.14	0.61	98.9	Pulse	0.30	3
1	Ge		221,481.47	0.37	98.5	Pulse	0.30	3
1	In		1,844,918.95	0.42	96.8	Pulse	0.30	3
1	Tb		4,617,680.17	0.28	99.8	Pulse	0.50	3
1	Lu		3,328,571.83	0.10	99.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		328,262.43	0.69	97.8	Pulse	0.30	3
1	Te		19.33	33.25	725.0	Pulse	0.50	3
1	Li		1,100.04	4.76	90.3	Pulse	0.30	3

Quantitation Report

File Name 010CALB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:21
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	3,825.06	1.669E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	73.00	3.184E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	318.67	1.655E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	1,642.08	5.192E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	3.17	1.379E-05	Pulse	2.00	3
Ag			1	0.000	ug/l	---	135.33	7.034E-05	Pulse	0.50	3
Ba			1	0.000	ug/l	---	16.67	8.707E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	592.68	1.873E-04	Pulse	0.50	3
Sn			1	0.000	ug/l	---	607.79	3.158E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	490.01	2.549E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	809.36	2.559E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	485.34	2.117E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	---	10.00	4.366E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	34,302.87	1.497E-01	Pulse	1.00	3
Mg			1	0.000	ug/l	---	1,253.71	5.469E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	83,012.49	3.622E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,173.37	5.118E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	300.00	1.309E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	15,985.96	6.975E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	114.67	5.002E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	121.33	5.293E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	32,367.09	1.412E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	2,128.12	6.290E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	14.67	7.616E-06	Pulse	0.50	3
Al			1	0.000	ug/l	---	485.01	2.116E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	56.44	1.669E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	246.67	1.282E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	47.33	1.399E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,161,601.25	1.62	100.0	Pulse	0.50	3
1	Sc		395,363.42	0.60	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		229,200.54	0.66	100.0	Pulse	0.30	3
1	In		1,923,249.37	0.70	100.0	Pulse	0.30	3
1	Tb		4,636,934.17	1.47	100.0	Pulse	0.50	3
1	Lu		3,305,304.92	0.93	100.0	Pulse	0.50	3
1	Ge		338,171.28	0.87	100.0	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,281.16	4.88	100.0	Pulse	0.30	3

Quantitation Report

File Name	011HSAG.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:25
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	012HSTD.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:28
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	195.079	ug/l	1.66	2,700,525.83	1.211E+01	Pulse	0.50	3
As			1	194.623	ug/l	1.58	324,829.30	1.456E+00	Pulse	1.00	3
Mo			1	195.558	ug/l	1.15	1,290,439.87	6.988E-01	Pulse	0.50	3
Pb			1	196.586	ug/l	0.49	4,888,674.67	1.604E+00	Pulse	1.00	3
Be			1	194.119	ug/l	1.55	11,959.18	5.361E-02	Pulse	2.00	3
Ag			1	155.890	ug/l	0.13	3,054,513.50	1.654E+00	Pulse	0.50	3
Ba			1	196.159	ug/l	1.40	556,750.75	3.015E-01	Pulse	0.50	3
Tl			1	187.358	ug/l	0.69	6,542,554.17	2.147E+00	Analog	0.50	3
Sn			1	197.406	ug/l	1.02	1,315,032.97	7.120E-01	Pulse	0.30	3
Sr			1	197.209	ug/l	1.04	1,734,111.46	9.390E-01	Pulse	0.50	3
[Pb]			1	195.322	ug/l	0.40	2,307,811.92	7.572E-01	Pulse	0.50	3
Ca			1	19458.927	ug/l	1.26	1,059,980.92	4.752E+00	Pulse	0.50	3
Ti			1	195.200	ug/l	2.36	73,161.13	3.280E-01	Pulse	0.50	3
Na			1	19246.953	ug/l	0.82	40,786,113.33	1.828E+02	Analog	1.00	3
Mg			1	19067.929	ug/l	1.49	19,917,475.33	8.929E+01	Analog	1.00	3
K			1	18975.325	ug/l	1.10	21,614,408.00	9.689E+01	Analog	1.00	3
V			1	195.340	ug/l	1.58	2,188,023.42	9.809E+00	Pulse	0.50	3
Mn			1	194.891	ug/l	1.52	1,547,967.09	6.939E+00	Pulse	0.50	3
Fe			1	19403.206	ug/l	1.74	220,119,386.67	9.868E+02	Analog	0.50	3
Co			1	194.171	ug/l	1.71	4,122,023.50	1.848E+01	Pulse	0.50	3
Ni			1	193.749	ug/l	1.13	1,096,707.05	4.916E+00	Pulse	0.50	3
Cu			1	192.631	ug/l	1.41	2,907,347.33	1.303E+01	Pulse	0.50	3
Zn			1	195.089	ug/l	0.94	469,572.93	1.431E+00	Pulse	1.00	3
Cd			1	194.529	ug/l	1.20	589,648.08	3.193E-01	Pulse	0.50	3
Al			1	18924.346	ug/l	1.29	8,588,679.00	3.850E+01	Analog	1.00	3
Se			1	196.244	ug/l	1.00	24,365.14	7.425E-02	Pulse	3.00	3
Sb			1	196.333	ug/l	0.84	1,726,355.46	9.348E-01	Pulse	1.00	3
Se			1	196.325	ug/l	0.88	11,459.55	3.492E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,047,887.25	0.72	96.4	Pulse	0.50	3
1	Sc		381,054.50	0.73	96.4	Pulse	0.30	3
1	Ge		223,091.72	1.16	97.3	Pulse	0.30	3
1	In		1,846,841.04	1.20	96.0	Pulse	0.30	3
1	Tb		4,598,116.33	0.56	99.2	Pulse	0.50	3
1	Lu		3,341,538.83	0.87	101.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		328,163.75	0.29	97.0	Pulse	0.30	3
1	Te		11.33	71.32	566.7	Pulse	0.50	3
1	Li		1,131.15	4.85	88.3	Pulse	0.30	3

Quantitation Report

File Name 013_ICV.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:32
Sample Name ICV
Sample Type ICV
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.647	ug/l	1.51	1,342,238.83	5.944E+00	Pulse	0.50	3
As			1	96.175	ug/l	1.07	162,527.70	7.198E-01	Pulse	1.00	3
Mo			1	95.932	ug/l	1.20	645,356.60	3.429E-01	Pulse	0.50	3
Pb			1	94.306	ug/l	1.55	2,407,828.33	7.697E-01	Pulse	1.00	3
Be			1	94.890	ug/l	0.64	5,919.20	2.621E-02	Pulse	2.00	3
Ag			1	46.448	ug/l	1.14	927,643.77	4.928E-01	Pulse	0.50	3
Ba			1	91.844	ug/l	1.19	265,695.74	1.412E-01	Pulse	0.50	3
Tl			1	97.642	ug/l	1.17	3,499,935.00	1.119E+00	Pulse	0.50	3
Sn			1	90.382	ug/l	1.84	613,968.92	3.262E-01	Pulse	0.30	3
Sr			1	96.999	ug/l	1.09	869,582.31	4.620E-01	Pulse	0.50	3
[Pb]			1	94.211	ug/l	0.89	1,142,882.21	3.653E-01	Pulse	0.50	3
Ca			1	9071.174	ug/l	1.16	500,458.54	2.216E+00	Pulse	0.50	3
Ti			1	96.673	ug/l	1.45	36,683.60	1.625E-01	Pulse	0.50	3
Na			1	9364.182	ug/l	0.78	20,103,570.67	8.903E+01	Analog	1.00	3
Mg			1	9619.435	ug/l	1.28	10,172,093.00	4.505E+01	Analog	1.00	3
K			1	9187.561	ug/l	0.58	10,635,639.33	4.710E+01	Analog	1.00	3
V			1	95.521	ug/l	1.38	1,083,676.95	4.799E+00	Pulse	0.50	3
Mn			1	95.797	ug/l	1.06	770,390.86	3.412E+00	Pulse	0.50	3
Fe			1	9374.144	ug/l	1.39	107,662,485.33	4.768E+02	Analog	0.50	3
Co			1	96.090	ug/l	1.35	2,065,007.59	9.145E+00	Pulse	0.50	3
Ni			1	95.843	ug/l	1.02	549,230.17	2.432E+00	Pulse	0.50	3
Cu			1	96.131	ug/l	1.19	1,484,669.79	6.575E+00	Pulse	0.50	3
Zn			1	96.606	ug/l	2.28	237,935.55	7.117E-01	Pulse	1.00	3
Cd			1	95.293	ug/l	1.19	294,394.47	1.564E-01	Pulse	0.50	3
Al			1	9294.427	ug/l	1.29	4,270,298.33	1.891E+01	Pulse	1.00	3
Se			1	97.024	ug/l	1.50	12,300.06	3.679E-02	Pulse	3.00	3
Sb			1	95.504	ug/l	0.72	856,013.31	4.548E-01	Pulse	1.00	3
Se			1	97.765	ug/l	1.51	5,837.00	1.746E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,128,137.08	0.46	98.9	Pulse	0.50	3
1	Sc		387,374.77	0.86	98.0	Pulse	0.30	3
1	Ge		225,812.48	0.77	98.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,882,219.02	0.90	97.9	Pulse	0.30	3
1	Tb		4,680,156.67	0.23	100.9	Pulse	0.50	3
1	Lu		3,373,778.92	0.83	102.1	Pulse	0.50	3
1	Ge		334,317.01	0.45	98.9	Pulse	0.30	3
1	Te		3.33	34.64	166.7	Pulse	0.50	3
1	Li		1,293.38	9.41	101.0	Pulse	0.30	3

Quantitation Report

File Name	014_ICB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:36
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.032	ug/l	47.23	4,225.14	1.865E-02	Pulse	0.50	3
As			1	0.041	ug/l	27.00	141.00	6.226E-04	Pulse	1.00	3
Mo			1	0.099	ug/l	14.59	997.37	5.205E-04	Pulse	0.50	3
Pb			1	-0.005	ug/l	-195.08	1,524.74	4.791E-04	Pulse	1.00	3
Be			1	0.006	ug/l	723.53	3.50	1.549E-05	Pulse	2.00	3
Ag			1	0.012	ug/l	25.64	387.34	2.024E-04	Pulse	0.50	3
Ba			1	0.026	ug/l	9.37	92.67	4.840E-05	Pulse	0.50	3
Tl			1	0.042	ug/l	19.39	2,120.81	6.662E-04	Pulse	0.50	3
Sn			1	0.114	ug/l	13.08	1,394.51	7.280E-04	Pulse	0.30	3
Sr			1	0.020	ug/l	43.77	669.35	3.496E-04	Pulse	0.50	3
[Pb]			1	-0.005	ug/l	-175.79	748.69	2.352E-04	Pulse	0.50	3
Ca			1	3.361	ug/l	64.21	665.35	2.938E-03	Pulse	0.50	3
Ti			1	0.041	ug/l	15.39	25.33	1.118E-04	Pulse	0.50	3
Na			1	4.160	ug/l	27.46	42,849.65	1.892E-01	Pulse	1.00	3
Mg			1	2.113	ug/l	49.74	3,477.66	1.536E-02	Pulse	1.00	3
K			1	1.124	ug/l	150.85	83,348.94	3.679E-01	Pulse	1.00	3
V			1	0.020	ug/l	65.29	1,388.06	6.128E-03	Pulse	0.50	3
Mn			1	0.044	ug/l	25.55	654.01	2.888E-03	Pulse	0.50	3
Fe			1	2.921	ug/l	36.04	49,425.42	2.183E-01	Pulse	0.50	3
Co			1	0.024	ug/l	43.09	621.35	2.746E-03	Pulse	0.50	3
Ni			1	0.033	ug/l	23.95	312.00	1.378E-03	Pulse	0.50	3
Cu			1	-1.043	ug/l	-2.23	16,175.46	7.140E-02	Pulse	0.50	3
Zn			1	-0.338	ug/l	-11.56	1,290.05	3.825E-03	Pulse	1.00	3
Cd			1	0.032	ug/l	36.41	116.00	6.062E-05	Pulse	0.50	3
Al			1	2.604	ug/l	40.66	1,678.08	7.413E-03	Pulse	1.00	3
Se			1	0.140	ug/l	57.37	74.11	2.197E-04	Pulse	3.00	3
Sb			1	0.059	ug/l	7.10	785.69	4.100E-04	Pulse	1.00	3
Se			1	0.008	ug/l	1313.77	47.67	1.413E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,185,937.08	0.99	100.8	Pulse	0.50	3
1	Sc		390,224.68	0.43	98.7	Pulse	0.30	3

Quantitation Report

1	Ge		226,559.22	0.54	98.8	Pulse	0.30	3
1	In		1,915,687.01	1.12	99.6	Pulse	0.30	3
1	Tb		4,682,221.17	1.20	101.0	Pulse	0.50	3
1	Lu		3,328,564.50	0.81	100.7	Pulse	0.50	3
1	Ge		337,318.91	0.21	99.7	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,175.60	3.97	91.8	Pulse	0.30	3

Quantitation Report

File Name 015LCCV.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:40
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.981	ug/l	1.94	17,557.28	7.751E-02	Pulse	0.50	3
As			1	0.972	ug/l	3.87	1,719.41	7.590E-03	Pulse	1.00	3
Mo			1	0.943	ug/l	2.89	6,798.59	3.534E-03	Pulse	0.50	3
Pb			1	0.941	ug/l	0.77	26,065.81	8.191E-03	Pulse	1.00	3
Be			1	1.095	ug/l	19.58	71.67	3.162E-04	Pulse	2.00	3
Ag			1	1.028	ug/l	1.56	21,106.02	1.097E-02	Pulse	0.50	3
Ba			1	0.916	ug/l	1.47	2,726.22	1.417E-03	Pulse	0.50	3
Tl			1	0.991	ug/l	1.22	36,727.25	1.154E-02	Pulse	0.50	3
Sn			1	0.987	ug/l	3.03	7,454.89	3.875E-03	Pulse	0.30	3
Sr			1	0.944	ug/l	1.14	9,136.91	4.749E-03	Pulse	0.50	3
[Pb]			1	0.950	ug/l	1.17	12,521.95	3.936E-03	Pulse	0.50	3
Ca			1	102.312	ug/l	1.49	6,136.98	2.709E-02	Pulse	0.50	3
Ti			1	1.008	ug/l	3.08	393.34	1.737E-03	Pulse	0.50	3
Na			1	102.038	ug/l	1.26	253,297.58	1.118E+00	Pulse	1.00	3
Mg			1	100.427	ug/l	0.86	107,764.27	4.757E-01	Pulse	1.00	3
K			1	105.784	ug/l	0.70	203,954.58	9.003E-01	Pulse	1.00	3
V			1	0.988	ug/l	1.23	12,387.28	5.468E-02	Pulse	0.50	3
Mn			1	1.010	ug/l	0.51	8,441.86	3.727E-02	Pulse	0.50	3
Fe			1	100.831	ug/l	1.19	1,177,397.87	5.197E+00	Pulse	0.50	3
Co			1	0.993	ug/l	3.40	21,529.31	9.503E-02	Pulse	0.50	3
Ni			1	1.065	ug/l	1.04	6,243.70	2.756E-02	Pulse	0.50	3
Cu			1	0.098	ug/l	18.17	33,477.56	1.478E-01	Pulse	0.50	3
Zn			1	0.798	ug/l	2.97	4,075.44	1.212E-02	Pulse	1.00	3
Cd			1	0.992	ug/l	2.31	3,146.95	1.636E-03	Pulse	0.50	3
Al			1	97.091	ug/l	1.90	45,226.24	1.996E-01	Pulse	1.00	3
Se			1	0.983	ug/l	7.18	180.89	5.380E-04	Pulse	3.00	3
Sb			1	0.964	ug/l	1.51	9,076.59	4.718E-03	Pulse	1.00	3
Se			1	0.800	ug/l	17.66	94.67	2.816E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,181,882.58	1.25	100.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		390,058.16	0.62	98.7	Pulse	0.30	3
1	Ge		226,533.98	0.51	98.8	Pulse	0.30	3
1	In		1,923,734.23	0.59	100.0	Pulse	0.30	3
1	Tb		4,687,157.83	0.46	101.1	Pulse	0.50	3
1	Lu		3,341,037.83	0.75	101.1	Pulse	0.50	3
1	Ge		336,260.12	0.66	99.4	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,161.15	2.79	90.6	Pulse	0.30	3

Quantitation Report

File Name 016ICSA.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:44
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.165	ug/l	0.89	31,666.32	1.509E-01	Pulse	0.50	3
As			1	0.126	ug/l	7.44	264.00	1.258E-03	Pulse	1.00	3
Mo			1	2044.923	ug/l	0.53	12,355,537.00	7.306E+00	Analog	0.50	3
Pb			1	0.026	ug/l	25.14	2,036.46	7.325E-04	Pulse	1.00	3
Be			1	-0.007	ug/l	-247.40	2.50	1.189E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	4.32	484.68	2.865E-04	Pulse	0.50	3
Ba			1	0.525	ug/l	1.24	1,378.73	8.151E-04	Pulse	0.50	3
Tl			1	0.048	ug/l	30.90	2,050.14	7.364E-04	Pulse	0.50	3
Sn			1	0.062	ug/l	6.52	912.25	5.393E-04	Pulse	0.30	3
Sr			1	0.838	ug/l	4.91	7,176.05	4.244E-03	Pulse	0.50	3
[Pb]			1	0.017	ug/l	25.34	895.36	3.221E-04	Pulse	0.50	3
Ca			1	95564.126	ug/l	1.72	4,895,852.83	2.333E+01	Mix	0.50	3
Ti			1	1986.546	ug/l	1.06	700,357.13	3.337E+00	Pulse	0.50	3
Na			1	98120.736	ug/l	1.42	195,467,109.33	9.315E+02	Analog	1.00	3
Mg			1	97234.641	ug/l	1.12	95,544,341.33	4.553E+02	Analog	1.00	3
K			1	96716.392	ug/l	0.92	103,325,762.67	4.924E+02	Analog	1.00	3
V			1	0.108	ug/l	3.36	2,214.14	1.055E-02	Pulse	0.50	3
Mn			1	0.850	ug/l	0.57	6,621.15	3.155E-02	Pulse	0.50	3
Fe			1	97931.884	ug/l	0.53	1,045,165,568.00	4.980E+03	Analog	0.50	3
Co			1	0.211	ug/l	1.99	4,327.17	2.062E-02	Pulse	0.50	3
Ni			1	0.486	ug/l	3.09	2,699.54	1.286E-02	Pulse	0.50	3
Cu			1	-1.192	ug/l	-6.58	12,889.02	6.143E-02	Pulse	0.50	3
Zn			1	0.739	ug/l	3.51	3,535.66	1.168E-02	Pulse	1.00	3
Cd			1	0.602	ug/l	4.56	1,685.42	9.964E-04	Pulse	0.50	3
Al			1	93912.428	ug/l	0.49	40,095,154.67	1.911E+02	Analog	1.00	3
Se			1	0.173	ug/l	24.27	70.22	2.320E-04	Pulse	3.00	3
Sb			1	0.063	ug/l	10.70	728.02	4.301E-04	Pulse	1.00	3
Se			1	0.131	ug/l	106.03	49.44	1.631E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,779,369.08	1.59	87.9	Pulse	0.50	3
1	Sc		360,674.56	0.97	91.2	Pulse	0.30	3
1	Ge		209,861.47	0.71	91.6	Pulse	0.30	3
1	In		1,691,329.13	1.56	87.9	Pulse	0.30	3
1	Tb		4,324,765.67	1.62	93.3	Pulse	0.50	3
1	Lu		3,151,796.17	2.59	95.4	Pulse	0.50	3
1	Ge		302,636.07	1.69	89.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,028.92	9.46	80.3	Pulse	0.30	3

Quantitation Report

File Name	017ICSB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:47
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.288	ug/l	1.24	284,301.06	1.336E+00	Pulse	0.50	3
As			1	19.182	ug/l	0.26	30,602.04	1.438E-01	Pulse	1.00	3
Mo			1	2042.331	ug/l	0.24	12,379,331.33	7.296E+00	Analog	0.50	3
Pb			1	0.024	ug/l	9.29	2,012.12	7.163E-04	Pulse	1.00	3
Be			1	0.004	ug/l	947.71	3.17	1.496E-05	Pulse	2.00	3
Ag			1	19.158	ug/l	0.21	344,961.10	2.033E-01	Pulse	0.50	3
Ba			1	0.536	ug/l	7.90	1,410.73	8.322E-04	Pulse	0.50	3
Tl			1	0.022	ug/l	10.21	1,244.05	4.427E-04	Pulse	0.50	3
Sn			1	0.037	ug/l	56.61	761.13	4.478E-04	Pulse	0.30	3
Sr			1	0.848	ug/l	2.90	7,283.42	4.292E-03	Pulse	0.50	3
[Pb]			1	0.023	ug/l	38.42	965.37	3.434E-04	Pulse	0.50	3
Ca			1	95636.148	ug/l	1.17	4,967,803.83	2.335E+01	Pulse	0.50	3
Ti			1	1990.198	ug/l	1.36	711,478.87	3.343E+00	Pulse	0.50	3
Na			1	98244.533	ug/l	1.26	198,448,485.33	9.326E+02	Analog	1.00	3
Mg			1	96776.006	ug/l	1.22	96,427,960.00	4.531E+02	Analog	1.00	3
K			1	96560.949	ug/l	1.17	104,599,893.33	4.916E+02	Analog	1.00	3
V			1	0.099	ug/l	17.98	2,144.13	1.007E-02	Pulse	0.50	3
Mn			1	19.915	ug/l	0.35	151,147.90	7.103E-01	Pulse	0.50	3
Fe			1	98134.470	ug/l	0.09	1,062,008,042.67	4.991E+03	Analog	0.50	3
Co			1	19.431	ug/l	0.91	393,594.31	1.850E+00	Pulse	0.50	3
Ni			1	19.455	ug/l	0.75	105,161.49	4.941E-01	Pulse	0.50	3
Cu			1	17.225	ug/l	0.56	275,373.58	1.294E+00	Pulse	0.50	3
Zn			1	19.813	ug/l	0.85	46,570.30	1.510E-01	Pulse	1.00	3
Cd			1	19.948	ug/l	1.04	55,563.06	3.275E-02	Pulse	0.50	3
Al			1	92713.597	ug/l	1.17	40,136,842.67	1.886E+02	Analog	1.00	3
Se			1	0.071	ug/l	72.05	59.78	1.937E-04	Pulse	3.00	3
Sb			1	0.056	ug/l	10.17	672.68	3.961E-04	Pulse	1.00	3
Se			1	0.003	ug/l	1526.97	43.33	1.405E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,808,670.83	1.24	88.8	Pulse	0.50	3
1	Sc		364,103.62	1.08	92.1	Pulse	0.30	3
1	Ge		212,803.66	1.52	92.8	Pulse	0.30	3
1	In		1,696,652.40	1.81	88.2	Pulse	0.30	3
1	Tb		4,396,751.67	1.76	94.8	Pulse	0.50	3
1	Lu		3,158,866.50	0.98	95.6	Pulse	0.50	3
1	Ge		308,456.02	0.99	91.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,046.70	12.79	81.7	Pulse	0.30	3

Quantitation Report

File Name	018CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:51
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.343	ug/l	2.17	644,009.92	2.889E+00	Pulse	0.50	3
As			1	45.859	ug/l	1.23	76,552.51	3.434E-01	Pulse	1.00	3
Mo			1	46.702	ug/l	1.50	312,705.58	1.670E-01	Pulse	0.50	3
Pb			1	45.553	ug/l	1.49	1,177,457.83	3.721E-01	Pulse	1.00	3
Be			1	45.751	ug/l	5.02	2,819.20	1.265E-02	Pulse	2.00	3
Ag			1	48.715	ug/l	0.94	967,818.81	5.169E-01	Pulse	0.50	3
Ba			1	45.734	ug/l	0.92	131,622.21	7.030E-02	Pulse	0.50	3
Tl			1	47.305	ug/l	0.71	1,715,705.63	5.421E-01	Pulse	0.50	3
Sn			1	45.984	ug/l	1.10	311,010.76	1.661E-01	Pulse	0.30	3
Sr			1	45.282	ug/l	1.24	404,080.63	2.158E-01	Pulse	0.50	3
[Pb]			1	45.528	ug/l	1.95	559,161.04	1.767E-01	Pulse	0.50	3
Ca			1	4515.283	ug/l	1.25	246,183.91	1.104E+00	Pulse	0.50	3
Ti			1	45.513	ug/l	0.61	17,056.80	7.650E-02	Pulse	0.50	3
Na			1	4541.895	ug/l	1.01	9,644,488.33	4.326E+01	Analog	1.00	3
Mg			1	4527.722	ug/l	1.06	4,727,777.50	2.121E+01	Mix	1.00	3
K			1	4422.439	ug/l	0.81	5,096,510.50	2.286E+01	Analog	1.00	3
V			1	45.775	ug/l	1.61	513,314.81	2.302E+00	Pulse	0.50	3
Mn			1	45.871	ug/l	1.01	364,364.10	1.634E+00	Pulse	0.50	3
Fe			1	4630.174	ug/l	1.46	52,510,700.00	2.355E+02	Analog	0.50	3
Co			1	46.692	ug/l	1.61	990,762.67	4.444E+00	Pulse	0.50	3
Ni			1	46.990	ug/l	1.10	265,919.75	1.193E+00	Pulse	0.50	3
Cu			1	45.872	ug/l	1.48	715,915.56	3.211E+00	Pulse	0.50	3
Zn			1	46.243	ug/l	0.92	113,910.15	3.440E-01	Pulse	1.00	3
Cd			1	46.036	ug/l	1.26	141,489.85	7.557E-02	Pulse	0.50	3
Al			1	4459.268	ug/l	1.82	2,023,018.46	9.074E+00	Pulse	1.00	3
Se			1	45.303	ug/l	1.24	5,718.41	1.727E-02	Pulse	3.00	3
Sb			1	45.668	ug/l	1.38	407,312.19	2.175E-01	Pulse	1.00	3
Se			1	45.778	ug/l	1.07	2,732.09	8.250E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,164,751.50	0.33	100.1	Pulse	0.50	3
1	Sc		378,831.46	1.07	95.8	Pulse	0.30	3
1	Ge		222,949.09	0.30	97.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,872,334.65	0.45	97.4	Pulse	0.30	3
1	Tb		4,654,705.00	0.65	100.4	Pulse	0.50	3
1	Lu		3,313,466.67	0.63	100.2	Pulse	0.50	3
1	Ge		331,144.05	1.21	97.9	Pulse	0.30	3
1	Te		3.33	69.28	166.7	Pulse	0.50	3
1	Li		1,090.04	7.05	85.1	Pulse	0.30	3

Quantitation Report

File Name	019_CCV.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 9:55
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.449	ug/l	1.35	1,336,589.00	5.932E+00	Pulse	0.50	3
As			1	95.095	ug/l	1.49	160,356.58	7.117E-01	Pulse	1.00	3
Mo			1	96.955	ug/l	0.76	641,508.02	3.465E-01	Pulse	0.50	3
Pb			1	95.803	ug/l	1.36	2,422,650.17	7.819E-01	Pulse	1.00	3
Be			1	95.344	ug/l	3.03	5,934.87	2.634E-02	Pulse	2.00	3
Ag			1	101.752	ug/l	0.29	1,998,507.92	1.080E+00	Pulse	0.50	3
Ba			1	96.534	ug/l	1.06	274,661.75	1.484E-01	Pulse	0.50	3
Tl			1	99.183	ug/l	0.90	3,521,178.17	1.136E+00	Pulse	0.50	3
Sn			1	96.837	ug/l	1.84	646,891.54	3.494E-01	Pulse	0.30	3
Sr			1	96.203	ug/l	0.41	848,246.92	4.582E-01	Pulse	0.50	3
[Pb]			1	95.486	ug/l	0.89	1,147,274.71	3.703E-01	Pulse	0.50	3
Ca			1	9448.714	ug/l	1.13	520,133.45	2.308E+00	Pulse	0.50	3
Ti			1	95.336	ug/l	1.53	36,097.79	1.602E-01	Pulse	0.50	3
Na			1	9407.622	ug/l	0.81	20,153,151.33	8.944E+01	Analog	1.00	3
Mg			1	9309.299	ug/l	1.10	9,822,911.67	4.360E+01	Analog	1.00	3
K			1	9218.748	ug/l	0.34	10,648,574.33	4.726E+01	Analog	1.00	3
V			1	95.522	ug/l	1.45	1,081,328.37	4.799E+00	Pulse	0.50	3
Mn			1	95.209	ug/l	2.03	763,988.17	3.391E+00	Pulse	0.50	3
Fe			1	9556.453	ug/l	1.44	109,517,296.00	4.861E+02	Analog	0.50	3
Co			1	96.937	ug/l	1.62	2,078,677.33	9.225E+00	Pulse	0.50	3
Ni			1	97.031	ug/l	0.63	554,828.60	2.462E+00	Pulse	0.50	3
Cu			1	95.659	ug/l	1.54	1,474,314.50	6.543E+00	Pulse	0.50	3
Zn			1	96.639	ug/l	1.95	236,361.36	7.120E-01	Pulse	1.00	3
Cd			1	97.341	ug/l	1.87	295,774.95	1.598E-01	Pulse	0.50	3
Al			1	9338.203	ug/l	1.26	4,281,036.00	1.900E+01	Pulse	1.00	3
Se			1	95.649	ug/l	0.47	12,042.23	3.627E-02	Pulse	3.00	3
Sb			1	96.706	ug/l	0.98	852,481.25	4.605E-01	Pulse	1.00	3
Se			1	96.393	ug/l	1.58	5,716.08	1.722E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,098,314.33	0.20	98.0	Pulse	0.50	3
1	Sc		380,823.13	1.01	96.3	Pulse	0.30	3
1	Ge		225,325.09	0.56	98.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,851,198.89	0.31	96.3	Pulse	0.30	3
1	Tb		4,643,583.00	0.22	100.1	Pulse	0.50	3
1	Lu		3,312,940.58	0.87	100.2	Pulse	0.50	3
1	Ge		331,983.97	0.83	98.2	Pulse	0.30	3
1	Te		5.33	43.30	266.7	Pulse	0.50	3
1	Li		1,145.60	6.64	89.4	Pulse	0.30	3

Quantitation Report

File Name 020_CCB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 9:59
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.050	ug/l	16.21	4,460.53	1.976E-02	Pulse	0.50	3
As			1	0.024	ug/l	34.52	112.67	4.996E-04	Pulse	1.00	3
Mo			1	0.159	ug/l	13.83	1,382.06	7.319E-04	Pulse	0.50	3
Pb			1	-0.006	ug/l	-128.20	1,474.40	4.676E-04	Pulse	1.00	3
Be			1	0.047	ug/l	53.52	6.00	2.662E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	64.41	461.34	2.451E-04	Pulse	0.50	3
Ba			1	0.018	ug/l	56.63	68.67	3.644E-05	Pulse	0.50	3
Tl			1	0.013	ug/l	59.43	1,064.04	3.380E-04	Pulse	0.50	3
Sn			1	0.084	ug/l	12.89	1,167.83	6.186E-04	Pulse	0.30	3
Sr			1	0.024	ug/l	49.81	692.68	3.673E-04	Pulse	0.50	3
[Pb]			1	-0.009	ug/l	-125.40	698.68	2.217E-04	Pulse	0.50	3
Ca			1	3.332	ug/l	32.50	661.35	2.931E-03	Pulse	0.50	3
Ti			1	0.082	ug/l	47.96	40.67	1.807E-04	Pulse	0.50	3
Na			1	9.714	ug/l	14.79	54,579.29	2.419E-01	Pulse	1.00	3
Mg			1	3.315	ug/l	32.49	4,732.25	2.099E-02	Pulse	1.00	3
K			1	3.268	ug/l	39.11	85,501.33	3.788E-01	Pulse	1.00	3
V			1	0.042	ug/l	34.73	1,634.74	7.248E-03	Pulse	0.50	3
Mn			1	0.021	ug/l	71.56	462.01	2.049E-03	Pulse	0.50	3
Fe			1	3.720	ug/l	28.85	58,376.76	2.589E-01	Pulse	0.50	3
Co			1	0.018	ug/l	62.05	506.68	2.250E-03	Pulse	0.50	3
Ni			1	0.021	ug/l	49.68	238.00	1.055E-03	Pulse	0.50	3
Cu			1	-1.118	ug/l	-1.81	14,976.49	6.636E-02	Pulse	0.50	3
Zn			1	-0.485	ug/l	-1.00	927.69	2.746E-03	Pulse	1.00	3
Cd			1	0.026	ug/l	45.50	96.00	5.095E-05	Pulse	0.50	3
Al			1	3.061	ug/l	34.01	1,880.09	8.343E-03	Pulse	1.00	3
Se			1	0.057	ug/l	15.99	63.67	1.885E-04	Pulse	3.00	3
Sb			1	0.051	ug/l	10.59	697.68	3.696E-04	Pulse	1.00	3
Se			1	-0.019	ug/l	-165.69	46.11	1.365E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,158,831.00	1.90	99.9	Pulse	0.50	3
1	Sc		391,347.34	1.25	99.0	Pulse	0.30	3

Quantitation Report

1	Ge		225,724.79	1.14	98.5	Pulse	0.30	3
1	In		1,887,095.62	1.15	98.1	Pulse	0.30	3
1	Tb		4,608,283.67	1.28	99.4	Pulse	0.50	3
1	Lu		3,279,896.25	1.39	99.2	Pulse	0.50	3
1	Ge		337,789.10	1.33	99.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,286.72	2.12	100.4	Pulse	0.30	3

Quantitation Report

File Name 021HSAG.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:03
Sample Name HSTD
Sample Type HSTD _Ag
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.378	ug/l	1.17	1,368,557.50	5.989E+00	Pulse	0.50	3
As			1	95.032	ug/l	1.45	162,505.84	7.112E-01	Pulse	1.00	3
Mo			1	97.174	ug/l	1.17	647,029.23	3.473E-01	Pulse	0.50	3
Pb			1	96.110	ug/l	0.91	2,421,883.75	7.844E-01	Pulse	1.00	3
Be			1	95.193	ug/l	0.86	6,008.89	2.630E-02	Pulse	2.00	3
Ag			1	101.236	ug/l	0.71	2,000,970.29	1.074E+00	Pulse	0.50	3
Ba			1	96.320	ug/l	1.07	275,792.17	1.480E-01	Pulse	0.50	3
Tl			1	99.946	ug/l	0.58	3,535,815.83	1.145E+00	Pulse	0.50	3
Sn			1	96.917	ug/l	1.63	651,528.39	3.497E-01	Pulse	0.30	3
Sr			1	96.474	ug/l	0.98	856,017.42	4.595E-01	Pulse	0.50	3
[Pb]			1	95.788	ug/l	1.11	1,146,884.58	3.715E-01	Pulse	0.50	3
Ca			1	9453.496	ug/l	0.94	527,727.81	2.310E+00	Pulse	0.50	3
Ti			1	94.356	ug/l	1.24	36,229.38	1.586E-01	Pulse	0.50	3
Na			1	9504.240	ug/l	0.37	20,647,029.33	9.036E+01	Analog	1.00	3
Mg			1	9400.505	ug/l	0.89	10,058,908.67	4.402E+01	Analog	1.00	3
K			1	9329.785	ug/l	0.32	10,927,774.33	4.782E+01	Analog	1.00	3
V			1	96.077	ug/l	1.25	1,102,942.33	4.827E+00	Pulse	0.50	3
Mn			1	95.539	ug/l	1.06	777,447.84	3.402E+00	Pulse	0.50	3
Fe			1	9584.707	ug/l	1.25	111,388,029.33	4.875E+02	Analog	0.50	3
Co			1	96.960	ug/l	1.29	2,108,450.71	9.228E+00	Pulse	0.50	3
Ni			1	96.799	ug/l	1.37	561,294.77	2.456E+00	Pulse	0.50	3
Cu			1	95.998	ug/l	1.44	1,500,251.67	6.566E+00	Pulse	0.50	3
Zn			1	96.722	ug/l	1.59	241,312.21	7.126E-01	Pulse	1.00	3
Cd			1	96.034	ug/l	1.16	293,649.67	1.576E-01	Pulse	0.50	3
Al			1	9442.943	ug/l	0.90	4,390,065.67	1.921E+01	Pulse	1.00	3
Se			1	94.352	ug/l	0.99	12,118.17	3.578E-02	Pulse	3.00	3
Sb			1	96.325	ug/l	1.40	854,509.40	4.587E-01	Pulse	1.00	3
Se			1	94.839	ug/l	0.61	5,737.20	1.694E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,087,401.25	0.69	97.7	Pulse	0.50	3
1	Sc		386,326.48	0.19	97.7	Pulse	0.30	3
1	Ge		228,499.44	0.39	99.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,862,943.89	0.17	96.9	Pulse	0.30	3
1	Tb		4,669,031.67	0.70	100.7	Pulse	0.50	3
1	Lu		3,322,508.75	0.73	100.5	Pulse	0.50	3
1	Ge		338,654.33	0.54	100.1	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,148.93	4.55	89.7	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:07
Sample Name FC591-6
Sample Type Sample
Comment
Prep Dilution 250.000
Auto Dilution N/A
Total Dilution 250.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	26.364	ug/l	14.47	5,428.78	2.322E-02	Pulse	0.50	3
As			1	43.312	ug/l	8.05	377.33	1.614E-03	Pulse	1.00	3
Mo			1	32.037	ug/l	16.75	1,207.38	6.233E-04	Pulse	0.50	3
Pb			1	36474.618	ug/l	1.00	3,823,451.92	1.190E+00	Pulse	1.00	3
Be			1	-0.842	ug/l	-472.42	3.00	1.286E-05	Pulse	2.00	3
Ag			1	4.634	ug/l	34.43	516.01	2.670E-04	Pulse	0.50	3
Ba			1	26.269	ug/l	6.67	329.34	1.702E-04	Pulse	0.50	3
Tl			1	3.900	ug/l	58.93	1,172.72	3.660E-04	Pulse	0.50	3
Sn			1	50.336	ug/l	5.85	2,016.79	1.042E-03	Pulse	0.30	3
Sr			1	19.894	ug/l	13.48	1,226.05	6.337E-04	Pulse	0.50	3
[Pb]			1	37028.658	ug/l	1.29	1,844,291.92	5.742E-01	Pulse	0.50	3
Ca			1	3470.750	ug/l	14.11	1,286.71	5.506E-03	Pulse	0.50	3
Ti			1	225.371	ug/l	16.27	364.00	1.558E-03	Pulse	0.50	3
Na			1	2866.299	ug/l	11.57	60,425.54	2.585E-01	Pulse	1.00	3
Mg			1	1217.865	ug/l	22.89	6,605.79	2.828E-02	Pulse	1.00	3
K			1	2464.848	ug/l	11.86	96,406.40	4.124E-01	Pulse	1.00	3
V			1	31.544	ug/l	3.69	2,676.86	1.145E-02	Pulse	0.50	3
Mn			1	112.058	ug/l	1.15	4,037.10	1.727E-02	Pulse	0.50	3
Fe			1	3585.503	ug/l	6.00	186,794.95	7.991E-01	Pulse	0.50	3
Co			1	5.424	ug/l	44.86	598.68	2.565E-03	Pulse	0.50	3
Ni			1	13.337	ug/l	20.62	440.01	1.883E-03	Pulse	0.50	3
Cu			1	-151.132	ug/l	-3.35	23,554.36	1.007E-01	Pulse	0.50	3
Zn			1	-16.899	ug/l	-75.45	2,008.11	5.796E-03	Pulse	1.00	3
Cd			1	6.624	ug/l	46.19	98.67	5.110E-05	Pulse	0.50	3
Al			1	2693.961	ug/l	9.77	5,618.14	2.404E-02	Pulse	1.00	3
Se			1	26.584	ug/l	20.30	71.78	2.070E-04	Pulse	3.00	3
Sb			1	231.899	ug/l	0.97	8,795.78	4.544E-03	Pulse	1.00	3
Se			1	-7.822	ug/l	-160.31	46.55	1.344E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,211,430.42	1.20	101.6	Pulse	0.50	3
1	Sc		400,847.16	0.37	101.4	Pulse	0.30	3
1	Ge		233,813.65	0.87	102.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,935,695.83	1.01	100.6	Pulse	0.30	3
1	Tb		4,678,206.83	1.22	100.9	Pulse	0.50	3
1	Lu		3,302,303.92	0.56	99.9	Pulse	0.50	3
1	Ge		346,617.58	1.12	102.5	Pulse	0.30	3
1	Te		2.00	173.21	100.0	Pulse	0.50	3
1	Li		1,112.26	5.28	86.8	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:10
Sample Name	FC674-2
Sample Type	Sample
Comment	
Prep Dilution	500.000
Auto Dilution	N/A
Total Dilution	500.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.491	ug/l	17.35	4,585.89	1.935E-02	Pulse	0.50	3
As			1	5.693	ug/l	49.63	95.67	4.036E-04	Pulse	1.00	3
Mo			1	20.478	ug/l	70.17	611.35	3.118E-04	Pulse	0.50	3
Pb			1	17.689	ug/l	50.77	2,535.20	8.078E-04	Pulse	1.00	3
Be			1	-12.224	ug/l	-36.20	1.67	7.035E-06	Pulse	2.00	3
Ag			1	1.272	ug/l	44.13	190.67	9.734E-05	Pulse	0.50	3
Ba			1	60.077	ug/l	5.01	378.68	1.934E-04	Pulse	0.50	3
Tl			1	-1.862	ug/l	-15.15	454.01	1.446E-04	Pulse	0.50	3
Sn			1	6.855	ug/l	100.59	715.57	3.652E-04	Pulse	0.30	3
Sr			1	7188.042	ug/l	1.41	134,514.10	6.869E-02	Pulse	0.50	3
[Pb]			1	17.966	ug/l	42.84	1,240.05	3.951E-04	Pulse	0.50	3
Ca			1	418632.150	ug/l	1.87	48,932.64	2.065E-01	Pulse	0.50	3
Ti			1	12.133	ug/l	124.11	20.00	8.442E-05	Pulse	0.50	3
Na			1	6382112.291	ug/l	1.30	28,746,830.67	1.213E+02	Analog	1.00	3
Mg			1	829885.743	ug/l	1.38	1,843,071.12	7.777E+00	Pulse	1.00	3
K			1	219501.339	ug/l	1.15	615,093.86	2.595E+00	Pulse	1.00	3
V			1	14.844	ug/l	29.24	1,566.07	6.608E-03	Pulse	0.50	3
Mn			1	101.499	ug/l	3.27	2,022.78	8.535E-03	Pulse	0.50	3
Fe			1	489.789	ug/l	3.05	28,335.96	1.196E-01	Pulse	0.50	3
Co			1	0.711	ug/l	67.12	150.67	6.356E-04	Pulse	0.50	3
Ni			1	3.926	ug/l	12.78	172.67	7.285E-04	Pulse	0.50	3
Cu			1	-347.001	ug/l	-5.12	22,455.70	9.476E-02	Pulse	0.50	3
Zn			1	39.413	ug/l	12.58	2,421.82	6.865E-03	Pulse	1.00	3
Cd			1	1.940	ug/l	92.86	27.33	1.398E-05	Pulse	0.50	3
Al			1	850.996	ug/l	3.83	1,322.05	5.578E-03	Pulse	1.00	3
Se			1	3.794	ug/l	219.78	59.89	1.697E-04	Pulse	3.00	3
Sb			1	7.914	ug/l	11.53	398.67	2.036E-04	Pulse	1.00	3
Se			1	7.069	ug/l	473.19	50.22	1.424E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,139,502.42	0.29	99.3	Pulse	0.50	3
1	Sc		408,908.36	0.47	103.4	Pulse	0.30	3
1	Ge		236,992.38	0.43	103.4	Pulse	0.30	3
1	In		1,958,168.26	0.64	101.8	Pulse	0.30	3
1	Tb		4,663,911.00	0.39	100.6	Pulse	0.50	3
1	Lu		3,323,497.58	0.78	100.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		352,783.61	0.85	104.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,226.71	5.25	95.7	Pulse	0.30	3

Quantitation Report

File Name 024SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:14
Sample Name MP41570-D1
Sample Type Sample
Comment
Prep Dilution 500.000
Auto Dilution N/A
Total Dilution 500.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	24.286	ug/l	3.18	4,680.58	1.970E-02	Pulse	0.50	3
As			1	-0.085	ug/l	-3153.64	75.33	3.171E-04	Pulse	1.00	3
Mo			1	6.066	ug/l	123.78	407.34	2.088E-04	Pulse	0.50	3
Pb			1	-0.013	ug/l	-11075.20	1,616.41	5.190E-04	Pulse	1.00	3
Be			1	-10.989	ug/l	-20.22	1.83	7.717E-06	Pulse	2.00	3
Ag			1	0.352	ug/l	187.86	151.33	7.782E-05	Pulse	0.50	3
Ba			1	39.001	ug/l	10.87	250.67	1.286E-04	Pulse	0.50	3
Tl			1	-4.203	ug/l	-1.28	283.33	9.099E-05	Pulse	0.50	3
Sn			1	-4.507	ug/l	-233.63	552.24	2.833E-04	Pulse	0.30	3
Sr			1	7190.590	ug/l	1.15	133,867.70	6.871E-02	Pulse	0.50	3
[Pb]			1	-2.371	ug/l	-43.43	739.35	2.375E-04	Pulse	0.50	3
Ca			1	419997.740	ug/l	1.23	49,224.09	2.071E-01	Pulse	0.50	3
Ti			1	18.727	ug/l	50.35	25.33	1.066E-04	Pulse	0.50	3
Na			1	6338916.334	ug/l	0.32	28,629,262.00	1.205E+02	Analog	1.00	3
Mg			1	824475.958	ug/l	1.31	1,836,027.92	7.727E+00	Pulse	1.00	3
K			1	218868.810	ug/l	0.39	615,212.54	2.589E+00	Pulse	1.00	3
V			1	13.165	ug/l	9.00	1,530.07	6.439E-03	Pulse	0.50	3
Mn			1	99.376	ug/l	4.50	1,992.11	8.384E-03	Pulse	0.50	3
Fe			1	304.982	ug/l	6.59	23,944.74	1.008E-01	Pulse	0.50	3
Co			1	0.084	ug/l	389.80	122.67	5.163E-04	Pulse	0.50	3
Ni			1	3.451	ug/l	80.86	167.33	7.044E-04	Pulse	0.50	3
Cu			1	-339.341	ug/l	-1.02	22,760.72	9.578E-02	Pulse	0.50	3
Zn			1	-80.313	ug/l	-9.80	1,813.42	5.117E-03	Pulse	1.00	3
Cd			1	1.333	ug/l	133.73	23.33	1.199E-05	Pulse	0.50	3
Al			1	570.158	ug/l	8.39	1,054.03	4.436E-03	Pulse	1.00	3
Se			1	12.341	ug/l	135.60	62.44	1.762E-04	Pulse	3.00	3
Sb			1	-0.632	ug/l	-332.02	238.33	1.222E-04	Pulse	1.00	3
Se			1	-28.535	ug/l	-121.92	46.00	1.298E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,114,172.33	1.30	98.5	Pulse	0.50	3
1	Sc		409,837.22	0.75	103.7	Pulse	0.30	3
1	Ge		237,621.06	0.30	103.7	Pulse	0.30	3
1	In		1,948,149.64	1.52	101.3	Pulse	0.30	3
1	Tb		4,657,031.33	0.78	100.4	Pulse	0.50	3
1	Lu		3,306,273.42	0.57	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		354,414.34	0.17	104.8	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,257.82	5.18	98.2	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:18
Sample Name MP41570-SD1
Sample Type Sample
Comment
Prep Dilution 2500.000
Auto Dilution N/A
Total Dilution 2500.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	92.579	ug/l	24.46	4,549.88	1.898E-02	Pulse	0.50	3
As			1	4.199	ug/l	88.60	79.33	3.309E-04	Pulse	1.00	3
Mo			1	-11.915	ug/l	-167.17	292.67	1.484E-04	Pulse	0.50	3
Pb			1	-8.283	ug/l	-65.82	1,568.41	4.922E-04	Pulse	1.00	3
Be			1	-74.313	ug/l	-64.08	1.33	5.578E-06	Pulse	2.00	3
Ag			1	-1.038	ug/l	-138.57	130.00	6.594E-05	Pulse	0.50	3
Ba			1	41.937	ug/l	33.54	68.00	3.449E-05	Pulse	0.50	3
Tl			1	-27.780	ug/l	-6.81	191.33	5.998E-05	Pulse	0.50	3
Sn			1	-33.756	ug/l	-105.92	526.68	2.671E-04	Pulse	0.30	3
Sr			1	7757.064	ug/l	1.84	29,623.18	1.503E-02	Pulse	0.50	3
[Pb]			1	-33.038	ug/l	-14.77	652.01	2.046E-04	Pulse	0.50	3
Ca			1	445265.833	ug/l	2.34	10,928.41	4.559E-02	Pulse	0.50	3
Ti			1	42.737	ug/l	74.00	17.33	7.238E-05	Pulse	0.50	3
Na			1	6854116.458	ug/l	0.08	6,273,232.17	2.617E+01	Analog	1.00	3
Mg			1	891345.203	ug/l	0.80	401,468.17	1.675E+00	Pulse	1.00	3
K			1	251086.378	ug/l	0.64	209,277.98	8.731E-01	Pulse	1.00	3
V			1	48.615	ug/l	23.69	1,460.73	6.093E-03	Pulse	0.50	3
Mn			1	99.106	ug/l	23.46	652.01	2.720E-03	Pulse	0.50	3
Fe			1	675.877	ug/l	9.47	20,012.99	8.349E-02	Pulse	0.50	3
Co			1	-1.742	ug/l	-88.69	104.00	4.339E-04	Pulse	0.50	3
Ni			1	10.072	ug/l	124.01	151.33	6.315E-04	Pulse	0.50	3
Cu			1	-1700.245	ug/l	-2.96	22,936.31	9.569E-02	Pulse	0.50	3
Zn			1	-345.484	ug/l	-14.65	1,882.09	5.280E-03	Pulse	1.00	3
Cd			1	7.455	ug/l	63.13	24.67	1.251E-05	Pulse	0.50	3
Al			1	2298.704	ug/l	9.02	955.36	3.986E-03	Pulse	1.00	3
Se			1	34.513	ug/l	167.91	61.33	1.721E-04	Pulse	3.00	3
Sb			1	-21.961	ug/l	-10.10	170.33	8.640E-05	Pulse	1.00	3
Se			1	-263.203	ug/l	-60.28	43.22	1.213E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,186,036.50	1.31	100.8	Pulse	0.50	3
1	Sc		414,469.63	0.13	104.8	Pulse	0.30	3
1	Ge		239,690.59	0.55	104.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,971,518.39	0.11	102.5	Pulse	0.30	3
1	Tb		4,664,259.50	0.92	100.6	Pulse	0.50	3
1	Lu		3,316,521.33	0.90	100.3	Pulse	0.50	3
1	Ge		356,435.92	0.48	105.4	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,202.26	12.41	93.8	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:22
Sample Name	MP41570-S1
Sample Type	Sample
Comment	
Prep Dilution	500.000
Auto Dilution	N/A
Total Dilution	500.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	233.169	ug/l	3.01	10,977.11	4.559E-02	Pulse	0.50	3
As			1	219.527	ug/l	7.08	867.69	3.603E-03	Pulse	1.00	3
Mo			1	199.913	ug/l	1.46	3,162.28	1.594E-03	Pulse	0.50	3
Pb			1	200.624	ug/l	0.52	11,972.53	3.792E-03	Pulse	1.00	3
Be			1	219.313	ug/l	24.89	32.50	1.349E-04	Pulse	2.00	3
Ag			1	96.493	ug/l	1.11	4,201.82	2.118E-03	Pulse	0.50	3
Ba			1	232.941	ug/l	3.20	1,438.06	7.247E-04	Pulse	0.50	3
Tl			1	196.566	ug/l	2.69	14,810.43	4.691E-03	Pulse	0.50	3
Sn			1	195.582	ug/l	3.10	3,424.78	1.726E-03	Pulse	0.30	3
Sr			1	6864.338	ug/l	1.42	130,171.44	6.561E-02	Pulse	0.50	3
[Pb]			1	191.168	ug/l	3.07	5,486.90	1.737E-03	Pulse	0.50	3
Ca			1	414007.868	ug/l	2.21	49,173.94	2.042E-01	Pulse	0.50	3
Ti			1	238.215	ug/l	17.82	203.33	8.440E-04	Pulse	0.50	3
Na			1	5947476.790	ug/l	0.82	27,221,855.33	1.131E+02	Analog	1.00	3
Mg			1	787953.200	ug/l	1.75	1,778,075.54	7.384E+00	Pulse	1.00	3
K			1	225669.111	ug/l	1.12	640,075.42	2.658E+00	Pulse	1.00	3
V			1	230.962	ug/l	5.31	6,813.88	2.830E-02	Pulse	0.50	3
Mn			1	293.499	ug/l	3.30	5,346.76	2.221E-02	Pulse	0.50	3
Fe			1	19902.789	ug/l	1.56	504,213.60	2.094E+00	Pulse	0.50	3
Co			1	215.620	ug/l	4.32	10,002.61	4.154E-02	Pulse	0.50	3
Ni			1	213.370	ug/l	5.59	2,734.20	1.136E-02	Pulse	0.50	3
Cu			1	-120.935	ug/l	-14.01	30,102.78	1.250E-01	Pulse	0.50	3
Zn			1	87.024	ug/l	15.64	2,725.86	7.561E-03	Pulse	1.00	3
Cd			1	199.174	ug/l	2.57	1,312.05	6.614E-04	Pulse	0.50	3
Al			1	19488.405	ug/l	2.89	19,601.94	8.141E-02	Pulse	1.00	3
Se			1	190.448	ug/l	9.65	112.00	3.107E-04	Pulse	3.00	3
Sb			1	208.042	ug/l	3.93	4,185.15	2.109E-03	Pulse	1.00	3
Se			1	176.600	ug/l	19.18	73.00	2.025E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,157,264.50	1.50	99.9	Pulse	0.50	3
1	Sc		417,143.96	0.18	105.5	Pulse	0.30	3
1	Ge		240,797.53	0.43	105.1	Pulse	0.30	3
1	In		1,983,958.46	0.95	103.2	Pulse	0.30	3
1	Tb		4,694,197.67	1.41	101.2	Pulse	0.50	3
1	Lu		3,343,625.67	0.86	101.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		360,559.45	0.49	106.6	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,228.93	7.44	95.9	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:26
Sample Name MP41570-S2
Sample Type Sample
Comment
Prep Dilution 500.000
Auto Dilution N/A
Total Dilution 500.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	235.833	ug/l	1.89	11,281.96	4.592E-02	Pulse	0.50	3
As			1	214.867	ug/l	0.66	868.02	3.533E-03	Pulse	1.00	3
Mo			1	194.433	ug/l	4.40	3,096.94	1.555E-03	Pulse	0.50	3
Pb			1	198.611	ug/l	1.00	11,869.11	3.759E-03	Pulse	1.00	3
Be			1	158.104	ug/l	24.35	24.83	1.011E-04	Pulse	2.00	3
Ag			1	94.458	ug/l	1.74	4,132.47	2.075E-03	Pulse	0.50	3
Ba			1	238.356	ug/l	2.72	1,476.73	7.414E-04	Pulse	0.50	3
Tl			1	198.239	ug/l	0.75	14,934.55	4.730E-03	Pulse	0.50	3
Sn			1	206.473	ug/l	7.80	3,594.82	1.805E-03	Pulse	0.30	3
Sr			1	7032.169	ug/l	1.38	133,871.31	6.721E-02	Pulse	0.50	3
[Pb]			1	185.051	ug/l	2.04	5,336.85	1.690E-03	Pulse	0.50	3
Ca			1	421211.189	ug/l	0.73	51,040.71	2.077E-01	Pulse	0.50	3
Ti			1	232.470	ug/l	7.13	202.67	8.247E-04	Pulse	0.50	3
Na			1	5978011.782	ug/l	0.43	27,918,475.33	1.136E+02	Analog	1.00	3
Mg			1	793180.732	ug/l	1.05	1,826,381.75	7.433E+00	Pulse	1.00	3
K			1	228140.771	ug/l	0.19	659,278.00	2.683E+00	Pulse	1.00	3
V			1	225.074	ug/l	1.60	6,807.88	2.771E-02	Pulse	0.50	3
Mn			1	336.628	ug/l	3.11	6,210.34	2.528E-02	Pulse	0.50	3
Fe			1	20217.513	ug/l	1.32	522,363.20	2.126E+00	Pulse	0.50	3
Co			1	213.912	ug/l	0.35	10,126.00	4.121E-02	Pulse	0.50	3
Ni			1	272.300	ug/l	2.78	3,525.00	1.435E-02	Pulse	0.50	3
Cu			1	-125.117	ug/l	-9.10	30,578.82	1.245E-01	Pulse	0.50	3
Zn			1	426.108	ug/l	6.46	4,548.88	1.251E-02	Pulse	1.00	3
Cd			1	204.763	ug/l	4.83	1,354.05	6.798E-04	Pulse	0.50	3
Al			1	22550.845	ug/l	0.96	23,063.95	9.387E-02	Pulse	1.00	3
Se			1	167.609	ug/l	19.25	106.67	2.934E-04	Pulse	3.00	3
Sb			1	205.249	ug/l	4.25	4,148.14	2.082E-03	Pulse	1.00	3
Se			1	150.361	ug/l	37.34	70.22	1.932E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,157,616.00	0.87	99.9	Pulse	0.50	3
1	Sc		422,177.30	0.08	106.8	Pulse	0.30	3
1	Ge		245,691.62	0.40	107.2	Pulse	0.30	3
1	In		1,991,936.31	0.14	103.6	Pulse	0.30	3
1	Tb		4,706,184.00	0.49	101.5	Pulse	0.50	3
1	Lu		3,332,275.17	0.53	100.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		363,513.84	0.32	107.5	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,226.71	4.98	95.8	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:29
Sample Name	MP41570-PS1
Sample Type	Sample
Comment	
Prep Dilution	500.000
Auto Dilution	N/A
Total Dilution	500.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	19.109	ug/l	33.46	4,631.90	1.906E-02	Pulse	0.50	3
As			1	-1.129	ug/l	-156.44	73.33	3.015E-04	Pulse	1.00	3
Mo			1	-8.677	ug/l	-47.54	204.67	1.035E-04	Pulse	0.50	3
Pb			1	-5.516	ug/l	-22.93	1,350.72	4.293E-04	Pulse	1.00	3
Be			1	-21.256	ug/l	-17.46	0.50	2.047E-06	Pulse	2.00	3
Ag			1	-0.608	ug/l	-81.97	113.33	5.743E-05	Pulse	0.50	3
Ba			1	41.646	ug/l	4.69	270.00	1.367E-04	Pulse	0.50	3
Tl			1	-6.833	ug/l	-3.31	96.67	3.072E-05	Pulse	0.50	3
Sn			1	-13.770	ug/l	-31.55	427.79	2.165E-04	Pulse	0.30	3
Sr			1	7210.678	ug/l	0.99	136,092.03	6.891E-02	Pulse	0.50	3
[Pb]			1	-4.727	ug/l	-25.61	690.02	2.192E-04	Pulse	0.50	3
Ca			1	421945.255	ug/l	1.64	50,590.22	2.081E-01	Pulse	0.50	3
Ti			1	11.502	ug/l	22.83	20.00	8.231E-05	Pulse	0.50	3
Na			1	6389841.490	ug/l	0.38	29,526,316.00	1.214E+02	Analog	1.00	3
Mg			1	823289.120	ug/l	0.28	1,875,797.75	7.715E+00	Pulse	1.00	3
K			1	220827.247	ug/l	0.63	634,274.52	2.609E+00	Pulse	1.00	3
V			1	14.951	ug/l	15.46	1,608.74	6.618E-03	Pulse	0.50	3
Mn			1	97.383	ug/l	5.28	2,003.45	8.242E-03	Pulse	0.50	3
Fe			1	74.702	ug/l	19.84	18,805.78	7.734E-02	Pulse	0.50	3
Co			1	-0.725	ug/l	-44.24	88.00	3.623E-04	Pulse	0.50	3
Ni			1	3.832	ug/l	61.24	176.00	7.237E-04	Pulse	0.50	3
Cu			1	-346.687	ug/l	-0.74	23,048.43	9.480E-02	Pulse	0.50	3
Zn			1	-95.053	ug/l	-10.21	1,764.08	4.901E-03	Pulse	1.00	3
Cd			1	0.150	ug/l	625.44	16.00	8.107E-06	Pulse	0.50	3
Al			1	325.724	ug/l	13.02	836.35	3.441E-03	Pulse	1.00	3
Se			1	25.546	ug/l	59.73	67.00	1.862E-04	Pulse	3.00	3
Sb			1	-6.217	ug/l	-1.98	136.33	6.902E-05	Pulse	1.00	3
Se			1	-37.606	ug/l	-77.61	45.56	1.266E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,146,974.42	0.81	99.5	Pulse	0.50	3
1	Sc		421,172.22	0.65	106.5	Pulse	0.30	3
1	Ge		243,120.47	0.87	106.1	Pulse	0.30	3
1	In		1,975,091.03	0.81	102.7	Pulse	0.30	3
1	Tb		4,684,656.83	0.93	101.0	Pulse	0.50	3
1	Lu		3,332,664.50	0.68	100.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		359,913.85	0.45	106.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,211.16	12.68	94.5	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:33
Sample Name	FC674-1
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.854	ug/l	8.99	5,731.53	2.376E-02	Pulse	0.50	3
As			1	0.197	ug/l	140.82	91.00	3.774E-04	Pulse	1.00	3
Mo			1	-0.367	ug/l	-29.31	220.67	1.131E-04	Pulse	0.50	3
Pb			1	-0.189	ug/l	-21.02	1,427.73	4.574E-04	Pulse	1.00	3
Be			1	-0.998	ug/l	-21.75	0.67	2.767E-06	Pulse	2.00	3
Ag			1	-0.037	ug/l	-95.51	106.67	5.463E-05	Pulse	0.50	3
Ba			1	4.948	ug/l	10.29	610.01	3.129E-04	Pulse	0.50	3
Tl			1	-0.327	ug/l	-3.88	117.33	3.759E-05	Pulse	0.50	3
Sn			1	-0.650	ug/l	-23.23	433.34	2.221E-04	Pulse	0.30	3
Sr			1	1279.590	ug/l	0.54	475,645.40	2.439E-01	Pulse	0.50	3
[Pb]			1	-0.239	ug/l	-24.41	682.69	2.187E-04	Pulse	0.50	3
Ca			1	81198.071	ug/l	1.18	191,731.75	7.949E-01	Pulse	0.50	3
Ti			1	2.144	ug/l	63.32	45.33	1.878E-04	Pulse	0.50	3
Na			1	375524.293	ug/l	0.33	34,424,920.00	1.427E+02	Analog	1.00	3
Mg			1	54945.237	ug/l	1.04	2,483,512.08	1.030E+01	Pulse	1.00	3
K			1	17990.973	ug/l	0.04	970,387.42	4.023E+00	Pulse	1.00	3
V			1	2.368	ug/l	7.76	2,380.82	9.871E-03	Pulse	0.50	3
Mn			1	13.266	ug/l	2.36	4,871.96	2.020E-02	Pulse	0.50	3
Fe			1	38.399	ug/l	3.46	35,661.98	1.479E-01	Pulse	0.50	3
Co			1	0.094	ug/l	38.91	207.33	8.598E-04	Pulse	0.50	3
Ni			1	0.192	ug/l	69.00	174.67	7.244E-04	Pulse	0.50	3
Cu			1	-14.347	ug/l	-8.25	24,794.58	1.028E-01	Pulse	0.50	3
Zn			1	12.719	ug/l	4.97	3,565.67	1.000E-02	Pulse	1.00	3
Cd			1	-0.033	ug/l	-26.65	10.67	5.469E-06	Pulse	0.50	3
Al			1	77.007	ug/l	4.69	2,021.77	8.382E-03	Pulse	1.00	3
Se			1	1.089	ug/l	83.48	65.33	1.833E-04	Pulse	3.00	3
Sb			1	-0.299	ug/l	-16.89	139.00	7.125E-05	Pulse	1.00	3
Se			1	-1.087	ug/l	-143.92	47.11	1.322E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,121,559.83	0.99	98.7	Pulse	0.50	3
1	Sc		418,023.23	0.92	105.7	Pulse	0.30	3
1	Ge		241,203.64	0.32	105.2	Pulse	0.30	3
1	In		1,950,099.86	0.84	101.4	Pulse	0.30	3
1	Tb		4,676,084.67	0.90	100.8	Pulse	0.50	3
1	Lu		3,318,317.25	0.43	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		356,392.10	0.39	105.4	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,203.38	13.58	93.9	Pulse	0.30	3

Quantitation Report

File Name	030SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:37
Sample Name	FC674-3
Sample Type	Sample
Comment	
Prep Dilution	500.000
Auto Dilution	N/A
Total Dilution	500.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	19.038	ug/l	19.23	4,611.23	1.905E-02	Pulse	0.50	3
As			1	-3.990	ug/l	-41.00	62.67	2.587E-04	Pulse	1.00	3
Mo			1	-11.256	ug/l	-24.03	168.00	8.504E-05	Pulse	0.50	3
Pb			1	4.036	ug/l	18.88	1,827.43	5.851E-04	Pulse	1.00	3
Be			1	-12.307	ug/l	-178.11	1.67	6.989E-06	Pulse	2.00	3
Ag			1	-0.705	ug/l	-55.82	109.33	5.538E-05	Pulse	0.50	3
Ba			1	50.329	ug/l	4.89	322.67	1.634E-04	Pulse	0.50	3
Tl			1	-6.955	ug/l	-2.63	87.33	2.792E-05	Pulse	0.50	3
Sn			1	-16.404	ug/l	-9.78	390.01	1.975E-04	Pulse	0.30	3
Sr			1	7793.746	ug/l	0.86	147,035.94	7.446E-02	Pulse	0.50	3
[Pb]			1	1.138	ug/l	336.94	826.02	2.647E-04	Pulse	0.50	3
Ca			1	417097.820	ug/l	1.27	49,810.17	2.057E-01	Pulse	0.50	3
Ti			1	11.574	ug/l	55.02	20.00	8.255E-05	Pulse	0.50	3
Na			1	7551635.496	ug/l	1.65	34,742,694.67	1.435E+02	Analog	1.00	3
Mg			1	938005.052	ug/l	1.93	2,128,000.83	8.790E+00	Pulse	1.00	3
K			1	273686.980	ug/l	1.57	761,853.50	3.147E+00	Pulse	1.00	3
V			1	13.143	ug/l	18.35	1,558.07	6.437E-03	Pulse	0.50	3
Mn			1	143.739	ug/l	5.32	2,794.21	1.154E-02	Pulse	0.50	3
Fe			1	319.778	ug/l	6.87	24,758.42	1.023E-01	Pulse	0.50	3
Co			1	-0.689	ug/l	-39.11	89.33	3.691E-04	Pulse	0.50	3
Ni			1	4.053	ug/l	21.97	178.00	7.350E-04	Pulse	0.50	3
Cu			1	-268.344	ug/l	-5.14	25,490.12	1.053E-01	Pulse	0.50	3
Zn			1	196.023	ug/l	4.90	3,276.29	9.152E-03	Pulse	1.00	3
Cd			1	-1.394	ug/l	-0.18	6.00	3.038E-06	Pulse	0.50	3
Al			1	1186.362	ug/l	1.26	1,681.08	6.943E-03	Pulse	1.00	3
Se			1	9.170	ug/l	154.70	62.22	1.738E-04	Pulse	3.00	3
Sb			1	-8.095	ug/l	-9.20	101.00	5.114E-05	Pulse	1.00	3
Se			1	-19.876	ug/l	-147.81	47.56	1.329E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,123,989.33	1.34	98.8	Pulse	0.50	3
1	Sc		419,860.89	0.48	106.2	Pulse	0.30	3
1	Ge		242,135.79	1.31	105.6	Pulse	0.30	3
1	In		1,974,761.45	0.28	102.7	Pulse	0.30	3
1	Tb		4,703,602.33	0.71	101.4	Pulse	0.50	3
1	Lu		3,338,877.67	0.94	101.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		357,984.25	0.47	105.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,114.48	3.89	87.0	Pulse	0.30	3

Quantitation Report

File Name	031SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:41
Sample Name	FC674-5
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.102	ug/l	10.09	6,494.44	2.685E-02	Pulse	0.50	3
As			1	3.265	ug/l	7.02	313.33	1.295E-03	Pulse	1.00	3
Mo			1	6.757	ug/l	4.72	2,216.81	1.131E-03	Pulse	0.50	3
Pb			1	1.861	ug/l	5.58	3,478.69	1.126E-03	Pulse	1.00	3
Be			1	-0.562	ug/l	-84.16	1.83	7.583E-06	Pulse	2.00	3
Ag			1	0.211	ug/l	10.47	313.33	1.599E-04	Pulse	0.50	3
Ba			1	178.006	ug/l	1.14	21,464.08	1.095E-02	Pulse	0.50	3
Tl			1	-0.333	ug/l	-5.22	106.67	3.450E-05	Pulse	0.50	3
Sn			1	-0.602	ug/l	-38.61	448.90	2.290E-04	Pulse	0.30	3
Sr			1	2051.335	ug/l	0.27	765,975.04	3.909E-01	Pulse	0.50	3
[Pb]			1	1.787	ug/l	2.91	1,646.09	5.329E-04	Pulse	0.50	3
Ca			1	251189.054	ug/l	0.94	593,634.29	2.455E+00	Pulse	0.50	3
Ti			1	2.222	ug/l	3.36	46.67	1.930E-04	Pulse	0.50	3
Na			1	764261.760	ug/l	0.43	70,209,149.33	2.903E+02	Analog	1.00	3
Mg			1	64184.748	ug/l	0.66	2,908,668.08	1.203E+01	Pulse	1.00	3
K			1	36688.714	ug/l	0.67	1,893,087.83	7.828E+00	Pulse	1.00	3
V			1	6.727	ug/l	2.37	4,503.87	1.862E-02	Pulse	0.50	3
Mn			1	60.447	ug/l	1.53	21,134.16	8.739E-02	Pulse	0.50	3
Fe			1	137.411	ug/l	2.19	84,467.01	3.493E-01	Pulse	0.50	3
Co			1	0.988	ug/l	5.61	1,030.03	4.260E-03	Pulse	0.50	3
Ni			1	2.877	ug/l	5.33	834.02	3.449E-03	Pulse	0.50	3
Cu			1	11.178	ug/l	5.03	41,386.81	1.711E-01	Pulse	0.50	3
Zn			1	31.781	ug/l	3.04	5,571.15	1.557E-02	Pulse	1.00	3
Cd			1	0.096	ug/l	90.78	27.33	1.393E-05	Pulse	0.50	3
Al			1	49.241	ug/l	1.31	1,480.73	6.123E-03	Pulse	1.00	3
Se			1	1.723	ug/l	64.10	69.00	1.929E-04	Pulse	3.00	3
Sb			1	9.586	ug/l	3.95	3,829.41	1.954E-03	Pulse	1.00	3
Se			1	1.865	ug/l	85.05	54.78	1.531E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,088,528.58	1.28	97.7	Pulse	0.50	3
1	Sc		421,949.43	1.58	106.7	Pulse	0.30	3
1	Ge		241,843.73	0.41	105.5	Pulse	0.30	3
1	In		1,959,764.37	0.81	101.9	Pulse	0.30	3
1	Tb		4,681,103.33	0.64	101.0	Pulse	0.50	3
1	Lu		3,356,918.25	0.99	101.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		357,736.39	0.35	105.8	Pulse	0.30	3
1	Te		1.33	86.60	66.7	Pulse	0.50	3
1	Li		1,276.72	2.91	99.7	Pulse	0.30	3

Quantitation Report

File Name	032CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:45
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.469	ug/l	1.20	697,883.75	2.896E+00	Pulse	0.50	3
As			1	45.476	ug/l	1.17	82,043.11	3.405E-01	Pulse	1.00	3
Mo			1	45.983	ug/l	1.53	318,185.85	1.644E-01	Pulse	0.50	3
Pb			1	45.549	ug/l	1.14	1,167,912.08	3.720E-01	Pulse	1.00	3
Be			1	46.173	ug/l	3.07	3,074.73	1.276E-02	Pulse	2.00	3
Ag			1	48.670	ug/l	1.55	999,283.04	5.164E-01	Pulse	0.50	3
Ba			1	46.026	ug/l	1.37	136,889.39	7.075E-02	Pulse	0.50	3
Tl			1	47.293	ug/l	1.46	1,701,454.71	5.420E-01	Pulse	0.50	3
Sn			1	46.130	ug/l	1.60	322,426.71	1.666E-01	Pulse	0.30	3
Sr			1	47.046	ug/l	0.45	433,847.39	2.242E-01	Pulse	0.50	3
[Pb]			1	45.520	ug/l	1.05	554,557.88	1.767E-01	Pulse	0.50	3
Ca			1	4634.931	ug/l	1.22	273,088.65	1.133E+00	Pulse	0.50	3
Ti			1	46.040	ug/l	2.56	18,644.89	7.739E-02	Pulse	0.50	3
Na			1	4660.768	ug/l	1.12	10,694,641.00	4.439E+01	Analog	1.00	3
Mg			1	4598.888	ug/l	1.40	5,189,575.67	2.154E+01	Analog	1.00	3
K			1	4620.398	ug/l	0.27	5,750,629.50	2.387E+01	Analog	1.00	3
V			1	46.413	ug/l	1.06	562,467.02	2.334E+00	Pulse	0.50	3
Mn			1	46.561	ug/l	0.46	399,697.06	1.659E+00	Pulse	0.50	3
Fe			1	4659.345	ug/l	1.18	57,107,037.33	2.370E+02	Analog	0.50	3
Co			1	46.650	ug/l	1.12	1,069,770.42	4.440E+00	Pulse	0.50	3
Ni			1	46.635	ug/l	0.75	285,224.01	1.184E+00	Pulse	0.50	3
Cu			1	45.736	ug/l	1.29	771,520.12	3.202E+00	Pulse	0.50	3
Zn			1	45.869	ug/l	1.47	121,238.80	3.412E-01	Pulse	1.00	3
Cd			1	46.124	ug/l	1.43	146,501.16	7.571E-02	Pulse	0.50	3
Al			1	4563.872	ug/l	1.39	2,237,558.50	9.287E+00	Pulse	1.00	3
Se			1	45.749	ug/l	0.58	6,195.34	1.744E-02	Pulse	3.00	3
Sb			1	45.722	ug/l	1.18	421,424.33	2.178E-01	Pulse	1.00	3
Se			1	45.678	ug/l	3.42	2,924.56	8.232E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,139,322.92	1.01	99.3	Pulse	0.50	3
1	Sc		416,660.58	0.39	105.4	Pulse	0.30	3
1	Ge		240,949.78	0.75	105.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,935,026.38	0.60	100.6	Pulse	0.30	3
1	Tb		4,697,567.50	0.76	101.3	Pulse	0.50	3
1	Lu		3,346,779.42	0.26	101.3	Pulse	0.50	3
1	Ge		355,306.76	0.66	105.1	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,198.94	9.71	93.6	Pulse	0.30	3

Quantitation Report

File Name	033_CCV.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:48
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.609	ug/l	1.52	1,404,301.42	5.942E+00	Pulse	0.50	3
As			1	94.163	ug/l	1.14	166,556.33	7.047E-01	Pulse	1.00	3
Mo			1	96.025	ug/l	1.42	655,637.13	3.432E-01	Pulse	0.50	3
Pb			1	95.116	ug/l	1.49	2,381,204.83	7.763E-01	Pulse	1.00	3
Be			1	94.092	ug/l	2.33	6,143.27	2.599E-02	Pulse	2.00	3
Ag			1	99.233	ug/l	0.61	2,011,211.50	1.053E+00	Pulse	0.50	3
Ba			1	94.680	ug/l	0.67	277,985.09	1.455E-01	Pulse	0.50	3
Tl			1	98.337	ug/l	1.60	3,456,220.00	1.127E+00	Pulse	0.50	3
Sn			1	95.683	ug/l	1.53	659,595.02	3.453E-01	Pulse	0.30	3
Sr			1	97.079	ug/l	0.44	883,270.23	4.624E-01	Pulse	0.50	3
[Pb]			1	95.103	ug/l	1.54	1,131,232.12	3.688E-01	Pulse	0.50	3
Ca			1	9618.157	ug/l	1.44	555,363.65	2.350E+00	Pulse	0.50	3
Ti			1	95.622	ug/l	0.98	37,977.98	1.607E-01	Pulse	0.50	3
Na			1	9642.210	ug/l	1.04	21,665,977.33	9.167E+01	Analog	1.00	3
Mg			1	9505.252	ug/l	1.33	10,520,375.67	4.451E+01	Analog	1.00	3
K			1	9537.999	ug/l	0.56	11,553,709.00	4.888E+01	Analog	1.00	3
V			1	96.119	ug/l	1.53	1,141,361.37	4.829E+00	Pulse	0.50	3
Mn			1	95.495	ug/l	1.25	803,805.34	3.401E+00	Pulse	0.50	3
Fe			1	9570.809	ug/l	1.60	115,049,298.67	4.868E+02	Analog	0.50	3
Co			1	95.600	ug/l	1.17	2,150,347.17	9.098E+00	Pulse	0.50	3
Ni			1	95.778	ug/l	1.52	574,466.52	2.431E+00	Pulse	0.50	3
Cu			1	94.714	ug/l	1.67	1,531,510.96	6.480E+00	Pulse	0.50	3
Zn			1	95.601	ug/l	1.39	244,843.37	7.044E-01	Pulse	1.00	3
Cd			1	95.297	ug/l	0.99	298,801.64	1.564E-01	Pulse	0.50	3
Al			1	9482.687	ug/l	1.62	4,560,011.50	1.929E+01	Pulse	1.00	3
Se			1	94.984	ug/l	1.31	12,521.76	3.602E-02	Pulse	3.00	3
Sb			1	94.544	ug/l	0.84	860,020.73	4.502E-01	Pulse	1.00	3
Se			1	94.759	ug/l	0.78	5,884.02	1.693E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,067,337.92	0.21	97.0	Pulse	0.50	3
1	Sc		409,640.34	0.80	103.6	Pulse	0.30	3
1	Ge		236,359.49	0.77	103.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,910,245.48	0.28	99.3	Pulse	0.30	3
1	Tb		4,657,505.83	0.58	100.4	Pulse	0.50	3
1	Lu		3,311,318.08	0.82	100.2	Pulse	0.50	3
1	Ge		347,611.53	0.71	102.8	Pulse	0.30	3
1	Te		8.67	70.50	433.3	Pulse	0.50	3
1	Li		1,257.83	6.87	98.2	Pulse	0.30	3

Quantitation Report

File Name	034_CCB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 10:52
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.049	ug/l	27.04	4,651.24	1.973E-02	Pulse	0.50	3
As			1	0.028	ug/l	24.89	123.67	5.248E-04	Pulse	1.00	3
Mo			1	0.069	ug/l	17.51	802.68	4.121E-04	Pulse	0.50	3
Pb			1	-0.007	ug/l	-122.57	1,438.40	4.609E-04	Pulse	1.00	3
Be			1	0.007	ug/l	252.44	3.67	1.558E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	52.25	466.01	2.395E-04	Pulse	0.50	3
Ba			1	0.008	ug/l	100.47	42.00	2.161E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	57.95	1,130.71	3.624E-04	Pulse	0.50	3
Sn			1	0.069	ug/l	25.68	1,096.71	5.630E-04	Pulse	0.30	3
Sr			1	0.019	ug/l	51.26	676.02	3.473E-04	Pulse	0.50	3
[Pb]			1	-0.008	ug/l	-107.52	704.02	2.256E-04	Pulse	0.50	3
Ca			1	2.962	ug/l	34.76	669.35	2.840E-03	Pulse	0.50	3
Ti			1	0.043	ug/l	95.83	27.33	1.160E-04	Pulse	0.50	3
Na			1	6.874	ug/l	16.58	50,655.71	2.149E-01	Pulse	1.00	3
Mg			1	2.181	ug/l	49.36	3,694.37	1.568E-02	Pulse	1.00	3
K			1	4.422	ug/l	23.46	90,674.88	3.847E-01	Pulse	1.00	3
V			1	0.042	ug/l	19.52	1,703.41	7.227E-03	Pulse	0.50	3
Mn			1	0.012	ug/l	105.84	410.67	1.743E-03	Pulse	0.50	3
Fe			1	2.389	ug/l	44.91	45,043.19	1.912E-01	Pulse	0.50	3
Co			1	0.016	ug/l	58.13	477.68	2.030E-03	Pulse	0.50	3
Ni			1	0.020	ug/l	44.46	245.33	1.041E-03	Pulse	0.50	3
Cu			1	-1.113	ug/l	-2.07	15,719.08	6.669E-02	Pulse	0.50	3
Zn			1	-0.482	ug/l	-3.40	970.02	2.771E-03	Pulse	1.00	3
Cd			1	0.023	ug/l	74.44	87.33	4.492E-05	Pulse	0.50	3
Al			1	2.197	ug/l	53.57	1,550.74	6.586E-03	Pulse	1.00	3
Se			1	0.096	ug/l	43.02	71.11	2.032E-04	Pulse	3.00	3
Sb			1	0.036	ug/l	13.52	583.68	2.998E-04	Pulse	1.00	3
Se			1	-0.102	ug/l	-69.10	42.67	1.219E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,122,161.08	0.54	98.8	Pulse	0.50	3
1	Sc		414,909.25	0.18	104.9	Pulse	0.30	3

Quantitation Report

1	Ge		235,722.78	0.85	102.8	Pulse	0.30	3
1	In		1,947,306.52	0.48	101.3	Pulse	0.30	3
1	Tb		4,627,177.17	0.42	99.8	Pulse	0.50	3
1	Lu		3,270,936.33	0.59	99.0	Pulse	0.50	3
1	Ge		350,033.68	0.30	103.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,272.27	3.54	99.3	Pulse	0.30	3

Quantitation Report

File Name 035SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 10:56
Sample Name FC674-6
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.190	ug/l	9.58	5,867.57	2.460E-02	Pulse	0.50	3
As			1	0.500	ug/l	50.62	111.67	4.681E-04	Pulse	1.00	3
Mo			1	0.009	ug/l	2407.38	324.67	1.667E-04	Pulse	0.50	3
Pb			1	-0.100	ug/l	-79.93	1,502.40	4.865E-04	Pulse	1.00	3
Be			1	-0.994	ug/l	-29.44	0.67	2.810E-06	Pulse	2.00	3
Ag			1	0.050	ug/l	41.30	178.00	9.139E-05	Pulse	0.50	3
Ba			1	5.510	ug/l	2.96	676.68	3.474E-04	Pulse	0.50	3
Tl			1	-0.078	ug/l	-0.80	468.01	1.516E-04	Pulse	0.50	3
Sn			1	0.279	ug/l	55.10	693.35	3.560E-04	Pulse	0.30	3
Sr			1	1333.729	ug/l	1.23	495,100.34	2.542E-01	Pulse	0.50	3
[Pb]			1	-0.105	ug/l	-149.58	740.02	2.395E-04	Pulse	0.50	3
Ca			1	86018.794	ug/l	1.10	200,870.33	8.420E-01	Pulse	0.50	3
Ti			1	1.888	ug/l	31.77	40.67	1.706E-04	Pulse	0.50	3
Na			1	401592.520	ug/l	1.21	36,410,829.33	1.526E+02	Analog	1.00	3
Mg			1	58725.001	ug/l	1.36	2,625,349.75	1.100E+01	Pulse	1.00	3
K			1	19140.242	ug/l	0.80	1,015,618.46	4.257E+00	Pulse	1.00	3
V			1	3.044	ug/l	3.65	2,678.86	1.123E-02	Pulse	0.50	3
Mn			1	13.820	ug/l	4.42	5,006.66	2.099E-02	Pulse	0.50	3
Fe			1	28.017	ug/l	3.89	30,235.46	1.267E-01	Pulse	0.50	3
Co			1	0.114	ug/l	32.10	222.67	9.329E-04	Pulse	0.50	3
Ni			1	0.315	ug/l	34.93	202.67	8.492E-04	Pulse	0.50	3
Cu			1	-13.315	ug/l	-3.35	25,184.41	1.056E-01	Pulse	0.50	3
Zn			1	14.908	ug/l	6.22	3,773.04	1.064E-02	Pulse	1.00	3
Cd			1	0.087	ug/l	219.85	26.00	1.336E-05	Pulse	0.50	3
Al			1	74.020	ug/l	2.81	1,942.10	8.139E-03	Pulse	1.00	3
Se			1	0.883	ug/l	114.39	63.89	1.802E-04	Pulse	3.00	3
Sb			1	-0.105	ug/l	-126.05	211.00	1.083E-04	Pulse	1.00	3
Se			1	-1.610	ug/l	-136.06	45.56	1.285E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,086,101.50	1.73	97.6	Pulse	0.50	3
1	Sc		415,874.00	0.14	105.2	Pulse	0.30	3
1	Ge		238,586.80	0.74	104.1	Pulse	0.30	3
1	In		1,947,575.06	0.40	101.3	Pulse	0.30	3
1	Tb		4,633,537.83	1.03	99.9	Pulse	0.50	3
1	Lu		3,303,904.08	1.27	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		354,464.67	0.28	104.8	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,302.27	5.82	101.6	Pulse	0.30	3

Quantitation Report

File Name 036_MB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:00
Sample Name MP41595-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.226	ug/l	4.24	5,695.52	2.370E-02	Pulse	0.50	3
As			1	0.022	ug/l	80.55	96.33	4.010E-04	Pulse	1.00	3
Mo			1	-0.006	ug/l	-222.41	302.00	1.543E-04	Pulse	0.50	3
Pb			1	0.898	ug/l	1.74	13,096.35	4.183E-03	Pulse	1.00	3
Be			1	-0.065	ug/l	-35.56	1.17	4.857E-06	Pulse	2.00	3
Ag			1	0.004	ug/l	35.58	176.67	9.028E-05	Pulse	0.50	3
Ba			1	0.006	ug/l	173.95	26.67	1.362E-05	Pulse	0.50	3
Tl			1	-0.018	ug/l	-7.56	265.33	8.477E-05	Pulse	0.50	3
Sn			1	-0.006	ug/l	-263.00	597.79	3.054E-04	Pulse	0.30	3
Sr			1	0.049	ug/l	33.69	728.68	3.725E-04	Pulse	0.50	3
[Pb]			1	0.913	ug/l	0.93	6,336.52	2.024E-03	Pulse	0.50	3
Ca			1	17.708	ug/l	12.59	1,028.03	4.278E-03	Pulse	0.50	3
Ti			1	0.130	ug/l	45.66	36.67	1.525E-04	Pulse	0.50	3
Na			1	18.364	ug/l	19.88	56,897.14	2.368E-01	Pulse	1.00	3
Mg			1	4.075	ug/l	15.07	3,605.67	1.501E-02	Pulse	1.00	3
K			1	32.148	ug/l	5.68	106,693.69	4.440E-01	Pulse	1.00	3
V			1	0.131	ug/l	3.20	2,017.44	8.395E-03	Pulse	0.50	3
Mn			1	2.582	ug/l	6.32	11,361.35	4.726E-02	Pulse	0.50	3
Fe			1	2.192	ug/l	2.94	30,160.06	1.255E-01	Pulse	0.50	3
Co			1	0.004	ug/l	31.53	163.33	6.794E-04	Pulse	0.50	3
Ni			1	4.744	ug/l	1.21	14,590.20	6.071E-02	Pulse	0.50	3
Cu			1	18.197	ug/l	0.83	180,271.81	7.501E-01	Pulse	0.50	3
Zn			1	11.701	ug/l	1.55	17,448.56	4.901E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	191.06	17.33	8.863E-06	Pulse	0.50	3
Al			1	3.920	ug/l	2.81	1,466.73	6.104E-03	Pulse	1.00	3
Se			1	0.109	ug/l	35.98	66.78	1.875E-04	Pulse	3.00	3
Sb			1	-0.015	ug/l	-22.49	179.67	9.180E-05	Pulse	1.00	3
Se			1	-0.273	ug/l	-68.94	41.22	1.157E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,130,596.92	0.70	99.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		420,902.94	0.11	106.5	Pulse	0.30	3
1	Ge		240,328.91	0.71	104.9	Pulse	0.30	3
1	In		1,956,764.58	0.46	101.7	Pulse	0.30	3
1	Tb		4,649,676.83	0.97	100.3	Pulse	0.50	3
1	Lu		3,300,299.08	1.38	99.8	Pulse	0.50	3
1	Ge		356,013.84	0.72	105.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,283.38	5.66	100.2	Pulse	0.30	3

Quantitation Report

File Name	037_BSP.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 11:03
Sample Name	MP41595-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	225.633	ug/l	1.72	1,664,122.91	7.008E+00	Pulse	0.50	3
As			1	227.020	ug/l	1.10	201,701.81	8.494E-01	Pulse	1.00	3
Mo			1	226.658	ug/l	0.69	776,029.56	4.050E-01	Pulse	0.50	3
Pb			1	226.988	ug/l	1.03	2,806,673.50	9.262E-01	Pulse	1.00	3
Be			1	225.215	ug/l	1.15	7,386.00	3.111E-02	Pulse	2.00	3
Ag			1	103.307	ug/l	0.77	1,050,035.37	5.481E-01	Pulse	0.50	3
Ba			1	221.410	ug/l	1.24	326,004.58	1.701E-01	Pulse	0.50	3
Tl			1	223.176	ug/l	1.00	3,874,565.67	1.279E+00	Pulse	0.50	3
Sn			1	222.914	ug/l	2.48	770,526.48	4.022E-01	Pulse	0.30	3
Sr			1	227.633	ug/l	0.95	1,038,554.33	5.421E-01	Pulse	0.50	3
[Pb]			1	218.020	ug/l	0.70	1,280,873.21	4.227E-01	Pulse	0.50	3
Ca			1	20948.352	ug/l	0.93	607,586.83	2.559E+00	Pulse	0.50	3
Ti			1	224.412	ug/l	0.94	44,771.61	1.885E-01	Pulse	0.50	3
Na			1	21024.162	ug/l	0.73	23,727,794.67	9.993E+01	Analog	1.00	3
Mg			1	20712.732	ug/l	1.07	11,516,047.00	4.850E+01	Analog	1.00	3
K			1	20779.358	ug/l	0.52	12,636,364.33	5.322E+01	Analog	1.00	3
V			1	225.507	ug/l	1.28	1,344,910.29	5.664E+00	Pulse	0.50	3
Mn			1	225.523	ug/l	1.47	953,529.44	4.016E+00	Pulse	0.50	3
Fe			1	20719.373	ug/l	1.05	125,115,413.33	5.269E+02	Analog	0.50	3
Co			1	226.872	ug/l	0.88	2,563,555.67	1.080E+01	Pulse	0.50	3
Ni			1	223.474	ug/l	1.01	673,304.73	2.835E+00	Pulse	0.50	3
Cu			1	236.050	ug/l	1.55	1,909,143.62	8.040E+00	Pulse	0.50	3
Zn			1	229.006	ug/l	1.55	298,337.35	8.424E-01	Pulse	1.00	3
Cd			1	222.148	ug/l	1.33	349,294.64	1.823E-01	Pulse	0.50	3
Al			1	20091.403	ug/l	1.37	4,853,436.00	2.044E+01	Pulse	1.00	3
Se			1	217.238	ug/l	0.47	14,580.22	4.117E-02	Pulse	3.00	3
Sb			1	226.182	ug/l	1.21	1,031,760.33	5.385E-01	Pulse	1.00	3
Se			1	215.753	ug/l	1.79	6,817.44	1.925E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,030,100.75	1.23	95.8	Pulse	0.50	3
1	Sc		414,986.11	0.98	105.0	Pulse	0.30	3
1	Ge		237,460.23	0.77	103.6	Pulse	0.30	3
1	In		1,915,923.88	0.73	99.6	Pulse	0.30	3
1	Tb		4,666,892.17	0.62	100.6	Pulse	0.50	3
1	Lu		3,317,784.25	0.13	100.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		354,145.41	0.37	104.7	Pulse	0.30	3
1	Te		4.00	50.00	200.0	Pulse	0.50	3
1	Li		1,197.82	6.27	93.5	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:07
Sample Name FC1052-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.599	ug/l	8.59	8,330.47	3.525E-02	Pulse	0.50	3
As			1	0.387	ug/l	3.65	417.68	1.767E-03	Pulse	1.00	3
Mo			1	0.631	ug/l	0.61	2,504.17	1.293E-03	Pulse	0.50	3
Pb			1	0.790	ug/l	1.97	11,675.32	3.742E-03	Pulse	1.00	3
Be			1	0.013	ug/l	861.30	3.67	1.552E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	35.37	286.67	1.480E-04	Pulse	0.50	3
Ba			1	5.451	ug/l	0.92	8,129.18	4.197E-03	Pulse	0.50	3
Tl			1	0.061	ug/l	41.57	1,680.09	5.393E-04	Pulse	0.50	3
Sn			1	0.296	ug/l	10.51	1,646.76	8.502E-04	Pulse	0.30	3
Sr			1	35.682	ug/l	0.65	164,987.00	8.518E-02	Pulse	0.50	3
[Pb]			1	0.775	ug/l	0.67	5,486.24	1.758E-03	Pulse	0.50	3
Ca			1	6675.479	ug/l	0.91	193,055.04	8.168E-01	Pulse	0.50	3
Ti			1	0.563	ug/l	15.67	122.00	5.163E-04	Pulse	0.50	3
Na			1	6734.465	ug/l	0.58	7,589,272.50	3.211E+01	Analog	1.00	3
Mg			1	490.391	ug/l	0.39	272,650.82	1.154E+00	Pulse	1.00	3
K			1	369.038	ug/l	1.62	307,453.61	1.301E+00	Pulse	1.00	3
V			1	0.342	ug/l	13.29	3,234.28	1.369E-02	Pulse	0.50	3
Mn			1	4.566	ug/l	1.39	19,519.82	8.258E-02	Pulse	0.50	3
Fe			1	98.414	ug/l	2.15	607,896.48	2.572E+00	Pulse	0.50	3
Co			1	0.089	ug/l	31.45	1,118.04	4.733E-03	Pulse	0.50	3
Ni			1	0.211	ug/l	18.95	757.35	3.206E-03	Pulse	0.50	3
Cu			1	-0.482	ug/l	-6.03	29,560.57	1.251E-01	Pulse	0.50	3
Zn			1	52.299	ug/l	0.55	69,645.06	1.972E-01	Pulse	1.00	3
Cd			1	0.069	ug/l	34.87	124.67	6.437E-05	Pulse	0.50	3
Al			1	33.807	ug/l	6.22	8,627.55	3.650E-02	Pulse	1.00	3
Se			1	0.162	ug/l	96.17	69.67	1.974E-04	Pulse	3.00	3
Sb			1	0.138	ug/l	1.23	883.35	4.561E-04	Pulse	1.00	3
Se			1	-0.272	ug/l	-49.46	40.89	1.158E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,120,544.58	1.06	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		417,973.27	0.89	105.7	Pulse	0.30	3
1	Ge		236,358.84	0.96	103.1	Pulse	0.30	3
1	In		1,936,835.89	0.11	100.7	Pulse	0.30	3
1	Tb		4,579,351.67	0.73	98.8	Pulse	0.50	3
1	Lu		3,267,982.75	0.88	98.9	Pulse	0.50	3
1	Ge		353,085.40	0.98	104.4	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,284.49	7.38	100.3	Pulse	0.30	3

Quantitation Report

File Name 039SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:11
Sample Name MP41595-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.497	ug/l	3.06	7,618.84	3.209E-02	Pulse	0.50	3
As			1	0.318	ug/l	17.85	358.34	1.510E-03	Pulse	1.00	3
Mo			1	0.451	ug/l	10.48	1,898.77	9.710E-04	Pulse	0.50	3
Pb			1	0.718	ug/l	1.66	10,725.37	3.446E-03	Pulse	1.00	3
Be			1	-0.054	ug/l	-84.29	1.50	6.309E-06	Pulse	2.00	3
Ag			1	0.004	ug/l	14.73	180.67	9.241E-05	Pulse	0.50	3
Ba			1	5.243	ug/l	0.90	7,893.73	4.037E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-251.59	550.68	1.772E-04	Pulse	0.50	3
Sn			1	0.081	ug/l	31.52	901.14	4.610E-04	Pulse	0.30	3
Sr			1	34.699	ug/l	1.00	161,969.98	8.284E-02	Pulse	0.50	3
[Pb]			1	0.710	ug/l	1.51	5,079.44	1.631E-03	Pulse	0.50	3
Ca			1	6431.063	ug/l	0.24	186,851.50	7.870E-01	Pulse	0.50	3
Ti			1	0.516	ug/l	21.58	113.33	4.772E-04	Pulse	0.50	3
Na			1	6536.553	ug/l	0.26	7,400,754.17	3.117E+01	Analog	1.00	3
Mg			1	471.792	ug/l	0.43	263,550.45	1.110E+00	Pulse	1.00	3
K			1	354.027	ug/l	0.74	299,795.69	1.263E+00	Pulse	1.00	3
V			1	0.284	ug/l	6.63	2,904.89	1.223E-02	Pulse	0.50	3
Mn			1	3.476	ug/l	1.01	15,000.47	6.318E-02	Pulse	0.50	3
Fe			1	92.686	ug/l	0.91	576,107.33	2.426E+00	Pulse	0.50	3
Co			1	0.045	ug/l	7.88	622.68	2.623E-03	Pulse	0.50	3
Ni			1	0.141	ug/l	2.44	550.01	2.317E-03	Pulse	0.50	3
Cu			1	-0.480	ug/l	-7.07	29,710.81	1.251E-01	Pulse	0.50	3
Zn			1	50.106	ug/l	1.32	67,017.75	1.892E-01	Pulse	1.00	3
Cd			1	0.016	ug/l	22.46	41.33	2.115E-05	Pulse	0.50	3
Al			1	24.052	ug/l	1.44	6,311.34	2.658E-02	Pulse	1.00	3
Se			1	0.087	ug/l	104.42	64.89	1.833E-04	Pulse	3.00	3
Sb			1	0.027	ug/l	24.32	374.67	1.916E-04	Pulse	1.00	3
Se			1	-0.081	ug/l	-145.24	47.00	1.327E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,113,342.83	1.91	98.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		415,012.71	0.26	105.0	Pulse	0.30	3
1	Ge		237,425.88	0.22	103.6	Pulse	0.30	3
1	In		1,955,096.10	0.39	101.7	Pulse	0.30	3
1	Tb		4,627,761.50	1.00	99.8	Pulse	0.50	3
1	Lu		3,273,438.33	1.25	99.0	Pulse	0.50	3
1	Ge		354,140.52	0.45	104.7	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,214.49	3.74	94.8	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:15
Sample Name MP41595-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.732	ug/l	25.89	5,084.68	2.122E-02	Pulse	0.50	3
As			1	0.333	ug/l	42.17	136.00	5.675E-04	Pulse	1.00	3
Mo			1	0.258	ug/l	56.14	506.01	2.575E-04	Pulse	0.50	3
Pb			1	0.457	ug/l	2.60	2,813.57	8.918E-04	Pulse	1.00	3
Be			1	-0.222	ug/l	-129.36	1.83	7.661E-06	Pulse	2.00	3
Ag			1	-0.006	ug/l	-222.30	126.67	6.448E-05	Pulse	0.50	3
Ba			1	5.136	ug/l	4.33	1,566.74	7.980E-04	Pulse	0.50	3
Tl			1	-0.087	ug/l	-4.37	276.67	8.770E-05	Pulse	0.50	3
Sn			1	-0.289	ug/l	-46.73	415.56	2.114E-04	Pulse	0.30	3
Sr			1	33.463	ug/l	1.88	31,780.67	1.618E-02	Pulse	0.50	3
[Pb]			1	0.386	ug/l	14.72	1,279.39	4.056E-04	Pulse	0.50	3
Ca			1	6240.638	ug/l	0.46	37,008.12	1.544E-01	Pulse	0.50	3
Ti			1	0.502	ug/l	40.14	30.67	1.280E-04	Pulse	0.50	3
Na			1	6306.217	ug/l	0.88	1,470,149.91	6.135E+00	Pulse	1.00	3
Mg			1	451.757	ug/l	1.52	51,998.83	2.170E-01	Pulse	1.00	3
K			1	370.107	ug/l	0.89	131,907.03	5.505E-01	Pulse	1.00	3
V			1	0.510	ug/l	11.08	1,840.09	7.679E-03	Pulse	0.50	3
Mn			1	2.825	ug/l	10.03	2,723.53	1.137E-02	Pulse	0.50	3
Fe			1	85.175	ug/l	0.80	120,505.23	5.029E-01	Pulse	0.50	3
Co			1	0.024	ug/l	48.89	174.00	7.263E-04	Pulse	0.50	3
Ni			1	0.206	ug/l	10.92	252.00	1.052E-03	Pulse	0.50	3
Cu			1	-9.870	ug/l	-0.40	18,007.09	7.515E-02	Pulse	0.50	3
Zn			1	44.872	ug/l	2.01	13,940.37	3.906E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	204.30	18.67	9.519E-06	Pulse	0.50	3
Al			1	29.418	ug/l	1.57	1,941.10	8.101E-03	Pulse	1.00	3
Se			1	0.420	ug/l	45.91	65.22	1.827E-04	Pulse	3.00	3
Sb			1	-0.066	ug/l	-47.33	190.33	9.687E-05	Pulse	1.00	3
Se			1	-1.324	ug/l	-36.21	41.56	1.165E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,155,006.83	0.63	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		420,366.02	0.40	106.3	Pulse	0.30	3
1	Ge		239,621.68	0.22	104.5	Pulse	0.30	3
1	In		1,963,617.35	0.62	102.1	Pulse	0.30	3
1	Tb		4,652,184.50	0.52	100.3	Pulse	0.50	3
1	Lu		3,276,760.75	0.32	99.1	Pulse	0.50	3
1	Ge		356,912.80	0.48	105.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,275.60	8.50	99.6	Pulse	0.30	3

Quantitation Report

File Name	041SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 11:19
Sample Name	MP41595-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	229.653	ug/l	3.45	1,731,668.04	7.133E+00	Pulse	0.50	3
As			1	231.812	ug/l	3.00	210,579.92	8.674E-01	Pulse	1.00	3
Mo			1	235.680	ug/l	2.49	810,091.63	4.211E-01	Pulse	0.50	3
Pb			1	233.469	ug/l	2.75	2,856,599.50	9.526E-01	Pulse	1.00	3
Be			1	226.068	ug/l	3.36	7,580.24	3.122E-02	Pulse	2.00	3
Ag			1	106.553	ug/l	1.69	1,087,337.12	5.653E-01	Pulse	0.50	3
Ba			1	231.108	ug/l	1.72	341,622.59	1.776E-01	Pulse	0.50	3
Tl			1	229.639	ug/l	2.43	3,945,055.67	1.316E+00	Pulse	0.50	3
Sn			1	227.463	ug/l	2.78	789,342.43	4.104E-01	Pulse	0.30	3
Sr			1	270.246	ug/l	1.79	1,237,763.04	6.435E-01	Pulse	0.50	3
[Pb]			1	223.326	ug/l	2.29	1,298,327.25	4.330E-01	Pulse	0.50	3
Ca			1	27638.461	ug/l	3.18	819,437.56	3.375E+00	Pulse	0.50	3
Ti			1	229.480	ug/l	3.28	46,808.39	1.928E-01	Pulse	0.50	3
Na			1	27626.520	ug/l	2.77	31,868,288.00	1.313E+02	Analog	1.00	3
Mg			1	21608.623	ug/l	2.83	12,283,978.67	5.060E+01	Analog	1.00	3
K			1	21707.279	ug/l	1.67	13,494,498.00	5.558E+01	Analog	1.00	3
V			1	229.680	ug/l	2.60	1,400,592.29	5.769E+00	Pulse	0.50	3
Mn			1	232.450	ug/l	2.99	1,004,864.75	4.139E+00	Pulse	0.50	3
Fe			1	21310.191	ug/l	3.05	131,569,714.67	5.419E+02	Analog	0.50	3
Co			1	229.721	ug/l	3.17	2,653,901.33	1.093E+01	Pulse	0.50	3
Ni			1	226.810	ug/l	3.00	698,688.67	2.878E+00	Pulse	0.50	3
Cu			1	225.413	ug/l	3.49	1,865,524.79	7.684E+00	Pulse	0.50	3
Zn			1	273.361	ug/l	2.65	359,701.67	1.004E+00	Pulse	1.00	3
Cd			1	227.454	ug/l	2.42	359,060.80	1.867E-01	Pulse	0.50	3
Al			1	20278.504	ug/l	2.98	5,008,563.83	2.063E+01	Analog	1.00	3
Se			1	223.005	ug/l	2.12	15,134.64	4.226E-02	Pulse	3.00	3
Sb			1	231.817	ug/l	2.12	1,061,630.88	5.519E-01	Pulse	1.00	3
Se			1	222.186	ug/l	1.69	7,098.88	1.982E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,998,562.83	0.38	94.8	Pulse	0.50	3
1	Sc		426,259.67	1.12	107.8	Pulse	0.30	3
1	Ge		242,842.90	1.20	106.0	Pulse	0.30	3
1	In		1,923,481.10	0.22	100.0	Pulse	0.30	3
1	Tb		4,662,634.33	0.81	100.6	Pulse	0.50	3
1	Lu		3,309,837.00	1.26	100.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		358,173.79	0.67	105.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,168.93	3.13	91.2	Pulse	0.30	3

Quantitation Report

File Name 042SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:22
Sample Name MP41595-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	232.659	ug/l	1.43	1,705,623.25	7.226E+00	Pulse	0.50	3
As			1	234.538	ug/l	1.46	207,136.09	8.775E-01	Pulse	1.00	3
Mo			1	237.848	ug/l	0.79	800,769.73	4.250E-01	Pulse	0.50	3
Pb			1	236.425	ug/l	0.39	2,865,881.25	9.647E-01	Pulse	1.00	3
Be			1	234.018	ug/l	1.53	7,629.10	3.232E-02	Pulse	2.00	3
Ag			1	107.921	ug/l	0.54	1,078,721.71	5.725E-01	Pulse	0.50	3
Ba			1	232.940	ug/l	1.01	337,268.75	1.790E-01	Pulse	0.50	3
Tl			1	231.569	ug/l	0.80	3,941,231.67	1.327E+00	Pulse	0.50	3
Sn			1	231.114	ug/l	1.59	785,539.13	4.169E-01	Pulse	0.30	3
Sr			1	273.823	ug/l	0.74	1,228,418.50	6.520E-01	Pulse	0.50	3
[Pb]			1	227.523	ug/l	0.43	1,310,419.79	4.411E-01	Pulse	0.50	3
Ca			1	27944.232	ug/l	0.73	805,520.83	3.413E+00	Pulse	0.50	3
Ti			1	232.856	ug/l	0.78	46,179.53	1.956E-01	Pulse	0.50	3
Na			1	28178.337	ug/l	0.88	31,601,257.33	1.339E+02	Analog	1.00	3
Mg			1	21939.126	ug/l	1.37	12,125,463.00	5.137E+01	Analog	1.00	3
K			1	21809.872	ug/l	0.58	13,180,509.00	5.584E+01	Analog	1.00	3
V			1	233.300	ug/l	0.62	1,383,127.17	5.860E+00	Pulse	0.50	3
Mn			1	235.343	ug/l	1.15	989,118.90	4.190E+00	Pulse	0.50	3
Fe			1	21569.071	ug/l	1.67	129,464,760.00	5.485E+02	Analog	0.50	3
Co			1	233.378	ug/l	1.68	2,621,186.33	1.111E+01	Pulse	0.50	3
Ni			1	230.873	ug/l	2.12	691,402.50	2.929E+00	Pulse	0.50	3
Cu			1	229.569	ug/l	2.05	1,846,491.71	7.823E+00	Pulse	0.50	3
Zn			1	276.776	ug/l	0.75	354,248.67	1.017E+00	Pulse	1.00	3
Cd			1	229.113	ug/l	0.83	354,260.95	1.880E-01	Pulse	0.50	3
Al			1	20579.321	ug/l	1.41	4,941,722.50	2.094E+01	Analog	1.00	3
Se			1	225.268	ug/l	1.11	14,871.00	4.269E-02	Pulse	3.00	3
Sb			1	234.615	ug/l	1.39	1,052,398.71	5.586E-01	Pulse	1.00	3
Se			1	224.528	ug/l	1.50	6,977.61	2.003E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,970,760.00	1.04	94.0	Pulse	0.50	3
1	Sc		414,239.51	0.23	104.8	Pulse	0.30	3
1	Ge		236,057.39	1.02	103.0	Pulse	0.30	3
1	In		1,884,078.67	0.08	98.0	Pulse	0.30	3
1	Tb		4,608,655.50	1.20	99.4	Pulse	0.50	3
1	Lu		3,259,388.58	1.02	98.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		348,373.41	0.36	103.0	Pulse	0.30	3
1	Te		1.33	86.60	66.7	Pulse	0.50	3
1	Li		1,161.15	4.88	90.6	Pulse	0.30	3

Quantitation Report

File Name 043SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:26
Sample Name MP41595-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.071	ug/l	1.25	149,788.50	6.386E-01	Pulse	0.50	3
As			1	20.367	ug/l	1.30	17,942.07	7.650E-02	Pulse	1.00	3
Mo			1	19.816	ug/l	2.21	68,165.20	3.556E-02	Pulse	0.50	3
Pb			1	19.868	ug/l	0.96	248,806.62	8.154E-02	Pulse	1.00	3
Be			1	19.768	ug/l	0.71	643.34	2.743E-03	Pulse	2.00	3
Ag			1	4.555	ug/l	1.52	46,446.44	2.423E-02	Pulse	0.50	3
Ba			1	23.731	ug/l	0.82	34,971.66	1.824E-02	Pulse	0.50	3
Tl			1	19.123	ug/l	0.45	334,772.96	1.097E-01	Pulse	0.50	3
Sn			1	18.155	ug/l	2.07	63,337.46	3.304E-02	Pulse	0.30	3
Sr			1	53.432	ug/l	0.85	244,263.00	1.274E-01	Pulse	0.50	3
[Pb]			1	18.933	ug/l	0.02	112,706.06	3.694E-02	Pulse	0.50	3
Ca			1	8267.112	ug/l	0.65	237,151.96	1.011E+00	Pulse	0.50	3
Ti			1	20.052	ug/l	3.86	3,961.09	1.689E-02	Pulse	0.50	3
Na			1	8394.146	ug/l	0.50	9,379,072.00	3.999E+01	Analog	1.00	3
Mg			1	2462.445	ug/l	0.90	1,353,517.42	5.771E+00	Pulse	1.00	3
K			1	2319.613	ug/l	0.10	1,468,852.46	6.262E+00	Pulse	1.00	3
V			1	20.262	ug/l	0.68	120,459.84	5.136E-01	Pulse	0.50	3
Mn			1	23.101	ug/l	1.17	96,757.65	4.125E-01	Pulse	0.50	3
Fe			1	2017.591	ug/l	0.76	12,049,360.00	5.137E+01	Analog	0.50	3
Co			1	19.852	ug/l	1.32	221,680.28	9.451E-01	Pulse	0.50	3
Ni			1	20.075	ug/l	1.24	59,858.76	2.552E-01	Pulse	0.50	3
Cu			1	19.695	ug/l	1.07	187,701.91	8.002E-01	Pulse	0.50	3
Zn			1	69.327	ug/l	1.05	90,776.19	2.594E-01	Pulse	1.00	3
Cd			1	18.977	ug/l	2.82	29,868.11	1.558E-02	Pulse	0.50	3
Al			1	1899.722	ug/l	1.14	453,755.79	1.935E+00	Pulse	1.00	3
Se			1	19.540	ug/l	3.62	1,349.05	3.855E-03	Pulse	3.00	3
Sb			1	17.806	ug/l	1.57	81,486.83	4.251E-02	Pulse	1.00	3
Se			1	18.660	ug/l	4.03	627.34	1.793E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,050,973.75	1.53	96.5	Pulse	0.50	3
1	Sc		414,021.41	0.16	104.7	Pulse	0.30	3
1	Ge		234,554.74	0.21	102.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,916,852.35	0.85	99.7	Pulse	0.30	3
1	Tb		4,596,152.17	1.01	99.1	Pulse	0.50	3
1	Lu		3,256,617.50	0.77	98.5	Pulse	0.50	3
1	Ge		349,939.56	0.95	103.5	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,293.38	10.30	101.0	Pulse	0.30	3

Quantitation Report

File Name 044SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:30
Sample Name FC1052-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.628	ug/l	1.87	8,497.88	3.615E-02	Pulse	0.50	3
As			1	0.337	ug/l	2.62	371.33	1.580E-03	Pulse	1.00	3
Mo			1	0.532	ug/l	3.43	2,132.13	1.115E-03	Pulse	0.50	3
Pb			1	0.732	ug/l	1.88	10,783.07	3.504E-03	Pulse	1.00	3
Be			1	0.008	ug/l	700.08	3.50	1.488E-05	Pulse	2.00	3
Ag			1	0.005	ug/l	51.04	183.33	9.595E-05	Pulse	0.50	3
Ba			1	5.684	ug/l	0.79	8,369.29	4.377E-03	Pulse	0.50	3
Tl			1	0.012	ug/l	5.40	780.02	2.535E-04	Pulse	0.50	3
Sn			1	0.126	ug/l	10.32	1,037.82	5.425E-04	Pulse	0.30	3
Sr			1	33.865	ug/l	1.07	154,636.21	8.086E-02	Pulse	0.50	3
[Pb]			1	0.730	ug/l	2.08	5,143.46	1.671E-03	Pulse	0.50	3
Ca			1	5852.307	ug/l	0.25	168,363.27	7.164E-01	Pulse	0.50	3
Ti			1	0.408	ug/l	31.69	90.67	3.862E-04	Pulse	0.50	3
Na			1	6365.015	ug/l	0.87	7,134,590.00	3.036E+01	Analog	1.00	3
Mg			1	451.537	ug/l	1.25	249,745.51	1.063E+00	Pulse	1.00	3
K			1	344.770	ug/l	1.21	291,226.82	1.239E+00	Pulse	1.00	3
V			1	0.371	ug/l	4.88	3,390.98	1.443E-02	Pulse	0.50	3
Mn			1	2.791	ug/l	1.27	11,984.38	5.099E-02	Pulse	0.50	3
Fe			1	88.710	ug/l	1.34	546,532.31	2.325E+00	Pulse	0.50	3
Co			1	0.053	ug/l	5.41	707.35	3.010E-03	Pulse	0.50	3
Ni			1	0.135	ug/l	10.10	528.01	2.247E-03	Pulse	0.50	3
Cu			1	-0.438	ug/l	-7.14	29,739.53	1.265E-01	Pulse	0.50	3
Zn			1	51.909	ug/l	0.88	68,511.71	1.958E-01	Pulse	1.00	3
Cd			1	0.028	ug/l	52.47	58.00	3.039E-05	Pulse	0.50	3
Al			1	23.528	ug/l	1.62	6,122.62	2.605E-02	Pulse	1.00	3
Se			1	0.119	ug/l	124.41	66.22	1.893E-04	Pulse	3.00	3
Sb			1	0.097	ug/l	7.55	687.35	3.594E-04	Pulse	1.00	3
Se			1	-0.307	ug/l	-10.58	39.44	1.127E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,077,628.08	0.64	97.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		416,000.47	0.24	105.2	Pulse	0.30	3
1	Ge		235,030.95	0.66	102.5	Pulse	0.30	3
1	In		1,912,410.41	1.00	99.4	Pulse	0.30	3
1	Tb		4,562,108.50	0.66	98.4	Pulse	0.50	3
1	Lu		3,228,605.25	1.23	97.7	Pulse	0.50	3
1	Ge		349,873.85	0.78	103.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,210.04	4.59	94.4	Pulse	0.30	3

Quantitation Report

File Name	045CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 11:34
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.492	ug/l	2.18	702,119.73	2.898E+00	Pulse	0.50	3
As			1	44.955	ug/l	1.18	81,553.34	3.366E-01	Pulse	1.00	3
Mo			1	46.183	ug/l	0.91	320,668.21	1.652E-01	Pulse	0.50	3
Pb			1	45.384	ug/l	1.19	1,142,101.96	3.707E-01	Pulse	1.00	3
Be			1	45.565	ug/l	2.58	3,051.40	1.259E-02	Pulse	2.00	3
Ag			1	48.096	ug/l	0.97	990,859.52	5.103E-01	Pulse	0.50	3
Ba			1	45.077	ug/l	1.36	134,530.83	6.929E-02	Pulse	0.50	3
Tl			1	47.161	ug/l	0.36	1,665,185.62	5.405E-01	Pulse	0.50	3
Sn			1	45.864	ug/l	1.30	321,681.34	1.657E-01	Pulse	0.30	3
Sr			1	46.535	ug/l	1.11	430,616.71	2.218E-01	Pulse	0.50	3
[Pb]			1	45.453	ug/l	0.91	543,486.00	1.764E-01	Pulse	0.50	3
Ca			1	4676.969	ug/l	1.84	277,103.82	1.144E+00	Pulse	0.50	3
Ti			1	46.035	ug/l	1.21	18,747.67	7.738E-02	Pulse	0.50	3
Na			1	4718.159	ug/l	0.99	10,886,318.00	4.493E+01	Analog	1.00	3
Mg			1	4645.933	ug/l	1.41	5,271,973.33	2.176E+01	Analog	1.00	3
K			1	4671.592	ug/l	0.65	5,845,597.33	2.413E+01	Analog	1.00	3
V			1	46.278	ug/l	1.60	563,963.90	2.328E+00	Pulse	0.50	3
Mn			1	46.526	ug/l	1.84	401,615.27	1.658E+00	Pulse	0.50	3
Fe			1	4640.539	ug/l	1.69	57,193,113.33	2.361E+02	Analog	0.50	3
Co			1	46.168	ug/l	2.50	1,064,622.96	4.394E+00	Pulse	0.50	3
Ni			1	46.256	ug/l	1.77	284,471.31	1.174E+00	Pulse	0.50	3
Cu			1	45.102	ug/l	2.29	765,529.91	3.160E+00	Pulse	0.50	3
Zn			1	45.671	ug/l	1.74	121,711.11	3.398E-01	Pulse	1.00	3
Cd			1	45.843	ug/l	2.12	146,113.62	7.525E-02	Pulse	0.50	3
Al			1	4591.516	ug/l	1.77	2,263,691.42	9.343E+00	Pulse	1.00	3
Se			1	45.198	ug/l	1.18	6,171.55	1.723E-02	Pulse	3.00	3
Sb			1	45.358	ug/l	1.08	419,511.91	2.161E-01	Pulse	1.00	3
Se			1	45.170	ug/l	3.44	2,916.22	8.142E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,080,862.83	0.84	97.4	Pulse	0.50	3
1	Sc		425,674.46	0.73	107.7	Pulse	0.30	3
1	Ge		242,281.94	0.16	105.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,941,553.81	0.71	101.0	Pulse	0.30	3
1	Tb		4,667,397.33	0.31	100.7	Pulse	0.50	3
1	Lu		3,318,705.33	0.77	100.4	Pulse	0.50	3
1	Ge		358,208.00	0.56	105.9	Pulse	0.30	3
1	Te		4.00	50.00	200.0	Pulse	0.50	3
1	Li		1,275.60	4.50	99.6	Pulse	0.30	3

Quantitation Report

File Name 046_CCV.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:38
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.477	ug/l	1.28	1,448,720.54	6.058E+00	Pulse	0.50	3
As			1	95.612	ug/l	0.55	171,129.40	7.155E-01	Pulse	1.00	3
Mo			1	96.899	ug/l	0.32	665,234.75	3.463E-01	Pulse	0.50	3
Pb			1	95.864	ug/l	0.96	2,360,082.58	7.824E-01	Pulse	1.00	3
Be			1	95.646	ug/l	1.95	6,318.98	2.642E-02	Pulse	2.00	3
Ag			1	99.548	ug/l	0.33	2,028,718.37	1.056E+00	Pulse	0.50	3
Ba			1	94.603	ug/l	1.04	279,302.04	1.454E-01	Pulse	0.50	3
Tl			1	99.291	ug/l	0.53	3,431,687.58	1.138E+00	Pulse	0.50	3
Sn			1	96.454	ug/l	0.72	668,577.92	3.481E-01	Pulse	0.30	3
Sr			1	98.066	ug/l	0.40	897,154.44	4.671E-01	Pulse	0.50	3
[Pb]			1	96.113	ug/l	0.70	1,124,262.83	3.727E-01	Pulse	0.50	3
Ca			1	9811.556	ug/l	0.06	573,262.73	2.397E+00	Pulse	0.50	3
Ti			1	97.560	ug/l	1.21	39,207.75	1.639E-01	Pulse	0.50	3
Na			1	9935.262	ug/l	0.56	22,588,865.33	9.445E+01	Analog	1.00	3
Mg			1	9807.530	ug/l	0.54	10,984,116.00	4.593E+01	Analog	1.00	3
K			1	9831.996	ug/l	0.34	12,048,652.33	5.038E+01	Analog	1.00	3
V			1	97.928	ug/l	0.61	1,176,637.54	4.920E+00	Pulse	0.50	3
Mn			1	97.714	ug/l	0.92	832,246.44	3.480E+00	Pulse	0.50	3
Fe			1	9798.866	ug/l	1.05	119,192,098.67	4.984E+02	Analog	0.50	3
Co			1	96.494	ug/l	1.37	2,196,256.17	9.183E+00	Pulse	0.50	3
Ni			1	96.494	ug/l	1.44	585,639.31	2.449E+00	Pulse	0.50	3
Cu			1	95.449	ug/l	1.73	1,561,480.21	6.529E+00	Pulse	0.50	3
Zn			1	95.816	ug/l	1.77	251,428.89	7.060E-01	Pulse	1.00	3
Cd			1	95.820	ug/l	0.56	302,101.38	1.573E-01	Pulse	0.50	3
Al			1	9763.002	ug/l	0.82	4,750,663.83	1.986E+01	Pulse	1.00	3
Se			1	95.261	ug/l	0.73	12,866.88	3.613E-02	Pulse	3.00	3
Sb			1	95.266	ug/l	0.91	871,399.02	4.536E-01	Pulse	1.00	3
Se			1	95.483	ug/l	1.49	6,074.30	1.706E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,016,264.08	1.06	95.4	Pulse	0.50	3
1	Sc		422,017.79	0.68	106.7	Pulse	0.30	3
1	Ge		239,159.26	0.25	104.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,920,789.02	0.78	99.9	Pulse	0.30	3
1	Tb		4,645,470.50	0.25	100.2	Pulse	0.50	3
1	Lu		3,293,362.92	0.95	99.6	Pulse	0.50	3
1	Ge		356,150.13	0.38	105.3	Pulse	0.30	3
1	Te		7.33	68.63	366.7	Pulse	0.50	3
1	Li		1,177.82	10.82	91.9	Pulse	0.30	3

Quantitation Report

File Name 047_CCB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:41
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.051	ug/l	39.73	4,791.27	1.988E-02	Pulse	0.50	3
As			1	0.024	ug/l	42.97	120.00	4.980E-04	Pulse	1.00	3
Mo			1	0.082	ug/l	13.78	892.03	4.582E-04	Pulse	0.50	3
Pb			1	-0.004	ug/l	-280.11	1,491.07	4.857E-04	Pulse	1.00	3
Be			1	0.013	ug/l	335.98	4.17	1.731E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	71.02	504.67	2.599E-04	Pulse	0.50	3
Ba			1	0.018	ug/l	50.26	70.00	3.603E-05	Pulse	0.50	3
Tl			1	0.021	ug/l	35.78	1,312.72	4.276E-04	Pulse	0.50	3
Sn			1	0.089	ug/l	35.30	1,242.27	6.378E-04	Pulse	0.30	3
Sr			1	0.019	ug/l	86.82	670.68	3.450E-04	Pulse	0.50	3
[Pb]			1	-0.002	ug/l	-345.98	760.69	2.476E-04	Pulse	0.50	3
Ca			1	4.652	ug/l	26.47	784.02	3.253E-03	Pulse	0.50	3
Ti			1	0.032	ug/l	71.08	23.33	9.689E-05	Pulse	0.50	3
Na			1	5.997	ug/l	19.94	49,802.62	2.066E-01	Pulse	1.00	3
Mg			1	2.310	ug/l	56.28	3,921.76	1.628E-02	Pulse	1.00	3
K			1	6.713	ug/l	18.59	95,554.05	3.963E-01	Pulse	1.00	3
V			1	0.042	ug/l	50.45	1,740.75	7.223E-03	Pulse	0.50	3
Mn			1	0.024	ug/l	48.33	517.34	2.147E-03	Pulse	0.50	3
Fe			1	2.686	ug/l	49.07	49,699.08	2.063E-01	Pulse	0.50	3
Co			1	0.021	ug/l	56.77	601.34	2.498E-03	Pulse	0.50	3
Ni			1	0.030	ug/l	43.54	309.34	1.284E-03	Pulse	0.50	3
Cu			1	-1.132	ug/l	-2.53	15,777.80	6.545E-02	Pulse	0.50	3
Zn			1	-0.470	ug/l	-5.17	1,016.36	2.856E-03	Pulse	1.00	3
Cd			1	0.027	ug/l	42.56	99.33	5.113E-05	Pulse	0.50	3
Al			1	2.560	ug/l	49.17	1,763.75	7.323E-03	Pulse	1.00	3
Se			1	0.061	ug/l	35.16	67.56	1.899E-04	Pulse	3.00	3
Sb			1	0.045	ug/l	12.68	664.68	3.417E-04	Pulse	1.00	3
Se			1	-0.140	ug/l	-93.98	40.89	1.150E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,075,614.17	1.42	97.3	Pulse	0.50	3
1	Sc		422,640.69	0.57	106.9	Pulse	0.30	3

Quantitation Report

1	Ge		241,096.58	0.45	105.2	Pulse	0.30	3
1	In		1,946,040.41	0.71	101.2	Pulse	0.30	3
1	Tb		4,569,197.67	0.72	98.5	Pulse	0.50	3
1	Lu		3,236,284.17	1.68	97.9	Pulse	0.50	3
1	Ge		355,932.79	1.00	105.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,217.82	7.68	95.1	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:45
Sample Name FC1052-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.007	ug/l	3.15	11,563.45	4.791E-02	Pulse	0.50	3
As			1	0.084	ug/l	38.29	153.00	6.337E-04	Pulse	1.00	3
Mo			1	0.120	ug/l	16.43	736.68	3.802E-04	Pulse	0.50	3
Pb			1	1.593	ug/l	0.49	21,702.74	7.017E-03	Pulse	1.00	3
Be			1	-0.020	ug/l	-267.19	2.67	1.106E-05	Pulse	2.00	3
Ag			1	0.018	ug/l	11.69	318.67	1.645E-04	Pulse	0.50	3
Ba			1	2.672	ug/l	1.17	3,993.79	2.062E-03	Pulse	0.50	3
Tl			1	0.011	ug/l	32.16	777.35	2.515E-04	Pulse	0.50	3
Sn			1	0.455	ug/l	11.61	2,197.93	1.136E-03	Pulse	0.30	3
Sr			1	28.457	ug/l	0.55	131,662.25	6.799E-02	Pulse	0.50	3
[Pb]			1	1.577	ug/l	1.98	10,243.76	3.312E-03	Pulse	0.50	3
Ca			1	7661.925	ug/l	2.06	226,214.93	9.372E-01	Pulse	0.50	3
Ti			1	3.126	ug/l	19.58	644.01	2.669E-03	Pulse	0.50	3
Na			1	455.576	ug/l	0.57	557,997.79	2.312E+00	Pulse	1.00	3
Mg			1	148.827	ug/l	0.98	85,424.23	3.539E-01	Pulse	1.00	3
K			1	64.925	ug/l	3.53	127,286.02	5.273E-01	Pulse	1.00	3
V			1	0.607	ug/l	1.94	4,914.64	2.036E-02	Pulse	0.50	3
Mn			1	7.117	ug/l	0.43	30,895.85	1.280E-01	Pulse	0.50	3
Fe			1	140.324	ug/l	1.14	878,067.23	3.638E+00	Pulse	0.50	3
Co			1	0.124	ug/l	2.77	1,549.40	6.419E-03	Pulse	0.50	3
Ni			1	0.587	ug/l	1.51	1,926.77	7.982E-03	Pulse	0.50	3
Cu			1	-0.395	ug/l	-30.51	30,896.00	1.280E-01	Pulse	0.50	3
Zn			1	18.448	ug/l	1.05	26,388.67	7.365E-02	Pulse	1.00	3
Cd			1	0.048	ug/l	25.40	91.33	4.712E-05	Pulse	0.50	3
Al			1	104.797	ug/l	1.01	26,241.54	1.087E-01	Pulse	1.00	3
Se			1	0.194	ug/l	24.10	72.89	2.034E-04	Pulse	3.00	3
Sb			1	0.068	ug/l	18.64	562.68	2.904E-04	Pulse	1.00	3
Se			1	-0.102	ug/l	-152.75	46.89	1.308E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,092,568.67	1.51	97.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		427,488.68	0.33	108.1	Pulse	0.30	3
1	Ge		241,378.91	0.47	105.3	Pulse	0.30	3
1	In		1,936,571.31	0.98	100.7	Pulse	0.30	3
1	Tb		4,575,718.00	1.38	98.7	Pulse	0.50	3
1	Lu		3,244,699.67	1.62	98.2	Pulse	0.50	3
1	Ge		358,309.81	0.68	106.0	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,358.95	6.02	106.1	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:49
Sample Name FC1052-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.849	ug/l	3.78	10,381.45	4.298E-02	Pulse	0.50	3
As			1	0.047	ug/l	20.01	119.33	4.942E-04	Pulse	1.00	3
Mo			1	0.015	ug/l	127.85	373.34	1.923E-04	Pulse	0.50	3
Pb			1	0.193	ug/l	1.26	4,013.48	1.307E-03	Pulse	1.00	3
Be			1	-0.030	ug/l	-56.10	2.33	9.650E-06	Pulse	2.00	3
Ag			1	0.004	ug/l	63.35	180.67	9.320E-05	Pulse	0.50	3
Ba			1	0.139	ug/l	14.76	224.67	1.158E-04	Pulse	0.50	3
Tl			1	-0.007	ug/l	-32.01	457.34	1.489E-04	Pulse	0.50	3
Sn			1	0.075	ug/l	37.22	874.47	4.508E-04	Pulse	0.30	3
Sr			1	0.088	ug/l	7.42	899.36	4.639E-04	Pulse	0.50	3
[Pb]			1	0.201	ug/l	6.92	1,981.46	6.454E-04	Pulse	0.50	3
Ca			1	28.691	ug/l	4.88	1,357.38	5.619E-03	Pulse	0.50	3
Ti			1	0.043	ug/l	133.16	19.33	7.974E-05	Pulse	0.50	3
Na			1	14.924	ug/l	4.32	53,257.61	2.205E-01	Pulse	1.00	3
Mg			1	2.786	ug/l	4.37	2,896.55	1.199E-02	Pulse	1.00	3
K			1	17.936	ug/l	10.72	98,499.34	4.078E-01	Pulse	1.00	3
V			1	0.311	ug/l	4.33	3,121.59	1.292E-02	Pulse	0.50	3
Mn			1	0.495	ug/l	3.07	2,444.16	1.012E-02	Pulse	0.50	3
Fe			1	205.062	ug/l	0.95	1,276,356.71	5.284E+00	Pulse	0.50	3
Co			1	0.007	ug/l	12.72	202.00	8.360E-04	Pulse	0.50	3
Ni			1	0.073	ug/l	3.41	352.67	1.460E-03	Pulse	0.50	3
Cu			1	-1.682	ug/l	-2.85	20,509.56	8.492E-02	Pulse	0.50	3
Zn			1	-0.050	ug/l	-102.80	2,191.46	6.109E-03	Pulse	1.00	3
Cd			1	0.008	ug/l	144.34	28.00	1.439E-05	Pulse	0.50	3
Al			1	3.892	ug/l	5.09	1,467.39	6.074E-03	Pulse	1.00	3
Se			1	0.179	ug/l	63.97	72.00	2.006E-04	Pulse	3.00	3
Sb			1	0.007	ug/l	166.10	279.67	1.441E-04	Pulse	1.00	3
Se			1	-0.251	ug/l	-27.42	42.22	1.177E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,070,240.92	1.09	97.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		431,798.78	0.96	109.2	Pulse	0.30	3
1	Ge		241,544.90	0.99	105.4	Pulse	0.30	3
1	In		1,938,721.03	1.13	100.8	Pulse	0.30	3
1	Tb		4,550,583.50	0.34	98.1	Pulse	0.50	3
1	Lu		3,210,001.42	0.53	97.1	Pulse	0.50	3
1	Ge		358,758.48	0.58	106.1	Pulse	0.30	3
1	Te		4.00	100.00	200.0	Pulse	0.50	3
1	Li		1,307.83	7.27	102.1	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:53
Sample Name FC1052-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.783	ug/l	2.06	9,760.47	4.095E-02	Pulse	0.50	3
As			1	0.045	ug/l	25.62	115.67	4.856E-04	Pulse	1.00	3
Mo			1	-0.008	ug/l	-149.99	286.67	1.512E-04	Pulse	0.50	3
Pb			1	0.581	ug/l	5.46	8,669.54	2.888E-03	Pulse	1.00	3
Be			1	-0.054	ug/l	-50.75	1.50	6.337E-06	Pulse	2.00	3
Ag			1	0.004	ug/l	49.13	168.67	8.908E-05	Pulse	0.50	3
Ba			1	0.538	ug/l	6.80	800.69	4.224E-04	Pulse	0.50	3
Tl			1	-0.014	ug/l	-9.10	314.00	1.046E-04	Pulse	0.50	3
Sn			1	0.078	ug/l	53.89	862.25	4.556E-04	Pulse	0.30	3
Sr			1	0.764	ug/l	5.56	3,927.76	2.072E-03	Pulse	0.50	3
[Pb]			1	0.580	ug/l	1.70	4,142.51	1.380E-03	Pulse	0.50	3
Ca			1	216.477	ug/l	7.82	6,795.19	2.854E-02	Pulse	0.50	3
Ti			1	0.301	ug/l	35.57	70.67	2.961E-04	Pulse	0.50	3
Na			1	57.621	ug/l	1.96	100,825.15	4.231E-01	Pulse	1.00	3
Mg			1	8.595	ug/l	4.20	6,096.94	2.559E-02	Pulse	1.00	3
K			1	21.123	ug/l	9.86	99,110.39	4.159E-01	Pulse	1.00	3
V			1	0.320	ug/l	11.70	3,132.93	1.315E-02	Pulse	0.50	3
Mn			1	0.831	ug/l	2.90	3,835.73	1.610E-02	Pulse	0.50	3
Fe			1	14.523	ug/l	3.20	104,598.07	4.390E-01	Pulse	0.50	3
Co			1	0.023	ug/l	16.78	383.34	1.610E-03	Pulse	0.50	3
Ni			1	0.106	ug/l	15.37	446.68	1.875E-03	Pulse	0.50	3
Cu			1	-1.507	ug/l	-4.82	21,628.12	9.077E-02	Pulse	0.50	3
Zn			1	4.668	ug/l	3.67	8,200.08	2.333E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	66.25	26.00	1.376E-05	Pulse	0.50	3
Al			1	11.923	ug/l	9.14	3,391.63	1.424E-02	Pulse	1.00	3
Se			1	0.078	ug/l	104.59	63.78	1.816E-04	Pulse	3.00	3
Sb			1	0.020	ug/l	39.50	335.00	1.768E-04	Pulse	1.00	3
Se			1	-0.236	ug/l	-113.95	41.78	1.190E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,002,174.25	0.92	95.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		422,400.01	2.85	106.8	Pulse	0.30	3
1	Ge		238,315.53	1.71	104.0	Pulse	0.30	3
1	In		1,895,967.63	2.00	98.6	Pulse	0.30	3
1	Tb		4,484,131.00	2.42	96.7	Pulse	0.50	3
1	Lu		3,150,802.42	2.72	95.3	Pulse	0.50	3
1	Ge		351,526.31	1.21	103.9	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,267.82	6.31	99.0	Pulse	0.30	3

Quantitation Report

File Name 051SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 11:56
Sample Name FC1030-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	14.995	ug/l	1.15	114,645.20	4.813E-01	Pulse	0.50	3
As			1	0.567	ug/l	0.85	580.68	2.438E-03	Pulse	1.00	3
Mo			1	10.369	ug/l	2.16	35,494.18	1.869E-02	Pulse	0.50	3
Pb			1	0.155	ug/l	3.96	3,385.67	1.152E-03	Pulse	1.00	3
Be			1	-0.044	ug/l	-20.34	1.83	7.701E-06	Pulse	2.00	3
Ag			1	0.005	ug/l	73.78	182.00	9.576E-05	Pulse	0.50	3
Ba			1	43.695	ug/l	1.95	63,791.76	3.359E-02	Pulse	0.50	3
Tl			1	-0.016	ug/l	-10.62	287.33	9.778E-05	Pulse	0.50	3
Sn			1	0.051	ug/l	22.62	775.58	4.083E-04	Pulse	0.30	3
Sr			1	193.807	ug/l	0.61	876,565.06	4.615E-01	Pulse	0.50	3
[Pb]			1	0.164	ug/l	4.05	1,688.09	5.743E-04	Pulse	0.50	3
Ca			1	62212.046	ug/l	0.28	1,808,754.59	7.595E+00	Pulse	0.50	3
Ti			1	7.205	ug/l	4.97	1,452.06	6.096E-03	Pulse	0.50	3
Na			1	56697.540	ug/l	0.40	64,118,677.33	2.692E+02	Analog	1.00	3
Mg			1	2623.630	ug/l	0.47	1,464,257.54	6.148E+00	Pulse	1.00	3
K			1	2980.979	ug/l	0.83	1,892,015.87	7.945E+00	Pulse	1.00	3
V			1	3.178	ug/l	1.54	20,211.85	8.486E-02	Pulse	0.50	3
Mn			1	14.875	ug/l	1.41	63,375.36	2.661E-01	Pulse	0.50	3
Fe			1	205.863	ug/l	0.86	1,263,322.25	5.304E+00	Pulse	0.50	3
Co			1	0.574	ug/l	1.51	6,627.15	2.782E-02	Pulse	0.50	3
Ni			1	2.183	ug/l	0.24	6,722.52	2.823E-02	Pulse	0.50	3
Cu			1	2.198	ug/l	2.54	51,153.42	2.148E-01	Pulse	0.50	3
Zn			1	8.573	ug/l	0.82	13,264.90	3.759E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	18.59	34.00	1.791E-05	Pulse	0.50	3
Al			1	1461.608	ug/l	0.36	354,603.06	1.489E+00	Pulse	1.00	3
Se			1	1.257	ug/l	9.23	142.67	4.042E-04	Pulse	3.00	3
Sb			1	0.534	ug/l	1.34	2,656.53	1.399E-03	Pulse	1.00	3
Se			1	0.948	ug/l	21.41	79.00	2.239E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,938,647.17	1.60	92.9	Pulse	0.50	3
1	Sc		422,343.59	0.25	106.8	Pulse	0.30	3
1	Ge		238,164.89	0.99	103.9	Pulse	0.30	3
1	In		1,899,144.09	0.87	98.7	Pulse	0.30	3
1	Tb		4,551,928.00	0.59	98.2	Pulse	0.50	3
1	Lu		3,215,318.25	0.68	97.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		352,863.07	0.68	104.3	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,303.38	8.95	101.7	Pulse	0.30	3

Quantitation Report

File Name	052SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:00
Sample Name	FC1032-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	34.064	ug/l	0.59	254,292.82	1.072E+00	Pulse	0.50	3
As			1	1.273	ug/l	1.06	1,204.71	5.079E-03	Pulse	1.00	3
Mo			1	11.556	ug/l	1.20	39,497.44	2.081E-02	Pulse	0.50	3
Pb			1	1.933	ug/l	1.34	25,006.22	8.401E-03	Pulse	1.00	3
Be			1	0.022	ug/l	418.02	4.00	1.682E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	21.85	290.67	1.531E-04	Pulse	0.50	3
Ba			1	49.385	ug/l	0.40	72,053.08	3.796E-02	Pulse	0.50	3
Tl			1	-0.008	ug/l	-19.14	413.34	1.388E-04	Pulse	0.50	3
Sn			1	0.445	ug/l	32.55	2,123.77	1.119E-03	Pulse	0.30	3
Sr			1	145.531	ug/l	0.46	658,019.04	3.466E-01	Pulse	0.50	3
[Pb]			1	1.934	ug/l	3.56	11,916.85	4.003E-03	Pulse	0.50	3
Ca			1	42743.003	ug/l	0.10	1,237,692.79	5.219E+00	Pulse	0.50	3
Ti			1	70.189	ug/l	1.26	13,993.70	5.900E-02	Pulse	0.50	3
Na			1	46355.316	ug/l	0.35	52,209,573.33	2.201E+02	Analog	1.00	3
Mg			1	2598.650	ug/l	0.27	1,444,227.33	6.089E+00	Pulse	1.00	3
K			1	3048.804	ug/l	1.01	1,925,007.00	8.117E+00	Pulse	1.00	3
V			1	12.119	ug/l	0.63	73,341.64	3.092E-01	Pulse	0.50	3
Mn			1	49.708	ug/l	0.35	210,156.81	8.861E-01	Pulse	0.50	3
Fe			1	2258.649	ug/l	0.36	13,637,434.00	5.750E+01	Analog	0.50	3
Co			1	1.900	ug/l	0.38	21,556.67	9.089E-02	Pulse	0.50	3
Ni			1	8.452	ug/l	1.37	25,554.87	1.077E-01	Pulse	0.50	3
Cu			1	6.150	ug/l	1.79	82,301.47	3.470E-01	Pulse	0.50	3
Zn			1	17.478	ug/l	1.66	24,741.50	7.011E-02	Pulse	1.00	3
Cd			1	0.051	ug/l	21.52	93.33	4.919E-05	Pulse	0.50	3
Al			1	4637.341	ug/l	0.33	1,119,262.50	4.719E+00	Pulse	1.00	3
Se			1	1.351	ug/l	10.12	148.89	4.219E-04	Pulse	3.00	3
Sb			1	0.685	ug/l	1.03	3,339.98	1.759E-03	Pulse	1.00	3
Se			1	1.161	ug/l	9.39	85.67	2.427E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,976,485.83	1.11	94.1	Pulse	0.50	3
1	Sc		424,542.15	0.57	107.4	Pulse	0.30	3
1	Ge		237,167.36	0.82	103.5	Pulse	0.30	3
1	In		1,898,221.66	0.92	98.7	Pulse	0.30	3
1	Tb		4,586,502.17	1.35	98.9	Pulse	0.50	3
1	Lu		3,239,602.50	0.69	98.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		352,919.57	0.11	104.4	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,246.71	6.95	97.3	Pulse	0.30	3

Quantitation Report

File Name 053SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:04
Sample Name FC1071-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.221	ug/l	15.96	5,701.52	2.353E-02	Pulse	0.50	3
As			1	-0.012	ug/l	-30.65	66.33	2.737E-04	Pulse	1.00	3
Mo			1	-0.032	ug/l	-36.91	210.00	1.080E-04	Pulse	0.50	3
Pb			1	-0.012	ug/l	-16.13	1,465.73	4.719E-04	Pulse	1.00	3
Be			1	-0.065	ug/l	-93.99	1.17	4.849E-06	Pulse	2.00	3
Ag			1	-0.002	ug/l	-41.45	118.67	6.107E-05	Pulse	0.50	3
Ba			1	0.114	ug/l	2.45	186.67	9.606E-05	Pulse	0.50	3
Tl			1	-0.026	ug/l	-3.72	122.00	3.932E-05	Pulse	0.50	3
Sn			1	-0.043	ug/l	-49.16	462.23	2.377E-04	Pulse	0.30	3
Sr			1	0.172	ug/l	13.59	1,291.38	6.648E-04	Pulse	0.50	3
[Pb]			1	-0.024	ug/l	-19.35	652.68	2.101E-04	Pulse	0.50	3
Ca			1	59.782	ug/l	9.84	2,280.81	9.413E-03	Pulse	0.50	3
Ti			1	0.165	ug/l	58.63	44.00	1.819E-04	Pulse	0.50	3
Na			1	59.060	ug/l	9.83	104,184.76	4.300E-01	Pulse	1.00	3
Mg			1	4.921	ug/l	6.77	4,117.10	1.699E-02	Pulse	1.00	3
K			1	11.012	ug/l	21.16	94,573.95	3.902E-01	Pulse	1.00	3
V			1	0.084	ug/l	8.74	1,750.08	7.220E-03	Pulse	0.50	3
Mn			1	0.313	ug/l	3.08	1,666.08	6.874E-03	Pulse	0.50	3
Fe			1	19.217	ug/l	4.79	135,339.04	5.584E-01	Pulse	0.50	3
Co			1	-0.001	ug/l	-177.07	114.67	4.732E-04	Pulse	0.50	3
Ni			1	0.068	ug/l	16.47	337.34	1.392E-03	Pulse	0.50	3
Cu			1	-2.461	ug/l	-0.45	14,263.29	5.884E-02	Pulse	0.50	3
Zn			1	0.492	ug/l	7.79	2,906.22	8.085E-03	Pulse	1.00	3
Cd			1	-0.003	ug/l	-40.62	10.00	5.143E-06	Pulse	0.50	3
Al			1	8.879	ug/l	8.11	2,701.19	1.115E-02	Pulse	1.00	3
Se			1	0.061	ug/l	107.21	64.11	1.784E-04	Pulse	3.00	3
Sb			1	0.020	ug/l	52.58	342.00	1.759E-04	Pulse	1.00	3
Se			1	-0.348	ug/l	-45.02	39.22	1.091E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,105,743.08	0.95	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		427,187.06	0.84	108.0	Pulse	0.30	3
1	Ge		242,383.26	0.69	105.8	Pulse	0.30	3
1	In		1,943,132.28	0.59	101.0	Pulse	0.30	3
1	Tb		4,591,820.33	0.70	99.0	Pulse	0.50	3
1	Lu		3,261,789.33	1.60	98.7	Pulse	0.50	3
1	Ge		359,454.36	0.24	106.3	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,338.94	3.89	104.5	Pulse	0.30	3

Quantitation Report

File Name	054SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:08
Sample Name	FC1071-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.445	ug/l	3.05	7,442.78	3.048E-02	Pulse	0.50	3
As			1	0.015	ug/l	137.80	91.00	3.727E-04	Pulse	1.00	3
Mo			1	-0.027	ug/l	-54.81	229.33	1.170E-04	Pulse	0.50	3
Pb			1	-0.028	ug/l	-13.49	1,248.05	4.054E-04	Pulse	1.00	3
Be			1	-0.031	ug/l	-73.33	2.33	9.551E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	3288.94	138.67	7.069E-05	Pulse	0.50	3
Ba			1	0.138	ug/l	10.14	224.67	1.146E-04	Pulse	0.50	3
Tl			1	-0.026	ug/l	-5.23	123.33	4.006E-05	Pulse	0.50	3
Sn			1	-0.049	ug/l	-41.21	444.45	2.266E-04	Pulse	0.30	3
Sr			1	0.054	ug/l	24.12	752.68	3.842E-04	Pulse	0.50	3
[Pb]			1	-0.032	ug/l	-13.52	597.34	1.941E-04	Pulse	0.50	3
Ca			1	25.684	ug/l	9.86	1,282.05	5.252E-03	Pulse	0.50	3
Ti			1	0.146	ug/l	60.48	40.67	1.667E-04	Pulse	0.50	3
Na			1	16.433	ug/l	1.13	55,583.90	2.277E-01	Pulse	1.00	3
Mg			1	2.778	ug/l	8.28	2,922.89	1.197E-02	Pulse	1.00	3
K			1	15.169	ug/l	4.02	97,849.11	4.008E-01	Pulse	1.00	3
V			1	0.197	ug/l	8.43	2,458.16	1.007E-02	Pulse	0.50	3
Mn			1	0.141	ug/l	3.31	932.69	3.820E-03	Pulse	0.50	3
Fe			1	3.999	ug/l	0.86	41,850.91	1.714E-01	Pulse	0.50	3
Co			1	-0.001	ug/l	-58.35	106.00	4.342E-04	Pulse	0.50	3
Ni			1	0.038	ug/l	8.92	246.67	1.010E-03	Pulse	0.50	3
Cu			1	-2.183	ug/l	-1.22	16,643.84	6.817E-02	Pulse	0.50	3
Zn			1	0.908	ug/l	3.47	3,478.32	9.606E-03	Pulse	1.00	3
Cd			1	-0.006	ug/l	-29.52	4.67	2.378E-06	Pulse	0.50	3
Al			1	4.590	ug/l	6.54	1,656.40	6.785E-03	Pulse	1.00	3
Se			1	0.070	ug/l	72.28	65.22	1.801E-04	Pulse	3.00	3
Sb			1	-0.006	ug/l	-48.39	224.33	1.144E-04	Pulse	1.00	3
Se			1	-0.258	ug/l	-113.81	42.44	1.171E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,078,432.50	1.14	97.4	Pulse	0.50	3
1	Sc		432,731.25	1.05	109.5	Pulse	0.30	3
1	Ge		244,147.04	0.43	106.5	Pulse	0.30	3
1	In		1,960,063.74	0.73	101.9	Pulse	0.30	3
1	Tb		4,598,584.67	0.62	99.2	Pulse	0.50	3
1	Lu		3,235,059.17	0.63	97.9	Pulse	0.50	3
1	Ge		362,124.08	0.86	107.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,297.83	8.11	101.3	Pulse	0.30	3

Quantitation Report

File Name 055SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:12
Sample Name FC1071-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	5.552	ug/l	2.24	46,602.77	1.887E-01	Pulse	0.50	3
As			1	1.478	ug/l	2.00	1,443.39	5.845E-03	Pulse	1.00	3
Mo			1	1.788	ug/l	1.95	6,585.18	3.360E-03	Pulse	0.50	3
Pb			1	16.250	ug/l	0.77	208,216.31	6.679E-02	Pulse	1.00	3
Be			1	-0.070	ug/l	-21.13	1.00	4.060E-06	Pulse	2.00	3
Ag			1	0.138	ug/l	3.89	1,570.07	8.011E-04	Pulse	0.50	3
Ba			1	48.176	ug/l	0.79	72,577.33	3.703E-02	Pulse	0.50	3
Tl			1	-0.012	ug/l	-13.75	366.67	1.176E-04	Pulse	0.50	3
Sn			1	1.718	ug/l	4.69	6,689.03	3.412E-03	Pulse	0.30	3
Sr			1	24.435	ug/l	0.82	114,493.66	5.842E-02	Pulse	0.50	3
[Pb]			1	16.004	ug/l	1.13	97,480.49	3.127E-02	Pulse	0.50	3
Ca			1	4840.533	ug/l	0.90	146,398.63	5.929E-01	Pulse	0.50	3
Ti			1	43.217	ug/l	3.93	8,973.43	3.634E-02	Pulse	0.50	3
Na			1	2812.727	ug/l	1.14	3,333,110.92	1.350E+01	Pulse	1.00	3
Mg			1	1331.670	ug/l	1.73	771,181.25	3.123E+00	Pulse	1.00	3
K			1	1492.843	ug/l	1.39	1,027,051.79	4.159E+00	Pulse	1.00	3
V			1	6.821	ug/l	2.04	43,529.77	1.763E-01	Pulse	0.50	3
Mn			1	47.238	ug/l	1.28	207,948.47	8.421E-01	Pulse	0.50	3
Fe			1	2311.148	ug/l	1.50	14,528,093.67	5.884E+01	Analog	0.50	3
Co			1	1.389	ug/l	2.04	16,439.67	6.658E-02	Pulse	0.50	3
Ni			1	6.945	ug/l	2.69	21,884.40	8.863E-02	Pulse	0.50	3
Cu			1	21.276	ug/l	1.95	210,679.59	8.532E-01	Pulse	0.50	3
Zn			1	218.910	ug/l	1.98	293,679.92	8.056E-01	Pulse	1.00	3
Cd			1	0.336	ug/l	8.60	555.34	2.834E-04	Pulse	0.50	3
Al			1	1636.125	ug/l	1.74	411,476.86	1.666E+00	Pulse	1.00	3
Se			1	0.291	ug/l	24.50	80.89	2.219E-04	Pulse	3.00	3
Sb			1	2.155	ug/l	0.55	10,303.56	5.257E-03	Pulse	1.00	3
Se			1	0.010	ug/l	214.37	51.34	1.408E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,117,718.50	1.76	98.6	Pulse	0.50	3
1	Sc		436,236.42	0.76	110.3	Pulse	0.30	3
1	Ge		246,941.45	0.75	107.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,959,925.55	0.71	101.9	Pulse	0.30	3
1	Tb		4,673,934.17	0.65	100.8	Pulse	0.50	3
1	Lu		3,281,218.33	1.03	99.3	Pulse	0.50	3
1	Ge		364,572.85	0.25	107.8	Pulse	0.30	3
1	Te		6.00	33.33	300.0	Pulse	0.50	3
1	Li		1,250.05	7.92	97.6	Pulse	0.30	3

Quantitation Report

File Name 056SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:15
Sample Name FC1071-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.461	ug/l	1.10	30,379.61	1.239E-01	Pulse	0.50	3
As			1	1.119	ug/l	6.74	1,104.70	4.505E-03	Pulse	1.00	3
Mo			1	1.539	ug/l	3.34	5,686.21	2.915E-03	Pulse	0.50	3
Pb			1	9.969	ug/l	0.85	126,755.10	4.117E-02	Pulse	1.00	3
Be			1	-0.026	ug/l	-290.65	2.50	1.017E-05	Pulse	2.00	3
Ag			1	0.081	ug/l	3.65	977.36	5.010E-04	Pulse	0.50	3
Ba			1	32.005	ug/l	0.38	47,990.63	2.460E-02	Pulse	0.50	3
Tl			1	-0.021	ug/l	-8.40	214.67	6.972E-05	Pulse	0.50	3
Sn			1	1.223	ug/l	2.73	4,917.37	2.521E-03	Pulse	0.30	3
Sr			1	20.727	ug/l	0.51	96,727.84	4.959E-02	Pulse	0.50	3
[Pb]			1	9.862	ug/l	0.25	59,613.25	1.937E-02	Pulse	0.50	3
Ca			1	4109.067	ug/l	0.19	123,446.59	5.036E-01	Pulse	0.50	3
Ti			1	25.656	ug/l	4.39	5,293.42	2.159E-02	Pulse	0.50	3
Na			1	2650.454	ug/l	0.62	3,119,979.00	1.273E+01	Pulse	1.00	3
Mg			1	970.590	ug/l	1.05	558,349.79	2.278E+00	Pulse	1.00	3
K			1	1394.167	ug/l	1.12	958,011.10	3.908E+00	Pulse	1.00	3
V			1	4.847	ug/l	1.53	31,070.69	1.268E-01	Pulse	0.50	3
Mn			1	31.924	ug/l	0.83	139,610.30	5.695E-01	Pulse	0.50	3
Fe			1	1378.385	ug/l	0.64	8,608,219.33	3.512E+01	Analog	0.50	3
Co			1	0.860	ug/l	2.20	10,148.69	4.141E-02	Pulse	0.50	3
Ni			1	4.474	ug/l	1.24	14,041.79	5.729E-02	Pulse	0.50	3
Cu			1	14.472	ug/l	1.27	153,329.82	6.255E-01	Pulse	0.50	3
Zn			1	152.327	ug/l	0.98	202,398.31	5.625E-01	Pulse	1.00	3
Cd			1	0.195	ug/l	6.11	327.33	1.678E-04	Pulse	0.50	3
Al			1	946.539	ug/l	0.53	236,534.41	9.649E-01	Pulse	1.00	3
Se			1	0.194	ug/l	14.56	73.22	2.035E-04	Pulse	3.00	3
Sb			1	1.575	ug/l	0.63	7,563.24	3.877E-03	Pulse	1.00	3
Se			1	0.013	ug/l	556.76	50.78	1.411E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,078,436.58	1.33	97.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		437,130.23	0.52	110.6	Pulse	0.30	3
1	Ge		245,129.57	0.75	106.9	Pulse	0.30	3
1	In		1,950,614.85	0.56	101.4	Pulse	0.30	3
1	Tb		4,648,300.50	0.64	100.2	Pulse	0.50	3
1	Lu		3,265,842.25	0.78	98.8	Pulse	0.50	3
1	Ge		359,837.79	0.67	106.4	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,270.05	3.87	99.1	Pulse	0.30	3

Quantitation Report

File Name	057SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:19
Sample Name	FC1071-5
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.093	ug/l	0.64	20,186.45	8.154E-02	Pulse	0.50	3
As			1	0.521	ug/l	5.55	561.34	2.267E-03	Pulse	1.00	3
Mo			1	4.213	ug/l	1.83	14,973.99	7.691E-03	Pulse	0.50	3
Pb			1	3.221	ug/l	1.84	41,956.58	1.366E-02	Pulse	1.00	3
Be			1	-0.076	ug/l	-22.13	0.83	3.358E-06	Pulse	2.00	3
Ag			1	0.060	ug/l	9.13	758.02	3.895E-04	Pulse	0.50	3
Ba			1	49.770	ug/l	0.95	74,480.17	3.825E-02	Pulse	0.50	3
Tl			1	-0.024	ug/l	-4.24	156.67	5.097E-05	Pulse	0.50	3
Sn			1	0.466	ug/l	9.60	2,252.37	1.156E-03	Pulse	0.30	3
Sr			1	55.459	ug/l	0.66	257,505.82	1.323E-01	Pulse	0.50	3
[Pb]			1	3.224	ug/l	0.78	19,981.02	6.503E-03	Pulse	0.50	3
Ca			1	15423.279	ug/l	0.36	466,521.07	1.884E+00	Pulse	0.50	3
Ti			1	7.965	ug/l	10.07	1,666.77	6.734E-03	Pulse	0.50	3
Na			1	1916.388	ug/l	0.90	2,288,564.67	9.244E+00	Pulse	1.00	3
Mg			1	1009.334	ug/l	0.60	586,369.64	2.369E+00	Pulse	1.00	3
K			1	3029.259	ug/l	0.98	1,997,148.04	8.067E+00	Pulse	1.00	3
V			1	1.774	ug/l	0.62	12,287.89	4.963E-02	Pulse	0.50	3
Mn			1	27.381	ug/l	1.04	120,985.28	4.887E-01	Pulse	0.50	3
Fe			1	674.953	ug/l	1.59	4,266,205.92	1.723E+01	Pulse	0.50	3
Co			1	0.837	ug/l	2.68	9,989.96	4.035E-02	Pulse	0.50	3
Ni			1	3.563	ug/l	3.33	11,321.34	4.572E-02	Pulse	0.50	3
Cu			1	4.626	ug/l	3.38	73,282.16	2.960E-01	Pulse	0.50	3
Zn			1	142.218	ug/l	1.75	192,199.41	5.256E-01	Pulse	1.00	3
Cd			1	0.097	ug/l	15.06	170.00	8.724E-05	Pulse	0.50	3
Al			1	270.392	ug/l	0.74	68,616.78	2.772E-01	Pulse	1.00	3
Se			1	0.183	ug/l	38.37	73.66	2.014E-04	Pulse	3.00	3
Sb			1	0.481	ug/l	1.82	2,476.84	1.272E-03	Pulse	1.00	3
Se			1	-0.094	ug/l	-365.83	48.11	1.316E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,072,322.08	0.75	97.2	Pulse	0.50	3
1	Sc		435,150.96	0.51	110.1	Pulse	0.30	3
1	Ge		247,568.85	0.60	108.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,946,937.28	1.04	101.2	Pulse	0.30	3
1	Tb		4,606,016.83	1.22	99.3	Pulse	0.50	3
1	Lu		3,261,403.08	1.23	98.7	Pulse	0.50	3
1	Ge		365,721.22	0.30	108.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,321.16	1.64	103.1	Pulse	0.30	3

Quantitation Report

File Name 058CCVA.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:23
Sample Name CCV (Ag)
Sample Type CCV_Ag
Comment =std 4
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.595	ug/l	1.77	724,791.67	2.904E+00	Pulse	0.50	3
As			1	44.841	ug/l	1.62	83,785.30	3.357E-01	Pulse	1.00	3
Mo			1	46.088	ug/l	0.83	326,656.01	1.648E-01	Pulse	0.50	3
Pb			1	45.513	ug/l	1.17	1,139,899.38	3.717E-01	Pulse	1.00	3
Be			1	45.537	ug/l	0.61	3,141.08	1.259E-02	Pulse	2.00	3
Ag			1	47.957	ug/l	1.11	1,008,553.56	5.089E-01	Pulse	0.50	3
Ba			1	45.001	ug/l	1.91	137,106.48	6.917E-02	Pulse	0.50	3
Tl			1	47.299	ug/l	1.05	1,662,212.87	5.421E-01	Pulse	0.50	3
Sn			1	45.324	ug/l	1.74	324,521.54	1.637E-01	Pulse	0.30	3
Sr			1	47.291	ug/l	0.61	446,692.99	2.254E-01	Pulse	0.50	3
[Pb]			1	45.605	ug/l	1.85	542,738.56	1.770E-01	Pulse	0.50	3
Ca			1	4726.537	ug/l	0.78	288,439.98	1.156E+00	Pulse	0.50	3
Ti			1	46.096	ug/l	3.85	19,334.88	7.748E-02	Pulse	0.50	3
Na			1	4793.349	ug/l	1.02	11,390,650.33	4.565E+01	Analog	1.00	3
Mg			1	4706.454	ug/l	1.73	5,500,854.67	2.204E+01	Analog	1.00	3
K			1	4781.041	ug/l	0.84	6,159,858.50	2.468E+01	Analog	1.00	3
V			1	46.380	ug/l	1.98	582,168.46	2.333E+00	Pulse	0.50	3
Mn			1	46.633	ug/l	1.33	414,612.82	1.661E+00	Pulse	0.50	3
Fe			1	4668.533	ug/l	1.23	59,264,792.00	2.375E+02	Analog	0.50	3
Co			1	46.163	ug/l	1.29	1,096,454.75	4.394E+00	Pulse	0.50	3
Ni			1	46.286	ug/l	2.31	293,191.47	1.175E+00	Pulse	0.50	3
Cu			1	44.779	ug/l	1.77	783,150.04	3.138E+00	Pulse	0.50	3
Zn			1	45.786	ug/l	1.35	124,902.07	3.406E-01	Pulse	1.00	3
Cd			1	45.368	ug/l	1.83	147,610.76	7.447E-02	Pulse	0.50	3
Al			1	4647.306	ug/l	1.91	2,359,994.17	9.457E+00	Pulse	1.00	3
Se			1	45.789	ug/l	2.62	6,399.19	1.745E-02	Pulse	3.00	3
Sb			1	44.778	ug/l	1.26	422,768.17	2.133E-01	Pulse	1.00	3
Se			1	46.148	ug/l	1.85	3,049.02	8.315E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,066,256.50	0.83	97.0	Pulse	0.50	3
1	Sc		443,481.68	0.73	112.2	Pulse	0.30	3
1	Ge		249,550.78	1.04	108.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,981,899.09	1.06	103.0	Pulse	0.30	3
1	Tb		4,670,165.00	1.05	100.7	Pulse	0.50	3
1	Lu		3,325,565.58	1.41	100.6	Pulse	0.50	3
1	Ge		366,680.72	1.26	108.4	Pulse	0.30	3
1	Te		4.00	100.00	200.0	Pulse	0.50	3
1	Li		1,204.49	8.17	94.0	Pulse	0.30	3

Quantitation Report

File Name	059_CCV.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:27
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.045	ug/l	1.18	1,486,567.42	6.031E+00	Pulse	0.50	3
As			1	94.053	ug/l	0.58	173,499.56	7.039E-01	Pulse	1.00	3
Mo			1	96.284	ug/l	0.49	675,279.54	3.441E-01	Pulse	0.50	3
Pb			1	94.854	ug/l	0.89	2,349,363.67	7.742E-01	Pulse	1.00	3
Be			1	94.202	ug/l	2.04	6,414.18	2.602E-02	Pulse	2.00	3
Ag			1	98.400	ug/l	0.36	2,048,575.46	1.044E+00	Pulse	0.50	3
Ba			1	94.010	ug/l	0.66	283,526.60	1.445E-01	Pulse	0.50	3
Tl			1	98.833	ug/l	1.38	3,436,634.33	1.132E+00	Pulse	0.50	3
Sn			1	95.182	ug/l	0.67	673,993.96	3.435E-01	Pulse	0.30	3
Sr			1	99.179	ug/l	0.50	926,912.19	4.724E-01	Pulse	0.50	3
[Pb]			1	94.946	ug/l	2.12	1,117,357.54	3.682E-01	Pulse	0.50	3
Ca			1	9872.764	ug/l	0.15	594,525.94	2.412E+00	Pulse	0.50	3
Ti			1	98.021	ug/l	0.39	40,601.93	1.647E-01	Pulse	0.50	3
Na			1	9972.445	ug/l	0.37	23,368,266.00	9.480E+01	Analog	1.00	3
Mg			1	9787.831	ug/l	1.03	11,298,094.67	4.584E+01	Analog	1.00	3
K			1	9934.026	ug/l	0.26	12,545,967.00	5.090E+01	Analog	1.00	3
V			1	97.281	ug/l	0.71	1,204,718.25	4.887E+00	Pulse	0.50	3
Mn			1	96.960	ug/l	0.79	851,156.85	3.453E+00	Pulse	0.50	3
Fe			1	9668.886	ug/l	0.97	121,219,285.33	4.918E+02	Analog	0.50	3
Co			1	95.437	ug/l	1.20	2,238,826.67	9.083E+00	Pulse	0.50	3
Ni			1	95.511	ug/l	1.49	597,434.87	2.424E+00	Pulse	0.50	3
Cu			1	93.269	ug/l	0.97	1,573,429.21	6.383E+00	Pulse	0.50	3
Zn			1	93.707	ug/l	1.33	253,157.43	6.906E-01	Pulse	1.00	3
Cd			1	94.388	ug/l	0.57	304,005.26	1.549E-01	Pulse	0.50	3
Al			1	9690.196	ug/l	0.31	4,859,826.17	1.972E+01	Mix	1.00	3
Se			1	94.020	ug/l	0.79	13,072.13	3.566E-02	Pulse	3.00	3
Sb			1	93.742	ug/l	0.49	875,926.63	4.464E-01	Pulse	1.00	3
Se			1	95.444	ug/l	1.53	6,249.69	1.705E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,034,637.42	0.32	96.0	Pulse	0.50	3
1	Sc		438,875.64	1.01	111.0	Pulse	0.30	3
1	Ge		246,494.19	0.64	107.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,962,210.41	0.56	102.0	Pulse	0.30	3
1	Tb		4,682,815.17	0.53	101.0	Pulse	0.50	3
1	Lu		3,318,239.08	0.40	100.4	Pulse	0.50	3
1	Ge		366,589.41	0.36	108.4	Pulse	0.30	3
1	Te		2.67	173.21	133.3	Pulse	0.50	3
1	Li		1,234.49	2.65	96.4	Pulse	0.30	3

Quantitation Report

File Name	060_CCB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:30
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.045	ug/l	50.65	4,803.28	1.949E-02	Pulse	0.50	3
As			1	0.030	ug/l	58.49	133.67	5.432E-04	Pulse	1.00	3
Mo			1	0.072	ug/l	5.91	836.02	4.228E-04	Pulse	0.50	3
Pb			1	-0.006	ug/l	-239.18	1,449.40	4.729E-04	Pulse	1.00	3
Be			1	0.031	ug/l	187.18	5.50	2.241E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	59.99	447.34	2.270E-04	Pulse	0.50	3
Ba			1	0.014	ug/l	70.40	60.00	3.047E-05	Pulse	0.50	3
Tl			1	0.015	ug/l	64.35	1,112.71	3.633E-04	Pulse	0.50	3
Sn			1	0.068	ug/l	29.40	1,105.60	5.595E-04	Pulse	0.30	3
Sr			1	0.020	ug/l	97.96	694.68	3.520E-04	Pulse	0.50	3
[Pb]			1	-0.010	ug/l	-102.40	668.01	2.178E-04	Pulse	0.50	3
Ca			1	3.780	ug/l	44.26	748.68	3.040E-03	Pulse	0.50	3
Ti			1	0.030	ug/l	62.15	23.33	9.486E-05	Pulse	0.50	3
Na			1	5.221	ug/l	29.03	49,091.57	1.992E-01	Pulse	1.00	3
Mg			1	2.250	ug/l	63.73	3,933.44	1.600E-02	Pulse	1.00	3
K			1	8.949	ug/l	23.22	100,498.31	4.077E-01	Pulse	1.00	3
V			1	0.057	ug/l	19.86	1,960.77	7.957E-03	Pulse	0.50	3
Mn			1	0.019	ug/l	82.65	489.34	1.989E-03	Pulse	0.50	3
Fe			1	2.600	ug/l	54.28	49,658.97	2.020E-01	Pulse	0.50	3
Co			1	0.018	ug/l	65.19	550.01	2.239E-03	Pulse	0.50	3
Ni			1	0.024	ug/l	32.26	281.33	1.142E-03	Pulse	0.50	3
Cu			1	-1.225	ug/l	-0.90	14,590.85	5.919E-02	Pulse	0.50	3
Zn			1	-0.472	ug/l	-2.11	1,039.70	2.844E-03	Pulse	1.00	3
Cd			1	0.028	ug/l	77.57	105.33	5.356E-05	Pulse	0.50	3
Al			1	2.817	ug/l	52.15	1,929.10	7.847E-03	Pulse	1.00	3
Se			1	0.136	ug/l	12.23	79.78	2.182E-04	Pulse	3.00	3
Sb			1	0.035	ug/l	21.69	579.34	2.932E-04	Pulse	1.00	3
Se			1	-0.129	ug/l	-12.09	42.78	1.170E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,071,633.50	1.37	97.2	Pulse	0.50	3
1	Sc		440,756.06	0.58	111.5	Pulse	0.30	3
1	Ge		246,533.65	1.13	107.6	Pulse	0.30	3
1	In		1,977,683.67	1.25	102.8	Pulse	0.30	3
1	Tb		4,629,587.67	1.18	99.8	Pulse	0.50	3
1	Lu		3,279,686.08	0.60	99.2	Pulse	0.50	3
1	Ge		365,605.31	0.40	108.1	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,343.39	5.46	104.9	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:34
Sample Name FC1071-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.603	ug/l	1.88	16,682.50	6.636E-02	Pulse	0.50	3
As			1	0.184	ug/l	6.75	253.33	1.008E-03	Pulse	1.00	3
Mo			1	0.229	ug/l	9.69	1,136.70	5.742E-04	Pulse	0.50	3
Pb			1	1.974	ug/l	1.59	26,522.17	8.569E-03	Pulse	1.00	3
Be			1	-0.066	ug/l	-33.65	1.17	4.653E-06	Pulse	2.00	3
Ag			1	0.019	ug/l	19.82	342.67	1.733E-04	Pulse	0.50	3
Ba			1	11.912	ug/l	1.60	18,131.78	9.162E-03	Pulse	0.50	3
Tl			1	-0.002	ug/l	-210.94	552.01	1.784E-04	Pulse	0.50	3
Sn			1	0.417	ug/l	3.15	2,112.36	1.067E-03	Pulse	0.30	3
Sr			1	4.290	ug/l	0.70	20,710.69	1.047E-02	Pulse	0.50	3
[Pb]			1	1.926	ug/l	1.32	12,341.81	3.988E-03	Pulse	0.50	3
Ca			1	844.972	ug/l	0.40	26,457.13	1.052E-01	Pulse	0.50	3
Ti			1	10.060	ug/l	3.96	2,135.46	8.494E-03	Pulse	0.50	3
Na			1	247.919	ug/l	0.72	333,411.42	1.326E+00	Pulse	1.00	3
Mg			1	245.156	ug/l	0.40	145,666.27	5.794E-01	Pulse	1.00	3
K			1	243.843	ug/l	2.39	246,969.15	9.824E-01	Pulse	1.00	3
V			1	1.089	ug/l	1.24	8,156.40	3.244E-02	Pulse	0.50	3
Mn			1	9.798	ug/l	0.78	44,173.30	1.757E-01	Pulse	0.50	3
Fe			1	540.112	ug/l	0.90	3,470,168.42	1.380E+01	Pulse	0.50	3
Co			1	0.354	ug/l	1.52	4,356.50	1.733E-02	Pulse	0.50	3
Ni			1	1.878	ug/l	0.97	6,122.32	2.435E-02	Pulse	0.50	3
Cu			1	2.807	ug/l	3.37	59,111.96	2.351E-01	Pulse	0.50	3
Zn			1	43.910	ug/l	0.64	61,348.07	1.666E-01	Pulse	1.00	3
Cd			1	0.045	ug/l	34.07	88.67	4.472E-05	Pulse	0.50	3
Al			1	375.314	ug/l	1.05	96,510.74	3.839E-01	Pulse	1.00	3
Se			1	0.251	ug/l	48.00	78.89	2.143E-04	Pulse	3.00	3
Sb			1	0.282	ug/l	8.84	1,583.74	7.999E-04	Pulse	1.00	3
Se			1	-0.122	ug/l	-104.12	47.55	1.291E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,094,911.58	0.55	97.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		445,944.25	0.64	112.8	Pulse	0.30	3
1	Ge		251,400.52	0.63	109.7	Pulse	0.30	3
1	In		1,978,792.98	1.06	102.9	Pulse	0.30	3
1	Tb		4,644,851.00	1.57	100.2	Pulse	0.50	3
1	Lu		3,282,076.00	0.32	99.3	Pulse	0.50	3
1	Ge		368,207.82	0.35	108.9	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,231.15	16.02	96.1	Pulse	0.30	3

Quantitation Report

File Name 062SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:38
Sample Name FC1071-7
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.809	ug/l	1.89	10,288.08	4.176E-02	Pulse	0.50	3
As			1	0.058	ug/l	58.35	132.00	5.358E-04	Pulse	1.00	3
Mo			1	0.122	ug/l	13.10	758.02	3.829E-04	Pulse	0.50	3
Pb			1	0.553	ug/l	3.28	8,570.82	2.775E-03	Pulse	1.00	3
Be			1	-0.061	ug/l	-36.69	1.33	5.404E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	21.73	259.33	1.312E-04	Pulse	0.50	3
Ba			1	5.301	ug/l	2.03	8,076.50	4.082E-03	Pulse	0.50	3
Tl			1	-0.017	ug/l	-11.02	272.67	8.823E-05	Pulse	0.50	3
Sn			1	0.230	ug/l	28.17	1,445.66	7.298E-04	Pulse	0.30	3
Sr			1	4.058	ug/l	1.04	19,614.87	9.913E-03	Pulse	0.50	3
[Pb]			1	0.528	ug/l	5.19	3,950.47	1.279E-03	Pulse	0.50	3
Ca			1	579.917	ug/l	0.87	17,956.90	7.289E-02	Pulse	0.50	3
Ti			1	3.032	ug/l	3.76	638.01	2.590E-03	Pulse	0.50	3
Na			1	1439.385	ug/l	0.84	1,719,596.50	6.981E+00	Pulse	1.00	3
Mg			1	286.816	ug/l	0.67	166,763.56	6.770E-01	Pulse	1.00	3
K			1	210.319	ug/l	0.66	221,006.23	8.972E-01	Pulse	1.00	3
V			1	0.399	ug/l	5.65	3,725.70	1.512E-02	Pulse	0.50	3
Mn			1	2.831	ug/l	0.94	12,738.20	5.171E-02	Pulse	0.50	3
Fe			1	146.216	ug/l	1.31	933,059.27	3.788E+00	Pulse	0.50	3
Co			1	0.105	ug/l	1.16	1,355.38	5.502E-03	Pulse	0.50	3
Ni			1	0.634	ug/l	4.22	2,112.79	8.575E-03	Pulse	0.50	3
Cu			1	0.747	ug/l	12.28	40,943.25	1.662E-01	Pulse	0.50	3
Zn			1	22.406	ug/l	0.81	32,166.72	8.810E-02	Pulse	1.00	3
Cd			1	0.011	ug/l	12.62	33.33	1.685E-05	Pulse	0.50	3
Al			1	89.434	ug/l	0.61	22,932.47	9.309E-02	Pulse	1.00	3
Se			1	0.125	ug/l	113.08	69.55	1.904E-04	Pulse	3.00	3
Sb			1	0.105	ug/l	5.77	750.02	3.790E-04	Pulse	1.00	3
Se			1	-0.388	ug/l	-12.39	38.56	1.056E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,087,983.50	1.08	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		438,880.53	0.77	111.0	Pulse	0.30	3
1	Ge		246,343.41	0.65	107.5	Pulse	0.30	3
1	In		1,978,568.12	1.21	102.9	Pulse	0.30	3
1	Tb		4,638,750.17	1.64	100.0	Pulse	0.50	3
1	Lu		3,279,399.83	1.71	99.2	Pulse	0.50	3
1	Ge		365,109.97	0.82	108.0	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,375.61	2.61	107.4	Pulse	0.30	3

Quantitation Report

File Name 063_MB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:42
Sample Name MP41607-MB1
Sample Type MB
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.912	ug/l	1.10	18,143.12	7.592E-02	Pulse	0.50	3
As			1	0.163	ug/l	20.29	222.00	9.284E-04	Pulse	1.00	3
Mo			1	-0.029	ug/l	-70.14	213.33	1.130E-04	Pulse	0.50	3
Pb			1	0.251	ug/l	3.64	4,518.94	1.543E-03	Pulse	1.00	3
Be			1	-0.044	ug/l	-51.04	1.83	7.651E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	3.28	233.33	1.239E-04	Pulse	0.50	3
Ba			1	0.140	ug/l	25.02	220.00	1.166E-04	Pulse	0.50	3
Tl			1	-0.007	ug/l	-51.99	430.01	1.469E-04	Pulse	0.50	3
Sn			1	0.375	ug/l	11.90	1,870.11	9.924E-04	Pulse	0.30	3
Sr			1	0.042	ug/l	17.12	670.01	3.558E-04	Pulse	0.50	3
[Pb]			1	0.257	ug/l	7.26	2,208.82	7.545E-04	Pulse	0.50	3
Ca			1	22.601	ug/l	9.91	1,165.38	4.876E-03	Pulse	0.50	3
Ti			1	0.144	ug/l	82.26	39.33	1.646E-04	Pulse	0.50	3
Na			1	18.370	ug/l	5.10	56,592.66	2.369E-01	Pulse	1.00	3
Mg			1	2.080	ug/l	2.08	2,470.83	1.034E-02	Pulse	1.00	3
K			1	29.415	ug/l	12.65	104,415.45	4.370E-01	Pulse	1.00	3
V			1	0.872	ug/l	1.82	6,451.09	2.700E-02	Pulse	0.50	3
Mn			1	0.206	ug/l	7.45	1,190.04	4.982E-03	Pulse	0.50	3
Fe			1	7.825	ug/l	2.74	64,218.89	2.687E-01	Pulse	0.50	3
Co			1	0.007	ug/l	26.77	196.67	8.233E-04	Pulse	0.50	3
Ni			1	0.121	ug/l	9.53	492.01	2.058E-03	Pulse	0.50	3
Cu			1	4.481	ug/l	5.16	69,583.34	2.911E-01	Pulse	0.50	3
Zn			1	5.760	ug/l	1.85	9,633.42	2.732E-02	Pulse	1.00	3
Cd			1	0.024	ug/l	60.79	51.33	2.729E-05	Pulse	0.50	3
Al			1	6.716	ug/l	1.44	2,138.12	8.948E-03	Pulse	1.00	3
Se			1	0.228	ug/l	49.10	74.00	2.099E-04	Pulse	3.00	3
Sb			1	0.051	ug/l	21.15	470.01	2.494E-04	Pulse	1.00	3
Se			1	-0.141	ug/l	-84.17	44.89	1.274E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,928,245.75	0.81	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		427,862.51	0.82	108.2	Pulse	0.30	3
1	Ge		238,960.20	0.99	104.3	Pulse	0.30	3
1	In		1,883,397.29	1.06	97.9	Pulse	0.30	3
1	Tb		4,452,337.00	1.35	96.0	Pulse	0.50	3
1	Lu		3,117,909.50	1.50	94.3	Pulse	0.50	3
1	Ge		352,569.20	1.04	104.3	Pulse	0.30	3
1	Te		2.00	173.21	100.0	Pulse	0.50	3
1	Li		1,277.82	9.14	99.7	Pulse	0.30	3

Quantitation Report

File Name	064_BSP.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 12:46
Sample Name	MP41607-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	229.719	ug/l	0.69	1,730,791.25	7.135E+00	Pulse	0.50	3
As			1	222.359	ug/l	0.33	201,814.39	8.320E-01	Pulse	1.00	3
Mo			1	232.626	ug/l	0.56	779,930.02	4.157E-01	Pulse	0.50	3
Pb			1	228.030	ug/l	0.18	2,666,241.17	9.305E-01	Pulse	1.00	3
Be			1	229.910	ug/l	0.51	7,702.29	3.175E-02	Pulse	2.00	3
Ag			1	106.616	ug/l	0.41	1,061,201.16	5.656E-01	Pulse	0.50	3
Ba			1	219.476	ug/l	0.76	316,456.40	1.687E-01	Pulse	0.50	3
Tl			1	223.220	ug/l	0.62	3,664,463.58	1.279E+00	Pulse	0.50	3
Sn			1	223.291	ug/l	0.55	755,802.61	4.028E-01	Pulse	0.30	3
Sr			1	233.229	ug/l	0.66	1,042,016.19	5.554E-01	Pulse	0.50	3
[Pb]			1	217.387	ug/l	0.24	1,207,724.00	4.215E-01	Pulse	0.50	3
Ca			1	21515.764	ug/l	0.14	637,475.60	2.628E+00	Pulse	0.50	3
Ti			1	227.342	ug/l	1.38	46,335.23	1.910E-01	Pulse	0.50	3
Na			1	22000.354	ug/l	0.14	25,362,823.33	1.046E+02	Analog	1.00	3
Mg			1	21482.715	ug/l	0.47	12,201,886.00	5.030E+01	Analog	1.00	3
K			1	21681.000	ug/l	0.50	13,464,499.33	5.551E+01	Analog	1.00	3
V			1	228.023	ug/l	0.33	1,389,260.71	5.727E+00	Pulse	0.50	3
Mn			1	227.793	ug/l	0.25	983,882.19	4.056E+00	Pulse	0.50	3
Fe			1	21055.137	ug/l	0.01	129,881,170.67	5.354E+02	Analog	0.50	3
Co			1	225.652	ug/l	0.41	2,604,673.00	1.074E+01	Pulse	0.50	3
Ni			1	222.382	ug/l	0.49	684,469.40	2.822E+00	Pulse	0.50	3
Cu			1	223.663	ug/l	0.64	1,849,823.58	7.626E+00	Pulse	0.50	3
Zn			1	217.808	ug/l	0.66	286,462.42	8.015E-01	Pulse	1.00	3
Cd			1	219.953	ug/l	1.15	338,691.31	1.805E-01	Pulse	0.50	3
Al			1	20348.591	ug/l	0.51	5,021,550.00	2.070E+01	Analog	1.00	3
Se			1	214.741	ug/l	0.62	14,545.42	4.070E-02	Pulse	3.00	3
Sb			1	223.413	ug/l	0.64	997,993.75	5.319E-01	Pulse	1.00	3
Se			1	212.990	ug/l	0.74	6,793.21	1.901E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,865,564.08	2.12	90.6	Pulse	0.50	3
1	Sc		434,590.68	1.63	109.9	Pulse	0.30	3
1	Ge		242,570.35	1.18	105.8	Pulse	0.30	3
1	In		1,876,144.44	1.15	97.6	Pulse	0.30	3
1	Tb		4,509,259.17	3.10	97.2	Pulse	0.50	3
1	Lu		3,166,669.25	2.36	95.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		357,411.44	1.92	105.7	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,298.94	6.59	101.4	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:49
Sample Name FC1138-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.142	ug/l	0.84	19,936.87	8.307E-02	Pulse	0.50	3
As			1	0.333	ug/l	9.51	375.00	1.564E-03	Pulse	1.00	3
Mo			1	0.055	ug/l	5.07	494.01	2.630E-04	Pulse	0.50	3
Pb			1	1.223	ug/l	2.28	16,148.28	5.508E-03	Pulse	1.00	3
Be			1	0.122	ug/l	10.04	7.33	3.057E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	36.31	283.33	1.512E-04	Pulse	0.50	3
Ba			1	48.992	ug/l	1.37	70,725.93	3.766E-02	Pulse	0.50	3
Tl			1	0.137	ug/l	19.86	2,841.58	9.713E-04	Pulse	0.50	3
Sn			1	0.539	ug/l	1.66	2,419.06	1.288E-03	Pulse	0.30	3
Sr			1	16.566	ug/l	0.79	74,547.70	3.969E-02	Pulse	0.50	3
[Pb]			1	1.219	ug/l	3.99	7,673.09	2.618E-03	Pulse	0.50	3
Ca			1	2381.366	ug/l	0.88	70,270.98	2.927E-01	Pulse	0.50	3
Ti			1	2.149	ug/l	17.67	443.34	1.849E-03	Pulse	0.50	3
Na			1	9443.252	ug/l	0.51	10,792,729.67	4.497E+01	Analog	1.00	3
Mg			1	1451.286	ug/l	0.29	816,869.94	3.403E+00	Pulse	1.00	3
K			1	3059.227	ug/l	0.54	1,954,602.08	8.144E+00	Pulse	1.00	3
V			1	1.167	ug/l	2.54	8,257.77	3.441E-02	Pulse	0.50	3
Mn			1	13.947	ug/l	0.26	59,903.04	2.496E-01	Pulse	0.50	3
Fe			1	128.363	ug/l	0.38	800,146.19	3.334E+00	Pulse	0.50	3
Co			1	0.966	ug/l	1.73	11,151.92	4.647E-02	Pulse	0.50	3
Ni			1	0.944	ug/l	4.39	3,002.24	1.250E-02	Pulse	0.50	3
Cu			1	-0.459	ug/l	-13.21	30,208.25	1.258E-01	Pulse	0.50	3
Zn			1	1.062	ug/l	10.85	3,625.35	1.017E-02	Pulse	1.00	3
Cd			1	0.073	ug/l	38.36	126.00	6.741E-05	Pulse	0.50	3
Al			1	480.613	ug/l	0.94	117,848.31	4.910E-01	Pulse	1.00	3
Se			1	0.704	ug/l	12.64	107.00	2.998E-04	Pulse	3.00	3
Sb			1	0.132	ug/l	2.58	831.35	4.427E-04	Pulse	1.00	3
Se			1	0.788	ug/l	17.47	74.78	2.097E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,932,770.50	2.48	92.8	Pulse	0.50	3
1	Sc		433,302.20	1.77	109.6	Pulse	0.30	3
1	Ge		240,033.57	1.99	104.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,878,292.08	2.20	97.7	Pulse	0.30	3
1	Tb		4,458,949.17	2.75	96.2	Pulse	0.50	3
1	Lu		3,128,642.42	2.35	94.7	Pulse	0.50	3
1	Ge		356,643.22	2.06	105.5	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,333.38	4.02	104.1	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:53
Sample Name MP41607-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.055	ug/l	1.68	19,509.11	8.035E-02	Pulse	0.50	3
As			1	0.280	ug/l	10.71	331.67	1.367E-03	Pulse	1.00	3
Mo			1	-0.015	ug/l	-22.83	262.00	1.384E-04	Pulse	0.50	3
Pb			1	1.158	ug/l	1.49	15,508.69	5.242E-03	Pulse	1.00	3
Be			1	0.053	ug/l	207.44	5.17	2.115E-05	Pulse	2.00	3
Ag			1	0.007	ug/l	60.41	202.00	1.065E-04	Pulse	0.50	3
Ba			1	47.109	ug/l	0.16	68,504.27	3.621E-02	Pulse	0.50	3
Tl			1	0.050	ug/l	4.91	1,406.06	4.750E-04	Pulse	0.50	3
Sn			1	0.367	ug/l	6.98	1,848.99	9.768E-04	Pulse	0.30	3
Sr			1	15.844	ug/l	0.63	71,826.44	3.797E-02	Pulse	0.50	3
[Pb]			1	1.135	ug/l	3.31	7,259.57	2.454E-03	Pulse	0.50	3
Ca			1	2288.231	ug/l	0.18	68,328.20	2.814E-01	Pulse	0.50	3
Ti			1	1.978	ug/l	23.00	412.68	1.705E-03	Pulse	0.50	3
Na			1	9032.238	ug/l	0.78	10,444,094.33	4.301E+01	Analog	1.00	3
Mg			1	1390.549	ug/l	0.42	791,815.50	3.261E+00	Pulse	1.00	3
K			1	2933.327	ug/l	1.00	1,899,459.25	7.823E+00	Pulse	1.00	3
V			1	1.188	ug/l	2.28	8,485.88	3.494E-02	Pulse	0.50	3
Mn			1	13.496	ug/l	0.50	58,654.02	2.415E-01	Pulse	0.50	3
Fe			1	136.767	ug/l	0.84	861,446.33	3.547E+00	Pulse	0.50	3
Co			1	0.908	ug/l	2.58	10,614.93	4.370E-02	Pulse	0.50	3
Ni			1	0.893	ug/l	3.94	2,877.56	1.186E-02	Pulse	0.50	3
Cu			1	-0.818	ug/l	-6.32	27,649.11	1.138E-01	Pulse	0.50	3
Zn			1	0.975	ug/l	3.16	3,537.33	9.849E-03	Pulse	1.00	3
Cd			1	0.029	ug/l	27.12	58.67	3.108E-05	Pulse	0.50	3
Al			1	485.155	ug/l	0.96	120,343.42	4.956E-01	Pulse	1.00	3
Se			1	0.560	ug/l	21.86	97.78	2.725E-04	Pulse	3.00	3
Sb			1	0.099	ug/l	9.62	688.01	3.634E-04	Pulse	1.00	3
Se			1	0.659	ug/l	5.66	71.22	1.983E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,959,354.58	2.45	93.6	Pulse	0.50	3
1	Sc		435,838.41	2.22	110.2	Pulse	0.30	3
1	Ge		242,826.40	2.10	105.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,891,892.08	2.08	98.4	Pulse	0.30	3
1	Tb		4,529,316.33	3.23	97.7	Pulse	0.50	3
1	Lu		3,147,385.42	2.38	95.2	Pulse	0.50	3
1	Ge		359,098.29	2.11	106.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,464.51	4.14	114.3	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 12:57
Sample Name MP41607-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.223	ug/l	7.35	7,630.18	3.046E-02	Pulse	0.50	3
As			1	0.354	ug/l	21.45	146.00	5.831E-04	Pulse	1.00	3
Mo			1	-0.286	ug/l	-16.26	126.00	6.316E-05	Pulse	0.50	3
Pb			1	0.924	ug/l	1.16	3,958.80	1.273E-03	Pulse	1.00	3
Be			1	-0.114	ug/l	-129.39	2.67	1.062E-05	Pulse	2.00	3
Ag			1	0.003	ug/l	31.59	146.67	7.374E-05	Pulse	0.50	3
Ba			1	47.600	ug/l	1.46	14,569.22	7.324E-03	Pulse	0.50	3
Tl			1	-0.042	ug/l	-11.99	432.01	1.390E-04	Pulse	0.50	3
Sn			1	-0.315	ug/l	-9.60	402.23	2.021E-04	Pulse	0.30	3
Sr			1	15.904	ug/l	1.18	15,564.45	7.826E-03	Pulse	0.50	3
[Pb]			1	0.850	ug/l	4.85	1,820.10	5.853E-04	Pulse	0.50	3
Ca			1	2356.357	ug/l	1.09	14,939.05	5.963E-02	Pulse	0.50	3
Ti			1	2.558	ug/l	17.27	118.67	4.734E-04	Pulse	0.50	3
Na			1	9122.392	ug/l	0.45	2,206,510.67	8.808E+00	Pulse	1.00	3
Mg			1	1401.388	ug/l	0.80	165,755.16	6.617E-01	Pulse	1.00	3
K			1	3011.885	ug/l	1.03	474,539.99	1.894E+00	Pulse	1.00	3
V			1	1.913	ug/l	3.78	3,687.03	1.472E-02	Pulse	0.50	3
Mn			1	13.601	ug/l	2.59	12,456.01	4.973E-02	Pulse	0.50	3
Fe			1	123.488	ug/l	1.52	174,796.62	6.977E-01	Pulse	0.50	3
Co			1	0.896	ug/l	1.34	2,261.47	9.027E-03	Pulse	0.50	3
Ni			1	0.897	ug/l	7.26	702.68	2.805E-03	Pulse	0.50	3
Cu			1	-11.463	ug/l	-1.30	16,155.43	6.449E-02	Pulse	0.50	3
Zn			1	-3.395	ug/l	-3.54	1,410.72	3.810E-03	Pulse	1.00	3
Cd			1	0.009	ug/l	303.35	18.00	9.034E-06	Pulse	0.50	3
Al			1	495.490	ug/l	0.41	25,782.04	1.029E-01	Pulse	1.00	3
Se			1	0.945	ug/l	21.16	75.00	2.025E-04	Pulse	3.00	3
Sb			1	-0.028	ug/l	-40.40	228.33	1.148E-04	Pulse	1.00	3
Se			1	-1.494	ug/l	-22.25	42.00	1.134E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,109,323.50	1.58	98.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		442,921.35	0.15	112.0	Pulse	0.30	3
1	Ge		250,507.52	0.74	109.3	Pulse	0.30	3
1	In		1,989,017.77	1.71	103.4	Pulse	0.30	3
1	Tb		4,661,071.83	1.97	100.5	Pulse	0.50	3
1	Lu		3,281,885.25	2.01	99.3	Pulse	0.50	3
1	Ge		370,235.58	0.71	109.5	Pulse	0.30	3
1	Te		3.33	91.65	166.7	Pulse	0.50	3
1	Li		1,322.28	13.24	103.2	Pulse	0.30	3

Quantitation Report

File Name 068SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:01
Sample Name MP41607-S1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	234.740	ug/l	0.25	1,794,267.04	7.290E+00	Pulse	0.50	3
As			1	228.335	ug/l	0.76	210,268.60	8.543E-01	Pulse	1.00	3
Mo			1	238.942	ug/l	0.81	807,797.36	4.270E-01	Pulse	0.50	3
Pb			1	235.696	ug/l	0.86	2,736,710.08	9.617E-01	Pulse	1.00	3
Be			1	231.874	ug/l	0.85	7,882.20	3.202E-02	Pulse	2.00	3
Ag			1	109.685	ug/l	0.50	1,100,902.62	5.819E-01	Pulse	0.50	3
Ba			1	275.166	ug/l	1.21	400,067.19	2.115E-01	Pulse	0.50	3
Tl			1	231.322	ug/l	0.65	3,771,173.50	1.325E+00	Pulse	0.50	3
Sn			1	228.084	ug/l	0.11	778,466.27	4.115E-01	Pulse	0.30	3
Sr			1	257.679	ug/l	0.24	1,160,815.59	6.136E-01	Pulse	0.50	3
[Pb]			1	225.695	ug/l	0.82	1,245,155.12	4.376E-01	Pulse	0.50	3
Ca			1	24441.760	ug/l	0.99	734,638.04	2.985E+00	Pulse	0.50	3
Ti			1	236.277	ug/l	0.61	48,859.37	1.985E-01	Pulse	0.50	3
Na			1	31479.692	ug/l	0.86	36,803,660.00	1.495E+02	Analog	1.00	3
Mg			1	23234.952	ug/l	0.92	13,389,180.00	5.440E+01	Analog	1.00	3
K			1	25016.759	ug/l	0.93	15,748,635.00	6.399E+01	Analog	1.00	3
V			1	234.817	ug/l	0.46	1,451,463.08	5.898E+00	Pulse	0.50	3
Mn			1	247.259	ug/l	0.92	1,083,462.50	4.403E+00	Pulse	0.50	3
Fe			1	21625.279	ug/l	0.60	135,341,898.67	5.499E+02	Analog	0.50	3
Co			1	231.380	ug/l	1.01	2,709,827.00	1.101E+01	Pulse	0.50	3
Ni			1	227.580	ug/l	0.33	710,690.45	2.888E+00	Pulse	0.50	3
Cu			1	224.503	ug/l	0.41	1,883,705.38	7.654E+00	Pulse	0.50	3
Zn			1	218.953	ug/l	0.67	292,929.91	8.057E-01	Pulse	1.00	3
Cd			1	224.832	ug/l	0.37	349,092.46	1.845E-01	Pulse	0.50	3
Al			1	21223.244	ug/l	0.59	5,313,742.83	2.159E+01	Analog	1.00	3
Se			1	218.525	ug/l	0.60	15,055.14	4.141E-02	Pulse	3.00	3
Sb			1	229.665	ug/l	0.39	1,034,495.10	5.468E-01	Pulse	1.00	3
Se			1	218.654	ug/l	0.67	7,091.88	1.951E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,845,468.50	1.29	90.0	Pulse	0.50	3
1	Sc		441,414.72	0.74	111.6	Pulse	0.30	3
1	Ge		246,114.61	1.36	107.4	Pulse	0.30	3
1	In		1,891,890.62	1.34	98.4	Pulse	0.30	3
1	Tb		4,525,075.00	2.04	97.6	Pulse	0.50	3
1	Lu		3,190,037.67	2.37	96.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		363,539.44	1.39	107.5	Pulse	0.30	3
1	Te		5.33	114.56	266.7	Pulse	0.50	3
1	Li		1,285.61	9.21	100.3	Pulse	0.30	3

Quantitation Report

File Name 069SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:05
Sample Name MP41607-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	230.972	ug/l	0.98	1,734,702.71	7.174E+00	Pulse	0.50	3
As			1	223.742	ug/l	0.72	202,439.72	8.372E-01	Pulse	1.00	3
Mo			1	237.444	ug/l	0.58	791,868.44	4.243E-01	Pulse	0.50	3
Pb			1	230.150	ug/l	0.92	2,670,698.75	9.391E-01	Pulse	1.00	3
Be			1	227.180	ug/l	2.61	7,586.58	3.138E-02	Pulse	2.00	3
Ag			1	108.866	ug/l	0.82	1,077,835.75	5.776E-01	Pulse	0.50	3
Ba			1	270.127	ug/l	0.77	387,413.51	2.076E-01	Pulse	0.50	3
Tl			1	225.663	ug/l	0.95	3,676,726.58	1.293E+00	Pulse	0.50	3
Sn			1	224.520	ug/l	0.86	755,965.53	4.051E-01	Pulse	0.30	3
Sr			1	251.585	ug/l	0.34	1,118,015.46	5.991E-01	Pulse	0.50	3
[Pb]			1	220.168	ug/l	1.19	1,213,992.21	4.269E-01	Pulse	0.50	3
Ca			1	24503.426	ug/l	1.11	723,638.12	2.993E+00	Pulse	0.50	3
Ti			1	230.544	ug/l	2.25	46,835.78	1.937E-01	Pulse	0.50	3
Na			1	31606.941	ug/l	1.12	36,307,814.67	1.501E+02	Analog	1.00	3
Mg			1	23532.668	ug/l	1.22	13,324,088.00	5.510E+01	Analog	1.00	3
K			1	25104.571	ug/l	0.99	15,528,311.67	6.422E+01	Analog	1.00	3
V			1	230.391	ug/l	1.03	1,399,309.17	5.787E+00	Pulse	0.50	3
Mn			1	241.393	ug/l	1.21	1,039,343.27	4.298E+00	Pulse	0.50	3
Fe			1	21982.179	ug/l	1.23	135,172,197.33	5.590E+02	Analog	0.50	3
Co			1	228.279	ug/l	1.34	2,626,761.33	1.086E+01	Pulse	0.50	3
Ni			1	224.509	ug/l	1.21	688,821.54	2.849E+00	Pulse	0.50	3
Cu			1	220.220	ug/l	1.55	1,816,199.92	7.510E+00	Pulse	0.50	3
Zn			1	215.740	ug/l	0.39	284,030.61	7.940E-01	Pulse	1.00	3
Cd			1	221.764	ug/l	0.91	339,676.04	1.820E-01	Pulse	0.50	3
Al			1	21490.757	ug/l	0.92	5,286,737.00	2.186E+01	Analog	1.00	3
Se			1	214.752	ug/l	0.59	14,559.97	4.070E-02	Pulse	3.00	3
Sb			1	225.565	ug/l	0.82	1,002,273.68	5.370E-01	Pulse	1.00	3
Se			1	214.079	ug/l	0.47	6,833.45	1.910E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,843,695.83	1.63	89.9	Pulse	0.50	3
1	Sc		434,338.79	0.66	109.9	Pulse	0.30	3
1	Ge		241,824.14	1.08	105.5	Pulse	0.30	3
1	In		1,866,295.21	1.33	97.0	Pulse	0.30	3
1	Tb		4,486,149.00	1.91	96.7	Pulse	0.50	3
1	Lu		3,145,237.67	1.97	95.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		357,724.35	0.69	105.8	Pulse	0.30	3
1	Te		4.00	86.60	200.0	Pulse	0.50	3
1	Li		1,171.15	1.89	91.4	Pulse	0.30	3

Quantitation Report

File Name 070SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:08
Sample Name MP41607-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	22.589	ug/l	1.10	173,523.31	7.166E-01	Pulse	0.50	3
As			1	20.772	ug/l	0.90	18,888.98	7.801E-02	Pulse	1.00	3
Mo			1	20.347	ug/l	1.22	68,959.34	3.651E-02	Pulse	0.50	3
Pb			1	21.156	ug/l	0.11	254,093.53	8.679E-02	Pulse	1.00	3
Be			1	21.123	ug/l	4.65	709.34	2.930E-03	Pulse	2.00	3
Ag			1	4.779	ug/l	1.33	48,009.81	2.542E-02	Pulse	0.50	3
Ba			1	67.741	ug/l	1.26	98,339.78	5.206E-02	Pulse	0.50	3
Tl			1	20.079	ug/l	0.72	337,263.07	1.152E-01	Pulse	0.50	3
Sn			1	19.311	ug/l	1.32	66,347.02	3.513E-02	Pulse	0.30	3
Sr			1	37.479	ug/l	1.48	168,962.30	8.946E-02	Pulse	0.50	3
[Pb]			1	20.512	ug/l	0.85	117,113.76	4.000E-02	Pulse	0.50	3
Ca			1	4424.686	ug/l	0.20	131,255.25	5.421E-01	Pulse	0.50	3
Ti			1	23.443	ug/l	2.83	4,779.34	1.974E-02	Pulse	0.50	3
Na			1	11259.101	ug/l	0.54	12,972,524.67	5.358E+01	Analog	1.00	3
Mg			1	3533.990	ug/l	0.26	2,004,531.00	8.279E+00	Pulse	1.00	3
K			1	5032.851	ug/l	0.93	3,186,840.00	1.316E+01	Pulse	1.00	3
V			1	21.977	ug/l	0.88	134,772.09	5.566E-01	Pulse	0.50	3
Mn			1	34.826	ug/l	0.50	150,398.44	6.212E-01	Pulse	0.50	3
Fe			1	2182.919	ug/l	0.65	13,455,568.67	5.557E+01	Analog	0.50	3
Co			1	21.488	ug/l	0.46	247,676.71	1.023E+00	Pulse	0.50	3
Ni			1	21.416	ug/l	1.49	65,914.27	2.722E-01	Pulse	0.50	3
Cu			1	19.842	ug/l	0.79	194,951.44	8.052E-01	Pulse	0.50	3
Zn			1	30.353	ug/l	0.75	42,062.97	1.171E-01	Pulse	1.00	3
Cd			1	19.722	ug/l	1.98	30,581.23	1.619E-02	Pulse	0.50	3
Al			1	2437.749	ug/l	0.51	600,867.42	2.482E+00	Pulse	1.00	3
Se			1	19.614	ug/l	1.26	1,389.38	3.869E-03	Pulse	3.00	3
Sb			1	18.666	ug/l	0.52	84,167.16	4.456E-02	Pulse	1.00	3
Se			1	20.257	ug/l	2.94	694.57	1.934E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,927,537.83	1.69	92.6	Pulse	0.50	3
1	Sc		432,195.88	1.42	109.3	Pulse	0.30	3
1	Ge		242,112.45	1.22	105.6	Pulse	0.30	3
1	In		1,889,091.38	2.31	98.2	Pulse	0.30	3
1	Tb		4,516,240.67	2.40	97.4	Pulse	0.50	3
1	Lu		3,175,855.17	2.32	96.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		359,148.04	1.59	106.2	Pulse	0.30	3
1	Te		2.67	114.56	133.3	Pulse	0.50	3
1	Li		1,347.83	4.36	105.2	Pulse	0.30	3

Quantitation Report

File Name	071CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:12
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.782	ug/l	1.85	729,041.86	2.916E+00	Pulse	0.50	3
As			1	45.000	ug/l	1.87	84,245.97	3.369E-01	Pulse	1.00	3
Mo			1	46.308	ug/l	0.88	327,376.30	1.656E-01	Pulse	0.50	3
Pb			1	45.437	ug/l	0.84	1,144,129.96	3.711E-01	Pulse	1.00	3
Be			1	45.942	ug/l	1.18	3,175.08	1.270E-02	Pulse	2.00	3
Ag			1	48.103	ug/l	1.08	1,009,018.67	5.104E-01	Pulse	0.50	3
Ba			1	44.900	ug/l	0.65	136,437.53	6.901E-02	Pulse	0.50	3
Tl			1	46.972	ug/l	0.81	1,659,580.46	5.383E-01	Pulse	0.50	3
Sn			1	45.649	ug/l	1.66	325,993.81	1.649E-01	Pulse	0.30	3
Sr			1	47.407	ug/l	0.89	446,648.82	2.259E-01	Pulse	0.50	3
[Pb]			1	45.402	ug/l	0.80	543,218.17	1.762E-01	Pulse	0.50	3
Ca			1	4710.947	ug/l	1.79	288,038.32	1.152E+00	Pulse	0.50	3
Ti			1	46.218	ug/l	0.70	19,425.65	7.769E-02	Pulse	0.50	3
Na			1	4817.885	ug/l	0.81	11,471,371.67	4.588E+01	Analog	1.00	3
Mg			1	4731.413	ug/l	1.51	5,540,674.83	2.216E+01	Analog	1.00	3
K			1	4772.808	ug/l	0.75	6,161,354.50	2.464E+01	Analog	1.00	3
V			1	46.688	ug/l	1.66	587,136.31	2.348E+00	Pulse	0.50	3
Mn			1	46.662	ug/l	1.79	415,667.61	1.662E+00	Pulse	0.50	3
Fe			1	4706.326	ug/l	2.22	59,856,050.67	2.394E+02	Analog	0.50	3
Co			1	46.351	ug/l	1.65	1,103,002.88	4.411E+00	Pulse	0.50	3
Ni			1	46.228	ug/l	1.69	293,390.16	1.173E+00	Pulse	0.50	3
Cu			1	44.624	ug/l	1.88	782,014.96	3.128E+00	Pulse	0.50	3
Zn			1	45.399	ug/l	0.88	124,656.07	3.378E-01	Pulse	1.00	3
Cd			1	45.566	ug/l	2.17	147,860.55	7.479E-02	Pulse	0.50	3
Al			1	4642.847	ug/l	1.69	2,362,220.42	9.448E+00	Pulse	1.00	3
Se			1	45.189	ug/l	0.79	6,356.39	1.723E-02	Pulse	3.00	3
Sb			1	45.127	ug/l	1.62	424,967.40	2.150E-01	Pulse	1.00	3
Se			1	44.749	ug/l	2.54	2,976.57	8.068E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,082,844.08	0.82	97.5	Pulse	0.50	3
1	Sc		443,381.25	0.37	112.1	Pulse	0.30	3
1	Ge		250,040.05	0.73	109.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,976,910.96	0.85	102.8	Pulse	0.30	3
1	Tb		4,695,428.50	1.00	101.3	Pulse	0.50	3
1	Lu		3,331,170.50	0.08	100.8	Pulse	0.50	3
1	Ge		368,996.58	0.79	109.1	Pulse	0.30	3
1	Te		5.33	86.60	266.7	Pulse	0.50	3
1	Li		1,327.83	13.46	103.6	Pulse	0.30	3

Quantitation Report

File Name 072_CCV.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:16
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.124	ug/l	1.88	1,488,431.13	5.974E+00	Pulse	0.50	3
As			1	93.337	ug/l	0.65	174,050.86	6.985E-01	Pulse	1.00	3
Mo			1	97.190	ug/l	0.96	676,757.98	3.474E-01	Pulse	0.50	3
Pb			1	95.610	ug/l	1.01	2,358,514.08	7.803E-01	Pulse	1.00	3
Be			1	93.958	ug/l	0.61	6,467.36	2.596E-02	Pulse	2.00	3
Ag			1	99.698	ug/l	0.63	2,060,762.50	1.058E+00	Pulse	0.50	3
Ba			1	94.640	ug/l	1.13	283,391.83	1.455E-01	Pulse	0.50	3
Tl			1	98.795	ug/l	0.55	3,421,399.75	1.132E+00	Pulse	0.50	3
Sn			1	96.093	ug/l	0.94	675,577.87	3.468E-01	Pulse	0.30	3
Sr			1	99.249	ug/l	0.98	920,938.85	4.727E-01	Pulse	0.50	3
[Pb]			1	96.145	ug/l	1.07	1,126,875.00	3.728E-01	Pulse	0.50	3
Ca			1	9813.746	ug/l	0.69	597,381.42	2.398E+00	Pulse	0.50	3
Ti			1	96.952	ug/l	0.59	40,593.97	1.629E-01	Pulse	0.50	3
Na			1	9903.540	ug/l	0.57	23,458,906.00	9.415E+01	Analog	1.00	3
Mg			1	9721.383	ug/l	0.83	11,343,136.00	4.552E+01	Analog	1.00	3
K			1	9826.227	ug/l	0.45	12,545,478.67	5.035E+01	Analog	1.00	3
V			1	96.914	ug/l	1.43	1,213,204.71	4.869E+00	Pulse	0.50	3
Mn			1	96.576	ug/l	1.49	856,979.06	3.439E+00	Pulse	0.50	3
Fe			1	9662.653	ug/l	1.14	122,453,325.33	4.915E+02	Analog	0.50	3
Co			1	95.145	ug/l	1.14	2,256,163.67	9.055E+00	Pulse	0.50	3
Ni			1	94.896	ug/l	1.20	600,040.90	2.408E+00	Pulse	0.50	3
Cu			1	93.254	ug/l	1.40	1,590,209.29	6.382E+00	Pulse	0.50	3
Zn			1	94.207	ug/l	1.64	254,630.99	6.942E-01	Pulse	1.00	3
Cd			1	94.839	ug/l	1.13	303,275.80	1.557E-01	Pulse	0.50	3
Al			1	9578.129	ug/l	0.74	4,855,715.67	1.949E+01	Mix	1.00	3
Se			1	93.932	ug/l	0.81	13,067.46	3.563E-02	Pulse	3.00	3
Sb			1	94.845	ug/l	0.97	879,899.67	4.516E-01	Pulse	1.00	3
Se			1	94.085	ug/l	0.71	6,165.11	1.681E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,022,289.25	0.90	95.6	Pulse	0.50	3
1	Sc		440,615.33	0.36	111.4	Pulse	0.30	3
1	Ge		249,170.05	0.45	108.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,948,171.93	0.55	101.3	Pulse	0.30	3
1	Tb		4,705,085.50	0.68	101.5	Pulse	0.50	3
1	Lu		3,325,907.25	0.62	100.6	Pulse	0.50	3
1	Ge		366,812.24	0.90	108.5	Pulse	0.30	3
1	Te		4.67	107.85	233.3	Pulse	0.50	3
1	Li		1,191.15	10.79	93.0	Pulse	0.30	3

Quantitation Report

File Name	073_CCB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:20
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.044	ug/l	21.29	4,847.95	1.940E-02	Pulse	0.50	3
As			1	0.038	ug/l	50.35	150.33	6.017E-04	Pulse	1.00	3
Mo			1	0.065	ug/l	16.64	796.69	3.991E-04	Pulse	0.50	3
Pb			1	-0.004	ug/l	-251.92	1,507.40	4.879E-04	Pulse	1.00	3
Be			1	0.010	ug/l	79.74	4.17	1.667E-05	Pulse	2.00	3
Ag			1	0.019	ug/l	63.43	536.68	2.700E-04	Pulse	0.50	3
Ba			1	0.019	ug/l	66.47	76.67	3.857E-05	Pulse	0.50	3
Tl			1	0.024	ug/l	53.97	1,433.40	4.644E-04	Pulse	0.50	3
Sn			1	0.061	ug/l	15.02	1,066.71	5.345E-04	Pulse	0.30	3
Sr			1	0.019	ug/l	61.96	691.35	3.470E-04	Pulse	0.50	3
[Pb]			1	-0.010	ug/l	-103.91	671.35	2.173E-04	Pulse	0.50	3
Ca			1	2.409	ug/l	50.58	676.01	2.705E-03	Pulse	0.50	3
Ti			1	0.025	ug/l	105.14	21.33	8.527E-05	Pulse	0.50	3
Na			1	4.568	ug/l	23.52	48,244.52	1.930E-01	Pulse	1.00	3
Mg			1	2.077	ug/l	53.96	3,796.74	1.520E-02	Pulse	1.00	3
K			1	6.430	ug/l	13.68	98,701.31	3.949E-01	Pulse	1.00	3
V			1	0.053	ug/l	25.68	1,942.77	7.774E-03	Pulse	0.50	3
Mn			1	0.012	ug/l	80.06	431.34	1.726E-03	Pulse	0.50	3
Fe			1	2.177	ug/l	48.91	45,093.95	1.805E-01	Pulse	0.50	3
Co			1	0.017	ug/l	66.78	540.01	2.161E-03	Pulse	0.50	3
Ni			1	0.013	ug/l	89.42	213.33	8.538E-04	Pulse	0.50	3
Cu			1	-1.325	ug/l	-1.86	13,125.15	5.252E-02	Pulse	0.50	3
Zn			1	-0.491	ug/l	-0.68	999.03	2.706E-03	Pulse	1.00	3
Cd			1	0.026	ug/l	57.73	98.67	4.964E-05	Pulse	0.50	3
Al			1	2.136	ug/l	55.31	1,614.41	6.461E-03	Pulse	1.00	3
Se			1	0.111	ug/l	38.52	77.11	2.089E-04	Pulse	3.00	3
Sb			1	0.038	ug/l	3.16	616.68	3.092E-04	Pulse	1.00	3
Se			1	-0.063	ug/l	-54.77	47.56	1.288E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,092,004.75	0.78	97.8	Pulse	0.50	3
1	Sc		442,142.26	0.40	111.8	Pulse	0.30	3

Quantitation Report

1	Ge		249,937.34	0.31	109.0	Pulse	0.30	3
1	In		1,994,812.01	1.13	103.7	Pulse	0.30	3
1	Tb		4,659,158.17	1.49	100.5	Pulse	0.50	3
1	Lu		3,298,706.92	0.44	99.8	Pulse	0.50	3
1	Ge		369,165.41	0.51	109.2	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,313.38	8.30	102.5	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:24
Sample Name	FC1138-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.140	ug/l	1.68	20,339.95	8.299E-02	Pulse	0.50	3
As			1	0.383	ug/l	8.14	429.34	1.751E-03	Pulse	1.00	3
Mo			1	0.056	ug/l	34.70	509.34	2.650E-04	Pulse	0.50	3
Pb			1	0.535	ug/l	3.35	8,119.60	2.700E-03	Pulse	1.00	3
Be			1	0.072	ug/l	59.46	5.83	2.375E-05	Pulse	2.00	3
Ag			1	0.024	ug/l	14.51	378.01	1.969E-04	Pulse	0.50	3
Ba			1	67.120	ug/l	1.67	98,913.05	5.159E-02	Pulse	0.50	3
Tl			1	0.108	ug/l	7.43	2,418.85	8.041E-04	Pulse	0.50	3
Sn			1	0.524	ug/l	12.94	2,419.07	1.260E-03	Pulse	0.30	3
Sr			1	29.666	ug/l	2.01	135,863.58	7.086E-02	Pulse	0.50	3
[Pb]			1	0.526	ug/l	2.40	3,833.78	1.275E-03	Pulse	0.50	3
Ca			1	5866.109	ug/l	1.12	175,951.89	7.180E-01	Pulse	0.50	3
Ti			1	3.203	ug/l	9.57	670.69	2.734E-03	Pulse	0.50	3
Na			1	10216.472	ug/l	0.69	11,918,050.33	4.863E+01	Analog	1.00	3
Mg			1	1369.770	ug/l	1.03	787,180.35	3.212E+00	Pulse	1.00	3
K			1	5104.008	ug/l	1.57	3,269,802.58	1.334E+01	Pulse	1.00	3
V			1	1.382	ug/l	3.04	9,755.79	3.981E-02	Pulse	0.50	3
Mn			1	34.704	ug/l	0.30	151,702.62	6.190E-01	Pulse	0.50	3
Fe			1	158.080	ug/l	0.39	1,002,121.52	4.089E+00	Pulse	0.50	3
Co			1	1.286	ug/l	3.53	15,126.61	6.170E-02	Pulse	0.50	3
Ni			1	0.686	ug/l	4.78	2,261.48	9.227E-03	Pulse	0.50	3
Cu			1	-1.471	ug/l	-7.03	22,550.50	9.198E-02	Pulse	0.50	3
Zn			1	2.566	ug/l	2.00	5,645.84	1.566E-02	Pulse	1.00	3
Cd			1	0.091	ug/l	17.15	158.00	8.230E-05	Pulse	0.50	3
Al			1	553.346	ug/l	0.75	138,452.83	5.650E-01	Pulse	1.00	3
Se			1	2.345	ug/l	9.50	219.67	6.094E-04	Pulse	3.00	3
Sb			1	0.071	ug/l	12.70	571.34	2.976E-04	Pulse	1.00	3
Se			1	2.289	ug/l	24.99	123.67	3.427E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,007,976.08	1.81	95.1	Pulse	0.50	3
1	Sc		434,578.13	1.41	109.9	Pulse	0.30	3
1	Ge		245,071.48	1.76	106.9	Pulse	0.30	3
1	In		1,917,924.09	2.68	99.7	Pulse	0.30	3
1	Tb		4,533,728.67	2.19	97.8	Pulse	0.50	3
1	Lu		3,178,673.50	1.98	96.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		360,551.72	1.28	106.6	Pulse	0.30	3
1	Te		2.67	114.56	133.3	Pulse	0.50	3
1	Li		1,248.93	9.86	97.5	Pulse	0.30	3

Quantitation Report

File Name	075SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:27
Sample Name	FC1138-3
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.497	ug/l	1.58	22,854.08	9.407E-02	Pulse	0.50	3
As			1	0.371	ug/l	9.53	414.34	1.705E-03	Pulse	1.00	3
Mo			1	0.031	ug/l	37.05	420.68	2.208E-04	Pulse	0.50	3
Pb			1	1.421	ug/l	2.55	18,719.24	6.314E-03	Pulse	1.00	3
Be			1	0.059	ug/l	80.57	5.33	2.194E-05	Pulse	2.00	3
Ag			1	0.009	ug/l	20.87	224.67	1.178E-04	Pulse	0.50	3
Ba			1	70.227	ug/l	1.03	102,866.12	5.397E-02	Pulse	0.50	3
Tl			1	0.063	ug/l	6.89	1,625.42	5.483E-04	Pulse	0.50	3
Sn			1	0.505	ug/l	3.84	2,336.83	1.226E-03	Pulse	0.30	3
Sr			1	19.625	ug/l	0.24	89,513.39	4.697E-02	Pulse	0.50	3
[Pb]			1	1.392	ug/l	1.62	8,750.26	2.952E-03	Pulse	0.50	3
Ca			1	3542.876	ug/l	0.64	105,564.13	4.345E-01	Pulse	0.50	3
Ti			1	2.457	ug/l	8.19	512.01	2.108E-03	Pulse	0.50	3
Na			1	12758.879	ug/l	1.02	14,747,484.33	6.070E+01	Analog	1.00	3
Mg			1	1407.969	ug/l	1.34	802,187.42	3.302E+00	Pulse	1.00	3
K			1	3827.931	ug/l	0.66	2,453,536.58	1.010E+01	Pulse	1.00	3
V			1	1.395	ug/l	3.37	9,751.13	4.013E-02	Pulse	0.50	3
Mn			1	23.112	ug/l	2.94	100,271.53	4.127E-01	Pulse	0.50	3
Fe			1	176.211	ug/l	2.70	1,105,534.33	4.550E+00	Pulse	0.50	3
Co			1	3.308	ug/l	1.71	38,359.85	1.579E-01	Pulse	0.50	3
Ni			1	1.055	ug/l	1.41	3,380.31	1.391E-02	Pulse	0.50	3
Cu			1	-1.229	ug/l	-7.15	24,311.98	1.001E-01	Pulse	0.50	3
Zn			1	2.355	ug/l	3.88	5,343.08	1.489E-02	Pulse	1.00	3
Cd			1	0.045	ug/l	30.07	84.67	4.433E-05	Pulse	0.50	3
Al			1	340.059	ug/l	1.31	84,555.51	3.480E-01	Pulse	1.00	3
Se			1	1.013	ug/l	7.87	128.45	3.581E-04	Pulse	3.00	3
Sb			1	0.062	ug/l	20.28	525.01	2.752E-04	Pulse	1.00	3
Se			1	1.463	ug/l	20.11	96.67	2.695E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,964,177.58	1.13	93.8	Pulse	0.50	3
1	Sc		434,239.73	1.51	109.8	Pulse	0.30	3
1	Ge		242,952.91	0.33	106.0	Pulse	0.30	3
1	In		1,905,898.05	1.42	99.1	Pulse	0.30	3
1	Tb		4,491,431.33	2.10	96.9	Pulse	0.50	3
1	Lu		3,153,518.50	2.80	95.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		358,767.82	1.59	106.1	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,445.62	10.61	112.8	Pulse	0.30	3

Quantitation Report

File Name 076SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:31
Sample Name FC933-1FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.127	ug/l	2.35	20,274.57	8.259E-02	Pulse	0.50	3
As			1	0.345	ug/l	8.83	394.67	1.608E-03	Pulse	1.00	3
Mo			1	-0.028	ug/l	-14.14	220.67	1.152E-04	Pulse	0.50	3
Pb			1	1.412	ug/l	1.39	18,803.32	6.279E-03	Pulse	1.00	3
Be			1	-0.046	ug/l	-19.10	1.83	7.472E-06	Pulse	2.00	3
Ag			1	0.006	ug/l	32.42	200.00	1.046E-04	Pulse	0.50	3
Ba			1	8.649	ug/l	2.85	12,731.83	6.655E-03	Pulse	0.50	3
Tl			1	-0.006	ug/l	-34.42	456.68	1.526E-04	Pulse	0.50	3
Sn			1	0.188	ug/l	15.22	1,253.39	6.544E-04	Pulse	0.30	3
Sr			1	41.914	ug/l	0.71	191,413.62	1.000E-01	Pulse	0.50	3
[Pb]			1	1.423	ug/l	1.96	9,021.07	3.012E-03	Pulse	0.50	3
Ca			1	3249.812	ug/l	1.49	97,900.92	3.987E-01	Pulse	0.50	3
Ti			1	0.599	ug/l	23.42	134.00	5.467E-04	Pulse	0.50	3
Na			1	1700.688	ug/l	0.22	2,018,211.92	8.221E+00	Pulse	1.00	3
Mg			1	313.609	ug/l	1.03	181,607.00	7.397E-01	Pulse	1.00	3
K			1	811.659	ug/l	0.16	595,745.31	2.427E+00	Pulse	1.00	3
V			1	1.171	ug/l	4.55	8,471.87	3.451E-02	Pulse	0.50	3
Mn			1	5.900	ug/l	1.88	26,109.55	1.063E-01	Pulse	0.50	3
Fe			1	9.767	ug/l	2.12	78,100.62	3.181E-01	Pulse	0.50	3
Co			1	0.037	ug/l	2.98	554.68	2.259E-03	Pulse	0.50	3
Ni			1	6.255	ug/l	2.28	19,613.96	7.988E-02	Pulse	0.50	3
Cu			1	0.342	ug/l	37.55	37,486.96	1.527E-01	Pulse	0.50	3
Zn			1	14.327	ug/l	1.82	21,137.90	5.860E-02	Pulse	1.00	3
Cd			1	0.043	ug/l	15.88	82.67	4.316E-05	Pulse	0.50	3
Al			1	13.563	ug/l	3.13	3,907.39	1.591E-02	Pulse	1.00	3
Se			1	0.218	ug/l	26.14	75.00	2.081E-04	Pulse	3.00	3
Sb			1	0.081	ug/l	23.70	616.34	3.216E-04	Pulse	1.00	3
Se			1	-0.011	ug/l	-1419.91	50.22	1.390E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,994,886.00	1.99	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		435,297.59	2.57	110.1	Pulse	0.30	3
1	Ge		245,496.99	1.39	107.1	Pulse	0.30	3
1	In		1,913,780.89	1.89	99.5	Pulse	0.30	3
1	Tb		4,516,776.50	2.10	97.4	Pulse	0.50	3
1	Lu		3,174,217.75	2.41	96.0	Pulse	0.50	3
1	Ge		360,812.82	2.75	106.7	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,376.72	3.57	107.5	Pulse	0.30	3

Quantitation Report

File Name 077SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:35
Sample Name FC933-2FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.118	ug/l	1.59	27,678.98	1.133E-01	Pulse	0.50	3
As			1	0.748	ug/l	8.15	760.35	3.116E-03	Pulse	1.00	3
Mo			1	0.049	ug/l	25.92	482.01	2.538E-04	Pulse	0.50	3
Pb			1	-0.019	ug/l	-0.60	1,301.05	4.397E-04	Pulse	1.00	3
Be			1	-0.061	ug/l	-49.85	1.33	5.417E-06	Pulse	2.00	3
Ag			1	0.003	ug/l	84.60	159.33	8.407E-05	Pulse	0.50	3
Ba			1	1.628	ug/l	2.59	2,390.17	1.260E-03	Pulse	0.50	3
Tl			1	-0.019	ug/l	-8.73	226.00	7.626E-05	Pulse	0.50	3
Sn			1	0.811	ug/l	10.37	3,377.00	1.778E-03	Pulse	0.30	3
Sr			1	37.532	ug/l	0.99	169,968.35	8.959E-02	Pulse	0.50	3
[Pb]			1	-0.020	ug/l	-26.17	644.02	2.177E-04	Pulse	0.50	3
Ca			1	5540.028	ug/l	0.89	165,647.62	6.782E-01	Pulse	0.50	3
Ti			1	0.547	ug/l	12.48	122.67	5.028E-04	Pulse	0.50	3
Na			1	4418.748	ug/l	0.83	5,157,990.33	2.112E+01	Analog	1.00	3
Mg			1	1092.297	ug/l	0.48	625,907.37	2.563E+00	Pulse	1.00	3
K			1	672.611	ug/l	1.88	506,225.71	2.073E+00	Pulse	1.00	3
V			1	1.390	ug/l	3.66	9,767.81	4.001E-02	Pulse	0.50	3
Mn			1	1.945	ug/l	2.02	8,773.34	3.593E-02	Pulse	0.50	3
Fe			1	7.701	ug/l	1.24	64,865.03	2.656E-01	Pulse	0.50	3
Co			1	0.049	ug/l	8.42	694.68	2.844E-03	Pulse	0.50	3
Ni			1	0.740	ug/l	6.22	2,422.16	9.914E-03	Pulse	0.50	3
Cu			1	-1.642	ug/l	-3.42	21,070.83	8.626E-02	Pulse	0.50	3
Zn			1	1.049	ug/l	3.40	3,633.02	1.012E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-528.69	12.67	6.649E-06	Pulse	0.50	3
Al			1	5.012	ug/l	1.24	1,762.08	7.214E-03	Pulse	1.00	3
Se			1	0.153	ug/l	21.41	70.22	1.957E-04	Pulse	3.00	3
Sb			1	0.103	ug/l	19.41	709.35	3.732E-04	Pulse	1.00	3
Se			1	-0.054	ug/l	-320.16	48.44	1.351E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,958,788.25	1.97	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		436,187.52	1.62	110.3	Pulse	0.30	3
1	Ge		244,244.44	1.94	106.6	Pulse	0.30	3
1	In		1,897,473.88	1.95	98.7	Pulse	0.30	3
1	Tb		4,480,810.67	2.62	96.6	Pulse	0.50	3
1	Lu		3,133,484.08	2.91	94.8	Pulse	0.50	3
1	Ge		359,003.75	1.75	106.2	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,364.50	9.17	106.5	Pulse	0.30	3

Quantitation Report

File Name	078SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:39
Sample Name	FC933-4FA
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.148	ug/l	1.48	20,141.09	8.325E-02	Pulse	0.50	3
As			1	10.850	ug/l	1.07	9,894.90	4.090E-02	Pulse	1.00	3
Mo			1	-0.030	ug/l	-51.59	211.33	1.116E-04	Pulse	0.50	3
Pb			1	0.095	ug/l	3.49	2,653.88	9.059E-04	Pulse	1.00	3
Be			1	-0.030	ug/l	-141.32	2.33	9.620E-06	Pulse	2.00	3
Ag			1	0.003	ug/l	68.88	158.00	8.364E-05	Pulse	0.50	3
Ba			1	4.676	ug/l	1.16	6,805.98	3.602E-03	Pulse	0.50	3
Tl			1	-0.016	ug/l	-14.42	288.00	9.816E-05	Pulse	0.50	3
Sn			1	0.121	ug/l	16.81	1,007.82	5.331E-04	Pulse	0.30	3
Sr			1	10.923	ug/l	1.02	49,611.62	2.625E-02	Pulse	0.50	3
[Pb]			1	0.095	ug/l	12.98	1,288.05	4.397E-04	Pulse	0.50	3
Ca			1	1553.583	ug/l	0.19	46,386.58	1.917E-01	Pulse	0.50	3
Ti			1	0.849	ug/l	24.76	183.33	7.571E-04	Pulse	0.50	3
Na			1	1990.518	ug/l	0.36	2,321,730.67	9.596E+00	Pulse	1.00	3
Mg			1	435.260	ug/l	0.56	247,878.46	1.024E+00	Pulse	1.00	3
K			1	274.836	ug/l	1.98	256,742.10	1.061E+00	Pulse	1.00	3
V			1	1.836	ug/l	3.68	12,383.29	5.120E-02	Pulse	0.50	3
Mn			1	65.400	ug/l	0.54	281,981.07	1.165E+00	Pulse	0.50	3
Fe			1	3778.897	ug/l	0.71	23,263,260.00	9.616E+01	Analog	0.50	3
Co			1	1.640	ug/l	0.58	19,000.00	7.853E-02	Pulse	0.50	3
Ni			1	0.674	ug/l	5.74	2,194.80	9.074E-03	Pulse	0.50	3
Cu			1	-1.898	ug/l	-4.42	18,801.84	7.770E-02	Pulse	0.50	3
Zn			1	1.994	ug/l	6.28	4,875.62	1.357E-02	Pulse	1.00	3
Cd			1	-0.004	ug/l	-104.07	8.67	4.553E-06	Pulse	0.50	3
Al			1	107.389	ug/l	1.05	26,941.46	1.114E-01	Pulse	1.00	3
Se			1	0.093	ug/l	43.71	66.22	1.844E-04	Pulse	3.00	3
Sb			1	0.039	ug/l	18.71	415.67	2.200E-04	Pulse	1.00	3
Se			1	-0.092	ug/l	-89.43	47.34	1.317E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,929,329.25	2.12	92.7	Pulse	0.50	3
1	Sc		433,636.46	1.58	109.7	Pulse	0.30	3
1	Ge		241,948.43	1.32	105.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,889,564.44	1.70	98.2	Pulse	0.30	3
1	Tb		4,485,123.83	2.15	96.7	Pulse	0.50	3
1	Lu		3,117,148.00	2.54	94.3	Pulse	0.50	3
1	Ge		359,236.19	0.93	106.2	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,387.84	6.79	108.3	Pulse	0.30	3

Quantitation Report

File Name 079SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:42
Sample Name FC933-5FA
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.231	ug/l	2.25	20,874.49	8.583E-02	Pulse	0.50	3
As			1	0.697	ug/l	8.95	712.01	2.925E-03	Pulse	1.00	3
Mo			1	0.138	ug/l	14.45	787.35	4.127E-04	Pulse	0.50	3
Pb			1	-0.031	ug/l	-11.39	1,166.71	3.934E-04	Pulse	1.00	3
Be			1	-0.085	ug/l	-17.92	0.50	2.076E-06	Pulse	2.00	3
Ag			1	0.005	ug/l	60.19	180.67	9.459E-05	Pulse	0.50	3
Ba			1	0.582	ug/l	8.25	870.69	4.562E-04	Pulse	0.50	3
Tl			1	-0.022	ug/l	-6.79	180.00	6.065E-05	Pulse	0.50	3
Sn			1	0.132	ug/l	20.03	1,055.60	5.531E-04	Pulse	0.30	3
Sr			1	16.332	ug/l	0.27	74,703.57	3.913E-02	Pulse	0.50	3
[Pb]			1	-0.042	ug/l	-28.91	516.01	1.744E-04	Pulse	0.50	3
Ca			1	3238.518	ug/l	0.41	96,662.29	3.974E-01	Pulse	0.50	3
Ti			1	0.444	ug/l	26.72	101.33	4.168E-04	Pulse	0.50	3
Na			1	2535.219	ug/l	1.15	2,962,963.75	1.218E+01	Pulse	1.00	3
Mg			1	712.333	ug/l	0.73	407,005.08	1.673E+00	Pulse	1.00	3
K			1	602.746	ug/l	1.82	461,000.52	1.895E+00	Pulse	1.00	3
V			1	1.472	ug/l	2.52	10,230.70	4.206E-02	Pulse	0.50	3
Mn			1	1.981	ug/l	2.48	8,897.40	3.658E-02	Pulse	0.50	3
Fe			1	25.675	ug/l	0.72	175,770.23	7.226E-01	Pulse	0.50	3
Co			1	0.032	ug/l	7.70	492.01	2.021E-03	Pulse	0.50	3
Ni			1	0.541	ug/l	2.32	1,800.09	7.398E-03	Pulse	0.50	3
Cu			1	-1.720	ug/l	-3.81	20,351.41	8.364E-02	Pulse	0.50	3
Zn			1	1.380	ug/l	3.65	4,063.44	1.133E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	105.07	20.00	1.044E-05	Pulse	0.50	3
Al			1	4.289	ug/l	7.61	1,575.06	6.478E-03	Pulse	1.00	3
Se			1	0.074	ug/l	104.37	64.78	1.808E-04	Pulse	3.00	3
Sb			1	0.095	ug/l	9.74	678.01	3.549E-04	Pulse	1.00	3
Se			1	-0.019	ug/l	-110.05	49.56	1.382E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,964,345.42	2.33	93.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		437,044.04	1.58	110.5	Pulse	0.30	3
1	Ge		243,271.85	1.77	106.1	Pulse	0.30	3
1	In		1,909,191.80	1.92	99.3	Pulse	0.30	3
1	Tb		4,490,976.67	2.81	96.9	Pulse	0.50	3
1	Lu		3,135,779.92	2.90	94.9	Pulse	0.50	3
1	Ge		358,571.38	2.35	106.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,371.17	2.73	107.0	Pulse	0.30	3

Quantitation Report

File Name 080SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:46
Sample Name FC1124-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.132	ug/l	3.21	19,280.90	8.275E-02	Pulse	0.50	3
As			1	10.141	ug/l	1.46	8,913.42	3.825E-02	Pulse	1.00	3
Mo			1	1.994	ug/l	2.74	6,633.19	3.726E-03	Pulse	0.50	3
Pb			1	1.616	ug/l	0.34	19,884.55	7.109E-03	Pulse	1.00	3
Be			1	-0.043	ug/l	-146.81	1.83	7.852E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	14.10	372.01	2.089E-04	Pulse	0.50	3
Ba			1	41.000	ug/l	0.96	56,097.80	3.152E-02	Pulse	0.50	3
Tl			1	-0.013	ug/l	-33.74	311.34	1.111E-04	Pulse	0.50	3
Sn			1	0.309	ug/l	6.48	1,552.30	8.722E-04	Pulse	0.30	3
Sr			1	310.358	ug/l	1.73	1,315,150.92	7.390E-01	Pulse	0.50	3
[Pb]			1	1.638	ug/l	3.20	9,594.06	3.430E-03	Pulse	0.50	3
Ca			1	52440.067	ug/l	0.91	1,492,026.50	6.402E+00	Pulse	0.50	3
Ti			1	0.824	ug/l	21.38	171.34	7.361E-04	Pulse	0.50	3
Na			1	176947.867	ug/l	0.51	195,750,032.00	8.399E+02	Analog	1.00	3
Mg			1	8128.365	ug/l	0.33	4,436,543.50	1.904E+01	Pulse	1.00	3
K			1	6427.617	ug/l	1.25	3,894,477.42	1.671E+01	Pulse	1.00	3
V			1	1.511	ug/l	9.04	10,022.61	4.303E-02	Pulse	0.50	3
Mn			1	6872.282	ug/l	0.83	28,509,164.00	1.223E+02	Analog	0.50	3
Fe			1	13860.105	ug/l	0.66	82,151,077.33	3.525E+02	Analog	0.50	3
Co			1	0.685	ug/l	2.43	7,708.89	3.308E-02	Pulse	0.50	3
Ni			1	1.454	ug/l	1.26	4,421.19	1.897E-02	Pulse	0.50	3
Cu			1	0.909	ug/l	30.52	40,016.77	1.716E-01	Pulse	0.50	3
Zn			1	20.871	ug/l	0.43	28,326.74	8.249E-02	Pulse	1.00	3
Cd			1	0.015	ug/l	32.56	36.00	2.026E-05	Pulse	0.50	3
Al			1	31.023	ug/l	3.24	7,845.83	3.367E-02	Pulse	1.00	3
Se			1	0.233	ug/l	47.38	72.34	2.108E-04	Pulse	3.00	3
Sb			1	0.565	ug/l	2.31	2,620.52	1.472E-03	Pulse	1.00	3
Se			1	0.065	ug/l	348.57	50.11	1.457E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,797,025.92	1.44	88.5	Pulse	0.50	3
1	Sc		413,905.00	1.08	104.7	Pulse	0.30	3
1	Ge		233,071.79	1.49	101.7	Pulse	0.30	3
1	In		1,780,187.98	2.44	92.6	Pulse	0.30	3
1	Tb		4,419,735.33	2.58	95.3	Pulse	0.50	3
1	Lu		3,089,166.50	2.64	93.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		343,397.51	1.84	101.5	Pulse	0.30	3
1	Te		1.33	86.60	66.7	Pulse	0.50	3
1	Li		1,265.60	9.90	98.8	Pulse	0.30	3

Quantitation Report

File Name	081SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:50
Sample Name	FC1124-4A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.117	ug/l	0.22	19,408.35	8.229E-02	Pulse	0.50	3
As			1	21.328	ug/l	1.64	18,891.66	8.009E-02	Pulse	1.00	3
Mo			1	6.302	ug/l	1.42	20,958.39	1.142E-02	Pulse	0.50	3
Pb			1	0.601	ug/l	1.91	8,471.43	2.971E-03	Pulse	1.00	3
Be			1	-0.008	ug/l	-535.68	3.00	1.274E-05	Pulse	2.00	3
Ag			1	0.010	ug/l	40.15	222.00	1.210E-04	Pulse	0.50	3
Ba			1	45.579	ug/l	0.52	64,272.83	3.503E-02	Pulse	0.50	3
Tl			1	-0.019	ug/l	-6.63	224.00	7.850E-05	Pulse	0.50	3
Sn			1	0.107	ug/l	0.73	932.25	5.081E-04	Pulse	0.30	3
Sr			1	153.344	ug/l	1.08	670,056.60	3.652E-01	Pulse	0.50	3
[Pb]			1	0.581	ug/l	3.01	3,936.47	1.381E-03	Pulse	0.50	3
Ca			1	21251.160	ug/l	1.29	612,247.65	2.596E+00	Pulse	0.50	3
Ti			1	1.257	ug/l	9.06	259.33	1.099E-03	Pulse	0.50	3
Na			1	60568.644	ug/l	0.94	67,830,249.33	2.876E+02	Analog	1.00	3
Mg			1	3488.550	ug/l	0.80	1,927,664.84	8.173E+00	Pulse	1.00	3
K			1	4795.832	ug/l	0.85	2,962,423.92	1.256E+01	Pulse	1.00	3
V			1	0.925	ug/l	5.18	6,677.83	2.833E-02	Pulse	0.50	3
Mn			1	3503.555	ug/l	0.67	14,709,043.00	6.236E+01	Analog	0.50	3
Fe			1	10575.010	ug/l	1.34	63,441,032.00	2.690E+02	Analog	0.50	3
Co			1	0.116	ug/l	10.13	1,416.73	6.008E-03	Pulse	0.50	3
Ni			1	0.431	ug/l	2.57	1,412.73	5.991E-03	Pulse	0.50	3
Cu			1	-0.384	ug/l	-34.29	30,285.07	1.284E-01	Pulse	0.50	3
Zn			1	4.462	ug/l	5.30	7,903.96	2.258E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	119.88	20.00	1.092E-05	Pulse	0.50	3
Al			1	46.605	ug/l	3.01	11,681.82	4.952E-02	Pulse	1.00	3
Se			1	0.162	ug/l	74.47	69.00	1.974E-04	Pulse	3.00	3
Sb			1	0.110	ug/l	4.58	716.01	3.904E-04	Pulse	1.00	3
Se			1	0.019	ug/l	630.25	49.55	1.416E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,850,908.00	1.99	90.2	Pulse	0.50	3
1	Sc		421,084.44	1.36	106.5	Pulse	0.30	3
1	Ge		235,848.03	1.62	102.9	Pulse	0.30	3
1	In		1,834,587.29	2.43	95.4	Pulse	0.30	3
1	Tb		4,449,953.50	2.74	96.0	Pulse	0.50	3
1	Lu		3,106,055.67	2.48	94.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		349,944.59	1.36	103.5	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,267.83	5.48	99.0	Pulse	0.30	3

Quantitation Report

File Name 082SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 13:54
Sample Name FC1124-5A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.811	ug/l	1.49	17,365.76	7.281E-02	Pulse	0.50	3
As			1	0.207	ug/l	16.61	261.00	1.092E-03	Pulse	1.00	3
Mo			1	-0.032	ug/l	-19.01	202.00	1.086E-04	Pulse	0.50	3
Pb			1	-0.030	ug/l	-7.99	1,162.37	3.962E-04	Pulse	1.00	3
Be			1	-0.069	ug/l	-59.89	1.00	4.272E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	969.62	134.67	7.200E-05	Pulse	0.50	3
Ba			1	1.433	ug/l	5.17	2,067.46	1.110E-03	Pulse	0.50	3
Tl			1	-0.023	ug/l	-2.67	162.67	5.538E-05	Pulse	0.50	3
Sn			1	0.111	ug/l	16.06	962.26	5.156E-04	Pulse	0.30	3
Sr			1	1.831	ug/l	2.86	8,594.65	4.613E-03	Pulse	0.50	3
[Pb]			1	-0.036	ug/l	-23.85	549.34	1.870E-04	Pulse	0.50	3
Ca			1	168.487	ug/l	1.21	5,409.43	2.268E-02	Pulse	0.50	3
Ti			1	0.124	ug/l	6.52	35.33	1.482E-04	Pulse	0.50	3
Na			1	174.987	ug/l	3.69	233,693.72	9.801E-01	Pulse	1.00	3
Mg			1	12.786	ug/l	4.51	8,440.78	3.540E-02	Pulse	1.00	3
K			1	32.585	ug/l	13.51	106,130.77	4.451E-01	Pulse	1.00	3
V			1	0.841	ug/l	5.31	6,257.03	2.622E-02	Pulse	0.50	3
Mn			1	7.931	ug/l	2.31	33,976.27	1.425E-01	Pulse	0.50	3
Fe			1	30.842	ug/l	0.93	203,675.72	8.539E-01	Pulse	0.50	3
Co			1	0.026	ug/l	6.57	420.01	1.760E-03	Pulse	0.50	3
Ni			1	0.455	ug/l	2.54	1,502.06	6.299E-03	Pulse	0.50	3
Cu			1	-1.404	ug/l	-4.22	22,474.40	9.421E-02	Pulse	0.50	3
Zn			1	1.868	ug/l	1.15	4,622.56	1.311E-02	Pulse	1.00	3
Cd			1	-0.003	ug/l	-97.10	9.33	4.957E-06	Pulse	0.50	3
Al			1	8.019	ug/l	2.91	2,450.49	1.027E-02	Pulse	1.00	3
Se			1	-0.011	ug/l	-874.05	58.00	1.647E-04	Pulse	3.00	3
Sb			1	0.045	ug/l	19.95	439.68	2.356E-04	Pulse	1.00	3
Se			1	-0.247	ug/l	-112.93	41.67	1.180E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,934,894.00	1.95	92.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		428,172.40	2.57	108.3	Pulse	0.30	3
1	Ge		238,535.87	2.11	104.1	Pulse	0.30	3
1	In		1,863,912.98	2.98	96.9	Pulse	0.30	3
1	Tb		4,447,387.50	2.70	95.9	Pulse	0.50	3
1	Lu		3,104,369.58	2.31	93.9	Pulse	0.50	3
1	Ge		352,562.60	2.10	104.3	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,323.39	6.59	103.3	Pulse	0.30	3

Quantitation Report

File Name	083SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 13:58
Sample Name	FC1124-1F
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.835	ug/l	2.88	17,190.24	7.354E-02	Pulse	0.50	3
As			1	7.015	ug/l	1.24	6,208.69	2.656E-02	Pulse	1.00	3
Mo			1	0.862	ug/l	1.63	3,075.60	1.705E-03	Pulse	0.50	3
Pb			1	0.153	ug/l	3.79	3,215.64	1.144E-03	Pulse	1.00	3
Be			1	-0.059	ug/l	-54.91	1.33	5.705E-06	Pulse	2.00	3
Ag			1	0.001	ug/l	335.81	135.33	7.482E-05	Pulse	0.50	3
Ba			1	38.636	ug/l	1.99	53,526.04	2.970E-02	Pulse	0.50	3
Tl			1	-0.025	ug/l	-3.54	131.33	4.669E-05	Pulse	0.50	3
Sn			1	5.868	ug/l	38.39	19,513.59	1.089E-02	Pulse	0.30	3
Sr			1	300.810	ug/l	1.65	1,290,974.71	7.162E-01	Pulse	0.50	3
[Pb]			1	0.150	ug/l	6.15	1,538.74	5.474E-04	Pulse	0.50	3
Ca			1	51714.923	ug/l	0.83	1,476,034.67	6.314E+00	Pulse	0.50	3
Ti			1	0.576	ug/l	11.01	123.33	5.274E-04	Pulse	0.50	3
Na			1	173291.464	ug/l	0.70	192,296,698.67	8.226E+02	Analog	1.00	3
Mg			1	8033.635	ug/l	0.53	4,398,339.33	1.881E+01	Pulse	1.00	3
K			1	6253.775	ug/l	1.13	3,803,308.75	1.627E+01	Pulse	1.00	3
V			1	0.795	ug/l	3.83	5,859.57	2.507E-02	Pulse	0.50	3
Mn			1	6766.555	ug/l	0.32	28,158,790.67	1.204E+02	Analog	0.50	3
Fe			1	10979.929	ug/l	0.42	65,287,196.00	2.793E+02	Analog	0.50	3
Co			1	0.639	ug/l	1.63	7,220.04	3.089E-02	Pulse	0.50	3
Ni			1	1.114	ug/l	3.97	3,426.98	1.466E-02	Pulse	0.50	3
Cu			1	-1.223	ug/l	-13.73	23,453.59	1.003E-01	Pulse	0.50	3
Zn			1	5.993	ug/l	0.86	9,743.47	2.817E-02	Pulse	1.00	3
Cd			1	-0.007	ug/l	-11.64	3.33	1.858E-06	Pulse	0.50	3
Al			1	4.103	ug/l	8.81	1,470.72	6.290E-03	Pulse	1.00	3
Se			1	0.095	ug/l	135.02	64.00	1.848E-04	Pulse	3.00	3
Sb			1	0.429	ug/l	1.48	2,070.79	1.148E-03	Pulse	1.00	3
Se			1	0.019	ug/l	1212.24	49.00	1.416E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,812,041.92	2.77	88.9	Pulse	0.50	3
1	Sc		420,507.13	1.70	106.4	Pulse	0.30	3
1	Ge		233,788.26	1.07	102.0	Pulse	0.30	3
1	In		1,803,020.76	2.97	93.7	Pulse	0.30	3
1	Tb		4,403,256.50	3.17	95.0	Pulse	0.50	3
1	Lu		3,126,845.33	2.67	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		345,872.75	1.71	102.3	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,252.27	4.79	97.7	Pulse	0.30	3

Quantitation Report

File Name	084CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:01
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.809	ug/l	2.27	735,210.12	2.918E+00	Pulse	0.50	3
As			1	44.567	ug/l	1.86	84,091.57	3.337E-01	Pulse	1.00	3
Mo			1	46.076	ug/l	1.01	329,285.15	1.648E-01	Pulse	0.50	3
Pb			1	45.505	ug/l	0.75	1,151,739.42	3.717E-01	Pulse	1.00	3
Be			1	45.633	ug/l	1.49	3,178.58	1.261E-02	Pulse	2.00	3
Ag			1	47.831	ug/l	0.46	1,014,221.25	5.075E-01	Pulse	0.50	3
Ba			1	44.713	ug/l	2.19	137,357.64	6.873E-02	Pulse	0.50	3
Tl			1	47.445	ug/l	0.86	1,685,032.92	5.437E-01	Pulse	0.50	3
Sn			1	45.506	ug/l	1.60	328,512.07	1.644E-01	Pulse	0.30	3
Sr			1	46.890	ug/l	0.95	446,584.39	2.235E-01	Pulse	0.50	3
[Pb]			1	45.659	ug/l	0.44	549,064.31	1.772E-01	Pulse	0.50	3
Ca			1	4741.751	ug/l	1.47	292,200.10	1.160E+00	Pulse	0.50	3
Ti			1	46.851	ug/l	2.66	19,844.76	7.875E-02	Pulse	0.50	3
Na			1	4860.307	ug/l	0.91	11,663,187.00	4.628E+01	Analog	1.00	3
Mg			1	4772.700	ug/l	1.49	5,633,007.67	2.235E+01	Analog	1.00	3
K			1	4793.622	ug/l	0.69	6,236,653.67	2.475E+01	Analog	1.00	3
V			1	46.776	ug/l	1.85	592,875.42	2.353E+00	Pulse	0.50	3
Mn			1	47.401	ug/l	1.48	425,578.79	1.689E+00	Pulse	0.50	3
Fe			1	4711.181	ug/l	1.83	60,391,866.67	2.397E+02	Analog	0.50	3
Co			1	46.365	ug/l	2.19	1,112,002.92	4.413E+00	Pulse	0.50	3
Ni			1	46.522	ug/l	2.00	297,578.03	1.181E+00	Pulse	0.50	3
Cu			1	44.936	ug/l	2.45	793,427.56	3.149E+00	Pulse	0.50	3
Zn			1	45.064	ug/l	1.02	125,420.85	3.354E-01	Pulse	1.00	3
Cd			1	45.314	ug/l	0.34	148,642.29	7.438E-02	Pulse	0.50	3
Al			1	4686.021	ug/l	2.17	2,402,894.67	9.535E+00	Pulse	1.00	3
Se			1	44.406	ug/l	1.86	6,331.72	1.693E-02	Pulse	3.00	3
Sb			1	44.850	ug/l	1.12	426,953.67	2.136E-01	Pulse	1.00	3
Se			1	44.645	ug/l	2.35	3,010.46	8.049E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,098,761.92	1.33	98.0	Pulse	0.50	3
1	Sc		449,599.51	0.54	113.7	Pulse	0.30	3
1	Ge		252,010.36	0.37	110.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,998,358.46	0.71	103.9	Pulse	0.30	3
1	Tb		4,752,999.50	0.75	102.5	Pulse	0.50	3
1	Lu		3,356,632.33	0.58	101.6	Pulse	0.50	3
1	Ge		373,973.54	0.60	110.6	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,305.61	9.27	101.9	Pulse	0.30	3

Quantitation Report

File Name	085_CCV.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:05
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.306	ug/l	1.89	1,495,437.33	5.985E+00	Pulse	0.50	3
As			1	93.245	ug/l	1.55	174,365.59	6.978E-01	Pulse	1.00	3
Mo			1	97.910	ug/l	1.89	681,712.87	3.499E-01	Pulse	0.50	3
Pb			1	95.179	ug/l	1.52	2,351,744.33	7.768E-01	Pulse	1.00	3
Be			1	93.985	ug/l	1.46	6,487.71	2.596E-02	Pulse	2.00	3
Ag			1	99.694	ug/l	1.81	2,060,499.42	1.058E+00	Pulse	0.50	3
Ba			1	94.322	ug/l	1.67	282,405.23	1.450E-01	Pulse	0.50	3
Tl			1	98.991	ug/l	1.88	3,433,912.58	1.134E+00	Pulse	0.50	3
Sn			1	96.429	ug/l	1.89	677,864.38	3.480E-01	Pulse	0.30	3
Sr			1	100.017	ug/l	1.58	927,997.92	4.764E-01	Pulse	0.50	3
[Pb]			1	95.532	ug/l	2.01	1,121,551.17	3.705E-01	Pulse	0.50	3
Ca			1	9894.111	ug/l	1.78	603,959.48	2.417E+00	Pulse	0.50	3
Ti			1	97.696	ug/l	2.67	41,018.12	1.642E-01	Pulse	0.50	3
Na			1	10043.668	ug/l	0.91	23,857,621.33	9.548E+01	Analog	1.00	3
Mg			1	9868.734	ug/l	2.04	11,547,184.33	4.621E+01	Analog	1.00	3
K			1	9948.420	ug/l	0.76	12,736,303.67	5.097E+01	Analog	1.00	3
V			1	97.535	ug/l	1.57	1,224,389.62	4.900E+00	Pulse	0.50	3
Mn			1	96.525	ug/l	1.56	858,949.39	3.438E+00	Pulse	0.50	3
Fe			1	9735.236	ug/l	1.34	123,721,133.33	4.951E+02	Analog	0.50	3
Co			1	95.096	ug/l	1.57	2,261,370.58	9.050E+00	Pulse	0.50	3
Ni			1	94.797	ug/l	1.84	601,094.85	2.406E+00	Pulse	0.50	3
Cu			1	92.920	ug/l	1.30	1,589,128.34	6.360E+00	Pulse	0.50	3
Zn			1	93.409	ug/l	1.38	254,436.36	6.884E-01	Pulse	1.00	3
Cd			1	94.966	ug/l	2.18	303,638.76	1.559E-01	Pulse	0.50	3
Al			1	9683.659	ug/l	2.03	4,922,940.67	1.970E+01	Analog	1.00	3
Se			1	93.683	ug/l	1.52	13,132.73	3.553E-02	Pulse	3.00	3
Sb			1	94.688	ug/l	1.78	878,348.98	4.509E-01	Pulse	1.00	3
Se			1	94.229	ug/l	0.92	6,221.79	1.683E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,027,286.75	0.38	95.8	Pulse	0.50	3
1	Sc		445,563.51	0.96	112.7	Pulse	0.30	3
1	Ge		249,881.77	0.74	109.0	Pulse	0.30	3
1	In		1,948,180.06	0.79	101.3	Pulse	0.30	3
1	Tb		4,714,898.67	0.85	101.7	Pulse	0.50	3
1	Lu		3,348,932.17	1.01	101.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		369,622.21	0.61	109.3	Pulse	0.30	3
1	Te		9.33	65.47	466.7	Pulse	0.50	3
1	Li		1,217.82	9.35	95.1	Pulse	0.30	3

Quantitation Report

File Name	086_CCB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:09
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.044	ug/l	45.31	4,771.94	1.939E-02	Pulse	0.50	3
As			1	0.033	ug/l	5.92	139.67	5.675E-04	Pulse	1.00	3
Mo			1	0.067	ug/l	12.20	795.35	4.053E-04	Pulse	0.50	3
Pb			1	-0.002	ug/l	-849.34	1,548.08	5.055E-04	Pulse	1.00	3
Be			1	0.016	ug/l	119.46	4.50	1.829E-05	Pulse	2.00	3
Ag			1	0.023	ug/l	76.84	621.35	3.176E-04	Pulse	0.50	3
Ba			1	0.022	ug/l	38.99	83.33	4.255E-05	Pulse	0.50	3
Tl			1	0.025	ug/l	55.27	1,447.41	4.730E-04	Pulse	0.50	3
Sn			1	0.063	ug/l	17.48	1,066.70	5.436E-04	Pulse	0.30	3
Sr			1	0.032	ug/l	63.66	800.69	4.086E-04	Pulse	0.50	3
[Pb]			1	-0.007	ug/l	-253.46	700.68	2.289E-04	Pulse	0.50	3
Ca			1	4.202	ug/l	26.13	773.35	3.143E-03	Pulse	0.50	3
Ti			1	0.056	ug/l	126.58	34.00	1.381E-04	Pulse	0.50	3
Na			1	8.955	ug/l	20.09	57,746.97	2.347E-01	Pulse	1.00	3
Mg			1	2.670	ug/l	55.16	4,420.89	1.797E-02	Pulse	1.00	3
K			1	7.211	ug/l	25.66	98,159.72	3.989E-01	Pulse	1.00	3
V			1	0.066	ug/l	42.52	2,072.12	8.422E-03	Pulse	0.50	3
Mn			1	0.058	ug/l	35.45	828.69	3.368E-03	Pulse	0.50	3
Fe			1	2.805	ug/l	49.49	52,254.40	2.124E-01	Pulse	0.50	3
Co			1	0.023	ug/l	63.04	664.68	2.702E-03	Pulse	0.50	3
Ni			1	0.025	ug/l	50.21	289.34	1.176E-03	Pulse	0.50	3
Cu			1	-1.323	ug/l	-1.67	12,957.70	5.266E-02	Pulse	0.50	3
Zn			1	-0.480	ug/l	-3.99	1,018.70	2.781E-03	Pulse	1.00	3
Cd			1	0.024	ug/l	61.22	93.33	4.761E-05	Pulse	0.50	3
Al			1	2.808	ug/l	51.43	1,925.77	7.829E-03	Pulse	1.00	3
Se			1	0.105	ug/l	52.44	75.67	2.065E-04	Pulse	3.00	3
Sb			1	0.038	ug/l	14.66	605.34	3.087E-04	Pulse	1.00	3
Se			1	0.003	ug/l	2597.73	51.44	1.405E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,066,685.00	1.03	97.0	Pulse	0.50	3
1	Sc		439,300.76	0.70	111.1	Pulse	0.30	3

Quantitation Report

1	Ge		246,092.25	0.16	107.4	Pulse	0.30	3
1	In		1,961,681.66	0.84	102.0	Pulse	0.30	3
1	Tb		4,632,133.00	0.88	99.9	Pulse	0.50	3
1	Lu		3,271,472.92	0.71	99.0	Pulse	0.50	3
1	Ge		366,225.92	0.54	108.3	Pulse	0.30	3
1	Te		2.00	173.21	100.0	Pulse	0.50	3
1	Li		1,361.16	4.75	106.2	Pulse	0.30	3

Quantitation Report

File Name 087SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:13
Sample Name FC1124-4F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.929	ug/l	2.42	17,959.61	7.648E-02	Pulse	0.50	3
As			1	20.096	ug/l	0.71	17,729.21	7.548E-02	Pulse	1.00	3
Mo			1	6.115	ug/l	0.45	20,292.30	1.109E-02	Pulse	0.50	3
Pb			1	0.077	ug/l	4.84	2,381.84	8.314E-04	Pulse	1.00	3
Be			1	-0.033	ug/l	-92.83	2.17	9.164E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	36.68	330.01	1.809E-04	Pulse	0.50	3
Ba			1	45.531	ug/l	1.38	64,035.32	3.500E-02	Pulse	0.50	3
Tl			1	0.028	ug/l	34.05	999.37	3.494E-04	Pulse	0.50	3
Sn			1	0.333	ug/l	4.95	1,676.76	9.164E-04	Pulse	0.30	3
Sr			1	150.544	ug/l	1.04	656,128.52	3.586E-01	Pulse	0.50	3
[Pb]			1	0.086	ug/l	17.64	1,208.71	4.223E-04	Pulse	0.50	3
Ca			1	20557.441	ug/l	1.67	589,679.12	2.511E+00	Pulse	0.50	3
Ti			1	0.659	ug/l	18.26	140.67	5.974E-04	Pulse	0.50	3
Na			1	59450.188	ug/l	1.53	66,291,758.67	2.823E+02	Analog	1.00	3
Mg			1	3438.383	ug/l	1.15	1,891,808.08	8.055E+00	Pulse	1.00	3
K			1	4679.962	ug/l	1.89	2,880,394.08	1.227E+01	Pulse	1.00	3
V			1	0.852	ug/l	7.30	6,218.35	2.649E-02	Pulse	0.50	3
Mn			1	3329.933	ug/l	1.70	13,919,514.00	5.927E+01	Analog	0.50	3
Fe			1	10064.503	ug/l	0.97	60,118,626.67	2.560E+02	Analog	0.50	3
Co			1	0.097	ug/l	11.35	1,196.04	5.099E-03	Pulse	0.50	3
Ni			1	0.554	ug/l	3.60	1,776.76	7.561E-03	Pulse	0.50	3
Cu			1	-1.512	ug/l	-6.33	21,294.43	9.062E-02	Pulse	0.50	3
Zn			1	1.072	ug/l	3.25	3,548.67	1.020E-02	Pulse	1.00	3
Cd			1	0.028	ug/l	52.29	55.33	3.045E-05	Pulse	0.50	3
Al			1	12.943	ug/l	12.56	3,584.34	1.528E-02	Pulse	1.00	3
Se			1	0.171	ug/l	106.38	69.33	1.991E-04	Pulse	3.00	3
Sb			1	0.124	ug/l	6.57	773.35	4.222E-04	Pulse	1.00	3
Se			1	0.058	ug/l	292.90	50.45	1.451E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,865,526.75	2.32	90.6	Pulse	0.50	3
1	Sc		421,698.45	1.92	106.7	Pulse	0.30	3
1	Ge		234,889.78	2.23	102.5	Pulse	0.30	3
1	In		1,830,172.57	2.73	95.2	Pulse	0.30	3
1	Tb		4,442,085.33	2.53	95.8	Pulse	0.50	3
1	Lu		3,131,233.58	2.96	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		347,745.31	1.36	102.8	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,271.16	2.88	99.2	Pulse	0.30	3

Quantitation Report

File Name 088SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:17
Sample Name FC1124-5F
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.809	ug/l	1.59	17,273.66	7.275E-02	Pulse	0.50	3
As			1	0.190	ug/l	7.37	244.67	1.031E-03	Pulse	1.00	3
Mo			1	0.027	ug/l	61.25	396.01	2.138E-04	Pulse	0.50	3
Pb			1	-0.034	ug/l	-6.37	1,105.37	3.788E-04	Pulse	1.00	3
Be			1	-0.070	ug/l	-57.31	1.00	4.189E-06	Pulse	2.00	3
Ag			1	0.005	ug/l	28.91	180.00	9.734E-05	Pulse	0.50	3
Ba			1	1.741	ug/l	3.09	2,488.85	1.347E-03	Pulse	0.50	3
Tl			1	-0.012	ug/l	-32.47	345.34	1.187E-04	Pulse	0.50	3
Sn			1	0.408	ug/l	6.88	1,945.67	1.052E-03	Pulse	0.30	3
Sr			1	3.168	ug/l	1.05	14,416.20	7.796E-03	Pulse	0.50	3
[Pb]			1	-0.035	ug/l	-19.66	547.34	1.875E-04	Pulse	0.50	3
Ca			1	234.629	ug/l	1.53	7,302.05	3.075E-02	Pulse	0.50	3
Ti			1	0.129	ug/l	45.85	36.00	1.521E-04	Pulse	0.50	3
Na			1	375.501	ug/l	2.02	458,633.45	1.932E+00	Pulse	1.00	3
Mg			1	28.421	ug/l	0.62	17,100.29	7.201E-02	Pulse	1.00	3
K			1	44.422	ug/l	8.23	112,818.42	4.752E-01	Pulse	1.00	3
V			1	0.855	ug/l	2.61	6,313.71	2.658E-02	Pulse	0.50	3
Mn			1	5.644	ug/l	3.63	24,158.33	1.018E-01	Pulse	0.50	3
Fe			1	18.331	ug/l	2.12	127,222.24	5.358E-01	Pulse	0.50	3
Co			1	0.057	ug/l	4.58	764.69	3.220E-03	Pulse	0.50	3
Ni			1	0.888	ug/l	1.09	2,802.21	1.180E-02	Pulse	0.50	3
Cu			1	-1.444	ug/l	-4.41	22,062.62	9.288E-02	Pulse	0.50	3
Zn			1	0.661	ug/l	7.36	3,044.24	8.702E-03	Pulse	1.00	3
Cd			1	0.003	ug/l	178.59	18.67	1.009E-05	Pulse	0.50	3
Al			1	4.429	ug/l	7.11	1,573.07	6.621E-03	Pulse	1.00	3
Se			1	0.023	ug/l	453.87	60.00	1.712E-04	Pulse	3.00	3
Sb			1	0.042	ug/l	17.71	422.34	2.283E-04	Pulse	1.00	3
Se			1	0.168	ug/l	124.85	54.22	1.548E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,917,194.25	2.24	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		422,922.58	1.44	107.0	Pulse	0.30	3
1	Ge		237,470.58	1.74	103.6	Pulse	0.30	3
1	In		1,848,897.57	2.39	96.1	Pulse	0.30	3
1	Tb		4,427,998.50	2.64	95.5	Pulse	0.50	3
1	Lu		3,089,924.67	3.45	93.5	Pulse	0.50	3
1	Ge		349,888.25	1.81	103.5	Pulse	0.30	3
1	Te		1.33	86.60	66.7	Pulse	0.50	3
1	Li		1,382.28	6.44	107.9	Pulse	0.30	3

Quantitation Report

File Name 089SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:20
Sample Name FC1186-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.709	ug/l	1.02	16,453.63	6.964E-02	Pulse	0.50	3
As			1	13.356	ug/l	0.99	11,879.36	5.027E-02	Pulse	1.00	3
Mo			1	0.259	ug/l	3.50	1,163.37	6.284E-04	Pulse	0.50	3
Pb			1	0.021	ug/l	4.54	1,743.43	6.036E-04	Pulse	1.00	3
Be			1	-0.049	ug/l	-37.19	1.67	7.070E-06	Pulse	2.00	3
Ag			1	0.006	ug/l	20.89	185.33	1.000E-04	Pulse	0.50	3
Ba			1	23.587	ug/l	1.24	33,571.05	1.813E-02	Pulse	0.50	3
Tl			1	-0.017	ug/l	-9.94	253.33	8.754E-05	Pulse	0.50	3
Sn			1	0.172	ug/l	24.42	1,161.16	6.261E-04	Pulse	0.30	3
Sr			1	309.839	ug/l	0.49	1,365,969.46	7.377E-01	Pulse	0.50	3
[Pb]			1	0.022	ug/l	4.56	863.36	2.989E-04	Pulse	0.50	3
Ca			1	40756.130	ug/l	0.54	1,175,661.13	4.976E+00	Pulse	0.50	3
Ti			1	0.633	ug/l	13.14	136.00	5.750E-04	Pulse	0.50	3
Na			1	24531.304	ug/l	0.74	27,539,538.67	1.166E+02	Analog	1.00	3
Mg			1	5635.286	ug/l	0.45	3,118,294.08	1.320E+01	Pulse	1.00	3
K			1	8066.361	ug/l	1.13	4,932,586.00	2.088E+01	Pulse	1.00	3
V			1	0.857	ug/l	4.40	6,295.04	2.663E-02	Pulse	0.50	3
Mn			1	1768.467	ug/l	0.81	7,437,107.67	3.148E+01	Analog	0.50	3
Fe			1	347.919	ug/l	0.24	2,106,635.88	8.916E+00	Pulse	0.50	3
Co			1	14.670	ug/l	0.46	165,045.17	6.985E-01	Pulse	0.50	3
Ni			1	5.616	ug/l	1.65	16,958.80	7.177E-02	Pulse	0.50	3
Cu			1	11.598	ug/l	1.37	125,073.11	5.293E-01	Pulse	0.50	3
Zn			1	7.565	ug/l	1.61	11,884.66	3.391E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	75.09	18.67	1.011E-05	Pulse	0.50	3
Al			1	4.275	ug/l	6.22	1,527.73	6.464E-03	Pulse	1.00	3
Se			1	0.045	ug/l	132.15	61.45	1.753E-04	Pulse	3.00	3
Sb			1	0.079	ug/l	15.40	588.01	3.172E-04	Pulse	1.00	3
Se			1	-0.209	ug/l	-35.51	42.55	1.214E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,888,706.50	2.54	91.4	Pulse	0.50	3
1	Sc		424,564.04	1.25	107.4	Pulse	0.30	3
1	Ge		236,267.60	1.58	103.1	Pulse	0.30	3
1	In		1,851,611.52	2.05	96.3	Pulse	0.30	3
1	Tb		4,483,972.17	2.84	96.7	Pulse	0.50	3
1	Lu		3,136,032.67	3.01	94.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		350,472.51	0.86	103.6	Pulse	0.30	3
1	Te		1.33	173.21	66.7	Pulse	0.50	3
1	Li		1,326.72	0.75	103.6	Pulse	0.30	3

Quantitation Report

File Name 090SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:24
Sample Name FC1186-2A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.084	ug/l	2.54	19,394.33	8.127E-02	Pulse	0.50	3
As			1	1486.093	ug/l	0.33	1,326,719.67	5.559E+00	Pulse	1.00	3
Mo			1	1.345	ug/l	2.75	4,715.94	2.567E-03	Pulse	0.50	3
Pb			1	-0.013	ug/l	-54.14	1,319.72	4.647E-04	Pulse	1.00	3
Be			1	-0.034	ug/l	-112.16	2.17	9.091E-06	Pulse	2.00	3
Ag			1	0.001	ug/l	181.90	139.33	7.580E-05	Pulse	0.50	3
Ba			1	50.792	ug/l	1.50	71,679.74	3.904E-02	Pulse	0.50	3
Tl			1	-0.019	ug/l	-2.87	216.00	7.610E-05	Pulse	0.50	3
Sn			1	0.206	ug/l	7.44	1,262.28	6.872E-04	Pulse	0.30	3
Sr			1	405.027	ug/l	0.55	1,770,640.67	9.643E-01	Pulse	0.50	3
[Pb]			1	-0.016	ug/l	-53.25	639.35	2.251E-04	Pulse	0.50	3
Ca			1	49394.320	ug/l	0.63	1,439,383.08	6.030E+00	Pulse	0.50	3
Ti			1	0.813	ug/l	9.72	173.33	7.262E-04	Pulse	0.50	3
Na			1	14639.465	ug/l	0.40	16,618,050.00	6.963E+01	Analog	1.00	3
Mg			1	7011.810	ug/l	0.37	3,919,666.00	1.642E+01	Pulse	1.00	3
K			1	8898.945	ug/l	0.74	5,488,652.33	2.300E+01	Analog	1.00	3
V			1	1.096	ug/l	4.86	7,782.24	3.262E-02	Pulse	0.50	3
Mn			1	2169.930	ug/l	0.44	9,219,425.00	3.863E+01	Analog	0.50	3
Fe			1	67463.457	ug/l	0.92	409,476,885.33	1.715E+03	Analog	0.50	3
Co			1	17.142	ug/l	1.50	194,832.77	8.162E-01	Pulse	0.50	3
Ni			1	6.281	ug/l	0.52	19,145.49	8.022E-02	Pulse	0.50	3
Cu			1	-1.561	ug/l	-4.36	21,243.73	8.898E-02	Pulse	0.50	3
Zn			1	2.660	ug/l	2.17	5,600.82	1.600E-02	Pulse	1.00	3
Cd			1	-0.004	ug/l	-89.80	7.33	3.982E-06	Pulse	0.50	3
Al			1	9.171	ug/l	0.77	2,731.86	1.144E-02	Pulse	1.00	3
Se			1	0.196	ug/l	58.02	71.33	2.040E-04	Pulse	3.00	3
Sb			1	0.093	ug/l	13.70	643.35	3.503E-04	Pulse	1.00	3
Se			1	0.211	ug/l	71.50	55.55	1.586E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,838,357.08	2.27	89.8	Pulse	0.50	3
1	Sc		423,009.76	2.36	107.0	Pulse	0.30	3
1	Ge		238,683.74	1.60	104.1	Pulse	0.30	3
1	In		1,836,262.70	2.27	95.5	Pulse	0.30	3
1	Tb		4,424,811.00	2.15	95.4	Pulse	0.50	3
1	Lu		3,114,506.92	2.53	94.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		350,027.05	1.15	103.5	Pulse	0.30	3
1	Te		2.67	114.56	133.3	Pulse	0.50	3
1	Li		1,373.39	6.65	107.2	Pulse	0.30	3

Quantitation Report

File Name	091SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:28
Sample Name	FC1186-3A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.748	ug/l	4.05	16,859.29	7.084E-02	Pulse	0.50	3
As			1	2841.835	ug/l	0.53	2,531,038.42	1.063E+01	Pulse	1.00	3
Mo			1	2.076	ug/l	1.67	7,182.73	3.873E-03	Pulse	0.50	3
Pb			1	-0.020	ug/l	-13.33	1,266.38	4.375E-04	Pulse	1.00	3
Be			1	-0.054	ug/l	-28.17	1.50	6.308E-06	Pulse	2.00	3
Ag			1	0.001	ug/l	352.34	137.33	7.435E-05	Pulse	0.50	3
Ba			1	13.495	ug/l	0.16	19,240.24	1.038E-02	Pulse	0.50	3
Tl			1	-0.017	ug/l	-20.41	267.33	9.242E-05	Pulse	0.50	3
Sn			1	0.224	ug/l	26.85	1,334.54	7.197E-04	Pulse	0.30	3
Sr			1	175.468	ug/l	0.83	774,626.69	4.179E-01	Pulse	0.50	3
[Pb]			1	-0.031	ug/l	-23.97	566.01	1.957E-04	Pulse	0.50	3
Ca			1	25058.156	ug/l	0.11	728,661.44	3.060E+00	Pulse	0.50	3
Ti			1	0.618	ug/l	9.16	134.00	5.627E-04	Pulse	0.50	3
Na			1	6413.806	ug/l	0.42	7,282,750.33	3.059E+01	Analog	1.00	3
Mg			1	3003.170	ug/l	0.59	1,675,497.50	7.036E+00	Pulse	1.00	3
K			1	3731.753	ug/l	0.88	2,345,984.42	9.854E+00	Pulse	1.00	3
V			1	0.761	ug/l	4.88	5,766.87	2.421E-02	Pulse	0.50	3
Mn			1	2421.692	ug/l	0.39	10,263,754.00	4.311E+01	Analog	0.50	3
Fe			1	39851.765	ug/l	0.20	241,288,048.00	1.013E+03	Analog	0.50	3
Co			1	13.345	ug/l	1.03	151,329.96	6.355E-01	Pulse	0.50	3
Ni			1	5.585	ug/l	0.61	16,994.82	7.138E-02	Pulse	0.50	3
Cu			1	-1.665	ug/l	-1.87	20,357.41	8.549E-02	Pulse	0.50	3
Zn			1	2.135	ug/l	2.92	4,951.97	1.409E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	623.52	15.33	8.253E-06	Pulse	0.50	3
Al			1	45.662	ug/l	36.72	11,612.39	4.856E-02	Pulse	1.00	3
Se			1	0.162	ug/l	12.11	69.44	1.975E-04	Pulse	3.00	3
Sb			1	0.120	ug/l	11.64	769.02	4.150E-04	Pulse	1.00	3
Se			1	-0.106	ug/l	-23.64	45.89	1.305E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,894,332.58	1.88	91.5	Pulse	0.50	3
1	Sc		424,127.18	2.12	107.3	Pulse	0.30	3
1	Ge		238,097.74	2.06	103.9	Pulse	0.30	3
1	In		1,853,796.11	2.96	96.4	Pulse	0.30	3
1	Tb		4,453,931.33	2.16	96.1	Pulse	0.50	3
1	Lu		3,120,945.08	2.39	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		351,624.34	1.72	104.0	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,360.05	2.73	106.2	Pulse	0.30	3

Quantitation Report

File Name 092_MB.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:32
Sample Name MP41609-MB1
Sample Type MB
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.171	ug/l	3.72	13,490.02	5.599E-02	Pulse	0.50	3
As			1	1.666	ug/l	31.63	675.68	2.811E-03	Pulse	1.00	3
Mo			1	-0.075	ug/l	-17.72	210.00	1.116E-04	Pulse	0.50	3
Pb			1	0.040	ug/l	7.76	1,729.75	5.849E-04	Pulse	1.00	3
Be			1	-0.187	ug/l	-11.30	0.83	3.451E-06	Pulse	2.00	3
Ag			1	-0.002	ug/l	-129.18	124.00	6.585E-05	Pulse	0.50	3
Ba			1	0.050	ug/l	57.87	45.33	2.417E-05	Pulse	0.50	3
Tl			1	-0.065	ug/l	-3.55	111.33	3.765E-05	Pulse	0.50	3
Sn			1	24.569	ug/l	1.48	33,943.59	1.803E-02	Pulse	0.30	3
Sr			1	0.123	ug/l	11.06	700.02	3.721E-04	Pulse	0.50	3
[Pb]			1	0.029	ug/l	87.07	821.36	2.780E-04	Pulse	0.50	3
Ca			1	49.999	ug/l	26.76	1,097.37	4.558E-03	Pulse	0.50	3
Ti			1	0.348	ug/l	3.19	38.67	1.605E-04	Pulse	0.50	3
Na			1	39.013	ug/l	11.59	53,877.65	2.237E-01	Pulse	1.00	3
Mg			1	3.398	ug/l	22.28	2,082.78	8.652E-03	Pulse	1.00	3
K			1	64.105	ug/l	9.75	102,943.71	4.274E-01	Pulse	1.00	3
V			1	1.203	ug/l	3.76	4,141.79	1.719E-02	Pulse	0.50	3
Mn			1	1.265	ug/l	45.41	2,478.19	1.032E-02	Pulse	0.50	3
Fe			1	31.617	ug/l	31.63	94,085.19	3.913E-01	Pulse	0.50	3
Co			1	0.010	ug/l	54.10	166.00	6.899E-04	Pulse	0.50	3
Ni			1	0.246	ug/l	11.80	428.01	1.777E-03	Pulse	0.50	3
Cu			1	-2.489	ug/l	-4.12	25,988.81	1.079E-01	Pulse	0.50	3
Zn			1	1.014	ug/l	8.35	2,757.53	7.770E-03	Pulse	1.00	3
Cd			1	-0.007	ug/l	-117.61	10.00	5.281E-06	Pulse	0.50	3
Al			1	9.499	ug/l	6.83	1,441.06	5.981E-03	Pulse	1.00	3
Se			1	0.217	ug/l	38.90	65.00	1.832E-04	Pulse	3.00	3
Sb			1	-0.009	ug/l	-187.83	225.33	1.197E-04	Pulse	1.00	3
Se			1	-0.398	ug/l	-114.29	44.56	1.258E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,957,052.58	2.06	93.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		432,849.23	1.41	109.5	Pulse	0.30	3
1	Ge		240,875.04	1.13	105.1	Pulse	0.30	3
1	In		1,882,143.26	1.76	97.9	Pulse	0.30	3
1	Tb		4,487,380.50	2.56	96.8	Pulse	0.50	3
1	Lu		3,134,056.00	2.24	94.8	Pulse	0.50	3
1	Ge		354,786.03	2.32	104.9	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,344.50	6.00	104.9	Pulse	0.30	3

Quantitation Report

File Name	093_BSP.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:36
Sample Name	MP41609-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	506.298	ug/l	1.34	1,535,946.62	6.292E+00	Pulse	0.50	3
As			1	492.225	ug/l	0.49	179,832.14	7.367E-01	Pulse	1.00	3
Mo			1	516.354	ug/l	0.39	698,819.58	3.691E-01	Pulse	0.50	3
Pb			1	495.181	ug/l	0.55	2,336,895.08	8.083E-01	Pulse	1.00	3
Be			1	497.692	ug/l	0.91	6,710.94	2.750E-02	Pulse	2.00	3
Ag			1	252.794	ug/l	0.27	1,015,668.04	5.365E-01	Pulse	0.50	3
Ba			1	483.081	ug/l	0.70	281,182.40	1.485E-01	Pulse	0.50	3
Tl			1	487.463	ug/l	0.54	3,229,702.25	1.117E+00	Pulse	0.50	3
Sn			1	508.338	ug/l	1.33	694,646.72	3.669E-01	Pulse	0.30	3
Sr			1	516.114	ug/l	0.99	930,706.00	4.916E-01	Pulse	0.50	3
[Pb]			1	475.155	ug/l	1.33	1,065,358.92	3.685E-01	Pulse	0.50	3
Ca			1	50382.072	ug/l	0.53	600,858.44	2.462E+00	Pulse	0.50	3
Ti			1	503.319	ug/l	0.62	41,290.07	1.692E-01	Pulse	0.50	3
Na			1	51500.347	ug/l	0.52	23,899,990.00	9.791E+01	Analog	1.00	3
Mg			1	50562.963	ug/l	0.69	11,559,620.33	4.736E+01	Analog	1.00	3
K			1	50794.115	ug/l	0.30	12,702,074.00	5.204E+01	Analog	1.00	3
V			1	501.815	ug/l	0.52	1,230,725.29	5.042E+00	Pulse	0.50	3
Mn			1	503.817	ug/l	0.55	875,914.89	3.588E+00	Pulse	0.50	3
Fe			1	49271.443	ug/l	0.66	122,340,741.33	5.012E+02	Analog	0.50	3
Co			1	499.833	ug/l	0.85	2,322,320.33	9.514E+00	Pulse	0.50	3
Ni			1	492.270	ug/l	0.78	609,858.58	2.498E+00	Pulse	0.50	3
Cu			1	485.526	ug/l	1.08	1,620,845.42	6.640E+00	Pulse	0.50	3
Zn			1	473.074	ug/l	1.00	253,014.84	6.972E-01	Pulse	1.00	3
Cd			1	485.957	ug/l	0.44	302,044.42	1.595E-01	Pulse	0.50	3
Al			1	48120.496	ug/l	1.04	4,779,762.33	1.958E+01	Mix	1.00	3
Se			1	467.700	ug/l	1.04	12,873.99	3.548E-02	Pulse	3.00	3
Sb			1	491.940	ug/l	0.53	887,034.56	4.685E-01	Pulse	1.00	3
Se			1	463.700	ug/l	1.80	6,012.84	1.657E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,891,346.92	2.57	91.5	Pulse	0.50	3
1	Sc		442,078.92	1.66	111.8	Pulse	0.30	3
1	Ge		244,082.24	1.40	106.5	Pulse	0.30	3
1	In		1,893,371.52	2.24	98.4	Pulse	0.30	3
1	Tb		4,532,407.67	2.41	97.7	Pulse	0.50	3
1	Lu		3,207,646.17	1.93	97.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		362,875.99	1.25	107.3	Pulse	0.30	3
1	Te		0.67	173.21	33.3	Pulse	0.50	3
1	Li		1,302.27	4.65	101.6	Pulse	0.30	3

Quantitation Report

File Name 094SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:39
Sample Name FC957-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	208.412	ug/l	0.92	644,417.15	2.600E+00	Pulse	0.50	3
As			1	40.449	ug/l	1.02	15,076.27	6.083E-02	Pulse	1.00	3
Mo			1	92.905	ug/l	1.04	127,602.90	6.655E-02	Pulse	0.50	3
Pb			1	138.690	ug/l	1.45	668,033.84	2.268E-01	Pulse	1.00	3
Be			1	1.273	ug/l	17.58	20.83	8.409E-05	Pulse	2.00	3
Ag			1	0.294	ug/l	8.26	1,332.05	6.949E-04	Pulse	0.50	3
Ba			1	175.594	ug/l	1.26	103,524.02	5.398E-02	Pulse	0.50	3
Tl			1	0.652	ug/l	6.89	4,948.07	1.681E-03	Pulse	0.50	3
Sn			1	28.957	ug/l	0.81	40,641.53	2.120E-02	Pulse	0.30	3
Sr			1	96.251	ug/l	0.48	176,206.49	9.189E-02	Pulse	0.50	3
[Pb]			1	141.130	ug/l	1.36	322,988.54	1.096E-01	Pulse	0.50	3
Ca			1	26799.602	ug/l	0.39	324,774.47	1.310E+00	Pulse	0.50	3
Ti			1	1103.920	ug/l	0.70	91,936.88	3.710E-01	Pulse	0.50	3
Na			1	466.625	ug/l	2.40	256,556.56	1.035E+00	Pulse	1.00	3
Mg			1	3931.059	ug/l	0.41	913,683.33	3.687E+00	Pulse	1.00	3
K			1	2822.105	ug/l	1.08	801,273.58	3.233E+00	Pulse	1.00	3
V			1	275.936	ug/l	0.38	687,730.87	2.775E+00	Pulse	0.50	3
Mn			1	116.176	ug/l	0.15	205,323.67	8.285E-01	Pulse	0.50	3
Fe			1	54837.424	ug/l	0.47	138,250,021.33	5.578E+02	Analog	0.50	3
Co			1	8.625	ug/l	1.10	40,813.55	1.647E-01	Pulse	0.50	3
Ni			1	38.935	ug/l	0.57	49,099.40	1.981E-01	Pulse	0.50	3
Cu			1	39.134	ug/l	0.52	164,822.77	6.650E-01	Pulse	0.50	3
Zn			1	88.711	ug/l	1.42	49,287.06	1.359E-01	Pulse	1.00	3
Cd			1	1.320	ug/l	7.09	844.69	4.408E-04	Pulse	0.50	3
Al			1	150512.626	ug/l	0.30	15,177,626.00	6.124E+01	Analog	1.00	3
Se			1	13.721	ug/l	1.96	436.34	1.203E-03	Pulse	3.00	3
Sb			1	2.594	ug/l	1.98	4,983.69	2.598E-03	Pulse	1.00	3
Se			1	15.662	ug/l	8.27	252.23	6.948E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,945,700.25	1.85	93.2	Pulse	0.50	3
1	Sc		481,318.83	1.49	121.7	Pulse	0.30	3
1	Ge		247,836.16	2.06	108.1	Pulse	0.30	3
1	In		1,917,533.81	1.96	99.7	Pulse	0.30	3
1	Tb		4,542,787.67	2.34	98.0	Pulse	0.50	3
1	Lu		3,170,551.42	1.96	95.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		362,795.60	1.95	107.3	Pulse	0.30	3
1	Te		4.67	137.77	233.3	Pulse	0.50	3
1	Li		1,364.50	6.19	106.5	Pulse	0.30	3

Quantitation Report

File Name 095SMPL.d
File Path D:\2022\xa121622m2.b
Method File
Method Path
Acq Time 12/16/2022 14:43
Sample Name MP41609-D1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/16/2022 14:46
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	175.462	ug/l	0.71	543,263.81	2.191E+00	Pulse	0.50	3
As			1	42.842	ug/l	0.33	15,969.00	6.441E-02	Pulse	1.00	3
Mo			1	86.849	ug/l	0.65	117,712.68	6.222E-02	Pulse	0.50	3
Pb			1	121.804	ug/l	0.57	585,585.50	1.992E-01	Pulse	1.00	3
Be			1	0.920	ug/l	25.04	16.00	6.460E-05	Pulse	2.00	3
Ag			1	0.418	ug/l	5.45	1,809.43	9.562E-04	Pulse	0.50	3
Ba			1	156.626	ug/l	0.48	91,103.76	4.815E-02	Pulse	0.50	3
Tl			1	0.487	ug/l	3.21	3,828.44	1.303E-03	Pulse	0.50	3
Sn			1	28.210	ug/l	2.07	39,079.33	2.066E-02	Pulse	0.30	3
Sr			1	85.180	ug/l	1.02	153,904.67	8.135E-02	Pulse	0.50	3
[Pb]			1	124.251	ug/l	0.20	283,817.56	9.656E-02	Pulse	0.50	3
Ca			1	22657.815	ug/l	0.28	274,741.89	1.108E+00	Pulse	0.50	3
Ti			1	1041.764	ug/l	0.67	86,789.05	3.501E-01	Pulse	0.50	3
Na			1	394.110	ug/l	1.28	222,562.13	8.978E-01	Pulse	1.00	3
Mg			1	3263.606	ug/l	0.34	759,069.17	3.062E+00	Pulse	1.00	3
K			1	2548.548	ug/l	0.99	732,572.21	2.955E+00	Pulse	1.00	3
V			1	304.156	ug/l	0.45	758,168.48	3.058E+00	Pulse	0.50	3
Mn			1	93.535	ug/l	0.73	165,419.98	6.673E-01	Pulse	0.50	3
Fe			1	49320.945	ug/l	0.64	124,382,570.67	5.017E+02	Analog	0.50	3
Co			1	7.410	ug/l	0.70	35,088.99	1.415E-01	Pulse	0.50	3
Ni			1	32.391	ug/l	0.42	40,877.66	1.649E-01	Pulse	0.50	3
Cu			1	34.275	ug/l	0.03	148,742.94	6.000E-01	Pulse	0.50	3
Zn			1	77.897	ug/l	0.33	43,388.92	1.201E-01	Pulse	1.00	3
Cd			1	1.112	ug/l	5.29	705.35	3.728E-04	Pulse	0.50	3
Al			1	126986.483	ug/l	0.23	12,809,633.33	5.167E+01	Analog	1.00	3
Se			1	12.385	ug/l	6.58	398.00	1.102E-03	Pulse	3.00	3
Sb			1	2.306	ug/l	2.08	4,396.53	2.324E-03	Pulse	1.00	3
Se			1	13.940	ug/l	14.43	229.11	6.338E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,939,363.00	1.60	93.0	Pulse	0.50	3
1	Sc		474,709.04	2.03	120.1	Pulse	0.30	3
1	Ge		247,912.96	1.24	108.2	Pulse	0.30	3
1	In		1,892,001.66	1.40	98.4	Pulse	0.30	3
1	Tb		4,532,394.83	1.63	97.7	Pulse	0.50	3
1	Lu		3,161,395.83	2.15	95.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		361,404.41	1.58	106.9	Pulse	0.30	3
1	Te		6.00	88.19	300.0	Pulse	0.50	3
1	Li		1,303.39	3.32	101.7	Pulse	0.30	3

Quantitation Report

File Name	096SMPL.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:47
Sample Name	MP4169-SD1
Sample Type	Sample
Comment	
Prep Dilution	25.000
Auto Dilution	N/A
Total Dilution	25.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	191.602	ug/l	0.51	123,700.98	4.916E-01	Pulse	0.50	3
As			1	37.560	ug/l	1.72	2,907.56	1.156E-02	Pulse	1.00	3
Mo			1	82.612	ug/l	0.25	23,756.37	1.197E-02	Pulse	0.50	3
Pb			1	126.633	ug/l	1.76	128,391.16	4.183E-02	Pulse	1.00	3
Be			1	0.193	ug/l	168.30	4.00	1.592E-05	Pulse	2.00	3
Ag			1	0.190	ug/l	5.73	300.00	1.511E-04	Pulse	0.50	3
Ba			1	161.635	ug/l	1.42	19,734.80	9.945E-03	Pulse	0.50	3
Tl			1	0.169	ug/l	9.75	812.02	2.645E-04	Pulse	0.50	3
Sn			1	25.273	ug/l	2.63	7,859.49	3.960E-03	Pulse	0.30	3
Sr			1	88.641	ug/l	1.72	34,005.30	1.713E-02	Pulse	0.50	3
[Pb]			1	128.089	ug/l	1.99	61,720.18	2.011E-02	Pulse	0.50	3
Ca			1	24981.446	ug/l	1.39	61,900.38	2.460E-01	Pulse	0.50	3
Ti			1	992.012	ug/l	1.20	16,783.95	6.671E-02	Pulse	0.50	3
Na			1	506.372	ug/l	2.93	86,020.76	3.419E-01	Pulse	1.00	3
Mg			1	3610.328	ug/l	1.44	171,514.03	6.817E-01	Pulse	1.00	3
K			1	2648.342	ug/l	0.66	226,711.49	9.011E-01	Pulse	1.00	3
V			1	255.016	ug/l	0.51	130,095.39	5.171E-01	Pulse	0.50	3
Mn			1	106.855	ug/l	0.93	38,612.19	1.535E-01	Pulse	0.50	3
Fe			1	51131.501	ug/l	0.67	26,186,564.67	1.041E+02	Analog	0.50	3
Co			1	7.870	ug/l	3.78	7,662.20	3.046E-02	Pulse	0.50	3
Ni			1	36.102	ug/l	0.58	9,351.62	3.717E-02	Pulse	0.50	3
Cu			1	6.409	ug/l	7.01	39,844.31	1.584E-01	Pulse	0.50	3
Zn			1	74.050	ug/l	0.96	10,427.16	2.792E-02	Pulse	1.00	3
Cd			1	0.941	ug/l	23.33	138.00	6.942E-05	Pulse	0.50	3
Al			1	140597.071	ug/l	1.10	2,879,282.08	1.144E+01	Pulse	1.00	3
Se			1	13.723	ug/l	13.45	139.67	3.741E-04	Pulse	3.00	3
Sb			1	1.841	ug/l	2.79	950.36	4.788E-04	Pulse	1.00	3
Se			1	9.346	ug/l	19.57	77.00	2.061E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,068,833.92	1.18	97.1	Pulse	0.50	3
1	Sc		459,360.76	0.91	116.2	Pulse	0.30	3
1	Ge		251,597.38	0.82	109.8	Pulse	0.30	3
1	In		1,984,551.66	1.20	103.2	Pulse	0.30	3
1	Tb		4,648,521.17	1.20	100.2	Pulse	0.50	3
1	Lu		3,269,077.83	0.99	98.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		373,492.46	1.10	110.4	Pulse	0.30	3
1	Te		0.00	---	0.0	Pulse	0.50	3
1	Li		1,363.39	11.30	106.4	Pulse	0.30	3

Quantitation Report

File Name	097CCVA.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:51
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.715	ug/l	1.47	743,377.71	2.912E+00	Pulse	0.50	3
As			1	44.694	ug/l	1.00	85,435.85	3.346E-01	Pulse	1.00	3
Mo			1	46.287	ug/l	1.17	329,358.94	1.655E-01	Pulse	0.50	3
Pb			1	45.372	ug/l	0.94	1,137,656.17	3.706E-01	Pulse	1.00	3
Be			1	44.306	ug/l	2.50	3,126.74	1.225E-02	Pulse	2.00	3
Ag			1	47.783	ug/l	0.87	1,008,802.85	5.070E-01	Pulse	0.50	3
Ba			1	45.236	ug/l	1.12	138,351.70	6.953E-02	Pulse	0.50	3
Tl			1	46.824	ug/l	0.45	1,647,278.13	5.366E-01	Pulse	0.50	3
Sn			1	45.923	ug/l	1.91	330,096.92	1.659E-01	Pulse	0.30	3
Sr			1	47.833	ug/l	0.91	453,578.03	2.280E-01	Pulse	0.50	3
[Pb]			1	45.321	ug/l	1.72	539,984.97	1.759E-01	Pulse	0.50	3
Ca			1	4771.060	ug/l	0.96	297,852.56	1.167E+00	Pulse	0.50	3
Ti			1	46.984	ug/l	2.25	20,163.07	7.897E-02	Pulse	0.50	3
Na			1	4826.009	ug/l	0.75	11,732,551.33	4.596E+01	Analog	1.00	3
Mg			1	4741.038	ug/l	1.38	5,668,942.17	2.220E+01	Analog	1.00	3
K			1	4809.455	ug/l	0.54	6,338,716.50	2.483E+01	Analog	1.00	3
V			1	46.567	ug/l	1.81	597,985.42	2.342E+00	Pulse	0.50	3
Mn			1	46.957	ug/l	1.76	427,111.27	1.673E+00	Pulse	0.50	3
Fe			1	4707.536	ug/l	1.11	61,136,169.33	2.395E+02	Analog	0.50	3
Co			1	46.345	ug/l	1.55	1,126,126.00	4.411E+00	Pulse	0.50	3
Ni			1	45.961	ug/l	1.53	297,847.73	1.167E+00	Pulse	0.50	3
Cu			1	44.468	ug/l	1.37	795,825.50	3.117E+00	Pulse	0.50	3
Zn			1	45.014	ug/l	1.45	126,209.45	3.350E-01	Pulse	1.00	3
Cd			1	45.802	ug/l	1.13	149,593.75	7.518E-02	Pulse	0.50	3
Al			1	4667.066	ug/l	2.12	2,424,610.33	9.497E+00	Pulse	1.00	3
Se			1	44.959	ug/l	0.26	6,456.65	1.714E-02	Pulse	3.00	3
Sb			1	45.193	ug/l	1.11	428,349.43	2.153E-01	Pulse	1.00	3
Se			1	44.371	ug/l	3.10	3,014.24	8.001E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,069,736.00	1.12	97.1	Pulse	0.50	3
1	Sc		455,354.96	0.54	115.2	Pulse	0.30	3
1	Ge		255,296.26	0.37	111.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,989,595.34	1.36	103.4	Pulse	0.30	3
1	Tb		4,742,111.17	1.14	102.3	Pulse	0.50	3
1	Lu		3,357,870.00	1.58	101.6	Pulse	0.50	3
1	Ge		376,726.19	0.56	111.4	Pulse	0.30	3
1	Te		3.33	173.21	166.7	Pulse	0.50	3
1	Li		1,342.28	6.98	104.8	Pulse	0.30	3

Quantitation Report

File Name	098_CCV.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:55
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.542	ug/l	2.64	1,511,011.17	6.000E+00	Pulse	0.50	3
As			1	93.143	ug/l	1.10	175,573.56	6.971E-01	Pulse	1.00	3
Mo			1	97.041	ug/l	1.67	686,235.33	3.468E-01	Pulse	0.50	3
Pb			1	95.039	ug/l	0.50	2,336,812.92	7.757E-01	Pulse	1.00	3
Be			1	94.704	ug/l	2.18	6,588.74	2.616E-02	Pulse	2.00	3
Ag			1	98.398	ug/l	1.18	2,065,554.79	1.044E+00	Pulse	0.50	3
Ba			1	94.241	ug/l	1.53	286,581.92	1.448E-01	Pulse	0.50	3
Tl			1	99.216	ug/l	0.47	3,424,887.92	1.137E+00	Pulse	0.50	3
Sn			1	95.762	ug/l	1.68	683,720.03	3.456E-01	Pulse	0.30	3
Sr			1	99.691	ug/l	1.17	939,436.38	4.748E-01	Pulse	0.50	3
[Pb]			1	95.382	ug/l	1.13	1,114,360.25	3.699E-01	Pulse	0.50	3
Ca			1	9881.672	ug/l	1.28	608,020.98	2.414E+00	Pulse	0.50	3
Ti			1	97.959	ug/l	2.72	41,457.75	1.646E-01	Pulse	0.50	3
Na			1	9956.188	ug/l	0.92	23,839,066.00	9.465E+01	Analog	1.00	3
Mg			1	9824.621	ug/l	1.39	11,587,729.67	4.601E+01	Analog	1.00	3
K			1	9969.953	ug/l	1.37	12,865,075.00	5.108E+01	Analog	1.00	3
V			1	97.103	ug/l	1.90	1,228,682.08	4.879E+00	Pulse	0.50	3
Mn			1	96.688	ug/l	1.81	867,265.90	3.443E+00	Pulse	0.50	3
Fe			1	9730.042	ug/l	1.80	124,639,589.33	4.949E+02	Analog	0.50	3
Co			1	95.109	ug/l	1.77	2,279,707.25	9.051E+00	Pulse	0.50	3
Ni			1	94.435	ug/l	1.89	603,606.69	2.396E+00	Pulse	0.50	3
Cu			1	93.089	ug/l	1.77	1,604,732.71	6.371E+00	Pulse	0.50	3
Zn			1	94.187	ug/l	2.32	256,634.14	6.941E-01	Pulse	1.00	3
Cd			1	94.425	ug/l	1.74	306,642.86	1.550E-01	Pulse	0.50	3
Al			1	9669.284	ug/l	1.38	4,955,072.67	1.967E+01	Analog	1.00	3
Se			1	94.365	ug/l	1.45	13,233.68	3.579E-02	Pulse	3.00	3
Sb			1	94.128	ug/l	1.74	886,827.17	4.482E-01	Pulse	1.00	3
Se			1	94.421	ug/l	1.92	6,236.91	1.687E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,012,519.00	1.10	95.3	Pulse	0.50	3
1	Sc		449,959.84	0.27	113.8	Pulse	0.30	3
1	Ge		251,885.99	1.30	109.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,978,527.91	0.05	102.9	Pulse	0.30	3
1	Tb		4,723,624.50	0.32	101.9	Pulse	0.50	3
1	Lu		3,364,072.25	0.43	101.8	Pulse	0.50	3
1	Ge		369,797.66	0.92	109.4	Pulse	0.30	3
1	Te		7.33	15.75	366.7	Pulse	0.50	3
1	Li		1,362.28	5.71	106.3	Pulse	0.30	3

Quantitation Report

File Name	099_CCB.d
File Path	D:\2022\xa121622m2.b
Method File	
Method Path	
Acq Time	12/16/2022 14:58
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/16/2022 14:46
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.036	ug/l	60.46	4,849.95	1.892E-02	Pulse	0.50	3
As			1	0.037	ug/l	33.06	152.00	5.930E-04	Pulse	1.00	3
Mo			1	0.073	ug/l	31.51	864.02	4.247E-04	Pulse	0.50	3
Pb			1	-0.004	ug/l	-235.99	1,482.40	4.836E-04	Pulse	1.00	3
Be			1	-0.026	ug/l	-30.58	1.67	6.494E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	42.12	566.68	2.796E-04	Pulse	0.50	3
Ba			1	0.016	ug/l	54.87	66.67	3.291E-05	Pulse	0.50	3
Tl			1	0.023	ug/l	43.23	1,380.73	4.505E-04	Pulse	0.50	3
Sn			1	0.056	ug/l	19.36	1,048.93	5.161E-04	Pulse	0.30	3
Sr			1	0.021	ug/l	56.98	720.02	3.548E-04	Pulse	0.50	3
[Pb]			1	-0.002	ug/l	-274.99	754.69	2.462E-04	Pulse	0.50	3
Ca			1	3.664	ug/l	25.81	772.02	3.012E-03	Pulse	0.50	3
Ti			1	0.034	ug/l	25.69	26.00	1.013E-04	Pulse	0.50	3
Na			1	5.414	ug/l	18.36	51,545.06	2.011E-01	Pulse	1.00	3
Mg			1	2.032	ug/l	43.62	3,839.40	1.498E-02	Pulse	1.00	3
K			1	6.086	ug/l	24.97	100,796.11	3.932E-01	Pulse	1.00	3
V			1	0.054	ug/l	17.92	2,008.11	7.834E-03	Pulse	0.50	3
Mn			1	0.022	ug/l	43.03	540.68	2.109E-03	Pulse	0.50	3
Fe			1	2.185	ug/l	40.62	46,347.22	1.808E-01	Pulse	0.50	3
Co			1	0.015	ug/l	58.58	503.34	1.964E-03	Pulse	0.50	3
Ni			1	0.018	ug/l	52.84	254.00	9.908E-04	Pulse	0.50	3
Cu			1	-1.432	ug/l	-0.92	11,626.19	4.535E-02	Pulse	0.50	3
Zn			1	-0.482	ug/l	-4.95	1,047.37	2.771E-03	Pulse	1.00	3
Cd			1	0.025	ug/l	44.23	99.33	4.902E-05	Pulse	0.50	3
Al			1	2.212	ug/l	45.74	1,695.75	6.616E-03	Pulse	1.00	3
Se			1	0.144	ug/l	34.92	83.67	2.213E-04	Pulse	3.00	3
Sb			1	0.029	ug/l	22.28	536.68	2.643E-04	Pulse	1.00	3
Se			1	-0.065	ug/l	-155.26	48.56	1.284E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

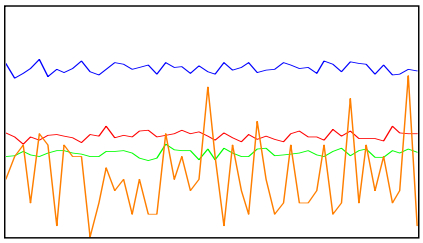
Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,066,178.25	0.30	97.0	Pulse	0.50	3
1	Sc		459,553.32	0.09	116.2	Pulse	0.30	3
1	Ge		256,391.53	0.87	111.9	Pulse	0.30	3
1	In		2,031,773.88	1.11	105.6	Pulse	0.30	3
1	Tb		4,701,158.33	1.55	101.4	Pulse	0.50	3
1	Lu		3,295,253.42	0.35	99.7	Pulse	0.50	3
1	Ge		377,973.85	0.64	111.8	Pulse	0.30	3
1	Te		2.00	100.00	100.0	Pulse	0.50	3
1	Li		1,288.94	9.65	100.6	Pulse	0.30	3

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Tune Report

Batch Folder	D:\2022\xa121622m1.b
Acq. Date-Time	12/16/2022 8:16
Report Comment	121622
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	2197	21972.57	5000.00	
89	5000	1819	18191.31	5000.00	
205	5000	3657	36574.34	5000.00	
78	20	5			

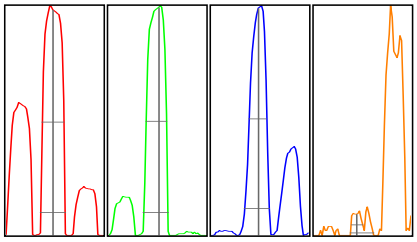
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.87	5.00	
89	4.18	5.00	
205	2.75	5.00	
78	60.50		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.10	2	
89	0.30	2	
205	1.00	2	
78	0.20	5	

Ratio	156/140	1.016 %
Ratio	70/140	4.154 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2156.80	59.00	58.9 - 59.1		0.64	0.731	0.900	
89	1825.94	89.05	88.9 - 89.1		0.60	0.722	0.900	

Tune Report

205	3696.14	205.00	204.9 - 205.1	0.52	0.739	0.900
78	4.25	77.85	-	0.35	0.681	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

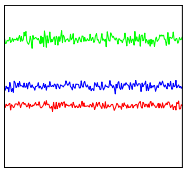
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-38 V
Extract 2	-195.0 V	Cell Exit	-70 V
Omega Bias	-115 V	Deflect	2.4 V
Omega Lens	6.6 V	Plate Bias	-60 V

Cell Parameters

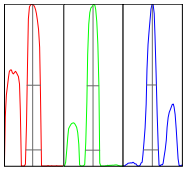
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



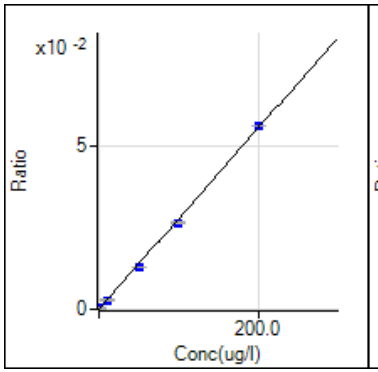
Sensitivity			
Mass	7	89	205
Range	5000	1.0E4	1.0E4
Count	1911.11	7903.33	5020.70
RSD%	3.4	2.7	3.2
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	0.96%	
Doubly Charged	70/140	7.24%	

Background			
Mass	7	89	205
Count	0.30	1.70	6.05

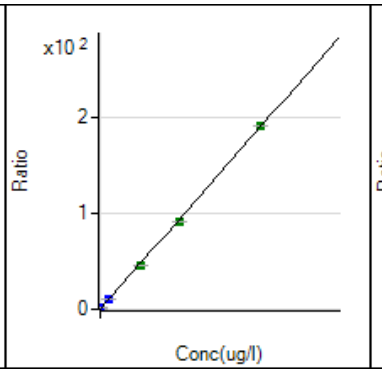


Resolution/Axis			
Mass	7	89	205
Height	1909	7710	5156
Axis	6.95	89.00	205.00
W-50%	0.66	0.58	0.49
W-10%	0.77	0.71	0.74
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

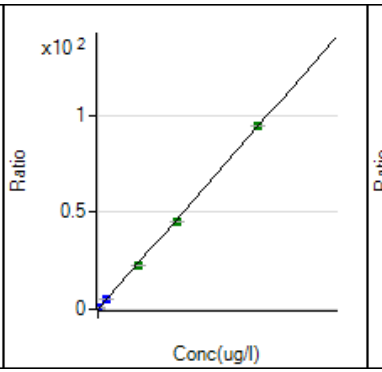
Calibration for D:\2022\xa121622m2.b\121SMPL.d



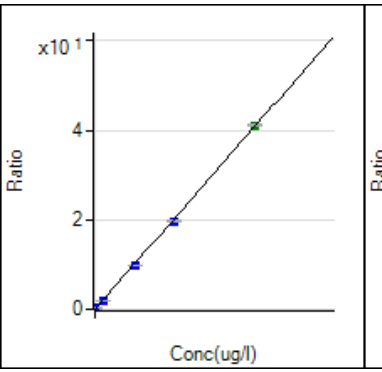
9 Be [2] / ISTD: 72 Ge
y = 2.761E-4 x + 1.379E-5
R 0.9994
DL 0.09531
BEC 0.04993



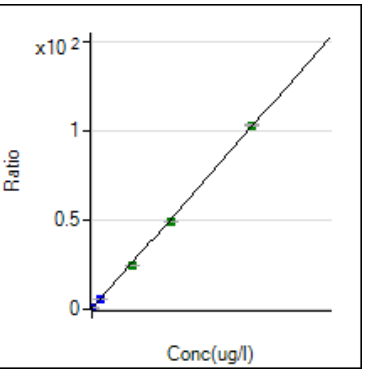
23 Na [2] / ISTD: 72 Ge
y = 9.492E-3 x + 1.497E-1
R 0.9997
DL 1.042
BEC 15.77



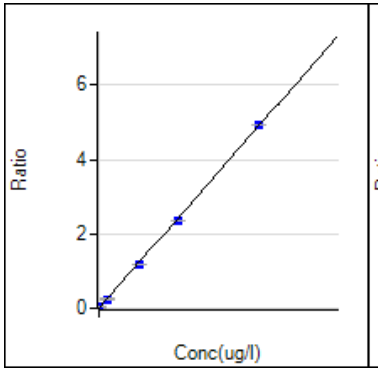
24 Mg [2] / ISTD: 72 Ge
y = 4.682E-3 x + 5.469E-3
R 0.9997
DL 0.1265
BEC 1.168



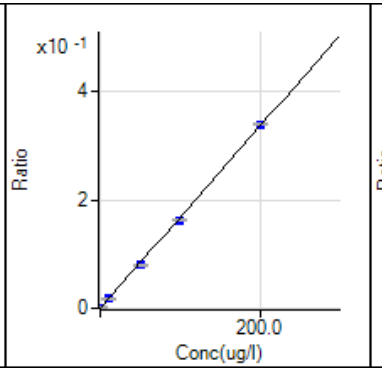
27 Al [2] / ISTD: 72 Ge
y = 2.034E-3 x + 2.116E-3
R 0.9998
DL 0.1257
BEC 1.04



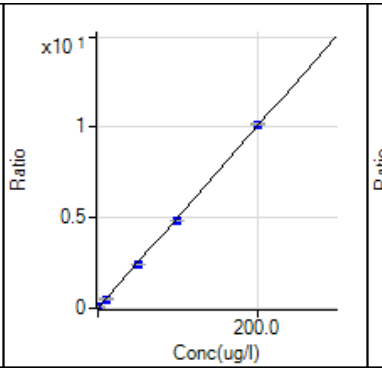
39 K [2] / ISTD: 72 Ge
y = 5.087E-3 x + 3.622E-1
R 0.9997
DL 2.332
BEC 71.2



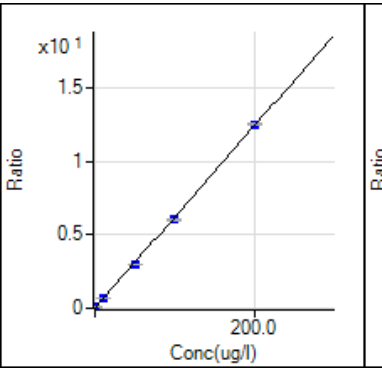
44 Ca [2] / ISTD: 72 Ge
y = 2.441E-4 x + 2.117E-3
R 0.9996
DL 1.289
BEC 8.674



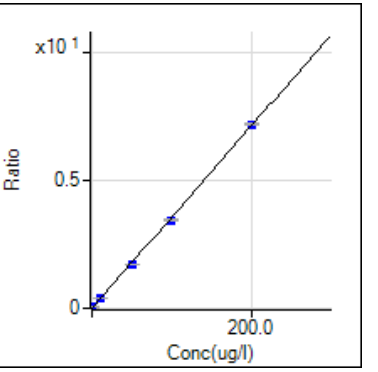
47 Ti [2] / ISTD: 72 Ge
y = 1.680E-3 x + 4.366E-5
R 0.9997
DL 0.016
BEC 0.02599



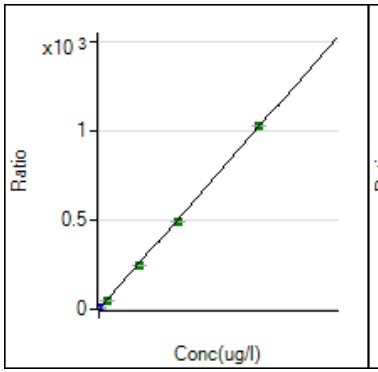
51 V [2] / ISTD: 72 Ge
y = 5.019E-2 x + 5.118E-3
R 0.9997
DL 0.02549
BEC 0.102



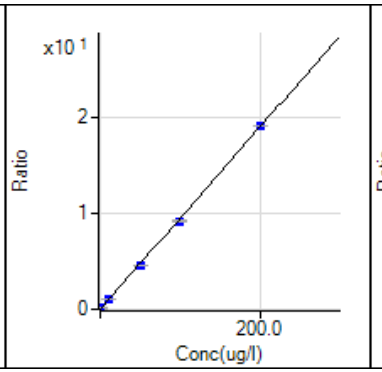
52 Cr [2] / ISTD: 72 Ge
y = 6.197E-2 x + 1.669E-2
R 0.9998
DL 0.01937
BEC 0.2693



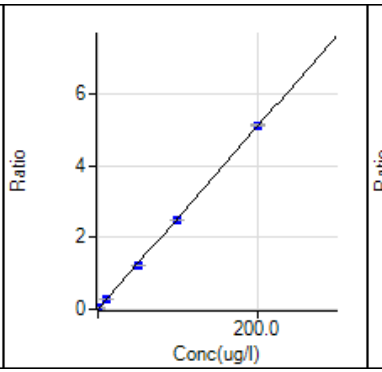
55 Mn [2] / ISTD: 72 Ge
y = 3.560E-2 x + 1.309E-3
R 0.9998
DL 0.01166
BEC 0.03676



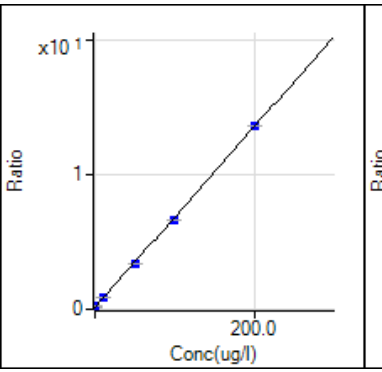
56 Fe [2] / ISTD: 72 Ge
y = 5.085E-2 x + 6.975E-2
R 0.9996
DL 0.1386
BEC 1.371



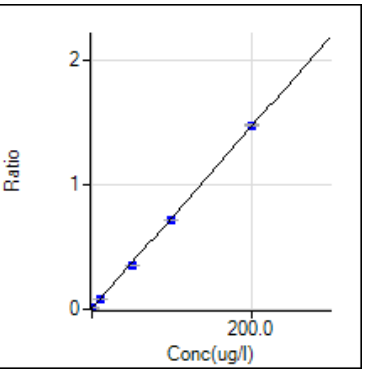
59 Co [2] / ISTD: 72 Ge
y = 9.516E-2 x + 5.002E-4
R 0.9998
DL 0.002283
BEC 0.005257



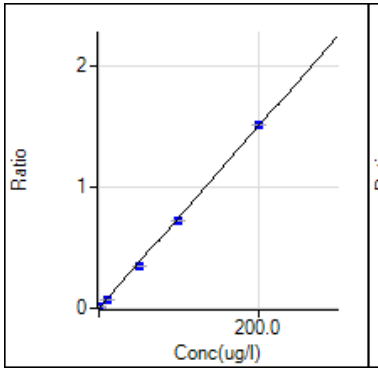
60 Ni [2] / ISTD: 72 Ge
y = 2.537E-2 x + 5.293E-4
R 0.9998
DL 0.005544
BEC 0.02086



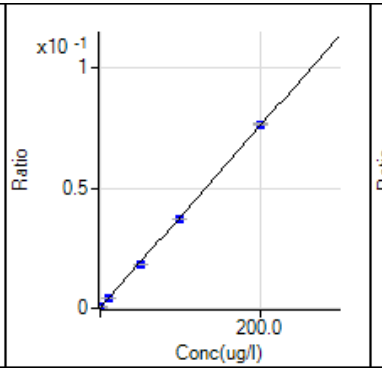
63 Cu [2] / ISTD: 72 Ge
y = 6.693E-2 x + 1.412E-1
R 0.9998
DL 0.3179
BEC 2.11



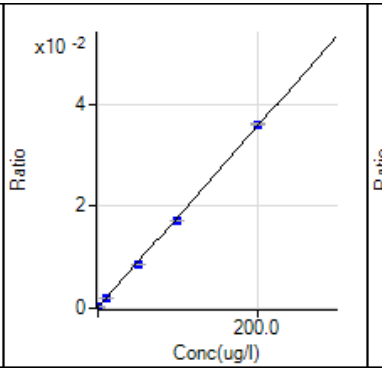
66 Zn [2] / ISTD: 74 Ge
y = 7.302E-3 x + 6.290E-3
R 0.9998
DL 0.2463
BEC 0.8613



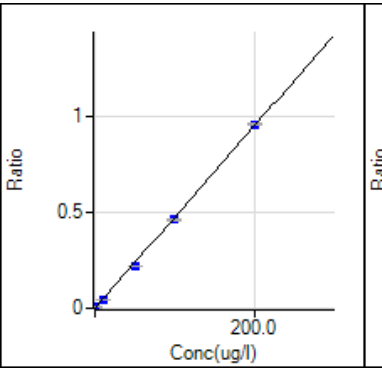
75 As [2] / ISTD: 72 Ge
y = 7.480E-3 x + 3.184E-4
R 0.9996
DL 0.01066
BEC 0.04256



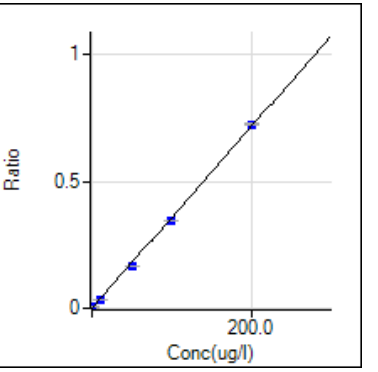
78 Se [2] / ISTD: 74 Ge
y = 3.775E-4 x + 1.669E-4
R 0.9998
DL 0.05265
BEC 0.4421



82 Se [2] / ISTD: 74 Ge
y = 1.772E-4 x + 1.399E-4
R 0.9997
DL 0.1761
BEC 0.7897

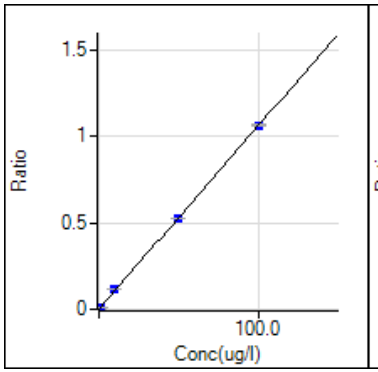


88 Sr [2] / ISTD: 115 In
y = 4.760E-3 x + 2.549E-4
R 0.9997
DL 0.01908
BEC 0.05355

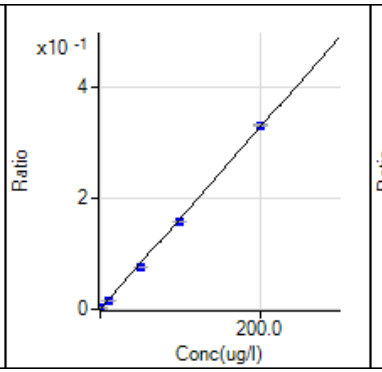


95 Mo [2] / ISTD: 115 In
y = 3.572E-3 x + 1.655E-4
R 0.9996
DL 0.04217
BEC 0.04632

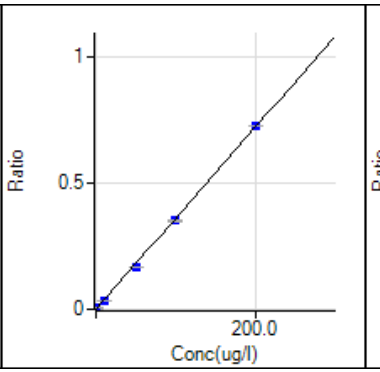
Calibration for D:\2022\xa121622m2.b\121SMPL.d



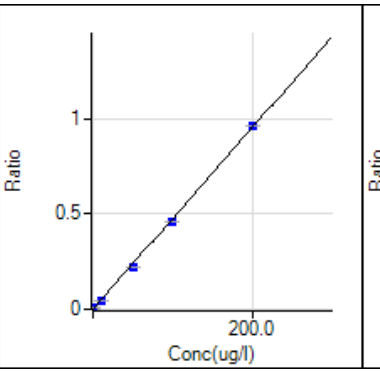
107 Ag [2] / ISTD: 115 In
y = 1.061E-2 x + 7.034E-5
R 0.9999
DL 0.00255
BEC 0.006631



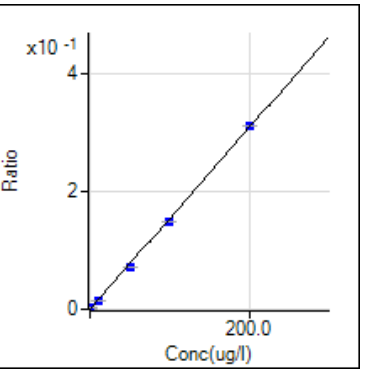
111 Cd [2] / ISTD: 115 In
y = 1.641E-3 x + 7.615E-6
R 0.9996
DL 0.004701
BEC 0.00464



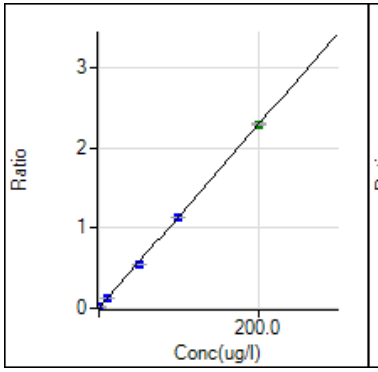
118 Sn [2] / ISTD: 115 In
y = 3.605E-3 x + 3.158E-4
R 0.9997
DL 0.04315
BEC 0.08759



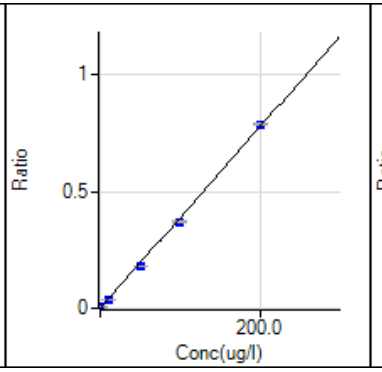
121 Sb [2] / ISTD: 115 In
y = 4.761E-3 x + 1.282E-4
R 0.9996
DL 0.007843
BEC 0.02693



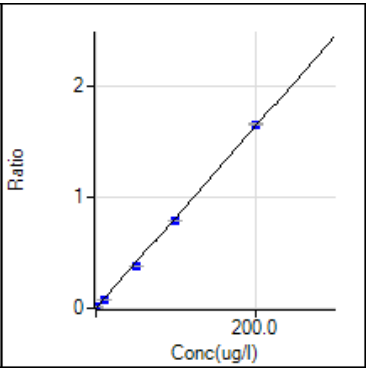
137 Ba [2] / ISTD: 115 In
y = 1.537E-3 x + 8.707E-6
R 0.9996
DL 0.01721
BEC 0.005665



205 Tl [2] / ISTD: 209 Bi
y = 1.146E-2 x + 1.873E-4
R 1.0000
DL 0.004846
BEC 0.01635



206 [Pb] [2] / ISTD: 209 Bi
y = 3.875E-3 x + 2.559E-4
R 0.9995
DL 0.01031
BEC 0.06602



208 Pb [2] / ISTD: 209 Bi
y = 8.156E-3 x + 5.192E-4
R 0.9996
DL 0.01126
BEC 0.06366

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 12/16/2022 9:05:55 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0010**	**-.0017**	**-.0006**	**.0043**	**.0127**	**.0011**	**.0024**	**.0002**	**-.0007**
Stddev	.0001	.0022	.0001	.0001	.0035	.0003	.0006	.0004	.0002
%RSD	10.51	130.7	23.21	3.072	27.36	25.75	22.82	157.9	31.21
#1	-.0011	-.0004	-.0007	.0043	.0132	.0015	.0024	.0007	-.0008
#2	-.0009	-.0043	-.0006	.0045	.0090	.0010	.0019	.0000	-.0009
#3	-.0011	-.0005	-.0004	.0043	.0159	.0009	.0030	.0000	-.0005

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0003**	**.0060**	**.0009**	**.0126**	**.0032**	**-.0006**	**.0001**	**.0013**	**-.0251**
Stddev	.0001	.0003	.0003	.0013	.0053	.0008	.0001	.0001	.0049
%RSD	45.50	4.838	37.54	10.40	163.8	133.0	130.6	9.376	19.48
#1	.0003	.0063	.0007	.0116	.0082	-.0015	.0001	.0013	-.0231
#2	.0001	.0057	.0007	.0121	.0038	-.0005	.0003	.0014	-.0215
#3	.0003	.0058	.0013	.0141	-.0023	.0002	.0000	.0012	-.0307

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0014**	**.0024**	**.0004**	**.0003**	**.0045**	**.0002**	**-.0012**	**.0007**	**-.0006**
Stddev	.0003	.0013	.0002	.0001	.0005	.0001	.0013	.0003	.0003
%RSD	22.10	55.48	50.52	18.83	11.29	72.71	117.1	41.01	48.41
#1	-.0010	.0012	.0004	.0004	.0050	.0003	-.0026	.0009	-.0003
#2	-.0015	.0022	.0006	.0003	.0043	.0002	.0000	.0004	-.0007
#3	-.0016	.0038	.0002	.0004	.0041	.0000	-.0009	.0009	-.0008

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**-.0005**	**.0012**
Stddev	.0002	.0002
%RSD	31.11	19.41
#1	-.0007	.0014
#2	-.0004	.0009
#3	-.0005	.0014

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 12/16/2022 9:05:55 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**957.16**	**2210.3**	**21261.**	**3101.3**
Stddev	.55	7.8	71.	14.4
%RSD	.05709	.35306	.33188	.46536
#1	957.52	2203.3	21199.	3118.0
#2	957.42	2208.9	21246.	3093.7
#3	956.53	2218.7	21338.	3092.3

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 12/16/2022 9:09:55 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0053**	**.0239**	**.0015**	**2.662**	**.0500**	**.3828**	**.0285**	**.1356**	**.0069**
Stddev	.0004	.0011	.0002	.004	.0011	.0014	.0004	.0004	.0000
%RSD	7.151	4.756	13.91	.1472	2.248	.3773	1.349	.2937	.6849
#1	.0049	.0228	.0017	2.663	.0497	.3825	.0281	.1360	.0068
#2	.0056	.0239	.0013	2.666	.0490	.3815	.0289	.1352	.0069
#3	.0055	.0250	.0015	2.658	.0512	.3843	.0286	.1357	.0069

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0287**	**.0692**	**1.402**	**.0011**	**.1907**	**.0492**	**.0579**	**4.458**	**.0700**
Stddev	.0001	.0002	.002	.0009	.0015	.0001	.0003	.012	.0004
%RSD	.4405	.2952	.1423	83.45	.7639	.2939	.4919	.2608	.5842
#1	.0287	.0694	1.403	.0009	.1923	.0493	.0581	4.449	.0701
#2	.0288	.0692	1.400	.0003	.1900	.0491	.0580	4.455	.0705
#3	.0285	.0690	1.404	.0021	.1897	.0493	.0576	4.471	.0696

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0092**	**.0015**	**.0016**	**.0232**	**.2012**	**.0238**	**.0046**	**.0385**	**.0611**
Stddev	.0001	.0003	.0001	.0003	.0023	.0003	.0006	.0002	.0002
%RSD	1.497	19.07	9.169	1.094	1.155	1.356	11.97	.5507	.2643
#1	.0092	.0016	.0017	.0235	.2018	.0240	.0053	.0385	.0611
#2	.0094	.0012	.0014	.0231	.1986	.0234	.0043	.0387	.0613
#3	.0091	.0016	.0017	.0230	.2032	.0239	.0044	.0383	.0610

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.74**	**2233.4**	**20197.**	**3020.0**
Stddev	3.50	6.2	97.	19.3
%RSD	.38032	.27927	.47933	.64000
#1	921.53	2228.1	20281.	3021.6
#2	923.78	2231.8	20091.	3000.0
#3	916.91	2240.3	20219.	3038.5

◀ Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 12/16/2022 9:13:55 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0213**	**.7486**	**.0487**	**.0854**	**3.448**	**2.701**	**2.040**	**1.482**	**.7172**
Stddev	.0005	.0057	.0002	.0011	.004	.007	.005	.002	.0007
%RSD	2.227	.7647	.4400	1.245	.1004	.2718	.2682	.1457	.0983
#1	.0218	.7444	.0485	.0843	3.449	2.695	2.034	1.479	.7176
#2	.0212	.7462	.0488	.0857	3.444	2.709	2.040	1.483	.7164
#3	.0209	.7551	.0488	.0863	3.450	2.698	2.045	1.483	.7176

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1811**	**.2415**	**1.241**	**.7544**	**.7876**	**.2098**	**.8843**	**.2932**	**2.644**
Stddev	.0007	.0006	.003	.0030	.0028	.0008	.0028	.0009	.012
%RSD	.3860	.2301	.2022	.3970	.3538	.3800	.3188	.3190	.4564
#1	.1804	.2421	1.239	.7526	.7851	.2107	.8866	.2940	2.638
#2	.1818	.2413	1.241	.7579	.7870	.2091	.8852	.2935	2.637
#3	.1810	.2411	1.244	.7528	.7906	.2095	.8812	.2922	2.658

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4584**	**.3530**	**.0708**	**.0364**	**.1269**	**.1177**	**5.334**	**.5869**	**.1510**
Stddev	.0010	.0008	.0003	.0001	.0002	.0001	.005	.0009	.0009
%RSD	.2181	.2251	.4375	.2291	.1825	.1022	.0887	.1561	.5826
#1	.4578	.3536	.0706	.0365	.1267	.1175	5.331	.5877	.1509
#2	.4579	.3521	.0707	.0364	.1269	.1177	5.340	.5870	.1502
#3	.4596	.3534	.0712	.0364	.1272	.1178	5.332	.5859	.1519

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.2033**	**.7581**
Stddev	.0004	.0024
%RSD	.1742	.3187
#1	.2037	.7556
#2	.2032	.7583
#3	.2030	.7604

Zoom In Zoom Out

Sample Name: STDC Acquired: 12/16/2022 9:13:55 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**927.09**	**2288.2**	**20169.**	**3001.9**
Stddev	.91	5.1	58.	37.5
%RSD	.09830	.22100	.28841	1.2506
#1	926.31	2294.0	20199.	2984.7
#2	928.09	2286.4	20102.	3045.0
#3	926.86	2284.4	20207.	2976.1

Zoom In Zoom Out

Sample Name: STDD Acquired: 12/16/2022 9:18:35 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0431**	**1.443**	**.1050**	**.1750**	**6.858**	**5.264**	**4.067**	**2.952**	**1.421**
Stddev	.0005	.008	.0012	.0008	.068	.035	.036	.005	.003
%RSD	1.197	.5688	1.168	.4632	.9915	.6676	.8964	.1841	.1802
#1	.0429	1.437	.1036	.1756	6.786	5.224	4.026	2.955	1.423
#2	.0437	1.452	.1053	.1741	6.921	5.290	4.082	2.955	1.422
#3	.0427	1.439	.1060	.1754	6.866	5.278	4.094	2.946	1.418

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3568**	**.4621**	**2.489**	**1.495**	**1.564**	**.4091**	**1.674**	**.5786**	**5.148**
Stddev	.0019	.0013	.025	.010	.008	.0032	.004	.0015	.044
%RSD	.5263	.2903	.9896	.6908	.5051	.7932	.2558	.2607	.8493
#1	.3555	.4624	2.461	1.484	1.557	.4055	1.678	.5793	5.112
#2	.3589	.4632	2.508	1.504	1.573	.4118	1.675	.5796	5.197
#3	.3559	.4606	2.498	1.496	1.562	.4099	1.670	.5768	5.136

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9382**	**.6907**	**.1410**	**.0732**	**.2537**	**.2365**	**10.44**	**1.132**	**.3046**
Stddev	.0030	.0016	.0007	.0000	.0006	.0003	.07	.003	.0007
%RSD	.3175	.2331	.5265	.0546	.2431	.1172	.6753	.2559	.2282
#1	.9351	.6925	.1412	.0732	.2538	.2366	10.37	1.132	.3039
#2	.9387	.6893	.1402	.0732	.2543	.2361	10.50	1.135	.3048
#3	.9410	.6903	.1417	.0733	.2531	.2366	10.46	1.129	.3053

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.4008**	**1.605**
Stddev	.0014	.012
%RSD	.3546	.7355
#1	.4001	1.593
#2	.4024	1.607
#3	.3998	1.616

Zoom In Zoom Out

Sample Name: STDD Acquired: 12/16/2022 9:18:35 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**912.45**	**2221.4**	**20620.**	**3074.6**
Stddev	2.55	9.3	128.	34.3
%RSD	.27929	.41846	.62048	1.1157
#1	914.61	2230.5	20767.	3109.8
#2	913.09	2221.8	20533.	3072.6
#3	909.64	2211.9	20560.	3041.3

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/16/2022 9:23:00 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0811**	**2.627**	**.2148**	**.3376**	**13.57**	**10.43**	**7.896**	**5.895**	**2.824**
Stddev	.0001	.003	.0028	.0044	.05	.02	.017	.016	.011
%RSD	.0865	.0962	1.320	1.318	.3722	.1459	.2192	.2733	.3990
#1	.0810	2.630	.2176	.3417	13.57	10.45	7.903	5.903	2.831
#2	.0812	2.625	.2147	.3382	13.61	10.42	7.909	5.906	2.830
#3	.0811	2.626	.2120	.3329	13.51	10.42	7.876	5.877	2.811

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.7004**	**.8863**	**4.812**	**2.859**	**3.113**	**.7736**	**3.273**	**1.168**	**9.592**
Stddev	.0022	.0010	.021	.005	.005	.0014	.011	.003	.014
%RSD	.3187	.1166	.4384	.1759	.1685	.1778	.3303	.2661	.1453
#1	.6988	.8854	4.809	2.857	3.114	.7749	3.264	1.169	9.607
#2	.7030	.8874	4.834	2.864	3.118	.7737	3.285	1.170	9.589
#3	.6996	.8861	4.793	2.854	3.108	.7722	3.271	1.164	9.579

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.865**	**1.387**	**.2818**	**.1486**	**.4364**	**.4758**	**20.85**	**2.213**	**.6162**
Stddev	.011	.005	.0005	.0005	.0032	.0017	.04	.004	.0009
%RSD	.6093	.3395	.1842	.3250	.7222	.3580	.2022	.1986	.1529
#1	1.874	1.382	.2819	.1480	.4391	.4775	20.88	2.208	.6152
#2	1.868	1.388	.2823	.1490	.4372	.4757	20.88	2.216	.6168
#3	1.852	1.392	.2813	.1487	.4330	.4741	20.81	2.215	.6168

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.7877**	**3.225**
Stddev	.0036	.032
%RSD	.4601	1.001
#1	.7856	3.258
#2	.7919	3.226
#3	.7857	3.193

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/16/2022 9:23:00 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**879.46**	**2170.8**	**20679.**	**3067.8**
Stddev	1.13	11.8	137.	27.3
%RSD	.12885	.54145	.66018	.88997
#1	879.14	2161.2	20739.	3085.2
#2	880.72	2167.3	20523.	3081.9
#3	878.53	2183.9	20776.	3036.3

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/16/2022 9:26:23 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1662**	**5.530**	**.4183**	**.6814**	**27.52**	**22.24**	**16.04**	**11.81**	**5.623**
Stddev	.0005	.018	.0027	.0050	.01	.06	.02	.04	.018
%RSD	.3222	.3266	.6395	.7401	.0288	.2550	.1301	.3222	.3178
#1	.1656	5.513	.4211	.6791	27.51	22.30	16.06	11.85	5.641
#2	.1663	5.529	.4179	.6778	27.53	22.22	16.03	11.79	5.622
#3	.1666	5.549	.4158	.6871	27.53	22.19	16.02	11.78	5.605

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.423**	**1.821**	**9.683**	**5.806**	**6.413**	**1.611**	**6.898**	**2.361**	**20.13**
Stddev	.002	.002	.009	.004	.017	.006	.036	.007	.02
%RSD	.1445	.0840	.0900	.0596	.2690	.3680	.5190	.2840	.1174
#1	1.421	1.823	9.690	5.806	6.429	1.608	6.906	2.369	20.11
#2	1.422	1.820	9.686	5.802	6.417	1.606	6.858	2.358	20.12
#3	1.425	1.821	9.673	5.809	6.395	1.617	6.929	2.357	20.16

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.634**	**2.908**	**.5670**	**.2976**	**.8684**	**.9464**	**43.66**	**4.605**	**1.257**
Stddev	.014	.005	.0015	.0007	.0032	.0026	.09	.007	.004
%RSD	.3823	.1580	.2687	.2293	.3726	.2738	.2097	.1590	.2946
#1	3.650	2.913	.5688	.2982	.8718	.9492	43.76	4.606	1.260
#2	3.628	2.905	.5660	.2979	.8680	.9461	43.57	4.597	1.260
#3	3.624	2.905	.5664	.2969	.8654	.9440	43.65	4.611	1.253

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**1.622**	**6.208**
Stddev	.000	.037
%RSD	.0188	.5998
#1	1.622	6.249
#2	1.622	6.199
#3	1.622	6.176

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/16/2022 9:26:23 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**843.78**	**2197.8**	**19916.**	**2994.8**
Stddev	4.53	14.1	146.	12.1
%RSD	.53678	.63936	.73485	.40562
#1	838.77	2182.5	19932.	2986.2
#2	844.98	2200.9	20054.	2989.4
#3	847.59	2210.1	19763.	3008.7

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/16/2022 9:35:17 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3477**	**11.46**	**.8992**	**1.466**	**55.38**	**43.88**	**31.78**	**23.92**	**11.43**
Stddev	.0016	.10	.0113	.011	.51	.42	.28	.02	.01
%RSD	.4594	.8605	1.260	.7742	.9185	.9650	.8866	.0765	.0924
#1	.3496	11.35	.8878	1.453	54.80	43.42	31.46	23.91	11.43
#2	.3467	11.55	.8995	1.474	55.73	43.97	31.92	23.90	11.42
#3	.3469	11.47	.9104	1.471	55.63	44.25	31.97	23.94	11.44

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.837**	**3.688**	**18.96**	**11.75**	**12.60**	**3.236**	**13.41**	**4.768**	**40.92**
Stddev	.013	.022	.17	.09	.13	.026	.10	.006	.30
%RSD	.4701	.5978	.8865	.8024	1.016	.8110	.7509	.1289	.7347
#1	2.852	3.713	18.76	11.64	12.46	3.205	13.47	4.774	40.58
#2	2.832	3.670	19.07	11.80	12.62	3.252	13.47	4.768	41.16
#3	2.827	3.681	19.04	11.80	12.72	3.249	13.29	4.762	41.02

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.466**	**5.957**	**1.180**	**.6154**	**1.676**	**1.901**	**86.85**	**9.291**	**2.579**
Stddev	.042	.010	.003	.0009	.006	.005	.80	.061	.010
%RSD	.5664	.1621	.2776	.1503	.3653	.2603	.9235	.6555	.3992
#1	7.423	5.962	1.178	.6143	1.670	1.897	85.93	9.361	2.568
#2	7.465	5.963	1.179	.6158	1.677	1.899	87.20	9.257	2.580
#3	7.508	5.945	1.184	.6160	1.682	1.907	87.42	9.255	2.589

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**3.271**	**13.01**
Stddev	.022	.13
%RSD	.6697	1.011
#1	3.296	12.88
#2	3.256	13.01
#3	3.261	13.14

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/16/2022 9:35:17 Type: Cal
Method: 60102007_COMBO_10242022(v52) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**784.67**	**2084.3**	**19811.**	**3022.7**
Stddev	2.95	12.4	142.	13.2
%RSD	.37651	.59573	.71904	.43745
#1	787.16	2094.9	19687.	3036.1
#2	785.44	2087.3	19778.	3022.4
#3	781.40	2070.6	19967.	3009.6

Zoom In Zoom Out

Sample Name: CRIA Acquired: 12/16/2022 9:40:59 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084**	**.1715**	**.0105**	**.0096**	**.1911**	**.0046**	**.9797**	**.0049**
Stddev	.0006	.0055	.0010	.0020	.0007	.0001	.0085	.0001
%RSD	6.909	3.182	9.356	20.43	.3481	2.372	.8667	1.425
#1	.0078	.1735	.0094	.0109	.1918	.0046	.9894	.0050
#2	.0086	.1756	.0109	.0105	.1909	.0045	.9735	.0048
#3	.0089	.1653	.0112	.0073	.1905	.0046	.9762	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0486**	**.0092**	**.0237**	**.2930**	**9.517**	F **-.0005**	**4.620**	**.0140**
Stddev	.0002	.0001	.0001	.0020	.011	.0001	.009	.0001
%RSD	.3474	1.148	.5026	.6809	.1184	32.47	.1996	1.025
#1	.0488	.0092	.0237	.2922	9.530	-.0005	4.630	.0141
#2	.0485	.0093	.0236	.2916	9.509	-.0006	4.619	.0140
#3	.0484	.0091	.0238	.2953	9.513	-.0003	4.612	.0139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0100		
Range						-20.00%		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Se1960	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0484**	**8.390**	**.0402**	**.0058**	**.0089**	**.0282**	**.0489**	**.0093**
Stddev	.0001	.041	.0002	.0004	.0017	.0008	.0008	.0001
%RSD	.2441	.4894	.4218	6.373	18.98	2.709	1.585	1.456
#1	.0485	8.436	.0404	.0061	.0070	.0280	.0495	.0093
#2	.0484	8.377	.0401	.0058	.0097	.0290	.0491	.0095
#3	.0482	8.357	.0402	.0054	.0101	.0275	.0480	.0093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: CRIA Acquired: 12/16/2022 9:40:59 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0083**	**.0459**	**.0205**
Stddev	.0001	.0011	.0004	.0002
%RSD	1.382	13.73	.9682	1.155
#1	.0095	.0088	.0460	.0207
#2	.0098	.0070	.0463	.0204
#3	.0096	.0090	.0454	.0203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**922.92**	**2147.3**	**20939.**	**3070.8**
Stddev	1.17	6.8	41.	12.3
%RSD	.12730	.31605	.19489	.39979
#1	924.16	2142.0	20982.	3084.9
#2	921.82	2144.8	20935.	3065.1
#3	922.77	2154.9	20901.	3062.4

Zoom In Zoom Out

Sample Name: CRIA Acquired: 12/16/2022 9:46:37 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068
Units	ppm
Avg	**.0056**
Stddev	.0007
%RSD	12.50
#1	.0051
#2	.0061
Check ?	Chk Pass
Value	
Range	

Int. Std.	Y_2243
Units	Cts/S
Avg	**2263.5**
Stddev	7.1
%RSD	.31264
#1	2258.5
#2	2268.5

Zoom In Zoom Out

Sample Name: HSTD Acquired: 12/16/2022 9:53:32 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5062**	**80.74**	**4.195**	F **4.159**	**4.107**	**3.927**	**79.74**	**4.008**	**4.024**
Stddev	.0016	.28	.023	.028	.007	.006	.03	.004	.007
%RSD	.3084	.3506	.5441	.6801	.1818	.1627	.0403	.0868	.1655
#1	.5079	81.07	4.169	4.137	4.112	3.921	79.77	4.006	4.016
#2	.5059	80.57	4.201	4.148	4.098	3.934	79.73	4.012	4.028
#3	.5049	80.59	4.214	4.191	4.110	3.927	79.70	4.005	4.028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.5000					
Range				5.000%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.959**	**4.014**	**79.50**	**81.77**	**4.025**	**78.57**	**3.848**	**4.033**	**81.14**
Stddev	.010	.014	.05	.10	.004	.27	.022	.004	.11
%RSD	.2448	.3368	.0669	.1256	.0860	.3406	.5784	.1007	.1337
#1	3.965	4.029	79.56	81.81	4.026	78.73	3.872	4.034	81.27
#2	3.965	4.012	79.46	81.66	4.027	78.72	3.844	4.037	81.09
#3	3.948	4.002	79.49	81.85	4.021	78.26	3.828	4.029	81.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.053**	**4.040**	**4.108**	**4.065**	**3.913**	**4.008**	**4.027**	**3.994**	**4.060**
Stddev	.009	.014	.008	.004	.005	.007	.006	.016	.018
%RSD	.2342	.3480	.1899	.0973	.1166	.1817	.1596	.4059	.4338
#1	4.042	4.024	4.100	4.066	3.908	4.000	4.021	4.010	4.040
#2	4.059	4.047	4.109	4.061	3.916	4.012	4.034	3.995	4.068
#3	4.059	4.049	4.115	4.069	3.916	4.013	4.026	3.977	4.073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 12/16/2022 9:53:32 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**4.003**	**4.094**
Stddev	.010	.019
%RSD	.2544	.4586
#1	4.012	4.073
#2	4.004	4.102
#3	3.992	4.107
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**770.77**	**2030.5**	**19739.**	**3011.2**
Stddev	3.76	6.7	77.	19.7
%RSD	.48756	.32906	.39024	.65525
#1	775.10	2038.2	19697.	3005.3
#2	768.88	2026.3	19692.	2995.1
#3	768.34	2027.0	19828.	3033.2

Zoom In Zoom Out

Sample Name: ICV Acquired: 12/16/2022 10:00:41 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2597**	**40.88**	**2.018**	F **2.085**	**2.080**	**2.049**	**39.40**	**2.053**	**2.073**
Stddev	.0009	.29	.013	.004	.006	.003	.06	.003	.004
%RSD	.3639	.7216	.6362	.1893	.3026	.1428	.1549	.1245	.1691
#1	.2608	40.82	2.032	2.081	2.086	2.046	39.44	2.054	2.075
#2	.2591	41.20	2.014	2.088	2.081	2.048	39.44	2.050	2.069
#3	.2592	40.62	2.007	2.087	2.073	2.052	39.33	2.055	2.075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.070**	**2.086**	**40.41**	**41.18**	**2.124**	**41.58**	**2.074**	**2.054**	**40.18**
Stddev	.005	.001	.11	.07	.003	.21	.004	.004	.16
%RSD	.2206	.0530	.2690	.1675	.1501	.5128	.1931	.1790	.3976
#1	2.066	2.084	40.51	41.19	2.127	41.53	2.070	2.052	40.16
#2	2.069	2.086	40.42	41.24	2.123	41.82	2.077	2.051	40.35
#3	2.075	2.086	40.30	41.11	2.121	41.40	2.077	2.058	40.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.046**	**2.048**	**2.075**	**2.066**	**.3126**	**1.990**	**2.103**	**2.092**	**2.105**
Stddev	.008	.005	.003	.006	.0021	.004	.002	.003	.007
%RSD	.3719	.2591	.1445	.3061	.6803	.1866	.1106	.1238	.3290
#1	2.054	2.042	2.073	2.073	.3149	1.990	2.101	2.089	2.113
#2	2.043	2.050	2.074	2.060	.3122	1.986	2.105	2.092	2.101
#3	2.039	2.051	2.078	2.065	.3107	1.993	2.104	2.094	2.101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 12/16/2022 10:00:41 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.060**	**2.019**
Stddev	.005	.015
%RSD	.2282	.7181
#1	2.055	2.036
#2	2.060	2.013
#3	2.064	2.009
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**822.21**	**2115.3**	**19793.**	**2988.8**
Stddev	.83	8.5	63.	8.3
%RSD	.10151	.40147	.31661	.27906
#1	821.25	2106.0	19789.	2983.9
#2	822.76	2122.5	19857.	2984.1
#3	822.63	2117.6	19732.	2998.4

Zoom In Zoom Out

Sample Name: ICB Acquired: 12/16/2022 10:11:49 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0044**	**.0007**	F **-.0039**	**.0000**	**.0000**	**-.0007**	**.0000**
Stddev	.0003	.0128	.0013	.0030	.000	.000	.0004	.000
%RSD	76.98	287.1	186.0	77.73	2771.	175.5	54.93	293.8
#1	-.0005	.0088	-.0004	-.0014	.0001	-.0001	-.0003	.0000
#2	-.0007	-.0054	.0003	-.0029	.0000	.0000	-.0011	-.0001
#3	-.0001	-.0167	.0021	-.0072	-.0001	-.0001	-.0008	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0002**	**-.0001**	**-.0022**	**-.0233**	**-.0006**	**-.0126**	**.0000**
Stddev	.0001	.0003	.0005	.0012	.0199	.0007	.0300	.0001
%RSD	104.7	143.1	460.3	55.91	85.15	114.2	237.3	159.4
#1	-.0001	-.0001	.0004	-.0010	-.0411	-.0010	.0103	.0001
#2	-.0001	-.0006	-.0006	-.0021	-.0019	-.0010	-.0465	.0000
#3	.0000	.0000	-.0002	-.0035	-.0271	.0002	-.0017	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0160**	**.0001**	**.0006**	**-.0003**	F **-.0027**	**-.0003**	**-.0003**
Stddev	.0002	.0024	.0001	.0003	.0004	.0017	.0007	.0006
%RSD	83.08	15.24	80.87	55.15	136.0	63.93	211.8	209.0
#1	-.0003	-.0185	.0001	.0004	.0001	-.0016	.0000	-.0010
#2	.0000	-.0159	.0001	.0010	-.0003	-.0017	.0002	.0001
#3	-.0004	-.0136	.0000	.0004	-.0007	-.0046	-.0012	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None	Chk Pass
High Limit						.0020		
Low Limit						-.0020		

Zoom In Zoom Out

Sample Name: ICB Acquired: 12/16/2022 10:11:49 Type: QC
Method: 60102007_COMBO_10242022(v52) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0000**	**-.0011**	**.0000**	**-.0001**
Stddev	.0001	.0002	.0008	.000	.0001
%RSD	130.0	1330.	77.38	224.4	132.7
#1	.0000	.0000	-.0002	-.0001	-.0001
#2	-.0002	-.0001	-.0018	-.0001	.0000
#3	-.0001	.0002	-.0012	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.47**	**2162.7**	**20757.**	**3068.1**
Stddev	5.25	10.2	42.	19.5
%RSD	.55905	.47126	.20388	.63519
#1	934.63	2155.4	20783.	3088.5
#2	936.33	2158.4	20781.	3049.7
#3	944.45	2174.4	20709.	3066.0

Zoom In Zoom Out

Sample Name: ICSA Acquired: 12/16/2022 10:16:28 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**540.2**	**.0000**	**.0003**	**-.0002**	**.0001**	**467.7**	**.0000**	**-.0001**
Stddev	.0017	5.7	.0009	.0219	.0001	.0001	8.7	.001	.0002
%RSD	1456.	1.057	4603.	6729.	83.05	101.7	1.850	2580.	176.7
#1	-.0001	539.0	.0010	.0254	-.0002	.0000	462.9	.0012	.0000
#2	.0016	546.5	-.0002	-.0090	-.0002	.0001	477.7	-.0012	-.0003
#3	-.0019	535.3	-.0008	-.0154	.0000	.0001	462.5	-.0001	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	F **512.7**	**.0408**	F **.0024**	**521.0**	**.0003**	**-.0009**	**.2365**
Stddev	.0006	.001	6.6	.0277	.0007	2.4	.0001	.0002	.0073
%RSD	289.4	7315.	1.288	67.89	29.59	.4636	41.38	24.03	3.101
#1	.0009	.0000	508.8	.0289	.0031	519.8	.0003	-.0009	.2445
#2	-.0003	.0008	520.3	.0210	.0022	523.8	.0001	-.0011	.2302
#3	.0000	-.0008	509.0	.0724	.0017	519.4	.0004	-.0007	.2347
Check ?	Chk Pass	Chk Pass	Chk Fail	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit			240.0		.0010				
Low Limit			160.0		-.0010				

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0017**	**-.0015**	**.0690**	**-.0005**	**.0001**	**.0000**	**.0000**
Stddev	.001	.0036	.0031	.0028	.0022	.0007	.0000	.000	.0011
%RSD	1701.	9068.	183.4	184.0	3.227	145.6	10.36	172.7	2226.
#1	-.0006	.0015	.0019	-.0022	.0703	-.0002	.0001	.0000	-.0012
#2	.0003	-.0040	-.0015	-.0040	.0702	-.0013	.0001	-.0001	.0009
#3	.0002	.0027	.0047	.0016	.0664	.0000	.0001	.0000	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICSA Acquired: 12/16/2022 10:16:28 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**-.0004**	**.0003**
Stddev	.0002	.0003
%RSD	55.61	83.79
#1	-.0002	.0000
#2	-.0005	.0004
#3	-.0006	.0006
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**780.54**	**1948.9**	**17464.**	**2809.7**
Stddev	3.12	9.3	99.	25.9
%RSD	.39937	.47967	.56963	.92334
#1	779.25	1939.8	17390.	2824.9
#2	778.28	1948.6	17577.	2779.8
#3	784.10	1958.5	17425.	2824.6

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/16/2022 10:26:44 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.058**	**529.4**	**.9359**	F **.0164**	**.5107**	**.4800**	**462.8**	**.9485**	**.4701**
Stddev	.003	3.9	.0023	.0011	.0016	.0005	2.5	.0012	.0004
%RSD	.2934	.7389	.2407	6.415	.3213	.1144	.5412	.1294	.0898
#1	1.055	526.6	.9365	.0177	.5108	.4795	464.8	.9480	.4701
#2	1.057	533.9	.9378	.0157	.5122	.4799	460.0	.9476	.4696
#3	1.061	527.8	.9334	.0159	.5090	.4806	463.7	.9499	.4705
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				1.000					
Range				-20.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4832**	**.5450**	**192.5**	**.1211**	**1.015**	**515.1**	**.4880**	**.8845**	**.2241**
Stddev	.0006	.0014	.9	.0315	.001	2.4	.0027	.0021	.0144
%RSD	.1302	.2569	.4693	26.05	.0679	.4698	.5498	.2330	6.432
#1	.4827	.5440	192.0	.1137	1.015	515.0	.4850	.8849	.2265
#2	.4832	.5443	193.5	.0939	1.014	517.5	.4889	.8823	.2086
#3	.4839	.5466	191.9	.1557	1.015	512.7	.4901	.8863	.2371
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9087**	**.9562**	**.9405**	**.8864**	**.0675**	**.8439**	**.9283**	**1.007**	**.8433**
Stddev	.0008	.0060	.0011	.0024	.0016	.0010	.0014	.003	.0052
%RSD	.0875	.6262	.1199	.2759	2.328	.1184	.1517	.3212	.6145
#1	.9078	.9547	.9402	.8836	.0660	.8430	.9267	1.004	.8380
#2	.9094	.9511	.9396	.8879	.0676	.8438	.9289	1.006	.8433
#3	.9088	.9628	.9418	.8877	.0691	.8450	.9293	1.010	.8484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/16/2022 10:26:44 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**.5100**	**.9273**
Stddev	.0012	.0012
%RSD	.2338	.1263
#1	.5110	.9278
#2	.5087	.9281
#3	.5102	.9259
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**727.64**	**1904.8**	**17954.**	**2868.5**
Stddev	2.25	2.5	44.	18.1
%RSD	.30989	.12880	.24767	.63272
#1	729.96	1907.7	18004.	2884.3
#2	727.50	1903.4	17918.	2848.7
#3	725.46	1903.4	17940.	2872.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 10:32:29 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2472**	**40.27**	**1.900**	F **1.952**	**2.029**	**2.016**	**40.01**	**1.996**	**2.003**
Stddev	.0005	.15	.018	.005	.006	.004	.10	.004	.004
%RSD	.2132	.3654	.9579	.2351	.2998	.1987	.2622	.1773	.1926
#1	.2466	40.42	1.913	1.956	2.034	2.019	40.11	1.992	2.000
#2	.2475	40.12	1.907	1.952	2.032	2.018	40.04	1.999	2.008
#3	.2474	40.28	1.879	1.947	2.023	2.012	39.90	1.996	2.003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.017**	**2.027**	**40.39**	**40.54**	**2.047**	**40.20**	**2.046**	**2.039**	**40.91**
Stddev	.004	.006	.13	.17	.009	.13	.009	.007	.11
%RSD	.2191	.3145	.3283	.4272	.4296	.3182	.4458	.3662	.2645
#1	2.019	2.021	40.50	40.73	2.055	40.26	2.038	2.030	41.04
#2	2.012	2.027	40.43	40.48	2.048	40.29	2.045	2.043	40.83
#3	2.019	2.034	40.24	40.40	2.037	40.05	2.056	2.044	40.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.970**	**2.008**	**1.991**	**1.979**	**2.025**	**2.008**	**2.034**	**2.031**	**1.983**
Stddev	.008	.008	.005	.003	.007	.002	.005	.006	.006
%RSD	.3866	.3795	.2764	.1691	.3681	.0911	.2391	.3099	.3225
#1	1.973	2.002	1.987	1.975	2.024	2.006	2.039	2.029	1.976
#2	1.975	2.006	1.997	1.979	2.033	2.008	2.033	2.026	1.989
#3	1.961	2.017	1.989	1.981	2.018	2.009	2.030	2.038	1.985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 10:32:29 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.030**	**1.908**
Stddev	.004	.014
%RSD	.2156	.7438
#1	2.026	1.920
#2	2.028	1.912
#3	2.035	1.893
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**813.88**	**2122.8**	**19466.**	**2908.0**
Stddev	2.53	2.2	27.	7.0
%RSD	.31122	.10223	.14073	.23925
#1	815.10	2122.4	19486.	2915.3
#2	815.56	2120.9	19477.	2907.2
#3	810.96	2125.1	19435.	2901.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 10:39:26 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0048**	**.0011**	F **-.0042**	**.0003**	**.0000**	**-.0007**	**-.0001**
Stddev	.0001	.0195	.0010	.0019	.0002	.000	.0017	.0000
%RSD	157.2	409.8	92.51	44.14	57.88	97.96	258.5	43.17
#1	.0000	-.0014	.0011	-.0056	.0005	-.0001	.0011	-.0001
#2	-.0002	.0129	.0001	-.0050	.0004	.0000	-.0007	-.0001
#3	.0000	-.0258	.0020	-.0021	.0001	-.0001	-.0023	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0002**	**-.0008**	**.0123**	F **-.0015**	**.0066**	**.0000**
Stddev	.0001	.0002	.0004	.0009	.0645	.0007	.0189	.0001
%RSD	185.5	275.1	171.4	108.5	526.6	43.52	287.4	261.8
#1	.0002	-.0001	.0000	-.0011	-.0157	-.0016	.0283	.0001
#2	.0000	-.0002	.0000	-.0014	.0860	-.0008	-.0048	-.0001
#3	.0000	.0001	-.0007	.0002	-.0336	-.0022	-.0039	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0098**	**.0000**	**.0002**	**.0000**	**-.0004**	**.0014**	**.0001**
Stddev	.0001	.0017	.0002	.0006	.0010	.0006	.0004	.0001
%RSD	52.28	17.17	1146.	243.8	14200.	180.8	25.01	195.2
#1	-.0004	-.0116	-.0002	.0009	.0002	.0001	.0015	.0002
#2	-.0002	-.0095	.0002	-.0003	.0009	-.0001	.0017	.0000
#3	-.0001	-.0083	.0000	.0001	-.0011	-.0011	.0010	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 10:39:26 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0001**	**-.0011**	**.0002**	**-.0001**
Stddev	.0001	.0002	.0002	.0001	.0000
%RSD	96.56	180.1	20.20	49.84	31.52
#1	-.0001	.0003	-.0013	.0001	-.0001
#2	.0000	.0001	-.0009	.0002	-.0001
#3	-.0002	-.0001	-.0010	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.65**	**2252.7**	**19626.**	**2881.3**
Stddev	4.19	4.3	11.	10.4
%RSD	.45067	.19180	.05425	.36256
#1	927.46	2256.2	19614.	2893.4
#2	925.19	2247.9	19632.	2875.7
#3	933.30	2254.0	19633.	2874.9

Zoom In Zoom Out

Sample Name: MP41605-MB1 Acquired: 12/16/2022 10:44:35 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0088**	**.0004**	F **-.0082**	**.0000**	**-.0001**	**.0517**	**-.0001**
Stddev	.0003	.0089	.0005	.0014	.0002	.0000	.0021	.0000
%RSD	74.94	101.8	137.4	16.85	1290.	.3586	4.115	17.14
#1	-.0001	-.0014	.0002	-.0082	-.0002	-.0001	.0510	-.0001
#2	-.0007	.0154	.0009	-.0069	.0000	-.0001	.0500	-.0001
#3	-.0005	.0124	-.0001	-.0096	.0002	-.0001	.0541	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0050				
Low Limit				-.0050				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0013**	**.0210**	**-.0129**	**-.0010**	**.0026**	**.0002**
Stddev	.000	.000	.0002	.0011	.0111	.0024	.0216	.0001
%RSD	485.5	235.1	15.31	5.364	85.98	229.2	832.9	23.44
#1	.0000	.0001	.0015	.0207	-.0161	.0009	.0260	.0002
#2	.0001	.0000	.0011	.0223	-.0221	-.0037	-.0017	.0003
#3	-.0001	-.0002	.0012	.0201	-.0006	-.0003	-.0165	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0072**	**.0006**	**.0003**	**.0005**	**-.0004**	**.0084**	**.0003**
Stddev	.0001	.0038	.0003	.0003	.0003	.0017	.0007	.0007
%RSD	100.3	53.27	48.00	85.03	74.19	446.5	8.451	254.1
#1	.0000	.0065	.0009	.0001	.0002	-.0022	.0087	-.0003
#2	-.0001	.0112	.0004	.0002	.0003	.0001	.0076	.0010
#3	-.0001	.0037	.0005	.0006	.0009	.0010	.0090	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: MP41605-MB1 Acquired: 12/16/2022 10:44:35 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0020**	**-.0001**	**.0025**
Stddev	.0001	.0001	.0008	.0007	.0001
%RSD	155.6	131.7	37.50	658.9	5.366
#1	.0002	.0001	-.0022	-.0008	.0024
#2	.0002	.0001	-.0027	.0005	.0026
#3	-.0001	.0000	-.0012	.0000	.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.10**	**2166.4**	**20411.**	**3005.4**
Stddev	4.15	10.1	57.	18.5
%RSD	.45088	.46723	.27839	.61415
#1	924.22	2172.8	20378.	3024.1
#2	915.93	2154.7	20379.	2987.2
#3	920.15	2171.7	20477.	3004.8

Zoom In Zoom Out

Sample Name: MP41605-B1 Acquired: 12/16/2022 10:49:29 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0516**	**27.61**	**1.823**	F **.0155**	**2.062**	**.0495**	**24.76**	**.0492**
Stddev	.0007	.15	.017	.0030	.003	.0004	.07	.0001
%RSD	1.439	.5278	.9296	19.32	.1306	.7415	.2719	.2894
#1	.0509	27.57	1.838	.0188	2.063	.0499	24.83	.0493
#2	.0523	27.48	1.828	.0130	2.059	.0492	24.70	.0492
#3	.0518	27.77	1.805	.0146	2.065	.0493	24.75	.0490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500				
Range				-20.00%				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5060**	**.2027**	**.2611**	**25.61**	**25.05**	F **-.0007**	**24.89**	**.5069**
Stddev	.0012	.0029	.0051	.08	.03	.0007	.17	.0086
%RSD	.2396	1.450	1.955	.3054	.1152	102.0	.6743	1.700
#1	.5069	.1993	.2553	25.61	25.05	.0000	24.99	.4976
#2	.5065	.2045	.2641	25.52	25.02	-.0007	24.70	.5086
#3	.5046	.2043	.2641	25.68	25.08	-.0013	25.00	.5146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0500		
Range						-20.00%		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5442**	**23.88**	**.4939**	**.4920**	**.4903**	**1.938**	**.6988**	**.5254**
Stddev	.0008	.04	.0016	.0010	.0023	.007	.0025	.0016
%RSD	.1559	.1868	.3185	.1939	.4714	.3671	.3533	.3109
#1	.5449	23.92	.4951	.4922	.4924	1.941	.6997	.5269
#2	.5445	23.83	.4945	.4910	.4908	1.943	.7007	.5257
#3	.5433	23.90	.4921	.4928	.4878	1.930	.6960	.5237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP41605-B1 Acquired: 12/16/2022 10:49:29 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.5397**	**.5479**	**1.945**	**.5056**	**.4683**
Stddev	.0024	.0092	.010	.0083	.0028
%RSD	.4392	1.671	.5215	1.639	.5969
#1	.5425	.5374	1.954	.4961	.4706
#2	.5381	.5518	1.948	.5114	.4692
#3	.5387	.5544	1.934	.5093	.4652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**849.72**	**2173.7**	**19641.**	**2920.9**
Stddev	4.66	14.8	213.	35.0
%RSD	.54851	.67936	1.0824	1.1976
#1	845.35	2161.1	19872.	2917.4
#2	849.20	2170.0	19594.	2957.5
#3	854.63	2189.9	19455.	2887.8

Zoom In Zoom Out

Sample Name: FC1015-3 Acquired: 12/16/2022 10:54:03 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.1284**	**.0007**	**.0013**	**.0149**	**-.0001**	**59.30**	**-.0001**	**.0001**
Stddev	.0003	.0104	.0007	.0029	.0001	.0000	.20	.0000	.0001
%RSD	49.88	8.121	97.60	219.9	.7977	35.70	.3328	17.13	135.7
#1	-.0010	.1394	.0014	.0036	.0149	-.0001	59.33	-.0001	.0000
#2	-.0005	.1186	.0006	-.0019	.0147	-.0001	59.49	-.0002	.0001
#3	-.0004	.1272	.0000	.0022	.0150	-.0002	59.10	-.0001	.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0006**	**.1976**	**1.316**	**-.0001**	**5.545**	**.1269**	**.0000**	**2.608**
Stddev	.0002	.0003	.0016	.006	.0033	.034	.0011	.0001	.006
%RSD	73.81	53.35	.7972	.4637	2556.	.6151	.8567	9590.	.2421
#1	.0005	.0008	.1991	1.319	.0016	5.540	.1281	.0001	2.613
#2	.0001	.0007	.1979	1.319	-.0040	5.515	.1266	.0000	2.610
#3	.0003	.0002	.1960	1.309	.0019	5.582	.1260	-.0001	2.601

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0001**	**.0007**	**-.0010**	**2.798**	**.0004**	**.1788**	**.0037**	**-.0008**
Stddev	.000	.0003	.0016	.0020	.015	.0002	.0009	.0002	.0010
%RSD	774.6	266.9	236.8	208.8	.5237	56.64	.5019	4.435	124.6
#1	.0001	-.0005	.0025	.0005	2.789	.0003	.1789	.0038	-.0011
#2	-.0002	.0001	-.0002	-.0033	2.790	.0002	.1797	.0035	-.0015
#3	.0000	.0001	-.0003	-.0001	2.814	.0006	.1779	.0036	.0003

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0007**	**.0113**
Stddev	.0002	.0001
%RSD	26.38	.5965
#1	.0007	.0112
#2	.0005	.0113
#3	.0009	.0113

Zoom In Zoom Out

Sample Name: FC1015-3 Acquired: 12/16/2022 10:54:03 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**882.07**	**2213.5**	**19275.**	**2872.7**
Stddev	5.04	13.7	204.	6.5
%RSD	.57154	.61891	1.0597	.22598
#1	887.89	2224.2	19068.	2865.2
#2	879.18	2218.3	19282.	2876.1
#3	879.15	2198.1	19476.	2876.8

Zoom In Zoom Out

Sample Name: MP41605-D1 Acquired: 12/16/2022 10:58:54 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.1119**	**.0011**	**.0011**	**.0155**	**-.0001**	**60.69**	**.0000**	**.0001**
Stddev	.0001	.0076	.0006	.0009	.0006	.0001	1.01	.000	.0001
%RSD	15.41	6.830	51.24	86.68	3.710	87.48	1.669	52.43	188.3
#1	-.0003	.1141	.0011	.0021	.0150	-.0001	59.90	-.0001	.0000
#2	-.0004	.1182	.0006	.0003	.0161	.0000	61.83	.0000	.0002
#3	-.0004	.1034	.0017	.0008	.0152	-.0001	60.33	.0000	.0000

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0004**	**.2041**	**1.408**	**.0001**	**5.635**	**.1234**	**.0002**	**2.646**
Stddev	.0002	.0002	.0044	.061	.0007	.124	.0009	.0002	.053
%RSD	28.56	43.47	2.133	4.339	593.1	2.193	.7482	76.60	1.996
#1	.0008	.0002	.1991	1.357	-.0001	5.507	.1227	.0005	2.615
#2	.0007	.0005	.2071	1.476	-.0004	5.754	.1244	.0001	2.707
#3	.0004	.0006	.2061	1.392	.0009	5.645	.1230	.0002	2.615

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0003**	**.0016**	**-.0020**	**2.883**	**.0001**	**.1798**	**.0036**	**-.0011**
Stddev	.000	.0008	.0016	.0011	.006	.0002	.0033	.0001	.0011
%RSD	490.8	223.6	96.76	55.77	.2061	118.3	1.856	2.363	104.9
#1	-.0002	-.0001	.0020	-.0033	2.890	.0000	.1772	.0035	-.0017
#2	.0001	.0002	.0030	-.0016	2.878	.0002	.1836	.0037	-.0017
#3	.0000	-.0012	-.0001	-.0012	2.883	.0003	.1786	.0036	.0002

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0007**	**.0128**
Stddev	.0001	.0001
%RSD	16.06	.7029
#1	.0007	.0129
#2	.0006	.0127
#3	.0008	.0128

Zoom In Zoom Out

Sample Name: MP41605-D1 Acquired: 12/16/2022 10:58:54 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**887.78**	**2174.3**	**19672.**	**2890.5**
Stddev	4.22	7.9	216.	46.3
%RSD	.47494	.36395	1.0999	1.6032
#1	884.52	2171.3	19746.	2901.4
#2	892.54	2183.3	19429.	2839.6
#3	886.29	2168.3	19842.	2930.4

Zoom In Zoom Out

Sample Name: MP41605-SD1 Acquired: 12/16/2022 11:03:45 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0033**	**.1614**	**.0044**	**-.0273**	**.0153**	**-.0002**	**57.30**	**-.0004**	**.0003**
Stddev	.0030	.0362	.0015	.0113	.0015	.0000	.19	.0002	.0003
%RSD	91.50	22.40	32.73	41.16	9.606	22.52	.3391	44.32	102.3
#1	-.0008	.1675	.0060	-.0221	.0170	-.0002	57.09	-.0004	.0005
#2	-.0025	.1226	.0031	-.0196	.0142	-.0002	57.33	-.0002	-.0001
#3	-.0067	.1942	.0043	-.0403	.0147	-.0002	57.47	-.0006	.0005

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0013**	**.1970**	**1.292**	**.0015**	**5.212**	**.1186**	**-.0020**	**2.316**
Stddev	.0003	.0014	.0111	.209	.0025	.112	.0008	.0006	.009
%RSD	71.19	106.7	5.650	16.19	166.0	2.145	.7017	30.00	.4044
#1	-.0007	-.0016	.1842	1.161	.0041	5.096	.1181	-.0020	2.324
#2	-.0006	.0002	.2023	1.533	.0014	5.319	.1196	-.0025	2.306
#3	-.0001	-.0026	.2045	1.182	-.0009	5.222	.1182	-.0014	2.318

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0006**	**.0047**	**-.0071**	**2.736**	**-.0007**	**.1660**	**.0060**	**-.0069**
Stddev	.0007	.0023	.0013	.0100	.006	.0030	.0003	.0004	.0034
%RSD	114.4	391.2	28.22	139.9	.2298	444.8	.1620	6.047	49.77
#1	-.0013	-.0025	.0039	.0010	2.731	.0013	.1658	.0063	-.0097
#2	-.0007	-.0011	.0039	-.0041	2.743	-.0042	.1658	.0059	-.0079
#3	.0001	.0019	.0062	-.0182	2.735	.0009	.1663	.0056	-.0031

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0015**	**.0117**
Stddev	.0004	.0002
%RSD	23.41	1.412
#1	.0015	.0117
#2	.0019	.0118
#3	.0012	.0115

Zoom In Zoom Out

Sample Name: MP41605-SD1 Acquired: 12/16/2022 11:03:45 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.18**	**2209.1**	**20087.**	**2932.5**
Stddev	6.46	3.4	153.	19.7
%RSD	.70171	.15334	.75972	.67228
#1	925.24	2211.7	20181.	2949.8
#2	922.38	2210.4	19911.	2911.0
#3	912.90	2205.3	20168.	2936.6

Zoom In Zoom Out

Sample Name: MP41605-PS1 Acquired: 12/16/2022 11:08:37 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0477**	**2.663**	**.0857**	**.0010**	**.2555**	**.0493**	**63.32**	**.0469**	**.0478**
Stddev	.0005	.013	.0011	.0019	.0011	.0002	.16	.0001	.0001
%RSD	1.117	.4834	1.295	195.7	.4168	.4226	.2512	.2762	.1665
#1	.0482	2.658	.0862	.0032	.2558	.0491	63.37	.0471	.0479
#2	.0477	2.677	.0864	-.0003	.2563	.0492	63.45	.0470	.0477
#3	.0471	2.653	.0844	.0000	.2543	.0495	63.14	.0468	.0477

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0490**	**.1018**	**3.058**	**10.74**	**-.0005**	**10.36**	**.1738**	**.0938**	**11.76**
Stddev	.0001	.0002	.017	.04	.0019	.03	.0001	.0003	.04
%RSD	.1907	.2444	.5447	.3712	373.2	.3144	.0813	.2774	.2983
#1	.0491	.1015	3.052	10.70	.0010	10.35	.1739	.0936	11.79
#2	.0489	.1019	3.076	10.78	-.0027	10.40	.1740	.0941	11.77
#3	.0491	.1019	3.044	10.72	.0002	10.34	.1737	.0936	11.72

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0925**	**.0466**	**.0958**	**.0886**	**2.846**	**.0475**	**.2255**	**.1033**	**.0888**
Stddev	.0001	.0004	.0002	.0027	.005	.0004	.0003	.0002	.0011
%RSD	.1421	.8177	.1576	3.046	.1774	.8953	.1310	.1899	1.201
#1	.0924	.0463	.0960	.0911	2.852	.0471	.2259	.1031	.0886
#2	.0926	.0465	.0957	.0890	2.845	.0480	.2254	.1034	.0899
#3	.0925	.0470	.0957	.0858	2.842	.0475	.2253	.1035	.0878

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0498**	**.2227**
Stddev	.0001	.0009
%RSD	.1014	.4220
#1	.0498	.2236
#2	.0499	.2226
#3	.0499	.2218

Zoom In Zoom Out

Sample Name: MP41605-PS1 Acquired: 12/16/2022 11:08:37 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**881.83**	**2242.4**	**19794.**	**2992.9**
Stddev	1.83	5.5	141.	12.3
%RSD	.20768	.24523	.71237	.41114
#1	883.02	2237.6	19775.	3006.7
#2	879.72	2241.2	19944.	2983.2
#3	882.76	2248.4	19664.	2988.7

Zoom In Zoom Out

Sample Name: MP41605-S1 Acquired: 12/16/2022 11:13:19 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0535**	**31.05**	**1.743**	**.0156**	**2.065**	**.0524**	**85.30**	**.0481**	**.4967**
Stddev	.0002	.13	.013	.0016	.013	.0002	.50	.0003	.0056
%RSD	.4531	.4258	.7151	10.09	.6270	.4245	.5822	.6045	1.118
#1	.0535	31.20	1.750	.0159	2.077	.0526	85.76	.0484	.5022
#2	.0538	30.94	1.728	.0170	2.052	.0522	84.77	.0479	.4911
#3	.0533	31.03	1.750	.0139	2.067	.0523	85.37	.0481	.4969

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2067**	**.2760**	**26.90**	**28.08**	**.0003**	**32.50**	**.6634**	**.5225**	**29.21**
Stddev	.0012	.0018	.16	.14	.0012	.27	.0040	.0064	.16
%RSD	.5771	.6351	.5902	.5149	402.2	.8421	.5978	1.233	.5434
#1	.2067	.2779	27.07	28.18	.0009	32.79	.6672	.5288	29.39
#2	.2056	.2744	26.75	27.91	-.0011	32.24	.6593	.5159	29.08
#3	.2080	.2759	26.87	28.15	.0011	32.49	.6636	.5226	29.18

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4748**	**.4977**	**.4902**	**1.938**	**3.540**	**.4961**	**.7141**	**.5546**	**1.928**
Stddev	.0035	.0053	.0041	.015	.033	.0046	.0033	.0020	.015
%RSD	.7271	1.064	.8277	.7869	.9376	.9361	.4660	.3678	.7625
#1	.4782	.5033	.4943	1.953	3.571	.5008	.7179	.5560	1.942
#2	.4713	.4928	.4862	1.923	3.505	.4916	.7117	.5523	1.913
#3	.4749	.4971	.4901	1.938	3.544	.4958	.7126	.5556	1.930

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.5259**	**.4471**
Stddev	.0018	.0028
%RSD	.3463	.6336
#1	.5267	.4489
#2	.5238	.4439
#3	.5271	.4485

Zoom In Zoom Out

Sample Name: MP41605-S1 Acquired: 12/16/2022 11:13:19 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**840.81**	**2226.4**	**19013.**	**2929.5**
Stddev	5.13	14.0	107.	10.5
%RSD	.60996	.62879	.56332	.35923
#1	835.96	2210.9	19033.	2925.9
#2	846.18	2238.3	19108.	2941.4
#3	840.27	2229.9	18897.	2921.3

Zoom In Zoom Out

Sample Name: MP41605-S2 Acquired: 12/16/2022 11:17:52 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0520**	**28.55**	**1.910**	**.0260**	**2.054**	**.0485**	**84.34**	**.0483**	**.4959**
Stddev	.0007	.13	.018	.0029	.013	.0003	.59	.0003	.0012
%RSD	1.334	.4664	.9544	11.12	.6522	.5440	.6947	.5805	.2444
#1	.0513	28.41	1.889	.0255	2.039	.0486	83.92	.0480	.4950
#2	.0526	28.57	1.915	.0234	2.059	.0482	84.08	.0484	.4955
#3	.0521	28.67	1.925	.0291	2.065	.0486	85.01	.0485	.4973

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2013**	**.2630**	**26.25**	**27.16**	**.0008**	**30.46**	**.6115**	**.5180**	**27.13**
Stddev	.0004	.0018	.20	.16	.0006	.20	.0016	.0001	.10
%RSD	.2216	.6730	.7786	.6013	73.03	.6403	.2626	.0248	.3732
#1	.2008	.2617	26.05	27.00	.0012	30.28	.6097	.5179	27.10
#2	.2016	.2650	26.26	27.16	.0010	30.42	.6127	.5179	27.05
#3	.2016	.2623	26.45	27.33	.0001	30.67	.6122	.5182	27.25

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4924**	**.4785**	**.4926**	**1.947**	**3.679**	**.5022**	**.6833**	**.5303**	**1.923**
Stddev	.0023	.0015	.0016	.004	.013	.0022	.0045	.0013	.003
%RSD	.4612	.3222	.3323	.2052	.3436	.4374	.6558	.2522	.1422
#1	.4898	.4789	.4912	1.946	3.666	.4999	.6811	.5289	1.920
#2	.4935	.4798	.4921	1.943	3.680	.5026	.6804	.5316	1.926
#3	.4940	.4768	.4944	1.951	3.691	.5042	.6885	.5304	1.922

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.5104**	**.4859**
Stddev	.0008	.0041
%RSD	.1643	.8423
#1	.5095	.4815
#2	.5109	.4868
#3	.5110	.4895

Zoom In Zoom Out

Sample Name: MP41605-S2 Acquired: 12/16/2022 11:17:52 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**851.24**	**2163.4**	**20125.**	**3079.8**
Stddev	1.08	12.3	139.	14.1
%RSD	.12691	.57060	.69014	.45801
#1	852.43	2176.3	20089.	3087.6
#2	850.31	2162.4	20278.	3088.2
#3	850.98	2151.6	20007.	3063.5

Zoom In Zoom Out

Sample Name: FC1015-4 Acquired: 12/16/2022 11:22:26 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0764**	**.0011**	**.0006**	**.0103**	**.0000**	**51.48**	**-.0001**	**.0000**
Stddev	.0005	.0083	.0002	.0010	.0002	.0000	.22	.0000	.000
%RSD	166.3	10.87	19.69	155.4	1.571	765.2	.4303	45.09	375.0
#1	.0002	.0688	.0010	.0015	.0104	.0000	51.74	-.0001	.0001
#2	-.0004	.0751	.0010	-.0004	.0104	.0000	51.36	.0000	-.0001
#3	-.0006	.0853	.0014	.0008	.0101	.0000	51.34	-.0001	.0000

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0019**	**.2910**	**14.90**	**.0001**	**6.041**	**.4459**	**.0000**	**26.37**
Stddev	.0003	.0003	.0021	.11	.0004	.057	.0025	.0002	.13
%RSD	145.5	13.28	.7167	.7662	394.8	.9379	.5587	473.9	.4944
#1	.0006	.0020	.2889	15.01	-.0002	6.101	.4458	.0001	26.51
#2	.0000	.0021	.2931	14.91	-.0001	5.988	.4484	-.0002	26.26
#3	.0000	.0016	.2911	14.78	.0005	6.035	.4434	.0001	26.32

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0000**	**.0005**	**-.0027**	**5.461**	**.0003**	**.1086**	**.0031**	**-.0005**
Stddev	.0001	.0009	.0013	.0014	.030	.0004	.0002	.0000	.0006
%RSD	25.23	3063.	256.2	50.92	.5548	143.8	.1871	1.323	115.4
#1	.0004	.0009	.0014	-.0035	5.494	-.0002	.1088	.0031	.0001
#2	.0004	.0000	-.0010	-.0036	5.457	.0005	.1084	.0031	-.0007
#3	.0003	-.0008	.0011	-.0011	5.433	.0005	.1086	.0032	-.0009

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0007**	**.0133**
Stddev	.0003	.0001
%RSD	52.89	.8252
#1	.0008	.0132
#2	.0003	.0134
#3	.0009	.0132

Zoom In Zoom Out

Sample Name: FC1015-4 Acquired: 12/16/2022 11:22:26 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**892.08**	**2188.3**	**20306.**	**3040.8**
Stddev	3.41	15.7	174.	23.7
%RSD	.38172	.71717	.85555	.77858
#1	888.38	2174.5	20345.	3014.4
#2	892.77	2185.1	20116.	3060.0
#3	895.09	2205.4	20456.	3048.2

Zoom In Zoom Out

Sample Name: FC980-5 Acquired: 12/16/2022 11:27:18 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0189**	**.0083**	**.0347**	**.0251**	**-.0001**	**69.97**	**.0000**	**-.0001**
Stddev	.0002	.0115	.0002	.0009	.0001	.0000	.31	.000	.0002
%RSD	36.59	60.91	2.827	2.606	.3352	36.45	.4435	60.93	124.8
#1	-.0007	.0104	.0080	.0353	.0252	-.0001	70.31	-.0001	.0000
#2	-.0003	.0321	.0084	.0350	.0250	-.0001	69.90	.0000	-.0001
#3	-.0004	.0143	.0084	.0336	.0251	-.0001	69.70	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0042**	**.3550**	**16.79**	**.0039**	**2.573**	**.0411**	**.0034**	**19.71**
Stddev	.0001	.0006	.0015	.08	.0012	.008	.0002	.0001	.09
%RSD	18.12	13.61	.4165	.4509	29.74	.2964	.3831	4.183	.4658
#1	.0006	.0037	.3536	16.88	.0030	2.582	.0409	.0035	19.80
#2	.0005	.0048	.3548	16.73	.0052	2.569	.0411	.0035	19.62
#3	.0008	.0041	.3566	16.78	.0036	2.569	.0412	.0033	19.71

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**-.0007**	**.0013**	**-.0001**	**7.415**	**.0002**	**.3516**	**.0022**	**-.0010**
Stddev	.0002	.0013	.0007	.0017	.029	.0004	.0013	.0001	.0003
%RSD	15.65	192.1	53.63	1185.	.3843	193.3	.3781	5.175	33.44
#1	.0015	.0008	.0010	.0017	7.400	-.0001	.3531	.0023	-.0008
#2	.0013	-.0018	.0021	-.0005	7.396	.0000	.3505	.0022	-.0009
#3	.0011	-.0010	.0009	-.0016	7.447	.0007	.3512	.0021	-.0014

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0076**	**.0239**
Stddev	.0004	.0001
%RSD	5.471	.4515
#1	.0074	.0240
#2	.0074	.0238
#3	.0081	.0238

Zoom In Zoom Out

Sample Name: FC980-5 Acquired: 12/16/2022 11:27:18 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**884.49**	**2233.1**	**19658.**	**3010.5**
Stddev	1.52	3.7	93.	13.7
%RSD	.17182	.16401	.47119	.45629
#1	885.77	2229.5	19751.	2995.7
#2	884.90	2236.8	19566.	3022.8
#3	882.81	2233.0	19656.	3012.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 11:37:28 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2574**	**41.33**	**1.987**	F **2.035**	**2.079**	**1.996**	**40.79**	**2.018**	**2.031**
Stddev	.0010	.02	.009	.010	.003	.002	.02	.001	.002
%RSD	.3746	.0374	.4461	.5063	.1636	.0897	.0505	.0688	.0806
#1	.2565	41.34	1.995	2.038	2.075	1.994	40.78	2.019	2.032
#2	.2584	41.33	1.986	2.044	2.080	1.995	40.78	2.016	2.029
#3	.2574	41.31	1.978	2.024	2.082	1.998	40.81	2.018	2.031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.031**	**2.063**	**40.80**	**41.77**	**2.068**	**40.35**	**2.021**	**2.043**	**41.83**
Stddev	.001	.002	.05	.03	.001	.08	.009	.003	.02
%RSD	.0422	.1179	.1310	.0670	.0684	.1861	.4183	.1585	.0538
#1	2.031	2.065	40.74	41.76	2.066	40.27	2.026	2.042	41.80
#2	2.031	2.065	40.83	41.81	2.068	40.42	2.026	2.042	41.84
#3	2.030	2.061	40.84	41.75	2.069	40.34	2.012	2.047	41.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.018**	**2.011**	**2.049**	**2.025**	**2.128**	**2.022**	**2.035**	**2.039**	**2.015**
Stddev	.004	.007	.001	.002	.003	.002	.003	.001	.005
%RSD	.1903	.3306	.0589	.0947	.1569	.0821	.1276	.0632	.2341
#1	2.022	2.006	2.050	2.027	2.132	2.023	2.033	2.040	2.013
#2	2.018	2.008	2.048	2.024	2.127	2.024	2.033	2.039	2.021
#3	2.015	2.018	2.050	2.023	2.126	2.021	2.038	2.037	2.012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 11:37:28 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.036**	**1.977**
Stddev	.001	.010
%RSD	.0305	.5200
#1	2.036	1.987
#2	2.036	1.978
#3	2.037	1.966
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**831.26**	**2141.4**	**20015.**	**3014.3**
Stddev	3.04	3.7	49.	5.7
%RSD	.36621	.17091	.24331	.18882
#1	834.74	2141.8	20062.	3012.5
#2	829.12	2137.6	20017.	3020.7
#3	829.91	2144.9	19965.	3009.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 11:44:05 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**-.0038**	**.0003**	F **-.0035**	**.0003**	**.0000**	**.0005**	**-.0001**
Stddev	.0002	.0053	.0006	.0023	.0002	.000	.0045	.0000
%RSD	19.19	139.1	192.3	66.17	52.40	338.6	851.3	46.87
#1	-.0007	-.0078	.0008	-.0039	.0004	.0001	-.0020	-.0001
#2	-.0008	.0022	-.0004	-.0010	.0001	-.0001	-.0021	.0000
#3	-.0010	-.0059	.0006	-.0056	.0003	-.0001	.0058	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**-.0002**	**-.0006**	**.0370**	F **-.0016**	**-.0096**	**.0001**
Stddev	.0001	.0000	.0004	.0036	.0384	.0004	.0128	.0000
%RSD	82.16	3.041	187.8	602.0	103.8	27.14	132.8	11.35
#1	.0001	-.0002	.0000	-.0001	.0707	-.0012	-.0104	.0001
#2	.0001	-.0002	.0000	.0027	.0450	-.0020	-.0220	.0001
#3	.0000	-.0002	-.0006	-.0044	-.0048	-.0016	.0035	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0069**	**.0000**	**.0004**	**.0017**	**.0002**	**.0023**	**-.0001**
Stddev	.0002	.0033	.0002	.0002	.0012	.0025	.0001	.0005
%RSD	579.6	48.27	14220.	57.00	71.75	1225.	4.416	565.0
#1	.0002	-.0044	.0003	.0005	.0022	-.0015	.0022	.0005
#2	.0000	-.0055	-.0002	.0001	.0027	.0030	.0023	-.0003
#3	-.0001	-.0107	.0000	.0005	.0003	-.0009	.0024	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 11:44:05 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0002**	**.0002**	**.0002**	**.0000**
Stddev	.0001	.0001	.0010	.0001	.000
%RSD	126.1	52.38	645.2	44.14	128.1
#1	.0000	.0002	.0002	.0001	.0000
#2	-.0001	.0001	.0011	.0002	-.0001
#3	-.0001	.0002	-.0009	.0002	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**944.49**	**2309.4**	**20064.**	**2965.6**
Stddev	3.47	1.7	44.	6.0
%RSD	.36733	.07488	.21841	.20071
#1	946.87	2307.6	20108.	2963.0
#2	946.09	2309.4	20021.	2972.5
#3	940.51	2311.1	20062.	2961.5

Zoom In Zoom Out

Sample Name: FC980-6 Acquired: 12/16/2022 11:48:59 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0524**	**.0051**	**.0639**	**.0092**	**.0000**	**65.84**	**.0000**	**-.0002**
Stddev	.0006	.0065	.0005	.0046	.0001	.000	.43	.000	.0001
%RSD	329.0	12.41	10.70	7.133	.7477	75.92	.6472	297.7	64.31
#1	-.0003	.0556	.0047	.0654	.0091	.0000	66.33	.0001	-.0002
#2	-.0007	.0449	.0057	.0588	.0092	.0000	65.64	-.0001	-.0003
#3	.0005	.0565	.0050	.0675	.0092	.0000	65.55	.0000	-.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0027**	**.0515**	**12.24**	**.0126**	**2.870**	**.0047**	**.0072**	**21.00**
Stddev	.0002	.0006	.0013	.10	.0009	.025	.0001	.0002	.17
%RSD	95.73	21.12	2.539	.7997	6.870	.8650	1.492	3.390	.7987
#1	.0001	.0027	.0503	12.35	.0117	2.896	.0047	.0075	21.15
#2	.0004	.0021	.0513	12.22	.0127	2.847	.0046	.0071	21.01
#3	.0000	.0032	.0529	12.16	.0134	2.865	.0047	.0071	20.82

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0000**	**.0022**	**.0027**	**6.850**	**-.0001**	**.4532**	**.0021**	**-.0018**
Stddev	.0002	.0001	.0008	.0026	.063	.0008	.0031	.0001	.0010
%RSD	28.91	301.9	35.03	95.52	.9226	904.1	.6937	6.034	53.34
#1	.0004	.0000	.0014	.0037	6.789	-.0010	.4567	.0019	-.0015
#2	.0007	.0000	.0030	-.0002	6.848	.0006	.4524	.0021	-.0029
#3	.0006	.0001	.0023	.0047	6.915	.0002	.4506	.0022	-.0010

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0168**	**.0171**
Stddev	.0000	.0003
%RSD	.2392	2.041
#1	.0167	.0168
#2	.0168	.0170
#3	.0168	.0174

Zoom In Zoom Out

Sample Name: FC980-6 Acquired: 12/16/2022 11:48:59 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**888.55**	**2178.1**	**19903.**	**3071.9**
Stddev	2.50	19.9	158.	21.1
%RSD	.28124	.91589	.79217	.68655
#1	891.43	2198.5	20003.	3048.7
#2	887.24	2177.3	19985.	3077.1
#3	886.98	2158.6	19722.	3089.9

Zoom In Zoom Out

Sample Name: FC980-7 Acquired: 12/16/2022 11:58:54 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0748**	**.0256**	**.0286**	**.0079**	**-.0001**	**72.21**	**-.0001**	**-.0002**
Stddev	.0004	.0058	.0003	.0027	.0003	.0000	4.50	.0000	.0001
%RSD	116.2	7.815	1.277	9.304	4.113	22.47	6.234	50.64	37.95
#1	-.0003	.0748	.0253	.0259	.0076	-.0001	67.01	-.0001	-.0001
#2	.0000	.0690	.0256	.0285	.0080	-.0002	74.94	-.0001	-.0002
#3	-.0008	.0807	.0260	.0313	.0082	-.0001	74.67	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0012**	**.0890**	**6.122**	**.0009**	**2.131**	**.1073**	**.0018**	**5.176**
Stddev	.0001	.0002	.0066	.369	.0021	.117	.0007	.0001	.307
%RSD	14.62	19.39	7.441	6.030	233.5	5.491	.6329	8.241	5.929
#1	.0009	.0014	.0814	5.696	-.0005	1.998	.1067	.0016	4.822
#2	.0008	.0011	.0926	6.347	-.0001	2.181	.1073	.0018	5.352
#3	.0007	.0010	.0931	6.324	.0032	2.215	.1080	.0019	5.355

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0008**	**.0007**	**-.0010**	**10.59**	**.0009**	**.4371**	**.0020**	**-.0020**
Stddev	.0001	.0010	.0007	.0021	.03	.0003	.0284	.0002	.0007
%RSD	36.40	126.4	88.61	209.0	.3239	33.87	6.488	9.273	34.60
#1	.0003	.0002	.0007	.0011	10.62	.0009	.4044	.0020	-.0016
#2	.0002	-.0007	.0001	-.0010	10.59	.0011	.4538	.0019	-.0016
#3	.0002	-.0017	.0014	-.0030	10.55	.0005	.4532	.0022	-.0027

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0090**	**.0148**
Stddev	.0003	.0001
%RSD	2.855	.8701
#1	.0090	.0148
#2	.0087	.0149
#3	.0093	.0147

Zoom In Zoom Out

Sample Name: FC980-7 Acquired: 12/16/2022 11:58:54 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**898.67**	**2257.9**	**19867.**	**3110.2**
Stddev	1.96	7.3	47.	161.1
%RSD	.21827	.32435	.23436	5.1805
#1	900.11	2253.0	19887.	3294.8
#2	896.44	2254.4	19899.	2997.8
#3	899.46	2266.3	19813.	3038.0

Zoom In Zoom Out

Sample Name: FC980-8 Acquired: 12/16/2022 12:03:45 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.2686**	**.0134**	**.0319**	**.0066**	**-.0001**	**51.56**	**-.0001**	**.0000**
Stddev	.0005	.0375	.0001	.0010	.0006	.0001	5.68	.0000	.0001
%RSD	125.2	13.98	1.116	3.088	9.389	127.0	11.01	24.33	151.0
#1	-.0008	.2522	.0133	.0324	.0061	.0000	49.28	-.0001	.0000
#2	.0001	.3116	.0133	.0326	.0073	-.0002	58.02	-.0002	.0000
#3	-.0004	.2420	.0136	.0308	.0063	-.0002	47.37	-.0002	.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0092**	**1.195**	**1.665**	**-.0009**	**1.507**	**.1060**	**.0004**	**4.456**
Stddev	.0000	.0005	.133	.182	.0006	.145	.0006	.0002	.473
%RSD	1.751	5.115	11.11	10.95	71.30	9.640	.5751	52.83	10.61
#1	.0015	.0086	1.147	1.586	-.0005	1.447	.1067	.0004	4.269
#2	.0016	.0094	1.344	1.873	-.0006	1.673	.1057	.0007	4.993
#3	.0015	.0094	1.092	1.535	-.0016	1.402	.1056	.0002	4.104

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0011**	**.0015**	**-.0010**	**3.333**	**.0002**	**.2357**	**.0055**	**-.0015**
Stddev	.0003	.0009	.0004	.0007	.010	.0000	.0260	.0001	.0012
%RSD	10.15	83.93	25.54	71.27	.2905	5.027	11.02	2.317	83.98
#1	.0025	.0014	.0017	-.0019	3.334	.0003	.2251	.0054	-.0008
#2	.0031	.0018	.0018	-.0005	3.342	.0002	.2653	.0056	-.0029
#3	.0030	.0001	.0011	-.0008	3.323	.0002	.2167	.0056	-.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0011**	**.0273**
Stddev	.0003	.0001
%RSD	26.05	.4130
#1	.0009	.0274
#2	.0014	.0274
#3	.0009	.0272

Zoom In Zoom Out

Sample Name: FC980-8 Acquired: 12/16/2022 12:03:45 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**916.75**	**2312.4**	**19706.**	**2840.9**
Stddev	1.98	6.7	133.	283.3
%RSD	.21569	.28964	.67534	9.9724
#1	917.19	2311.6	19576.	2957.3
#2	914.59	2306.2	19842.	2518.0
#3	918.47	2319.5	19699.	3047.5

Zoom In Zoom Out

Sample Name: FC980-9 Acquired: 12/16/2022 12:08:37 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.3483**	**.0098**	**.0350**	**.0168**	**-.0001**	**57.19**	**-.0001**	**-.0001**
Stddev	.0002	.0227	.0012	.0026	.0002	.0001	.07	.0000	.0001
%RSD	156.1	6.510	11.91	7.379	1.195	136.8	.1176	54.91	82.57
#1	-.0001	.3742	.0090	.0320	.0165	-.0002	57.11	-.0001	.0000
#2	-.0004	.3321	.0111	.0359	.0169	.0000	57.23	.0000	-.0001
#3	.0000	.3387	.0092	.0369	.0169	-.0001	57.23	-.0001	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0012**	**.2154**	**1.834**	**.0013**	**2.227**	**.0940**	**.0025**	**21.20**
Stddev	.0002	.0003	.0041	.020	.0002	.026	.0003	.0000	.05
%RSD	40.87	21.05	1.898	1.071	16.73	1.183	.3072	1.637	.2546
#1	.0008	.0010	.2177	1.851	.0014	2.197	.0943	.0025	21.17
#2	.0006	.0015	.2178	1.837	.0011	2.244	.0938	.0025	21.17
#3	.0003	.0011	.2107	1.813	.0015	2.240	.0939	.0024	21.26

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0002**	**.0010**	**-.0025**	**4.539**	**.0001**	**.2817**	**.0025**	**-.0012**
Stddev	.0002	.0006	.0002	.0010	.015	.0006	.0010	.0001	.0001
%RSD	247.9	314.7	15.24	41.59	.3246	578.4	.3589	5.921	8.964
#1	-.0001	-.0009	.0009	-.0014	4.524	.0007	.2811	.0025	-.0012
#2	-.0002	.0002	.0009	-.0025	4.542	.0000	.2829	.0024	-.0011
#3	.0001	.0002	.0012	-.0035	4.553	-.0004	.2811	.0026	-.0013

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0080**	**.0190**
Stddev	.0001	.0002
%RSD	1.275	.8904
#1	.0079	.0189
#2	.0080	.0190
#3	.0081	.0192

Zoom In Zoom Out

Sample Name: FC980-9 Acquired: 12/16/2022 12:08:37 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**901.07**	**2265.2**	**19640.**	**2954.4**
Stddev	5.62	2.3	118.	12.0
%RSD	.62356	.10243	.60036	.40668
#1	894.59	2266.1	19604.	2953.6
#2	904.31	2262.5	19772.	2942.8
#3	904.33	2266.9	19544.	2966.7

Zoom In Zoom Out

Sample Name: FC980-10 Acquired: 12/16/2022 12:13:28 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.1766**	**.2282**	**.0235**	**.0055**	**-.0001**	**23.95**	**-.0001**	**-.0001**
Stddev	.0002	.0200	.0020	.0010	.0003	.0001	.01	.0001	.0001
%RSD	40.86	11.30	.8891	4.364	4.813	58.23	.0453	86.43	145.3
#1	-.0003	.1536	.2281	.0229	.0056	-.0001	23.93	.0000	.0000
#2	-.0004	.1883	.2303	.0228	.0057	-.0001	23.95	-.0001	-.0001
#3	-.0006	.1880	.2262	.0247	.0052	-.0002	23.95	-.0002	-.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0018**	**.2820**	**3.441**	**.0002**	**3.252**	**.0072**	**.0042**	**9.241**
Stddev	.0003	.0003	.0015	.026	.0008	.018	.0000	.0002	.007
%RSD	9.612	15.98	.5190	.7479	458.0	.5392	.2612	3.675	.0726
#1	.0029	.0016	.2813	3.411	-.0005	3.233	.0071	.0043	9.233
#2	.0032	.0017	.2837	3.458	.0010	3.268	.0072	.0040	9.245
#3	.0026	.0021	.2810	3.453	.0001	3.255	.0072	.0042	9.243

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0005**	**.0010**	**-.0011**	**4.248**	**.0003**	**.1912**	**.0031**	**-.0016**
Stddev	.0001	.0005	.0008	.0039	.011	.0001	.0003	.0002	.0015
%RSD	6.439	93.79	83.99	363.3	.2631	30.82	.1658	7.054	97.71
#1	.0011	.0000	.0017	-.0055	4.259	.0002	.1916	.0030	-.0008
#2	.0013	.0006	.0001	.0019	4.249	.0004	.1909	.0031	-.0005
#3	.0012	.0009	.0011	.0004	4.236	.0003	.1912	.0034	-.0033

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0052**	**.0343**
Stddev	.0003	.0001
%RSD	5.082	.3477
#1	.0050	.0344
#2	.0055	.0343
#3	.0051	.0341

Zoom In Zoom Out

Sample Name: FC980-10 Acquired: 12/16/2022 12:13:28 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**912.74**	**2246.1**	**20200.**	**3052.9**
Stddev	1.11	4.9	201.	24.7
%RSD	.12178	.22019	.99483	.80838
#1	912.53	2241.8	20427.	3081.1
#2	911.75	2244.9	20132.	3035.0
#3	913.94	2251.5	20043.	3042.7

Zoom In Zoom Out

Sample Name: FC980-11 Acquired: 12/16/2022 12:18:19 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0559**	**.0115**	**.0766**	**.0182**	**.0000**	**131.6**	**-.0001**	**-.0002**
Stddev	.0001	.0154	.0006	.0022	.0003	.000	1.4	.0000	.0001
%RSD	653.7	27.45	5.310	2.830	1.921	192.7	1.080	32.95	81.40
#1	.0000	.0615	.0121	.0777	.0185	.0000	133.1	-.0001	.0000
#2	.0001	.0386	.0114	.0781	.0182	.0000	131.2	-.0001	-.0002
#3	.0000	.0678	.0109	.0741	.0178	.0000	130.3	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0161**	**.4341**	**1.010**	**.0016**	**9.163**	**.0052**	**.0049**	**33.54**
Stddev	.0002	.0003	.0067	.013	.0014	.120	.0000	.0002	.32
%RSD	11.06	1.953	1.555	1.274	85.70	1.310	.4937	3.503	.9419
#1	.0018	.0161	.4419	1.013	.0028	9.295	.0052	.0051	33.90
#2	.0021	.0164	.4299	1.021	.0001	9.133	.0052	.0049	33.43
#3	.0018	.0157	.4306	.9957	.0018	9.061	.0052	.0047	33.30

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**-.0003**	**.0139**	**.0002**	**12.47**	**.0004**	**1.061**	**.0025**	**-.0025**
Stddev	.0002	.0006	.0010	.0024	.03	.0003	.011	.0003	.0011
%RSD	8.871	197.5	6.931	1509.	.2389	77.63	1.048	11.01	44.39
#1	.0023	.0000	.0138	-.0025	12.49	.0001	1.073	.0027	-.0012
#2	.0027	.0000	.0130	.0006	12.48	.0004	1.059	.0022	-.0029
#3	.0023	-.0009	.0149	.0023	12.43	.0007	1.051	.0026	-.0033

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0817**	**.0127**
Stddev	.0002	.0001
%RSD	.2079	.6353
#1	.0819	.0128
#2	.0818	.0127
#3	.0816	.0126

Zoom In Zoom Out

Sample Name: FC980-11 Acquired: 12/16/2022 12:18:19 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**872.60**	**2261.2**	**19323.**	**2956.9**
Stddev	1.63	1.0	71.	35.8
%RSD	.18684	.04434	.36623	1.2101
#1	873.83	2260.1	19241.	2943.5
#2	873.23	2261.4	19369.	2929.8
#3	870.75	2262.1	19358.	2997.4

Zoom In Zoom Out

Sample Name: FC980-12 Acquired: 12/16/2022 12:23:11 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.1518**	**.1912**	**.0190**	**.0051**	**-.0001**	**21.76**	**-.0001**	**-.0001**
Stddev	.0004	.0101	.0003	.0037	.0003	.0000	.06	.0000	.0001
%RSD	81.49	6.674	.1709	19.43	5.453	73.95	.2639	39.07	64.17
#1	.0000	.1417	.1914	.0207	.0050	-.0001	21.69	-.0001	-.0001
#2	-.0006	.1620	.1914	.0148	.0048	-.0001	21.80	-.0002	-.0002
#3	-.0008	.1517	.1908	.0215	.0054	.0000	21.79	-.0001	-.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0006**	**.1231**	**3.183**	**.0001**	**3.139**	**.0034**	**.0037**	**8.831**
Stddev	.0002	.0002	.0016	.022	.0009	.012	.0000	.0002	.014
%RSD	7.419	37.05	1.339	.7040	1151.	.3921	.2373	6.073	.1626
#1	.0022	.0004	.1243	3.159	.0003	3.137	.0034	.0034	8.821
#2	.0020	.0004	.1239	3.203	.0009	3.152	.0034	.0038	8.847
#3	.0020	.0008	.1213	3.187	-.0009	3.128	.0034	.0038	8.824

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0002**	**.0012**	**-.0003**	**3.748**	**.0003**	**.1804**	**.0029**	**-.0027**
Stddev	.000	.0005	.0015	.0019	.007	.0005	.0002	.0004	.0013
%RSD	1458.	265.2	128.5	678.6	.1908	143.7	.1224	15.16	48.91
#1	-.0003	-.0003	.0018	-.0025	3.753	-.0002	.1802	.0028	-.0033
#2	.0004	.0003	-.0005	.0008	3.740	.0006	.1804	.0025	-.0012
#3	-.0001	.0006	.0022	.0009	3.751	.0007	.1806	.0034	-.0037

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0050**	**.0169**
Stddev	.0002	.0000
%RSD	4.524	.2648
#1	.0051	.0169
#2	.0051	.0169
#3	.0047	.0168

Zoom In Zoom Out

Sample Name: FC980-12 Acquired: 12/16/2022 12:23:11 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**923.15**	**2344.2**	**19552.**	**2932.5**
Stddev	2.61	6.8	108.	28.7
%RSD	.28278	.29084	.55114	.97881
#1	925.37	2341.2	19676.	2955.6
#2	923.82	2352.0	19487.	2900.4
#3	920.27	2339.4	19493.	2941.7

Zoom In Zoom Out

Sample Name: FC980-1F Acquired: 12/16/2022 12:28:04 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0257**	**.0470**	**.0374**	**.0147**	**.0000**	**62.61**	**-.0001**	**-.0001**
Stddev	.0002	.0049	.0008	.0018	.0001	.000	.22	.0001	.0001
%RSD	28.14	19.04	1.782	4.908	.8120	106.9	.3436	45.34	149.9
#1	-.0005	.0313	.0473	.0392	.0146	-.0001	62.42	-.0002	-.0001
#2	-.0009	.0225	.0461	.0355	.0148	.0000	62.84	-.0001	-.0001
#3	-.0007	.0233	.0477	.0376	.0148	.0000	62.58	-.0002	.0000

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**-.0002**	**1.160**	**9.173**	**-.0001**	**6.769**	**.0030**	**.0019**	**19.23**
Stddev	.0002	.0003	.003	.049	.0005	.020	.0001	.0001	.02
%RSD	15.23	120.6	.2655	.5359	392.7	.2917	2.062	4.131	.1192
#1	.0012	-.0006	1.163	9.140	-.0004	6.748	.0031	.0020	19.21
#2	.0017	-.0001	1.157	9.230	-.0004	6.787	.0030	.0018	19.25
#3	.0015	.0000	1.160	9.150	.0004	6.773	.0030	.0019	19.22

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**.0015**	**-.0024**	**2.956**	**.0003**	**.4693**	**.0019**	**-.0017**
Stddev	.0001	.0006	.0010	.0014	.006	.0002	.0027	.0001	.0010
%RSD	117.0	533.5	64.36	59.88	.1909	61.77	.5855	6.082	57.12
#1	-.0001	.0006	.0023	-.0032	2.955	.0001	.4679	.0018	-.0021
#2	.0000	-.0006	.0017	-.0032	2.951	.0004	.4724	.0020	-.0024
#3	-.0002	-.0003	.0004	-.0007	2.962	.0004	.4675	.0018	-.0006

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0009**	**.0129**
Stddev	.0002	.0001
%RSD	16.50	.4674
#1	.0010	.0130
#2	.0010	.0129
#3	.0008	.0129

Zoom In Zoom Out

Sample Name: FC980-1F Acquired: 12/16/2022 12:28:04 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**888.78**	**2309.0**	**19191.**	**2905.6**
Stddev	1.17	3.7	48.	9.8
%RSD	.13167	.15873	.25030	.33870
#1	889.30	2305.8	19138.	2916.8
#2	887.44	2313.0	19233.	2901.8
#3	889.61	2308.2	19201.	2898.2

Zoom In Zoom Out

Sample Name: FC980-2F Acquired: 12/16/2022 12:32:56 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0231**	**.0455**	**.0299**	**.0062**	**-.0001**	**29.79**	**-.0001**	**-.0001**
Stddev	.0003	.0076	.0013	.0041	.0001	.0001	.15	.0001	.0001
%RSD	120.1	33.07	2.866	13.59	1.463	91.33	.4939	39.86	76.67
#1	-.0004	.0143	.0444	.0285	.0061	-.0002	29.83	-.0001	.0000
#2	-.0004	.0265	.0451	.0266	.0061	.0000	29.91	-.0002	-.0001
#3	.0001	.0283	.0469	.0344	.0063	.0000	29.63	-.0001	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0001**	**3.439**	**4.996**	**-.0001**	**4.782**	**.8405**	**.0038**	**28.65**
Stddev	.0002	.0003	.005	.063	.0003	.026	.0020	.0001	.18
%RSD	15.26	207.6	.1517	1.264	377.6	.5464	.2412	3.152	.6373
#1	.0011	.0001	3.443	5.061	-.0001	4.789	.8421	.0039	28.79
#2	.0009	-.0001	3.441	4.991	-.0004	4.803	.8382	.0039	28.71
#3	.0012	.0004	3.433	4.935	.0002	4.753	.8410	.0037	28.44

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0006**	**.0013**	**-.0031**	**2.283**	**.0002**	**.2712**	**.0014**	**-.0008**
Stddev	.0001	.0002	.0010	.0022	.010	.0001	.0010	.0001	.0007
%RSD	45.23	33.73	82.30	71.04	.4244	50.95	.3831	6.685	89.39
#1	-.0002	.0006	.0004	-.0020	2.272	.0002	.2707	.0013	.0000
#2	-.0001	.0004	.0011	-.0016	2.290	.0003	.2724	.0014	-.0010
#3	-.0004	.0009	.0024	-.0056	2.287	.0001	.2705	.0015	-.0014

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0011**	**.0125**
Stddev	.0003	.0001
%RSD	27.48	1.152
#1	.0010	.0123
#2	.0009	.0126
#3	.0014	.0125

Zoom In Zoom Out

Sample Name: FC980-2F Acquired: 12/16/2022 12:32:56 Type: Unk
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**913.59**	**2300.9**	**19830.**	**2996.6**
Stddev	1.25	12.6	110.	36.6
%RSD	.13662	.54878	.55457	1.2228
#1	914.54	2315.4	19704.	2968.4
#2	912.18	2292.5	19905.	2983.3
#3	914.07	2294.7	19881.	3038.0

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 12:37:47 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2613**	**43.99**	**1.848**	F **2.024**	**2.082**	**2.142**	**41.32**	**2.029**	**2.038**
Stddev	.0043	.57	.005	.018	.031	.024	.54	.004	.005
%RSD	1.645	1.296	.2903	.8680	1.472	1.129	1.296	.1947	.2327
#1	.2565	44.05	1.854	2.040	2.083	2.133	41.27	2.031	2.040
#2	.2625	44.53	1.843	2.027	2.112	2.169	41.88	2.024	2.033
#3	.2648	43.39	1.846	2.005	2.051	2.123	40.82	2.031	2.042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.059**	**2.139**	**40.93**	**42.22**	**2.137**	**42.44**	**2.156**	**2.076**	F **44.02**
Stddev	.036	.035	.55	.59	.028	.46	.045	.004	.55
%RSD	1.728	1.632	1.355	1.388	1.305	1.076	2.082	.2168	1.250
#1	2.018	2.099	40.95	42.22	2.133	42.50	2.104	2.077	44.06
#2	2.078	2.157	41.47	42.81	2.167	42.86	2.176	2.071	44.55
#3	2.081	2.162	40.36	41.63	2.111	41.96	2.187	2.079	43.45
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value									40.00
Range									10.00%

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.962**	**2.091**	**2.046**	**2.027**	**2.094**	**2.025**	**2.127**	**2.128**	**2.023**
Stddev	.004	.006	.003	.006	.005	.002	.027	.037	.004
%RSD	.2143	.2930	.1281	.3005	.2321	.1101	1.258	1.762	.1973
#1	1.966	2.089	2.048	2.031	2.097	2.027	2.121	2.085	2.019
#2	1.958	2.085	2.043	2.020	2.088	2.023	2.156	2.148	2.022
#3	1.961	2.097	2.046	2.030	2.097	2.025	2.103	2.151	2.027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 12:37:47 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.082**	**1.852**
Stddev	.035	.008
%RSD	1.675	.4157
#1	2.041	1.860
#2	2.101	1.849
#3	2.103	1.846
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**839.04**	**2236.2**	**19672.**	**2930.0**
Stddev	2.17	8.0	418.	21.6
%RSD	.25919	.35893	2.1250	.73649
#1	838.74	2227.3	20153.	2930.8
#2	841.35	2242.9	19456.	2908.0
#3	837.03	2238.4	19405.	2951.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 13:30:11 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0072**	**.0001**	F **-.0093**	**-.0007**	**.0000**	**-.0025**	**.0000**
Stddev	.0003	.0032	.0011	.0014	.0002	.0000	.0029	.000
%RSD	158.6	44.13	814.2	14.54	22.17	109.5	114.7	78.27
#1	-.0004	-.0059	-.0004	-.0098	-.0007	.0001	.0006	.0000
#2	.0001	-.0049	-.0006	-.0104	-.0009	.0000	-.0050	-.0001
#3	-.0002	-.0108	.0014	-.0078	-.0006	.0000	-.0032	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0002**	**-.0008**	**-.0009**	**-.0328**	F **-.0027**	**-.0086**	**.0001**
Stddev	.0001	.0003	.0001	.0016	.0591	.0010	.0052	.0000
%RSD	297.1	114.5	15.01	170.8	180.5	37.47	59.82	14.06
#1	.0001	-.0005	-.0009	-.0028	-.0985	-.0036	-.0108	.0001
#2	.0002	-.0003	-.0009	.0001	-.0159	-.0031	-.0027	.0000
#3	-.0001	.0001	-.0007	-.0002	.0161	-.0016	-.0124	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0346**	**.0006**	F **.0013**	**.0005**	**-.0015**	**.0015**	**.0001**
Stddev	.0003	.0170	.0002	.0004	.0005	.0022	.0007	.0001
%RSD	82.00	49.06	28.53	27.08	90.98	153.2	51.16	114.0
#1	-.0006	-.0526	.0007	.0012	.0011	-.0040	.0007	.0002
#2	-.0001	-.0189	.0007	.0010	.0002	-.0007	.0014	.0000
#3	-.0002	-.0322	.0004	.0017	.0003	.0003	.0022	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	None	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 13:30:11 Type: QC
Method: 60102007_COMBO_10242022(v53) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0001**	**-.0018**	**.0001**	**.0000**
Stddev	.0001	.0002	.0005	.0002	.000
%RSD	210.1	349.2	25.47	237.4	130.2
#1	.0000	.0002	-.0023	.0000	.0000
#2	.0000	.0002	-.0015	-.0001	.0000
#3	-.0002	-.0002	-.0016	.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**950.70**	**2315.9**	**19999.**	**2891.9**
Stddev	3.87	6.8	92.	2.6
%RSD	.40658	.29171	.46057	.08858
#1	946.89	2308.1	20101.	2894.5
#2	954.62	2320.6	19922.	2889.4
#3	950.61	2318.9	19973.	2891.9

Zoom In Zoom Out

Sample Name: STDA Acquired: 12/16/2022 13:50:05 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0010**	**-.0023**	**-.0004**	**.0023**	**-.0017**	**.0004**	**.0025**	**-.0002**	**-.0003**
Stddev	.0003	.0038	.0001	.0007	.0010	.0007	.0013	.0007	.0002
%RSD	31.30	165.8	26.67	32.56	54.82	170.4	50.16	271.2	56.63
#1	-.0009	.0017	-.0003	.0014	-.0007	-.0003	.0011	.0000	-.0002
#2	-.0008	-.0027	-.0005	.0026	-.0019	.0011	.0036	.0003	-.0002
#3	-.0014	-.0059	-.0004	.0028	-.0026	.0004	.0029	-.0010	-.0005

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0048**	**.0012**	**.0102**	**-.0003**	**-.0004**	**.0003**	**.0012**	**-.0502**
Stddev	.0001	.0003	.0004	.0021	.0041	.0003	.0002	.0001	.0070
%RSD	223.4	6.297	28.89	21.08	1328.	59.24	57.04	10.41	14.00
#1	-.0001	.0045	.0008	.0099	-.0033	-.0002	.0003	.0013	-.0575
#2	.0001	.0051	.0014	.0082	-.0020	-.0003	.0001	.0011	-.0435
#3	.0002	.0047	.0015	.0124	.0043	-.0007	.0004	.0013	-.0496

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0007**	**.0047**	**.0005**	**.0001**	**.0053**	**.0001**	**-.0017**	**.0009**	**-.0015**
Stddev	.0004	.0010	.0002	.0002	.0002	.0002	.0025	.0001	.0009
%RSD	56.91	21.73	28.97	148.1	4.081	131.7	147.7	10.57	60.04
#1	-.0005	.0041	.0007	-.0001	.0054	.0003	.0011	.0010	-.0015
#2	-.0005	.0040	.0004	.0003	.0054	.0000	-.0036	.0009	-.0023
#3	-.0012	.0058	.0004	.0002	.0050	.0001	-.0026	.0008	-.0006

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**-.0003**	**.0010**
Stddev	.0004	.0000
%RSD	120.0	2.279
#1	.0001	.0010
#2	-.0005	.0010
#3	-.0007	.0010

Zoom In Zoom Out

Sample Name: STDA Acquired: 12/16/2022 13:50:05 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**958.33**	**2415.0**	**19265.**	**2771.1**
Stddev	2.63	4.8	67.	11.2
%RSD	.27410	.19897	.34775	.40552
#1	961.23	2420.6	19331.	2771.3
#2	957.65	2412.0	19267.	2759.8
#3	956.10	2412.4	19197.	2782.3

Zoom In Zoom Out

Sample Name: STDB Acquired: 12/16/2022 13:54:10 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0058**	**.0282**	**.0015**	**2.588**	**.0605**	**.4024**	**.0284**	**.1369**	**.0073**
Stddev	.0002	.0018	.0001	.012	.0009	.0016	.0003	.0008	.0003
%RSD	3.389	6.345	4.809	.4478	1.529	.4057	1.170	.6198	3.906
#1	.0058	.0302	.0015	2.595	.0600	.4035	.0282	.1373	.0071
#2	.0056	.0279	.0015	2.594	.0600	.4031	.0283	.1374	.0076
#3	.0060	.0266	.0014	2.574	.0616	.4005	.0288	.1359	.0071

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0291**	**.0738**	**1.426**	**.0101**	**.2144**	**.0583**	**.0596**	**4.892**	**.0674**
Stddev	.0003	.0007	.002	.0066	.0016	.0006	.0003	.018	.0004
%RSD	1.002	.9722	.1186	65.79	.7535	1.089	.5046	.3720	.5641
#1	.0288	.0745	1.425	.0027	.2155	.0575	.0595	4.913	.0677
#2	.0294	.0730	1.428	.0120	.2152	.0585	.0599	4.884	.0675
#3	.0292	.0738	1.425	.0156	.2125	.0587	.0594	4.880	.0670

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0104**	**.0019**	**.0014**	**.0232**	**.2237**	**.0259**	**.0051**	**.0407**	**.0549**
Stddev	.0010	.0001	.0002	.0002	.0019	.0002	.0008	.0001	.0005
%RSD	9.731	6.362	16.35	.6791	.8637	.6898	14.81	.1746	.9883
#1	.0115	.0021	.0016	.0234	.2216	.0257	.0045	.0408	.0549
#2	.0102	.0019	.0011	.0231	.2254	.0261	.0060	.0407	.0555
#3	.0095	.0018	.0014	.0231	.2239	.0259	.0049	.0406	.0544

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**927.24**	**2389.5**	**19056.**	**2766.4**
Stddev	2.15	14.4	41.	33.3
%RSD	.23179	.60425	.21345	1.2021
#1	924.80	2375.5	19046.	2728.0
#2	928.09	2388.5	19100.	2786.1
#3	928.83	2404.4	19021.	2785.1

Zoom In Zoom Out

Sample Name: STDC Acquired: 12/16/2022 13:58:21 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0229**	**.8289**	**.0482**	**.0848**	**3.525**	**3.214**	**2.186**	**1.527**	**.7382**
Stddev	.0002	.0024	.0001	.0007	.006	.018	.002	.005	.0024
%RSD	1.034	.2920	.1173	.8689	.1825	.5467	.0851	.3285	.3216
#1	.0229	.8305	.0482	.0852	3.532	3.225	2.188	1.531	.7403
#2	.0226	.8300	.0481	.0852	3.525	3.194	2.184	1.521	.7356
#3	.0231	.8261	.0482	.0839	3.519	3.224	2.186	1.529	.7388

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1942**	**.2616**	**1.358**	**.7925**	**.8724**	**.2366**	**1.039**	**.3062**	**2.921**
Stddev	.0001	.0014	.002	.0038	.0021	.0013	.003	.0011	.015
%RSD	.0688	.5324	.1246	.4858	.2368	.5471	.2409	.3490	.5067
#1	.1943	.2629	1.359	.7967	.8741	.2362	1.041	.3071	2.937
#2	.1940	.2619	1.356	.7892	.8730	.2355	1.038	.3050	2.908
#3	.1942	.2601	1.359	.7915	.8701	.2380	1.037	.3064	2.919

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4515**	**.3834**	**.0723**	**.0379**	**.1283**	**.1219**	**5.988**	**.6494**	**.1594**
Stddev	.0006	.0018	.0005	.0003	.0009	.0004	.015	.0030	.0013
%RSD	.1417	.4822	.7188	.8879	.6819	.3276	.2529	.4631	.8367
#1	.4512	.3855	.0718	.0383	.1280	.1223	6.005	.6528	.1579
#2	.4512	.3821	.0728	.0376	.1275	.1215	5.981	.6481	.1599
#3	.4523	.3826	.0723	.0378	.1292	.1219	5.978	.6472	.1605

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.2175**	**.7365**
Stddev	.0012	.0022
%RSD	.5696	.2992
#1	.2189	.7351
#2	.2172	.7354
#3	.2165	.7391

Zoom In Zoom Out

Sample Name: STDC Acquired: 12/16/2022 13:58:21 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**936.34**	**2431.7**	**19191.**	**2811.2**
Stddev	1.19	2.8	87.	19.2
%RSD	.12664	.11476	.45210	.68326
#1	936.67	2432.9	19095.	2832.6
#2	937.32	2433.7	19262.	2795.4
#3	935.02	2428.5	19217.	2805.7

Zoom In Zoom Out

Sample Name: STDD Acquired: 12/16/2022 14:02:10 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0457**	**1.637**	**.0941**	**.1662**	**6.833**	**6.216**	**4.247**	**2.977**	**1.432**
Stddev	.0004	.007	.0008	.0013	.009	.021	.017	.003	.002
%RSD	.8604	.4458	.8355	.8095	.1351	.3461	.3941	.1079	.1525
#1	.0459	1.641	.0949	.1678	6.843	6.223	4.257	2.981	1.434
#2	.0453	1.641	.0934	.1653	6.832	6.191	4.227	2.976	1.431
#3	.0460	1.628	.0941	.1656	6.825	6.233	4.256	2.974	1.430

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3792**	**.5083**	**2.648**	**1.540**	**1.691**	**.4590**	**2.004**	**.5985**	**5.761**
Stddev	.0015	.0012	.009	.007	.010	.0037	.002	.0004	.016
%RSD	.4060	.2399	.3306	.4269	.5910	.8042	.0981	.0690	.2726
#1	.3808	.5096	2.656	1.546	1.701	.4616	2.005	.5986	5.779
#2	.3778	.5071	2.650	1.533	1.681	.4548	2.006	.5988	5.750
#3	.3791	.5084	2.638	1.542	1.692	.4605	2.002	.5980	5.755

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.8804**	**.7522**	**.1393**	**.0732**	**.2410**	**.2359**	**11.56**	**1.258**	**.3127**
Stddev	.0019	.0012	.0004	.0005	.0002	.0006	.05	.001	.0005
%RSD	.2151	.1575	.2846	.6558	.0996	.2381	.4021	.0707	.1440
#1	.8824	.7509	.1396	.0738	.2411	.2360	11.58	1.259	.3128
#2	.8801	.7533	.1395	.0730	.2407	.2353	11.50	1.257	.3131
#3	.8786	.7523	.1389	.0729	.2411	.2364	11.58	1.258	.3122

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.4279**	**1.385**
Stddev	.0015	.003
%RSD	.3486	.2330
#1	.4296	1.388
#2	.4268	1.382
#3	.4274	1.384

Zoom In Zoom Out

Sample Name: STDD Acquired: 12/16/2022 14:02:10 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**916.35**	**2414.5**	**19021.**	**2817.8**
Stddev	3.01	4.8	81.	13.5
%RSD	.32831	.19876	.42531	.47794
#1	919.55	2413.9	18940.	2807.2
#2	913.57	2410.0	19021.	2813.2
#3	915.95	2419.6	19102.	2832.9

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/16/2022 14:05:42 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0910**	**3.312**	**.2018**	**.3461**	**14.46**	**13.07**	**8.543**	**6.243**	**2.989**
Stddev	.0003	.020	.0009	.0022	.09	.11	.032	.016	.009
%RSD	.3325	.6132	.4371	.6298	.6328	.8049	.3746	.2523	.3179
#1	.0913	3.292	.2008	.3451	14.39	13.02	8.517	6.226	2.978
#2	.0909	3.311	.2025	.3445	14.43	13.01	8.533	6.255	2.996
#3	.0907	3.333	.2021	.3485	14.56	13.20	8.579	6.249	2.993

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.7891**	**1.055**	**5.293**	**3.104**	**3.520**	**.9310**	**4.188**	**1.255**	**11.69**
Stddev	.0007	.002	.029	.014	.022	.0018	.008	.004	.06
%RSD	.0907	.1473	.5379	.4612	.6234	.1986	.1834	.3535	.5197
#1	.7886	1.055	5.279	3.102	3.503	.9291	4.196	1.249	11.64
#2	.7888	1.053	5.275	3.090	3.512	.9313	4.183	1.257	11.67
#3	.7900	1.056	5.326	3.119	3.545	.9327	4.184	1.257	11.76

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.820**	**1.605**	**.2969**	**.1566**	**.4366**	**.4922**	**24.30**	**2.648**	**.6657**
Stddev	.004	.011	.0013	.0003	.0003	.0015	.13	.004	.0027
%RSD	.2436	.6896	.4216	.1636	.0581	.2961	.5511	.1491	.4049
#1	1.815	1.602	.2956	.1564	.4369	.4906	24.20	2.648	.6654
#2	1.822	1.617	.2971	.1566	.4367	.4925	24.25	2.644	.6685
#3	1.823	1.596	.2981	.1569	.4364	.4935	24.45	2.652	.6632

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.8930**	**2.894**
Stddev	.0034	.004
%RSD	.3807	.1230
#1	.8913	2.891
#2	.8908	2.898
#3	.8969	2.894

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/16/2022 14:05:42 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**885.58**	**2391.7**	**18912.**	**2792.8**
Stddev	5.40	10.8	48.	17.0
%RSD	.60965	.45251	.25448	.60838
#1	889.29	2404.2	18893.	2809.8
#2	879.39	2386.0	18876.	2775.8
#3	888.07	2384.9	18967.	2792.8

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/16/2022 14:09:37 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1778**	**6.431**	**.3958**	**.6844**	**28.34**	**25.44**	**16.36**	**12.03**	**5.739**
Stddev	.0002	.007	.0009	.0021	.06	.07	.04	.02	.011
%RSD	.1393	.1019	.2314	.3036	.2180	.2907	.2295	.1812	.1881
#1	.1778	6.433	.3958	.6851	28.38	25.53	16.36	12.04	5.750
#2	.1781	6.424	.3967	.6821	28.27	25.39	16.40	12.04	5.740
#3	.1776	6.437	.3948	.6861	28.36	25.41	16.32	12.00	5.728

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.516**	**2.049**	**10.18**	**5.990**	**6.786**	**1.785**	**8.055**	**2.418**	**22.80**
Stddev	.003	.006	.02	.013	.020	.003	.027	.003	.04
%RSD	.1748	.3069	.2374	.2180	.2923	.1388	.3354	.1046	.1577
#1	1.515	2.043	10.21	5.989	6.805	1.788	8.026	2.421	22.84
#2	1.519	2.056	10.17	6.004	6.787	1.783	8.079	2.419	22.81
#3	1.514	2.048	10.16	5.978	6.765	1.785	8.060	2.416	22.77

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.479**	**3.148**	**.5744**	**.3053**	**.8381**	**.9439**	**47.14**	**5.142**	**1.290**
Stddev	.010	.004	.0007	.0007	.0012	.0024	.09	.016	.004
%RSD	.2859	.1182	.1217	.2351	.1456	.2515	.2007	.3171	.3164
#1	3.489	3.146	.5751	.3058	.8390	.9450	47.25	5.126	1.286
#2	3.480	3.152	.5737	.3057	.8386	.9455	47.06	5.159	1.290
#3	3.469	3.146	.5744	.3045	.8367	.9412	47.13	5.140	1.294

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**1.737**	**5.501**
Stddev	.003	.012
%RSD	.1565	.2086
#1	1.735	5.512
#2	1.740	5.502
#3	1.736	5.489

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/16/2022 14:09:37 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**849.87**	**2351.8**	**18629.**	**2792.6**
Stddev	1.61	6.1	76.	23.0
%RSD	.18942	.26111	.40891	.82528
#1	850.81	2349.9	18586.	2798.3
#2	848.01	2346.8	18584.	2767.2
#3	850.78	2358.6	18717.	2812.2

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/16/2022 14:13:12 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3650**	**13.03**	**.8042**	**1.412**	**56.17**	**50.31**	**32.46**	**23.91**	**11.43**
Stddev	.0007	.12	.0111	.026	.42	.13	.07	.31	.15
%RSD	.1802	.9134	1.377	1.833	.7517	.2657	.2049	1.301	1.299
#1	.3658	13.16	.8170	1.441	56.58	50.41	32.54	24.27	11.60
#2	.3647	13.03	.7982	1.406	56.18	50.35	32.43	23.75	11.35
#3	.3646	12.92	.7975	1.391	55.74	50.16	32.41	23.71	11.33

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.945**	**4.048**	**20.13**	**12.00**	**13.45**	**3.561**	**15.53**	**4.909**	**45.66**
Stddev	.002	.012	.15	.04	.05	.020	.05	.064	.32
%RSD	.0617	.2935	.7234	.3163	.3907	.5653	.2991	1.311	.6907
#1	2.945	4.060	20.27	12.04	13.50	3.581	15.57	4.983	45.98
#2	2.947	4.049	20.15	11.99	13.44	3.560	15.55	4.876	45.67
#3	2.944	4.036	19.98	11.97	13.40	3.541	15.48	4.868	45.34

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.888**	**6.350**	**1.166**	**.6160**	**1.598**	**1.889**	**94.87**	**10.24**	**2.572**
Stddev	.085	.087	.015	.0098	.019	.026	.16	.03	.033
%RSD	1.236	1.376	1.289	1.584	1.215	1.362	.1688	.2445	1.284
#1	6.986	6.448	1.184	.6272	1.621	1.918	94.96	10.27	2.607
#2	6.840	6.279	1.159	.6100	1.586	1.873	94.96	10.25	2.542
#3	6.837	6.325	1.156	.6107	1.588	1.874	94.68	10.22	2.568

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**3.454**	**10.90**
Stddev	.009	.12
%RSD	.2737	1.145
#1	3.452	11.04
#2	3.464	10.83
#3	3.446	10.82

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/16/2022 14:13:12 Type: Cal
Method: 60102007_COMBO_10242022(v54) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**797.29**	**2258.9**	**18402.**	**2790.5**
Stddev	9.26	27.1	26.	8.1
%RSD	1.1615	1.1990	.13932	.29048
#1	786.90	2227.7	18374.	2781.8
#2	804.67	2272.8	18405.	2791.9
#3	800.31	2276.1	18425.	2797.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 14:23:33 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2456**	**39.44**	**1.985**	F **1.959**	**2.013**	**2.024**	**39.98**	**1.997**	**1.993**
Stddev	.0005	.13	.002	.019	.010	.008	.13	.004	.004
%RSD	.2176	.3189	.0883	.9690	.4850	.3891	.3217	.1853	.1935
#1	.2459	39.53	1.983	1.976	2.019	2.023	39.84	1.992	1.989
#2	.2449	39.30	1.986	1.939	2.001	2.017	39.99	2.000	1.996
#3	.2458	39.50	1.986	1.964	2.018	2.033	40.10	1.998	1.996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.015**	**1.996**	**40.01**	**39.86**	**2.008**	**39.98**	**2.044**	**1.976**	**40.12**
Stddev	.007	.008	.11	.09	.008	.10	.004	.005	.13
%RSD	.3567	.4042	.2703	.2344	.3869	.2490	.2203	.2587	.3189
#1	2.022	2.005	40.06	39.76	2.003	39.95	2.047	1.970	40.20
#2	2.013	1.992	39.88	39.85	2.005	39.90	2.045	1.978	39.97
#3	2.008	1.991	40.07	39.95	2.017	40.09	2.039	1.980	40.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.999**	**1.986**	**1.979**	**1.991**	**2.008**	**1.989**	**2.001**	**1.994**	**1.998**
Stddev	.006	.007	.006	.007	.007	.006	.009	.005	.010
%RSD	.3173	.3672	.3301	.3403	.3337	.2933	.4394	.2775	.5060
#1	1.993	1.978	1.972	1.983	2.000	1.982	1.997	2.001	1.986
#2	2.005	1.993	1.980	1.994	2.014	1.993	1.996	1.992	2.006
#3	2.000	1.988	1.985	1.996	2.009	1.991	2.011	1.991	2.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 14:23:33 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**1.989**	**1.998**
Stddev	.010	.004
%RSD	.5167	.2125
#1	2.000	1.995
#2	1.985	2.003
#3	1.981	1.997
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**851.59**	**2347.8**	**18760.**	**2780.5**
Stddev	4.04	8.2	106.	26.2
%RSD	.47408	.34931	.56755	.94343
#1	855.52	2354.7	18674.	2810.3
#2	847.46	2338.7	18728.	2761.0
#3	851.79	2349.8	18879.	2770.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 14:29:39 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0158**	**-.0006**	F **.0030**	**.0001**	**.0000**	**-.0066**	**.0000**	**-.0002**
Stddev	.0004	.0061	.0014	.0014	.0002	.0001	.0021	.000	.0001
%RSD	118.7	39.00	228.2	47.54	266.1	34650.	31.58	63.44	26.60
#1	-.0001	.0186	-.0020	.0015	.0001	.0000	-.0079	.0000	-.0001
#2	-.0009	.0087	.0008	.0043	-.0001	.0001	-.0042	-.0001	-.0002
#3	-.0001	.0200	-.0006	.0031	.0002	-.0001	-.0077	.0000	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**-.0001**	**.0560**	**.0008**	**-.0112**	**.0000**	**.0000**	**.0081**
Stddev	.0002	.0002	.0008	.0370	.0018	.0057	.000	.000	.0059
%RSD	297.7	160.1	557.7	65.99	233.6	51.17	1120.	14570.	73.15
#1	-.0002	-.0003	-.0008	.0970	.0025	-.0152	.0000	-.0001	.0148
#2	.0001	.0001	-.0003	.0458	-.0010	-.0138	.0000	-.0001	.0058
#3	-.0001	-.0002	.0007	.0252	.0008	-.0046	.0000	.0002	.0037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0005**	**.0006**	**-.0013**	**-.0007**	**-.0001**	**.0000**	**.0001**	**-.0001**
Stddev	.0001	.0006	.0004	.0018	.0002	.0002	.0001	.0001	.0009
%RSD	454.3	119.4	64.34	136.2	32.37	195.1	591.9	52.10	668.4
#1	-.0001	.0000	.0010	-.0019	-.0004	-.0001	.0000	.0001	-.0003
#2	.0002	-.0003	.0005	-.0026	-.0008	-.0002	.0001	.0002	.0008
#3	.0000	-.0012	.0003	.0007	-.0007	.0001	.0000	.0002	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 14:29:39 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**-.0003**	**.0000**
Stddev	.0002	.000
%RSD	84.84	116.3
#1	-.0001	.0000
#2	-.0006	-.0001
#3	-.0002	-.0001
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**975.74**	**2479.4**	**19659.**	**2852.6**
Stddev	3.11	4.8	101.	31.7
%RSD	.31856	.19232	.51128	1.1116
#1	979.33	2484.8	19614.	2838.3
#2	973.92	2475.6	19589.	2830.5
#3	973.97	2477.9	19774.	2888.9

Zoom In Zoom Out

Sample Name: FC980-3F Acquired: 12/16/2022 14:37:25 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0169**	**.0536**	**.0498**	**.0211**	**.0000**	**69.47**	**-.0001**	**-.0002**
Stddev	.0004	.0123	.0012	.0021	.0002	.000	.30	.0000	.0002
%RSD	88.34	73.27	2.192	4.239	1.165	609.7	.4384	36.23	70.78
#1	-.0009	.0043	.0522	.0522	.0213	.0000	69.24	-.0001	-.0001
#2	-.0001	.0173	.0540	.0486	.0212	-.0001	69.35	-.0001	-.0001
#3	-.0004	.0290	.0545	.0485	.0209	.0001	69.82	-.0001	-.0004

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0007**	**3.175**	**32.80**	**.0016**	**4.415**	**.0170**	**.0027**	**44.31**
Stddev	.0004	.0006	.016	.09	.0004	.024	.0010	.0001	.08
%RSD	41.78	94.80	.4973	.2712	21.48	.5531	5.994	4.106	.1798
#1	.0009	.0009	3.157	32.75	.0016	4.387	.0176	.0028	44.31
#2	.0014	.0011	3.181	32.74	.0013	4.433	.0176	.0028	44.23
#3	.0006	-.0001	3.187	32.90	.0020	4.424	.0158	.0026	44.39

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0022**	**.0016**	**-.0015**	**4.448**	**.0003**	**.4780**	**.0015**	**-.0009**
Stddev	.0001	.0002	.0000	.0014	.007	.0003	.0029	.0002	.0012
%RSD	108.9	9.558	1.369	95.32	.1602	84.38	.6146	11.21	130.2
#1	.0002	-.0023	.0016	-.0019	4.451	.0002	.4752	.0017	.0002
#2	.0000	-.0020	.0016	.0001	4.440	.0002	.4777	.0014	-.0021
#3	.0002	-.0024	.0016	-.0026	4.453	.0006	.4810	.0014	-.0008

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0011**	**.0175**
Stddev	.0001	.0000
%RSD	6.551	.1819
#1	.0011	.0174
#2	.0011	.0175
#3	.0010	.0175

Zoom In Zoom Out

Sample Name: FC980-3F Acquired: 12/16/2022 14:37:25 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**879.99**	**2355.3**	**19200.**	**2865.0**
Stddev	2.30	8.8	844.	19.3
%RSD	.26084	.37211	4.3954	.67425
#1	880.52	2357.2	18737.	2882.9
#2	881.98	2362.9	18688.	2844.5
#3	877.48	2345.7	20174.	2867.5

Zoom In Zoom Out

Sample Name: FC980-4F Acquired: 12/16/2022 14:42:15 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0265**	**.0505**	**.0290**	**.0113**	**.0000**	**51.65**	**.0001**	**.0011**
Stddev	.0003	.0106	.0002	.0006	.0003	.000	.09	.0000	.0000
%RSD	45.69	40.06	.3531	2.206	2.574	647.1	.1757	50.71	1.056
#1	-.0005	.0171	.0503	.0283	.0117	.0000	51.56	.0001	.0011
#2	-.0004	.0380	.0506	.0296	.0111	.0000	51.65	.0000	.0011
#3	-.0009	.0244	.0505	.0292	.0112	.0000	51.74	.0001	.0011

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.0007**	**4.700**	**8.689**	**.0017**	**5.568**	**.3293**	**.0080**	**19.14**
Stddev	.0000	.0005	.018	.060	.0020	.046	.0016	.0001	.06
%RSD	.0831	80.59	.3804	.6895	117.2	.8184	.4881	1.486	.3061
#1	.0026	.0000	4.683	8.620	.0026	5.516	.3304	.0080	19.07
#2	.0026	.0010	4.698	8.721	.0030	5.597	.3275	.0081	19.16
#3	.0026	.0009	4.718	8.727	-.0006	5.592	.3301	.0079	19.18

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0007**	**.0007**	**-.0023**	**2.314**	**.0000**	**.4374**	**.0014**	**-.0002**
Stddev	.0001	.0002	.0025	.0018	.018	.000	.0012	.0001	.0001
%RSD	32.85	24.06	345.6	79.32	.7945	2403.	.2696	8.326	32.32
#1	.0005	-.0009	-.0018	-.0037	2.302	.0004	.4361	.0016	-.0001
#2	.0003	-.0008	.0006	-.0003	2.335	-.0003	.4374	.0013	-.0002
#3	.0005	-.0006	.0033	-.0029	2.305	-.0001	.4385	.0014	-.0003

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0029**	**.0181**
Stddev	.0003	.0001
%RSD	11.70	.3496
#1	.0025	.0180
#2	.0029	.0181
#3	.0032	.0180

Zoom In Zoom Out

Sample Name: FC980-4F Acquired: 12/16/2022 14:42:15 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**902.21**	**2383.2**	**19188.**	**2851.8**
Stddev	9.93	22.1	92.	10.5
%RSD	1.1009	.92841	.48064	.36679
#1	910.42	2398.3	19123.	2852.7
#2	891.17	2357.8	19294.	2861.7
#3	905.05	2393.5	19149.	2840.9

Zoom In Zoom Out

Sample Name: FC980-5F Acquired: 12/16/2022 14:47:08 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0280**	**.0089**	**.0450**	**.0260**	**-.0001**	**76.31**	**.0000**	**-.0003**
Stddev	.0006	.0107	.0014	.0008	.0003	.0000	.10	.000	.0001
%RSD	156.7	38.39	15.57	1.870	1.298	32.98	.1315	73.61	27.09
#1	-.0008	.0335	.0081	.0445	.0257	-.0001	76.40	.0000	-.0003
#2	.0003	.0348	.0080	.0460	.0260	-.0001	76.20	-.0001	-.0002
#3	-.0006	.0156	.0104	.0446	.0264	-.0001	76.34	-.0001	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0045**	**.2322**	**17.22**	**.0073**	**2.730**	**.0274**	**.0038**	**19.24**
Stddev	.0001	.0003	.0037	.05	.0007	.011	.0001	.0002	.08
%RSD	13.04	6.837	1.592	.2640	9.324	.3897	.3523	5.285	.4070
#1	.0007	.0047	.2342	17.27	.0070	2.735	.0273	.0037	19.31
#2	.0009	.0041	.2344	17.18	.0068	2.718	.0273	.0037	19.15
#3	.0010	.0046	.2279	17.20	.0080	2.737	.0275	.0040	19.25

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0011**	**.0019**	**-.0005**	**8.132**	**.0005**	**.3708**	**.0014**	**-.0005**
Stddev	.0001	.0003	.0008	.0010	.014	.0000	.0004	.0002	.0007
%RSD	26.15	24.25	42.79	212.5	.1732	9.713	.0980	10.75	124.8
#1	.0004	-.0011	.0013	.0005	8.149	.0004	.3712	.0015	-.0013
#2	.0006	-.0009	.0028	-.0016	8.122	.0005	.3705	.0015	-.0003
#3	.0007	-.0014	.0016	-.0004	8.126	.0005	.3708	.0012	.0000

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0081**	**.0232**
Stddev	.0001	.0001
%RSD	1.576	.4277
#1	.0083	.0231
#2	.0080	.0233
#3	.0081	.0231

Zoom In Zoom Out

Sample Name: FC980-5F Acquired: 12/16/2022 14:47:08 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**899.01**	**2385.4**	**18862.**	**2801.3**
Stddev	3.60	9.5	51.	29.2
%RSD	.40097	.39955	.27224	1.0410
#1	895.47	2374.7	18872.	2796.4
#2	902.67	2388.6	18907.	2832.5
#3	898.89	2393.0	18806.	2774.8

Zoom In Zoom Out

Sample Name: FC980-6F Acquired: 12/16/2022 14:56:48 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0261**	**.0055**	**.0685**	**.0097**	**.0000**	**72.56**	**.0000**	**-.0002**
Stddev	.0005	.0078	.0004	.0027	.0002	.000	.24	.000	.0001
%RSD	214.4	29.85	7.792	3.970	2.445	232.3	.3255	347.7	42.63
#1	-.0003	.0344	.0059	.0694	.0099	.0000	72.53	-.0001	-.0002
#2	-.0007	.0189	.0054	.0654	.0097	.0000	72.81	.0000	-.0001
#3	.0003	.0250	.0051	.0706	.0095	-.0001	72.34	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0028**	**.0108**	**13.02**	**.0162**	**3.063**	**.0014**	**.0079**	**21.52**
Stddev	.0001	.0001	.0010	.03	.0005	.018	.0000	.0001	.05
%RSD	16.75	1.917	9.472	.2158	2.783	.5925	1.409	1.253	.2476
#1	.0007	.0028	.0114	13.02	.0167	3.042	.0014	.0079	21.53
#2	.0005	.0027	.0114	13.06	.0161	3.074	.0014	.0080	21.57
#3	.0006	.0028	.0096	13.00	.0159	3.072	.0014	.0078	21.46

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**-.0019**	**.0009**	**.0009**	**7.332**	**.0004**	**.4872**	**.0015**	**-.0001**
Stddev	.0001	.0017	.0003	.0016	.008	.0002	.0005	.0001	.0014
%RSD	11.22	89.07	36.52	183.9	.1121	59.25	.1007	5.247	993.1
#1	.0010	-.0023	.0012	.0026	7.324	.0001	.4866	.0014	.0010
#2	.0010	-.0034	.0011	-.0006	7.332	.0006	.4875	.0016	.0002
#3	.0012	-.0001	.0006	.0007	7.340	.0004	.4874	.0015	-.0017

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0177**	**.0180**
Stddev	.0005	.0001
%RSD	2.822	.3044
#1	.0174	.0180
#2	.0174	.0180
#3	.0183	.0179

Zoom In Zoom Out

Sample Name: FC980-6F Acquired: 12/16/2022 14:56:48 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**906.00**	**2389.1**	**18834.**	**2821.5**
Stddev	.34	3.9	42.	14.6
%RSD	.03718	.16520	.22161	.51658
#1	905.68	2388.7	18843.	2833.5
#2	905.96	2385.3	18870.	2805.3
#3	906.35	2393.2	18788.	2825.8

Zoom In Zoom Out

Sample Name: FC980-7F Acquired: 12/16/2022 15:01:40 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0076**	**.0242**	**.0335**	**.0067**	**.0000**	**71.37**	**.0000**	**-.0003**
Stddev	.0001	.0133	.0006	.0036	.0002	.0001	.16	.000	.0001
%RSD	410.0	174.6	2.500	10.68	3.602	594.4	.2302	495.3	24.35
#1	.0001	.0127	.0236	.0367	.0064	-.0001	71.18	-.0001	-.0004
#2	.0001	.0176	.0241	.0297	.0068	.0000	71.47	.0000	-.0003
#3	-.0001	-.0075	.0248	.0340	.0068	.0001	71.45	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0017**	**.0048**	**5.925**	**-.0007**	**2.080**	**.0095**	**.0020**	**4.788**
Stddev	.0001	.0003	.0027	.006	.0016	.004	.0003	.0002	.019
%RSD	10.96	16.12	57.31	.1091	224.4	.2120	2.756	8.251	.3993
#1	.0008	.0014	.0042	5.923	-.0022	2.085	.0098	.0021	4.766
#2	.0009	.0017	.0078	5.932	-.0009	2.077	.0093	.0018	4.798
#3	.0009	.0020	.0024	5.919	.0010	2.078	.0094	.0019	4.800

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0014**	**.0008**	**.0019**	**10.19**	**.0003**	**.4153**	**.0015**	**.0001**
Stddev	.0002	.0007	.0007	.0004	.01	.0001	.0017	.0000	.0009
%RSD	103.1	45.93	86.00	21.79	.1153	32.07	.4115	2.797	854.8
#1	.0002	-.0014	.0015	.0016	10.17	.0003	.4137	.0016	-.0008
#2	.0003	-.0021	.0008	.0017	10.19	.0002	.4171	.0015	.0003
#3	.0000	-.0008	.0001	.0024	10.20	.0003	.4152	.0015	.0008

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0085**	**.0153**
Stddev	.0001	.0000
%RSD	.7431	.2359
#1	.0085	.0153
#2	.0084	.0154
#3	.0085	.0153

Zoom In Zoom Out

Sample Name: FC980-7F Acquired: 12/16/2022 15:01:40 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**913.93**	**2407.5**	**18729.**	**2845.1**
Stddev	1.02	.4	659.	18.0
%RSD	.11125	.01603	3.5182	.63137
#1	915.08	2407.9	17969.	2825.3
#2	913.56	2407.5	19147.	2860.3
#3	913.16	2407.1	19070.	2849.8

Zoom In Zoom Out

Sample Name: FC980-8F Acquired: 12/16/2022 15:06:32 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0161**	**.0126**	**.0388**	**.0057**	**.0000**	**49.53**	**-.0001**	**-.0001**
Stddev	.0004	.0071	.0010	.0021	.0002	.000	.18	.0000	.0000
%RSD	127.1	44.23	7.786	5.338	2.953	33.09	.3548	45.59	27.63
#1	.0002	.0202	.0132	.0399	.0058	.0000	49.46	-.0001	-.0001
#2	-.0006	.0204	.0114	.0364	.0058	-.0001	49.73	-.0001	-.0001
#3	-.0006	.0079	.0131	.0401	.0055	.0000	49.40	.0000	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0002**	**.9669**	**1.593**	**.0028**	**1.379**	**.0981**	**.0003**	**4.010**
Stddev	.0005	.0002	.0067	.034	.0013	.024	.0001	.0002	.002
%RSD	67.56	90.18	.6894	2.148	46.93	1.754	.0776	60.66	.0450
#1	.0002	.0001	.9745	1.557	.0036	1.405	.0981	.0004	4.008
#2	.0009	.0001	.9639	1.598	.0035	1.375	.0980	.0004	4.012
#3	.0012	.0004	.9623	1.625	.0013	1.357	.0981	.0001	4.010

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0010**	**.0005**	**.0000**	**3.412**	**.0003**	**.2156**	**.0014**	**.0007**
Stddev	.0001	.0003	.0014	.001	.006	.0003	.0004	.0001	.0012
%RSD	14.66	31.06	265.9	1955.	.1876	114.2	.2063	7.329	182.2
#1	.0005	-.0006	.0019	-.0010	3.406	-.0001	.2153	.0015	.0013
#2	.0006	-.0012	.0007	.0004	3.419	.0004	.2162	.0014	.0014
#3	.0007	-.0011	-.0009	.0004	3.412	.0005	.2154	.0013	-.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0001**	**.0144**
Stddev	.0003	.0000
%RSD	501.4	.2879
#1	.0001	.0144
#2	-.0002	.0144
#3	.0003	.0144

Zoom In Zoom Out

Sample Name: FC980-8F Acquired: 12/16/2022 15:06:32 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**932.70**	**2426.4**	**19229.**	**2863.7**
Stddev	3.15	3.7	56.	16.4
%RSD	.33792	.15244	.28949	.57140
#1	929.25	2422.2	19165.	2877.9
#2	935.44	2428.8	19269.	2845.8
#3	933.40	2428.4	19252.	2867.5

Zoom In Zoom Out

Sample Name: FC980-9F Acquired: 12/16/2022 15:11:24 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0133**	**.0102**	**.0387**	**.0149**	**-.0001**	**57.35**	**.0000**	**-.0002**
Stddev	.0004	.0139	.0014	.0011	.0001	.0001	.37	.000	.0001
%RSD	198.4	104.7	13.30	2.890	.3692	155.5	.6383	123.5	39.17
#1	-.0003	.0244	.0100	.0386	.0149	.0000	57.05	-.0001	-.0002
#2	.0003	.0178	.0116	.0399	.0148	-.0001	57.24	.0000	-.0001
#3	-.0006	-.0023	.0089	.0377	.0148	-.0002	57.76	.0000	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0010**	**.0117**	**1.852**	**.0000**	**2.143**	**.0200**	**.0024**	**19.90**
Stddev	.0002	.0000	.0006	.028	.001	.021	.0000	.0002	.04
%RSD	49.58	4.610	5.513	1.510	20630.	.9608	.1755	9.964	.2132
#1	.0003	.0009	.0125	1.847	-.0006	2.122	.0201	.0024	19.86
#2	.0007	.0010	.0113	1.827	-.0001	2.143	.0200	.0021	19.89
#3	.0003	.0009	.0115	1.882	.0008	2.163	.0200	.0026	19.94

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0014**	**.0020**	**-.0004**	**4.487**	**.0000**	**.2697**	**.0015**	**-.0002**
Stddev	.0002	.0005	.0011	.0018	.009	.0002	.0015	.0001	.0014
%RSD	177.9	33.23	57.64	507.1	.1888	352.2	.5649	4.391	575.4
#1	.0001	-.0017	.0028	-.0013	4.496	.0001	.2681	.0015	.0014
#2	.0002	-.0009	.0007	.0017	4.485	-.0001	.2699	.0015	-.0011
#3	-.0001	-.0017	.0024	-.0015	4.479	.0002	.2711	.0014	-.0010

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0065**	**.0160**
Stddev	.0002	.0000
%RSD	3.086	.2107
#1	.0068	.0160
#2	.0064	.0160
#3	.0064	.0160

Zoom In Zoom Out

Sample Name: FC980-9F Acquired: 12/16/2022 15:11:24 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**911.93**	**2402.4**	**18896.**	**2802.5**
Stddev	1.36	5.5	42.	21.2
%RSD	.14915	.22803	.22024	.75503
#1	912.54	2402.7	18944.	2785.6
#2	910.37	2396.7	18878.	2826.3
#3	912.87	2407.7	18867.	2795.7

Zoom In Zoom Out

Sample Name: FC980-10F Acquired: 12/16/2022 15:16:18 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0801**	**.2246**	**.0276**	**.0051**	**.0000**	**22.54**	**-.0001**	**-.0003**
Stddev	.0004	.0066	.0010	.0019	.0002	.0001	.01	.0001	.0001
%RSD	111.0	8.213	.4470	6.880	3.755	376.2	.0661	85.88	24.96
#1	-.0007	.0861	.2256	.0281	.0051	-.0001	22.55	-.0001	-.0004
#2	-.0004	.0731	.2247	.0255	.0048	.0000	22.53	.0000	-.0002
#3	.0001	.0812	.2236	.0292	.0052	.0001	22.55	-.0002	-.0004

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.0009**	**.0862**	**3.202**	**.0007**	**3.103**	**.0030**	**.0038**	**8.380**
Stddev	.0001	.0004	.0018	.053	.0015	.015	.0000	.0001	.029
%RSD	5.198	44.65	2.045	1.661	221.4	.4695	.2883	3.883	.3466
#1	.0026	.0011	.0842	3.141	-.0010	3.116	.0030	.0039	8.371
#2	.0028	.0010	.0877	3.224	.0012	3.105	.0029	.0036	8.357
#3	.0025	.0004	.0868	3.240	.0019	3.087	.0030	.0038	8.413

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0004**	**.0001**	**-.0005**	**3.921**	**.0005**	**.1768**	**.0021**	**.0005**
Stddev	.0002	.0004	.0014	.0010	.012	.0003	.0005	.0001	.0009
%RSD	85.43	96.15	1076.	190.1	.3020	58.50	.2572	3.310	165.2
#1	.0001	-.0008	-.0010	.0006	3.935	.0002	.1770	.0020	-.0004
#2	.0001	-.0006	.0017	-.0008	3.912	.0006	.1763	.0020	.0014
#3	.0004	.0000	-.0004	-.0014	3.917	.0007	.1771	.0021	.0006

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0045**	**.0188**
Stddev	.0002	.0001
%RSD	4.392	.3042
#1	.0046	.0189
#2	.0046	.0187
#3	.0043	.0188

Zoom In Zoom Out

Sample Name: FC980-10F Acquired: 12/16/2022 15:16:18 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**929.98**	**2436.3**	**19047.**	**2833.4**
Stddev	4.34	16.4	75.	11.5
%RSD	.46648	.67142	.39511	.40745
#1	925.59	2418.3	18961.	2841.0
#2	934.27	2450.3	19079.	2839.1
#3	930.08	2440.3	19101.	2820.1

Zoom In Zoom Out

Sample Name: FC1151-5F Acquired: 12/16/2022 15:21:10 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**7.387**	**-.0002**	**.0384**	**.1245**	**.0003**	**640.7**	**.0000**	**.0007**
Stddev	.0015	.053	.0029	.0037	.0006	.0001	4.3	.000	.0002
%RSD	100.7	.7142	1348.	9.604	.5106	20.12	.6751	284.0	30.02
#1	-.0002	7.327	.0016	.0384	.1251	.0003	635.7	.0000	.0007
#2	-.0011	7.408	-.0035	.0421	.1245	.0003	643.0	-.0001	.0005
#3	-.0031	7.426	.0013	.0347	.1238	.0004	643.4	.0000	.0009

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0135**	**.0036**	**3.400**	**.6696**	**.0120**	**28.63**	**.1664**	**.0018**	**149.1**
Stddev	.0002	.0007	.010	.0995	.0029	.19	.0010	.0004	.4
%RSD	1.764	18.79	.2932	14.85	23.85	.6599	.5828	20.14	.2738
#1	.0136	.0028	3.397	.7244	.0089	28.72	.1675	.0015	149.0
#2	.0137	.0040	3.392	.7296	.0144	28.42	.1661	.0022	148.7
#3	.0132	.0041	3.411	.5548	.0128	28.77	.1657	.0016	149.5

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**-.0056**	**.0009**	**-.0087**	**12.92**	**.0263**	**1.791**	**.0311**	**-.0025**
Stddev	.0002	.0020	.0040	.0048	.01	.0003	.010	.0006	.0003
%RSD	3.806	36.24	442.0	55.53	.0912	1.049	.5585	1.846	12.63
#1	.0041	-.0035	-.0024	-.0113	12.91	.0264	1.788	.0313	-.0025
#2	.0040	-.0076	-.0002	-.0031	12.93	.0266	1.783	.0316	-.0022
#3	.0043	-.0059	.0053	-.0117	12.92	.0260	1.802	.0305	-.0028

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0138**	**.3094**
Stddev	.0007	.0006
%RSD	5.186	.1879
#1	.0132	.3100
#2	.0146	.3088
#3	.0137	.3095

Zoom In Zoom Out

Sample Name: FC1151-5F Acquired: 12/16/2022 15:21:10 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 2.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**831.30**	**2321.3**	**18171.**	**2785.5**
Stddev	1.19	1.9	62.	23.0
%RSD	.14363	.08023	.34294	.82628
#1	829.94	2320.8	18238.	2787.5
#2	832.17	2323.3	18115.	2807.5
#3	831.78	2319.7	18160.	2761.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 15:26:08 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2444**	**40.09**	**1.976**	F **1.940**	**2.052**	**2.036**	**39.68**	**1.977**	**1.979**
Stddev	.0011	.15	.003	.012	.014	.008	.05	.001	.000
%RSD	.4601	.3791	.1433	.6359	.6697	.4101	.1213	.0530	.0143
#1	.2456	40.02	1.972	1.951	2.039	2.027	39.62	1.976	1.978
#2	.2443	40.27	1.977	1.942	2.066	2.043	39.70	1.978	1.978
#3	.2433	39.99	1.977	1.927	2.052	2.039	39.70	1.978	1.979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.015**	**2.020**	**40.67**	**39.75**	**2.010**	**40.29**	**2.049**	**1.964**	**40.61**
Stddev	.003	.007	.13	.12	.006	.13	.002	.003	.16
%RSD	.1543	.3396	.3234	.3001	.2863	.3313	.1154	.1302	.3817
#1	2.015	2.025	40.51	39.74	2.006	40.20	2.050	1.962	40.46
#2	2.012	2.023	40.73	39.87	2.016	40.44	2.046	1.964	40.77
#3	2.018	2.012	40.75	39.64	2.007	40.22	2.051	1.967	40.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.957**	**1.986**	**1.963**	**1.974**	**1.980**	**1.968**	**2.002**	**2.012**	**1.969**
Stddev	.001	.001	.005	.003	.004	.003	.005	.004	.004
%RSD	.0443	.0705	.2586	.1569	.1864	.1442	.2703	.2106	.1987
#1	1.957	1.987	1.960	1.971	1.977	1.968	1.996	2.017	1.970
#2	1.957	1.985	1.961	1.975	1.979	1.965	2.005	2.011	1.965
#3	1.958	1.984	1.969	1.977	1.984	1.971	2.006	2.009	1.973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 15:26:08 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.005**	**1.930**
Stddev	.002	.001
%RSD	.0932	.0635
#1	2.006	1.929
#2	2.006	1.931
#3	2.003	1.931
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**865.49**	**2405.1**	**18743.**	**2786.4**
Stddev	1.17	2.1	95.	10.5
%RSD	.13556	.08539	.50489	.37593
#1	864.15	2403.6	18809.	2797.6
#2	866.32	2407.5	18785.	2784.6
#3	866.01	2404.3	18634.	2776.9

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 15:30:40 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0071**	**-.0001**	F **-.0021**	**.0003**	**.0000**	**.0000**	**.0000**
Stddev	.0004	.0097	.0005	.0006	.0002	.0001	.002	.0000
%RSD	153.0	137.3	440.7	26.73	92.42	169.6	7781.	61.42
#1	.0001	.0106	.0004	-.0015	.0000	.0000	.0006	.0000
#2	-.0003	.0145	-.0007	-.0026	.0005	.0001	.0012	.0000
#3	-.0007	-.0039	.0000	-.0021	.0003	.0000	-.0019	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0001**	**.0000**	**-.0004**	**.0583**	**-.0009**	**.0030**	**.0000**
Stddev	.0002	.0003	.000	.0016	.0326	.0005	.0101	.000
%RSD	108.8	358.6	709.6	402.9	55.84	58.67	335.3	3075.
#1	-.0002	-.0002	-.0003	-.0020	.0732	-.0014	.0131	.0001
#2	.0000	.0004	.0000	-.0002	.0808	-.0010	-.0071	.0000
#3	-.0003	.0000	.0002	.0011	.0210	-.0004	.0031	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0206**	**.0003**	**-.0004**	F **.0023**	**-.0015**	**-.0010**	**.0001**
Stddev	.0002	.0100	.0002	.0002	.0003	.0010	.0002	.0004
%RSD	255.9	48.74	70.07	46.66	12.47	67.93	23.68	262.7
#1	.0002	.0093	.0002	-.0002	.0025	-.0004	-.0011	-.0003
#2	.0002	.0284	.0005	-.0005	.0024	-.0016	-.0012	.0003
#3	-.0002	.0240	.0001	-.0005	.0019	-.0025	-.0008	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
High Limit					.0020			
Low Limit					-.0020			

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 15:30:40 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0001**	**-.0009**	**.0000**	**-.0001**
Stddev	.000	.0001	.0011	.0004	.0001
%RSD	2245.	109.5	117.9	11970.	148.1
#1	.0000	.0002	-.0004	-.0004	.0000
#2	.0000	.0001	-.0002	.0003	-.0001
#3	.0000	.0000	-.0022	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**983.08**	**2535.0**	**19388.**	**2859.8**
Stddev	1.37	3.7	18.	26.0
%RSD	.13891	.14472	.09432	.90970
#1	982.44	2531.6	19392.	2830.0
#2	984.65	2538.9	19404.	2877.9
#3	982.16	2534.6	19368.	2871.5

Zoom In Zoom Out

Sample Name: FC1124-1 Acquired: 12/16/2022 15:40:30 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0026**	**.0470**	**.0069**	**-.0116**	**.0404**	**-.0003**	**49.20**	**-.0004**	**-.0004**
Stddev	.0020	.0646	.0060	.0088	.0017	.0002	.14	.0002	.0002
%RSD	74.54	137.6	86.73	75.64	4.288	75.98	.2793	46.79	42.64
#1	-.0006	.0696	.0001	-.0147	.0420	-.0004	49.22	-.0002	-.0006
#2	-.0029	-.0259	.0092	-.0017	.0406	-.0004	49.05	-.0006	-.0003
#3	-.0045	.0972	.0113	-.0184	.0386	.0000	49.32	-.0005	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0017**	**13.28**	**5.953**	**.0042**	**7.605**	**6.805**	**.0006**	**149.7**
Stddev	.001	.0020	.03	.180	.0025	.036	.057	.0005	.3
%RSD	10250.	112.3	.2006	3.031	60.17	.4725	.8338	80.86	.2125
#1	-.0005	.0006	13.27	6.148	.0020	7.563	6.862	.0010	149.5
#2	.0013	.0006	13.26	5.919	.0069	7.624	6.803	.0001	149.6
#3	-.0008	.0040	13.31	5.792	.0037	7.628	6.749	.0006	150.1

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0032**	**.0086**	**-.0019**	**4.247**	**.0010**	**.2807**	**.0031**	**.0095**
Stddev	.001	.0024	.0075	.0072	.005	.0028	.0018	.0007	.0066
%RSD	5815.	73.36	87.48	381.5	.1183	269.2	.6362	23.08	69.49
#1	-.0014	-.0028	.0051	-.0074	4.242	.0042	.2790	.0029	.0081
#2	.0003	-.0057	.0172	.0063	4.252	.0001	.2806	.0038	.0166
#3	.0010	-.0011	.0034	-.0046	4.247	-.0012	.2826	.0024	.0037

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0009**	**.0078**
Stddev	.0010	.0006
%RSD	116.2	8.049
#1	.0002	.0076
#2	-.0018	.0085
#3	-.0010	.0073

Zoom In Zoom Out

Sample Name: FC1124-1 Acquired: 12/16/2022 15:40:30 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**938.26**	**2496.3**	**19154.**	**2831.6**
Stddev	3.31	7.6	126.	9.4
%RSD	.35227	.30476	.65942	.33333
#1	940.86	2502.9	19022.	2820.7
#2	934.54	2488.0	19274.	2837.6
#3	939.38	2497.9	19165.	2836.4

Zoom In Zoom Out

Sample Name: MP41608-MB1 Acquired: 12/16/2022 15:45:22 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0126**	**-.0004**	**-.0024**	**.0002**	**.0000**	**.0004**	**.0000**	**-.0001**
Stddev	.0006	.0111	.0006	.0014	.0001	.000	.0022	.000	.0001
%RSD	104.5	87.65	133.4	57.68	35.14	134.0	550.3	169.3	84.93
#1	-.0012	.0006	.0001	-.0023	.0002	.0000	-.0018	-.0001	-.0001
#2	.0000	.0149	-.0010	-.0011	.0001	.0000	.0027	.0000	.0000
#3	-.0005	.0224	-.0003	-.0039	.0002	-.0001	.0004	.0000	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0012**	**.0202**	**-.0013**	**.0025**	**.0001**	**-.0005**	**.0096**
Stddev	.0004	.000	.0014	.0174	.0004	.0114	.0000	.0001	.0086
%RSD	255.8	20440.	112.2	86.24	27.90	455.0	69.83	22.64	88.87
#1	.0001	.0000	-.0020	.0248	-.0016	.0099	.0000	-.0004	.0051
#2	-.0002	-.0001	-.0020	.0349	-.0009	.0083	.0001	-.0006	.0195
#3	.0005	.0000	.0004	.0009	-.0015	-.0107	.0001	-.0004	.0043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0008**	**-.0007**	**-.0020**	**.0001**	**.0002**	**.0000**	**.0000**	**-.0004**
Stddev	.0002	.0005	.0009	.0022	.0003	.0005	.000	.0002	.0004
%RSD	1989.	68.78	118.9	109.3	291.3	220.0	455.0	914.1	96.25
#1	.0000	-.0005	-.0015	.0001	.0002	-.0003	-.0001	.0002	.0000
#2	.0003	-.0005	.0002	-.0019	-.0002	.0003	.0001	-.0002	-.0006
#3	-.0002	-.0014	-.0009	-.0043	.0004	.0006	-.0001	.0000	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP41608-MB1 Acquired: 12/16/2022 15:45:22 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**-.0004**	**.0006**
Stddev	.0001	.0001
%RSD	14.48	12.26
#1	-.0005	.0006
#2	-.0004	.0006
#3	-.0004	.0007
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**992.33**	**2546.7**	**19591.**	**2900.4**
Stddev	1.79	6.4	129.	8.3
%RSD	.18016	.25285	.65664	.28628
#1	992.49	2552.0	19454.	2909.9
#2	994.04	2548.4	19611.	2896.9
#3	990.47	2539.5	19709.	2894.5

Zoom In Zoom Out

Sample Name: MP41608-B1 Acquired: 12/16/2022 15:50:16 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0525**	**27.76**	**1.981**	F **.0019**	**2.082**	**.0512**	**25.72**	**.0495**	**.5057**
Stddev	.0000	.08	.004	.0038	.009	.0003	.08	.0001	.0009
%RSD	.0684	.2721	.1986	196.4	.4555	.6298	.3187	.1960	.1732
#1	.0525	27.79	1.977	.0039	2.088	.0513	25.69	.0494	.5047
#2	.0525	27.68	1.981	-.0024	2.071	.0508	25.65	.0495	.5064
#3	.0526	27.82	1.984	.0043	2.088	.0514	25.81	.0495	.5058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2072**	**.2575**	**27.18**	**25.45**	F **.0001**	**26.19**	**.5218**	**.5240**	**24.18**
Stddev	.0002	.0015	.14	.09	.0025	.08	.0023	.0024	.11
%RSD	.0999	.5759	.5222	.3536	2077.	.3152	.4368	.4496	.4750
#1	.2075	.2584	27.22	25.54	-.0027	26.16	.5243	.5214	24.26
#2	.2071	.2582	27.03	25.36	.0011	26.14	.5215	.5245	24.05
#3	.2072	.2557	27.30	25.45	.0020	26.29	.5197	.5260	24.24
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					.0500				
Range					-20.00%				

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5014**	**.4980**	**.4723**	**2.081**	**.6975**	**.5239**	**.5396**	**.5408**	**1.989**
Stddev	.0012	.0016	.0065	.002	.0020	.0023	.0029	.0016	.008
%RSD	.2340	.3124	1.375	.0991	.2888	.4449	.5330	.2933	.3834
#1	.5001	.4963	.4652	2.079	.6956	.5213	.5404	.5425	1.980
#2	.5025	.4984	.4737	2.083	.6996	.5259	.5364	.5405	1.994
#3	.5016	.4993	.4780	2.081	.6971	.5245	.5419	.5394	1.993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41608-B1 Acquired: 12/16/2022 15:50:16 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**.5106**	**.4924**
Stddev	.0021	.0012
%RSD	.4157	.2482
#1	.5124	.4910
#2	.5111	.4933
#3	.5082	.4929
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**920.42**	**2508.9**	**19383.**	**2863.2**
Stddev	4.40	7.9	61.	5.3
%RSD	.47768	.31355	.31592	.18589
#1	925.14	2516.8	19382.	2857.6
#2	916.44	2501.1	19445.	2863.8
#3	919.68	2508.9	19323.	2868.2

Zoom In Zoom Out

Sample Name: FC975-1 Acquired: 12/16/2022 15:54:51 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**1.450**	**.0015**	**.0361**	**.0462**	**.0000**	**12.04**	**.0001**	**.0012**
Stddev	.0002	.007	.0003	.0028	.0005	.0001	.04	.0001	.0001
%RSD	40.68	.5019	16.46	7.721	.9929	318.8	.3689	71.45	7.451
#1	-.0003	1.457	.0018	.0387	.0466	.0001	12.06	.0000	.0012
#2	-.0006	1.443	.0014	.0332	.0457	.0000	11.99	.0002	.0011
#3	-.0007	1.451	.0013	.0364	.0463	.0000	12.07	.0001	.0013

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**.0159**	**2.170**	**4.601**	**.0039**	**1.292**	**.0627**	**.0015**	**12.98**
Stddev	.0001	.0001	.016	.034	.0021	.016	.0001	.0002	.07
%RSD	.9683	.6754	.7567	.7424	54.89	1.201	.1960	13.04	.5412
#1	.0089	.0158	2.172	4.604	.0015	1.279	.0628	.0017	13.05
#2	.0087	.0160	2.152	4.565	.0046	1.288	.0628	.0013	12.91
#3	.0089	.0159	2.185	4.633	.0056	1.309	.0626	.0014	12.98

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**.0050**	**.0016**	**-.0009**	**3.152**	**.0008**	**.0348**	**.0723**	**-.0005**
Stddev	.0001	.0003	.0017	.0025	.009	.0002	.0003	.0007	.0007
%RSD	1.286	5.682	103.8	265.0	.2877	24.04	.8300	.9123	145.6
#1	.0094	.0052	.0007	.0015	3.143	.0007	.0351	.0728	-.0012
#2	.0093	.0047	.0006	-.0009	3.161	.0007	.0345	.0715	-.0003
#3	.0092	.0051	.0035	-.0035	3.151	.0010	.0348	.0726	.0001

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0081**	**.1855**
Stddev	.0002	.0001
%RSD	1.871	.0420
#1	.0080	.1856
#2	.0082	.1855
#3	.0083	.1855

Zoom In Zoom Out

Sample Name: FC975-1 Acquired: 12/16/2022 15:54:51 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**970.44**	**2549.1**	**19720.**	**2903.8**
Stddev	1.48	1.3	76.	9.5
%RSD	.15289	.04933	.38394	.32869
#1	971.49	2548.0	19745.	2910.9
#2	968.74	2550.5	19780.	2907.4
#3	971.08	2548.9	19635.	2892.9

Zoom In Zoom Out

Sample Name: MP41608-D1 Acquired: 12/16/2022 15:59:40 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**1.535**	**.0016**	**.0390**	**.0472**	**.0000**	**12.18**	**.0001**	**.0011**
Stddev	.0004	.020	.0008	.0018	.0002	.0001	.04	.0001	.0001
%RSD	99.99	1.319	49.66	4.575	.3234	353.1	.3388	49.56	8.397
#1	-.0007	1.518	.0007	.0369	.0472	.0002	12.16	.0001	.0010
#2	-.0005	1.557	.0021	.0399	.0473	-.0001	12.23	.0002	.0012
#3	.0001	1.530	.0019	.0401	.0470	.0000	12.16	.0001	.0012

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**.0163**	**2.330**	**4.643**	**.0046**	**1.303**	**.0648**	**.0009**	**13.20**
Stddev	.0002	.0002	.006	.042	.0001	.030	.0002	.0003	.02
%RSD	1.904	1.228	.2460	.9111	1.524	2.320	.2426	28.29	.1270
#1	.0093	.0160	2.325	4.679	.0045	1.279	.0649	.0007	13.18
#2	.0091	.0163	2.336	4.655	.0046	1.294	.0647	.0012	13.21
#3	.0094	.0164	2.328	4.597	.0046	1.337	.0646	.0009	13.20

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0100**	**.0053**	**.0011**	**-.0003**	**3.287**	**.0004**	**.0352**	**.0765**	**.0007**
Stddev	.0004	.0003	.0009	.0027	.013	.0002	.0003	.0004	.0007
%RSD	4.312	6.168	78.79	827.6	.3894	42.23	.7362	.5209	96.21
#1	.0096	.0055	.0021	-.0011	3.274	.0004	.0351	.0770	.0004
#2	.0099	.0056	.0004	.0027	3.287	.0003	.0355	.0764	.0015
#3	.0104	.0050	.0008	-.0025	3.300	.0006	.0350	.0762	.0002

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0082**	**.1881**
Stddev	.0001	.0003
%RSD	1.278	.1407
#1	.0082	.1878
#2	.0081	.1883
#3	.0083	.1883

Zoom In Zoom Out

Sample Name: MP41608-D1 Acquired: 12/16/2022 15:59:40 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**969.14**	**2546.0**	**19586.**	**2915.1**
Stddev	1.83	3.2	90.	7.5
%RSD	.18863	.12704	.45703	.25712
#1	970.73	2549.5	19503.	2915.9
#2	967.14	2545.4	19681.	2907.2
#3	969.55	2543.1	19573.	2922.2

Zoom In Zoom Out

Sample Name: MP41608-SD1 Acquired: 12/16/2022 16:04:28 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**1.603**	**.0032**	**.0245**	**.0495**	**-.0006**	**12.67**	**.0003**	**.0008**
Stddev	.0020	.050	.0039	.0060	.0018	.0007	.06	.0003	.0002
%RSD	113.6	3.139	120.9	24.56	3.685	123.9	.4517	82.88	30.54
#1	-.0041	1.635	-.0001	.0223	.0516	-.0014	12.60	.0006	.0009
#2	-.0007	1.545	.0074	.0198	.0488	-.0005	12.70	.0000	.0005
#3	-.0005	1.629	.0023	.0313	.0481	.0001	12.70	.0004	.0010

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0092**	**.0162**	**2.292**	**4.900**	**.0078**	**1.437**	**.0666**	**-.0006**	**13.82**
Stddev	.0011	.0011	.012	.073	.0095	.074	.0003	.0001	.05
%RSD	11.93	6.625	.5319	1.496	122.1	5.153	.5179	21.60	.3334
#1	.0105	.0172	2.284	4.945	.0095	1.395	.0665	-.0006	13.82
#2	.0086	.0164	2.306	4.816	-.0025	1.522	.0663	-.0004	13.77
#3	.0086	.0151	2.286	4.940	.0163	1.393	.0669	-.0006	13.87

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094**	**-.0009**	**.0053**	**-.0042**	**3.256**	**.0025**	**.0365**	**.0752**	**.0000**
Stddev	.0004	.0030	.0096	.0045	.006	.0020	.0003	.0007	.0043
%RSD	4.680	348.1	179.7	107.5	.1779	78.52	.8746	.9641	20650.
#1	.0099	.0026	.0161	-.0093	3.255	.0003	.0366	.0759	-.0016
#2	.0091	-.0032	.0020	-.0011	3.251	.0034	.0362	.0752	.0049
#3	.0093	-.0020	-.0021	-.0021	3.262	.0039	.0368	.0745	-.0033

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0077**	**.1921**
Stddev	.0013	.0006
%RSD	17.57	.3066
#1	.0062	.1921
#2	.0080	.1916
#3	.0088	.1927

Zoom In Zoom Out

Sample Name: MP41608-SD1 Acquired: 12/16/2022 16:04:28 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**984.85**	**2543.4**	**19452.**	**2852.5**
Stddev	2.39	6.6	35.	25.3
%RSD	.24269	.25766	.18227	.88764
#1	985.17	2541.5	19438.	2881.2
#2	982.31	2538.0	19492.	2833.3
#3	987.06	2550.7	19426.	2843.0

Zoom In Zoom Out

Sample Name: MP41608-PS1 Acquired: 12/16/2022 16:09:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0475**	**3.787**	**.0944**	**.0357**	**.2807**	**.0476**	**16.24**	**.0474**	**.0483**
Stddev	.0004	.018	.0005	.0008	.0017	.0003	.08	.0002	.0002
%RSD	.9021	.4734	.4941	2.140	.6199	.6273	.4762	.3447	.3671
#1	.0470	3.776	.0941	.0358	.2791	.0477	16.26	.0475	.0485
#2	.0477	3.778	.0950	.0348	.2805	.0473	16.16	.0473	.0482
#3	.0478	3.808	.0943	.0364	.2825	.0479	16.31	.0472	.0482

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0568**	**.1112**	**4.997**	**13.50**	**.0055**	**6.175**	**.1108**	**.0892**	**21.25**
Stddev	.0007	.0008	.040	.04	.0003	.020	.0005	.0004	.10
%RSD	1.243	.7632	.8001	.2664	4.653	.3175	.4665	.4605	.4580
#1	.0567	.1115	4.959	13.53	.0057	6.164	.1109	.0891	21.18
#2	.0575	.1119	4.994	13.46	.0056	6.198	.1113	.0890	21.21
#3	.0561	.1103	5.039	13.50	.0052	6.164	.1103	.0897	21.36

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1029**	**.0504**	**.0958**	**.0915**	**3.104**	**.0479**	**.0807**	**.1666**	**.0918**
Stddev	.0002	.0007	.0019	.0021	.007	.0003	.0004	.0002	.0017
%RSD	.2207	1.339	2.015	2.254	.2187	.5737	.5343	.1039	1.849
#1	.1031	.0498	.0979	.0892	3.110	.0479	.0808	.1666	.0937
#2	.1030	.0511	.0940	.0933	3.106	.0476	.0803	.1668	.0903
#3	.1026	.0502	.0955	.0919	3.096	.0481	.0811	.1664	.0915

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0552**	**.4062**
Stddev	.0003	.0013
%RSD	.5922	.3082
#1	.0552	.4076
#2	.0548	.4060
#3	.0555	.4051

Zoom In Zoom Out

Sample Name: MP41608-PS1 Acquired: 12/16/2022 16:09:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**952.21**	**2549.5**	**19501.**	**2922.7**
Stddev	4.50	6.9	41.	19.4
%RSD	.47264	.26946	.20933	.66409
#1	953.18	2546.8	19546.	2940.5
#2	947.31	2544.4	19466.	2925.7
#3	956.15	2557.3	19491.	2902.0

Zoom In Zoom Out

Sample Name: MP41608-S1 Acquired: 12/16/2022 16:14:02 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0531**	**29.35**	**1.979**	**.0455**	**2.118**	**.0506**	**37.10**	**.0494**	**.5039**
Stddev	.0006	.04	.001	.0023	.002	.0002	.14	.0001	.0007
%RSD	1.193	.1534	.0490	5.004	.0895	.4356	.3835	.1740	.1298
#1	.0529	29.30	1.979	.0441	2.120	.0507	37.17	.0494	.5040
#2	.0526	29.39	1.981	.0443	2.119	.0506	37.19	.0495	.5044
#3	.0538	29.34	1.979	.0482	2.116	.0503	36.94	.0493	.5031

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2158**	**.2751**	**29.03**	**29.90**	**.0054**	**27.20**	**.5824**	**.5193**	**37.01**
Stddev	.0007	.0005	.04	.05	.0016	.12	.0041	.0012	.08
%RSD	.3445	.1672	.1461	.1639	30.30	.4551	.7101	.2226	.2067
#1	.2165	.2756	29.01	29.95	.0051	27.22	.5869	.5184	37.09
#2	.2159	.2747	29.08	29.86	.0072	27.32	.5788	.5189	37.00
#3	.2150	.2751	29.00	29.88	.0040	27.07	.5814	.5206	36.93

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5071**	**.5052**	**.4494**	**2.063**	**3.978**	**.4724**	**.5647**	**.6099**	**1.980**
Stddev	.0003	.0016	.0052	.003	.001	.0013	.0036	.0020	.004
%RSD	.0687	.3169	1.152	.1521	.0135	.2846	.6376	.3308	.2105
#1	.5071	.5070	.4435	2.060	3.977	.4724	.5677	.6122	1.983
#2	.5075	.5042	.4529	2.063	3.978	.4737	.5657	.6084	1.982
#3	.5068	.5043	.4519	2.066	3.978	.4710	.5608	.6091	1.976

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.5213**	**.6628**
Stddev	.0013	.0021
%RSD	.2494	.3146
#1	.5215	.6652
#2	.5225	.6619
#3	.5199	.6613

Zoom In Zoom Out

Sample Name: MP41608-S1 Acquired: 12/16/2022 16:14:02 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.61**	**2493.4**	**19153.**	**2887.4**
Stddev	1.04	1.4	123.	38.2
%RSD	.11443	.05695	.64225	1.3239
#1	903.43	2495.0	19037.	2863.9
#2	905.36	2492.3	19142.	2866.7
#3	905.05	2492.9	19282.	2931.5

Zoom In Zoom Out

Sample Name: MP41608-S2 Acquired: 12/16/2022 16:18:38 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0534**	**29.52**	**1.990**	**.0463**	**2.128**	**.0510**	**37.39**	**.0495**	**.5051**
Stddev	.0005	.06	.003	.0045	.007	.0003	.10	.0002	.0016
%RSD	1.001	.1925	.1548	9.770	.3079	.5871	.2639	.4344	.3212
#1	.0540	29.58	1.993	.0412	2.132	.0512	37.48	.0495	.5050
#2	.0534	29.49	1.991	.0478	2.131	.0513	37.28	.0496	.5068
#3	.0529	29.48	1.987	.0499	2.120	.0507	37.40	.0492	.5036

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2172**	**.2774**	**29.34**	**30.08**	**.0047**	**27.43**	**.5840**	**.5213**	**37.17**
Stddev	.0010	.0012	.05	.06	.0009	.07	.0006	.0016	.05
%RSD	.4497	.4434	.1571	.1985	19.47	.2715	.1091	.2985	.1434
#1	.2183	.2788	29.39	30.07	.0057	27.47	.5834	.5205	37.22
#2	.2165	.2768	29.32	30.02	.0039	27.47	.5841	.5231	37.17
#3	.2169	.2765	29.30	30.14	.0045	27.34	.5846	.5203	37.11

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5069**	**.5080**	**.4498**	**2.067**	**4.010**	**.4721**	**.5718**	**.6148**	**1.989**
Stddev	.0018	.0014	.0034	.005	.010	.0017	.0011	.0011	.006
%RSD	.3619	.2699	.7626	.2625	.2389	.3647	.1929	.1735	.2798
#1	.5077	.5079	.4459	2.066	4.013	.4716	.5729	.6160	1.990
#2	.5081	.5095	.4521	2.073	4.018	.4741	.5717	.6140	1.994
#3	.5048	.5067	.4514	2.063	3.999	.4708	.5707	.6144	1.983

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.5243**	**.6604**
Stddev	.0014	.0030
%RSD	.2594	.4549
#1	.5256	.6620
#2	.5229	.6622
#3	.5245	.6569

Zoom In Zoom Out

Sample Name: MP41608-S2 Acquired: 12/16/2022 16:18:38 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**903.27**	**2499.4**	**19030.**	**2882.9**
Stddev	3.69	9.1	129.	14.1
%RSD	.40813	.36387	.67997	.48793
#1	902.57	2499.6	19092.	2869.0
#2	899.98	2490.2	19117.	2897.1
#3	907.25	2508.4	18881.	2882.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 16:23:13 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2446**	**40.10**	**1.989**	F **1.955**	**2.060**	**2.044**	**39.66**	**1.984**	**1.985**
Stddev	.0003	.22	.001	.014	.014	.005	.15	.002	.001
%RSD	.1418	.5520	.0384	.6908	.6656	.2405	.3862	.0846	.0662
#1	.2447	39.84	1.988	1.959	2.044	2.038	39.50	1.982	1.984
#2	.2450	40.24	1.989	1.940	2.070	2.045	39.80	1.985	1.986
#3	.2443	40.20	1.989	1.966	2.066	2.048	39.69	1.985	1.986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021**	**2.031**	**40.81**	**39.62**	**2.005**	**40.29**	**2.071**	**1.973**	**40.53**
Stddev	.005	.006	.24	.28	.010	.18	.003	.002	.22
%RSD	.2633	.3181	.5846	.7177	.4897	.4548	.1474	.1116	.5495
#1	2.016	2.024	40.54	39.33	1.993	40.09	2.073	1.971	40.28
#2	2.020	2.033	40.92	39.90	2.012	40.45	2.067	1.974	40.70
#3	2.026	2.036	40.98	39.64	2.008	40.34	2.072	1.975	40.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.958**	**2.002**	**1.972**	**1.991**	**1.994**	**1.975**	**2.002**	**2.022**	**1.974**
Stddev	.003	.005	.006	.004	.004	.001	.007	.003	.005
%RSD	.1736	.2493	.2993	.2105	.1804	.0442	.3701	.1479	.2328
#1	1.954	2.001	1.965	1.996	1.990	1.976	1.994	2.019	1.972
#2	1.959	2.007	1.973	1.988	1.994	1.974	2.009	2.022	1.980
#3	1.961	1.997	1.977	1.989	1.997	1.974	2.004	2.025	1.972
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 16:23:13 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.013**	**1.924**
Stddev	.007	.006
%RSD	.3367	.3224
#1	2.005	1.918
#2	2.016	1.925
#3	2.017	1.930
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**860.36**	**2402.8**	**18618.**	**2810.7**
Stddev	2.48	2.7	53.	17.6
%RSD	.28808	.11364	.28519	.62710
#1	860.58	2405.5	18561.	2828.0
#2	857.78	2400.0	18667.	2792.8
#3	862.72	2402.9	18626.	2811.3

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 16:27:45 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0083**	**-.0009**	F **-.0025**	**.0003**	**.0000**	**-.0038**	**.0000**
Stddev	.0000	.0041	.0010	.0023	.0002	.0001	.0044	.000
%RSD	22.36	49.42	111.0	90.51	54.81	124.6	116.5	69.06
#1	-.0003	.0128	-.0019	-.0025	.0005	.0001	-.0035	.0000
#2	-.0002	.0048	.0001	-.0003	.0003	.0000	-.0084	.0000
#3	-.0002	.0074	-.0010	-.0048	.0002	.0000	.0005	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0001**	**-.0002**	**.0018**	**.0300**	**-.0001**	**.0176**	**.0001**
Stddev	.0001	.0003	.0003	.0010	.0151	.0014	.0179	.0001
%RSD	58.50	232.5	119.5	56.27	50.54	1200.	101.4	82.02
#1	.0000	.0005	-.0003	.0009	.0129	-.0001	.0244	.0000
#2	-.0002	-.0001	.0001	.0029	.0352	.0013	-.0027	.0001
#3	-.0002	.0000	-.0005	.0016	.0418	-.0015	.0311	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0222**	**.0002**	**-.0010**	**.0013**	**-.0006**	**.0014**	**.0006**
Stddev	.0001	.0070	.0002	.0004	.0015	.0019	.0003	.0002
%RSD	11.88	31.51	83.83	45.59	119.1	336.7	23.21	28.56
#1	.0006	.0272	.0003	-.0013	.0021	.0007	.0017	.0004
#2	.0005	.0252	.0003	-.0005	.0021	-.0028	.0015	.0007
#3	.0005	.0142	.0000	-.0012	-.0005	.0004	.0011	.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 16:27:45 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0005**	**-.0002**	**.0000**
Stddev	.0001	.0000	.0013	.0001	.000
%RSD	96.73	25.13	267.9	30.50	111.0
#1	.0002	.0001	-.0019	-.0002	.0000
#2	.0000	.0001	.0006	-.0003	-.0001
#3	.0001	.0001	-.0001	-.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**975.48**	**2524.0**	**19210.**	**2816.7**
Stddev	1.39	3.0	96.	17.5
%RSD	.14267	.11737	.49846	.62241
#1	975.08	2521.8	19100.	2836.6
#2	974.33	2527.4	19256.	2810.1
#3	977.02	2522.8	19274.	2803.4

Zoom In Zoom Out

Sample Name: FC975-2 Acquired: 12/16/2022 16:32:41 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**1.070**	**.0015**	**.0139**	**.0362**	**.0001**	**15.65**	**.0002**	**.0004**
Stddev	.0000	.017	.0002	.0013	.0004	.0000	.06	.0001	.0001
%RSD	23.61	1.600	10.55	9.463	1.034	62.19	.3659	29.69	12.78
#1	-.0002	1.051	.0015	.0154	.0365	.0000	15.69	.0002	.0005
#2	-.0002	1.078	.0014	.0135	.0358	.0001	15.58	.0002	.0004
#3	-.0001	1.082	.0017	.0128	.0363	.0001	15.68	.0001	.0004

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**.0208**	**1.353**	**4.690**	**.0031**	**1.021**	**.0449**	**.0014**	**7.597**
Stddev	.0002	.0001	.003	.004	.0015	.019	.0001	.0002	.047
%RSD	3.936	.4973	.2187	.0880	47.13	1.871	.1154	13.00	.6124
#1	.0057	.0207	1.350	4.692	.0016	1.039	.0448	.0015	7.640
#2	.0055	.0209	1.353	4.685	.0032	1.024	.0449	.0015	7.548
#3	.0059	.0207	1.355	4.693	.0045	1.001	.0449	.0012	7.605

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**.0016**	**-.0001**	**-.0008**	**3.042**	**.0003**	**.0331**	**.0431**	**.0007**
Stddev	.0001	.0008	.0001	.0011	.011	.0002	.0002	.0007	.0005
%RSD	1.885	48.38	68.15	141.2	.3465	75.76	.4980	1.522	77.73
#1	.0045	.0025	-.0002	-.0015	3.030	.0000	.0330	.0439	.0002
#2	.0044	.0016	.0000	.0005	3.048	.0004	.0330	.0427	.0007
#3	.0045	.0009	-.0002	-.0012	3.049	.0005	.0333	.0428	.0012

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0087**	**.1088**
Stddev	.0002	.0004
%RSD	2.296	.3633
#1	.0086	.1085
#2	.0086	.1087
#3	.0089	.1093

Zoom In Zoom Out

Sample Name: FC975-2 Acquired: 12/16/2022 16:32:41 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**978.53**	**2564.2**	**19561.**	**2880.8**
Stddev	4.28	5.9	129.	14.2
%RSD	.43707	.23020	.65960	.49334
#1	983.46	2570.6	19627.	2883.6
#2	975.86	2563.1	19643.	2893.5
#3	976.26	2558.9	19412.	2865.5

Zoom In Zoom Out

Sample Name: FC1078-1 Acquired: 12/16/2022 16:37:32 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**1.672**	**.0003**	**.0381**	**.0699**	**.0003**	**5.163**	**.0000**	**.0005**
Stddev	.0003	.014	.0005	.0032	.0009	.0000	.059	.0001	.0002
%RSD	61.43	.8572	160.5	8.425	1.323	7.322	1.149	2379.	35.94
#1	-.0003	1.656	.0007	.0416	.0688	.0003	5.097	-.0001	.0006
#2	-.0003	1.677	.0005	.0372	.0704	.0003	5.211	.0001	.0005
#3	-.0008	1.683	-.0003	.0354	.0705	.0003	5.182	.0000	.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0487**	**.0352**	**.1859**	**F 809.7**	**F 97.20**	**.4634**	**.0251**	**.0241**	**F 295.0**
Stddev	.0005	.0003	.0019	16.9	.96	.0142	.0001	.0002	1.6
%RSD	1.126	.9644	1.020	2.082	.9885	3.067	.5722	.6603	.5589
#1	.0494	.0355	.1838	828.7	98.31	.4795	.0252	.0243	293.1
#2	.0484	.0349	.1874	796.4	96.74	.4525	.0249	.0241	295.8
#3	.0485	.0354	.1866	804.1	96.56	.4582	.0251	.0240	296.0

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0404**	**.0046**	**-.0002**	**-.0038**	**1.763**	**.0001**	**.2911**	**.0016**	**-.0006**
Stddev	.0002	.0008	.0011	.0033	.007	.0003	.0047	.0001	.0021
%RSD	.4439	16.43	462.7	86.15	.3786	350.3	1.599	4.408	379.5
#1	.0404	.0054	-.0006	-.0020	1.756	-.0002	.2858	.0015	.0007
#2	.0402	.0045	-.0011	-.0076	1.767	.0004	.2946	.0017	-.0030
#3	.0406	.0039	.0010	-.0018	1.768	.0001	.2929	.0016	.0006

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0166**	**.0093**
Stddev	.0001	.0002
%RSD	.8318	1.985
#1	.0166	.0094
#2	.0167	.0095
#3	.0164	.0091

Zoom In Zoom Out

Sample Name: FC1078-1 Acquired: 12/16/2022 16:37:32 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**811.17**	**2436.1**	**18015.**	**2990.2**
Stddev	2.98	8.6	72.	25.0
%RSD	.36717	.35310	.39695	.83719
#1	813.72	2445.6	17946.	2961.7
#2	807.90	2428.9	18089.	3008.9
#3	811.89	2433.7	18009.	2999.8

Zoom In Zoom Out

Sample Name: MP41606-MB1 Acquired: 12/16/2022 16:42:49 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0077**	**-.0011**	**-.0040**	**.0003**	**.0000**	**.0126**	**.0000**	**-.0001**
Stddev	.000	.0058	.0007	.0017	.0002	.0001	.0014	.000	.0001
%RSD	1809.	74.96	62.58	43.95	69.41	118.0	11.11	37.47	161.5
#1	.0001	.0108	-.0011	-.0034	.0002	.0001	.0127	.0000	-.0001
#2	-.0004	.0114	-.0004	-.0059	.0005	.0000	.0112	.0000	-.0002
#3	.0003	.0010	-.0017	-.0026	.0001	.0000	.0140	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0061**	**.0198**	**.7191**	F **.0275**	**-.0002**	**.0001**	**-.0001**	**.1622**
Stddev	.0002	.0002	.0009	.0251	.0013	.0065	.0001	.0001	.0090
%RSD	103.1	3.546	4.753	3.488	4.623	3205.	69.83	113.5	5.537
#1	.0000	.0060	.0196	.7465	.0276	-.0060	.0002	.0000	.1716
#2	.0004	.0060	.0208	.6973	.0287	-.0014	.0000	-.0001	.1612
#3	.0003	.0064	.0190	.7135	.0262	.0068	.0001	-.0002	.1538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.0050				
Low Limit					-.0050				

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**.0024**	**.0002**	**.0079**	**.0003**	**.0000**	**.0001**	**-.0008**
Stddev	.0002	.0008	.0004	.0010	.0004	.0003	.0001	.0001	.0004
%RSD	99.16	479.6	16.87	626.0	4.753	103.3	258.3	150.2	48.63
#1	.0001	.0007	.0025	.0008	.0084	.0000	.0000	.0001	-.0013
#2	.0000	-.0008	.0019	.0007	.0079	.0005	.0000	.0001	-.0007
#3	.0003	-.0004	.0026	-.0010	.0076	.0003	.0001	.0000	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: MP41606-MB1 Acquired: 12/16/2022 16:42:49 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**.0000**	**.0038**
Stddev	.000	.0001
%RSD	185.1	2.100
#1	-.0001	.0037
#2	.0000	.0038
#3	-.0001	.0039
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**988.18**	**2580.7**	**19918.**	**2976.1**
Stddev	1.61	5.8	14.	6.8
%RSD	.16322	.22402	.07044	.22825
#1	986.91	2580.1	19927.	2969.6
#2	989.99	2586.7	19925.	2983.1
#3	987.63	2575.2	19902.	2975.5

Zoom In Zoom Out

Sample Name: MP41606-B1 Acquired: 12/16/2022 16:47:45 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0463**	**24.50**	**1.716**	F **.0053**	**1.849**	**.0452**	**22.75**	**.0432**	**.4439**
Stddev	.0007	.13	.005	.0026	.007	.0001	.05	.0003	.0018
%RSD	1.550	.5458	.3149	49.56	.3606	.1398	.1993	.5989	.4038
#1	.0460	24.65	1.711	.0066	1.856	.0453	22.79	.0429	.4420
#2	.0471	24.45	1.716	.0070	1.847	.0452	22.70	.0432	.4441
#3	.0458	24.39	1.722	.0023	1.843	.0453	22.76	.0435	.4456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500					
Range				-20.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1806**	**.2342**	**24.17**	**22.62**	F **.0153**	**22.89**	**.4585**	**.4743**	**21.50**
Stddev	.0002	.0006	.07	.08	.0009	.12	.0016	.0022	.08
%RSD	.1008	.2557	.2884	.3636	6.116	.5218	.3441	.4628	.3496
#1	.1805	.2343	24.25	22.72	.0164	23.02	.4584	.4720	21.58
#2	.1809	.2348	24.13	22.57	.0148	22.79	.4569	.4747	21.47
#3	.1805	.2336	24.12	22.59	.0147	22.87	.4600	.4763	21.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					.0500				
Range					-20.00%				

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4372**	**.4348**	**.4299**	**1.735**	**.6232**	**.4650**	**.4792**	**.4844**	**1.726**
Stddev	.0021	.0012	.0025	.009	.0010	.0017	.0013	.0009	.007
%RSD	.4769	.2813	.5809	.5107	.1602	.3693	.2805	.1809	.3896
#1	.4349	.4335	.4271	1.732	.6221	.4631	.4801	.4848	1.719
#2	.4377	.4349	.4320	1.728	.6232	.4654	.4776	.4850	1.733
#3	.4390	.4359	.4306	1.745	.6241	.4665	.4798	.4834	1.727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: MP41606-B1 Acquired: 12/16/2022 16:47:45 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**.4513**	**.4234**
Stddev	.0018	.0018
%RSD	.4050	.4192
#1	.4530	.4214
#2	.4517	.4242
#3	.4494	.4247
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**921.28**	**2518.0**	**19585.**	**2958.7**
Stddev	1.34	4.6	95.	17.6
%RSD	.14567	.18223	.48600	.59401
#1	921.23	2523.3	19486.	2957.2
#2	919.96	2514.7	19675.	2977.0
#3	922.64	2516.2	19593.	2942.0

Zoom In Zoom Out

Sample Name: FC1010-1 Acquired: 12/16/2022 16:52:21 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0257**	**-.0007**	**.3872**	**.0046**	**.0000**	**5.817**	**.0000**	**.0010**
Stddev	.0002	.0126	.0012	.0059	.0002	.0001	.022	.000	.0001
%RSD	53.87	48.89	176.7	1.515	3.621	426.5	.3713	169.3	9.055
#1	-.0007	.0135	-.0019	.3877	.0045	-.0001	5.794	.0000	.0010
#2	-.0004	.0386	-.0008	.3811	.0048	.0000	5.818	.0000	.0011
#3	-.0002	.0251	.0006	.3928	.0047	.0001	5.837	.0000	.0009

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084**	**.0054**	**.0522**	**.7231**	**.0108**	**6.618**	**.0420**	**.0018**	F **112.1**
Stddev	.0003	.0006	.0009	.0192	.0012	.013	.0002	.0001	.2
%RSD	3.267	11.63	1.741	2.657	11.25	.1973	.5145	4.802	.1633
#1	.0082	.0049	.0515	.7010	.0114	6.632	.0418	.0019	112.3
#2	.0088	.0052	.0518	.7322	.0094	6.612	.0420	.0017	111.9
#3	.0083	.0061	.0532	.7361	.0115	6.608	.0422	.0019	112.2

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2076**	**-.0002**	**.0016**	**.0051**	**7.037**	**.0009**	**.0440**	**.0015**	**-.0004**
Stddev	.0005	.0009	.0005	.0012	.011	.0004	.0002	.0007	.0002
%RSD	.2601	499.0	28.94	24.29	.1561	46.32	.3587	48.15	54.53
#1	.2077	.0008	.0011	.0045	7.035	.0013	.0441	.0011	-.0002
#2	.2070	-.0005	.0019	.0065	7.027	.0009	.0438	.0023	-.0004
#3	.2081	-.0008	.0018	.0042	7.048	.0005	.0440	.0010	-.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0006**	**.0161**
Stddev	.0002	.0001
%RSD	30.91	.5606
#1	.0004	.0160
#2	.0007	.0161
#3	.0007	.0162

Zoom In Zoom Out

Sample Name: FC1010-1 Acquired: 12/16/2022 16:52:21 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**907.39**	**2472.7**	**18992.**	**2890.4**
Stddev	.92	3.1	30.	19.4
%RSD	.10180	.12680	.15965	.67061
#1	906.39	2472.6	18996.	2893.6
#2	907.60	2475.8	18960.	2869.7
#3	908.20	2469.6	19021.	2908.1

Zoom In Zoom Out

Sample Name: MP41606-D1 Acquired: 12/16/2022 16:57:12 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0316**	**-.0009**	**.3798**	**.0047**	**.0000**	**5.689**	**.0000**	**.0012**
Stddev	.0002	.0092	.0011	.0059	.0001	.000	.018	.000	.0001
%RSD	25.47	29.13	127.1	1.558	2.847	239.5	.3100	122.2	9.543
#1	-.0012	.0251	-.0020	.3849	.0048	-.0001	5.691	.0000	.0011
#2	-.0007	.0275	.0003	.3733	.0047	.0000	5.706	-.0001	.0011
#3	-.0009	.0421	-.0009	.3811	.0045	.0000	5.671	.0000	.0013

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**.0059**	**.0545**	**.6520**	**.0109**	**6.520**	**.0412**	**.0017**	F **110.0**
Stddev	.0002	.0003	.0036	.0081	.0015	.028	.0001	.0001	.2
%RSD	1.941	5.694	6.543	1.235	13.76	.4262	.2639	6.327	.2048
#1	.0088	.0056	.0534	.6476	.0096	6.542	.0411	.0018	109.8
#2	.0086	.0062	.0516	.6471	.0104	6.530	.0413	.0016	110.2
#3	.0090	.0059	.0585	.6613	.0125	6.489	.0412	.0017	110.1

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2038**	**-.0007**	**.0011**	**.0047**	**6.877**	**.0008**	**.0432**	**.0008**	**.0000**
Stddev	.0007	.0007	.0007	.0029	.019	.0004	.0001	.0001	.001
%RSD	.3676	106.3	62.98	62.18	.2733	46.69	.3430	7.432	121000.
#1	.2036	-.0011	.0010	.0047	6.874	.0010	.0433	.0009	.0001
#2	.2031	.0002	.0019	.0018	6.860	.0009	.0433	.0009	.0006
#3	.2046	-.0011	.0005	.0076	6.897	.0004	.0430	.0008	-.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0006**	**.0160**
Stddev	.0003	.0000
%RSD	51.36	.2680
#1	.0004	.0160
#2	.0010	.0160
#3	.0005	.0159

Zoom In Zoom Out

Sample Name: MP41606-D1 Acquired: 12/16/2022 16:57:12 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**912.23**	**2466.6**	**18903.**	**2879.3**
Stddev	1.93	5.0	50.	13.7
%RSD	.21155	.20164	.26322	.47470
#1	914.04	2472.3	18867.	2894.8
#2	910.20	2463.4	18959.	2868.8
#3	912.45	2464.0	18882.	2874.3

Zoom In Zoom Out

Sample Name: MP41606-SD1 Acquired: 12/16/2022 17:02:04 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0785**	**-.0053**	**.3846**	**.0058**	**.0000**	**5.952**	**-.0004**	**.0007**
Stddev	.0019	.0716	.0004	.0045	.0003	.0006	.024	.0003	.0003
%RSD	1381.	91.21	8.404	1.165	4.317	4228.	.4019	67.35	46.19
#1	-.0014	-.0039	-.0049	.3797	.0056	.0006	5.963	-.0005	.0008
#2	.0021	.1255	-.0058	.3856	.0061	-.0006	5.969	-.0006	.0010
#3	-.0012	.1138	-.0051	.3885	.0058	.0000	5.925	-.0001	.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0085**	**.0046**	**.0443**	**1.170**	**.0249**	**6.971**	**.0440**	**.0001**	**116.4**
Stddev	.0016	.0014	.0078	.134	.0039	.131	.0001	.0007	.3
%RSD	18.71	30.22	17.58	11.44	15.48	1.878	.2565	1094.	.2261
#1	.0103	.0041	.0501	1.042	.0232	6.928	.0439	-.0005	116.2
#2	.0072	.0035	.0355	1.309	.0221	7.118	.0441	.0009	116.7
#3	.0081	.0061	.0475	1.158	.0293	6.867	.0439	-.0002	116.4

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2192**	**-.0031**	**.0057**	**-.0052**	**7.300**	**.0005**	**.0449**	**.0008**	**-.0008**
Stddev	.0005	.0010	.0011	.0103	.018	.0012	.0005	.0004	.0064
%RSD	.2138	31.13	18.45	196.4	.2419	228.7	1.018	43.07	751.0
#1	.2194	-.0036	.0058	-.0108	7.320	.0011	.0444	.0006	.0041
#2	.2196	-.0036	.0046	-.0115	7.293	-.0008	.0453	.0006	.0014
#3	.2187	-.0020	.0067	.0066	7.287	.0013	.0450	.0012	-.0080

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0009**	**.0166**
Stddev	.0014	.0002
%RSD	156.6	.9841
#1	-.0001	.0166
#2	.0003	.0168
#3	.0024	.0165

Zoom In Zoom Out

Sample Name: MP41606-SD1 Acquired: 12/16/2022 17:02:04 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**981.33**	**2572.6**	**19733.**	**2948.5**
Stddev	2.35	3.2	77.	22.5
%RSD	.23990	.12518	.38942	.76288
#1	984.05	2575.1	19786.	2957.2
#2	979.91	2569.0	19769.	2923.0
#3	980.04	2573.7	19645.	2965.4

Zoom In Zoom Out

Sample Name: MP41606-PS1 Acquired: 12/16/2022 17:06:58 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0457**	**2.379**	**.0915**	**.4035**	**.2424**	**.0477**	**10.62**	**.0457**	**.0473**
Stddev	.0004	.016	.0008	.0056	.0005	.0002	.02	.0001	.0002
%RSD	.9331	.6700	.8516	1.395	.1979	.4844	.1686	.2693	.4379
#1	.0454	2.375	.0913	.4067	.2426	.0476	10.61	.0455	.0471
#2	.0456	2.366	.0924	.3970	.2426	.0480	10.62	.0457	.0474
#3	.0462	2.397	.0909	.4068	.2418	.0477	10.64	.0458	.0475

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0570**	**.0987**	**2.930**	**9.642**	**.0084**	**11.73**	**.0918**	**.0915**	F **125.6**
Stddev	.0000	.0004	.008	.017	.0005	.02	.0002	.0004	.2
%RSD	.0272	.4055	.2624	.1744	6.402	.1558	.2595	.4383	.1753
#1	.0570	.0990	2.934	9.632	.0086	11.71	.0921	.0916	125.3
#2	.0570	.0983	2.934	9.662	.0088	11.75	.0916	.0911	125.7
#3	.0570	.0989	2.921	9.633	.0078	11.74	.0918	.0919	125.6

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3047**	**.0453**	**.0925**	**.0904**	**7.409**	**.0468**	**.0928**	**.0965**	**.0852**
Stddev	.0006	.0009	.0006	.0024	.007	.0004	.0002	.0004	.0005
%RSD	.1906	2.061	.6448	2.696	.0976	.8218	.2260	.3710	.5949
#1	.3044	.0445	.0919	.0925	7.400	.0464	.0926	.0968	.0854
#2	.3043	.0463	.0931	.0877	7.414	.0470	.0930	.0961	.0856
#3	.3053	.0450	.0926	.0910	7.411	.0471	.0928	.0965	.0846

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0479**	**.2364**
Stddev	.0005	.0005
%RSD	.9732	.1962
#1	.0480	.2359
#2	.0474	.2364
#3	.0483	.2368

Zoom In Zoom Out

Sample Name: MP41606-PS1 Acquired: 12/16/2022 17:06:58 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**904.87**	**2487.7**	**19041.**	**2921.6**
Stddev	2.35	4.6	68.	17.9
%RSD	.25955	.18353	.35533	.61311
#1	904.52	2484.6	18992.	2942.1
#2	907.38	2492.9	19118.	2909.4
#3	902.72	2485.5	19012.	2913.2

Zoom In Zoom Out

Sample Name: MP41606-S1 Acquired: 12/16/2022 17:11:42 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0483**	**26.00**	**1.818**	**.3982**	**1.961**	**.0480**	**29.65**	**.0447**	**.4610**
Stddev	.0002	.08	.001	.0092	.007	.0003	.17	.0001	.0011
%RSD	.5136	.2990	.0457	2.299	.3497	.5609	.5567	.2861	.2459
#1	.0481	26.06	1.818	.3905	1.966	.0482	29.80	.0446	.4597
#2	.0485	26.03	1.819	.4084	1.964	.0481	29.67	.0446	.4618
#3	.0482	25.91	1.818	.3958	1.953	.0477	29.48	.0448	.4616

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1976**	**.2432**	**25.73**	**24.27**	**.0088**	**30.83**	**.5225**	**.4967**	F **134.3**
Stddev	.0003	.0011	.17	.12	.0008	.13	.0012	.0011	.5
%RSD	.1464	.4653	.6692	.5098	8.624	.4370	.2344	.2287	.4090
#1	.1979	.2443	25.90	24.38	.0080	30.98	.5238	.4954	134.8
#2	.1975	.2432	25.73	24.29	.0095	30.79	.5225	.4975	134.4
#3	.1974	.2420	25.56	24.13	.0087	30.71	.5213	.4971	133.7

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6501**	**.4582**	**.4552**	**1.836**	**7.726**	**.4831**	**.5473**	**.5107**	**1.781**
Stddev	.0024	.0043	.0016	.006	.014	.0008	.0024	.0005	.012
%RSD	.3716	.9484	.3496	.3086	.1771	.1668	.4395	.1018	.6438
#1	.6474	.4532	.4554	1.833	7.710	.4822	.5491	.5113	1.768
#2	.6520	.4608	.4536	1.832	7.731	.4833	.5482	.5103	1.786
#3	.6510	.4606	.4568	1.842	7.736	.4838	.5445	.5105	1.790

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.4765**	**.4521**
Stddev	.0012	.0024
%RSD	.2531	.5293
#1	.4773	.4493
#2	.4770	.4534
#3	.4751	.4535

Zoom In Zoom Out

Sample Name: MP41606-S1 Acquired: 12/16/2022 17:11:42 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**873.11**	**2458.5**	**18878.**	**2871.8**
Stddev	5.13	7.4	58.	40.0
%RSD	.58789	.30025	.30552	1.3937
#1	878.87	2465.7	18845.	2825.8
#2	869.02	2450.9	18944.	2891.3
#3	871.43	2458.9	18844.	2898.3

Zoom In Zoom Out

Sample Name: MP41606-S2 Acquired: 12/16/2022 17:16:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0505**	**26.85**	**1.911**	**.4216**	**2.021**	**.0493**	**30.87**	**.0466**	**.4824**
Stddev	.0008	.10	.004	.0031	.008	.0003	.16	.0001	.0010
%RSD	1.588	.3816	.1810	.7285	.3886	.6181	.5085	.2026	.1991
#1	.0496	26.81	1.914	.4181	2.012	.0490	30.80	.0468	.4833
#2	.0509	26.77	1.913	.4239	2.023	.0495	30.76	.0466	.4825
#3	.0510	26.97	1.907	.4226	2.027	.0495	31.05	.0466	.4814

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2084**	**.2544**	**26.58**	**25.11**	**.0076**	**32.09**	**.5502**	**.5123**	F **141.7**
Stddev	.0008	.0005	.10	.13	.0013	.18	.0009	.0006	.5
%RSD	.3654	.1944	.3685	.5222	17.63	.5617	.1594	.1083	.3357
#1	.2075	.2543	26.48	25.07	.0091	32.10	.5499	.5126	141.3
#2	.2089	.2550	26.59	25.00	.0073	31.90	.5512	.5126	141.5
#3	.2087	.2540	26.68	25.26	.0065	32.26	.5495	.5116	142.2

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6859**	**.4800**	**.4763**	**1.921**	**8.274**	**.4972**	**.5591**	**.5283**	**1.861**
Stddev	.0013	.0013	.0016	.002	.010	.0022	.0031	.0008	.007
%RSD	.1829	.2740	.3434	.0888	.1184	.4508	.5624	.1446	.3764
#1	.6873	.4812	.4781	1.921	8.283	.4986	.5558	.5279	1.866
#2	.6852	.4802	.4756	1.923	8.277	.4984	.5597	.5292	1.863
#3	.6852	.4786	.4751	1.919	8.264	.4946	.5620	.5279	1.853

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.4998**	**.4739**
Stddev	.0009	.0012
%RSD	.1898	.2464
#1	.4988	.4752
#2	.5006	.4734
#3	.5000	.4731

Zoom In Zoom Out

Sample Name: MP41606-S2 Acquired: 12/16/2022 17:16:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**862.00**	**2431.3**	**18655.**	**2844.0**
Stddev	2.43	4.9	62.	39.8
%RSD	.28171	.20253	.33453	1.3985
#1	859.46	2426.5	18650.	2800.2
#2	862.24	2431.1	18595.	2877.9
#3	864.30	2436.3	18720.	2853.8

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 17:20:54 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2460**	**40.54**	**1.999**	F **1.960**	**2.082**	**2.057**	**39.85**	**1.991**	**1.992**
Stddev	.0014	.19	.011	.009	.014	.008	.13	.010	.011
%RSD	.5640	.4732	.5634	.4773	.6596	.3906	.3291	.4850	.5439
#1	.2454	40.37	1.995	1.964	2.069	2.049	39.81	1.990	1.989
#2	.2450	40.50	2.012	1.967	2.080	2.056	39.75	2.001	2.004
#3	.2476	40.75	1.991	1.949	2.097	2.065	40.00	1.981	1.983
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.020**	**2.031**	**41.20**	**39.98**	**2.025**	**40.56**	**2.070**	**1.980**	**40.99**
Stddev	.015	.017	.21	.12	.010	.12	.008	.010	.19
%RSD	.7455	.8120	.5104	.3072	.5121	.3005	.4018	.5251	.4565
#1	2.011	2.026	41.01	40.01	2.016	40.54	2.069	1.977	40.81
#2	2.012	2.018	41.17	39.85	2.022	40.45	2.062	1.992	40.96
#3	2.038	2.050	41.42	40.08	2.036	40.69	2.079	1.971	41.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.965**	**2.009**	**1.978**	**2.001**	**1.997**	**1.979**	**2.016**	**2.026**	**1.985**
Stddev	.012	.009	.012	.010	.009	.011	.006	.013	.011
%RSD	.6277	.4416	.6020	.5213	.4457	.5676	.2835	.6261	.5549
#1	1.965	2.005	1.972	1.996	1.994	1.979	2.010	2.021	1.979
#2	1.977	2.019	1.992	2.013	2.007	1.990	2.015	2.017	1.997
#3	1.952	2.002	1.971	1.994	1.990	1.968	2.022	2.041	1.978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 17:20:54 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.016**	**1.926**
Stddev	.015	.012
%RSD	.7630	.6049
#1	2.012	1.930
#2	2.003	1.935
#3	2.033	1.913
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**883.01**	**2468.5**	**19235.**	**2865.4**
Stddev	3.74	12.0	68.	17.7
%RSD	.42308	.48618	.35203	.61904
#1	885.84	2470.5	19312.	2884.2
#2	878.77	2455.6	19203.	2863.2
#3	884.40	2479.4	19189.	2848.9

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 17:25:27 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0018**	**-.0014**	**.0005**	**.0000**	**.0000**	**-.0030**	**.0000**
Stddev	.0002	.0174	.0004	.0009	.0002	.000	.0018	.0001
%RSD	55.57	989.1	25.34	171.3	581.7	141.4	58.08	309.4
#1	-.0002	-.0180	-.0014	-.0005	.0000	-.0001	-.0034	.0001
#2	-.0002	.0087	-.0017	.0008	.0002	.0000	-.0046	.0001
#3	-.0005	.0147	-.0010	.0012	-.0001	.0000	-.0011	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**-.0002**	**-.0009**	**.1159**	F **.0024**	**-.0032**	**.0000**
Stddev	.0001	.0002	.0005	.0020	.0285	.0011	.0131	.0000
%RSD	111.1	251.9	253.9	223.8	24.56	44.39	405.5	26.85
#1	.0000	.0000	.0000	.0010	.1371	.0036	-.0179	.0000
#2	-.0002	-.0002	.0002	-.0030	.0836	.0021	.0011	.0000
#3	-.0002	.0001	-.0008	-.0007	.1270	.0016	.0071	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0458**	**.0000**	F **-.0011**	**.0011**	**-.0007**	**-.0006**	**.0001**
Stddev	.0002	.0029	.0002	.0003	.0014	.0029	.0005	.0002
%RSD	129.7	6.232	2812.	24.05	123.6	395.2	87.73	145.1
#1	.0004	.0486	.0000	-.0013	.0006	-.0021	-.0003	-.0001
#2	.0001	.0429	.0002	-.0008	.0026	-.0027	-.0012	.0004
#3	.0000	.0458	-.0002	-.0013	.0001	.0026	-.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	None	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 17:25:27 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0007**	**.0001**	**.0000**
Stddev	.0000	.0001	.0004	.0003	.000
%RSD	47.84	81.57	50.88	478.3	664.8
#1	.0001	.0001	.0004	-.0002	-.0001
#2	.0001	.0001	.0006	.0004	.0000
#3	.0000	.0000	.0011	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**991.91**	**2566.5**	**19612.**	**2893.8**
Stddev	.82	2.6	46.	29.1
%RSD	.08281	.10183	.23626	1.0068
#1	991.33	2563.5	19558.	2865.9
#2	992.85	2567.8	19638.	2891.4
#3	991.56	2568.3	19639.	2924.0

Zoom In Zoom Out

Sample Name: FC1010-2 Acquired: 12/16/2022 17:30:22 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1852**	**.0031**	F **1.111**	**.0187**	**.0000**	**35.53**	**.0000**	**.0007**
Stddev	.0004	.0044	.0006	.016	.0002	.000	.07	.000	.0001
%RSD	462.9	2.373	20.17	1.411	1.303	470.9	.2060	63.34	11.17
#1	-.0003	.1823	.0038	1.093	.0185	.0000	35.61	.0000	.0006
#2	.0000	.1903	.0025	1.122	.0190	-.0001	35.50	.0000	.0007
#3	.0006	.1831	.0032	1.119	.0186	.0000	35.47	-.0001	.0007

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0106**	**.2551**	**3.970**	**.0036**	**3.749**	**.1789**	**.0004**	F **90.51**
Stddev	.0001	.0004	.0024	.031	.0015	.007	.0008	.0003	.28
%RSD	6.356	4.134	.9564	.7803	40.84	.1801	.4194	56.63	.3071
#1	.0015	.0101	.2545	3.967	.0032	3.754	.1780	.0006	90.58
#2	.0015	.0109	.2578	3.940	.0024	3.742	.1795	.0002	90.20
#3	.0016	.0109	.2531	4.002	.0052	3.752	.1790	.0006	90.75

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**-.0004**	**.0014**	**.0017**	**6.377**	**.0005**	**.1487**	**.0133**	**-.0006**
Stddev	.0002	.0009	.0005	.0022	.085	.0002	.0004	.0001	.0012
%RSD	5.157	206.3	38.20	130.4	1.329	32.15	.2401	.6025	187.3
#1	.0032	-.0015	.0019	-.0008	6.299	.0005	.1491	.0134	-.0020
#2	.0035	.0003	.0008	.0025	6.467	.0003	.1484	.0132	.0000
#3	.0036	-.0002	.0014	.0033	6.364	.0007	.1485	.0133	.0001

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0064**	**.0231**
Stddev	.0002	.0005
%RSD	3.120	2.133
#1	.0065	.0226
#2	.0064	.0235
#3	.0061	.0232

Zoom In Zoom Out

Sample Name: FC1010-2 Acquired: 12/16/2022 17:30:22 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**899.73**	**2448.9**	**19259.**	**2967.0**
Stddev	13.55	33.4	109.	5.9
%RSD	1.5055	1.3638	.56709	.20013
#1	911.67	2480.0	19369.	2962.9
#2	885.01	2413.6	19255.	2973.8
#3	902.52	2453.0	19151.	2964.3

Zoom In Zoom Out

Sample Name: FC1010-5 Acquired: 12/16/2022 17:35:14 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0419**	**-.0009**	**.3838**	**.0020**	**.0000**	**1.573**	**-.0001**	**.0011**
Stddev	.0002	.0125	.0007	.0042	.0001	.000	.002	.0000	.0001
%RSD	47.66	29.77	72.54	1.089	5.690	655.4	.1323	36.28	11.59
#1	-.0008	.0276	-.0015	.3853	.0022	.0000	1.572	-.0002	.0011
#2	-.0003	.0507	-.0011	.3870	.0019	.0000	1.572	-.0001	.0012
#3	-.0004	.0474	-.0002	.3791	.0020	.0000	1.576	-.0001	.0010

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3643**	**.0110**	**1.102**	**.4137**	**.0026**	**4.396**	**.0189**	**.0033**	F **97.86**
Stddev	.0010	.0001	.006	.0300	.0014	.009	.0001	.0002	.31
%RSD	.2687	.5792	.5858	7.259	53.24	.1983	.5768	5.631	.3156
#1	.3648	.0109	1.109	.4482	.0015	4.399	.0188	.0033	98.11
#2	.3632	.0109	1.100	.3992	.0041	4.387	.0190	.0035	97.52
#3	.3650	.0110	1.096	.3937	.0022	4.403	.0189	.0032	97.96

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0579**	**.0004**	**.0013**	**.0030**	**6.132**	**.0003**	**.0379**	**.0013**	**-.0006**
Stddev	.0003	.0009	.0010	.0004	.005	.0005	.0003	.0001	.0003
%RSD	.4516	220.2	81.04	13.84	.0778	169.3	.6950	5.239	53.21
#1	.0581	.0008	.0025	.0030	6.131	.0002	.0380	.0013	-.0005
#2	.0576	-.0006	.0009	.0035	6.128	-.0002	.0376	.0012	-.0004
#3	.0580	.0010	.0005	.0026	6.137	.0008	.0381	.0013	-.0010

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0022**	**.0198**
Stddev	.0006	.0001
%RSD	28.46	.6072
#1	.0015	.0199
#2	.0027	.0196
#3	.0023	.0198

Zoom In Zoom Out

Sample Name: FC1010-5 Acquired: 12/16/2022 17:35:14 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.71**	**2509.3**	**19417.**	**2918.6**
Stddev	3.87	2.6	54.	23.3
%RSD	.41623	.10420	.27571	.79853
#1	931.72	2510.2	19478.	2916.9
#2	930.05	2511.3	19389.	2942.8
#3	924.35	2506.3	19382.	2896.3

Zoom In Zoom Out

Sample Name: FC1010-6 Acquired: 12/16/2022 17:40:06 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.1094**	**-.0003**	**.3994**	**.0026**	**.0000**	**1.639**	**-.0003**	**.0017**
Stddev	.0002	.0228	.0008	.0046	.0004	.000	.003	.0001	.0001
%RSD	34.48	20.84	264.3	1.160	16.83	65.30	.1891	22.17	4.505
#1	-.0006	.1318	.0004	.4036	.0030	.0000	1.636	-.0003	.0018
#2	-.0003	.0862	-.0011	.3945	.0021	-.0001	1.640	-.0002	.0016
#3	-.0007	.1104	-.0002	.4001	.0028	.0000	1.642	-.0003	.0018

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.773**	**.0307**	**6.103**	**.4403**	**.0026**	**4.644**	**.0223**	**.0172**	F **102.7**
Stddev	.005	.0002	.025	.0100	.0004	.022	.0001	.0002	.4
%RSD	.2938	.7005	.4077	2.269	13.51	.4682	.2980	1.315	.3840
#1	1.772	.0305	6.081	.4293	.0025	4.626	.0222	.0175	102.3
#2	1.769	.0310	6.130	.4428	.0023	4.668	.0222	.0170	103.1
#3	1.779	.0307	6.098	.4488	.0030	4.639	.0223	.0171	102.6

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1128**	**.0005**	**.0037**	**.0025**	**6.830**	**.0004**	**.0399**	**.0054**	**-.0006**
Stddev	.0002	.0010	.0008	.0015	.011	.0002	.0002	.0001	.0003
%RSD	.2037	212.7	21.15	61.10	.1585	37.45	.5284	1.727	46.63
#1	.1125	-.0003	.0036	.0032	6.823	.0006	.0396	.0053	-.0005
#2	.1130	.0002	.0046	.0035	6.826	.0003	.0401	.0054	-.0005
#3	.1128	.0015	.0030	.0007	6.843	.0005	.0399	.0055	-.0010

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0112**	**.0214**
Stddev	.0003	.0001
%RSD	2.387	.4464
#1	.0111	.0215
#2	.0115	.0213
#3	.0111	.0214

Zoom In Zoom Out

Sample Name: FC1010-6 Acquired: 12/16/2022 17:40:06 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**930.20**	**2489.3**	**19416.**	**2940.6**
Stddev	1.69	1.3	67.	27.1
%RSD	.18220	.05345	.34501	.92302
#1	931.51	2488.0	19379.	2971.8
#2	930.81	2490.6	19376.	2927.2
#3	928.29	2489.2	19494.	2922.8

Zoom In Zoom Out

Sample Name: FC980-11F Acquired: 12/16/2022 17:44:57 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0342**	**.0097**	**.0886**	**.0177**	**-.0001**	**136.1**	**.0000**	**-.0002**
Stddev	.0007	.0223	.0019	.0019	.0004	.0001	.8	.000	.0000
%RSD	1156.	65.11	19.70	2.124	2.113	171.6	.6197	239.8	18.18
#1	.0002	.0139	.0098	.0865	.0180	.0001	136.8	.0000	-.0002
#2	.0005	.0306	.0077	.0895	.0179	-.0001	136.2	-.0001	-.0002
#3	-.0008	.0580	.0115	.0899	.0173	-.0002	135.2	.0000	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0191**	**.0587**	**1.104**	**.0011**	**9.281**	**.0028**	**.0053**	**32.91**
Stddev	.0002	.0005	.0012	.030	.0014	.096	.0000	.0001	.27
%RSD	12.74	2.497	2.058	2.759	130.2	1.035	1.454	2.581	.8302
#1	.0017	.0193	.0579	1.102	.0009	9.369	.0028	.0052	33.14
#2	.0017	.0186	.0582	1.136	.0025	9.296	.0028	.0054	32.97
#3	.0013	.0195	.0601	1.075	-.0002	9.179	.0029	.0054	32.61

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**-.0027**	**.0152**	**.0015**	**13.13**	**-.0001**	**1.064**	**.0015**	**-.0010**
Stddev	.0001	.0008	.0004	.0008	.03	.0004	.004	.0000	.0007
%RSD	5.017	29.20	2.563	54.79	.2366	553.7	.3896	2.947	73.02
#1	.0026	-.0031	.0147	.0006	13.10	.0001	1.068	.0015	-.0002
#2	.0028	-.0033	.0152	.0020	13.16	-.0005	1.065	.0016	-.0016
#3	.0029	-.0018	.0155	.0020	13.14	.0002	1.060	.0015	-.0012

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0823**	**.0168**
Stddev	.0004	.0002
%RSD	.5082	1.048
#1	.0819	.0169
#2	.0827	.0166
#3	.0823	.0167

Zoom In Zoom Out

Sample Name: FC980-11F Acquired: 12/16/2022 17:44:57 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**905.89**	**2462.1**	**19119.**	**2909.8**
Stddev	2.60	5.5	134.	23.2
%RSD	.28686	.22491	.70039	.79733
#1	908.64	2467.9	19233.	2890.9
#2	905.53	2456.9	19153.	2902.8
#3	903.48	2461.3	18972.	2935.7

Zoom In Zoom Out

Sample Name: FC980-12F Acquired: 12/16/2022 17:49:52 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0746**	**.2092**	**.0249**	**.0048**	**.0000**	**21.00**	**-.0001**	**-.0002**
Stddev	.0004	.0032	.0014	.0022	.0001	.0000	.04	.0001	.0001
%RSD	97.74	4.328	.6490	9.009	2.347	304.6	.1859	102.3	53.65
#1	-.0008	.0730	.2081	.0274	.0049	.0000	21.00	.0000	-.0003
#2	.0000	.0783	.2107	.0232	.0048	.0000	21.04	.0000	-.0001
#3	-.0003	.0724	.2087	.0240	.0047	.0000	20.96	-.0001	-.0002

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0066**	**.0862**	**2.978**	**.0030**	**2.912**	**.0027**	**.0037**	**7.942**
Stddev	.0003	.0001	.0034	.026	.0011	.015	.0000	.0002	.028
%RSD	16.14	2.083	3.892	.8779	37.26	.5028	1.407	4.513	.3579
#1	.0023	.0066	.0854	3.002	.0038	2.910	.0028	.0038	7.941
#2	.0024	.0064	.0833	2.982	.0017	2.928	.0028	.0035	7.971
#3	.0018	.0067	.0899	2.950	.0034	2.899	.0027	.0036	7.915

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0003**	**.0005**	**-.0015**	**3.618**	**.0004**	**.1660**	**.0017**	**.0000**
Stddev	.0001	.0002	.0009	.0018	.004	.0003	.0004	.0001	.0008
%RSD	57.13	80.74	201.5	121.3	.1220	67.24	.2240	4.429	2499.
#1	.0001	.0000	-.0006	-.0014	3.614	.0001	.1659	.0018	.0003
#2	.0002	.0004	.0013	.0003	3.623	.0005	.1664	.0018	-.0009
#3	.0002	.0004	.0007	-.0034	3.617	.0006	.1656	.0016	.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0041**	**.0183**
Stddev	.0002	.0001
%RSD	4.851	.6424
#1	.0042	.0182
#2	.0039	.0184
#3	.0043	.0183

Zoom In Zoom Out

Sample Name: FC980-12F Acquired: 12/16/2022 17:49:52 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**959.96**	**2521.9**	**19554.**	**2915.2**
Stddev	2.35	4.5	134.	22.1
%RSD	.24506	.17672	.68462	.75840
#1	959.04	2521.4	19545.	2917.5
#2	958.20	2517.8	19424.	2892.0
#3	962.63	2526.6	19692.	2936.0

Zoom In Zoom Out

Sample Name: FC1124-4 Acquired: 12/16/2022 17:54:45 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0334**	**.0189**	**.0280**	**.0435**	**-.0001**	**18.52**	**-.0004**	**-.0002**
Stddev	.000	.0101	.0018	.0022	.0002	.0000	.05	.0000	.0002
%RSD	1279.	30.23	9.506	7.996	.4026	64.92	.2519	4.574	83.16
#1	-.0002	.0402	.0184	.0273	.0434	.0000	18.47	-.0004	-.0002
#2	.0004	.0218	.0209	.0305	.0435	-.0001	18.52	-.0004	.0000
#3	-.0003	.0382	.0174	.0262	.0437	-.0001	18.56	-.0004	-.0004

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**.0054**	**9.743**	**4.101**	**.0039**	**2.981**	**3.204**	**.0050**	**48.18**
Stddev	.0001	.0001	.031	.032	.0002	.029	.013	.0001	.07
%RSD	3.444	2.284	.3209	.7697	4.266	.9813	.3976	1.127	.1468
#1	.0033	.0054	9.745	4.104	.0040	2.965	3.205	.0051	48.16
#2	.0031	.0053	9.711	4.068	.0037	2.963	3.216	.0051	48.12
#3	.0031	.0055	9.773	4.131	.0040	3.015	3.191	.0050	48.26

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**-.0008**	**.0021**	**.0004**	**4.442**	**.0003**	**.1328**	**.0016**	**.0032**
Stddev	.0001	.0005	.0016	.0020	.012	.0002	.0008	.0002	.0014
%RSD	3.144	66.32	75.87	517.1	.2729	89.50	.5831	12.06	42.99
#1	.0016	-.0011	.0025	-.0009	4.448	.0003	.1319	.0017	.0026
#2	.0016	-.0012	.0034	.0027	4.450	.0005	.1331	.0017	.0048
#3	.0017	-.0002	.0003	-.0007	4.428	.0000	.1334	.0014	.0023

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0006**	**.0045**
Stddev	.0001	.0000
%RSD	21.22	.5581
#1	-.0006	.0046
#2	-.0008	.0045
#3	-.0005	.0045

Zoom In Zoom Out

Sample Name: FC1124-4 Acquired: 12/16/2022 17:54:45 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**923.66**	**2477.4**	**19101.**	**2872.3**
Stddev	4.08	8.7	102.	12.7
%RSD	.44193	.35238	.53593	.44306
#1	928.31	2485.0	19135.	2866.1
#2	922.00	2467.9	18985.	2886.9
#3	920.67	2479.5	19181.	2863.8

Zoom In Zoom Out

Sample Name: FC1124-5 Acquired: 12/16/2022 17:59:37 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0137**	**-.0010**	**-.0027**	**.0014**	**.0000**	**.0774**	**.0000**	**-.0002**
Stddev	.0005	.0097	.0003	.0020	.0004	.000	.0024	.000	.0000
%RSD	149.5	71.18	24.91	72.32	26.91	107.9	3.096	187.6	7.667
#1	-.0006	.0248	-.0013	-.0043	.0017	-.0001	.0801	-.0001	-.0003
#2	-.0005	.0090	-.0008	-.0005	.0014	.0000	.0761	.0000	-.0002
#3	.0002	.0071	-.0010	-.0034	.0010	.0000	.0758	.0000	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0044**	**.0016**	**.0479**	**.0017**	**.0060**	**.0002**	**-.0002**	**.0690**
Stddev	.0001	.0003	.0010	.0188	.0008	.0092	.0001	.0001	.0040
%RSD	23.17	6.959	62.88	39.23	50.31	153.9	26.06	56.03	5.862
#1	.0003	.0045	.0012	.0692	.0026	.0009	.0001	-.0001	.0646
#2	.0004	.0045	.0009	.0338	.0010	.0167	.0002	-.0002	.0727
#3	.0005	.0040	.0028	.0407	.0015	.0004	.0002	-.0003	.0696

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0008**	**.0009**	**.0022**	**.0378**	**.0005**	**.0012**	**.0001**	**-.0008**
Stddev	.0002	.0001	.0016	.0013	.0002	.0002	.0001	.0000	.0006
%RSD	92.51	16.33	176.0	60.79	.4494	49.73	6.594	49.08	75.93
#1	.0003	-.0009	.0022	.0011	.0377	.0004	.0012	.0001	-.0012
#2	.0001	-.0008	-.0009	.0037	.0380	.0007	.0011	.0000	-.0009
#3	.0001	-.0007	.0015	.0018	.0377	.0002	.0012	.0001	-.0001

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0001**	**.0028**
Stddev	.0002	.0001
%RSD	341.0	4.666
#1	-.0002	.0026
#2	-.0002	.0029
#3	.0002	.0028

Zoom In Zoom Out

Sample Name: FC1124-5 Acquired: 12/16/2022 17:59:37 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**992.28**	**2572.8**	**20051.**	**2946.9**
Stddev	3.33	8.4	132.	44.3
%RSD	.33512	.32650	.65713	1.5020
#1	990.63	2563.1	20193.	2919.5
#2	996.11	2576.6	20026.	2998.0
#3	990.10	2578.6	19933.	2923.3

Zoom In Zoom Out

Sample Name: FC1189-1 Acquired: 12/16/2022 18:04:34 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.3406**	**.1230**	**.0229**	**.0082**	**.0000**	**69.45**	**-.0003**	**-.0001**
Stddev	.0004	.0034	.0003	.0009	.0001	.0000	.26	.0001	.0001
%RSD	80.73	1.008	.2282	3.715	1.516	104.9	.3766	18.78	116.7
#1	-.0006	.3446	.1231	.0237	.0082	.0001	69.70	-.0002	-.0001
#2	-.0008	.3386	.1227	.0220	.0081	.0000	69.47	-.0003	.0000
#3	-.0001	.3387	.1233	.0230	.0083	.0001	69.17	-.0003	.0000

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0039**	**5.221**	**1.131**	**.0030**	**5.729**	**.1616**	**.0002**	**2.036**
Stddev	.0001	.0004	.025	.018	.0012	.033	.0006	.0001	.012
%RSD	7.349	9.971	.4855	1.631	41.02	.5706	.3978	42.96	.6007
#1	.0013	.0036	5.250	1.123	.0016	5.756	.1619	.0003	2.046
#2	.0013	.0044	5.210	1.152	.0036	5.738	.1619	.0001	2.022
#3	.0012	.0038	5.203	1.118	.0038	5.692	.1608	.0002	2.039

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0016**	**.0015**	**-.0021**	**3.130**	**.0009**	**.4067**	**.0031**	**-.0003**
Stddev	.0001	.0007	.0001	.0004	.003	.0002	.0032	.0002	.0010
%RSD	18.28	42.13	4.926	18.95	.0858	19.54	.7825	7.862	364.0
#1	.0006	-.0024	.0015	-.0016	3.133	.0010	.4101	.0030	-.0014
#2	.0009	-.0014	.0015	-.0023	3.128	.0007	.4059	.0029	.0001
#3	.0006	-.0011	.0016	-.0023	3.128	.0008	.4039	.0033	.0005

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0008**	**.0062**
Stddev	.0001	.0000
%RSD	9.944	.4937
#1	.0008	.0062
#2	.0007	.0061
#3	.0008	.0062

Zoom In Zoom Out

Sample Name: FC1189-1 Acquired: 12/16/2022 18:04:34 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**946.38**	**2506.1**	**19423.**	**2969.7**
Stddev	1.77	9.3	31.	16.0
%RSD	.18741	.37116	.16031	.54031
#1	944.62	2499.1	19444.	2954.2
#2	948.16	2516.6	19387.	2986.2
#3	946.36	2502.5	19438.	2968.6

Zoom In Zoom Out

Sample Name: FC1189-2 Acquired: 12/16/2022 18:09:28 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**5.883**	**.0072**	**.0365**	**.0748**	**.0003**	**50.14**	**.0003**	**.0010**
Stddev	.0004	.030	.0004	.0013	.0001	.0001	.16	.0001	.0001
%RSD	63.28	.5080	4.991	3.482	.1085	42.83	.3267	27.70	11.68
#1	-.0005	5.875	.0070	.0369	.0747	.0003	50.19	.0003	.0009
#2	-.0004	5.916	.0070	.0376	.0749	.0001	50.27	.0002	.0010
#3	-.0012	5.858	.0076	.0351	.0747	.0004	49.96	.0003	.0011

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066**	**.0135**	**4.138**	**45.33**	**.0134**	**13.38**	**.1095**	**.0013**	F **113.3**
Stddev	.0005	.0003	.019	.23	.0007	.05	.0002	.0002	.4
%RSD	7.246	2.294	.4602	.5075	5.583	.3461	.1677	12.99	.3322
#1	.0070	.0136	4.156	45.39	.0140	13.41	.1094	.0015	113.3
#2	.0067	.0137	4.138	45.52	.0137	13.39	.1095	.0014	113.6
#3	.0061	.0131	4.118	45.07	.0126	13.33	.1098	.0011	112.9

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0158**	**.0148**	**.0003**	**.0005**	**7.429**	**.0008**	**.6211**	**.0020**	**.0003**
Stddev	.0000	.0002	.0015	.0005	.009	.0003	.0006	.0002	.0003
%RSD	.1991	1.617	515.4	95.11	.1217	34.45	.0939	9.465	101.0
#1	.0158	.0147	.0000	.0002	7.439	.0006	.6216	.0019	.0002
#2	.0157	.0151	-.0011	.0011	7.426	.0006	.6212	.0022	.0001
#3	.0158	.0147	.0019	.0002	7.422	.0011	.6204	.0018	.0007

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0076**	**.0716**
Stddev	.0001	.0001
%RSD	1.443	.1177
#1	.0075	.0716
#2	.0077	.0716
#3	.0075	.0717

Zoom In Zoom Out

Sample Name: FC1189-2 Acquired: 12/16/2022 18:09:28 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**887.02**	**2478.0**	**19009.**	**2915.6**
Stddev	.41	4.4	93.	17.0
%RSD	.04638	.17883	.48997	.58404
#1	886.92	2477.3	19080.	2914.9
#2	886.68	2473.9	19043.	2898.9
#3	887.48	2482.7	18903.	2932.9

Zoom In Zoom Out

Sample Name: FC1189-3 Acquired: 12/16/2022 18:14:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**31.86**	**.0056**	**.0467**	**.0336**	**.0002**	**83.50**	**-.0003**	**.0009**
Stddev	.0003	2.77	.0009	.0012	.0031	.0001	7.29	.0001	.0001
%RSD	75.71	8.688	16.54	2.466	9.288	41.06	8.731	35.33	13.80
#1	-.0001	28.71	.0045	.0453	.0300	.0001	75.21	-.0002	.0008
#2	-.0005	33.01	.0061	.0472	.0351	.0002	86.37	-.0003	.0010
#3	-.0007	33.88	.0062	.0474	.0357	.0002	88.91	-.0004	.0010

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0450**	**.0089**	**7.964**	**11.01**	**.0099**	**6.747**	**.0703**	**.0076**	**2.710**
Stddev	.0013	.0005	.683	.94	.0018	.573	.0017	.0002	.220
%RSD	2.864	5.870	8.579	8.513	18.33	8.486	2.453	3.162	8.114
#1	.0443	.0083	7.187	9.956	.0079	6.097	.0686	.0076	2.458
#2	.0464	.0093	8.235	11.34	.0105	6.965	.0721	.0078	2.809
#3	.0441	.0090	8.470	11.74	.0113	7.179	.0702	.0074	2.863

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**.0247**	**.0003**	**-.0025**	**30.59**	**.0010**	**.3139**	**.0838**	**-.0017**
Stddev	.0002	.0018	.0004	.0002	.60	.0003	.0283	.0024	.0007
%RSD	3.614	7.094	172.7	8.061	1.964	27.62	9.000	2.875	43.85
#1	.0056	.0244	-.0001	-.0027	30.38	.0009	.2817	.0814	-.0025
#2	.0059	.0266	.0007	-.0023	31.27	.0013	.3257	.0862	-.0011
#3	.0055	.0231	.0002	-.0025	30.13	.0008	.3344	.0840	-.0014

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0402**	**.0162**
Stddev	.0012	.0003
%RSD	2.888	2.153
#1	.0391	.0162
#2	.0414	.0166
#3	.0400	.0159

Zoom In Zoom Out

Sample Name: FC1189-3 Acquired: 12/16/2022 18:14:19 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**918.81**	**2516.3**	**19349.**	**3013.1**
Stddev	14.34	48.1	479.	228.6
%RSD	1.5613	1.9117	2.4777	7.5860
#1	926.11	2534.1	19793.	3271.9
#2	902.28	2461.9	18841.	2929.0
#3	928.03	2553.0	19414.	2838.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 18:19:09 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2472**	**40.84**	**2.007**	F **1.991**	**2.102**	**2.067**	**40.09**	**2.003**	**2.006**
Stddev	.0009	.16	.010	.011	.009	.000	.06	.007	.009
%RSD	.3455	.3795	.5143	.5424	.4409	.0081	.1403	.3463	.4254
#1	.2467	40.67	2.004	1.982	2.091	2.067	40.14	1.999	2.002
#2	.2482	40.89	2.019	2.003	2.106	2.067	40.10	2.011	2.016
#3	.2467	40.97	1.999	1.988	2.108	2.067	40.03	1.999	2.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.031**	**2.039**	**41.45**	**40.26**	**2.031**	**40.77**	**2.078**	**1.992**	**41.23**
Stddev	.008	.007	.12	.04	.003	.07	.007	.009	.10
%RSD	.3833	.3405	.2897	.1082	.1522	.1647	.3522	.4707	.2444
#1	2.027	2.032	41.32	40.26	2.031	40.85	2.070	1.987	41.13
#2	2.040	2.046	41.52	40.30	2.035	40.73	2.079	2.003	41.24
#3	2.025	2.040	41.53	40.22	2.029	40.74	2.084	1.986	41.33
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.979**	**2.016**	**1.992**	**2.007**	**2.008**	**1.992**	**2.031**	**2.036**	**1.992**
Stddev	.005	.012	.009	.002	.007	.006	.001	.007	.015
%RSD	.2607	.5680	.4274	.1076	.3398	.3202	.0396	.3231	.7424
#1	1.975	2.005	1.987	2.005	2.005	1.987	2.031	2.032	1.980
#2	1.985	2.027	2.002	2.009	2.016	1.999	2.030	2.044	2.009
#3	1.977	2.016	1.987	2.008	2.003	1.990	2.032	2.033	1.987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 18:19:09 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.025**	**1.944**
Stddev	.012	.004
%RSD	.5787	.2007
#1	2.021	1.939
#2	2.039	1.947
#3	2.016	1.944
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**882.40**	**2461.3**	**19157.**	**2886.6**
Stddev	5.59	8.0	28.	7.1
%RSD	.63343	.32352	.14530	.24625
#1	888.31	2467.9	19184.	2894.5
#2	877.20	2452.5	19128.	2884.9
#3	881.70	2463.4	19157.	2880.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 18:23:42 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0111**	**.0000**	**-.0009**	**.0004**	**.0000**	**-.0009**	**.0000**	**-.0001**
Stddev	.0001	.0067	.0011	.0014	.0001	.0001	.0025	.000	.0002
%RSD	73.88	60.57	8889.	156.7	21.22	225.5	272.5	2115.	249.2
#1	-.0003	.0183	.0013	.0003	.0004	.0000	-.0015	-.0001	-.0002
#2	.0000	.0103	-.0007	-.0006	.0003	.0001	.0018	.0001	.0001
#3	-.0002	.0049	-.0006	-.0025	.0004	.0000	-.0030	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**.0019**	**.0636**	**.0010**	**-.0139**	**.0000**	**.0002**	**.0336**
Stddev	.0001	.0001	.0024	.0048	.0017	.0137	.0000	.0002	.0057
%RSD	109.4	40.17	125.2	7.555	179.3	98.70	129.1	64.17	17.05
#1	.0002	-.0001	.0007	.0687	.0002	-.0235	.0000	.0003	.0394
#2	.0000	-.0002	.0048	.0592	.0029	.0018	.0001	.0004	.0279
#3	.0002	-.0003	.0004	.0630	-.0003	-.0200	.0000	.0001	.0335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0004**	F **.0021**	**-.0004**	**-.0003**	**-.0002**	**.0000**	**.0001**	**.0009**
Stddev	.0002	.0002	.0003	.0015	.0009	.0002	.0000	.0000	.0015
%RSD	294.6	48.56	12.59	362.0	358.1	110.6	54.41	46.76	162.8
#1	.0002	-.0005	.0020	-.0004	-.0011	-.0002	.0000	.0001	.0015
#2	-.0001	-.0002	.0018	.0011	-.0004	.0000	.0001	.0000	-.0008
#3	.0001	-.0005	.0024	-.0020	.0007	-.0005	.0000	.0001	.0020
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0020						
Low Limit			-.0020						

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 18:23:42 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**-.0001**	**.0000**
Stddev	.0003	.000
%RSD	309.2	95.02
#1	-.0001	.0000
#2	-.0003	-.0001
#3	.0002	.0000
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1006.0**	**2609.7**	**19946.**	**2938.3**
Stddev	4.3	9.4	36.	22.5
%RSD	.43129	.35939	.18066	.76564
#1	1010.0	2619.7	19939.	2922.0
#2	1001.4	2601.0	19913.	2929.1
#3	1006.5	2608.5	19984.	2964.0

Zoom In Zoom Out

Sample Name: FC1189-4 Acquired: 12/16/2022 18:28:38 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**18.97**	**.0049**	**.0226**	**.0337**	**.0001**	**53.16**	**-.0001**	**.0004**
Stddev	.0004	.11	.0004	.0005	.0003	.0000	.11	.0000	.0000
%RSD	181.8	.5581	9.081	2.193	.9582	17.63	.2010	23.01	2.304
#1	-.0004	19.07	.0047	.0222	.0337	.0001	53.23	-.0001	.0004
#2	-.0005	18.98	.0045	.0232	.0340	.0002	53.21	-.0001	.0004
#3	.0002	18.86	.0054	.0226	.0333	.0001	53.04	-.0001	.0004

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0235**	**.0087**	**4.272**	**5.447**	**.0067**	**2.825**	**.1585**	**.0066**	**1.805**
Stddev	.0001	.0000	.021	.035	.0021	.036	.0011	.0002	.006
%RSD	.4960	.4720	.5013	.6405	30.84	1.274	.7109	2.909	.3592
#1	.0234	.0087	4.296	5.459	.0070	2.864	.1590	.0068	1.800
#2	.0234	.0087	4.263	5.408	.0085	2.794	.1593	.0067	1.813
#3	.0236	.0086	4.257	5.475	.0044	2.816	.1572	.0064	1.803

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061**	**.0129**	**.0005**	**.0001**	**15.39**	**.0007**	**.1037**	**.0764**	**-.0014**
Stddev	.0000	.0006	.0006	.0035	.01	.0002	.0003	.0014	.0005
%RSD	.5530	4.838	131.3	3557.	.0515	24.88	.2678	1.847	40.46
#1	.0061	.0123	.0012	.0041	15.40	.0005	.1039	.0773	-.0010
#2	.0061	.0129	-.0001	-.0019	15.38	.0007	.1038	.0772	-.0020
#3	.0061	.0136	.0003	-.0019	15.39	.0008	.1034	.0748	-.0011

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0180**	**.0146**
Stddev	.0003	.0001
%RSD	1.611	.7093
#1	.0177	.0146
#2	.0179	.0145
#3	.0183	.0147

Zoom In Zoom Out

Sample Name: FC1189-4 Acquired: 12/16/2022 18:28:38 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**928.88**	**2503.9**	**19385.**	**2918.7**
Stddev	2.88	8.0	97.	9.2
%RSD	.31053	.31953	.49879	.31359
#1	925.76	2496.2	19306.	2909.0
#2	931.45	2512.2	19356.	2927.3
#3	929.42	2503.3	19493.	2919.7

Zoom In Zoom Out

Sample Name: FC1189-5 Acquired: 12/16/2022 18:33:30 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**4.590**	**.0005**	**.0328**	**.0684**	**.0002**	**46.10**	**.0004**	**.0011**
Stddev	.0002	.010	.0012	.0011	.0002	.0000	.07	.0000	.0001
%RSD	37.96	.2170	262.3	3.203	.2903	12.42	.1601	7.468	5.707
#1	-.0005	4.579	-.0005	.0321	.0684	.0002	46.07	.0004	.0012
#2	-.0005	4.599	.0001	.0323	.0682	.0002	46.18	.0004	.0011
#3	-.0009	4.591	.0019	.0340	.0686	.0002	46.04	.0004	.0011

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039**	**.0055**	**1.948**	**32.29**	**.0122**	**10.35**	**.1141**	**.0014**	F **81.91**
Stddev	.0003	.0002	.004	.08	.0012	.05	.0006	.0001	.23
%RSD	7.237	4.480	.1937	.2433	10.07	.4855	.4961	5.290	.2800
#1	.0039	.0053	1.949	32.21	.0120	10.29	.1143	.0014	81.65
#2	.0036	.0056	1.951	32.36	.0110	10.38	.1135	.0015	82.08
#3	.0042	.0058	1.944	32.32	.0135	10.38	.1145	.0013	82.00

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0122**	**.0003**	**.0011**	**-.0010**	**8.487**	**.0006**	**.4603**	**.0075**	**-.0005**
Stddev	.0002	.0005	.0003	.0005	.020	.0006	.0018	.0002	.0001
%RSD	1.518	156.4	26.71	51.95	.2297	92.90	.3993	2.098	13.64
#1	.0121	.0005	.0013	-.0005	8.474	.0001	.4597	.0075	-.0005
#2	.0124	-.0002	.0008	-.0015	8.510	.0012	.4624	.0074	-.0005
#3	.0122	.0008	.0013	-.0010	8.478	.0006	.4588	.0077	-.0004

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0056**	**.0594**
Stddev	.0004	.0004
%RSD	6.252	.6650
#1	.0059	.0589
#2	.0052	.0597
#3	.0057	.0595

Zoom In Zoom Out

Sample Name: FC1189-5 Acquired: 12/16/2022 18:33:30 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**887.73**	**2445.8**	**18758.**	**2855.8**
Stddev	1.02	6.8	35.	12.8
%RSD	.11544	.27681	.18924	.44796
#1	888.59	2451.9	18718.	2852.6
#2	886.59	2438.5	18775.	2844.9
#3	887.99	2447.0	18783.	2869.9

Zoom In Zoom Out

Sample Name: FC1192-22 Acquired: 12/16/2022 18:38:21 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1937**	**.0002**	**.0084**	**.0106**	**.0000**	**3.703**	**.0000**	**.0001**
Stddev	.000	.0098	.0015	.0011	.0004	.000	.009	.000	.0002
%RSD	1983.	5.085	661.9	13.43	3.830	248.1	.2472	2366.	235.3
#1	-.0002	.2049	.0017	.0083	.0109	.0000	3.701	.0000	.0001
#2	.0004	.1897	-.0012	.0073	.0101	.0000	3.713	.0000	.0002
#3	-.0003	.1864	.0001	.0096	.0108	.0000	3.695	.0000	-.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0039**	**.0088**	**.3313**	**.0019**	**.5371**	**.0023**	**-.0002**	**.8338**
Stddev	.0004	.0001	.0016	.0181	.0009	.0180	.0001	.0001	.0035
%RSD	65.16	2.471	17.93	5.466	47.88	3.358	2.335	34.01	.4200
#1	.0006	.0039	.0073	.3516	.0008	.5180	.0023	-.0002	.8347
#2	.0002	.0040	.0087	.3171	.0024	.5393	.0024	-.0003	.8368
#3	.0011	.0038	.0105	.3251	.0024	.5539	.0023	-.0002	.8299

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0005**	**.0010**	**.0005**	**1.100**	**.0005**	**.0131**	**.0037**	**-.0002**
Stddev	.0002	.0008	.0015	.0024	.007	.0004	.0001	.0005	.0003
%RSD	6.921	157.8	145.6	465.0	.6245	66.86	.7263	13.06	157.9
#1	.0033	-.0015	.0003	.0016	1.108	.0004	.0132	.0032	.0000
#2	.0031	-.0002	.0027	-.0023	1.098	.0010	.0131	.0040	.0000
#3	.0029	.0001	.0000	.0022	1.094	.0003	.0130	.0040	-.0005

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0005**	**.0221**
Stddev	.0003	.0003
%RSD	63.60	1.130
#1	.0002	.0224
#2	.0004	.0220
#3	.0008	.0220

Zoom In Zoom Out

Sample Name: FC1192-22 Acquired: 12/16/2022 18:38:21 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**976.31**	**2551.8**	**19430.**	**2915.5**
Stddev	4.93	15.7	126.	9.2
%RSD	.50487	.61333	.64821	.31461
#1	971.00	2533.7	19429.	2924.1
#2	977.19	2561.3	19305.	2905.8
#3	980.74	2560.4	19556.	2916.5

Zoom In Zoom Out

Sample Name: FC1011-1 Acquired: 12/16/2022 18:43:14 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0057**	**.0164**	**-.0036**	**.5310**	**.0036**	**-.0003**	**295.7**	**-.0023**	**-.0013**
Stddev	.0028	.0680	.0080	.0059	.0009	.0006	.9	.0004	.0011
%RSD	48.38	415.5	223.7	1.114	26.00	184.8	.3094	16.64	84.02
#1	-.0027	-.0505	-.0023	.5309	.0025	-.0009	296.8	-.0021	-.0023
#2	-.0062	.0855	-.0121	.5252	.0041	.0003	295.3	-.0021	-.0001
#3	-.0082	.0141	.0037	.5370	.0042	-.0004	295.1	-.0027	-.0016

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**.0056**	**56.15**	**15.79**	**.7627**	**393.2**	**.0172**	**-.0003**	F **1631.**
Stddev	.0011	.0009	.25	.09	.0034	1.1	.0004	.0005	21.
%RSD	41.50	16.93	.4508	.5465	.4410	.2879	2.121	166.2	1.299
#1	.0026	.0046	56.44	15.80	.7630	394.3	.0170	.0001	1626.
#2	.0016	.0065	55.98	15.88	.7592	393.1	.0176	-.0008	1655.
#3	.0039	.0056	56.03	15.70	.7659	392.0	.0170	-.0001	1613.

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**-.0135**	**.0020**	**.3033**	**5.430**	**.0146**	**3.793**	**.0066**	**-.0048**
Stddev	.0005	.0021	.0066	.0109	.009	.0023	.017	.0005	.0045
%RSD	44.95	15.40	323.2	3.584	.1691	15.72	.4423	7.070	94.06
#1	-.0007	-.0134	.0094	.3156	5.423	.0160	3.809	.0064	-.0059
#2	-.0016	-.0114	-.0034	.2953	5.426	.0158	3.776	.0071	.0002
#3	-.0008	-.0156	.0001	.2989	5.440	.0119	3.794	.0063	-.0085

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0047**	**.0085**
Stddev	.0013	.0001
%RSD	27.06	1.422
#1	.0040	.0086
#2	.0061	.0084
#3	.0039	.0086

Zoom In Zoom Out

Sample Name: FC1011-1 Acquired: 12/16/2022 18:43:14 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**848.46**	**2411.4**	**18287.**	**2867.2**
Stddev	1.88	4.4	114.	38.3
%RSD	.22191	.18202	.62565	1.3366
#1	847.49	2408.6	18212.	2856.4
#2	847.27	2409.2	18231.	2835.4
#3	850.63	2416.5	18419.	2909.7

Zoom In Zoom Out

Sample Name: FC1011-2 Acquired: 12/16/2022 18:48:15 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0032**	**.0924**	**-.0038**	**.5087**	**.0006**	**-.0002**	**270.5**	**-.0002**	**-.0003**
Stddev	.0022	.0976	.0048	.0175	.0006	.0001	1.8	.0003	.0005
%RSD	69.26	105.6	126.2	3.437	95.95	27.49	.6493	156.6	139.2
#1	-.0052	-.0073	.0015	.4951	.0001	-.0002	268.7	-.0002	-.0004
#2	-.0036	.0967	-.0052	.5284	.0013	-.0002	270.5	-.0006	.0002
#3	-.0008	.1877	-.0076	.5026	.0005	-.0003	272.2	.0001	-.0008

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0101**	**.0754**	**14.63**	**.7055**	**361.3**	**.0008**	**-.0008**	F **1484.**
Stddev	.0016	.0017	.0247	.30	.0079	2.4	.0000	.0012	27.
%RSD	295.6	16.90	32.78	2.082	1.116	.6553	5.820	149.0	1.792
#1	.0013	.0105	.0547	14.40	.6989	358.7	.0008	-.0003	1499.
#2	-.0013	.0116	.1028	14.52	.7033	361.7	.0008	.0000	1454.
#3	.0016	.0082	.0688	14.98	.7142	363.4	.0007	-.0022	1501.

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0084**	**.0026**	**.2844**	**4.958**	**-.0001**	**3.461**	**.0063**	**-.0018**
Stddev	.001	.0065	.0024	.0044	.020	.0011	.024	.0004	.0070
%RSD	6068.	76.99	90.23	1.558	.3964	1669.	.7011	5.564	396.5
#1	-.0007	-.0159	.0029	.2843	4.946	.0005	3.435	.0060	.0045
#2	.0009	-.0050	.0001	.2889	4.946	-.0013	3.464	.0062	-.0093
#3	-.0003	-.0044	.0048	.2801	4.980	.0006	3.484	.0067	-.0005

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0016**	**.0082**
Stddev	.0028	.0002
%RSD	179.1	2.681
#1	-.0042	.0080
#2	-.0019	.0082
#3	.0014	.0085

Zoom In Zoom Out

Sample Name: FC1011-2 Acquired: 12/16/2022 18:48:15 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**857.47**	**2425.6**	**18468.**	**2877.1**
Stddev	.97	2.7	68.	40.2
%RSD	.11360	.10983	.36655	1.3977
#1	857.45	2424.6	18468.	2887.6
#2	856.51	2423.6	18400.	2911.0
#3	858.45	2428.6	18535.	2832.7

Zoom In Zoom Out

Sample Name: FC1186-1 Acquired: 12/16/2022 18:53:16 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0050**	**.0113**	**.0884**	**.0226**	**-.0001**	**36.63**	**.0000**	**.0131**
Stddev	.0004	.0155	.0010	.0035	.0002	.0000	.20	.000	.0001
%RSD	312.0	306.7	8.528	3.907	.8075	87.99	.5546	114.6	1.073
#1	.0000	.0211	.0102	.0865	.0228	.0000	36.49	.0000	.0130
#2	.0006	.0037	.0119	.0924	.0224	-.0001	36.53	.0000	.0133
#3	-.0002	-.0097	.0119	.0863	.0226	-.0001	36.86	-.0001	.0131

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0175**	**.5179**	**7.068**	**.0038**	**5.027**	**1.692**	**.0000**	**20.13**
Stddev	.0001	.0001	.0034	.032	.0003	.044	.001	.0000	.11
%RSD	4.781	.7505	.6626	.4535	7.505	.8756	.0840	135.0	.5581
#1	.0023	.0175	.5178	7.031	.0041	4.978	1.692	.0001	20.04
#2	.0025	.0177	.5214	7.087	.0037	5.042	1.690	.0000	20.09
#3	.0024	.0174	.5145	7.086	.0036	5.062	1.692	.0000	20.26

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055**	**-.0002**	**.0005**	**-.0028**	**5.798**	**.0004**	**.2804**	**.0011**	**.0022**
Stddev	.0000	.0007	.0006	.0013	.006	.0007	.0016	.0001	.0009
%RSD	.4836	390.7	121.1	44.42	.1071	167.4	.5768	6.037	42.48
#1	.0055	-.0008	-.0001	-.0016	5.802	.0012	.2792	.0010	.0014
#2	.0055	.0006	.0005	-.0029	5.801	-.0001	.2798	.0011	.0032
#3	.0055	-.0003	.0010	-.0041	5.791	.0001	.2822	.0012	.0020

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0003**	**.0097**
Stddev	.0002	.0002
%RSD	73.27	1.998
#1	-.0002	.0095
#2	-.0001	.0098
#3	-.0006	.0098

Zoom In Zoom Out

Sample Name: FC1186-1 Acquired: 12/16/2022 18:53:16 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**934.38**	**2492.5**	**19196.**	**2900.5**
Stddev	.96	3.7	46.	22.2
%RSD	.10264	.14727	.23733	.76490
#1	933.27	2490.7	19146.	2913.1
#2	934.86	2490.0	19206.	2913.6
#3	934.99	2496.7	19235.	2874.9

Zoom In Zoom Out

Sample Name: FC1186-2 Acquired: 12/16/2022 18:58:09 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**.0186**	**1.397**	**.0768**	**.0515**	**.0000**	**45.24**	**-.0023**	**.0150**
Stddev	.0004	.0139	.004	.0013	.0001	.000	.06	.0001	.0001
%RSD	14.60	74.70	.2838	1.708	.2775	221.6	.1360	3.111	.4890
#1	-.0020	.0028	1.398	.0782	.0513	.0000	45.23	-.0022	.0150
#2	-.0027	.0241	1.393	.0756	.0516	.0000	45.18	-.0023	.0149
#3	-.0025	.0290	1.400	.0767	.0515	.0000	45.30	-.0022	.0150

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0032**	**63.85**	**8.096**	**.0025**	**6.337**	**2.091**	**.0001**	**12.16**
Stddev	.0003	.0002	.25	.022	.0011	.023	.010	.0002	.01
%RSD	19.42	6.187	.3859	.2757	42.40	.3600	.4901	142.7	.0886
#1	.0018	.0035	63.59	8.074	.0030	6.328	2.091	.0000	12.15
#2	.0012	.0031	63.88	8.118	.0013	6.320	2.101	.0001	12.16
#3	.0014	.0032	64.08	8.097	.0033	6.363	2.080	.0004	12.17

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0042**	**-.0044**	**.0006**	**-.0015**	**6.839**	**.0001**	**.3674**	**.0012**	**.0040**
Stddev	.0002	.0013	.0004	.0031	.012	.0007	.0011	.0001	.0015
%RSD	4.615	29.81	58.50	204.4	.1689	502.4	.3103	11.88	37.08
#1	.0042	-.0038	.0004	.0017	6.844	-.0003	.3671	.0011	.0034
#2	.0041	-.0035	.0010	-.0018	6.825	.0010	.3665	.0013	.0058
#3	.0045	-.0059	.0004	-.0045	6.846	-.0002	.3687	.0013	.0030

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0000**	**.0036**
Stddev	.0002	.0001
%RSD	737.6	1.510
#1	-.0001	.0035
#2	-.0002	.0036
#3	.0003	.0037

Zoom In Zoom Out

Sample Name: FC1186-2 Acquired: 12/16/2022 18:58:09 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**950.93**	**2536.7**	**19588.**	**2926.9**
Stddev	.27	2.3	35.	38.1
%RSD	.02854	.08938	.17867	1.3013
#1	950.66	2539.3	19549.	2969.2
#2	951.20	2535.0	19598.	2916.2
#3	950.91	2535.9	19616.	2895.3

Zoom In Zoom Out

Sample Name: FC1186-3 Acquired: 12/16/2022 19:02:59 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**.0213**	**2.352**	**.0094**	**.0122**	**.0000**	**19.73**	**-.0010**	**.0104**
Stddev	.0000	.0102	.005	.0032	.0002	.0000	.64	.0002	.0001
%RSD	.4843	47.94	.2014	34.29	1.375	256.7	3.259	20.55	.6667
#1	-.0018	.0124	2.355	.0097	.0123	.0000	20.04	-.0011	.0104
#2	-.0018	.0324	2.347	.0061	.0123	.0000	20.15	-.0012	.0104
#3	-.0018	.0190	2.355	.0125	.0120	.0000	18.99	-.0008	.0105

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0047**	**32.18**	**2.861**	**.0013**	**2.307**	**2.067**	**.0010**	**4.603**
Stddev	.0001	.0005	1.04	.073	.0018	.059	.018	.0002	.142
%RSD	20.56	9.964	3.231	2.550	139.6	2.552	.8735	21.16	3.092
#1	.0008	.0052	32.76	2.870	.0033	2.346	2.081	.0008	4.681
#2	.0005	.0046	32.80	2.930	-.0001	2.336	2.047	.0009	4.690
#3	.0008	.0042	30.98	2.785	.0006	2.239	2.073	.0012	4.439

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**-.0023**	**-.0001**	**-.0004**	**4.977**	**.0003**	**.1387**	**.0008**	**.0037**
Stddev	.0003	.0002	.0012	.0015	.021	.0004	.0044	.0000	.0004
%RSD	6.883	9.844	834.1	336.0	.4228	106.5	3.204	3.108	9.572
#1	.0038	-.0024	-.0014	-.0019	4.955	.0007	.1408	.0009	.0036
#2	.0042	-.0020	.0001	-.0005	4.979	.0002	.1416	.0009	.0035
#3	.0044	-.0023	.0009	.0011	4.997	.0000	.1336	.0008	.0041

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0006**	**.0029**
Stddev	.0004	.0000
%RSD	67.62	.1476
#1	-.0007	.0029
#2	-.0001	.0030
#3	-.0009	.0029

Zoom In Zoom Out

Sample Name: FC1186-3 Acquired: 12/16/2022 19:02:59 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**961.29**	**2516.0**	**19441.**	**2996.5**
Stddev	.58	7.0	156.	88.1
%RSD	.06030	.27638	.80429	2.9396
#1	961.19	2521.0	19391.	2963.6
#2	961.92	2518.8	19616.	2929.6
#3	960.78	2508.0	19315.	3096.3

Zoom In Zoom Out

Sample Name: FC1011-1 Acquired: 12/16/2022 19:07:50 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0389**	**.8592**	**-.0701**	**-.0366**	**.0280**	**-.0057**	**264.7**	**-.0031**	**-.0080**
Stddev	.0573	1.106	.1155	.1286	.0077	.0022	.5	.0055	.0112
%RSD	147.4	128.7	164.8	351.6	27.58	37.87	.1870	177.2	140.2
#1	-.0719	.5060	-.1552	-.1850	.0312	-.0081	264.3	-.0072	-.0044
#2	.0273	-.0266	-.1166	.0331	.0192	-.0041	264.5	.0031	.0010
#3	-.0719	2.098	.0614	.0421	.0336	-.0048	265.2	-.0052	-.0205

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073**	**.0138**	**46.87**	**14.52**	**.7453**	**337.7**	**.0260**	**-.0397**	**1426.**
Stddev	.0106	.0096	.70	4.88	.0227	.9	.0024	.0079	2.
%RSD	145.3	69.13	1.491	33.61	3.040	.2534	9.272	19.86	.1413
#1	.0051	.0248	47.56	9.103	.7659	338.0	.0232	-.0373	1424.
#2	-.0020	.0097	46.89	15.89	.7210	336.8	.0271	-.0485	1428.
#3	.0189	.0070	46.16	18.57	.7489	338.4	.0276	-.0333	1426.

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0372**	**-.1015**	**-.1498**	**.0707**	**4.845**	**.0408**	**3.270**	**.0054**	**-.0395**
Stddev	.0176	.0490	.1281	.1897	.086	.0358	.005	.0098	.0189
%RSD	47.22	48.29	85.51	268.5	1.785	87.76	.1692	183.0	47.90
#1	.0183	-.0802	-.0145	.2815	4.852	.0404	3.270	.0043	-.0197
#2	.0530	-.0667	-.2692	.0169	4.755	.0052	3.265	.0156	-.0574
#3	.0401	-.1575	-.1658	-.0864	4.928	.0767	3.276	-.0039	-.0415

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0141**	**.0027**
Stddev	.0455	.0057
%RSD	321.9	212.7
#1	.0486	.0080
#2	.0313	-.0033
#3	-.0375	.0034

Zoom In Zoom Out

Sample Name: FC1011-1 Acquired: 12/16/2022 19:07:50 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**993.07**	**2525.1**	**20413.**	**3038.6**
Stddev	1.50	.6	131.	7.3
%RSD	.15103	.02470	.64016	.24146
#1	994.34	2525.7	20296.	3046.9
#2	993.46	2525.2	20554.	3035.7
#3	991.42	2524.4	20389.	3033.2

Zoom In Zoom Out

Sample Name: FC1011-2 Acquired: 12/16/2022 19:12:44 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0369**	**.9420**	**.0342**	**-.0117**	**.0615**	**-.0072**	**237.1**	**-.0041**	**-.0031**
Stddev	.0417	.6208	.0655	.1938	.0233	.0024	3.0	.0030	.0102
%RSD	113.1	65.90	191.2	1657.	37.86	34.20	1.277	73.50	330.8
#1	-.0733	.2305	.0792	.1976	.0460	-.0050	237.9	-.0007	-.0145
#2	-.0460	1.373	.0644	-.0476	.0883	-.0098	239.6	-.0062	.0052
#3	.0086	1.222	-.0409	-.1851	.0503	-.0067	233.7	-.0053	.0001

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0168**	**.0213**	**-.2786**	**14.58**	**.8137**	**305.9**	**-.0023**	**-.0473**	**1283.**
Stddev	.0318	.0070	.1145	1.44	.0446	5.2	.0043	.0038	11.
%RSD	189.5	32.95	41.10	9.898	5.479	1.688	184.6	7.983	.8662
#1	.0091	.0199	-.4042	14.78	.8232	304.7	-.0073	-.0516	1283.
#2	-.0522	.0151	-.1800	15.91	.8528	311.6	-.0003	-.0457	1294.
#3	-.0071	.0289	-.2517	13.05	.7652	301.4	.0006	-.0446	1271.

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**-.0759**	**-.0416**	**.0741**	**4.215**	**.0198**	**2.943**	**-.0068**	**.0641**
Stddev	.0249	.0499	.0402	.0240	.243	.0112	.030	.0023	.0482
%RSD	399.3	65.71	96.72	32.34	5.774	56.39	1.011	33.47	75.25
#1	.0348	-.0337	-.0722	.0795	4.243	.0158	2.953	-.0066	.0956
#2	-.0110	-.0632	-.0566	.0480	3.958	.0324	2.967	-.0047	.0881
#3	-.0051	-.1310	.0040	.0950	4.443	.0112	2.910	-.0092	.0086

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**-.0028**	**.0202**
Stddev	.0167	.0068
%RSD	600.8	33.47
#1	-.0026	.0246
#2	.0138	.0124
#3	-.0196	.0237

Zoom In Zoom Out

Sample Name: FC1011-2 Acquired: 12/16/2022 19:12:44 Type: Unk
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 100.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**991.03**	**2541.3**	**20140.**	**2965.4**
Stddev	38.91	99.2	51.	50.0
%RSD	3.9266	3.9041	.25239	1.6853
#1	988.84	2537.6	20139.	2974.9
#2	1031.0	2642.4	20090.	2911.3
#3	953.26	2444.1	20192.	3009.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 19:17:37 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2449**	**39.52**	**1.992**	F **1.985**	**2.019**	**2.008**	**39.88**	**1.998**	**1.997**
Stddev	.0005	.24	.001	.008	.014	.008	.18	.002	.001
%RSD	.1900	.5958	.0459	.4237	.6889	.3779	.4539	.1062	.0589
#1	.2448	39.76	1.992	1.989	2.033	2.015	40.08	2.000	1.998
#2	.2454	39.29	1.993	1.991	2.006	2.000	39.84	1.999	1.996
#3	.2445	39.49	1.991	1.975	2.017	2.009	39.73	1.996	1.996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021**	**2.012**	**39.85**	**39.92**	**1.999**	**39.81**	**2.024**	**1.981**	**40.14**
Stddev	.003	.007	.17	.28	.011	.21	.008	.002	.24
%RSD	.1251	.3350	.4189	.7099	.5684	.5256	.3897	.1108	.6017
#1	2.022	2.019	40.03	40.25	2.012	40.05	2.020	1.982	40.41
#2	2.018	2.006	39.71	39.74	1.991	39.68	2.033	1.978	39.94
#3	2.023	2.010	39.79	39.77	1.994	39.70	2.019	1.982	40.08
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.994**	**1.995**	**1.994**	**2.005**	**2.015**	**1.984**	**1.985**	**2.003**	**1.997**
Stddev	.007	.004	.004	.005	.005	.004	.009	.001	.002
%RSD	.3353	.1741	.1888	.2542	.2524	.1760	.4420	.0432	.0786
#1	2.000	1.996	1.993	1.999	2.018	1.986	1.994	2.004	1.999
#2	1.995	1.991	1.991	2.008	2.019	1.987	1.976	2.003	1.997
#3	1.987	1.997	1.998	2.008	2.010	1.980	1.984	2.002	1.995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/16/2022 19:17:37 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.010**	**1.985**
Stddev	.005	.009
%RSD	.2403	.4658
#1	2.015	1.993
#2	2.005	1.988
#3	2.010	1.975
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**882.71**	**2444.9**	**19377.**	**2937.7**
Stddev	.63	5.5	57.	16.1
%RSD	.07106	.22534	.29581	.54705
#1	883.09	2441.6	19442.	2919.4
#2	881.99	2441.9	19358.	2949.3
#3	883.07	2451.3	19332.	2944.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/16/2022 19:22:09 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0105**	**.0000**	**.0007**	**.0001**	**.0001**	**.0001**	**.0000**	**-.0001**
Stddev	.0003	.0083	.000	.0020	.0001	.0000	.0016	.000	.0000
%RSD	56.76	78.38	881.5	304.0	105.1	32.57	2595.	1221.	27.94
#1	-.0002	.0073	.0000	.0005	.0001	.0000	-.0008	.0000	-.0001
#2	-.0006	.0044	-.0003	-.0013	.0000	.0000	.0019	.0001	-.0001
#3	-.0008	.0199	.0002	.0028	.0002	.0001	-.0009	-.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**-.0013**	**.0536**	F **.0015**	**-.0035**	**.0000**	**.0002**	**.0343**
Stddev	.0001	.0004	.0017	.0261	.0001	.0115	.000	.0001	.0065
%RSD	62.19	3745.	132.6	48.76	9.637	327.9	4311.	46.42	19.07
#1	.0001	.0004	-.0031	.0425	.0015	.0084	.0000	.0002	.0417
#2	.0003	-.0001	.0004	.0835	.0013	-.0145	.0001	.0003	.0321
#3	.0002	-.0003	-.0012	.0349	.0016	-.0044	-.0001	.0001	.0292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.0010				
Low Limit					-.0010				

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0009**	**.0013**	F **.0038**	**.0000**	**.0002**	**.0000**	**.0000**	**.0005**
Stddev	.0001	.0007	.0002	.0012	.0003	.0004	.0001	.0001	.0006
%RSD	41.59	79.91	16.17	30.98	933.8	271.3	14280.	412.8	123.1
#1	.0004	-.0001	.0014	.0040	.0003	.0003	.0000	.0001	.0010
#2	.0004	-.0014	.0010	.0025	.0001	-.0003	.0001	-.0001	.0006
#3	.0002	-.0011	.0013	.0049	-.0003	.0005	-.0001	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0020					
Low Limit				-.0020					

Zoom In
Zoom Out

Sample Name: CCB Acquired: 12/16/2022 19:22:09 Type: QC
Method: 60102007_COMBO_10242022(v54) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE02: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**-.0003**	**.0000**
Stddev	.0000	.0001
%RSD	11.45	521.0
#1	-.0003	-.0001
#2	-.0004	.0001
#3	-.0003	.0000
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**996.46**	**2563.7**	**19798.**	**2929.7**
Stddev	1.67	5.4	172.	12.5
%RSD	.16736	.20904	.86816	.42602
#1	996.55	2557.9	19723.	2925.5
#2	994.75	2568.5	19995.	2919.9
#3	998.08	2564.6	19677.	2943.8

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000146	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000060	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
B 249.773 {135}	☒	1	Fe	0.001937	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000028	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000625	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000127	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000003	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000014	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	-0.000107	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000021	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	0.000001	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	0.000001	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000032	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No
Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No
			Fe	0.000075	0.000000	No
			Mo	-0.002189	0.000000	No
			Cu	0.000467	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	0.000036	0.000000	No
			Si	0.000043	0.000000	No
			Ca	0.000012	0.000000	No
			Cr	-0.000260	0.000000	No
			Mg	0.000002	0.000000	No
Sb 206.833 {463}	☒	11	Fe	0.000025	0.000000	No
			Cr	0.011486	0.000000	No
			Mo	-0.002538	0.000000	No
			V	-0.000441	0.000000	No
			Sn	-0.008695	0.000000	No
			Ti	0.000278	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000818	0.000000	No
			Al	0.000005	0.000000	No
			Mn	-0.000133	0.000000	No
			Mg	-0.000002	0.000000	No
Se 196.090 {472}	☒	12	Fe	-0.000026	0.000000	No
			Ca	0.000006	0.000000	No
			Mn	0.000331	0.000000	No
			Mo	0.000111	0.000000	No
			Al	0.000001	0.000000	No
			V	0.000000	0.000000	No
			Zn	0.000000	0.000000	No
			Sr	-0.000111	0.000000	No
			As	0.000125	0.000000	No
			Cd	-0.000250	0.000000	No
			Mg	0.000002	0.000000	No
			Cr	-0.000326	0.000000	No
Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000006	0.000000	No
Sr 407.771 { 83}	☒	2	Ca	0.000000	0.000000	No
			Al	0.000012	0.000000	No
Ti 334.941 {101}	☒	1	Ca	-0.000009	0.000000	No
Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
			Fe	-0.000045	0.000000	No
			Al	0.000000	0.000000	No
			Ba	-0.000051	0.000000	No
			Ti	-0.000648	0.000000	No
			Sb	0.000167	0.000000	No
			Ca	0.000001	0.000000	No
			Cr	0.000340	0.000000	No
			Mg	-0.000002	0.000000	No
			V	0.000015	0.000000	No
V 292.402 {115}	☒	5	Fe	0.000003	0.000000	No
			Cr	-0.003634	0.000000	No
			Mo	-0.009536	0.000000	No
			Ti	0.000303	0.000000	No
			Mn	-0.000333	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
			Al	0.000014	0.000000	No
			Ca	0.000003	0.000000	No
			Fe	-0.000010	0.000000	No
			As	0.001105	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.001034	0.736659	0.000000	1.000000
Al 396.152 { 85}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.001720	0.140427	0.000000	1.000000
As 189.042 {478}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.000575	0.218208	0.000000	1.000000
B 249.773 {135}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.004328	0.338352	0.000000	1.000000
Ba 455.403 { 74}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.012579	13.748748	0.000000	1.000000
Be 313.042 {108}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.001126	10.899196	0.000000	1.000000
Ca 317.933 {106}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.002426	0.398645	0.000000	1.000000
Cd 226.502 {449}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000229	5.926369	0.000000	1.000000
Co 228.616 {447}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.000720	2.837545	0.000000	1.000000
Cr 267.716 {126}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000252	0.709388	0.000000	1.000000
Cu 324.754 {104}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.005961	0.914598	0.000000	1.000000
Fe 259.940 {130}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000918	0.239837	0.000000	1.000000
In 230.606 {446}*	12/16/2022 10:26:24	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.012554	0.145374	0.000000	1.000000
Li 670.784 { 50}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.003194	3.152213	0.000000	1.000000
Mg 279.079 {121}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.000638	0.040206	0.000000	1.000000
Mn 257.610 {131}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000113	3.372332	0.000000	1.000000
Mo 202.030 {467}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.001269	1.182085	0.000000	1.000000
Na 589.592 { 57}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.025233	0.503287	0.000000	1.000000
Ni 231.604 {445}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.001397	1.853069	0.000000	1.000000
Pb 220.353 {453}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.002382	1.451635	0.000000	1.000000
Sb 206.833 {463}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000403	0.288948	0.000000	1.000000
Se 196.090 {472}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000339	0.150946	0.000000	1.000000
Si 212.412 {459}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.004494	0.430867	0.000000	1.000000
Sn 189.989 {477}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000204	0.474205	0.000000	1.000000
Sr 407.771 { 83}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.001178	21.560141	0.000000	1.000000
Ti 334.941 {101}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.000732	2.300273	0.000000	1.000000
Tl 190.856 {477}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.000571	0.631656	0.000000	1.000000
V 292.402 {115}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	-0.000539	0.821911	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	12/16/2022 10:26:24	12/16/2022 9:38:29	Linear	1/Conc	0.001216	3.199975	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999617	0.000070	0.000553	0.001843	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999500	0.000927	0.014674	0.048913	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999349	0.000082	0.001268	0.004226	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	0.999123	0.000793	0.002931	0.009771	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999958	0.005910	0.000237	0.000791	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999774	0.001707	0.000090	0.000301	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999960	0.001671	0.003125	0.010417	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999978	0.000291	0.000074	0.000247	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999969	0.000523	0.000166	0.000554	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999978	0.000049	0.000343	0.001143	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999880	0.000233	0.000367	0.001224	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999885	0.000928	0.002636	0.008786	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999875	0.002469	0.031166	0.103885	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.999284	0.001180	0.001466	0.004888	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999822	0.000802	0.020180	0.067266	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999828	0.000798	0.000062	0.000206	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999946	0.000286	0.000242	0.000805	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999369	0.019195	0.009016	0.030054	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999925	0.000474	0.000253	0.000843	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999599	0.000304	0.000776	0.002588	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999755	0.000047	0.001570	0.005234	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999774	0.000033	0.002778	0.009260	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.998673	0.001196	0.000746	0.002488	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999993	0.000042	0.000476	0.001588	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999863	0.003719	0.000092	0.000306	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999866	0.000392	0.000158	0.000527	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999769	0.000142	0.001051	0.003505	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999922	0.000237	0.000357	0.001190	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999757	0.001040	0.000098	0.000326	OK.	1.000000	0.000000	1	0

Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 12/19/2022 9:50:35 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0216**	**1.026**	**.0301**	**.0583**	**2.846**	**3.524**	**2.484**	**1.395**	**.6823**
Stddev	.0002	.002	.0001	.0008	.006	.007	.004	.001	.0010
%RSD	1.016	.1864	.3650	1.420	.2056	.2057	.1396	.0331	.1410
#1	.0217	1.028	.0301	.0573	2.839	3.516	2.480	1.394	.6813
#2	.0214	1.025	.0302	.0587	2.850	3.525	2.486	1.395	.6822
#3	.0218	1.024	.0300	.0588	2.849	3.530	2.487	1.395	.6833

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1906**	**.2413**	**1.201**	**.5076**	**.4892**	**.2708**	**.9567**	**.1881**	**1.717**
Stddev	.0006	.0002	.002	.0024	.0036	.0005	.0027	.0004	.004
%RSD	.2994	.0787	.1623	.4725	.7377	.1947	.2847	.2222	.2227
#1	.1912	.2413	1.199	.5048	.4895	.2702	.9586	.1877	1.713
#2	.1905	.2411	1.203	.5092	.4855	.2711	.9535	.1880	1.718
#3	.1901	.2415	1.202	.5087	.4927	.2712	.9578	.1885	1.720

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4598**	**.3261**	**.0482**	**.0224**	**.0898**	**.0846**	**3.668**	**.4952**	**.0627**
Stddev	.0006	.0012	.0002	.0002	.0002	.0002	.013	.0008	.0003
%RSD	.1343	.3594	.4541	.8848	.2692	.1783	.3595	.1596	.4482
#1	.4606	.3266	.0480	.0226	.0900	.0847	3.654	.4956	.0628
#2	.4595	.3248	.0484	.0222	.0899	.0844	3.672	.4943	.0623
#3	.4595	.3270	.0482	.0225	.0896	.0846	3.679	.4956	.0628

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.2749**	**.7936**
Stddev	.0008	.0014
%RSD	.2824	.1764
#1	.2749	.7949
#2	.2742	.7939
#3	.2757	.7921

◀ Zoom In ▶ Zoom Out

Sample Name: STDC Acquired: 12/19/2022 9:50:35 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3023.7**	**7671.9**	**43783.**	**6913.0**
Stddev	6.0	12.5	254.	19.2
%RSD	.19806	.16355	.58089	.27771
#1	3016.9	7683.4	43549.	6928.5
#2	3027.9	7673.6	44054.	6891.5
#3	3026.4	7658.5	43746.	6918.9

◀ Zoom In ▶ Zoom Out

Sample Name: STDD Acquired: 12/19/2022 9:54:26 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0432**	**2.019**	**.0606**	**.1182**	**5.641**	**7.013**	**4.912**	**2.790**	**1.357**
Stddev	.0005	.005	.0003	.0011	.017	.014	.017	.009	.004
%RSD	1.086	.2670	.4854	.9482	.3006	.2027	.3465	.3152	.3242
#1	.0433	2.016	.0604	.1169	5.623	6.998	4.892	2.782	1.354
#2	.0436	2.025	.0605	.1188	5.642	7.026	4.921	2.787	1.355
#3	.0427	2.016	.0610	.1188	5.657	7.014	4.923	2.799	1.362

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3765**	**.4638**	**2.376**	**.9689**	**.9622**	**.5334**	**1.900**	**.3777**	**3.437**
Stddev	.0002	.0005	.005	.0067	.0046	.0033	.005	.0012	.017
%RSD	.0407	.1064	.2255	.6932	.4747	.6109	.2456	.3167	.4948
#1	.3764	.4632	2.371	.9612	.9581	.5323	1.895	.3771	3.418
#2	.3766	.4639	2.381	.9731	.9614	.5370	1.905	.3769	3.450
#3	.3764	.4642	2.376	.9726	.9671	.5308	1.900	.3791	3.444

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.9114**	**.6617**	**.0956**	**.0451**	**.1783**	**.1675**	**7.252**	**.9859**	**.1267**
Stddev	.0024	.0026	.0004	.0002	.0005	.0005	.018	.0022	.0006
%RSD	.2624	.3984	.3843	.4593	.2600	.3236	.2531	.2273	.4416
#1	.9102	.6587	.0954	.0452	.1781	.1671	7.239	.9833	.1263
#2	.9098	.6627	.0954	.0449	.1780	.1672	7.273	.9870	.1264
#3	.9142	.6637	.0960	.0452	.1789	.1681	7.243	.9873	.1273

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.5495**	**1.576**
Stddev	.0000	.004
%RSD	.0007	.2836
#1	.5495	1.573
#2	.5495	1.574
#3	.5495	1.582

◀ Zoom In ▶ Zoom Out

Sample Name: STDD Acquired: 12/19/2022 9:54:26 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2935.4**	**7560.8**	**43411.**	**6918.2**
Stddev	9.4	24.4	85.	28.4
%RSD	.32015	.32310	.19553	.41049
#1	2944.0	7581.3	43487.	6939.6
#2	2936.9	7567.3	43425.	6886.0
#3	2925.4	7533.7	43319.	6929.1

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/19/2022 9:58:06 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0829**	**4.084**	**.1279**	**.2392**	**11.94**	**14.77**	**9.931**	**5.842**	**2.831**
Stddev	.0004	.006	.0003	.0038	.02	.04	.007	.006	.003
%RSD	.4432	.1362	.1955	1.576	.1560	.2645	.0714	.1070	.0995
#1	.0828	4.085	.1276	.2349	11.93	14.77	9.938	5.835	2.828
#2	.0833	4.089	.1280	.2416	11.96	14.81	9.929	5.848	2.834
#3	.0826	4.078	.1281	.2413	11.93	14.74	9.924	5.842	2.832

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.7774**	**.9578**	**4.728**	**1.952**	**2.021**	**1.081**	**3.944**	**.7837**	**7.036**
Stddev	.0002	.0015	.008	.009	.005	.004	.012	.0010	.004
%RSD	.0272	.1554	.1704	.4507	.2531	.3950	.2909	.1268	.0504
#1	.7772	.9594	4.735	1.963	2.016	1.085	3.956	.7826	7.040
#2	.7776	.9576	4.730	1.947	2.022	1.077	3.943	.7845	7.034
#3	.7773	.9565	4.719	1.948	2.026	1.080	3.933	.7839	7.035

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.885**	**1.392**	**.1999**	**.0951**	**.3132**	**.3428**	**15.55**	**2.057**	**.2653**
Stddev	.002	.002	.0004	.0005	.0007	.0004	.01	.007	.0005
%RSD	.0873	.1484	.2153	.5230	.2100	.1207	.0859	.3459	.2032
#1	1.883	1.393	.1994	.0946	.3125	.3425	15.54	2.065	.2659
#2	1.886	1.393	.2002	.0956	.3137	.3426	15.56	2.055	.2649
#3	1.886	1.389	.2000	.0952	.3135	.3432	15.54	2.052	.2651

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**1.134**	**3.284**
Stddev	.003	.002
%RSD	.2237	.0610
#1	1.136	3.286
#2	1.134	3.284
#3	1.131	3.282

Zoom In Zoom Out

Sample Name: STDE Acquired: 12/19/2022 9:58:06 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2838.7**	**7429.8**	**42859.**	**6785.8**
Stddev	6.2	22.9	118.	60.7
%RSD	.21917	.30777	.27643	.89452
#1	2844.7	7454.2	42724.	6716.7
#2	2839.0	7426.4	42947.	6830.3
#3	2832.3	7408.8	42905.	6810.5

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/19/2022 10:02:34 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1690**	**8.281**	**.2638**	**.4932**	**24.29**	**30.02**	**20.14**	**11.89**	**5.768**
Stddev	.0005	.014	.0008	.0058	.05	.04	.04	.01	.009
%RSD	.2754	.1639	.3098	1.177	.2161	.1455	.1818	.1213	.1619
#1	.1688	8.268	.2633	.4900	24.25	30.02	20.16	11.89	5.769
#2	.1687	8.280	.2632	.4896	24.28	29.97	20.10	11.88	5.758
#3	.1695	8.295	.2647	.4999	24.35	30.06	20.16	11.91	5.777

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.565**	**1.944**	**9.540**	**3.960**	**4.122**	**2.189**	**7.897**	**1.604**	**14.39**
Stddev	.004	.005	.019	.003	.007	.005	.062	.003	.01
%RSD	.2307	.2706	.2026	.0621	.1698	.2463	.7804	.1723	.0740
#1	1.562	1.940	9.527	3.963	4.121	2.189	7.968	1.605	14.39
#2	1.569	1.950	9.530	3.958	4.115	2.183	7.854	1.601	14.38
#3	1.564	1.943	9.562	3.959	4.129	2.194	7.869	1.606	14.41

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.820**	**2.885**	**.4094**	**.1949**	**.6408**	**.6900**	**31.89**	**4.196**	**.5450**
Stddev	.007	.006	.0007	.0002	.0015	.0009	.05	.010	.0011
%RSD	.1718	.2193	.1725	.0845	.2369	.1256	.1693	.2473	.1980
#1	3.817	2.885	.4102	.1947	.6418	.6891	31.84	4.202	.5462
#2	3.815	2.891	.4089	.1949	.6390	.6900	31.88	4.184	.5441
#3	3.827	2.878	.4090	.1951	.6415	.6908	31.95	4.202	.5448

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**2.303**	**6.675**
Stddev	.005	.009
%RSD	.2298	.1282
#1	2.305	6.668
#2	2.297	6.673
#3	2.307	6.684

Zoom In Zoom Out

Sample Name: STDF Acquired: 12/19/2022 10:02:34 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2669.6**	**7181.9**	**41831.**	**6663.9**
Stddev	4.7	15.2	37.	46.4
%RSD	.17525	.21220	.08934	.69585
#1	2670.5	7191.0	41852.	6637.7
#2	2664.6	7190.4	41788.	6636.5
#3	2673.8	7164.3	41853.	6717.4

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/19/2022 10:06:28 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3457**	**16.38**	**.5278**	**1.010**	**47.78**	**58.03**	**39.79**	**23.29**	**11.32**
Stddev	.0007	.04	.0002	.007	.09	.68	.04	.05	.03
%RSD	.2167	.2310	.0304	.7318	.1818	1.178	.0946	.2243	.2535
#1	.3450	16.40	.5279	1.002	47.72	58.30	39.78	23.35	11.35
#2	.3465	16.41	.5277	1.012	47.88	58.54	39.83	23.29	11.33
#3	.3455	16.34	.5276	1.016	47.74	57.25	39.75	23.25	11.29

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.026**	**3.779**	**18.60**	**7.864**	**8.082**	**4.279**	**15.28**	**3.216**	**28.66**
Stddev	.005	.006	.06	.007	.034	.012	.11	.010	.04
%RSD	.1573	.1537	.3444	.0931	.4196	.2717	.7340	.3185	.1477
#1	3.030	3.785	18.64	7.864	8.094	4.288	15.36	3.226	28.65
#2	3.021	3.774	18.64	7.872	8.109	4.282	15.33	3.216	28.71
#3	3.027	3.776	18.53	7.857	8.044	4.266	15.15	3.206	28.62

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.488**	**5.875**	**.8154**	**.3892**	**1.208**	**1.361**	**63.07**	**8.244**	**1.089**
Stddev	.008	.005	.0010	.0006	.004	.001	.64	.081	.003
%RSD	.1072	.0901	.1204	.1587	.2914	.0760	1.008	.9813	.2354
#1	7.496	5.870	.8161	.3898	1.212	1.362	63.11	8.152	1.088
#2	7.488	5.875	.8158	.3893	1.207	1.360	63.69	8.279	1.088
#3	7.480	5.880	.8142	.3886	1.205	1.362	62.42	8.302	1.092

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**4.522**	**13.06**
Stddev	.001	.02
%RSD	.0163	.1900
#1	4.523	13.08
#2	4.521	13.04
#3	4.523	13.04

Zoom In Zoom Out

Sample Name: STDG Acquired: 12/19/2022 10:06:28 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2467.9**	**6898.2**	**41056.**	**6581.6**
Stddev	4.9	5.0	165.	47.0
%RSD	.19784	.07281	.40216	.71360
#1	2472.8	6892.8	40955.	6528.3
#2	2467.9	6899.1	40967.	6599.7
#3	2463.0	6902.8	41247.	6616.8

Zoom In Zoom Out

Sample Name: STDA Acquired: 12/19/2022 10:14:42 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0002**	**.0019**	**-.0002**	**.0022**	**-.0032**	**.0001**	**.0013**	**-.0005**	**-.0003**
Stddev	.0002	.0009	.0001	.0007	.0024	.0005	.0004	.0000	.0001
%RSD	114.4	48.99	43.42	29.90	77.41	427.7	31.35	8.682	17.55
#1	-.0002	.0022	-.0003	.0015	-.0004	.0002	.0018	-.0005	-.0003
#2	-.0005	.0026	-.0002	.0023	-.0052	.0005	.0010	-.0004	-.0002
#3	.0000	.0008	-.0002	.0028	-.0039	-.0004	.0012	-.0005	-.0003

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0119**	**-.0004**	**.0372**	**.0083**	**-.0007**	**.0000**	**.0004**	**-.0383**
Stddev	.0002	.0004	.0004	.0041	.0023	.0005	.0000	.0001	.0022
%RSD	132.1	3.320	81.05	11.06	27.68	77.73	126.5	19.54	5.730
#1	.0003	.0122	-.0008	.0410	.0085	-.0001	.0000	.0005	-.0400
#2	.0000	.0115	-.0003	.0376	.0105	-.0008	.0000	.0004	-.0359
#3	.0001	.0120	-.0001	.0328	.0059	-.0011	.0001	.0003	-.0391

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0018**	**-.0044**	**.0008**	**-.0001**	**.0021**	**.0003**	**.0007**	**.0021**	**-.0008**
Stddev	.0001	.0005	.0001	.0001	.0000	.0001	.0011	.0003	.0001
%RSD	8.281	10.63	14.33	71.61	1.141	30.98	151.9	16.45	15.64
#1	-.0019	-.0045	.0009	-.0002	.0021	.0002	.0010	.0024	-.0008
#2	-.0016	-.0039	.0008	.0000	.0021	.0003	-.0005	.0017	-.0009
#3	-.0017	-.0049	.0007	-.0002	.0021	.0004	.0017	.0021	-.0006

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**-.0003**	**.0022**
Stddev	.0002	.0001
%RSD	56.23	4.954
#1	-.0005	.0021
#2	-.0002	.0021
#3	-.0003	.0023

Zoom In Zoom Out

Sample Name: STDA Acquired: 12/19/2022 10:14:42 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3165.3**	**7648.6**	**44111.**	**6830.4**
Stddev	3.5	11.9	30.	72.8
%RSD	.11121	.15621	.06722	1.0653
#1	3163.4	7635.7	44093.	6798.1
#2	3163.1	7659.3	44095.	6779.3
#3	3169.3	7650.7	44145.	6913.7

Zoom In Zoom Out

Sample Name: STDB Acquired: 12/19/2022 10:19:00 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0062**	**.0390**	**.0009**	**2.209**	**.0672**	**.4741**	**.0266**	**.1333**	**.0072**
Stddev	.0002	.0011	.0001	.009	.0005	.0008	.0003	.0006	.0001
%RSD	3.097	2.706	9.050	.4090	.7897	.1709	1.120	.4452	1.040
#1	.0063	.0380	.0010	2.218	.0666	.4740	.0269	.1336	.0073
#2	.0064	.0389	.0009	2.200	.0674	.4749	.0268	.1326	.0072
#3	.0060	.0401	.0009	2.209	.0676	.4733	.0263	.1337	.0071

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0341**	**.0668**	**.9286**	**.0034**	**.2538**	**.0564**	**.0380**	**3.032**	**.0703**
Stddev	.0003	.0007	.0050	.0009	.0006	.0002	.0001	.008	.0002
%RSD	.7888	.9768	.5414	27.16	.2204	.2664	.3544	.2644	.2600
#1	.0340	.0665	.9278	.0034	.2544	.0565	.0380	3.041	.0704
#2	.0339	.0676	.9239	.0043	.2536	.0564	.0378	3.025	.0701
#3	.0345	.0664	.9339	.0024	.2534	.0562	.0381	3.030	.0704

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0008**	**.0018**	**.0007**	**.0168**	**.1431**	**.0225**	**.0014**	**.0539**	**.0630**
Stddev	.0005	.0001	.0001	.0002	.0004	.0002	.0005	.0004	.0001
%RSD	57.93	4.232	13.10	.9247	.2987	1.083	36.17	.7680	.2075
#1	.0012	.0019	.0006	.0170	.1436	.0228	.0008	.0536	.0629
#2	.0009	.0017	.0006	.0167	.1427	.0223	.0016	.0544	.0630
#3	.0003	.0018	.0008	.0169	.1430	.0223	.0017	.0538	.0631

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2994.8**	**7442.6**	**42785.**	**6751.9**
Stddev	5.1	7.7	64.	9.0
%RSD	.17115	.10346	.14940	.13330
#1	2989.5	7443.0	42789.	6742.7
#2	2995.2	7450.1	42848.	6760.7
#3	2999.8	7434.7	42720.	6752.2

Zoom In Zoom Out

Sample Name: STDB Acquired: 12/19/2022 10:23:43 Type: Cal
Method: 60102007_COMBO_102422(v103) Mode: IR Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0062**	**.0391**	**.0010**	**2.207**	**.0686**	**.4740**	**.0270**	**.1331**	**.0073**
Stddev	.0000	.0014	.0001	.015	.0011	.0023	.0006	.0004	.0001
%RSD	.4421	3.638	7.337	.6956	1.610	.4948	2.068	.3153	1.477
#1	.0062	.0388	.0009	2.192	.0680	.4726	.0276	.1336	.0072
#2	.0062	.0406	.0009	2.205	.0680	.4726	.0266	.1331	.0073
#3	.0062	.0378	.0011	2.223	.0699	.4767	.0267	.1327	.0074

Elem	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0342**	**.0666**	**.9218**	**.0039**	**.2526**	**.0561**	**.0380**	**3.033**	**.0708**
Stddev	.0001	.0012	.0043	.0021	.0005	.0001	.0000	.009	.0004
%RSD	.3294	1.779	.4612	54.44	.1919	.0910	.0639	.2837	.6278
#1	.0343	.0653	.9170	.0063	.2531	.0561	.0380	3.026	.0703
#2	.0343	.0669	.9232	.0029	.2524	.0560	.0380	3.029	.0712
#3	.0341	.0677	.9251	.0025	.2522	.0561	.0380	3.043	.0708

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0009**	**.0017**	**.0006**	**.0169**	**.1417**	**.0223**	**.0015**	**.0540**	**.0630**
Stddev	.0002	.0001	.0002	.0001	.0012	.0002	.0005	.0004	.0001
%RSD	27.73	6.172	32.14	.3803	.8190	.6767	34.88	.7098	.0924
#1	.0009	.0015	.0007	.0168	.1416	.0222	.0016	.0544	.0631
#2	.0006	.0017	.0008	.0169	.1428	.0222	.0009	.0537	.0630
#3	.0011	.0017	.0004	.0169	.1405	.0225	.0019	.0538	.0630

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2997.3**	**7488.0**	**43203.**	**6814.0**
Stddev	7.5	23.9	23.	51.1
%RSD	.25057	.31949	.05309	.74989
#1	2993.5	7472.1	43195.	6755.1
#2	2992.4	7476.4	43186.	6847.2
#3	3005.9	7515.5	43229.	6839.6

Zoom In Zoom Out

Sample Name: CRIA Acquired: 12/19/2022 10:33:16 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0086**	**.1842**	**.0096**	F **.0030**	**.1860**	**.0047**	**.9563**	**.0047**
Stddev	.0008	.0060	.0012	.0010	.0001	.0000	.0007	.0000
%RSD	9.122	3.270	12.81	35.31	.0406	.1802	.0759	.8623
#1	.0092	.1799	.0104	.0022	.1861	.0047	.9568	.0047
#2	.0081	.1884	.0087	.0037	.1860	.0047	.9557	.0046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100				
Range				-20.00%				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0474**	**.0097**	**.0238**	**.2892**	**9.321**	F **-.0015**	**4.824**	**.0144**
Stddev	.0002	.0001	.0001	.0030	.018	.0036	.018	.0000
%RSD	.4681	1.454	.5795	1.023	.1883	239.8	.3711	.2487
#1	.0472	.0096	.0237	.2871	9.333	-.0040	4.837	.0144
#2	.0475	.0098	.0239	.2913	9.309	.0010	4.811	.0143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0100		
Range						-20.00%		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0473**	**8.692**	**.0384**	**.0042**	**.0047**	**.0082**	**.0734**	**.0483**
Stddev	.0000	.000	.0001	.0007	.0006	.0007	.0002	.0005
%RSD	.0037	.0003	.1970	17.47	12.55	7.957	.2562	1.047
#1	.0473	8.692	.0383	.0036	.0043	.0077	.0735	.0480
#2	.0473	8.692	.0384	.0047	.0051	.0086	.0732	.0487
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: CRIA Acquired: 12/19/2022 10:33:16 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0092**	**.0098**	**.0082**	**.0474**	**.0186**
Stddev	.0001	.0002	.0012	.0001	.0000
%RSD	.9521	2.161	14.99	.2383	.0803
#1	.0093	.0099	.0074	.0475	.0186
#2	.0092	.0096	.0091	.0473	.0186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3009.6**	**7486.5**	**43120.**	**6661.4**
Stddev	9.9	29.4	304.	5.8
%RSD	.32843	.39324	.70559	.08659
#1	3016.6	7507.3	42905.	6665.4
#2	3002.6	7465.6	43335.	6657.3

Zoom In Zoom Out

Sample Name: HSTD Acquired: 12/19/2022 10:40:57 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5071**	**79.26**	**4.076**	F **4.197**	**3.951**	**3.926**	**79.54**	**4.012**	**4.015**
Stddev	.0018	.06	.043	.080	.020	.120	.17	.050	.050
%RSD	.3600	.0700	1.061	1.914	.5060	3.059	.2131	1.234	1.249
#1	.5086	79.21	4.060	4.192	3.973	3.879	79.40	3.999	4.002
#2	.5051	79.32	4.042	4.120	3.945	4.062	79.49	3.970	3.972
#3	.5078	79.26	4.125	4.280	3.934	3.837	79.73	4.066	4.070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.5000					
Range				5.000%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.967**	**3.966**	**78.41**	**79.85**	**3.925**	**78.18**	**3.958**	**4.066**	**80.55**
Stddev	.004	.008	.18	.13	.012	.34	.030	.049	.20
%RSD	.1128	.1909	.2340	.1614	.3039	.4298	.7507	1.193	.2448
#1	3.968	3.972	78.29	79.72	3.915	77.84	3.992	4.056	80.39
#2	3.962	3.958	78.62	79.85	3.938	78.51	3.948	4.024	80.48
#3	3.971	3.970	78.31	79.98	3.922	78.19	3.935	4.119	80.77
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.003**	**4.099**	**4.049**	**4.064**	**3.875**	**4.009**	**3.864**	**4.004**	**4.049**
Stddev	.043	.037	.040	.045	.046	.040	.030	.016	.030
%RSD	1.085	.9095	.9961	1.107	1.195	.9872	.7799	.4047	.7342
#1	3.993	4.097	4.042	4.048	3.864	4.004	3.873	3.985	4.050
#2	3.965	4.063	4.012	4.029	3.836	3.972	3.830	4.013	4.019
#3	4.050	4.137	4.092	4.115	3.926	4.051	3.888	4.014	4.079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 12/19/2022 10:40:57 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**4.012**	**4.008**
Stddev	.011	.041
%RSD	.2756	1.027
#1	4.023	4.003
#2	4.001	3.969
#3	4.011	4.051
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2462.0**	**6876.8**	**40876.**	**6745.6**
Stddev	16.9	68.4	112.	44.8
%RSD	.68519	.99425	.27449	.66391
#1	2461.2	6891.1	41005.	6769.3
#2	2479.2	6936.8	40809.	6693.9
#3	2445.5	6802.4	40813.	6773.4

Zoom In Zoom Out

Sample Name: ICV Acquired: 12/19/2022 10:47:43 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2590**	**39.95**	**2.025**	F **2.045**	**2.008**	**1.999**	**40.29**	**2.010**	**2.001**
Stddev	.0005	.22	.009	.007	.011	.012	.31	.010	.011
%RSD	.1773	.5584	.4281	.3665	.5441	.6167	.7734	.4852	.5238
#1	.2587	39.72	2.034	2.052	1.996	1.986	39.96	2.020	2.011
#2	.2595	39.96	2.025	2.037	2.010	2.000	40.34	2.009	2.000
#3	.2589	40.17	2.017	2.044	2.018	2.011	40.58	2.000	1.991
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.042**	**1.995**	**39.84**	**39.97**	**1.971**	**39.54**	**2.064**	**2.010**	**40.60**
Stddev	.001	.003	.24	.27	.014	.38	.027	.011	.27
%RSD	.0235	.1420	.6097	.6812	.6879	.9671	1.315	.5329	.6642
#1	2.041	1.995	39.59	39.71	1.957	39.13	2.093	2.021	40.31
#2	2.041	1.993	39.87	39.94	1.975	39.61	2.060	2.010	40.66
#3	2.042	1.998	40.07	40.25	1.983	39.89	2.039	1.999	40.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021**	**2.005**	**2.017**	**2.014**	**2.114**	**2.044**	**1.944**	**2.055**	**2.021**
Stddev	.011	.004	.010	.010	.009	.009	.013	.008	.002
%RSD	.5189	.1827	.5167	.5008	.4416	.4582	.6683	.3976	.1100
#1	2.031	2.008	2.028	2.025	2.124	2.054	1.931	2.059	2.023
#2	2.022	2.005	2.013	2.012	2.113	2.044	1.943	2.061	2.021
#3	2.010	2.001	2.009	2.005	2.105	2.035	1.957	2.046	2.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV Acquired: 12/19/2022 10:47:43 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.065**	**2.025**
Stddev	.006	.010
%RSD	.2885	.4729
#1	2.067	2.034
#2	2.070	2.025
#3	2.058	2.015
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2660.8**	**7218.7**	**41602.**	**6840.3**
Stddev	6.8	37.8	169.	39.7
%RSD	.25663	.52373	.40586	.58096
#1	2656.0	7184.2	41560.	6881.4
#2	2657.8	7212.7	41457.	6802.1
#3	2668.6	7259.1	41787.	6837.3

Zoom In Zoom Out

Sample Name: ICB Acquired: 12/19/2022 10:53:44 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0004**	**.0005**	F **-.0023**	**.0000**	**.0000**	**-.0026**	**.0000**
Stddev	.0004	.0046	.0003	.0011	.0002	.000	.0002	.000
%RSD	1389.	1148.	58.11	49.61	683.5	264.9	8.854	73.06
#1	-.0003	-.0006	.0003	-.0013	.0002	-.0001	-.0028	-.0001
#2	.0004	.0044	.0005	-.0021	-.0002	.0000	-.0024	.0000
#3	.0000	-.0049	.0009	-.0036	.0001	.0000	-.0025	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0001**	**.0003**	**-.0003**	**-.0047**	F **-.0030**	**.0164**	**.0000**
Stddev	.000	.0004	.0004	.0018	.0148	.0010	.0056	.000
%RSD	437.2	625.3	138.0	691.1	317.4	32.85	33.83	169.2
#1	-.0001	-.0001	.0006	.0013	-.0185	-.0019	.0148	.0000
#2	.0001	.0003	.0004	.0002	-.0065	-.0032	.0226	-.0001
#3	-.0001	-.0004	-.0002	-.0022	.0110	-.0038	.0119	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0125**	**.0001**	**-.0009**	**-.0002**	**-.0008**	**-.0004**	**-.0004**
Stddev	.0001	.0080	.0002	.0008	.0013	.0007	.0002	.0002
%RSD	120.3	63.84	141.3	90.08	736.4	83.46	56.92	41.84
#1	.0000	.0191	.0003	-.0014	.0002	-.0002	-.0001	-.0003
#2	-.0002	.0146	.0002	-.0013	-.0016	-.0015	-.0005	-.0006
#3	.0000	.0037	-.0001	.0000	.0009	-.0006	-.0005	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ICB Acquired: 12/19/2022 10:53:44 Type: QC
Method: 60102007_COMBO_102422(v103) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0002**	**-.0013**	**.0000**	**-.0005**
Stddev	.0001	.0001	.0004	.0001	.0000
%RSD	456.5	85.33	32.64	137.1	4.364
#1	.0001	.0003	-.0010	.0001	-.0005
#2	.0000	.0001	-.0018	.0001	-.0005
#3	.0000	.0001	-.0011	.0000	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3081.9**	**7475.1**	**43331.**	**6783.4**
Stddev	3.1	12.3	449.	25.4
%RSD	.10086	.16400	1.0351	.37463
#1	3085.3	7475.8	43107.	6756.8
#2	3081.1	7487.0	43039.	6807.4
#3	3079.2	7462.5	43848.	6786.0

Zoom In Zoom Out

Sample Name: ICSA Acquired: 12/19/2022 10:57:44 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**502.3**	**-.0019**	**.0003**	**.0001**	**.0000**	**450.7**	**.0000**
Stddev	.0004	6.2	.0007	.0068	.0002	.0001	3.4	.000
%RSD	632.8	1.236	36.56	2626.	323.5	23560.	.7626	714.2
#1	.0003	500.1	-.0023	-.0020	.0001	-.0001	451.0	.0000
#2	-.0006	509.3	-.0011	.0079	-.0002	.0001	454.0	.0002
#3	.0001	497.5	-.0025	-.0052	.0003	.0000	447.1	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**-.0002**	**.0005**	F **490.1**	**.1453**	F **-.0033**	**497.1**	**.0000**
Stddev	.0000	.0002	.0001	5.2	.0791	.0006	.6	.0001
%RSD	2.216	95.35	29.89	1.055	54.41	18.38	.1125	197.0
#1	-.0009	-.0004	.0006	488.8	.1116	-.0029	497.7	.0001
#2	-.0009	-.0002	.0004	485.6	.2357	-.0029	496.8	.0000
#3	-.0009	.0000	.0004	495.7	.0887	-.0039	496.7	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	None	Chk Fail	Chk Pass	Chk Pass
High Limit				240.0		.0010		
Low Limit				160.0		-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.3095**	**.0000**	**.0001**	**.0000**	**.0000**	**.0987**	**.0007**
Stddev	.0001	.0176	.0003	.0016	.001	.002	.0007	.0009
%RSD	89.84	5.697	759.8	2801.	3119.	6828.	.7320	134.3
#1	.0000	.2964	.0002	.0014	-.0002	-.0019	.0979	-.0002
#2	-.0003	.3027	-.0003	-.0018	.0006	-.0009	.0989	.0007
#3	-.0002	.3296	.0002	.0005	-.0005	.0026	.0993	.0016
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ICSA Acquired: 12/19/2022 10:57:44 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0008**	**.0000**	**.0000**	**.0012**
Stddev	.0001	.0000	.0053	.0003	.0002
%RSD	54.49	5.670	10820.	701.2	13.43
#1	-.0003	.0007	-.0011	.0002	.0014
#2	-.0003	.0008	-.0046	-.0003	.0011
#3	-.0001	.0008	.0058	.0002	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2110.6**	**6621.7**	**37408.**	**6438.2**
Stddev	2.3	20.3	112.	28.6
%RSD	.11078	.30688	.30029	.44424
#1	2108.3	6641.2	37409.	6417.8
#2	2113.0	6600.7	37520.	6425.8
#3	2110.5	6623.3	37295.	6470.9

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/19/2022 11:07:29 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.086**	**508.6**	**.9182**	F **-.0200**	**.4872**	**.4887**	**453.5**	**.9415**
Stddev	.014	3.7	.0032	.0056	.0051	.0049	7.7	.0042
%RSD	1.281	.7296	.3452	28.02	1.054	1.005	1.690	.4449
#1	1.071	504.8	.9162	-.0232	.4862	.4868	456.2	.9367
#2	1.098	512.2	.9165	-.0234	.4826	.4850	444.8	.9434
#3	1.089	508.7	.9219	-.0135	.4927	.4943	459.4	.9445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				1.000				
Range				-20.00%				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4589**	**.4831**	**.5263**	**187.7**	**.0394**	**.9685**	**512.3**	**.5023**
Stddev	.0022	.0059	.0080	2.9	.0342	.0108	4.6	.0058
%RSD	.4709	1.231	1.511	1.555	86.87	1.115	.9044	1.147
#1	.4564	.4766	.5176	188.4	.0052	.9632	510.0	.4960
#2	.4599	.4882	.5332	190.3	.0393	.9615	509.2	.5072
#3	.4604	.4845	.5282	184.5	.0736	.9810	517.6	.5037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8676**	**.2848**	**.8935**	**1.065**	**.9278**	**.8723**	**.1267**	**.8474**
Stddev	.0045	.0173	.0048	.006	.0026	.0055	.0020	.0043
%RSD	.5205	6.072	.5362	.5597	.2778	.6351	1.612	.5051
#1	.8625	.2917	.8880	1.058	.9265	.8660	.1249	.8425
#2	.8692	.2651	.8958	1.070	.9261	.8742	.1289	.8493
#3	.8710	.2975	.8967	1.067	.9307	.8766	.1264	.8504
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/19/2022 11:07:29 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.9184**	**1.007**	**.9101**	**.5073**	**.9201**
Stddev	.0079	.012	.0064	.0059	.0031
%RSD	.8625	1.151	.7071	1.157	.3329
#1	.9144	.9947	.9030	.5010	.9165
#2	.9132	1.018	.9155	.5126	.9218
#3	.9275	1.007	.9119	.5084	.9219
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2231.4**	**6666.9**	**38184.**	**6593.5**
Stddev	10.7	26.6	470.	55.0
%RSD	.47992	.39901	1.2320	.83480
#1	2243.4	6696.9	38699.	6606.2
#2	2222.9	6657.3	37776.	6641.1
#3	2228.0	6646.4	38078.	6533.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/19/2022 11:14:48 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2507**	**40.34**	**2.057**	F **2.042**	**2.063**	**2.047**	**40.72**	**2.065**	**2.064**
Stddev	.0030	.10	.002	.015	.006	.006	.08	.001	.002
%RSD	1.191	.2444	.1065	.7541	.2883	.3043	.1985	.0658	.0803
#1	.2518	40.23	2.055	2.027	2.057	2.040	40.64	2.066	2.063
#2	.2531	40.41	2.059	2.041	2.069	2.049	40.80	2.066	2.066
#3	.2474	40.39	2.057	2.058	2.063	2.052	40.73	2.063	2.062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.047**	**2.049**	**40.41**	**40.49**	**2.017**	**40.44**	**2.070**	**2.047**	**40.98**
Stddev	.020	.020	.09	.21	.010	.04	.044	.003	.13
%RSD	.9981	.9864	.2193	.5155	.5124	.0909	2.108	.1318	.3098
#1	2.061	2.063	40.31	40.28	2.005	40.39	2.093	2.049	40.86
#2	2.057	2.059	40.42	40.70	2.023	40.45	2.098	2.048	41.11
#3	2.024	2.026	40.48	40.50	2.023	40.46	2.020	2.044	40.96
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.061**	**2.033**	**2.060**	**2.068**	**2.080**	**2.047**	**2.029**	**2.058**	**2.055**
Stddev	.001	.001	.003	.005	.003	.001	.014	.027	.001
%RSD	.0254	.0698	.1453	.2351	.1536	.0533	.6655	1.307	.0686
#1	2.061	2.032	2.064	2.063	2.084	2.047	2.014	2.071	2.055
#2	2.062	2.032	2.058	2.072	2.079	2.048	2.038	2.076	2.056
#3	2.061	2.035	2.060	2.071	2.078	2.046	2.036	2.027	2.053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/19/2022 11:14:48 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.051**	**2.059**
Stddev	.023	.001
%RSD	1.120	.0416
#1	2.066	2.059
#2	2.063	2.060
#3	2.025	2.058
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2667.6**	**7177.1**	**42146.**	**6769.8**
Stddev	6.7	17.0	548.	40.6
%RSD	.25102	.23654	1.3010	.59988
#1	2674.8	7196.0	41855.	6747.8
#2	2666.3	7163.3	41806.	6744.9
#3	2661.6	7171.8	42779.	6816.6

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/19/2022 11:20:22 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0081**	**.0005**	F **-.0028**	**.0001**	**.0000**	**-.0004**	**.0000**
Stddev	.0001	.0069	.0005	.0007	.0001	.0001	.0005	.000
%RSD	149.8	85.59	110.4	26.80	86.74	352.0	112.1	268.5
#1	-.0002	-.0158	.0005	-.0020	.0000	.0001	-.0008	.0000
#2	.0001	-.0023	.0000	-.0034	.0001	.0000	.0001	.0000
#3	-.0001	-.0062	.0010	-.0030	.0002	.0000	-.0005	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0002**	**.0027**	**-.0371**	F **-.0011**	**-.0018**	**.0000**
Stddev	.0001	.0002	.0003	.0018	.0563	.0017	.0091	.000
%RSD	75.14	433.0	107.8	67.81	151.6	154.3	519.8	55.56
#1	.0002	-.0002	-.0005	.0008	-.0572	-.0028	.0053	.0000
#2	.0000	.0003	.0000	.0044	-.0806	.0006	-.0121	.0000
#3	.0001	.0001	-.0002	.0030	.0265	-.0010	.0015	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0156**	**.0000**	**-.0004**	**-.0003**	**-.0007**	**-.0007**	**-.0007**
Stddev	.0001	.0073	.000	.0001	.0005	.0008	.0004	.0002
%RSD	83.80	46.58	176.9	36.03	161.0	113.1	56.52	30.00
#1	-.0001	-.0225	-.0001	-.0003	-.0002	.0002	-.0010	-.0005
#2	.0000	-.0163	.0000	-.0004	.0001	-.0013	-.0002	-.0009
#3	-.0002	-.0080	.0000	-.0006	-.0008	-.0009	-.0008	-.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/19/2022 11:20:22 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0001**	**-.0010**	**.0001**	**-.0002**
Stddev	.0001	.0001	.0007	.0003	.0000
%RSD	174.9	71.41	70.38	191.2	12.15
#1	.0000	.0000	-.0017	.0001	-.0002
#2	-.0002	.0001	-.0004	-.0001	-.0002
#3	.0000	.0002	-.0008	.0004	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3140.9**	**7566.2**	**43793.**	**6796.1**
Stddev	7.0	18.1	71.	48.0
%RSD	.22282	.23924	.16185	.70662
#1	3144.9	7569.4	43748.	6851.3
#2	3132.8	7546.8	43756.	6773.6
#3	3145.0	7582.6	43874.	6763.6

Zoom In Zoom Out

Sample Name: MP41606-B1 Acquired: 12/19/2022 11:24:48 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0535**	**27.23**	**1.982**	F **.0167**	**2.020**	**.0506**	**25.31**	**.0497**
Stddev	.0002	.07	.007	.0002	.005	.0004	.09	.0000
%RSD	.3972	.2563	.3691	1.455	.2671	.7305	.3711	.0710
#1	.0536	27.29	1.987	.0165	2.026	.0510	25.42	.0497
#2	.0537	27.15	1.985	.0168	2.017	.0503	25.24	.0497
#3	.0533	27.23	1.973	.0169	2.017	.0505	25.27	.0497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0500				
Range				-20.00%				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4966**	**.2080**	**.2541**	**26.26**	**24.71**	F **-.0031**	**25.14**	**.5150**
Stddev	.0018	.0004	.0007	.11	.11	.0017	.08	.0010
%RSD	.3586	.1885	.2702	.4009	.4501	53.99	.3005	.1991
#1	.4984	.2078	.2535	26.38	24.83	-.0016	25.22	.5158
#2	.4966	.2077	.2538	26.18	24.62	-.0028	25.07	.5153
#3	.4949	.2084	.2548	26.23	24.67	-.0048	25.14	.5138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0500		
Range						-20.00%		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5216**	**23.47**	**.5051**	**.4899**	**.4926**	**2.039**	**.7040**	**.5377**
Stddev	.0010	.09	.0021	.0019	.0015	.012	.0024	.0019
%RSD	.2011	.3869	.4100	.3796	.2998	.5780	.3375	.3496
#1	.5227	23.56	.5065	.4903	.4924	2.048	.7064	.5385
#2	.5215	23.38	.5059	.4915	.4942	2.043	.7041	.5390
#3	.5206	23.48	.5027	.4878	.4913	2.025	.7016	.5355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: MP41606-B1 Acquired: 12/19/2022 11:24:48 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.5165**	**.5341**	**2.035**	**.5107**	**.5027**
Stddev	.0024	.0012	.003	.0007	.0018
%RSD	.4668	.2245	.1250	.1399	.3496
#1	.5182	.5351	2.036	.5112	.5041
#2	.5137	.5345	2.037	.5110	.5034
#3	.5176	.5328	2.032	.5099	.5007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2877.4**	**7589.3**	**43620.**	**6984.0**
Stddev	5.8	5.5	168.	64.2
%RSD	.20275	.07267	.38471	.91990
#1	2880.0	7587.0	43505.	6923.1
#2	2870.7	7585.3	43543.	7051.2
#3	2881.5	7595.6	43813.	6977.6

Zoom In Zoom Out

Sample Name: FC1201-8 Acquired: 12/19/2022 11:29:41 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**148.6**	**.0432**	**.0365**	**.7895**	**.0081**	**78.35**	**.0000**	**.0454**
Stddev	.0003	.7	.0007	.0019	.0020	.0001	.34	.000	.0003
%RSD	21.41	.4524	1.697	5.140	.2507	.9832	.4337	43.80	.5771
#1	-.0015	149.0	.0430	.0368	.7918	.0081	78.52	.0000	.0451
#2	-.0011	148.9	.0426	.0345	.7883	.0081	78.57	-.0001	.0456
#3	-.0018	147.8	.0441	.0382	.7885	.0080	77.96	.0000	.0455

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1431**	**.0651**	**124.1**	**24.37**	**.0578**	**30.00**	**2.073**	**.0004**	**7.433**
Stddev	.0006	.0003	.7	.07	.0015	.14	.009	.0001	.003
%RSD	.4327	.4609	.5636	.2713	2.588	.4786	.4400	30.25	.0418
#1	.1425	.0648	124.7	24.44	.0570	30.07	2.077	.0005	7.436
#2	.1437	.0654	124.4	24.33	.0569	30.08	2.079	.0003	7.433
#3	.1432	.0651	123.3	24.33	.0595	29.83	2.063	.0003	7.430

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0919**	**.1509**	**-.0022**	**-.0002**	**16.00**	**.0183**	**.2691**	**.2845**	**-.0028**
Stddev	.0002	.0009	.0003	.0005	.05	.0003	.0006	.0008	.0002
%RSD	.2311	.5737	12.55	216.0	.2824	1.554	.2332	.2722	6.893
#1	.0917	.1500	-.0020	-.0001	15.95	.0180	.2698	.2846	-.0028
#2	.0919	.1511	-.0022	-.0008	16.04	.0185	.2690	.2852	-.0026
#3	.0921	.1517	-.0026	.0002	16.00	.0183	.2686	.2837	-.0030

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.1911**	**.3128**
Stddev	.0001	.0006
%RSD	.0514	.1911
#1	.1912	.3123
#2	.1910	.3135
#3	.1912	.3126

Zoom In Zoom Out

Sample Name: FC1201-8 Acquired: 12/19/2022 11:29:41 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2614.7**	**9990.2**	**55855.**	**9480.6**
Stddev	5.1	35.8	118.	82.9
%RSD	.19463	.35856	.21112	.87483
#1	2619.8	10021.	55941.	9454.8
#2	2609.6	9950.8	55721.	9413.7
#3	2614.7	9999.0	55905.	9573.4

Zoom In Zoom Out

Sample Name: MP41604-D1 Acquired: 12/19/2022 11:34:55 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**145.8**	**.0396**	**.0241**	**1.062**	**.0083**	**131.7**	**.0001**	**.0497**
Stddev	.0001	1.1	.0001	.0044	.008	.0001	1.1	.0001	.0002
%RSD	9.617	.7360	.1733	18.16	.7661	.7909	.8430	100.7	.3552
#1	-.0011	146.6	.0396	.0191	1.067	.0082	132.1	.0000	.0498
#2	-.0012	146.1	.0397	.0268	1.066	.0083	132.5	.0001	.0497
#3	-.0013	144.6	.0396	.0265	1.052	.0082	130.4	.0002	.0495

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1926**	**.0835**	**122.6**	**24.77**	**.0605**	**29.61**	**2.082**	**.0028**	**7.860**
Stddev	.0005	.0001	1.2	.12	.0011	.11	.003	.0002	.050
%RSD	.2850	.1141	1.008	.4915	1.846	.3846	.1319	7.349	.6399
#1	.1931	.0836	123.9	24.80	.0618	29.68	2.079	.0030	7.877
#2	.1927	.0835	122.5	24.86	.0601	29.66	2.084	.0029	7.899
#3	.1920	.0834	121.4	24.63	.0597	29.48	2.084	.0026	7.803

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0946**	**.1624**	**-.0014**	**-.0034**	**14.04**	**.0175**	**.3108**	**.2547**	**-.0030**
Stddev	.0004	.0008	.0011	.0007	.04	.0003	.0018	.0002	.0012
%RSD	.4525	.4658	78.01	19.91	.2685	1.850	.5735	.0628	39.41
#1	.0947	.1628	-.0026	-.0031	14.05	.0176	.3125	.2547	-.0024
#2	.0950	.1615	-.0013	-.0042	14.06	.0177	.3111	.2548	-.0043
#3	.0941	.1629	-.0004	-.0030	13.99	.0171	.3089	.2545	-.0022

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.1729**	**.3077**
Stddev	.0007	.0010
%RSD	.4066	.3282
#1	.1737	.3082
#2	.1727	.3083
#3	.1724	.3065

Zoom In Zoom Out

Sample Name: MP41604-D1 Acquired: 12/19/2022 11:34:55 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2584.1**	**10572.**	**59836.**	**9978.6**
Stddev	11.2	33.	92.	76.5
%RSD	.43299	.31036	.15336	.76639
#1	2571.9	10542.	59759.	9920.3
#2	2586.6	10567.	59938.	9950.4
#3	2593.9	10607.	59812.	10065.

Zoom In Zoom Out

Sample Name: MP41604-S1 Acquired: 12/19/2022 11:40:14 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0369**	**228.6**	**1.351**	**.1003**	**2.071**	**.0442**	**101.5**	**.0328**	**.3863**
Stddev	.0003	2.1	.005	.0027	.011	.0002	.2	.0002	.0018
%RSD	.8451	.9080	.3466	2.648	.5520	.3771	.2192	.7498	.4579
#1	.0371	227.5	1.347	.1033	2.084	.0444	101.4	.0326	.3843
#2	.0371	227.2	1.356	.0987	2.064	.0441	101.8	.0327	.3869
#3	.0366	231.0	1.351	.0988	2.065	.0441	101.5	.0331	.3877

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4223**	**.2704**	**166.3**	**48.56**	**.0792**	**52.92**	**2.563**	**.2974**	**24.12**
Stddev	.0011	.0005	1.1	.14	.0019	.11	.007	.0015	.11
%RSD	.2570	.1775	.6715	.2956	2.405	.2055	.2773	.5139	.4732
#1	.4231	.2706	165.4	48.71	.0813	53.02	2.560	.2957	24.24
#2	.4228	.2708	167.5	48.43	.0776	52.80	2.571	.2980	24.02
#3	.4211	.2699	166.0	48.53	.0787	52.93	2.557	.2986	24.11

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4400**	**.6866**	**.0969**	**1.304**	**15.07**	**.3565**	**.6663**	**.8135**	**1.985**
Stddev	.0018	.0033	.0012	.007	.05	.0020	.0010	.0013	.010
%RSD	.4160	.4769	1.204	.5156	.3213	.5711	.1473	.1553	.4974
#1	.4379	.6836	.0956	1.297	15.02	.3543	.6674	.8150	1.974
#2	.4410	.6859	.0978	1.310	15.09	.3568	.6656	.8129	1.988
#3	.4412	.6901	.0973	1.305	15.10	.3584	.6659	.8126	1.994

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.6337**	**.7240**
Stddev	.0016	.0030
%RSD	.2470	.4088
#1	.6352	.7206
#2	.6339	.7252
#3	.6321	.7262

Zoom In Zoom Out

Sample Name: MP41604-S1 Acquired: 12/19/2022 11:40:14 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2466.0**	**10152.**	**57043.**	**9796.4**
Stddev	16.4	67.	241.	60.9
%RSD	.66345	.65990	.42271	.62198
#1	2482.5	10225.	57027.	9818.3
#2	2465.6	10137.	56810.	9843.3
#3	2449.8	10094.	57292.	9727.5

Zoom In Zoom Out

Sample Name: MP41604-S2 Acquired: 12/19/2022 11:45:41 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0245**	**200.6**	**.8661**	**.0829**	**F 5.840**	**.0300**	**385.3**	**.0220**	**.2560**
Stddev	.0001	4.2	.0022	.0056	.020	.0002	2.2	.0001	.0006
%RSD	.3391	2.105	.2570	6.783	.3331	.5430	.5698	.4990	.2292
#1	.0244	201.3	.8677	.0796	5.827	.0301	387.7	.0219	.2565
#2	.0245	204.5	.8636	.0796	5.831	.0300	383.5	.0219	.2554
#3	.0246	196.1	.8670	.0894	5.863	.0298	384.8	.0221	.2561

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3926**	**.1915**	**132.3**	**36.87**	**.0766**	**42.23**	**3.432**	**.1577**	**17.78**
Stddev	.0024	.0003	1.1	.09	.0023	.13	.027	.0004	.04
%RSD	.6022	.1315	.8007	.2532	3.051	.3133	.7793	.2279	.2532
#1	.3909	.1912	133.2	36.97	.0769	42.32	3.438	.1580	17.83
#2	.3917	.1917	132.6	36.85	.0787	42.29	3.403	.1573	17.77
#3	.3953	.1916	131.1	36.79	.0741	42.08	3.455	.1578	17.75

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2988**	**.8452**	**.0639**	**.8058**	**8.050**	**.2008**	**.7997**	**.3292**	**2.023**
Stddev	.0004	.0033	.0004	.0017	.011	.0004	.0034	.0010	.003
%RSD	.1189	.3950	.5960	.2106	.1357	.2221	.4226	.2898	.1331
#1	.2991	.8437	.0640	.8076	8.061	.2012	.8029	.3289	2.020
#2	.2984	.8429	.0634	.8042	8.039	.2003	.8000	.3283	2.024
#3	.2988	.8490	.0641	.8057	8.048	.2008	.7962	.3302	2.025

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.4603**	**.5351**
Stddev	.0018	.0012
%RSD	.3930	.2269
#1	.4596	.5355
#2	.4590	.5337
#3	.4624	.5360

Zoom In Zoom Out

Sample Name: MP41604-S2 Acquired: 12/19/2022 11:45:41 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2164.7**	**15003.**	**83506.**	**15046.**
Stddev	4.5	19.	725.	105.
%RSD	.20600	.12359	.86763	.69956
#1	2164.3	14993.	83844.	14977.
#2	2169.4	15024.	83999.	14994.
#3	2160.5	14991.	82674.	15167.

Zoom In Zoom Out

Sample Name: MP41604-PS1 Acquired: 12/19/2022 11:51:15 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0356**	**147.7**	**.1086**	**.0364**	**.9378**	**.0429**	**79.80**	**.0326**	**.0761**
Stddev	.0001	.1	.0006	.0008	.0007	.0001	.58	.0001	.0001
%RSD	.4138	.0910	.5254	2.115	.0742	.1551	.7241	.2660	.1785
#1	.0358	147.8	.1079	.0361	.9379	.0429	79.13	.0326	.0760
#2	.0356	147.7	.1089	.0372	.9385	.0428	80.15	.0326	.0760
#3	.0355	147.5	.1089	.0358	.9371	.0429	80.11	.0327	.0762

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1785**	**.1360**	**124.3**	**30.19**	**.0552**	**32.69**	**2.066**	**.0641**	**13.37**
Stddev	.0002	.0004	.1	.04	.0011	.06	.018	.0002	.01
%RSD	.1079	.2712	.0694	.1263	1.972	.1722	.8937	.3449	.0677
#1	.1787	.1363	124.4	30.15	.0557	32.75	2.045	.0638	13.36
#2	.1785	.1356	124.3	30.21	.0539	32.64	2.070	.0641	13.37
#3	.1784	.1360	124.2	30.21	.0559	32.69	2.082	.0643	13.38

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1557**	**.1949**	**.0656**	**.0617**	**16.43**	**.0518**	**.2944**	**.3538**	**.0871**
Stddev	.0003	.0011	.0010	.0014	.03	.0005	.0009	.0018	.0013
%RSD	.2093	.5898	1.555	2.306	.1546	.8985	.3032	.5076	1.460
#1	.1554	.1961	.0666	.0625	16.41	.0516	.2951	.3558	.0878
#2	.1558	.1948	.0646	.0601	16.41	.0523	.2947	.3524	.0879
#3	.1560	.1938	.0657	.0625	16.46	.0514	.2934	.3533	.0857

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.2247**	**.4734**
Stddev	.0009	.0006
%RSD	.3905	.1264
#1	.2256	.4727
#2	.2239	.4737
#3	.2244	.4737

Zoom In Zoom Out

Sample Name: MP41604-PS1 Acquired: 12/19/2022 11:51:15 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2593.6**	**10030.**	**55631.**	**9447.7**
Stddev	3.1	8.	33.	33.6
%RSD	.11870	.08330	.05965	.35603
#1	2593.7	10037.	55667.	9482.4
#2	2590.4	10021.	55624.	9445.5
#3	2596.6	10033.	55602.	9415.2

Zoom In Zoom Out

Sample Name: MP41604-SD1 Acquired: 12/19/2022 11:56:28 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**181.8**	**.0536**	**.0091**	**.9602**	**.0101**	**97.52**	**-.0004**	**.0572**
Stddev	.0020	1.1	.0037	.0171	.0059	.0001	.66	.0001	.0006
%RSD	100.1	.5952	6.981	187.0	.6148	1.132	.6748	30.45	.9741
#1	-.0026	181.5	.0540	.0053	.9579	.0099	97.41	-.0006	.0566
#2	.0002	183.0	.0571	-.0057	.9669	.0102	98.23	-.0005	.0577
#3	-.0037	180.9	.0496	.0278	.9558	.0100	96.93	-.0003	.0574

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1768**	**.0789**	**156.5**	**29.48**	**.0640**	**38.09**	**2.590**	**-.0007**	**9.113**
Stddev	.0010	.0001	1.3	.20	.0140	.31	.003	.0009	.036
%RSD	.5715	.1690	.8145	.6879	21.93	.8111	.1324	138.8	.3958
#1	.1774	.0790	156.5	29.26	.0759	38.04	2.586	.0002	9.089
#2	.1756	.0789	157.8	29.66	.0676	38.42	2.592	-.0017	9.154
#3	.1773	.0787	155.2	29.51	.0486	37.81	2.592	-.0005	9.095

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1153**	**.1189**	**-.0085**	**-.0098**	**19.44**	**.0232**	**.3338**	**.3548**	**-.0090**
Stddev	.0011	.0035	.0040	.0069	.12	.0003	.0017	.0020	.0040
%RSD	.9510	2.949	47.20	70.42	.6156	1.353	.4944	.5686	44.37
#1	.1140	.1149	-.0088	-.0020	19.32	.0236	.3331	.3525	-.0105
#2	.1161	.1215	-.0123	-.0150	19.55	.0229	.3357	.3561	-.0120
#3	.1157	.1203	-.0043	-.0123	19.46	.0231	.3326	.3559	-.0045

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.2326**	**.3932**
Stddev	.0013	.0032
%RSD	.5527	.8046
#1	.2317	.3896
#2	.2340	.3952
#3	.2320	.3949

Zoom In Zoom Out

Sample Name: MP41604-SD1 Acquired: 12/19/2022 11:56:28 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2956.3**	**8234.9**	**46267.**	**7583.8**
Stddev	29.9	73.7	199.	62.2
%RSD	1.0109	.89498	.43072	.82007
#1	2988.9	8315.3	46367.	7589.1
#2	2949.9	8219.0	46397.	7519.1
#3	2930.2	8170.5	46038.	7643.2

Zoom In Zoom Out

Sample Name: FC1233-1 Acquired: 12/19/2022 12:01:26 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**182.3**	**1.779**	**-.0195**	**3.326**	**.0044**	**13.34**	**-.0044**
Stddev	.0009	.2	.001	.1097	.007	.0002	.01	.0028
%RSD	207.1	.1145	.0436	562.0	.2174	5.504	.0920	63.69
#1	.0004	182.1	1.779	-.0414	3.333	.0043	13.33	-.0042
#2	-.0003	182.5	1.778	-.1167	3.319	.0047	13.35	-.0073
#3	-.0014	182.4	1.779	.0995	3.327	.0042	13.34	-.0017

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.75**	**7.651**	**1.224**	**1695.**	**5.915**	**-.0306**	**12.25**	**10.02**
Stddev	.03	.011	.002	37.	.158	.0051	.04	.09
%RSD	.2138	.1396	.1623	2.161	2.666	16.70	.3629	.9399
#1	13.77	7.661	1.225	1691.	5.970	-.0365	12.20	9.985
#2	13.76	7.640	1.222	1734.	6.038	-.0272	12.29	9.945
#3	13.72	7.652	1.225	1661.	5.737	-.0281	12.26	10.12

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
IS Ref	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0483**	**.6458**	**.4463**	F **-.2120**	**.0188**	**.0379**	**10.60**	**.0720**
Stddev	.0005	.0327	.0017	.0089	.0025	.0068	.02	.0015
%RSD	1.089	5.062	.3697	4.221	13.48	17.88	.1908	2.057
#1	.0487	.6408	.4472	-.2092	.0166	.0396	10.61	.0718
#2	.0477	.6808	.4474	-.2220	.0216	.0305	10.61	.0735
#3	.0485	.6160	.4444	-.2047	.0183	.0437	10.57	.0706

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
IS Ref	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm
Avg	F **124.5**	**4.634**	**-.0115**	**1.555**	**1.433**
Stddev	2.2	.006	.0141	.002	.001
%RSD	1.733	.1365	123.0	.1378	.0803
#1	124.4	4.634	.0006	1.554	1.433
#2	126.8	4.628	-.0270	1.554	1.434
#3	122.5	4.641	-.0080	1.558	1.432

Zoom In Zoom Out

Sample Name: FC1233-1 Acquired: 12/19/2022 12:01:26 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 5.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2727.1**	**8012.1**	**45986.**	**7541.3**
Stddev	3.6	18.2	348.	46.6
%RSD	.13372	.22754	.75601	.61782
#1	2727.6	8025.5	46025.	7574.0
#2	2723.2	7991.4	46313.	7487.9
#3	2730.5	8019.5	45621.	7561.9

Zoom In Zoom Out

Sample Name: FC1222-1 Acquired: 12/19/2022 12:06:49 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 10.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**99.03**	**-.0035**	**.2246**	**.0704**	**-.0009**	**2977.**	**.0013**	**.0073**
Stddev	.0033	.40	.0134	.0152	.0003	.0006	17.	.0003	.0011
%RSD	287.5	.3990	381.9	6.781	.4390	65.58	.5857	21.44	15.38
#1	.0012	99.12	-.0176	.2327	.0705	-.0009	2987.	.0010	.0061
#2	-.0022	99.37	-.0021	.2341	.0701	-.0003	2987.	.0012	.0074
#3	.0044	98.59	.0092	.2070	.0707	-.0014	2957.	.0016	.0083

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0439**	**.0812**	**16.34**	**19.54**	**.0550**	**74.28**	**.3752**	**.0114**	**35.58**
Stddev	.0019	.0017	.07	.39	.0151	.30	.0012	.0012	.22
%RSD	4.230	2.153	.4270	1.994	27.51	.4018	.3099	10.22	.6070
#1	.0436	.0829	16.40	19.63	.0721	74.33	.3758	.0124	35.82
#2	.0422	.0812	16.36	19.87	.0435	74.55	.3759	.0117	35.53
#3	.0459	.0794	16.26	19.11	.0494	73.96	.3739	.0101	35.39

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0526**	**-.0017**	**-.0075**	**-.0286**	**9.770**	**.0315**	**1.478**	**6.674**	**-.0083**
Stddev	.0009	.0043	.0088	.0072	.097	.0022	.004	.046	.0066
%RSD	1.729	258.7	116.5	25.07	.9874	7.049	.2963	.6943	80.02
#1	.0536	.0025	-.0016	-.0365	9.833	.0338	1.481	6.684	-.0091
#2	.0518	-.0061	-.0034	-.0270	9.819	.0314	1.480	6.714	-.0145
#3	.0525	-.0014	-.0176	-.0224	9.659	.0294	1.473	6.623	-.0013

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0339**	**.3361**
Stddev	.0028	.0052
%RSD	8.119	1.553
#1	.0329	.3404
#2	.0318	.3378
#3	.0370	.3303

Zoom In Zoom Out

Sample Name: FC1222-1 Acquired: 12/19/2022 12:06:49 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 10.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2659.7**	**7165.8**	**41236.**	**6932.1**
Stddev	44.4	108.9	172.	79.5
%RSD	1.6710	1.5191	.41748	1.1474
#1	2619.4	7061.0	41357.	6975.9
#2	2652.4	7158.1	41039.	6840.3
#3	2707.4	7278.3	41313.	6980.1

Zoom In Zoom Out

Sample Name: FC1222-2 Acquired: 12/19/2022 12:11:58 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 10.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0135**	**160.8**	**.0181**	**.4265**	**.5619**	**.0006**	**1660.**	**.0010**	**1.241**
Stddev	.0041	2.0	.0077	.0116	.0052	.0005	11.	.0007	.009
%RSD	30.22	1.234	42.44	2.718	.9226	89.54	.6453	68.15	.7242
#1	.0136	162.1	.0242	.4139	.5632	.0004	1648.	.0003	1.236
#2	.0094	161.8	.0207	.4287	.5663	.0012	1665.	.0010	1.236
#3	.0176	158.5	.0095	.4368	.5562	.0002	1667.	.0017	1.252

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.625**	**.6846**	**332.8**	**30.12**	**.0780**	**41.89**	**2.029**	**.0581**	**87.58**
Stddev	.022	.0083	4.7	.45	.0213	.50	.024	.0006	.95
%RSD	.8412	1.215	1.419	1.485	27.31	1.195	1.174	1.013	1.090
#1	2.622	.6806	335.3	29.95	.0648	42.06	2.022	.0576	88.16
#2	2.648	.6941	335.7	30.63	.0667	42.28	2.056	.0587	88.09
#3	2.604	.6790	327.3	29.79	.1026	41.32	2.010	.0580	86.47

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
IS Ref	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.294**	**.0477**	**-.0004**	**.0083**	**10.26**	**.1221**	**1.182**	**4.768**	**-.0130**
Stddev	.004	.0011	.0056	.0076	.06	.0044	.017	.072	.0248
%RSD	.3349	2.245	1547.	91.84	.5997	3.575	1.457	1.512	191.2
#1	1.292	.0467	.0059	-.0004	10.23	.1270	1.188	4.716	-.0016
#2	1.291	.0488	-.0048	.0140	10.22	.1205	1.195	4.850	.0041
#3	1.299	.0476	-.0022	.0113	10.33	.1187	1.162	4.738	-.0415

Elem	V_2924	Zn2062
IS Ref	(Y_3600)	(Y_2243)
Units	ppm	ppm
Avg	**.0694**	F **77.82**
Stddev	.0003	.31
%RSD	.4404	.4019
#1	.0695	77.66
#2	.0696	77.62
#3	.0690	78.18

Zoom In Zoom Out

Sample Name: FC1222-2 Acquired: 12/19/2022 12:11:58 Type: Unk
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 10.000000
User: admin SSTRACE01: : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2826.6**	**7568.3**	**43021.**	**7263.0**
Stddev	17.8	47.0	372.	69.0
%RSD	.62846	.62080	.86414	.95045
#1	2839.0	7597.8	43153.	7263.1
#2	2834.5	7593.0	42601.	7194.0
#3	2806.2	7514.1	43309.	7332.1

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/19/2022 12:17:07 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2524**	**39.66**	**2.034**	F **2.030**	**2.019**	**2.039**	**39.61**	**2.011**	**1.998**
Stddev	.0004	.08	.006	.029	.002	.004	.11	.003	.004
%RSD	.1669	.2054	.2788	1.406	.1014	.1835	.2881	.1393	.1898
#1	.2527	39.72	2.029	1.997	2.019	2.041	39.74	2.008	1.994
#2	.2519	39.57	2.041	2.045	2.016	2.035	39.56	2.014	2.001
#3	.2526	39.68	2.033	2.047	2.020	2.042	39.53	2.012	1.997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.2500					
Range				10.00%					

Elem	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.088**	**2.033**	**39.77**	**38.85**	**1.930**	**38.77**	**2.065**	**1.991**	**39.70**
Stddev	.007	.009	.08	.10	.005	.14	.033	.003	.10
%RSD	.3388	.4345	.1925	.2516	.2369	.3483	1.586	.1498	.2403
#1	2.090	2.036	39.83	38.96	1.935	38.90	2.073	1.987	39.81
#2	2.093	2.041	39.68	38.80	1.926	38.63	2.093	1.993	39.63
#3	2.079	2.024	39.79	38.78	1.930	38.77	2.029	1.992	39.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**2.032**	**2.033**	**2.003**	**2.029**	**2.064**	**1.926**	**2.035**	**2.076**
Stddev	.003	.004	.003	.004	.003	.004	.001	.005	.006
%RSD	.1668	.1883	.1308	.2056	.1548	.1753	.0496	.2464	.2914
#1	2.037	2.030	2.031	2.001	2.026	2.060	1.926	2.036	2.076
#2	2.044	2.036	2.036	2.008	2.032	2.068	1.925	2.040	2.082
#3	2.042	2.029	2.032	2.001	2.030	2.064	1.926	2.030	2.070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 12/19/2022 12:17:07 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	**2.060**	**2.044**
Stddev	.005	.004
%RSD	.2210	.1941
#1	2.063	2.041
#2	2.061	2.048
#3	2.054	2.042
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2630.2**	**7198.8**	**41624.**	**6883.8**
Stddev	8.8	28.5	267.	80.9
%RSD	.33444	.39535	.64149	1.1752
#1	2639.1	7231.2	41636.	6790.4
#2	2621.5	7177.9	41351.	6931.6
#3	2630.2	7187.2	41885.	6929.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/19/2022 12:22:06 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3130	Ca3179	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0077**	**.0003**	F **-.0059**	**.0004**	**.0000**	**.0029**	**.0000**
Stddev	.0000	.0040	.0002	.0018	.0003	.0000	.0014	.0000
%RSD	99.77	52.24	54.55	30.33	64.11	211.1	48.63	103.1
#1	.0001	-.0041	.0005	-.0041	.0002	.0000	.0045	.0000
#2	.0000	-.0069	.0003	-.0060	.0003	.0000	.0027	.0000
#3	.0000	-.0120	.0001	-.0076	.0007	.0000	.0016	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010				
Low Limit				-.0010				

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**.0005**	**.0053**	**-.0469**	F **-.0011**	**.0126**	**.0000**
Stddev	.0001	.0002	.0002	.0020	.0382	.0021	.0110	.0001
%RSD	100.5	273.5	32.15	37.79	81.39	190.3	87.40	212.6
#1	.0000	.0001	.0003	.0059	-.0666	-.0030	.0242	.0001
#2	.0001	-.0003	.0006	.0031	-.0029	.0012	.0114	.0000
#3	.0001	.0000	.0007	.0069	-.0711	-.0015	.0022	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0010		
Low Limit						-.0010		

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0166**	**.0001**	**-.0005**	**-.0013**	**-.0008**	**.0003**	**-.0008**
Stddev	.0001	.0141	.0002	.0003	.0006	.0008	.0004	.0003
%RSD	86.90	84.91	165.3	60.52	44.32	92.71	128.0	33.07
#1	.0000	.0004	.0002	-.0004	-.0007	-.0001	.0000	-.0008
#2	.0001	.0259	-.0001	-.0009	-.0018	-.0016	.0008	-.0005
#3	.0000	.0237	.0002	-.0003	-.0014	-.0008	.0002	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: CCB Acquired: 12/19/2022 12:22:06 Type: QC
Method: 60102007_COMBO_102422(v104) Mode: CONC Corr. Factor: 1.000000
User: admin SSTRACE01: : :
Comment:

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0002**	**.0003**	**.0000**	**-.0001**
Stddev	.000	.0001	.0009	.0001	.0000
%RSD	6665.	61.10	322.0	182.1	7.650
#1	.0000	.0003	.0009	.0001	-.0001
#2	.0002	.0002	.0007	.0000	-.0001
#3	-.0002	.0001	-.0008	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3100.4**	**7620.1**	**43951.**	**6960.9**
Stddev	17.5	27.5	130.	40.9
%RSD	.56565	.36044	.29475	.58798
#1	3119.5	7651.2	44088.	6953.2
#2	3096.8	7609.6	43830.	7005.1
#3	3085.0	7599.4	43934.	6924.4

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	2	V	-0.005817	0.000000	No
			Fe	-0.000008	0.000000	No
Al 396.152 { 85}	☒	1	Mo	0.040336	0.000000	No
As 189.042 {478}	☒	4	Fe	-0.000039	0.000000	No
			Cr	-0.000653	0.000000	No
			Mo	0.000444	0.000000	No
			Al	0.000001	0.000000	No
B 249.773 {135}	☒	1	Fe	0.002193	0.000000	No
Ba 455.403 { 74}	☒	4	Fe	-0.000029	0.000000	No
			Al	0.000025	0.000000	No
			Ca	0.000016	0.000000	No
			Mg	0.000016	0.000000	No
Be 313.042 {108}	☒	2	V	0.000089	0.000000	No
			Ti	-0.000289	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 226.502 {449}	☒	4	Fe	0.000077	0.000000	No
			Ca	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ti	0.000103	0.000000	No
Co 228.616 {447}	☒	3	Mo	-0.001220	0.000000	No
			Ti	0.002210	0.000000	No
			Fe	0.000005	0.000000	No
Cr 267.716 {126}	☒	4	Al	0.000003	0.000000	No
			Fe	-0.000016	0.000000	No
			Ca	0.000002	0.000000	No
			Cd	-0.000120	0.000000	No
Cu 324.754 {104}	☒	10	Mo	0.000189	0.000000	No
			Sn	-0.000012	0.000000	No
			V	-0.000158	0.000000	No
			Al	0.000003	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000547	0.000000	No
			Cd	0.000190	0.000000	No
			Fe	0.000007	0.000000	No
			Ca	0.000001	0.000000	No
			Ti	-0.000268	0.000000	No
Fe 259.940 {130}	☒	None				
In 230.606 {446}*	☒	None				
K 766.490 { 44}	☒	None				
Li 670.784 { 50}	☒	4	Ca	0.000004	0.000000	No
			Fe	0.000031	0.000000	No
			Al	-0.000009	0.000000	No
			Mg	-0.000006	0.000000	No
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	2	Fe	-0.000009	0.000000	No
			Mg	0.000000	0.000000	No
Mo 202.030 {467}	☒	3	Fe	-0.000000	0.000000	No
			Al	-0.000002	0.000000	No
			Ca	-0.000003	0.000000	No
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	7	Fe	-0.000026	0.000000	No
			Co	0.000112	0.000000	No
			Mo	0.000980	0.000000	No
			Sb	-0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	-0.000304	0.000000	No
			Tl	0.000172	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Pb 220.353 {453}	☒	9	Al	0.000153	0.000000	No
				Fe	0.000262	0.000000	No
				Mo	-0.002189	0.000000	No
				Cu	0.000467	0.000000	No
				Ti	0.000036	0.000000	No
				Si	0.000182	0.000000	No
				Ca	0.000012	0.000000	No
				Cr	-0.000260	0.000000	No
				Mg	0.000002	0.000000	No
	Sb 206.833 {463}	☒	11	Fe	0.000007	0.000000	No
				Cr	0.011486	0.000000	No
				Mo	-0.002538	0.000000	No
				V	-0.002735	0.000000	No
				Sn	-0.008695	0.000000	No
				Ti	0.000278	0.000000	No
				Ca	0.000001	0.000000	No
				Ni	-0.000818	0.000000	No
				Al	0.000005	0.000000	No
				Mn	-0.000133	0.000000	No
				Mg	-0.000002	0.000000	No
	Se 196.090 {472}	☒	12	Fe	-0.000046	0.000000	No
				Ca	0.000006	0.000000	No
				Mn	0.000331	0.000000	No
				Mo	0.000111	0.000000	No
				Al	0.000001	0.000000	No
				V	0.000000	0.000000	No
				Zn	0.000000	0.000000	No
				Sr	-0.000111	0.000000	No
				As	0.000125	0.000000	No
				Cd	-0.000250	0.000000	No
				Mg	0.000002	0.000000	No
				Cr	-0.000326	0.000000	No
	Si 212.412 {459}	☒	1	Mo	0.000000	0.000000	No
	Sn 189.989 {477}	☒	1	Fe	0.000005	0.000000	No
	Sr 407.771 { 83}	☒	2	Ca	-0.000001	0.000000	No
				Al	0.000012	0.000000	No
	Ti 334.941 {101}	☒	1	Ca	-0.000008	0.000000	No
	Tl 190.856 {477}	☒	10	Co	0.004099	0.000000	No
				Fe	-0.000033	0.000000	No
				Al	0.000000	0.000000	No
				Ba	-0.000051	0.000000	No
				Ti	-0.000648	0.000000	No
				Sb	0.000167	0.000000	No
				Ca	0.000001	0.000000	No
				Cr	0.000340	0.000000	No
				Mg	-0.000002	0.000000	No
				V	0.000015	0.000000	No
	V 292.402 {115}	☒	5	Fe	0.000005	0.000000	No
				Cr	-0.003634	0.000000	No
				Mo	-0.009536	0.000000	No
				Ti	0.000303	0.000000	No
				Mn	-0.000333	0.000000	No
	Y 224.306 {450}*	☒	None				
	Y 360.073 { 94}*	☒	None				
	Y 371.030 { 91}*	☒	None				
	Zn 206.200 {463}	☒	5	Cr	-0.001305	0.000000	No
				Al	0.000014	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Ca	0.000003	0.000000	No
				Fe	-0.000009	0.000000	No
				As	0.001105	0.000000	No

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
	Ag 328.068 {103}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000208	0.718656	0.000000	1.000000
	Al 396.152 { 85}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.001880	0.204624	0.000000	1.000000
	As 189.042 {478}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000231	0.130609	0.000000	1.000000
	B 249.773 {135}	12/19/2022 11:07:03	12/19/2022 10:18:17	Linear	1/Conc	0.002175	0.235849	0.000000	1.000000
	Ba 455.403 { 74}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.003501	11.908888	0.000000	1.000000
	Be 313.042 {108}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000103	14.628838	0.000000	1.000000
	Ca 317.933 {106}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.001311	0.498213	0.000000	1.000000
	Cd 226.502 {449}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000487	5.824802	0.000000	1.000000
	Co 228.616 {447}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000302	2.829809	0.000000	1.000000
	Cr 267.716 {126}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000118	0.765960	0.000000	1.000000
	Cu 324.754 {104}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.011908	0.945479	0.000000	1.000000
	Fe 259.940 {130}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000437	0.235138	0.000000	1.000000
	In 230.606 {446}*	12/19/2022 11:07:03	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	K 766.490 { 44}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.037089	0.096680	0.000000	1.000000
	Li 670.784 { 50}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.008309	2.013782	0.000000	1.000000
	Mg 279.079 {121}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000680	0.053805	0.000000	1.000000
	Mn 257.610 {131}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000026	3.868571	0.000000	1.000000
	Mo 202.030 {467}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000378	0.795639	0.000000	1.000000
	Na 589.592 { 57}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.038574	0.354600	0.000000	1.000000
	Ni 231.604 {445}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.001764	1.879314	0.000000	1.000000
	Pb 220.353 {453}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.004449	1.430226	0.000000	1.000000
	Sb 206.833 {463}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000830	0.202427	0.000000	1.000000
	Se 196.090 {472}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000130	0.096497	0.000000	1.000000
	Si 212.412 {459}	12/19/2022 11:07:03	12/19/2022 10:18:18	Linear	1/Conc	0.002099	0.312206	0.000000	1.000000
	Sn 189.989 {477}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000308	0.341154	0.000000	1.000000
	Sr 407.771 { 83}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.000694	15.662753	0.000000	1.000000
	Ti 334.941 {101}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.002094	2.060718	0.000000	1.000000
	Tl 190.856 {477}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000791	0.269143	0.000000	1.000000
	V 292.402 {115}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	-0.000307	1.148228	0.000000	1.000000
	Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Zn 206.200 {463}	12/19/2022 11:07:03	12/19/2022 10:27:16	Linear	1/Conc	0.002165	3.273615	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	0.999855	0.000043	0.000429	0.001430	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	0.999972	0.000321	0.008353	0.027842	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	0.999700	0.000033	0.001005	0.003351	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	0.999534	0.000405	0.002013	0.006710	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	0.999767	0.012120	0.000195	0.000652	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	0.999811	0.002092	0.000053	0.000175	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	0.999969	0.001835	0.001906	0.006353	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	0.999858	0.000723	0.000044	0.000148	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	0.999871	0.001064	0.000104	0.000347	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	0.999875	0.000126	0.000286	0.000952	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	0.999852	0.000268	0.000363	0.001210	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	0.999926	0.000728	0.001821	0.006069	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	K 766.490 { 44}	0.999665	0.002685	0.029729	0.099097	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	0.998928	0.000923	0.001584	0.005282	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	0.999896	0.000819	0.011488	0.038292	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	0.999867	0.000805	0.000048	0.000160	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	0.999804	0.000368	0.000187	0.000624	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	0.999373	0.013477	0.008441	0.028137	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	0.999926	0.000477	0.000159	0.000530	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	0.999518	0.000329	0.000450	0.001500	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	0.999766	0.000032	0.001207	0.004024	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	0.999731	0.000023	0.002100	0.007001	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	0.998840	0.000810	0.000573	0.001909	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	0.999965	0.000067	0.000398	0.001327	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	0.999696	0.004028	0.000090	0.000300	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	0.999864	0.000354	0.000150	0.000499	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	0.999771	0.000060	0.001049	0.003497	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	0.999918	0.000339	0.000261	0.000870	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Zn 206.200 {463}	0.999879	0.000751	0.000056	0.000185	OK.	1.000000	0.000000	1	0

Quantitation Report

File Name 001CALB.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 10:51
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.077	ug/l	-215.81	5,486.48	9.010E-03	Pulse	0.50	3
As			1	-0.023	ug/l	-48.13	105.67	1.672E-04	Pulse	1.00	3
Mo			1	0.015	ug/l	234.21	456.72	5.171E-04	Pulse	0.50	3
Pb			1	-0.028	ug/l	-22.06	3,596.08	3.321E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.00	0.000E+00	Pulse	2.00	3
Ag			1	-0.001	ug/l	-155.19	310.67	3.271E-04	Pulse	0.50	3
Ba			1	0.110	ug/l	176.96	1,070.37	2.033E-04	Pulse	0.50	3
Tl			1	0.005	ug/l	126.44	1,278.76	1.207E-04	Pulse	0.50	3
Sn			1	0.424	ug/l	181.90	9,844.74	1.867E-03	Pulse	0.30	3
Sr			1	0.021	ug/l	174.08	1,777.52	3.185E-04	Pulse	0.50	3
[Pb]			1	-0.029	ug/l	-21.13	1,700.77	1.571E-04	Pulse	0.50	3
Ca			1	-5.376	ug/l	-9.85	322.00	5.033E-04	Pulse	0.50	3
Ti			1	4.243	ug/l	172.13	4,515.87	7.599E-03	Pulse	0.50	3
Na			1	-8.185	ug/l	-9.86	23,835.41	3.711E-02	Pulse	1.00	3
Mg			1	2.918	ug/l	189.39	10,062.51	1.684E-02	Pulse	1.00	3
K			1	-50.713	ug/l	-12.43	38,835.21	3.788E-02	Pulse	1.00	3
V			1	-0.072	ug/l	-102.47	1,595.21	2.657E-03	Pulse	0.50	3
Mn			1	0.013	ug/l	438.92	1,215.00	1.982E-03	Pulse	0.50	3
Fe			1	8.667	ug/l	163.13	338,483.82	5.609E-01	Pulse	0.50	3
Co			1	0.002	ug/l	252.96	376.68	6.084E-04	Pulse	0.50	3
Ni			1	-0.017	ug/l	-115.79	416.01	6.693E-04	Pulse	0.50	3
Cu			1	-1.320	ug/l	-4.22	16,248.58	2.524E-02	Pulse	0.50	3
Zn			1	3.532	ug/l	200.70	30,026.36	3.411E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	294.97	7.33	8.117E-06	Pulse	0.50	3
Al			1	42.931	ug/l	165.88	56,585.99	9.464E-02	Pulse	1.00	3
Se			1	-0.222	ug/l	-9.40	56.67	5.935E-05	Pulse	3.00	3
Sb			1	0.023	ug/l	184.92	799.13	8.980E-04	Pulse	1.00	3
Se			1	0.187	ug/l	60.77	160.67	1.682E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		10,917,170.67	7.45	100.0	Analog	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		1,047,837.70	7.36	100.0	Pulse	0.30	3
1	Ge		649,624.25	8.39	100.0	Pulse	0.30	3
1	In		5,743,029.77	7.74	100.0	Mix	0.30	3
1	Tb		15,717,226.33	7.38	100.0	Analog	0.50	3
1	Lu		11,447,506.33	7.86	100.0	Analog	0.50	3
1	Ge		962,204.72	8.20	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		3,721.50	7.02	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 10:55
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.009	ug/l	66.91	3,013.58	1.487E-02	Pulse	0.50	3
As			1	-0.007	ug/l	-197.62	62.00	3.057E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	-178.81	44.00	1.457E-04	Pulse	0.50	3
Pb			1	0.008	ug/l	26.22	2,300.83	6.578E-04	Pulse	1.00	3
Be			1	0.008	ug/l	100.14	0.50	2.466E-06	Pulse	2.00	3
Ag			1	-0.001	ug/l	-100.16	98.67	3.267E-04	Pulse	0.50	3
Ba			1	-0.002	ug/l	-101.25	10.67	5.713E-06	Pulse	0.50	3
Tl			1	0.001	ug/l	64.05	260.00	7.435E-05	Pulse	0.50	3
Sn			1	-0.002	ug/l	-234.80	275.56	1.478E-04	Pulse	0.30	3
Sr			1	0.004	ug/l	53.97	436.01	2.337E-04	Pulse	0.50	3
[Pb]			1	0.009	ug/l	61.08	1,128.04	3.226E-04	Pulse	0.50	3
Ca			1	-0.767	ug/l	-56.85	342.67	1.690E-03	Pulse	0.50	3
Ti			1	0.022	ug/l	71.64	14.67	7.233E-05	Pulse	0.50	3
Na			1	-0.402	ug/l	-43.33	22,878.35	1.129E-01	Pulse	1.00	3
Mg			1	0.037	ug/l	69.38	536.68	2.647E-03	Pulse	1.00	3
K			1	-0.572	ug/l	-65.76	65,204.20	1.973E-01	Pulse	1.00	3
V			1	-0.008	ug/l	-57.68	1,252.71	6.180E-03	Pulse	0.50	3
Mn			1	0.002	ug/l	73.86	317.33	1.565E-03	Pulse	0.50	3
Fe			1	0.396	ug/l	21.89	19,019.57	9.382E-02	Pulse	0.50	3
Co			1	-0.001	ug/l	-132.41	65.33	3.223E-04	Pulse	0.50	3
Ni			1	-0.005	ug/l	-101.70	209.33	1.033E-03	Pulse	0.50	3
Cu			1	0.081	ug/l	22.76	26,697.07	1.317E-01	Pulse	0.50	3
Zn			1	-0.029	ug/l	-96.78	1,525.73	5.049E-03	Pulse	1.00	3
Cd			1	0.001	ug/l	74.35	4.00	1.322E-05	Pulse	0.50	3
Al			1	0.366	ug/l	38.51	839.36	4.140E-03	Pulse	1.00	3
Se			1	0.045	ug/l	81.97	51.67	1.711E-04	Pulse	3.00	3
Sb			1	0.001	ug/l	82.26	60.67	2.007E-04	Pulse	1.00	3
Se			1	-0.001	ug/l	-4688.78	39.56	1.309E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,497,689.67	0.34	100.0	Pulse	0.50	3
1	Sc		330,540.79	0.57	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		202,699.33	0.25	100.0	Pulse	0.30	3
1	In		1,865,911.52	0.78	100.0	Pulse	0.30	3
1	Tb		4,880,949.67	0.62	100.0	Pulse	0.50	3
1	Lu		3,566,492.50	1.10	100.0	Pulse	0.50	3
1	Ge		302,115.05	0.66	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,024.48	4.67	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALB.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 10:59
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	2,896.89	1.424E-02	Pulse	0.50	3
As			1	0.000	ug/l	---	73.33	3.605E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	47.33	1.569E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	2,034.79	5.826E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.00		Pulse	2.00	3
Ag			1	0.000	ug/l	---	114.00	3.778E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	16.67	8.927E-06	Pulse	0.50	3
Tl			1	0.000	ug/l	---	209.33	5.997E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	288.89	1.544E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	400.68	2.142E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	988.03	2.828E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	384.01	1.888E-03	Pulse	0.50	3
Ti			1	0.000	ug/l	---	6.67	3.268E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	23,756.34	1.168E-01	Pulse	1.00	3
Mg			1	0.000	ug/l	---	501.34	2.465E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	65,739.64	1.991E-01	Pulse	1.00	3
V			1	0.000	ug/l	---	1,344.05	6.606E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	300.00	1.475E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	14,531.46	7.143E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	78.67	3.873E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	236.00	1.162E-03	Pulse	0.50	3
Cu			1	0.000	ug/l	---	25,539.52	1.256E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	1,596.07	5.288E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	1.33	4.426E-06	Pulse	0.50	3
Al			1	0.000	ug/l	---	684.35	3.361E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	46.00	1.523E-04	Pulse	3.00	3
Sb			1	0.000	ug/l	---	51.67	1.713E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	39.55	1.310E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,493,146.58	0.38	100.0	Pulse	0.50	3
1	Sc		330,198.63	0.23	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		203,400.42	1.26	100.0	Pulse	0.30	3
1	In		1,870,475.90	0.65	100.0	Pulse	0.30	3
1	Tb		4,898,479.17	0.15	100.0	Pulse	0.50	3
1	Lu		3,573,601.17	0.68	100.0	Pulse	0.50	3
1	Ge		301,845.20	0.77	100.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,063.37	2.57	100.0	Pulse	0.30	3

Quantitation Report

File Name 004CALS.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 11:03
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.479	ug/l	1.40	9,557.71	4.673E-02	Pulse	0.50	3
As			1	0.448	ug/l	2.00	835.69	4.086E-03	Pulse	1.00	3
Mo			1	0.448	ug/l	2.18	3,270.30	1.076E-02	Pulse	0.50	3
Pb			1	0.434	ug/l	1.58	15,785.60	4.520E-03	Pulse	1.00	3
Be			1	0.441	ug/l	3.86	27.50	1.345E-04	Pulse	2.00	3
Ag			1	0.481	ug/l	3.24	10,597.72	3.489E-02	Pulse	0.50	3
Ba			1	0.444	ug/l	5.61	1,473.40	7.915E-04	Pulse	0.50	3
Tl			1	0.450	ug/l	2.52	20,310.72	5.815E-03	Pulse	0.50	3
Sn			1	0.493	ug/l	0.30	3,990.46	2.144E-03	Pulse	0.30	3
Sr			1	0.461	ug/l	0.54	4,757.28	2.556E-03	Pulse	0.50	3
[Pb]			1	0.427	ug/l	0.62	7,385.62	2.115E-03	Pulse	0.50	3
Ca			1	48.441	ug/l	4.61	2,937.56	1.437E-02	Pulse	0.50	3
Ti			1	0.525	ug/l	18.82	198.00	9.679E-04	Pulse	0.50	3
Na			1	45.899	ug/l	1.49	115,258.74	5.636E-01	Pulse	1.00	3
Mg			1	45.970	ug/l	1.37	46,835.10	2.290E-01	Pulse	1.00	3
K			1	51.752	ug/l	1.89	121,175.38	3.636E-01	Pulse	1.00	3
V			1	0.457	ug/l	3.36	6,499.77	3.178E-02	Pulse	0.50	3
Mn			1	0.505	ug/l	1.68	4,293.82	2.099E-02	Pulse	0.50	3
Fe			1	47.483	ug/l	1.03	563,073.50	2.753E+00	Pulse	0.50	3
Co			1	0.466	ug/l	1.96	10,280.08	5.027E-02	Pulse	0.50	3
Ni			1	0.456	ug/l	0.99	2,918.23	1.427E-02	Pulse	0.50	3
Cu			1	0.158	ug/l	34.28	28,141.14	1.376E-01	Pulse	0.50	3
Zn			1	2.859	ug/l	1.58	8,693.97	2.862E-02	Pulse	1.00	3
Cd			1	0.466	ug/l	4.20	1,553.40	5.113E-03	Pulse	0.50	3
Al			1	46.046	ug/l	1.53	20,711.38	1.013E-01	Pulse	1.00	3
Se			1	0.536	ug/l	12.17	114.55	3.773E-04	Pulse	3.00	3
Sb			1	0.458	ug/l	1.97	4,530.90	1.492E-02	Pulse	1.00	3
Se			1	0.476	ug/l	17.63	68.56	2.257E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,492,618.42	0.97	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		333,281.29	0.80	100.9	Pulse	0.30	3
1	Ge		204,534.66	1.05	100.6	Pulse	0.30	3
1	In		1,861,381.80	0.22	99.5	Pulse	0.30	3
1	Tb		4,912,138.50	0.66	100.3	Pulse	0.50	3
1	Lu		3,562,568.50	0.52	99.7	Pulse	0.50	3
1	Ge		303,819.25	1.14	100.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,072.26	1.26	100.8	Pulse	0.30	3

Quantitation Report

File Name 005CALS.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 11:07
Sample Name CALSTD-3
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.991	ug/l	2.98	16,874.64	8.148E-02	Pulse	0.50	3
As			1	0.964	ug/l	4.46	1,734.08	8.373E-03	Pulse	1.00	3
Mo			1	0.939	ug/l	4.88	6,853.29	2.238E-02	Pulse	0.50	3
Pb			1	0.930	ug/l	0.51	31,533.93	9.031E-03	Pulse	1.00	3
Be			1	0.913	ug/l	4.87	57.67	2.783E-04	Pulse	2.00	3
Ag			1	1.011	ug/l	0.89	22,320.12	7.289E-02	Pulse	0.50	3
Ba			1	0.938	ug/l	3.00	3,131.62	1.663E-03	Pulse	0.50	3
Tl			1	0.965	ug/l	0.44	43,298.56	1.240E-02	Pulse	0.50	3
Sn			1	0.973	ug/l	2.08	7,687.21	4.081E-03	Pulse	0.30	3
Sr			1	0.934	ug/l	0.93	9,338.33	4.958E-03	Pulse	0.50	3
[Pb]			1	0.942	ug/l	1.90	15,102.03	4.325E-03	Pulse	0.50	3
Ca			1	97.243	ug/l	3.67	5,578.15	2.694E-02	Pulse	0.50	3
Ti			1	0.898	ug/l	16.68	338.67	1.634E-03	Pulse	0.50	3
Na			1	95.075	ug/l	1.96	215,868.27	1.042E+00	Pulse	1.00	3
Mg			1	96.118	ug/l	0.85	98,625.93	4.761E-01	Pulse	1.00	3
K			1	101.790	ug/l	2.23	175,392.48	5.227E-01	Pulse	1.00	3
V			1	0.962	ug/l	3.14	12,343.93	5.961E-02	Pulse	0.50	3
Mn			1	0.981	ug/l	3.13	8,153.73	3.937E-02	Pulse	0.50	3
Fe			1	97.590	ug/l	1.49	1,156,378.83	5.583E+00	Pulse	0.50	3
Co			1	0.966	ug/l	2.74	21,495.93	1.038E-01	Pulse	0.50	3
Ni			1	0.984	ug/l	1.74	6,096.32	2.943E-02	Pulse	0.50	3
Cu			1	0.584	ug/l	8.22	35,199.28	1.700E-01	Pulse	0.50	3
Zn			1	0.814	ug/l	3.90	3,653.69	1.193E-02	Pulse	1.00	3
Cd			1	0.943	ug/l	2.97	3,168.29	1.035E-02	Pulse	0.50	3
Al			1	95.997	ug/l	1.44	42,973.99	2.075E-01	Pulse	1.00	3
Se			1	0.965	ug/l	5.80	170.56	5.570E-04	Pulse	3.00	3
Sb			1	0.957	ug/l	0.61	9,485.46	3.098E-02	Pulse	1.00	3
Se			1	0.884	ug/l	20.10	94.00	3.070E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,491,638.50	0.65	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		335,594.42	0.77	101.6	Pulse	0.30	3
1	Ge		207,162.50	1.80	101.8	Pulse	0.30	3
1	In		1,883,362.98	0.65	100.7	Pulse	0.30	3
1	Tb		4,912,449.00	0.91	100.3	Pulse	0.50	3
1	Lu		3,570,671.58	0.45	99.9	Pulse	0.50	3
1	Ge		306,226.44	0.19	101.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		974.48	9.03	91.6	Pulse	0.30	3

Quantitation Report

File Name	006CALS.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:11
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.176	ug/l	1.09	146,039.63	7.044E-01	Pulse	0.50	3
As			1	10.112	ug/l	1.28	17,501.99	8.442E-02	Pulse	1.00	3
Mo			1	9.914	ug/l	1.22	72,042.45	2.348E-01	Pulse	0.50	3
Pb			1	9.881	ug/l	0.81	317,888.40	9.032E-02	Pulse	1.00	3
Be			1	9.908	ug/l	2.21	626.34	3.021E-03	Pulse	2.00	3
Ag			1	10.746	ug/l	1.57	236,601.35	7.711E-01	Pulse	0.50	3
Ba			1	9.923	ug/l	1.36	33,001.34	1.751E-02	Pulse	0.50	3
Tl			1	10.174	ug/l	0.42	457,956.57	1.301E-01	Pulse	0.50	3
Sn			1	9.957	ug/l	0.56	76,048.50	4.035E-02	Pulse	0.30	3
Sr			1	9.948	ug/l	0.18	95,685.20	5.077E-02	Pulse	0.50	3
[Pb]			1	9.982	ug/l	0.80	151,713.89	4.311E-02	Pulse	0.50	3
Ca			1	1016.881	ug/l	0.55	54,699.06	2.638E-01	Pulse	0.50	3
Ti			1	9.965	ug/l	3.97	3,689.69	1.780E-02	Pulse	0.50	3
Na			1	1004.140	ug/l	0.94	2,050,620.54	9.891E+00	Pulse	1.00	3
Mg			1	1020.922	ug/l	0.96	1,043,543.08	5.033E+00	Pulse	1.00	3
K			1	1018.402	ug/l	0.73	1,162,090.08	3.436E+00	Pulse	1.00	3
V			1	9.979	ug/l	0.30	115,341.25	5.563E-01	Pulse	0.50	3
Mn			1	10.352	ug/l	0.32	83,228.86	4.014E-01	Pulse	0.50	3
Fe			1	1021.728	ug/l	0.91	11,978,044.67	5.778E+01	Analog	0.50	3
Co			1	10.396	ug/l	1.15	230,730.83	1.113E+00	Pulse	0.50	3
Ni			1	10.488	ug/l	1.11	62,707.57	3.025E-01	Pulse	0.50	3
Cu			1	9.915	ug/l	0.07	182,287.84	8.792E-01	Pulse	0.50	3
Zn			1	10.076	ug/l	0.81	26,848.63	8.750E-02	Pulse	1.00	3
Cd			1	10.314	ug/l	1.21	34,712.45	1.131E-01	Pulse	0.50	3
Al			1	994.017	ug/l	0.63	438,884.68	2.117E+00	Pulse	1.00	3
Se			1	10.290	ug/l	2.41	1,371.49	4.469E-03	Pulse	3.00	3
Sb			1	10.149	ug/l	1.00	100,301.86	3.269E-01	Pulse	1.00	3
Se			1	10.409	ug/l	2.09	675.68	2.202E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,519,572.67	0.95	100.8	Pulse	0.50	3
1	Sc		338,182.91	0.75	102.4	Pulse	0.30	3
1	Ge		207,333.17	1.00	101.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,884,802.77	0.34	100.8	Pulse	0.30	3
1	Tb		4,971,397.83	0.35	101.5	Pulse	0.50	3
1	Lu		3,613,350.83	0.61	101.1	Pulse	0.50	3
1	Ge		306,863.20	0.86	101.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,164.48	2.90	109.5	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:15
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	47.484	ug/l	0.95	677,263.29	3.235E+00	Pulse	0.50	3
As			1	46.847	ug/l	1.17	81,613.93	3.898E-01	Pulse	1.00	3
Mo			1	46.893	ug/l	1.00	343,206.25	1.110E+00	Pulse	0.50	3
Pb			1	46.390	ug/l	0.62	1,465,664.75	4.219E-01	Pulse	1.00	3
Be			1	46.802	ug/l	1.89	2,987.89	1.427E-02	Pulse	2.00	3
Ag			1	49.143	ug/l	1.36	1,089,898.37	3.525E+00	Pulse	0.50	3
Ba			1	46.807	ug/l	0.19	155,032.94	8.256E-02	Pulse	0.50	3
Tl			1	47.872	ug/l	0.25	2,126,109.42	6.120E-01	Pulse	0.50	3
Sn			1	46.447	ug/l	0.65	352,392.84	1.877E-01	Pulse	0.30	3
Sr			1	46.768	ug/l	0.28	446,690.01	2.379E-01	Pulse	0.50	3
[Pb]			1	46.829	ug/l	0.22	698,900.67	2.012E-01	Pulse	0.50	3
Ca			1	4703.609	ug/l	0.85	254,079.96	1.214E+00	Pulse	0.50	3
Ti			1	46.550	ug/l	0.58	17,385.72	8.303E-02	Pulse	0.50	3
Na			1	4695.550	ug/l	0.84	9,594,265.00	4.582E+01	Analog	1.00	3
Mg			1	4698.286	ug/l	1.23	4,848,044.50	2.316E+01	Analog	1.00	3
K			1	4715.841	ug/l	0.65	5,199,850.67	1.519E+01	Analog	1.00	3
V			1	47.027	ug/l	0.90	543,799.44	2.597E+00	Pulse	0.50	3
Mn			1	47.619	ug/l	0.86	385,487.32	1.841E+00	Pulse	0.50	3
Fe			1	4717.221	ug/l	0.87	55,795,062.67	2.665E+02	Analog	0.50	3
Co			1	47.641	ug/l	1.05	1,067,567.59	5.099E+00	Pulse	0.50	3
Ni			1	48.082	ug/l	0.59	289,473.57	1.383E+00	Pulse	0.50	3
Cu			1	48.057	ug/l	1.03	791,075.06	3.778E+00	Pulse	0.50	3
Zn			1	47.561	ug/l	0.92	121,622.73	3.933E-01	Pulse	1.00	3
Cd			1	47.607	ug/l	0.91	161,442.70	5.221E-01	Pulse	0.50	3
Al			1	4688.933	ug/l	1.17	2,088,110.54	9.973E+00	Pulse	1.00	3
Se			1	47.726	ug/l	0.40	6,237.68	2.017E-02	Pulse	3.00	3
Sb			1	47.080	ug/l	1.21	468,643.09	1.516E+00	Pulse	1.00	3
Se			1	46.876	ug/l	1.52	2,924.45	9.458E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,473,986.33	0.17	99.5	Pulse	0.50	3
1	Sc		342,333.08	0.61	103.7	Pulse	0.30	3
1	Ge		209,386.28	0.91	102.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,877,858.12	0.10	100.4	Pulse	0.30	3
1	Tb		4,947,835.50	0.20	101.0	Pulse	0.50	3
1	Lu		3,623,174.42	0.46	101.4	Pulse	0.50	3
1	Ge		309,212.44	0.83	102.4	Pulse	0.30	3
1	Te		4.67	107.85		Pulse	0.50	3
1	Li		1,106.70	4.96	104.1	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:19
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.674	ug/l	0.70	1,340,920.83	6.503E+00	Pulse	0.50	3
As			1	95.570	ug/l	0.32	163,897.55	7.948E-01	Pulse	1.00	3
Mo			1	95.593	ug/l	0.71	687,567.48	2.263E+00	Pulse	0.50	3
Pb			1	95.374	ug/l	0.48	2,936,416.42	8.668E-01	Pulse	1.00	3
Be			1	96.349	ug/l	1.32	6,058.07	2.938E-02	Pulse	2.00	3
Ag			1	100.354	ug/l	0.76	2,187,357.00	7.198E+00	Pulse	0.50	3
Ba			1	94.902	ug/l	0.49	310,298.42	1.674E-01	Pulse	0.50	3
Tl			1	98.253	ug/l	0.69	4,255,115.83	1.256E+00	Pulse	0.50	3
Sn			1	95.666	ug/l	0.27	716,245.82	3.863E-01	Pulse	0.30	3
Sr			1	95.690	ug/l	0.90	901,868.17	4.865E-01	Pulse	0.50	3
[Pb]			1	95.538	ug/l	0.51	1,389,509.42	4.101E-01	Pulse	0.50	3
Ca			1	9624.736	ug/l	0.93	511,607.90	2.481E+00	Pulse	0.50	3
Ti			1	97.271	ug/l	2.34	35,767.24	1.735E-01	Pulse	0.50	3
Na			1	9587.080	ug/l	0.67	19,266,540.00	9.344E+01	Analog	1.00	3
Mg			1	9595.313	ug/l	0.72	9,750,513.33	4.729E+01	Analog	1.00	3
K			1	9657.649	ug/l	0.72	10,366,918.33	3.090E+01	Analog	1.00	3
V			1	95.538	ug/l	0.87	1,086,567.96	5.270E+00	Pulse	0.50	3
Mn			1	96.450	ug/l	0.81	768,618.75	3.728E+00	Pulse	0.50	3
Fe			1	9553.022	ug/l	0.59	111,262,666.67	5.396E+02	Analog	0.50	3
Co			1	96.208	ug/l	0.71	2,123,049.83	1.030E+01	Pulse	0.50	3
Ni			1	96.790	ug/l	0.48	573,623.48	2.782E+00	Pulse	0.50	3
Cu			1	97.082	ug/l	0.62	1,547,425.63	7.504E+00	Pulse	0.50	3
Zn			1	97.039	ug/l	0.78	242,208.76	7.970E-01	Pulse	1.00	3
Cd			1	97.244	ug/l	0.07	324,112.97	1.067E+00	Pulse	0.50	3
Al			1	9654.149	ug/l	0.80	4,233,324.00	2.053E+01	Pulse	1.00	3
Se			1	96.673	ug/l	1.14	12,369.77	4.071E-02	Pulse	3.00	3
Sb			1	96.380	ug/l	0.74	942,853.33	3.103E+00	Pulse	1.00	3
Se			1	95.861	ug/l	1.63	5,835.78	1.920E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,387,825.75	0.49	97.0	Pulse	0.50	3
1	Sc		335,530.05	1.30	101.6	Pulse	0.30	3
1	Ge		206,198.86	0.25	101.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,853,877.29	0.07	99.1	Pulse	0.30	3
1	Tb		4,911,305.17	0.09	100.3	Pulse	0.50	3
1	Lu		3,591,496.83	0.80	100.5	Pulse	0.50	3
1	Ge		303,895.36	0.82	100.7	Pulse	0.30	3
1	Te		4.67	65.47		Pulse	0.50	3
1	Li		1,054.48	4.00	99.2	Pulse	0.30	3

Quantitation Report

File Name	009CALS.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:23
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.783	ug/l	0.81	2,758,731.33	1.377E+01	Pulse	0.50	3
As			1	202.998	ug/l	1.20	338,211.62	1.688E+00	Pulse	1.00	3
Mo			1	202.985	ug/l	0.89	1,427,916.59	4.804E+00	Pulse	0.50	3
Pb			1	203.222	ug/l	0.36	6,061,370.17	1.846E+00	Pulse	1.00	3
Be			1	202.630	ug/l	1.50	12,380.10	6.179E-02	Pulse	2.00	3
Ag			1	126.400	ug/l	1.28	2,694,508.00	9.066E+00	Pulse	0.50	3
Ba			1	203.351	ug/l	0.75	638,630.46	3.586E-01	Pulse	0.50	3
Tl			1	201.397	ug/l	0.16	8,452,396.67	2.575E+00	Analog	0.50	3
Sn			1	203.058	ug/l	0.55	1,459,965.84	8.199E-01	Pulse	0.30	3
Sr			1	202.966	ug/l	0.75	1,836,961.25	1.032E+00	Pulse	0.50	3
[Pb]			1	203.025	ug/l	0.36	2,860,472.00	8.713E-01	Pulse	0.50	3
Ca			1	20260.903	ug/l	0.57	1,046,216.54	5.221E+00	Pulse	0.50	3
Ti			1	202.229	ug/l	1.25	72,255.65	3.606E-01	Pulse	0.50	3
Na			1	20282.400	ug/l	0.88	39,583,884.00	1.975E+02	Analog	1.00	3
Mg			1	20276.755	ug/l	1.10	20,022,386.67	9.992E+01	Analog	1.00	3
K			1	20241.282	ug/l	0.65	21,127,916.00	6.454E+01	Analog	1.00	3
V			1	202.976	ug/l	0.67	2,241,911.08	1.119E+01	Pulse	0.50	3
Mn			1	202.353	ug/l	1.29	1,566,703.33	7.819E+00	Pulse	0.50	3
Fe			1	20293.116	ug/l	1.38	229,655,269.33	1.146E+03	Analog	0.50	3
Co			1	202.466	ug/l	1.20	4,341,612.83	2.167E+01	Pulse	0.50	3
Ni			1	202.060	ug/l	1.27	1,163,418.96	5.806E+00	Pulse	0.50	3
Cu			1	201.952	ug/l	1.36	3,100,825.08	1.548E+01	Pulse	0.50	3
Zn			1	202.081	ug/l	1.08	491,620.92	1.654E+00	Pulse	1.00	3
Cd			1	201.961	ug/l	0.78	658,351.75	2.215E+00	Pulse	0.50	3
Al			1	20251.022	ug/l	0.87	8,628,750.33	4.306E+01	Analog	1.00	3
Se			1	202.217	ug/l	1.01	25,257.74	8.498E-02	Pulse	3.00	3
Sb			1	202.533	ug/l	0.94	1,937,786.04	6.520E+00	Pulse	1.00	3
Se			1	202.831	ug/l	0.46	12,034.12	4.049E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,283,094.42	0.37	94.0	Pulse	0.50	3
1	Sc		327,361.38	1.01	99.1	Pulse	0.30	3
1	Ge		200,393.42	1.28	98.5	Pulse	0.30	3
1	In		1,780,733.68	0.81	95.2	Pulse	0.30	3
1	Tb		4,804,371.00	0.44	98.1	Pulse	0.50	3
1	Lu		3,514,894.75	0.45	98.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		297,236.60	1.13	98.5	Pulse	0.30	3
1	Te		26.67	30.31		Pulse	0.50	3
1	Li		980.03	10.91	92.2	Pulse	0.30	3

Quantitation Report

File Name	010HSAG.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:27
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	107.263	ug/l	0.78	1,472,222.63	7.289E+00	Pulse	0.50	3
As			1	105.821	ug/l	0.59	177,753.79	8.801E-01	Pulse	1.00	3
Mo			1	106.868	ug/l	1.25	753,046.00	2.529E+00	Pulse	0.50	3
Pb			1	106.642	ug/l	1.31	3,221,149.67	9.691E-01	Pulse	1.00	3
Be			1	108.296	ug/l	1.82	6,669.59	3.302E-02	Pulse	2.00	3
Ag			1	111.346	ug/l	1.22	2,377,628.17	7.986E+00	Pulse	0.50	3
Ba			1	106.067	ug/l	0.76	334,685.48	1.871E-01	Pulse	0.50	3
Tl			1	109.082	ug/l	1.15	4,634,985.33	1.394E+00	Pulse	0.50	3
Sn			1	106.699	ug/l	0.97	770,911.69	4.309E-01	Pulse	0.30	3
Sr			1	106.809	ug/l	0.81	971,447.31	5.430E-01	Pulse	0.50	3
[Pb]			1	106.583	ug/l	0.84	1,520,758.04	4.575E-01	Pulse	0.50	3
Ca			1	10605.732	ug/l	0.58	552,177.75	2.734E+00	Pulse	0.50	3
Ti			1	107.406	ug/l	1.34	38,685.37	1.915E-01	Pulse	0.50	3
Na			1	10709.794	ug/l	0.10	21,079,526.67	1.044E+02	Analog	1.00	3
Mg			1	10710.567	ug/l	0.65	10,660,980.33	5.278E+01	Analog	1.00	3
K			1	10737.917	ug/l	0.57	11,298,127.33	3.433E+01	Analog	1.00	3
V			1	106.264	ug/l	0.39	1,183,694.13	5.861E+00	Pulse	0.50	3
Mn			1	106.540	ug/l	0.34	831,620.44	4.117E+00	Pulse	0.50	3
Fe			1	10763.658	ug/l	0.63	122,794,509.33	6.080E+02	Analog	0.50	3
Co			1	107.137	ug/l	0.66	2,315,808.33	1.147E+01	Pulse	0.50	3
Ni			1	108.204	ug/l	1.01	628,101.94	3.110E+00	Pulse	0.50	3
Cu			1	108.125	ug/l	1.24	1,685,249.92	8.344E+00	Pulse	0.50	3
Zn			1	125.510	ug/l	1.29	306,445.35	1.029E+00	Pulse	1.00	3
Cd			1	107.936	ug/l	1.56	352,426.15	1.184E+00	Pulse	0.50	3
Al			1	10365.523	ug/l	0.68	4,452,189.50	2.204E+01	Pulse	1.00	3
Se			1	106.951	ug/l	1.13	13,402.35	4.502E-02	Pulse	3.00	3
Sb			1	106.893	ug/l	1.55	1,024,436.52	3.441E+00	Pulse	1.00	3
Se			1	106.665	ug/l	0.79	6,357.39	2.135E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,323,880.58	0.10	95.2	Pulse	0.50	3
1	Sc		329,087.50	0.91	99.7	Pulse	0.30	3
1	Ge		201,977.50	0.20	99.3	Pulse	0.30	3
1	In		1,789,101.60	0.14	95.6	Pulse	0.30	3
1	Tb		4,807,912.00	0.44	98.2	Pulse	0.50	3
1	Lu		3,513,985.42	0.47	98.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		297,730.10	0.77	98.6	Pulse	0.30	3
1	Te		6.00	33.33		Pulse	0.50	3
1	Li		1,032.26	5.22	97.1	Pulse	0.30	3

Quantitation Report

File Name	011HSTD.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:31
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	195.137	ug/l	1.50	2,621,508.67	1.325E+01	Pulse	0.50	3
As			1	195.163	ug/l	1.28	321,099.46	1.623E+00	Pulse	1.00	3
Mo			1	197.709	ug/l	0.30	1,366,571.00	4.679E+00	Pulse	0.50	3
Pb			1	195.989	ug/l	0.19	5,765,188.00	1.781E+00	Pulse	1.00	3
Be			1	198.507	ug/l	1.46	11,976.85	6.053E-02	Pulse	2.00	3
Ag			1	122.616	ug/l	0.61	2,568,350.75	8.795E+00	Pulse	0.50	3
Ba			1	195.265	ug/l	1.04	605,509.48	3.444E-01	Pulse	0.50	3
Tl			1	197.624	ug/l	0.69	8,179,749.50	2.526E+00	Analog	0.50	3
Sn			1	196.185	ug/l	1.30	1,392,826.09	7.921E-01	Pulse	0.30	3
Sr			1	195.088	ug/l	0.53	1,743,487.54	9.916E-01	Pulse	0.50	3
[Pb]			1	197.394	ug/l	0.52	2,742,868.67	8.471E-01	Pulse	0.50	3
Ca			1	19413.304	ug/l	0.78	989,940.08	5.003E+00	Pulse	0.50	3
Ti			1	195.953	ug/l	2.00	69,135.19	3.494E-01	Pulse	0.50	3
Na			1	19678.948	ug/l	1.14	37,926,378.67	1.917E+02	Analog	1.00	3
Mg			1	19611.521	ug/l	1.10	19,123,746.67	9.665E+01	Analog	1.00	3
K			1	19622.705	ug/l	0.85	20,142,510.67	6.258E+01	Analog	1.00	3
V			1	195.333	ug/l	1.23	2,130,508.17	1.077E+01	Pulse	0.50	3
Mn			1	194.367	ug/l	1.29	1,486,091.67	7.510E+00	Pulse	0.50	3
Fe			1	19615.640	ug/l	1.56	219,216,384.00	1.108E+03	Analog	0.50	3
Co			1	193.933	ug/l	1.30	4,106,687.75	2.075E+01	Pulse	0.50	3
Ni			1	194.183	ug/l	1.76	1,104,068.29	5.580E+00	Pulse	0.50	3
Cu			1	194.731	ug/l	1.26	2,953,509.58	1.493E+01	Pulse	0.50	3
Zn			1	195.128	ug/l	0.30	466,488.14	1.597E+00	Pulse	1.00	3
Cd			1	196.582	ug/l	0.78	629,636.48	2.156E+00	Pulse	0.50	3
Al			1	19462.127	ug/l	1.25	8,188,812.33	4.138E+01	Analog	1.00	3
Se			1	195.331	ug/l	0.60	23,974.43	8.209E-02	Pulse	3.00	3
Sb			1	196.142	ug/l	0.78	1,843,950.42	6.314E+00	Pulse	1.00	3
Se			1	197.480	ug/l	0.82	11,512.81	3.942E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,237,882.17	0.43	92.7	Pulse	0.50	3
1	Sc		321,909.03	1.31	97.5	Pulse	0.30	3
1	Ge		197,889.41	1.17	97.3	Pulse	0.30	3
1	In		1,758,351.22	0.96	94.0	Pulse	0.30	3
1	Tb		4,746,338.50	0.65	96.9	Pulse	0.50	3
1	Lu		3,465,363.92	0.49	97.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		292,037.98	0.34	96.8	Pulse	0.30	3
1	Te		22.67	50.94		Pulse	0.50	3
1	Li		1,001.14	10.97	94.1	Pulse	0.30	3

Quantitation Report

File Name	012_ICV.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:35
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.668	ug/l	0.98	1,298,405.67	6.503E+00	Pulse	0.50	3
As			1	95.845	ug/l	0.63	159,169.54	7.971E-01	Pulse	1.00	3
Mo			1	96.568	ug/l	1.07	671,518.52	2.286E+00	Pulse	0.50	3
Pb			1	94.454	ug/l	0.82	2,836,352.58	8.584E-01	Pulse	1.00	3
Be			1	98.143	ug/l	0.46	5,975.88	2.993E-02	Pulse	2.00	3
Ag			1	46.654	ug/l	0.83	983,177.62	3.346E+00	Pulse	0.50	3
Ba			1	90.867	ug/l	1.07	284,264.16	1.603E-01	Pulse	0.50	3
Tl			1	97.367	ug/l	1.07	4,112,757.00	1.245E+00	Pulse	0.50	3
Sn			1	90.188	ug/l	0.60	646,078.39	3.642E-01	Pulse	0.30	3
Sr			1	95.793	ug/l	0.53	863,827.87	4.870E-01	Pulse	0.50	3
[Pb]			1	95.089	ug/l	0.88	1,348,838.04	4.082E-01	Pulse	0.50	3
Ca			1	9023.181	ug/l	0.93	464,488.66	2.326E+00	Pulse	0.50	3
Ti			1	95.865	ug/l	2.61	34,132.98	1.710E-01	Pulse	0.50	3
Na			1	9613.994	ug/l	0.92	18,709,306.67	9.370E+01	Analog	1.00	3
Mg			1	9880.026	ug/l	0.88	9,722,316.67	4.869E+01	Analog	1.00	3
K			1	9456.731	ug/l	0.26	9,854,550.33	3.026E+01	Analog	1.00	3
V			1	94.593	ug/l	1.10	1,041,800.75	5.218E+00	Pulse	0.50	3
Mn			1	95.046	ug/l	0.67	733,498.14	3.673E+00	Pulse	0.50	3
Fe			1	9475.710	ug/l	1.33	106,869,794.67	5.352E+02	Analog	0.50	3
Co			1	96.349	ug/l	1.85	2,058,871.83	1.031E+01	Pulse	0.50	3
Ni			1	95.793	ug/l	0.91	549,750.56	2.753E+00	Pulse	0.50	3
Cu			1	97.135	ug/l	1.26	1,499,274.88	7.509E+00	Pulse	0.50	3
Zn			1	97.085	ug/l	1.20	234,276.30	7.974E-01	Pulse	1.00	3
Cd			1	96.013	ug/l	0.94	309,371.81	1.053E+00	Pulse	0.50	3
Al			1	9230.925	ug/l	1.09	3,919,723.42	1.963E+01	Pulse	1.00	3
Se			1	97.065	ug/l	0.23	12,007.54	4.087E-02	Pulse	3.00	3
Sb			1	95.173	ug/l	0.61	900,133.15	3.064E+00	Pulse	1.00	3
Se			1	96.523	ug/l	1.25	5,680.74	1.934E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,304,268.92	0.51	94.6	Pulse	0.50	3
1	Sc		325,661.33	0.39	98.6	Pulse	0.30	3
1	Ge		199,686.12	1.03	98.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,773,766.60	0.47	94.8	Pulse	0.30	3
1	Tb		4,776,320.67	0.28	97.5	Pulse	0.50	3
1	Lu		3,481,709.67	0.32	97.4	Pulse	0.50	3
1	Ge		293,793.03	0.06	97.3	Pulse	0.30	3
1	Te		4.00	50.00		Pulse	0.50	3
1	Li		1,145.59	5.98	107.7	Pulse	0.30	3

Quantitation Report

File Name	013_ICB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:39
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.042	ug/l	35.06	3,465.66	1.712E-02	Pulse	0.50	3
As			1	0.021	ug/l	35.57	108.33	5.354E-04	Pulse	1.00	3
Mo			1	0.111	ug/l	18.74	831.36	2.795E-03	Pulse	0.50	3
Pb			1	-0.007	ug/l	-112.77	1,759.76	5.208E-04	Pulse	1.00	3
Be			1	0.051	ug/l	51.34	3.17	1.567E-05	Pulse	2.00	3
Ag			1	0.013	ug/l	18.40	384.67	1.296E-03	Pulse	0.50	3
Ba			1	0.021	ug/l	25.50	84.67	4.682E-05	Pulse	0.50	3
Tl			1	0.060	ug/l	16.43	2,783.57	8.239E-04	Pulse	0.50	3
Sn			1	0.146	ug/l	17.03	1,347.84	7.450E-04	Pulse	0.30	3
Sr			1	0.030	ug/l	35.91	661.35	3.657E-04	Pulse	0.50	3
[Pb]			1	-0.006	ug/l	-172.72	865.36	2.562E-04	Pulse	0.50	3
Ca			1	4.157	ug/l	47.00	598.68	2.959E-03	Pulse	0.50	3
Ti			1	0.055	ug/l	34.49	26.67	1.316E-04	Pulse	0.50	3
Na			1	6.071	ug/l	14.70	35,596.50	1.759E-01	Pulse	1.00	3
Mg			1	2.082	ug/l	35.62	2,573.51	1.273E-02	Pulse	1.00	3
K			1	0.430	ug/l	173.88	66,047.99	2.005E-01	Pulse	1.00	3
V			1	-0.005	ug/l	-101.17	1,280.05	6.324E-03	Pulse	0.50	3
Mn			1	0.045	ug/l	34.61	646.68	3.197E-03	Pulse	0.50	3
Fe			1	2.589	ug/l	31.80	44,028.69	2.177E-01	Pulse	0.50	3
Co			1	0.021	ug/l	45.75	525.35	2.599E-03	Pulse	0.50	3
Ni			1	0.018	ug/l	41.49	338.67	1.674E-03	Pulse	0.50	3
Cu			1	-0.915	ug/l	-0.61	11,334.69	5.599E-02	Pulse	0.50	3
Zn			1	0.009	ug/l	459.41	1,593.74	5.365E-03	Pulse	1.00	3
Cd			1	0.041	ug/l	17.21	134.00	4.513E-04	Pulse	0.50	3
Al			1	2.032	ug/l	40.07	1,553.73	7.681E-03	Pulse	1.00	3
Se			1	0.139	ug/l	27.02	62.55	2.106E-04	Pulse	3.00	3
Sb			1	0.072	ug/l	7.70	743.02	2.499E-03	Pulse	1.00	3
Se			1	-0.051	ug/l	-276.28	35.89	1.209E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,379,660.58	0.38	96.8	Pulse	0.50	3
1	Sc		329,492.44	0.60	99.8	Pulse	0.30	3

Quantitation Report

1	Ge		202,430.18	0.53	99.5	Pulse	0.30	3
1	In		1,808,814.37	0.47	96.7	Pulse	0.30	3
1	Tb		4,783,205.67	0.72	97.6	Pulse	0.50	3
1	Lu		3,445,738.42	0.32	96.4	Pulse	0.50	3
1	Ge		297,212.89	1.17	98.5	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		1,078.93	6.19	101.5	Pulse	0.30	3

Quantitation Report

File Name 014LCCV.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 11:42
Sample Name CRIA
Sample Type CRIA
Comment =std 2
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.998	ug/l	2.11	16,654.48	8.190E-02	Pulse	0.50	3
As			1	0.992	ug/l	0.95	1,750.42	8.608E-03	Pulse	1.00	3
Mo			1	1.023	ug/l	0.75	7,322.12	2.437E-02	Pulse	0.50	3
Pb			1	0.937	ug/l	0.15	31,077.46	9.095E-03	Pulse	1.00	3
Be			1	0.938	ug/l	14.83	58.17	2.860E-04	Pulse	2.00	3
Ag			1	1.049	ug/l	0.81	22,720.58	7.562E-02	Pulse	0.50	3
Ba			1	0.956	ug/l	5.46	3,120.95	1.696E-03	Pulse	0.50	3
Tl			1	1.006	ug/l	0.45	44,170.06	1.293E-02	Pulse	0.50	3
Sn			1	1.024	ug/l	2.37	7,888.42	4.287E-03	Pulse	0.30	3
Sr			1	0.953	ug/l	3.60	9,305.66	5.057E-03	Pulse	0.50	3
[Pb]			1	0.939	ug/l	0.74	14,731.05	4.311E-03	Pulse	0.50	3
Ca			1	100.438	ug/l	2.21	5,644.83	2.776E-02	Pulse	0.50	3
Ti			1	0.995	ug/l	6.02	367.34	1.806E-03	Pulse	0.50	3
Na			1	103.488	ug/l	0.75	228,565.98	1.124E+00	Pulse	1.00	3
Mg			1	100.200	ug/l	0.97	100,905.49	4.962E-01	Pulse	1.00	3
K			1	102.935	ug/l	1.11	176,395.04	5.263E-01	Pulse	1.00	3
V			1	0.926	ug/l	1.63	11,712.21	5.760E-02	Pulse	0.50	3
Mn			1	0.996	ug/l	1.11	8,127.72	3.997E-02	Pulse	0.50	3
Fe			1	99.493	ug/l	0.97	1,157,093.21	5.690E+00	Pulse	0.50	3
Co			1	0.991	ug/l	1.25	21,648.79	1.065E-01	Pulse	0.50	3
Ni			1	1.041	ug/l	2.67	6,318.39	3.108E-02	Pulse	0.50	3
Cu			1	0.261	ug/l	1.69	29,559.92	1.454E-01	Pulse	0.50	3
Zn			1	1.035	ug/l	6.05	4,126.78	1.373E-02	Pulse	1.00	3
Cd			1	1.025	ug/l	0.97	3,378.32	1.124E-02	Pulse	0.50	3
Al			1	95.768	ug/l	0.61	42,087.09	2.070E-01	Pulse	1.00	3
Se			1	1.018	ug/l	10.30	174.11	5.795E-04	Pulse	3.00	3
Sb			1	1.000	ug/l	0.99	9,723.24	3.236E-02	Pulse	1.00	3
Se			1	0.970	ug/l	8.03	97.33	3.240E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,417,136.67	0.47	97.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		335,169.92	0.55	101.5	Pulse	0.30	3
1	Ge		203,332.38	0.57	100.0	Pulse	0.30	3
1	In		1,839,958.33	0.77	98.4	Pulse	0.30	3
1	Tb		4,819,614.33	0.94	98.4	Pulse	0.50	3
1	Lu		3,493,712.25	0.88	97.8	Pulse	0.50	3
1	Ge		300,469.47	0.50	99.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,115.59	2.78	104.9	Pulse	0.30	3

Quantitation Report

File Name 015ICSA.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 11:46
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.120	ug/l	1.67	30,522.49	1.580E-01	Pulse	0.50	3
As			1	0.102	ug/l	17.68	233.00	1.205E-03	Pulse	1.00	3
Mo			1	2070.853	ug/l	1.05	13,617,194.00	4.901E+01	Analog	0.50	3
Pb			1	0.017	ug/l	7.87	2,152.81	7.390E-04	Pulse	1.00	3
Be			1	0.048	ug/l	50.68	2.83	1.466E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	20.13	396.01	1.426E-03	Pulse	0.50	3
Ba			1	0.561	ug/l	1.66	1,636.08	9.985E-04	Pulse	0.50	3
Tl			1	0.066	ug/l	34.54	2,639.56	9.043E-04	Pulse	0.50	3
Sn			1	0.119	ug/l	15.71	1,042.26	6.359E-04	Pulse	0.30	3
Sr			1	0.848	ug/l	2.58	7,415.48	4.526E-03	Pulse	0.50	3
[Pb]			1	0.011	ug/l	12.44	955.36	3.280E-04	Pulse	0.50	3
Ca			1	95798.764	ug/l	0.96	4,766,596.00	2.468E+01	Pulse	0.50	3
Ti			1	1992.801	ug/l	1.37	686,244.48	3.553E+00	Pulse	0.50	3
Na			1	99910.102	ug/l	1.09	187,855,914.67	9.726E+02	Analog	1.00	3
Mg			1	99034.110	ug/l	1.29	94,258,149.33	4.880E+02	Analog	1.00	3
K			1	98729.659	ug/l	0.23	99,960,906.67	3.140E+02	Analog	1.00	3
V			1	0.069	ug/l	17.56	2,010.78	1.040E-02	Pulse	0.50	3
Mn			1	0.746	ug/l	5.04	5,851.57	3.031E-02	Pulse	0.50	3
Fe			1	97808.908	ug/l	0.74	1,066,963,178.67	5.524E+03	Analog	0.50	3
Co			1	0.191	ug/l	0.71	4,027.77	2.085E-02	Pulse	0.50	3
Ni			1	0.453	ug/l	3.24	2,736.87	1.417E-02	Pulse	0.50	3
Cu			1	-0.921	ug/l	-4.80	10,733.68	5.560E-02	Pulse	0.50	3
Zn			1	1.033	ug/l	4.06	3,810.38	1.372E-02	Pulse	1.00	3
Cd			1	0.573	ug/l	3.80	1,748.75	6.294E-03	Pulse	0.50	3
Al			1	95835.557	ug/l	1.30	39,356,045.33	2.038E+02	Analog	1.00	3
Se			1	0.183	ug/l	31.83	63.67	2.292E-04	Pulse	3.00	3
Sb			1	0.083	ug/l	8.36	789.69	2.841E-03	Pulse	1.00	3
Se			1	0.101	ug/l	127.78	42.00	1.511E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,913,150.75	0.92	83.4	Pulse	0.50	3
1	Sc		318,305.37	0.20	96.4	Pulse	0.30	3
1	Ge		193,162.65	1.61	95.0	Pulse	0.30	3
1	In		1,638,447.82	0.54	87.6	Pulse	0.30	3
1	Tb		4,427,949.83	1.41	90.4	Pulse	0.50	3
1	Lu		3,281,793.25	0.89	91.8	Pulse	0.50	3
1	Ge		277,840.75	0.97	92.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		994.47	5.65	93.5	Pulse	0.30	3

Quantitation Report

File Name	016ICSB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:50
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.270	ug/l	0.18	285,869.89	1.457E+00	Pulse	0.50	3
As			1	18.944	ug/l	0.79	30,972.64	1.578E-01	Pulse	1.00	3
Mo			1	2094.418	ug/l	0.52	13,843,588.67	4.957E+01	Analog	0.50	3
Pb			1	0.016	ug/l	15.18	2,154.47	7.323E-04	Pulse	1.00	3
Be			1	0.025	ug/l	67.50	1.50	7.678E-06	Pulse	2.00	3
Ag			1	18.757	ug/l	0.55	375,835.34	1.346E+00	Pulse	0.50	3
Ba			1	0.531	ug/l	4.67	1,548.74	9.461E-04	Pulse	0.50	3
Tl			1	0.055	ug/l	13.70	2,265.50	7.691E-04	Pulse	0.50	3
Sn			1	0.106	ug/l	16.42	952.26	5.815E-04	Pulse	0.30	3
Sr			1	0.855	ug/l	2.66	7,460.83	4.558E-03	Pulse	0.50	3
[Pb]			1	0.013	ug/l	28.11	999.37	3.396E-04	Pulse	0.50	3
Ca			1	95075.179	ug/l	0.93	4,805,835.17	2.449E+01	Pulse	0.50	3
Ti			1	1987.247	ug/l	0.32	695,282.40	3.543E+00	Pulse	0.50	3
Na			1	101047.377	ug/l	0.17	193,028,128.00	9.837E+02	Analog	1.00	3
Mg			1	99394.481	ug/l	0.13	96,114,576.00	4.898E+02	Analog	1.00	3
K			1	101084.280	ug/l	1.06	102,324,792.00	3.215E+02	Analog	1.00	3
V			1	0.077	ug/l	7.45	2,124.12	1.083E-02	Pulse	0.50	3
Mn			1	19.514	ug/l	0.58	148,218.27	7.554E-01	Pulse	0.50	3
Fe			1	98825.231	ug/l	0.42	1,095,235,328.00	5.581E+03	Analog	0.50	3
Co			1	19.172	ug/l	0.52	402,682.59	2.052E+00	Pulse	0.50	3
Ni			1	19.155	ug/l	0.67	108,210.63	5.515E-01	Pulse	0.50	3
Cu			1	17.555	ug/l	1.13	286,475.00	1.460E+00	Pulse	0.50	3
Zn			1	19.943	ug/l	0.54	46,920.11	1.680E-01	Pulse	1.00	3
Cd			1	19.478	ug/l	1.19	59,662.98	2.136E-01	Pulse	0.50	3
Al			1	94711.424	ug/l	0.37	39,516,509.33	2.014E+02	Analog	1.00	3
Se			1	0.140	ug/l	31.22	59.00	2.112E-04	Pulse	3.00	3
Sb			1	0.086	ug/l	4.11	821.02	2.939E-03	Pulse	1.00	3
Se			1	0.065	ug/l	213.87	40.22	1.440E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		2,941,181.75	1.88	84.2	Pulse	0.50	3
1	Sc		318,265.85	1.01	96.4	Pulse	0.30	3
1	Ge		196,226.55	1.05	96.5	Pulse	0.30	3
1	In		1,636,792.61	0.54	87.5	Pulse	0.30	3
1	Tb		4,490,205.67	1.33	91.7	Pulse	0.50	3
1	Lu		3,249,576.33	1.13	90.9	Pulse	0.50	3
1	Ge		279,278.50	0.98	92.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		970.03	4.51	91.2	Pulse	0.30	3

Quantitation Report

File Name	017CCVA.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:54
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.561	ug/l	0.76	640,711.58	3.172E+00	Pulse	0.50	3
As			1	45.615	ug/l	0.74	76,664.32	3.796E-01	Pulse	1.00	3
Mo			1	46.945	ug/l	1.19	328,641.43	1.111E+00	Pulse	0.50	3
Pb			1	45.845	ug/l	0.68	1,389,360.38	4.169E-01	Pulse	1.00	3
Be			1	47.070	ug/l	1.57	2,899.04	1.435E-02	Pulse	2.00	3
Ag			1	49.084	ug/l	0.97	1,041,274.96	3.521E+00	Pulse	0.50	3
Ba			1	45.553	ug/l	0.37	142,465.15	8.035E-02	Pulse	0.50	3
Tl			1	47.263	ug/l	0.54	2,013,391.42	6.042E-01	Pulse	0.50	3
Sn			1	46.196	ug/l	0.53	330,945.21	1.866E-01	Pulse	0.30	3
Sr			1	44.870	ug/l	0.44	404,677.88	2.282E-01	Pulse	0.50	3
[Pb]			1	45.938	ug/l	0.66	657,645.21	1.974E-01	Pulse	0.50	3
Ca			1	4493.682	ug/l	0.45	234,189.68	1.159E+00	Pulse	0.50	3
Ti			1	44.984	ug/l	2.46	16,206.08	8.024E-02	Pulse	0.50	3
Na			1	4727.807	ug/l	0.62	9,318,852.33	4.614E+01	Analog	1.00	3
Mg			1	4557.125	ug/l	1.02	4,536,421.50	2.246E+01	Pulse	1.00	3
K			1	4612.694	ug/l	0.38	4,822,916.83	1.486E+01	Pulse	1.00	3
V			1	45.646	ug/l	0.90	509,221.46	2.521E+00	Pulse	0.50	3
Mn			1	45.781	ug/l	0.84	357,532.22	1.770E+00	Pulse	0.50	3
Fe			1	4712.199	ug/l	0.50	53,767,738.67	2.662E+02	Analog	0.50	3
Co			1	46.893	ug/l	0.97	1,013,667.96	5.019E+00	Pulse	0.50	3
Ni			1	47.109	ug/l	1.11	273,592.24	1.355E+00	Pulse	0.50	3
Cu			1	46.847	ug/l	1.09	744,559.29	3.686E+00	Pulse	0.50	3
Zn			1	47.018	ug/l	0.88	115,019.58	3.889E-01	Pulse	1.00	3
Cd			1	46.834	ug/l	0.46	151,915.58	5.137E-01	Pulse	0.50	3
Al			1	4408.830	ug/l	0.82	1,894,113.75	9.378E+00	Pulse	1.00	3
Se			1	45.269	ug/l	0.66	5,661.39	1.914E-02	Pulse	3.00	3
Sb			1	45.612	ug/l	0.91	434,292.51	1.468E+00	Pulse	1.00	3
Se			1	45.255	ug/l	1.62	2,701.64	9.135E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,332,179.08	0.45	95.4	Pulse	0.50	3
1	Sc		324,515.12	0.11	98.3	Pulse	0.30	3
1	Ge		201,985.49	0.61	99.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,773,093.40	0.77	94.8	Pulse	0.30	3
1	Tb		4,746,068.67	0.84	96.9	Pulse	0.50	3
1	Lu		3,406,955.92	0.15	95.3	Pulse	0.50	3
1	Ge		295,753.66	0.59	98.0	Pulse	0.30	3
1	Te		6.00	57.74		Pulse	0.50	3
1	Li		1,008.92	10.09	94.9	Pulse	0.30	3

Quantitation Report

File Name	018_CCV.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 11:58
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.434	ug/l	0.92	1,307,670.67	6.555E+00	Pulse	0.50	3
As			1	94.622	ug/l	1.19	157,006.62	7.870E-01	Pulse	1.00	3
Mo			1	95.416	ug/l	0.83	668,052.61	2.258E+00	Pulse	0.50	3
Pb			1	95.050	ug/l	1.22	2,807,050.75	8.638E-01	Pulse	1.00	3
Be			1	98.702	ug/l	2.02	6,004.72	3.010E-02	Pulse	2.00	3
Ag			1	99.702	ug/l	0.73	2,115,387.58	7.151E+00	Pulse	0.50	3
Ba			1	94.181	ug/l	1.19	290,113.04	1.661E-01	Pulse	0.50	3
Tl			1	97.888	ug/l	1.00	4,066,403.92	1.251E+00	Pulse	0.50	3
Sn			1	95.998	ug/l	1.52	677,123.45	3.877E-01	Pulse	0.30	3
Sr			1	94.861	ug/l	0.89	842,300.35	4.823E-01	Pulse	0.50	3
[Pb]			1	95.753	ug/l	1.67	1,335,764.54	4.111E-01	Pulse	0.50	3
Ca			1	9340.502	ug/l	0.42	480,398.67	2.408E+00	Pulse	0.50	3
Ti			1	95.863	ug/l	1.98	34,107.63	1.710E-01	Pulse	0.50	3
Na			1	9815.526	ug/l	0.30	19,084,750.67	9.566E+01	Analog	1.00	3
Mg			1	9676.410	ug/l	0.40	9,513,782.33	4.769E+01	Analog	1.00	3
K			1	9637.064	ug/l	0.24	10,049,266.67	3.083E+01	Analog	1.00	3
V			1	95.600	ug/l	0.78	1,052,000.64	5.273E+00	Pulse	0.50	3
Mn			1	94.536	ug/l	0.29	728,926.31	3.654E+00	Pulse	0.50	3
Fe			1	9686.441	ug/l	0.43	109,155,426.67	5.471E+02	Analog	0.50	3
Co			1	96.133	ug/l	0.55	2,052,530.87	1.029E+01	Pulse	0.50	3
Ni			1	97.464	ug/l	0.91	558,874.25	2.801E+00	Pulse	0.50	3
Cu			1	96.624	ug/l	0.46	1,490,227.92	7.470E+00	Pulse	0.50	3
Zn			1	95.745	ug/l	1.02	232,646.66	7.865E-01	Pulse	1.00	3
Cd			1	95.292	ug/l	1.64	309,149.58	1.045E+00	Pulse	0.50	3
Al			1	9274.930	ug/l	0.60	3,935,090.83	1.972E+01	Pulse	1.00	3
Se			1	93.042	ug/l	1.41	11,590.40	3.918E-02	Pulse	3.00	3
Sb			1	93.744	ug/l	0.96	892,690.48	3.018E+00	Pulse	1.00	3
Se			1	92.955	ug/l	0.29	5,509.69	1.863E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,249,648.25	0.36	93.0	Pulse	0.50	3
1	Sc		325,921.97	0.45	98.7	Pulse	0.30	3
1	Ge		199,505.96	0.50	98.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,746,591.88	0.41	93.4	Pulse	0.30	3
1	Tb		4,718,270.83	0.88	96.3	Pulse	0.50	3
1	Lu		3,389,667.50	0.20	94.9	Pulse	0.50	3
1	Ge		295,811.75	0.42	98.0	Pulse	0.30	3
1	Te		13.33	56.79		Pulse	0.50	3
1	Li		1,104.48	7.84	103.9	Pulse	0.30	3

Quantitation Report

File Name	019_CCB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:02
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.025	ug/l	31.46	3,236.95	1.592E-02	Pulse	0.50	3
As			1	0.010	ug/l	187.94	89.33	4.395E-04	Pulse	1.00	3
Mo			1	0.153	ug/l	18.33	1,135.38	3.773E-03	Pulse	0.50	3
Pb			1	-0.010	ug/l	-82.76	1,648.75	4.941E-04	Pulse	1.00	3
Be			1	0.059	ug/l	75.16	3.67	1.806E-05	Pulse	2.00	3
Ag			1	0.011	ug/l	60.02	354.00	1.178E-03	Pulse	0.50	3
Ba			1	0.009	ug/l	77.11	44.67	2.515E-05	Pulse	0.50	3
Tl			1	0.027	ug/l	24.56	1,372.07	4.113E-04	Pulse	0.50	3
Sn			1	0.089	ug/l	22.37	913.36	5.138E-04	Pulse	0.30	3
Sr			1	0.016	ug/l	42.53	528.01	2.971E-04	Pulse	0.50	3
[Pb]			1	-0.009	ug/l	-53.82	816.02	2.445E-04	Pulse	0.50	3
Ca			1	1.135	ug/l	51.36	443.34	2.180E-03	Pulse	0.50	3
Ti			1	0.068	ug/l	28.30	31.33	1.540E-04	Pulse	0.50	3
Na			1	10.355	ug/l	8.51	44,245.95	2.176E-01	Pulse	1.00	3
Mg			1	3.389	ug/l	24.26	3,896.73	1.917E-02	Pulse	1.00	3
K			1	3.006	ug/l	18.22	68,871.91	2.086E-01	Pulse	1.00	3
V			1	-0.011	ug/l	-60.99	1,218.05	5.988E-03	Pulse	0.50	3
Mn			1	0.010	ug/l	117.43	380.00	1.869E-03	Pulse	0.50	3
Fe			1	2.735	ug/l	23.56	45,930.44	2.259E-01	Pulse	0.50	3
Co			1	0.010	ug/l	47.83	306.00	1.506E-03	Pulse	0.50	3
Ni			1	-0.006	ug/l	-96.54	201.33	9.903E-04	Pulse	0.50	3
Cu			1	-0.727	ug/l	-3.21	14,293.98	7.029E-02	Pulse	0.50	3
Zn			1	-0.105	ug/l	-6.89	1,333.72	4.434E-03	Pulse	1.00	3
Cd			1	0.027	ug/l	26.87	92.00	3.059E-04	Pulse	0.50	3
Al			1	1.733	ug/l	41.77	1,432.39	7.045E-03	Pulse	1.00	3
Se			1	0.107	ug/l	24.14	59.33	1.972E-04	Pulse	3.00	3
Sb			1	0.054	ug/l	7.70	572.34	1.902E-03	Pulse	1.00	3
Se			1	0.043	ug/l	140.19	42.00	1.396E-04	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,338,682.17	0.59	95.6	Pulse	0.50	3
1	Sc		330,102.50	0.64	100.0	Pulse	0.30	3
1	Ge		203,374.87	0.51	100.0	Pulse	0.30	3
1	In		1,777,727.08	0.76	95.0	Pulse	0.30	3
1	Tb		4,697,604.67	0.67	95.9	Pulse	0.50	3
1	Lu		3,350,315.33	0.93	93.8	Pulse	0.50	3
1	Ge		300,802.84	0.42	99.7	Pulse	0.30	3
1	Te		1.33	173.21		Pulse	0.50	3
1	Li		1,208.93	3.05	113.7	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 12:05
Sample Name HiSTD Ag
Sample Type HSTD _Ag
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.390	ug/l	0.92	2,736,442.42	1.374E+01	Pulse	0.50	3
As			1	200.768	ug/l	0.51	332,451.19	1.669E+00	Pulse	1.00	3
Mo			1	204.247	ug/l	1.05	1,411,190.58	4.834E+00	Pulse	0.50	3
Pb			1	202.556	ug/l	0.65	5,828,389.17	1.840E+00	Pulse	1.00	3
Be			1	209.088	ug/l	1.69	12,696.46	6.376E-02	Pulse	2.00	3
Ag			1	126.487	ug/l	0.72	2,648,423.75	9.072E+00	Pulse	0.50	3
Ba			1	200.345	ug/l	0.96	610,414.46	3.533E-01	Pulse	0.50	3
Tl			1	208.641	ug/l	0.27	8,447,384.67	2.667E+00	Analog	0.50	3
Sn			1	203.075	ug/l	0.17	1,416,518.73	8.200E-01	Pulse	0.30	3
Sr			1	201.017	ug/l	0.54	1,765,072.34	1.022E+00	Pulse	0.50	3
[Pb]			1	204.085	ug/l	0.97	2,773,935.58	8.758E-01	Pulse	0.50	3
Ca			1	19893.335	ug/l	0.60	1,020,895.02	5.126E+00	Pulse	0.50	3
Ti			1	200.810	ug/l	0.30	71,310.41	3.581E-01	Pulse	0.50	3
Na			1	20697.466	ug/l	0.55	40,144,842.67	2.016E+02	Analog	1.00	3
Mg			1	20420.480	ug/l	0.67	20,040,579.33	1.006E+02	Analog	1.00	3
K			1	20500.039	ug/l	0.82	21,181,450.00	6.536E+01	Analog	1.00	3
V			1	202.877	ug/l	0.97	2,227,002.83	1.118E+01	Pulse	0.50	3
Mn			1	198.922	ug/l	0.73	1,530,697.50	7.686E+00	Pulse	0.50	3
Fe			1	20364.197	ug/l	0.99	229,048,912.00	1.150E+03	Analog	0.50	3
Co			1	201.418	ug/l	0.31	4,292,729.33	2.156E+01	Pulse	0.50	3
Ni			1	200.927	ug/l	0.80	1,149,792.96	5.774E+00	Pulse	0.50	3
Cu			1	200.943	ug/l	0.70	3,066,574.75	1.540E+01	Pulse	0.50	3
Zn			1	201.835	ug/l	1.32	482,271.61	1.652E+00	Pulse	1.00	3
Cd			1	201.654	ug/l	1.09	645,624.71	2.212E+00	Pulse	0.50	3
Al			1	20003.958	ug/l	0.75	8,471,108.00	4.254E+01	Analog	1.00	3
Se			1	197.640	ug/l	0.42	24,247.77	8.306E-02	Pulse	3.00	3
Sb			1	199.690	ug/l	1.07	1,876,527.50	6.428E+00	Pulse	1.00	3
Se			1	198.033	ug/l	0.49	11,540.60	3.953E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,167,237.25	0.26	90.7	Pulse	0.50	3
1	Sc		324,069.55	1.13	98.1	Pulse	0.30	3
1	Ge		199,149.62	0.59	97.9	Pulse	0.30	3
1	In		1,727,557.71	0.20	92.4	Pulse	0.30	3
1	Tb		4,666,378.67	0.20	95.3	Pulse	0.50	3
1	Lu		3,367,084.25	0.49	94.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		291,929.08	0.47	96.7	Pulse	0.30	3
1	Te		29.33	69.98		Pulse	0.50	3
1	Li		1,116.70	14.33	105.0	Pulse	0.30	3

Quantitation Report

File Name	021SMPL.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:09
Sample Name	FC1124-1F
Sample Type	Sample
Comment	
Prep Dilution	100.000
Auto Dilution	N/A
Total Dilution	100.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.328	ug/l	36.63	3,369.64	1.650E-02	Pulse	0.50	3
As			1	11.660	ug/l	2.30	271.67	1.330E-03	Pulse	1.00	3
Mo			1	19.019	ug/l	15.76	1,400.06	4.658E-03	Pulse	0.50	3
Pb			1	0.872	ug/l	113.00	2,239.15	6.617E-04	Pulse	1.00	3
Be			1	8.301	ug/l	44.19	5.17	2.531E-05	Pulse	2.00	3
Ag			1	1.691	ug/l	10.05	477.34	1.591E-03	Pulse	0.50	3
Ba			1	39.432	ug/l	2.51	1,270.72	7.043E-04	Pulse	0.50	3
Tl			1	5.271	ug/l	22.22	2,481.53	7.338E-04	Pulse	0.50	3
Sn			1	18.221	ug/l	5.79	1,605.64	8.900E-04	Pulse	0.30	3
Sr			1	279.891	ug/l	0.64	26,047.29	1.444E-02	Pulse	0.50	3
[Pb]			1	1.038	ug/l	77.10	1,108.71	3.274E-04	Pulse	0.50	3
Ca			1	49091.860	ug/l	1.15	26,220.83	1.283E-01	Pulse	0.50	3
Ti			1	5.136	ug/l	35.77	25.33	1.243E-04	Pulse	0.50	3
Na			1	164417.912	ug/l	0.77	3,293,529.83	1.612E+01	Pulse	1.00	3
Mg			1	8084.154	ug/l	1.66	81,889.22	4.008E-01	Pulse	1.00	3
K			1	6160.391	ug/l	1.29	131,034.55	3.949E-01	Pulse	1.00	3
V			1	-0.232	ug/l	-482.80	1,322.72	6.478E-03	Pulse	0.50	3
Mn			1	6704.680	ug/l	1.62	529,455.85	2.592E+00	Pulse	0.50	3
Fe			1	11094.909	ug/l	1.34	1,294,678.96	6.337E+00	Pulse	0.50	3
Co			1	2.973	ug/l	30.63	728.02	3.569E-03	Pulse	0.50	3
Ni			1	2.144	ug/l	60.69	362.67	1.778E-03	Pulse	0.50	3
Cu			1	-61.609	ug/l	-3.47	16,084.72	7.874E-02	Pulse	0.50	3
Zn			1	37.519	ug/l	9.63	2,506.17	8.350E-03	Pulse	1.00	3
Cd			1	4.765	ug/l	16.51	158.00	5.270E-04	Pulse	0.50	3
Al			1	297.276	ug/l	41.27	1,974.44	9.682E-03	Pulse	1.00	3
Se			1	14.073	ug/l	17.42	63.44	2.114E-04	Pulse	3.00	3
Sb			1	10.283	ug/l	8.35	1,045.70	3.481E-03	Pulse	1.00	3
Se			1	11.886	ug/l	52.51	46.44	1.547E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,388,057.17	1.39	97.0	Pulse	0.50	3
1	Sc		331,807.82	0.30	100.5	Pulse	0.30	3
1	Ge		204,310.62	1.20	100.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,804,121.32	0.66	96.5	Pulse	0.30	3
1	Tb		4,724,843.67	0.67	96.5	Pulse	0.50	3
1	Lu		3,380,326.75	0.84	94.6	Pulse	0.50	3
1	Ge		300,190.19	1.19	99.5	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,145.60	5.57	107.7	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 12:13
Sample Name FC1124-2F
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.368	ug/l	29.73	3,281.63	1.585E-02	Pulse	0.50	3
As			1	0.911	ug/l	118.90	90.33	4.363E-04	Pulse	1.00	3
Mo			1	7.722	ug/l	22.93	604.01	1.985E-03	Pulse	0.50	3
Pb			1	-1.248	ug/l	-9.36	1,571.74	4.692E-04	Pulse	1.00	3
Be			1	2.639	ug/l	16.97	1.67	8.046E-06	Pulse	2.00	3
Ag			1	0.363	ug/l	30.33	194.00	6.379E-04	Pulse	0.50	3
Ba			1	5.779	ug/l	14.67	200.67	1.108E-04	Pulse	0.50	3
Tl			1	1.553	ug/l	5.97	865.36	2.585E-04	Pulse	0.50	3
Sn			1	4.570	ug/l	49.14	613.35	3.389E-04	Pulse	0.30	3
Sr			1	345.562	ug/l	0.87	32,176.03	1.777E-02	Pulse	0.50	3
[Pb]			1	-1.270	ug/l	-13.80	764.69	2.284E-04	Pulse	0.50	3
Ca			1	90851.707	ug/l	0.86	48,853.79	2.359E-01	Pulse	0.50	3
Ti			1	4.669	ug/l	30.95	24.00	1.159E-04	Pulse	0.50	3
Na			1	12929.148	ug/l	0.35	284,791.01	1.375E+00	Pulse	1.00	3
Mg			1	16634.792	ug/l	0.51	170,261.83	8.222E-01	Pulse	1.00	3
K			1	5858.125	ug/l	0.83	129,966.26	3.853E-01	Pulse	1.00	3
V			1	-1.670	ug/l	-17.27	1,177.37	5.686E-03	Pulse	0.50	3
Mn			1	347.142	ug/l	0.94	28,076.94	1.356E-01	Pulse	0.50	3
Fe			1	480.951	ug/l	0.78	71,040.31	3.431E-01	Pulse	0.50	3
Co			1	0.691	ug/l	20.57	233.33	1.127E-03	Pulse	0.50	3
Ni			1	-0.760	ug/l	-52.44	195.33	9.435E-04	Pulse	0.50	3
Cu			1	-64.435	ug/l	-2.93	15,860.53	7.659E-02	Pulse	0.50	3
Zn			1	114.681	ug/l	3.29	4,452.19	1.465E-02	Pulse	1.00	3
Cd			1	1.779	ug/l	13.43	60.67	1.995E-04	Pulse	0.50	3
Al			1	245.521	ug/l	2.94	1,777.08	8.582E-03	Pulse	1.00	3
Se			1	9.533	ug/l	63.01	58.45	1.923E-04	Pulse	3.00	3
Sb			1	3.607	ug/l	16.43	405.34	1.332E-03	Pulse	1.00	3
Se			1	-3.020	ug/l	-103.05	38.00	1.250E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,349,259.33	1.09	95.9	Pulse	0.50	3
1	Sc		337,305.68	0.18	102.2	Pulse	0.30	3
1	Ge		207,076.98	0.32	101.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,810,248.89	0.09	96.8	Pulse	0.30	3
1	Tb		4,727,168.50	0.49	96.5	Pulse	0.50	3
1	Lu		3,362,685.00	0.60	94.1	Pulse	0.50	3
1	Ge		304,029.56	0.80	100.7	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,153.37	10.03	108.5	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:17
Sample Name	FC1186-3A
Sample Type	Sample
Comment	
Prep Dilution	100.000
Auto Dilution	N/A
Total Dilution	100.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.128	ug/l	15.38	3,268.96	1.569E-02	Pulse	0.50	3
As			1	2805.833	ug/l	0.53	48,684.26	2.336E-01	Pulse	1.00	3
Mo			1	6.259	ug/l	15.81	501.34	1.638E-03	Pulse	0.50	3
Pb			1	-1.922	ug/l	-14.54	1,373.39	4.080E-04	Pulse	1.00	3
Be			1	3.414	ug/l	66.73	2.17	1.041E-05	Pulse	2.00	3
Ag			1	0.236	ug/l	20.46	167.33	5.469E-04	Pulse	0.50	3
Ba			1	12.981	ug/l	7.07	434.68	2.379E-04	Pulse	0.50	3
Tl			1	0.866	ug/l	19.56	574.68	1.707E-04	Pulse	0.50	3
Sn			1	1.911	ug/l	55.33	423.34	2.315E-04	Pulse	0.30	3
Sr			1	160.791	ug/l	1.31	15,325.57	8.385E-03	Pulse	0.50	3
[Pb]			1	-2.046	ug/l	-11.90	656.68	1.951E-04	Pulse	0.50	3
Ca			1	22777.625	ug/l	3.05	12,618.74	6.056E-02	Pulse	0.50	3
Ti			1	5.165	ug/l	37.44	26.00	1.248E-04	Pulse	0.50	3
Na			1	6414.806	ug/l	1.39	154,454.46	7.412E-01	Pulse	1.00	3
Mg			1	2864.838	ug/l	1.04	29,933.95	1.436E-01	Pulse	1.00	3
K			1	3411.851	ug/l	1.30	104,343.63	3.075E-01	Pulse	1.00	3
V			1	-1.405	ug/l	-32.58	1,215.38	5.832E-03	Pulse	0.50	3
Mn			1	2282.534	ug/l	0.60	184,070.97	8.833E-01	Pulse	0.50	3
Fe			1	37094.066	ug/l	0.30	4,380,862.83	2.102E+01	Pulse	0.50	3
Co			1	13.049	ug/l	5.92	2,992.24	1.435E-02	Pulse	0.50	3
Ni			1	3.816	ug/l	6.34	470.68	2.258E-03	Pulse	0.50	3
Cu			1	-65.769	ug/l	-2.95	15,752.45	7.558E-02	Pulse	0.50	3
Zn			1	4.214	ug/l	26.99	1,723.41	5.632E-03	Pulse	1.00	3
Cd			1	1.131	ug/l	16.59	39.33	1.285E-04	Pulse	0.50	3
Al			1	17.124	ug/l	82.20	776.02	3.726E-03	Pulse	1.00	3
Se			1	6.095	ug/l	76.34	54.44	1.779E-04	Pulse	3.00	3
Sb			1	2.582	ug/l	19.53	306.67	1.002E-03	Pulse	1.00	3
Se			1	-7.821	ug/l	-30.51	35.33	1.155E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,367,013.00	0.89	96.4	Pulse	0.50	3
1	Sc		339,276.00	0.39	102.7	Pulse	0.30	3
1	Ge		208,404.47	1.16	102.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,827,674.23	0.56	97.7	Pulse	0.30	3
1	Tb		4,734,284.50	0.91	96.6	Pulse	0.50	3
1	Lu		3,372,338.50	0.98	94.4	Pulse	0.50	3
1	Ge		306,006.93	0.41	101.4	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		1,184.49	13.85	111.4	Pulse	0.30	3

Quantitation Report

File Name	024_MB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:20
Sample Name	MP41610-MB1
Sample Type	MB
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.678	ug/l	2.24	13,133.79	6.413E-02	Pulse	0.50	3
As			1	0.472	ug/l	14.33	234.67	1.145E-03	Pulse	1.00	3
Mo			1	0.512	ug/l	13.93	781.35	2.579E-03	Pulse	0.50	3
Pb			1	0.095	ug/l	9.62	2,464.51	7.554E-04	Pulse	1.00	3
Be			1	0.186	ug/l	64.78	2.33	1.134E-05	Pulse	2.00	3
Ag			1	0.036	ug/l	15.13	269.33	8.893E-04	Pulse	0.50	3
Ba			1	2.025	ug/l	1.65	1,281.38	7.233E-04	Pulse	0.50	3
Tl			1	0.085	ug/l	8.98	906.03	2.778E-04	Pulse	0.50	3
Sn			1	25.059	ug/l	3.27	36,122.13	2.039E-02	Pulse	0.30	3
Sr			1	0.242	ug/l	12.04	815.35	4.601E-04	Pulse	0.50	3
[Pb]			1	0.084	ug/l	43.98	1,158.04	3.551E-04	Pulse	0.50	3
Ca			1	69.318	ug/l	10.13	1,118.04	5.459E-03	Pulse	0.50	3
Ti			1	4.309	ug/l	15.39	321.33	1.569E-03	Pulse	0.50	3
Na			1	138.848	ug/l	1.53	79,276.22	3.871E-01	Pulse	1.00	3
Mg			1	25.579	ug/l	6.78	5,668.82	2.768E-02	Pulse	1.00	3
K			1	48.471	ug/l	12.17	78,602.21	2.299E-01	Pulse	1.00	3
V			1	1.730	ug/l	1.19	5,257.39	2.567E-02	Pulse	0.50	3
Mn			1	8.590	ug/l	2.61	13,892.32	6.784E-02	Pulse	0.50	3
Fe			1	13484.771	ug/l	0.57	31,210,294.67	1.524E+02	Analog	0.50	3
Co			1	0.778	ug/l	1.43	3,490.99	1.704E-02	Pulse	0.50	3
Ni			1	5.389	ug/l	1.21	6,581.14	3.213E-02	Pulse	0.50	3
Cu			1	5.545	ug/l	1.90	42,985.69	2.099E-01	Pulse	0.50	3
Zn			1	10.795	ug/l	2.00	6,932.59	2.290E-02	Pulse	1.00	3
Cd			1	0.126	ug/l	11.90	84.67	2.797E-04	Pulse	0.50	3
Al			1	35.959	ug/l	5.28	3,820.71	1.865E-02	Pulse	1.00	3
Se			1	0.363	ug/l	130.34	55.33	1.828E-04	Pulse	3.00	3
Sb			1	0.441	ug/l	4.35	911.69	3.012E-03	Pulse	1.00	3
Se			1	-0.258	ug/l	-61.17	36.56	1.208E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,262,465.50	0.98	93.4	Pulse	0.50	3
1	Sc		341,973.65	2.24	103.6	Pulse	0.30	3
1	Ge		204,823.37	1.64	100.7	Pulse	0.30	3
1	In		1,771,370.59	1.25	94.7	Pulse	0.30	3
1	Tb		4,618,399.33	1.54	94.3	Pulse	0.50	3
1	Lu		3,268,771.33	1.37	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		302,660.05	1.22	100.3	Pulse	0.30	3
1	Te		2.00	173.21		Pulse	0.50	3
1	Li		1,130.04	13.78	106.3	Pulse	0.30	3

Quantitation Report

File Name	025_BSP.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:24
Sample Name	MP41610-B1
Sample Type	BSP
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	522.392	ug/l	1.29	1,450,286.58	7.100E+00	Pulse	0.50	3
As			1	516.390	ug/l	1.02	175,440.71	8.589E-01	Pulse	1.00	3
Mo			1	510.218	ug/l	0.69	727,024.37	2.415E+00	Pulse	0.50	3
Pb			1	511.207	ug/l	0.33	2,910,333.00	9.291E-01	Pulse	1.00	3
Be			1	543.690	ug/l	1.95	6,772.30	3.316E-02	Pulse	2.00	3
Ag			1	253.922	ug/l	0.82	1,096,503.96	3.643E+00	Pulse	0.50	3
Ba			1	494.499	ug/l	0.84	303,317.42	1.744E-01	Pulse	0.50	3
Tl			1	503.087	ug/l	0.24	4,028,945.25	1.286E+00	Pulse	0.50	3
Sn			1	528.653	ug/l	0.76	742,509.86	4.270E-01	Pulse	0.30	3
Sr			1	508.892	ug/l	1.16	899,728.84	5.174E-01	Pulse	0.50	3
[Pb]			1	495.127	ug/l	0.19	1,331,571.87	4.251E-01	Pulse	0.50	3
Ca			1	49257.677	ug/l	0.54	518,723.63	2.540E+00	Pulse	0.50	3
Ti			1	506.229	ug/l	0.65	36,878.61	1.806E-01	Pulse	0.50	3
Na			1	52382.232	ug/l	0.19	20,853,866.00	1.021E+02	Analog	1.00	3
Mg			1	51339.331	ug/l	0.52	10,335,836.00	5.060E+01	Analog	1.00	3
K			1	50389.878	ug/l	0.89	10,949,127.00	3.224E+01	Analog	1.00	3
V			1	512.099	ug/l	0.53	1,153,785.08	5.649E+00	Pulse	0.50	3
Mn			1	505.646	ug/l	0.73	798,302.85	3.908E+00	Pulse	0.50	3
Fe			1	50824.507	ug/l	0.73	117,274,032.00	5.741E+02	Analog	0.50	3
Co			1	522.450	ug/l	0.99	2,284,093.00	1.118E+01	Pulse	0.50	3
Ni			1	517.887	ug/l	0.87	608,042.75	2.977E+00	Pulse	0.50	3
Cu			1	519.715	ug/l	0.95	1,639,379.38	8.026E+00	Pulse	0.50	3
Zn			1	504.123	ug/l	0.43	249,225.79	8.279E-01	Pulse	1.00	3
Cd			1	489.043	ug/l	1.44	322,879.50	1.073E+00	Pulse	0.50	3
Al			1	47056.466	ug/l	0.58	4,087,998.08	2.001E+01	Pulse	1.00	3
Se			1	482.173	ug/l	0.88	12,222.90	4.061E-02	Pulse	3.00	3
Sb			1	490.759	ug/l	1.09	951,074.12	3.160E+00	Pulse	1.00	3
Se			1	482.404	ug/l	2.03	5,817.11	1.933E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,132,313.42	0.76	89.7	Pulse	0.50	3
1	Sc		339,680.98	0.83	102.9	Pulse	0.30	3
1	Ge		204,259.84	0.70	100.4	Pulse	0.30	3
1	In		1,739,028.30	1.08	93.0	Pulse	0.30	3
1	Tb		4,626,656.50	0.94	94.5	Pulse	0.50	3
1	Lu		3,283,105.08	1.02	91.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		301,025.93	1.22	99.7	Pulse	0.30	3
1	Te		4.67	137.77		Pulse	0.50	3
1	Li		1,215.60	3.35	114.3	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:28
Sample Name	FC993-8
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	257.935	ug/l	0.42	721,730.36	3.513E+00	Pulse	0.50	3
As			1	21.387	ug/l	1.17	7,379.10	3.592E-02	Pulse	1.00	3
Mo			1	9.585	ug/l	2.25	13,831.13	4.553E-02	Pulse	0.50	3
Pb			1	426.563	ug/l	0.72	2,517,293.42	7.754E-01	Pulse	1.00	3
Be			1	0.733	ug/l	41.85	9.17	4.472E-05	Pulse	2.00	3
Ag			1	0.226	ug/l	8.17	1,100.70	3.623E-03	Pulse	0.50	3
Ba			1	142.246	ug/l	0.34	87,864.31	5.018E-02	Pulse	0.50	3
Tl			1	0.362	ug/l	15.50	3,200.32	9.861E-04	Pulse	0.50	3
Sn			1	30.370	ug/l	0.38	43,205.11	2.467E-02	Pulse	0.30	3
Sr			1	50.658	ug/l	0.71	90,524.05	5.170E-02	Pulse	0.50	3
[Pb]			1	432.300	ug/l	1.29	1,205,135.75	3.712E-01	Pulse	0.50	3
Ca			1	9349.645	ug/l	0.89	99,348.67	4.836E-01	Pulse	0.50	3
Ti			1	383.569	ug/l	1.81	28,109.48	1.368E-01	Pulse	0.50	3
Na			1	124.131	ug/l	3.97	73,629.92	3.584E-01	Pulse	1.00	3
Mg			1	960.465	ug/l	0.67	194,978.98	9.491E-01	Pulse	1.00	3
K			1	477.241	ug/l	1.56	174,653.03	5.025E-01	Pulse	1.00	3
V			1	45.821	ug/l	0.52	105,071.21	5.114E-01	Pulse	0.50	3
Mn			1	82.555	ug/l	0.19	131,350.36	6.393E-01	Pulse	0.50	3
Fe			1	68055.251	ug/l	0.31	157,943,808.00	7.688E+02	Analog	0.50	3
Co			1	3.840	ug/l	1.58	16,962.77	8.257E-02	Pulse	0.50	3
Ni			1	22.890	ug/l	2.03	27,261.83	1.327E-01	Pulse	0.50	3
Cu			1	30.593	ug/l	0.62	121,343.38	5.906E-01	Pulse	0.50	3
Zn			1	1192.831	ug/l	0.45	592,941.48	1.952E+00	Pulse	1.00	3
Cd			1	2.887	ug/l	3.98	1,925.44	6.338E-03	Pulse	0.50	3
Al			1	26802.223	ug/l	0.26	2,342,269.75	1.140E+01	Pulse	1.00	3
Se			1	6.934	ug/l	7.88	223.00	7.341E-04	Pulse	3.00	3
Sb			1	1.815	ug/l	0.35	3,602.36	1.186E-02	Pulse	1.00	3
Se			1	7.726	ug/l	10.13	133.22	4.384E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,246,420.75	1.05	92.9	Pulse	0.50	3
1	Sc		347,573.80	0.26	105.3	Pulse	0.30	3
1	Ge		205,445.87	0.89	101.0	Pulse	0.30	3
1	In		1,750,962.40	0.99	93.6	Pulse	0.30	3
1	Tb		4,638,728.00	1.42	94.7	Pulse	0.50	3
1	Lu		3,268,229.42	1.67	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		303,790.67	0.43	100.6	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,161.15	2.67	109.2	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 12:32
Sample Name MP41610-D1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	343.076	ug/l	0.96	986,988.23	4.668E+00	Pulse	0.50	3
As			1	16.188	ug/l	1.59	5,767.21	2.728E-02	Pulse	1.00	3
Mo			1	3.204	ug/l	5.96	4,743.95	1.533E-02	Pulse	0.50	3
Pb			1	535.743	ug/l	1.18	3,191,977.08	9.737E-01	Pulse	1.00	3
Be			1	1.085	ug/l	12.07	14.00	6.617E-05	Pulse	2.00	3
Ag			1	0.265	ug/l	2.74	1,292.72	4.177E-03	Pulse	0.50	3
Ba			1	146.414	ug/l	0.73	92,365.23	5.165E-02	Pulse	0.50	3
Tl			1	0.240	ug/l	4.15	2,205.49	6.726E-04	Pulse	0.50	3
Sn			1	31.185	ug/l	0.80	45,300.10	2.533E-02	Pulse	0.30	3
Sr			1	58.891	ug/l	0.70	107,412.43	6.007E-02	Pulse	0.50	3
[Pb]			1	544.910	ug/l	0.87	1,533,547.04	4.678E-01	Pulse	0.50	3
Ca			1	10738.289	ug/l	1.14	117,375.88	5.551E-01	Pulse	0.50	3
Ti			1	730.275	ug/l	0.87	55,069.08	2.604E-01	Pulse	0.50	3
Na			1	120.808	ug/l	0.73	74,416.79	3.520E-01	Pulse	1.00	3
Mg			1	1095.837	ug/l	1.20	228,887.37	1.083E+00	Pulse	1.00	3
K			1	553.347	ug/l	1.41	195,898.27	5.509E-01	Pulse	1.00	3
V			1	44.414	ug/l	1.65	104,866.32	4.959E-01	Pulse	0.50	3
Mn			1	59.958	ug/l	1.39	98,269.06	4.647E-01	Pulse	0.50	3
Fe			1	9588.066	ug/l	0.45	22,913,430.67	1.084E+02	Analog	0.50	3
Co			1	2.887	ug/l	1.75	13,148.48	6.218E-02	Pulse	0.50	3
Ni			1	18.400	ug/l	0.78	22,600.54	1.069E-01	Pulse	0.50	3
Cu			1	36.317	ug/l	2.81	143,291.56	6.776E-01	Pulse	0.50	3
Zn			1	1297.580	ug/l	1.23	656,928.27	2.123E+00	Pulse	1.00	3
Cd			1	3.497	ug/l	1.41	2,375.50	7.676E-03	Pulse	0.50	3
Al			1	33090.814	ug/l	0.85	2,976,088.92	1.408E+01	Pulse	1.00	3
Se			1	8.125	ug/l	8.71	258.12	8.340E-04	Pulse	3.00	3
Sb			1	1.416	ug/l	1.20	2,874.57	9.289E-03	Pulse	1.00	3
Se			1	8.344	ug/l	9.29	143.33	4.630E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,277,898.25	1.28	93.8	Pulse	0.50	3
1	Sc		355,624.61	1.20	107.7	Pulse	0.30	3
1	Ge		211,430.06	0.93	103.9	Pulse	0.30	3
1	In		1,788,150.35	0.83	95.6	Pulse	0.30	3
1	Tb		4,673,818.00	1.36	95.4	Pulse	0.50	3
1	Lu		3,295,039.25	1.65	92.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		309,451.03	0.99	102.5	Pulse	0.30	3
1	Te		3.33	34.64		Pulse	0.50	3
1	Li		1,203.38	1.94	113.2	Pulse	0.30	3

Quantitation Report

File Name 028SMPL.d
File Path D:\2022\xa122222m1.b
Method File
Method Path
Acq Time 12/22/2022 12:36
Sample Name MP41610-SD1
Sample Type Sample
Comment
Prep Dilution 25.000
Auto Dilution N/A
Total Dilution 25.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 12/22/2022 11:48
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	250.150	ug/l	1.44	148,296.44	6.929E-01	Pulse	0.50	3
As			1	20.876	ug/l	3.25	1,563.07	7.302E-03	Pulse	1.00	3
Mo			1	9.576	ug/l	6.47	2,890.90	9.222E-03	Pulse	0.50	3
Pb			1	412.103	ug/l	1.25	500,203.76	1.503E-01	Pulse	1.00	3
Be			1	0.829	ug/l	57.82	2.17	1.011E-05	Pulse	2.00	3
Ag			1	0.192	ug/l	28.44	290.67	9.275E-04	Pulse	0.50	3
Ba			1	135.916	ug/l	3.66	17,509.81	9.597E-03	Pulse	0.50	3
Tl			1	0.261	ug/l	5.88	644.01	1.935E-04	Pulse	0.50	3
Sn			1	28.412	ug/l	0.39	8,653.19	4.742E-03	Pulse	0.30	3
Sr			1	49.930	ug/l	1.54	18,909.48	1.036E-02	Pulse	0.50	3
[Pb]			1	420.908	ug/l	1.60	241,331.54	7.251E-02	Pulse	0.50	3
Ca			1	9133.191	ug/l	2.31	20,545.41	9.599E-02	Pulse	0.50	3
Ti			1	379.258	ug/l	1.52	5,796.22	2.708E-02	Pulse	0.50	3
Na			1	244.425	ug/l	3.51	45,362.65	2.119E-01	Pulse	1.00	3
Mg			1	938.835	ug/l	0.76	40,137.03	1.875E-01	Pulse	1.00	3
K			1	472.170	ug/l	2.58	91,874.95	2.591E-01	Pulse	1.00	3
V			1	44.793	ug/l	1.81	22,540.35	1.053E-01	Pulse	0.50	3
Mn			1	79.883	ug/l	2.76	26,737.68	1.249E-01	Pulse	0.50	3
Fe			1	66139.635	ug/l	0.61	31,994,912.67	1.495E+02	Analog	0.50	3
Co			1	3.765	ug/l	6.27	3,532.33	1.650E-02	Pulse	0.50	3
Ni			1	21.210	ug/l	5.73	5,465.46	2.554E-02	Pulse	0.50	3
Cu			1	14.732	ug/l	1.22	36,462.34	1.704E-01	Pulse	0.50	3
Zn			1	1186.476	ug/l	1.51	123,062.45	3.925E-01	Pulse	1.00	3
Cd			1	2.956	ug/l	4.97	408.01	1.301E-03	Pulse	0.50	3
Al			1	26065.518	ug/l	0.88	475,207.89	2.220E+00	Pulse	1.00	3
Se			1	6.406	ug/l	24.72	81.44	2.598E-04	Pulse	3.00	3
Sb			1	1.797	ug/l	5.08	779.02	2.485E-03	Pulse	1.00	3
Se			1	5.537	ug/l	19.48	54.89	1.751E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,328,189.17	0.32	95.3	Pulse	0.50	3
1	Sc		354,565.35	0.63	107.4	Pulse	0.30	3
1	Ge		214,034.52	0.31	105.2	Pulse	0.30	3
1	In		1,824,662.01	0.60	97.6	Pulse	0.30	3
1	Tb		4,753,575.17	0.86	97.0	Pulse	0.50	3
1	Lu		3,340,076.33	0.36	93.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		313,533.91	0.44	103.9	Pulse	0.30	3
1	Te		2.00	100.00		Pulse	0.50	3
1	Li		1,263.38	2.97	118.8	Pulse	0.30	3

Quantitation Report

File Name	029SMPL.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:39
Sample Name	MP41610-S1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	832.214	ug/l	1.03	2,304,155.17	1.130E+01	Pulse	0.50	3
As			1	533.590	ug/l	0.81	180,933.29	8.875E-01	Pulse	1.00	3
Mo			1	513.158	ug/l	0.68	733,764.98	2.429E+00	Pulse	0.50	3
Pb			1	1080.616	ug/l	0.79	6,032,286.67	1.963E+00	Pulse	1.00	3
Be			1	568.107	ug/l	1.31	7,062.73	3.465E-02	Pulse	2.00	3
Ag			1	262.922	ug/l	0.85	1,139,348.00	3.772E+00	Pulse	0.50	3
Ba			1	675.477	ug/l	0.80	408,177.12	2.383E-01	Pulse	0.50	3
Tl			1	521.808	ug/l	0.81	4,098,921.75	1.334E+00	Pulse	0.50	3
Sn			1	553.814	ug/l	0.42	766,342.03	4.473E-01	Pulse	0.30	3
Sr			1	596.179	ug/l	0.94	1,038,367.29	6.061E-01	Pulse	0.50	3
[Pb]			1	1070.495	ug/l	0.34	2,822,786.33	9.188E-01	Pulse	0.50	3
Ca			1	62991.987	ug/l	1.09	661,960.06	3.247E+00	Pulse	0.50	3
Ti			1	905.744	ug/l	0.69	65,851.37	3.230E-01	Pulse	0.50	3
Na			1	54999.772	ug/l	1.32	21,851,256.00	1.072E+02	Analog	1.00	3
Mg			1	55135.112	ug/l	1.64	11,077,895.33	5.434E+01	Analog	1.00	3
K			1	52114.459	ug/l	0.41	11,561,476.33	3.333E+01	Analog	1.00	3
V			1	579.130	ug/l	0.63	1,302,130.92	6.387E+00	Pulse	0.50	3
Mn			1	573.204	ug/l	0.65	903,185.69	4.430E+00	Pulse	0.50	3
Fe			1	62557.299	ug/l	0.69	144,064,864.00	7.067E+02	Analog	0.50	3
Co			1	542.995	ug/l	1.27	2,369,251.42	1.162E+01	Pulse	0.50	3
Ni			1	557.552	ug/l	1.41	653,306.37	3.205E+00	Pulse	0.50	3
Cu			1	570.141	ug/l	1.10	1,792,412.29	8.793E+00	Pulse	0.50	3
Zn			1	1625.349	ug/l	0.14	802,765.58	2.658E+00	Pulse	1.00	3
Cd			1	498.839	ug/l	0.72	330,518.84	1.094E+00	Pulse	0.50	3
Al			1	90377.280	ug/l	1.11	7,835,501.17	3.844E+01	Analog	1.00	3
Se			1	496.313	ug/l	1.15	12,623.94	4.179E-02	Pulse	3.00	3
Sb			1	436.028	ug/l	0.79	848,006.83	2.807E+00	Pulse	1.00	3
Se			1	501.581	ug/l	0.82	6,068.63	2.009E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,072,301.67	0.47	88.0	Pulse	0.50	3
1	Sc		346,862.07	0.32	105.0	Pulse	0.30	3
1	Ge		203,872.00	1.04	100.2	Pulse	0.30	3
1	In		1,713,227.85	1.02	91.6	Pulse	0.30	3
1	Tb		4,576,300.17	0.95	93.4	Pulse	0.50	3
1	Lu		3,225,661.75	0.93	90.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		302,066.86	0.40	100.1	Pulse	0.30	3
1	Te		2.67	173.21		Pulse	0.50	3
1	Li		1,234.49	2.91	116.1	Pulse	0.30	3

Quantitation Report

File Name	030CCVA.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:43
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	47.207	ug/l	1.60	679,116.71	3.216E+00	Pulse	0.50	3
As			1	45.369	ug/l	1.54	79,722.62	3.775E-01	Pulse	1.00	3
Mo			1	45.480	ug/l	1.04	333,239.49	1.077E+00	Pulse	0.50	3
Pb			1	45.831	ug/l	0.94	1,354,803.54	4.168E-01	Pulse	1.00	3
Be			1	48.208	ug/l	1.67	3,104.24	1.470E-02	Pulse	2.00	3
Ag			1	47.908	ug/l	1.16	1,063,729.17	3.436E+00	Pulse	0.50	3
Ba			1	45.422	ug/l	0.52	143,484.96	8.011E-02	Pulse	0.50	3
Tl			1	47.016	ug/l	0.74	1,953,676.42	6.011E-01	Pulse	0.50	3
Sn			1	45.943	ug/l	0.34	332,449.59	1.856E-01	Pulse	0.30	3
Sr			1	46.327	ug/l	0.87	422,018.62	2.356E-01	Pulse	0.50	3
[Pb]			1	46.295	ug/l	1.19	646,466.83	1.989E-01	Pulse	0.50	3
Ca			1	4575.461	ug/l	0.99	249,300.10	1.181E+00	Pulse	0.50	3
Ti			1	45.709	ug/l	2.25	17,216.93	8.153E-02	Pulse	0.50	3
Na			1	4890.122	ug/l	0.37	10,077,259.67	4.772E+01	Analog	1.00	3
Mg			1	4806.294	ug/l	0.59	5,002,450.17	2.369E+01	Analog	1.00	3
K			1	4761.597	ug/l	0.46	5,335,395.83	1.534E+01	Analog	1.00	3
V			1	46.516	ug/l	1.35	542,534.65	2.569E+00	Pulse	0.50	3
Mn			1	45.904	ug/l	0.85	374,827.99	1.775E+00	Pulse	0.50	3
Fe			1	4739.178	ug/l	1.40	56,537,098.67	2.677E+02	Analog	0.50	3
Co			1	47.047	ug/l	1.45	1,063,300.29	5.035E+00	Pulse	0.50	3
Ni			1	47.256	ug/l	1.67	286,945.15	1.359E+00	Pulse	0.50	3
Cu			1	46.601	ug/l	1.49	774,514.83	3.668E+00	Pulse	0.50	3
Zn			1	46.718	ug/l	1.39	119,627.40	3.865E-01	Pulse	1.00	3
Cd			1	45.461	ug/l	1.51	154,340.69	4.986E-01	Pulse	0.50	3
Al			1	4483.776	ug/l	1.34	2,014,003.33	9.537E+00	Pulse	1.00	3
Se			1	45.155	ug/l	1.70	5,910.47	1.909E-02	Pulse	3.00	3
Sb			1	43.956	ug/l	0.88	438,040.59	1.415E+00	Pulse	1.00	3
Se			1	44.720	ug/l	0.17	2,794.87	9.029E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,250,418.25	0.33	93.1	Pulse	0.50	3
1	Sc		347,920.38	0.58	105.4	Pulse	0.30	3
1	Ge		211,191.22	0.75	103.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,790,979.16	0.27	95.7	Pulse	0.30	3
1	Tb		4,714,440.33	0.37	96.2	Pulse	0.50	3
1	Lu		3,362,854.42	0.35	94.1	Pulse	0.50	3
1	Ge		309,553.56	0.52	102.6	Pulse	0.30	3
1	Te		0.67	173.21		Pulse	0.50	3
1	Li		1,131.15	6.52	106.4	Pulse	0.30	3

Quantitation Report

File Name	031_CCV.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:47
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	97.108	ug/l	1.44	1,363,217.71	6.600E+00	Pulse	0.50	3
As			1	94.511	ug/l	1.22	162,351.40	7.860E-01	Pulse	1.00	3
Mo			1	94.052	ug/l	0.96	681,195.92	2.226E+00	Pulse	0.50	3
Pb			1	94.697	ug/l	1.14	2,756,857.83	8.606E-01	Pulse	1.00	3
Be			1	99.729	ug/l	1.11	6,280.81	3.041E-02	Pulse	2.00	3
Ag			1	97.545	ug/l	0.64	2,140,980.42	6.997E+00	Pulse	0.50	3
Ba			1	93.440	ug/l	1.00	292,837.60	1.648E-01	Pulse	0.50	3
Tl			1	98.236	ug/l	1.08	4,022,813.08	1.256E+00	Pulse	0.50	3
Sn			1	95.175	ug/l	1.07	683,000.65	3.844E-01	Pulse	0.30	3
Sr			1	95.041	ug/l	0.62	858,576.19	4.832E-01	Pulse	0.50	3
[Pb]			1	95.447	ug/l	0.83	1,312,594.21	4.098E-01	Pulse	0.50	3
Ca			1	9411.802	ug/l	1.04	501,145.13	2.426E+00	Pulse	0.50	3
Ti			1	95.846	ug/l	1.74	35,302.38	1.709E-01	Pulse	0.50	3
Na			1	10104.510	ug/l	0.46	20,339,542.00	9.847E+01	Analog	1.00	3
Mg			1	9904.592	ug/l	0.84	10,081,751.33	4.881E+01	Analog	1.00	3
K			1	9781.329	ug/l	0.41	10,678,413.33	3.129E+01	Analog	1.00	3
V			1	96.386	ug/l	1.04	1,098,058.09	5.316E+00	Pulse	0.50	3
Mn			1	94.517	ug/l	1.00	754,495.87	3.653E+00	Pulse	0.50	3
Fe			1	9813.829	ug/l	0.82	114,494,125.33	5.543E+02	Analog	0.50	3
Co			1	96.215	ug/l	1.46	2,126,721.50	1.030E+01	Pulse	0.50	3
Ni			1	96.980	ug/l	1.51	575,696.29	2.787E+00	Pulse	0.50	3
Cu			1	96.232	ug/l	1.10	1,536,657.84	7.440E+00	Pulse	0.50	3
Zn			1	99.299	ug/l	1.04	249,541.82	8.155E-01	Pulse	1.00	3
Cd			1	92.489	ug/l	1.32	310,396.15	1.014E+00	Pulse	0.50	3
Al			1	9381.666	ug/l	1.11	4,120,760.25	1.995E+01	Pulse	1.00	3
Se			1	92.844	ug/l	0.45	11,964.96	3.910E-02	Pulse	3.00	3
Sb			1	91.214	ug/l	1.16	898,526.77	2.936E+00	Pulse	1.00	3
Se			1	91.555	ug/l	0.05	5,614.49	1.835E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,203,348.25	0.51	91.7	Pulse	0.50	3
1	Sc		341,250.82	0.49	103.3	Pulse	0.30	3
1	Ge		206,552.49	0.82	101.5	Pulse	0.30	3
1	In		1,776,963.75	0.37	95.0	Pulse	0.30	3
1	Tb		4,694,842.17	0.50	95.8	Pulse	0.50	3
1	Lu		3,362,576.58	0.33	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		306,012.16	0.61	101.4	Pulse	0.30	3
1	Te		8.00	66.14		Pulse	0.50	3
1	Li		1,237.82	5.20	116.4	Pulse	0.30	3

Quantitation Report

File Name	032_CCB.d
File Path	D:\2022\xa122222m1.b
Method File	
Method Path	
Acq Time	12/22/2022 12:51
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	12/22/2022 11:48
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.044	ug/l	25.48	3,602.34	1.721E-02	Pulse	0.50	3
As			1	0.026	ug/l	21.29	120.33	5.750E-04	Pulse	1.00	3
Mo			1	0.095	ug/l	13.90	739.35	2.400E-03	Pulse	0.50	3
Pb			1	0.007	ug/l	111.53	2,121.14	6.460E-04	Pulse	1.00	3
Be			1	0.063	ug/l	43.44	4.00	1.913E-05	Pulse	2.00	3
Ag			1	0.019	ug/l	16.31	535.34	1.740E-03	Pulse	0.50	3
Ba			1	0.018	ug/l	24.86	72.67	4.006E-05	Pulse	0.50	3
Tl			1	0.041	ug/l	15.07	1,915.45	5.835E-04	Pulse	0.50	3
Sn			1	0.099	ug/l	21.41	1,010.04	5.560E-04	Pulse	0.30	3
Sr			1	0.027	ug/l	63.98	635.35	3.504E-04	Pulse	0.50	3
[Pb]			1	0.005	ug/l	163.24	996.03	3.034E-04	Pulse	0.50	3
Ca			1	1.613	ug/l	59.54	482.01	2.304E-03	Pulse	0.50	3
Ti			1	0.023	ug/l	36.35	15.33	7.329E-05	Pulse	0.50	3
Na			1	7.090	ug/l	11.69	38,882.23	1.858E-01	Pulse	1.00	3
Mg			1	2.589	ug/l	26.97	3,186.27	1.522E-02	Pulse	1.00	3
K			1	3.649	ug/l	10.93	73,087.90	2.107E-01	Pulse	1.00	3
V			1	0.006	ug/l	146.49	1,446.73	6.913E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	83.91	399.34	1.909E-03	Pulse	0.50	3
Fe			1	2.634	ug/l	26.21	46,090.40	2.202E-01	Pulse	0.50	3
Co			1	0.021	ug/l	28.59	540.68	2.583E-03	Pulse	0.50	3
Ni			1	0.007	ug/l	99.47	286.67	1.369E-03	Pulse	0.50	3
Cu			1	-0.744	ug/l	-2.25	14,441.43	6.901E-02	Pulse	0.50	3
Zn			1	-0.059	ug/l	-49.70	1,478.39	4.803E-03	Pulse	1.00	3
Cd			1	0.034	ug/l	40.22	116.67	3.798E-04	Pulse	0.50	3
Al			1	1.977	ug/l	32.44	1,583.40	7.564E-03	Pulse	1.00	3
Se			1	0.086	ug/l	25.46	58.00	1.884E-04	Pulse	3.00	3
Sb			1	0.056	ug/l	5.99	606.68	1.970E-03	Pulse	1.00	3
Se			1	0.018	ug/l	241.22	41.45	1.347E-04	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,286,266.25	1.20	94.1	Pulse	0.50	3
1	Sc		346,907.29	0.54	105.1	Pulse	0.30	3

Quantitation Report

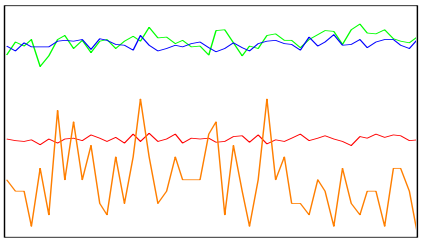
1	Ge		209,266.06	0.33	102.9	Pulse	0.30	3
1	In		1,815,367.85	0.71	97.1	Pulse	0.30	3
1	Tb		4,688,205.50	1.09	95.7	Pulse	0.50	3
1	Lu		3,317,489.75	1.27	92.8	Pulse	0.50	3
1	Ge		307,885.43	0.88	102.0	Pulse	0.30	3
1	Te		0.00	---		Pulse	0.50	3
1	Li		1,201.15	5.04	113.0	Pulse	0.30	3

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Tune Report

Batch Folder	D:\2022\xa122222m1.b
Acq. Date-Time	12/22/2022 10:42
Report Comment	122222
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	2137	21374.10	5000.00	
89	1000	853	8528.92	5000.00	
205	5000	4192	41917.46	5000.00	
78	20	5			

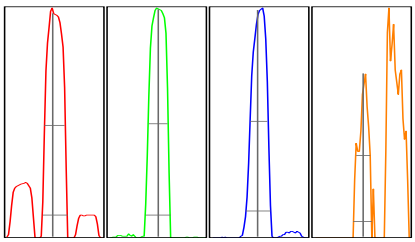
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	3.13	5.00	
89	4.31	5.00	
205	2.16	5.00	
78	58.17		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.10	2	
89	0.10	2	
205	0.50	2	
78	0.40	5	

Ratio	156/140	0.976 %	
Ratio	70/140	2.102 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2115.74	59.00	58.9 - 59.1		0.62	0.754	0.900	
89	867.99	89.05	88.9 - 89.1		0.59	0.749	0.900	

Tune Report

205	4313.14	205.00	204.9 - 205.1	0.53	0.743	0.900
78	10.00	78.05	-	0.42	0.526	

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

Plasma Mode General Purpose

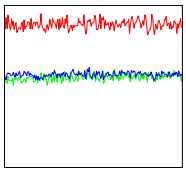
Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-200.0 V	Cell Exit	-70 V
Omega Bias	-115 V	Deflect	2.8 V
Omega Lens	6.9 V	Plate Bias	-60 V

Cell Parameters

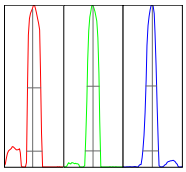
Use Gas	true	OctP Bias	-18.0 V
He Flow	4.3 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

Performance



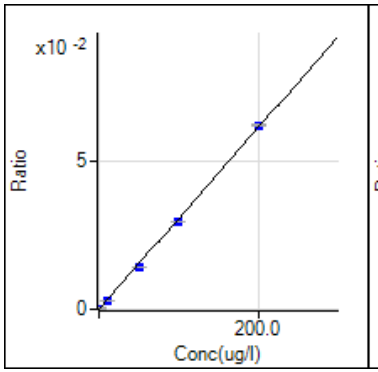
Sensitivity			
Mass	7	89	205
Range	2000	5000	1.0E4
Count	1765.39	2771.76	5725.38
RSD%	3.2	3.5	2.6
Integration Time	0.100 sec		
Sampling Period	0.311 sec		
Oxide	156/140	0.94%	
Doubly Charged	70/140	5.02%	

Background			
Mass	7	89	205
Count	0.20	1.75	5.35

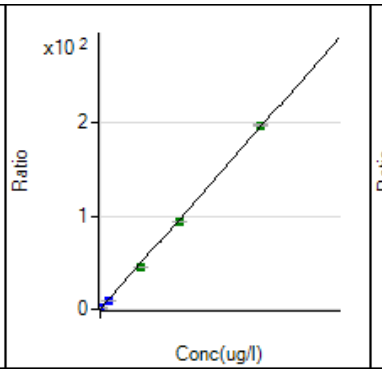


Resolution/Axis			
Mass	7	89	205
Height	1731	2868	5706
Axis	6.95	89.00	205.00
W-50%	0.67	0.59	0.53
W-10%	0.77	0.76	0.78
Integration Time	0.100 sec		
Acquisition Time	00:00:23		

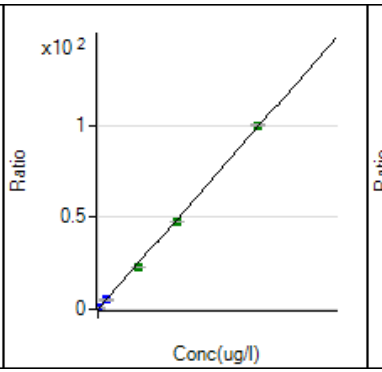
Calibration for D:\2022\xa122222m1.b\001CALB.d



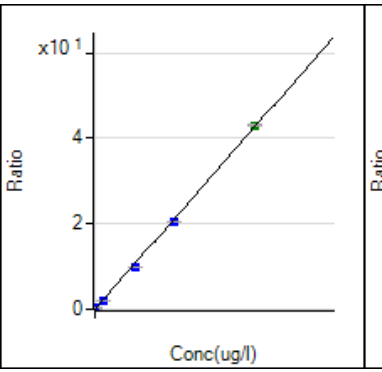
9 Be [2] / ISTD: 72 Ge
y = 3.049E-4 x
R 0.9996
DL 0
BEC 0



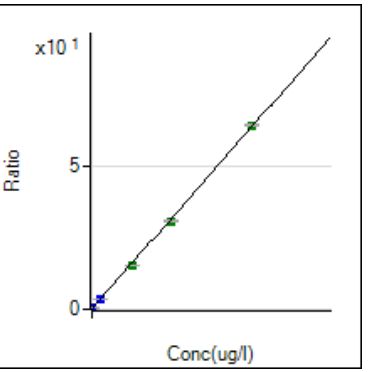
23 Na [2] / ISTD: 72 Ge
y = 9.734E-3 x + 1.168E-1
R 0.9996
DL 0.8425
BEC 12



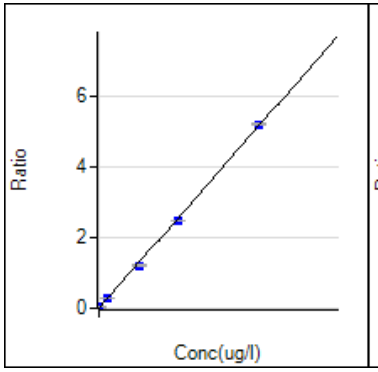
24 Mg [2] / ISTD: 72 Ge
y = 4.928E-3 x + 2.465E-3
R 0.9996
DL 0.03316
BEC 0.5002



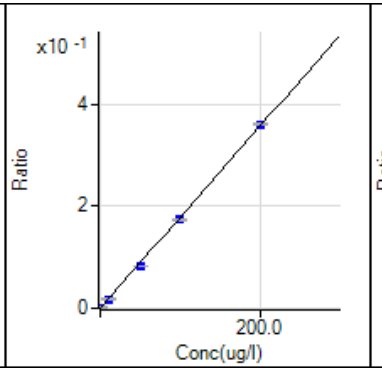
27 Al [2] / ISTD: 72 Ge
y = 2.126E-3 x + 3.361E-3
R 0.9997
DL 0.6764
BEC 1.581



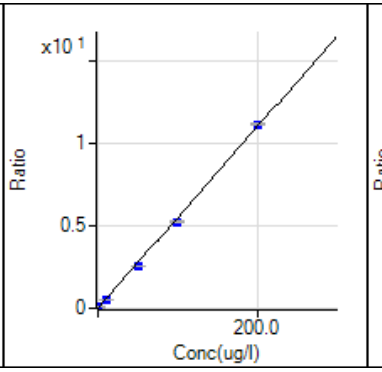
39 K [2] / ISTD: 45 Sc
y = 3.179E-3 x + 1.991E-1
R 0.9997
DL 2.266
BEC 62.63



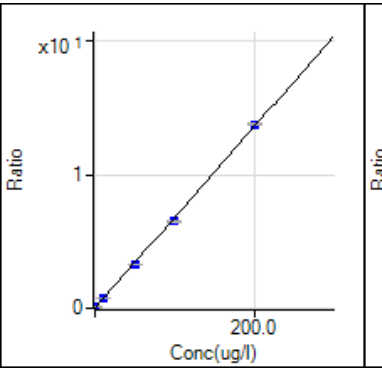
44 Ca [2] / ISTD: 72 Ge
y = 2.576E-4 x + 1.888E-3
R 0.9996
DL 0.141
BEC 7.329



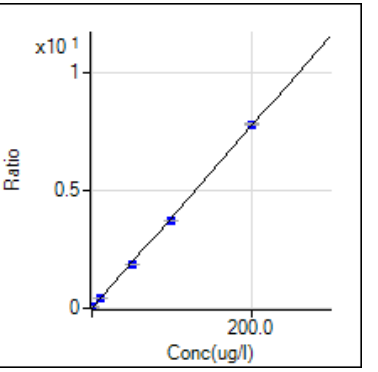
47 Ti [2] / ISTD: 72 Ge
y = 1.783E-3 x + 3.268E-5
R 0.9997
DL 0.02477
BEC 0.01833



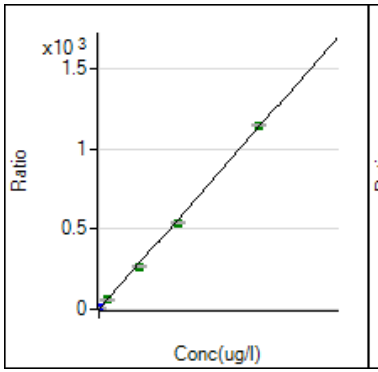
51 V [2] / ISTD: 72 Ge
y = 5.509E-2 x + 6.606E-3
R 0.9995
DL 0.01409
BEC 0.1199



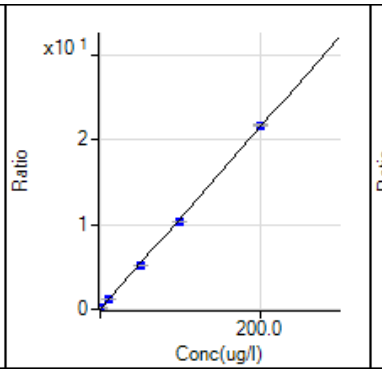
52 Cr [2] / ISTD: 72 Ge
y = 6.782E-2 x + 1.424E-2
R 0.9996
DL 0.002386
BEC 0.21



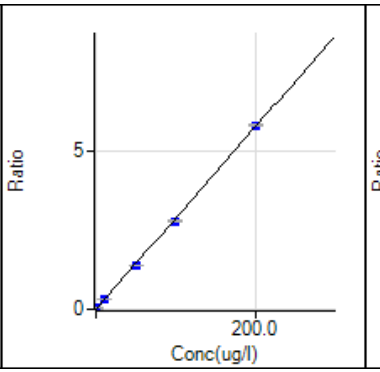
55 Mn [2] / ISTD: 72 Ge
y = 3.863E-2 x + 1.475E-3
R 0.9997
DL 0.001396
BEC 0.03818



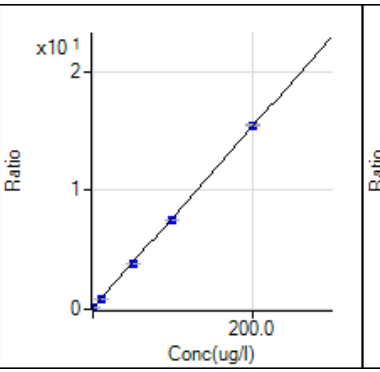
56 Fe [2] / ISTD: 72 Ge
y = 5.648E-2 x + 7.143E-2
R 0.9995
DL 0.09895
BEC 1.265



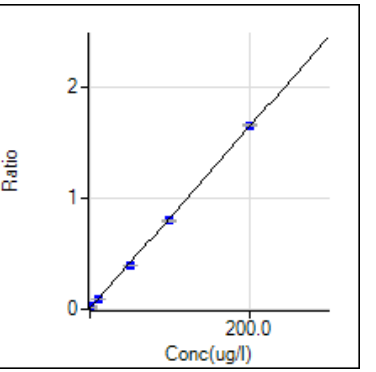
59 Co [2] / ISTD: 72 Ge
y = 1.070E-1 x + 3.873E-4
R 0.9997
DL 0.001762
BEC 0.003619



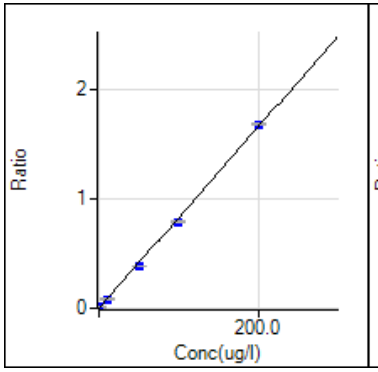
60 Ni [2] / ISTD: 72 Ge
y = 2.873E-2 x + 1.162E-3
R 0.9998
DL 0.02212
BEC 0.04044



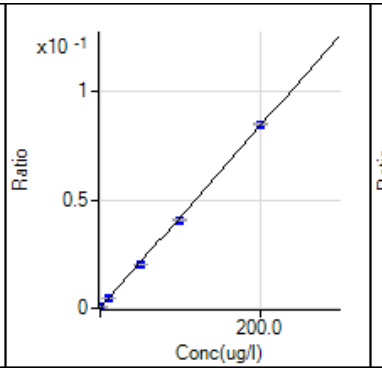
63 Cu [2] / ISTD: 72 Ge
y = 7.601E-2 x + 1.256E-1
R 0.9998
DL 0.06091
BEC 1.652



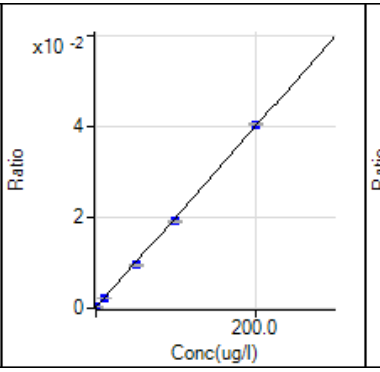
66 Zn [2] / ISTD: 74 Ge
y = 8.159E-3 x + 5.288E-3
R 0.9996
DL 0.06501
BEC 0.6482



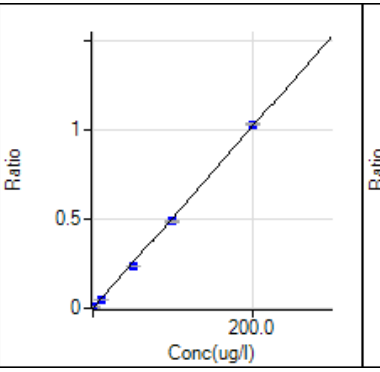
75 As [2] / ISTD: 72 Ge
y = 8.313E-3 x + 3.605E-4
R 0.9995
DL 0.02037
BEC 0.04336



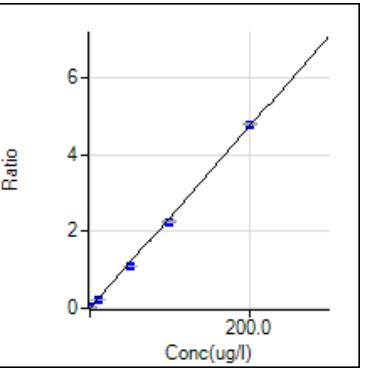
78 Se [2] / ISTD: 74 Ge
y = 4.195E-4 x + 1.523E-4
R 0.9997
DL 0.1114
BEC 0.3631



82 Se [2] / ISTD: 74 Ge
y = 1.990E-4 x + 1.310E-4
R 0.9995
DL 0.05209
BEC 0.6585

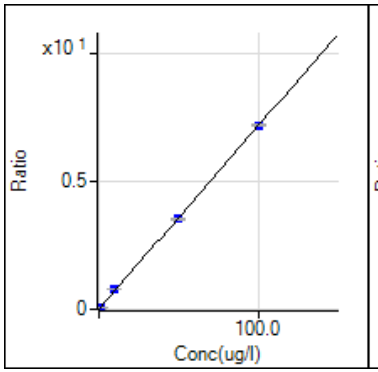


88 Sr [2] / ISTD: 115 In
y = 5.082E-3 x + 2.142E-4
R 0.9995
DL 0.006412
BEC 0.04216

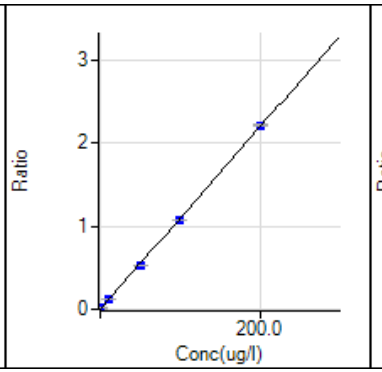


95 Mo [2] / ISTD: 74 Ge
y = 2.367E-2 x + 1.569E-4
R 0.9995
DL 0.002547
BEC 0.006629

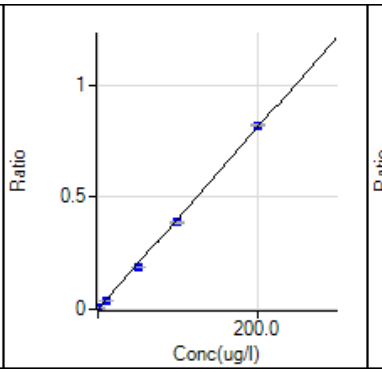
Calibration for D:\2022\xa122222m1.b\001CALB.d



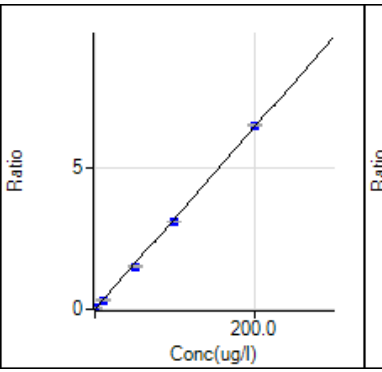
107 Ag [2] / ISTD: 74 Ge
y = 7.172E-2 x + 3.778E-4
R 0.9999
DL 0.001611
BEC 0.005268



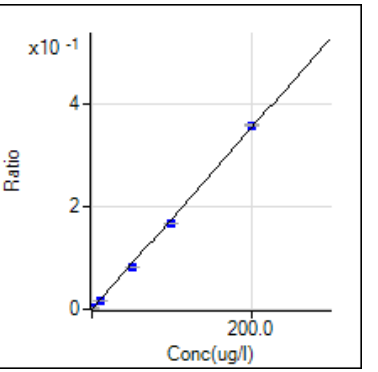
111 Cd [2] / ISTD: 74 Ge
y = 1.097E-2 x + 4.426E-6
R 0.9998
DL 0.002097
BEC 0.0004036



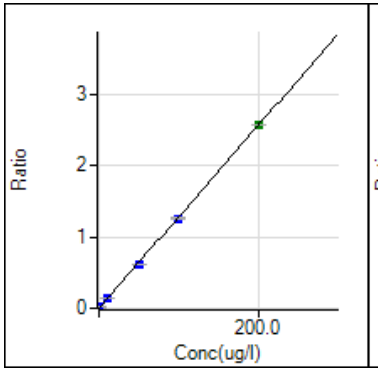
118 Sn [2] / ISTD: 115 In
y = 4.037E-3 x + 1.544E-4
R 0.9995
DL 0.02392
BEC 0.03824



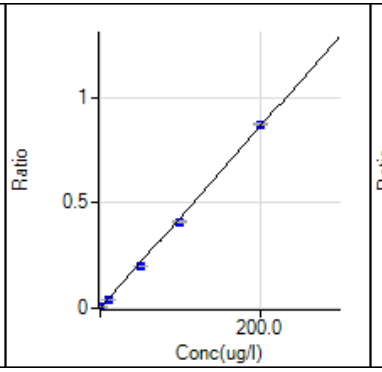
121 Sb [2] / ISTD: 74 Ge
y = 3.219E-2 x + 1.713E-4
R 0.9996
DL 0.0036
BEC 0.005323



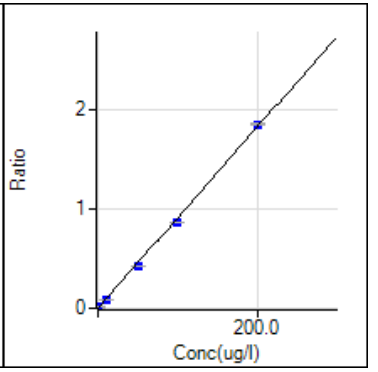
137 Ba [2] / ISTD: 115 In
y = 1.764E-3 x + 8.927E-6
R 0.9994
DL 0.006952
BEC 0.005062



205 Tl [2] / ISTD: 209 Bi
y = 1.278E-2 x + 5.997E-5
R 0.9999
DL 0.003851
BEC 0.004691



206 [Pb] [2] / ISTD: 209 Bi
y = 4.290E-3 x + 2.828E-4
R 0.9995
DL 0.008621
BEC 0.06593



208 Pb [2] / ISTD: 209 Bi
y = 9.082E-3 x + 5.826E-4
R 0.9994
DL 0.005855
BEC 0.06414

SGS Orlando

Date:	12/15/22
Time [24hr]	13:40

Analysts Name:	Thomas F
MP Batch ID:	MP41606
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	22330073	ACC1362	0.5	KU15244
Conc. HCl (B)	22C1662007	ACC1346	0.25	KU15244
NA	NA	MET7303	0.25	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	12	**Therm ID**	Mercur	**Temp. C**	95	**Corr. Factor**	-2	**Corrected Observed Temp. C**	93
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2208066

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	26	Matrix Spike(MS)	50	50	Y	
	26	Matrix Spike Dup(MSD)	50	50	Y	
	26	Duplicate(DUP)	50	50	Y	
1(QC) C	26	FC1010-1	50	50	Y	
2	10	FC1010-2	50	50	Y	
3	10	FC1010-5	50	50	Y	
4	10	FC1010-6	50	50	Y	
5	2	FC980-11F	50	50	Y	
6	2	FC980-12F	50	50	Y	
7	17	FC1124-4	50	50	Y	
8	17	FC1124-5	50	50	Y	
9	4	FC1189-1	50	50	Y	
10	4	FC1189-2	50	50	Y	
11	4	FC1189-3	50	50	Y	
12	4	FC1189-4	50	50	Y	
13	4	FC1189-5	50	50	Y	
14	4	FC1192-22	50	50	Y	
15	5	FC1011-1	50	50	Y	
16	5	FC1011-2	50	50	Y	
17	1	FC1186-1	50	50	Y	
18	1	FC1186-2	50	50	Y	
19	1	FC1186-3	50	50	Y	
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD
B For reagent volumes used refer to SOP MET 103, current verion
C Parent sample used to prepare MS, MSD, DUP
D Additional matrix QC

ICP_WaterPrep_Logbook
Rev. 07/09/2021
DM

SGS Orlando

Date:	12/15/22
Time	16:20

[24hr]

Analysts Name:	Adam K
MP Batch ID:	41607
Method	SW846-3010A

Reagent / Lot Number		Spk.Soln(A)	Vol. Used (ml)	Pipette Number
Conc. HNO3 (B)	22330073	ACC1321	0.05	MU45274
Conc. HCl (B)	22C1662007	ACC1346	0.2	KU15244
NA	NA	MET7330	1	KU15244
NA	NA	NA	NA	NA

HotBlock I.D.	10	**Therm ID**	6071	**Temp. C**	95	**Corr. Factor**	-2	**Corrected Observed Temp. C**	93
pH Paper Lot Number	230320			**Filter Lot Number**		280632432		**Digestion Tube Lot Number**	2208066

	Bot#	Sample #	Initial Vol.(ml)	Final Vol.(ml)	pH<2	Comments
	NA	Method Blank(MB)	50	50	NA	
	NA	Spike Blank(SB)	50	50	NA	
	11	Matrix Spike(MS)	50	50	Y	
	11	Matrix Spike Dup(MSD)	50	50	Y	
	11	Duplicate(DUP)	50	50	Y	
1(QC) C	11	FC1138-1	50	50	Y	
2	11	FC1138-2	50	50	Y	
3	11	FC1138-3	50	50	Y	
4	3	FC933-1FA	50	50	Y	
5	3	FC933-2FA	50	50	Y	
6	3	FC933-4FA	50	50	Y	
7	3	FC933-5FA	50	50	Y	
8	13	FC1124-1A	50	50	Y	
9	17	FC1124-4A	50	50	Y	
10	3	FC1124-5A	50	50	Y	
11	14	FC1124-1FA	50	50	Y	
12	18	FC1124-4FA	50	50	Y	
13	4	FC1124-5FA	50	50	Y	
14	3	FC1186-1A	50	50	Y	
15	1	FC1186-2A	50	50	Y	
16	1	FC1186-3A	50	50	Y	
17						
18						
19						
20						
21 [D]						
22 [D]						
23 [D]						
24 [D]						

Protected Worksheet

A Used for SB, MS, MSD

B For reagent volumes used refer to SOP MET 103, current verion

C Parent sample used to prepare MS, MSD, DUP

D Additional matrix QC

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP38306/GN93026	2.0	0.0	mg/l	50	49.8	99.6	90-110%
Nitrogen, Nitrate	GP38306/GN93026	0.10	0.0	mg/l	2.5	2.55	102.0	90-110%
Sulfate	GP38306/GN93026	2.0	0.0	mg/l	50	49.6	99.2	90-110%

Associated Samples:
Batch GP38306: FC1186-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP38306/GN93026	FC1196-12	mg/l	4.1	50	58.0	107.8	90-110%
Nitrogen, Nitrate	GP38306/GN93026	FC1196-12	mg/l	0.051	2.5	3.1	122.0N(a)	90-110%
Sulfate	GP38306/GN93026	FC1196-12	mg/l	20.9	50	71.2	100.6	90-110%

Associated Samples:
Batch GP38306: FC1186-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP38306/GN93026	FC1196-12	mg/l	4.1	50	58.0	0.0	15%
Nitrogen, Nitrate	GP38306/GN93026	FC1196-12	mg/l	0.051	2.5	3.1	0.0	15%
Sulfate	GP38306/GN93026	FC1196-12	mg/l	20.9	50	71.2	0.0	15%

Associated Samples:
Batch GP38306: FC1186-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022121401.CSV Date Analyzed: 12/08/22 Methods: EPA 300/SW846 9056A
Analyst: GT Run ID: GN93026
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:48	GN93026-STD1	1		STDA
12:09	GN93026-STD2	1		STDB
12:30	GN93026-STD3	1		STDC
12:50	GN93026-STD4	1		STDD
13:11	GN93026-STD5	1		STDE
13:31	GN93026-STD6	1		STDF
13:52	GN93026-STD7	1		STDG
14:12	GN93026-STD8	1		STDH
14:33	GN93026-STD9	1		STDI
14:53	GN93026-STD10	1		STDJ
15:14	GN93026-STD11	1		STDK
15:42	GN93026-ICV1	1		
16:02	GN93026-ICB1	1		
16:23	GN93026-CRI1	1		
16:43	GN93026-CCV1	1		
17:04	GN93026-CCB1	1		
07:53	GN93026-CCV2	1		
08:13	GN93026-CCB2	1		
08:34	GP38306-MB1	1		
08:55	GP38306-B1	1		
09:47	FC1186-1	1		
10:08	FC1196-12	1		(sample used for QC only; not part of login FC1186)
10:28	GP38306-S1	1		
10:49	GP38306-S2	1		
11:09	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:55	ZZZZZZ	5		
12:16	ZZZZZZ	500		
12:37	GN93026-CCV3	1		
12:57	GN93026-CCB3	1		
13:18	ZZZZZZ	5		
16:03	ZZZZZZ	1		
16:23	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022121401.CSV Date Analyzed: 12/08/22 Methods: EPA 300/SW846 9056A
Analyst: GT Run ID: GN93026
Parameters: Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:44	GN93026-CCV4	1		
17:04	GN93026-CCB4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FC1186
Account: SCMAW - Sovereign Consulting
Project: Shepley's Hill (SHL); Devens, MA

File ID: 42022121401.CSV Date Analyzed: 12/08/22 Methods: EPA 300/SW846 9056A
Run ID: GN93026 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN93026-ICV1	Chloride	49.6	2.0	0.80	50	99.2	90-110
GN93026-ICV1	Sulfate	48.9	2.0	0.60	50	97.8	90-110
GN93026-ICB1	Chloride	0.80 U	2.0	0.80			
GN93026-ICB1	Sulfate	0.60 U	2.0	0.60			
GN93026-CRI1	Chloride	1.04	2.0	0.80	1	104.0	50-150
GN93026-CRI1	Sulfate	0.688	2.0	0.60	1	68.8	50-150
GN93026-CCV1	Chloride	48.9	2.0	0.80	50	97.8	90-110
GN93026-CCV1	Sulfate	49.8	2.0	0.60	50	99.6	90-110
GN93026-CCB1	Chloride	0.80 U	2.0	0.80			
GN93026-CCB1	Sulfate	0.60 U	2.0	0.60			
GN93026-CCV2	Chloride	49.5	2.0	0.80	50	99.0	90-110
GN93026-CCV2	Sulfate	49.3	2.0	0.60	50	98.6	90-110
GN93026-CCB2	Chloride	0.80 U	2.0	0.80			
GN93026-CCB2	Sulfate	0.60 U	2.0	0.60			
GN93026-CCV3	Chloride	49.7	2.0	0.80	50	99.4	90-110
GN93026-CCV3	Sulfate	49.3	2.0	0.60	50	98.6	90-110
GN93026-CCB3	Chloride	0.80 U	2.0	0.80			
GN93026-CCB3	Sulfate	0.60 U	2.0	0.60			
GN93026-CCV4	Chloride	49.8	2.0	0.80	50	99.6	90-110
GN93026-CCV4	Sulfate	49.4	2.0	0.60	50	98.8	90-110
GN93026-CCB4	Chloride	0.80 U	2.0	0.80			
GN93026-CCB4	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

General Chemistry

Raw Data

IC STANDARDS PREP LOG

STANDARD NAME	ANALYTES	STOCK MFG. #	STOCK LOT #	STOCK EXP. DATE	STOCK CONC. (mg/l)	VOLUME ADDED (ml)	TOTAL VOLUME (ml)	STANDARD CONC. (mg/l)	PREP DATE	INITIALS	STD LOT #	EXP. DATE
B1	NO_2/NO_3	IC014249/50	Ref	12-10-22	100	2.5	100	2.5	12-9-22	JR	IC014252	12-10-22
① GN34296 GN34297 WC1995 GN34298 JR 12/8/22 12/9/22	SO_4	~~WC1992~~ ①	↓	1-30-23	1000	5	↓	50	↓	↓	↓	↓
↓	Cl	WC2002	↓	↓	↓	↓		↓				
	F	~~WC1970~~	Spex	9-30-23	↓	0.25		2.5				
	Br	~~WC1960~~	Ref	1-30-23	↓	1	↓	↓	↓	↓	↓	↓
$1°NO_2$	NO_2	WC1975	Absolute	5-18-24	1000	2.5	25	100	12-13-22	JR	IC014253	12-14-22
$1°NO_3$	NO_3	WC1999	↓	11-3-24	↓	↓	↓	↓	↓	↓	4 5 6	↓
$2°NO_2$	NO_2	WC1977		11-10-23							↓	
$2°NO_3$	NO_3	WC1982	↓	5-12-25	↓	↓	↓	↓				
CW	NO_2/NO_3	IC014253/4	Ref	12-14-22	100	5	200	2.5			IC014257	
↓	SO_4	WC1982	Ricca	11-1-23	1000	10		50			↓	
	Cl	WC2002	Fisher	8-1-24		↓		↓				
	F	WC1970	LLOC	6-30-23		0.5		2.5				
	Br	WC1960	Spex	↓		2		10			↓	
B1	NO_2/NO_3	IC014255/6	Ref	12-14-22	100	2.5	100	2.5			IC014258	
	SO_4	GN34296		1-30-23	1000	5		50				
	Cl	↓ 7	↓	↓		↓		↓				
	F	WC1995	Spex	9-30-23		0.25		2.5				
↓	Br	GN34298	Ref	1-30-23	↓	1	↓	10	↓	↓	↓	↓

IC Instrument Log

Method: ~~EPA300.0 / SW846 9056A~~ (circle one)

Date:	12/14/22 @ 7:53
Analyst:	DR
Instrument:	#2
Inst. File Name:	42022121401.CLW

Prep Batchs:	GP38306
Analytical Batch:	GN93026
Calibration Date:	12/8/22
Pump pressure:	8.49 MPa

Vial lot#	7016370-E23497
Cap lot#	—
Syringe lot#	—
Filter lot#	—

Standards	
ICAL:	—
ICV:	—
CCV:	12/14/22 / 1C0142S7
QC:	1C0142S8

Sample#	Bot#	Matrix	Scon	DF	Filter (y/n)	Ions Needed						Results OK or Dilution Needed						Comments
						F	Cl	NO2	Br	NO3	SO4	(1)F	Cl	NO2	Br	NO3	SO4	(1) Ok unless marked
CCV	-	AQ	-	1	N		—			—	—							
CCB	-	↓	-	↓	↓		—			—	—							
MB 1	-		-				—			—	—							
B1	-		-				—			—	—							
FC1186-1	1		321 nS				—				—							
FC1196-12	10		746 µS				—			—	—							
↓ -1251	↓		↓				—			—	—							
↓ -1252	↓		↓				—			—	—							
FC1214-2	7		14 mS								—							
↓ -3	↓		712 µS	↓							—							
↓ -1	↓		3.1 mS	5							—							
FC1215-1	7		19 mS	500							—							
CCV	-		-	1			—			—	—							
CCB	-		-	↓			—			—	—							
FC1215-2	7		735 µS	5							—							
FC1280-1	10		23 nS	1			—			—	—							
↓ -2	4		222 µS	↓			—			—	—							
CCV	-		-				—			—	—							
CCB	-	↓	-	↓	↓		—			—	—							

GT 12/15/22

MagIC Net

2022-12-09 9:53:24

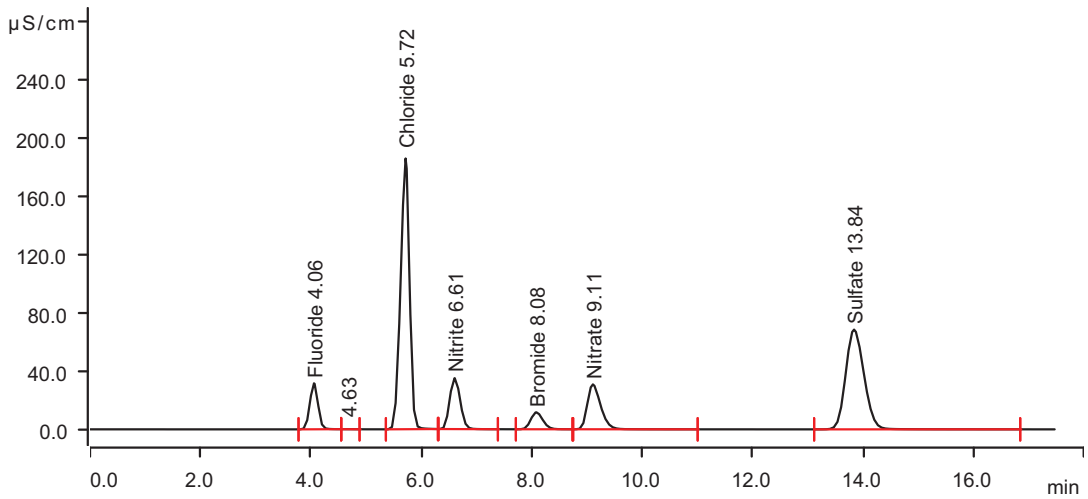
Sample data

Ident	STDK
Sample type	Standard 10
Determination start	2022-12-08 15:14:18 UTC-5
Method	SGS In-Vial Anions191003A
Operator	JR

Anions

Data source	Conductivity detector 1 (930 Compact IC Flex 1)	
Channel	Conductivity	
Recording time	17.5	min
Integration	Automatically	
Column type	Metrosep A Supp 5 - 150/4.0	
Eluent composition	not defined	
Flow	0.700	mL/min
Maximum flow monitored	yes	
Pressure	9.51	MPa
Maximum pressure monitored	yes	
Temperature	30.0	°C

Anions



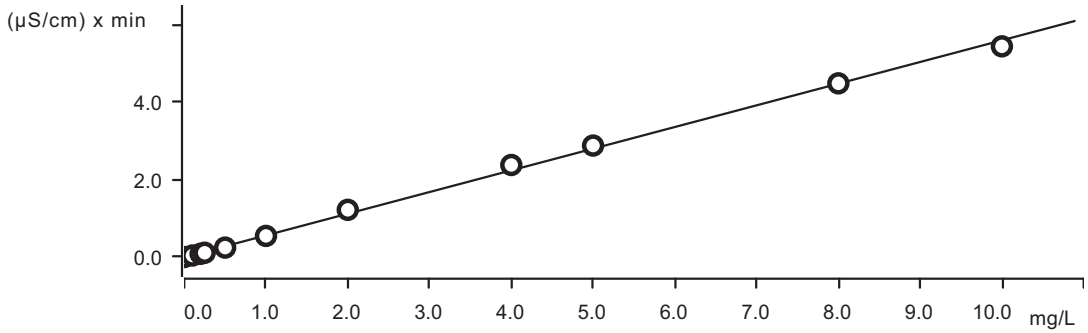
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration mg/L	Component name
1	4.057	5.4347	31.534	9.722	Fluoride
2	4.632	0.0048	0.024	invalid	
3	5.715	34.7879	185.718	98.995	Chloride
4	6.605	7.7415	34.916	9.764	Nitrite
5	8.083	2.9645	11.649	20.332	Bromide
6	9.107	8.6031	30.782	10.055	Nitrate
7	13.835	26.2433	68.430	99.641	Sulfate

Metrohm

MagIC Net

2022-12-09 9:53:24

Fluoride (Anions)



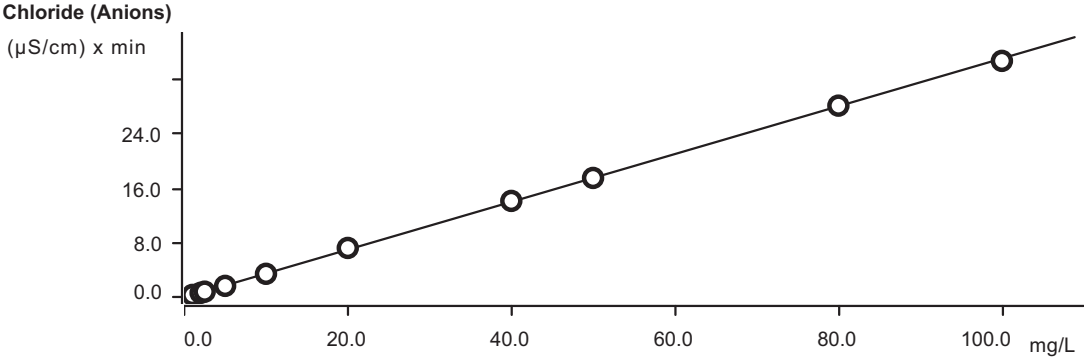
Function: . . . . . *A = 2.31582E-6 + 0.0279509× Q*

Relative standard deviation . . . . . *5.293658 %*

Correlation coefficient *0.999165*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0006	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0405	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.0845	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.1108	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.2437	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.5456	STDF	2022-12-08 13:31:37 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	1.2180	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	2.3746	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	2.8755	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	4.4805	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	5.4347	STDK	2022-12-08 15:14:18 UTC-5

Chloride (Anions)



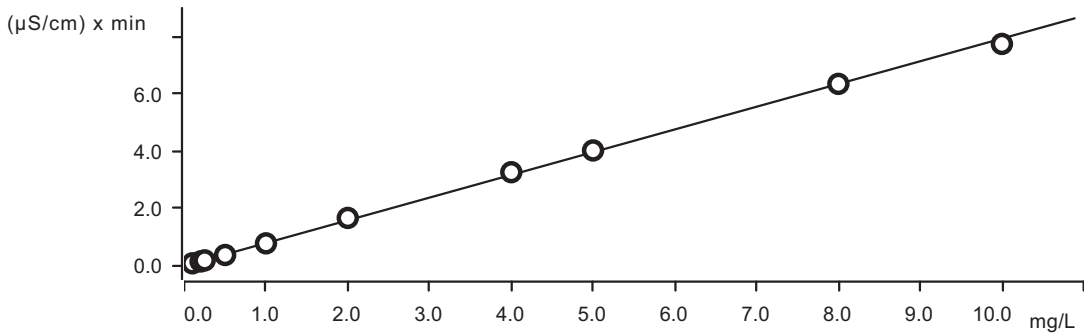
Function: . . . . . *A = - 0.0793457 + 0.0176105× Q*

Relative standard deviation . . . . . *1.537074 %*

Correlation coefficient *0.999920*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	1.000	20.0	1.0	1.0	0.2971	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	2.000	20.0	1.0	1.0	0.5989	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	2.500	20.0	1.0	1.0	0.7750	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	5.000	20.0	1.0	1.0	1.6297	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	10.000	20.0	1.0	1.0	3.4075	STDF	2022-12-08 13:31:37 UTC-5
Standard 6	1	20.000	20.0	1.0	1.0	7.2169	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	40.000	20.0	1.0	1.0	14.1491	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	50.000	20.0	1.0	1.0	17.5353	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	80.000	20.0	1.0	1.0	28.1906	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	100.000	20.0	1.0	1.0	34.7879	STDK	2022-12-08 15:14:18 UTC-5

Nitrite (Anions)



Function: . . . . . *A = - 0.0242312 + 0.0397660× Q*

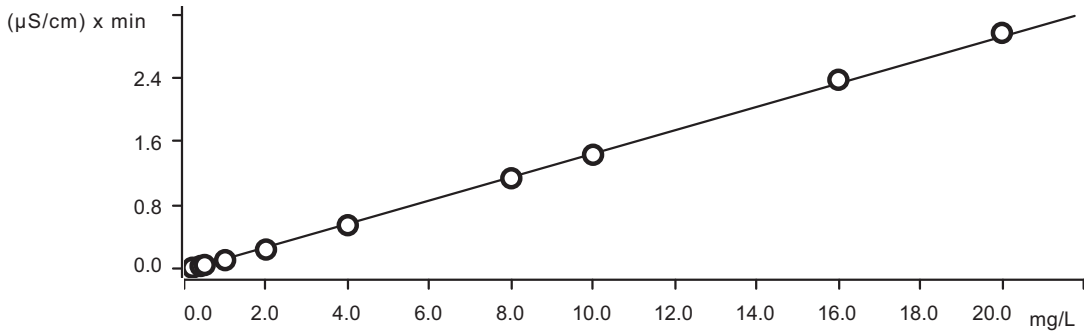
Relative standard deviation . . . . . *3.402278 %*

Correlation coefficient *0.999606*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0625	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.1272	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.1652	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.3534	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.7606	STDF	2022-12-08 13:31:37 UTC-5

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	2.000	20.0	1.0	1.0	1.6501	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	3.2513	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	4.0128	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	6.3432	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	7.7415	STDK	2022-12-08 15:14:18 UTC-5

Bromide (Anions)



Function: . . . . . *A = - 0.0140526 + 7.32479E-3× Q*

Relative standard deviation . . . . . *3.151192 %*

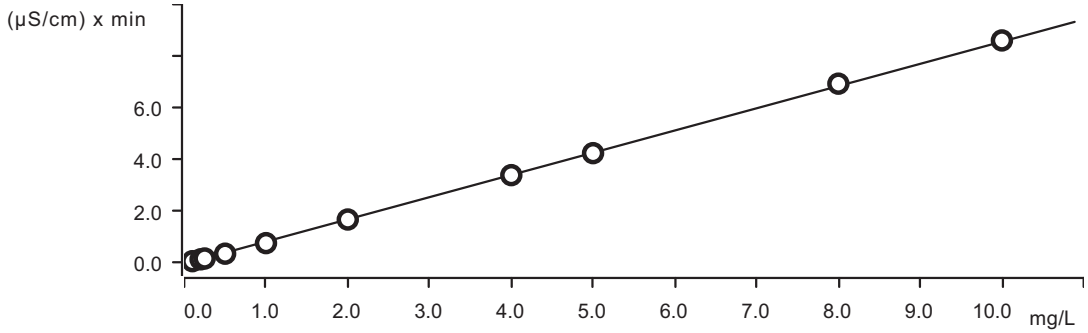
Correlation coefficient *0.999686*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	0.200	20.0	1.0	1.0	0.0224	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	0.400	20.0	1.0	1.0	0.0442	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	0.500	20.0	1.0	1.0	0.0566	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	1.000	20.0	1.0	1.0	0.1171	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	2.000	20.0	1.0	1.0	0.2500	STDF	2022-12-08 13:31:37 UTC-5
Standard 6	1	4.000	20.0	1.0	1.0	0.5549	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	8.000	20.0	1.0	1.0	1.1431	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	10.000	20.0	1.0	1.0	1.4376	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	16.000	20.0	1.0	1.0	2.3768	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	20.000	20.0	1.0	1.0	2.9645	STDK	2022-12-08 15:14:18 UTC-5

MagIC Net

2022-12-09 9:53:24

Nitrate (Anions)



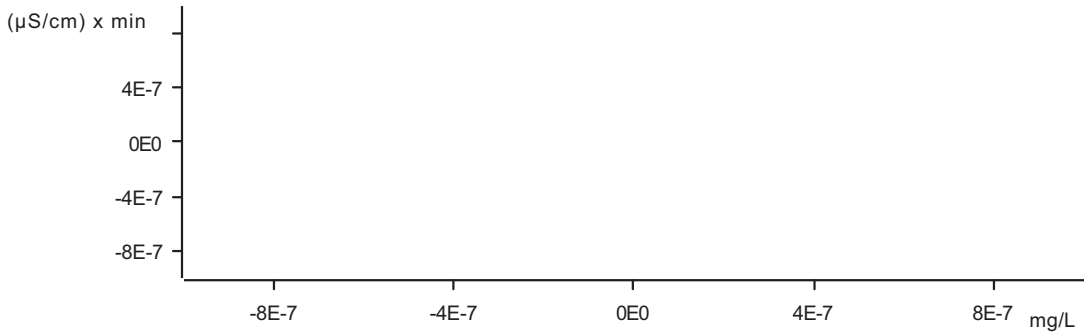
Function: . . . . . *A = - 0.0385421 + 0.0429716× Q*

Relative standard deviation . . . . . *1.735208 %*

Correlation coefficient *0.999903*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	0.0622	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	0.1337	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	0.1663	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	0.3525	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	0.7605	STDF	2022-12-08 13:31:37 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	1.6745	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	3.3910	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	4.2415	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	6.9296	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	8.6031	STDK	2022-12-08 15:14:18 UTC-5

Phosphate (Anions)



MagIC Net

2022-12-09 9:53:24

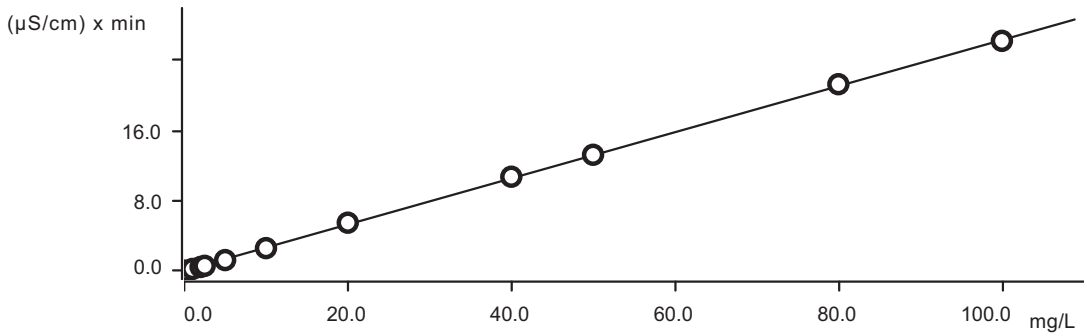
Function: . . . . . .

Relative standard deviation . . . . . *invalid %*

Correlation coefficient . . . . . *invalid*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	n. d.	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	0.100	20.0	1.0	1.0	n. d.	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	0.200	20.0	1.0	1.0	n. d.	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	0.250	20.0	1.0	1.0	n. d.	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	0.500	20.0	1.0	1.0	n. d.	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	1.000	20.0	1.0	1.0	n. d.	STDF	2022-12-08 13:31:37 UTC-5
Standard 6	1	2.000	20.0	1.0	1.0	n. d.	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	4.000	20.0	1.0	1.0	n. d.	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	5.000	20.0	1.0	1.0	n. d.	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	8.000	20.0	1.0	1.0	n. d.	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	10.000	20.0	1.0	1.0	n. d.	STDK	2022-12-08 15:14:18 UTC-5

Sulfate (Anions)



Function: . . . . . *A = 2.96329E-4 + 0.0131688× Q*

Relative standard deviation . . . . . *1.929724 %*

Correlation coefficient *0.999892*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 100	1	0.000	20.0	1.0	1.0	0.0037	STDA	2022-12-08 11:48:55 UTC-5
Standard 1	1	1.000	20.0	1.0	1.0	0.1877	STDB	2022-12-08 12:09:30 UTC-5
Standard 2	1	2.000	20.0	1.0	1.0	0.4176	STDC	2022-12-08 12:30:03 UTC-5
Standard 3	1	2.500	20.0	1.0	1.0	0.5488	STDD	2022-12-08 12:50:34 UTC-5
Standard 4	1	5.000	20.0	1.0	1.0	1.2041	STDE	2022-12-08 13:11:06 UTC-5
Standard 5	1	10.000	20.0	1.0	1.0	2.5690	STDF	2022-12-08 13:31:37 UTC-5

MagIC Net

2022-12-09 9:53:24

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date
Standard 6	1	20.000	20.0	1.0	1.0	5.4735	STDG	2022-12-08 13:52:09 UTC-5
Standard 7	1	40.000	20.0	1.0	1.0	10.7228	STDH	2022-12-08 14:12:40 UTC-5
Standard 8	1	50.000	20.0	1.0	1.0	13.2313	STDI	2022-12-08 14:33:14 UTC-5
Standard 9	1	80.000	20.0	1.0	1.0	21.2909	STDJ	2022-12-08 14:53:45 UTC-5
Standard 10	1	100.000	20.0	1.0	1.0	26.2433	STDK	2022-12-08 15:14:18 UTC-5

MagIC Net

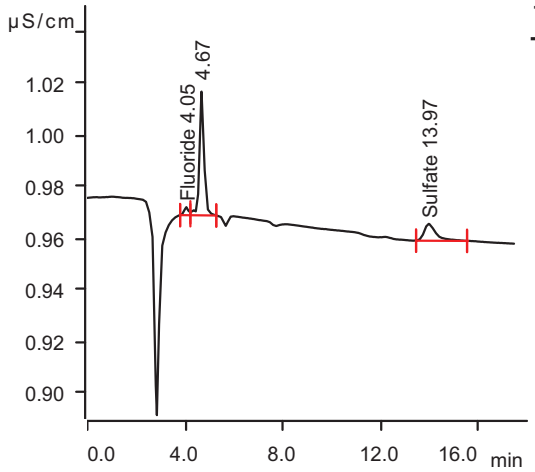
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDA
Sample type . . . . . Standard 100
Determination start 2022-12-08 11:48:55
Dilution factor 1.00

Anions

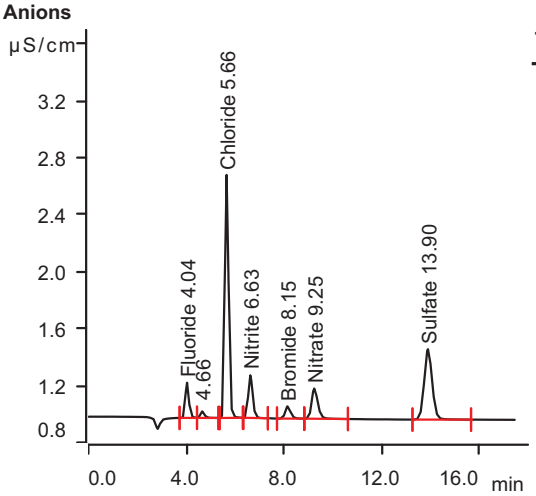


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	0.0006	0.001	0.001
13.97	Sulfate	0.0037	0.013	0.013

Sample data

Ident . . . . . STDB
Sample type . . . . . Standard 1
Determination start 2022-12-08 12:09:30
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.0405	0.072	0.072
5.66	Chloride	0.2971	1.069	1.069
6.63	Nitrite	0.0625	0.109	0.109
8.15	Bromide	0.0224	0.249	0.249
9.25	Nitrate	0.0622	0.117	0.117
13.90	Sulfate	0.1877	0.711	0.711

MagIC Net

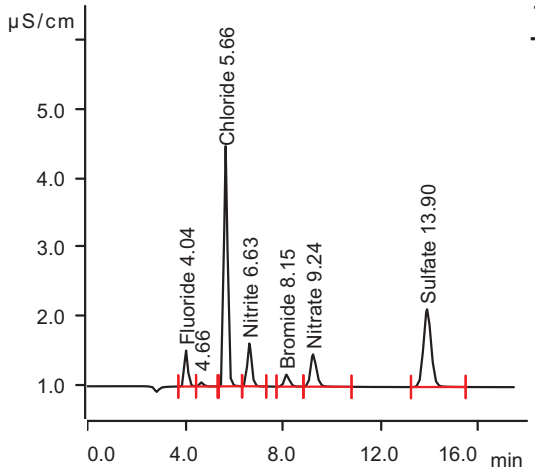
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDC
Sample type . . . . . Standard 2
Determination start 2022-12-08 12:30:03
Dilution factor 1.00

Anions

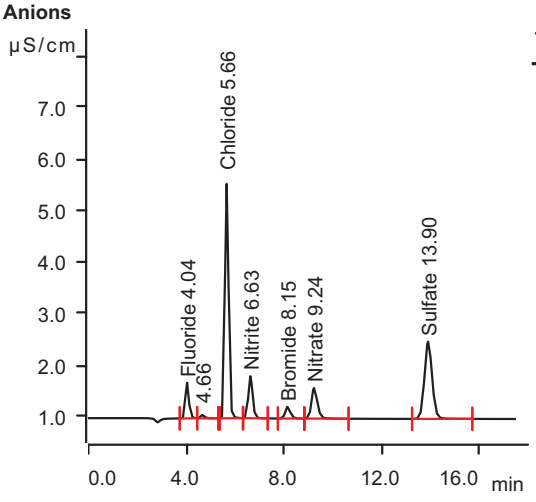


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.0845	0.151	0.151
5.66	Chloride	0.5989	1.926	1.926
6.63	Nitrite	0.1272	0.190	0.190
8.15	Bromide	0.0442	0.398	0.398
9.24	Nitrate	0.1337	0.200	0.200
13.90	Sulfate	0.4176	1.584	1.584

Sample data

Ident . . . . . STDD
Sample type . . . . . Standard 3
Determination start 2022-12-08 12:50:34
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.1108	0.198	0.198
5.66	Chloride	0.7750	2.426	2.426
6.63	Nitrite	0.1652	0.238	0.238
8.15	Bromide	0.0566	0.482	0.482
9.24	Nitrate	0.1663	0.238	0.238
13.90	Sulfate	0.5488	2.083	2.083

MagIC Net

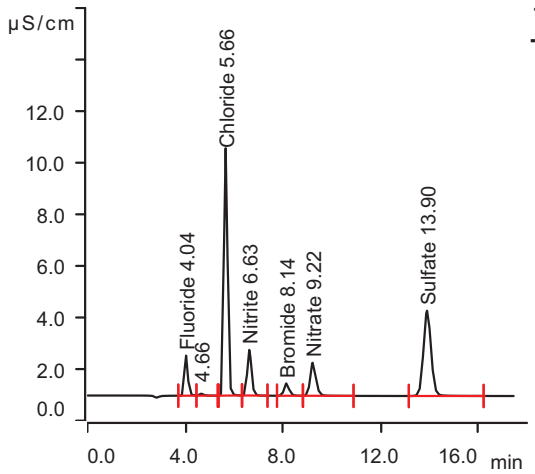
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDE
Sample type . . . . . Standard 4
Determination start 2022-12-08 13:11:06
Dilution factor 1.00

Anions

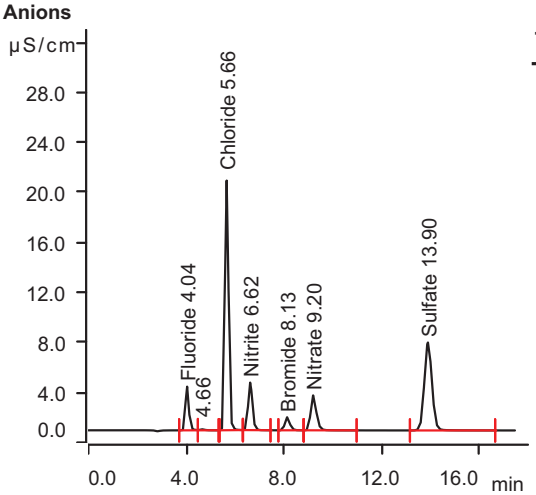


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.2437	0.436	0.436
5.66	Chloride	1.6297	4.852	4.852
6.63	Nitrite	0.3534	0.475	0.475
8.14	Bromide	0.1171	0.895	0.895
9.22	Nitrate	0.3525	0.455	0.455
13.90	Sulfate	1.2041	4.571	4.571

Sample data

Ident . . . . . STDF
Sample type . . . . . Standard 5
Determination start 2022-12-08 13:31:37
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.5456	0.976	0.976
5.66	Chloride	3.4075	9.900	9.900
6.62	Nitrite	0.7606	0.987	0.987
8.13	Bromide	0.2500	1.802	1.802
9.20	Nitrate	0.7605	0.930	0.930
13.90	Sulfate	2.5690	9.753	9.753

MagIC Net

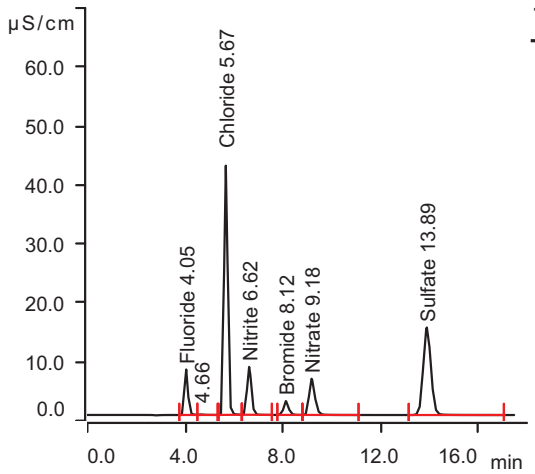
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDG
Sample type . . . . . Standard 6
Determination start 2022-12-08 13:52:09
Dilution factor 1.00

Anions

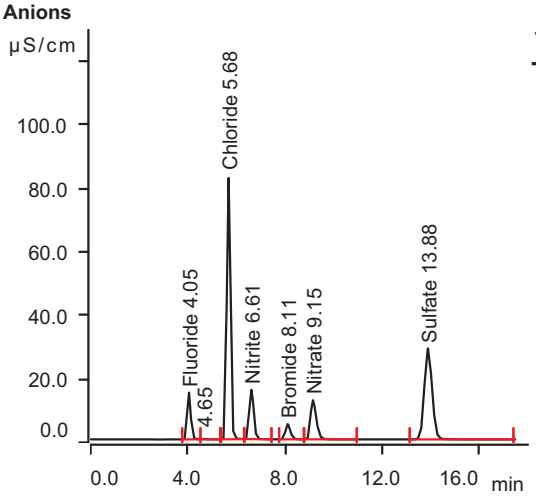


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	1.2180	2.179	2.179
5.67	Chloride	7.2169	20.716	20.716
6.62	Nitrite	1.6501	2.105	2.105
8.12	Bromide	0.5549	3.884	3.884
9.18	Nitrate	1.6745	1.993	1.993
13.89	Sulfate	5.4735	20.781	20.781

Sample data

Ident . . . . . STDH
Sample type . . . . . Standard 7
Determination start 2022-12-08 14:12:40
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	2.3746	4.248	4.248
5.68	Chloride	14.1491	40.397	40.397
6.61	Nitrite	3.2513	4.119	4.119
8.11	Bromide	1.1431	7.899	7.899
9.15	Nitrate	3.3910	3.990	3.990
13.88	Sulfate	10.7228	40.712	40.712

MagIC Net

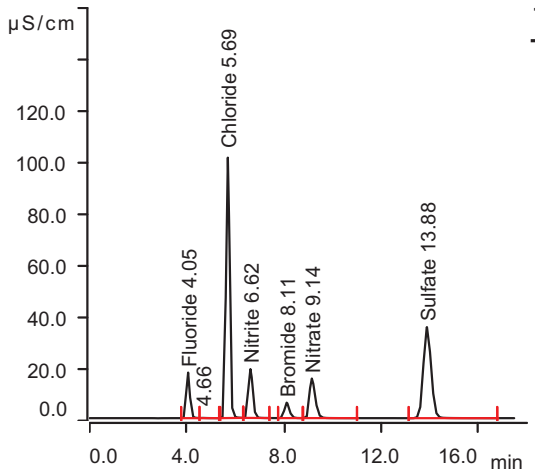
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDI
Sample type . . . . . Standard 8
Determination start 2022-12-08 14:33:14
Dilution factor 1.00

Anions

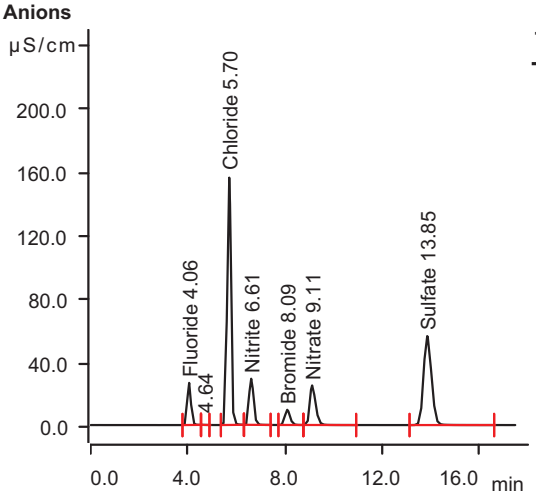


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	2.8755	5.144	5.144
5.69	Chloride	17.5353	50.012	50.012
6.62	Nitrite	4.0128	5.076	5.076
8.11	Bromide	1.4376	9.909	9.909
9.14	Nitrate	4.2415	4.980	4.980
13.88	Sulfate	13.2313	50.236	50.236

Sample data

Ident . . . . . STDJ
Sample type . . . . . Standard 9
Determination start 2022-12-08 14:53:45
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.06	Fluoride	4.4805	8.015	8.015
5.70	Chloride	28.1906	80.264	80.264
6.61	Nitrite	6.3432	8.006	8.006
8.09	Bromide	2.3768	16.320	16.320
9.11	Nitrate	6.9296	8.108	8.108
13.85	Sulfate	21.2909	80.837	80.837

MagIC Net

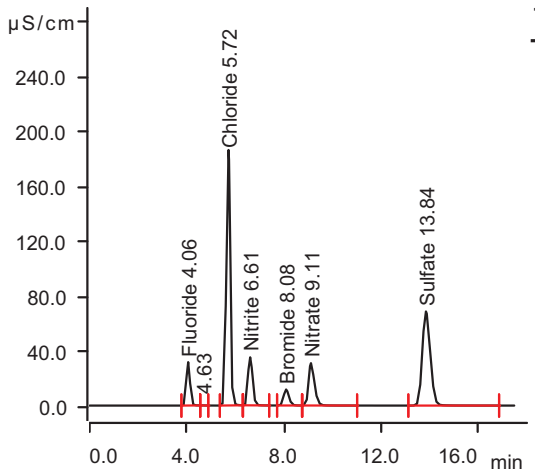
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . STDK
Sample type . . . . . Standard 10
Determination start 2022-12-08 15:14:18
Dilution factor 1.00

Anions

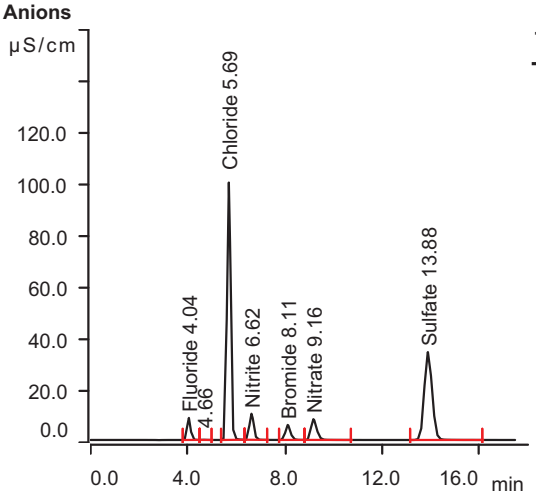


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.06	Fluoride	5.4347	9.722	9.722
5.72	Chloride	34.7879	98.995	98.995
6.61	Nitrite	7.7415	9.764	9.764
8.08	Bromide	2.9645	20.332	20.332
9.11	Nitrate	8.6031	10.055	10.055
13.84	Sulfate	26.2433	99.641	99.641

Sample data

Ident ICV
Sample type . . . . . Sample
Determination start 2022-12-08 15:42:22
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	1.3367	2.391	2.391
5.69	Chloride	17.4055	49.643	49.643
6.62	Nitrite	2.0666	2.629	2.629
8.11	Bromide	1.4043	9.682	9.682
9.16	Nitrate	2.2293	2.639	2.639
13.88	Sulfate	12.8856	48.924	48.924

MagIC Net

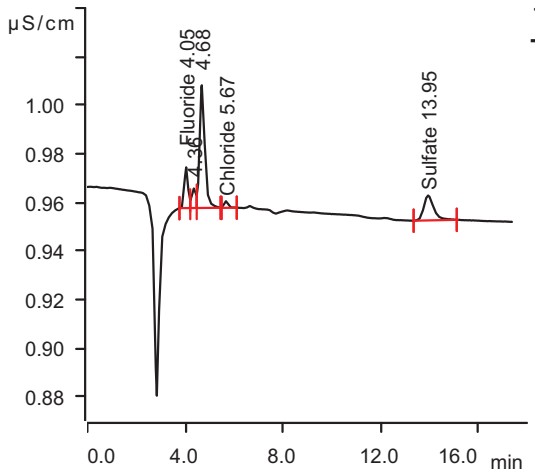
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . ICB
Sample type . . . . . Sample
Determination start 2022-12-08 16:02:53
Dilution factor 1.00

Anions

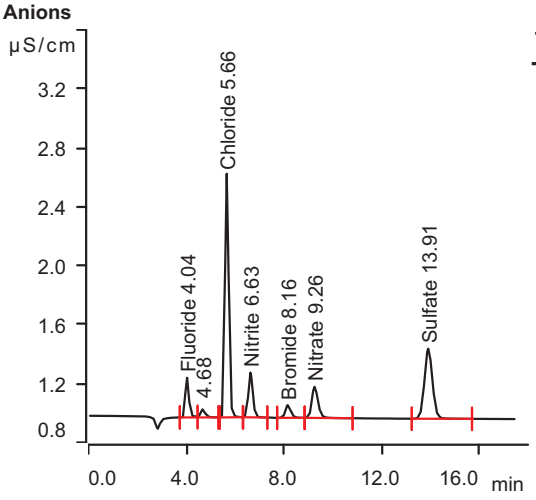


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	0.0029	0.005	0.005
5.67	Chloride	0.0005	0.227	0.227
13.95	Sulfate	0.0049	0.017	0.017

Sample data

Ident . . . . . CRI
Sample type . . . . . Sample
Determination start 2022-12-08 16:23:24
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	0.0445	0.080	0.080
5.66	Chloride	0.2875	1.042	1.042
6.63	Nitrite	0.0634	0.110	0.110
8.16	Bromide	0.0225	0.249	0.249
9.26	Nitrate	0.0622	0.117	0.117
13.91	Sulfate	0.1816	0.688	0.688

MagIC Net

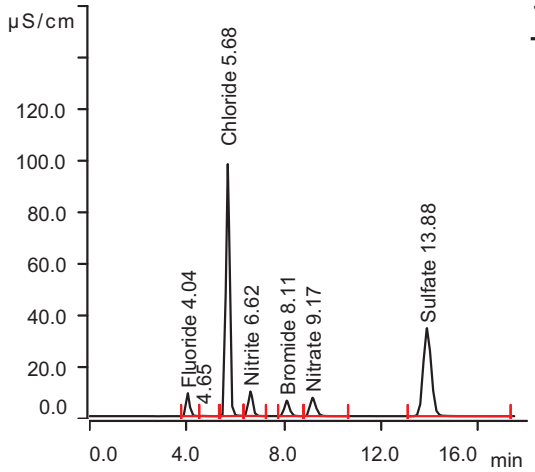
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-12-08 16:43:56
Dilution factor 1.00

Anions

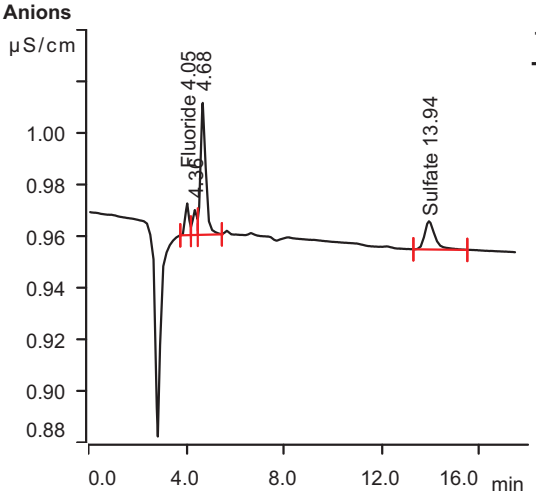


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.04	Fluoride	1.4480	2.590	2.590
5.68	Chloride	17.1457	48.906	48.906
6.62	Nitrite	1.9561	2.490	2.490
8.11	Bromide	1.4621	10.076	10.076
9.17	Nitrate	1.9883	2.358	2.358
13.88	Sulfate	13.1282	49.844	49.844

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-12-08 17:04:33
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.05	Fluoride	0.0021	0.004	0.004
13.94	Sulfate	0.0055	0.020	0.020

MagIC Net

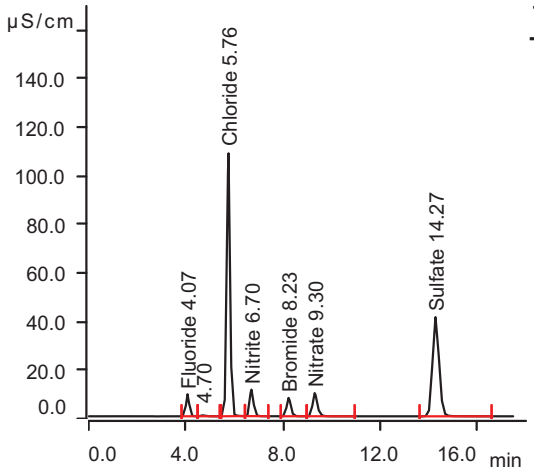
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-12-14 07:53:22
Dilution factor 1.00

Anions

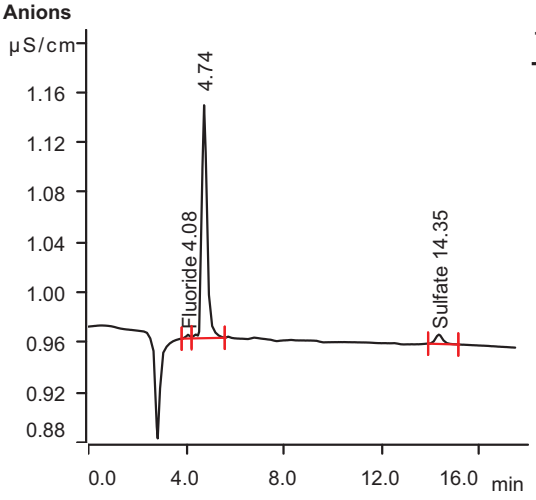


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	1.3765	2.462	2.462
5.76	Chloride	17.3655	49.530	49.530
6.70	Nitrite	2.0014	2.547	2.547
8.23	Bromide	1.5100	10.403	10.403
9.30	Nitrate	2.1521	2.549	2.549
14.27	Sulfate	12.9719	49.251	49.251

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-12-14 08:13:59
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0005	0.001	0.001
14.35	Sulfate	0.0026	0.009	0.009

MagIC Net

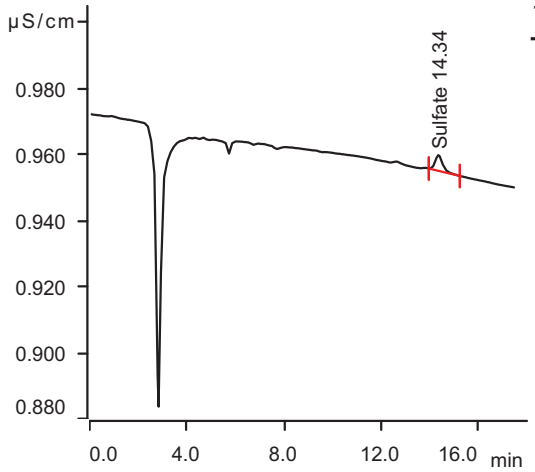
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident MB1
Sample type . . . . . Sample
Determination start 2022-12-14 08:34:31
Dilution factor 1.00

Anions

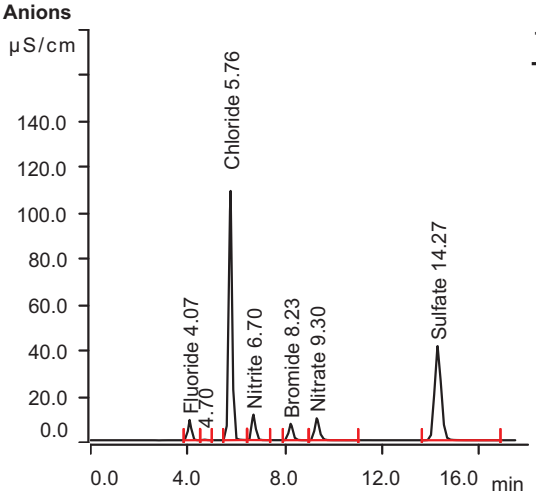


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
14.34	Sulfate	0.0017	0.005	0.005

Sample data

Ident B1
Sample type . . . . . Sample
Determination start 2022-12-14 08:55:02
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	1.3490	2.413	2.413
5.76	Chloride	17.4504	49.771	49.771
6.70	Nitrite	2.0382	2.593	2.593
8.23	Bromide	1.4261	9.831	9.831
9.30	Nitrate	2.1556	2.553	2.553
14.27	Sulfate	13.0512	49.552	49.552

MagIC Net

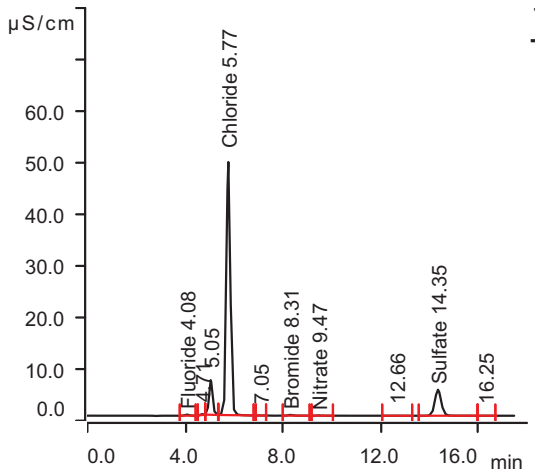
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1186-1
Sample type . . . . . Sample
Determination start 2022-12-14 09:47:45
Dilution factor 1.00

Anions

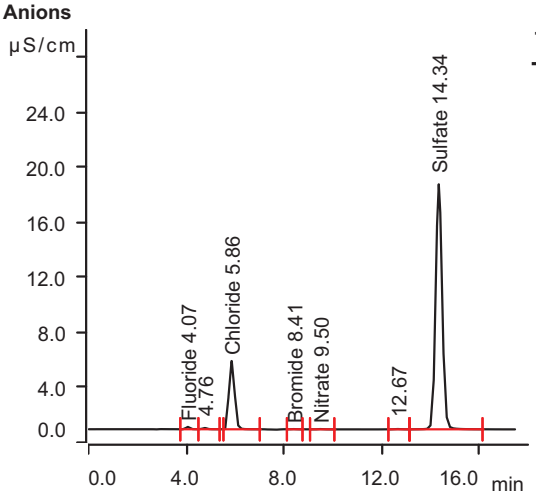


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0365	0.065	0.065
5.77	Chloride	9.3559	26.789	26.789
8.31	Bromide	0.0322	0.316	0.316
9.47	Nitrate	0.0116	0.058	0.058
14.35	Sulfate	1.5443	5.862	5.862

Sample data

Ident FC1196-12
Sample type . . . . . Sample
Determination start 2022-12-14 10:08:18
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	0.0322	0.058	0.058
5.86	Chloride	1.3488	4.055	4.055
8.41	Bromide	0.0030	0.116	0.116
9.50	Nitrate	0.0052	0.051	0.051
14.34	Sulfate	5.4975	20.872	20.872

MagIC Net

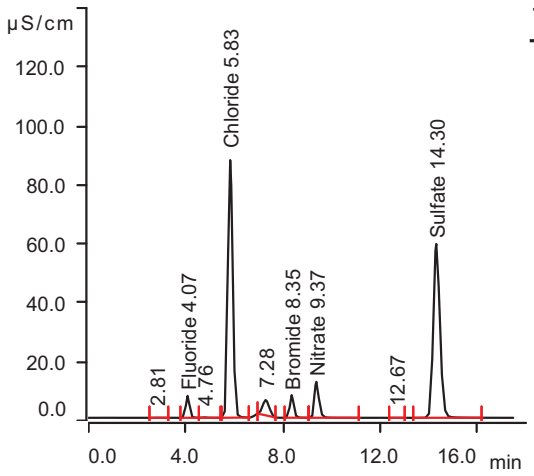
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1196-12S1
Sample type . . . . . Sample
Determination start 2022-12-14 10:28:49
Dilution factor 1.00

Anions

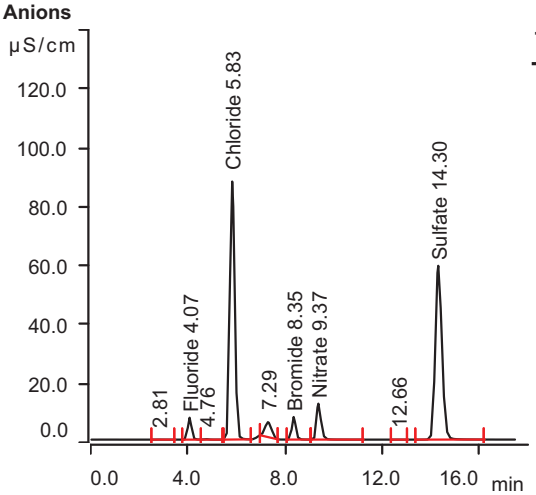


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	1.2808	2.291	2.291
5.83	Chloride	20.3367	57.966	57.966
8.35	Bromide	1.4001	9.653	9.653
9.37	Nitrate	2.6392	3.116	3.116
14.30	Sulfate	18.7414	71.157	71.157

Sample data

Ident FC1196-12S2
Sample type . . . . . Sample
Determination start 2022-12-14 10:49:23
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	1.2823	2.294	2.294
5.83	Chloride	20.3555	58.019	58.019
8.35	Bromide	1.3999	9.652	9.652
9.37	Nitrate	2.6428	3.120	3.120
14.30	Sulfate	18.7555	71.210	71.210

MagIC Net

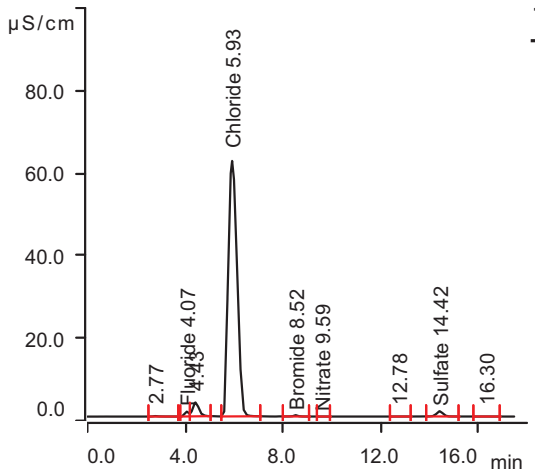
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1214-2
Sample type . . . . . Sample
Determination start 2022-12-14 11:09:57
Dilution factor 1.00

Anions

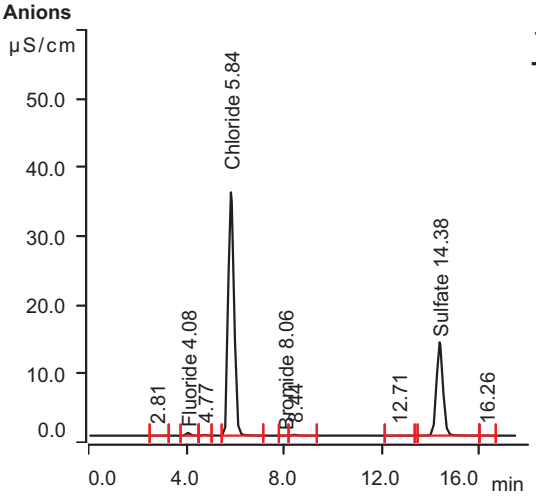


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	0.2228	0.399	0.399
5.93	Chloride	25.9245	73.831	73.831
8.52	Bromide	0.0616	0.516	0.516
9.59	Nitrate	0.0008	0.046	0.046
14.42	Sulfate	0.3906	1.482	1.482

Sample data

Ident FC1214-3
Sample type . . . . . Sample
Determination start 2022-12-14 11:30:30
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0753	0.135	0.135
5.84	Chloride	9.8346	28.148	28.148
8.06	Bromide	0.0029	0.115	0.115
14.38	Sulfate	4.1705	15.833	15.833

MagIC Net

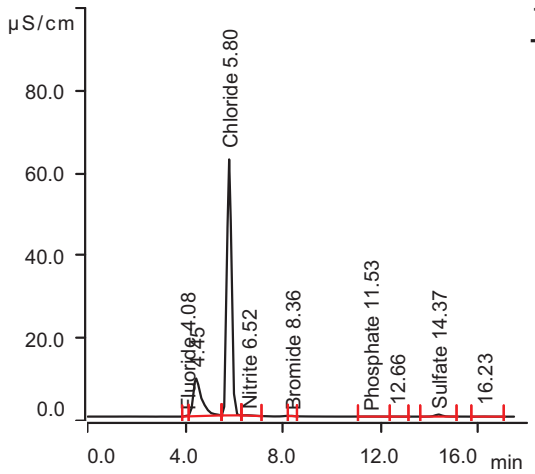
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1214-1
Sample type . . . . . Sample
Determination start 2022-12-14 11:55:44
Dilution factor 5.00

Anions

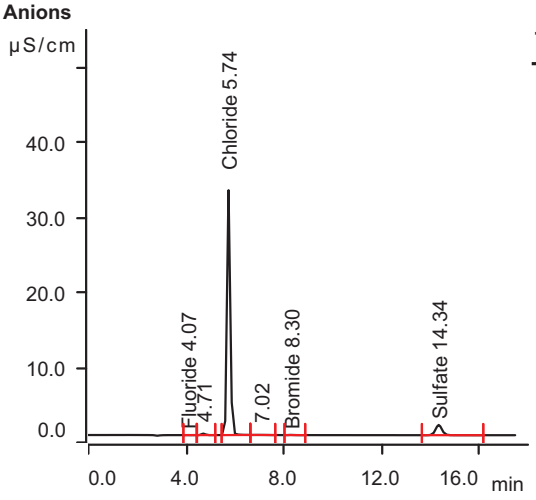


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0263	0.047	0.235
5.80	Chloride	13.3257	38.060	190.299
6.52	Nitrite	0.0304	0.069	0.343
8.36	Bromide	0.0090	0.157	0.787
11.53	Phosphate	0.0056	invalid	invalid
14.37	Sulfate	0.1685	0.639	3.193

Sample data

Ident FC1215-1
Sample type . . . . . Sample
Determination start 2022-12-14 12:16:03
Dilution factor 500.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	0.0006	0.001	0.499
5.74	Chloride	5.0213	14.482	7240.917
8.30	Bromide	0.0056	0.134	67.022
14.34	Sulfate	0.4225	1.603	801.511

MagIC Net

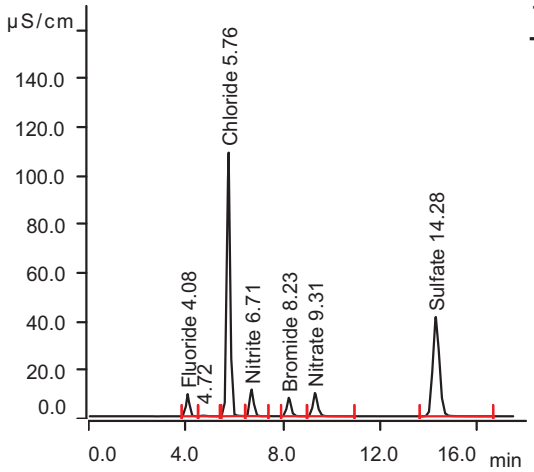
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-12-14 12:37:18
Dilution factor 1.00

Anions

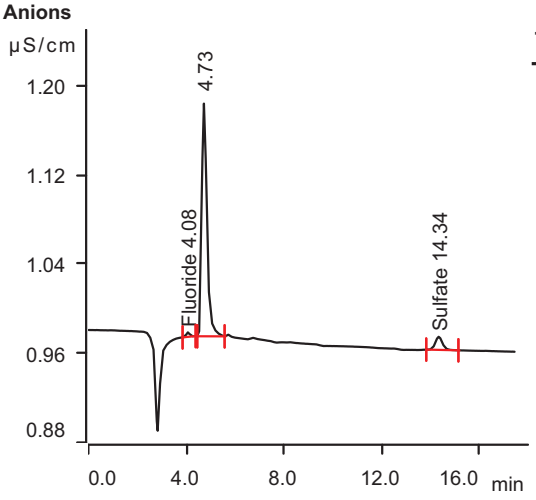


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	1.3856	2.479	2.479
5.76	Chloride	17.4264	49.703	49.703
6.71	Nitrite	2.0089	2.556	2.556
8.23	Bromide	1.5151	10.438	10.438
9.31	Nitrate	2.1621	2.561	2.561
14.28	Sulfate	12.9972	49.347	49.347

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-12-14 12:57:53
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0007	0.001	0.001
14.34	Sulfate	0.0040	0.014	0.014

MagIC Net

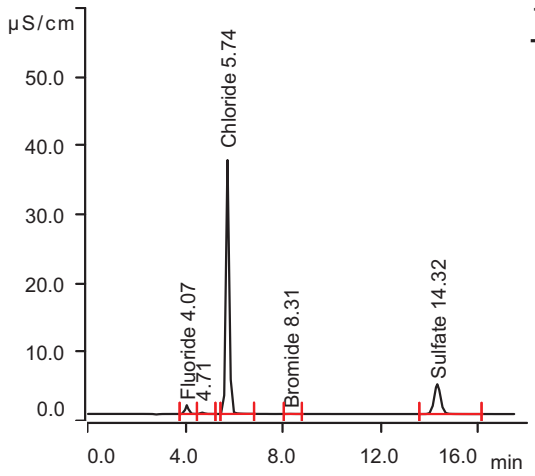
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1215-2
Sample type . . . . . Sample
Determination start 2022-12-14 13:18:24
Dilution factor 5.00

Anions

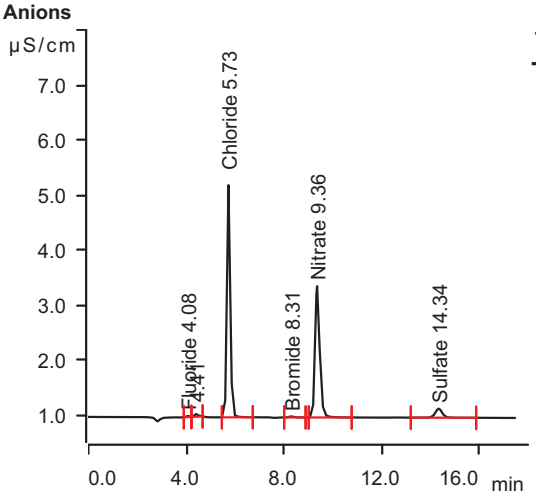


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	0.1937	0.346	1.732
5.74	Chloride	5.8329	16.786	83.931
8.31	Bromide	0.0027	0.114	0.572
14.32	Sulfate	1.3265	5.035	25.177

Sample data

Ident FC1280-1
Sample type . . . . . Sample
Determination start 2022-12-14 16:03:09
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0029	0.005	0.005
5.73	Chloride	0.6697	2.127	2.127
8.31	Bromide	0.0041	0.124	0.124
9.36	Nitrate	0.5287	0.660	0.660
14.34	Sulfate	0.0556	0.210	0.210

MagIC Net

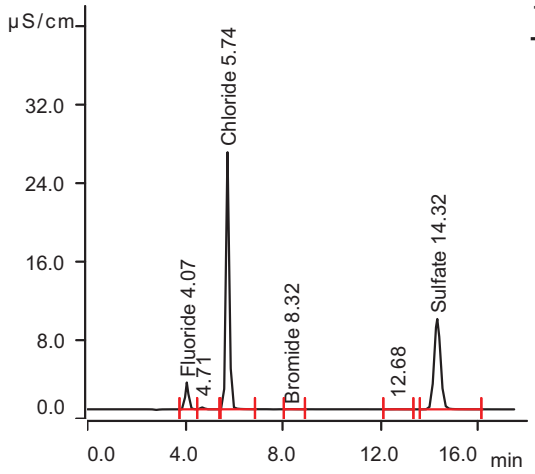
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident FC1280-2
Sample type . . . . . Sample
Determination start 2022-12-14 16:23:43
Dilution factor 1.00

Anions

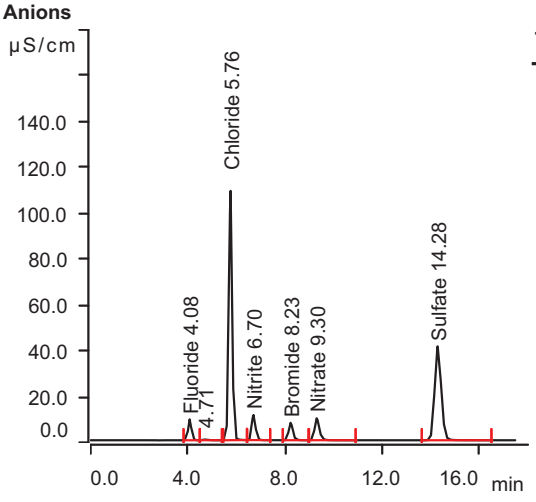


Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.07	Fluoride	0.4131	0.739	0.739
5.74	Chloride	4.2735	12.359	12.359
8.32	Bromide	0.0022	0.111	0.111
14.32	Sulfate	2.8295	10.742	10.742

Sample data

Ident CCV
Sample type . . . . . Sample
Determination start 2022-12-14 16:44:16
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	1.3841	2.476	2.476
5.76	Chloride	17.4613	49.802	49.802
6.70	Nitrite	2.0072	2.554	2.554
8.23	Bromide	1.5164	10.447	10.447
9.30	Nitrate	2.1602	2.558	2.558
14.28	Sulfate	13.0221	49.442	49.442

MagIC Net

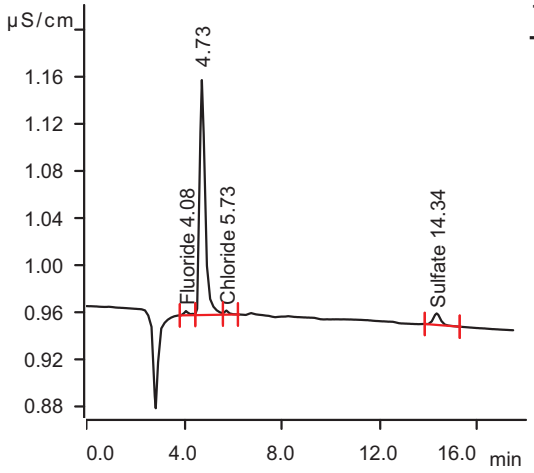
Summary Report

2022-12-15 9:40:23
MagIC Net 3.2 - 123

Sample data

Ident . . . . . CCB
Sample type . . . . . Sample
Determination start 2022-12-14 17:04:54
Dilution factor 1.00

Anions



Retention Time (min)	Component Name	Area uS*min	Conc. on Column (mg/L)	Final Conc. (mg/L)
4.08	Fluoride	0.0009	0.002	0.002
5.73	Chloride	0.0007	0.227	0.227
14.34	Sulfate	0.0033	0.011	0.011

Misc. Forms

Custody Documents and Other Forms

(SGS Dayton, NJ)

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Orlando
4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com/ehsusa

AQ

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # FC1186

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: SGS North America Inc.	Project Name: Shepley's Hill (SHL); Devens, MA		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL- Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 4405 Vineland Rd, Suite C-15	Street	Billing Information (if different from Report to)	
City: Orlando State: FL Zip: 32811	City State	Company Name	
Project Contact: evita.martinez@sgs.com E-mail	Project #	Street Address	
Phone #: 407-425-6700 Fax #	Client Purchase Order #	City State Zip	
Sampler(s) Name(s): JR Phone	Project Manager	Attention:	

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	NO2 ,NO32 ,NO3O , by 353.2	LAB USE ONLY
1	EFFLUENT		12/9/22	10:30:00 AM	JR	AQ	1									X	
																	CH.5

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 12/16/2022

Initial Assessment NA (3A)
Label Verification

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ] [X] FL

Commercial "A" = Results Onl
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SGS-NJ direct sub

* Please aliquot 30ml & preserve w/ H2SO4 for NO32. Limited Volume

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/9/22 15:30	1 [signature]	2 [signature]	12/9/22 17:35	2 Brandon Malloy
3 Brandon Malloy	12/9/22 20:38	3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ Therm. ID: On Ice ☑ Cooler Temp.

10.1

10

FC1186: Chain of Custody
Page 1 of 2
SGS Dayton, NJ

SGS Sample Receipt Summary

Job Number: FC1186 **Client:** _____ **Project:** _____

Date / Time Received: 12/9/2022 5:35:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

10.1 10

FC1186: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1186
Account: SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA
Collected: 12/09/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FC1186

General Chemistry

QC Data Summaries

(SGS Dayton, NJ)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Nitrate + Nitrite	GP44067/GN36600	0.10	0.0	mg/l	2	2.38	119.0	80-120%
Nitrogen, Nitrite	GN36485	0.010	0.0	mg/l	0.04	0.039	97.5	90-110%

Associated Samples:
Batch GN36485: FC1186-1
Batch GP44067: FC1186-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate + Nitrite	GP44067/GN36600	JD56876-2	mg/l	0.18	0.17	5.7	0-33%

Associated Samples:
Batch GP44067: FC1186-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GP44067/GN36600	JD56876-2	mg/l	0.18	1	1.4	122.0N(a)	80-120%
Nitrogen, Nitrite	GN36485	JD56902-1	mg/l	0.0057	0.04	0.045	98.3	22-140%

Associated Samples:
Batch GN36485: FC1186-1
Batch GP44067: FC1186-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrite	GN36485	JD56902-1	mg/l	0.0057	0.04	0.045	0.0	20%

Associated Samples:
Batch GN36485: FC1186-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E121322W1.NO32 Date Analyzed: 12/13/22 Methods: EPA 353.2/LACHAT
Analyst: MM Run ID: GN36600
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:41	GN36600-STD1	1		STDA
14:42	GN36600-STD2	1		STDB
14:43	GN36600-STD3	1		STDC
14:44	GN36600-STD4	1		STDD
14:46	GN36600-STD5	1		STDE
14:47	GN36600-STD6	1		STDF
14:48	GN36600-STD7	1		STDG
14:50	GN36600-ICV1	1		
14:51	GN36600-ICB1	1		
14:52	GN36600-CCV1	1		
14:53	GN36600-CCB1	1		
14:56	GP44067-MB1	1		
14:58	GP44067-B1	1		
14:59	GP44067-S1	1		
15:00	GP44067-S2	1		
15:01	GP44067-D1	1		
15:02	JD56876-2	1		(sample used for QC only; not part of login FC1186)
15:03	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:05	GN36600-CCV2	1		
15:06	GN36600-CCB2	1		
15:07	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:11	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:13	JD56902-1	1		(sample used for QC only; not part of login FC1186)
15:14	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:17	ZZZZZZ	1		
15:18	GN36600-CCV3	1		
15:19	GN36600-CCB3	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E121322W1.NO32 Date Analyzed: 12/13/22 Methods: EPA 353.2/LACHAT
Analyst: MM Run ID: GN36600
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:20	ZZZZZZ	1		
15:22	FC1186-1	1		
15:23	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:27	ZZZZZZ	2		
15:28	ZZZZZZ	2		
15:29	ZZZZZZ	2		
15:30	GP44068-MB1	1		
15:32	GN36600-CCV4	1		
15:33	GN36600-CCB4	1		
15:34	GP44068-B1	1		
15:35	GP44068-S1	1		
15:36	GP44068-S2	1		
15:37	GP44068-D1	1		
15:38	JD56972-1	1		(sample used for QC only; not part of login FC1186)
15:39	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:43	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:45	GN36600-CCV5	1		
15:46	GN36600-CCB5	1		
15:47	ZZZZZZ	1		
15:48	ZZZZZZ	1		
15:49	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:51	JD57010-2	1		(sample used for QC only; not part of login FC1186)
15:52	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:55	ZZZZZZ	1		
15:56	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E121322W1.NO32 Date Analyzed: 12/13/22 Methods: EPA 353.2/LACHAT
Analyst: MM Run ID: GN36600
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:57	ZZZZZZ	1		
15:58	GN36600-CCV6	1		
15:59	GN36600-CCB6	1		
16:00	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:02	GP44070-MB1	1		
16:03	ZZZZZZ	2		
16:05	GP44070-B1	1		
16:06	GP44070-S1	1		
16:07	GP44070-S2	1		
16:08	GP44070-D1	1		
16:09	JD57053-1	1		(sample used for QC only; not part of login FC1186)
16:11	GN36600-CCV7	1		
16:12	GN36600-CCB7	1		
16:13	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:16	ZZZZZZ	1		
16:17	ZZZZZZ	1		
16:18	ZZZZZZ	1		
16:19	ZZZZZZ	1		
16:20	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:22	ZZZZZZ	1		
16:23	ZZZZZZ	1		
16:24	GN36600-CCV8	1		
16:26	GN36600-CCB8	1		
16:27	ZZZZZZ	1		
16:28	ZZZZZZ	1		
16:29	ZZZZZZ	1		
16:30	ZZZZZZ	1		
16:31	JD57050-2	1		(sample used for QC only; not part of login FC1186)
16:32	ZZZZZZ	1		
16:33	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E121322W1.NO32 Date Analyzed: 12/13/22 Methods: EPA 353.2/LACHAT
Analyst: MM Run ID: GN36600
Parameters: Nitrogen, Nitrate + Nitrite

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:34	GP44070-S2	2		
16:38	JD57050-2	2		(sample used for QC only; not part of login FC1186)
16:39	ZZZZZZ	2		
16:42	GN36600-CCV9	1		
16:43	GN36600-CCB9	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FC1186
Account: ALSE - SGS Orlando, FL
Project: SCMAW: Shepley's Hill (SHL); Devens, MA

File ID: E121322W1.NO32 Date Analyzed: 12/13/22 Methods: EPA 353.2/LACHAT
Run ID: GN36600 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN36600-ICV1	Nitrogen, Nitrate + Nitrite	2.40	0.10	0.090	2	120.0	80-120
GN36600-ICB1	Nitrogen, Nitrate + Nitrite	-0.0975	0.10	0.090			
GN36600-CCV1	Nitrogen, Nitrate + Nitrite	2.80	0.10	0.090	2.5	112.0	80-120
GN36600-CCB1	Nitrogen, Nitrate + Nitrite	-0.0949	0.10	0.090			
GN36600-CCV2	Nitrogen, Nitrate + Nitrite	2.80	0.10	0.090	2.5	112.0	80-120
GN36600-CCB2	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV3	Nitrogen, Nitrate + Nitrite	2.79	0.10	0.090	2.5	111.6	80-120
GN36600-CCB3	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV4	Nitrogen, Nitrate + Nitrite	2.77	0.10	0.090	2.5	110.8	80-120
GN36600-CCB4	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV5	Nitrogen, Nitrate + Nitrite	2.80	0.10	0.090	2.5	112.0	80-120
GN36600-CCB5	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV6	Nitrogen, Nitrate + Nitrite	2.60	0.10	0.090	2.5	104.0	80-120
GN36600-CCB6	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV7	Nitrogen, Nitrate + Nitrite	2.63	0.10	0.090	2.5	105.2	80-120
GN36600-CCB7	Nitrogen, Nitrate + Nitrite	-0.0937	0.10	0.090			
GN36600-CCV8	Nitrogen, Nitrate + Nitrite	2.61	0.10	0.090	2.5	104.4	80-120
GN36600-CCB8	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			
GN36600-CCV9	Nitrogen, Nitrate + Nitrite	2.57	0.10	0.090	2.5	102.8	80-120
GN36600-CCB9	Nitrogen, Nitrate + Nitrite	0.090 U	0.10	0.090			

(!) Outside of QC limits

General Chemistry

Raw Data

(SGS Dayton, NJ)

Test: Nitrogen, Nitrite
Product: NO2
Method: SM4500NO2 B-11 (Aqueous) ◉ Units: mg/l
SM4500NO2 B-11 M (Solids) ○ mg/kg

Analyst: MARCINK
GN Batch ID: GN36485
GP Batch ID:
Date: 12/10/2022
Instrument ID: L Pipet II GLASS PIPETTE CLASS A

Original Calibration Information Calibration Date: 10/11/2022

	Blank	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7
Known:	0.000	0.010	0.025	0.050	0.075	0.100	0.200	
Absorbance:	0.000	0.033	0.085	0.170	0.256	0.337	0.694	
Actual Value:	#DIV/0!	0.010	0.025	0.050	0.075	0.098	0.201	
% RE:	#DIV/0!	-3.04	-1.24	0.32	0.45	1.96	-0.53	

Continuing Calibration Check Standards Data: 12/10/2022

	Blank	Std 1	Std 6
Known:	0.000	0.010	0.200
Absorbance:	0.000	0.033	0.698
Recovery:	0.0%	103.0%	101.1%
Actual Value:		0.010	0.202

Correlation Coeff. = 0.99990
Slope = 0.28859
Intercept = 0.00078

Bottle #	Sample ID	Time Analyzed	Initial Wt (g) or Vol (ml)	Final Vol (ml)	Dilution	Sample Abs	Background Abs.	Result From Curve (mg/L)	Final Result	DL	Units	Factor	pH between 5 and 9 (Y or N)
	ICV	8:45	50	50	1	0.341	NA	0.099	0.099	NA	mg/l	NA	
	CCV	9:10	50	50	1	0.338	NA	0.098	0.098	NA	mg/l	NA	
	CCB	9:10	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
	GN36485-MB1	9:10	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	
	GN36485-B1	9:10	50	50	1	0.132	0.000	0.039	0.039	0.010	mg/l	1	
	GN36485-S1	9:10	50	50	1	0.154	0.000	0.045	0.045	0.010	mg/l	1	
	GN36485-MSD1	9:10	50	50	1	0.152	0.000	0.045	0.045	0.010	mg/l	1	
13	JD56902-1	9:10	50	50	1	0.017	0.000	0.006	0.006	0.010	mg/l	1	Y
5	JD56960-1F	9:10	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
6	JD56960-2F	9:10	50	50	1	0.001	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56914-1	10:36	50	50	1	0.018	0.000	0.006	0.006	0.010	mg/l	1	Y
12	JD56914-2	10:36	50	50	1	0.003	0.000	0.002	0.002	0.010	mg/l	1	Y
12	JD56914-3	10:36	50	50	1	0.004	0.000	0.002	0.002	0.010	mg/l	1	Y
	CCVA	10:36	50	50	1	0.676	NA	0.196	0.196	NA	mg/l	NA	
	CCB	10:36	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
9	JD56914-4	10:36	50	50	1	0.009	0.000	0.003	0.003	0.010	mg/l	1	Y
10	JD56914-5	10:36	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56972-1	10:36	50	50	1	0.001	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56972-2	10:36	50	50	1	0.043	0.000	0.013	0.013	0.010	mg/l	1	Y
9	JD56972-3	10:36	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56972-4	10:36	50	50	1	0.026	0.000	0.008	0.008	0.010	mg/l	1	Y
9	JD56972-5	10:36	50	50	1	0.001	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56972-6	10:36	50	50	1	0.000	0.000	0.001	0.001	0.010	mg/l	1	Y
9	JD56972-7	10:36	50	50	1	0.125	0.000	0.037	0.037	0.010	mg/l	1	Y
9	JD56972-8	10:36	50	50	1	0.002	0.000	0.001	0.001	0.010	mg/l	1	Y
	CCV	10:36	50	50	1	0.336	NA	0.098	0.098	NA	mg/l	NA	
	CCB	10:36	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	
1	FC1186-1	12:40	50	25	1	0.002	0.000	0.001	0.001	0.005	mg/l	1	Y
		13:40											
		13:40											
		13:40											
		13:40											
		13:40											
		13:40											
		13:40											
		13:40											
		13:40											
	CCVA	13:40	50	50	1	0.680	NA	0.197	0.197	NA	mg/l	NA	
	CCB	13:40	50	50	1	0.000	NA	0.001	0.001	NA	mg/l	NA	

Analyst: _____ Date: _____ QC Reviewer: _____ Date: _____

SGS

Test: **Nitrogen, Nitrite**
Product: **NO2**
Method: **SM18 4500 NO2B (aqueous)**
SM18 4500 NO2B M (solids)

Units: (mg/l) mg/kg

Analyst: MK
GNBatch ID: GN36485
GPBatch ID:
Date: 12/10/22

Preparation Batch QC Summary Units = mg/L

Method Blank ID: GN36485-MB1 Date: 12/10/22 Result: <DL DL: <DL:
Spike Blank ID: -QC Date: ↓ Result: 0.039 Spike: %Rec.: 97.5%.
MS ID: -S1 Samp. Result: 0.006 MS Result: 0.045 Spike: %Rec:
MSDUP ID: -MSD1 Samp. Result: 0.006 MSDUP Result: 0.045 Spike: %Rec: 97.5%.
MSDUP ID: MSDUP Result: MS Result: %RPD:

Method Blank ID: Date: Result: DL: <DL:
Spike Blank ID: Date: Result: Spike: %Rec.:
MS ID: Samp. Result: MS Result: Spike: %Rec:
MSDUP ID: Samp. Result: MSDUP Result: Spike: %Rec:
MSDUP ID: MSDUP Result: MS Result: %RPD:

Analysis Batch QC Summary Units =
ICV (Ext): 12/10/22 Result: 0.099 TV: 0.1 %Rec: 99%

CCV : Result: 0.098 TV: 0.1 %Rec.: 98%.
CCVA : Result: 0.196 TV: 0.2 %Rec.: 98
CCV : Result: 0.098 TV: 0.1 %Rec.: 98%.
CCVA : Result: 0.197 TV: 0.2 %Rec.: 98.5%.
CCV : Result: TV: 0.1 %Rec.:
CCVA : Result: TV: 0.2 %Rec.:

CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:
CCB: Result: DL: <DL:

Reagent Reference Numbers:

Analyst: Date:

Comments:

Form: GN032-01
Rev. Date:9/4/09]

Reagent Information Log - Nitrite as Nitrogen

Reagent	Reagent # or Manufacturer/Lot
Calibration Source: 1000 mg/l nitrite stock (STD)	ERA LOT #261221M XP: 12/14/2023
External Check (ICV)	ERA LOT #120421M XP: 4/7/2023
Spiking Solution Source STD	ERA LOT #261221M XP: 12/14/2023
NO2 Color Reagent	GNE11-72365-NO2 XP 12/18/2022
NH4OH	FISHER 193136 XP 2/20/2027

All standards and stocks were made as described in the SOP for this method (circle one): Y or N
If no (N), see attached page for standards prep.

Form: GN087A-42
Rev. Date:12/10/2022

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: _____

GN or GP Number: _____

Standard	Manufacturer/Lot Number	Concentration	Expiration Date
1000 mg/l Nitrite Standard	ERA LOT# 261221M	1000 PPM	12/14/2023
1000 mg/l Nitrite Standard (ICV)	ERA LOT# 120421M	1000 PPM	4/7/2023

Standard Description	Lot or Tracking #	Initial Volume	Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
10 PPM NO2 STANDARD	GNE12-72594-NO2	1.0 ml	1000 mg/l Nitrite Standard	A	DI water	100 ml	10 mg/l	12/10/2022	MK	12/10/2022
1 PPM NO2 STANDARD	GNE12-72595-NO2	10.0 ml	10 PPM NO2 STANDARD	A	DI water	100 ml	1 mg/L	12/10/2022	MK	12/10/2022
10 PPM NO2 EXTERNAL	GNE12-72596-NO2	1.0 ml	Nitrite Standard (ICV)	A	DI water	100 ml	10 mg/l	12/10/2022	MK	12/10/2022
1 PPM NO2 EXTERNAL	GNE12-72597-NO2	10.0 ml	10 PPM NO2 EXTERNAL	A	DI water	100 ml	1 mg/l	12/10/2022	MK	12/10/2022

Standard Description	Intermediate or Stock used to prepare standard	Initial Volume	Concentration of Standard Used	Autopipet ID	Diluent	Final Volume	Final Concentration	Expiration Date	Analyst	Date
0.2 mg/L (high)	GNE12-72595-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	12/10/2022	MK	12/10/2022
0.1 mg/L		10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L			
0.075 mg/L		7.5 ml	1.0 mg/L	A	DI water	100 ml	0.075 mg/L			
0.05 mg/L		5.0 ml	1.0 mg/L	A	DI water	100 ml	0.05 mg/L			
0.025 mg/L		2.5 ml	1.0 mg/L	A	DI water	100 ml	0.025 mg/L			
0.01 mg/L (low)	GNE12-72595-NO2	1.0 ml	1.0 mg/L	A	DI water	100 ml	0.01 mg/L	12/10/2022	MK	12/10/2022
0 mg/L	NA	NA	NA	NA	NA	100 ml	NA	12/10/2022	MK	12/10/2022
CCV	GNE12-72595-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	12/10/2022	MK	12/10/2022
CCVA	GNE12-72595-NO2	20.0 ml	1.0 mg/L	A	DI water	100 ml	0.2 mg/L	12/10/2022	MK	12/10/2022
ICV	GNE12-72597-NO2	10.0 ml	1.0 mg/L	A	DI water	100 ml	0.1 mg/L	12/10/2022	MK	12/10/2022

* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01
Rev. Date: 1/13/09

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E121322W1.NO32
Analyst: MM

Date Analyzed: 12/13/22
Run ID: GN36600

Methods: EPA 353.2/LACHAT

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: MM Date 12/13/22

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): _____ Date 12/14/22

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GN366600

Author: chemistry

Date : 12/13/2022

Original Run Filename: OM_12-13-2022_02-40-49PM.OMN Created: 12/13/2022 2:40:49 PM
Original Run Author's Signature: [chemistry]
Current Run Filename: OM_12-13-2022_02-40-49PM.OMN Last Modified: 12/13/2022 5:02:35 PM
Current Run Author's Signature: [chemistry]
Description: Default New Run

e121322w1 n032

Sample	Rep.	Cup No.	Channel 1 NO32 (mg/L)	Detection Time	MDF	
STDA	1	1	4.00	12/13/2022@2:41:41 PM		
STDB	1	2	2.50	12/13/2022@2:42:47 PM		
STDC	1	3	1.00	12/13/2022@2:43:53 PM		
STDD	1	4	0.500	12/13/2022@2:44:58 PM		
STDE	1	5	0.200	12/13/2022@2:46:03 PM		
STDF	1	6	0.100	12/13/2022@2:47:08 PM		
STDG	1	7	0.00	12/13/2022@2:48:12 PM		
EFFCHK	1	8	2.23	12/13/2022@2:49:19 PM		111.5%
	Known Conc:		2.00			
ICV	1	9	2.40	12/13/2022@2:50:23 PM		120%
	Known Conc:		2.00			
ICB	1	10	-0.0975	12/13/2022@2:51:29 PM		
	Known Conc:		0.00			
CCV	1	11	2.80	12/13/2022@2:52:34 PM		112%
	Known Conc:		2.50			
CCB	1	12	-0.0949	12/13/2022@2:53:40 PM		
	Known Conc:		0.00			
628-2pconf	1	13	3.26	12/13/2022@2:54:45 PM	2.00	wrong injection
GP44067-MB1	1	13	3.33	12/13/2022@2:55:51 PM		
GP44067-MB1	1	13	-0.0854	12/13/2022@2:56:57 PM		
GP44067-B1	1	14	2.38	12/13/2022@2:58:03 PM		119%
GP44067-S1	1	15	1.38	12/13/2022@2:59:08 PM		
GP44067-S2	1	16	1.79	12/13/2022@3:00:14 PM		
GP44067-D1	1	17	0.174	12/13/2022@3:01:18 PM		
JD56876-2	1	18	0.179	12/13/2022@3:02:23 PM		
JD56876-1 (2)	1	19	4.17	12/13/2022@3:03:29 PM		overange
JD56876-3	1	20	0.142	12/13/2022@3:04:35 PM		
CCV	1	11	2.80	12/13/2022@3:05:41 PM		112%
	Known Conc:		2.50			
CCB	1	12	-0.0809	12/13/2022@3:06:45 PM		
	Known Conc:		0.00			
JD56876-4	1	21	-0.0394	12/13/2022@3:07:51 PM		
JD56876-5	1	22	-0.0736	12/13/2022@3:08:56 PM		
JD56876-6	1	23	-0.0497	12/13/2022@3:10:02 PM		
JD56876-7	1	24	-0.0805	12/13/2022@3:11:07 PM		
JD56876-8	1	25	-0.0386	12/13/2022@3:12:13 PM		
JD56902-1	1	26	0.737	12/13/2022@3:13:19 PM		
JD56914-1	1	27	0.0124	12/13/2022@3:14:25 PM		
JD56914-2 (2)	1	28	5.34	12/13/2022@3:15:30 PM		overange
JD56914-3 1	1	29	5.32	12/13/2022@3:16:37 PM		
JD56914-4	1	30	2.65	12/13/2022@3:17:42 PM		
CCV	1	11	2.79	12/13/2022@3:18:47 PM		111.6%
	Known Conc:		2.50			
CCB	1	12	-0.0760	12/13/2022@3:19:51 PM		
	Known Conc:		0.00			
JD56914-5	1	31	1.02	12/13/2022@3:20:58 PM		
FC1186-1	1	32	-5.26e-3	12/13/2022@3:22:04 PM		
JD57028-1F	1	33	-0.0385	12/13/2022@3:23:10 PM		
JD57028-2F	1	34	-0.0781	12/13/2022@3:24:16 PM		
JD57028-3F	1	35	-0.0730	12/13/2022@3:25:22 PM		
JD57028-4F	1	36	-0.0719	12/13/2022@3:26:27 PM		
JD56876-1	1	83	2.56	12/13/2022@3:27:34 PM	2.00	4 mL sample + 4 mL DI
JD56914-2	1	84	3.98	12/13/2022@3:28:41 PM	2.00	
JD56914-3	1	85	3.86	12/13/2022@3:29:48 PM	2.00	
GP44068-MB1	1	37	-0.0854	12/13/2022@3:30:55 PM		
CCV	1	11	2.77	12/13/2022@3:32:00 PM		110.8%
	Known Conc:		2.50			
CCB	1	12	-0.0781	12/13/2022@3:33:05 PM		
	Known Conc:		0.00			
GP44068-B1	1	38	2.34	12/13/2022@3:34:11 PM		

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Author: chemistry

Date : 12/13/2022

GP44068-S1	1	39	1.08	12/13/2022@3:35:17 PM		
GP44068-S2	1	40	1.20	12/13/2022@3:36:23 PM		
GP44068-D1	1	41	-0.0765	12/13/2022@3:37:29 PM		
	Calibration:		Table/Fig. : 1			
JD56972-1	1	42	-0.0725	12/13/2022@3:38:35 PM		
JD56972-2 (2)	1	43	4.42	12/13/2022@3:39:41 PM		overrange
JD56972-3	1	44	-0.0905	12/13/2022@3:40:48 PM		
JD56972-4	1	45	0.0367	12/13/2022@3:41:54 PM		
JD56972-5	1	46	-0.0850	12/13/2022@3:43:00 PM		
JD56972-6	1	47	-0.0849	12/13/2022@3:44:06 PM		
CCV	1	11	2.80	12/13/2022@3:45:11 PM		112%
	Known Conc:		2.50			
CCB	1	12	-0.0776	12/13/2022@3:46:16 PM		
	Known Conc:		0.00			
JD56972-7	1	48	0.563	12/13/2022@3:47:22 PM		
JD56972-8	1	49	-0.0781	12/13/2022@3:48:28 PM		
JD57009-1	1	50	2.53	12/13/2022@3:49:34 PM		
JD57010-1	1	51	-0.0450	12/13/2022@3:50:41 PM		
JD57010-2	1	52	0.0501	12/13/2022@3:51:47 PM		
JD57010-3	1	53	-0.0758	12/13/2022@3:52:54 PM		
JD57010-4	1	54	-0.0701	12/13/2022@3:53:59 PM		
JD57010-6	1	55	0.0822	12/13/2022@3:55:06 PM		
JD57010-7	1	56	-0.0967	12/13/2022@3:56:13 PM		
JD57010-8	1	57	-0.0713	12/13/2022@3:57:19 PM		
CCV	1	11	2.60	12/13/2022@3:58:24 PM		104%
	Known Conc:		2.50			
CCB	1	12	-0.0815	12/13/2022@3:59:30 PM		
	Known Conc:		0.00			
JD57010-9	1	58	-0.0774	12/13/2022@4:00:36 PM		
JD57010-10	1	59	0.202	12/13/2022@4:01:42 PM		
GP44070-MB1	1	60	-0.0752	12/13/2022@4:02:48 PM		
JD56972-2	1	86	2.86	12/13/2022@4:03:55 PM	2.00	4 mL Sample + 4 mL DI
GP44070-B1	1	61	2.36	12/13/2022@4:05:02 PM		
GP44070-S1	1	62	1.25	12/13/2022@4:06:09 PM		
GP44070-S2	1	63	4.61	12/13/2022@4:07:16 PM		overrange
GP44070-D1	1	64	0.0396	12/13/2022@4:08:22 PM		
JD57053-1	1	65	0.0505	12/13/2022@4:09:28 PM		
CONF	1	60	-0.0762	12/13/2022@4:10:34 PM		
CCV	1	11	2.63	12/13/2022@4:11:40 PM		105.2%
	Known Conc:		2.50			
CCB	1	12	-0.0937	12/13/2022@4:12:44 PM		
	Known Conc:		0.00			
JD57053-2	1	66	1.21	12/13/2022@4:13:50 PM		
JD57053-3	1	67	2.83	12/13/2022@4:14:58 PM		
JD57053-4	1	68	2.95	12/13/2022@4:16:04 PM		
JD57053-5	1	69	-0.0890	12/13/2022@4:17:11 PM		
JD57054-1	1	70	1.61	12/13/2022@4:18:18 PM		
JD57054-2	1	71	-0.0833	12/13/2022@4:19:24 PM		
JD57054-3	1	72	-0.0114	12/13/2022@4:20:31 PM		
JD57055-1	1	73	0.115	12/13/2022@4:21:38 PM		
JD57055-2	1	74	3.05	12/13/2022@4:22:45 PM		
JD57055-3	1	75	-0.0993	12/13/2022@4:23:52 PM		
CCV	1	11	2.61	12/13/2022@4:24:57 PM		104.4%
	Known Conc:		2.50			
CCB	1	12	-0.0797	12/13/2022@4:26:02 PM		
	Known Conc:		0.00			
TD84191-1	1	76	0.303	12/13/2022@4:27:09 PM		
TD84191-2	1	77	0.307	12/13/2022@4:28:15 PM		
JD56960-1F	1	78	-0.122	12/13/2022@4:29:22 PM		
JD56960-2F	1	79	-0.190	12/13/2022@4:30:29 PM		
JD57050-2	1	80	4.04	12/13/2022@4:31:36 PM		overrange
JD57050-3	1	81	4.40	12/13/2022@4:32:43 PM		
JD57051-1	1	82	2.81	12/13/2022@4:33:50 PM		
GP44070-S2	1	87	3.05	12/13/2022@4:34:57 PM	2.00	4 mL Sample + 4 mL DI
JD57050-2	1	88	2.60	12/13/2022@4:38:12 PM	2.00	
JD57050-3	1	89	2.85	12/13/2022@4:39:19 PM	2.00	
CCV	1	11	2.57	12/13/2022@4:42:32 PM		102.8%
	Known Conc:		2.50			

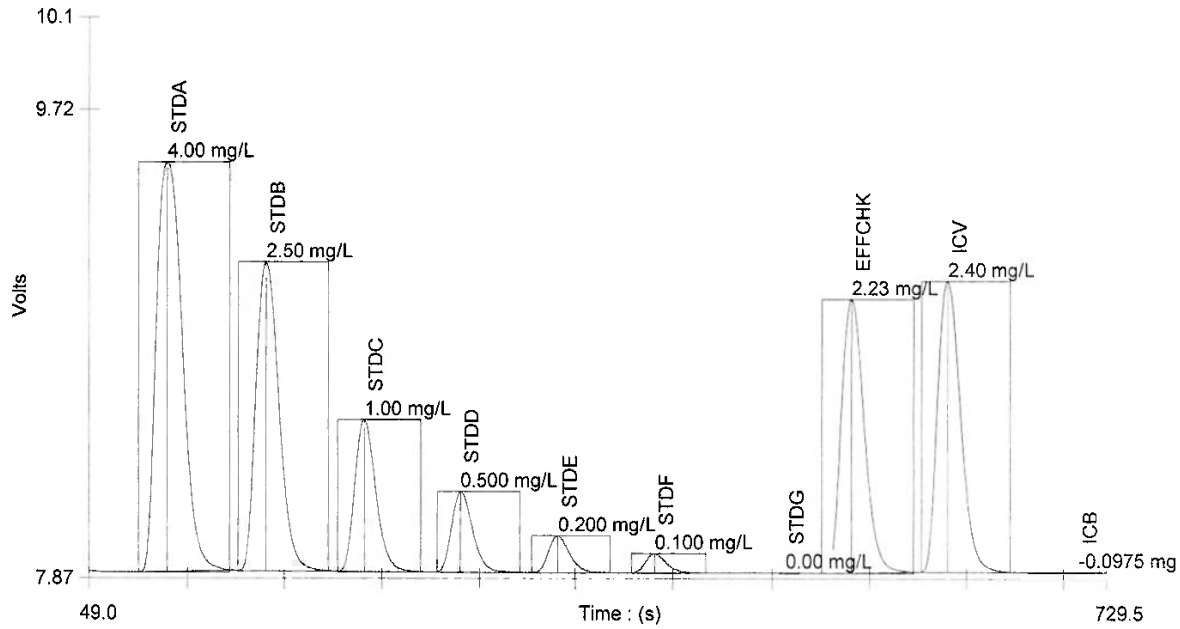
12.2 12

Author: chemistry

Date : 12/13/2022

CCB	1	12	-0.0836	12/13/2022@4:43:37 PM
		Known Conc:	0.00	

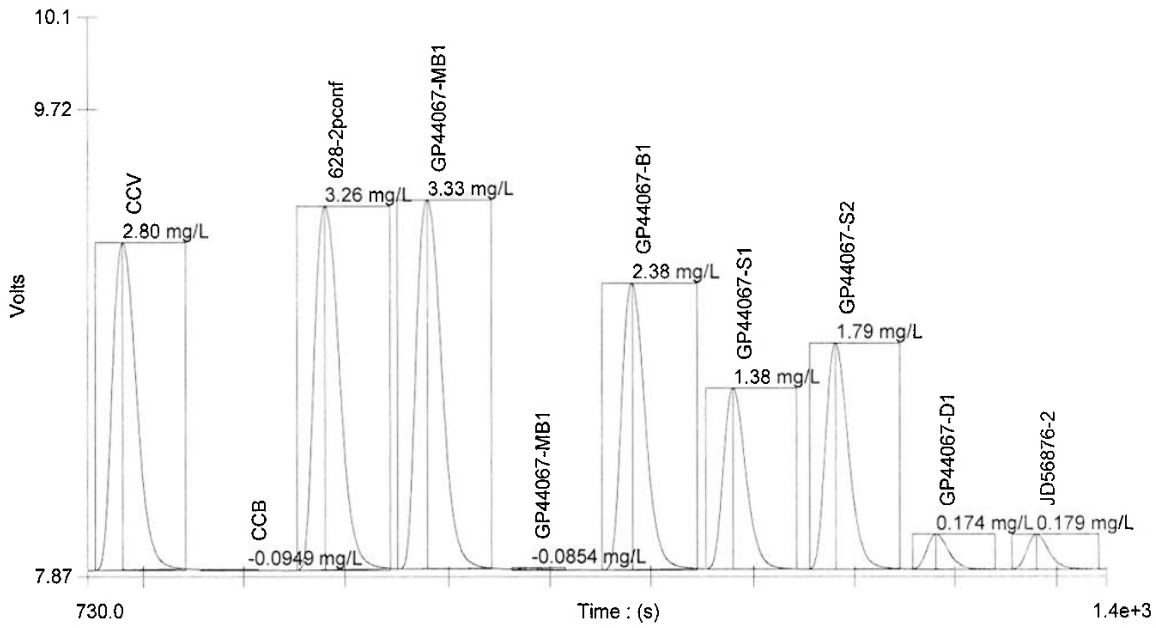
Channel 1 - Set: 1 / 11



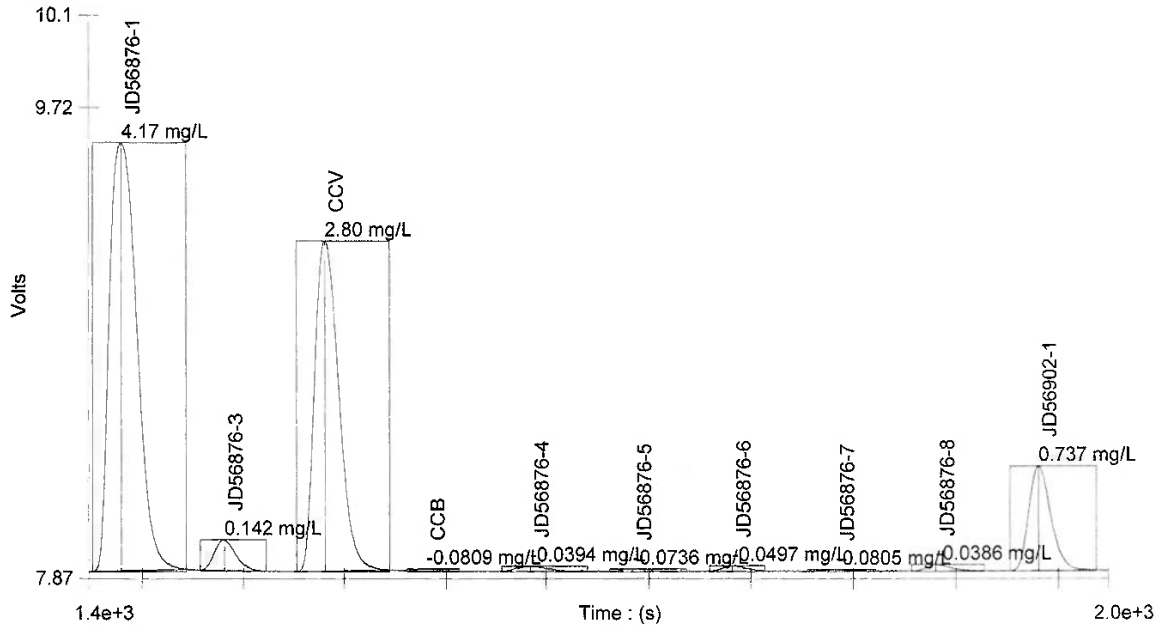
Author: chemistry

Date : 12/13/2022

Channel 1 - Set: 2 / 11



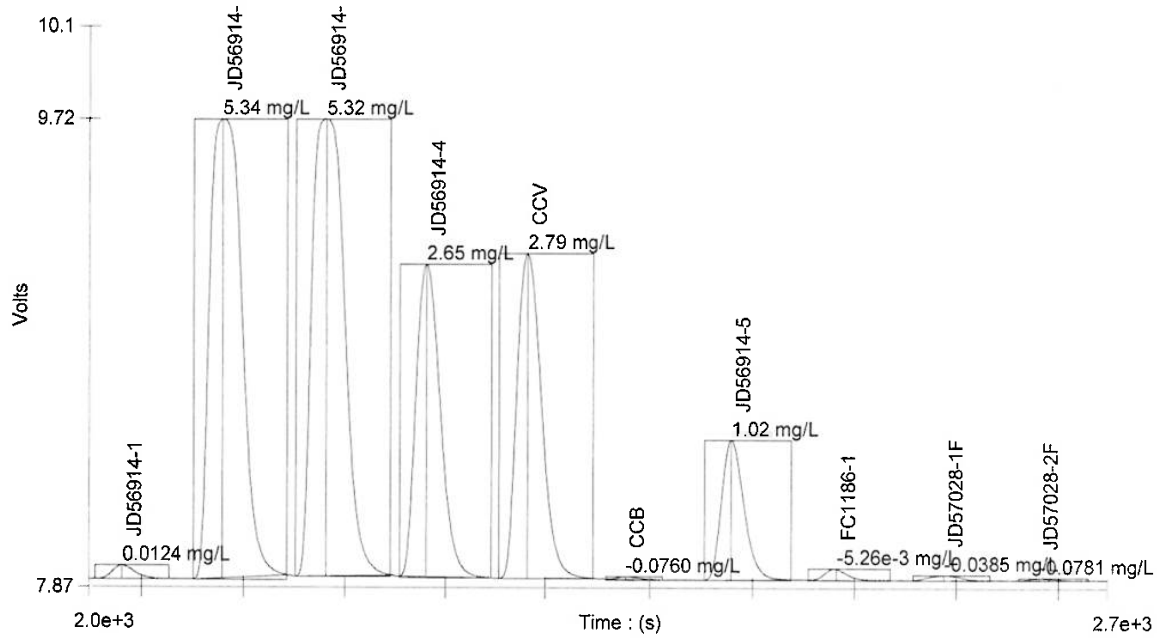
Channel 1 - Set: 3 / 11



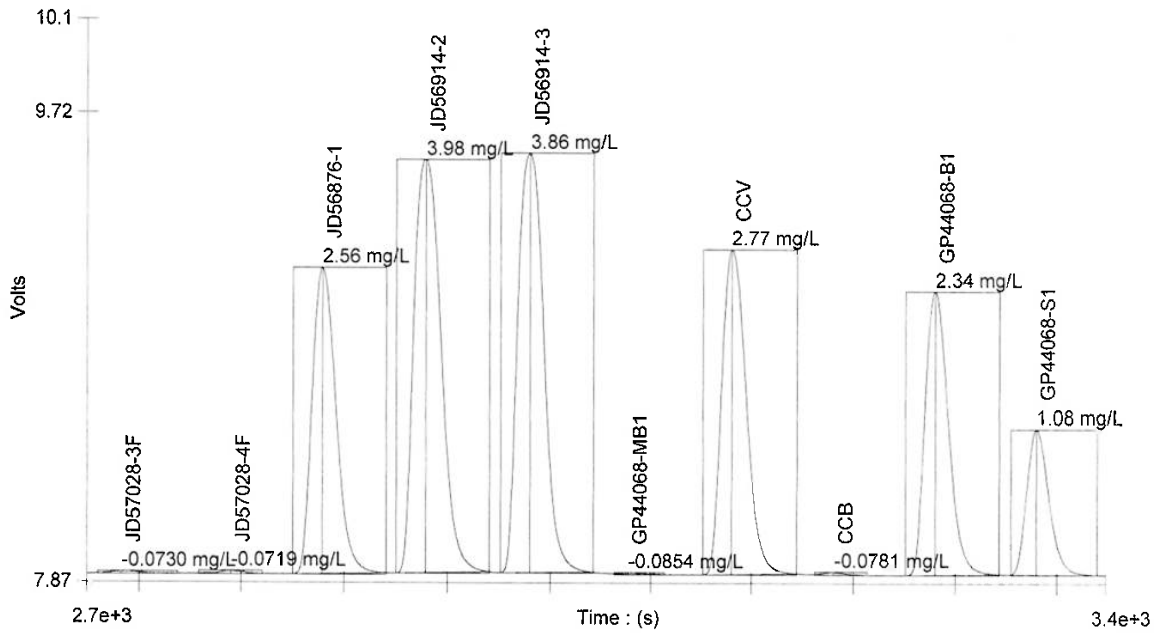
Author: chemistry

Date : 12/13/2022

Channel 1 - Set: 4 / 11



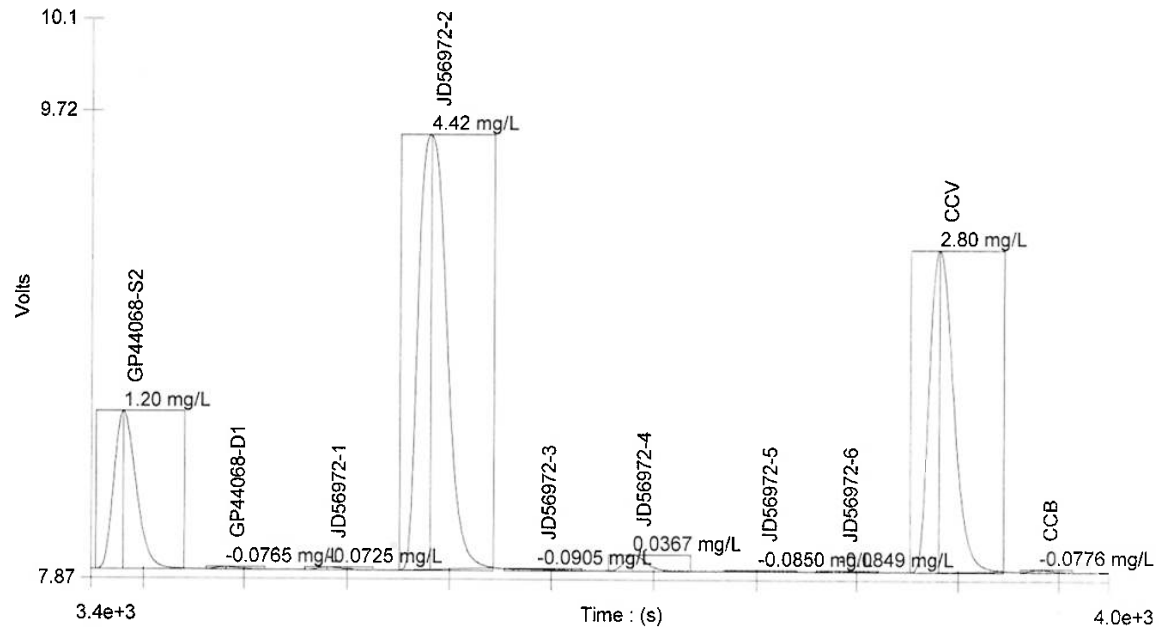
Channel 1 - Set: 5 / 11



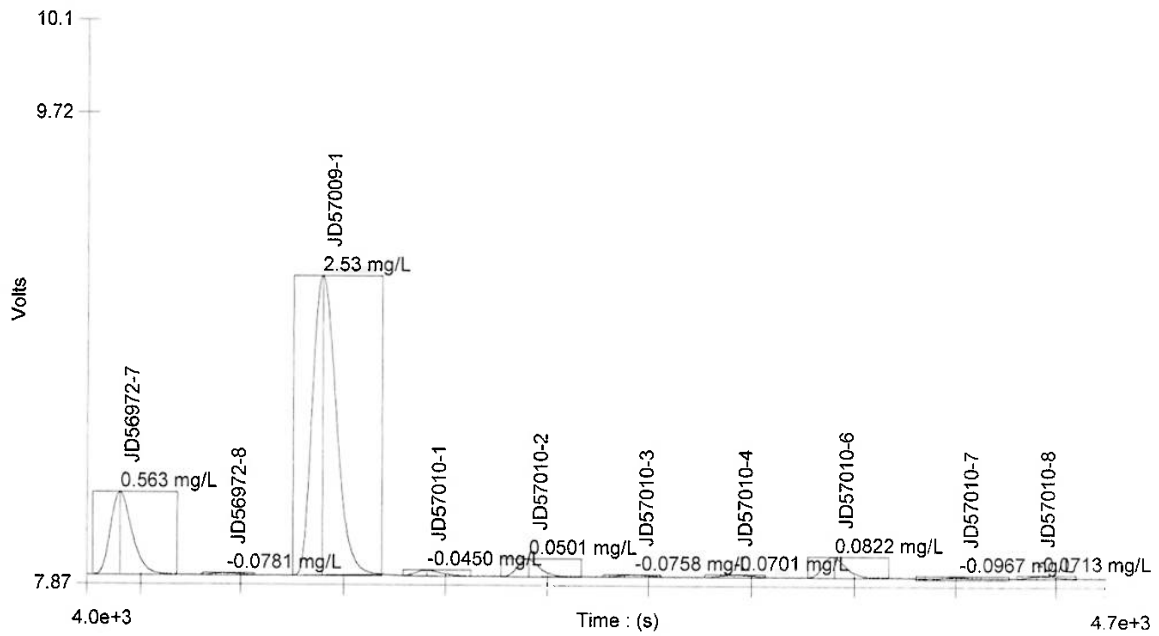
Author: chemistry

Date : 12/13/2022

Channel 1 - Set: 6 / 11



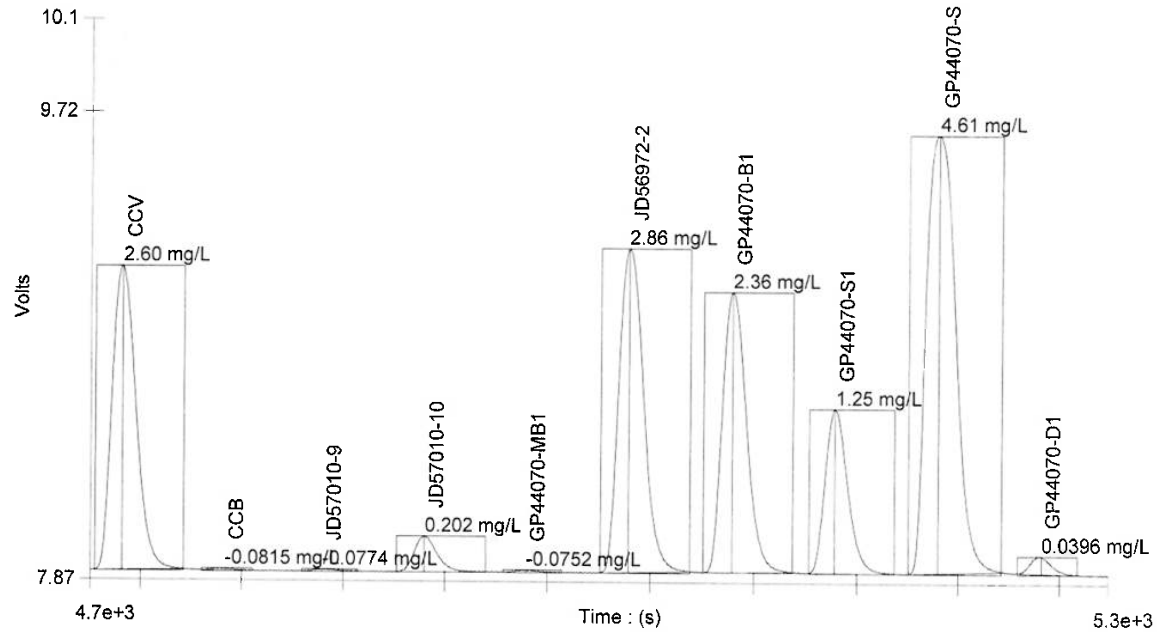
Channel 1 - Set: 7 / 11



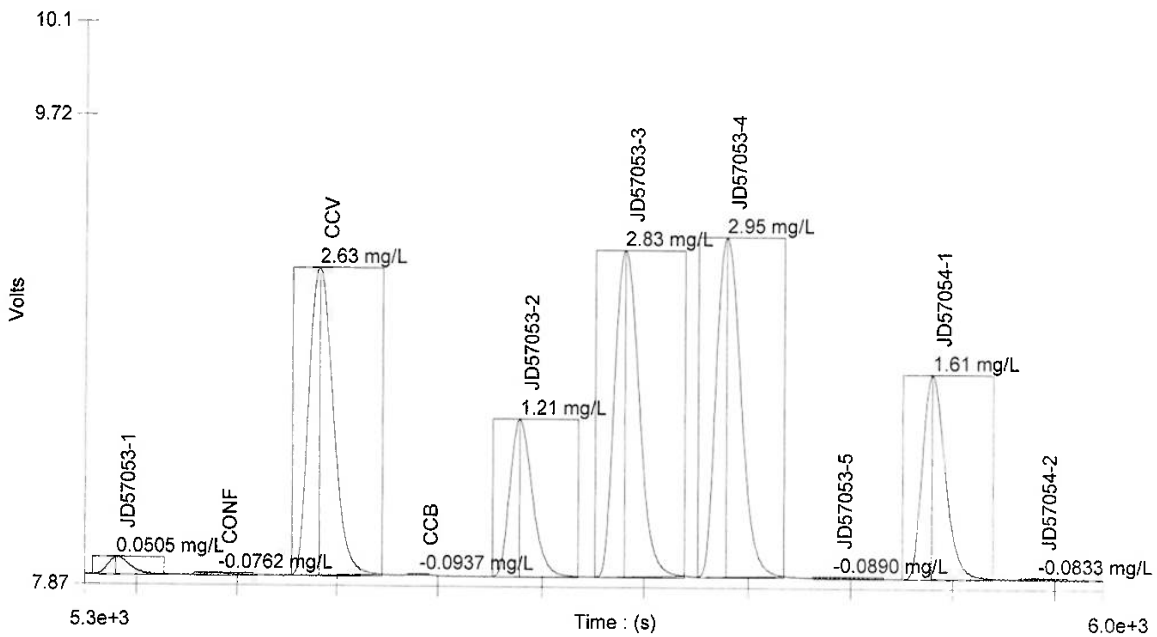
Author: chemistry

Date : 12/13/2022

Channel 1 - Set: 8 / 11



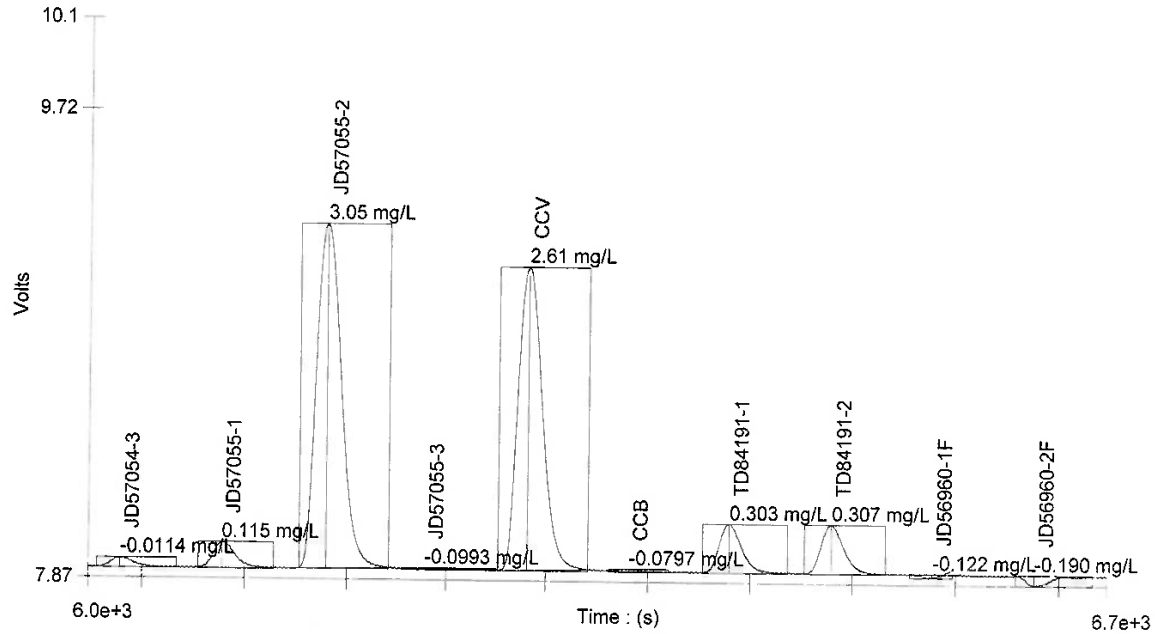
Channel 1 - Set: 9 / 11



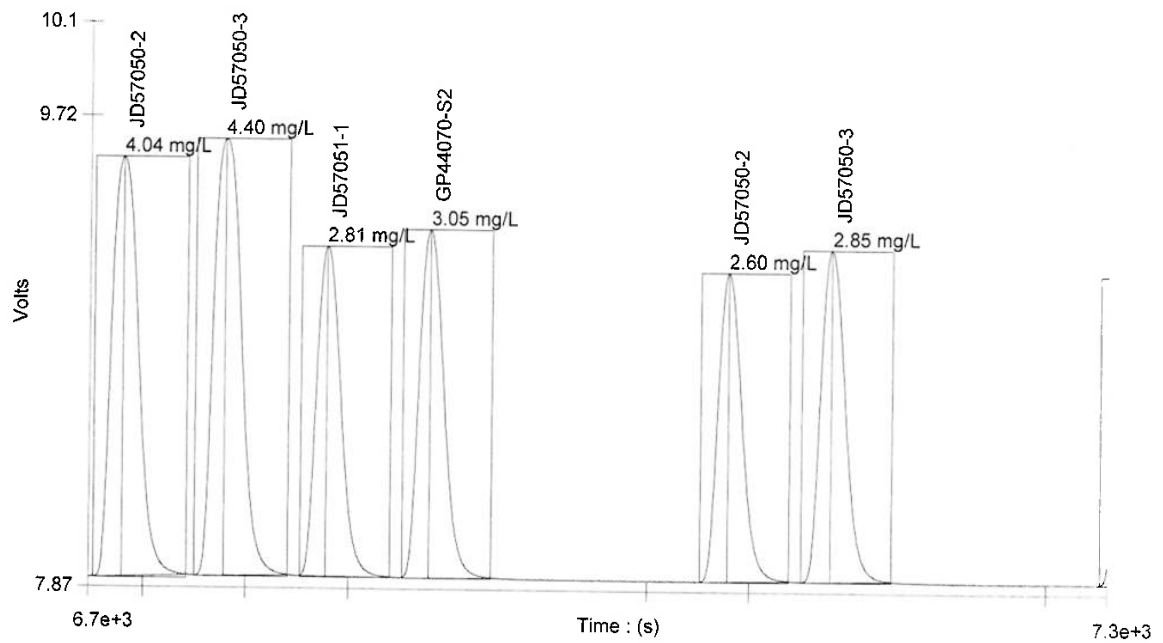
Author: chemistry

Date : 12/13/2022

Channel 1 - Set: 10 / 11



Channel 1 - Set: 11 / 11



Author: chemistry

Date : 12/13/2022

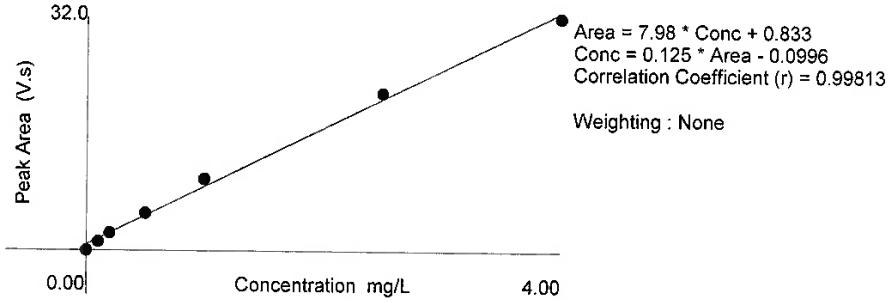
Table : 1 (NO32)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	4.00	1	32.0	1.62	0.0	2.4	3.89	12/13/2022	2:41:41 PM
2	2.50	1	21.6	1.22	0.0	-3.8	2.59	12/13/2022	2:42:47 PM
3	1.00	1	9.83	0.596	0.0	-11.5	1.13	12/13/2022	2:43:53 PM
4	0.500	1	5.14	0.318	0.0	-6.6	0.542	12/13/2022	2:44:58 PM
5	0.200	1	2.35	0.146	0.0	3.0	0.194	12/13/2022	2:46:03 PM
6	0.100	1	1.20	0.0754	0.0	26.3	0.0506	12/13/2022	2:47:08 PM
7	0.00	1	-0.0162	-2.62e-3			-0.102	12/13/2022	2:48:12 PM

13%

3%

Figure : 1 (NO32)



SGS

Analyst: MM

Prep Date: 12/13/2022

Pipette ID: 52

Batch ID: GP44067

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD56876-2	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD56902-1	
-D1		JD56876-2	Y
JD56876-1			Y
JD56876-2			Y
JD56876-3			Y
JD56876-4			Y
JD56876-5			Y
JD56876-6			Y
JD56876-7			Y
JD56876-8			Y
JD56902-1			Y
JD56914-1			Y
JD56914-2			Y
JD56914-3			Y
JD56914-4			Y
JD56914-5			Y
FC1186-1			Y
JD57028-1F			Y
JD57028-2F			Y
JD57028-3F			Y
JD57028-4F			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer: _____

Date: _____

12.2 12

SGS

Analyst: MM

Prep Date: 12/13/2022

Pipette ID: 52

Batch ID: GP44068

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD56972-1	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD57010-2	Y
-D1		JD56972-1	Y
JD56972-1			Y
JD56972-2			Y
JD56972-3			Y
JD56972-4			Y
JD56972-5			Y
JD56972-6			Y
JD56972-7			Y
JD56972-8			Y
JD57009-1			Y
JD57010-1			Y
JD57010-2			Y
JD57010-3			Y
JD57010-4			Y
JD57010-5			Y
JD57010-6			Y
JD57010-7			Y
JD57010-8			Y
JD57010-9			Y
JD57010-10			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer:

Date:

12.2 12

SGS

Analyst: MM

Prep Date: 12/13/2022

Pipette ID: 52

Batch ID: GP44070

Batch QC Prep Log / Sample pH Log

Sample ID	Standard Prep	Std Final Volume	SAMPLE pH 5 - 9
EDTA BUFFER SOLN.	N/A	N/A	9.1
-B1	2 ML OF 100 PPM NO32 STANDARD	100 ML CARRIER	Y
-S1	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD57053-1	Y
-S2	0.5 ML OF 100 PPM NO32 STANDARD	50 ML JD57050-2	Y
-D1		JD57053-1	Y
JD57050-2			Y
JD57050-3			Y
JD57051-1			Y
JD57053-1			Y
JD57053-2			Y
JD57053-3			Y
JD57053-4			Y
JD57053-5			Y
JD57054-1			Y
JD57054-2			Y
JD57054-3			Y
JD57055-1			Y
JD57055-2			Y
JD57055-3			Y
TD84191-1			Y
TD84191-2			Y
JD56960-1F			Y
JD56960-2F			Y

Form GN319-02 (Formerly DAYT-WET-0318-01-Form)

Rev date: 06/23/2021

Reviewer:

Date: 12/14/22

12.2 12

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: NO32

GN/GP number: GP44067,GP44068,GP44070

Analyst: MM

Date: 12/13/2022

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume used in ml	Pipette ID*	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Standard ID
100 ppm NO3 intermediate	GNE6-70384-NO32	1000	10	48	Carrier	100 ml	100	12/10/2022	NO32-100-061522
100 ppm NO2 Intermediate	ERA LOT# 291020M	1000	10	48	Carrier	100 ml	100	12/10/2022	NO2-100-061522
100 ppm NO3 External	GNE6-70385-NO32	1000	10	48	Carrier	100 ml	100	12/10/2022	NO32E-100-061522

Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml		Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	
5.0 mg/l NO3	NO32-100-061522	100 mg/l	5.0	48	Carrier	100 ml	5.0	12/13/2022	STDA-120622
2.5 mg/l NO3	NO32-100-061522	100 mg/l	2.5	48	Carrier	100 ml	2.5	12/13/2022	STDB-120622
1.0 mg/l NO3	NO32-100-061522	100 mg/l	1.0	48	Carrier	100 ml	1.0	12/13/2022	STDC-120622
0.5 mg/l NO3	NO32-100-061522	100 mg/l	0.5	48	Carrier	100 ml	0.5	12/13/2022	STDD-120622
0.2 mg/l NO3	NO32-100-061522	100 mg/l	0.2	48	Carrier	100 ml	0.2	12/13/2022	STDE-120622
0.1 mg/l NO3	NO32-100-061522	100 mg/l	0.1	48	Carrier	100 ml	0.1	12/13/2022	STDF-120622
Effcheck 2.0	NO2-100-061522	100 mg/l	2.0	48	Carrier	100 ml	2.0	12/13/2022	EFFcheck-120622
ICV	NO32E-100-061522	100 mg/l	2.0	48	Carrier	100 ml	2.0	12/13/2022	ICV-120622

*If Class A glass pipettes are used, enter an A.

Form: GN205-03
Rev. Date:03/22/2022

Reagent Information Log - Nitrate Lachat Autoanalyzer

Reagent	Reagent # or Manufacturer/Lot	Expiration Date
Nitrate Stock Solution	GNE6-70384-NO32	12/10/2022
Ammonium Chloride Buffer Solution	GNE11-72430-NO3	5/23/2023
Sulfanilamide Color Reagent	GNE11-72313-NO32	12/15/2022
1:1 NH4OH	GNE11-72312-NO3	6/15/2023
Carrier Solution	GNE7-70884-NO32	1/19/2023
1000 ppm Nitrite Solution	GNE6-70384-NO32	12/10/2022
Nitrate External Stock Solution	GNE6-70385-NO32	12/10/2022

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-43
Rev. Date: 7/19/06

Appendix C

Summary of Quality Control Exceedances and Data Validation Reports

Arsenic Treatment Plant

- September 2022. The matrix spike (MS)/matrix spike duplicate (MSD) performed using sample EFFLUENT exhibited recoveries for bromomethane less than the acceptance criteria. The bromomethane result in sample EFFLUENT was qualified as estimated (UJ) with a potential for low bias in the reported result.

Spring 2022

- The MS/MSD performed using sample SHM-05-41C-SPR22 exhibited an MS recovery for dissolved arsenic greater than the acceptance criteria. The dissolved arsenic result in sample SHM-05-41C-SPR22 was qualified as estimated (J) with a potential for high bias.
- Low-level detections of dissolved iron in the continuing calibration blanks and/or laboratory blank resulted in qualification of the dissolved iron results as not detected (U) at the limit of quantitation (LOQ) in samples SHL-10-SPR22 and SHM-7-03-SPR22. Since the concentration of dissolved iron in sample EPA-PZ-2012-2A-SPR22 was greater than the LOQ, the result was qualified as estimated (J) with a potential for high bias.

Fall 2022

- The alkalinity analysis of sample SHM-13-15-FAL22 was performed outside of the method-specified 14 day holding time (analysis 15 days from collection). The alkalinity result was qualified as estimated (J). The result may be biased low.
- The chloride and sulfate analysis of sample SHM-10-04-FAL22 was performed outside of the method-specified 28 day holding time (analysis 29 days from collection). The chloride and sulfate results were qualified as estimated (J). The results may be biased low.
- The MS/MSD performed using sample PZ-12-10-FAL22 exhibited MSD recoveries for chloride and sulfate greater than the acceptance criteria. The chloride and sulfate results in sample PZ-12-10-FAL22 were qualified as estimated (J) with a potential for high bias in the reported result.
- The MS/MSD performed using sample SHL-15-FAL22 exhibited MS recovery for chloride greater than the acceptance criteria. The chloride result in sample SHL-15-FAL22 was qualified as estimated (J) with a potential for high bias in the reported result.
- The MS/MSD performed using sample SHM-99-31B-FAL22 exhibited recoveries for dissolved iron less than the acceptance criteria. The dissolved iron result in sample SHM-99-31B-FAL22 was qualified as estimated (J) with a potential for low bias.
- Low-level detection of dissolved organic carbon in the equipment blank SHL-RB01-FAL22 resulted in qualification of the dissolved organic carbon results as not detected (U) in samples SHL-23-FAL22, SHL-DUP07-FAL22, SHM-05-39B-FAL22, SHM-5-40X-FAL22, SHM-13-01-FAL22, SHM-13-02-FAL22, SHP-01-37X-FAL22, SHP-2016-06A-FAL22, SHP-2016-06B-FAL22, and SHP-2016-06C-FAL22.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 B:

SDG #	Fraction
680-215070-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 680-215070-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	680-215070-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
PZ-12-01-SPR22	680-215070-1	Water	Field Sample/N	X	X	X	X	X
SHL-4-SPR22	680-215070-2	Water	Field Sample/N	X	X	X	X	X
SHM-11-06-SPR22	680-215070-3	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-215070-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 21 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

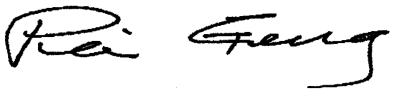
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

No Outliers were associated with this sample delivery group.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
TR	Trace Level Detect

There are no Flag Code definitions to display.

Bias

-	The result may be biased low

+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?				
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data is acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data is acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data is acceptable as reported and qualified

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data is acceptable as reported and qualified

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 C:

SDG #	Fraction
680-215133-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 680-215133-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	680-215133-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-3A-SPR22	680-215133-3	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-3B-SPR22	680-215133-4	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-5A-SPR22	680-215133-5	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-5B-SPR22	680-215133-6	Water	Field Sample/N	X	X	X	X	X
PZ-12-02-SPR22	680-215133-7	Water	Field Sample/N	X	X	X	X	X
PZ-12-03-SPR22	680-215133-8	Water	Field Sample/N	X	X	X	X	X
PZ-12-04-SPR22	680-215133-9	Water	Field Sample/N	X	X	X	X	X
SHL-11-SPR22	680-215133-10	Water	Field Sample/N	X	X	X	X	X
SHL-20-SPR22	680-215133-11	Water	Field Sample/N	X	X	X	X	X
SHL-DUP02-SPR22	680-215133-12	Water	Field Duplicate/FD	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-215133-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 70 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

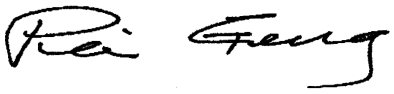
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6807200851A (LB)	Manganese	7.310	< 1.3	< 10	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
L	Lab Blank
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Mn detect above MDL.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 680-215133-1

Location	Analysis
SHL-20	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Alkalinity, Total (as CaCO3)	95.0	97.0	6.00	2.08	30	OK	NA

Location	Analysis
SHL-20	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Iron (FLDFLT)	54000	53000	100	1.87	30	OK	NA
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Manganese (FLDFLT)	4000	3900	10.0	2.53	30	OK	NA

Location	Analysis
SHL-20	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Arsenic (FLDFLT)	830	830	5.00	0.00	30	OK	NA

Location	Analysis
SHL-20	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Chloride	94.0	94.0	0.500	0.00	30	OK	NA
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Sulfate	51.0	51.0	1.00	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 680-215133-1

Location	Analysis
SHL-20	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-SPR22 / SHL-DUP02-SPR22	680-215133-11 / 680-215133-12	Dissolved Organic Carbon (FLDFLT)	1.80	2.00	1.00	10.5	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 D:

SDG #	Fraction
680-215169-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 6802151691

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	6802151691
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
PZ-12-05-SPR22	680-215169-1	Water	Field Sample/N	X	X	X	X	X
PZ-12-06-SPR22	680-215169-2	Water	Field Sample/N	X	X	X	X	X
PZ-12-10-SPR22	680-215169-4	Water	Field Sample/N	X	X	X	X	X
SHL-DUP01-SPR22	680-215169-3	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP03-SPR22	680-215169-9	Water	Field Duplicate/FD	X	X	X	X	X
SHM-05-41B-SPR22	680-215169-5	Water	Field Sample/N	X	X	X	X	X
SHM-93-22B-SPR22	680-215169-6	Water	Field Sample/N	X	X	X	X	X
SHP-01-37X-SPR22	680-215169-7	Water	Field Sample/N	X	X	X	X	X
SHP-01-38A-SPR22	680-215169-8	Water	Field Sample/N	X	X	X	X	X
SHP-2016-3A-SPR22	680-215169-10	Water	Field Sample/N	X	X	X	X	X
SHP-2016-3B-SPR22	680-215169-11	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802151691. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 77 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

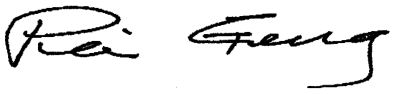
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

No Outliers were associated with this sample delivery group.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
TR	Trace Level Detect

There are no Flag Code definitions to display.

Bias

-	The result may be biased low

+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Data Validation Report for 6802151691

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable and reported and qualified.

Data Validation Report for 6802151691

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802151691

Location	Analysis
PZ-12-06	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Alkalinity, Total (as CaCO3)	49.0	50.0	6.00	2.02	30	OK	NA

Location	Analysis
PZ-12-06	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Iron (FLDFLT)	41.0	34.0	100	18.7	30	NA	OK
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Manganese (FLDFLT)	240	240	10.0	0.00	30	OK	NA

Location	Analysis
PZ-12-06	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Arsenic (FLDFLT)	ND	ND	5.00	NA	30	NA	OK

Location	Analysis
PZ-12-06	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Chloride	3.20	3.20	0.500	0.00	30	OK	NA
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Sulfate	36.0	36.0	1.00	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802151691

Location	Analysis
PZ-12-06	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-SPR22 / SHL-DUP01-SPR22	680-215169-2 / 680-215169-3	Dissolved Organic Carbon (FLDFLT)	1.30	1.20	1.00	8.00	30	NA	OK

Location	Analysis
SHP-01-38A	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Alkalinity, Total (as CaCO3)	70.0	71.0	6.00	1.42	30	OK	NA

Location	Analysis
SHP-01-38A	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Iron (FLDFLT)	17000	17000	100	0.00	30	OK	NA
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Manganese (FLDFLT)	1400	1300	10.0	7.41	30	OK	NA

Location	Analysis
SHP-01-38A	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Arsenic (FLDFLT)	87.0	85.0	5.00	2.33	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802151691

Location	Analysis
SHP-01-38A	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Chloride	1.40	1.40	0.500	0.00	30	NA	OK
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Sulfate	5.90	5.80	1.00	1.71	30	OK	NA

Location	Analysis
SHP-01-38A	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-SPR22 / SHL-DUP03-SPR22	680-215169-8 / 680-215169-9	Dissolved Organic Carbon (FLDFLT)	1.20	1.00	1.00	18.2	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 E:

SDG #	Fraction
680-215173-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 6802151731

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	6802151731
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-6A-SPR22	680-215173-1	Water	Field Sample/N	X	X	X	X	X
PZ-12-07-SPR22	680-215173-2	Water	Field Sample/N	X	X	X	X	X
PZ-12-08-SPR22	680-215173-3	Water	Field Sample/N	X	X	X	X	X
PZ-12-09-SPR22	680-215173-4	Water	Field Sample/N	X	X	X	X	X
SHL-19-SPR22	680-215173-5	Water	Field Sample/N	X	X	X	X	X
SHM-05-41C-SPR22	680-215173-6	Water	Field Sample/N	X	X	X	X	X
SHM-11-02-SPR22	680-215173-7	Water	Field Sample/N	X	X	X	X	X
SHM-13-03-SPR22	680-215173-8	Water	Field Sample/N	X	X	X	X	X
SHM-13-04-SPR22	680-215173-9	Water	Field Sample/N	X	X	X	X	X
SHM-13-06-SPR22	680-215173-10	Water	Field Sample/N	X	X	X	X	X
SHM-13-07-SPR22	680-215173-11	Water	Field Sample/N	X	X	X	X	X
SHM-13-08-SPR22	680-215173-12	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802151731. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 1 results (1.19%) out of the 84 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

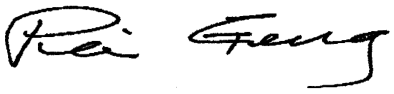
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-05-41C-SPR22 (MS)	Arsenic	117.0	84 - 116	10 - 125	percent	J/None	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW6020A, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-05-41C-SPR22 680-215173-6	N	Arsenic	5.00	270 J1	270 J	+	ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-05-41C-SPR22 (MS)	Chloride	40.00	90 - 110	10 - 110	percent	J/UJ	M	Spike amount Insignificant
SHM-05-41C-SPR22 (SD)	Chloride	40.00	90 - 110	10 - 110	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW6020A		**Extraction Method: FLDFLT**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-05-41C-SPR22 680-215173-6	N	Arsenic	5.00	270 J1	270 J	+	ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions	
Code	Definition
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions	
Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

Bias	
-	The result may be biased low
+	The result may be biased high
Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result	

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Al data acceptable as reports and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		As MS %R 117 out of limits 84-116
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Data Validation Report for 6802151731

Review Questions

Method: SW9056A (Anion Chromatography)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 F:

SDG #	Fraction
680-215360-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 6802153601

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	6802153601
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-4A-SPR22	680-215360-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-4B-SPR22	680-215360-2	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-6B-SPR22	680-215360-4	Water	Field Sample/N	X	X	X	X	X
SHL-DUP04-SPR22	680-215360-3	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP05-SPR22	680-215360-6	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP06-SPR22	680-215360-13	Water	Field Duplicate/FD	X	X	X	X	X
SHM-96-5B-SPR22	680-215360-5	Water	Field Sample/N	X	X	X	X	X
SHP-01-36X-SPR22	680-215360-7	Water	Field Sample/N	X	X	X	X	X
SHP-2016-07A-SPR22	680-215360-8	Water	Field Sample/N	X	X	X	X	X
SHP-2016-1A-SPR22	680-215360-9	Water	Field Sample/N	X	X	X	X	X
SHP-2016-1B-SPR22	680-215360-10	Water	Field Sample/N	X	X	X	X	X
SHP-2016-4B-SPR22	680-215360-11	Water	Field Sample/N	X	X	X	X	X
SHP-2016-5A-SPR22	680-215360-12	Water	Field Sample/N	X	X	X	X	X
SHP-2016-5B-SPR22	680-215360-14	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802153601. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 98 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

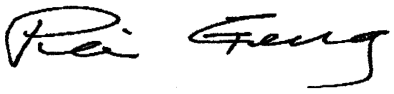
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHL-DUP05-SPR22 (MS)	Chloride	0.000	90 - 110	10 - 110	percent	J/X	M	Parent not found
SHL-DUP05-SPR22 (SD)	Chloride	0.000	90 - 110	10 - 110	percent	J/X	M	Parent not found
SHL-DUP05-SPR22 (MS)	Sulfate	0.000	90 - 110	10 - 110	percent	J/X	M	Parent not found
SHL-DUP05-SPR22 (SD)	Sulfate	0.000	90 - 110	10 - 110	percent	J/X	M	Parent not found

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Data Validation Report for 6802153601

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?			•	
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802153601

Location	Analysis
EPA-PZ-2012-4B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Alkalinity, Total (as CaCO3)	120	100	6.00	18.2	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Iron (FLDFLT)	50000	50000	100	0.00	30	OK	NA
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Manganese (FLDFLT)	770	750	10.0	2.63	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Arsenic (FLDFLT)	1800	1800	5.00	0.00	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Chloride	33.0	33.0	0.500	0.00	30	OK	NA
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Sulfate	17.0	17.0	1.00	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802153601

Location	Analysis
EPA-PZ-2012-4B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-SPR22 / SHL-DUP04-SPR22	680-215360-2 / 680-215360-3	Dissolved Organic Carbon (FLDFLT)	1.90	1.90	1.00	0.00	30	NA	OK

Location	Analysis
SHM-96-5B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Alkalinity, Total (as CaCO3)	170	160	6.00	6.06	30	OK	NA

Location	Analysis
SHM-96-5B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Iron (FLDFLT)	14000	15000	100	6.90	30	OK	NA
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Manganese (FLDFLT)	7800	7900	10.0	1.27	30	OK	NA

Location	Analysis
SHM-96-5B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Arsenic (FLDFLT)	980	1000	5.00	2.02	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802153601

Location	Analysis
SHM-96-5B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Chloride	35.0	35.0	0.500	0.00	30	OK	NA
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Sulfate	21.0	21.0	1.00	0.00	30	OK	NA

Location	Analysis
SHM-96-5B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-SPR22 / SHL-DUP05-SPR22	680-215360-5 / 680-215360-6	Dissolved Organic Carbon (FLDFLT)	1.40	1.50	1.00	6.90	30	NA	OK

Location	Analysis
SHP-2016-5A	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Alkalinity, Total (as CaCO3)	64.0	65.0	6.00	1.55	30	OK	NA

Location	Analysis
SHP-2016-5A	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Iron (FLDFLT)	1700	1800	100	5.71	30	OK	NA
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Manganese (FLDFLT)	190	200	10.0	5.13	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
Field Duplicates for SDG: 6802153601

Location	Analysis
SHP-2016-5A	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Arsenic (FLDFLT)	3.30	3.20	5.00	3.08	30	NA	OK

Location	Analysis
SHP-2016-5A	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Chloride	9.50	9.50	0.500	0.00	30	OK	NA
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Sulfate	3.40	3.30	1.00	2.99	30	NA	OK

Location	Analysis
SHP-2016-5A	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-5A-SPR22 / SHL-DUP06-SPR22	680-215360-12 / 680-215360-13	Dissolved Organic Carbon (FLDFLT)	6.90	6.80	1.00	1.46	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 17, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387_C_RV1:

SDG #	Fraction
680-215133-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 6802153671

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	6802153671
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	August 11, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-1A-SPR22	680-215367-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-1B-SPR22	680-215367-2	Water	Field Sample/N	X	X	X	X	X
SHL-RB01-SPR22	680-215367-10	Water	Equipment Blank/EB	X	X	X	X	X
SHP-2016-06A-SPR22	680-215367-3	Water	Field Sample/N	X	X	X	X	X
SHP-2016-06B-SPR22	680-215367-4	Water	Field Sample/N	X	X	X	X	X
SHP-2016-06C-SPR22	680-215367-5	Water	Field Sample/N	X	X	X	X	X
SHP-2016-07B-SPR22	680-215367-6	Water	Field Sample/N	X	X	X	X	X
SHP-2016-2A-SPR22	680-215367-7	Water	Field Sample/N	X	X	X	X	X
SHP-2016-2B-SPR22	680-215367-8	Water	Field Sample/N	X	X	X	X	X
SHP-2016-4A-SPR22	680-215367-9	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802153671. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 70 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

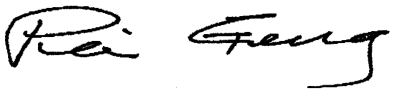
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



August 11, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

August 17, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

No Outliers were associated with this sample delivery group.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.

U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias	
-	The result may be biased low
+	The result may be biased high
Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result	

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not included.
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not included
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not included
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not included
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Data Validation Report for 6802153671

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not includedz
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not included
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not included.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not included
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 1, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 8, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54387 H:

SDG #	Fraction
680-215476-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist
pgeng@lab-data.com

313 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54387 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		As,Mn (6010C /6020A)		3 D.Met. (6010C/ 6020A)		VPH (MADEP -VPH		Alk (2320B)		DOC (9060A)		Cl (9056A)		SO_4 (9056A)																			
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-214975-1	07/08/22	07/22/22	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-																
B	680-215070-1	07/08/22	07/22/22	-	-	-	-	3	0	-	-	3	0	3	0	3	0	3	0																
C	680-215133-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
D	680-215169-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
E	680-215173-1	07/08/22	07/22/22	-	-	-	-	12	0	-	-	12	0	12	0	12	0	12	0																
F	680-215360-1	07/08/22	07/22/22	-	-	-	-	14	0	-	-	14	0	14	0	14	0	14	0																
G	680-215367-1	07/08/22	07/22/22	-	-	-	-	10	0	-	-	10	0	10	0	10	0	10	0																
H	680-215476-1	07/08/22	07/22/22	-	-	-	-	11	0	-	-	11	0	11	0	11	0	11	0																
I	SP2157	07/08/22	07/22/22	-	-	-	-	-	-	5	0	-	-	-	-	-	-	-	-																
Total	T/PG			5	0	5	0	71	0	5	0	71	0	71	0	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54387ST.wpd

Data Validation Report for 6802154761

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Spring 2022
SDG:	6802154761
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	July 28, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-2A-SPR22	680-215476-3	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-2B-SPR22	680-215476-4	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-7A-SPR22	680-215476-5	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-7B-SPR22	680-215476-6	Water	Field Sample/N	X	X	X	X	X
EW-01-SPR22	680-215476-1	Water	Field Sample/N	X	X	X	X	X
EW-04-SPR22	680-215476-2	Water	Field Sample/N	X	X	X	X	X
SHL-10-SPR22	680-215476-7	Water	Field Sample/N	X	X	X	X	X
SHL-RB02-SPR22	680-215476-11	Water	Equipment Blank/EB	X	X	X	X	X
SHM-05-40X-SPR22	680-215476-8	Water	Field Sample/N	X	X	X	X	X
SHM-07-03-SPR22	680-215476-9	Water	Field Sample/N	X	X	X	X	X
SHM-07-05X-SPR22	680-215476-10	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802154761. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 3 results (3.90%) out of the 77 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

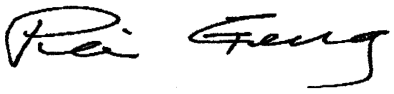
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



July 28, 2022

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants Inc.

July 29, 2022

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method A2320B, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHL-RB02-SPR22 (EB)	Alkalinity, Total (as CaCO3)	2.200	< 2.2	< 6	mg/l	U/None*	V	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680721879108 (CB)	Iron	24.40	< 17	< 50	ug/l	U/None*	B2	
CCB680721879132 (CB)	Iron	18.50	< 17	< 50	ug/l	U/None*	B2	
CCB68072187972 (CB)	Iron	18.30	< 17	< 50	ug/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Calibration Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
EPA-PZ-2012-2A-SPR22 680-215476-3	N	Iron	100	130	130 J	+	ug/l	B2/L
SHL-10-SPR22 680-215476-7	N	Iron	100	28.0 J	100 U		ug/l	B2
SHM-07-03-SPR22 680-215476-9	N	Iron	100	75.0 J	100 U		ug/l	B2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6807213021A (LB)	Iron	35.90	< 20	< 100	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
EPA-PZ-2012-2A-SPR22 680-215476-3	N	Iron	100	130	130 J	+	ug/l	B2/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-05-40X-SPR22 (MS)	Iron	86.00	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-05-40X-SPR22 (MS)	Arsenic	70.00	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant
SHM-05-40X-SPR22 (SD)	Arsenic	70.00	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW6010C		Extraction Method: FLDFLT						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
EPA-PZ-2012-2A-SPR22 680-215476-3	N	Iron	100	130	130 J	+	ug/l	B2/L
SHL-10-SPR22 680-215476-7	N	Iron	100	28.0 J	100 U		ug/l	B2
SHM-07-03-SPR22 680-215476-9	N	Iron	100	75.0 J	100 U		ug/l	B2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
B2	CCB
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank

Flag Code and Definitions

Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected: The analyte was analyzed for, but not detected.

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSd detect for As, Fe but sample amount was 4x spike amount
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Data Validation Report for 6802154761

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?		•		CCB detects for Fe.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Blank detects for Fe.
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Data Validation Report for 6802154761

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

January 5, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on November 30, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55524_A:

SDG #	**Fraction**
680-223337-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

346 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55524 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		DOC (9060A)		Cl (9056A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TOC (9060A)																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223337-1	11/30/22	12/14/22	-	-	30	0	-	-	30	0	30	0	30	0	-	-	30	0	-	-	-	-														
B	680-222340-1	11/30/22	12/14/22	11	0	7	0	7	0	4	0	-	-	-	-	4	0	4	0	4	0	4	0														
C	680-222692-1	11/30/22	12/14/22	27	0	26	0	7	0	7	0	-	-	-	-	7	0	7	0	7	0	7	0														
D	680-223686-1	11/30/22	12/14/22	-	-	12	0	-	-	12	0	12	0	12	0	-	-	12	0	-	-	-	-														
E	680-223687-1	11/30/22	12/14/22	-	-	20	0	-	-	20	0	20	0	20	0	-	-	20	0	-	-	-	-														
Total	TR/PG			38	0	95	0	14	0	73	0	62	0	62	0	11	0	73	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55524ST.wpd

Data Validation Report for 680-223337-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-223337-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-4A-FAL22	680-223337-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-4B-FAL22	680-223337-2	Water	Field Sample/N	X	X	X	X	X
PZ-12-01-FAL22	680-223337-3	Water	Field Sample/N	X	X	X	X	X
PZ-12-02-FAL22	680-223337-4	Water	Field Sample/N	X	X	X	X	X
PZ-12-03-FAL22	680-223337-5	Water	Field Sample/N	X	X	X	X	X
PZ-12-04-FAL22	680-223337-6	Water	Field Sample/N	X	X	X	X	X
PZ-12-05-FAL22	680-223337-7	Water	Field Sample/N	X	X	X	X	X
PZ-12-06-FAL22	680-223337-8	Water	Field Sample/N	X	X	X	X	X
PZ-12-10-FAL22	680-223337-9	Water	Field Sample/N	X	X	X	X	X
SHL-11-FAL22	680-223337-10	Water	Field Sample/N	X	X	X	X	X
SHL-20-FAL22	680-223337-11	Water	Field Sample/N	X	X	X	X	X
SHL-24-FAL22	680-223337-12	Water	Field Sample/N	X	X	X	X	X
SHL-4-FAL22	680-223337-13	Water	Field Sample/N	X	X	X	X	X
SHL-DUP01-FAL22	680-223337-14	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP03-FAL22	680-223337-15	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP04-FAL22	680-223337-16	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP06-FAL22	680-223337-17	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP08-FAL22	680-223337-18	Water	Field Duplicate/FD	X	X	X	X	X
SHM-10-06-FAL22	680-223337-19	Water	Field Sample/N	X	X	X	X	X

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHM-11-02-FAL22	680-223337-20	Water	Field Sample/N	X	X	X	X	X
SHM-11-06-FAL22	680-223337-21	Water	Field Sample/N	X	X	X	X	X
SHM-13-04-FAL22	680-223337-22	Water	Field Sample/N	X	X	X	X	X
SHM-13-05-FAL22	680-223337-23	Water	Field Sample/N	X	X	X	X	X
SHM-13-06-FAL22	680-223337-24	Water	Field Sample/N	X	X	X	X	X
SHM-13-07-FAL22	680-223337-25	Water	Field Sample/N	X	X	X	X	X
SHM-13-08-FAL22	680-223337-26	Water	Field Sample/N	X	X	X	X	X
SHM-93-24A-FAL22	680-223337-27	Water	Field Sample/N	X	X	X	X	X
SHM-99-31A-FAL22	680-223337-28	Water	Field Sample/N	X	X	X	X	X
SHM-99-31B-FAL22	680-223337-29	Water	Field Sample/N	X	X	X	X	X
SHM-99-31C-FAL22	680-223337-30	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-223337-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 3 results (1.43%) out of the 210 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

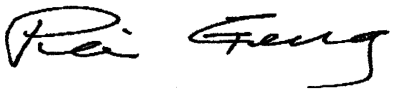
Narrative Comments

Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

January 05, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-13-05-FAL22 (MS)	Manganese	133.0	90 - 114	10 - 125	percent	J/None	M	Spike amount Insignificant
SHM-13-05-FAL22 (SD)	Manganese	120.0	90 - 114	10 - 125	percent	J/None	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9056A, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68074817719 (CB)	Sulfate	0.6590	< 0.4	< 1	mg/l	U/None*	B2	
CCB68074817733 (CB)	Sulfate	0.6140	< 0.4	< 1	mg/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
PZ-12-10-FAL22 (SD)	Chloride	113.0	90 - 110	10 - 110	percent	J/None	M	
PZ-12-10-FAL22 (SD)	Sulfate	117.0	90 - 110	10 - 110	percent	J/None	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW9056A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
PZ-12-10-FAL22 680-223337-9	N	Chloride	0.500	1.00 J1	1.00 J	+	mg/l	M
PZ-12-10-FAL22 680-223337-9	N	Sulfate	1.00	4.50 J1	4.50 J	+	mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: SW6010C		Extraction Method: FLDFLT						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-99-31B-FAL22 680-223337-29	N	Iron	100	2400 J1	2400 J		ug/l	M

Test Method: SW9056A		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
PZ-12-10-FAL22 680-223337-9	N	Chloride	0.500	1.00 J1	1.00 J	+	mg/l	M
PZ-12-10-FAL22 680-223337-9	N	Sulfate	1.00	4.50 J1	4.50 J	+	mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW6010C, Dissolved							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
SHM-99-31B-FAL22 680-223337-29	N	Iron	100	2400 J1	2400	2400 J	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?			•	Not applicable to this method.
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		One result qualified J due to MS/MSD %R being lower than %R limits. Mn was not qualified due to sample result being 4x greater than the spike.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		Analytes detected in CCB but no results were qualified.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Results qualified J due to MS/MSD %R being greater than %R limits.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
EPA-PZ-2012-4B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Alkalinity, Total (as CaCO3)	120	120	5.00	0.00	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Iron (FLDFLT)	49000	50000	100	2.02	30	OK	NA
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Manganese (FLDFLT)	810	820	10.0	1.23	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Arsenic (FLDFLT)	2100	2000	5.00	4.88	30	OK	NA

Location	Analysis
EPA-PZ-2012-4B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Chloride	30.0	32.0	0.500	6.45	30	OK	NA
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Sulfate	17.0	19.0	1.00	11.1	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
EPA-PZ-2012-4B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-4B-FAL22 / SHL-DUP01-FAL22	680-223337-2 / 680-223337-14	Dissolved Organic Carbon (FLDFLT)	1.80	1.70	1.00	5.71	30	NA	OK

Location	Analysis
PZ-12-06	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Alkalinity, Total (as CaCO3)	53.0	52.0	5.00	1.90	30	OK	NA

Location	Analysis
PZ-12-06	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Iron (FLDFLT)	920	930	100	1.08	30	OK	NA
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Manganese (FLDFLT)	860	860	10.0	0.00	30	OK	NA

Location	Analysis
PZ-12-06	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Arsenic (FLDFLT)	1.40	1.10	5.00	24.0	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
PZ-12-06	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Chloride	8.40	8.50	0.500	1.18	30	OK	NA
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Sulfate	9.90	10.0	1.00	1.01	30	OK	NA

Location	Analysis
PZ-12-06	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
PZ-12-06-FAL22 / SHL-DUP03-FAL22	680-223337-8 / 680-223337-15	Dissolved Organic Carbon (FLDFLT)	0.830	1.00	1.00	18.6	30	NA	OK

Location	Analysis
SHL-20	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Alkalinity, Total (as CaCO3)	150	160	5.00	6.45	30	OK	NA

Location	Analysis
SHL-20	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Iron (FLDFLT)	73000	72000	100	1.38	30	OK	NA
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Manganese (FLDFLT)	2400	2400	10.0	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
SHL-20	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Arsenic (FLDFLT)	870	830	5.00	4.71	30	OK	NA

Location	Analysis
SHL-20	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Chloride	110	110	0.500	0.00	30	OK	NA
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Sulfate	7.30	7.40	1.00	1.36	30	OK	NA

Location	Analysis
SHL-20	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-20-FAL22 / SHL-DUP04-FAL22	680-223337-11 / 680-223337-16	Dissolved Organic Carbon (FLDFLT)	2.20	2.20	1.00	0.00	30	NA	OK

Location	Analysis
SHL-24	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Alkalinity, Total (as CaCO3)	48.0	51.0	5.00	6.06	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
SHL-24	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Iron (FLDFLT)	ND	ND	100	NA	30	NA	OK
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Manganese (FLDFLT)	ND	ND	10.0	NA	30	NA	OK

Location	Analysis
SHL-24	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Arsenic (FLDFLT)	3.80	3.60	5.00	5.41	30	NA	OK

Location	Analysis
SHL-24	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Chloride	41.0	41.0	0.500	0.00	30	OK	NA
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Sulfate	25.0	25.0	1.00	0.00	30	OK	NA

Location	Analysis
SHL-24	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-24-FAL22 / SHL-DUP06-FAL22	680-223337-12 / 680-223337-17	Dissolved Organic Carbon (FLDFLT)	ND	0.990	1.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
SHM-11-06	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Alkalinity, Total (as CaCO3)	180	180	5.00	0.00	30	OK	NA

Location	Analysis
SHM-11-06	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Iron (FLDFLT)	54000	51000	100	5.71	30	OK	NA
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Manganese (FLDFLT)	1400	1300	10.0	7.41	30	OK	NA

Location	Analysis
SHM-11-06	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Arsenic (FLDFLT)	630	580	5.00	8.26	30	OK	NA

Location	Analysis
SHM-11-06	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Chloride	65.0	69.0	0.500	5.97	30	OK	NA
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Sulfate	15.0	17.0	1.00	12.5	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223337-1

Location	Analysis
SHM-11-06	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-11-06-FAL22 / SHL-DUP08-FAL22	680-223337-21 / 680-223337-18	Dissolved Organic Carbon (FLDFLT)	2.40	2.40	1.00	0.00	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

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ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

January 5, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on November 30, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55524_D:

SDG #	**Fraction**
680-223686-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

346 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55524 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		DOC (9060A)		Cl (9056A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TOC (9060A)																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223337-1	11/30/22	12/14/22	-	-	30	0	-	-	30	0	30	0	30	0	-	-	30	0	-	-	-	-														
B	680-222340-1	11/30/22	12/14/22	11	0	7	0	7	0	4	0	-	-	-	-	4	0	4	0	4	0	4	0														
C	680-222692-1	11/30/22	12/14/22	27	0	26	0	7	0	7	0	-	-	-	-	7	0	7	0	7	0	7	0														
D	680-223686-1	11/30/22	12/14/22	-	-	12	0	-	-	12	0	12	0	12	0	-	-	12	0	-	-	-	-														
E	680-223687-1	11/30/22	12/14/22	-	-	20	0	-	-	20	0	20	0	20	0	-	-	20	0	-	-	-	-														
Total	TR/PG			38	0	95	0	14	0	73	0	62	0	62	0	11	0	73	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55524ST.wpd

Data Validation Report for 680-223686-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-223686-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-5A-FAL22	680-223686-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-5B-FAL22	680-223686-2	Water	Field Sample/N	X	X	X	X	X
N5-P1-FAL22	680-223686-3	Water	Field Sample/N	X	X	X	X	X
SHL-15-FAL22	680-223686-4	Water	Field Sample/N	X	X	X	X	X
SHL-7-FAL22	680-223686-5	Water	Field Sample/N	X	X	X	X	X
SHL-8D-FAL22	680-223686-6	Water	Field Sample/N	X	X	X	X	X
SHL-DUP09-FAL22	680-223686-7	Water	Field Duplicate/FD	X	X	X	X	X
SHM-10-14-FAL22	680-223686-8	Water	Field Sample/N	X	X	X	X	X
SHM-10-15-FAL22	680-223686-9	Water	Field Sample/N	X	X	X	X	X
SHM-96-5B-FAL22	680-223686-10	Water	Field Sample/N	X	X	X	X	X
SHM-96-5C-FAL22	680-223686-11	Water	Field Sample/N	X	X	X	X	X
SHP-99-29X-FAL22	680-223686-12	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-223686-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 1 results (1.19%) out of the 84 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

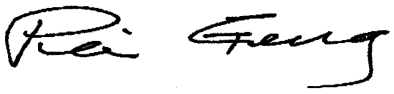
Narrative Comments

Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

January 05, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

No Outliers were associated with this sample delivery group.

Table of All Qualified Results

Test Method: SW9056A		**Extraction Method: NONE**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHL-15-FAL22 680-223686-4	N	Chloride	0.500	24.0 J1	24.0 J		mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW9056A

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
SHL-15-FAL22 680-223686-4	N	Chloride	0.500	24.0 J1	24.0	24.0 J	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		One result qualified J due to MS/MSD %R being greater than %R limits.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223686-1

Location	Analysis
SHM-96-5B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Alkalinity, Total (as CaCO3)	180	180	5.00	0.00	30	OK	NA

Location	Analysis
SHM-96-5B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Iron (FLDFLT)	11000	12000	100	8.70	30	OK	NA
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Manganese (FLDFLT)	8800	8900	10.0	1.13	30	OK	NA

Location	Analysis
SHM-96-5B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Arsenic (FLDFLT)	840	830	5.00	1.20	30	OK	NA

Location	Analysis
SHM-96-5B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Chloride	35.0	35.0	0.500	0.00	30	OK	NA
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Sulfate	20.0	20.0	1.00	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223686-1

Location	Analysis
SHM-96-5B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-96-5B-FAL22 / SHL-DUP09-FAL22	680-223686-10 / 680-223686-7	Dissolved Organic Carbon (FLDFLT)	1.50	1.50	1.00	0.00	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

January 5, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on November 30, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55524_E:

SDG #	**Fraction**
680-223687-1	Dissolved Metals, Alkalinity, Chloride, Sulfate, DOC

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

346 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55524 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		DOC (9060A)		Cl (9056A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TOC (9060A)																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223337-1	11/30/22	12/14/22	-	-	30	0	-	-	30	0	30	0	30	0	-	-	30	0	-	-	-	-														
B	680-222340-1	11/30/22	12/14/22	11	0	7	0	7	0	4	0	-	-	-	-	4	0	4	0	4	0	4	0														
C	680-222692-1	11/30/22	12/14/22	27	0	26	0	7	0	7	0	-	-	-	-	7	0	7	0	7	0	7	0														
D	680-223686-1	11/30/22	12/14/22	-	-	12	0	-	-	12	0	12	0	12	0	-	-	12	0	-	-	-	-														
E	680-223687-1	11/30/22	12/14/22	-	-	20	0	-	-	20	0	20	0	20	0	-	-	20	0	-	-	-	-														
Total	TR/PG			38	0	95	0	14	0	73	0	62	0	62	0	11	0	73	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55524ST.wpd

Data Validation Report for 680-223687-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-223687-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-1A-FAL22	680-223687-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-1B-FAL22	680-223687-2	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-2A-FAL22	680-223687-3	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-2B-FAL22	680-223687-4	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-3A-FAL22	680-223687-5	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-3B-FAL22	680-223687-6	Water	Field Sample/N	X	X	X	X	X
PZ-12-07-FAL22	680-223687-7	Water	Field Sample/N	X	X	X	X	X
PZ-12-08-FAL22	680-223687-8	Water	Field Sample/N	X	X	X	X	X
PZ-12-09-FAL22	680-223687-9	Water	Field Sample/N	X	X	X	X	X
SHL-12-FAL22	680-223687-10	Water	Field Sample/N	X	X	X	X	X
SHL-19-FAL22	680-223687-11	Water	Field Sample/N	X	X	X	X	X
SHL-5-FAL22	680-223687-12	Water	Field Sample/N	X	X	X	X	X
SHL-DUP11-FAL22	680-223687-13	Water	Field Duplicate/FD	X	X	X	X	X
SHM-05-41A-FAL22	680-223687-14	Water	Field Sample/N	X	X	X	X	X
SHM-05-41B-FAL22	680-223687-15	Water	Field Sample/N	X	X	X	X	X
SHM-05-41C-FAL22	680-223687-16	Water	Field Sample/N	X	X	X	X	X
SHM-10-07-FAL22	680-223687-17	Water	Field Sample/N	X	X	X	X	X
SHM-10-16-FAL22	680-223687-18	Water	Field Sample/N	X	X	X	X	X
SHM-99-32X-FAL22	680-223687-19	Water	Field Sample/N	X	X	X	X	X

Data Validation Report for 680-223687-1

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHP-2016-07B-FAL22	680-223687-20	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-223687-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 140 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

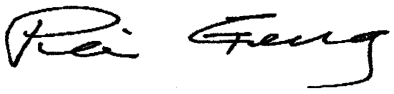
Narrative Comments

Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

January 05, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW9056A, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS68074975033 (BS)	Sulfate	89.00	90 - 110	10 - 110	percent	J/UJ	C	
LCSD68074975034 (BD)	Sulfate	89.00	90 - 110	10 - 110	percent	J/UJ	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW9056A

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
EPA-PZ-2012-1A-FAL22 680-223687-1	N	Sulfate	1.00	1.30	1.30 J	1.30	
EPA-PZ-2012-1B-FAL22 680-223687-2	N	Sulfate	1.00	21.0	21.0 J	21.0	
EPA-PZ-2012-2A-FAL22 680-223687-3	N	Sulfate	1.00	5.60 M	5.60 J	5.60	
EPA-PZ-2012-2B-FAL22 680-223687-4	N	Sulfate	1.00	8.30	8.30 J	8.30	
EPA-PZ-2012-3A-FAL22 680-223687-5	N	Sulfate	1.00	1.00 U	1.00 UJ	1.00 UJ	
EPA-PZ-2012-3B-FAL22 680-223687-6	N	Sulfate	1.00	18.0	18.0 J	18.0	
PZ-12-07-FAL22 680-223687-7	N	Sulfate	1.00	59.0	59.0 J	59.0	
PZ-12-08-FAL22 680-223687-8	N	Sulfate	1.00	9.00	9.00 J	9.00	
PZ-12-09-FAL22 680-223687-9	N	Sulfate	1.00	9.20	9.20 J	9.20	
SHL-12-FAL22 680-223687-10	N	Sulfate	1.00	130 M J1	130 J	130	
SHL-19-FAL22 680-223687-11	N	Sulfate	1.00	12.0	12.0 J	12.0	
SHL-5-FAL22 680-223687-12	N	Sulfate	1.00	1.00 U	1.00 UJ	1.00 UJ	
SHL-DUP11-FAL22 680-223687-13	FD	Sulfate	1.00	32.0	32.0 J	32.0	
SHM-05-41A-FAL22 680-223687-14	N	Sulfate	1.00	5.20	5.20 J	5.20	
SHM-05-41B-FAL22 680-223687-15	N	Sulfate	1.00	1.00 U	1.00 UJ	1.00 UJ	
SHM-05-41C-FAL22 680-223687-16	N	Sulfate	1.00	1.00 U	1.00 UJ	1.00 UJ	
SHM-10-07-FAL22 680-223687-17	N	Sulfate	1.00	12.0 M	12.0 J	12.0	
SHM-10-16-FAL22 680-223687-18	N	Sulfate	1.00	5.30	5.30 J	5.30	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R for SO4 was greater than %R limits but results were not qualified due to sample results being 4x greater than spike.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223687-1

Location	Analysis
SHP-2016-07B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Alkalinity, Total (as CaCO3)	140	140	5.00	0.00	30	OK	NA

Location	Analysis
SHP-2016-07B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Iron (FLDFLT)	560	580	100	3.51	30	OK	NA
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Manganese (FLDFLT)	510	530	10.0	3.85	30	OK	NA

Location	Analysis
SHP-2016-07B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Arsenic (FLDFLT)	160	160	5.00	0.00	30	OK	NA

Location	Analysis
SHP-2016-07B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Chloride	2.80	2.80	0.500	0.00	30	OK	NA
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Sulfate	33.0	32.0	1.00	3.08	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-223687-1

Location	Analysis
SHP-2016-07B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-2016-07B-FAL22 / SHL-DUP11-FAL22	680-223687-20 / 680-223687-13	Dissolved Organic Carbon (FLDFLT)	3.80	3.90	1.00	2.60	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 8, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on December 12, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55616_A:

SDG #	**Fraction**
680-223842-1	Alkalinity, Metals, Anion Chromatography, Total Organic Carbon

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

137 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55616 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	3 D.Met. (6010C/ 6020A)		Alk (2320B)		Cl (9056A)		SO_4 (9056A)		DOC (9060A)																							
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223842-1	12/12/22	12/27/22	20	0	20	0	20	0	20	0	20	0																						
B	680-224054-1	12/12/22	12/27/22	18	0	18	0	18	0	18	0	18	0																						
C	680-224164-1	12/12/22	12/27/22	12	0	12	0	12	0	12	0	12	0																						
Total	TR/PG			50	0	50	0	50	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55616ST.wpd

Data Validation Report for 680-223842-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-223842-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 07, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EW-01-FAL22	680-223842-1	Water	Field Sample/N	X	X	X	X	X
EW-04-FAL22	680-223842-2	Water	Field Sample/N	X	X	X	X	X
SHL-3-FAL22	680-223842-3	Water	Field Sample/N	X	X	X	X	X
SHL-8S-FAL22	680-223842-4	Water	Field Sample/N	X	X	X	X	X
SHM-05-42A-FAL22	680-223842-5	Water	Field Sample/N	X	X	X	X	X
SHM-05-42B-FAL22	680-223842-6	Water	Field Sample/N	X	X	X	X	X
SHM-10-10-FAL22	680-223842-7	Water	Field Sample/N	X	X	X	X	X
SHM-10-11-FAL22	680-223842-8	Water	Field Sample/N	X	X	X	X	X
SHM-10-12-FAL22	680-223842-9	Water	Field Sample/N	X	X	X	X	X
SHM-10-13-FAL22	680-223842-10	Water	Field Sample/N	X	X	X	X	X
SHM-13-03-FAL22	680-223842-11	Water	Field Sample/N	X	X	X	X	X
SHM-93-10D-FAL22	680-223842-12	Water	Field Sample/N	X	X	X	X	X
SHP-2016-1A-FAL22	680-223842-13	Water	Field Sample/N	X	X	X	X	X
SHP-2016-1B-FAL22	680-223842-14	Water	Field Sample/N	X	X	X	X	X
SHP-2016-2A-FAL22	680-223842-15	Water	Field Sample/N	X	X	X	X	X
SHP-2016-2B-FAL22	680-223842-16	Water	Field Sample/N	X	X	X	X	X
SHP-2016-4A-FAL22	680-223842-17	Water	Field Sample/N	X	X	X	X	X
SHP-2016-4B-FAL22	680-223842-18	Water	Field Sample/N	X	X	X	X	X
SHP-2016-5A-FAL22	680-223842-19	Water	Field Sample/N	X	X	X	X	X

Data Validation Report for 680-223842-1

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHP-2016-5B-FAL22	680-223842-20	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-223842-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 140 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

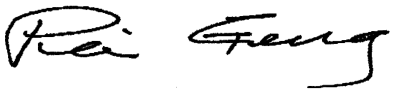
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



February 07, 2023

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 07, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-10-12-FAL22 (MS)	Iron	84.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
SHM-10-12-FAL22 (SD)	Iron	30.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
SHM-10-12-FAL22 (SD)	Manganese	38.0	90 - 114	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-10-12-FAL22 (MS)	Arsenic	210	84 - 116	10 - 125	percent	J/None	M	Spike amount Insignificant
SHM-10-12-FAL22 (SD)	Arsenic	280	84 - 116	10 - 125	percent	J/None	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R out of %R limits but no results were qualified as sample amount was 4x greater than spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R out of %R limits but no results were qualified as sample amount was 4x greater than spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 8, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on December 12, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55616_B:

SDG #	**Fraction**
680-224054-1	Alkalinity, Metals, Anion Chromatography, Total Organic Carbon

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

137 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55616 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	3 D.Met. (6010C/ 6020A)		Alk (2320B)		Cl (9056A)		SO_4 (9056A)		DOC (9060A)																							
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223842-1	12/12/22	12/27/22	20	0	20	0	20	0	20	0	20	0																						
B	680-224054-1	12/12/22	12/27/22	18	0	18	0	18	0	18	0	18	0																						
C	680-224164-1	12/12/22	12/27/22	12	0	12	0	12	0	12	0	12	0																						
Total	TR/PG			50	0	50	0	50	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55616ST.wpd

Data Validation Report for 680-224054-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-224054-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 07, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
EPA-PZ-2012-6A-FAL22	680-224054-1	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-6B-FAL22	680-224054-2	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-7A-FAL22	680-224054-3	Water	Field Sample/N	X	X	X	X	X
EPA-PZ-2012-7B-FAL22	680-224054-4	Water	Field Sample/N	X	X	X	X	X
SHL-10-FAL22	680-224054-5	Water	Field Sample/N	X	X	X	X	X
SHL-22-FAL22	680-224054-6	Water	Field Sample/N	X	X	X	X	X
SHL-9-FAL22	680-224054-7	Water	Field Sample/N	X	X	X	X	X
SHL-DUP02-FAL22	680-224054-8	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP05-FAL22	680-224054-9	Water	Field Duplicate/FD	X	X	X	X	X
SHL-DUP10-FAL22	680-224054-10	Water	Field Duplicate/FD	X	X	X	X	X
SHM-10-05A-FAL22	680-224054-11	Water	Field Sample/N	X	X	X	X	X
SHM-10-06A-FAL22	680-224054-12	Water	Field Sample/N	X	X	X	X	X
SHM-93-22B-FAL22	680-224054-13	Water	Field Sample/N	X	X	X	X	X
SHM-93-22C-FAL22	680-224054-14	Water	Field Sample/N	X	X	X	X	X
SHP-01-36X-FAL22	680-224054-15	Water	Field Sample/N	X	X	X	X	X
SHP-01-38A-FAL22	680-224054-16	Water	Field Sample/N	X	X	X	X	X
SHP-2016-3A-FAL22	680-224054-17	Water	Field Sample/N	X	X	X	X	X
SHP-2016-3B-FAL22	680-224054-18	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-224054-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 126 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

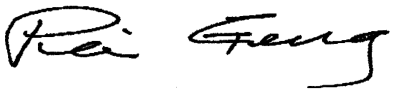
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



February 07, 2023

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 07, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

No Outliers were associated with this sample delivery group.

Qualified Results

No results associated with this sample delivery group required qualification.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.

U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias	
-	The result may be biased low
+	The result may be biased high
Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result	

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?			•	Not applicable to this method.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224054-1

Location	Analysis
EPA-PZ-2012-6B	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Alkalinity, Total (as CaCO3)	52.0	53.0	5.00	1.90	30	OK	NA

Location	Analysis
EPA-PZ-2012-6B	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Iron (FLDFLT)	21000	21000	100	0.00	30	OK	NA
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Manganese (FLDFLT)	1100	1200	10.0	8.70	30	OK	NA

Location	Analysis
EPA-PZ-2012-6B	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Arsenic (FLDFLT)	300	290	5.00	3.39	30	OK	NA

Location	Analysis
EPA-PZ-2012-6B	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Chloride	6.00	6.00	0.500	0.00	30	OK	NA
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Sulfate	5.60	5.50	1.00	1.80	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224054-1

Location	Analysis
EPA-PZ-2012-6B	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
EPA-PZ-2012-6B-FAL22 / SHL-DUP02-FAL22	680-224054-2 / 680-224054-8	Dissolved Organic Carbon (FLDFLT)	1.40	1.60	1.50	13.3	30	NA	OK

Location	Analysis
SHL-22	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Alkalinity, Total (as CaCO3)	270	270	5.00	0.00	30	OK	NA

Location	Analysis
SHL-22	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Iron (FLDFLT)	39.0	48.0	100	20.7	30	NA	OK
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Manganese (FLDFLT)	7900	8000	10.0	1.26	30	OK	NA

Location	Analysis
SHL-22	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Arsenic (FLDFLT)	4.40	5.00	5.00	12.8	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224054-1

Location	Analysis
SHL-22	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Chloride	31.0	31.0	0.500	0.00	30	OK	NA
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Sulfate	13.0	13.0	1.00	0.00	30	OK	NA

Location	Analysis
SHL-22	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHL-22-FAL22 / SHL-DUP05-FAL22	680-224054-6 / 680-224054-9	Dissolved Organic Carbon (FLDFLT)	1.30	1.30	1.50	0.00	30	NA	OK

Location	Analysis
SHP-01-38A	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Alkalinity, Total (as CaCO3)	73.0	96.0	5.00	27.2	30	OK	NA

Location	Analysis
SHP-01-38A	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Iron (FLDFLT)	24000	25000	100	4.08	30	OK	NA
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Manganese (FLDFLT)	1800	1800	10.0	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224054-1

Location	Analysis
SHP-01-38A	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Arsenic (FLDFLT)	140	140	5.00	0.00	30	OK	NA

Location	Analysis
SHP-01-38A	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Chloride	13.0	13.0	0.500	0.00	30	OK	NA
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Sulfate	5.80	6.10	1.00	5.04	30	OK	NA

Location	Analysis
SHP-01-38A	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHP-01-38A-FAL22 / SHL-DUP10-FAL22	680-224054-16 / 680-224054-10	Dissolved Organic Carbon (FLDFLT)	1.30	1.40	1.50	7.41	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 8, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on December 12, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55616_C:

SDG #	**Fraction**
680-224164-1	Alkalinity, Metals, Anion Chromatography, Total Organic Carbon

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

137 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55616 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	3 D.Met. (6010C/ 6020A)		Alk (2320B)		Cl (9056A)		SO_4 (9056A)		DOC (9060A)																							
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-223842-1	12/12/22	12/27/22	20	0	20	0	20	0	20	0	20	0																						
B	680-224054-1	12/12/22	12/27/22	18	0	18	0	18	0	18	0	18	0																						
C	680-224164-1	12/12/22	12/27/22	12	0	12	0	12	0	12	0	12	0																						
Total	TR/PG			50	0	50	0	50	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55616ST.wpd

Data Validation Report for 680-224164-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-224164-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 07, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHL-23-FAL22	680-224164-1	Water	Field Sample/N	X	X	X	X	X
SHL-DUP07-FAL22	680-224164-2	Water	Field Duplicate/FD	X	X	X	X	X
SHL-RB01-FAL22	680-224164-12	Water	Equipment Blank/EB	X	X	X	X	X
SHM-05-39B-FAL22	680-224164-3	Water	Field Sample/N	X	X	X	X	X
SHM-05-40X-FAL22	680-224164-4	Water	Field Sample/N	X	X	X	X	X
SHM-07-05X-FAL22	680-224164-5	Water	Field Sample/N	X	X	X	X	X
SHM-13-01-FAL22	680-224164-6	Water	Field Sample/N	X	X	X	X	X
SHM-13-02-FAL22	680-224164-7	Water	Field Sample/N	X	X	X	X	X
SHP-01-37X-FAL22	680-224164-8	Water	Field Sample/N	X	X	X	X	X
SHP-2016-06A-FAL22	680-224164-9	Water	Field Sample/N	X	X	X	X	X
SHP-2016-06B-FAL22	680-224164-10	Water	Field Sample/N	X	X	X	X	X
SHP-2016-06C-FAL22	680-224164-11	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-224164-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 10 results (11.90%) out of the 84 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

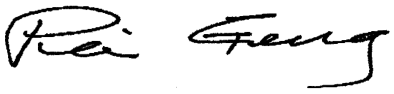
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



February 07, 2023

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 07, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW9060A, Dissolved, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHL-RB01-FAL22 (EB)	Dissolved Organic Carbon	1.90	< 0.5	< 1.5	mg/l	U/None*	V	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Equipment Blank for SW9060A, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHL-23-FAL22 680-224164-1	N	Dissolved Organic Carbon	1.50	1.60	1.60 UB		mg/l	V
SHL-DUP07-FAL22 680-224164-2	FD	Dissolved Organic Carbon	1.50	1.70	1.70 UB		mg/l	V
SHM-05-39B-FAL22 680-224164-3	N	Dissolved Organic Carbon	1.50	1.50	1.50 UB		mg/l	V
SHM-05-40X-FAL22 680-224164-4	N	Dissolved Organic Carbon	1.50	1.70	1.70 UB		mg/l	V
SHM-13-01-FAL22 680-224164-6	N	Dissolved Organic Carbon	1.50	0.740 J	0.740 UB		mg/l	TR/V
SHM-13-02-FAL22 680-224164-7	N	Dissolved Organic Carbon	1.50	1.50	1.50 UB		mg/l	V
SHP-01-37X-FAL22 680-224164-8	N	Dissolved Organic Carbon	1.50	5.30	5.30 UB		mg/l	V
SHP-2016-06A-FAL22 680-224164-9	N	Dissolved Organic Carbon	1.50	7.80	7.80 UB		mg/l	V
SHP-2016-06B-FAL22 680-224164-10	N	Dissolved Organic Carbon	1.50	1.60	1.60 UB		mg/l	V
SHP-2016-06C-FAL22 680-224164-11	N	Dissolved Organic Carbon	1.50	1.20 J	1.20 UB		mg/l	TR/V

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: SW9060A		Extraction Method: FLDFLT						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHL-23-FAL22 680-224164-1	N	Dissolved Organic Carbon	1.50	1.60	1.60 UB		mg/l	V
SHL-DUP07-FAL22 680-224164-2	FD	Dissolved Organic Carbon	1.50	1.70	1.70 UB		mg/l	V
SHM-05-39B-FAL22 680-224164-3	N	Dissolved Organic Carbon	1.50	1.50	1.50 UB		mg/l	V
SHM-05-40X-FAL22 680-224164-4	N	Dissolved Organic Carbon	1.50	1.70	1.70 UB		mg/l	V
SHM-13-01-FAL22 680-224164-6	N	Dissolved Organic Carbon	1.50	0.740 J	0.740 UB		mg/l	TR/V
SHM-13-02-FAL22 680-224164-7	N	Dissolved Organic Carbon	1.50	1.50	1.50 UB		mg/l	V
SHP-01-37X-FAL22 680-224164-8	N	Dissolved Organic Carbon	1.50	5.30	5.30 UB		mg/l	V
SHP-2016-06A-FAL22 680-224164-9	N	Dissolved Organic Carbon	1.50	7.80	7.80 UB		mg/l	V
SHP-2016-06B-FAL22 680-224164-10	N	Dissolved Organic Carbon	1.50	1.60	1.60 UB		mg/l	V
SHP-2016-06C-FAL22 680-224164-11	N	Dissolved Organic Carbon	1.50	1.20 J	1.20 UB		mg/l	TR/V

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW9060A, Dissolved

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
SHL-23-FAL22 680-224164-1	N	Dissolved Organic Carbon	1.50	1.60	1.60	1.60 UB	V
SHL-DUP07-FAL22 680-224164-2	FD	Dissolved Organic Carbon	1.50	1.70	1.70	1.70 UB	V
SHM-05-39B-FAL22 680-224164-3	N	Dissolved Organic Carbon	1.50	1.50	1.50	1.50 UB	V
SHM-05-40X-FAL22 680-224164-4	N	Dissolved Organic Carbon	1.50	1.70	1.70	1.70 UB	V
SHM-13-01-FAL22 680-224164-6	N	Dissolved Organic Carbon	1.50	0.740 J	0.740 J	0.740 UB	TR/V
SHM-13-02-FAL22 680-224164-7	N	Dissolved Organic Carbon	1.50	1.50	1.50	1.50 UB	V
SHP-01-37X-FAL22 680-224164-8	N	Dissolved Organic Carbon	1.50	5.30	5.30	5.30 UB	V
SHP-2016-06A-FAL22 680-224164-9	N	Dissolved Organic Carbon	1.50	7.80	7.80	7.80 UB	V
SHP-2016-06B-FAL22 680-224164-10	N	Dissolved Organic Carbon	1.50	1.60	1.60	1.60 UB	V
SHP-2016-06C-FAL22 680-224164-11	N	Dissolved Organic Carbon	1.50	1.20 J	1.20 J	1.20 UB	TR/V

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
TR	Trace Level Detect
V	Equipment Blank

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		Several results qualified U at concentration due to field blank contamination.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224164-1

Location	Analysis
SHM-05-40X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Alkalinity, Total (as CaCO3)	150	150	5.00	0.00	30	OK	NA

Location	Analysis
SHM-05-40X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Iron (FLDFLT)	29000	30000	100	3.39	30	OK	NA
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Manganese (FLDFLT)	880	890	10.0	1.13	30	OK	NA

Location	Analysis
SHM-05-40X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Arsenic (FLDFLT)	2200	2300	5.00	4.44	30	OK	NA

Location	Analysis
SHM-05-40X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Chloride	17.0	17.0	0.500	0.00	30	OK	NA
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Sulfate	4.40	4.10	1.00	7.06	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
Field Duplicates for SDG: 680-224164-1

Location	Analysis
SHM-05-40X	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
SHM-05-40X-FAL22 / SHL-DUP07-FAL22	680-224164-4 / 680-224164-2	Dissolved Organic Carbon (FLDFLT)	1.70	1.70	1.50	0.00	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 13, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 18, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55942_E:

SDG #	**Fraction**
680-224679-2	Alkalinity, Metals, Total Organic Carbons, Anion Chromatography

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

231 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55942 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		Pest. (8081B)		Metals (6010C/20A /7470A)		Fe,Mn (6010C)		Mn (6010C)		Diss. Mn (6010C)		3 D.Met. (6010C /6020A)		VPH (MADEP -VPH		EPH (MADEP -EPH		Alk (2320B)		COD (410.4)		CN- (9012B)		Cl (9056A)		DOC (9060A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		TDS (2540C)	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-224346-1	01/18/23	02/01/23	-	-	4	0	4	0	-	-	-	-	-	-	-	-	4	0	4	0	4	0	4	0	4	0	4	0	4	0	-	-	4	0	4	0	4	0
B	680-224347-1	01/18/23	02/01/23	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0	5	0	-	-	-	-	-	-	-	-	-	-
C	680-224673-1	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	1	0	9	0	-	-	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D	680-224679-1	01/18/23	02/01/23	-	-	-	-	-	-	5	0	1	0	-	-	-	-	5	0	-	-	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E	680-224679-2	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-	-	-	1	0	1	0	-	-	4	0	-	-
F	680-224848-1	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G	680-224848-2	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	-	-	8	0	-	-	-	-	8	0	8	0	-	-	8	0	-	-
Total	TR/PG			5	0	9	0	4	0	5	0	1	0	1	0	19	0	9	0	13	0	18	0	9	0	9	0	13	0	9	0	4	0	16	0	4	148

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55942ST.wpd

Data Validation Report for 680-224679-2

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-224679-2
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 13, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHM-13-15-FAL22	680-224679-7	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-224679-2. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 1 results (14.29%) out of the 7 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

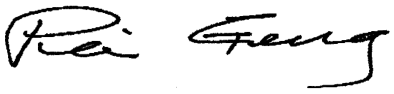
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



February 13, 2023

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 13, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method A2320B, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-13-15-FAL22 (N)		14.5	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Test Hold Time for A2320B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-13-15-FAL22 680-224679-7	N	Alkalinity, Total (as CaCO3)	5.00	270 H	270 J	-	mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: A2320B		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-13-15-FAL22 680-224679-7	N	Alkalinity, Total (as CaCO3)	5.00	270 H	270 J	-	mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
H1	Test Hold Time
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?		•		Several results qualified J- due to alkalinity being analyzed outside of 14 day holding time.
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?			•	Not applicable to this method.
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060A (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 13, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 18, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55942_G:

SDG #	**Fraction**
680-224848-2	Alkalinity, Dissolved Metals, Anion Chromatography, Total Organic Carbon,

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

231 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55942 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		Pest. (8081B)		Metals (6010C/20A /7470A)		Fe,Mn (6010C)		Mn (6010C)		Diss. Mn (6010C)		3 D.Met. (6010C /6020A)		VPH (MADEP -VPH		EPH (MADEP -EPH		Alk (2320B)		COD (410.4)		CN- (9012B)		Cl (9056A)		DOC (9060A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		TDS (2540C)	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-224346-1	01/18/23	02/01/23	-	-	4	0	4	0	-	-	-	-	-	-	-	-	4	0	4	0	4	0	4	0	4	0	4	0	4	0	-	-	4	0	4	0	4	0
B	680-224347-1	01/18/23	02/01/23	5	0	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0	5	0	-	-	-	-	-	-	-	-	-	-
C	680-224673-1	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	1	0	9	0	-	-	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D	680-224679-1	01/18/23	02/01/23	-	-	-	-	-	-	5	0	1	0	-	-	-	-	5	0	-	-	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E	680-224679-2	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-	-	-	1	0	1	0	-	-	4	0	-	-
F	680-224848-1	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G	680-224848-2	01/18/23	02/01/23	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	-	-	8	0	-	-	-	-	8	0	8	0	-	-	8	0	-	-
Total	TR/PG			5	0	9	0	4	0	5	0	1	0	1	0	19	0	9	0	13	0	18	0	9	0	9	0	13	0	9	0	4	0	16	0	4	148

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

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Data Validation Report for 680-224848-2

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2022
SDG:	680-224848-2
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 13, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	SW6010C - Dissolved	SW6020A - Dissolved	SW9056A	SW9060A - Dissolved
SHM-05-39A-FAL22	680-224848-2	Water	Field Sample/N	X	X	X	X	X
SHM-10-02-FAL22	680-224848-3	Water	Field Sample/N	X	X	X	X	X
SHM-10-03-FAL22	680-224848-4	Water	Field Sample/N	X	X	X	X	X
SHM-10-04-FAL22	680-224848-5	Water	Field Sample/N	X	X	X	X	X
SHM-10-08-FAL22	680-224848-6	Water	Field Sample/N	X	X	X	X	X
SHM-13-14D-FAL22	680-224848-7	Water	Field Sample/N	X	X	X	X	X
SHM-13-14S-FAL22	680-224848-8	Water	Field Sample/N	X	X	X	X	X
SHM-93-18B-FAL22	680-224848-9	Water	Field Sample/N	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-224848-2. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 2 results (3.57%) out of the 56 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

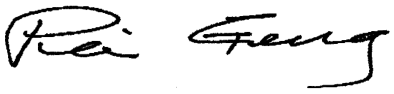
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.



February 13, 2023

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 13, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-93-18B-FAL22 (SD)	Chloride	78.0	90 - 110	10 - 110	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9056A, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SHM-10-04-FAL22 (N)	Chloride	29.2	< 28	< 56	days	J/UJ	H1	Test Exceeds UWL
SHM-10-04-FAL22 (N)	Sulfate	29.2	< 28	< 56	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Test Hold Time for SW9056A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-10-04-FAL22 680-224848-5	N	Chloride	0.500	47.0 H	47.0 J	-	mg/l	H1
SHM-10-04-FAL22 680-224848-5	N	Sulfate	1.00	34.0 H	34.0 J	-	mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: SW9056A		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SHM-10-04-FAL22 680-224848-5	N	Chloride	0.500	47.0 H	47.0 J	-	mg/l	H1
SHM-10-04-FAL22 680-224848-5	N	Sulfate	1.00	34.0 H	34.0 J	-	mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
H1	Test Hold Time
M	MS Recovery
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?			•	Not applicable to this method.
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?		•		Several results qualified J- due to analytes being analyzed outside of holding time.
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R lower than %R limits but no results were qualified as sample amount was 4x greater than spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Data Validation Report for 680-224848-2

Review Questions

Method: SW9060A (Total Organic Carbon)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

February 23, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on January 31, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #53332:

SDG #	Fraction
JD37967	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Kevin Kha
Project Manager/Chemist
Kkha@lab-data.com

75 pages-ADV (no worksheets) Attachment 1

ADR (Stage 2A) **LDC# 53332 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix: Water/Sediment				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	JD37967	01/31/22	02/22/22	1	0																														

LDC Report# 53332

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

JD37967

February 23, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the January 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed for this method.

Serial Dilution

Serial dilution analysis was performed on an associated project sample. The analysis criteria were met.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Jan-2022	EFFLUENT	JD37967-1	N	3010A	6020B	S2AVE
10-Jan-2022	EFFLUENTMS	MP30757-S1	MS	3010A	6020B	S2AVE
10-Jan-2022	EFFLUENTMSD	MP30757-S2	MSD	3010A	6020B	S2AVE

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: JD37967

Laboratory: ACTD

EDD Filename: jd37967-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_211006

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

JD37967

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

March 17, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on February 23, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #35042:

SDG #	Fraction
FA92962	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Kevin Kha
Project Manager/Chemist
Kkha@lab-data.com

33 pages-ADV (no worksheets) Attachment 1

ADR (Stage 2A) **LDC# 53504 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA92962	02/23/22	03/16/22	1	0																														

LDC Report# 53504

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA92962

March 17, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the February 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed for this method.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Feb-2022	EFFLUENT	FA92962-1	N	3010A	6020B	S2AVE

N = Normal Sample

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA92962

Laboratory: ACTO

EDD Filename: fa92962-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_211006

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA92962

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

May 31, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on April 8, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #53941:

SDG #	**Fraction**
FA93641/SP1016	Metals, Nitrate as Nitrogen, Chloride and Sulfate

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,



Kevin Kha
Project Manager/Chemist
Kkha@lab-data.com

ADR (Stage 2A)

LDC# 53941 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	(3) Metals (6010D)		Fe,Mn (6010D)		As (6020B)		Cl,SO_4 (300.0 /9056A)		NO_3N (353.2)		NO_3/NO_2-N (353.2)																					
Matrix: Water/Sediment				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA93641/SP1016	04/08/22	04/29/22	1	0	2	0	3	0	1	0	1	0	1	0																				
Total	T/PG/KK			1	0	2	0	3	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

LDC Report# 53941

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA93641/SP1016

May 31, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the March 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015), and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Metals by EPA SW 846 Method 6010D and 6020B
Nitrate as Nitrogen and Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Chloride and Sulfate by EPA Method 300.0/SW 846 Method 9056A

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the limit of quantitation (LOQ) as detected by the laboratory were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

Overall Assessment of Data

The analysis was conducted within all spe*cifications of the methods. No results were rejected in this SDG.

Due to results below the LOQ, data were qualified as estimated in one sample.

Data flags are summarized and are presented as Attachment 2.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-Mar-2022	EW-04	FA93641-3	N	3010A	6010D	S2AVE
04-Mar-2022	EW-04	FA93641-3	N	3010A	6020B	S2AVE
04-Mar-2022	EW-01	FA93641-2	N	3010A	6010D	S2AVE
04-Mar-2022	EW-01	FA93641-2	N	3010A	6020B	S2AVE
04-Mar-2022	EFFLUENT	FA93641-1	N	3010A	6010D	S2AVE
04-Mar-2022	EFFLUENT	FA93641-1	N	3010A	6020B	S2AVE
04-Mar-2022	EFFLUENT	FA93641-1	N	Gen Prep	300.0	S2AVE
04-Mar-2022	EFFLUENT	SP1016-1	N	NONE	353.2	S2AVE

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: SP1016, FA93641 **Laboratory: KAS, ACTO**

EDD Filename: SP1016, fa93641-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_211025**

SDG: FA93641

Method Category: METALS

Method: 6010D ***Matrix:*** Water

Sample ID: EFFLUENT ***Collected:*** 3/4/2022 10:30:00 AM ***Analysis Type:*** Initial/TOT ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BARIUM	14.0	J	5.0	LOD	200	LOQ	ug/L	J	TR
MANGANESE	4.5	J	2.0	LOD	15	LOQ	ug/L	J	TR

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Data Qualifier Summary

Lab Reporting Batch ID: SP1016, FA93641 **Laboratory: KAS, ACTO**

EDD Filename: SP1016, fa93641-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_211025**

Reason Code Legend

Reason Code	*Description*
TR	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA93641/SP1016

Reporting Limit Outliers

Lab Reporting Batch ID: FA93641 **Laboratory: ACTO**

EDD Filename: fa93641-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_211025**

Method: **6010D**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
EFFLUENT	BARIUM	J	14.0	200	LOQ	ug/L	J (all detects)
	MANGANESE	J	4.5	15	LOQ	ug/L	

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

June 3, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on April 20, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #54102:

SDG #	**Fraction**
FA94728	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,



Kevin Kha
Project Manager/Chemist
Kkha@lab-data.com

34 pages-ADV (no worksheets) Attachment 1

ADR (Stage 2A) **LDC# 54102 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA94728	04/20/22	05/11/22	1	0																														

LDC Report# 54102

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA94728

June 2, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the April 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

Serial Dilution

Serial dilution analysis was performed on an associated project sample. The analysis criteria were met.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Apr-2022	EFFLUENT	FA94728-1	N	3010A	6020B	S2AVE
08-Apr-2022	EFFLUENTDUP	MP40550-D1	DUP	3010A	6020B	S2AVE
08-Apr-2022	EFFLUENTMS	MP40550-S1	MS	3010A	6020B	S2AVE
08-Apr-2022	EFFLUENTMSD	MP40550-S2	MSD	3010A	6020B	S2AVE

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA94728

Laboratory: ACTO

EDD Filename: fa94728-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_211025

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control Outlier Reports

FA94728

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

July 8, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on May 26, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #54376:

SDG #	**Fraction**
FA95548	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Kevin Kha
Project Manager/Chemist
Kkha@lab-data.com

36 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A) **LDC# 54376 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA95548	05/26/22	06/17/22	1	0																														
Total	T/PG/KK			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Sovereign\Shepleys Hill\54376ST.wpd

LDC Report# 54376

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA95548

July 8, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the May 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2022	EFFLUENT	FA95548-1	N	3010A	6020B	S2AVE

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA95548

Laboratory: ACTO

EDD Filename: fa95548-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_211025

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA95548

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

July 28, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on June 14, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #54441:

SDG #	**Fraction**
FA96171	Metals, Wet Chemistry

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

103 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A)

LDC# 54441 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	(3) Metals (6010D)		Fe,Mn (6010D)		As (6020B)		Cl,SO_4 (300.0 /9056A)		NO_3N (353.2)		NO_2-N (353.2)		NO_3/ NO_2-N (353.2)																					
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA96171	06/14/22	07/06/22	1	0	2	0	3	0	1	0	1	0	1	0	1	0																				

LDC Report# 54441

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA96171

July 27, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the June 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Metals by Environmental Protection Agency (EPA) SW 846 Methods 6010D/6020B

Wet Chemistry
Chloride and Sulfate by EPA Method 300.0 and EPA SW 846 Method 9056A
Nitrate as Nitrogen (N), Nitrite as N, and Nitrate/Nitrite as N by EPA Method 353.2

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the limit of quantitation (LOQ) as detected by the laboratory were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results below the LOQ, data were qualified as estimated in one sample.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Jun-2022	EFFLUENT	FA96171-1	N	3010A	6010D	S2AVE
03-Jun-2022	EFFLUENT	FA96171-1	N	3010A	6020B	S2AVE
03-Jun-2022	EFFLUENT	FA96171-1	N	Gen Prep	300.0	S2AVE
03-Jun-2022	INFLUENT EW-04	FA96171-3A	N	3010A	6020B	S2AVE
03-Jun-2022	INFLUENT EW-04	FA96171-3B	N	3010A	6010D	S2AVE
03-Jun-2022	INFLUENT EW-01	FA96171-2A	N	3010A	6020B	S2AVE
03-Jun-2022	INFLUENT EW-01	FA96171-2B	N	3010A	6010D	S2AVE

N = Normal Sample *MS = Matrix Spike* *EB = Equipment Blank*
FD = Field Duplicate *MSD = Matrix Spike Duplicate* *TB = Trip Blank*
III = EPA Level III Validation *IV = EPA Level IV Validation*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA96171 **Laboratory: ACTO**

EDD Filename: fa96171-sedd_2a_1-Part1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method Category: METALS

Method: 6010D ***Matrix:*** Water

Sample ID: EFFLUENT ***Collected:*** 6/3/2022 11:45:00 AM ***Analysis Type:*** Initial/TOT ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BARIUM	15.3	J	5.0	LOD	200	LOQ	ug/L	J	TR
MANGANESE	6.0	J	2.0	LOD	15	LOQ	ug/L	J	TR
MAGNESIUM	4890	J	100	LOD	5000	LOQ	ug/L	J	TR

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA96171

Reporting Limit Outliers

Lab Reporting Batch ID: FA96171 **Laboratory: ACTO**

EDD Filename: fa96171-sedd_2a_1-Part1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **6010D**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
EFFLUENT	BARIUM	J	15.3	200	LOQ	ug/L	
	MAGNESIUM	J	4890	5000	LOQ	ug/L	J (all detects)
	MANGANESE	J	6.0	15	LOQ	ug/L	

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

August 23, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on August 2, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #54759:

SDG #	**Fraction**
FA97199	Arsenc

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

157 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A) **LDC# 54759 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA97199	08/02/22	08/23/22	1	0																														
Total	T/PG			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Sovereign\Shepleys Hill\54759ST.wpd

LDC Report# 54759

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA97199

August 23, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the June 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the method. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Jul-2022	EFFLUENT	22207163801	N	TOTAL	6020B	S2AVE

N = Normal Sample *MS = Matrix Spike* *EB = Equipment Blank*
FD = Field Duplicate *MSD = Matrix Spike Duplicate* *TB = Trip Blank*
III = EPA Level III Validation *IV = EPA Level IV Validation*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 222071638

Laboratory: PAGC

EDD Filename: 222071638

eQAPP Name: Sovereign_Shepley'sHillLandfill_220526

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA97199

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

September 19, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on September 8, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #54933:

SDG #	**Fraction**
FA97917/222081830	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

154 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A)

LDC# 54933 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA97917/ 222081830	09/08/22	09/29/22	1	0																														
Total	TR/PG			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Sovereign\Shepleys Hill\54933ST.wpd

LDC Report# 54933

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA97917/222081830

September 19, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the August 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the method. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for this method, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Aug-2022	EFFLUENT	22208183001	N	TOTAL	6020B	S2AVE

N = Normal Sample *MS = Matrix Spike* *EB = Equipment Blank*
FD = Field Duplicate *MSD = Matrix Spike Duplicate* *TB = Trip Blank*
III = EPA Level III Validation *IV = EPA Level IV Validation*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 222081830

Laboratory: PAGC

EDD Filename: 222081830

eQAPP Name: Sovereign_Shepley'sHillLandfill_220526

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

222081830

(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

November 8, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fractions listed below. This SDG was received on October 17, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #55176:

SDG #	Fraction
FA98819/222091446	Volatile, Semivolatiles, Chlorinated Pesticides and Polychlorinated Biphenyls, Metals, Mercury, Wet Chemistry

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

348 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A)

LDC# 55176 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (624.1)		SVOA (625.1)		Pest. /PCBs (608.3)		Metals (6010D /7470A)		As (6020B)		Cl,SO_4 (300.0 /9056A)		NO_3N (353.2)		NO_2-N (353.2)		NO_3/ NO_2-N (353.2)		HEM (1664A)															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA98819 /222091446	10/17/22	11/07/22	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0														

LDC Report# 55176

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA98819/222091446

November 8, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the September 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Volatile Organic Compounds (VOCs) by EPA Method 624.1
Semivolatile Organic Compounds (SVOCs) by EPA Method 625.1
Chlorinated Pesticide and Polychlorinated Biphenyls (PCBs) by EPA Method 608.3
Metals by EPA SW 846 Methods 6010D/6020B
Mercury by EPA SW Method 7470A

Wet Chemistry
Chloride and Sulfate by EPA Method 300.0 and EPA SW 846 Method 9056A
Nitrate as Nitrogen (N), Nitrite as N, and Nitrate/Nitrite as N by EPA Method 353.2
n-Hexane Extractable Material by EPA Method 1664A

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of one MS/MSD pair for bromomethane, chloroethane, and trichlorofluoromethane. The associated sample results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are presented in Enclosure I.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for these methods, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits with the exception of one LCS for 3,3'-dichlorobenzidine and benzo(k)fluoranthene. The associated sample results were qualified as detected estimated (J). The details regarding the qualification of data are presented in Enclosure I.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the limit of quantitation (LOQ) as detected by the laboratory were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to MS/MSD %R and RPD, data were qualified as estimated in one sample.

Due to LCS %R, data were qualified as estimated in one sample.

Due to results below the LOQ, data were qualified as estimated in one sample.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Sep-2022	EFFLUENT	FA98819-1	N		624	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	3010A	6010D	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	3010A	6020B	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	3510C	608-PCB	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	3510C	608-PEST	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	3510C	625	Stage 2A
09-Sep-2022	EFFLUENT	FA98819-1	N	7470A	7470A	Stage 2A
09-Sep-2022	EFFLUENTMS	FA98819-1MS	MS		624	Stage 2A
09-Sep-2022	EFFLUENTMSD	FA98819-1MSD	MSD		624	Stage 2A

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA98819 **Laboratory: ACTO**

EDD Filename: fa98819-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method Category: METALS
Method: 6010D **Matrix:** Water

Sample ID: EFFLUENT **Collected:** 9/9/2022 10:15:00 AM **Analysis Type:** Initial/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	16.0	J	5.0	LOD	200	LOQ	ug/L	J	TR
COPPER	14.7	J	2.0	LOD	25	LOQ	ug/L	J	TR
MANGANESE	11.8	J	2.0	LOD	15	LOQ	ug/L	J	TR

Method Category: VOA
Method: 624 **Matrix:** Water

Sample ID: EFFLUENT **Collected:** 9/9/2022 10:15:00 AM **Analysis Type:** Initial/TOT **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMOMETHANE	80	U	80	LOD	100	LOQ	ug/L	UJ	Q
METHYLENE CHLORIDE	41.1	J	80	LOD	100	LOQ	ug/L	J	TR

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Data Qualifier Summary

Lab Reporting Batch ID: FA98819 **Laboratory: ACTO**

EDD Filename: fa98819-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Reason Code Legend

Reason Code	*Description*
L	Laboratory Control Spike Upper Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
TR	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA98819

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: FA98819 **Laboratory: ACTO**

EDD Filename: fa98819-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **625**
Matrix: **Water**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
OP93036-BS (EFFLUENT)	3,3'-DICHLOROBENZIDINE BENZO(K)FLUORANTHENE	116 112	- -	20.00-110.00 56.00-110.00	- -	3,3'-DICHLOROBENZIDINE BENZO(K)FLUORANTHENE	J (all detects)

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: FA98819 **Laboratory: ACTO**

EDD Filename: fa98819-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **624**
Matrix: **Water**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
EFFLUENTMSD (EFFLUENT)	CHLOROETHANE TRICHLOROFLUOROMETHANE	- -	- -	58.00-145.00 57.00-139.00	20 (19.00) 23 (17.00)	CHLOROETHANE TRICHLOROFLUOROMETHANE	J (all detects)
EFFLUENTMS EFFLUENTMSD (EFFLUENT)	BROMOMETHANE	41	48	54.00-149.00	-	BROMOMETHANE	J(all detects) UJ(all non-detects)

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Reporting Limit Outliers

Lab Reporting Batch ID: FA98819 **Laboratory: ACTO**

EDD Filename: fa98819-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **6010D**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
EFFLUENT	BARIUM	J	16.0	200	LOQ	ug/L	
	COPPER	J	14.7	25	LOQ	ug/L	J (all detects)
	MANGANESE	J	11.8	15	LOQ	ug/L	

Method: **624**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
EFFLUENT	METHYLENE CHLORIDE	J	41.1	100	LOQ	ug/L	J (all detects)

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

November 8, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fractions listed below. This SDG was received on October 18, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #55177:

SDG #	**Fraction**
FA98820	Volatile, Methane, Ethane, and Ethene, Metals

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

150 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A)

LDC# 55177 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260D)		Fe,Mn (6010D)		As (6020B)		Methane Ethane Ethene																											
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA98820	10/18/22	11/08/22	2	0	2	0	2	0	2	0																								
Total	TR/PG			2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Sovereign\Shepleys Hill\55177ST.wpd

LDC Report# 55177

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA98820

November 8, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the September 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Volatile Organic Compounds (VOCs) by EPA SW 846 Method 8260D
Methane, Ethane, and Ethene by Method RSK-175
Metals by EPA SW 846 Methods 6010D/6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the laboratory blanks with the exception of one blank for iron. The associated sample results were not detected or were significantly greater than the concentrations found in the blanks, therefore no data were qualified. The details are presented in Enclosure I.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for these methods, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for these methods, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the limit of quantitation (LOQ) as detected by the laboratory were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results below the LOQ, data were qualified as estimated in two samples.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Sep-2022	EW-01	FA98820-1	N		RSK 175	Stage 2A
09-Sep-2022	EW-01	FA98820-1	N	3010A	6010D	Stage 2A
09-Sep-2022	EW-01	FA98820-1	N	3010A	6020B	Stage 2A
09-Sep-2022	EW-01	FA98820-1	N	5030B	8260D	Stage 2A
09-Sep-2022	EW-04	FA98820-2	N		RSK 175	Stage 2A
09-Sep-2022	EW-04	FA98820-2	N	3010A	6010D	Stage 2A
09-Sep-2022	EW-04	FA98820-2	N	3010A	6020B	Stage 2A
09-Sep-2022	EW-04	FA98820-2	N	5030B	8260D	Stage 2A

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA98820 **Laboratory: ACTO**

EDD Filename: fa98820-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method Category: VOA

Method: 8260D ***Matrix:*** Water

Sample ID: EW-01 ***Collected:*** 9/9/2022 10:45:00 AM ***Analysis Type:*** Initial/TOT ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BENZENE	0.94	J	0.50	LOD	1.0	LOQ	ug/L	J	TR
CHLOROBENZENE	0.73	J	0.50	LOD	1.0	LOQ	ug/L	J	TR
ETHYLBENZENE	0.41	J	0.50	LOD	1.0	LOQ	ug/L	J	TR
P/M-XYLENE	1.6	J	1.0	LOD	2.0	LOQ	ug/L	J	TR
CIS-1,2-DICHLOROETHENE	0.56	J	0.50	LOD	1.0	LOQ	ug/L	J	TR

Sample ID: EW-04 ***Collected:*** 9/9/2022 11:15:00 AM ***Analysis Type:*** Initial/TOT ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BENZENE	0.35	J	0.50	LOD	1.0	LOQ	ug/L	J	TR
ETHYL ETHER	2.7	J	2.0	LOD	5.0	LOQ	ug/L	J	TR

Method Category: VOA

Method: RSK 175 ***Matrix:*** Water

Sample ID: EW-01 ***Collected:*** 9/9/2022 10:45:00 AM ***Analysis Type:*** Initial/TOT ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ETHANE	0.68	J	0.50	LOD	1.0	LOQ	ug/L	J	TR

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Data Qualifier Summary

Lab Reporting Batch ID: FA98820 **Laboratory: ACTO**

EDD Filename: fa98820-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
TR	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA98820

Method Blank Outlier Report

Lab Reporting Batch ID: FA98820 **Laboratory: ACTO**

EDD Filename: fa98820-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **6010D**
Matrix: **Water**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MP41228-MB1	9/21/2022 4:14:00 PM	IRON	100 ug/L	EW-01 EW-04

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Reporting Limit Outliers

Lab Reporting Batch ID: FA98820 **Laboratory: ACTO**

EDD Filename: fa98820-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: 8260D

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EW-01	BENZENE	J	0.94	1.0	LOQ	ug/L	
	CHLOROBENZENE	J	0.73	1.0	LOQ	ug/L	
	CIS-1,2-DICHLOROETHENE	J	0.56	1.0	LOQ	ug/L	J (all detects)
	ETHYLBENZENE	J	0.41	1.0	LOQ	ug/L	
	P/M-XYLENE	J	1.6	2.0	LOQ	ug/L	
EW-04	BENZENE	J	0.35	1.0	LOQ	ug/L	J (all detects)
	ETHYL ETHER	J	2.7	5.0	LOQ	ug/L	

Method: RSK 175

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EW-01	ETHANE	J	0.68	1.0	LOQ	ug/L	J (all detects)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

November 8, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fractions listed below. This SDG was received on October 20, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #55220:

SDG #	**Fraction**
FA99549	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

34 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A) **LDC# 55220 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FA99549	10/20/22	11/10/22	1	0																														

LDC Report# 55220

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FA99549

November 8, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the October 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by EPA SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the method. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for these methods, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Oct-2022	EFFLUENT	FA99549-1	N	3010A	6020B	Stage 2A

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FA99549

Laboratory: ACTO

EDD Filename: fa99549-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_220526

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FA99549
(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

December 8, 2022

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed is the final validation report for the fraction listed below. This SDG was received on November 17, 2022. Attachment 1 is a summary of the samples that were reviewed for the analysis.

LDC Project #55436:

SDG #	**Fraction**
FC389	Arsenic

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to the method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Chemist
pgeng@lab-data.com

37 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A) **LDC# 55436 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	As (6020B)																															
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FC389	11/17/22	12/12/22	1	0																														

LDC Report# 55436

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FC389

December 8, 2022

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the November 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Arsenic by EPA SW 846 Method 6020B

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the method. No contaminant concentrations were detected in the laboratory blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for these methods, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-Nov-2022	EFFLUENT	FC389-1	N	3010A	6020A	Stage 2A

N = Normal Sample *MS = Matrix Spike* *DUP = Laboratory Duplicate*
FD = Field Duplicate *MSD = Matrix Spike Duplicate*
TB = Trip Blank *EB = Equipment Blank* *SB = Source Blank* *AB = Ambient Blank*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FC389

Laboratory: ATCO

EDD Filename: fc389-sedd_2a_1

eQAPP Name: Sovereign_Shepley'sHillLandfill_221108

No Data Review Qualifiers Applied.

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FC389
(No Outliers)

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Sovereign Consulting Inc.
16 Chestnut Street, Suite 500
Foxborough, MA 02045
ATTN: Mr. Steven Passafaro
spassafaro@sovcon.com

January 24, 2023

SUBJECT: Shepley's Hill - Data Validation

Dear Mr. Passafaro,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 3, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55747:

SDG #	**Fraction**
FC1186	Metals, Wet Chemistry

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015)
- US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

V:\LOGIN\Sovereign\Shepleys Hill\55747COV.doc

143 pages-ADV (no worksheets)

Attachment 1

ADR (Stage 2A)

LDC# 55747 (Sovereign Consulting, Inc. - Foxborough, MA / Shepley's Hill)

LDC	SDG#	DATE REC'D	(3) DATE DUE	(3) Metals (6010D)		Fe,Mn (6010D)		As (6020B)		Cl,SO_4 (300.0 /9056A)		NO_3N (353.2)		NO_2-N (353.2)		NO_3/ NO_2-N (353.2)																					
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	FC1186	01/03/23	01/24/23	1	0	2	0	2	0	1	0	1	0	1	0	1	0																		
Total	TR/PG			1	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

Shaded cells indicate Stage 4 validation (all other cells are ADR review). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Sovereign\Shepleys Hill\55747ST.wpd

LDC Report# 55747

Automated Data Review Data Validation Report
Shepley's Hill

Sample Delivery Group(s)

FC1186

January 23, 2023

Introduction

This Data Validation Report (DVR) presents Stage 2A data validation results for samples collected during the November 2022 sampling period. Data validation was performed in accordance with the Quality Assurance Project Plan (QAPP) for Shepley's Hill Landfill Treatment System O&M Services, Devens, Massachusetts (March 2015) and the US Environmental Protection Agency (EPA) National Functional Guidelines (NFG) for Inorganic Superfund Data Review (January 2017). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method(s):

Metals by EPA SW 846 Methods 6010D/6020B

Wet Chemistry
Chloride, Sulfate by EPA SW 846 Method 9056A and EPA Method 300.0
Nitrate as Nitrogen (N), Nitrite as N, and Nitrate/Nitrite as N by EPA Method 353.2

Sample identifications, methods of analyses performed, and review levels on each sample are presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. Automated Data Review outliers and manual data validation worksheets are presented in Enclosure I.

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

Sample Receipt & Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

Laboratory Blanks

Laboratory blanks were performed as required by the methods. No contaminant concentrations were detected in the method blanks with the following exceptions:

SDG	Laboratory Blank ID	Analyte	Maximum Concentration	Associated Samples
FC1186	MP41606-MB1	Iron	19.8 ug/L	EFFLUENT INFLUENT EW-01 INFLUENT EW-04

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were not detected or were significantly greater than the concentrations found in the associated blanks.

Field Blanks

No field blanks were identified in this SDG.

Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for this method, and therefore matrix spike and matrix spike duplicate analyses were not performed.

Duplicate Sample Analysis

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for these methods, and therefore laboratory duplicate analyses were not performed.

Serial Dilution

Serial dilution was not performed for this SDG.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Field Duplicates

No field duplicates were identified in this SDG.

Target Analyte Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the limit of quantitation (LOQ) as detected by the laboratory were qualified as detected estimated (J). The details regarding the qualification of data are provided in Enclosure I.

Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to results below the LOQ, data were qualified as estimated in one sample.

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Dec-2022	EFFLUENT	FC1186-1	N	3010A	6010D	Stage 2A
09-Dec-2022	EFFLUENT	FC1186-1	N	3010A	6020B	Stage 2A
09-Dec-2022	EFFLUENT	FC1186-1	N	Gen Prep	300.0	Stage 2A
09-Dec-2022	INFLUENT EW-01	FC1186-2	N	3010A	6010D	Stage 2A
09-Dec-2022	INFLUENT EW-01	FC1186-2	N	3010A	6020B	Stage 2A
09-Dec-2022	INFLUENT EW-04	FC1186-3	N	3010A	6010D	Stage 2A

N = Normal Sample *MS = Matrix Spike* *EB = Equipment Blank*
FD = Field Duplicate *MSD = Matrix Spike Duplicate* *TB = Trip Blank*
III = EPA Level III Validation *IV = EPA Level IV Validation*

Attachment 2

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: FC1186 **Laboratory: ACTO**

EDD Filename: fc1186-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method Category: **METALS**

Method: **6010D** ***Matrix:*** **Water**

Sample ID: **EFFLUENT** ***Collected:*** **12/9/2022 10:30:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BARIUM	22.6	J	5.0	LOD	200	LOQ	ug/L	J	TR

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Data Qualifier Summary

Lab Reporting Batch ID: FC1186 **Laboratory: ACTO**

EDD Filename: fc1186-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
TR	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Enclosure I

Validation Outlier Reports

Quality Control
Outlier Reports

FC1186

Method Blank Outlier Report

Lab Reporting Batch ID: FC1186 **Laboratory: ACTO**

EDD Filename: fc1186-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **6010D**
Matrix: **Water**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MP41606-MB1	12/16/2022 4:42:00 PM	IRON	19.8 ug/L	EFFLUENT INFLUENT EW-01 INFLUENT EW-04

Project Name and Number: - USACE Project: Shepley's Hill (SHL); Devens, MA

Reporting Limit Outliers

Lab Reporting Batch ID: FC1186 **Laboratory: ACTO**

EDD Filename: fc1186-sedd_2a_1 **eQAPP Name: Sovereign_Shepley'sHillLandfill_220526**

Method: **6010D**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
EFFLUENT	BARIUM	J	22.6	200	LOQ	ug/L	J (all detects)

Appendix D

Site-Wide Hydraulic Monitoring Results from 2017 through 2022

Appendix D
Site-Wide Hydraulic Monitoring Results from 2017 through 2022
Shepley's Hill Landfill, Former Fort Devens Army Installation, Massachusetts

SERES Engineering & Services, LLC
ARCADIS a joint venture

Well ID	TOR Elevation (ft NAVD88)	May 2017		November 2017		April 2018		November 2018		April 2019		October 2019		May 2020		November 2020		May 2021		October 2021		April 2022		October 2022	
		DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)	DTW (ft bmp)	GWE (ft NAVD88)
20-1	278.52	17.78	260.74	36.86	241.66	-	-	18.33	260.19	-	-	39.50	239.02	-	-	45.35	233.17	-	-	-	-	-	-		
27-1	270.66	11.71	258.95	34.32	236.34	-	-	12.59	258.07	-	-	41.12	229.54	-	-	42.85	227.81	-	-	-	-	-	-		
27-2	275.15	19.40	255.75	44.45	230.70	-	-	21.00	254.15	-	-	47.45	227.70	-	-	51.50	223.65	-	-	-	-	-	-		
3-2	268.20	25.39	242.81	36.45	231.75	-	-	27.13	241.07	-	-	39.53	228.67	-	-	40.00	228.20	-	-	-	-	-	-		
32M-01-14XBR	256.06	-	-	-	-	-	-	-	-	-	-	24.65	231.41	-	-	25.88	230.18	-	-	-	-	-	-		
32M-01-14XOB	256.56	21.14	235.42	25.57	230.99	-	-	24.28	232.28	-	-	26.38	230.18	-	-	27.05	229.51	-	-	-	-	-	-		
32M-01-15XBR	257.70	-	-	-	-	-	-	-	-	-	-	22.57	235.13	-	-	22.32	235.38	-	-	-	-	-	-		
32M-01-16XBR	257.50	-	-	-	-	-	-	-	-	-	-	24.54	232.96	-	-	26.94	230.56	-	-	-	-	-	-		
32M-92-01X	260.17	16.11	244.06	18.51	241.66	-	-	17.66	242.51	-	-	11.38	248.79	-	-	20.96	239.21	-	-	-	-	-	-		
32Z-01-07XOB	259.48	13.99	245.49	16.17	243.31	-	-	15.29	244.19	-	-	19.38	240.10	-	-	19.55	239.93	-	-	-	-	-	-		
CAP-2B	250.21	7.36	242.85	20.66	229.55	-	-	9.32	240.89	-	-	22.80	227.41	-	-	23.70	226.51	-	-	-	-	-	-		
CH-1D	250.59	8.09	242.50	19.15	231.44	-	-	9.66	240.93	-	-	21.80	228.79	-	-	21.77	228.82	-	-	-	-	-	-		
CH-1S	250.63	8.42	242.21	18.98	231.65	-	-	9.95	240.68	-	-	22.00	228.63	-	-	21.87	228.76	-	-	-	-	-	-		
EPA-PZ-2012-1A	223.79	10.39	213.40	10.62	213.17	10.34	213.45	10.69	213.10	10.84	212.95	12.15	211.64	10.38	213.41	12.27	211.52	11.12	212.67	9.74	214.05	10.55	213.24	12.81	210.98
EPA-PZ-2012-1B	223.53	10.14	213.39	10.35	213.18	10.08	213.45	10.43	213.10	10.56	212.97	11.80	211.73	10.09	213.44	11.93	211.60	10.81	212.72	9.51	214.02	10.30	213.23	12.51	211.02
EPA-PZ-2012-2A	223.38	9.98	213.40	9.96	213.42	9.88	213.50	10.15	213.23	10.39	212.99	11.42	211.96	9.94	213.44	11.51	211.87	10.62	212.76	9.40	213.98	10.11	213.27	12.20	211.18
EPA-PZ-2012-2B	223.37	10.03	213.34	10.11	213.26	9.99	213.38	10.29	213.08	10.42	212.95	11.44	211.93	9.98	213.39	11.51	211.86	10.60	212.77	9.45	213.92	10.30	213.07	12.15	211.22
EPA-PZ-2012-3A	222.65	9.80	212.85	10.10	212.55	9.74	212.91	10.20	212.45	10.20	212.45	11.68	210.97	9.81	212.84	11.76	210.89	10.50	212.15	9.20	213.45	9.95	212.70	12.27	210.38
EPA-PZ-2012-3B	222.57	9.78	212.79	10.11	212.46	9.75	212.82	10.20	212.37	10.17	212.40	11.60	210.97	9.68	212.89	11.70	210.87	10.48	212.09	9.19	213.38	9.86	212.71	12.25	210.32
EPA-PZ-2012-4A	226.60	14.00	212.60	14.35	212.25	13.88	212.72	14.36	212.24	14.37	212.23	15.92	210.68	13.94	212.66	16.00	210.60	14.58	212.02	13.41	213.19	14.08	212.52	16.46	210.14
EPA-PZ-2012-4B	226.39	13.93	212.46	14.31	212.08	13.79	212.60	14.18	212.21	15.24	211.15	15.76	210.63	13.85	212.54	15.90	210.49	14.62	211.77	13.40	212.99	14.03	212.36	16.48	209.91
EPA-PZ-2012-5A	220.01	7.09	212.92	7.19	212.82	7.09	212.92	7.41	212.60	7.50	212.51	8.96	211.05	7.42	212.59	9.05	210.96	7.96	212.05	6.68	213.33	7.37	212.64	9.66	210.35
EPA-PZ-2012-5B	219.38	6.49	212.89	6.70	212.68	6.49	212.89	6.83	212.55	6.91	212.47	8.24	211.14	6.63	212.75	8.32	211.06	7.23	212.15	6.04	213.34	6.74	212.64	8.86	210.52
EPA-PZ-2012-6A	234.25	21.53	212.72	22.01	212.24	21.45	212.80	21.99	212.26	21.89	212.36	23.68	210.57	21.49	212.76	23.70	210.55	22.28	211.97	20.96	213.29	21.64	212.61	24.24	210.01
EPA-PZ-2012-6B	234.08	22.55	211.53	21.92	212.16	21.49	212.59	21.87	212.21	21.85	212.23	23.55	210.53	21.39	212.69	23.63	210.45	22.26	211.82	21.04	213.04	21.62	212.46	24.12	209.96
EPA-PZ-2012-7A	234.16	21.35	212.81	22.12	212.04	21.32	212.84	22.21	211.95	22.95	211.21	27.79	206.37	21.32	212.84	23.58	210.58	22.10	212.06	21.07	213.09	21.61	212.55	24.11	210.05
EPA-PZ-2012-7B	234.03	21.36	212.67	21.87	212.16	21.30	212.73	22.05	211.98	21.83	212.20	23.39	210.64	21.37	212.66	23.45	210.58	22.11	211.92	20.98	213.05	21.51	212.52	24.02	210.01
MW-1	251.84	8.31	243.53	11.50	240.34	-	-	9.37	242.47	-	-	Dry	-	-	-	Dry	-	-	-	-	-	-	-		
MW-11A	258.57	Dry	-	8.75	249.82	-	-	-	-	-	-	8.90	249.67	-	-	Dry	-	-	-	-	-	-	-		
MW-14	256.61	6.47	250.14	Dry	-	-	-	6.83	249.78	-	-	Dry	-	-	-	Dry	-	-	-	-	-	-	-		
MW-16	270.23	Dry	-	9.55	260.68	-	-	9.54	260.69	-	-	9.55	260.68	-	-	Dry	-	-	-	-	-	-	-		
MW-22	267.64	6.13	261.51	Dry	-	-	-	6.36	261.28	-	-	Dry	-	-	-	Dry	-	-	-	-	-	-	-		
MW-4-1	247.33	3.26	244.07	7.58	239.75	-	-	3.75	243.58	-	-	Dry	-	-	-	7.60	239.73	-	-	-	-	-	-		
MW-7	249.10	6.03	243.07	11.98	237.12	-	-	-	-	-	-	Dry	-	-	-	Dry	-	-	-	-	-	-	-		
MW-9	243.91	9.21	234.70	11.88	232.03	-	-	-	-	-	-	Dry	-	-	-	Dry	-	-	-	-	-	-	-		
N1-P1	229.92	14.39	215.53	13.80	216.12	-	-	14.26	215.66	-	-	12.99	216.93	-	-	14.85	215.07	-	-	13.72	216.20	-	-	13.14	216.78
N1-P2	229.93	13.94	215.99	13.75	216.18	-	-	14.11	215.82	-	-	13.01	216.92	-	-	14.28	215.65	-	-	13.62	216.31	-	-	14.45	215.48
N1-P3	230.08	13.64	216.44	13.40	216.68	-	-	13.85	216.23	-	-	12.97	217.11	-	-	13.71	216.37	-	-	13.39	216.69	-	-	13.80	216.28
N2-P1	222.01	-	-	5.00	217.01	-	-	5.41	216.60	-	-	4.65	217.36	-	-	5.24	216.77	-	-	4.96	217.05	-	-	5.34	216.67
N2-P2	222.16	-	-	5.21	216.95	-	-	5.50	216.66	-	-	4.99	217.17	-	-	5.26	216.90	-	-	5.15	217.01	-	-	5.42	216.74
N3-P1	220.83	-	-	4.30	216.53	-	-	4.45	216.38	-	-	4.15	216.68	-	-	4.86	215.97	-	-	4.48	216.35	-	-	4.06	216.77
N3-P2	220.84	-	-	3.80	217.04	-	-	4.23	216.61	-	-	3.85	216.99	-	-	4.14	216.70	-	-	3.96	216.88	-	-	4.09	216.75
N5-P1	242.65	22.67	219.98	23.80	218.85	-	-	23.02	219.63	-	-	24.00	218.65	-	-	24.70	217.95	-	-	22.30	220.35	-	-	24.61	218.04
N5-P2	242.69	23.06	219.63	24.11	218.58	-	-	23.36	219.33	-	-	24.25	218.44	-	-	24.80	217.89	-	-	22.66	220.03	-	-	24.50	218.19
N6-P1	258.60	-	-	37.25	221.35	35.92	222.68	35.85	222.75	34.59	224.01	36.68	221.92	-	-	37.52	221.08	-	-	35.19	223.41	-	-	37.46	221.14
N7-P1	255.59	30.32	225.27	30.95	224.64	-	-	29.54	226.05	-	-	31.15	224.44	-	-	32.00	223.59	-	-	29.10	226.49	-	-	32.15	223.44
N7-P2	256.04	30.51	225.53	31.18	224.86	-	-	30.08	225.96	-	-	31.20	224.84	-	-	32.10	223.94	-	-	29.18	226.86	-	-	32.25	223.79
PSP-01	218.14	-	-	2.00	216.82	1.85	216.67	1.68	216.50	1.50	216.32	2.80	217.62	-	-	Destroyed	-	-	-	-	-	-	-		
PZ-12-01	237.55	20.37	217.18	20.16	217.39	20.23	217.32	20.45	217.10	20.42	217.13	20.12	217.43	20.20	217.35	20.80	216.75	20.55	217.00	20.04	217.51	20.30	217.25	21.01	216.54
PZ-12-02	237.79	19.82	217.97	20.05	217.74	19.80	217.99	19.99	217.80	19.57	218.22	20.80	216.99	19.29	218.50	20.81	216.98	20.04	217.75	19.42	218.37	19.44	218.35	20.99	216.80
PZ-12-03	236.40	19.46	216.94	19.06	217.34	19.32	217.08	19.50	216.90	19.54	216.86	19.95	216.45	19.36	217.04	19.55	216.85	19.60	216.80	19.04	217.36	19.50	216.90	19.71	216.69
PZ-12-04	238.20	19.46	218.74	19.86	218.34	19.41	218.79	19.58	218.62	18.96	219.24	19.90	218.30	18.73	219.47	20.71	217.49	19.66	218.54	19.01	219.19	18.85	219.35	20.73	217.47
PZ-12-05	238.73	21.52	217.21	21.18	217.55	21.43	217.30	21.57	217.16	21.62	217.11	21.09	217.64	21.10	217.63	21.78	216.95	21.71	217.02	21.06	217.67	21.61	217.12	21.88	216.85
PZ-12-06	242.18	23.27	218.91	23.55	218.63	23.17	219.01	23.31	218.87	22.73	219.45	23.64	218.54	22.46	219.72	24.44	217.74	23.43	218.75	22.65	219.53	22.60	219.58	24.51	217.67
PZ-12-07	244.59	27.31	217.28	26.40	218.19	27.22	217.37	27.35	217.24	27.70	216.89	27.08	217.51	27.35	217.24	27.75	216.84	27.65	216.94	26.60	217.99	27.48	217.11	27.99	216.60
PZ-12-08	244.83	24.75	220.08	25.02	219.81	24.51	220.32	26.70	218.13	24.08	220.75	26.41	218.42	23.88	220.95	27.35	217.48	25.00	219.83	23.71	221.12	23.98	220.85	26.38	218.45
PZ-12-09	241.93	23.64	218.29	21.98	219.95	23.47	218.46	23.55	218.38	23.89	218.04	23.97	217.96	23.29	218.64	24.60	217.33	23.75	218.18	23.12	218.81	23.45	218.48	24.78	217.15
PZ-12-10	242.28	21.68	220.60	21.35	220.93	21.56	220.72	21.74	220.54	21.71	220.57	22.81	219.47	21.02	221.26	23.45	218.83	21.91	220.37	21.21	221.07	21.20	221.08	23.48	218.80

Well ID	TOR Elevation (ft	May 2017		November 2017		April 2018		November 2018		April 2019		October 2019		May 2020		November 2020		May 2021		October 2021		April 2022		October 2022	
Q4-1	268.38	9.79	258.59	30.70	237.68	-	-	10.09	258.29	-	-	32.70	235.68	-	-	35.10	233.28	-	-	-	-	-	-		
Q5-1	260.99	5.27	255.72	26.40	234.59	-	-	5.57	255.42	-	-	28.53	232.46	-	-	31.15	229.84	-	-	-	-	-	-		
RSK-15	225.54	-	-	8.06	217.48	-	-	8.65	216.89	-	-	8.05	217.49	-	-	8.73	216.81	-	-	-	-	-	-		
RSK-19	218.76	-	-	1.58	217.18	-	-	1.98	216.78	-	-	1.35	217.41	-	-	1.99	216.77	-	-	-	-	-	-		
RSK-25	239.21	-	-	21.01	218.20	-	-	21.95	217.26	-	-	21.69	217.52	-	-	Destroyed	-	-	-	-	-	-	-		
RSK-27	241.45	-	-	22.70	218.75	-	-	22.45	219.00	-	-	22.37	219.08	-	-	23.55	217.90	-	-	-	-	-	-		
RSK-28	239.24	-	-	20.75	218.49	-	-	20.45	218.79	-	-	20.75	218.49	-	-	21.66	217.58	-	-	-	-	-	-		
RSK-32	236.91	-	-	18.60	218.31	-	-	18.34	218.57	-	-	18.61	218.30	-	-	19.41	217.50	-	-	-	-	-	-		
RSK-34	233.16	-	-	15.82	217.34	-	-	15.44	217.72	-	-	16.06	217.10	-	-	Destroyed	-	-	-	-	-	-	-		
RSK-35	233.64	-	-	16.71	216.93	-	-	16.72	216.92	-	-	17.01	216.63	-	-	17.76	215.88	-	-	-	-	-	-		
RSK-37	220.55	-	-	4.47	216.08	-	-	8.80	211.75	-	-	3.10	217.45	-	-	3.97	216.58	-	-	-	-	-	-		
RSK-7	222.01	-	-	5.00	217.01	-	-	5.40	216.61	-	-	4.63	217.38	-	-	5.24	216.77	-	-	-	-	-	-		
SHL-10	248.02	30.71	217.31	29.94	218.08	30.69	217.33	37.45	210.57	31.14	216.88	30.56	217.46	30.67	217.35	31.20	216.82	30.98	217.04	30.45	217.57	30.83	217.19	31.40	216.62
SHL-11	235.47	18.44	217.03	18.20	217.27	18.36	217.11	18.57	216.90	18.57	216.90	18.05	217.42	18.36	217.11	18.67	216.80	18.67	216.80	18.13	217.34	18.53	216.94	18.88	216.59
SHL-12	248.62	21.91	226.71	22.10	226.52	-	-	20.73	227.89	-	-	22.58	226.04	-	-	23.35	225.27	-	-	20.11	228.51	-	-	23.75	224.87
SHL-13	220.71	-	-	6.21	214.50	-	-	6.59	214.12	-	-	6.59	214.12	-	-	7.17	213.54	-	-	5.83	214.88	-	-	7.77	212.94
SHL-15	259.92	16.63	243.29	18.38	241.54	-	-	17.68	242.24	-	-	20.47	239.45	16.32	243.60	21.00	238.92	-	-	17.39	241.44	-	-	20.83	238.00
SHL-17	233.79	7.04	226.75	6.86	226.93	-	-	5.60	228.19	-	-	8.88	224.91	-	-	8.20	225.59	-	-	4.86	228.93	-	-	8.93	224.86
SHL-18	237.56	18.75	218.81	18.26	219.30	-	-	18.64	218.92	-	-	25.12	212.44	-	-	19.55	218.01	-	-	18.36	217.35	-	-	19.85	215.86
SHL-19	240.50	23.13	217.37	20.09	220.41	23.04	217.46	23.18	217.32	23.56	216.94	22.97	217.53	23.15	217.35	22.68	217.82	23.45	214.98	22.41	216.02	23.30	215.13	23.93	214.50
SHL-20	235.95	17.70	218.25	18.00	217.95	17.68	218.27	18.91	217.04	17.38	218.57	18.00	217.95	17.11	218.84	18.80	217.15	17.90	218.05	17.30	218.65	17.25	218.70	18.89	217.06
SHL-22	219.58	-	-	7.15	212.43	-	-	7.22	212.36	-	-	8.68	210.90	-	-	9.15	210.43	-	-	6.40	213.18	-	-	9.05	210.53
SHL-23	241.29	26.79	214.50	28.76	212.53	-	-	27.89	213.40	-	-	30.21	211.08	-	-	30.36	210.93	-	-	27.15	214.14	-	-	30.60	210.69
SHL-24	238.75	15.37	223.38	14.95	223.80	-	-	14.59	224.16	-	-	15.79	222.96	-	-	16.35	222.40	-	-	14.05	224.70	-	-	16.96	221.79
SHL-25	258.01	25.06	232.95	27.54	230.47	-	-	25.97	232.04	-	-	27.68	230.33	24.62	233.39	28.82	229.19	-	-	-	-	-	-		
SHL-3	246.95	-	-	29.24	217.71	-	-	30.14	216.81	-	-	29.35	217.60	-	-	30.55	216.40	-	-	29.72	217.23	-	-	30.63	216.32
SHL-4	227.48	10.51	216.97	10.00	217.48	10.40	217.08	10.70	216.78	10.68	216.80	10.00	217.48	10.13	217.35	10.68	216.80	10.69	214.81	10.05	215.45	10.58	214.92	10.77	214.73
SHL-5	217.60	-	-	2.50	215.10	-	-	2.72	214.88	-	-	5.65	211.95	-	-	6.55	211.05	-	-	2.37	214.44	-	-	6.81	210.00
SHL-7	236.33	15.86	220.47	17.19	219.14	-	-	16.50	219.83	-	-	18.14	218.19	-	-	17.60	218.73	-	-	16.83	219.50	-	-	19.02	217.31
SHL-8D	220.78	-	-	7.12	213.66	-	-	7.42	213.36	-	-	8.21	212.57	-	-	8.40	212.38	-	-	6.71	214.07	-	-	9.00	211.78
SHL-8S	220.97	-	-	7.27	213.70	-	-	7.52	213.45	-	-	8.33	212.64	-	-	8.56	212.41	-	-	6.83	214.14	-	-	9.09	211.88
SHL-9	221.95	-	-	9.30	212.65	-	-	9.46	212.49	-	-	12.18	209.77	-	-	11.74	210.21	-	-	8.48	212.40	-	-	11.72	209.16
SHM-05-39A	221.53	-	-	11.07	210.46	-	-	11.30	210.23	-	-	12.45	209.08	-	-	12.25	209.28	-	-	10.76	210.77	-	-	13.05	208.48
SHM-05-39B	221.51	-	-	11.84	209.67	-	-	12.10	209.41	-	-	Dry	-	-	-	12.99	208.52	-	-	11.61	209.90	-	-	13.69	207.82
SHM-05-40X	223.19	13.67	209.52	13.93	209.26	10.37	212.82	13.93	209.26	13.93	209.26	14.95	208.24	13.66	209.53	14.99	208.20	14.12	209.07	13.45	209.74	13.88	209.31	15.73	207.46
SHM-05-41A	222.48	-	-	10.42	212.06	-	-	10.47	212.01	-	-	11.95	210.53	-	-	12.01	210.47	-	-	9.68	213.10	-	-	12.55	209.93
SHM-05-41B	222.33	9.99	212.34	10.25	212.08	9.90	212.43	10.30	212.03	11.60	210.73	40.09	182.24	9.96	212.37	11.68	210.65	10.61	211.72	9.58	212.75	10.03	212.30	12.35	209.98
SHM-05-41C	222.57	10.15	212.42	10.53	212.04	10.09	212.48	10.60	211.97	10.82	211.75	12.15	210.42	10.31	212.26	12.12	210.45	11.00	211.57	9.71	212.86	10.28	212.29	12.61	209.96
SHM-05-42A	216.81	-	-	4.43	212.38	-	-	4.52	212.29	-	-	8.05	208.76	-	-	5.90	210.91	-	-	3.85	212.96	-	-	6.55	210.26
SHM-05-42B	216.80	-	-	4.52	212.28	-	-	4.68	212.12	-	-	7.50	209.30	-	-	6.00	210.80	-	-	3.85	212.95	-	-	6.61	210.19
SHM-07-03	227.90	19.02	208.88	19.53	208.37	19.11	208.79	19.44	208.46	19.50	208.40	24.00	203.90	19.03	208.87	20.70	207.20	19.71	208.19	18.36	209.54	19.48	208.42	--	--
SHM-07-05X	223.40	16.10	207.30	14.33	209.07	13.99	209.41	14.50	208.90	14.19	209.21	15.30	208.10	2.75	220.65	14.95	208.45	14.28	209.12	13.78	209.62	14.19	209.21	16.01	207.39
SHM-10-01	209.65		209.65	1.91	207.74	-	-	3.45	206.20	-	-	4.20	205.45	-	-	4.23	205.42	-	-	2.95	206.70	-	-	4.69	204.96
SHM-10-02	223.03		223.03	15.71	207.32	-	-	16.74	206.29	-	-	18.24	204.79	-	-	18.31	204.72	-	-	16.74	206.29	-	-	18.62	204.41
SHM-10-03	232.05		232.05	24.64	207.41	-	-	25.65	206.40	-	-	26.87	205.18	-	-	27.03	205.02	-	-	25.58	206.47	-	-	27.43	204.62
SHM-10-04	212.61		212.61	5.11	207.50	-	-	4.75	207.86	-	-	6.69	205.92	-	-	6.52	206.09	-	-	5.39	207.22	-	-	7.38	205.23
SHM-10-05A	235.09	-	-	24.73	210.36	-	-	25.00	210.09	-	-	25.72	209.37	-	-	25.28	209.81	-	-	24.43	210.66	-	-	26.16	208.93
SHM-10-06	232.91	-	-	18.60	214.31	-	-	18.55	214.36	-	-	20.00	212.91	-	-	20.31	212.60	-	-	17.71	215.20	-	-	20.65	212.26
SHM-10-06A	248.54	-	-	34.02	214.52	-	-	33.98	214.56	-	-	35.30	213.24	-	-	36.11	212.43	-	-	33.18	215.36	-	-	35.97	212.57
SHM-10-07	246.82	-	-	27.11	219.71	39.87	206.95	26.48	220.34		246.82	27.08	219.74	-	-	27.85	218.97	-	-	25.82	221.00	-	-	27.83	218.99
SHM-10-08	214.36	-	-	7.12	207.24	-	-	9.00	205.36	-	-	9.97	204.39	-	-	9.78	204.58	-	-	8.06	206.30	-	-	9.98	204.38
SHM-10-10	217.11	-	-	9.19	207.92	-	-	10.25	206.86	-	-	11.75	205.36	-	-	10.92	206.19	-	-	9.98	207.13	-	-	11.69	205.42
SHM-10-11	263.76	-	-	40.48	223.28	-	-	39.20	224.56	38.17	225.59	40.23	223.53	-	-	41.24	222.52	-	-	38.63	225.13	-	-	41.18	222.58
SHM-10-12	255.17	-	-	34.01	221.16	-	-	33.13	222.04	-	-	33.75	221.42	-	-	34.70	220.47	-	-	32.45	222.72	-	-	34.66	220.51
SHM-10-13	244.77	-	-	25.93	218.84	-	-	25.20	219.57	-	-	25.95	218.82	-	-	26.80	217.97	-	-	24.46	220.31	-	-	26.72	218.05
SHM-10-14	237.62	-	-	20.09	217.53	-	-	19.24	218.38	-	-	20.48	217.14	-	-	21.11	216.51	-	-	18.52	219.10	-	-	21.12	216.50
SHM-10-15	243.68	-	-	24.42	219.26	-	-	23.50	220.18	-	-	24.40	219.28	-	-	25.30	218.38	-	-	22.71	220.97	-	-	25.17	218.51
SHM-10-16	219.23	18.25	200.98	7.13	212.10	-	-	7.20	212.03	-	-	8.62	210.61	-	-	8.63	210.60	-	-	6.44	212.79	-	-	9.25	209.98
SHM-11-02	240.73	22.29	218.44	22.32	218.41	22.15	218.58	22.30	218.43	21.91	218.82	22.32	218.41	21.55	219.18	23.90	216.83	22.39	218.34	21.77	218.96	21.86	218.87	23.25	217.48

Well ID	TOR Elevation (ft	May 2017		November 2017		April 2018		November 2018		April 2019		October 2019		May 2020		November 2020		May 2021		October 2021		April 2022		October 2022	
SHM-11-06	236.17	17.81	218.36	19.42	216.75	19.21	216.96	19.47	216.70	19.36	216.81	20.11	216.06	18.97	217.20	20.75	215.42	19.72	216.45	18.79	217.38	19.12	217.05	20.95	215.22
SHM-11-07	240.83	-	-	22.35	218.48	-	-	22.02	218.81	-	-	22.40	218.43	-	-	23.24	217.59	-	-	21.39	219.44	-	-	23.23	217.60
SHM-13-01	208.08	-	-	1.80	206.28	-	-	2.38	205.70	-	-	3.48	204.60	-	-	3.28	204.80	-	-	1.68	206.40	-	-	3.50	204.58
SHM-13-02	218.72	-	-	10.79	207.93	-	-	12.24	206.48	-	-	13.03	205.69	-	-	13.04	205.68	-	-	11.83	206.89	-	-	13.54	205.18
SHM-13-03	212.05	5.03	207.02	4.31	207.74	10.30	201.75	4.85	207.20	4.88	207.17	5.68	206.37	5.11	206.94	5.39	206.66	5.14	206.91	5.18	206.87	5.34*	206.71	6.42	205.63
SHM-13-04	227.02	18.47	208.55	18.33	208.69	18.50	208.52	18.85	208.17	18.71	208.31	19.71	207.31	18.54	208.48	19.65	207.37	19.03	207.99	18.29	208.73	18.71	208.31	20.36	206.66
SHM-13-05	225.14	-	-	15.87	209.27	-	-	16.25	208.89	-	-	17.15	207.99	-	-	16.96	208.18	-	-	15.80	209.34	-	-	17.83	207.31
SHM-13-06	223.89	35.78	188.11	15.61	208.28	16.88	207.01	16.89	207.00	17.00	206.89	17.72	206.17	17.07	206.82	17.63	206.26	17.51	206.38	16.72	207.17	17.23	206.66	18.37	205.52
SHM-13-07	225.64	18.19	207.45	6.13	219.51	18.32	207.32	-	-	18.47	207.17	19.23	206.41	18.54	207.10	19.11	206.53	18.97	206.67	18.05	207.59	18.69	206.95	19.93	205.71
SHM-13-08	227.90	19.78	208.12	19.36	208.54	19.91	207.99	20.00	207.90	20.90	207.00	20.90	207.00	20.06	207.84	20.68	207.22	20.36	207.54	19.59	208.31	20.18	207.72	21.55	206.35
SHM-13-14D	210.48	-	-	2.78	207.70	-	-	3.15	207.33	-	-	3.98	206.50	-	-	3.63	206.85	-	-	2.84	207.64	-	-	4.63	205.85
SHM-13-14S	210.55	-	-	3.48	207.07	-	-	3.34	207.21	-	-	4.12	206.43	-	-	3.65	206.90	-	-	3.11	207.44	-	-	4.75	205.80
SHM-13-15	210.58	-	-	3.01	207.57	-	-	-	-	-	-	4.32	206.26	-	-	4.03	206.55	-	-	3.26	207.32	-	-	4.96	205.62
SHM-93-10D	248.01	-	-	29.99	218.02	-	-	30.22	217.79	-	-	30.03	217.98	-	-	30.71	217.30	-	-	29.89	218.12	-	-	30.96	217.05
SHM-93-18B	237.31	18.42	218.89	17.91	219.40	-	-	18.20	219.11	-	-	18.64	218.67	-	-	19.25	218.06	-	-	17.78	219.53	-	-	19.54	217.77
SHM-93-22B	219.39	7.65	211.74	6.91	212.48	6.62	212.77	7.05	212.34	7.12	212.27	8.48	210.91	6.67	212.72	9.73	209.66	7.36	212.03	6.18	213.21	6.99	212.40	9.09	210.30
SHM-93-22C	220.69	-	-	8.38	212.31	-	-	8.26	212.43	-	-	9.85	210.84	-	-	11.35	209.34	-	-	7.76	212.93	-	-	10.29	210.40
SHM-93-24A	238.42	15.71	222.71	15.20	223.22	-	-	15.09	223.33	-	-	16.12	222.30	-	-	16.68	221.74	-	-	14.55	223.87	-	-	16.63	221.79
SHM-96-5B	218.92	5.76	213.16	6.08	212.84	5.73	213.19	6.10	212.82	6.24	212.68	7.49	211.43	5.79	213.13	7.63	211.29	6.50	212.42	5.20	213.72	5.92	213.00	8.10	210.82
SHM-96-5C	218.39	-	-	5.49	212.90	-	-	5.58	212.81	-	-	6.97	211.42	-	-	7.08	211.31	-	-	4.73	213.66	-	-	7.61	210.78
SHM-99-31A	214.34	-	-	0.68	213.66	-	-	1.78	212.56	-	-	3.98	210.36	-	-	1.67	212.67	-	-	1.47	212.87	-	-	4.42	209.92
SHM-99-31B	214.39	-	-	3.47	210.92	-	-	3.75	210.64	-	-	4.85	209.54	-	-	4.57	209.82	-	-	3.18	211.21	-	-	5.40	208.99
SHM-99-31C	214.60	-	-	3.73	210.87	-	-	4.02	210.58	-	-	5.15	209.45	-	-	4.87	209.73	-	-	3.45	211.15	-	-	5.70	208.90
SHM-99-32X	221.28	-	-	9.32	211.96	-	-	9.26	212.02	-	-	10.80	210.48	-	-	10.42	210.86	-	-	8.96	212.32	-	-	11.19	210.09
SHP-01-36X	223.95	7.60	216.35	7.15	216.80	7.32	216.63	7.61	216.34	7.71	216.24	6.67	217.28	7.56	216.39	7.35	216.60	7.69	216.26	7.09	216.86	7.56	216.39	7.57	216.38
SHP-01-37X	222.79	6.38	216.41	5.95	216.84	6.10	216.69	6.42	216.37	6.46	216.33	5.85	216.94	6.36	216.43	6.04	216.75	6.40	216.39	5.87	216.92	6.35	216.44	6.10	216.69
SHP-01-38A	220.86	4.01	216.85	3.59	217.27	3.82	217.04	4.07	216.79	4.05	216.81	3.32	217.54	3.59	217.27	3.96	216.90	4.17	214.60	3.62	215.15	4.01	214.76	3.93	214.84
SHP-01-38B	221.03	-	-	3.72	217.31	3.95	217.08	4.21	216.82	4.25	216.78	3.49	217.54	-	-	4.08	216.95	-	-	3.71	217.32	-	-	4.62	216.41
SHP-05-43	260.17	-	-	44.60	215.57	44.40	215.77	44.69	215.48	44.73	215.44	45.05	215.12	-	-	45.61	215.10	-	-	44.21	216.50	-	-	46.74	213.97
SHP-05-44	258.55	-	-	41.55	217.00	41.51	217.04	41.32	217.23	41.77	216.78	42.41	216.14	-	-	42.19	215.95	-	-	41.27	216.87	-	-	42.40	215.74
SHP-05-45A	228.48	-	-	16.08	212.40	-	-	16.12	212.36	-	-	17.73	210.75	-	-	17.90	210.58	-	-	14.99	213.49	-	-	18.38	210.10
SHP-05-45B	229.11	-	-	16.87	212.24	-	-	16.89	212.22	-	-	18.42	210.69	-	-	18.31	210.80	-	-	15.79	213.32	-	-	18.83	210.28
SHP-05-46A	228.18	-	-	15.42	212.76	-	-	14.89	213.29	-	-	16.95	211.23	-	-	17.11	211.07	-	-	14.31	213.87	-	-	17.53	210.65
SHP-05-46B	227.60	-	-	14.74	212.86	14.21	213.39	14.74	212.86	14.77	212.83	16.30	211.30	-	-	16.38	211.22	-	-	13.72	213.88	-	-	16.88	210.72
SHP-05-47A	217.39	-	-	3.79	213.60	4.47	212.92	4.75	212.64	4.19	213.20	5.56	211.83	-	-	3.54	213.85	-	-	3.92	213.47	-	-	5.91	211.48
SHP-05-47B	215.40	-	-	1.69	213.71	2.18	213.22	2.80	212.60	2.23	213.17	2.43	212.97	-	-	2.28	213.12	-	-	1.99	213.41	-	-	3.00	212.40
SHP-05-48A	217.31	-	-	3.58	213.73	-	-	4.61	212.70	-	-	3.82	213.49	-	-	4.45	212.86	-	-	4.31	213.00	-	-	Dry	Dry
SHP-05-48B	215.96	-	-	2.17	213.79	3.31	212.65	3.23	212.73	3.20	212.76	2.84	213.12	-	-	3.07	212.89	-	-	2.86	213.10	-	-	Dry	Dry
SHP-05-49A	216.67	-	-	5.65	211.02	5.49	211.18	5.42	211.25	5.50	211.17	5.68	210.99	-	-	5.57	211.10	-	-	5.03	211.64	-	-	5.32	211.35
SHP-05-49B	215.14	-	-	3.96	211.18	3.79	211.35	3.68	211.46	3.97	211.17	4.18	210.96	-	-	3.32	211.82	-	-	3.32	211.82	-	-	4.27	210.87
SHP-2016-06A	241.90	26.35	215.55	28.35	213.55	27.12	214.78	29.73	212.17	27.79	214.11	30.17	211.73	26.31	215.59	29.98	211.92	29.39	212.51	27.10	214.80	27.65	214.25	30.38	211.52
SHP-2016-06B	241.89	19.80	222.09	22.90	218.99	20.17	221.72	21.26	220.63	20.31	221.58	24.05	217.84	19.68	222.21	24.65	217.24	23.06	218.83	20.68	221.21	19.51	222.38	24.52	217.37
SHP-2016-06C	241.92	19.75	222.17	22.80	219.12	19.97	221.95	21.15	220.77	19.49	222.43	23.75	218.17	19.74	222.18	24.35	217.57	21.14	220.78	20.77	221.15	19.95	221.97	24.34	217.58
SHP-2016-07A	265.30	14.27	251.03	31.44	233.86	13.95	251.35	16.59	248.71	15.56	249.74	Dry	-	14.91	250.39	31.46	233.84	16.14	249.16	17.40	247.90	15.21	250.09	31.60	233.70
SHP-2016-07B	265.33	22.46	242.87	32.85	232.48	20.90	244.43	23.43	241.90	22.02	243.31	35.80	229.53	21.74	243.59	35.54	229.79	22.68	242.65	23.52	241.81	22.31	243.02	33.47	231.86
SHP-2016-1A	227.27	14.25	213.02	14.89	212.38	14.17	213.10	14.80	212.47	14.65	212.62	16.85	210.42	14.30	212.97	16.62	210.65	15.16	212.11	13.56	213.71	14.48	212.79	17.22	210.05
SHP-2016-1B	227.24	16.47	210.77	16.01	211.23	15.85	211.39	16.65	210.59	16.19	211.05	17.75	209.49	16.19	211.05	18.00	209.24	16.89	210.35	14.83	212.41	16.03	211.21	18.33	208.91
SHP-2016-2A	225.93	13.40	212.53	13.65	212.28	13.27	212.66	13.15	212.78	13.69	212.24	15.41	210.52	14.37	212.66	15.28	210.65	14.03	211.90	12.83	213.10	13.43	212.50	15.84	210.09
SHP-2016-2B	225.95	13.40	212.55	13.69	212.26	13.32	212.63	13.22	212.73	13.78	212.17	16.29	209.66	13.35	212.60	15.30	210.65	14.10	211.85	12.87	213.08	13.51	212.44	15.84	210.11
SHP-2016-3A	223.18	10.58	212.60	10.92	212.26	10.42	212.76	11.10	212.08	10.90	212.28	12.50	210.68	10.81	212.37	11.52	211.66	11.17	212.01	9.87	213.31	10.57	212.61	13.13	210.05
SHP-2016-3B	223.18	10.52	212.66	10.86	212.32	10.51	212.67	10.95	212.23	10.91	212.27	12.37	210.81	10.55	212.63	12.47	210.71	11.32	211.86	10.06	213.12	10.67	212.51	12.98	210.20
SHP-2016-4A	229.97	17.40	212.57	17.78	212.19	17.31	212.66	17.80	212.17	17.73	212.24	24.83	205.14	17.41	212.56	19.17	210.80	18.13	211.84	16.87	213.10	17.29	212.68	19.88	210.09
SHP-2016-4B	229.75	17.25	212.50	17.52	212.23	17.10	212.65	17.56	212.19	17.57	212.18	19.10	210.65	17.13	212.62	19.45	210.30	17.95	211.80	16.68	213.07	17.73	212.02	19.67	210.08
SHP-2016-5A	227.01	14.43	212.58	14.72	212.29	14.28	212.73	14.80	212.21	14.77	212.24	16.10	210.91	14.35	212.66	16.35	210.66	15.07	211.94	13.82	213.19	14.47	212.54	16.89	210.12
SHP-2016-5B	226.95	14.40	212.55	14.70	212.25	14.22	212.73	14.79	212.16	14.77	212.18	16.28	210.67	14.29	212.66	16.38	210.57	15.08	211.87	13.84	213.11	14.43	212.52	16.87	210.08
SHP-2017-01	229.63	-	-	18.55	211.08	17.57	212.06	18.71	210.92	18.54	211.09	20.17	209.46	17.62	212.01	20.31	209.32	18.93	210.70	17.42	212.21	18.18	211.45	20.58	209.05
SHP-2017-02	230.05	-	-	19.24	210.81	18.69	211.36	18.82	211.23	19.28	210.77	20.80	209.25	18.58	211.47	20.90	209.15	19.49	210.56	18.01	212.04	18.81	211.24	21.23	208.82
SHP-95-27X	237.45	14.63	222.82	14.27	223.18	-	-	14.00	223.45	-	-	14.03	223.42	-	-	31.90	205.55	-	-	28.83	208.62	-	-	34.74	202.71
SHP-99-01C	274.15	9.16	264.99	19.80	254.35	-	-	10.54	263.61	-	-	24.54	249.61	-	-	24.95	249.20	-	-	10.08	264.07	-	-	26.91	247.24

Appendix D
Site-Wide Hydraulic Monitoring Results from 2017 through 2022
Shepley's Hill Landfill, Former Fort Devens Army Installation, Massachusetts

Well ID	TOR Elevation (ft	May 2017		November 2017		April 2018		November 2018		April 2019		October 2019		May 2020		November 2020		May 2021		October 2021		April 2022		October 2022	
SHP-99-29X	243.34	-	-	23.97	219.37	21.86	221.48	22.77	220.57	20.82	222.52	23.95	219.39	-	-	25.85	217.49	-	-	21.57	221.77	-	-	24.73	218.61
SHP-99-34B	224.91	-	-	12.12	212.79	-	-	12.60	212.31		224.91	13.80	211.11	-	-	13.80	211.11	-	-	12.24	212.67	-	-	14.25	210.66
SHP-99-35X	258.23	-	-	36.78	221.45	35.78	222.45	25.95	232.28	34.54	223.69	36.35	221.88	-	-	36.80	221.43	-	-	35.31	222.92	-	-	36.76	221.47
SHSG-13-01G	205.53	-	-	1.60	203.13	-	-	1.75	203.78	-	-	1.50	203.03	-	-	Dry	-	-	-	-	-	-	-	--	--
SHSG-13-02G	208.25	-	-	3.30	207.55	-	-	3.50	204.75	-	-	-	-	-	-	2.85	202.16	-	-	2.30	205.01	-	-	1.45	203.56
SHSG-13-03G	209.99	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	--
SHSG-14-01G	213.71	-	-	3.10	213.81	-	-	1.56	212.15	-	-	2.30	213.01	-	-	2.47	210.54	-	-	2.88	213.01	-	-	1.47	211.54

Notes:
TOR elevations from November 2017 Shepley's Hill Landfill (SHL) survey data (North American Vertical Datum [NAVD] 1988)

Acronyms and Abbreviations:
- = not measured
bmp = below measuring point
TOR = top of riser (referenced measuring point)

Appendix E

Historical Groundwater Monitoring Well Analytical Results

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
EPA-PZ-2012-1A	10/13/2014	2.0 U	121	937	40	22	2.2	5.1 J	5.93	0.145	0.36	0.38	10.1	109.0
	10/22/2015	4.0 U	149	470	39	52	2.3	12	5.44	0.290	1.28	0.27	10.5	71.6
	11/17/2016	3.0 U	200	380	25	61	1.7	2.7	6.13	0.263	9.09	0.17	10.3	127.2
	5/25/2017	3.0 U	210	240	36	27	2.6	7.6	5.99	0.219	7.59	0.54	8.0	36.2
	11/14/2017	3.0 U	110	160	43	5.3	2.8	11	6.79	1.690	1.60	--	8.8	167.0
	04/16/2018	3.0 U	83	110	40	5.8	3.0	4.9	6.06	0.101	3.16	1.46	7.2	99.0
	11/13/2018	3.0 U	160	190	51	6.9	2.3	3.8	5.67	0.203	1.22	0.15	10.2	-11.3
	04/16/2019	3.0 U	270	250	51	3.3	2.4	3.2	6.10	0.120	2.30	0.59	7.4	140.0
	11/07/2019	3.0 U	190	240	43	11	3.0	3.6	6.10	0.120	4.10	0.24	9.6	79.0
	05/19/2020	3.0 U	270	290	44	15	1.7	1.2	6.06	0.122	3.04	4.10	9.4	91.5
	10/30/2020	3.0 U	140	170	39	3.7	1.8 U	1.8	6.59	0.081	3.70	0.78	7.2	88.8
	6/15/2021	5.3	120	170	33	1.6 J	0.5 U	2.6	6.28	0.055	47.37	0.77	12.9	93.8
	11/1/2021	3.0 U	180	180	47	0.86	2.1	12	6.20	0.194	4.6	0.91	7.9	88.2
	5/11/2022	1.8 J	400	320	57	0.99	2.3	1.8	5.83	0.020	1.9	0.58	11.6	111.0
	10/18/2022	2.1 J	400	240	46	3.7	2.1	1.3	5.97	0.065	1.11	1.32	12.6	100.7
EPA-PZ-2012-1B	10/13/2014	**160**	**21,500**	**6,900**	304	17	2.4	3.8 J	6.54	0.587	28.2	0.14	10.9	-58.8
	10/22/2015	**288**	**19,200**	**9,450**	266	19	2.2	6.7 J	5.91	0.635	8.66	0.60	11.0	-59.0
	11/17/2016	**260**	**16,000**	**9,600**	250	22	1.8	5.5	6.58	0.519	0.92	0.13	10.4	3.7
	5/25/2017	**240**	**14,000**	**9,700**	260	26	1.9	6.7	6.37	0.665	26.1	0.52	9.4	-23.5
	11/14/2017	**200**	**13,000**	**11,000**	220	30	1.7	6.6	7.22	0.540	3.57	3.06	9.1	22.5
	04/16/2018	**170**	**13,000**	**10,000**	210	37	1.7	11	6.75	0.519	1.98	0.94	7.1	0.3
	11/13/2018	**170**	**13,000**	**9,700**	200	34	1.6 U	11	6.39	0.648	54.7	0.35	10.7	-72.7
	04/16/2019	**160**	**15,000**	**13,000**	240	26	2.1	3.4	6.50	0.590	35.0	0.68	8.3	11.0
	11/07/2019	**220**	**13,000**	**9,400**	190	30	2.7	20	6.40	0.480	18.0	0.28	9.8	-33.0
	05/19/2020	**150**	**9,600**	**9,000**	200	36	1.5	14	6.31	0.496	3.08	2.30	11.8	-52.5
	10/30/2020	**210**	**11,000**	**8,000**	170	35	1.8 U	18	6.47	0.282	10.2	2.95	7.3	9.1
	6/15/2021	**160**	**10,000**	**7,800**	190	39	0.5 U	16	6.56	0.373	5.06	0.39	14.5	-36.3
	11/1/2021	**140**	8,600	**7,900**	170	41	1.4	17	6.57	0.638	3.79	0.97	7.8	-33.2
	5/11/2022	**150**	**9,400**	**8,100**	140	36	1.6	14	6.29	0.078	6.40	0.52	13.4	-24.8
	10/18/2022	**200**	**12,000**	**7,000**	180	35	2.4	21	6.35	0.293	2.74	1.27	12.0	-40.8
EPA-PZ-2012-2A	10/14/2014	2.0 U	50 U	7.5 U	7.6	1.5	1.2	7.7 J	5.89	0.040	0.69	5.63	10.6	223.4
	10/22/2015	4.0 U	100 U	15 U	9.3	1.8	0.42 J	7.5 J	4.85	0.047	0.85	5.18	13.1	130.1
	11/17/2016	3.0 U	28 J	1.7 J	7.5	9.1	0.58 J	5.5	6.04	0.060	0.94	5.11	10.6	172.4
	5/31/2017	3.0 U	50 U	1.8 J	9.0	5.6	1.0 U	5.7	5.99	0.079	6.73	3.01	8.9	36.7
	11/8/2017	3.0 U	75 U	2.0 J	8.6 U	8.5	0.45 J	4.6	6.26	0.058	6.96	4.72	10.0	59.3
	4/16/2018	3.0 U	50 U	3.0 J	7.6	6.8	1.0 J	5.5	6.04	0.053	2.95	5.96	6.9	126.9
	11/13/2018	1.9 J	160	160	8.9	8.3	1.0 U	5.4	5.43	0.121	0.99	2.63	11.2	32.5
	04/12/2019	3.0 U	50 U	1.5 J	10	2.6	0.50 U	5.8	5.80	0.047	0.72	5.30	7.1	190.0
	10/24/2019	3.0 U	50 U	1.6 J	9.4 J	4.4	0.46 J	6.9	5.40	0.051	1.40	6.60	10.0	160.0
	05/19/2020	3.0 U	50 U	1.1 J	11	2.8	0.74 J	6.3	4.47	0.040	0.22	3.61	12.1	410.0
	11/05/2020	3.0 U	50 U	1.5 J	13	6.9	1.0 U	6.2	5.55	0.047	1.90	5.79	12.4	264.0
	5/20/2021	3.0 U	50 U	1.4 J	6.4 U	4.1	0.74 J	6.6	5.85	0.009	5.47	1.11	12.7	141.2
	11/1/2021	1.5 J	50 U	1.2 J	17	2.9	0.64 J	6.2	5.84	0.132	5.17	4.63	7.8	195.1
	5/12/2022	3.0 U	130	1.9 J	11	1.9	0.75 J	5.2	5.46	0.005	1.70	3.25	12.2	271.0
	10/18/2022	3.0 U	50 U	5.0 U	12	3.7	0.87 J	5.6	5.67	0.033	0.87	5.49	11.7	272.2
EPA-PZ-2012-2B	10/14/2014	2.0 U	52 J	**5,910**	152	12	2.2	3.5 J	6.37	0.298	0.55	0.56	11.5	112.9
	10/22/2015	4.0 U	100 U	**7,080**	159	17	1.8	7.5	5.40	0.380	0.67	0.51	13.3	79.1
	11/17/2016	3.0 U	44 J	**6,100**	150	18	1.8	4.9	6.27	0.324	0.69	0.17	10.4	114.7
	5/31/2017	3.3	59	**6,800**	160	21	1.7	4.6	6.09	0.400	8.45	0.66	10.9	14.6
	11/8/2017	3.0 U	26 J	**7,400**	180	31	1.7	5.1	6.46	0.386	3.97	0.97	9.8	22.9
	4/16/2018	3.0 U	21 J	**6,000**	140	27	1.8	7.0	6.32	0.354	2.29	0.94	8.2	87.9
	11/13/2018	3.0 U	50 U	**6,600**	130	36	1.6 U	9.2	6.92	0.506	3.98	0.28	10.3	-24.9
	04/12/2019	3.0 U	97	**6,400**	130	35	1.7	13	6.20	0.390	12.0	0.57	8.4	150.0
	10/24/2019	3.0 U	250	**6,200**	140	35	1.6	10	5.90	0.380	27.0	0.35	11.0	180.0
	05/20/2020	3.0 U	680	**4,700**	110	31	1.2	5.9	6.28	0.292	20.9	3.81	9.6	46.8
	11/05/2020	3.0 U	4,300	**6,000**	130	45	1.4 U	10	5.93	0.288	12.4	0.81	12.4	54.2
	5/20/2021	1.6 J	5,000	**6,300**	130	48	1.6	12	6.20	0.073	8.14	1.24	13.9	-32.7
	11/1/2021	1.5 J	5,500	**5,400**	140 J	39	0.8 U	7.4	6.12	0.550	4.68	0.88	7.7	41.9
	5/12/2022	1.8 J	5,900	**4,200**	110	29	1.3	5.4	5.89	0.040	1.90	0.55	12.9	85.6
	10/18/2022	2.7 J	**10,000**	**6,600**	150	51	2.4	8.3	6.01	0.281	3.31	1.16	12.3	13.2
EPA-PZ-2012-3A	10/8/2014	**21**	**19,200**	730	108	15	8.4	1.2 J	5.86	0.299	0.00	0.50	11.7	0.4
	10/26/2015	**16**	**16,400**	674	105	40	9.1	1.1 J	5.19	0.392	1.14	0.01	12.8	-11.5
	11/18/2016	**23**	**14,000**	710	75	66	8.7	0.56 J	6.09	0.416	3.36	1.60	9.8	-16.0
	5/25/2017	**19**	**17,000**	850	73	94	8.7	0.50 J	5.85	0.534	9.78	1.08	10.0	-11.5
	11/8/2017	**12**	**14,000**	670	80	67	8.6	0.57 J	6.16	0.371	1.83	0.02	11.2	8.1
	4/24/2018	**13**	**12,000**	600	92	48	10	1.2	6.29	0.389	3.40	0.69	11.8	-18.4
	11/14/2018	**15**	**13,000**	690	100	44	9.9	1.2	5.51	0.373	5.50	0.81	9.7	42.7
	04/16/2019	**15**	**16,000**	920	89	32	11	1.0 U	6.10	0.340	8.00	0.51	11.0	16.0
	10/28/2019	**16**	**17,000**	950	96	34	9.7	0.94 J	5.60	0.320	1.90	0.38	11.0	50.0
	05/21/2020	**17**	**14,000**	890	100	27	9.4	10 U	6.14	0.258	0.02	3.50	10.3	-11.0
	11/02/2020	**12**	**13,000**	720	97	27	9.8	1.0 U	5.76	0.195	8.40	0.92	10.6	223.0
	5/24/2021	**15**	**14,000**	910	89	21	9.7	1.0 U	5.87	0.163	4.05	2.63	12.7	7.7
	11/3/2021	**16**	**14,000**	920	96 J	20	8.4	1.0 U	5.81	0.204	9.22	0.71	11.8	-5.2
	5/5/2022	**17**	**15,000**	880	86	22	8.3	1.0 U	5.73	0.190	2.03	0.76	10.3	-19.3
	10/17/2022	**15**	**15,000**	880	83	24	9.5	1.0 UJ	5.75	0.252	1.90	0.59	11.8	285.3
EPA-PZ-2012-3B	10/9/2014	**3,830**	**62,100**	**5,930**	265	16	2.5	49	6.70	0.658	12.1	0.21	11.2	-113.9
	10/26/2015	**4,070**	**63,400**	**6,620**	260	17	3.3	4.5 J	5.41	0.701	4.61	0.26	12.7	-109.4
	11/18/2016	**3,600**	**52,000**	**5,600**	220	19	2.0	6.7	6.76	0.626	16.5	1.67	10.6	-106.6
	5/25/2017	**4,000**	**49,000**	**5,600**	200	22	2.3	8.5	6.55	0.658	22.0	2.41	10.3	-65.7
	11/9/2017	**3,400**	**53,000**	**6,300**	220	23	2.1	8.6	6.98	0.496	11.0	0.38	10.7	-92.2
	4/24/2018	**2,900**	**45,000**	**5,500**	210	25	1.6	12	6.98	0.638	7.26	0.77	11.6	-96.2
	11/14/2018	**3,000**	**44,000**	**5,600**	200	27	1.8 U	11	6.34	0.577	14.4	0.18	8.8	-53.6
	04/16/2019	**2,700**	**45,000**	**5,800**	180	28	1.9	12	6.70	0.610	33.0	0.42	12.0	-80.0
	10/28/2019	**3,200**	**49,000**	**5,900**	180	29	1.7	15	6.50	0.560	9.70	0.27	10.0	-54.0
	05/21/2020	**3,200**	**44,000**	**5,600**	180	27	1.7	15	6.64	0.533	0.02	3.72	11.6	-97.8
	11/02/2020	**2,700**	**37,000**	**5,300**	170	29	1.4	16	6.42	0.311	35.5	0.88	9.5	131.0
	5/24/2021	**2,800**	**39,000**	**5,100**	160	32	1.6	18	6.50	0.323	7.49	3.28	12.7	-61.2
	11/3/2021	**2,500**	**38,000**	**5,500**	160 J	33	0.8 U	18	6.52	0.398	1.06	0.75	11.2	-94.4
	5/5/2022	**2,600**	**38,000**	**5,100**	140	33	1.8	17	6.49	0.376	5.81	0.75	11.5	-96.6
	10/17/2022	**2,700**	**37,000**	**5,800**	150	34	1.7	18	6.51	0.483	3.21	0.69	11.2	-132.9
EPA-PZ-2012-4A	10/8/2014	4.8	**16,500**	**2,740**	46	145	6.3	10	6.03	0.690	0.47	0.03	13.0	-26.8
	10/26/2015	5.6	**14,300**	**2,000**	48	210	7.6	6.1	6.43	0.769	1.02	0.35	12.9	-33.1
	11/17/2016	5.1	5,200	710	69	110	12	9.4	6.21	0.525	0.91	1.13	13.2	5.6
	5/25/2017	2.9 J	3,100	400	67	49	15	5.4	6.34	0.368	6.42	0.38	9.8	-4.0
	11/8/2017	3.4	4,800	610	74	63	11	4.2	6.45	0.347	1.73	0.12	12.4	-2.3
	4/16/2018	2.5 J	3,700	500	83	39	11	5.9	6.43	0.324	0.72	0.79	6.7	-15.9
	11/13/2018	3.5	5,300	710	81	54	9.7	9.4	6.05	0.382	2.00	0.68	11.6	31.9
	04/15/2019	2.5 J	4,100	560	79	29	11	3.4	6.40	0.290	2.70	0.71	11.0	2.0
	10/31/2019	4.5	7,000	920	79	55	8.9	2.7	6.20	0.360	2.70	0.30	13.0	-33.0
	05/19/2020	2.7 J	4,900	640	75	39	9.4	1.5	6.45	0.279	0.02	3.84	13.1	-52.6
	10/30/2020	3.6	5,800	790	74	48	7.5	1.7	6.38	0.431	8.77	0.89	6.7	72.4
	5/25/2021	2.5 J	4,600	620	75	29	8.9	5.7	6.12	0.156	3.0	3.19	12.7	0.1
	11/5/2021	4.2	4,100	560	94 J	25	9.4	6.3	6.39	0.419	6.8	1.11	8.5	-4.4
	5/10/2022	2.8 J	4,200	580	87	14	10	1.8	6.34	0.243	34.0	0.85	18.2	-41.8
	10/13/2022	3.3 J	4,400	610	88	21	9.3	1.0 U	6.10	0.238	1.41	0.63	14.9	8.0
EPA-PZ-2012-4B	10/6/2014	**2,680**	**76,800**	784	208	16	2.6	4.9 J	6.60	0.578	3.33	0.35	12.9	-118.5
	10/26/2015	**3,520**	**85,600**	984	224	17	4.0	11	6.68	0.515	14.1	0.45	11.7	-119.2
	11/17/2016	**2,200**	**70,000**	640	210	18	2.7	0.90 J	6.36	0.569	13.2	1.46	11.8	-70.9
	5/25/2017	**2,300**	**73,000**	850	200	19	3.1	1.1	6.45	0.670	10.5	0.52	10.3	-64.2
	11/8/2017	**2,300**	**71,000**	890	220	21	2.5	2.2	6.76	0.550	2.09	0.22	10.7	-73.2
	4/16/2018	**1,900**	**72,000**	790	200	23	2.8	3.7	6.63	0.632	14.1	1.04	6.7	-65.1
	11/13/2018	**2,000**	**75,000**	880	190	21	2.9	3.2	6.30	0.614	3.10	0.30	10.0	-42.4
	04/15/2019	**2,000**	**72,000**	880	140	22	2.9	6.8	6.60	0.600	14.0	0.60	12.0	-63.0
	10/31/2019	**2,100**	**62,000**	690	130	26	2.1	17	6.50	0.510	9.50	1.70	12.0	-98.0
	05/19/2020	**1,800**	**66,000**	640	160	25	2.6	12	6.69	0.505	0.02	3.86	14.6	-104.0
	10/29/2020	**2,000**	**59,000**	780	140	28	2.6	12	6.46	0.468	33.3	3.51	9.1	5.4
	5/25/2021	**2,000**	**63,000**	960	120	29	2.2	9.5	6.43	0.312	11.1	2.91	13.0	-66.9

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	11/5/2021	**2,000**	**49,000**	740	120 J	29	2.1	20	6.71	0.588	5.97	1.14	6.8	-76.9
	5/10/2022	**1,800**	**50,000**	770	120	33	1.9	17	6.59	0.426	2.63	0.82	15.4	-101.0
	10/13/2022	**2,100**	**49,000**	810	120	30	1.8	17	6.49	0.457	3.44	0.58	14.6	-103.3
EPA-PZ-2012-5A	10/14/2014	2.0 U	6,450	86	24	17	6.0	7.2 J	5.57	0.093	2.68	0.07	11.3	71.1
	10/26/2015	4.0 U	6,560	90	22	9.5	5.8	5.5	5.51	0.101	1.08	0.48	10.3	35.9
	11/17/2016	3.0 U	6,300	79	22	12	5.5	4.3	5.90	0.084	0.88	0.22	10.7	48.9
	5/31/2017	3.0 U	6,400	83	23	12	6.0	4.3	5.45	0.133	9.13	0.48	10.5	25.9
	11/10/2017	3.0 U	6,300	84	22	13	5.5	3.5	5.82	0.085	2.78	0.56	9.5	56.7
	4/23/2018	1.5 J	6,500	87	23	14	6.2	5.1	5.71	0.111	7.72	0.85	9.4	6.2
	11/15/2018	1.5 J	6,200	90	18	14	5.9	3.9	6.42	0.071	1.94	0.27	7.7	112.0
	04/12/2019	1.5 J	7,200	96	22	15	6.5	4.2	5.70	0.120	5.20	0.39	7.9	36.0
	11/05/2019	2.2 J	6,800	96	24	16	6.3	5.1	5.20	0.110	3.30	0.20	9.5	80.0
	05/22/2020	3.0 U	6,700	88	26	15	6.7	4.0	5.57	0.106	2.78	3.73	9.6	52.3
	11/10/2020	3.0 U	5,800 J	87	22	15	6.3	4.4	6.17	0.333	9.60	0.82	13.2	74.7
	5/20/2021	3.0 U	6,200	88	25	13	6.7	4.2	5.53	0.017	2.79	1.95	10.5	10.4
	10/26/2021	3.0 U	6,200	90	33	15	7.4	4.2	5.51	0.085	1.03	0.27	11.6	36.7
	5/5/2022	1.4 J	5,800	87	25	14	6.9	3.9	5.30	0.079	2.77	0.76	10.2	43.8
	10/19/2022	1.2 J	4,700	88	24	13	6.7	3.2	5.19	0.093	2.47	0.64	9.9	399.5
EPA-PZ-2012-5B	10/14/2014	3.2 J	471	**11,900**	311	6.5	1.9	3.6 J	6.44	0.598	0.01	0.16	11.0	34.3
	10/26/2015	3.7	181	**12,300**	286	18	2.2	1.7 J	6.13	0.626	1.42	0.33	10.7	24.4
	11/17/2016	2.4 J	130	**11,000**	250	20	1.7	2.7	6.62	0.501	0.83	0.19	10.2	21.4
	5/31/2017	1.6 J	130	**11,000**	230	24	1.7	2.7	7.00	0.534	3.14	0.90	7.8	108.9
	11/10/2017	3.0 U	290	**10,000**	220	30	1.6	3.5	6.69	0.435	3.24	0.18	9.3	86.3
	4/23/2018	3.0 U	100	**9,600**	220	35	1.8	7.2	6.39	0.539	3.74	0.78	10.3	18.3
	11/15/2018	**12**	910	**10,000**	200	40	1.6	7.1	6.35	0.344	10.4	0.54	7.5	16.1
	04/12/2019	2.7 J	390	**11,000**	200	42	1.7	8.9	6.40	0.530	4.40	0.33	8.8	38.0
	11/05/2019	**14**	940	**9,800**	190	40	1.3	12	6.20	0.450	2.00	0.28	9.4	-22.0
	05/22/2020	2.4 J	300	**9,600**	190	37	1.4	10	6.81	0.464	23.1	3.69	10.8	24.8
	11/10/2020	2.5 J	230	**9,000**	180	42	1.5	11	6.40	0.116	4.23	7.13	16.8	65.7
	5/20/2021	3.3	200	**10,000**	180	40	1.4	9.9	6.49	0.079	< 0.1	1.22	12.5	-77.3
	10/26/2021	3.6	140	**9,800**	180	45	1.3	12	6.41	0.356	< 0.1	0.26	11.4	-14.0
	5/5/2022	1.5 J	140	**8,800**	150	44	1.4	15	6.14	0.330	1.41	0.80	11.1	33.0
	10/19/2022	1.4 J	180	**9,600**	160	43	1.3	16	6.31	0.432	3.15	0.57	10.9	423.7
EPA-PZ-2012-6A	10/9/2014	2.0 U	50 U	7.5 U	32	41	0.87 J	22	6.28	0.323	0.97	7.40	9.4	177.3
	10/26/2015	4.0 U	100 U	15 U	26	67	1.6	13	6.64	0.289	5.19	8.50	8.8	37.2
	11/17/2016	1.6 J	34 J	3.0 U	24	3.4	0.98 J	4.0	7.02	0.071	6.51	6.32	8.8	202.8
	5/24/2017	3.0 U	50 U	1.5 J	21	72	1.2	34	5.98	0.407	13.5	11.98	8.7	18.3
	11/9/2017	3.0 U	29 J	5.0 U	37	9.7	1.5	14	6.81	0.112	3.35	5.17	9.2	43.8
	4/20/2018	3.0 U	50 U	2.9 J	39	150	1.3	28	6.54	0.588	2.63	7.95	8.1	38.2
	11/09/2018	3.0 U	50 U	3.0 U	62	14	2.0	19	6.68	0.216	3.60	8.56	10.1	37.0
	04/22/2019	1.6 J	50 U	7.8 J	25	58	0.50 U	3.7	6.30	0.260	5.00	9.20	12.0	160.0
	10/25/2019	3.0 U	50 U	3.0 U	32	4.7	0.85 J	4.0	6.10	0.088	13.0	7.00	9.7	180.0
	05/22/2020	3.0 U	50 U	3.0 U	37	3.3	0.71 J	2.8	6.30	0.084	4.04	8.01	13.7	282.0
	11/11/2020	3.0 U	50 U	3.0 U	38	9.3	0.97 J	3.9	6.45	0.150	2.34	0.46	15.4	-1.6
	5/20/2021	3.0 U	50 U	3.0 U	25	33	0.90 J	4.2	7.14	0.162	7.11	9.37	22.8	155.1
	11/3/2021	3.0 U	50 U	3.0 U	62 J	0.93	0.8 U	3.7	6.64	0.206	4.68	9.20	6.5	95.2
	5/6/2022	3.0 U	50 U	5.0 U	38	39	1.1	4.5	5.97	0.169	2.25	7.08	13.6	132.0
	10/24/2022	3.0 U	50 U	5.0 U	35	1.8	0.98 J	2.4	6.34	0.049	1.46	5.79	11.9	181.9
EPA-PZ-2012-6B	10/9/2014	**515**	**18,000**	1,020	49	1.5	9.5	3.7 J	6.94	0.158	0.73	0.54	9.8	-123.2
	10/26/2015	**386**	**19,600**	667	46	5.0	1.4	3.5 J	6.31	0.102	2.81	0.75	8.4	10.3
	11/17/2016	**370**	**24,000**	870	67	5.7	1.2	4.5	6.55	0.166	12.0	0.75	9.0	-30.0
	5/24/2017	**430**	**27,000**	900	57	16	1.5	3.1	6.42	0.268	9.46	0.66	9.5	-38.7
	11/9/2017	**350**	**21,000**	1,000	53	9.4	1.4	3.6	7.14	0.165	4.55	0.20	9.3	-97.7
	4/20/2018	**96**	4,900	760	44	6.4	1.5	4.6	6.98	0.159	2.90	0.87	8.8	-69.7
	11/09/2018	**300**	**18,000**	890	48	3.4	1.4 U	3.4	6.74	0.100	37.4	1.76	9.2	4.5
	04/22/2019	**350**	**19,000**	950	39	17	1.6	12	6.80	0.200	36.0	6.80	12.0	-55.0
	10/25/2019	**370**	**17,000**	960	47	10	1.3	9.4	6.60	0.190	9.90	0.15	10.0	-60.0
	05/22/2020	**220**	**14,000**	720	36	8.8	1.1	3.5	6.46	0.117	6.99	0.45	11.2	52.3
	11/11/2020	**300**	**16,000**	970	42	3.7	1.3	2.8	7.97	0.375	3.24	4.94	12.7	123.0
	5/20/2021	**220**	**16,000**	860	41	3.0	1.3	2.5	7.20	0.123	4.15	1.07	24.1	-99.7
	11/3/2021	**250**	**21,000**	990	39 J	8.5	0.8 U	4.4	6.98	0.260	7.17	1.16	6.5	-83.8
	5/10/2022	**250**	**15,000**	800	31	4.1	1.3	3.6	6.63	0.105	11.30	0.83	12.7	-103.0
	10/24/2022	**300**	**21,000**	1,100	52	6.0	1.4	5.6	6.73	0.105	3.21	1.60	12.6	-108.7
EPA-PZ-2012-7A	10/14/2014	2.0 U	50 U	121	60	150	--	9.3 J	6.60	0.604	1.04	1.80	13.2	97.0
	10/27/2015	4.0 U	100 U	5.9 J	40	145	0.80 J	7.9	3.95	0.654	0.82	2.72	11.2	136.1
	11/21/2016	3.0 U	28 J	49	28	320	0.77 J	6.8	6.31	0.815	2.49	4.93	10.0	123.1
	5/24/2017	3.0 U	19 J	16	22	210	1.0	8.2	6.01	0.812	8.70	8.35	11.8	38.0
	11/17/2017	3.0 U	75 U	22	25	160	0.50 U	4.0	6.41	0.549	4.52	3.01	10.2	161.3
	4/18/2018	3.0 U	50 U	6.4 J	25	160	1.0 U	6.1	6.15	0.608	0.95	4.82	10.7	87.5
	11/16/2018	3.0 U	50 U	8.0 J	30	89	0.66 J	9.7	6.08	0.373	0.68	5.60	8.9	14.5
	04/19/2019	3.0 U	50 U	3.0 U	21	180	0.50 U	2.1	5.70	0.660	1.80	6.00	10.0	120.0
	10/31/2019	2.3 J	50 U	47	22	120	0.67 J	5.0	6.00	0.450	2.80	3.60	12.0	94.0
	05/22/2020	3.0 U	50 U	10 U	18	160	0.96 J	3.0	5.79	0.626	2.61	5.64	16.5	291.0
	11/06/2020	3.0 U	200	3.0 J	24	100	1.0 U	8.2	8.12	0.145	3.48	0.46	12.6	44.4
	6/16/2021	4.0 U	80 U	6.4	12	140	0.5 U	5.0	6.79	0.409	4.48	6.21	16.3	189.3
	11/2/2021	3.0 U	50 U	3.0 J	31 J	67	0.8 U	2.1	6.06	0.439	2.78	7.12	8.3	135.3
	5/12/2022	3.0 U	50 U	6.4 J	24	160	1.1	4.4	5.81	0.546	3.37	4.27	15.4	189.0
	10/24/2022	3.0 U	50 U	2.8 J	21	170	1.3 J	4.3	5.86	0.364	1.81	4.75	13.0	115.2
EPA-PZ-2012-7B	10/14/2014	**1,250**	**34,800**	1,460	77	0.77 U	2.4	4.9 J	6.67	0.229	3.18	0.20	12.9	-92.9
	10/27/2015	**1,330**	**36,900**	1,380	773	3.0	3.6	12	5.59	0.275	0.68	0.95	11.7	-115.4
	11/21/2016	**1,000**	**26,000**	930	45	34	1.5	0.50 U	6.60	0.202	17.2	7.04	10.1	-55.2
	5/24/2017	**1,500**	**18,000**	930	39	1.8	1.4	3.5	6.45	0.175	11.4	0.41	11.5	-58.1
	11/17/2017	**1,200**	**19,000**	830	44	1.7	1.3	3.5	6.91	0.140	389	0.33	10.0	-94.1
	4/18/2018	**1,300**	**20,000**	1,200	46	2.3	1.5	3.5	6.81	0.161	5.97	1.01	9.4	-83.3
	11/16/2018	**1,100**	**16,000**	1,000	40	1.2	1.5	3.4 J	6.54	0.138	15.8	0.57	10.0	-65.1
	04/19/2019	**1,500**	**22,000**	**2,700**	52	9.6	0.50 U	5.0	6.20	0.210	1.00	0.77	11.0	-34.0
	11/05/2019	**1,300**	**23,000**	**1,900**	50	1.3	1.3	4.7	6.70	0.150	6.40	0.23	9.8	-93.0
	05/22/2020	**1,400**	**16,000**	**2,700**	38	1.2	1.1	3.3	6.56	0.117	5.06	0.37	13.6	38.6
	11/06/2020	**1,300**	**21,000**	**2,500**	52	1.4	1.1 U	2.8	6.50	0.505	4.23	1.05	9.9	96.1
	6/16/2021	**1,300**	**19,000**	**2,900**	56	1.7 J	0.5 U	3.2	7.75	0.098	4.84	0.64	14.7	-81.5
	11/2/2021	**1,200**	**24,000**	**3,400**	56 J	1.3	0.8 U	3.3	6.75	0.307	4.25	1.18	8.6	-81.8
	5/12/2022	**1,300**	**15,000**	**3,100**	31	1.1	1.1	2.4	6.74	0.101	3.99	0.65	12.3	-107.0
	10/24/2022	**770**	**12,000**	1,600	40	51	1.8	0.59 J	6.67	0.098	10.16	1.48	12.8	-99.9
EW-01	8/29/2016	**1,500**	**62,000**	**2,100**	260	16	4.8	2.0	--	--	--	--	--	--
	6/14/2017	**1,900**	**63,000**	**2,200**	170	15	4.5	3.7	--	--	--	--	--	--
	11/28/2017	**1,800**	**71,000**	**2,200**	180	15	4.2	3.8	--	--	--	--	--	--
	04/19/2018	**1,500**	**60,000**	**2,100**	190 J	15	4.7	4.1	--	--	--	--	--	--
	12/18/2018	**1,900**	**75,000**	**2,500**	240	15	4.3	4.2	--	--	--	--	--	--
	04/12/2019	**1,500**	**64,000**	**2,100**	200	15	4.4	4.0	--	--	--	--	--	--
	11/05/2019	**1,600**	**65,000**	**2,100**	210	18	4.2	6.6	--	--	--	--	--	--
	05/08/2020	**1,500**	**63,000**	**2,000**	--	--	--	--	--	--	--	--	--	--
	05/18/2020	**1,600**	**65,000**	**2,100**	250	17	4.8	5.1	6.62	0.569	40.0	9.26	11.8	-43.3
	10/30/2020	**1,400**	**56,000**	**1,800**	210	18	4.1	4.8	6.76	0.284	6.18	2.11	6.7	74.7
	6/15/2021	**1,400**	**66,000**	**2,200**	250	16	5.1	4.9	6.68	0.443	1.46	2.49	15.3	-60.1
	11/5/2021	**1,600**	**63,000**	**2,100**	210 J	19	4.6	4.3	6.41	0.622	5.45	2.93	5.4	-38.7
	5/13/2022	**1,500**	**70,000**	**2,200**	200	18	4.8	3.7	--	--	--	--	--	--
	5/25/2022	**1,600**	**65,000**	**2,200**	230	17	4.9	4.1	6.60	0.624	4.51	0.18	11.1	-1.0
	8/23/2022	**1,500**	**63,000**	**2,100**	200	18	4.8	5.2	6.79	0.620	1.81	6.00	11.8	-52.5
	10/21/2022	**1,600**	**64,000**	**2,100**	230	18	4.6	4.5	6.27	0.393	7.82	4.17	14.0	-67.9
	11/18/2022	**1,700**	**61,000**	**2,000**	200	18	4.4	5.7	6.26	0.529	1.63	2.09	10.8	-193.0
EW-04	8/29/2016	**2,400**	**35,000**	**2,200**	130	9.1	2.0	4.2	--	--	--	--	--	--
	6/14/2017	**3,500**	**42,000**	**2,700**	100	8.1	2.0	4.4	--	--	--	--	--	--
	11/28/2017	**3,500**	**45,000**	**2,700**	98	7.5	1.9	4.5	--	--	--	--	--	--
	04/19/2018	**3,300**	**37,000**	**2,300**	110 J	6.4	2.2	4.6	--	--	--	--	--	--
	12/18/2018	**4,000**	**56,000**	**3,200**	160	6.8	2.4	5.0	--	--	--	--	--	--
	04/12/2019	**2,900**	**41,000**	**2,400**	100	5.2	1.9	4.4	--	--	--	--	--	--
	11/05/2019	**3,200**	**38,000**	**2,100**	110	6.8	1.7	6.4	--	--	--	--	--	--

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	05/08/2020	**3,100**	**39,000**	**2,400**	--	--	--	--	--	--	--	--	--	--
	05/18/2020	**3,300**	**39,000**	**2,400**	130	5.8	1.9	5.3	7.73	0.317	39.3	9.54	11.9	-65.3
	10/30/2020	**3,000**	**33,000**	**2,100**	100	6.7	1.9 U	4.5	6.78	0.171	6.00	0.68	9.1	-38.3
	6/15/2021	**3,000**	**39,000**	**2,500**	130	6.6	0.5 U	5.2	6.60	0.246	7.14	2.78	16.4	-55.5
	11/5/2021	**3,400**	**39,000**	**2,500**	120 J	6.9	2.1	4.7	6.60	0.440	7.13	3.04	6.6	-25.3
	5/13/2022	**3,000**	**41,000**	**2,600**	100	6.3	2.2	4.3	--	--	--	--	--	--
	10/21/2022	**3,000**	**37,000**	**2,400**	120	5.6	1.9	3.9	6.34	0.194	2.42	3.49	13.9	-62.4
N5-P1	10/12/2010	--	--	--	300	20	--	11 U	6.06	1.353	1.00	0.31	12.3	-61.8
	10/10/2011	--	--	--	280	16	--	9.5	6.60	0.548	2.00	0.18	12.7	-60.0
	10/18/2012	--	--	--	270	20	--	11	6.79	0.386	18.0	0.55	11.7	-100.0
	10/22/2013	**2,500**	7,520	**8,570**	313	18	--	11	6.73	0.620	0.46	0.57	13.6	-69.5
	10/8/2014	**327**	563	**2,010**	230	20	2.4	17	7.20	0.303	0.61	0.25	13.8	-108.3
	10/23/2015	**2,170**	3,440	**7,250**	250	16	2.7	14	6.25	0.560	1.52	0.51	11.5	-25.0
	12/22/2016	**4,200**	**35,000**	**9,000**	110 J	18	2.3	14	6.26	0.887	3.57	1.35	10.7	-41.0
	6/15/2017	**4,700**	**20,000**	**9,400**	220	220	2.4	220	7.12	0.269	6.97	0.48	14.0	-82.1
	11/9/2017	**4,700**	**44,000**	**6,800**	230	16	2.7	9.0	6.81	0.381	4.18	0.85	11.1	-23.0
	11/14/2018	**540**	570	**2,000**	140	19	1.2 U	16	7.66	0.337	21.5	2.25	8.4	-50.4
	11/06/2019	**4,400**	**43,000**	**6,200**	240	21	2.6	12	6.60	0.590	9.90	0.55	11.0	-43.0
	10/30/2020	**520**	510	980	130	19	1.2 U	17	6.81	0.527	11.7	0.63	9.2	10.7
	11/4/2021	**540**	280	980	140	18	0.8 U	17	7.19	0.428	4.11	1.25	4.2	-23.4
	10/19/2022	**560**	380	1,300	130	18	1.0	16	6.90	0.208	3.22	1.37	13.5	-48.2
N5-P2	10/12/2010	--	--	--	700	14	--	1.0	6.43	0.519	1.00	0.35	12.1	-60.7
	10/10/2011	--	--	--	690	14	--	1.0	6.20	1.080	2.00	0.17	12.8	-32.0
	10/17/2012	--	--	--	640	13	--	2.0 U	6.25	0.850	82.0	1.21	14.9	-132.4
	10/22/2013	**21**	**75,400**	459	652	15	--	0.67 J	6.34	1.271	3.36	0.72	14.2	-71.6
	10/23/2015	**26**	**38,200**	426	574	15	13	4.2	5.64	1.340	1.29	0.39	12.2	-57.2
	11/22/2016	**35**	**72,000**	490	610	13	12	1.0 U	6.26	0.887	3.57	1.35	10.7	-41.0
PZ-12-01	5/28/2013	**441**	**27,100**	**3,930**	201	38	2.4	14	6.50	0.421	4.19	0.23	12.4	-86.3
	05/25/2017	**680**	**41,000**	**3,100**	190	49	2.6	5.2	5.89	0.416	12.1	0.52	10.5	-18.6
	11/3/2017	**420**	**53,000**	670	150	14	2.1	2.9	6.43	0.532	7.93	0.52	14.1	-63.1
	4/12/2018	**700**	**55,000**	**2,800**	180	45	2.4	8.4	6.36	0.544	7.18	0.94	11.0	-0.3
	11/6/2018	**570**	**59,000**	**1,800**	140	48	2.2	5.9	6.27	0.583	23.4	1.01	11.2	-38.4
	04/18/2019	**470**	**54,000**	1,700	170	58	3.3	11	6.50	0.660	9.60	0.71	10.0	-54.0
	11/01/2019	**560**	**52,000**	**1,800**	140	62	2.0	14	6.40	0.600	4.50	0.36	11.0	-64.0
	05/18/2020	**540**	**54,000**	**2,000**	190	60	2.4	16	6.49	0.602	0.81	0.43	11.3	-1.4
	11/02/2020	**600**	**52,000**	**1,900**	160	57	1.9	19	6.56	0.621	1.96	0.69	10.2	-8.5
	5/19/2021	**580**	**66,000**	**2,300**	180	60	2.8	13	6.55	0.674	6.99	0.88	24.9	-91.9
	10/21/2021	**580**	**62,000**	**2,400**	140	75	2.5	14	6.50	0.894	7.46	1.03	14.5	-73.8
	5/4/2022	**600**	**64,000**	**2,500**	170	84	3.3	17	6.36	0.611	2.38	0.74	11.1	-87.8
	10/13/2022	**570**	**58,000**	**2,400**	140	86	2.4	25	6.54	0.440	9.73	1.31	14.1	-73.8
PZ-12-02	5/21/2013	**627**	**58,600**	1,330	213	42	2.8	4.5 U	6.37	0.665	4.58	0.15	12.3	-87.0
	05/26/2017	**500**	**56,000**	840	180	33	2.6	1.3	6.01	0.378	10.3	0.34	10.2	-34.6
	11/3/2017	**660**	**45,000**	**2,200**	150	46	2.7	6.1	6.31	0.477	1.72	0.33	13.1	-63.7
	4/12/2018	**400**	**60,000**	780	160	34	2.5	4.2	6.91	0.466	4.07	0.93	11.9	36.0
	11/6/2018	**300**	**64,000**	930	180	41	3.5	0.55 J	6.17	0.621	23.7	0.35	11.7	-58.1
	04/18/2019	**190**	**73,000**	1,300	240	47	5.8	6.0	6.40	0.780	5.50	1.20	9.8	-57.0
	11/01/2019	**270**	**74,000**	1,200	220	68	3.9	2.8	6.40	0.770	3.10	1.50	12.0	-64.0
	05/15/2020	**210**	**74,000**	1,400	260	54	4.3	5 U	5.49	0.710	7.77	0.56	13.7	99.1
	11/02/2020	**270**	**64,000**	1,100	200	64	3.0	1.0 U	6.63	0.504	30.0	0.37	8.5	-17.6
	5/19/2021	**290**	**71,000**	1,400	200	67	3.4	1.0 U	6.42	0.679	3.44	0.91	22.1	-75.0
	10/21/2021	**270**	**67,000**	1,400	180	63	3.7	1.0 U	6.46	0.954	0.48	1.14	15.6	-69.3
	5/4/2022	**250**	**65,000**	1,200	210	61	4.0	1.0 U	6.34	0.589	3.45	0.67	11.0	-82.1
	10/13/2022	**280**	**66,000**	1,200	200	81	3.5	1.0 U	6.46	0.475	3.91	1.20	14.9	-74.0
PZ-12-03	5/24/2013	**659**	**40,100**	**2,950**	227	53	3.3	21	6.60	0.563	1.94	0.23	12.2	-105.4
	05/26/2017	**600**	**39,000**	**2,700**	170	33	2.3	5.6	6.35	0.359	10.9	0.30	10.0	-64.1
	11/6/2017	**620**	**41,000**	**3,800**	140	12	2.8	48	6.44	0.416	9.32	0.47	13.1	-60.1
	4/19/2018	**610**	**32,000**	**3,000**	140 J	40	2.0	7.4	6.63	0.511	2.15	1.12	7.9	-75.6
	11/7/2018	**560**	**31,000**	**3,300**	150	47	1.8	5.1	6.35	0.537	31.7	0.43	13.3	-59.2
	04/18/2019	**630**	**39,000**	**3,900**	170	--	2.0	--	6.70	0.600	12.0	0.64	10.0	-65.0
	10/30/2019	**790**	**63,000**	**4,600**	190	51	1.9	20	6.30	0.630	2.70	0.29	11.0	-80.0
	05/18/2020	**740**	**42,000**	**3,600**	180	57	2.3	4.2	6.29	0.574	39.2	0.32	12.2	9.8
	11/02/2020	**720**	**50,000**	**3,300**	170	47	1.7	3.0	6.50	0.572	24.2	0.52	8.2	-2.3
	5/20/2021	**790**	**50,000**	**3,600**	160	62	2.1	1.5	7.14	0.601	42.59	0.95	23.6	-110.4
	10/26/2021	**740**	**45,000**	**3,500**	160	65	2.0	3.8	6.70	0.590	4.73	0.90	7.2	-80.7
	5/5/2022	**750**	**45,000**	**3,600**	160	75	2.1	3.5	6.50	0.669	9.22	0.57	17.5	-105.0
	10/14/2022	**720**	**53,000**	**4,100**	160	54	2.3	7.5	6.70	0.357	13.16	1.31	12.5	-97.5
PZ-12-04	5/24/2013	**610**	**56,300**	1,310	171	51	3.5	5.0	6.53	0.447	4.29	0.29	13.3	-86.9
	05/26/2017	**640**	**47,000**	850	110	10	2.1	1.9	6.30	0.258	9.69	0.29	10.4	-61.9
	11/6/2017	**68**	3,700	1,200	150	23	2.0	1.0	6.22	0.474	9.42	0.33	13.3	-78.2
	4/19/2018	**690**	**53,000**	1,300	130 J	13	2.2	2.8	6.45	0.451	1.38	2.96	8.6	-58.1
	11/7/2018	**630**	**56,000**	1,600	99 J	39	1.8	0.96 J	7.22	0.461	16.3	0.55	13.3	-65.0
	04/18/2019	**670**	**66,000**	1,700	150	44	2.2	1.8	6.50	0.580	4.00	0.52	11.0	-61.0
	10/30/2019	**730**	**78,000**	**2,000**	180	62	2.2	2.4	6.40	0.630	5.20	0.26	12.0	-72.0
	05/18/2020	**750**	**73,000**	**1,900**	230	40	2.4	3.8	6.10	0.585	7.99	0.32	12.6	17.9
	11/02/2020	**710**	**75,000**	**1,900**	160	61	2.3 U	1.0 U	6.51	0.277	3.37	0.91	9.4	43.8
	5/20/2021	**800**	**61,000**	1,600	180	29	2.3	1.5	7.03	0.480	5.14	0.97	23.2	-96.9
	10/26/2021	**720**	**64,000**	1,700	130	43	2.3	0.81 J	6.58	0.541	0.83	0.83	7.5	-75.6
	5/5/2022	**710**	**57,000**	1,400	150	49	2.2	0.88 J	6.34	0.554	10.80	0.62	18.1	-87.3
	10/13/2022	**690**	**63,000**	1,700	130	79	2.2	0.80 J	6.62	0.404	3.66	1.18	15.3	-93.1
PZ-12-05	5/22/2013	**741**	**67,700**	1,710	188	31	2.4	4.5 U	6.46	0.571	0.87	0.31	12.2	-99.6
	05/26/2017	**260**	**24,000**	1,300	55	2.4	1.3	12	6.27	0.128	6.91	0.27	10.1	-44.7
	11/6/2017	**260**	**32,000**	**1,900**	86	2.0	1.1	8.0	6.12	0.225	0.29	0.16	12.5	-43.1
	4/13/2018	**190**	**29,000**	**2,000**	76	2.1	1.3	8.8	6.41	0.204	1.09	0.36	12.4	-68.7
	11/7/2018	**140**	**33,000**	**2,200**	57 J	1.8	1.3 U	13 J	5.80	0.215	15.2	0.22	12.6	-8.0
	04/16/2019	**220**	**56,000**	**3,600**	59	9.1	1.4	23	6.20	0.340	4.80	0.65	12.0	-66.0
	10/30/2019	**210**	**38,000**	**2,500**	120	7.7	1.1	13	6.20	0.290	3.50	2.00	12.0	-39.0
	05/18/2020	**160**	**19,000**	1,400	76	4.4	1.0	7.0	6.08	0.166	5.31	0.34	13.6	46.7
	11/03/2020	**140**	**38,000**	**3,500**	120	12	2.3 U	7.0	6.24	0.243	3.11	0.60	10.3	58.9
	5/21/2021	**86**	**13,000**	1,400	40	1.4	1.2	5.0	6.82	0.117	4.25	1.05	20.6	-43.8
	10/26/2021	**49**	**12,000**	1,200	50	0.7	1.2	2.7	6.06	0.201	7.47	1.22	8.7	13.1
	5/9/2022	6.9	6,800	890	35	1.6	1.3	6.1	5.71	0.099	15.80	2.43	14.1	63.5
	10/14/2022	**14**	5,800	780	63	2.0	2.2	7.7	6.03	0.097	47.59	1.33	13.6	47.9
PZ-12-06	5/24/2013	**244**	**54,600**	1,350	293	51	30	10	6.23	0.700	2.90	1.57	13.0	-71.6
	05/26/2017	**41 J**	**20,000**	**2,000**	65	1.4	1.1	7.8	6.38	0.129	8.46	0.32	10.0	-24.3
	11/6/2017	**49**	**27,000**	**2,600**	90	1.6	1.4	36	6.08	0.279	6.97	0.57	13.1	-39.7
	4/13/2018	**25**	**19,000**	**2,400**	100	3.1	1.1	14	6.14	0.254	2.12	0.73	12.0	-52.3
	11/7/2018	**48**	**16,000**	**1,900**	58 J	0.56	1.2 U	17 J	6.17	0.188	15.8	0.29	13.5	-21.7
	4/16/2019	**31**	**23,000**	**6,800**	100	7.6	2.8	70	5.90	0.430	5.70	0.56	12.0	-9.6
	10/29/2019	**40**	**16,000**	**2,900**	100	2.0	0.96 J	15	6.00	0.230	6.60	0.31	16.0	-29.0
	05/18/2020	5.2	4,200	1,200	74	3.3	1.0	62	5.52	0.289	8.55	0.27	12.1	70.6
	11/03/2020	**13**	7,100	**2,400**	110	7.5	1.5 U	23	7.69	0.241	331	3.85	12.9	100.0
	5/21/2021	2.0 J	1,100	780	46	2.3	1.0	18	6.23	0.122	12	1.22	16.0	128.1
	10/26/2021	1.8 J	490	170	35	0.38 J	0.98 J	11	5.91	0.153	3.51	0.98	8.1	115.1
	5/9/2022	3.0 U	41 J	240	49	3.2	1.3	36	5.48	0.230	3.39	0.91	12.4	225.0
	10/14/2022	1.4 J	920	860	53	8.4	0.83 J	9.9	5.87	0.107	2.85	1.24	17.4	118.5
PZ-12-07	5/24/2013	**484**	**29,000**	1,620	105	6.3	2.2	13	6.41	0.276	18.0	0.29	11.5	-390.0
	06/03/2017	**110**	7,500	1,300	59	2.5	1.3	33	5.93	0.109	8.86	4.64	11.0	14.6
	11/6/2017	3.8	75 U	1,200	75	2.3	1.2	32	6.37	0.212	17.9	3.26	13.1	22.9
	4/12/2018	**72**	3,200	850	64	1.9	1.2	30	6.61	0.200	1.97	3.42	12.3	3.8
	11/9/2018	3.0 U	35 J	19	13	0.82	2.8	1.4	6.13	0.037	25.5	6.63	13.5	78.3
	4/16/2019	**100**	4,500	1,500	120	2.2	1.7	44	6.70	0.350	9.70	2.50	11.0	-14.0
	11/01/2019	**94**	5,100	1,400	94	4.2	2.2	99	6.40	0.440	8.70	2.90	12.0	47.0
	05/15/2020	**70**	3,500	1,000	85	1.3	1.5	32	5.44	0.227	7.46	7.78	12.5	274.0
	11/05/2020	**110**	3,800	1,100	87	2.2	1.4 U	50	7.49	0.167	29.8	0.42	13.6	89.7
	6/15/2021	**88**	3,200	1,100	80	1.3 J	1.4 U	24	6.95	0.162	29.1	6.01	13.9	-4.2
	10/27/2021	**140**	4,600	1,600	120 J	1.4	1.8	42	6.92	0.488	47.3	1.65	7.1	-57.1
	5/6/2022	**130**	2,900	980	80	0.89	1.4	16	6.51	0.181	34.8	4.53	14.1	-10.6

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	10/17/2022	**110**	3,300	1,600	99	2.3	2.3	59	6.57	0.198	46.8	3.82	12.1	-29.1
PZ-12-08	5/24/2013	1.9	174	361	46	5.8	6.9	7.4	5.90	0.125	9.20	2.68	10.6	131.7
	06/03/2017	3.1	590	44	21	0.67	2.5	3.7	7.38	0.039	14.8	8.60	10.4	23.9
	11/6/2017	2.3 J	2,200	1,600	55	1.3	1.9	21	5.82	0.194	24.2	0.48	13.9	68.0
	4/13/2018	1.5 J	420	790	30	1.0	1.8	7.4	6.01	0.090	1.02	7.68	9.8	94.8
	11/9/2018	3.0 U	35 J	19	13	0.82	2.8	1.4	6.13	0.037	25.5	6.63	13.5	78.3
	4/12/2019	**160**	**23,000**	1,200	70	1.0	0.50 U	26	6.10	0.240	89.0	3.90	10.0	52.0
	10/31/2019	**17**	**14,000**	**2,600**	88	5.6	1.2	13	5.80	0.230	26.0	0.35	13.0	64.0
	05/19/2020	1.7 J	5,200	1,200	58	0.60	1.3	16	6.06	0.127	18.9	4.90	10.7	99.7
	11/05/2020	**24**	**17,000**	1,700	85	1.1	1.7 U	8.8	6.99	0.182	39.6	1.39	9.8	122.0
	5/21/2021	3.0 U	4,700	1,400	46	0.92	1.3	14	6.52	0.124	49.7	1.06	19.9	64.1
	10/27/2021	3.0 U	6,100	1,300	52 J	0.51	1.2	15	6.13	0.261	49.9	1.35	8.0	32.9
	5/6/2022	3.8 J	**12,000**	**2,900**	65	0.69	1.4	18	5.72	0.187	84.1	0.95	13.2	40.2
	10/17/2022	**14**	**18,000**	**2,300**	91	1.9	1.6	9.0	5.96	0.129	34.5	1.23	12.0	5.6
PZ-12-09	5/21/2013	1.1	30 U	176	55	4.3	1.1	27	6.34	0.187	3.46	3.83	13.2	112.6
	06/08/2017	3.0 U	50 U	30	80	3.1	1.1	34	6.53	0.177	6.88	3.02	10.5	63.0
	11/7/2017	3.0 U	75 U	2.4 J	55	1.6	0.81 J	21	6.91	0.131	1.95	7.48	11.9	83.4
	4/12/2018	3.0 U	50 U	17	80	2.1	1.0 U	26	6.88	0.233	2.22	4.12	11.4	79.5
	11/6/2018	3.0 U	26 J	10 U	76 J	1.5	1.0 U	16	6.21	0.200	3.95	0.97	11.8	55.8
	4/16/2019	3.0 U	50 U	37	72	1.3	0.50 U	13	6.80	0.200	8.70	1.90	11.0	120.0
	10/31/2019	3.1	50 U	12	69	1.4	0.64 J	20	6.30	0.180	10.0	0.86	12.0	160.0
	05/15/2020	3.0 U	50 U	17	84	1.1	0.52 J	13	4.70	0.177	4.89	5.94	12.4	285.0
	10/26/2020	1.6 J	50 U	14	110	1.1	0.46 J	10	6.82	0.071	2.43	4.47	9.2	165.0
	5/21/2021	1.7 J	50 U	32	85	0.97	0.66 J	11	7.44	0.177	8.43	2.15	21.5	117.8
	11/1/2021	3.0 U	50 U	7.2 J	90	2.30	0.74 J	2.3	6.88	0.333	0.52	6.03	9.2	115.3
	5/6/2022	1.7 J	50 U	43	84	0.89	0.61 J	9.8	6.55	0.181	3.74	2.00	14.4	108.0
	10/17/2022	2.0 J	50 U	3.0 J	87	0.82	0.86 J	9.2	6.58	0.115	0.67	2.43	11.2	127.8
PZ-12-10	5/22/2013	0.69 J	30 U	2.5 U	16	1.8	2.0	4.5 U	5.88	0.043	1.10	10.37	10.2	191.3
	06/08/2017	3.0 U	50 U	3.0 U	25	0.99	1.1	6.7	5.67	0.046	6.50	9.67	9.5	131.6
	11/7/2017	3.0 U	75 U	5.0 U	36	0.81	0.89 J	8.1	6.30	0.074	1.95	7.24	12.0	129.9
	4/12/2018	3.0 U	21 J	1.4 J	17	0.86	1.0 U	2.0	6.24	0.044	1.57	10.04	9.7	121.5
	11/6/2018	3.0 U	50 U	3.0 U	38 J	0.98	1.0 U	2.3	5.35	0.088	2.98	3.50	13.1	74.3
	04/16/2019	3.0 U	790	8.8	44	0.91	0.50 U	6.1	6.10	0.097	2.60	3.50	9.1	170.0
	10/31/2019	3.0 U	50 U	1.2 J	36	0.86	0.69 J	11	5.20	0.095	1.90	6.80	13.0	180.0
	05/15/2020	3.0 U	50 U	10 U	33	0.46 J	0.64 J	7.2	6.23	0.068	2.46	10.90	11.2	122.0
	10/26/2020	3.0 U	50 U	3.0 U	30	0.44 J	0.94 J	9.7	8.24	0.044	1.53	2.27	16.3	120.0
	5/24/2021	3.0 U	50 U	3.0 U	29	1.0	0.59 J	1.8	10.28	0.046	0.74	8.84	15.4	204.9
	10/27/2021	3.0 U	50 U	3.0 U	53 J	0.42 J	0.85 J	2.4	6.24	0.208	0.47	8.01	8.2	158.3
	5/9/2022	3.0 U	50 U	5.0 U	49	1.7	0.87 J	7.3	6.17	0.113	2.74	6.69	14.0	177.0
	10/14/2022	3.0 U	50 U	5.0 U	37	1.0 J	0.74 J	4.5 J	6.16	0.053	1.28	5.51	15.3	173.4
SHL-10	10/14/2010	--	--	--	31	1.3	--	6.0	6.51	0.089	1.00	9.16	12.8	136.9
	10/16/2012	--	--	--	26	1.1	--	4.2	6.89	0.073	0.36	0.87	9.8	59.1
	5/22/2013	1.2	30 J	2.5 U	24	5.8	1.6	4.6 J	6.62	0.055	1.22	10.05	11.5	149.8
	10/8/2014	2.0 U	50 U	7.5 U	34	2.8	0.57 J	9.8 J	6.54	0.076	8.11	8.68	10.9	173.6
	10/23/2015	4.0 U	100 U	15 U	36	3.0	1.0 U	10	6.59	0.084	1.53	7.74	11.3	86.6
	12/1/2016	3.0 U	18 J	2.6 J	11	1.4	0.96 J	2.7	6.59	0.081	16.2	7.29	10.5	43.6
	6/1/2017	3.0 U	50	3.0 U	5.4	1.1	9.1	1.5	6.53	0.022	8.67	9.14	9.5	184.2
	11/29/2017	3.0 U	75 U	5.0 U	7.5 U	0.95	0.50 U	2.1	6.25	0.030	1.42	9.24	10.8	104.9
	4/19/2018	3.0 U	85	1.2 J	12	1.1	1.0 U	2.0	6.57	0.032	2.18	9.74	10.3	46.8
	11/6/2018	3.0 U	50 U	3.0 U	9.3 J	0.78 J	1.0 U	1.1 J	5.46	0.032	4.71	0.94	10.6	103.0
	4/12/2019	3.0 U	50 U	3.0 U	14	0.97 J	0.50 U	2.5	6.30	0.041	3.90	5.70	10.0	170.0
	10/29/2019	3.0 U	50 U	3.0 U	28	1.4	0.58 J	6.8	6.80	0.075	9.80	8.80	11.0	150.0
	05/07/2020	3.0 U	50 U	3.0 U	--	--	--	--	5.71	0.025	1.22	8.37	10.0	77.6
	05/19/2020	3.0 U	50 U	10 U	9.2 J	1.0	0.38 J	1.6	5.79	0.022	3.50	9.55	13.5	164.0
	11/09/2020	3.0 U	50 U	23 U	20	1.1	1.7 U	4.0	6.53	0.534	35.8	0.52	10.6	21.5
	5/24/2021	3.0 U	29 J	2.1 J	10 U	1.2	1.2	1.5	5.95	0.274	6.30	1.00	10.6	198.6
	11/2/2021	3.0 U	50 U	3.0 U	6.4 J	0.61	0.8 U	1.6	6.46	0.089	1.11	2.15	8.8	100.0
	5/12/2022	3.0 U	50 U	2.0 J	11	0.92	4.6	1.8	6.11	0.004	2.20	7.30	12.1	140.0
	10/24/2022	7.7	2,400	1,100	41	2.0	2.3	6.4	6.27	0.117	4.43	2.06	11.3	37.2
SHL-11	10/13/2010	--	--	--	230	19	--	6.1	6.38	0.580	0.72	0.24	12.7	-70.0
	10/6/2011	--	--	--	240	15	--	1.6	6.20	0.597	4.00	0.30	13.1	-41.2
	10/15/2012	--	--	--	200	20	--	19	6.71	0.365	79.0	0.35	14.8	-108.2
	5/23/2013	**496**	**19,800**	**2,430**	160	41	2.1	20	6.75	0.462	8.50	0.18	12.2	-96.0
	10/22/2013	**752**	**27,600**	**3,610**	164	43	--	20	6.54	0.530	0.43	0.42	12.8	-97.6
	4/23/2014	**587**	**25,100**	**3,950**	157	48	1.9	20	6.45	0.390	4.94	0.26	10.3	-54.9
	10/8/2014	**793**	**44,700**	**4,320**	242	43	2.8	70	6.61	0.623	5.51	0.44	12.4	-90.3
	6/4/2015	**925**	**53,400**	**3,310**	187	64	1.6	0.95 J	7.01	0.676	11.3	0.31	11.6	-134.2
	10/23/2015	**642**	**45,800**	**3,560 J**	173	41	3.0	527	6.32	0.630	8.17	1.12	11.5	-78.4
	6/27/2016	**970**	**57,000**	**3,500**	200	63	2.5	0.80 U	6.28	0.696	10.2	13.26	0.2	-73.0
	11/16/2016	**520**	**32,000**	**1,900**	160	45	1.9	3.3	6.34	0.492	11.5	1.10	11.7	-49.1
	5/31/2017	**880**	**47,000**	**3,000**	170	51	2.1	2.8	6.23	0.404	12.8	0.38	10.3	70.9
	11/3/2017	**870**	**57,000**	**2,500**	150	57	2.0	2.2	6.61	0.590	14.2	0.17	13.2	-79.0
	4/12/2018	**820**	**53,000**	**2,300**	160	54	2.1	3.6	7.32	0.504	9.62	0.65	11.5	55.0
	11/7/2018	**910**	**51,000**	1,600	130	61	1.9	0.96 J	7.33	0.585	20.6	0.42	12.1	-91.4
	4/22/2019	**960**	**58,000**	1,700	140	65	2.0	4.7	6.70	0.640	32.0	0.84	11.0	-82.0
	10/30/2019	**920**	**50,000**	**1,900**	140	64	1.7	14	6.60	0.550	3.80	0.23	12.0	-110.0
	05/05/2020	**850**	**64,000**	1,800	--	--	--	--	7.47	0.634	21.0	0.44	10.3	-77.4
	05/18/2020	**900**	**68,000**	1,700	220	67	2.0	2.3	6.30	0.637	14.1	0.32	12.0	9.3
	10/29/2020	**900**	**48,000**	**2,000**	120	66	2.4	16	6.05	0.247	6.30	2.96	8.5	71.3
	5/20/2021	**1,200**	**82,000**	**2,800**	230	73	2.3	1.0 U	7.01	0.653	1.09	0.95	20.1	-106.8
	10/26/2021	**990**	**66,000**	**2,000**	130	81	2.1	3	6.75	0.659	3.74	1.05	7.4	-95.2
	5/5/2022	**930**	**87,000**	1,500	180	89	2.4	0.46 J	6.48	0.713	54.4	0.58	14.6	-111.0
	10/13/2022	**940**	**65,000**	**2,000**	170	94	2.0	9.5	6.77	0.447	0.33	1.12	14.2	-113.8
SHL-12	6/8/2015	2.0 J	50 U	15 J	63	24	1.8	92	--	--	--	--	--	--
	11/21/2016	1.6 J	20 J	**2,000**	92	62	2.6	100	6.17	0.457	2.04	1.07	11.2	81.0
	11/29/2017	2.4 J	120	**2,100**	78	61	2.1	92	6.86	0.640	2.96	0.69	12.7	144.4
	11/26/2018	1.9 J	50 U	150	76	19	2.3	61	6.00	0.340	3.23	3.88	11.6	105.0
	11/7/2019	7.4	660	890	69	40	3.2	98	5.90	0.439	12.2	3.14	10.4	105.0
	11/02/2020	2.3 J	130	180	63	57	1.7 U	90	5.95	0.161	12.1	0.69	10.7	-1.4
	10/26/2021	2.8 J	110	440	110	47	1.5	66	6.16	0.411	13.1	1.40	13.0	88.7
	5/26/2022	1.4 J	34 J	74	83	82	2.2	100	6.51	0.534	10.2	2.18	12.0	140.0
	8/23/2022	3.0 U	50 U	13	52	85	2.8	120	5.92	0.635	0.99	3.12	12.6	141.0
	10/18/2022	3.0 U	50 U	100	110	93	2.1	130	6.21	0.881	60.8	1.56	13.9	188.2
	11/8/2022	3.0 U	50 U	5.0 U	64 J	45	2.0	110	6.02	0.476	1.96	2.22	12.2	151.0
SHL-13	10/11/2010	--	--	--	19	82	--	6.5	5.62	0.317	3.08	2.54	15.5	169.0
	10/6/2011	--	--	--	18	66	--	4.7	5.72	0.273	0.00	0.25	14.6	42.0
	10/15/2012	--	--	--	23	61	--	5.5	5.91	0.254	0.23	0.67	16.3	61.5
	10/22/2013	2.0 U	43 J	30	23	61	--	8.0 J	6.08	0.269	0.20	0.35	13.9	127.0
	10/22/2015	2.9 J	1,210	549	23	90	2.0	5.3 J	5.32	0.338	0.26	0.41	17.8	28.8
SHL-15	10/14/2010	--	--	--	70	11	--	20	5.73	0.241	1.00	0.21	11.5	-0.3
	10/6/2011	--	--	--	140	22	--	14	6.17	0.403	0.90	0.27	12.4	66.1
	10/16/2012	--	--	--	84	26	--	14	5.98	0.348	1.30	3.27	13.1	-18.7
	10/22/2013	**35**	6,610	437	91	17	--	10	5.91	0.266	2.08	0.31	13.5	-23.6
	6/9/2015	**32**	3,570	198	75	120	8.5	14	5.82	0.392	23.8	0.24	10.2	-151.5
	1/21/2016	**19**	4,100	230	93	100	3.3	22	6.16	0.565	2.25	1.89	11.3	-10.7
	11/15/2017	**200**	**11,000**	820	130	4.6	8.8	1.0	6.36	0.271	4.79	0.34	13.3	13.2
	11/12/2018	**44**	**15,000**	670	100	2.5	6.2	2.4	5.84	0.268	4.35	0.72	12.5	12.9
	11/01/2019	**110**	1,500	540	100	7.0	2.6	29	5.80	0.290	2.90	0.21	12.0	71.0
	11/02/2020	**26**	4,500	250	100	19	2.8	9.1	6.74	0.178	15.9	4.35	9.9	142.0
	11/2/2021	**22**	7,000	250	110 J	19	2.8	4.7	5.99	0.431	4.66	1.01	6.9	-28.7
	5/23/2022	**45**	3,100	140	83	23	3.1	14	5.77	0.300	0.61	0.35	13.2	17.1
	8/23/2022	**28**	2,100	140	95	25	2.7	15	5.83	0.313	2.02	0.45	14.5	-20.6
	10/19/2022	**40**	4,200	220	110	24 J	3.4	10	5.84	0.197	1.51	1.53	11.4	-19.1
	11/8/2022	**58**	2,300	190	81 J	15	4.3	19	5.95	0.288	1.27	0.65	11.6	20.4
SHL-19	10/14/2010	--	--	--	80	2.2	--	22	5.86	0.240	40.0	0.57	11.0	22.0
	10/7/2011	--	--	--	38	1.2	--	13	4.97	0.107	13.0	3.66	13.1	128.0
	10/16/2012	--	--	--	66	2.3	--	22	5.67	0.194	79.0	0.27	10.5	22.0

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	5/24/2013	3.8	1,460	580	55	1.0	1.8	13	5.86	0.137	17.0	1.01	10.8	98.9
	10/24/2013	**34**	8,380	1,630	65	2.8	--	17	6.76	0.110	123	0.50	11.5	-85.9
	10/8/2014	3.1 J	5,640	**2,210 J**	62	2.5	2.4	18	6.09	0.180	30.7	0.52	12.8	29.6
	10/27/2015	3.1 J	8,850	**2,770**	334	75	1.0	17	6.13	0.167	50.7	0.59	11.1	-50.2
	11/21/2016	3.0 U	50 U	9.8 J	45	2.3	0.69 J	17	6.56	0.147	28.4	9.39	10.5	161.0
	6/2/2017	1.6 J	50 U	3.0 U	14	0.67	1.0	2.9	5.72	0.300	11.0	9.83	10.2	117.9
	11/7/2017	3.0 U	75 U	2.2 J	47	2.6	1.0	33	6.51	0.156	2.74	7.25	12.6	90.9
	4/19/2018	3.0 U	21 J	3.0 U	39 J	1.1	1.0 U	15	6.57	0.112	1.19	8.38	15.3	53.7
	11/7/2018	**20 J**	1,400	18 J	39	1.1	1.0 U	11	6.71	0.107	49.4	8.26	13.1	58.2
	04/12/2019	3.0 U	23 J	3.0 U	71	1.3	0.50 U	26	6.40	0.210	26.0	5.60	8.2	170.0
	10/29/2019	4.4	100	56	90	1.1	0.74 J	23	6.20	0.210	15.0	9.00	11.0	110.0
	05/08/2020	3.0 U	50 U	3.0 U	--	--	--	--	6.64	0.069	4.50	8.18	8.1	126.0
	05/19/2020	**20**	1,400	62	33	0.31 J	0.68 J	3.2	6.45	0.056	7.99	10.30	13.3	112.0
	10/26/2020	3.0 U	50 U	15	88	0.92	1.0	19	6.45	0.513	10.7	3.37	10.4	17.1
	5/19/2021	8.1	400	18	46	0.89	0.87 J	6.1	7.00	0.017	79.2	0.33	13.3	105.3
	10/27/2021	3.0 U	50 U	3.0 U	62 J	0.68	0.91 J	9.5	6.69	0.278	6.51	7.55	9.5	114.0
	5/6/2022	5.6	230	2.8 J	75	0.77	0.91 J	11	6.26	0.166	12.7	6.78	13.3	151.0
	10/17/2022	1.2 J	50 U	5.0 U	78	0.80	1.4	12	6.31	0.108	3.32	3.94	11.9	172.1
SHL-20	10/13/2010	--	--	--	140	20	--	8.8	6.43	0.395	1.71	0.20	12.0	88.0
	10/6/2011	--	--	--	140	22	--	14	6.17	0.403	1.60	0.27	12.4	66.1
	10/15/2012	**140**	--	**3,000**	120	22	--	22	6.36	0.277	16.0	2.43	12.7	50.1
	5/22/2013	**621**	**17,700**	**2,150**	111	36	1.4	31	6.75	0.414	0.54	0.19	12.2	-85.6
	10/22/2013	**641**	**38,500**	1,590	81	50	--	23	6.51	0.443	4.10	1.87	12.8	-93.6
	4/23/2014	**701**	**40,700 J**	**1,760**	120	50	1.6	26	6.21	0.499	6.31	0.85	11.0	-58.7
	10/8/2014	**763**	**52,500**	1,700	153	61	2.0	4.0 J	6.40	0.620	2.43	0.43	12.9	-87.8
	6/5/2015	**794**	**53,400**	**3,310**	118	59	1.5	15	6.61	0.530	9.24	0.47	12.7	-86.4
	10/23/2015	**855**	**59,300**	**2,060**	139	62	2.2	3.5 J	6.46	0.606	7.31	0.57	10.8	-119.0
	6/27/2016	**880**	**63,000**	**2,400**	210	63	2.6	0.80 U	6.46	0.719	9.08	16.36	0.3	-67.6
	11/16/2016	**830**	**45,000**	1,500	140	50	2.0	2.0	6.58	0.505	3.24	0.91	11.6	-89.0
	5/31/2017	**860**	**54,000**	**2,300**	150	61	2.1	3.8	6.43	0.449	11.9	0.32	11.4	-84.9
	11/7/2017	**860**	**71,000**	**2,300**	170	59	2.3	1.0 U	6.52	0.474	9.82	0.32	11.7	-62.3
	4/12/2018	**830**	**56,000**	**2,100**	160	61	2.2	1.0 U	7.34	0.610	1.33	0.64	12.3	11.0
	11/7/2018	**970**	**43,000**	**1,800**	72 J	58	1.8	37	7.32	0.500	3.02	3.47	11.8	-70.6
	04/22/2019	**770**	**41,000**	**2,200**	80	61	1.7	40	6.20	0.520	3.90	0.42	9.2	-68.0
	11/01/2019	**830**	**45,000**	**1,900**	99	62	1.3	29	6.60	0.550	3.00	0.17	11.0	-91.0
	11/11/2019	1.8	50	2.1	-	-	-	-	6.00	0.340	14.0	2.60	11.0	67.0
	05/05/2020	1.9 J	50 U	26	-	-	-	-	6.48	0.373	9.77	2.62	10.4	169.0
	05/18/2020	**810**	**37,000**	**2,600**	110	60	1.3	36	6.54	0.511	17.6	0.40	11.7	3.4
	10/29/2020	**760**	**52,000**	**2,100**	110	63	1.8	28	6.67	0.035	2.40	1.17	8.7	97.8
	5/20/2021	3.0	50 U	4.6 J	59	58	0.98 J	30	6.88	0.349	1.52	6.82	18.7	205.2
	10/21/2021	**840**	**57,000**	**3,600**	120	75	2.0	43	6.69	0.851	16	0.96	11.6	-93.1
	5/5/2022	**830**	**54,000**	**4,000**	95	94	1.8	51	6.55	0.607	3.54	0.65	13.6	-105.0
	10/13/2022	**870**	**73,000**	**2,400**	150	110	2.2	7.3	6.67	0.493	5.65	1.14	14.5	-98.7
SHL-22	4/21/2010	--	--	--	340	21	--	5.9	6.77	0.933	0.05	0.10	9.2	-40.0
	10/12/2010	--	--	--	380	23	--	5.9	6.47	0.783	0.03	0.31	9.8	-14.1
	4/6/2011	--	--	--	370	22	--	5.3 U	6.67	0.750	0.00	0.22	8.2	-43.6
	10/7/2011	--	--	--	380	22	--	5.3	6.54	0.776	0.00	0.27	11.1	15.3
	4/10/2012	--	--	--	380	22	--	2.2 U	6.42	0.981	2,000	2.13	8.8	-20.6
	10/17/2012	--	--	--	360	21	--	6.0	6.72	0.705	0.85	0.45	9.8	-20.2
	5/28/2013	**34**	453	**9,200**	400	20	2.2	5.8	6.68	0.492	0.91	1.28	9.2	18.7
	10/23/2013	**53**	615	**9,700**	388	20	--	6.6 J	6.70	0.511	0.00	0.39	10.6	-6.9
	4/24/2014	**49**	564	**9,430**	393	20	2.2	5.9 J	6.71	0.757	0.18	0.16	8.2	7.1
	10/9/2014	**45**	436	**8,820**	378	20	1.8	7.2 J	6.67	0.526	1.99	0.31	10.2	5.8
	10/26/2015	**16**	123	**10,200**	362	195	2.2	5.8	6.03	0.557	0.19	0.44	9.8	0.3
	11/17/2016	9.4	110	**8,900**	230	20	1.8	5.2	6.62	0.700	1.01	1.54	10.4	60.0
	11/13/2017	6.1	110	**9,400**	330	20	1.9	4.7	6.74	0.497	5.96	0.26	10.4	37.9
	11/12/2018	5.0	47 J	**8,500**	330	23	2.7	5.3	6.50	0.763	1.17	0.31	10.4	-140.0
	11/04/2019	6.2	74	**8,900**	320	26	1.5	10	6.60	0.680	4.00	0.55	9.8	47.0
	11/03/2020	2.4 J	50 U	**7,700**	320	29	1.5 U	8.9	6.52	0.043	1.06	10.10	10.6	200.0
	11/4/2021	5.0	51	**8,000**	320	31	0.8 U	12	6.53	0.478	0.96	0.89	10.3	120.0
	10/25/2022	4.4 J	39 J	**7,900**	270	31	1.3 J	13	6.56	0.564	3.80	0.74	10.5	89.2
SHL-23	8/12/2010	0.14 J	17 J	6.9	4.3	1.3	1.0 U	4.9	6.45	0.025	--	10.06	10.4	209.8
	10/13/2010	--	--	--	4.3	1.9	--	5.5	4.98	0.031	1.00	10.43	11.5	264.1
	10/15/2012	--	--	--	4.8	2.1	--	4.8	5.32	0.024	1.1	11.55	11.3	290.1
	6/10/2015	2.0 U	50 U	22	3.9 U	2.5	0.36 J	26	5.22	0.026	3.25	8.59	9.6	134.6
	10/26/2015	4.0 U	100 U	9.3 J	4.1 J	3.0	1.6	5.4	4.78	0.024	1.06	10.09	10.6	165.1
	11/22/2016	3.0 U	50 U	8.3 J	4.2 J	3.4	0.67 J	4.2	5.50	0.036	1.38	10.20	9.2	210.2
	11/27/2017	3.0 U	75 U	24	5.0 U	7.1	0.50 U	5.3	4.96	0.045	0.84	8.90	9.3	102.9
	11/8/2018	3.0 U	50 U	25	5.0 U	8.8	1.0 U	5.6	4.46	0.059	1.18	5.52	9.9	105.0
	11/13/2019	3.0 U	50 U	14	4.5	4.8	1.0 U	6.7	4.50	0.044	4.60	7.50	8.6	250.0
	11/12/2020	3.0 U	50 U	11 U	5.8 J	4.3	1.6	6.2	6.97	0.202	0.00	2.66	11.4	159.0
	11/9/2021	3.0 U	50 U	18	6.4 U	2.3	0.8 U	5.1	5.46	0.088	3.34	12.00	7.1	216.0
	5/31/2022	3.0 U	50 U	31	4.3 J	2.5	0.6 U	5.7	5.44	0.036	6.14	9.77	10.4	155.0
	8/30/2022	3.0 U	50 U	12	5.6 J	2.9	0.93 J	5.2	5.35	0.039	6.19	9.57	12.3	90.0
	10/26/2022	3.0 U	50 U	12	5.2	3.8	1.6 U	4.9	5.51	0.024	4.92	9.94	11.7	199.2
	11/14/2022	3.2 J	110 J	12	32	3.9	0.83 J	4.5	5.50	0.040	2.22	10.8	9.69	-62.6
SHL-24	6/9/2015	4.9	50 U	7.5 U	46	33	0.36 U	26	--	--	--	--	--	--
	10/27/2015	6.5	50 U	7.5 U	52	24	0.37 J	20	--	--	--	--	--	--
	11/21/2016	5.5	50 U	3.0 U	45	24	0.50 J	20	7.34	0.145	5.13	7.68	4.9	9.8
	11/29/2017	4.8	75 U	5.0 U	45	37	0.50 U	24	7.16	0.589	1.27	2.01	12.1	117.2
	11/28/2018	3.4	50 U	3.0 U	48	37	1.0 U	22	7.17	0.291	1.88	6.42	10.2	45.4
	11/07/2019	4.2	50 U	3.0 U	49	38	1.6	26	7.20	0.270	11.0	1.90	11.0	95.0
	10/26/2020	3.9	50 U	3.0 U	50	39	1.0 U	24	7.58	0.136	1.12	3.91	16.1	130.0
	11/4/2021	3.8	50 U	3.0 U	60	42	0.8 U	24	8.08	0.247	0.88	1.90	10.6	82.2
	6/2/2022	3.8 J	50 U	5.0 U	45	41	0.6 U	25	7.23	0.298	2.73	1.61	12.6	34.0
	8/30/2022	4.1 J	180	1.3 J	49	41	0.6 U	24	7.01	0.282	2.25	1.61	17.1	102.0
	10/14/2022	3.8 J	50 U	5.0 U	48	41	0.5 U	25	7.04	0.290	0.21	2.66	13.0	163.1
	11/10/2022	3.7 J	50 U	5.0 U	47	40	1.0 U	25	7.19	0.256	0.43	1.17	13.6	70.2
SHL-3	11/27/2017	3.0 U	75 U	2.6 J	99	1.9	1.7	21	5.53	0.261	5.07	7.01	12.3	126.3
	11/5/2018	3.0 U	22 J	3.0 U	150	1.8	1.9	22	6.06	0.342	6.78	6.57	12.7	37.9
	10/29/2019	3.0 U	50 U	1.3 J	99	1.3	1.4	7.3	6.00	0.220	3.60	5.10	12.0	160.0
	11/09/2020	3.0 U	50 U	10 U	61	0.65	1.6 U	6.3	6.00	0.147	65.2	0.80	12.7	-17.2
	11/3/2021	3.0 U	17 J	1.6 J	150 J	0.79	0.8 U	8.4	6.99	0.219	1.46	8.52	13.1	84.1
	10/21/2022	3.0 U	27 J	2.9 J	67	1.9	1.5	3.8	5.58	0.158	6.26	5.35	12.6	209.7
SHL-4	10/14/2010	--	--	--	110	25	--	7.2	6.01	0.334	0.03	0.46	12.2	47.0
	10/7/2011	--	--	--	32	1.6	--	2.3	5.65	0.082	0.00	1.44	12.6	274.0
	10/16/2012	--	--	--	55	13	--	0.65 J	5.69	0.162	0.84	0.34	13.6	47.0
	5/24/2013	2.6	58 J	481	123	13	2.4	15	6.10	0.278	0.36	0.27	10.4	107.1
	11/19/2013	6.2	637	**1,830**	112	18	3.3	69	6.13	0.427	0.06	0.33	11.5	35.2
	10/8/2014	**37**	8,030 J	**2,480 J**	114	6.0	2.7	15	6.20	0.239	11.7	0.30	17.7	4.2
	10/27/2015	**37**	3,470	**2,320**	71	15	3.0	16	6.15	0.189	3.70	0.82	13.0	6.2
	11/21/2016	**110**	**22,000**	**3,300**	84	1.4	1.4	22	6.43	0.219	18.0	0.81	11.7	-20.0
	6/7/2017	**74**	**15,000**	**2,000**	65	1.6	1.5	24	5.99	0.149	12.1	0.42	10.3	-8.2
	11/7/2017	**130**	**15,000**	**2,500**	76	1.5	1.4	18	6.62	0.163	4.14	0.17	12.3	-38.2
	4/19/2018	**110**	**15,000**	**2,600**	64 J	1.7	1.4	24	6.28	0.212	4.31	1.05	8.8	-1.6
	11/14/2018	**150**	**17,000**	**3,200**	68	1.2	1.5	22	6.32	0.313	22.4	0.21	11.3	-15.2
	04/16/2019	**98**	**14,000**	**2,900**	55	0.93	1.6	18	6.30	0.190	7.70	0.59	11.0	-28.0
	10/29/2019	**69**	**11,000**	**3,900**	90	1.5	1.5	17	6.10	0.210	18.0	0.29	12.0	-4.1
	05/20/2020	**220**	**24,000**	**2,500**	100	1.5	1.3	27	6.58	0.262	21.0	0.46	11.0	18.6
	11/12/2020	**110**	**15,000**	**2,500**	76	1.5	1.6	21	5.77	0.081	33.1	0.85	15.1	92.8
	5/25/2021	**180**	**17,000**	1,700	80	0.93	1.2	17	6.32	0.140	4.09	3.24	12.6	-27.2
	11/1/2021	**220**	**14,000**	1,400	71	0.76	1.1	16	7.10	0.175	6.10	0.01	13.8	-37.2
	5/3/2022	**110**	6,900	1,400	73	0.98	2.3	28	6.20	0.174	21.0	0.84	11.4	-36.4
	10/13/2022	**120**	**13,000**	**1,900**	65	1.2	1.3	18	6.19	0.186	7.89	0.70	17.1	-11.1
SHL-5	4/22/2010	--	--	--	25	3.6	--	1.0 U	5.86	0.090	0.56	0.09	7.2	-254.0
	10/11/2010	--	--	--	20	2.9	--	2.1	5.39	0.123	0.44	0.34	13.9	108.0
	4/5/2011	--	--	--	12	3.7	--	2.2	5.78	0.060	0.20	0.34	4.3	85.2

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	10/11/2011	--	--	--	33	0.60	--	1.1	5.28	0.078	1.00	0.14	15.2	130.0
	4/10/2012	--	--	--	24	3.3	--	1.7 U	5.54	0.084	2,100	0.54	7.7	111.8
	10/15/2012	--	--	--	37	2.9	--	4.7	5.42	0.099	4.10	0.49	14.0	82.4
	5/21/2013	3.7	999	286	23	16	4.1	4.5 U	5.59	0.100	3.36	0.36	10.8	82.9
	10/22/2013	**15**	2,380	429	44	4.3	--	0.87 J	5.73	0.088	0.90	0.86	13.8	-89.4
	4/22/2014	2.0 U	282	159	27	63	5.1	4.5 J	5.87	0.235	1.63	0.43	6.3	141.4
	10/13/2014	**13**	8,390	320	41	35	10	5.6 J	5.98	0.205	1.27	0.18	13.1	4.7
	10/21/2015	**13**	700	293	38	31	11	2.4	6.24	0.170	0.44	0.93	12.7	38.7
	11/17/2016	3.0 U	190	130	26	15	6.7	17	5.74	0.132	0.66	0.23	10.8	130.1
	11/10/2017	3.7	640	190	42	6.2	6.9	4.4	6.38	0.100	3.34	0.19	12.4	63.7
	11/14/2018	2.8 J	610	140	32	3.8	6.4	0.54 J	5.37	0.132	2.11	0.43	8.4	3.4
	11/08/2019	5.1	390	170	41	12	8.0	11	5.50	0.140	3.60	0.00	12.0	63.0
	11/09/2020	4.6	2,100	290	30	13	8.2	1.0 U	5.91	0.175	8.90	0.79	9.1	84.3
	11/2/2021	8.0	2,100	280	43 J	4.3	5.3	1.0 U	6.34	0.082	4.90	1.77	13.3	80.8
	10/17/2022	**14**	7,900	710	25	73	3.7	1.0 U	5.52	0.287	1.29	0.76	12.4	464.3
SHL-7	11/15/2017	3.0	180	110	48	13	0.50 U	5.3	6.70	0.162	6.18	0.39	11.8	87.9
	11/12/2018	3.0 U	22 J	34	59	4.6	1.1 U	3.5	6.27	0.137	4.95	0.27	14.5	128.0
	11/13/2019	3.0 U	160	13	61	26	1.0	12	7.70	0.190	4.20	3.30	9.4	-4.5
	11/03/2020	3.0 U	700	63	39	73	1.0 U	3.0	5.94	0.154	2.00	0.66	13.9	89.0
	11/4/2021	3.0 U	320	5.8 J	62	4.4	0.8 U	2.5	6.93	0.110	21.7	0.19	13.1	105.0
	5/26/2022	3.0 U	94 J	3.4 J	21	210	0.6 U	9.1	5.99	0.170	19.8	3.56	12.9	134.0
	8/24/2022	3.0 U	130	9.9 J	35	100	0.75 J	2.4	5.89	0.765	2.97	0.47	13.1	115.0
	10/19/2022	3.0 U	87 J	13	67	56	1.2	12	6.14	0.378	72.4	1.20	11.7	146.3
	11/17/2022	3.0 U	120	6.0 J	50	11	0.91 J	9.4	6.43	0.140	2.46	0.71	11.6	81.6
SHL-8D	4/22/2010	--	--	--	36	12	--	7.5	6.28	0.167	0.03	1.50	10.3	-121.0
	10/11/2010	--	--	--	23	9.6	--	8.0	6.02	0.102	0.98	3.65	11.3	14.3
	4/5/2011	--	--	--	20	19	--	7.0	6.13	0.124	0.00	3.47	10.2	88.0
	10/6/2011	--	--	--	22	7.9	--	7.6	6.13	0.091	0.00	5.39	10.6	43.0
	4/11/2012	--	--	--	5.0	12	--	5.8 U	5.89	0.164	130	0.83	9.5	89.6
	10/15/2012	--	--	--	18	24	--	6.4	6.17	0.092	1.2	2.19	13.0	60.5
	5/21/2013	0.72 J	30 U	2.5 U	28	30	0.64 U	6.2	6.12	0.138	0.32	1.67	13.7	48.7
	10/22/2013	2.0 U	30 U	2.5 U	13	12	--	7.5 J	6.21	0.090	0.00	3.25	11.1	83.9
	4/22/2014	2.0 U	30 U	2.5 U	11	28	0.73 J	6.3 J	5.92	0.147	0.15	2.08	10.9	146.6
	10/9/2014	2.0 U	50 U	7.5 U	16	43	0.41 J	7.2 J	5.88	0.204	0.60	0.77	10.9	101.8
	10/27/2015	4.0 U	70 J	39	29	6.3	1.0	3.6 J	5.42	0.069	0.32	0.35	9.9	49.2
	11/17/2016	3.0 U	50 U	9.9 J	27	13	0.73 J	7.1	6.34	0.101	1.06	0.16	10.6	36.9
	11/8/2017	3.0 U	34 J	8.7	23	21	0.54 J	7.1	6.44	0.137	4.66	0.25	10.1	38.3
	11/13/2018	3.0 U	50 U	6.6 J	24	25	1.0 U	7.5	5.84	0.227	6.59	0.19	10.8	-47.0
	10/24/2019	3.0 U	22 J	11	24	38	0.68 J	7.4	6.00	0.190	0.72	0.19	10.0	120.0
	11/10/2020	3.0 U	100 U	19	21	45	1.0	7.5	5.98	0.066	2.30	4.07	13.3	163.0
	11/2/2021	3.0 U	89	15	33 J	38	0.8 U	8.3	6.70	0.166	0.1 U	0.01	11.4	37.7
	10/19/2022	3.0 U	50 U	1.3 J	13	62	0.89 J	5.1	5.77	0.262	2.54	1.16	11.1	152.1
SHL-8S	4/22/2010	--	--	--	20	6.7	--	6.6	6.28	0.101	0.01	2.39	9.9	-91.0
	10/11/2010	--	--	--	20	7.5	--	5.0	6.15	0.078	0.47	1.72	10.2	145.0
	4/5/2011	--	--	--	21	6.4	--	6.1	6.15	0.077	0.00	4.37	10.2	138.0
	10/6/2011	--	--	--	21	7.1	--	5.4	6.06	0.082	0.00	2.24	10.4	175.0
	4/10/2012	--	--	--	20	5,200	--	4.0 U	6.21	0.097	580	6.90	10.0	139.8
	10/15/2012	--	--	--	19	7.4	--	4.3	6.37	0.051	1.1	4.56	12.6	110.1
	5/28/2013	0.93 J	100 U	15 U	22	6.0	16	6.2	6.40	0.074	1.33	5.94	10.3	146.2
	10/22/2013	2.0 U	30 U	2.5 U	18	6.8	--	6.4 J	6.20	0.075	0.70	2.49	10.8	230.0
	4/22/2014	2.0 U	79 J	6.1 J	26	6.3	0.55 J	6.0 J	6.54	0.077	0.62	5.53	10.1	160.8
	10/9/2014	2.0 U	50 U	83	25	5.0	0.59 J	7.8 J	6.06	0.084	1.50	0.53	10.8	127.8
	10/27/2015	4.0 U	100 U	15 U	22	6.0	0.49 J	7.3	5.47	0.065	0.29	2.36	9.4	101.1
	11/17/2016	3.0 U	50 U	3.0 U	24	5.0	0.36 J	6.8	6.42	0.076	1.01	4.11	10.4	170.2
	11/8/2017	3.0 U	75 U	5.0 U	23	5.6	0.43 J	5.7	6.28	0.085	5.91	4.03	10.0	68.7
	11/13/2018	3.0 U	50 U	1.3 J	23	5.9	1.0 U	6.3	5.78	0.145	5.66	3.48	10.9	29.8
	10/24/2019	3.0 U	50 U	1.7 J	26	5.9	0.37 J	6.7	6.00	0.082	1.10	4.70	9.6	170.0
	11/10/2020	3.0 U	70 U	7.3 J	24	7.2	1.0 U	6.1	6.52	0.194	72.3	0.83	8.7	3.6
	11/2/2021	3.0 U	50 U	3.0 U	35 J	7.4	0.8 U	5.4	6.90	0.075	0.28	3.47	11.3	128.0
	10/20/2022	3.0 U	50 U	5.0 U	25	6.4	0.54 J	5.0	6.16	0.090	4.49	5.08	10.4	235.7
SHL-9	4/21/2010	--	--	--	580	6.3	--	6.6	6.58	0.204	4.10	0.12	8.4	-74.0
	10/12/2010	--	--	--	770	7.3	--	4.3	6.35	0.204	0.89	0.21	10.2	-70.0
	4/6/2011	--	--	--	580	3.4	--	6.8 U	6.48	0.160	24.0	0.27	7.7	-38.7
	10/7/2011	--	--	--	670	14	--	7.8	6.26	0.223	0.00	0.27	11.8	-55.1
	4/10/2012	--	--	--	860	5.0	--	4.4	6.20	0.268	4,600	0.34	8.5	-19.3
	10/17/2012	--	--	--	85	4.4	--	6.8	6.94	0.210	0.72	0.36	9.1	-80.3
	5/28/2013	**30**	**9,590 J**	497	88	5.5	4.6	4.5 U	6.51	0.199	1.71	0.27	9.0	-54.1
	10/23/2013	**33**	8,890	439	64	23	--	2.1 J	6.52	0.160	0.58	0.22	10.9	-76.4
	4/23/2014	**22**	**9,530**	533	62	24	4.8	6.7 J	6.28	0.211	20.0	0.71	7.4	5.3
	10/9/2014	**29**	**9,820**	469	56	37	4.5	8.5 J	6.45	0.183	7.51	0.11	9.7	-42.1
	10/28/2015	**19**	**15,900**	451	82	14	11	1.6 J	5.96	0.299	1.51	0.28	9.4	-7.8
	11/17/2016	**38**	6,800	350	52	78	5.8	10	6.34	0.431	42.0	0.81	10.5	-13.0
	11/15/2017	**25**	6,400	360	55	21	5.3	11	7.89	0.418	4.77	2.06	10.2	4.9
	11/12/2018	**28**	3,700	220	76	26	8.1	8.9	6.25	0.339	4.55	0.28	11.2	-131.0
	10/30/2019	**33**	3,800	190	100	20	8.7	3.8	6.30	0.270	21.0	0.36	11.0	5.0
	11/03/2020	**35**	6,200	390	69	50	5.7	1.6	6.28	0.150	33.5	1.71	12.1	196.0
	11/2/2021	**35**	4,100	260	76 J	8.8	7.0	4.1	6.39	0.140	3.47	0.85	13.0	-16.6
	10/25/2022	**40**	4,800	270	92	6.9	7.6	0.76 J	6.34	0.320	2.50	0.61	11.8	-7.7
SHM-05-39A	8/12/2010	**236**	**24,500**	680	100	7.1	2.9	6.0	6.45	0.263	--	0.35	11.4	-52.9
	10/13/2012	--	--	--	87	3.6	--	3.8	6.62	0.213	2.00	0.16	12.1	-66.0
	10/4/2011	--	--	--	110	13	--	4.3	6.63	0.297	0.17	0.20	11.3	-92.0
	10/16/2012	--	--	--	50	17	--	4.8	6.28	0.149	40.0	0.37	14.3	69.6
	10/24/2013	**146**	**14,700**	575	52	19	--	4.0 J	6.70	0.133	0.35	0.23	11.9	-94.3
	10/29/2015	4.0 U	100 U	417	57	18	1.8	5.4 J	6.47	0.175	5.62	3.35	13.4	16.5
	10/26/2020	7.3	150	96	59	26	1.1	5.2	6.91	0.523	11.5	0.77	10.8	-70.5
	11/10/2021	2.0 J	50 U	180	58	25	0.88 J	5.6	6.62	0.317	8.82	1.45	10.3	83.0
	11/3/2022	2.4 J	50 U	3.0 J	43	31	1.3 J	5.7	6.56	0.120	19.31	7.34	10.9	197.1
SHM-05-39B	10/13/2010	--	--	--	300	130 J	--	4.0 J	6.75	0.896	3.54	0.19	12.9	-68.1
	10/5/2011	--	--	--	420	93 J	--	3.2	6.85	0.919	3.00	0.11	13.1	-66.0
	10/16/2012	--	--	--	420	37	--	2.0 J	6.91	1.365	55.0	1.67	15.3	-126.7
	10/24/2013	**113**	**9,580**	1,230	71	89	--	3.8 J	6.93	0.278	0.97	0.40	10.8	-95.3
	10/29/2015	**293**	**37,800**	1,500	63	525	3.0	10	6.82	1.712	5.44	2.81	13.8	-160.8
	11/10/2021	**250**	**19,000**	980	36	220	0.97 J	5.0 U	6.31	0.557	58.2	1.26	9.9	55.2
	10/26/2022	**440**	**18,000**	810	50	150	1.5 U	6.8	6.84	0.704	31.2	0.66	14.1	-99.0
SHM-05-40X	10/31/2007	**2,620**	**43,500**	1,244	220	13	--	1.7	6.71	0.565	7.89	1.62	11.0	-134.1
	8/12/2010	**3,180**	**22,500**	544	94	8.9	2.0	8.1	6.45	0.256	--	0.40	11.4	-21.5
	10/7/2010	--	--	--	160	12	--	5.8	6.47	0.409	0.34	0.22	10.7	-106.1
	10/5/2011	--	--	--	159	11	--	4.2	6.48	3.950	4.10	0.24	10.5	-77.3
	10/17/2012	--	--	--	150	9.7	--	5.9	6.71	0.374	40.0	0.19	10.6	-133.2
	10/24/2013	**3,100**	**28,800**	--	165	13	--	4.8 J	6.87	0.253	2.21	0.32	10.6	-136.3
	10/13/2014	**3,070**	**40,800**	1,080	178	12	5.8	5.4 J	6.85	0.334	8.65	0.39	10.5	-130.2
	10/29/2015	**2,060**	**39,800**	955	174	13	4.3	4.5 J	6.71	0.445	5.92	4.13	11.7	-144.8
	11/21/2016	**2,400**	**35,000**	800	160	10	2.0	2.9	6.88	0.347	4.79	1.09	10.1	-107.1
	6/6/2017	**25 J**	9,000	1,700	8.6	8.6	2.0	8.6	7.10	0.046	40.2	5.09	11.7	71.6
	11/17/2017	**2,200**	**43,000**	1,100	150	14	2.1	2.7	6.73	0.331	3.45	0.20	9.6	-66.1
	4/17/2018	**1,900**	**28,000**	740	180	130	2.1	4.6	6.66	1.026	0.80	0.98	10.5	-60.9
	11/26/2018	**2,400**	**41,000**	980	120 J	23 J	2.0	3.7 J	6.44	0.532	6.49	1.20	9.0	0.5
	04/23/2019	**2,100**	**27,000**	690	74	38	1.9	3.5	6.80	0.360	3.00	0.41	10.0	-110.0
	11/08/2019	**2,200**	**33,000**	820	140	23	2.8	5.4	6.50	0.390	13.0	0.44	8.1	20.0
	05/19/2020	**1,900**	**23,000**	700	110	27	1.7	3.1 J	5.33	1.560	22.0	0.36	12.4	236.0
	11/11/2020	**2,100**	**24,000**	670	150	11	1.6	3.8	7.67	0.423	5.51	0.46	11.4	7.9
	5/27/2021	**2,200**	**34,000**	1,000	170	19	2.0	4.0	6.78	0.070	43.4	1.17	16.7	-134.5
	11/8/2021	**2,100**	**27,000**	830	140	19	1.5	3.4	6.84	0.538	4.81	1.25	9.0	-77.1
	5/12/2022	**1,900**	**24,000**	730	100	17	1.9	3.3	6.37	0.273	3.81	0.89	12.5	-91.7
	5/25/2022	**2,000**	**23,000**	730	100	18	1.4	3.8	6.60	0.355	1.70	0.32	11.4	-54.0
	8/26/2022	**1,800**	**24,000**	800	120	16	2.3	4.1	6.76	0.351	3.26	0.32	14.8	-55.9
	10/26/2022	**2,200**	**29,000**	880	150	17	1.7 U	4.4	6.61	0.499	8.10	0.69	12.5	-92.9

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	11/18/2022	**2,100**	**25,000**	750	110	14	1.5	4.4	6.64	0.357	9.69	0.39	9.5	-196.0
SHM-05-41A	4/21/2010	--	--	--	37	1.4	--	7.9	6.60	0.121	0.15	0.09	9.5	-34.0
	10/7/2010	--	--	--	31	3.0	--	7.3	6.09	0.095	0.67	0.26	10.2	1.3
	4/4/2011	--	--	--	37	2.5	--	6.7	6.46	0.100	2.70	0.32	8.4	1.8
	10/4/2011	--	--	--	41	2.2	--	5.2	5.76	0.107	3.90	0.48	11.0	44.9
	4/11/2012	--	--	--	30	3.0	--	6.2 U	6.20	0.111	1,200	0.52	9.6	18.4
	10/17/2012	--	--	--	34	2.0	--	6.1	6.25	0.090	1.40	0.35	13.0	-33.5
	5/22/2013	**12**	5,530	569	33	3.3	1.2	7.9	6.27	0.101	3.79	0.76	10.4	17.6
	10/23/2013	**13**	4,560	534	41	2.8	--	5.8 J	6.42	0.069	0.66	0.35	10.2	-18.0
	4/23/2014	9.7	6,240	576	35	21	1.9	4.9 J	6.22	0.172	6.28	0.72	9.3	45.3
	10/9/2014	**14**	8,040	552	38	3.5	1.5	6.8 J	6.39	0.081	0.42	0.08	10.9	-20.0
	10/26/2015	**15**	6,330	308	32	5.5	1.5	5.4	5.79	0.088	0.28	2.16	10.1	54.2
	11/18/2016	**19**	4,600	160	33	5.7	1.5	4.1	6.45	0.103	1.03	1.53	10.7	81.2
	11/20/2017	**18**	5,900	210	25	17	1.1	3.3	6.73	0.142	3.79	0.46	9.4	43.5
	11/16/2018	**16**	4,400	160	29	11	1.2	5.7	5.52	0.193	2.55	0.21	10.4	-0.9
	11/08/2019	**31**	6,300	260	36	5.8	1.0 U	8.5	6.10	0.120	36.0	0.10	8.0	9.5
	11/06/2020	**18**	4,800	170	36	5.9	1.0 U	6.5	8.17	0.104	6.25	0.32	11.8	19.8
	11/5/2021	**20**	2,900	150	6.4 J	4.3	2.2	0.47 J	6.30	0.086	21.2	7.24	6.6	107.0
	10/17/2022	**48**	**10,000**	180	31	16	1.6	5.2	6.75	0.165	3.54	0.91	10.8	-62.4
SHM-05-41B	8/9/2010	**1,130**	**28,000**	656 J	--	--	2.6	--	6.43	0.310	--	0.32	11.8	42.6
	4/21/2010	--	--	--	120	7.0	--	5.0	6.74	0.392	9.60	0.08	9.6	-124.0
	10/7/2010	--	--	--	100	2.9	--	5.3	6.65	0.259	1.64	0.35	10.3	-86.8
	4/4/2011	--	--	--	120	1.5	--	5.7	6.73	0.266	0.50	0.16	8.4	-80.4
	10/4/2011	--	--	--	83	1.5	--	3.5	6.29	0.209	5.80	0.35	10.9	-61.2
	4/11/2012	--	--	--	66	3.0	--	3.3 U	6.44	0.199	8,400	0.14	10.0	-57.2
	10/17/2012	--	--	--	100	3.1	--	4.1	6.58	0.259	41.0	0.22	12.2	-150.1
	5/22/2013	**812**	**32,300**	780	97	5.8	2.8	8.7	6.55	0.302	3.03	0.26	10.0	-94.0
	10/23/2013	**716**	**21,400**	583	81	4.3	--	4.7 J	6.88	0.155	4.49	0.46	10.1	-120.4
	4/23/2014	**678**	**25,900**	766	88	3.8	2.3	5.2 J	6.60	0.245	15.0	0.47	9.3	-37.7
	10/9/2014	**638**	**24,300**	752	97	2.5	1.7	5.3 J	6.76	0.195	10.7	0.41	10.5	-93.0
	6/8/2015	**626**	**28,500**	947	93	19	1.6	3.8 J	6.67	0.315	6.90	0.09	13.3	-64.0
	10/26/2015	**614**	**27,300**	890	34	18	1.7	5.8	5.32	0.269	30.9	0.27	11.3	-23.3
	6/27/2016	**670**	**32,000**	1,100	130	7.9	1.9	1.7	6.43	0.327	11.7	13.23	0.3	-59.7
	11/18/2016	**730**	**41,000**	1,400	120	10	1.8	1.8	6.67	0.373	9.82	0.29	12.1	-103.7
	6/6/2017	**630**	**53,000**	**1,800**	130	15	1.8	2.3	7.12	0.479	9.06	1.73	6.6	-50.9
	11/20/2017	**620**	**50,000**	**1,800**	110	16	1.6	1.8	6.86	0.300	6.48	0.31	10.1	-69.1
	4/20/2018	**330**	**33,000**	1,300	110	810	1.7	5.4	6.47	3.310	4.91	1.85	8.5	-33.9
	11/16/2018	**510**	**42,000**	1,400	81	17	1.4	4.0	6.13	0.437	5.01	0.19	9.9	-70.0
	04/18/2019	**360**	**23,000**	840	65	430	2.2	11	6.40	1.400	14.0	0.41	6.6	-44.0
	11/08/2019	**530**	**24,000**	720	62	2.3	1.0 U	6.4	6.60	0.190	25.0	0.13	9.3	-60.0
	05/21/2020	**420**	**22,000**	740	84	430	1.7	5.7	6.43	0.333	12.0	0.26	13.5	44.4
	11/06/2020	**570**	**35,000**	1,100	86	48	1.7 U	2.5 J	7.58	1.940	3.34	0.54	13.6	-19.9
	5/27/2021	**440**	**28,000**	990	71	11	1.5	3.9	6.65	0.150	51.7	1.34	15.4	-59.8
	11/8/2021	**440**	**34,000**	1,200	96	11	1.5	3.0	6.65	0.451	3.11	1.20	9.7	-62.7
	5/9/2022	**390**	**21,000**	770	56	50	2.8	3.9	6.26	0.310	1.76	0.78	11.7	-68.2
	10/17/2022	**710**	**15,000**	150	31	110	9.2	1.0 U	7.00	0.318	5.30	0.85	10.8	-115.2
SHM-05-41C	4/21/2010	--	--	--	350	30	--	1.0 U	7.17	0.963	0.80	0.11	10.1	-167.0
	10/7/2010	--	--	--	350	29	--	1.0 U	7.01	0.753	0.43	0.29	10.7	-132.0
	4/4/2011	--	--	--	250	130	--	2.9	7.03	1.132	19.0	0.28	8.7	-99.0
	10/4/2011	--	--	--	340	28	--	0.30 J	6.28	0.775	4.80	0.36	11.1	-88.7
	4/11/2012	--	--	--	330	30	--	2.1 U	7.00	0.929	150,000	0.19	9.2	-116.8
	10/18/2012	--	--	--	350	28	--	0.81 J	6.93	0.714	170	0.70	9.0	-164.5
	5/21/2013	**709**	**14,700**	**2,530**	375	153	3.9	4.5 U	6.98	1.081	2.70	0.26	11.5	-98.5
	10/23/2013	**890**	**16,200**	**2,940**	364	29	--	1.4 J	7.16	0.511	0.44	0.93	10.1	-165.9
	4/23/2014	**1,490**	**17,600**	1,660	378	437	4.5	4.2 J	7.14	1.905	4.91	0.57	9.5	-121.7
	10/9/2014	**946**	**16,000**	**2,540**	368	90	4.1	2.6 J	7.13	0.699	0.42	0.14	11.0	-152.2
	6/8/2015	**883**	**16,700**	**2,880**	368	41	3.8	1.4 J	7.02	0.825	4.59	0.49	12.1	-131.7
	10/26/2015	**851**	**15,700**	**2,740**	370	34	6.4	2.1 J	6.29	0.654	0.12	0.54	10.3	-98.1
	6/27/2016	**810**	**17,000**	**3,100**	370	30	3.8	1.9	6.83	0.798	5.66	12.83	0.5	-93.6
	11/18/2016	**820**	**17,000**	**3,100**	360	27	3.7	2.6	7.21	0.732	0.34	0.70	10.1	-113.3
	6/6/2017	**390**	8,000	**2,400**	270	180	2.8	4.3	7.43	1.130	8.42	0.90	6.7	-76.7
	11/20/2017	**740**	**16,000**	**2,900**	360	25	3.1	2.9	7.05	0.559	6.62	0.39	9.7	-97.1
	4/20/2018	**800**	**18,000**	**3,000**	370	23	3.6	3.1	7.06	0.808	0.15	1.87	8.0	-118.9
	4/15/2019	**91**	**10,000**	**3,700**	280	550	6.0	10 U	6.80	2.600	4.50	1.20	9.8	-90.0
	11/08/2019	**29**	3,400	820 J	86	1,900	1.0 U	14 J	6.80	5.900	6.90	0.05	8.3	-53.0
	05/21/2020	**660**	**14,000**	**2,400**	360	1,200	3.1	10	6.20	4.550	7.96	0.37	12.4	89.7
	11/06/2020	**610**	**14,000**	**2,600**	350	380	3.2	2.4	5.63	0.067	15.6	0.68	12.2	176.0
	5/27/2021	**800**	**14,000**	**2,100**	340	970	3.0	10 U	6.95	2.570	0.8	0.61	14.4	-101.2
	11/4/2021	**280 J**	**8,800**	1,100 J	130	24	3.4	4.3	6.93	0.428	12	1.33	6.5	-75.0
	5/6/2022	**270 J**	4,700	940	260	180	3.8	3.7	6.78	0.809	4.3	0.80	10.9	-122.0
	10/17/2022	**28**	1,600	39	25	86	3.5	1.0 U	6.54	0.361	10.9	0.99	10.6	-19.9
SHM-05-42A	8/12/2010	--	--	--	160	2.0	--	5.8	6.08	0.071	3.50	5.11	9.6	-95.0
	4/22/2010	1.3	388	140	18	1.6	1.0 U	5.6	6.50	0.061	--	1.20	10.4	89.5
	10/13/2010	--	--	--	230	2.2	--	5.9	5.75	0.070	1.00	0.31	9.8	102.7
	4/5/2011	--	--	--	210	2.3	--	6.4	6.05	0.070	0.00	0.16	8.8	95.2
	10/7/2011	--	--	--	190	1.8	--	4.5	5.23	0.061	0.08	1.95	10.3	156.3
	4/11/2012	--	--	--	170	2.7	--	3.8 U	5.60	0.063	2,700	6.09	9.0	186.2
	10/18/2012	--	--	--	23	3.3	--	4.3	6.04	0.066	0.73	0.54	9.9	125.5
	5/22/2013	0.89 J	224	103	23	2.8	0.65 J	5.6	6.06	0.062	0.00	0.38	9.6	86.2
	10/23/2013	2.0 U	111	66	23	2.8	--	6.3 J	6.09	0.061	0.28	2.53	8.0	73.2
	4/23/2014	2.0 U	961	193	23	4.3	3.1	7.5 J	5.86	0.062	0.88	0.23	9.2	101.2
	10/9/2014	2.0 U	130	130	35	5.5	0.87 J	7.6 J	5.81	0.073	2.20	0.09	10.6	123.7
	10/28/2015	4.0 U	122	199	32	4.5	0.98 J	8.3	5.33	0.076	0.20	0.91	9.4	103.7
	11/18/2016	3.0 U	110	510	33	4.8	0.96 J	11	6.21	0.089	0.86	0.25	9.0	144.6
	11/28/2017	3.0 U	170	680	27	5.5	0.50 U	7.5	6.42	0.105	4.11	0.27	8.7	127.3
	11/15/2018	3.0 U	950	680	31	5.7	0.96 J	7.4	5.92	0.164	2.01	0.24	7.5	46.7
	11/5/2019	3.0 U	50 U	50	26	8.3	0.78 J	5.8	5.80	0.084	2.30	0.23	9.8	100.0
	11/09/2020	3.0 U	50 U	100	26	7.4	1.1 U	7.6	6.22	0.296	6.30	0.72	12.1	-24.5
	10/25/2021	3.0 U	560	310	31	4.1	1.1	7.2	5.94	0.063	0.1 U	0.86	10.8	83.1
	10/20/2022	3.0 U	69 J	76	28	6.3	1.0 J	6.5	5.55	0.083	1.91	0.62	10.5	417.9
SHM-05-42B	4/22/2010	--	--	--	290	23	--	5.2	6.52	0.863	6.00	0.19	9.8	-272.0
	10/13/2010	--	--	--	300	25	--	3.9	6.52	0.691	1.00	0.53	9.9	-64.6
	4/1/2011	--	--	--	340	32	--	3.3	6.44	0.759	0.00	0.25	8.8	-63.0
	10/7/2011	--	--	--	330	31	--	3.4	6.36	0.755	0.30	0.26	10.4	-44.1
	4/11/2012	--	--	--	320	26	--	2.4 U	6.45	0.895	37,000	0.54	9.6	-59.0
	10/18/2012	--	--	--	300	25	--	3.2	6.53	0.643	48.0	0.69	10.2	-116.8
	5/22/2013	**238**	**51,100**	**2,900**	318	28	3.4	4.5 U	6.58	0.655	1.20	0.37	9.9	-49.9
	10/23/2013	**232**	**43,200**	**3,280**	313	21	--	3.3 J	6.48	0.654	0.96	0.16	10.8	-105.7
	4/23/2014	**229**	**38,000**	**6,110**	308	18	3.9	2.0 J	6.43	0.643	3.08	0.14	9.4	-36.9
	10/9/2014	**215**	**34,300**	**6,450**	293	17	2.9	1.5 J	6.60	0.498	3.40	0.10	10.7	-78.6
	10/28/2015	**206**	**27,500**	**6,950**	221	15	2.5	2.4 J	6.33	0.389	0.21	0.41	9.7	-11.2
	11/18/2016	**180**	**27,000**	**6,500**	200	22	2.3	3.7	6.56	0.441	97.0	0.40	9.1	-8.3
	11/28/2017	**160**	**20,000**	**4,200**	110	38	1.5	3.6	7.17	0.364	2.87	0.48	8.5	-34.2
	11/15/2018	**160**	**21,000**	**4,800**	150	26	1.8	3.3	6.54	0.517	3.52	0.47	7.5	-38.1
	11/05/2019	**170**	**29,000**	**6,300**	170	34	1.6	9.7	6.40	0.450	4.70	0.19	9.6	-54.0
	11/09/2020	**160**	**28,000**	**6,200**	170	38	1.8 U	9.4	5.84	1.270	12.9	7.85	14.2	139.0
	10/25/2021	**150**	**29,000**	**6,600**	160	45	2.1	13	6.25	0.439	0.30	0.83	10.9	-57.8
	10/20/2022	**150**	**26,000**	**5,800**	150	45	1.3 J	7.5	6.24	0.443	0.75	0.62	10.7	-12.5
SHM-07-03	10/31/2007	0.50 U	73 J	211	21	6.4	--	24	--	--	--	--	--	--
	8/12/2010	0.29 J	54	9.7	18	8.2	1.0 U	10	5.81	0.081	--	6.61	12.3	133.9
	5/28/2013	1.0	100 U	15 U	17	29	1.3	6.4	5.81	0.147	12.0	4.82	12.8	139.2
	6/9/2015	2.0 U	98 K	18	17	180	0.77 J	8.8 J	5.75	0.601	7.34	7.55	12.6	136.7
	6/30/2016	3.2	660	82	13	200	1.3	7.6	5.78	0.686	36.7	4.42	17.4	140.8
	06/01/2017	3.0 U	83	23	13	210	1.0 U	5.6	5.70	0.786	9.81	7.40	12.6	76.5
	11/17/2017	3.0 U	470	41	12	150	0.50 U	6.2	6.09	0.435	11.2	0.60	10.1	59.4
	4/17/2018	3.1	620	60	16	840	1.0 U	9.0	5.96	3.125	51.3	4.32	11.3	85.1
	11/19/2018	3.0 U	540	27	180	170	2.5	6.8	5.33	0.638	12.5	4.22	8.5	232.0

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	4/18/2019	3.0 U	260	3.0 U	28	170	1.6	10	5.60	0.650	22.0	5.40	8.3	1700.0
	11/07/2019	3.0 U	200	7.3 J	16	130	1.9	8.8	5.60	0.444	602	7.80	9.2	117.6
	05/15/2020	3.0 U	110	26	25	130	0.84 J	6.1	5.62	0.443	19.1	5.58	13.8	290.0
	11/11/2020	3.0 U	320	8.9 J	15 U	320	0.87 J	11	6.75	0.253	27.4	0.81	18.2	56.2
	5/27/2021	3.0 U	37 J	2.0 J	31	120	0.83 J	7.4	6.02	0.060	16.0	0.26	16.9	158.7
	11/10/2021	3.0 U	120	2.1 J	35	110	0.60 J	7.5	6.12	0.552	9.3	7.29	8.2	159.0
	5/12/2022	3.0 U	50 U	13	23	240	0.78 J	6.4	5.44	0.751	11.1	4.84	16.2	149.0
SHM-07-05X	10/31/2007	--	--	--	46	60	--	12	7.61	0.429	5.01	1.85	11.1	19.0
	6/8/2015	4.8	50 U	7.5 U	157	77	4.2	28	7.41	0.460	3.05	6.47	13.7	37.9
	6/30/2016	**11**	50 U	10	160	200	2.0	25	6.06	1.000	13.5	0.03	17.6	56.2
	6/1/2017	**54**	870	550	120	1,100	3.3	19	7.19	3.798	20.0	1.46	14.7	-45.9
	11/17/2017	**890**	**19,000**	**2,200**	220	24	2.2	6.4	7.17	0.472	2.85	0.18	9.5	-106.3
	4/18/2018	**430**	**11,000**	1,500	170	1,300	3.1	13	6.83	4.659	11.0	1.20	13.5	-57.1
	11/26/2018	**100**	**9,800**	1,700	210	96	2.9	6.8	6.63	0.785	32.1	0.85	9.6	6.0
	4/18/2019	**950**	**23,000**	**1,900**	220	130	2.8	8.0	6.70	1.500	35.0	2.00	7.6	-66.0
	11/08/2019	**500**	**18,000**	**1,900**	240	68	3.1	8.7	6.80	0.660	14.0	0.46	7.4	11.0
	05/18/2020	**15**	3,400	74	30	46	3.0	2.3	6.27	0.188	119	0.92	12.8	216.0
	11/11/2020	**83**	1,900	140	38	48	2.0	2.7	6.40	0.608	4.02	0.28	14.8	101.0
	5/27/2021	**150**	2,700	530	87	390	2.1	4.2	6.98	0.212	4.18	0.38	18.4	-83.3
	11/8/2021	**24**	560	53	6.4 U	22	1.7	5.0 U	6.08	0.207	5.27	1.65	10.6	86.6
	5/12/2022	**110**	4,200	110	26	360	3.3	5.0 U	6.41	1.090	3.15	0.90	15.7	-67.1
	10/26/2022	**60**	740	200	26	37	13	7.8	6.50	0.345	26.2	0.63	16.7	25.8
SHM-10-01	7/13/2010	0.68 J	373	**10,600**	130	12	--	6.8	6.19	0.297	3.34	0.18	12.4	63.5
	8/12/2010	3.5 J	886	**10,700**	130	14	1.5	7.0	6.61	0.291	--	0.49	11.9	42.2
	9/8/2010	7.9	1,680	**10,300**	140	11	1.6	8.7	6.31	0.299	0.15	0.12	12.7	11.3
	10/24/2012	1.4	210	--	89	8.5	--	6.2 U	6.39	0.143	0.95	0.40	11.5	48.3
	5/29/2013	1.3	124	**5,970 J**	73	4.0	5.3	6.5	6.53	0.160	0.00	0.16	10.6	51.2
	6/9/2015	2.0 U	93 J	**14,800**	137	18	1.1	8.6 J	6.08	0.310	0.50	1.03	11.0	98.0
SHM-10-02	7/15/2010	0.43 J	881	**2,180**	250	160	--	20	6.42	0.836	3.47	0.45	12.2	80.8
	9/7/2010	1.1	843	**2,190**	260	120	2.5	19	5.94	0.881	0.64	0.87	12.5	-258.3
	10/22/2012	1.1	100 UJ	--	448	62	--	7.4 U	6.52	0.726	1.78	0.48	12.2	40.2
	5/29/2013	1.5	34 J	**2,450**	444	62	3.8	8.8	6.53	0.537	1.04	0.20	11.4	73.2
	6/8/2015	3.2 J	50 U	**4,700**	291	215	2.0	12	6.47	1.173	0.31	0.69	11.3	59.8
	11/21/2017	3.0 U	75 U	**1,800**	140	88	1.5	5.8	7.38	0.530	1.92	0.80	11.5	202.9
	11/28/2018	3.0 U	50 U	1,600	130	93	1.2	7.1	6.38	0.580	1.51	1.70	10.6	139.0
	11/14/2019	3.0 U	50 U	1,400	90	120	1.3	7.8	6.70	0.500	1.10	9.60	11.0	150.0
	11/10/2020	3.0 U	50 U	**2,000**	110	150	1.2	6.3	6.80	0.598	9.84	0.52	16.5	93.5
	11/1/2021	3.0 U	50 U	1.2 J	90	110	1.1	6.5	7.15	0.488	0.1 U	4.54	13.8	93.1
	11/4/2022	3.0 U	50 U	940	110	100	1.2 J	6.4	6.35	0.572	3.17	4.28	13.7	286.7
SHM-10-03	7/14/2010	0.78 J	866	153	96	1,000	--	38	6.60	3.331	31.7	1.47	16.1	75.7
	9/7/2010	0.51 J	1,030	44	78	1,100	1.0 U	39	6.31	3.341	13.4	1.72	11.9	148.1
	10/23/2012	1.0 U	79 J	--	57	900	--	38	6.51	2.230	21.9	1.45	13.8	-3.6
	5/24/2013	1.5	51 J	37	72	870	0.72 J	35	6.54	1.981	3.68	0.61	11.5	61.5
	6/9/2015	4.2	50 U	38	74	1,000	0.61 J	67	6.41	3.485	2.54	0.31	12.6	140.0
	11/21/2017	3.0 U	75 U	15	170	320	1.0	19	6.96	1.162	4.89	0.52	11.6	103.1
	11/28/2018	3.0 U	50 U	7.5 J	170	260	1.0 U	13	6.83	1.170	2.37	2.21	9.8	152.0
	11/14/2019	8.5	50 U	4.0 J	150	120	1.4	11	7.10	0.580	2.60	4.20	9.6	120.0
	11/10/2020	1.9 J	75 U	8.0 J	160	110	1.7	7.5	6.03	0.459	6.01	0.73	11.6	96.0
	10/28/2021	3.0 U	32 J	4.2 J	140 J	88	1.1	5.4	7.61	0.483	0.11	0.16	11.4	36.0
	11/3/2022	3.0 U	50 U	9.0 J	170	130	0.95 J	6.7	7.00	0.721	3.18	1.17	12.9	60.4
SHM-10-04	7/14/2010	0.64	5,190	**2,500**	99	74	--	84	6.37	0.630	17.7	0.23	10.8	9.9
	9/7/2010	0.79 J	1,650	**3,100**	100	92	2.7	87	5.99	0.656	4.28	0.23	12.1	43.7
	10/22/2012	1.0 U	100 U	--	81	83	--	71	5.89	0.460	4.15	0.27	11.6	65.0
	5/29/2013	1.0	100 U	622	100	83	1.9	82	6.01	0.382	1.67	0.16	10.2	180.1
	6/8/2015	2.0 U	50 U	597	58	140	1.3	65	6.14	0.710	0.17	0.24	10.9	96.9
	11/21/2017	3.0 U	180	330	100	92	1.5	17	6.33	0.473	1.28	0.26	11.2	151.2
	11/26/2018	3.0 U	50 U	320	80	97	1.1	23	6.16	0.522	2.97	0.39	10.7	71.0
	11/14/2019	3.0 U	50 U	330	71	89	1.1	20	6.80	0.420	3.10	0.43	11.0	100.0
	11/12/2020	3.0 U	50 U	280 J	63	90	1.2	17	5.64	0.165	6.20	1.21	13.5	158.0
	10/28/2021	3.0 U	50 U	390	81 J	81	1.2	21	6.62	0.371	0.17	0.10	11.9	97.1
	11/3/2022	3.0 U	50 U	290	62	47 J	1.2 J	34 J	6.28	0.388	3.67	1.07	14.3	145.7
SHM-10-05A	7/15/2010	4.6	1,880	620	43	34	--	10	6.29	0.186	5.12	1.42	19.1	31.7
	9/8/2010	5.2	677	122	36	29	1.0 U	11	5.27	0.200	8.92	3.20	20.2	-29.0
	10/23/2012	3.0	68 J	--	42	31	--	8.0	6.04	0.208	4.30	4.84	14.4	164.8
	5/22/2013	3.1	30 U	16	39	31	0.79 J	7.2	6.26	0.145	2.47	1.31	13.5	158.1
	6/9/2015	3.0 U	50 U	10 J	29	36	0.70 J	9.5 J	6.10	0.207	1.26	1.86	14.0	208.2
	11/16/2017	2.1 J	75 U	5.4	25	48	0.50 U	11	6.68	0.242	4.17	1.60	11.9	161.9
	11/13/2018	3.0 U	50 U	3.7 J	24	62	1.0 U	6.7	6.18	0.276	24.7	1.38	11.4	65.7
	11/12/2019	2.0 J	50 U	2.4 J	32	32	0.62 J	9.5	5.70	0.210	4.20	2.60	11.0	180.0
	11/12/2020	2.0 J	96 U	10 U	36	43	0.89 J	8.8	6.50	0.479	28.3	0.77	8.3	-10.6
	10/27/2021	3.0 U	50 U	2.0 J	39 J	49	1.6	6.1	6.16	0.187	0.1 U	1.03	13.6	89.8
	10/24/2022	1.3 J	58 J	3.8 J	23	62	0.71 J	6.5	6.35	0.294	12.9	1.60	15.0	149.2
SHM-10-06	7/8/2010	**1,680 J**	**117,000**	699	360	17	--	0.89	6.62	0.754	21.4	0.55	21.7	-93.8
	9/8/2010	**2,710**	**145,000**	9.6	300	15	5.0	0.49 J	6.16	0.783	3.72	2.83	11.6	-64.3
	10/23/2012	**2,300**	**111,000**	--	184	17	--	5.0 U	6.57	0.587	3.38	1.18	15.8	-122.1
	10/23/2012	--	--	--	117	14	--	0.99	--	--	--	--	--	--
	5/23/2013	**1,980**	**107,000**	**1,890**	227	16	3.7	4.5 U	6.60	0.473	4.66	0.86	13.2	-120.7
	10/8/2014	**1,900**	**92,000**	**2,080**	238	18	2.9	4.8 J	6.73	0.515	3.49	0.41	11.5	-119.3
	10/22/2015	**2,150**	**88,800**	**2,090**	183	18	5.4	3.7 J	6.65	0.535	3.00	0.41	11.0	-123.5
	11/21/2016	**1,700**	**77,000**	**3,100**	210	27	2.3	5.1	6.83	0.613	0.18	1.55	8.4	-89.3
	11/16/2017	**1,600**	**88,000**	**5,000**	180	26	2.5	5.4	6.90	0.483	3.57	0.31	9.7	-79.1
	11/12/2018	**1,200**	**81,000**	**3,300**	160	27	2.5	5.7	6.64	0.592	2.90	0.20	12.2	-82.1
	11/1/2019	**1,300**	**81,000**	**2,400**	150	29	2.2	11	6.60	0.580	3.40	0.08	11.0	-75.0
	10/30/2020	**1,000**	**63,000**	1,400	140	33	1.9 U	7.8	5.59	0.150	6.30	0.82	9.3	50.0
	11/2/2021	**990**	**78,000**	**2,800**	150 J	30	2.4	6.9	7.40	0.546	0.1 U	0.12	14.1	-96.2
	10/13/2022	**930**	**73,000**	**2,400**	100	36	1.8	12	6.32	0.460	1.61	0.65	13.4	-89.9
SHM-10-06A	7/7/2010	**61**	**19,900 J**	1,620	100	3.4	--	2.5 B	6.51	0.209	5.38	1.49	19.7	-22.6
	9/9/2010	**94**	**42,900**	**4,080**	190	11	3.3	3.2	5.94	0.431	40.6	0.39	10.7	-157.3
	10/24/2012	**72**	**19,900**	--	67	4.5	--	5.9 U	5.90	0.190	13.9	0.63	11.0	-203.0
	5/22/2013	**73**	**11,400**	1,430	49	1.8	1.9	4.5 U	6.57	0.090	3.67	0.55	12.6	-12.3
	11/20/2013	**23**	3,410	**1,960**	54	1.5	1.8	2.1 J	6.49	0.107	0.44	0.22	9.3	-61.6
	10/7/2014	**96**	**27,800**	**3,480**	119	10	5.4	2.7 J	6.19	0.199	4.63	0.41	11.8	-25.1
	10/21/2015	4.0 U	100 U	1,170	27	1.5	2.2	5.1	6.78	0.065	6.39	0.59	11.5	53.1
	12/2/2016	**76**	**11,000**	1,200	59	11	1.7	9.6	6.08	0.147	9.41	2.43	9.0	36.2
	11/30/2017	**74**	**28,000**	190	61	15	1.6	7.7	7.00	0.170	23.0	2.99	8.2	55.9
	11/7/2018	**64**	6,100	550	57 J	8.7	1.4 U	6.4	5.87	0.164	4.91	0.58	10.5	13.8
	11/7/2019	**63**	8,900	710	93	13	1.0 U	6.1	6.00	0.220	9.90	0.99	11.0	40.0
	11/13/2020	**71**	**9,800**	1,500	85	20	1.4	4.5	7.74	0.644	5.27	0.41	12.7	-45.4
	11/3/2021	**76**	**14,000**	1,400	85 J	12	0.8 U	5.1	6.27	0.150	0.60	0.13	9.3	68.3
	10/24/2022	**66**	**9,100**	1,200	81	12	1.7	5.7	6.01	0.356	10.7	1.08	12.7	25.8
SHM-10-07	5/27/2010	**818 J**	**70,600 J**	**3,110 J**	300	48	--	8.6	6.97	0.751	237	0.15	13.4	-195.0
	9/9/2010	**918**	**56,800**	**1,940**	240	41	3.5	2.3	6.54	0.635	15.4	0.43	12.4	-105.6
	10/22/2012	**1,100**	**69,000**	--	191	47	--	5.0 U	6.45	0.516	21.3	0.13	12.1	-86.0
	5/23/2013	**1,210**	**94,900**	**2,670**	243	62	3.5	5.6	6.50	0.561	4.60	1.23	12.0	-109.6
	10/7/2014	**861**	**53,330**	**2,150**	162	55	2.8	1.9 J	6.80	0.634	44.0	0.27	12.2	-92.8
	10/22/2015	**926**	**43,900**	**2,410**	127	56	2.8	4.0 J	6.61	0.453	7.21	0.48	12.3	-117.1
	12/1/2016	**750**	**26,000**	**3,400**	130	54	2.3	10	6.83	0.413	--	0.78	12.1	-87.4
	11/7/2017	**970**	**44,000**	**1,800**	110	52	1.9	6.9	6.66	0.360	7.93	0.47	11.2	-72.9
	11/9/2018	**900**	**39,000**	**1,800**	100	54	1.9	8.8	6.68	0.498	283	0.29	10.7	-82.7
	11/6/2019	**1,000**	**52,000**	**2,000**	150	64	1.9	7.7	6.60	0.580	15.0	3.10	11.0	-97.0
	11/10/2020	**1,000**	**46,000**	**2,100**	130	70	2.1	7.0	6.46	0.656	4.65	0.36	14.7	113.0
	11/1/2021	**980**	**40,000**	**1,700**	120	75	1.8	9.8	6.57	0.507	2.87	0.97	12.4	-97.1
	5/26/2022	**980**	**50,000**	**1,900**	83	83	2.2	8.4	6.48	0.634	8.82	0.30	12.1	-71.7
	8/31/2022	**1,000**	**47,000**	**1,900**	100	86	1.8	13	6.63	0.604	25.3	0.27	15.3	-26.3
	10/18/2022	**1,100**	**42,000**	**2,300**	120	88	2.4	12	6.54	0.394	8.32	1.37	13.3	-103.9
	11/10/2022	**1,000**	**46,000**	**2,400**	120	91	1.9	11	6.64	0.661	15.2	0.44	12.8	-143.0
SHM-10-08	7/15/2010	0.73 J	1,310 J	885 J	480	71	--	15	6.73	0.917	7.15	0.21	11.0	33.7

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	9/7/2010	1.6	1,260	376	500	79	3.8	15	6.19	1.079	1.37	3.61	12.1	-233.0
	10/22/2012	1.9	37 J	--	459	54	--	7.8 U	6.63	0.713	0.00	0.40	11.6	45.1
	5/21/2013	1.9	43 J	242	499	56	3.2	10	6.73	0.721	1.70	0.49	11.9	7.8
	6/8/2015	3.6 J	50 U	328	426	120	2.6	6.9 J	6.36	0.937	1.29	0.39	10.7	102.8
	11/21/2017	3.0 U	75 U	470	430	51	3.0	7.1	7.22	0.878	1.70	1.26	10.8	219.8
	11/26/2018	2.0 J	50 U	540	430	58	3.0	11	6.57	0.759	4.65	2.05	10.0	82.4
	11/14/2019	3.0 U	50 U	550	350	69	2.1	7.9	6.30	0.710	3.60	4.20	9.8	170.0
	11/10/2020	3.0 U	53 U	340	220	89	1.7	5.2	6.33	5.090	2.55	0.32	16.9	216.0
	11/1/2021	3.0 U	50 U	540	160	110	1.3	5.5	7.19	0.574	0.1 U	0.60	13.6	84.1
	11/4/2022	3.0 U	50 U	570	120	120	1.0 J	5.8	6.32	0.648	3.59	1.03	15.2	229.1
SHM-10-10	7/13/2010	1.3 J	799	**24,200**	350	19	--	0.56 J	6.61	0.658	4.52	0.85	12.1	28.7
	8/12/2010	3.6 J	1,180	**22,000**	320	23	3.9	0.79 J	6.57	0.622	--	0.76	11.3	-9.1
	9/8/2010	2.4 J	700	**25,200**	320	17	3.8	0.34 J	6.55	0.617	0.71	0.16	13.1	63.3
	10/24/2012	1.0	180	--	295	21	--	5.0 U	6.55	0.464	3.25	0.28	12.1	37.6
	5/29/2013	1.7	83 J	**26,400**	343	19	2.9	4.5 U	6.62	0.579	0.46	3.07	11.2	48.8
	11/20/2013	2.0 J	49 J	**23,300**	256	61	16	2.9 J	6.53	0.557	0.39	0.36	12.0	75.2
	10/10/2014	2.6 J	50 U	**25,800**	327	44	3.5	4.0 J	6.57	0.484	0.98	0.26	12.1	78.8
	10/23/2015	2.9 J	100 U	**16,000**	271	51	3.9	6.6 J	6.53	0.561	0.89	4.59	11.7	17.2
	11/29/2016	3.5	21 J	**10,000**	240	49	2.9	3.6	6.65	0.488	6.01	2.06	12.0	105.7
	11/27/2017	3.0 U	75 U	**8,600**	150	280	2.0	46	7.35	1.040	1.39	0.31	11.5	117.6
	11/20/2018	3.0 U	50 U	**5,900**	14	260	0.66 J	7.3	6.37	1.150	6.19	0.21	9.3	186.0
	11/11/2019	3.0 U	50 U	**8,400**	260	93	2.6	4.9	6.50	0.790	1.20	0.58	11.0	43.0
	11/09/2020	3.0 U	50 U	3.0 U	200	64	2.8 U	3.9	5.97	0.541	19.0	0.19	12.0	15.9
	11/8/2021	3.0 U	18 J	**3,300**	230	34	1.6	2.8	6.42	0.403	1.29	0.15	13.6	132.0
	10/20/2022	3.0 U	50 U	1.5 J	95	180	1.4 J	12	6.82	0.855	3.22	5.07	12.9	196.1
SHM-10-11	8/30/2010	**342 J**	**55,700**	**2,320**	160	24	3.3	19	6.12	0.419	4.05	1.68	13.2	-32.0
	10/19/2010	**463**	**61,000**	**2,260**	140	23	3.4	19 J	6.28	4.140	4.28	0.41	11.6	-42.1
	10/23/2012	**440**	**56,100**	--	77	26	--	29	6.27	0.304	1.10	1.78	11.2	-34.0
	5/23/2013	**460**	**65,100**	**2,510**	102	21	2.9	30	6.15	0.287	2.01	0.80	11.3	-46.1
	11/19/2013	**432**	**60,400**	**2,400**	121	30	2.7	35	6.41	0.421	0.45	0.33	10.6	-43.5
	10/21/2015	**503**	**59,700**	**2,430**	52	32	2.6	45	6.01	0.348	1.54	0.40	11.2	-19.9
	12/1/2016	**520**	**52,000**	**2,600**	120	29	2.5	48	6.32	0.345	16.9	0.80	11.1	-49.7
	11/30/2017	**540**	**59,000**	**2,900**	89	32	2.4	52	7.05	0.363	9.19	0.25	11.0	-38.1
	11/9/2018	**620**	**61,000**	**3,600**	73	33	2.7	74	6.34	0.504	5.81	0.21	11.3	-49.9
	11/7/2019	**560**	**63,000**	**2,800**	150	32	1.0 U	51	6.20	0.500	15.0	0.20	11.0	-21.0
	11/12/2020	**430**	**47,000**	**1,900**	130	34	2.5	56	5.78	0.394	13.1	0.50	12.3	53.6
	11/5/2021	**680**	**50,000**	**2,900**	96 J	34	3.8	68	6.38	0.682	12.0	0.70	9.4	-45.0
	10/20/2022	**530**	**55,000**	**2,500**	160	42	2.0	53	6.14	0.315	1.99	1.06	11.6	-49.8
SHM-10-12	8/30/2010	**3,560**	**104,000**	**7,000**	240	3.7	4.1	1.7	6.04	0.460	8.43	3.55	14.4	-34.9
	10/20/2010	**3,120**	**90,000**	**6,200**	240	4.4	4.3	1.4	5.93	0.432	1.60	0.32	10.9	-14.5
	10/23/2012	**4,100**	**78,600**	--	131	2.5	--	5.0 U	5.74	0.322	0.20	0.29	11.5	8.4
	5/23/2013	**3,580**	**56,300**	**6,450**	171	7.3	24	7.9	6.09	0.302	4.36	0.26	11.8	-44.9
	11/19/2013	**3,570**	**89,600**	**6,270**	210	4.0	3.5	3.8 J	6.35	0.428	0.16	0.72	10.5	-19.3
	10/7/2014	**3,510**	**84,100**	**6,970**	191	3.5	3.9	4.0 J	6.02	0.368	0.43	0.31	14.0	-29.1
	10/22/2015	**3,850**	**85,600**	**7,760**	136	4.5	4.1	6.1	6.09	0.452	0.38	0.33	10.7	-27.1
	12/1/2016	**2,900**	**65,000**	**7,000**	200	8.1	4.0	9.7	6.12	0.367	--	1.99	12.8	-22.6
	11/30/2017	**3,300**	**79,000**	**7,700**	210	4.9	3.5	3.5	6.89	0.392	6.62	0.35	10.8	-19.0
	11/8/2018	**3,300**	**79,000**	**6,500**	170	4.9	3.1	3.7	5.58	0.443	23.8	0.25	11.1	-12.7
	11/14/2019	**3,400**	**65,000**	**5,400**	170	4.1	2.9	2.6	5.40	0.400	25.0	0.26	9.5	20.0
	11/11/2020	**3,400**	**69,000**	**5,000**	170	2.9	4.1	1.7	6.35	0.332	12.4	0.68	8.2	-64.6
	11/4/2021	**2,900**	**66,000**	**5,100**	180	3.3	7.0	3.2	6.03	0.535	42.9	0.78	8.2	-16.8
	10/20/2022	**3,200**	**66,000**	**5,200**	180	2.5	3.7	1.5	5.92	0.214	3.73	0.91	11.4	-32.8
SHM-10-13	9/1/2010	**575**	**84,100**	**1,850 J**	380	18	5.6	0.12 U	6.32	0.782	18.8	2.76	13.6	-68.6
	10/19/2010	**672**	**94,600**	**2,060**	360	21	8.7	0.12 U	6.27	0.743	12.0	0.12	12.5	-52.5
	10/23/2012	**670**	**68,800**	--	296	17	--	5.3 U	6.42	0.597	14.2	0.11	12.5	-44.5
	5/23/2013	**565**	**83,400 J**	1,130	292	20	5.1	4.5 U	6.35	0.571	14.4	0.22	12.6	-91.7
	10/7/2014	**532**	**55,700**	1,670	266	25	4.7	22	6.56	0.527	3.05	0.20	11.8	-112.2
	10/22/2015	4.5	354	327	162	36	2.8	102	6.47	0.629	3.50	0.29	13.1	62.7
	11/28/2016	**530**	**67,000**	1,000	280	16	3.9	1.0 U	6.50	0.432	3.11	1.80	9.0	-46.8
	11/9/2017	**450**	**82,000**	1,300	260	21	3.5	1.0 U	6.76	0.374	7.84	0.36	11.7	-61.2
	11/14/2018	**570**	**72,000**	1,200	230	22	3.2	4.9	6.98	0.614	65.2	1.08	9.1	-64.5
	11/06/2019	**460**	**69,000**	960	260	30	4.1	2.5	6.50	0.710	12.0	0.55	10.0	-39.0
	10/30/2020	**430**	**58,000**	1,200	250	31	4.3	1.0 U	6.28	0.244	10.7	0.93	6.3	-67.4
	11/4/2021	**410**	**58,000**	1,500	250	29	5.0	1.0 U	6.59	0.849	4.31	0.79	9.1	-80.5
	10/20/2022	**410**	**52,000**	790	280	29	4.9	1.0 U	6.38	0.448	6.51	1.21	13.6	-88.4
SHM-10-14	9/2/2010	**4,100**	**73,000**	**4,720**	360	6.3	8.7	3.7	6.35	0.645	34.7	0.18	14.5	-87.4
	10/19/2010	**5,860**	**92,700**	**4,180**	320	4.8	62	0.67 J	6.35	0.693	34.5	0.36	12.0	-38.6
	10/23/2012	**6,200 J**	**94,400**	--	194	5.0	--	5.0 U	6.26	0.445	4.88	0.13	12.4	-41.0
	5/23/2013	**5,540**	**83,100**	**2,800**	241	5.8	21	6.4	6.24	0.467	10.1	0.20	11.4	-67.0
	10/8/2014	**5,380**	**92,100**	**2,810**	283	5.5	23	1.8 J	6.30	0.482	4.56	0.19	13.7	-76.1
	10/22/2015	**2,320**	**63,500**	**3,650**	169	4.0	4.7	2.7 J	6.22	0.418	3.68	0.37	12.3	-30.2
	11/28/2016	**4,900**	**85,000**	**2,300**	280	4.5	3.8	1.0 U	6.40	0.433	12.4	0.14	11.2	-46.3
	11/9/2017	**5,400**	**95,000**	**2,300**	240	5.2	3.9	1.0 U	6.49	0.430	4.70	0.66	11.1	-42.1
	11/8/2018	**3,900**	**75,000**	**2,600**	200	4.2	3.5	1.0 U	7.65	0.512	55.1	0.50	13.0	-79.8
	11/06/2019	**4,500**	**78,000**	**2,400**	200	4.0	3.4	2.4	6.50	0.470	13.0	11.00	11.0	31.0
	11/10/2020	**5,000**	**86,000**	**1,900**	250	5.1	4.1	1.0 U	6.28	0.244	10.7	0.93	6.3	-67.4
	11/2/2021	**4,100**	**76,000**	**2,000**	200 J	3.9	3.7	1.0 U	5.94	0.419	3.69	0.80	11.3	-59.5
	5/26/2022	**5,000**	**77,000**	**2,300**	160	4.3	3.7	0.64 J	6.17	0.550	16.4	0.17	12.6	-34.2
	8/31/2022	**6,100**	**75,000**	**2,800**	200	4.6	3.6	0.46 J	6.04	0.533	31.0	0.27	15.2	9.5
	10/19/2022	**4,900**	**80,000**	**2,300**	230	4.3	3.7	1.0 U	6.14	0.318	2.70	1.19	12.3	-56.0
	11/7/2022	**5,300**	**75,000**	**2,000**	220	4.8	4.8	1.0 U	6.19	0.578	41.6	0.30	13.8	-84.1
SHM-10-15	9/1/2010	**8,110**	**63,300**	**10,700**	210	5.7	4.2	3.8	6.21	0.503	16.3	0.25	16.0	-52.7
	9/1/2010	**8,110**	**63,300**	**10,700**	240	11	3.2	8.4	6.21	0.503	16.3	0.25	16.0	-52.7
	10/20/2010	**6,230**	**52,000**	**8,680**	230	12	4.0	10	5.94	0.510	59.5	0.36	12.0	-10.9
	10/23/2012	**7,000**	**46,600**	--	172	10	--	9.5 U	6.43	0.376	5.10	0.20	12.0	-49.0
	5/24/2013	**1,090**	8,290	**1,960**	196	7.5	3.4	7.4	6.37	0.440	12.0	0.49	15.1	-73.9
	11/20/2013	**5,740**	**47,400**	**8,210**	210	9.5	2.8	11	6.51	0.048	10.3	0.38	10.4	-65.9
	10/7/2014	**5,870 J**	**46,500 J**	**8,530 J**	207	9.0	2.6	12	6.45	0.351	29.7	0.08	12.3	-90.8
	10/23/2015	**5,450**	**41,500**	**7,600**	197	9.0	2.9	11	6.25	0.492	1.05	0.76	11.1	-60.1
	11/22/2016	**5,100**	**44,000**	**7,700**	210	12	2.8	11	6.44	0.382	8.19	0.99	10.8	-56.3
	11/9/2017	**6,400**	**52,000**	**8,600**	200	12	2.5	9.3	6.70	0.327	5.52	0.47	10.4	-30.2
	11/14/2018	**5,800**	**48,000**	**8,200**	200	12	2.7	10	6.96	0.497	50.3	0.50	9.7	-60.1
	11/14/2019	**5,600**	**44,000**	**7,300**	200	12	2.4	14	6.40	0.430	6.80	0.16	10.0	79.0
	11/02/2020	**6,800**	**44,000**	**7,300**	220	8.1	2.2	8.1	6.22	0.387	25.9	0.87	11.5	-65.4
	11/4/2021	**6,300**	**43,000**	**7,700**	190	7.8	2.8	8.6	6.40	0.611	5.11	0.89	7.2	-46.2
	10/19/2022	**7,500**	**44,000**	**7,600**	200	6.7	3.0	7.5	6.24	0.286	37.2	1.69	13.2	-59.1
SHM-10-16	9/2/2010	**495**	**53,100**	**1,790**	330	31	5.3	2.9	6.98	0.784	78.5	0.17	11.4	-233.8
	10/20/2010	**1,090**	**46,900**	1,150	320	28	10	3.2	6.77	0.793	34.6	0.34	10.6	-129.2
	10/23/2012	**1,600**	**41,700**	--	281	25	--	6.8 U	6.64	0.533	0.65	0.26	10.2	-86.2
	5/28/2013	**1,350**	**42,700**	1,280	309	21	3.8	4.7 J	6.71	0.632	0.08	0.15	9.4	-128.0
	11/20/2013	**1,530**	**44,500**	1,480	312	24	3.7	2.9 J	6.75	0.677	0.84	0.19	9.4	-115.6
	10/28/2015	**1,760**	**44,600**	1,410 J	290	29	4.0	4.6 J	7.02	0.354	0.31	2.63	10.1	-13.1
	6/27/2016	**1,900**	**43,000**	1,600	300	23	3.3	2.2	6.77	0.690	1.74	11.27	1.5	-93.8
	11/29/2016	**1,600**	**43,000**	1,700	320	21	2.8	2.8	6.76	0.523	5.87	1.12	9.1	-101.9
	6/2/2017	**1,800**	**79,000**	**4,000**	190	25	2.7	8.5	6.77	0.704	6.36	6.65	10.9	-68.0
	11/17/2017	**1,200**	**40,000**	**1,800**	290	20	2.2	3.2	6.93	0.429	4.74	0.30	9.3	-75.5
	11/15/2018	**1,100**	**37,000**	1,700	260	21	2.1	3.9	6.64	0.756	0.50	0.33	9.0	-50.1
	11/13/2019	**1,200**	**37,000**	1,700	280	24	1.9	3.7	6.50	0.560	11.0	0.69	7.6	42.0
	05/06/2020	**1,100**	**34,000**	**1,900**	--	--	--	--	6.69	0.685	0.97	0.79	9.3	-80.9
	11/12/2020	**1,100**	**29,000**	**2,100**	290	26	1.8	3.9	6.76	0.533	14.9	0.49	9.3	-29.7
	10/22/2021	**1,100**	**33,000**	**2,100**	280 J	31	2.1	5.9	6.48	0.560	20.9	0.78	12.1	-91.2
	5/25/2022	**1,100**	**32,000**	**2,100**	220	30	1.7	6.1	6.64	0.647	8.35	0.33	10.7	-74.5
	8/29/2022	**990**	**31,000**	**2,000**	220	32	1.8	5.9	6.63	0.594	8.69	0.20	12.5	-34.2
	10/18/2022	**1,000**	**30,000**	**2,400**	250	30	1.7	5.3	6.56	0.638	16.1	0.68	13.1	-161.6
	11/17/20222	**1,100**	**35,000**	**2,300**	170	33	1.7	6.9	6.69	0.534	6.13	1.31	9.5	
SHM-11-02	10/22/2012	7.1	2,000	--	228	42	--	16	7.32	0.468	19.6	0.21	14.4	-135.0
	11/20/2013	3.2 J	2,470	146	92	35	38	9.9 J	8.38	0.241	21.3	0.30	10.8	-279.2

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	4/24/2014	2.0 U	1,270	268	52	35	42	5.3 J	7.23	0.196	22.7	0.79	10.8	-118.3
	10/8/2014	2.0 U	5,030	224	109	41	21	1.2 J	7.91	0.351	19.0	0.06	15.4	-289.0
	6/5/2015	2.0 U	1,720	479	44	37	39	0.50 U	7.35	0.232	8.50	0.13	17.1	-195.4
	10/27/2015	4.0 U	3,340	278	51	36	28	5.0 U	7.21	0.247	13.0	0.40	12.3	-232.6
	6/27/2016	3.0	**12,000**	310	130	49	2.9	0.80 U	7.33	0.400	22.7	19.40	0.4	-188.0
	11/16/2016	3.0 U	**15,000**	330	140	45	3.1	1.0 U	7.32	0.343	11.7	0.79	11.8	-139.9
	5/31/2017	3.0 U	**13,000**	280	140	45	3.4	1.0 U	7.39	0.312	8.14	0.19	12.3	-209.6
	11/6/2017	2.5 J	**14,000**	330	160	47	1.9	1.7	7.26	0.500	5.25	0.31	13.1	-177.6
	4/19/2018	2.0 J	**17,000**	310	160 J	46	1.8	1.0 U	7.57	0.505	9.99	1.05	8.8	-198.5
	11/7/2018	8.7	**31,000**	**1,900**	280	45	70	1.0 U	6.94	0.841	34.1	0.52	15.1	-144.0
	4/26/2019	**37**	**34,000**	**2,300**	280	44	2.6	1.0 U	7.60	0.750	8.60	0.40	12.0	-240.0
	11/13/2019	**33**	**22,000**	1,600	250	47	1.0 U	1.1	7.40	0.630	9.90	0.24	9.5	-190.0
	5/19/2020	**13**	**12,000**	880	220	44	1.6	1.4	6.96	0.526	8.29	0.39	14.1	-131.0
	11/03/2020	**12**	**11,000**	830	250	42	1.3 U	0.85 J	7.16	0.533	10.4	0.46	9.2	41.3
	5/24/2021	**16**	8,400	640	240	48	1.3	7.5	7.49	0.371	12.2	3.51	13.4	-131.7
	10/26/2021	3.0 U	100	38	78	44	1.7	1.0 U	9.34	0.344	24.1	1.10	8.5	-207.9
	5/6/2022	**14**	8,900	750	200	50	1.4	4.3	7.49	0.461	5.5	0.79	11.8	-199.0
	10/14/2022	7.1	7,000	550	160	50	1.4	1.6	7.51	0.468	11.6	0.96	12.8	-207.8
SHM-11-06	10/22/2012	**920**	**84,100**	--	287	21	--	5.0 U	6.41	0.561	4.24	1.80	13.1	-83.0
	5/28/2013	**1,020**	**73,200**	990	262	20	3.1	6.8	6.54	0.495	3.19	0.34	12.1	-105.7
	11/20/2013	**1,000**	**74,600**	938	220	23	3.2	6.8 J	6.45	0.578	2.23	0.36	9.3	-104.4
	10/8/2014	**825**	**63,600**	818	173	36	2.7	5.2 J	6.53	0.633	2.18	0.20	12.7	-88.3
	10/27/2015	**821**	4,680	687	118	41	2.2	14	6.62	0.492	0.74	0.65	11.4	-131.2
	11/16/2016	**900**	**56,000**	1,400	170	50	--	0.77 J	6.30	0.433	5.17	1.40	11.8	-67.1
	06/06/2017	**730**	**67,000**	1,700	160	54	1.9	2.2	6.12	0.415	6.12	0.31	8.9	-59.9
	11/7/2017	**780**	**62,000**	1,400	150	50	1.8	5.9	6.52	0.413	7.21	0.31	11.5	-54.9
	4/13/2018	**600**	**56,000**	1,400	160	49	1.9	7.4	7.18	0.524	1.70	0.70	11.6	12.7
	11/12/2018	**750**	**64,000**	1,400	140	48	1.9	6.2	6.53	0.560	14.0	0.22	12.5	-69.9
	4/18/2019	**680**	**59,000**	1,300	140	48	1.9	8.4	6.60	0.590	17.0	0.90	9.3	-72.0
	11/1/2019	**780**	**69,000**	1,700	190	46	2.1	8.6	6.30	0.640	3.40	0.18	10.0	-61.0
	5/20/2020	**750**	**77,000**	**2,000**	220	50	2.1	4.7	5.77	1.060	0.02	3.21	15.4	-38.3
	11/2/2020	**620**	**62,000 J**	1,600 J	150	55	1.8	9.6	6.13	0.245	9.40	2.04	13.5	165.0
	5/19/2021	**710**	**63,000**	**1,800**	160	59	2.0	11	6.31	0.109	18.1	0.98	13.2	-75.0
	11/9/2021	**870**	**74,000**	**2,400**	200	58	1.5	5.5	6.52	0.890	6.58	1.1	12.4	-67.8
	5/4/2022	**770**	**78,000**	**1,900**	210	60	2.7	5.1	6.18	0.588	5.23	0.92	10.5	-80.4
	10/14/2022	**630**	**54,000**	1,400	180	65	2.4	15	6.03	0.703	4.44	0.85	13.0	-74.8
SHM-13-01	11/21/2013	2.2 J	30 U	7.4 J	25	32	0.82 J	12	6.46	0.163	0.31	6.48	10.2	165.1
	10/27/2015	2.1 J	100 U	15 U	14	48	0.47 J	7.6	6.13	0.198	0.61	7.92	10.9	99.9
	11/28/2017	1.5 J	75 U	5.9	16	95	0.50 U	6.7	6.20	0.306	0.40	6.41	10.3	58.6
	11/26/2018	1.5 J	50 U	5.7 J	17	130	1.0 U	7.6	5.99	0.476	3.97	8.45	11.1	114.0
	11/14/2019	1.9 J	50 U	3.3 J	17	340	0.93 J	9.5	5.80	1.100	9.00	4.50	11.0	110.0
	11/09/2020	3.0 U	50 U	10 U	20	150	1.2 U	8.7	5.69	4.690	2.95	4.26	11.8	230.0
	11/8/2021	1.7 J	50 U	2.4 J	32	110	0.8 U	7.8	6.03	0.300	0.71	0.12	12.1	174.0
	10/26/2022	2.2 J	130	2.4 J	23	83	0.74 U	12	5.42	0.387	2.81	6.95	15.0	262.5
SHM-13-02	5/29/2013	2.5	30 U	**7,960**	160	9.5	34	6.5	7.23	0.311	0.22	0.16	11.5	-107.7
	11/21/2013	2.7 J	250	**9,490**	161	8.0	1.9	5.7 J	6.99	0.024	1.84	0.10	10.9	-17.0
	10/10/2014	2.6 J	261	**15,800**	220	31	1.6	5.0 J	6.72	0.430	0.26	0.22	12.0	-8.6
	10/23/2015	2.6	100 U	**13,200**	155	15	1.7	10	6.83	0.302	0.96	0.26	11.0	4.9
	11/29/2016	1.8 J	35 J	**12,000**	170	21	1.6	6.8	6.84	0.382	2.65	1.31	10.3	41.3
	11/27/2017	3.0 U	59 J	**20,000**	180	120	2.1	8.1	6.66	0.510	0.25	3.04	10.8	86.0
	11/15/2018	3.0 U	50 U	**17,000**	98	160	1.7	8.9	6.12	0.509	0.63	0.59	8.7	75.0
	11/11/2019	3.0 U	50 U	**9,400**	160	51	1.7	7.1	6.50	0.430	4.60	4.30	11.0	46.0
	11/05/2020	3.0 U	50 U	74	110	41	1.5 U	4.4	4.93	0.315	5.60	1.15	10.8	14.4
	11/8/2021	3.0 U	50 U	69	120	43	0.99 J	4.2	6.45	0.263	10.3	0.05	13.7	150.0
	10/26/2022	3.0 U	50 U	**2,500**	100	42	1.5 U	6.6	5.59	0.375	2.38	2.99	14.9	194.3
SHM-13-03	5/29/2013	**318**	**13,600**	**6,740**	372	39	4.4	5.6	6.56	0.730	1.20	0.14	11.7	-99.2
	11/20/2013	**137**	**11,200**	**9,640**	391	38	4.3	5.0 J	6.50	0.563	0.54	0.40	10.3	-41.8
	4/23/2014	**120**	6,770	**7,990**	287	24	7.3	4.7 J	6.10	0.433	0.22	0.16	9.3	-12.5
	10/10/2014	**81**	7,590	**12,100**	390	38	3.7	4.7 J	6.53	0.557	0.69	0.13	12.6	-57.7
	6/8/2015	**76**	7,190	**12,600**	380	37	6.6	6.6 J	6.48	0.677	3.98	0.25	13.2	-71.3
	10/23/2015	**69**	6,610	**10,800**	273	37	3.9	5.4 J	6.43	0.473	0.81	0.29	12.6	-91.4
	6/28/2016	**53**	5,500	**9,300**	300	37	4.1	2.8	6.33	0.590	5.41	16.38	1.2	-46.4
	11/28/2016	**55**	5,800	**8,400**	120	93	1.9	7.3	6.63	0.544	2.40	1.40	9.9	-40.7
	06/07/2017	**46**	3,900	**8,900**	290	32	3.8	7.4	7.00	0.661	4.74	0.66	8.1	-65.6
	11/27/2017	**46**	4,000	**12,000**	180	130	2.5	4.2	6.61	0.452	0.97	3.02	11.4	119.3
	4/25/2018	**26**	830	**9,900**	320	44	3.0	5.8	6.66	0.702	7.66	0.89	10.0	-18.5
	11/19/2018	**44**	2,000	**13,000**	120	160	2.5	3.8	6.52	0.993	3.77	0.23	9.8	59.9
	04/16/2019	**110**	7,000	**8,400**	200	200	2.5	4.6	6.40	1.100	3.60	0.37	8.1	4.0
	11/11/2019	**140**	8,600	**10,000**	280	32	2.5	6.0	6.40	0.620	0.98	0.40	11.0	-1.0
	05/21/2020	**150**	**10,000**	**11,000**	220	180	2.3	2.9	5.08	0.658	3.60	0.42	11.3	44.7
	10/29/2020	**83**	6,200	**7,500**	140	64	2.6	3.5	6.17	0.290	128.0	2.89	14.7	239.0
	6/17/2021	**49**	6,500	**12,000**	99	180	3.2	6.5	6.42	0.753	22.1	0.72	17.8	-5.5
	11/5/2021	**39**	3,900	**11,000**	260 J	90	3.1	3.3	7.25	0.605	5.81	0.02	11	44.8
	5/6/2022	**53**	3,800	**8,400**	210	59	2.5	3.6	6.34	0.150	22.9	0.23	10.7	-16.9
	10/20/2022	**69**	4,900	**7,500**	160	52	1.8	3.7	7.05	0.525	15.3	1.09	15.6	-11.5
SHM-13-04	5/28/2013	**2,060**	**40,900**	**2,130**	40	200	1.8	10	6.46	0.717	3.63	0.71	11.7	-73.6
	4/24/2014	**61**	334	238	30	167	0.92 J	10	6.35	0.866	2.18	3.21	10.6	92.4
	10/13/2014	**693**	6,410	392	41	110	1.6	13	6.48	0.464	2.31	2.04	11.9	-13.2
	6/9/2015	**620**	**12,500**	843	33	175	1.1 J	14	5.89	0.680	2.68	2.01	11.6	41.1
	10/28/2015	**212**	4,620	429	38	175	0.94	12	6.43	0.595	3.49	1.81	11.9	-19.3
	6/28/2016	**20**	110	72	39	310	1.2	15	6.29	1.251	10.8	14.58	3.2	153.6
	11/28/2016	**140 J**	2,500	260 J	48	180	0.93 J	11	6.31	0.750	11.4	3.86	12.2	44.0
	6/6/2017	**350**	4,700	**3,700**	57	57	1.3	57	6.32	0.617	12.9	3.97	9.5	69.9
	11/14/2017	**160**	3,200	520	42	250	0.50 U	13	6.65	0.813	4.93	2.19	11.9	65.1
	4/17/2018	**340**	5,900	620	61	200	1.2	7.9	6.59	0.850	11.2	3.20	11.0	14.2
	11/13/2018	**190 J**	2,400	180	45	120	1.0 U	9.7	6.63	0.565	49.5	5.82	12.3	7.3
	4/15/2019	**430**	2,400	100	41	75	0.50 U	9.8	6.50	0.380	26.0	4.70	11.0	40.0
	11/12/2019	**600**	3,400	84	46	250	1.1	11	6.30	1.000	2.50	4.00	10.0	58.0
	05/20/2020	**200**	1,300	100	44	160	0.89 J	8.0	6.42	0.640	10.4	6.05	13.4	49.1
	11/06/2020	**260 J**	2,400	160	36	100	1.0 U	10	6.13	0.134	3.70	1.15	12.4	217.0
	6/15/2021	**68**	680	61	36	290	1.9 U	12	6.20	1.129	49.3	5.01	14.0	72.8
	10/26/2021	**31**	60	18	41	170	1.0	9.3	6.18	0.595	60.3	5.86	13.3	130.0
	5/6/2022	**50**	410	24	33	330	1.1	7.7	6.13	0.311	69.8	5.30	12.0	117.0
	10/13/2022	**96**	540	17	38	560	1.0	9.0	5.94	1.815	71.7	6.68	13.8	141.7
SHM-13-05	5/28/2013	8.9	597	**4,680**	423	37	4.7	12	6.88	0.629	2.05	0.27	11.1	-136.0
	11/21/2013	6.8	1,860	**5,720**	425	42	4.5	11	7.94	0.044	2.11	0.44	10.3	-154.6
	10/13/2014	**11**	4,580	**5,940**	455	36	3.6	8.4 J	6.88	0.686	1.11	0.44	11.0	-159.0
	10/28/2015	**12**	3,470	**3,660**	359	43	3.9	13	6.94	0.688	0.74	0.39	11.2	-94.1
	11/28/2016	**11**	3,700	**3,500**	360	41	3.0	12	6.88	0.808	0.84	1.76	10.7	-52.9
	11/16/2017	8.4	3,000	**3,600**	410	38	2.8	9.9	6.98	0.656	3.20	0.37	10.7	-46.9
	11/13/2018	**12**	3,300	**3,600**	390	37	2.6	12	7.23	0.831	25.6	0.51	10.5	-58.4
	11/12/2019	**16**	3,100	**3,400**	410	39	2.5	12	6.80	0.740	15.0	0.36	9.3	48.0
	11/06/2020	6.4	1,000	1,100	140	38	2.0 U	7.9	6.86	5.000	14.2	0.06	16.1	-131.0
	10/26/2021	**18**	3,500	**2,900**	410	42	2.7	11	6.92	0.730	0.56	1.08	12.5	-122.0
	10/13/2022	**17**	2,500	**3,300**	360	36	2.3	7.6	6.81	0.742	0.92	0.92	14.8	-85.5
SHM-13-06	6/13/2013	**3,180 J**	**19,700 J**	**1,830**	84	19	1.0	6.4	7.16	0.287	4.07	0.14	12.4	-154.4
	11/21/2013	**2,540**	**39,900 J**	**2,490**	33	145	1.5	11	6.84	0.587	1.24	0.25	11.3	-119.4
	4/24/2014	**2,850**	**25,000**	**1,820**	61	70	1.5	8.9 J	6.94	0.446	2.51	0.28	11.7	-104.3
	10/13/2014	**2,360**	**25,400**	1,570	46	130	1.1	9.9 J	7.04	0.569	1.23	0.10	12.0	-145.6
	6/8/2015	**2,460**	**35,200**	**1,840**	40	240	0.91 J	10	7.00	0.924	1.53	0.18	11.8	-128.2
	12/22/2015	**2,160**	**32,600**	1,640	57	192	1.0	9.1	--	--	--	--	--	--
	6/28/2016	**2,500**	**30,000**	1,400	70	130	1.4	7.1	6.55	0.666	8.36	14.44	0.4	-98.2
	11/28/2016	**2,700**	**27,000**	1,200	80	110	1.4	6.5	7.10	0.429	11.7	0.46	12.0	-123.4
	6/6/2017	**2,800**	**36,000**	**3,100**	110	110	1.9	110	6.84	0.638	6.03	0.64	12.9	-100.1
	11/14/2017	**2,700**	**43,000**	**2,100**	86	130	1.3	5.1	7.07	0.518	17.2	0.32	11.6	-103.1
	4/17/2018	**2,700**	**29,000**	**2,200**	85	80	1.2	5.1	7.10	0.441	3.01	0.57	10.6	-106.1
	11/13/2018	**2,400**	**25,000**	1,400	89	140	1.4	6.7	7.67	0.720	54.6	0.45	11.4	-133.0

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	04/16/2019	**3,100**	**18,000**	1,100	73	70	1.4	6.3	6.40	0.450	6.60	0.79	7.8	-51.0
	11/12/2019	**1,900**	**18,000**	880	44	100	1.0	5.7	6.40	0.440	11.0	0.45	10.0	41.0
	05/19/2020	**2,900**	**22,000**	1,200	57	95	1.1	2.7 J	6.70	0.402	29.2	0.53	11.5	22.3
	11/09/2020	**2,200**	**20,000**	980	51	120	1.7 U	6.7	6.35	0.498	77.3	0.85	14.6	-26.3
	6/16/2021	**2,200**	**20,000**	1,200	57	63	3.9	6.3	7.15	0.371	35.3	0.62	17.7	-143.9
	11/4/2021	**1,800**	**18,000**	1,500	68	99	0.8 U	8.3	7.57	0.407	3.82	0.45	14.1	-65.2
	5/6/2022	**2,400**	**15,000**	1,100	56	34	1.2	6.2	6.95	0.076	8.6	0.53	13.0	-131.0
	10/13/2022	**2,300**	**15,000**	1,400	54	24	1.1	3.6	6.97	0.236	17.5	0.95	13.4	-115.3
SHM-13-07	11/21/2013	**1,340**	**30,000**	**2,710**	45	225	1.6	12	6.80	0.773	4.70	0.14	12.5	-97.4
	4/24/2014	**1,280**	**39,200**	**3,660**	31	212	1.2	7.7 J	6.84	0.734	26.8	0.29	11.0	-106.1
	10/10/2014	**962**	**25,200**	**2,160**	62	165	8.8	16	6.90	0.787	4.90	0.15	12.8	-126.3
	6/8/2015	**946**	**18,800**	**3,460**	57	120	3.2	10	6.82	0.565	24.8	0.19	12.7	-60.7
	10/23/2015	**531**	**11,500**	1,390	91	68	1.7	12	6.88	0.366	4.83	0.17	12.4	-140.2
	6/28/2016	**320**	**29,000**	**4,900**	80	260	1.5	6.7	6.28	0.990	9.72	15.01	0.8	-47.1
	11/28/2016	**140**	9,100	**1,800**	85	200	1.4	9.8	6.57	0.918	13.0	2.10	12.0	-9.1
	06/07/2017	**230**	6,900	790	87	49	2.0	8.9	6.30	0.267	19.2	0.22	11.5	-15.3
	11/28/2017	**620**	**16,000**	**2,700**	97	230	1.4	8.2	7.52	0.874	5.24	0.26	12.1	-67.3
	4/17/2018	**470**	**18,000**	**2,300**	86	120	1.4	7.9	6.83	0.610	6.17	0.82	10.8	-53.9
	11/20/2018	**490**	**20,000**	**2,200**	260	95	6.4	5.2	6.60	0.630	25.2	0.21	9.8	-27.0
	04/16/2019	**470**	**23,000**	**3,100**	60	100	1.4	5.8	6.20	0.560	12.0	0.49	8.6	-18.0
	11/11/2019	**750**	**27,000**	**4,700**	65	180	1.2	4.9	6.40	0.770	16.0	0.15	12.0	-39.0
	05/22/2020	**400**	**12,000**	**2,500**	72	96	1.2	7.5	5.64	0.471	8.63	0.92	17.4	199.0
	11/05/2020	**420**	**15,000**	**2,000**	44	170	1.0 U	8.4	6.55	0.612	15.9	0.27	18.0	-120.0
	6/15/2021	**290**	**14,000**	**1,700**	58	160	4.4	6.4	6.63	0.647	35.7	0.72	14.8	-62.3
	11/4/2021	**290**	**18,000**	**2,400**	56	210	0.8 U	4.0 J	7.10	0.692	0.7	0.19	14	5.1
	5/6/2022	**210**	**12,000**	1,200	48	120	1.0	10	6.50	0.141	4.7	0.23	11.9	-53.2
	10/13/2022	**350**	**15,000**	**2,000**	54	97	1.2	5.5	6.58	0.445	11.1	0.92	13.8	-63.3
SHM-13-08	6/13/2013	**928**	**35,900**	941	141	8.5	2.8	7.3	6.84	0.378	2.92	0.74	12.8	-122.4
	11/21/2013	**994**	**35,400**	826	116	8.0	3.2	3.7 J	6.84	0.323	0.98	0.24	11.3	-131.1
	4/24/2014	**1,040**	**50,600**	1,170	173	15	3.8	4.9 J	6.89	0.439	1.14	0.38	11.3	-123.8
	10/13/2014	**978**	**52,200 J**	1,160	140	130	3.6	6.5 J	6.90	0.733	0.39	0.16	11.8	-146.1
	6/8/2015	**975**	**113,000**	**2,180**	112 J	140 J	2.4 J	0.50 U	6.76	0.376	6.10	0.83	14.1	-88.1
	10/28/2015	**954**	**78,000**	1,620	126	145	2.8	10	6.46	0.728	3.21	0.47	11.3	-148.0
	6/29/2016	**770**	**68,000**	1,600	90	140	2.6	2.7	6.54	0.782	3.58	15.68	0.3	-106.1
	11/28/2016	**870**	**62,000**	1,500	200	74	2.9	4.0	6.93	0.714	3.01	1.74	11.9	-132.2
	06/06/2017	**900**	**74,000**	**2,100**	67	240	2.4	4.4	6.73	1.084	9.89	0.37	10.8	-45.9
	11/14/2017	**810**	**54,000**	1,400	90	130	2.1	3.5	7.05	0.464	6.94	0.55	11.1	-117.3
	4/17/2018	**830**	**48,000**	1,300	95	95	2.6	4.8	6.82	0.556	1.83	0.68	10.8	-78.3
	11/19/2018	**310**	**32,000**	940	250	50	3.2	4.1	6.71	0.442	33.2	0.39	9.8	29.8
	04/16/2019	**800**	**30,000**	760	73	31	2.0	3.7	6.50	0.320	5.30	0.36	9.4	-66.0
	11/11/2019	**930**	**41,000**	970	100	33	1.9	4.4	6.40	0.390	4.70	0.55	11.0	70.0
	05/22/2020	**630**	**19,000**	410	110	17	2.1	2.8	5.05	0.314	7.66	0.99	15.4	252.0
	11/10/2020	**1,000**	**59,000**	2,100	150	72	2.7	5.2	5.57	0.409	14.3	3.62	10.9	94.3
	5/27/2021	**890**	**50,000**	1,400	120	130	2.0	3.3	6.96	0.056	6.53	1.19	17.3	-155.5
	11/4/2021	**820**	**38,000**	920	120	25	2.1	3.8	7.66	0.354	4.10	0.01	12.6	-109.0
	5/6/2022	**890**	**37,000**	1,100	110	23	1.9	3.6	6.81	0.107	2.30	0.33	12.9	-133.0
	10/13/2022	**890**	**38,000**	1,100	120	37	2.9	2.5	6.76	0.455	4.06	0.90	13.8	-121.3
SHM-13-14D	2/19/2014	7.9	**11,800**	1,190	81	48	1.9	12	6.85	0.349	26.0	0.09	9.2	-82.0
	10/10/2014	9.6	**20,900**	**2,910**	44	320	1.3	7.2 J	6.75	1.233	1.24	0.19	12.4	-79.6
	12/2/2016	9.1	4,900	1,400	48	130	0.93 J	7.5	6.82	0.478	70.0	2.37	13.7	23.9
	11/27/2017	**11**	1,600	190	77	56	1.7	7.7	6.87	0.332	5.58	3.29	10.8	159.9
	11/15/2018	6.1	2,600	370	83	75	1.8	6.4	6.58	0.474	2.51	0.59	11.0	31.4
	11/11/2019	**12**	2,600	470	74	120	1.4	7.0	6.40	0.490	0.78	0.24	11.0	29.0
	10/29/2020	3.0 U	50 U	380	53	120	1.9	15	5.83	0.305	5.90	0.67	11.4	158.0
	11/5/2021	3.3	3,800	720	71 J	34	0.8 U	4.9	6.54	0.202	5.68	0.95	11.1	-21.6
	11/2/2022	3.0 U	50 U	300	41	29	1.2	5.1	6.35	0.209	5.56	1.01	13.6	202.9
SHM-13-14S	2/19/2014	2.0 U	241	56	58	91	1.2	9.6 J	5.88	0.440	1.97	0.59	6.5	96.3
	10/10/2014	2.0 U	94 J	87	75	100	1.9	8.1 J	5.87	0.320	0.88	0.45	12.8	139.4
	12/2/2016	3.0 U	75 U	1,300	29	150	1.3	2.9	6.74	0.569	4.75	0.28	10.6	155.4
	11/27/2017	4.0	280	160	51	200	2.7	0.45 J	5.71	0.693	32.1	0.27	12.1	179.1
	11/15/2018	3.0 U	50 U	710	35	110	1.3	13	6.16	0.463	3.65	0.83	10.6	70.5
	11/11/2019	1.9 J	50 U	410	42	140	1.8	19	5.90	0.650	0.71	0.39	11.0	57.0
	10/29/2020	1.5 J	110	27	87	120	1.8	7.3	6.56	0.394	12.7	0.67	11.2	14.5
	11/5/2021	3.0 U	18 J	39	6.4 J	100	0.8 U	16	6.34	0.344	10.3	0.51	9.8	147.0
	11/2/2022	3.0 U	50 U	160	33	73	1.2 J	12	5.70	0.374	8.49	1.94	14.7	197.0
SHM-13-15	2/19/2014	3.8 J	623	**4,860**	273	46	2.9	7.7 J	6.59	0.642	42.3	0.44	9.2	-172.7
	10/10/2014	8.1	1,050	**4,480**	315	38	2.8	5.5 J	6.56	0.704	0.23	0.15	13.4	20.4
	12/2/2016	5.5	1,400	**3,600**	200	82	1.8	8.2	6.58	0.612	0.94	0.24	12.2	-6.9
	11/27/2017	5.7	1,100	**7,200**	380	48	3.4	10	7.27	0.790	7.52	0.74	10.5	12.7
	11/15/2018	1.6 J	200	1,000	150	84	1.8	7.7	7.20	0.607	1.00	0.33	9.0	46.5
	11/11/2019	5.1	770	**5,800**	430	43	3.2	9.6	6.10	0.920	2.90	0.41	11.0	44.0
	10/29/2020	7.1	1,200	**4,300**	320	42	2.5	5.4	11.20	0.275	15.7	1.08	19.4	-122.0
	11/5/2021	1.8 J	110	**2,300**	260 J	66	3.1	6.3	7.79	0.530	6.41	0.01	10.7	61.3
	10/31/2022	7.0	850	**4,300**	270 J	54	2.5	12	6.64	0.727	13.1	1.03	14.2	19.2
SHM-93-10C	10/16/2007	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/14/2010	--	--	--	170	23	--	1.9	7.31	0.469	1.00	0.30	12.1	-30.7
	10/16/2012	--	--	--	180	23	--	18	7.28	0.434	1.0	1.23	9.5	16.3
	10/22/2015	**12**	100 U	15 U	162	23	1.0 U	20	7.69	0.342	0.48	2.38	12.2	43.3
SHM-93-10D	10/29/2019	3.0 U	73	2.1 J	54	29	0.95 J	17 J	12.00	0.400	20.0	0.51	11.0	88.0
	11/11/2020	3.0 U	490	9.9 J	53	30	1.2	18	5.86	0.392	8.50	0.69	12.6	216.0
	11/10/2021	3.0 U	140	3.6 J	42	30	0.47 J	19	11.00	0.212	14.0	0.01	12.0	-4.6
	10/21/2022	1.6 J	140	2.5 J	54	31	1.4 J	20	11.20	0.288	41.8	1.77	15.1	81.6
SHM-93-18B	11/13/2019	3.0 U	50 U	1.4 J	60	51	0.61 J	33	7.70	0.320	1.90	7.60	9.2	2.3
	11/12/2020	3.0 U	50 U	450	49	140	0.83 J	34	6.45	0.322	42.0	0.90	9.1	-24.2
	11/8/2021	3.0 U	50 U	520	56	170	0.8 U	35	6.08	0.661	0.1 U	0.98	12.6	204.0
	5/31/2022	3.0 U	50 U	860 J	44	180	0.6 U	33	6.36	0.794	2.55	0.24	12.3	69.8
	8/25/2022	0.93 J	50 U	570 J	46	200	0.54 J	34	6.16	0.789	4.14	0.34	17.9	139.0
	11/3/2022	3.0 U	50 U	750	45	220	0.5 J	34	6.14	0.571	3.88	1.21	17.5	141.1
	11/9/2022	3.0 U	50 U	680	45	210	1.0 U	33	6.25	0.751	1.36	0.39	11.9	152.0
SHM-93-22B	4/21/2010	--	--	--	380	22	--	4.4	6.71	0.953	5.20	0.11	8.1	-125.0
	10/11/2010	--	--	--	350	24	--	3.7	6.52	0.745	1.18	0.29	9.5	-83.2
	4/6/2011	--	--	--	330	26	--	3.5 U	6.57	0.749	8.60	0.23	7.0	-78.8
	10/11/2011	--	--	--	330	23	--	3.6	6.36	0.704	5.00	0.16	11.1	-63.0
	4/10/2012	--	--	--	340 J	19	--	1.9 U	6.25	0.908	95,000	0.37	8.7	-59.8
	10/17/2012	--	--	--	340	22	--	4.4	6.54	0.415	39.0	0.55	10.8	-141.4
	5/28/2013	**1,150**	**30,000**	**9,680**	337	22	2.9	4.5 U	6.57	0.471	71.0	0.22	8.9	80.4
	10/23/2013	**1,150**	**31,300**	**9,450**	334	21	--	4.4 J	6.59	0.485	1.20	0.39	10.2	1.8
	4/24/2014	**997**	**28,300 J**	**10,600 J**	329	22	2.8	2.9 J	6.48	0.734	0.45	0.14	7.6	-66.3
	10/8/2014	**690**	**19,300**	**11,700**	338	21	2.7	4.9 J	6.51	0.503	3.44	0.29	10.3	-43.8
	6/8/2015	**1,050**	**19,500**	**12,100**	309	19	2.2	3.3 J	6.39	0.628	9.60	0.65	9.5	-49.3
	10/23/2015	**670**	**12,500**	**11,500**	283	18	4.0	5.2 J	5.27	0.475	10.6	0.41	9.1	2.7
	6/27/2016	**630**	**17,000**	**9,800**	290	18	2.2	1.5	6.37	0.570	10.9	11.31	1.7	-64.8
	11/17/2016	**480**	**12,000**	**9,100**	260	19	1.8	2.1	6.47	0.590	23.2	1.40	10.4	-45.9
	5/23/2017	**310**	**18,000**	**9,700**	230	21	2.1	1.9	6.30	0.626	34.7	0.48	8.7	1.0
	11/13/2017	**360**	**16,000**	**10,000**	240	25	1.8	1.9 J	6.48	0.418	7.68	0.41	9.8	-41.7
	4/24/2018	**270**	**17,000**	**9,500**	240	33	1.4	4.2	6.75	0.601	4.84	0.70	11.1	-34.5
	11/14/2018	**170**	8,600	**8,400**	230	33	1.7 U	4.4	6.62	0.658	3.99	0.48	11.5	-65.8
	4/12/2019	**83**	3,000	**9,500**	260	31	1.8	5.6	6.70	0.600	6.10	0.45	6.8	13.0
	11/04/2019	**370**	**11,000**	**10,000**	250	35	1.6	10	6.30	0.620	12.0	0.62	9.1	1.5
	05/21/2020	**170**	**10,000**	**9,300**	240	34	1.6	7.9	6.13	0.481	17.3	0.32	11.0	0.3
	11/03/2020	**300**	**12,000**	**9,000**	220	34	1.4 U	7.8	7.52	0.192	4.20	2.46	9.2	-13.9
	6/15/2021	**96**	6,500	**7,800**	220	36	1.8 U	9.7	6.64	0.373	12.1	2.15	10.3	-12.4
	11/4/2021	**440**	**13,000**	**9,500**	200	37	0.8 U	11	6.59	0.423	3.63	0.73	11.9	-65.5
	5/9/2022	**34**	1,100	**6,600**	190	39	1.4	12	6.81	0.107	2.30	0.33	12.9	-133.0
	10/25/2022	**120**	6,500	**9,300**	180	40	1.4 J	13	6.38	0.509	9.30	0.62	10.9	-13.6
SHM-93-22C	4/21/2010	--	--	--	110	10	--	6.1	8.23	0.321	2.20	1.10	11.3	-38.0
	10/12/2010	--	--	--	110	12	--	5.8	7.82	0.286	1.05	0.58	10.9	-103.1

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	4/6/2011	--	--	--	120	10	--	6.0 U	8.84	0.284	0.00	0.78	9.9	-1.0
	10/5/2011	--	--	--	120	8.4	--	6.1	7.50	0.282	1.00	0.14	12.1	-42.0
	4/11/2012	--	--	--	120	9.9	--	6.6 U	7.46	0.361	1,600	1.26	8.2	-105.3
	10/17/2012	--	--	--	120	10	--	6.9	8.04	0.140	0.30	0.41	8.4	-163.1
	5/28/2013	**20**	568	140	133	10	3.6	7.5	7.83	0.196	3.37	0.45	10.7	-145.7
	10/23/2013	**25**	555	154	137	11	--	7.0 J	7.79	0.198	0.31	0.40	10.9	-164.8
	4/24/2014	**32**	397	145	140	11	3.5	6.3 J	7.77	0.294	0.82	0.17	8.9	-89.5
	10/8/2014	**46**	519	**8,800**	375	20	2.4	7.9 J	6.65	0.743	0.73	0.25	10.9	18.2
	10/23/2015	**137**	1,410	271	201	25	3.5	3.9 J	6.78	0.384	0.30	0.30	10.6	-127.1
	11/29/2016	**120**	850	260	200	23	2.7	1.3	7.74	0.451	3.27	0.82	9.0	-122.6
	11/13/2017	3.8	63 J	7.6	110	26	2.9	6.5	7.29	0.286	5.12	3.01	10.1	32.9
	11/14/2018	3.8	50 U	3.0 U	120	25	3.3	6.5	7.26	0.404	1.18	2.29	9.2	-62.7
	11/4/2019	4.3	50 U	3.0 U	120	22	3.2	7.6	7.60	0.320	4.30	2.30	9.0	31.0
	05/06/2020	4.5	50 U	3.0 U	--	--	--	--	7.46	0.305	0.85	2.74	8.8	28.1
	11/03/2020	4.4	50 U	10 U	120	20	2.8	5.1	5.86	0.046	2.99	8.09	12.0	257.0
	11/4/2021	5.0	50 U	1.5 J	140	20	3.1	5.6	7.60	0.241	0.1 U	2.54	11.4	-33.1
	10/25/2022	**11**	54 J	17	130	19	3.0	4.7	7.48	0.414	2.80	1.98	11.4	-42.1
SHM-93-24A	11/08/2019	3.0 U	50 U	7.7 J	22	180	2.1	54	5.80	0.713	12.4	9.40	11.5	124.0
	10/26/2020	3.0 U	50 U	6.4 J	25	190	0.68 J	55	6.17	0.324	124	1.07	12.0	2.6
	11/5/2021	3.0 U	50 U	20	6.4 J	180	0.8 U	94	6.12	0.745	1.68	7.01	13.4	152.5
	6/2/2022	3.0 U	50 U	6.4 J	23	180	0.6 U	49	6.09	0.774	5.22	7.24	12.6	76.1
	8/30/2022	1.2 J	50 U	6.4 J	26	210	0.89 J	41	5.90	0.790	1.65	7.77	16.0	151.0
	10/14/2022	3.0 U	50 U	11	15	210	0.71 J	45	5.26	0.806	0.38	8.53	13.4	233.3
	11/10/2022	3.0 U	50 U	7.4 J	20	180	0.75 J	40	6.00	0.632	0.59	3.43	14.2	177.0
SHM-96-5B	4/22/2010	--	--	--	330 J	19	--	4.4	6.51	0.883	0.18	0.16	10.2	-278.0
	10/11/2010	--	--	--	320	21	--	4.5	6.34	0.685	0.24	0.13	11.2	-35.0
	4/5/2011	--	--	--	340	17	--	3.8	6.54	0.681	1.00	0.19	10.2	-60.0
	10/6/2011	--	--	--	310	20	--	4.1	6.15	0.702	4.40	0.38	12.9	-19.8
	4/10/2012	--	--	--	330	18	--	1.6 U	6.35	0.869	42,000	0.25	9.8	-43.0
	10/15/2012	--	--	--	320	18	--	5.4	6.56	0.475	52.0	0.69	14.7	-71.6
	5/21/2013	**1,400**	**20,000**	**9,670**	315	19	2.7	5.4	6.42	0.652	9.01	0.36	10.8	-43.7
	10/22/2013	**1,660**	**24,700**	**9,980**	315	18	--	5.0 J	6.55	0.560	0.58	1.31	11.6	-69.0
	4/22/2014	**1,340**	**17,100**	**9,810**	345	18	2.4	4.5 J	6.21	0.642	4.61	0.73	10.1	-29.4
	10/9/2014	**991**	**13,100**	**10,500**	318	17	2.7	5.7 J	6.53	0.484	0.41	0.12	12.1	-54.8
	6/5/2015	**1,210**	**16,200**	**9,810**	296	28	2.0	6.9 J	6.54	0.618	4.03	1.36	14.3	-56.8
	10/21/2015	**799**	**11,000**	**11,600**	256	19	2.2	7.2	7.42	0.541	0.17	0.60	13.2	-18.3
	6/27/2016	**1,100**	**15,000**	**10,000**	280	20	1.8	5.1	6.30	0.593	11.2	13.74	0.2	-19.1
	11/17/2016	**990**	**13,000**	**11,000**	250	23	1.7	6.2	6.59	0.573	0.97	0.67	13.0	-6.9
	5/31/2017	**1,200**	**16,000**	**9,400**	230	27	1.7	8.0	7.21	0.588	3.05	0.98	7.7	-12.6
	11/10/2017	**990**	**15,000**	**9,200**	230	29	1.7	8.9	6.79	0.403	25.3	0.66	10.2	-26.1
	4/23/2018	**980**	**15,000**	**8,500**	220	32	1.7	13	6.60	0.594	37.0	0.78	11.6	-60.3
	11/26/2018	**100**	50 U	28	240	19	1.7	4.4	6.67	0.500	2.41	4.02	9.8	36.4
	04/23/2019	**1,100**	**14,000**	**8,300**	220	33	1.8	14	6.50	0.550	19.0	0.87	8.6	-41.0
	11/07/2019	**41**	50 U	23	230	23	2.5	9.6	6.80	0.490	4.40	3.40	10.0	150.0
	05/19/2020	**1,100**	**15,000**	**8,000**	210	30	1.6	17	6.47	0.491	21.4	0.50	11.3	82.6
	11/10/2020	**720**	8,600	**7,900**	210	35	1.6	16	5.58	0.086	14.6	0.99	8.2	266.0
	5/20/2021	**930**	**13,000**	**7,800**	190	37	1.4	19	6.49	0.087	70.2	1.01	14.3	-48.6
	11/9/2021	**1,200**	**15,000**	**7,500**	190	36	0.74 J	20	6.43	0.458	0.1 U	0.02	11.9	-65.4
	5/10/2022	**980**	**14,000**	**7,800**	170	35	1.4	21	6.41	0.088	42.9	0.47	10.9	-49.3
	10/19/2022	**840**	**11,000**	**8,800**	180	35	1.5	20	6.46	0.492	10.3	0.69	12.3	-183.7
SHM-96-5C	4/22/2010	--	--	--	30	34	--	1.0 U	6.31	1.008	0.19	0.14	9.8	-267.0
	10/11/2010	--	--	--	310	31	--	2.0	6.19	0.712	0.49	0.12	10.6	-51.0
	4/5/2011	--	--	--	340	28	--	1.6	6.33	0.744	15.0	0.20	9.4	-32.2
	10/6/2011	--	--	--	310	28	--	1.7	6.16	0.721	4.60	0.22	12.2	-3.1
	4/10/2012	--	--	--	310	27	--	2.0 U	6.00	0.885	6,600	0.11	9.5	32.7
	10/17/2012	--	--	--	300	27	--	2.6	6.30	0.396	0.62	0.84	12.0	-71.0
	5/28/2013	**10**	2,200	**12,600**	318	24	3.8	4.5 U	6.29	0.482	4.82	0.18	10.0	-64.9
	10/22/2013	5.5	609	**12,900**	315	19	--	3.4 J	6.21	0.529	0.10	1.41	11.6	-20.1
	4/22/2014	**11**	3,980	**10,400**	326	20	3.8	2.6 J	6.18	0.618	3.66	0.16	9.8	7.8
	10/9/2014	**18**	7,300	**8,310**	302	18	2.8	3.5 J	6.39	0.466	0.35	0.07	11.8	-28.1
	10/21/2015	**40**	**22,000**	**7,820**	265	21	5.2	5.0	7.02	0.637	18.0	0.91	12.1	-33.7
	11/17/2016	**42**	**16,000**	**6,200**	250	19	4.4	2.1	6.57	0.588	2.57	0.18	11.4	-48.7
	11/10/2017	**34**	**13,000**	**6,900**	240	21	3.1	1.8	6.66	0.365	4.92	0.47	9.6	-12.9
	11/20/2018	**31**	**22,000**	**2,100**	130	28	1.5	1.2	6.07	0.360	24.2	0.25	8.9	15.5
	11/07/2019	**13**	1,900	**14,000**	240	28	3.3	8.1	6.40	0.540	3.80	0.31	9.8	-37.0
	11/10/2020	**29**	7,500	**9,700**	200	31	2.4	6.4	6.27	0.335	12.6	0.69	13.1	8.4
	11/8/2021	**45**	**17,000**	**5,700**	160	29	1.2	5.4	6.25	0.382	1.00	0.90	11.2	-73.2
	10/19/2022	**54**	**29,000**	**5,700**	160	35	1.7	5.1	6.23	0.425	1.25	0.65	11.1	-174.3
SHM-99-31A	10/13/2010	--	--	--	32	46	--	5.6	5.83	0.241	0.24	0.11	13.6	6.4
	10/5/2011	--	--	--	38	3.0	--	6.6	5.55	0.151	1.80	0.28	15.6	3.2
	10/18/2012	--	--	--	22	46	--	15	5.78	0.169	2.20	0.42	13.7	-6.0
	10/23/2013	**14**	4,210	311	15	26	--	9.7 J	5.83	0.145	3.79	1.02	12.5	41.9
	10/29/2015	**19**	7,300	443	17	63	2.4	7.4	5.48	0.271	4.44	0.48	13.1	20.5
	11/02/2020	**20**	7,600	270	14 U	20	3.9	7.4	6.61	0.308	4.60	1.10	6.7	-37.1
	10/25/2021	**25**	5,000	270	47	26	6.7	1.2	5.67	0.158	2.61	0.84	13.7	48.4
	10/14/2022	**29**	**13,000**	650	30	89	3.1	0.95 J	5.52	0.325	3.18	0.51	13.7	443.7
SHM-99-31B	8/12/2010	**29**	**14,600**	478	86	4.0	6.5	3.0	6.03	0.186	--	0.19	10.7	33.9
	10/13/2010	--	--	--	86	3.4	--	3.8	6.27	0.211	0.19	0.15	10.6	-71.0
	10/5/2011	--	--	--	83	3.3	--	4.1	6.22	0.201	0.19	0.22	11.8	-46.0
	10/18/2012	--	--	--	73	2.3	--	5.3	6.31	0.175	1.30	0.31	10.4	-85.0
	10/23/2013	**62**	**9,460**	448	64	4.3	--	7.6 J	6.56	0.176	1.02	2.42	11.2	-57.7
	10/29/2015	**59**	7,430	340	57	5.0	3.5	6.2	5.81	0.156	0.84	0.28	11.0	-23.4
	10/30/2020	1.9 J	17 J	1.5 J	35	8.8	2.3	4.7	6.78	0.077	5.30	6.46	6.7	97.6
	10/25/2021	1.6 J	50 U	30 U	39	8.8	2.5	5.0	6.45	0.102	2.61	4.53	11.9	50.1
	10/14/2022	1.6 J	2,400 J	7.4 J	34	8.3	2.1	5.8	6.61	0.109	2.29	4.53	13.6	556.2
SHM-99-31C	10/13/2010	--	--	--	350	30	--	3.5	6.46	0.811	0.25	0.16	10.6	-80.0
	10/5/2011	--	--	--	340	27	--	3.9	6.50	0.809	1.90	0.27	11.6	-59.2
	10/18/2012	--	--	--	310	28	--	5.2	6.75	0.641	19.0	0.64	13.8	-117.1
	10/23/2013	**205**	**16,400**	**6,160**	348	32	--	5.7 J	6.70	0.737	3.71	0.23	11.1	-95.7
	10/13/2014	**180**	**15,800**	**5,060**	315	25	4.2	6.0 J	6.71	0.634	4.22	0.17	10.9	-78.4
	10/29/2015	**194**	**14,700**	**5,200**	313	23	3.6	5.0	6.62	0.663	8.32	1.31	13.4	-73.9
	11/29/2016	**200**	**17,000**	**5,900**	330	25	3.0	3.9	6.66	0.534	6.59	0.67	9.4	-57.7
	11/28/2017	**200**	**17,000**	**5,600**	320	31	2.5	4.4	6.73	0.675	1.99	3.83	8.6	-26.6
	11/29/2018	**160**	**15,000**	**5,300**	270	33	2.6	4.6	6.87	0.695	2.39	1.34	8.9	-46.4
	11/14/2019	**140**	**11,000**	**4,700**	250	31	2.0	5.4	6.70	0.300	6.40	0.78	9.4	-78.0
	5/19/2020	**180**	**15,000**	**4,900**	--	--	--	--	6.65	0.553	7.37	0.71	9.6	-126.0
	10/30/2020	**140**	**12,000**	**4,600**	230	31	1.9 U	4.7	6.63	0.241	11.4	1.06	8.8	-36.1
	10/25/2021	**150**	**12,000**	**4,900**	260	59	2.7	9.5	6.40	0.467	1.01	0.85	10.7	-75.6
	10/14/2022	**56**	4,700	**5,100**	260	30	1.7	7.0	6.58	0.574	1.27	0.60	14.6	-87.9
SHM-99-32X	10/13/2010	--	--	--	390	39	--	3.9	6.51	0.879	0.42	0.16	10.5	-77.0
	10/4/2011	--	--	--	380	32	--	2.4	6.42	0.825	5.00	0.33	11.5	-36.0
	10/17/2012	--	--	--	370	36	--	2.8	6.54	0.469	28.0	0.63	10.5	-136.4
	10/23/2013	**107**	**18,400**	**10,900**	342	32	--	2.9 J	6.45	0.704	0.37	0.17	11.2	-77.9
	10/13/2014	**94**	**16,800**	**9,670**	280	33	2.1	4.9 J	6.64	0.462	17.4	1.89	11.2	-83.0
	11/21/2016	**59**	4,800	**3,900**	76	55	1.2	4.9	7.06	0.354	12.3	0.35	10.4	-31.2
	11/28/2017	**60**	4,900	**4,000**	81	64 J	1.2	5.6	6.91	0.362	4.28	1.85	10.2	-59.1
	11/15/2018	6.3	1,200	1,700	50	56	1.5	5.8	6.52	0.289	42.1	2.10	4.1	170.0
	11/12/2019	**47**	6,700	**4,100**	78	64	1.4	17	6.40	0.370	7.80	0.16	9.2	12.0
	05/19/2020	**22**	4,900	**3,200**	--	--	--	--	6.81	0.326	9.63	0.54	11.4	-101.0
	10/30/2020	**26**	4,200	**2,800**	58	72	1.2 U	11	6.42	0.232	2.70	0.97	13.6	46.3
	10/25/2021	**27**	4,500	**3,100**	47	79	1.5	8.1	6.79	0.313	5.61	0.92	11.3	-88.8
	10/18/2022	**24**	4,200	**3,100**	54	72	1.4	8.7	6.46	0.351	4.68	0.73	12.4	-104.8
SHP-01-36X	10/14/2010	--	--	--	24	40	--	9.2	6.50	0.218	1.00	0.12	15.8	-78.0
	10/10/2011	--	--	--	28	46	--	4.3	5.82	0.208	1.00	0.18	19.8	-43.0
	10/16/2012	--	--	--	40	63	--	5.1	6.52	0.379	23.0	0.36	15.0	-73.4
	11/19/2013	4.8	75 J	23	24	76	--	24	6.42	0.351	0.63	7.07	6.8	118.8
	10/9/2014	**11**	535	68	26	110	3.1	8.1 J	6.27	0.329	2.99	0.32	17.4	39.2

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	10/27/2015	9.0	686	111	24	105	2.7	7.7	6.12	0.329	0.91	1.40	11.8	27.2
	11/22/2016	4.5	350	28	24	84	3.1	8.4	6.82	0.370	0.47	2.50	8.2	36.5
	6/2/2017	4.3	490	39	27	84	3.6	3.9	6.55	0.382	6.69	0.59	14.5	32.9
	11/13/2017	**17**	6,800	220	26	66	5.0	2.9	6.31	0.293	1.20	1.08	12.1	7.5
	4/13/2018	**11**	3,400	77	18	110	3.2	7.7	7.00	0.403	1.51	0.94	8.3	69.4
	11/8/2018	7.8	550	39	25	53	3.6	5.4	6.42	0.239	28.2	0.34	11.8	36.4
	04/12/2019	6.3	870	33	22	81	2.1	7.3	7.30	0.330	1.30	1.30	7.5	170.0
	11/04/2019	**11**	1,500	78	27	67	3.5	6.0	6.40	0.300	--	0.30	12.0	37.0
	05/20/2020	5.9	760	32	33	62	2.8	5.6	6.41	0.272	0.02	3.18	11.8	23.4
	11/11/2020	6.6	530	49	33	74	2.9	8.6	6.66	0.247	3.20	3.38	15.4	44.9
	5/24/2021	6.3	720	39	33	65	3.3	4.4	6.35	0.224	0.48	0.15	16.0	36.9
	11/1/2021	**13**	1,300	46	35	47	3.6	3.0	6.18	0.212	1.04	0.85	16.3	13.5
	5/10/2022	7.5	1,200	110	22	80	2.5	5.5	6.13	0.058	8.50	0.43	12.7	31.0
	10/25/2022	6.6	620	98	33	86	3.4	14	5.85	0.424	9.02	1.29	15.0	74.6
SHP-01-37X	10/14/2010	--	--	--	44	60	--	1.0 U	6.21	0.300	0.29	0.42	16.7	-43.0
	10/16/2012	--	--	--	37	62	--	3.0	6.40	0.287	1.60	0.38	14.7	-105.8
	11/19/2013	4.7	1,430	569	4.4 J	76	2.0 U	78	5.64	0.433	0.43	3.12	6.9	123.3
	10/9/2014	8.5	3,410	158	12	80	3.1	8.0 J	6.22	0.350	0.10	1.80	17.1	28.0
	10/27/2015	**14**	1,090	136	26	95	3.8	6.3	6.30	0.325	0.88	3.02	11.7	0.7
	11/22/2016	**11**	1,000	46	22	86	4.3	11	7.85	0.367	0.71	3.60	8.7	-28.5
	6/2/2017	6.5	1,400	72	24	100	3.5	8.0	6.64	0.470	8.32	1.15	12.6	13.6
	11/13/2017	**13**	1,500	110	26	71	4.9	3.8	6.42	0.301	2.88	1.91	11.2	25.4
	4/13/2018	9.9	1,200	160	28	89	3.5	7.0	6.87	0.350	1.77	0.90	8.1	88.0
	11/8/2018	**17**	2,200	120	36	110	3.6	4.0	6.30	0.447	22.7	0.15	13.7	11.6
	04/12/2019	**15**	5,400	440	65	28	2.1	21	7.00	0.290	7.40	0.62	8.5	140.0
	11/04/2019	**13**	4,500	210	28	69	3.9	7.8	6.60	0.310	2.60	0.39	13.0	-4.3
	05/20/2020	**13**	1,500	150	37	68	2.4	6.6	6.58	0.315	0.73	3.77	12.2	-17.0
	11/11/2020	6.1	430	53	25	75	3.7	8.3	5.82	0.191	7.10	0.88	15.0	29.6
	5/24/2021	**11**	1,100	97	30	89	2.8	7.4	6.62	0.301	0.42	0.28	15.0	-5.0
	11/1/2021	**13**	1,200	98	41	71	4.2	6.5	6.29	0.296	1.59	0.74	14.8	3.7
	5/9/2022	**25**	2,500	350	51	31	1.9	13	6.09	0.052	2.70	1.16	11.3	30.9
	10/26/2022	5.0	670	55	30	85	5.3 U	14	5.94	0.429	2.87	2.92	14.8	52.1
SHP-01-38A	10/14/2010	--	--	--	140	28	--	18	6.37	0.433	1.00	0.91	12.8	-70.0
	10/12/2011	--	--	--	200	24	--	11	5.95	0.500	3.00	0.21	13.4	-39.0
	10/15/2012	--	--	--	180	44	--	18	6.19	0.499	30.0	0.36	12.8	-73.1
	5/23/2013	**412**	**10,200**	254	64	5.3	2.1	6.3	6.66	0.156	4.30	0.12	10.8	-70.1
	11/19/2013	**247**	**17,900**	**2,200**	79	7.0	2.2	115	6.14	0.435	0.31	1.25	12.3	-20.7
	10/9/2014	**263**	**23,500**	**2,490**	94	11	20	49	6.23	0.256	0.37	0.16	14.1	-47.0
	10/28/2015	**314**	**38,400**	**2,950**	112	11	1.8	21	6.28	0.388	1.39	0.36	12.7	-52.8
	11/16/2016	**320**	**20,000**	**1,900**	78	4.3	1.4	13	6.18	0.163	5.96	0.78	12.2	-34.6
	6/12/2017	**190**	**15,000**	1,300	55	1.0	1.4	16	5.34	0.205	9.84	0.70	13.7	-4.2
	11/7/2017	**190**	**20,000**	1,500	70	2.2	1.5	8.6	6.30	0.183	3.16	0.30	14.0	-24.0
	4/19/2018	**140**	**12,000**	1,000	39 J	1.2	1.7	11	6.46	0.142	1.45	1.51	7.2	-33.4
	11/8/2018	**130**	**19,000**	1,600	61	1.8	1.5 U	10	5.94	0.181	21.1	0.34	12.0	9.9
	04/12/2019	**79**	**15,000**	1,300	41	1.3	1.3	8.6	6.80	0.140	2.40	0.59	7.3	130.0
	11/04/2019	**130**	**25,000**	**2,000**	94	8.5	1.3	13	6.00	0.250	2.20	0.37	12.0	0.8
	05/21/2020	**87**	**13,000**	1,200	60	0.49 J	1.1	16	7.63	0.330	5.23	0.88	11.7	23.1
	11/11/2020	**150**	**24,000**	2,200	90	14	1.4	8.0	8.70	0.501	7.22	0.45	10.2	-7.5
	5/27/2021	**95**	**13,000**	1,100	53	0.87	1.2	11	6.36	0.109	4.82	0.42	14.1	11.7
	11/1/2021	**110**	**16,000**	1,400	67	0.65	1.4	6.8	5.92	0.146	1.27	0.74	13	-2.3
	5/9/2022	**87**	**17,000**	1,400	70	1.4	1.2	5.9	5.98	0.034	2.30	0.54	10.9	-3.7
	10/25/2022	**140**	**24,000**	1,800	73	13	1.3 J	5.8	5.46	0.311	10.30	1.27	15.0	17.5
SHP-01-38B	5/23/2013	**900**	**47,100**	**2,240**	190	52	3.6	4.5 U	6.62	0.583	0.00	0.30	10.8	-109.1
	10/28/2015	**903**	**43,600**	**2,320**	145	43	4.4	7.0	6.34	0.610	0.34	0.15	11.1	-100.0
SHP-05-45A	8/9/2010	**34**	**22,100**	--	--	--	3.6	--	6.20	0.294	--	0.30	14.0	-32.2
	10/28/2015	**28**	**17,500**	325	109	7.5	6.3	5.0 U	--	--	--	--	--	--
SHP-05-46B	8/9/2010	**81**	**34,800**	--	--	--	14	--	5.71	0.662	--	0.81	12.9	3.0
	10/28/2015	7.7	802	361	94	27	12	5.0 U	--	--	--	--	--	--
SHP-2016-06A	6/15/2017	**520**	64	**3,300**	120	120	3.4	120	7.49	0.204	9.63	5.47	13.5	62.3
	11/28/2017	**600**	320	**2,000**	130	13	9.0	74	6.78	0.413	3.32	0.60	8.3	-105.2
	4/18/2018	**280**	120	**1,800**	140	10	6.0	57	7.71	0.424	6.86	1.40	8.6	-113.8
	11/9/2018	**480**	94	**2,600**	170	16	13	1.0 U	7.57	0.427	4.55	0.60	9.2	-183.0
	4/17/2019	**2,800**	1,400	**1,900**	190	16	22	150	7.30	0.720	2.30	1.50	8.1	-97.0
	11/5/2019	**860**	400	**2,300**	230	15	18	180	7.20	0.690	1.70	0.68	10.0	-67.0
	05/21/2020	**760**	160	920	140	8.7	3.2	36	6.13	0.143	0.02	3.33	10.8	1.3
	11/12/2020	**640**	340	1,000	150	4.9	3.3	41	8.27	0.399	3.15	0.44	11.9	2.8
	5/25/2021	**960**	130	730	140	4.8	3.7	46	7.99	0.259	10.7	0.13	17.4	-176.9
	11/9/2021	**1,000**	820	1,100 J	210	5.6	8.8	85	7.76	0.636	15.7	1.70	5.9	-99.6
	5/11/2022	**1,500**	690	1,200	150	6.6	7.0	59	7.99	0.443	4.23	0.39	17.1	-217.0
	5/25/2022	**1,100**	440	1,200	150	6.7	6.5	62	8.20	0.449	2.09	0.46	11.1	-154.0
	8/23/2022	**1,700**	610	1,100	140	6.9	7.0	77	7.97	0.406	3.10	4.70	13.8	-124.0
	10/26/2022	**1,900**	1,200	1,400	140	5.6	7.8 U	70	7.40	0.278	3.01	1.41	15.1	-142.2
	11/14/2022	**1,400**	530	1,300	120	6.1	6.1	58	7.64	0.406	6.47	0.58	9.31	-166.0
SHP-2016-06B	6/15/2017	**830**	120	**2,500**	130	130	1.8	130	7.14	0.246	6.91	1.09	13.7	48.6
	11/28/2017	**1,300**	240	1,600	130	10	5.8	110	6.81	0.469	8.45	0.79	7.2	-69.5
	4/18/2018	**1,300**	1,800	**4,700**	240	51	36	730	7.73	1.463	7.25	0.81	10.1	-113.9
	11/7/2018	**1,300**	1,000	1,600	280	40	25	530	7.63	1.900	41.8	0.65	10.4	-75.2
	4/17/2019	**1,300**	990	1,200	260	27	21	440	7.50	1.600	20.0	0.42	9.6	-110.0
	11/5/2019	**1,200**	1,100	1,200	310	17	36	380	7.60	1.100	6.20	0.56	11.0	-96.0
	05/21/2020	**1,100**	310	430	260	7.4	14	210	7.23	0.971	3.83	0.38	13.9	-13.9
	11/12/2020	**1,100**	240	550	160	3.6	4.8	76	8.98	0.256	7.13	0.36	9.6	-7.8
	5/25/2021	**1,200**	180	320	190	2.9	6.8	65	8.16	0.327	1.82	0.54	16.8	-148.5
	11/9/2021	**510**	56	130	220	2.5	6.6	60	8.07	0.605	26.40	0.81	7.8	-118.0
	5/11/2022	**340**	100	190	120	1.6	1.3	14	7.98	0.307	11.8	0.34	12.4	-192.0
	5/25/2022	**540**	140	200	130	1.6	0.91 J	16	8.29	0.281	3.63	0.52	10.3	-129.0
	8/23/2022	**470**	120	170	130	1.5	1.4	14	8.30	0.288	8.95	4.12	13.1	-168.0
	10/26/2022	**290**	140	210	130	1.5	1.6 U	19	7.79	0.181	4.73	1.45	14.3	-145.1
	11/14/2022	**420**	120	180	120	1.5	1.4 J	14	7.87	0.277	12.1	0.80	9.3	-140.0
SHP-2016-06C	6/14/2017	**320**	360	**1,900**	140	140	2.9	140	7.51	0.276	8.70	1.07	18.6	38.7
	11/28/2017	**280**	140	330	120	1.5	0.50 U	8.4	7.08	0.253	9.57	2.79	7.7	-87.1
	4/18/2018	**210**	97 J	220	120	1.6	1.0 U	10	7.77	0.236	1.38	0.50	10.4	-64.5
	11/7/2018	**300**	340	230	120	1.8	1.0 U	22	7.64	0.255	9.74	0.38	11.2	-37.5
	4/17/2019	**250**	130	220	120	1.5	0.50 U	9.2	7.30	0.260	4.10	1.40	9.3	-42.0
	11/5/2019	**270**	110	170	120	1.8	0.40 J	12	7.90	0.240	8.00	2.20	11.0	-64.0
	05/21/2020	**310**	100	200	130	1.5	0.47 J	10	6.03	0.244	2.74	0.43	17.3	272.0
	11/12/2020	**350**	150	180	130	1.5	1.0 U	9.4	7.05	0.174	42.1	1.38	8.4	-13.5
	5/25/2021	**310**	110	180	120	1.5	0.47 J	8.5	7.98	0.165	4.02	0.66	17.3	-143.5
	11/9/2021	**290**	130	180	130	1.4	0.66 J	8.5	8.15	0.371	17.3	0.81	8.8	-124.0
	5/11/2022	**360**	120	190	110	1.5	0.56 J	8.5	7.94	0.244	10.5	0.42	16.9	-177.0
	5/25/2022	**370**	120	180	110	1.4	0.6 U	9.3	8.16	0.255	2.68	0.50	10.7	-129.0
	8/23/2022	**360**	120	150	120	1.5	0.88 J	8.9	8.20	0.251	7.40	4.18	14.2	-117.0
	10/26/2022	**380**	150	180	110	1.4	1.2 U	13	7.75	0.160	5.55	1.10	15.2	-162.6
	11/14/2022	**380**	150	190	94	1.5	1.0 U	9.0	7.83	0.239	4.16	0.79	9.1	-126.0
SHP-2016-07A	6/13/2017	**81**	5,900	560	28	28	0.81 J	28	4.49	0.062	8.59	0.43	13.4	103.6
	11/30/2017	**12**	39 J	**7,300**	64	2.5	1.9	8.8	6.60	0.149	5.88	5.30	8.6	154.1
	4/19/2018	**84**	5,800	**5,400**	32	2.0	1.4	4.0	6.05	0.060	3.15	0.87	8.1	40.3
	11/9/2018	**200**	410	600	43	6.5	1.3 U	100	5.76	0.102	22.8	0.12	12.2	32.7
	4/22/2019	**19**	3,400	**3,600**	20	1.5	0.50 U	3.4	5.10	0.058	1.70	0.90	8.3	89.0
	05/20/2020	**74**	5,600	**4,100**	34	1.4	1.8	2.9	6.12	0.068	2.22	0.39	13.7	10.1
	6/16/2021	**160**	**11,000**	**5,200**	38	2.2	3.2	2.4	5.93	0.090	7.25	2.98	13.5	-7.7
	10/27/2021	**130**	**7,100**	**3,700**	37	1.7	1.0	3.3	6.02	0.053	0.1 U	0.11	11.4	-20.8
	5/10/2022	2.2 J	210	**1,900**	9.1	1.5	0.89 J	4.6	5.32	0.032	2.49	2.51	13.1	117.0
	5/24/2022	**93**	140	510	120	2.7	2.7	29	7.25	0.316	2.18	0.77	13.8	-37.8
SHP-2016-07B	6/13/2017	7.9	270	760	99	99	3.3	99	6.67	0.301	7.32	1.34	19.2	32.3
	11/30/2017	**11**	230	1,700	100	4.3	1.9	42	7.32	0.290	18.9	1.47	10.5	-44.4
	4/19/2018	**200**	870	**2,000**	160	16	9.3	200	7.22	0.630	23.2	1.18	6.9	-45.9
	11/8/2018	**150**	**10,000**	**7,000**	120	2.1	4.5	4.7	6.68	0.491	8.43	0.34	12.0	-43.9

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
	4/19/2019	**80**	210	700	120	4.1	3.0	71	7.00	0.380	12.0	0.87	14.0	-8.8
	11/6/2019	**35**	84	350	110	2.9	1.5	36	7.10	0.300	28.0	0.98	13.0	18.0
	05/15/2020	**57**	110	470	130	2.6	1.6	34	7.09	0.211	0.02	4.47	13.3	16.7
	11/13/2020	**65**	460	580	110	2.6	1.6	30	7.46	0.207	6.62	0.30	12.5	45.5
	6/16/2021	**100**	340	450	140	3.2	3.5	32	7.05	0.160	7.14	3.39	15.5	-33.1
	10/27/2021	**130**	270	340	150 J	2.9	3.5	36	7.29	0.263	2.19	0.21	11.5	-91.5
	5/11/2022	**100**	110	350	130	2.7	2.8	28	6.86	0.298	3.43	1.05	15.3	-47.4
	5/23/2022	**37**	72 J	140	100	3.1	1.6	24	7.32	0.264	2.64	6.32	11.7	-3.1
	8/30/2022	**67**	110	380	130	2.9	3.2	42	7.35	0.332	45.7	1.02	24.6	-75.8
	10/18/2022	**160**	560	510	140	2.8	3.8	33	7.26	0.333	12.9	0.71	12.2	-150.1
	11/16/2022	**120**	500	520	120	2.5	3.6	22	7.15	0.285	36.5	0.49	10.4	-222.0
SHP-2016-1A	05/23/2017	3.0 U	220	82	15	1.2	1.0 U	4.9	4.77	0.042	9.35	7.46	10.3	140.6
	11/14/2017	3.0 U	75 U	33	22	1.0	0.50 U	4.5	6.93	0.070	1.27	6.07	10.8	122.8
	11/13/2018	3.0 U	50 U	4.0 J	21	0.69	1.0 U	3.7 J	5.38	0.063	6.98	2.79	12.5	79.6
	04/22/2019	3.0 U	50 U	2.3 J	20	1.2	0.50 U	3.0	5.10	0.056	4.80	8.10	8.5	170.0
	11/08/2019	3.0 U	20 J	4.7 J	24	0.48 J	1.7	4.8	5.70	0.068	6.80	0.00	11.0	36.0
	05/15/2020	3.0 U	50 U	10 U	17	0.55	0.65 J	3.2	5.59	0.043	2.37	10.50	11.5	190.0
	11/05/2020	3.0 U	240	6.6 J	16	0.53	1.0 U	4.5	7.64	0.045	8.48	3.52	12.9	101.0
	5/25/2021	3.0 U	50 U	3.0 U	22	0.91	0.95 J	3.4	5.97	0.032	0.2	9.77	12.1	246.9
	11/2/2021	3.0 U	50 U	1.4 J	33 J	0.51	0.80 U	3.2	5.97	0.051	4.45	7.57	14.6	136.0
	5/10/2022	3.0 U	50 U	5.0 U	21	0.79	0.73 J	2.4	5.86	0.051	1.48	8.15	12.0	236.0
	10/21/2022	3.0 U	50 U	2.9 J	23	0.84	1.0 J	2.9	5.67	0.036	2.12	6.77	9.9	183.9
SHP-2016-1B	05/23/2017	**120**	**21,000**	1,200	82	2.6	3.2	0.63 J	6.66	0.147	12.5	0.21	10.7	-96.4
	11/14/2017	**170**	**27,000**	1,700	120	5.8	2.4	0.98 J	7.35	0.281	3.07	1.48	9.8	-46.7
	11/13/2018	**130**	**16,000**	970	69	3.0	2.0	2.3	6.10	0.189	7.50	0.90	9.2	-9.9
	04/22/2019	**120**	**18,000**	1,200	68	12	2.2	2.6	5.70	0.230	1.40	0.48	11.0	-22.0
	11/08/2019	**180**	**34,000**	1,700	140	11	4.0	7.3	5.70	0.330	6.80	0.89	10.0	36.0
	05/19/2020	**110**	**15,000**	840	66	6.7	1.9	2.2	6.76	0.175	17.3	4.54	11.7	-91.8
	11/05/2020	**140**	**24,000**	1,100	91	5.0	1.8 U	2.6	8.74	0.081	5.00	2.87	11.6	7.2
	5/25/2021	**120**	**17,000**	960	58	2.3	1.9	3.6	6.59	0.110	0.58	0.60	15.1	-59.7
	11/2/2021	**110**	**15,000**	860	60 J	3.9	1.9	2.5	6.49	0.123	5.45	0.81	12.4	-68.9
	5/10/2022	**110**	**18,000**	910	66	2.5	1.9	2.4	6.44	0.163	8.04	0.89	14.1	-66.5
	10/21/2022	**140**	**27,000**	1,300	110	7.5	2.8	5.9	6.29	0.166	1.92	1.23	13.3	-62.9
SHP-2016-2A	05/24/2017	**58**	4,300	420	110	8.3	2.5	4.6	10.07	0.186	95.9	1.15	9.5	-177.6
	11/20/2017	**51**	420	30	81	7.2	1.7	3.3	11.91	0.197	13.2	--	9.0	-196.3
	04/23/2018	**32**	430	32	92	6.4	1.6	3.9	9.65	0.234	30.8	1.76	10.0	-43.1
	11/15/2018	**17**	19 J	190	58	5.1	1.1	3.1	9.44	0.184	22.4	3.07	9.1	-51.4
	04/19/2019	**16**	22 J	450	64	3.3	0.50 U	4.8	8.70	0.150	8.50	1.10	9.8	-31.0
	10/24/2019	**11**	25 J	400	51	2.5	1.2	5.0	8.10	0.120	4.60	2.50	11.0	160.0
	05/20/2020	9.5	32 J	290	58	2.1	0.66 J	3.8	8.47	0.096	2.60	2.28	11.2	-46.9
	11/06/2020	8.5	120 U	290	57	2.2	1.0 U	3.6	6.51	0.269	4.60	0.78	10.4	-78.2
	5/21/2021	**12**	50 U	120	51	2.4	0.78 J	3.8	10.17	0.014	1.3	1.21	12.8	16.1
	11/9/2021	**8.9**	50 U	170	62	2.7	1.6	3.8	9.29	0.100	1.95	3.45	12.8	70.6
	5/11/2022	3.0 J	50 U	320	48	2.6	0.82 J	2.7	7.00	0.086	3.38	2.65	10.2	48.0
	10/20/2022	2.0 J	50 U	590	48	2.5	0.65 J	2.5	6.82	0.091	0.57	2.86	10.2	526.8
SHP-2016-2B	05/24/2017	**350**	**64,000**	**2,700**	220	16	2.7	0.47 J	6.48	0.421	9.67	0.51	9.5	-91.3
	11/20/2017	**550**	**65,000**	**2,900**	200	20	2.7	0.88 J	8.76	0.528	2.27	--	8.3	-69.9
	04/23/2018	**420**	**59,000**	**2,600**	200	18	2.6	2.2	6.83	0.578	4.79	0.81	10.0	-69.5
	11/15/2018	**430**	**52,000**	**2,700**	170	18	2.3	2.4	6.79	0.634	1.44	0.27	8.1	-79.6
	04/19/2019	**450**	**43,000**	**2,200**	150	9.6	2.2	4.3	6.30	0.440	2.50	0.48	8.5	-49.0
	10/24/2019	**560**	**46,000**	**2,400**	170	15	2.2	5.1	6.50	0.490	3.00	0.19	9.9	-33.0
	05/20/2020	**260**	**31,000**	**1,900**	120	7.7	1.8	2.3	6.38	0.248	1.15	0.46	8.6	19.5
	11/06/2020	**520**	**43,000**	**2,400**	10 U	14	1.8 U	3.2	6.53	0.097	3.40	1.17	6.6	151.0
	5/21/2021	**450**	**47,000**	**2,800**	150	17	2.3	3.2	6.77	0.048	0.31	1.52	12.6	-129.1
	11/9/2021	**380**	**35,000**	**2,200**	130	13	1.8	2.7	6.54	0.320	10.8	0.07	12.5	-83.5
	5/11/2022	**140**	**39,000**	**2,500**	110	16	1.9	3.4	6.22	0.308	1.80	0.90	10.9	-80.3
	10/20/2022	**480**	**38,000**	**2,400**	140	14	2.0	4.7	6.53	0.369	0.93	0.65	10.1	-60.0
SHP-2016-3A	05/23/2017	4.8	1,700	190	61	2.7	3.0	3.7	7.06	0.097	35.1	1.59	7.3	-61.9
	11/15/2017	7.0	3,200	590	77	8.2	3.8	0.92 J	7.96	0.171	1.89	1.87	8.5	-31.4
	04/24/2018	3.2	5,000	600	55	4.0	1.5	3.2	7.52	0.150	1.09	1.40	9.8	-87.5
	11/12/2018	4.5	**9,400**	830	69	6.5	1.9	1.5	6.53	0.255	0.90	0.32	11.0	-81.4
	04/18/2019	4.0	8,100	530	43	2.5	0.50 U	1.4	6.30	0.120	2.00	1.10	4.3	-34.0
	10/28/2019	4.1	**11,000**	740	49	14	1.1	2.5	6.50	0.240	2.90	0.21	9.1	-86.0
	05/20/2020	3.1	7,400	380	37	1.9	0.90 J	2.2	6.16	0.085	1.09	1.13	10.1	94.4
	11/02/2020	5.3	**14,000**	670	55	14	1.3	1.7	6.30	0.151	11.8	1.01	7.3	-43.9
	6/16/2021	4.1 J	8,380	394	36	2.7	1.4 U	2.8	6.41	0.080	3.6	3.36	8.9	-32.7
	11/4/2021	5.8	**13,000**	490	75	2.4	0.8 U	1.2	6.64	0.113	0.1 U	0.98	11.9	-61.8
	5/9/2022	3.6 J	7,000	270	33	1.8	0.92 J	1.3	6.17	0.071	1.1	2.56	7.7	-40.2
	10/24/2022	4.6 J	**11,000**	410	37	7.5	1.1 J	1.0	6.31	0.232	2.8	0.75	9.4	-27.2
SHP-2016-3B	05/23/2017	**240**	**54,000**	**4,100**	200	18	3.5	0.56 J	6.45	0.398	7.19	0.32	8.7	-70.1
	11/15/2017	**270**	**53,000**	**4,000**	240	18	2.9	0.47 J	7.87	0.512	1.15	2.51	8.9	-45.4
	04/24/2018	**240**	**43,000**	**3,400**	170	16	2.2	1.9	6.79	0.485	3.85	0.84	10.0	-49.6
	11/12/2018	**240**	**43,000**	**3,200**	150	18	2.3	2.0	6.36	0.570	3.62	0.29	10.1	-72.5
	04/18/2019	**230**	**42,000**	**3,000**	150	12	2.3	3.4	6.20	0.420	2.70	0.52	6.0	-44.0
	10/28/2019	**260**	**36,000**	**2,800**	130	11	1.8	4.5	6.50	0.160	3.00	0.37	8.7	-52.0
	05/20/2020	**160**	**25,000**	**2,000**	100	5.9	1.7	2.4	6.36	0.202	2.22	0.29	10.0	55.0
	11/03/2020	**180**	**29,000**	**2,200**	110	5.9	1.9 U	1.8	6.43	0.305	6.50	0.87	10.1	-69.6
	5/27/2021	**200**	**36,000**	**2,400**	100	16	1.9	3.2	6.48	0.235	4.13	0.39	14.7	-43.6
	11/4/2021	**200**	**44,000**	**3,000**	120	18	2.1	4.3	6.38	0.291	0.32	0.94	11.3	-67.5
	5/9/2022	**210**	**31,000**	**2,200**	94	8.3	1.7	3.9	6.18	0.233	0.51	0.78	9.1	-70.1
	10/24/2022	**260**	**34,000**	**2,900**	110	18	1.7	5.6	6.34	0.433	4.50	0.72	9.6	-61.3
SHP-2016-4A	05/24/2017	10	3,400	150	57	4.9	2.5	6.2	7.05	0.098	62.0	0.73	9.9	-75.1
	11/16/2017	4.6	610	170	43	5.5	1.4	2.6	8.30	0.091	20.9	2.08	7.2	-6.5
	04/24/2018	3.8	1,600	710	44	7.0	0.89 J	3.7	6.92	0.121	5.18	1.23	11.0	-43.0
	11/12/2018	1.5 J	960	1,000	24	5.4	1.1 U	5.7	5.56	0.141	2.15	2.59	8.2	24.6
	04/19/2019	3.0 U	84	640	24	6.2	0.50 U	6.6	5.60	0.082	7.40	4.80	9.9	210.0
	11/05/2019	3.0 U	24 J	580	16	8.9	0.63 J	7.8	6.30	0.084	9.10	2.70	8.1	50.0
	05/21/2020	3.0 U	68	70	11	4.2	0.70 J	6.9	5.82	0.046	1.60	6.48	11.2	153.0
	11/06/2020	3.0 U	50 U	110	17	4.2	1.0 U	4.6	6.40	0.157	2.79	0.72	11.2	-5.1
	5/21/2021	3.0 U	50 U	44	13	6.3	0.82 J	6.6	6.25	0.008	< 0.1	0.64	10.6	111.2
	11/4/2021	3.0 U	50 U	69	6.4 U	2.2	0.8 U	4.5	6.13	0.030	1.71	8.97	9.3	114.0
	5/11/2022	3.0 U	50 U	64	12	3.2	0.96 J	4.2	5.88	0.008	2.2	8.87	12.1	214.0
	10/21/2022	3.0 U	50 U	67	16	3.4	0.81 J	2.9	5.86	0.120	2.0	2.82	10.0	220.0
SHP-2016-4B	05/24/2017	**1,100**	**75,000**	**1,900**	220	17	5.5	1.0 U	6.50	0.415	6.68	0.27	8.9	-95.4
	11/16/2017	**1,800**	**62,000**	1,400	230	18	2.6	0.78 J	7.79	0.524	2.65	3.76	7.7	-58.9
	04/23/2018	**1,300**	**55,000**	1,500	190	17	2.3	2.1	6.71	0.541	6.51	0.75	9.4	-64.8
	11/12/2018	**1,400**	**53,000**	1,500	160	16	2.3	2.6	6.30	0.594	23.1	0.50	8.9	-109.0
	04/19/2019	**1,400**	**41,000**	1,300	130	10	1.9	4.7	6.10	0.370	4.20	0.62	10.0	-62.0
	11/05/2019	**1,500**	**50,000**	**2,000**	170	17	1.8	5.4	6.50	0.490	8.10	--	8.3	-60.0
	05/21/2020	**650**	**29,000**	**1,900**	91	4.0	1.4	4.0	6.52	0.207	0.09	0.39	10.0	4.4
	11/06/2020	**1,700**	**48,000**	**2,600**	160	22	1.7 U	5.1	6.19	0.040	7.20	4.27	10.3	148.0
	5/21/2021	**690**	**32,000**	**2,100**	83	4.5	1.7	3.7	6.79	0.034	0.16	1.72	11.0	-124.4
	11/4/2021	**1,100**	**36,000**	**2,300**	120	14	0.8 U	6.3	6.60	0.252	0.94	0.81	9.1	-95.9
	5/10/2022	**730**	**31,000**	**2,200**	67	4.8	1.4	3.9	6.58	0.039	4.90	0.70	11.1	-110.0
	10/21/2022	**1,400**	**45,000**	**2,800**	140	26	1.7	11	6.50	0.464	2.20	0.73	10.5	-89.4
SHP-2016-5A	05/24/2017	2.3 J	8,000	260	63	27	18	1.0 U	6.76	0.162	9.94	0.26	9.2	-78.3
	11/16/2017	2.2 J	4,900	140	73	17	8.6	0.76 J	8.19	0.174	5.74	1.60	8.2	-59.4
	04/24/2018	2.5 J	3,900	110	70	14	7.9	2.8	7.02	0.191	7.68	0.40	11.6	-58.5
	11/14/2018	2.8 J	4,000	140	66	40	5.6	6.7	6.26	0.375	1.52	0.24	9.7	14.6
	04/23/2019	3.9	3,200	100	67	25	6.3	6.7	6.50	0.240	7.90	0.59	8.8	-9.9
	11/05/2019	3.2	4,400	190	65	67	4.1	4.8	6.20	0.380	8.10	0.45	8.1	30.0
	05/21/2020	3.0	2,000	150	60	31	6.5	2.1	5.96	0.180	4.63	0.23	9.6	114.0
	11/09/2020	3.9	2,200	200	56	39	5.5	2.7	6.56	0.339	2.10	0.76	12.8	-87.7
	6/22/2021	3.0 J	1,700	170	56	19	6.9	4.1	7.14	0.154	< 0.1	3.54	10.7	0.4
	11/9/2021	3.4	2,000	220	67	24	6.1	2.6	6.31	0.184	0.56	0.10	11.7	-33.3
	5/10/2022	3.3 J	1,700	190	64	9.5	6.9	3.4	6.19	0.140	4.87	0.82	11.5	-28.7
	10/21/2022	3.5 J	1,300	140	61	3.2	7.6	1.1	6.37	0.216	7.40	0.78	10.6	-21.3

Appendix E
Historical Groundwater Monitoring Well Analytical Results
Shepley's Hill Landfill - Devens Massachusetts

SERES Engineering & Services, LLC
ARCADIS
a joint venture

Analytical Method		Dissolved Metals			Anions		General Chemistry		Field Parameters					
Analyte		Arsenic	Iron	Manganese	Alkalinity	Chloride	DOC	Sulfate	pH	SPC	Turbidity	DO	Temp	ORP
Unit		(µg/L)	(µg/L)	(µg/L)	mg/L	mg/L	mg/L	mg/L	SU	mS/cm	NTU	mg/L	°C	mV
Screening Limit*		10	9,100	1,715										
Well ID	Date													
SHP-2016-5B	05/24/2017	**620**	**66,000**	**4,100**	240	19	4.4	1.0 U	6.40	0.462	7.86	0.59	9.3	-76.9
	11/20/2017	**700**	**64,000**	**4,700**	200	19	3.3	0.63 J	8.44	0.518	1.96	--	9.1	-64.1
	04/24/2018	**620**	**57,000**	**4,300**	200	19	2.8	2.3	7.19	0.578	5.29	0.75	10.8	-71.5
	11/14/2018	**520**	**52,000**	**4,000**	190	21	2.6	1.2	6.85	0.735	6.82	0.87	8.2	-81.0
	04/23/2019	**610**	**64,000**	**5,100**	180	21	2.6	0.81 J	6.70	0.600	37.0	0.69	9.2	-81.0
	11/05/2019	**720**	**66,000**	**3,500**	210	20	2.5	5.2	6.50	0.590	13.0	0.34	8.5	-70.0
	05/21/2020	**470**	**47,000**	**2,500**	150	12	2.6	1.6	5.99	0.352	3.62	0.33	10.3	61.9
	11/09/2020	**730**	**57,000**	**2,600**	160	25	2.7 U	9.6	5.92	0.118	67.9	1.50	7.9	0.2
	5/27/2021	**630**	**55,000**	**2,300**	130	28	1.9	4.0	6.96	0.056	6.53	1.19	17.3	-155.5
	11/10/2021	**550**	**58,000**	**3,000**	150	28	2.5	9.8	6.40	0.377	0.1 U	0.02	12.0	-65.9
	5/10/2022	**560**	**56,000**	**2,900**	130	19	2.2	5.0	6.39	0.398	1.07	0.85	11.9	-90.2
	5/25/2022	**530**	**49,000**	**2,700**	120	17	1.9	5.5	6.54	0.465	2.99	0.25	11.7	-83.1
	8/29/2022	**590**	**56,000**	**3,300**	150	27	2.2	11.0	6.62	0.400	2.81	0.55	13.1	-30.1
	10/21/2022	**710**	**58,000**	**3,500**	160	21	2.3	7.2	6.52	0.503	3.20	0.61	11.3	-97.9
	11/17/2022	**670**	**58,000**	**3,400**	91	23	2.1	7.1	6.60	0.452	2.81	1.67	9.3	-77.0
SHP-99-29X	10/29/2007	--	**41,000**	**10,000**	--	--	--	--	--	--	--	--	--	--
	10/12/2010	--	--	--	130	2.5	--	4.9	5.67	0.270	1.00	0.13	11.9	-8.8
	10/11/2012	--	--	--	110	4.1	--	3.0 J	5.54	0.287	6.00	0.27	12.1	-1.0
	10/17/2012	--	--	--	92	1.6	--	4.8	5.82	0.191	3.60	0.29	11.3	-75.7
	10/22/2013	**2,760**	**43,300**	**6,430**	101	2.3	--	5.6 J	6.02	0.230	4.29	0.90	13.1	-48.3
	10/7/2014	**3,000**	**49,100**	**8,510**	120	3.0	1.5	7.8 J	5.92	0.180	13.2	0.13	11.6	-17.8
	10/22/2015	**3,810**	**48,500**	**8,340**	108	2.8	1.5	6.2	5.73	0.243	3.35	0.35	12.3	27.3
	11/22/2016	**3,900**	**57,000**	**9,600**	140	2.3	1.5	6.1	5.97	0.229	7.89	1.03	11.4	-4.1
	11/9/2017	**2,100**	**47,000**	**2,500**	98	3.5	2.4	2.0	6.47	0.207	8.70	0.40	10.7	4.0
	11/8/2018	**1,200**	**50,000**	**2,700**	81	4.6	3.1	1.9	7.24	0.265	49.5	0.56	12.1	22.7
	11/06/2019	**1,600**	**42,000**	**3,900**	110	5.5	2.8	5.1	5.60	0.240	4.10	0.51	11.0	14.0
	11/2/2020	**2,300**	**44,000**	**5,500**	100	2.3	2.4	3.2	6.50	0.240	2.90	0.21	9.1	-86.0
	11/2/2021	**1,600**	**40,000**	**2,800**	92 J	2.7	2.2	2.2	5.92	0.176	6.60	0.76	11.1	-16.4
	10/19/2022	**2,300**	**30,000**	**4,200**	78	2.0	2.0	2.4	5.75	0.111	3.52	1.16	13.5	-0.8

Notes:
1. *Screening Limits: Shepley's Hill Landfill (SHL) Cleanup Goals
2. Screening Limits Source: USACE. 1995. Record of Decision, Shepley's Hill Landfill Operable Unit, Fort Devens, Massachusetts. September.
3. -- : no data available

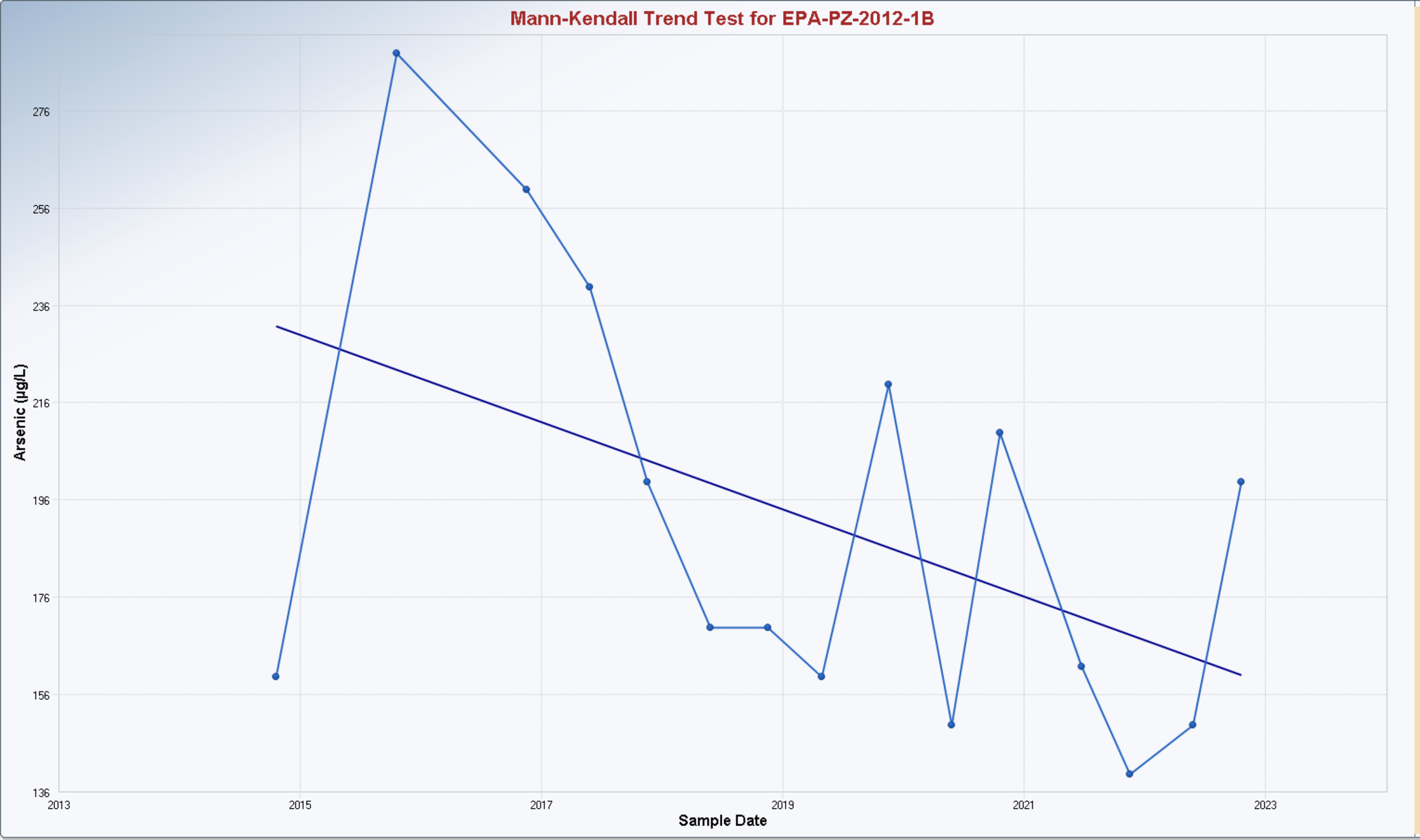
Analytical Parameters:
= Above Cleanup Goal
= Spring 2022 sampling result
= Fall 2022 sampling result

Acronyms and Abbreviations:
°C = degrees Celsius
µg/L = microgram per liter
µS/cm = microSiemen per centimeter
DO = dissolved oxygen
DOC = dissolved organic carbon
J = The analyte was positively identified, the quantitation is an estimation.
mg/L = milligram per liter
mV = millivolt
NTU = Nephelometric Turbidity Unit
ORP = oxidation-reduction potential
SPC = specific conductivity
SU = standard unit
Temp = temperature
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.

Appendix F

ProUCL Outputs

Mann-Kendall Trend Test for EPA-PZ-2012-1B



Mann-Kendall Trend Analysis

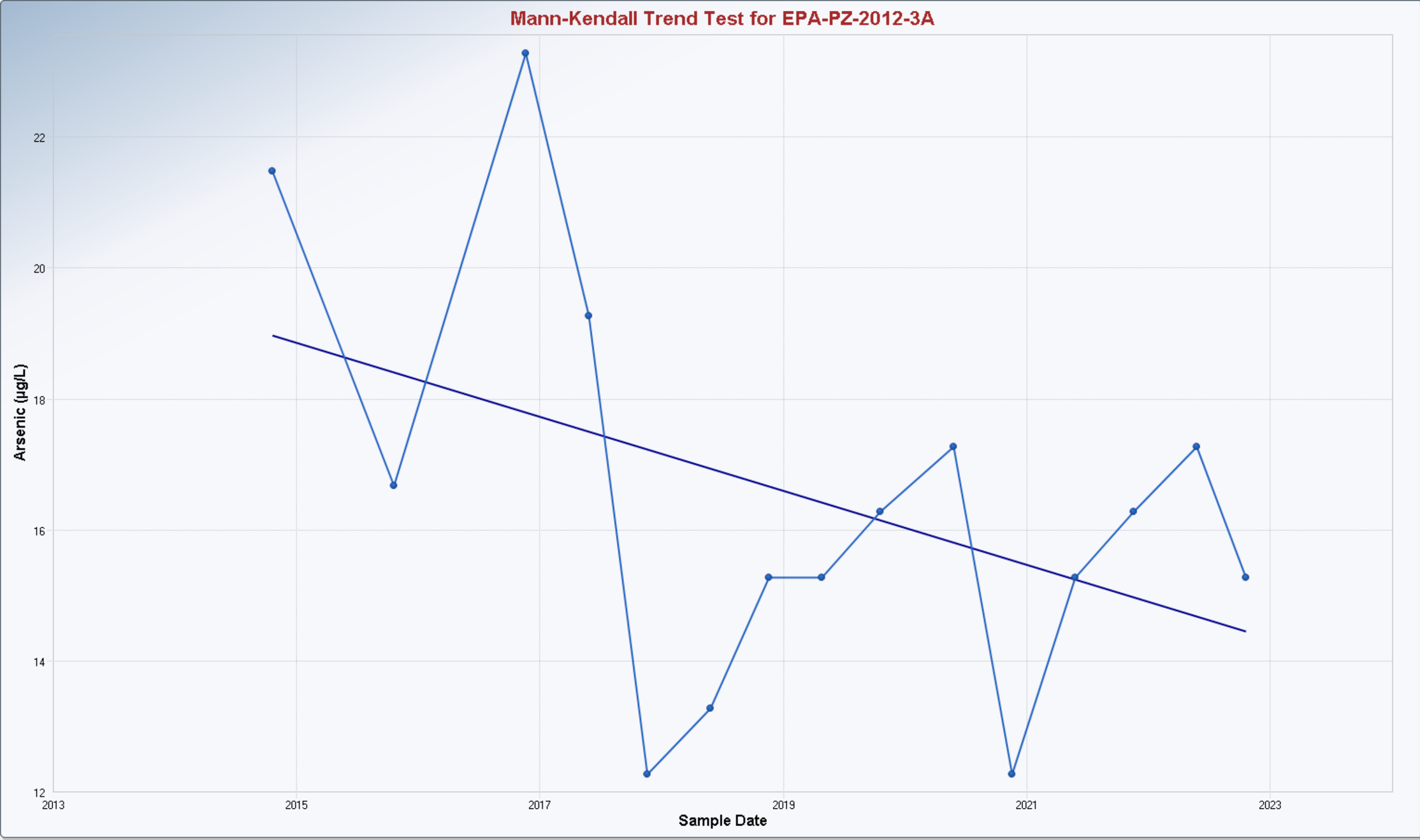
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1080
Standardized Value of S	-2.0887
M-K Test Value (S)	-43
Tabulated p-value	0.0180
Approximate p-value	0.0184

OLS Regression Line (Blue)

OLS Regression Slope	-8.9668
OLS Regression Intercept	18,298.3555

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for EPA-PZ-2012-3A



Mann-Kendall Trend Analysis

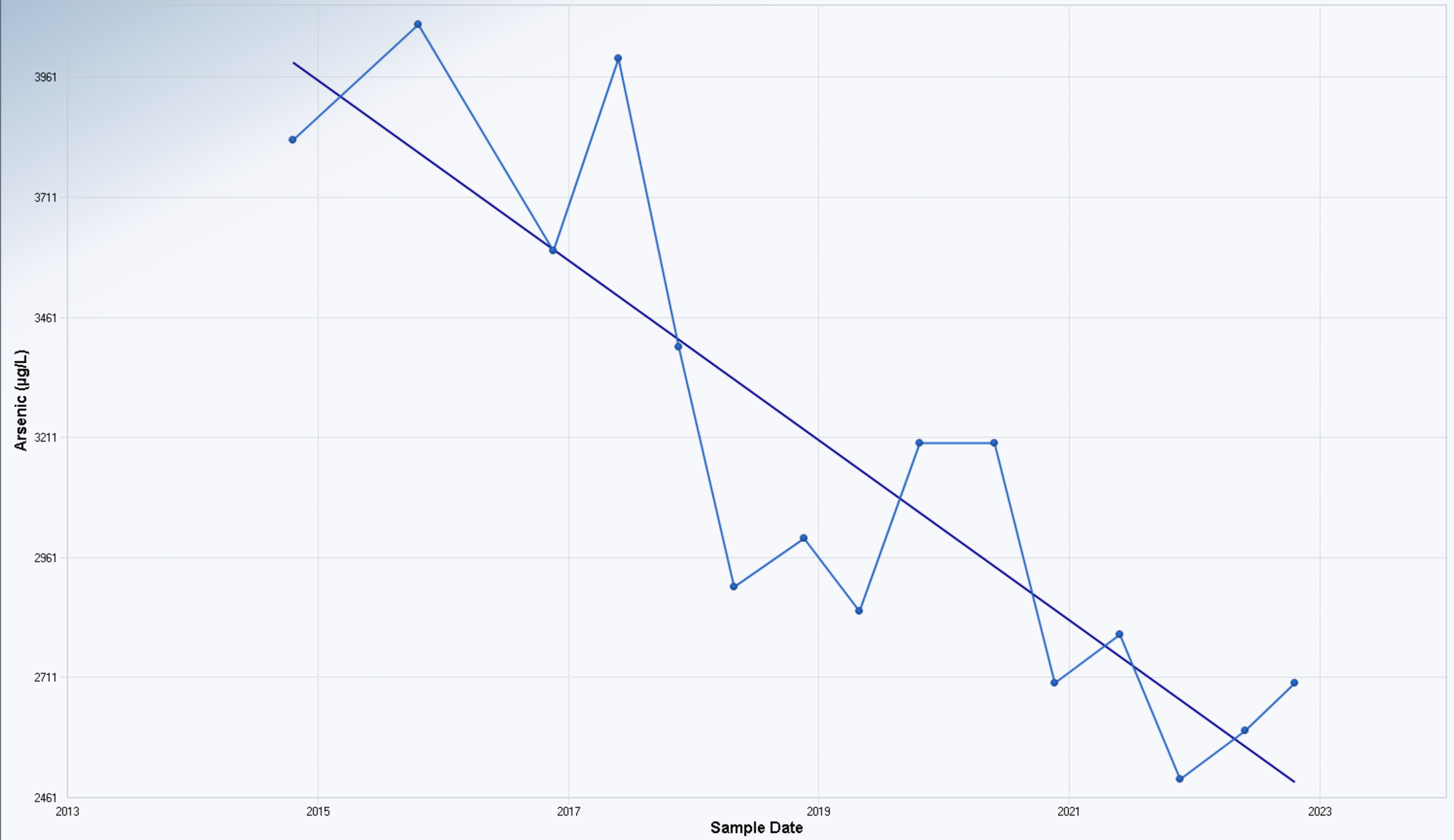
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.9165
Standardized Value of S	-0.8536
M-K Test Value (S)	-18
Tabulated p-value	0.1900
Approximate p-value	0.1967

OLS Regression Line (Blue)

OLS Regression Slope	-0.5656
OLS Regression Intercept	1,158.1795

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for EPA-PZ-2012-3B



Mann-Kendall Trend Analysis

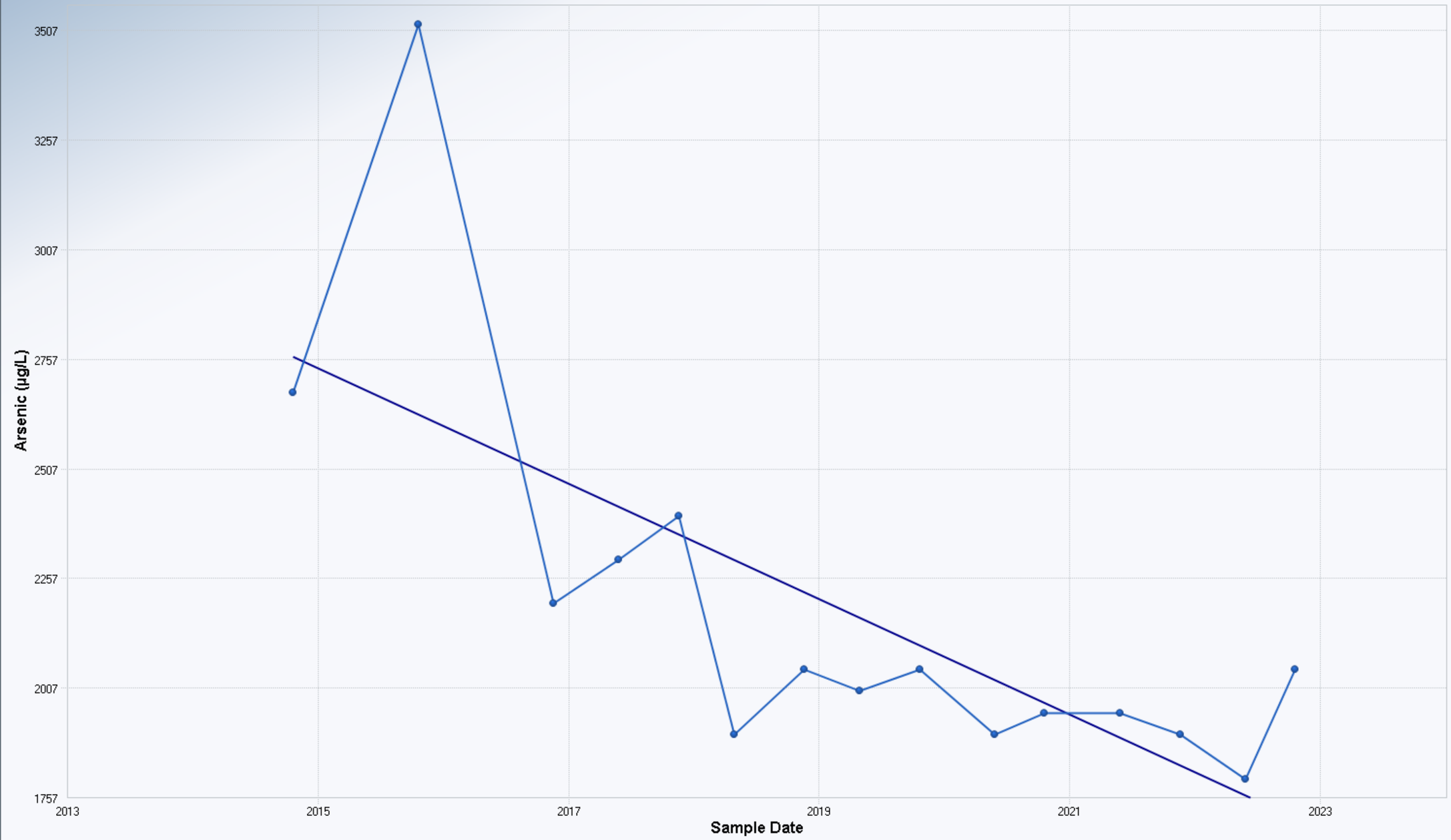
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1577
Standardized Value of S	-3.6711
M-K Test Value (S)	-75
Tabulated p-value	0.0000
Approximate p-value	0.0001

OLS Regression Line (Blue)

OLS Regression Slope	-187.3234
OLS Regression Intercept	381,410.4816

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for EPA-PZ-2012-4B



Mann-Kendall Trend Analysis

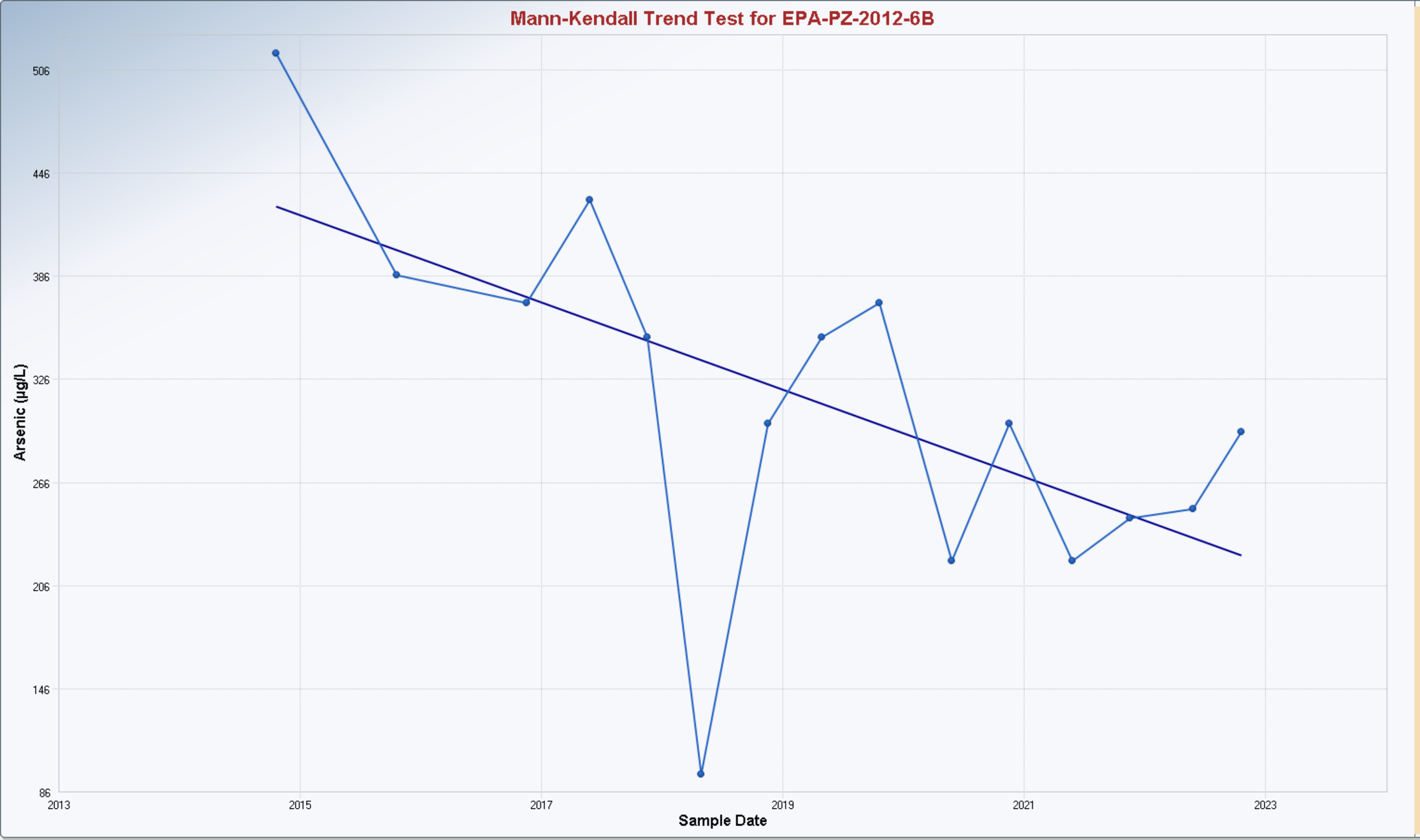
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.0000
Standardized Value of S	-2.9500
M-K Test Value (S)	-60
Tabulated p-value	0.0010
Approximate p-value	0.0016

OLS Regression Line (Blue)

OLS Regression Slope	-131.6970
OLS Regression Intercept	268,105.9681

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for EPA-PZ-2012-6B



Mann-Kendall Trend Analysis

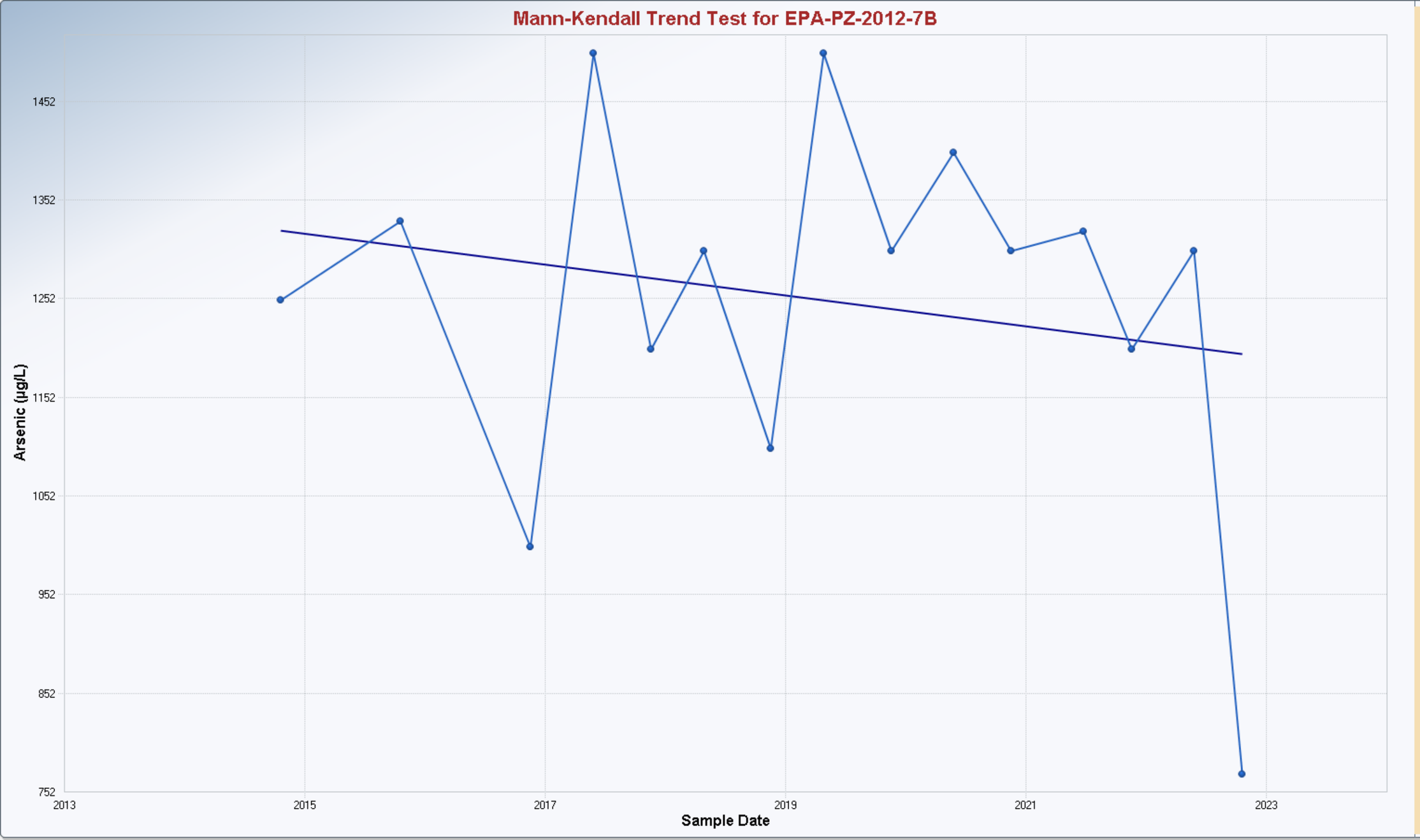
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1080
Standardized Value of S	-2.4866
M-K Test Value (S)	-51
Tabulated p-value	0.0060
Approximate p-value	0.0064

OLS Regression Line (Blue)

OLS Regression Slope	-25.3949
OLS Regression Intercept	51,591.8529

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for EPA-PZ-2012-7B



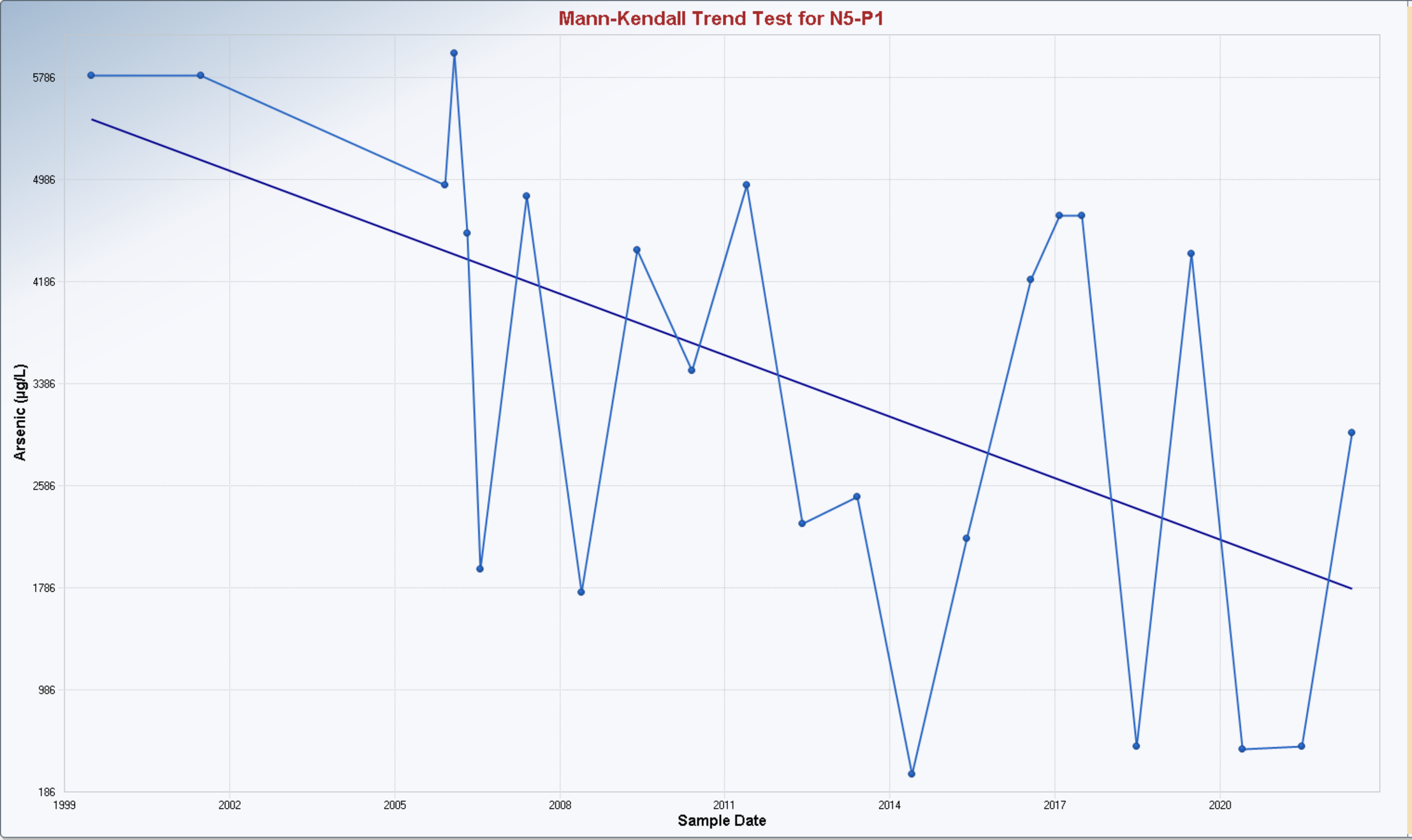
Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.9416
Standardized Value of S	-0.4012
M-K Test Value (S)	-9
Tabulated p-value	0.3490
Approximate p-value	0.3441

OLS Regression Line (Blue)

OLS Regression Slope	-15.6250
OLS Regression Intercept	32,802.3750

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8242
Standardized Value of S	-2.7231
M-K Test Value (S)	-104
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0032

OLS Regression Line (Blue)

OLS Regression Slope	-160.4436
OLS Regression Intercept	326,323.5965

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

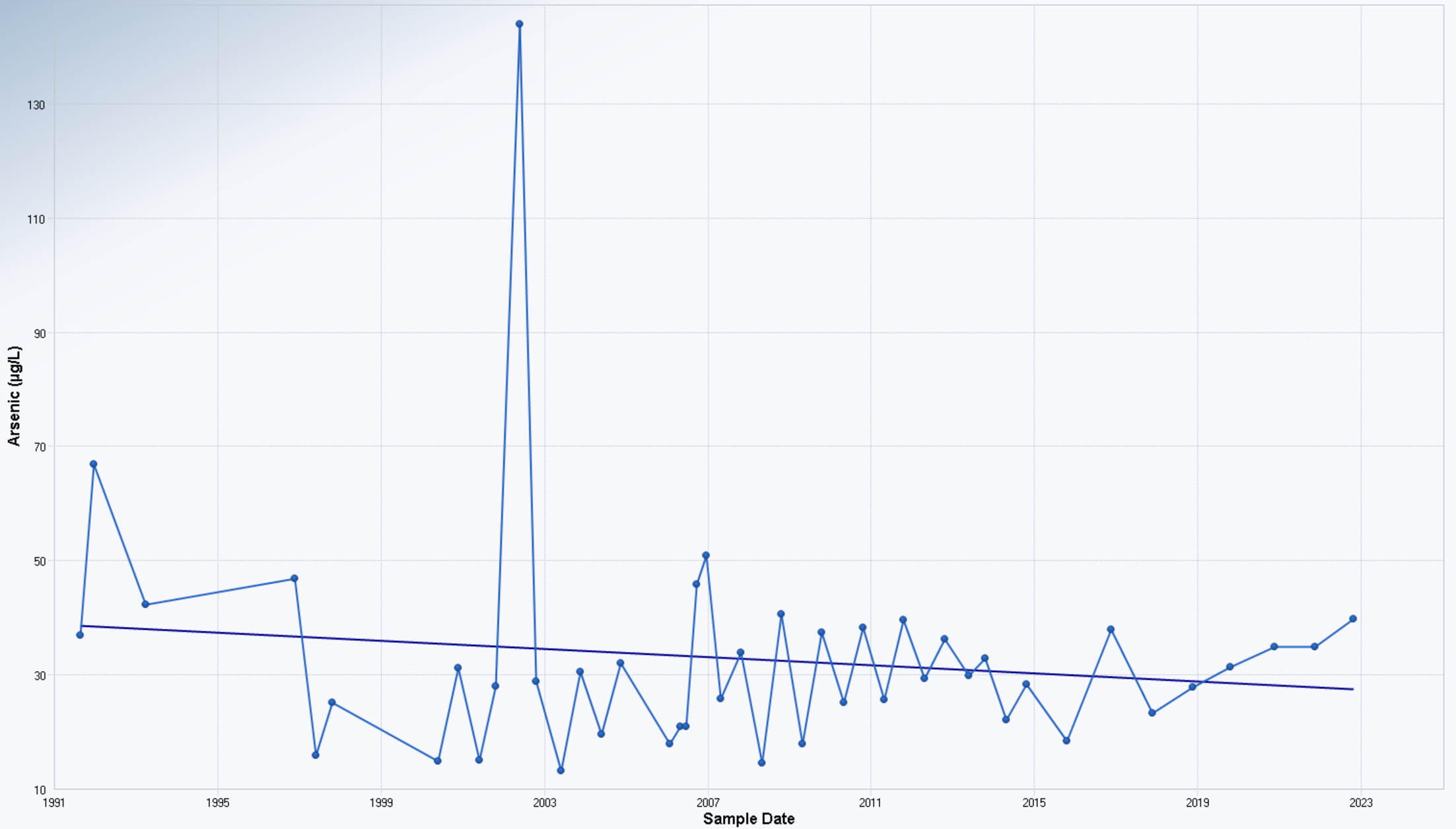
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.5488
Standardized Value of S	0.5499
M-K Test Value (S)	9
Tabulated p-value	0.3190
Approximate p-value	0.2912

OLS Regression Line (Blue)

OLS Regression Slope	0.0100
OLS Regression Intercept	-13.0819

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHL-9



Mann-Kendall Trend Analysis

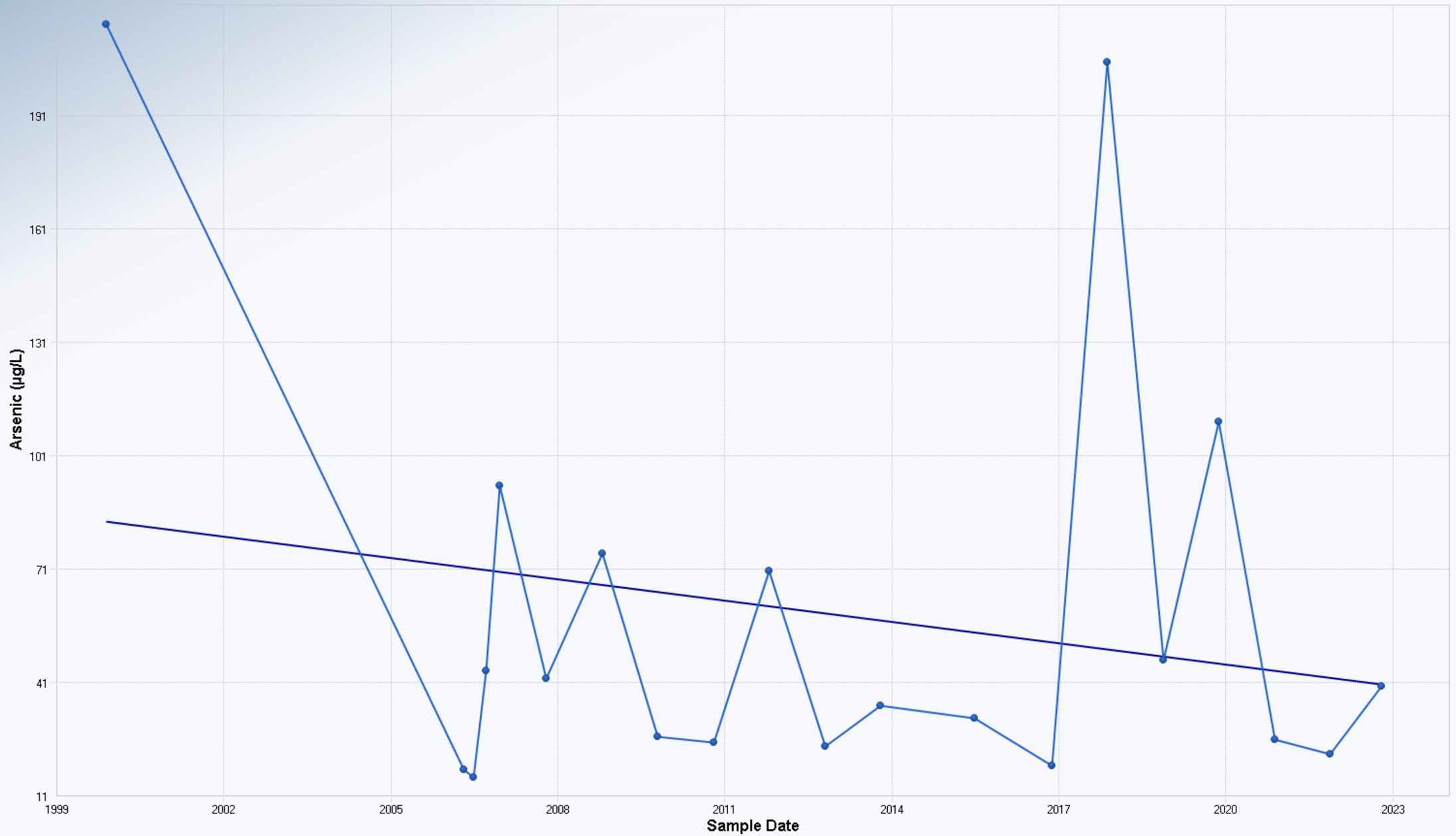
n	45
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	102.2106
Standardized Value of S	0.4892
M-K Test Value (S)	51
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.3124

OLS Regression Line (Blue)

OLS Regression Slope	-0.3563
OLS Regression Intercept	748.3762

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHL-15



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8221
Standardized Value of S	-0.2920
M-K Test Value (S)	-10
Tabulated p-value	0.3870
Approximate p-value	0.3851

OLS Regression Line (Blue)

OLS Regression Slope	-1.8867
OLS Regression Intercept	3,856.8143

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-05-40X



Mann-Kendall Trend Analysis

n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	45.2953
Standardized Value of S	-4.5479
M-K Test Value (S)	-207
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-134.5464
OLS Regression Intercept	274,015.0584

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-05-41A



Mann-Kendall Trend Analysis

n	28
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	50.5964
Standardized Value of S	-2.5496
M-K Test Value (S)	-130
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0054

OLS Regression Line (Blue)

OLS Regression Slope	-0.8981
OLS Regression Intercept	1,833.2537

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-05-41B



Mann-Kendall Trend Analysis

n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	73.4098
Standardized Value of S	-6.8928
M-K Test Value (S)	-507
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-128.1876
OLS Regression Intercept	259,296.6366

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-05-41C



Mann-Kendall Trend Analysis

n	35
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	70.4083
Standardized Value of S	-0.9800
M-K Test Value (S)	-70
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.1635

OLS Regression Line (Blue)

OLS Regression Slope	-21.7967
OLS Regression Intercept	44,585.5682

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-05-42B



Mann-Kendall Trend Analysis

n	28
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	50.5701
Standardized Value of S	-4.8052
M-K Test Value (S)	-244
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-7.1781
OLS Regression Intercept	14,663.7980

Statistically significant evidence of a decreasing trend at the specified level of significance.



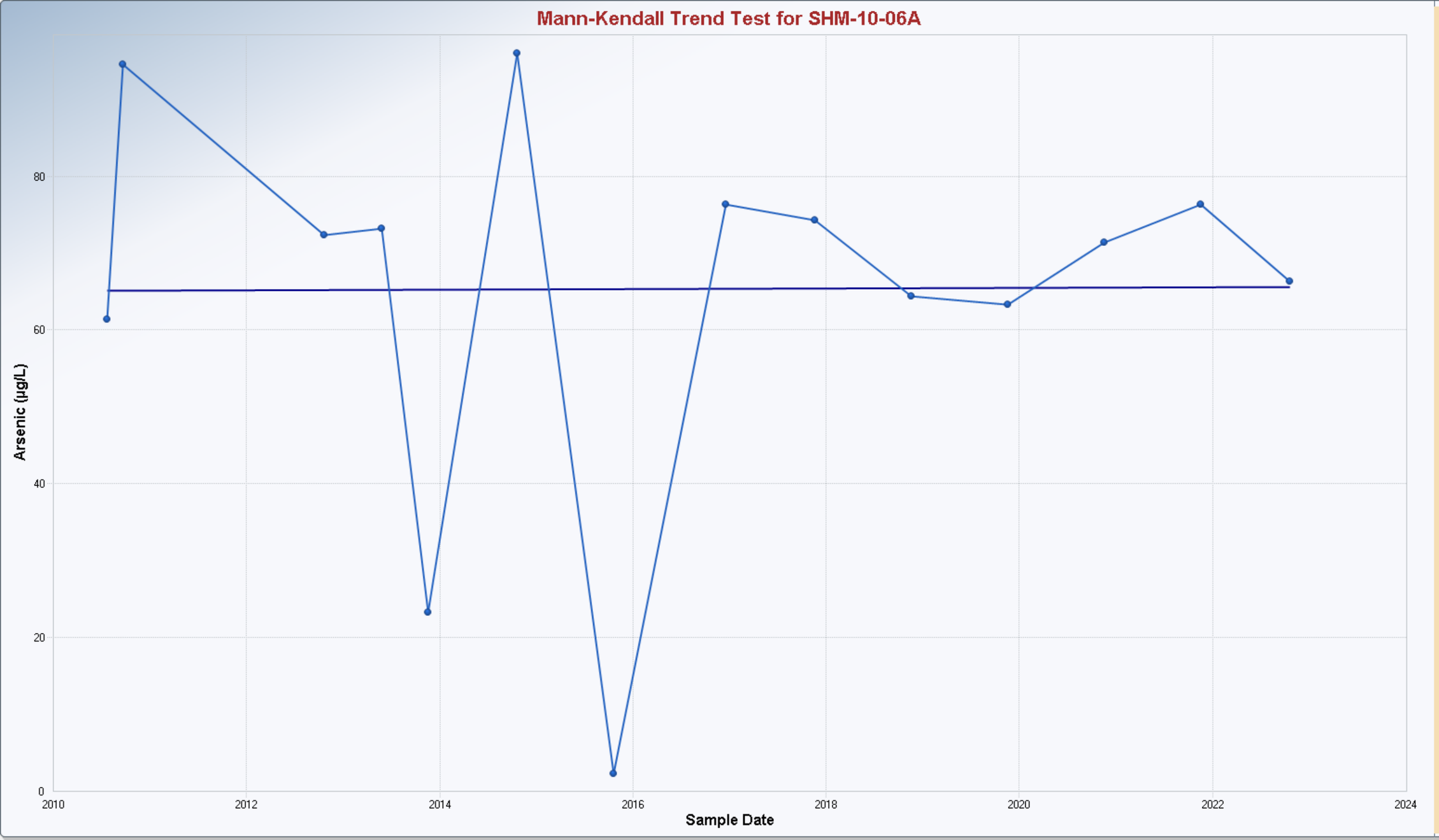
Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3911
Standardized Value of S	-3.5995
M-K Test Value (S)	-60
Tabulated p-value	0.0000
Approximate p-value	0.0002

OLS Regression Line (Blue)

OLS Regression Slope	-117.7982
OLS Regression Intercept	239,212.7740

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2392
Standardized Value of S	-0.0548
M-K Test Value (S)	-2
Tabulated p-value	0.4570
Approximate p-value	0.4781

OLS Regression Line (Blue)

OLS Regression Slope	0.0353
OLS Regression Intercept	-6.0976

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-07



Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	1.2860
M-K Test Value (S)	22
Tabulated p-value	0.1020
Approximate p-value	0.0992

OLS Regression Line (Blue)

OLS Regression Slope	5.2595
OLS Regression Intercept	-9,642.7784

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-11



Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3911
Standardized Value of S	2.3793
M-K Test Value (S)	40
Tabulated p-value	0.0070
Approximate p-value	0.0087

OLS Regression Line (Blue)

OLS Regression Slope	14.9819
OLS Regression Intercept	-29,711.7399

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-12



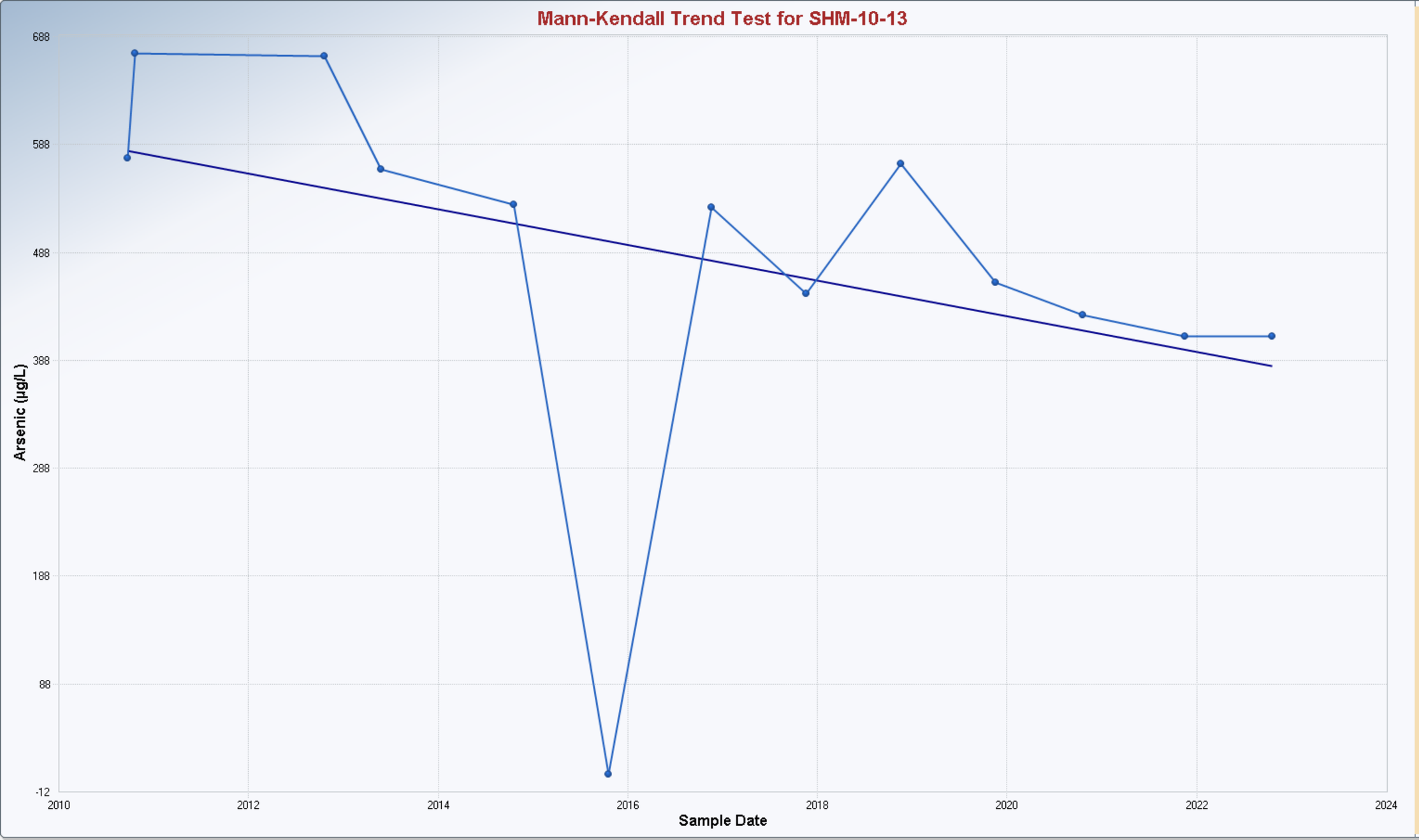
Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2392
Standardized Value of S	-1.9189
M-K Test Value (S)	-36
Tabulated p-value	0.0240
Approximate p-value	0.0275

OLS Regression Line (Blue)

OLS Regression Slope	-40.4104
OLS Regression Intercept	84,887.7270

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3605
Standardized Value of S	-2.9339
M-K Test Value (S)	-49
Tabulated p-value	0.0010
Approximate p-value	0.0017

OLS Regression Line (Blue)

OLS Regression Slope	-16.5582
OLS Regression Intercept	33,876.0768

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-14



Mann-Kendall Trend Analysis

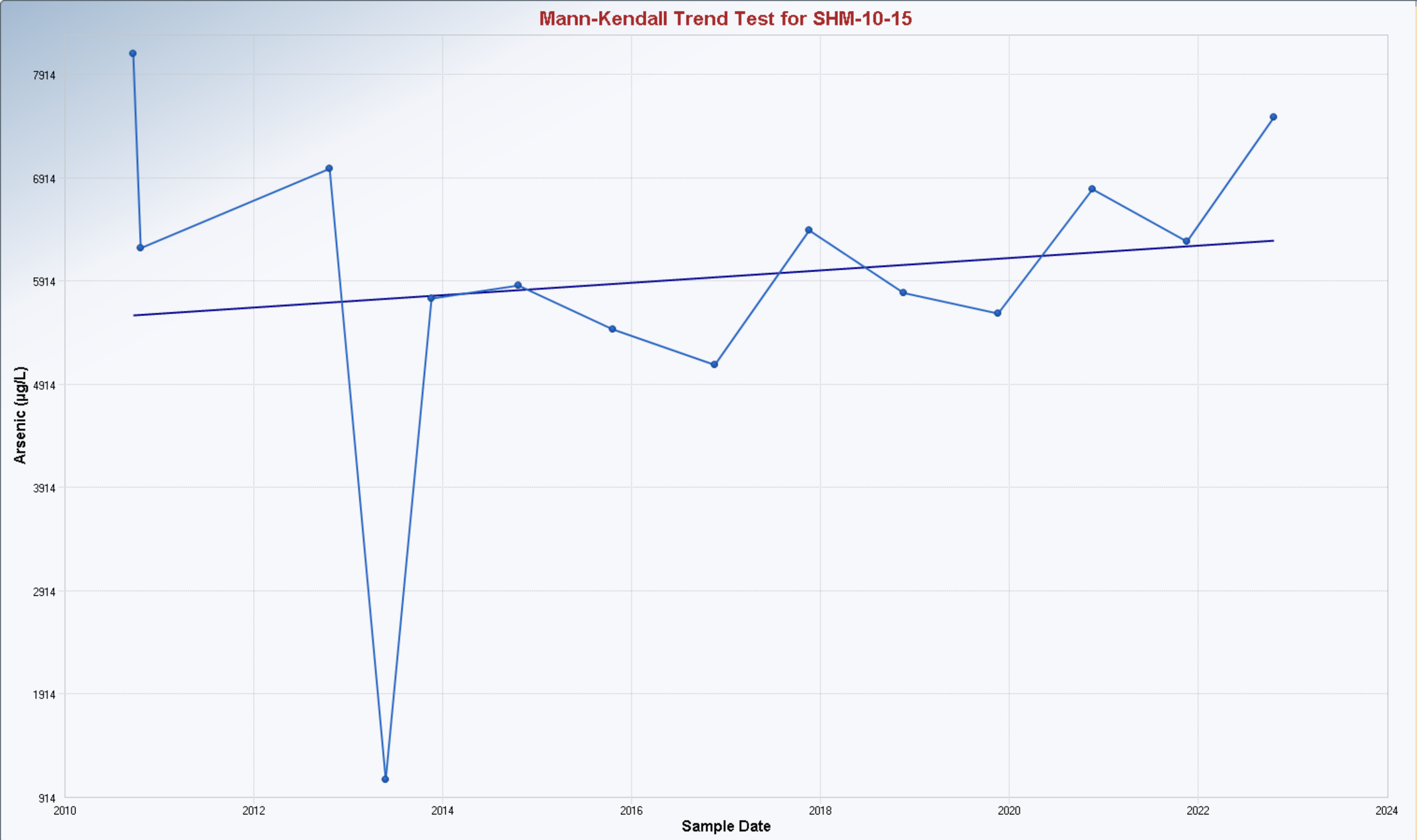
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	-1.2860
M-K Test Value (S)	-22
Tabulated p-value	0.1020
Approximate p-value	0.0992

OLS Regression Line (Blue)

OLS Regression Slope	-66.3845
OLS Regression Intercept	138,656.1234

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-15



Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2665
Standardized Value of S	0.2190
M-K Test Value (S)	5
Tabulated p-value	0.4150
Approximate p-value	0.4133

OLS Regression Line (Blue)

OLS Regression Slope	59.4573
OLS Regression Intercept	-113,968.9169

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-10-16



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.0915
Standardized Value of S	-0.7964
M-K Test Value (S)	-17
Tabulated p-value	0.2180
Approximate p-value	0.2129

OLS Regression Line (Blue)

OLS Regression Slope	-3.7500
OLS Regression Intercept	8,880.9275

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-13-03



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	-1.7863
M-K Test Value (S)	-56
Tabulated p-value	0.0370
Approximate p-value	0.0370

OLS Regression Line (Blue)

OLS Regression Slope	-9.2398
OLS Regression Intercept	18,735.2644

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-13-04



Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5832
Standardized Value of S	-1.7493
M-K Test Value (S)	-51
Tabulated p-value	0.0400
Approximate p-value	0.0401

OLS Regression Line (Blue)

OLS Regression Slope	-84.5628
OLS Regression Intercept	171,023.7712

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-13-05



Mann-Kendall Trend Analysis

n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.8062
Standardized Value of S	1.6398
M-K Test Value (S)	22
Tabulated p-value	0.0430
Approximate p-value	0.0505

OLS Regression Line (Blue)

OLS Regression Slope	0.7424
OLS Regression Intercept	-1,486.3715

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-13-06



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7463
Standardized Value of S	-1.6587
M-K Test Value (S)	-52
Tabulated p-value	0.0490
Approximate p-value	0.0486

OLS Regression Line (Blue)

OLS Regression Slope	-55.6949
OLS Regression Intercept	114,903.9239

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-13-07



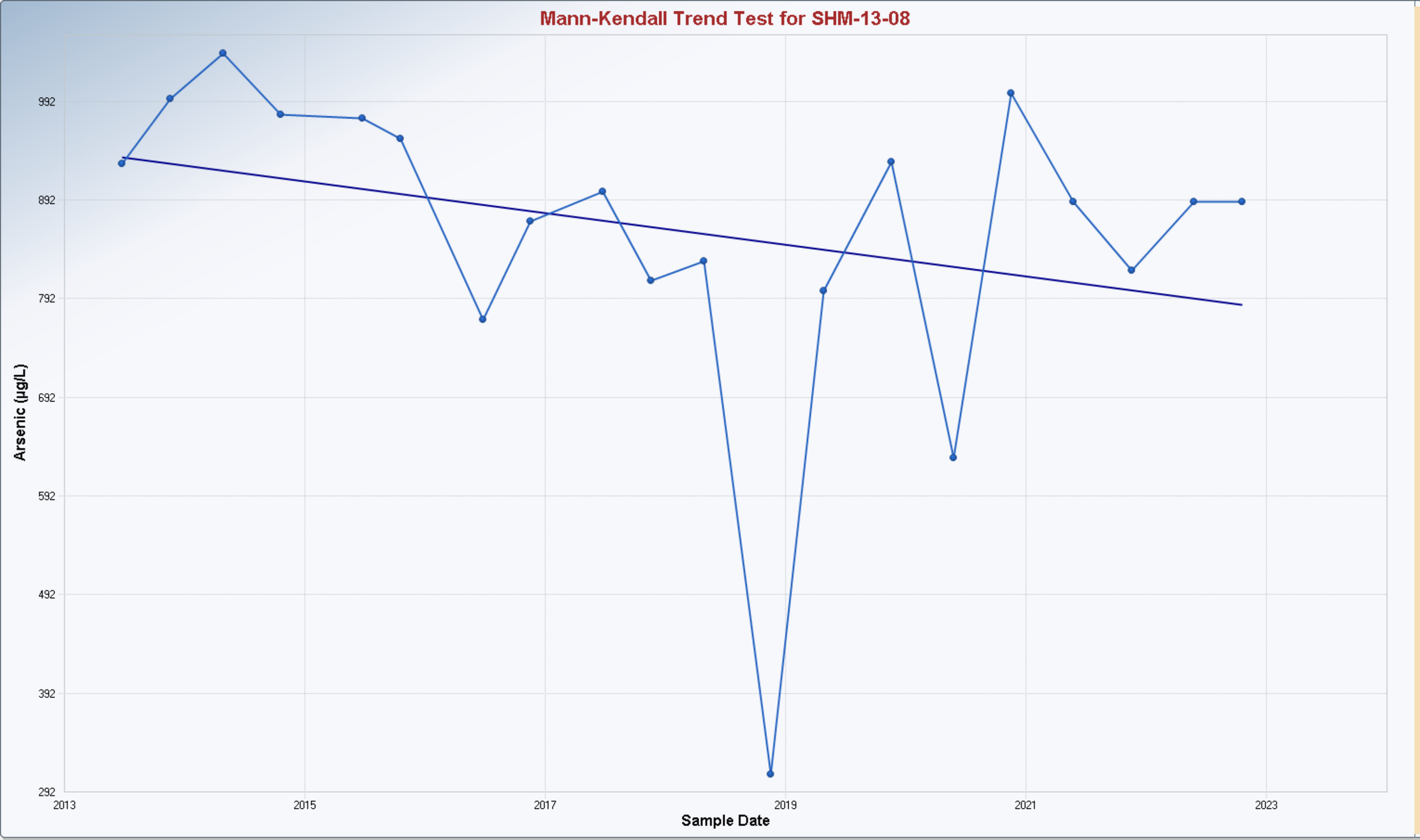
Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5657
Standardized Value of S	-3.0456
M-K Test Value (S)	-88
Tabulated p-value	0.0010
Approximate p-value	0.0012

OLS Regression Line (Blue)

OLS Regression Slope	-85.2681
OLS Regression Intercept	172,656.7341

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

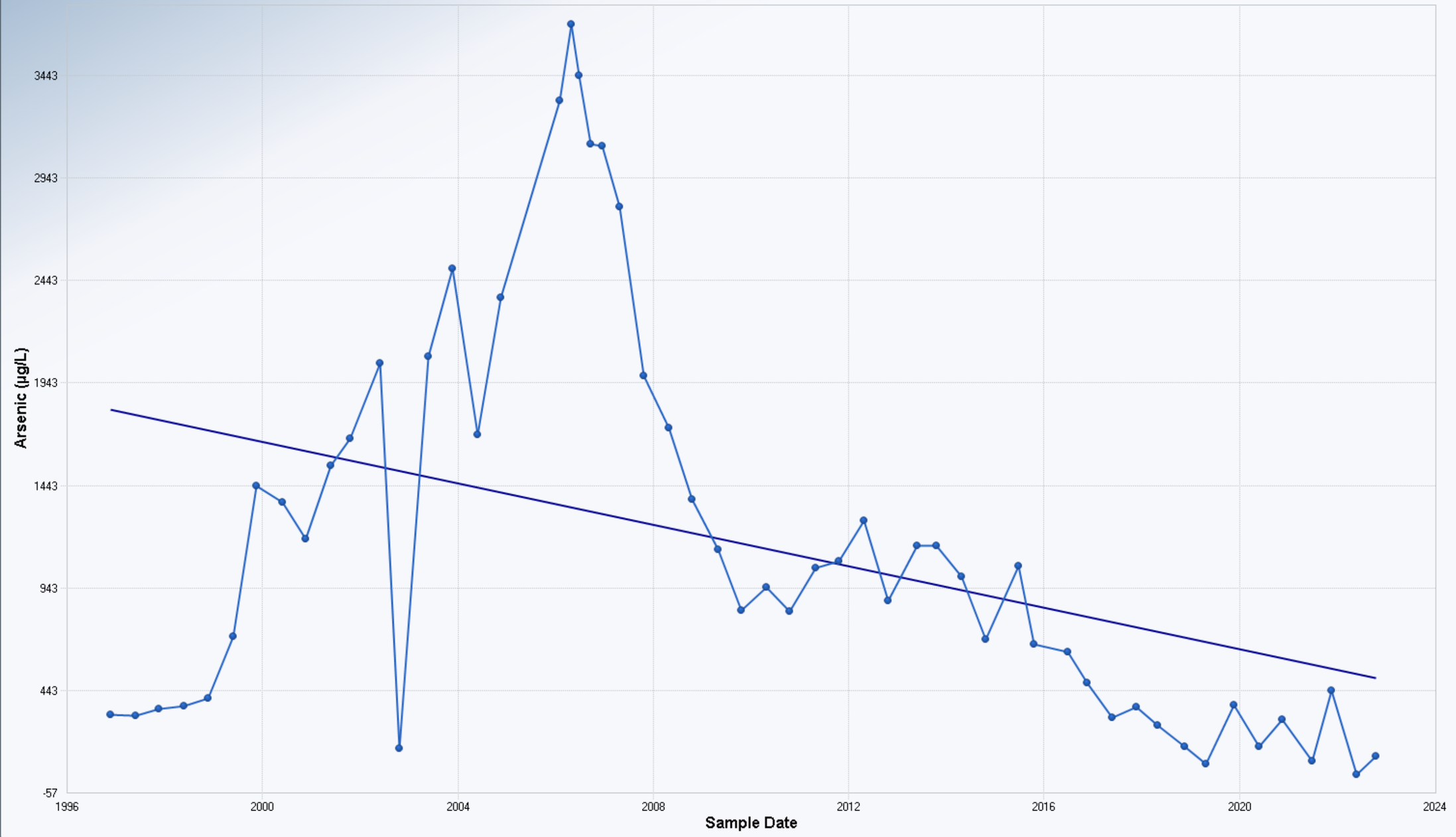
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7625
Standardized Value of S	-1.8204
M-K Test Value (S)	-57
Tabulated p-value	0.0370
Approximate p-value	0.0343

OLS Regression Line (Blue)

OLS Regression Slope	-16.0727
OLS Regression Intercept	33,297.3686

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-93-22B



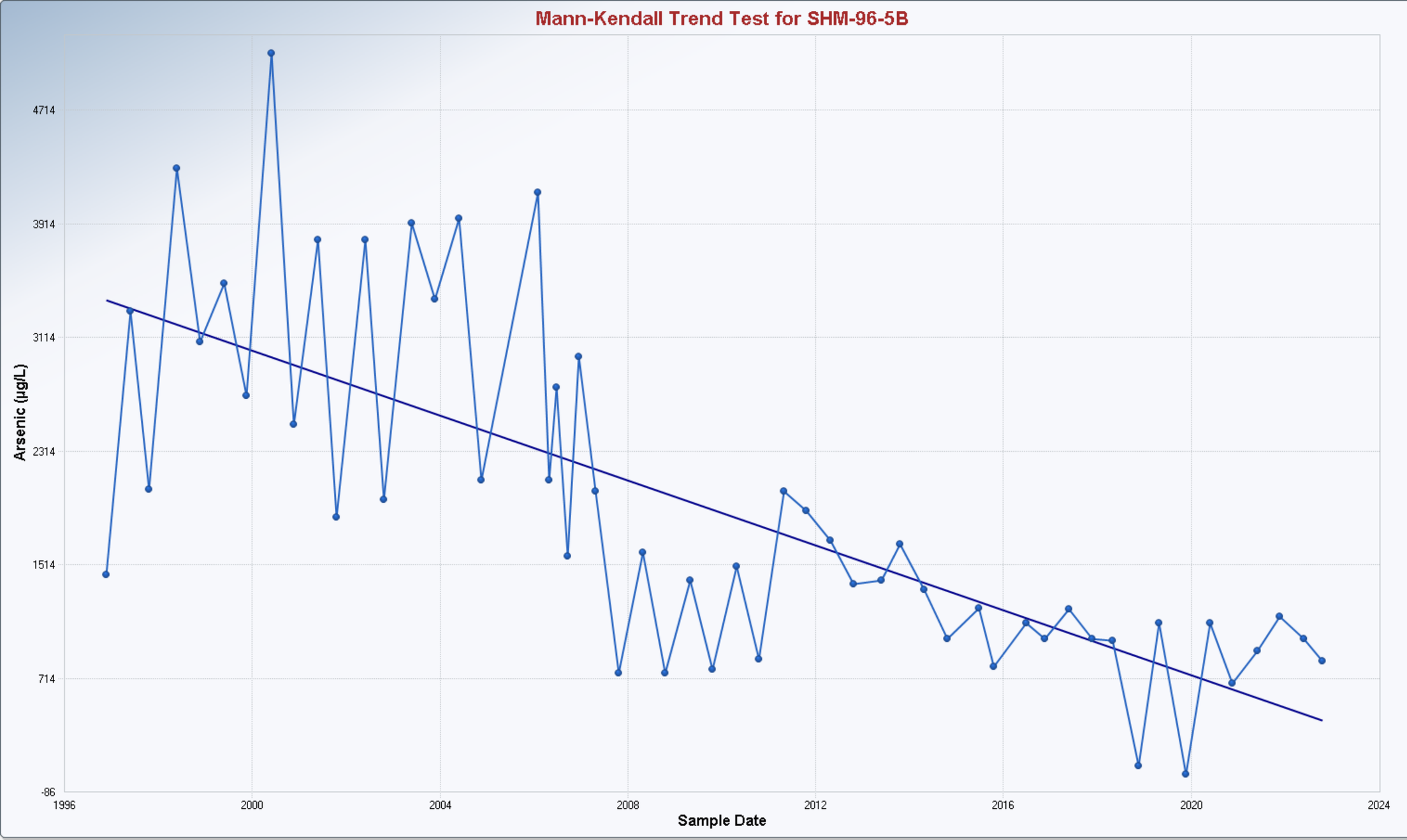
Mann-Kendall Trend Analysis

n	54
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	134.0336
Standardized Value of S	-3.9542
M-K Test Value (S)	-531
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-50.6505
OLS Regression Intercept	102,957.1874

Statistically significant evidence of a decreasing trend at the specified level of significance.



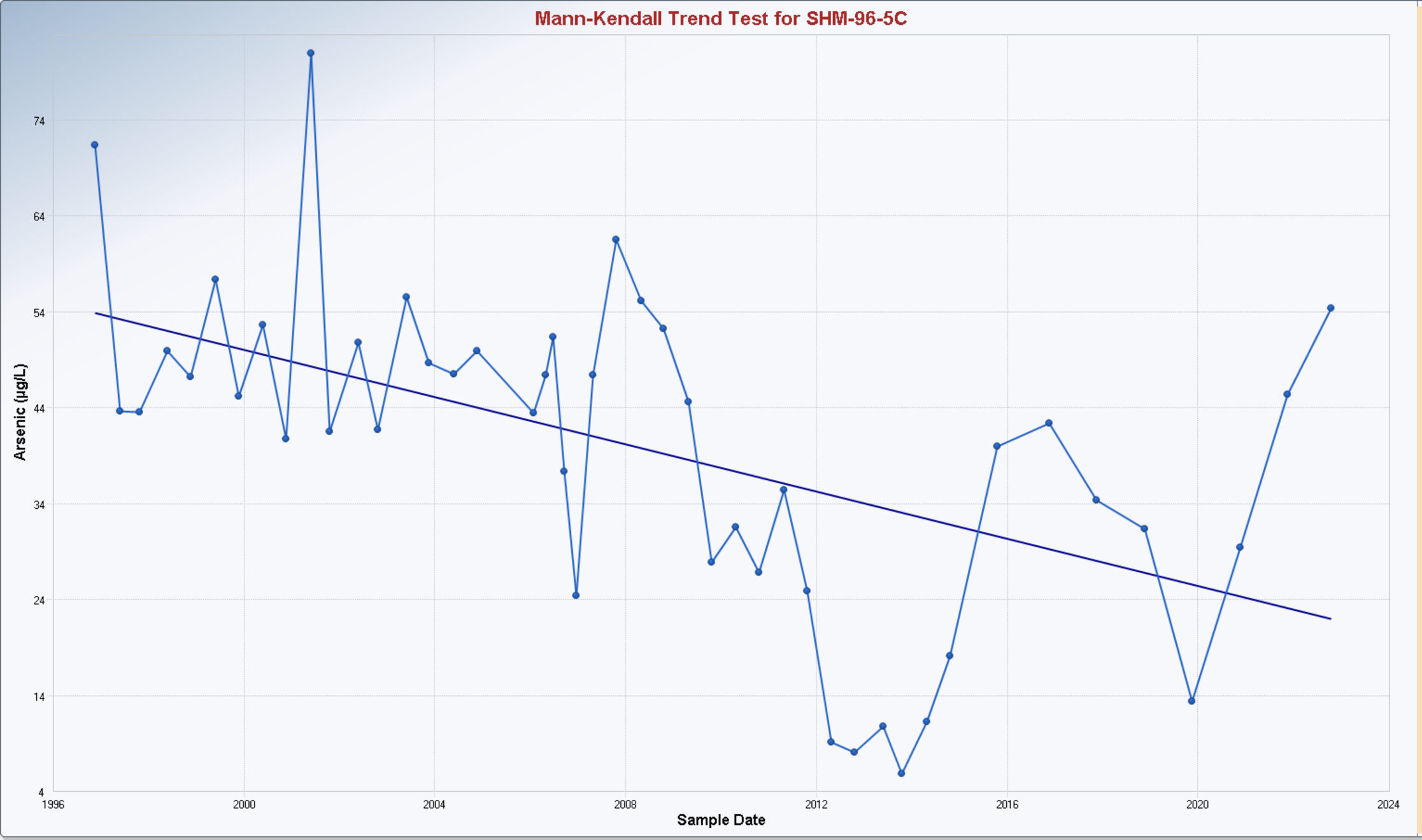
Mann-Kendall Trend Analysis

n	54
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	134.0025
Standardized Value of S	-6.2462
M-K Test Value (S)	-838
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-114.2030
OLS Regression Intercept	231,425.9617

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	46
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	105.6078
Standardized Value of S	-3.6929
M-K Test Value (S)	-391
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0001

OLS Regression Line (Blue)

OLS Regression Slope	-1.2300
OLS Regression Intercept	2,509.6690

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-99-31C



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	-4.9692
M-K Test Value (S)	-154
Tabulated p-value	0.0000
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-10.7924
OLS Regression Intercept	21,943.3078

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHM-99-32X



Mann-Kendall Trend Analysis

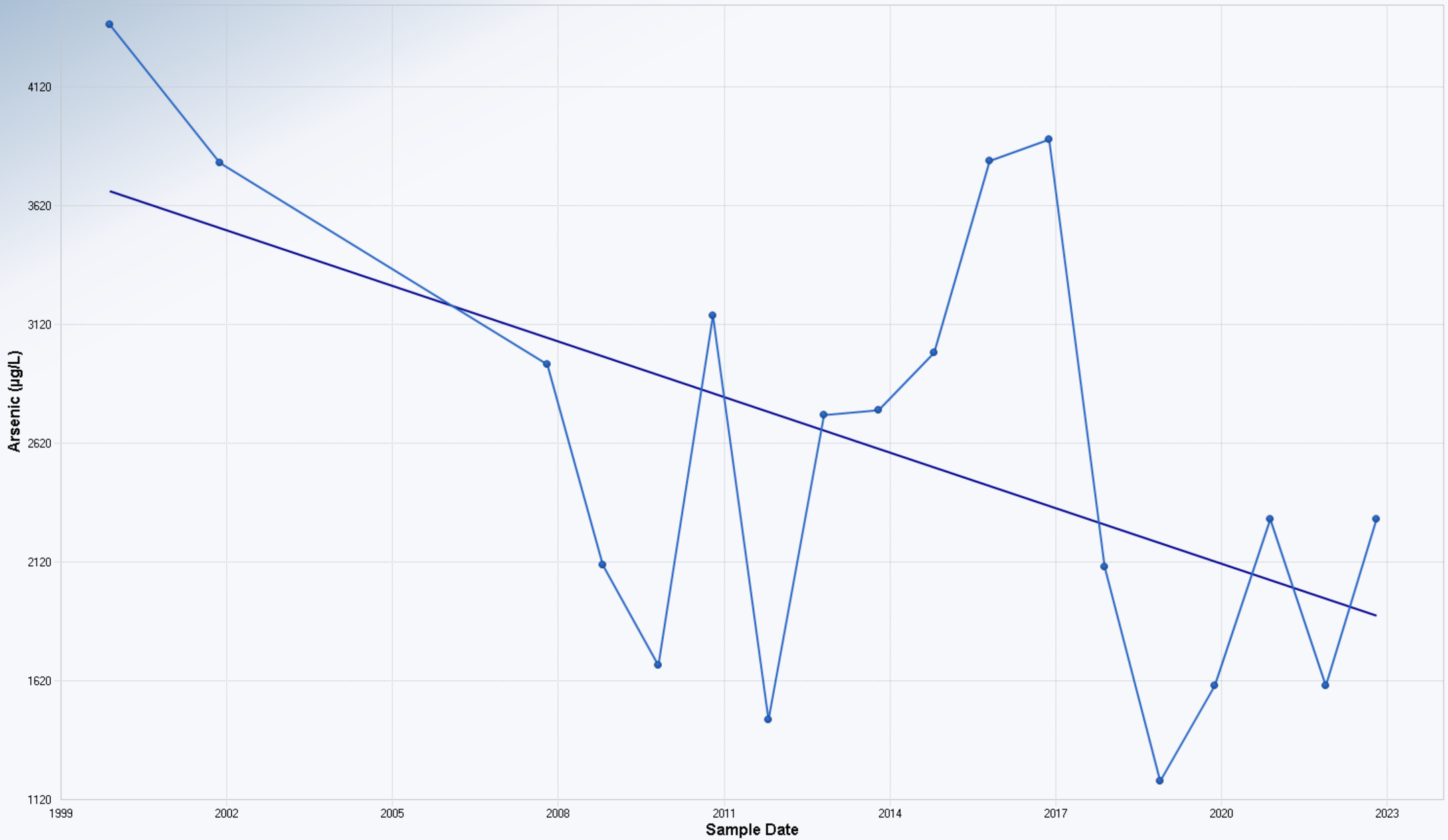
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5832
Standardized Value of S	-4.3382
M-K Test Value (S)	-125
Tabulated p-value	0.0000
Approximate p-value	0.0000

OLS Regression Line (Blue)

OLS Regression Slope	-12.2197
OLS Regression Intercept	24,723.0686

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test for SHP-99-29X



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3629
Standardized Value of S	-1.5932
M-K Test Value (S)	-43
Tabulated p-value	0.0560
Approximate p-value	0.0556

OLS Regression Line (Blue)

OLS Regression Slope	-77.9605
OLS Regression Intercept	159,593.6723

Insufficient statistical evidence of a significant trend at the specified level of significance.

Appendix G

Summary of Landfill and ATP Operations, Maintenance, and Monitoring

Sovereign Consulting Inc.
9 Payson Road, Suite 150
Foxborough, MA 02035

ANNUAL LANDFILL INSPECTION
Shepley's Hill Landfill
Devens, Massachusetts

Date of Inspection: 25 October 2022
Inspector/Company: Steven Passafaro, PE of Sovereign Consulting Inc.
Site Location: Shepley's Hill Landfill, Devens, Massachusetts

Weather Conditions:
Temperature: 60° F
Weather: Cloudy with Fog

Type of Inspection:
☒ Annual
☐ Post-Major Weather Event
☐ Re-Inspection of Deficiencies
☐ Other

Landfill Attribute & Observations	Comments and Recommendations	SAT	UNSAT
Cover Surface			
1. There are no new depressions on the cover surface	Continue monitoring for settlement that creates depressions.	☒	☐
2. No tree or shrub growth was observed on the landfill surface during the inspection. Small tree and shrub growth on the margins of the landfill were removed during annual mowing event.	Continue monitoring for tree and shrub growth on cover surface. Remove tree/shrub growth as necessary.	☒	☐

Landfill Attribute & Observations	Comments and Recommendations	SAT	UNSAT
3. The utility berm that was constructed through the middle of the landfill in 2004 provides utility service to the pumping station at the northeastern corner of the landfill. The vegetation atop the utility berm was mowed during the annual mowing event. The berm is intact and no adverse effects to the berm were observed.	Continue monitoring the utility berm for negative impacts on the drainage patterns.	☒	☐
Vegetative Growth			
1. The vegetation growth was normal and appeared to have no major stressed areas. The annual landfill mowing event was conducted from 27 September to 28 September 2022.	Continue mowing on an annual basis.	☒	☐
Landfill Gas Vents & Monitoring Wells			
1. Gas vent GV-3 appears to be leaning about 15 to 20 degrees off center. This includes the concrete pad the vent is set in. The vent is still firmly in the ground, is stable, and does not rock or move in anyway. There is no evidence that the vent was struck by a vehicle, and the vent still appears to be functional. The remaining landfill gas vents are in good condition. All pipes are in functional condition with screens installed on all vents.	Continue to monitor GV-3 to ensure the angle of the vent does not worsen. Continue to monitor the condition of the remaining landfill gas vents to ensure they remain in good condition.	☐	☒
2. The perimeter landfill gas points are in good condition.	Continue to monitor the condition of the perimeter landfill gas points.	☒	☐

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Foxborough, MA 02035

ANNUAL LANDFILL INSPECTION
Shepley's Hill Landfill
Devens, Massachusetts

Landfill Attribute & Observations	Comments and Recommendations	SAT	UNSAT
3. All groundwater monitoring wells located on the landfill appeared to be in good condition.	Continue to monitor the condition of the landfill groundwater monitoring wells.	☒	☐
Drainage Swales			
1. Most of the southern drainage swale exhibited vegetative growth. Large growth was removed during annual mowing activities. Small growth and wetland plant life were not disturbed, as they have become a natural retardant to erosive forces.	Continue to monitor and clear drainage swales of invasive vegetative growth.	☒	☐
2. Vegetative growth was removed from all northern drainage swales during annual mowing activities.	Continue to monitor and clear drainage swales of invasive vegetative growth.	☒	☐
3. Mowing is conducted to the edge of the swales.	Continue mowing annually.	☒	☐
Settlement			
1. No new depressions were observed within the landfill.	Continue to monitor for new depressions or settlement and repair as necessary.	☒	☐
Erosion			
1. There was no erosion observed.	Continue to monitor for erosion annually.	☒	☐

Sovereign Consulting Inc.
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Foxborough, MA 02035

ANNUAL LANDFILL INSPECTION
Shepley's Hill Landfill
Devens, Massachusetts

Landfill Attribute & Observations	Comments and Recommendations	SAT	UNSAT
Access Roads			
1. Overall, the landfill access road is in good condition. Rutting with ponded water from a recent rain event was observed along the northern portion of the access road. The rutting in this area appears to have worsened since the 2021 annual inspection.	The rutting observed along the northern portion of the landfill access road will be repaired, and the road regraded in the Winter 2022. Continue to monitor condition of road. If additional rutting is observed, then repair and regrade portions of the access road as necessary.	☐	☒
Culverts and Catch Basins			
1. The culverts along the northern portion of the landfill were observed to be in good condition; some growth was removed from the culverts along the entrance road to the ATP during the annual mowing event to ensure proper use.	Continue to monitor and remove growth as necessary.	☒	☐
Security/Fencing			
1. Perimeter fencing is non-existent along much of the western boundary of the landfill (wooded area along Shepley's Hill), and along the southeastern boundary near the railroad tracks. However, no roads have open access to the landfill, and existing fence gates across roads that access the landfill are secured with chains and padlocks.	Continue to maintain proper security measures including ensure lockage of all landfill fence gates.	☒	☐

Sovereign Consulting Inc.
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Foxborough, MA 02035

ANNUAL LANDFILL INSPECTION
Shepley's Hill Landfill
Devens, Massachusetts

Landfill Attribute & Observations	Comments and Recommendations	SAT	UNSAT
Wetland Encroachment			
1. Wetland encroachment was observed in the swales located in the southern portion of the landfill. Overall, the areas of encroachment are small and confined to the swales.	Continue to monitor wetland encroachment and continued mowing of the areas close to the existing growth will prevent the development of wide-spread wetland encroachment issues.	☒	☐
Other Observations			
1. The recreation field located south of the landfill access road in the middle of the southern area of the landfill appears to be in good condition, and tire rutting was not observed between the field and the landfill access road. 2. No other outstanding issues were observed.	1. Continue to monitor the recreation field and the associated access road to ensure that tire rutting does not develop and that there is minimal impact to the landfill cover as part of recreational usage. 2. Ensure all post closure uses of the landfill do not compromise the integrity of the landfill cover or the network of landfill gas vents and groundwater monitoring wells.	☒	☐

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Conditions of Northern Portion of Landfill



Description - Current Conditions of Western Portion of Landfill and Western Drainage Swale

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Conditions of Southern Portion of Landfill



Description - Current Conditions of Eastern Portion of Landfill

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Condition of the Northern Barrier Wall Area



Description - Current Condition of the Southern Barrier Wall Area

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Conditions of Red Cove Area



Description - Current Condtion of Southern Drainage Swale

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Condition of Eastern Drainage Swale



Description - Current Condition of the Northern Landfill Access Road

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Condition of the Southern Landfill Access Road



Description - Current condition of Recreation Field Access Point

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Condtions of Southern Portion of Recreation Field



Description - Current Condtions of Northern Portion of Recreation Field

Shepley's Hill Landfill
Annual Inspection - October 2022



Description - Current Condtions of GV-3.



Description - Current Condtions of GV-3.

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Order No.: r89715
Date: 10/25/2022
Technician: RR

Company: 0
Contact: 0
Phone #: 0

Packing List

Item	Serial Number	Included	QC
MultiRAE Lite	1090-1025	✓	
Manual			
Charger		✓	
Sample Tubing		✓	
Alkaline Battery Pack		✓	
External Filters		✓	
Software			
Comm. Cable			
Regulator		✓	
Tedlar Bag		✓	
Calibration Gas		✓	

Calibration Report

MultiRAE Lite 1090-1025

Calibrated with the following calibration gas:

10 H2S /50 CO/ 50 LEL/ 18 O2/ — *Lot #:* 3.04402E+12

isobutylene — *Lot #:* 3.04402E+12

Lot #:

	Span Setting		Calibrated Reading		Post-Calibration Bump Test	
H_2S	10	*ppm*	10	*ppm*	10.1	*ppm*
CO	50	*ppm*	50	*ppm*	50	*ppm*
LEL	50	%	50	%	49	%
O_2	18	%	18	%	18.1	%
PID	100	*ppm*	100	*ppm*	100	*ppm*
HCN	0	*ppm*	0	*ppm*	0	*ppm*

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

LANDTEC

Company: 0
Contact: 0
Phone #: 631 454 3182

Order No.: 0
Date: 10/24/2022
Technician: RR

Packing List

Item	Serial Number	Included	QC
GEM 5000	**G507763**	✓	
H2S Sensor	**NA**	✓	
Manual			
Charger		✓	
External Filters		✓	
Sample Line		✓	
Pressure Line		✓	
Temperature Probe		✓	
Quick Connects		✓	
Regulator		✓	
Tedlar Bag		✓	
Calibration Gas		✓	
Software			
Comm. Cable			

Calibration Report

Item		Information	
GEM 5000	**G507763**		
Calibration Gas:		**15% CO2 / 15% CH4**	
Lot Number:		***3.04402E+12***	
H2S Concentration		***NA***	***ppm***
Lot Number:		***304402123828-1***	
CO_2 Calibrated Reading		***15.0***	*%*
CO_2 Post-Cal Bump		***15.0***	*%*
CH_4 Calibrated Reading		***15.0***	*%*
CH_4 Post-Cal Bump		***15.0***	*%*
O_2 Calibrated Reading		***20.9***	*%*
O_2 Post-Cal Bump		***20.9***	*%*
H_2S Calibrated Reading		***25.0***	***ppm***
H_2S Post-Cal Bump		***25.0***	***ppm***

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Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

Table G-1
2022 Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

Date: 10/27/2022 **Start of Day Weather:** 65°F Sunny **End of Day Weather:** 65°F Sunny **Field Team: Joe Rogers, Noel Lioce**

		Initial Readings									Post Purge Readings							
ID	**Time**	**VOC (ppm)**	**O_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**CO_2 (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**O_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**CO_2 (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
GV-1	13:41	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-2	13:49	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-3	13:32	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-4	13:24	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-5	13:17	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-6	12:51	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-7	12:59	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-8	13:09	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-9	12:43	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-10	12:34	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-11	12:25	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-12	12:15	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-13	9:42	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
GV-14	9:58	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.56
GV-15	10:08	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.69
GV-16	12:04	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-17	11:52	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-18	10:18	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.69
LGP-01-01X	14:34	0.0	20.9	0.0	0.0	0.0	0.5	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-09-01XA	14:27	0.0	20.9	0.0	0.0	0.0	0.0	0.0	2	157	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-09-01XB	14:31	1.0	20.3	0.0	0.0	0.0	0.0	0.0	2	157	0.0	20.9	0.0	0.0	0.0	0.7	0.0	29.80
LGP-01-02X	14:12	0.0	19.5	0.0	0.0	0.0	1.3	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.80
LGP-09-02X	14:17	1.0	19.4	0.0	0.0	0.0	1.4	0.0	2	204	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-01-03X	14:51	0.0	20.0	0.0	0.0	0.0	0.9	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.2	0.0	29.87
LGP-09-03X	14:44	0.0	20.0	0.0	0.0	0.0	0.09	0.0	2	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-01-04X	14:05	0.0	20.1	0.0	0.0	0.0	0.08	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-09-04X	13:59	0.0	20.9	0.0	0.0	0.0	0.03	0.0	2	120	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-05-05X	7:50	0.0	6.4	0.0	7.0	0.0	15.0	11.4	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-05X	8:00	0.0	0.0	0.0	74.0	0.0	15.5	5.0	2	167	0.0	20.9	0.0	5.0	0.0	0.1	0.0	29.56
LGP-05-06X	8:13	0.0	16.8	0.0	6.0	0.0	4.1	0.0	2	93	0.0	20.9	0.0	4.0	0.0	0.1	0.0	29.56
LGP-09-06X	8:10	0.0	10.2	0.0	6.0	0.0	7.6	0.0	2	120	0.0	20.9	0.0	4.0	0.0	0.1	0.0	29.56
LGP-05-07X	8:21	0.0	9.8	0.0	99.0	0.0	8.8	9.4	2	65	0.0	20.9	0.0	5.0	0.0	0.1	0.0	29.56
LGP-05-08X	8:28	0.0	9.7	0.0	36.0	0.0	4.8	0.7	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-08X	8:33	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2	185	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-09X	8:37	0.0	9.2	0.0	0.0	0.0	0.1	0.0	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-09X	8:41	0.0	7.0	0.0	12.0	0.0	9.9	0.4	2	185	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-10X	8:58	0.0	17.4	0.0	41.0	0.0	8.5	4.4	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-10X	9:04	0.0	20.9	0.0	0.0	0.0	0.1	0.0	2	148	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-11X	9:14	0.0	9.2	0.0	22.0	0.0	4.7	0.7	2	83	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-11X	9:21	0.0	4.6	0.0	46.0	0.0	14.8	2.5	2	139	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-13X	9:30	0.0	20.9	0.0	0.0	0.0	0.1	0.0	2	56	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-14X	9:53	0.0	11.5	0.0	0.0	0.0	7.5	0.0	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-15X	9:36	0.0	17.0	0.0	0.0	0.0	3.5	0.0	2	111	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56

Ambient Readings	**Time**	**VOC (ppm)**	**O_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**CO_2 (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
Start of Day	7:48	0	20.9	0	0	0	0.2	0	29.56
Mid Morning	10:15	0	20.9	0	0	0	0	0	29.56
Mid Day	11:50	0	20.9	0	0	0	0.1	0	29.73
Mid Afternoon	13:55	0	20.9	0	0	0	0	0	29.80
End of Day	14:55	0	20.9	0	0	0	0	0	29.87

Notes:

VOC = Volatile Organic Compounds
O_2 = Oxygen
LEL = Lower Explosive Limit
CO = Carbon Monoxide
CO_2 = Carbon Dioxide
CH_4 = Methane
H_2S = Hydrogen Sulfide
"Hg = inches of Mercury
lpm = Liters per minute
sec = Seconds
ppm = Parts per million
% = Percentage

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
GV-1	10/26/2012	12:54	0.2	8.6	0	16	0	9.5	0.8	4	167	0.5	8.0	0	23	0	10.8	1.1	29.87
	11/12/2013	8:46	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.2	0.0	29.98
	10/17/2014	14:49	0.0	21.0	0.0	0.0	0.0	0.0	0.0	4	167	0.0	18.4	0.0	3.0	4.0	1.9	0.1	29.32
	10/20/2015	9:21	0.0	20.8	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.90
	10/18/2016	17:48	0.1	8.8	0.0	21	0.0	9.4	1.1	4	167	0.1	6.1	0.0	24	0.0	11.8	1.2	29.55
	10/18/2017	15:05	0.0	19.6	0.0	0.0	0.0	1.0	0.0	4	167	0.0	11.4	0.0	12.0	0.0	6.9	0.3	29.98
	10/18/2018	14:28	0.0	21.3	0.0	0.0	0.0	0.4	0.0	4	167	0.0	21.1	0.0	0.0	0.0	0.5	0.0	30.03
	10/16/2019	14:07	0.0	9.1	0.0	64.0	0.0	8.4	1.3	4	167	0.0	5.6	0.0	66.0	0.0	11.0	3.3	29.71
	10/13/2020	13:15	0.5	8.8	0.0	32.0	0.0	9.2	0.8	4	167	0.5	8.8	0.0	31.0	0.0	9.1	0.8	29.57
	10/20/2021	14:09	0.0	22.2	3.0	3.0	0.0	0.1	0.0	4	167	0.0	20.6	3.0	3.0	0.0	1.0	0.1	29.57
	10/27/2022	13:41	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-2	10/26/2012	13:05	0.4	9.9	0	87	0	9.6	4.3	4	167	0.6	4.0	0	>100	0	15.4	9.3	29.87
	11/12/2013	8:56	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:40	0.0	20.8	1.0	0.0	0.0	0.1	0.0	4	167	0.0	15.2	0.0	68.0	4.0	5.1	3.5	29.32
	10/20/2015	10:50	0.1	19.4	0.0	27.0	0.0	1.2	0.8	4	167	0.1	16.4	0.0	83.0	1.0	4.2	2.5	29.89
	10/18/2016	17:43	0.1	8.7	0.0	99	0.0	10.3	4.9	4	167	0.0	3.9	0.0	100	0.0	14.8	7.2	29.55
	10/18/2017	14:58	0.0	20.5	0.0	5.0	0.0	0.5	0.1	4	167	0.0	11.3	0.0	69.0	0.0	6.7	2.7	29.99
	10/18/2018	14:23	0.0	21.6	0.0	0.0	0.0	0.0	0.0	4	167	0.0	21.6	0.0	0.0	0.0	0.1	0.0	30.03
	10/16/2019	14:15	0.0	11.5	0.0	74.0	0.0	7.5	3.0	4	167	0.0	2.6	0.0	99.0	0.0	13.7	7.7	29.71
	10/13/2020	13:35	0.4	1.2	0.0	45.0	0.0	11.3	9.6	4	167	0.7	1.1	0.0	99.0	0.0	11.3	9.8	29.57
	10/20/2021	14:03	0.0	22.3	3.0	3.0	0.0	0.0	0.0	4	167	0.0	22.3	3.0	3.0	1.0	0.0	0.0	29.57
	10/27/2022	13:49	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-3	10/26/2012	13:22	0.0	20.9	0	0	0	0.0	0.0	4	167	0.0	20.9	0	0	0	0.0	0.0	29.87
	11/12/2013	9:09	0.1	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:25	0.0	20.7	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.32
	10/20/2015	8:50	0.0	20.5	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.5	0.0	0.0	0.0	0.1	0.1	29.88
	10/18/2016	17:31	0.0	18.3	0.0	13	0.0	1.8	0.6	4	167	0.0	19.9	0.0	0	0.0	0.0	0.0	29.55
	10/18/2017	14:39	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.98
	10/18/2018	14:12	0.0	21.3	0.0	0.0	0.0	0.0	0.0	4	167	0.0	21.4	0.0	0.0	0.0	0.0	0.0	30.03
	10/16/2019	13:40	0.0	21.1	0.0	3.0	0.0	0.0	0.1	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.1	29.71
	10/13/2020	13:25	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.57
	10/20/2021	13:28	0.0	22.0	3.0	3.0	0.0	0.0	0.0	4	167	0.0	22.0	3.0	3.0	1.0	0.0	0.0	29.57
	10/27/2022	13:32	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-4	10/26/2012	13:15	0.6	7.4	0	72	0	10.4	3.4	4	167	0.5	11.3	0	39	0	6.8	1.9	29.87
	11/12/2013	9:18	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:33	0.0	18.0	0.0	21.0	5.0	2.5	1.0	4	167	0.2	1.8	0.0	100.0	0.0	14.3	8.1	29.32
	10/20/2015	9:00	0.1	10.0	0.0	71.0	0.0	8.7	2.1	4	167	0.2	10.1	0.0	100.0	0.0	10.1	3.1	29.88
	10/18/2016	17:37	0.2	8.7	0.0	80	0.0	11.0	4.0	4	167	0.2	5.2	0.0	100	0.0	14.0	5.3	29.55
	10/18/2017	14:48	0.0	13.3	0.0	61.0	0.0	4.8	2.1	4	167	0.0	15.2	0.0	30.0	0.0	4.1	1.0	29.97
	10/18/2018	14:18	0.0	21.5	0.0	0.0	0.0	0.0	0.0	4	167	0.0	21.5	0.0	0.0	0.0	0.0	0.0	30.03
	10/16/2019	13:58	0.0	5.5	0.0	91.0	0.0	11.7	5.1	4	167	0.0	9.3	0.0	63.0	0.0	8.5	2.7	29.71
	10/13/2020	13:45	0.5	5.4	0.0	99.0	0.0	12.8	6.4	4	167	0.5	5.8	0.0	99.0	0.0	12.3	6.0	29.55
	10/20/2021	13:34	0.0	17.3	3.0	43.0	0.0	2.7	0.8	4	167	0.0	18.2	3.0	18.0	1.0	2.1	0.3	29.57
	10/27/2022	13:24	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-5	10/26/2012	13:55	1.5	13.4	0	1	0	5.2	0.0	4	167	0.2	14.0	0	0	0	4.8	0.0	29.87
	11/12/2013	9:48	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:02	0.0	6.9	0.0	0.0	5.0	6.7	0.0	4	167	0.0	5.9	0.0	0.0	5.0	7.9	0.0	29.32
	10/20/2015	9:12	0.1	19.7	0.0	4.0	0.0	0.6	0.1	4	167	0.0	20.5	0.0	0.0	0.0	0.4	0.0	29.88
	10/18/2016	17:01	0.0	14.2	0.0	0	0.0	5.0	0.0	4	167	0.0	12.4	0.0	0	0.0	6.3	0.0	29.55
	10/18/2017	13:47	0.0	18.0	0.0	0.0	0.0	1.3	0.0	4	167	0.0	18.1	0.0	0.0	0.0	1.9	0.0	29.98
	10/18/2018	12:58	0.0	21.7	0.0	0.0	0.0	0.1	0.0	4	167	0.0	21.8	0.0	1.0	0.0	0.1	0.1	30.02
	10/16/2019	14:43	0.0	12.2	0.0	6.0	0.0	6.4	6.2	4	167	0.0	12.6	0.0	0.0	0.0	6.2	0.2	29.71
	10/13/2020	13:55	0.0	12.8	0.0	4.0	0.0	5.6	0.1	4	167	0.0	13.5	0.0	0.4	0.0	5.9	0.1	29.55
	10/20/2021	12:14	0.0	21.0	2.0	0.0	1.0	0.2	0.0	4	167	0.0	21.4	2.0	0.0	1.0	0.0	0.0	29.61
	10/27/2022	13:17	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
GV-6	10/26/2012	13:31	0.4	5.8	0	>100	0	12.8	7.5	4	167	0.7	5.7	0	85	0	11.4	4.2	29.87
	11/12/2013	9:29	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:14	70.1	2.6	0.0	>100	3.0	14.3	8.0	4	167	0.1	0.5	0.0	>100	0.0	17.5	9.4	29.32
	10/20/2015	13:16	0.0	3.3	0.0	100.0	0.0	13.7	7.6	4	167	0.0	1.7	0.0	100.0	0.0	14.8	7.8	29.88
	10/18/2016	17:29	0.0	6.5	0.0	100	0.0	14.1	6.0	4	167	0.1	6.9	0.0	100	0.0	14.0	5.7	29.55
	10/18/2017	14:31	0.0	14.8	0.0	46.0	0.0	4.0	1.0	4	167	0.0	14.3	0.0	49.0	0.0	43.0	1.8	29.97
	10/18/2018	14:06	0.0	21.1	0.0	0.0	0.0	0.1	0.0	4	167	0.0	21.1	0.0	0.0	0.0	0.1	0.0	30.03
	10/16/2019	13:38	1.0	1.6	0.0	97.0	0.0	14.4	6.5	4	167	0.0	1.6	0.0	51.0	0.0	14.7	5.4	29.71
	10/13/2020	14:10	0.7	4.5	0.0	99.0	0.0	12.9	2.8	4	167	0.7	4.0	0.0	99.0	0.0	12.0	2.9	29.55
	10/20/2021	13:20	0.0	20.1	3.0	23.0	1.0	1.2	0.5	4	167	0.0	20.2	3.0	14.0	0.0	1.1	0.2	29.61
	10/27/2022	12:51	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-7	10/26/2012	14:15	0.5	1.1	0	>100	2	12.1	6.6	4	167	0.4	1.2	0	63	0	11.1	3.2	29.87
	11/12/2013	9:57	0.0	20.7	0	0	0	0.1	0.0	4	167	0.0	20.5	0	0	0	0.1	0.0	29.98
	10/17/2014	13:47	0.0	2.9	0.0	>100	0.0	11.4	7.6	4	167	0.0	0.6	0.0	>100	0.0	13.8	8.2	29.32
	10/20/2015	11:30	0.0	5.4	0.0	100.0	0.0	11.6	8.2	4	167	0.0	1.1	0.0	100.0	1.0	14.1	7.9	29.89
	10/18/2016	17:10	0.0	11.8	0.0	100	0.0	7.7	5.6	4	167	0.0	2.5	0.0	100	0.0	16.8	11.0	29.55
	10/18/2017	13:37	0.0	18.2	0.0	10.0	0.0	0.9	0.3	4	167	0.0	18.6	0.0	5.0	0.0	0.8	0.0	29.98
	10/18/2018	12:47	0.0	21.6	1.0	1.0	0.0	0.0	0.1	4	167	0.0	21.6	1.0	0.0	0.0	0.0	0.0	30.02
	10/16/2019	14:27	0.0	0.3	0.0	99.0	0.0	15.2	13.3	4	167	0.0	0.1	0.0	99.0	0.0	15.1	12.1	29.71
	10/13/2020	14:20	0.5	0.2	0.0	99.0	0.0	15.8	12.4	4	167	0.3	1.5	0.0	99.0	0.0	15.0	12.2	29.55
	10/20/2021	13:41	0.0	21.5	3.0	16.0	0.0	0.2	0.0	4	167	0.0	20.1	3.0	13.0	0.0	0.8	0.2	29.57
	10/27/2022	12:59	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-8	10/26/2012	14:05	0.7	10.1	0	1	0	7.0	0.1	4	167	0.1	9.1	0	0	1	7.4	0.0	29.87
	11/12/2013	10:04	0.0	20.3	0	0	0	0.1	0.0	4	167	0.0	20.2	0	0	0	0.1	0.0	29.98
	10/17/2014	13:54	0.0	6.7	0.0	15.0	6.0	6.6	0.8	4	167	0.0	5.8	0.0	9.0	6.0	7.7	0.4	29.32
	10/20/2015	11:39	0.0	12.7	0.0	45.0	0.0	6.2	1.4	4	167	0.0	10.6	0.0	27.0	0.0	7.3	0.8	29.89
	10/18/2016	16:53	0.0	13.6	0.0	9	0.0	5.2	0.4	4	167	0.0	8.1	0.0	2	0.0	9.6	0.1	29.55
	10/18/2017	13:56	0.0	17.7	0.0	9.0	0.0	1.8	0.1	4	167	0.0	17.8	0.0	0.0	0.0	1.9	0.0	29.95
	10/18/2018	12:52	0.0	21.7	1.0	0.0	0.0	0.1	0.0	4	167	0.0	21.5	0.0	0.0	0.0	0.1	0.0	30.02
	10/16/2019	14:26	0.0	8.2	0.0	49.0	0.0	9.0	2.5	4	167	0.0	5.8	0.0	5.0	0.0	11.1	0.3	29.71
	10/13/2020	14:30	0.0	9.2	0.0	58.0	0.0	8.7	1.5	4	167	0.6	9.0	0.0	59.0	0.0	8.8	1.5	29.55
	10/20/2021	13:55	0.0	19.5	3.0	3.0	0.0	1.5	0.1	4	167	0.0	19.5	3.0	8.0	1.0	1.5	0.0	29.57
	10/27/2022	13:09	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-9	10/26/2012	13:40	0.6	3.0	0	99	0	11.7	4.9	4	167	1.2	3.2	0	>100	0	18.1	22.0	29.87
	11/12/2013	9:39	0.0	20.9	0	0	0	0.1	0.0	4	167	0.0	20.9	0	0	0	0.1	0.0	29.98
	10/17/2014	14:10	0.2	1.0	0.0	>100	0.0	16.8	9.1	4	167	0.2	0.3	0.0	0.0	0.0	18.7	17.0	29.32
	10/20/2015	13:24	0.2	7.1	0.0	100.0	0.0	11.2	5.9	4	167	0.4	0.7	0.0	100.0	0.0	19.1	17.8	29.88
	10/18/2016	17:17	0.0	5.5	0.0	100	0.0	15.7	7.6	4	167	0.0	4.9	0.0	100	0.0	17.1	13.7	29.55
	10/18/2017	14:23	0.0	14.9	0.0	49.0	0.0	3.3	1.5	4	167	0.0	10.1	0.0	100.0	0.0	9.1	10.3	29.98
	10/18/2018	14:00	0.0	20.7	0.0	3.0	0.0	0.3	0.2	4	167	0.0	20.1	0.0	11.0	0.0	0.7	0.5	30.03
	10/16/2019	13:27	0.0	0.0	0.0	40.0	0.0	16.0	8.8	4	167	0.0	0.1	0.0	99.0	0.0	17.0	13.1	29.71
	10/13/2020	13:00	0.5	2.3	0.0	99.0	0.0	16.0	6.6	4	167	0.5	1.1	0.0	99.0	0.0	16.2	6.7	29.57
	10/20/2021	12:38	0.0	21.1	2.0	2.0	1.0	0.2	0.0	4	167	0.0	20.9	2.0	2.0	0.0	0.3	0.2	29.61
	10/27/2022	12:43	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
GV-10	10/26/2012	14:22	0.3	2.8	0	50	2	10.5	2.6	4	167	0.2	4.0	0	30	2	9.5	1.5	29.87
	11/12/2013	10:22	0.0	20.7	0	0	0	0.2	0.0	4	167	0.0	20.6	0	0	0	0.1	0.0	29.98
	10/17/2014	13:30	0.0	1.9	0.0	55.0	0.0	11.6	2.7	4	167	0.0	1.3	0.0	54.0	0.0	12.1	2.7	29.32
	10/20/2015	13:03	0.0	4.2	0.0	100.0	0.0	11.6	4.2	4	167	0.0	2.0	0.0	100.0	0.0	12.4	4.3	29.89
	10/18/2016	16:40	0.0	6.1	0.0	100	0.0	14.4	8.4	4	167	0.0	2.2	0.0	100	0.0	16.3	7.8	29.55
	10/18/2017	14:17	0.0	18.6	0.0	0.0	0.0	0.9	0.0	4	167	0.0	17.6	0.0	0.0	0.0	1.3	0.0	29.98
	10/18/2018	12:41	0.0	21.6	1.0	0.0	0.0	0.0	0.0	4	167	0.0	21.6	1.0	0.0	0.0	0.0	0.0	30.02
	10/16/2019	13:17	0.0	1.1	0.0	51.0	0.0	14.1	3.0	4	167	0.0	2.0	0.0	45.0	0.0	13.6	2.4	29.71
	10/13/2020	12:50	0.5	2.1	0.0	99.0	0.0	12.4	2.2	4	167	0.5	1.9	0.0	99.0	0.0	13.2	3.2	29.55
	10/20/2021	12:32	0.0	21.5	2.0	2.0	1.0	0.0	0.0	4	167	0.0	21.4	2.0	2.0	0.0	0.1	0.0	29.61
	10/27/2022	12:34	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
GV-11	10/26/2012	14:30	0.2	11.8	0	9	0	5.2	0.5	4	167	0.1	11.3	0	16	0	5.1	0.8	29.87
	11/12/2013	10:14	0.0	20.6	0	0	0	0.1	0.0	4	167	0.0	20.6	0	0	0	0.2	0.0	29.98
	10/17/2014	13:37	0.0	13.3	0.0	5.0	4.0	4.9	0.2	4	167	0.0	6.9	0.0	2.0	6.0	5.0	1.0	29.32
	10/20/2015	12:54	0.0	14.1	0.0	0.0	0.0	4.5	1.1	4	167	0.0	13.7	0.0	22.0	1.0	4.8	0.6	29.89
	10/18/2016	16:46	0.1	13.8	0.0	23	0.0	4.9	1.1	4	167	0.0	12.2	0.0	15	0.0	5.6	0.7	29.55
	10/18/2017	14:12	0.0	19.5	0.0	3.0	0.0	0.7	0.0	4	167	0.0	18.0	0.0	5.0	0.0	1.5	0.0	29.98
	10/18/2018	12:35	0.0	21.3	0.0	0.0	0.0	0.0	0.0	4	167	0.0	21.4	0.0	0.0	0.0	0.1	0.0	30.02
	10/16/2019	13:09	0.0	10.9	0.0	99.0	0.0	6.8	2.5	4	167	0.0	5.9	0.0	99.0	0.0	6.5	9.0	29.71
	10/13/2020	12:40	0.6	11.9	0.0	78.0	0.0	6.8	2.2	4	167	0.5	11.8	0.0	75.0	0.0	6.0	2.6	29.57
	10/20/2021	12:24	0.0	21.2	2.0	0.0	0.0	0.2	0.0	4	167	0.0	20.9	2.0	0.0	0.0	0.3	0.1	29.61
	10/27/2022	12:25	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-12	10/26/2012	14:40	0.1	0.9	0	>100	0	9.3	6.1	4	167	0.2	1.0	0	>100	1	10.1	6.5	29.87
	11/12/2013	11:00	0.0	20.4	0	0	0	0.2	0.0	4	167	0.0	20.6	0	0	0	0.2	0.0	29.98
	10/17/2014	12:55	0.0	12.6	1.0	14.0	2.0	5.3	0.7	4	167	0.0	4.9	0.0	24.0	5.0	7.4	1.2	29.32
	10/20/2015	13:35	0.1	7.5	0.0	100.0	0.0	10.2	8.3	4	167	0.0	0.8	0.0	100.0	0.0	14.6	11.8	29.88
	10/18/2016	16:16	0.0	3.1	0.0	100	0.0	14.7	9.5	4	167	0.0	1.5	0.0	100	0.0	15.7	9.7	29.55
	10/18/2017	13:11	0.0	20.5	0.0	0.0	0.0	0.2	0.0	4	167	0.0	20.3	0.0	0.0	10.0	0.4	0.0	29.99
	10/18/2018	12:28	0.0	21.2	1.0	0.0	0.0	0.0	0.0	4	167	0.0	21.3	1.0	0.0	0.0	0.0	0.0	30.02
	10/16/2019	13:00	0.0	3.3	0.0	95.0	0.0	10.7	7.0	4	167	0.0	0.0	0.0	99.0	0.0	12.4	8.8	29.71
	10/13/2020	12:25	0.4	2.8	0.0	99.0	0.0	14.6	9.9	4	167	0.3	1.2	0.0	99.0	0.0	14.2	9.6	29.57
	10/20/2021	13:09	0.0	22.0	2.0	3.0	0.0	0.0	0.0	4	167	0.0	22.0	3.0	4.0	1.0	0.1	0.0	29.61
	10/27/2022	12:15	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-13	10/26/2012	15:51	1.5	19.4	0	77	0	2.0	3.8	4	167	0.5	18.1	0	>100	0	3.7	5.2	29.77
	11/12/2013	11:11	0.1	20.6	0	0	0	0.4	0.0	4	167	0.0	20.5	0	6	0	0.4	0.0	29.98
	10/17/2014	10:01	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.7	0.0	0.0	0.0	0.2	0.0	29.40
	10/20/2015	13:45	0.1	20.1	0.0	15.0	0.0	0.7	0.4	4	167	0.1	19.3	0.0	32.0	0.0	1.2	0.8	29.88
	10/18/2016	8:44	0.0	19.6	0.0	0	0.0	0.3	0.0	4	167	0.0	19.7	0.0	0	0.0	0.1	0.0	29.73
	10/18/2017	9:40	0.0	20.9	0.0	0.0	0.0	0.4	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.4	0.0	30.02
	10/18/2018	9:04	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.1	0.0	30.06
	10/16/2019	11:44	0.0	12.4	0.0	47.0	0.0	5.0	3.4	4	167	0.0	16.2	0.0	30.0	0.0	2.5	2.1	29.85
	10/13/2020	11:25	0.6	19.2	0.0	40.0	0.0	4.8	2.1	4	167	0.0	11.5	0.0	82.0	0.0	33.0	1.5	29.61
	10/20/2021	10:12	0.0	21.8	1.0	0.0	0.0	0.1	0.0	4	167	0.0	21.8	1.0	0.0	0.0	0.0	0.0	29.60
	10/27/2022	9:42	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
GV-14	10/26/2012	15:37	0.6	20.9	0	>100	0	15.7	29.5	4	167	0.5	3.0	0	>100	0	19.7	34.9	29.87
	11/12/2013	12:30	0.2	11.2	0	>100	0	6.3	7.9	4	167	0.3	8.1	0	>100	0	8.3	10.3	29.91
	10/17/2014	10:12	0.0	20.1	0.0	29.0	30.0	1.6	1.7	4	167	0.2	17.1	0.0	100.0	0.0	4.4	6.1	29.40
	10/20/2015	14:00	0.1	20.4	0.0	15.0	0.0	0.6	0.3	4	167	0.0	13.9	0.0	100.0	0.0	7.0	11.9	29.88
	10/18/2016	10:00	0.0	19.3	0.0	7	0.0	0.7	0.3	4	167	0.0	19.7	0.0	2	0.0	0.3	0.1	29.72
	10/18/2017	10:20	0.0	20.5	0.0	0.0	0.0	0.6	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.3	0.0	30.02
	10/18/2018	12:21	0.0	21.3	1.0	0.0	0.0	0.0	0.0	4	167	0.0	21.3	1.0	0.0	0.0	0.0	0.0	30.02
	10/16/2019	11:55	0.0	20.6	0.0	99.0	0.0	0.2	0.2	4	167	0.0	3.7	0.0	99.0	0.0	15.1	29.3	29.85
	10/13/2020	11:35	0.6	19.1	0.0	99.0	0.0	21.0	9.9	4	167	0.0	19.7	0.0	99.0	0.0	6.1	10.0	29.61
	10/20/2021	10:30	0.0	21.6	1.0	2.0	1.0	0.1	0.0	4	167	0.0	21.4	2.0	2.0	0.0	0.2	0.0	29.60
	10/27/2022	9:58	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.56
GV-15	10/26/2012	15:27	1.0	1.5	0	>100	4	22.5	24.3	4	375	0.4	1.5	0	>100	1	22.6	23.9	29.87
	11/12/2013	14:39	0.3	6.4	0	75	0	10.5	7.9	4	375	0.2	4.8	0	>100	0	11.4	8.6	29.91
	10/17/2014	10:56	0.0	15.2	1.0	25.0	5.0	5.0	1.3	4	375	0.0	20.7	0.0	0.0	0.0	0.1	0.0	29.33
	10/20/2015	16:15	0.1	20.6	0.0	23.0	0.0	0.7	0.6	4	375	0.1	3.1	0.0	100.0	0.0	21.2	24.9	29.88
	10/18/2016	16:05	0.0	2.7	0.0	100	0.0	23.3	22.3	4	375	0.0	2.8	0.0	100	0.0	22.9	21.2	29.55
	10/18/2017	13:02	0.0	16.9	0.0	35.0	0.0	2.4	1.1	4	375	0.0	16.0	0.0	42.0	0.0	3.2	1.4	29.98
	10/18/2018	12:11	0.0	21.5	0.0	0.0	0.0	0.0	0.1	4	375	0.0	21.4	0.0	0.0	0.0	0.0	0.0	30.10
	10/16/2019	12:10	0.0	1.8	0.0	99.0	0.0	21.9	23.5	4	375	0.0	0.0	0.0	99.0	0.0	21.0	26.5	29.85
	10/13/2020	11:55	0.4	4.3	0.0	99.0	0.0	22.2	17.5	4	375	0.3	4.3	0.0	99.0	0.0	22.2	24.0	29.59
	10/20/2021	10:50	0.0	21.8	2.0	0.0	1.0	0.1	0.0	4	375	0.0	21.8	2.0	0.0	1.0	0.0	0.0	29.60
	10/27/2022	10:08	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.69

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
GV-16	10/26/2012	14:50	0.3	1.2	0	>100	2	20.3	14.1	4	375	0.4	2.2	0	>100	2	20.3	13.7	29.87
	11/12/2013	10:45	0.0	20.8	0	0	0	0.3	0.0	4	375	0.0	20.0	0	0	0	0.3	0.0	29.98
	10/17/2014	13:04	0.0	1.2	0.0	100.0	0.0	19.5	15.8	4	375	0.1	0.7	0.0	100.0	0.0	20.2	17.0	29.32
	10/20/2015	15:55	0.1	20.1	0.0	27.0	0.0	23.7	17.3	4	375	0.2	6.1	0.0	100.0	0.0	16.7	11.0	29.88
	10/18/2016	16:22	0.0	1.7	0.0	100	0.0	25.5	19.9	4	375	0.0	1.9	0.0	100	0.0	25.5	19.9	29.55
	10/18/2017	13:19	0.0	17.2	0.0	14.0	0.0	2.4	0.4	4	375	0.0	16.8	0.0	12.0	0.0	2.7	0.3	29.90
	10/18/2018	12:00	0.0	21.6	0.0	0.0	0.0	0.0	0.0	4	375	0.0	21.7	0.0	0.0	0.0	0.0	0.0	30.10
	10/16/2019	12:48	0.0	0.0	0.0	99.0	22.1	0.0	20.2	4	375	0.0	0.0	0.0	99.0	0.0	22.4	19.2	29.71
	10/13/2020	12:15	0.2	0.9	0.0	99.0	0.0	22.0	17.5	4	375	0.4	0.1	0.0	99.0	0.0	22.2	17.3	29.59
	10/20/2021	12:57	0.0	20.4	2.0	8.0	0.0	0.2	0.0	4	375	0.0	20.3	2.0	10.0	0.0	1.3	0.1	29.61
	10/27/2022	12:04	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-17	10/26/2012	15:02	0.0	3.3	0	>100	2	22.7	20.7	4	375	0.3	2.7	0	>100	2	22.9	20.9	29.87
	11/12/2013	10:30	0.0	20.5	0	0	0	0.3	0.0	4	375	0.0	20.0	0	0	0	0.3	0.0	29.98
	10/17/2014	13:16	0.0	0.2	97.0	100.0	0.0	24.6	27.5	4	375	0.1	0.0	0.0	100.0	0.0	25.0	28.4	29.32
	10/20/2015	16:08	0.2	2.2	0.0	100.0	0.0	23.2	21.5	4	375	0.1	1.1	0.0	100.0	0.0	24.3	22.8	29.88
	10/18/2016	16:30	0.0	1.7	0.0	100	0.0	27.5	26.0	4	375	0.0	3.6	0.0	100	0.0	25.1	24.3	29.55
	10/18/2017	13:27	0.0	16.1	0.0	20.0	0.0	2.4	0.4	4	375	0.0	15.8	0.0	21.0	0.0	3.2	0.6	29.94
	10/18/2018	11:51	0.0	21.2	0.0	0.0	0.0	0.1	0.0	4	375	0.0	21.4	0.0	0.0	0.0	0.1	0.0	30.10
	10/16/2019	12:36	0.0	2.6	0.0	99.0	0.0	23.4	25.6	4	375	0.0	0.0	0.0	99.0	0.0	23.4	26.1	29.71
	10/13/2020	12:05	0.4	4.3	0.0	99.0	0.0	14.6	9.9	4	375	0.3	0.3	0.0	99.0	0.0	39.1	19.0	29.59
	10/20/2021	12:45	0.0	20.5	2.0	25.0	0.0	0.6	0.3	4	375	0.0	20.5	3.0	21.0	0.0	0.7	0.4	29.61
	10/27/2022	11:52	0.0	20.9	0.0	0.0	0.0	0.1	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.73
GV-18	10/26/2012	15:15	0.5	5.3	0	>100	4	25.8	34.6	4	375	0.4	0.8	0	>100	3	26.3	35.5	29.87
	11/12/2013	14:23	0.2	5.9	0	>100	0	15.5	16.2	4	375	0.2	3.2	0	>100	0	17.9	18.9	29.91
	10/17/2014	11:12	0.0	20.8	0.0	0.0	0.0	0.1	0.0	4	375	0.0	20.7	0.0	0.0	0.0	0.1	0.0	29.33
	10/20/2015	16:25	0.1	5.6	0.0	100.0	0.0	21.2	29.1	4	375	0.2	8.8	0.0	100.0	0.0	17.1	24.1	29.88
	10/18/2016	15:55	0.0	4.8	0.0	100	0.0	22.9	25.2	4	375	0.0	2.6	0.0	100	0.0	26.4	29.3	29.55
	10/18/2017	12:55	0.0	20.2	0.0	7.0	0.0	0.5	0.1	4	375	0.0	20.3	0.0	0.0	0.0	0.5	0.1	29.98
	10/18/2018	11:40	0.0	20.9	0.0	0.0	0.0	0.2	0.0	4	375	0.0	21.2	0.0	0.0	0.0	0.1	0.0	30.10
	10/16/2019	12:21	0.0	0.7	0.0	99.0	0.0	21.3	23.4	4	375	0.0	1.0	0.0	99.0	0.0	21.2	23.4	29.71
	10/13/2020	11:45	0.1	18.8	0.0	14.0	0.0	2.7	3.2	4	375	0.5	19.8	0.0	88.0	0.0	1.5	1.6	29.59
	10/20/2021	10:56	0.0	21.9	2.0	0.0	0.0	0.0	0.0	4	375	0.0	21.9	2.0	0.0	0.0	0.0	0.0	29.60
	10/27/2022	10:18	0.0	20.9	0.0	0.0	0.0	0.0	0.0	4	375	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.69
LGP-01-01X	10/26/2012	7:55	0.0	20.9	0	0	0	0.7	0.0	2	83	0.0	20.3	0	0	0	0.7	0.0	29.88
	11/12/2013	7:36	0.0	20.8	0	0	0	0.4	0.0	2	83	0.0	20.9	0	0	0	0.5	0.0	29.98
	10/17/2014	15:00	0.0	20.4	0.0	0.0	0.0	0.6	0.0	2	83	0.0	20.6	0.0	0.0	0.0	0.6	0.0	29.32
	10/20/2015	9:45	0.0	20.6	0.0	0.0	0.0	0.7	0.0	2	83	0.0	20.5	0.0	0.0	0.0	0.7	0.0	29.90
	10/18/2016	17:56	0.0	18.9	0.0	0	0.0	1.4	0.0	2	83	0.0	19.3	0.0	0	0.0	0.9	0.0	29.55
	10/18/2017	8:55	0.0	20.3	0.0	0.0	0.0	0.8	0.0	2	83	0.0	20.4	0.0	0.0	0.0	0.9	0.0	30.00
	10/18/2018	14:48	0.0	20.9	0.0	0.0	0.0	1.0	0.0	2	83	0.0	20.9	0.0	0.0	0.0	1.0	0.0	30.03
	10/16/2019	15:37	0.0	21.0	0.0	0.0	0.0	0.5	0.1	2	83	0.0	21.1	0.0	0.0	0.0	0.5	0.1	29.64
	10/13/2020	15:40	0.0	20.9	0.0	0.0	0.0	0.5	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.5	0.0	29.52
	10/20/2021	14:14	0.0	21.2	4.0	3.0	0.0	0.1	0.0	2	83	0.0	21.3	4.0	3.0	0.0	0.8	0.0	29.61
	10/27/2022	14:34	0.0	20.9	0.0	0.0	0.0	0.5	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-09-01XA	10/26/2012	8:00	0.0	20.3	0	0	0	0.8	0.0	2	157	0.0	20.4	0	0	0	0.8	0.0	29.89
	11/12/2013	7:42	0.0	20.9	0	0	0	0.7	0.0	2	157	0.0	20.9	0	0	0	0.7	0.0	29.98
	10/17/2014	15:03	0.4	20.6	0.0	0.0	0.0	0.6	0.0	2	157	0.0	20.7	0.0	0.0	0.0	0.6	0.0	29.32
	10/20/2015	9:33	0.0	20.8	0.0	0.0	0.0	0.8	0.0	2	157	0.0	20.3	0.0	0.0	0.0	0.9	0.0	29.90
	10/18/2016	18:01	0.0	19.7	0.0	0	0.0	0.5	0.0	2	157	0.0	19.6	0.0	0	0.0	0.6	0.0	29.55
	10/18/2017	9:00	0.0	20.2	0.0	0.0	0.0	0.8	0.0	2	157	0.0	20.2	0.0	0.0	0.0	1.0	0.0	30.00
	10/18/2018	14:43	0.0	20.6	0.0	0.0	0.0	1.2	0.0	2	157	0.0	20.6	0.0	0.0	0.0	1.2	0.0	30.03
	10/16/2019	15:48	0.0	21.0	0.0	0.0	0.0	0.5	0.1	2	157	0.0	21.2	0.0	0.0	0.0	0.6	0.1	29.64
	10/13/2020	15:45	0.0	20.9	0.0	0.0	0.0	0.5	0.0	2	157	0.0	20.9	0.0	0.0	0.0	0.6	0.0	29.52
	10/20/2021	14:22	0.0	21.1	3.0	3.0	0.0	0.9	0.0	2	157	0.0	21.1	3.0	3.0	0.0	1.0	0.0	29.61
	10/27/2022	14:27	0.0	20.9	0.0	0.0	0.0	0.0	0.0	2	157	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
LGP-09-01XB	10/26/2012	8:06	0.1	20.9	0	0	0	0.9	0.0	2	259	0.0	20.9	0	0	0	0.9	0.0	29.89
	11/12/2013	7:50	0.2	20.9	0	0	0	0.2	0.0	2	259	0.0	20.9	0	0	0	1.0	0.0	29.98
	10/17/2014	15:02	0.7	20.5	0.0	0.0	0.0	0.6	0.0	2	157	0.0	20.6	0.0	0.0	0.0	0.6	0.0	29.32
	10/20/2015	9:40	0.0	20.2	0.0	0.0	0.0	0.9	0.0	2	157	0.0	20.2	0.0	0.0	0.0	0.9	0.0	29.90
	10/18/2016	18:05	0.0	19.5	0.0	0	0.0	0.7	0.0	2	157	0.0	19.5	0.0	0	0.0	0.7	0.0	29.55
	10/18/2017	9:05	1.0	20.1	0.0	0.0	0.0	1.0	0.0	2	157	0.0	20.1	0.0	0.0	0.0	1.0	0.0	30.00
	10/18/2018	14:38	0.0	20.8	0.0	1.0	0.0	0.9	0.1	2	157	0.0	20.6	0.0	0.0	0.0	1.0	0.0	30.03
	10/16/2019	15:43	0.0	20.8	0.0	0.0	0.0	0.7	0.1	2	157	0.0	20.9	0.0	0.0	0.0	0.8	0.1	29.64
	10/13/2020	15:50	0.3	20.9	0.0	0.0	0.0	0.7	0.0	2	157	0.2	20.4	0.0	0.0	0.0	0.5	0.0	29.52
	10/20/2021	14:18	1.3	21.1	3.0	6.0	2.0	0.8	0.0	2	157	0.0	21.2	3.0	3.0	0.0	0.9	0.0	29.61
	10/27/2022	14:31	1.0	20.3	0.0	0.0	0.0	0.0	0.0	2	157	0.0	20.9	0.0	0.0	0.0	0.7	0.0	29.80
LGP-01-02X	10/26/2012	8:26	0.0	19.8	0	0	0	1.4	0.0	2	83	0.0	20.2	0	0	0	1.5	0.0	29.89
	11/12/2013	8:02	0.0	20.9	0	0	0	0.9	0.0	2	83	0.0	20.8	0	0	0	0.9	0.0	29.98
	10/17/2014	15:18	0.0	20.2	0.0	0.0	0.0	0.8	0.0	2	83	0.0	20.2	0.0	0.0	0.0	0.9	0.0	29.32
	10/20/2015	9:58	0.0	20.3	0.0	0.0	0.0	1.1	0.0	2	83	0.0	20.2	0.0	0.0	0.0	1.3	0.0	29.90
	10/18/2016	18:09	0.0	19.4	0.0	0	0.0	1.0	0.0	2	83	0.0	19.3	0.0	0	0.0	1.2	0.0	29.55
	10/18/2017	9:18	0.0	19.9	0.0	0.0	0.0	1.3	0.0	2	83	0.0	20.0	0.0	0.0	0.0	1.2	0.0	30.01
	10/18/2018	15:01	0.0	18.7	0.0	0.0	0.0	3.2	0.0	2	83	0.0	18.8	1.0	0.0	0.0	3.2	0.0	30.03
	10/16/2019	15:28	0.0	20.8	0.0	0.0	0.0	0.9	0.1	2	83	0.0	20.8	0.0	0.0	0.0	0.9	0.1	29.64
	10/13/2020	15:25	0.0	20.9	0.0	0.0	0.0	0.2	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.53
	10/20/2021	14:26	0.0	22.1	4.0	3.0	1.0	0.1	0.0	2	83	0.0	21.3	3.0	3.0	0.0	0.9	0.0	29.61
	10/27/2022	14:12	0.0	19.5	0.0	0.0	0.0	1.3	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.80
LGP-09-02X	10/26/2012	8:20	0.1	19.6	0	0	0	1.7	0.0	2	204	0.0	19.7	0	0	0	1.7	0.0	29.89
	11/12/2013	8:07	0.2	20.9	0	0	0	1.1	0.0	2	204	0.1	20.6	0	0	0	1.3	0.0	29.98
	10/17/2014	15:20	0.0	20.2	0.0	0.0	0.0	1.0	0.0	2	204	0.0	20.3	1.0	0.0	0.0	1.1	0.0	29.32
	10/20/2015	9:52	0.0	20.1	0.0	0.0	0.0	1.4	0.0	2	204	0.0	20.0	0.0	0.0	0.0	0.3	0.0	29.90
	10/18/2016	18:12	0.0	19.4	0.0	0	0.0	1.0	0.0	2	204	0.0	19.5	0.0	0	0.0	0.9	0.0	29.55
	10/18/2017	9:13	0.0	19.8	0.0	0.0	0.0	1.1	0.0	2	204	0.0	19.9	0.0	0.0	0.0	1.2	0.0	30.00
	10/18/2018	14:56	0.0	18.9	1.0	0.0	0.0	3.2	0.0	2	204	0.0	18.5	2.0	0.0	0.0	3.5	0.0	30.03
	10/16/2019	15:26	0.0	20.7	0.0	0.0	0.0	1.1	0.1	2	204	0.0	20.9	0.0	0.0	0.0	1.2	0.2	29.64
	10/13/2020	15:30	0.0	20.9	0.0	0.0	0.0	1.0	0.0	2	204	0.0	20.9	0.0	0.0	0.0	1.1	0.0	29.53
	10/20/2021	14:24	1.4	19.4	4.0	7.0	1.0	3.1	0.0	2	204	0.0	19.0	4.0	4.0	0.0	3.2	0.0	29.61
	10/27/2022	14:17	1.0	19.4	0.0	0.0	0.0	1.4	0.0	2	204	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-01-03X	10/26/2012	8:47	0.0	20.2	0	0	0	1.1	0.0	2	83	0.0	20.2	0	0	0	1.1	0.0	29.91
	11/12/2013	8:15	0.0	20.8	0	0	0	0.9	0.0	2	83	0.0	20.7	0	0	0	0.9	0.0	29.98
	10/17/2014	15:29	0.0	20.2	0.0	0.0	0.0	0.8	0.0	2	83	0.0	20.2	0.0	0.0	0.0	0.8	0.0	29.32
	10/20/2015	10:10	0.0	20.3	0.0	0.0	0.0	1.1	0.0	2	83	0.0	20.3	0.0	0.0	0.0	1.1	0.0	29.90
	10/18/2016	18:15	0.0	19.6	0.0	0	0.0	0.7	0.0	2	83	0.0	19.6	0.0	0	0.0	0.7	0.0	29.55
	10/18/2017	8:40	0.0	20.2	0.0	0.0	0.0	1.0	0.0	2	83	0.0	20.1	0.0	0.0	0.0	1.2	0.0	30.00
	10/18/2018	15:07	0.0	19.9	1.0	0.0	0.0	1.8	0.0	2	83	0.0	20.0	0.0	0.0	0.0	1.6	0.0	30.03
	10/16/2019	15:22	0.0	20.8	0.0	0.0	0.0	0.8	0.1	2	83	0.0	20.9	0.0	0.0	0.0	0.8	0.1	29.64
	10/13/2020	15:05	0.0	20.9	0.0	0.0	0.0	0.6	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.53
	10/20/2021	14:45	0.0	21.0	4.0	4.0	0.0	1.2	0.0	2	83	0.0	21.2	3.0	4.0	0.0	1.2	0.0	29.61
	10/27/2022	14:51	0.0	20.0	0.0	0.0	0.0	0.9	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.2	0.0	29.87
LGP-09-03X	10/26/2012	8:40	0.4	19.8	0	0	0	1.4	0.0	2	167	0.0	19.9	0	0	0	1.5	0.0	29.91
	11/12/2013	8:20	0.1	20.7	0	0	0	1.2	0.0	2	167	0.0	20.6	0	0	0	1.3	0.0	29.98
	10/17/2014	15:31	0.5	20.1	0.0	0.0	0.0	1.0	0.0	2	167	0.0	20.8	0.0	0.0	0.0	0.3	0.0	29.32
	10/20/2015	10:19	0.0	20.1	0.0	0.0	0.0	1.2	0.0	2	167	0.0	20.2	0.0	0.0	0.0	1.3	0.0	29.90
	10/18/2016	18:19	0.0	19.4	0.0	0	0.0	0.9	0.0	2	167	0.0	19.4	0.0	0	0.0	1.0	0.0	29.55
	10/18/2017	8:46	0.0	19.8	0.0	0.0	0.0	1.5	0.0	2	167	0.0	19.8	0.0	0.0	0.0	1.6	0.0	30.00
	10/18/2018	15:12	0.0	19.8	0.0	0.0	0.0	1.9	0.0	2	167	0.0	19.6	0.0	0.0	0.0	2.0	0.0	30.03
	10/16/2019	15:16	0.0	20.8	0.0	0.0	0.0	1.0	0.1	2	167	0.0	20.7	0.0	0.0	0.0	1.0	0.1	29.64
	10/13/2020	15:15	0.1	20.9	0.0	0.0	0.0	0.0	0.0	2	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.53
	10/20/2021	14:41	0.5	22.1	4.0	7.0	1.0	0.1	0.0	2	167	0.0	20.3	3.0	3.0	1.0	1.7	0.0	29.61
	10/27/2022	14:44	0.0	20.0	0.0	0.0	0.0	0.09	0.0	2	167	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
LGP-01-04X	10/26/2012	8:54	0.0	20.5	0	0	0	0.8	0.0	2	83	0.0	20.9	0	0	0	0.8	0.0	29.91
	11/12/2013	8:27	0.0	20.9	0	0	0	0.5	0.0	2	83	0.0	20.9	0	0	0	0.5	0.0	29.98
	10/17/2014	15:38	0.0	20.5	0.0	0.0	0.0	0.5	0.0	2	83	0.0	20.5	0.0	0.0	0.0	0.5	0.0	29.32
	10/20/2015	11:11	0.0	20.1	0.0	0.0	0.0	0.7	0.0	2	83	0.0	20.2	0.0	0.0	0.0	0.8	0.0	29.89
	10/18/2016	18:23	0.0	19.7	0.0	0	0.0	0.5	0.0	2	83	0.0	19.6	0.0	0	0.0	0.7	0.0	29.55
	10/18/2017	8:20	0.0	20.4	0.0	0.0	0.0	0.8	0.1	2	83	0.0	20.3	0.0	0.0	0.0	1.0	0.1	30.00
	10/18/2018	15:20	0.0	20.4	0.0	0.0	0.0	1.6	0.0	2	83	0.0	20.4	0.0	0.0	0.0	1.6	0.0	30.03
	10/16/2019	15:05	0.0	20.9	0.0	0.0	0.0	0.5	0.1	2	83	0.0	20.9	0.0	0.0	0.0	0.5	0.2	29.65
	10/13/2020	14:45	0.0	20.9	0.0	0.0	0.0	0.0	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.5	0.0	29.55
	10/20/2021	14:36	0.0	20.8	4.0	5.0	1.0	1.2	0.0	2	83	0.0	20.7	3.0	4.0	1.0	1.4	0.0	29.61
	10/27/2022	14:05	0.0	20.1	0.0	0.0	0.0	0.08	0.0	2	83	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-09-04X	10/26/2012	9:00	0.0	20.4	0	0	0	0.8	0.0	2	120	0.0	20.4	0	0	0	0.9	0.0	29.91
	11/12/2013	8:33	0.1	20.9	0	0	0	0.6	0.0	2	120	0.0	20.8	0	0	0	0.7	0.0	29.98
	10/17/2014	15:40	0.1	20.6	0.0	0.0	0.0	0.5	0.0	2	120	0.0	20.5	0.0	0.0	0.0	0.5	0.0	29.32
	10/20/2015	11:18	0.0	20.8	0.0	0.0	0.0	0.8	0.0	2	120	0.0	20.3	0.0	0.0	0.0	0.9	0.0	29.89
	10/18/2016	18:27	0.0	19.7	0.0	0	0.0	0.6	0.0	2	120	0.0	19.6	0.0	0	0.0	0.7	0.0	29.55
	10/18/2017	8:27	0.0	20.5	0.0	0.0	0.0	0.6	0.0	2	120	0.0	20.3	0.0	0.0	0.0	1.0	0.0	30.00
	10/18/2018	15:24	0.0	19.9	0.0	0.0	0.0	1.8	0.0	2	120	0.0	19.7	0.0	0.0	0.0	1.9	0.0	30.03
	10/16/2019	15:11	0.0	21.0	0.0	0.0	0.0	0.2	0.1	2	120	0.0	21.0	0.0	0.0	0.0	0.6	0.1	29.65
	10/13/2020	14:55	0.0	20.9	0.0	0.0	0.0	0.0	0.0	2	120	0.0	20.9	0.0	0.0	0.0	0.5	0.0	29.53
	10/20/2021	14:34	0.0	20.6	3.0	3.0	1.0	1.4	0.0	2	120	0.0	20.7	3.0	4.0	1.0	1.4	0.0	29.61
	10/27/2022	13:59	0.0	20.9	0.0	0.0	0.0	0.03	0.0	2	120	0.0	20.9	0.0	0.0	0.0	0.0	0.0	29.80
LGP-05-05X	10/26/2012	9:10	0.3	14.4	0	3	0	7.1	0.2	2	93	0.0	12.4	0	0	0	9.7	0.0	29.91
	11/12/2013	14:10	0.2	17.1	0	13	0	7.6	0.4	2	93	0.1	18.1	0	2	0	5.6	0.0	29.91
	10/17/2014	11:43	0.0	2.5	1.0	100.0	0.0	17.1	12.2	2	93	0.2	0.0	1.0	100.0	0.0	29.7	30.1	29.33
	10/20/2015	15:35	0.2	14.4	0.0	6.0	0.0	6.0	0.0	2	93	0.3	1.1	0.0	44.0	0.0	18.9	1.5	29.88
	10/18/2016	15:41	0.0	8.0	0.0	100	0.0	16.7	9.7	2	93	0.0	2.6	0.0	100	0.0	27.6	16.7	29.65
	10/18/2017	11:55	0.0	15.2	0.0	40.0	0.0	8.1	1.5	2	93	0.0	14.3	0.0	0.0	0.0	6.9	0.0	30.00
	10/18/2018	11:27	0.0	14.9	1.0	66.0	0.0	8.7	3.3	2	93	0.0	19.5	1.0	6.0	0.0	2.6	0.3	30.10
	10/16/2019	8:33	0.0	11.7	0.0	12.0	0.0	11.7	0.8	2	93	0.0	9.9	0.0	0.0	0.0	0.1	0.2	29.95
	10/13/2020	7:50	0.0	14.0	0.0	0.0	0.0	0.5	0.0	2	93	0.0	14.0	0.0	0.0	0.0	9.2	0.0	29.67
	10/20/2021	8:30	0.7	15.4	0.0	30.0	1.0	21.6	18.1	2	93	0.7	17.8	0.0	17.0	0.0	5.6	1.5	29.55
	10/27/2022	7:50	0.0	6.4	0.0	7.0	0.0	15.0	11.4	2	93	0.0	20.9	0.0	5.0	0.0	0.1	0.0	29.56
LGP-09-05X	10/26/2012	9:18	2.5	10.6	0	30	0	14.4	1.5	2	167	0.2	9.3	0	0	0	13.0	0.0	29.91
	11/12/2013	14:15	0.8	10.4	0	42	0	14.2	2.4	2	167	0.1	11.4	0	0	0	13.0	0.0	29.91
	10/17/2014	11:45	0.3	1.7	1.0	100.0	0.0	20.2	16.0	2	167	0.3	0.0	1.0	100.0	0.0	30.1	33.5	29.33
	10/20/2015	15:40	0.6	9.3	0.0	65.0	0.0	13.1	1.7	2	167	0.3	0.5	0.0	100.0	0.0	24.7	9.1	29.88
	10/18/2016	15:36	0.0	6.1	0.0	100	0.0	20.5	13.2	2	167	0.0	1.6	0.0	100	0.0	30.1	21.9	29.65
	10/18/2017	11:48	0.0	10.6	0.0	100.0	0.0	13.8	4.6	2	167	0.0	12.8	0.0	0.0	0.0	9.4	0.0	30.00
	10/18/2018	11:32	1.0	18.0	1.0	34.0	0.0	5.1	1.7	2	167	0.0	19.3	1.0	3.0	0.0	2.8	0.2	30.10
	10/16/2019	8:43	0.55	22.0	0.0	53.0	0.0	0.2	0.2	2	167	0.0	3.0	0.0	31.0	0.0	0.2	0.2	29.95
	10/13/2020	8:00	30.7	12.0	0.0	30.0	0.0	1.3	1.3	2	167	0.5	0.9	0.0	99.0	0.0	22.0	61.0	29.67
	10/20/2021	8:35	0.1	14.0	0.0	99.0	1.0	11.4	10.0	2	167	1.9	21.5	0.0	48.0	0.0	0.2	0.0	29.55
	10/27/2022	8:00	0.0	0.0	0.0	74.0	0.0	15.5	5.0	2	167	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-06X	10/26/2012	9:37	0.0	17.5	0	0	0	0.0	0.0	2	93	0.0	15.9	0	0	0	4.9	0.0	29.91
	11/12/2013	14:01	0.1	18.7	0	2	0	2.6	0.0	2	93	0.1	19.7	0	2	0	2.7	0.0	29.91
	10/17/2014	11:34	0.0	17.2	0.0	0.0	0.0	3.0	0.0	2	93	0.0	16.5	0.0	0.0	5.0	3.6	0.0	29.33
	10/20/2015	15:23	0.0	17.0	0.0	0.0	0.0	3.7	0.0	2	93	0.0	17.3	0.0	0.0	0.0	3.5	0.0	29.88
	10/18/2016	15:29	0.0	16.8	0.0	0	0.0	3.0	0.0	2	93	0.0	16.3	0.0	0	0.0	3.5	0.0	29.65
	10/18/2017	11:36	0.0	17.6	0.0	0.0	0.0	2.7	0.0	2	93	0.0	17.6	0.0	0.0	0.0	3.5	0.0	30.00
	10/18/2018	11:20	0.0	14.2	2.0	0.0	0.0	5.3	0.0	2	93	0.0	14.6	2.0	0.0	0.0	5.2	0.0	30.10
	10/16/2019	9:00	0.0	18.3	0.0	0.0	0.0	2.3	0.2	2	93	0.0	18.8	0.0	0.0	0.0	2.5	0.2	29.93
	10/13/2020	8:15	0.0	20.4	0.0	0.0	0.0	1.6	0.0	2	93	0.0	20.4	0.0	0.0	0.0	0.0	0.0	29.67
	10/20/2021	8:44	0.0	16.0	0.0	6.0	1.0	4.7	0.0	2	93	0.0	15.7	0.0	0.0	1.0	4.9	0.0	29.55
	10/27/2022	8:13	0.0	16.8	0.0	6.0	0.0	4.1	0.0	2	93	0.0	20.9	0.0	4.0	0.0	0.1	0.0	29.56

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
LGP-09-06X	10/26/2012	9:28	0.2	10.2	0	0	0	8.6	0.0	2	120	0.0	10.9	0	0	0	8.4	0.0	29.91
	11/12/2013	14:06	0.1	15.5	0	1	0	5.8	0.0	2	120	0.1	15.7	0	1	0	5.8	0.0	29.91
	10/17/2014	11:32	0.5	6.9	7.0	0.0	5.0	6.2	0.0	2	120	0.0	6.6	1.0	0.0	5.0	6.5	0.0	29.32
	10/20/2015	15:30	0.2	14.1	0.0	0.0	0.0	5.6	0.0	2	120	0.0	14.1	0.0	0.0	0.0	5.8	0.0	29.88
	10/18/2016	15:23	0.0	14.4	0.0	0	0.0	5.0	0.0	2	120	0.0	13.7	0.0	0	0.0	5.5	0.0	29.65
	10/18/2017	11:41	0.0	14.4	0.0	0.0	0.0	6.1	0.0	2	120	0.0	14.5	0.0	0.0	0.0	6.1	0.0	30.01
	10/18/2018	11:15	0.0	9.5	0.0	0.0	0.0	10.1	0.0	2	120	0.0	11.6	1.0	0.0	0.0	8.5	0.0	30.10
	10/16/2019	8:52	0.0	16.2	0.0	0.0	0.0	0.2	0.2	2	120	0.0	16.1	0.0	0.0	0.0	5.0	0.2	29.93
	10/13/2020	8:25	0.0	20.9	0.0	0.0	0.0	3.6	0.0	2	120	0.0	17.2	0.0	0.0	0.0	3.6	0.0	29.67
	10/20/2021	8:51	0.3	14.2	0.0	8.0	0.0	12.1	0.0	2	120	0.0	21.4	0.0	0.0	1.0	0.1	0.0	29.55
	10/27/2022	8:10	0.0	10.2	0.0	6.0	0.0	7.6	0.0	2	120	0.0	20.9	0.0	4.0	0.0	0.1	0.0	29.56
LGP-05-07X	10/26/2012	9:45	0.1	15.4	0	0	0	7.7	0.0	2	65	0.0	13.2	0	0	0	6.8	0.0	29.91
	11/12/2013	13:55	0.1	19.8	0	1	0	2.0	0.0	2	65	0.0	19.6	0	0	0	2.7	0.0	29.91
	10/17/2014	11:25	0.1	1.1	0.0	100.0	0.0	20.6	10.4	2	65	0.2	0.0	0.0	100.0	0.0	21.9	8.4	29.33
	10/20/2015	15:17	0.1	10.8	0.0	0.0	0.0	7.3	0.0	2	65	0.0	8.1	0.0	0.0	0.0	12.7	0.0	29.88
	10/18/2016	15:15	0.1	10.7	0.0	4	0.0	10.4	0.2	2	65	0.0	9.4	0.0	0	0.0	11.9	0.0	29.65
	10/18/2017	11:27	0.0	17.9	0.0	0.0	0.0	3.9	0.0	2	65	0.0	18.4	0.0	0.0	0.0	3.8	0.0	30.01
	10/18/2018	11:08	0.0	12.5	1.0	7.0	0.0	10.5	0.4	2	65	0.0	16.3	0.0	0.0	0.0	6.7	0.0	30.10
	10/16/2019	9:09	0.0	18.2	0.0	0.0	0.0	3.7	0.2	2	65	0.0	15.4	0.0	0.0	0.0	6.0	0.2	NR
	10/13/2020	8:40	0.0	21.9	0.0	0.0	0.0	0.1	0.0	2	65	0.0	12.2	0.0	0.0	0.0	6.1	0.0	29.65
	10/20/2021	8:56	0.0	12.8	0.0	0.0	0.0	8.1	1.0	2	65	0.2	13.2	1.0	8.0	0.0	11.3	0.0	29.55
	10/27/2022	8:21	0.0	9.8	0.0	99.0	0.0	8.8	9.4	2	65	0.0	20.9	0.0	5.0	0.0	0.1	0.0	29.56
LGP-05-08X	10/26/2012	9:55	0.8	9.8	0	0	0	4.4	0.0	2	93	0.0	7.7	0	0	0	13.5	0.0	29.91
	11/12/2013	13:42	0.1	17.7	0	0	0	5.2	0.0	2	93	0.0	14.1	0	0	0	8.6	0.0	29.91
	10/17/2014	11:38	0.3	3.8	20.0	17.0	1.0	13.2	0.9	2	93	0.2	0.0	0.0	69.0	4.0	19.8	3.4	29.33
	10/20/2015	15:05	0.0	16.9	0.0	0.0	0.0	7.2	0.0	2	93	0.0	4.7	0.0	0.0	0.0	14.8	0.0	29.88
	10/18/2016	15:10	0.0	9.7	0.0	2	0.0	10.4	0.1	2	93	0.0	1.8	0.0	8	0.0	10.1	0.4	29.65
	10/18/2017	11:18	0.0	12.4	0.0	0.0	0.0	0.4	0.0	2	93	0.0	10.7	0.0	0.0	0.0	10.3	0.0	30.01
	10/18/2018	10:50	0.0	20.9	1.0	0.0	0.0	0.4	0.0	2	93	0.0	17.6	1.0	0.0	0.0	2.5	0.0	30.10
	10/16/2019	9:25	0.0	15.7	0.0	0.0	0.0	6.6	0.2	2	93	0.0	7.0	0.0	0.0	0.0	14.5	0.2	29.93
	10/13/2020	8:55	0.0	17.9	0.0	0.0	0.0	3.9	0.0	2	93	0.0	12.5	0.0	0.0	0.0	0.0	0.0	29.65
	10/20/2021	9:04	1.6	18.7	1.0	52.0	1.0	1.7	0.5	2	93	3.1	2.5	1.0	29.0	1.0	18.6	1.0	29.55
	10/27/2022	8:28	0.0	9.7	0.0	36.0	0.0	4.8	0.7	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-08X	10/26/2012	10:05	0.8	5.6	0	0	1	3.8	0.0	2	185	0.1	2.2	0	4	0	18.6	0.2	29.91
	11/12/2013	13:48	0.2	7.7	0	7	0	14.6	0.2	2	185	0.1	1.8	0	3	0	18.7	0.0	29.91
	10/17/2014	10:40	0.4	1.0	0.0	21.0	5.0	17.2	1.1	2	185	0.3	0.0	0.0	90.0	4.0	20.3	4.4	29.40
	10/20/2015	15:10	0.1	10.5	0.0	5.0	0.0	13.9	0.0	2	185	0.1	0.7	0.0	9.0	0.0	20.3	0.3	29.88
	10/18/2016	15:05	0.1	8.4	0.0	13	0.0	12.0	0.6	2	185	0.2	4.4	0.0	27	0.0	19.3	1.3	29.65
	10/18/2017	11:09	0.0	7.3	0.0	11.0	0.0	15.0	0.5	2	185	0.0	7.8	0.0	0.0	0.0	14.4	0.0	30.01
	10/18/2018	10:56	0.0	8.4	2.0	4.0	0.0	15.7	0.2	2	185	0.0	7.8	2.0	0.0	0.0	16.1	0.0	30.10
	10/16/2019	9:18	0.0	5.9	0.0	0.0	0.0	16.5	0.2	2	185	0.0	2.8	0.0	5.0	0.0	19.3	0.3	NR
	10/13/2020	9:05	0.0	11.1	0.0	4.0	0.0	12.9	0.0	2	185	0.0	3.1	0.0	0.0	0.0	16.7	0.0	29.65
	10/20/2021	9:00	0.3	14.3	1.0	99.0	1.0	8.8	6.1	2	185	1.5	0.2	3.0	19.0	1.0	21.0	4.7	29.55
	10/27/2022	8:33	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2	185	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-09X	10/26/2012	10:15	0.1	13.8	0	0	0	7.2	0.0	2	93	0.0	13.2	0	0	0	7.9	0.0	29.91
	11/12/2013	13:27	0.0	16.9	0	0	0	6.0	0.0	2	93	0.0	18.1	0	0	0	5.4	0.0	29.91
	10/17/2014	8:46	0.0	5.8	0.0	0.0	0.0	9.0	0.0	2	93	0.0	0.5	0.0	0.0	0.0	16.7	0.0	29.40
	10/20/2015	14:55	0.0	16.0	0.0	0.0	0.0	5.1	0.0	2	93	0.0	14.0	0.0	0.0	0.0	6.6	0.0	29.88
	10/18/2016	14:58	0.0	10.6	0.0	0	0.0	9.0	0.0	2	93	0.0	8.3	0.0	0	0.0	11.4	0.0	29.65
	10/18/2017	10:56	0.0	14.3	0.0	0.0	0.0	7.2	0.0	2	93	0.0	14.0	0.0	0.0	0.0	7.5	0.0	30.01
	10/18/2018	10:32	0.0	8.7	1.0	4.0	0.0	13.7	0.2	2	93	0.0	9.9	1.0	0.0	0.0	12.9	0.0	30.10
	10/16/2019	9:53	0.0	14.4	0.0	0.0	0.0	15.2	0.2	2	93	0.0	20.9	0.0	0.0	0.0	7.4	0.2	29.86
	10/13/2020	8:20	0.0	20.4	0.0	0.0	0.0	1.4	0.0	2	93	0.0	16.5	0.0	0.0	0.0	6.6	0.0	29.67
	10/20/2021	9:10	0.0	0.8	1.0	2.0	1.0	10.2	3.5	2	93	0.0	2.0	1.0	0.0	1.0	13.9	0.8	29.55
	10/27/2022	8:37	0.0	9.2	0.0	0.0	0.0	0.1	0.0	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
LGP-09-09X	10/26/2012	10:25	0.4	17.5	0	0	0	1.0	0.0	2	185	0.1	7.3	0	4	0	13.1	0.0	29.91
	11/12/2013	13:32	0.2	11.9	0	0	0	10.2	0.0	2	185	0.0	5.2	0	0	0	15.0	0.0	29.91
	10/17/2014	8:49	0.0	20.7	0.0	0.0	0.0	0.1	0.0	2	185	0.0	0.2	0.0	28.0	6.0	18.5	1.4	29.40
	10/20/2015	15:00	0.1	11.3	0.0	0.0	0.0	9.7	0.0	2	185	0.0	3.7	0.0	0.0	6.0	16.7	0.0	29.88
	10/18/2016	14:48	0.1	5.9	0.0	5	0.0	13.5	0.2	2	185	0.0	1.8	0.0	2	0.0	18.2	0.1	29.65
	10/18/2017	11:00	0.0	10.5	0.0	5.0	0.0	0.1	0.0	2	185	0.0	10.5	0.0	0.0	0.0	11.1	0.0	30.01
	10/18/2018	10:26	1.0	6.7	1.0	32.0	0.0	15.1	1.6	2	185	0.0	7.1	1.0	2.0	0.0	15.2	0.1	30.10
	10/16/2019	9:37	0.0	10.1	0.0	0.0	0.0	10.9	0.2	2	185	0.0	5.4	0.0	0.0	0.0	15.3	0.2	29.93
	10/13/2020	9:30	0.0	13.6	0.0	0.0	0.0	10.7	0.0	2	185	0.0	9.0	0.0	0.0	0.0	13.3	0.0	29.65
	10/20/2021	9:07	0.8	0.4	1.0	99.0	1.0	16.0	8.9	2	185	0.0	0.8	5.0	0.0	1.0	17.4	3.4	29.55
	10/27/2022	8:41	0.0	7.0	0.0	12.0	0.0	9.9	0.4	2	185	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-10X	10/26/2012	10:51	0.1	14.6	0	0	0	4.6	0.0	2	93	0.1	10.1	0	0	0	10.5	0.0	29.89
	11/12/2013	13:15	0.0	20.2	0	0	0	1.9	0.0	2	93	0.0	19.0	0	0	0	4.1	0.0	29.91
	10/17/2014	9:07	0.0	2.3	0.0	10.0	0.0	16.4	8.0	2	93	0.0	0.0	0.0	100.0	0.0	21.4	14.0	29.40
	10/20/2015	14:40	0.0	14.8	0.0	0.0	0.0	5.3	0.0	2	93	0.0	6.7	0.0	0.0	0.0	10.2	0.0	29.88
	10/18/2016	14:38	0.3	8.3	0.0	46	0.0	11.7	2.3	2	93	0.0	1.6	0.0	100	0.0	20.1	5.2	29.65
	10/18/2017	10:47	0.0	16.9	0.0	0.0	0.0	3.2	0.0	2	93	0.0	15.4	0.0	0.0	0.0	6.1	0.0	30.02
	10/18/2018	10:05	0.0	19.3	1.0	7.0	0.0	2.8	0.4	2	93	0.0	20.0	1.0	0.0	0.0	2.3	0.0	30.10
	10/16/2019	10:06	0.0	15.4	0.0	0.0	0.0	5.2	0.2	2	93	0.0	8.3	0.0	0.0	0.0	11.9	0.2	29.86
	10/13/2020	9:45	0.0	19.6	0.0	0.0	0.0	2.6	0.0	2	93	0.0	13.1	0.0	0.0	0.0	0.4	0.0	29.63
	10/20/2021	9:40	0.2	14.5	1.0	14.0	0.0	6.6	2.7	2	93	0.2	15.2	1.0	15.0	0.0	5.3	0.4	29.58
	10/27/2022	8:58	0.0	17.4	0.0	41.0	0.0	8.5	4.4	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-10X	10/26/2012	11:00	0.1	17.2	0	0	0	9.5	0.0	2	148	0.1	7.0	0	0	0	14.4	0.0	29.89
	11/12/2013	13:20	0.1	15.0	0	0	0	8.3	0.0	2	148	0.0	14.3	0	0	0	8.9	0.0	29.91
	10/17/2014	9:09	0.0	1.2	0.0	100.0	0.0	19.8	14.0	2	148	0.1	0.0	0.0	100.0	0.0	23.1	20.5	29.40
	10/20/2015	14:45	0.1	10.4	0.0	0.0	0.0	9.7	0.0	2	148	0.0	2.9	0.0	5.0	0.0	16.5	0.0	29.88
	10/18/2016	14:32	0.0	6.1	0.0	100	0.0	15.9	6.2	2	148	0.0	1.4	0.0	100	0.0	22.0	10.1	29.65
	10/18/2017	10:42	0.0	18.6	0.0	0.0	0.0	2.2	0.0	2	148	0.0	12.0	0.0	0.0	0.0	9.8	0.0	30.02
	10/18/2018	10:11	0.0	20.8	1.0	0.0	0.0	1.6	0.0	2	148	1.0	12.1	1.0	0.0	0.0	11.8	0.0	30.10
	10/16/2019	10:15	0.0	2.5	0.0	5.0	0.0	14.1	0.3	2	148	0.0	2.7	0.0	7.0	0.0	17.7	0.5	29.86
	10/13/2020	9:55	0.0	15.4	0.0	0.0	0.0	6.8	0.0	2	148	0.0	6.2	0.0	0.0	0.0	13.4	0.0	29.63
	10/20/2021	9:45	0.1	21.9	1.0	2.0	0.0	0.1	0.0	2	148	0.0	21.4	1.0	0.0	0.0	0.4	0.0	29.58
	10/27/2022	9:04	0.0	20.9	0.0	0.0	0.0	0.1	0.0	2	148	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-11X	10/26/2012	10:35	0.2	15.9	0	0	0	12.6	0.0	2	83	0.0	9.8	0	0	0	10.8	0.0	29.91
	11/12/2013	13:02	0.1	19.2	0	0	0	2.8	0.0	2	83	0.1	16.1	0	0	0	6.5	0.0	29.91
	10/17/2014	9:20	0.1	3.1	0.0	44.0	5.0	13.2	2.2	2	83	0.0	0.0	0.0	100.0	0.0	19.8	8.7	29.40
	10/20/2015	14:25	0.1	15.5	0.0	0.0	0.0	5.5	0.0	2	83	0.0	8.5	0.0	0.0	0.0	11.6	0.0	29.88
	10/18/2016	14:22	0.2	7.8	0.0	24	0.0	11.7	1.2	2	83	0.1	2.7	0.0	54	0.0	17.8	2.7	29.65
	10/18/2017	10:09	0.0	12.9	0.0	4.0	0.0	9.1	0.1	2	83	0.0	10.4	0.0	0.0	0.0	12.0	0.0	30.02
	10/18/2018	9:58	1.0	11.1	1.0	5.0	0.0	13.0	0.3	2	83	1.0	14.2	1.0	25.0	0.0	11.1	1.3	30.06
	10/16/2019	10:36	0.0	14.8	0.0	0.0	0.0	5.6	0.2	2	83	0.0	8.5	0.0	0.0	0.0	10.9	0.2	29.86
	10/13/2020	10:10	0.0	20.1	0.0	0.0	0.0	1.9	0.0	2	83	0.0	14.3	0.0	0.0	0.0	7.3	0.0	29.63
	10/20/2021	9:29	0.1	12.5	1.0	50.0	1.0	9.9	3.1	2	83	0.0	12.7	1.0	0.0	1.0	10.9	0.8	29.58
	10/27/2022	9:14	0.0	9.2	0.0	22.0	0.0	4.7	0.7	2	83	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-11X	10/26/2012	10:41	1.0	1.5	0	54	0	10.5	0.8	2	139	0.2	0.8	0	3	0	18.8	0.1	29.91
	11/12/2013	13:10	0.4	12.2	0	0	0	9.1	0.0	2	139	0.1	14.0	0	0	0	8.7	0.0	29.91
	10/17/2014	9:22	0.0	16.1	0.0	26.0	5.0	12.6	1.9	2	139	0.2	20.5	0.0	1.0	3.0	0.9	0.2	29.40
	10/20/2015	14:30	0.3	7.7	0.0	20.0	0.0	14.1	0.5	2	139	0.1	2.9	0.0	2.0	3.0	17.2	0.0	29.88
	10/18/2016	14:10	0.1	3.8	0.0	61	0.0	16.3	3.0	2	139	0.1	2.7	0.0	100	0.0	18.4	5.8	29.65
	10/18/2017	10:17	0.0	8.9	0.0	18.0	0.0	15.2	1.0	2	139	0.0	6.5	0.0	0.0	0.0	15.8	0.0	30.02
	10/18/2018	9:51	0.0	8.1	0.0	85.0	0.0	14.1	4.3	2	139	0.0	2.9	1.0	24.0	0.0	18.7	1.2	30.06
	10/16/2019	10:30	0.0	6.8	0.0	0.0	0.0	11.9	0.2	2	139	0.0	4.6	0.0	0.0	0.0	15.0	0.2	29.86
	10/13/2020	10:20	0.4	14.6	0.0	0.0	0.0	9.6	0.2	2	139	0.0	9.9	0.0	0.0	0.0	12.2	0.0	29.63
	10/20/2021	9:33	0.1	21.8	1.0	99.0	0.0	0.1	0.0	2	139	1.5	1.8	1.0	99.0	3.0	14.5	14.8	29.58
	10/27/2022	9:21	0.0	4.6	0.0	46.0	0.0	14.8	2.5	2	139	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56

Table G-2
Historical Gas Monitoring Results
Shepley's Hill Landfill
Devens, Massachusetts

			Initial Readings									Post Purge Readings							
ID	**Date**	**Time**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Purge Rate (lpm)**	**Purge Time (sec)**	**VOC (ppm)**	**0_2 (%)**	**H_2S (ppm)**	**LEL (%)**	**CO (ppm)**	**$C0_2$ (%)**	**CH_4 (%)**	**Bar. Pres.("Hg)**
LGP-05-13X	10/26/2012	11:21	0.0	18.0	0	0	0	5.4	0.0	2	56	0.0	13.3	0	0	0	6.8	0.0	29.88
	11/12/2013	12:43	0.1	19.5	0	0	0	1.6	0.0	2	56	0.0	19.8	0	0	0	2.4	0.0	29.91
	10/17/2014	9:35	0.0	1.3	0.0	56.0	4.0	14.3	2.0	2	56	0.1	0.0	0.0	100.0	0.0	15.3	6.7	29.40
	10/20/2015	14:20	0.1	14.8	0.0	0.0	0.0	4.4	0.0	2	56	0.1	9.5	0.0	0.0	0.0	8.2	0.0	29.88
	10/18/2016	9:40	0.0	14.8	0.0	0	0.0	5.0	0.0	2	56	0.0	13.3	0.0	0	0.0	6.6	0.0	29.72
	10/18/2017	10:00	0.0	18.0	0.0	0.0	0.0	3.2	0.0	2	56	0.0	16.9	0.0	0.0	0.0	4.3	0.0	30.03
	10/18/2018	9:39	0.0	18.6	0.0	2.0	0.0	3.1	0.1	2	56	0.0	18.5	1.0	0.0	0.0	3.8	0.0	30.06
	10/16/2019	11:16	0.0	17.0	0.0	0.0	0.0	3.8	0.2	2	56	0.0	12.5	0.0	0.0	0.0	6.6	0.2	29.85
	10/13/2020	10:35	0.2	19.4	0.0	0.0	0.0	2.3	0.0	2	56	0.0	16.1	0.0	0.0	0.0	6.5	0.0	29.61
	10/20/2021	9:58	0.2	17.7	1.0	6.0	0.0	4.0	0.0	2	56	0.0	21.9	1.0	0.0	0.0	0.1	0.0	29.58
	10/27/2022	9:30	0.0	20.9	0.0	0.0	0.0	0.1	0.0	2	56	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-05-14X	10/26/2012	11:30	0.0	6.1	0	0	0	13.3	0.0	2	93	0.0	8.5	0	0	0	13.4	0.0	29.88
	11/12/2013	12:53	0.1	15.2	0	0	0	7.2	0.0	2	93	0.0	14.2	0	0	0	8.7	0.0	29.91
	10/17/2014	9:44	0.0	5.6	0.0	100.0	5.0	8.8	0.6	2	93	0.0	0.0	0.0	37.0	5.0	15.5	1.9	29.40
	10/20/2015	14:10	0.2	15.7	0.0	13.0	0.0	4.7	0.4	2	93	0.1	9.9	0.0	6.0	5.0	9.6	0.1	29.88
	10/18/2016	9:05	0.0	9.4	0.0	0	0.0	10.2	0.0	2	93	0.0	8.9	0.0	0	0.0	10.8	0.0	29.73
	10/18/2017	9:52	0.0	11.8	0.0	0.0	0.0	9.7	0.0	2	93	0.0	11.5	0.0	0.0	0.0	11.1	0.0	29.95
	10/18/2018	9:31	0.0	1.0	1.0	31.0	0.0	11.0	1.6	2	93	0.0	0.2	0.0	39.0	0.0	11.9	1.9	30.06
	10/16/2019	11:22	0.0	12.4	0.0	0.0	0.0	7.7	0.2	2	93	0.0	12.5	0.0	0.0	0.0	7.5	0.2	29.85
	10/13/2020	10:50	0.0	17.9	0.0	0.0	0.0	3.0	0.0	2	93	0.0	14.5	0.0	0.0	0.0	7.5	0.0	29.61
	10/20/2021	10:22	0.0	6.8	2.0	0.0	1.0	8.1	0.0	2	93	0.0	5.3	2.0	1.0	11.0	9.0	0.0	29.58
	10/27/2022	9:53	0.0	11.5	0.0	0.0	0.0	7.5	0.0	2	93	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56
LGP-09-15X	10/26/2012	11:39	0.1	15.9	0	0	0	6.6	0.0	2	111	0.0	13.7	0	0	0	7.0	0.0	29.88
	11/12/2013	11:25	0.0	16.4	0	0	0	5.8	0.0	2	111	0.0	16.4	0	0	0	5.9	0.0	29.98
	10/17/2014	9:53	0.0	16.7	1.0	0.0	60.0	5.1	0.0	2	111	0.0	16.4	0.0	0.0	0.0	5.6	0.0	29.40
	10/20/2015	13:50	0.1	16.3	0.0	0.0	0.0	4.6	0.0	2	111	0.0	15.3	0.0	0.0	0.0	6.1	0.0	29.88
	10/18/2016	8:29	0.0	15.6	0.0	0	0.0	4.8	0.0	2	111	0.0	14.8	0.0	0	0.0	5.8	0.0	29.73
	10/18/2017	9:34	0.0	18.0	0.0	0.0	0.0	4.1	0.0	2	111	0.0	16.6	0.0	0.0	0.0	6.0	0.0	30.01
	10/18/2018	9:15	0.0	11.7	1.0	0.0	0.0	9.3	0.0	2	111	0.0	10.6	1.0	0.0	0.0	10.5	0.0	30.06
	10/16/2019	11:33	0.0	17.0	0.0	0.0	0.0	4.2	0.2	2	111	0.0	16.0	0.0	0.0	0.0	5.7	0.2	29.85
	10/13/2020	11:15	0.0	18.5	0.0	0.0	0.0	13.4	0.0	2	111	0.0	17.4	0.0	0.0	0.0	4.5	0.0	29.61
	10/20/2021	10:06	0.0	16.5	1.0	0.0	0.0	4.8	0.0	2	111	0.0	11.7	1.0	0.0	0.0	8.4	0.0	29.58
	10/27/2022	9:36	0.0	17.0	0.0	0.0	0.0	3.5	0.0	2	111	0.0	20.9	0.0	0.0	0.0	0.1	0.0	29.56

Notes:

VOC = Volatile Organic Compounds
O_2 = Oxygen
LEL = Lower Explosive Limit
CO = Carbon Monoxide
CO_2 = Carbon Dioxide
CH_4 = Methane
H_2S = Hydrogen Sulfide
"Hg = inches of Mercury
lpm = Liters per minute
sec = Seconds
ppm = Parts per million
% = Percentage

Table G-3
Landfill Gas Probe Construction Details
Shepley's Hill Landfill
Devens, Massachusetts

Gas Probe ID	Gas Probe Screen Interval (ft bgs)	Screen Length (ft)
LGP-01-01X	6.4 to 7.4	1
LGP-09-01XA	7.0 to 17.0	10
LGP-09-01XB	19.0 to 28.0	9
LGP-01-02X	5.0 to 6.0	1
LGP-09-02X	6.0 to 21.0	15
LGP-01-03X	5.0 to 6.0	1
LGP-09-03X	6.0 to 18.0	12
LGP-01-04X	3.0 to 4.0	1
LGP-09-04X	4.0 to 9.0	5
LGP-05-05X	6.0 to 7.0	1
LGP-09-05X (1)	7.0 to 14.5	7.5
LGP-05-06X	6.0 to 7.0	1
LGP-09-06X	7.0 to 12.0	5
LGP-05-07X (2)	3.0 to 4.0	1
LGP-05-08X	6.0 to 7.0	1
LGP-09-08X	7.0 to 19.0	12
LGP-05-09X	6.0 to 7.0	1
LGP-09-09X	7.0 to 19.0	12
LGP-05-10X	6.0 to 7.0	1
LGP-09-10X	7.0 to 14.0	7
LGP-05-11X	5.0 to 6.0	1
LGP-09-11X	7.0 to 14.0	7
LGP-05-13X	2.0 to 3.0	1
LGP-05-14X	6.0 to 7.0	1
LGP-09-15X	4.0 to 10.0	6

Notes:

(1) Bedrock was encountered at a depth of 15 ft bgs. Proposed total depth (19.60 ft) was unattainable due to refusal.

(2) Bedrock was encountered at a depth of 4 ft bgs. Installation of additonal gas probe was unattainable due to refusal.

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

2022

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	710.50	744	95%	2,328,000	54.61	52.15
February	638.50	672	95%	2,096,800	54.73	52.00
March	711.80	744	96%	2,335,000	54.67	52.31
April	639.50	720	89%	2,099,000	54.70	48.59
May	584.80	744	79%	1,930,700	55.02	43.25
June	491.00	720	68%	1,615,500	54.84	37.40
July	605.80	744	81%	2,006,900	55.21	44.96
August	664.30	744	89%	2,166,400	54.35	48.53
September	568.80	720	79%	1,801,200	52.78	41.69
October	692.50	744	93%	2,271,525	54.67	50.89
November	669.50	720	93%	2,232,400	55.57	51.68
December	711.00	744	96%	2,373,400	55.64	53.17
Yearly Averages	**640.67**		**88%**	**2,104,735**	**54.73**	**48.05**
			Total Discharged	*25,256,825*		

2021

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	689.50	744	93%	2,239,400	54.13	50.17
February	552.75	672	82%	1,808,400	54.53	44.85
March	713.00	744	96%	2,333,700	54.55	52.28
April	690.30	720	96%	2,259,700	54.56	52.31
May	711.50	744	96%	2,331,900	54.62	52.24
June	577.30	720	80%	1,887,700	54.50	43.70
July	690.00	744	93%	2,240,000	54.11	50.18
August	418.30	744	56%	1,336,500	53.25	29.94
September	617.00	720	86%	1,787,400	48.28	41.38
October	713.80	744	96%	2,057,400	48.04	46.09
November	662.50	720	92%	2,185,400	54.98	50.59
December	699.50	744	94%	2,301,900	54.85	51.57
Yearly Averages	**644.62**		**88%**	**2,064,117**	**53.37**	**47.11**
			Total Discharged	*24,769,400*		

2020

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	714.00	744	96%	2,322,300	54.21	52.02
February	666.80	696	96%	2,168,200	54.19	51.92
March	712.50	744	96%	2,313,900	54.13	51.83
April	659.00	720	92%	2,189,200	55.37	50.68
May	714.80	744	96%	2,328,000	54.28	52.15
June	685.80	720	95%	2,235,100	54.32	51.74
July	711.80	744	96%	2,318,100	54.28	51.93
August	680.00	744	91%	2,218,500	54.38	49.70
September	680.80	720	95%	2,213,300	54.18	51.23
October	714.80	744	96%	2,326,700	54.25	52.12
November	690.50	720	96%	2,243,900	54.16	51.94
December	662.30	744	89%	2,162,400	54.42	48.44
Yearly Averages	**691.09**		**94%**	**2,253,300**	**54.35**	**51.31**
			Total Discharged	*27,039,600*		

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

2019

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	632.50	744	85%	2,004,100	52.81	44.89
February	633.80	672	94%	2,066,100	54.33	51.24
March	678.30	744	91%	2,268,000	55.73	50.81
April	689.80	720	96%	2,246,200	54.27	52.00
May	714.50	744	96%	2,321,500	54.15	52.00
June	122.00	720	17%	393,300	53.73	9.10
July	697.50	744	94%	2,265,400	54.13	50.75
August	709.80	744	95%	2,309,700	54.23	51.74
September	688.10	720	96%	2,237,100	54.19	51.78
October	709.00	744	95%	2,308,000	54.25	51.70
November	689.00	720	96%	2,241,200	54.21	51.88
December	701.50	744	94%	2,284,500	54.28	51.18
Yearly Averages	**638.82**		**87%**	**2,078,758**	**54.19**	**47.42**
			Total Discharged	*24,945,100*		

2018

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	697.50	744	94%	2,347,800	56.10	52.59
February	599.50	672	89%	2,108,500	58.62	52.29
March	711.00	744	96%	2,340,000	54.85	52.42
April	674.08	720	94%	2,208,300	54.60	51.12
May	679.25	744	91%	2,285,700	56.08	51.20
June	679.00	720	94%	2,244,200	55.09	51.95
July	697.25	744	94%	2,301,600	55.02	51.56
August	710.50	744	95%	2,313,500	54.27	51.83
September	666.75	720	93%	2,215,300	55.38	51.28
October	704.75	744	95%	2,276,800	53.84	51.00
November	269.42	720	37%	903,800	55.91	20.92
December	435.92	744	59%	1,404,300	53.69	31.46
Yearly Averages	**627.08**		**86%**	**2,079,150**	**55.29**	**47.47**
			Total Discharged	*24,949,800*		

2017

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	707.42	744	95%	2,318,600	54.63	51.94
February	632.50	672	94%	2,072,500	54.61	51.40
March	711.67	744	96%	2,325,100	54.45	52.09
April	667.25	720	93%	2,182,300	54.51	50.52
May	702.95	744	94%	2,287,400	54.23	51.24
June	683.75	720	95%	2,234,300	54.46	51.72
July	700.75	744	94%	2,289,200	54.45	51.28
August	640.75	744	86%	2,281,000	59.33	51.10
September	708.75	720	98%	2,337,900	54.98	54.12
October	712.00	744	96%	2,328,400	54.50	52.16
November	609.80	720	85%	1,975,400	53.99	45.73
December	584.00	744	78%	2,049,700	58.50	45.92
Yearly Averages	**671.80**		**92%**	**2,223,483**	**55.22**	**50.77**
			Total Discharged	*26,681,800*		

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

2016

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	704.90	744	95%	2,583,000	61.07	57.86
February	665.80	696	96%	2,209,000	55.30	52.90
March	714.30	744	96%	2,359,700	55.06	52.86
April	676.30	720	94%	2,242,200	55.26	51.90
May	714.20	744	96%	2,366,500	55.22	53.01
June	686.40	720	95%	2,277,300	55.30	52.72
July	715.00	744	96%	2,369,200	55.23	53.07
August	706.70	744	95%	2,344,800	55.30	52.53
September	691.10	720	96%	2,292,000	55.27	53.06
October	712.80	744	96%	2,347,300	54.88	52.58
November	679.75	720	94%	2,259,400	55.40	52.30
December	713.75	744	96%	2,332,600	54.47	52.25
Yearly Averages	**698.42**		**95%**	**2,331,917**	**55.65**	**53.09**
			Total Discharged	*27,983,000*		

2015

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	492.10	744	66%	1,600,100	54.19	35.84
February	500.80	672	75%	1,779,800	59.23	44.14
March	590.80	744	79%	1,992,100	56.20	44.63
April	639.10	720	89%	2,198,900	57.34	50.90
May	630.80	744	85%	2,118,300	55.97	47.45
June	600.80	720	83%	2,073,000	57.51	47.99
July	603.10	744	81%	2,037,000	56.29	45.63
August	658.50	744	89%	2,454,900	62.13	54.99
September	680.50	720	95%	2,530,300	61.97	58.57
October	694.10	744	93%	2,577,600	61.89	57.74
November	680.70	720	95%	2,522,000	61.75	58.38
December	645.20	744	87%	2,399,400	61.98	53.75
Yearly Averages	**618.04**		**85%**	**2,190,283**	**58.87**	**50.00**
			Total Discharged	*26,283,400*		

2014

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	636.20	744	86%	1,905,500	49.92	42.69
February	589.60	672	88%	1,773,000	50.12	43.97
March	706.50	744	95%	2,112,000	49.82	47.31
April	567.50	720	79%	1,696,300	49.82	39.27
May	710.30	744	95%	2,124,000	49.84	47.58
June	649.44	720	90%	1,943,600	49.88	44.99
July	671.60	744	90%	2,019,100	50.11	45.23
August	727.80	744	98%	2,182,900	49.99	48.90
September	621.20	720	86%	1,871,900	50.22	43.33
October	549.11	744	74%	1,646,600	49.98	36.89
November	657.49	720	91%	1,980,900	50.21	45.85
December	648.68	744	87%	1,948,100	50.05	43.64
Yearly Averages	**644.62**		**88%**	**1,933,658**	**50.00**	**44.14**
			Total Discharged	*23,203,900*		

2013

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	592.80	744	80%	1,776,200	49.94	39.79
February	436.00	672	65%	1,310,700	50.10	32.51
March	644.80	744	87%	1,926,400	49.79	43.15
April	686.80	720	95%	2,055,600	49.88	47.58
May	506.50	744	68%	1,492,100	49.10	33.43
June	687.80	720	96%	2,055,700	49.81	47.59
July	677.13	744	91%	2,023,950	49.82	45.34
August	731.37	744	98%	2,185,000	49.79	48.95
September	563.10	720	78%	1,679,600	49.71	38.88
October	591.80	744	80%	1,769,700	49.84	39.64
November	623.62	720	87%	1,865,600	49.86	43.19
December	685.40	744	92%	2,055,100	49.97	46.04
Yearly Averages	**618.93**		**85%**	**1,849,638**	**49.80**	**42.17**
			Total Discharged	*22,195,650*		

2012

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	623.50	744	84%	1,673,400	44.73	37.49
February	547.65	696	79%	1,642,300	49.98	39.33
March	536.05	744	72%	1,530,400	47.58	34.28
April	596.70	720	83%	1,512,300	42.24	35.01
May	470.50	744	63%	1,458,500	51.66	32.67
June	664.60	720	92%	1,938,100	48.60	44.86
July	587.80	744	79%	1,557,500	44.16	34.89
August	661.30	744	89%	1,612,200	40.63	36.12
September	684.95	720	95%	1,807,400	43.98	41.84
October	579.85	744	78%	1,729,100	49.70	38.73
November	660.30	720	92%	1,979,100	49.95	45.81
December	641.10	744	86%	1,915,900	49.81	42.92
Yearly Averages	**604.53**		**83%**	**1,696,350**	**46.92**	**38.66**
			Total Discharged	*20,356,200*		

2011

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	667.50	744	90%	1,907,600	47.63	42.73
February	628.50	672	94%	1,766,400	46.84	43.81
March	490.75	744	66%	1,413,900	48.02	31.67
April	622.50	720	86%	1,834,200	49.11	42.46
May	692.25	744	93%	2,064,700	49.71	46.25
June	628.25	720	87%	1,872,000	49.66	43.33
July	591.25	744	79%	1,642,500	46.30	36.79
August	649.00	744	87%	1,904,500	48.91	42.66
September	631.75	720	88%	1,825,500	48.16	42.26
October	492.00	744	66%	1,438,700	48.74	32.23
November	639.75	720	89%	1,907,200	49.69	44.15
December	621.75	744	84%	1,843,300	49.41	41.29
Yearly Averages	**612.94**		**84%**	**1,785,042**	**48.51**	**40.80**
			Total Discharged	*21,420,500*		

2010

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	699.00	744	94%	2,030,000	48.40	45.47
February	576.50	672	86%	1,695,500	49.02	42.05
March	656.00	744	88%	1,922,900	48.85	43.08
April	670.25	720	93%	1,986,900	49.41	45.99
May	674.25	744	91%	1,997,200	49.37	44.74
June	615.50	720	85%	1,822,400	49.35	42.19
July	549.25	744	74%	1,606,700	48.75	35.99
August	621.50	744	84%	1,552,700	41.64	34.78
September	524.75	720	73%	1,207,200	38.34	27.94
October	597.50	744	80%	1,768,600	49.33	39.62
November	633.10	720	88%	1,869,600	49.22	43.28
December	645.25	744	87%	1,833,600	47.36	41.08
Yearly Averages	**621.90**		**85%**	**1,774,442**	**47.42**	**40.52**
			Total Discharged	*21,293,300*		

2009

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	641.50	744	86%	1,602,500	41.63	35.90
February	638.50	672	95%	1,625,700	42.44	40.32
March	334.25	744	45%	909,400	45.35	20.37
April	446.50	720	62%	1,292,500	48.25	29.92
May	553.25	744	74%	1,631,000	49.13	36.54
June	612.75	720	85%	1,793,400	48.78	41.51
July	625.50	744	84%	1,830,700	48.78	41.01
August	665.58	744	89%	1,935,700	48.47	43.36
September	639.50	720	89%	1,879,100	48.97	43.50
October	620.50	744	83%	1,832,600	49.22	41.05
November	648.25	720	90%	1,909,100	49.08	44.19
December	608.25	744	82%	1,773,100	48.58	39.72
Yearly Averages	**586.19**		**80%**	**1,667,900**	**47.39**	**38.12**
			Total Discharged	*20,014,800*		

2008

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	617.75	744	83%	1,589,100	42.87	35.60
February	530.50	696	76%	1,418,100	44.55	33.96
March	639.75	744	86%	1,596,600	41.59	35.77
April	620.92	720	86%	1,586,500	42.58	36.72
May	636.25	744	86%	1,616,300	42.34	36.21
June	569.50	720	79%	1,424,400	41.69	32.97
July	617.50	744	83%	1,591,800	42.96	35.66
August	437.75	744	59%	1,101,700	41.95	24.68
September	656.50	720	91%	1,652,800	41.96	38.26
October	492.55	744	66%	1,238,900	41.92	27.75
November	664.00	720	92%	1,649,500	41.40	38.18
December	610.00	744	82%	1,521,400	41.57	34.08
Yearly Averages	**591.08**		**81%**	**1,498,925**	**42.28**	**34.15**
			Total Discharged	*17,987,100*		

2007

Table G-4
2022 ATP Flow Rate Summary
Shepley's Hill Landfill
Devens, Massachusetts

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	471.00	744	63%	739,600	26.17	16.57
February	0.00	672	0%	0	0.00	0.00
March	461.00	744	62%	672,400	24.31	15.06
April	572.00	720	79%	854,000	24.88	19.77
May	657.50	744	88%	974,700	24.71	21.83
June	627.25	720	87%	942,200	25.04	21.81
July	533.50	744	72%	970,500	30.32	21.74
August	599.50	744	81%	1,563,400	43.46	35.02
September	659.75	720	92%	1,809,100	45.70	41.88
October	629.92	744	85%	1,616,000	42.76	36.20
November	544.50	720	76%	1,436,200	43.96	33.25
December	630.00	744	85%	1,629,200	43.10	36.50
Yearly Averages	**532.16**		**72%**	**1,100,608**	**31.20**	**24.97**
			Total Discharged	*13,207,300*		

2006

	Total Run Time (Hours)	Total Available Hours Per Month	Percent Online	Gallons Discharged	Average Online Flow (GPM)	Average Effective Flow Rate (GPM)
January	0.00	744	0%	0	0.00	0.00
February	0.00	672	0%	0	0.00	0.00
March	Not Reported	744	#VALUE!	555,800	25.00	12.45
April	Not Reported	720	#VALUE!	833,600	25.00	19.30
May	Not Reported	744	#VALUE!	941,700	25.00	21.10
June	Not Reported	720	#VALUE!	979,000	25.00	22.66
July	Not Reported	744	#VALUE!	646,600	25.00	14.48
August	Not Reported	744	#VALUE!	327,200	25.00	7.33
September	Not Reported	720	#VALUE!	453,500	25.00	10.50
October	Not Reported	744	#VALUE!	597,500	25.00	13.38
November	Not Reported	720	#VALUE!	562,500	25.00	13.02
December	Not Reported	744	#VALUE!	606,800	25.00	13.59
Yearly Averages	**0.00**		**#VALUE!**	**542,017**	**20.83**	**12.32**
			Total Discharged	*6,504,200*		

Note: Run times for 2006 were not reported. However, according to the 2006 Annual Report, the average online flowrate was 25 gpm for 2006.

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
1/1/2022	24	78,100	54.2	System online and operating.
1/2/2022	24	78,200	54.3	System online and operating.
1/3/2022	19.5	65,900	56.3	System offline between 0715 and 1145 to replace Pump P1 on microfilter skid.
1/4/2022	7.5	24,900	55.3	System offline at 0730 for CIP activities.
1/5/2022	11.75	38,700	54.9	System online at 1215 following CIP activities.
1/6/2022	24	78,700	54.7	System online and operating.
1/7/2022	24	78,500	54.5	System online and operating.
1/8/2022	24	78,600	54.6	System online and operating.
1/9/2022	24	79,200	55.0	System online and operating.
1/10/2022	24	78,200	54.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/11/2022	24	79,300	55.1	System online and operating.
1/12/2022	23.75	77,800	54.6	System offline between 0915 and 0930 for FBRO pump out. Air sparged IPC. Manually pumped excess sludge.
1/13/2022	24	78,000	54.2	System online and operating.
1/14/2022	24	78,800	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/15/2022	24	77,600	53.9	System online and operating.
1/16/2022	24	79,600	55.3	System online and operating.
1/17/2022	24	77,600	53.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/18/2022	24	79,600	55.3	System online and operating.
1/19/2022	24	77,600	53.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/20/2022	24	79,600	55.3	System online and operating.
1/21/2022	24	77,700	54.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/22/2022	24	79,600	55.3	System online and operating.
1/23/2022	24	78,500	54.5	System online and operating.
1/24/2022	24	78,800	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/25/2022	24	78,200	54.3	FBRO pumped out. Air sparged IPC. Manually pumped excess sludge.
1/26/2022	24	78,400	54.4	System online and operating.
1/27/2022	24	78,700	54.7	System online and operating.
1/28/2022	24	78,300	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
1/29/2022	24	78,200	54.3	System online and operating.
1/30/2022	24	79,100	54.9	System online and operating.
1/31/2022	24	78,000	54.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.

Total	**710.5**	**2,328,000**	
Total Available Hours	**744**	**Average On-line Flow**	**54.6**

Percent Online	**95**

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
2/1/2022	7.25	25,700	59.1	System offline at 0715 for CIP activities.
2/2/2022	9.25	32,500	58.6	System online at 1445 following CIP activities.
2/3/2022	24	79,000	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/4/2022	24	78,800	54.7	System online and operating.
2/5/2022	24	78,500	54.5	System online and operating.
2/6/2022	24	78,900	54.8	System online and operating.
2/7/2022	24	79,100	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/8/2022	23	75,000	54.3	System offline between 0930 and 1030 for FBRO pump out. Air sparged IPC. Manually pumped excess sludge.
2/9/2022	24	79,500	55.2	System online and operating.
2/10/2022	24	78,500	54.5	System online and operating.
2/11/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/12/2022	24	78,600	54.6	System online and operating.
2/13/2022	24	78,400	54.4	System online and operating.
2/14/2022	24	78,900	54.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/15/2022	24	78,400	54.4	System online and operating.
2/16/2022	24	79,000	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/17/2022	24	78,400	54.4	System online and operating.
2/18/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/19/2022	24	79,000	54.9	System online and operating.
2/20/2022	24	78,200	54.3	System online and operating.
2/21/2022	24	79,400	55.1	System online and operating.
2/22/2022	23	74,300	53.8	System offline between 0930 and 1030 for FBRO pump out. Air sparged IPC. Manually pumped excess sludge.
2/23/2022	24	77,600	53.9	System online and operating.
2/24/2022	24	79,000	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
2/25/2022	24	79,100	54.9	System online and operating..
2/26/2022	24	78,100	54.2	System online and operating.
2/27/2022	24	78,900	54.8	System online and operating.
2/28/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.

Total	**638.5**	**2,096,800**	
Total Available Hours	**672**	**Average On-line Flow**	**54.7**

Percent Online	**95**

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
3/1/2022	7	25,500	60.7	System offline at 0700 for CIP activities.
3/2/2022	12	40,300	56.0	System online at 1200 following CIP activities.
3/3/2022	24	78,600	54.6	System online and operating.
3/4/2022	22	74,200	56.2	System offline between 1045 and 1245 for ClO2 valve repair. Air sparged IPC. Manually pumped excess sludge.
3/5/2022	24	78,100	54.2	System online and operating.
3/6/2022	24	79,300	55.1	System online and operating.
3/7/2022	24	79,000	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/8/2022	23	74,500	54.0	System offline between 0945 and 1045 for FBRO pump out. Air sparged IPC. Manually pumped excess sludge.
3/9/2022	24	78,600	54.6	System online and operating.
3/10/2022	24	79,400	55.1	System online and operating.
3/11/2022	24	77,900	54.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/12/2022	24	79,200	55.0	System online and operating.
3/13/2022	24	74,800	51.9	System online and operating.
3/14/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/15/2022	24	79,400	55.1	System online and operating.
3/16/2022	24	78,900	54.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/17/2022	24	78,000	54.2	System online and operating.
3/18/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/19/2022	24	78,300	54.4	System online and operating.
3/20/2022	24	78,900	54.8	System online and operating.
3/21/2022	24	78,500	54.5	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/22/2022	23.75	78,500	55.1	System offline between 0945 and 1000 for FBRO pump out.
3/23/2022	24	78,600	54.6	System online and operating.
3/24/2022	24	79,100	54.9	System online and operating.
3/25/2022	24	77,500	53.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/26/2022	24	79,500	55.2	System online and operating.
3/27/2022	24	77,900	54.1	System online and operating.
3/28/2022	24	79,700	55.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/29/2022	24	77,900	54.1	System online and operating.
3/30/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
3/31/2022	24	78,900	54.8	System online and operating.

Total	**711.8**	**2,335,000**	
Total Available Hours	**744**	**Average On-line Flow**	**54.7**
Percent Online	**96**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
4/1/2022	24	78,300	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/2/2022	24	79,000	54.9	System online and operating.
4/3/2022	24	78,700	54.7	System online and operating.
4/4/2022	8.25	28,500	57.6	System offline at 0815 for CIP activities.
4/5/2022	9.25	31,600	56.9	System online at 1445 following CIP activities. FBRO pumped out.
4/6/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/7/2022	24	79,100	54.9	System online and operating.
4/8/2022	23.5	76,600	54.3	System offline between 0915 and 0945 for chlorine gas cylinder exchange. Air sparged IPC. Manually pumped excess sludge.
4/9/2022	24	78,800	54.7	System online and operating.
4/10/2022	24	79,000	54.9	System online and operating.
4/11/2022	24	78,200	54.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/12/2022	24	79,000	54.9	System online and operating.
4/13/2022	24	78,200	54.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/14/2022	24	78,900	54.8	System online and operating.
4/15/2022	24	77,400	53.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/16/2022	17.50	56,600	53.9	System offline at 0615 due to a low pressure alarm. Replaced microfilter I/O card and restart system at 1245.
4/17/2022	16.75	56,800	56.5	System offline at 1645 due to low pressure alarm and faulty air compressor.
4/18/2022	0	0	0.0	System offline.
4/19/2022	12.25	39,200	53.3	System online at 1145 following air compressor maintenance. FBRO pumped out.
4/20/2022	24	79,100	54.9	System online and operating.
4/21/2022	24	78,200	54.3	System online and operating.
4/22/2022	24	78,900	54.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/23/2022	24	78,300	54.4	System online and operating.
4/24/2022	24	79,100	54.9	System online and operating.
4/25/2022	24	78,800	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/26/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/27/2022	24	78,400	54.4	System online and operating.
4/28/2022	24	79,000	54.9	System online and operating.
4/29/2022	24	78,300	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
4/30/2022	24	79,200	55.0	System online and operating.

Total	**639.5**	**2,099,000**	
Total Available Hours	**720**	**Average On-line Flow**	**54.7**
Percent Online	**89**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
5/1/2022	9.5	32,200	56.5	System offline at 0930 due to a low pressure alarm.
5/2/2022	0	5,700	0.0	System remains offline for CIP activities.
5/3/2022	0	0	0.0	System remains offline for air compressor troubleshooting.
5/4/2022	0	3,000	0.0	CIP concludes. System remains offline due to faulty air compressor.
5/5/2022	0	0	0.0	System remains offline offline due to faulty air compressor.
5/6/2022	9.5	30,100	52.8	System online at 1430 following air compressor repairs.
5/7/2022	24	78,300	54.4	System online and operating.
5/8/2022	24	79,200	55.0	System online and operating.
5/9/2022	24	78,400	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/10/2022	24	79,600	55.3	System online and operating.
5/11/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/12/2022	24	79,000	54.9	System online and operating.
5/13/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/14/2022	24	78,300	54.4	System online and operating.
5/15/2022	24	79,300	55.1	System online and operating.
5/16/2022	19	62,600	54.9	System offline at 0645 due to a power failure. Restart system at 1145. Air sparged IPC. Manually pumped excess sludge.
5/17/2022	9.5	35,000	61.4	System offline at 0930 for FBRO pump out. Sytem remains off due to a broken static mixer on the polymer skid.
5/18/2022	9.25	28,600	51.5	System online at 1445 following static mixer replacement.
5/19/2022	24	79,100	54.9	System online and operating.
5/20/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/21/2022	24	79,200	55.0	System online and operating.
5/22/2022	24	78,800	54.7	System online and operating.
5/23/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/24/2022	24	78,200	54.3	System online and operating.
5/25/2022	24	79,300	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/26/2022	24	78,800	54.7	System online and operating.
5/27/2022	24	79,100	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
5/28/2022	24	78,100	54.2	System online and operating.
5/29/2022	24	79,100	54.9	System online and operating.
5/30/2022	24	78,200	54.3	System online and operating.
5/31/2022	24	79,000	54.9	System online and operating. FBRO pumped out. Air sparged IPC. Manually pumped excess sludge.

Total	**584.8**	**1,930,700**	
Total Available Hours	**744**	**Average On-line Flow**	**55.0**
Percent Online	**79**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
6/1/2022	7.5	25,200	56.0	System offline at 0730 for CIP activities.
6/2/2022	10.5	34,500	54.8	System online at 1330 following CIP activities.
6/3/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/4/2022	24	78,200	54.3	System online and operating.
6/5/2022	24	79,800	55.4	System online and operating.
6/6/2022	24	77,800	54.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/7/2022	24	79,800	55.4	System online and operating.
6/8/2022	24	78,700	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/9/2022	24	78,800	54.7	System online and operating.
6/10/2022	24	77,900	54.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/11/2022	24	78,000	54.2	System online and operating.
6/12/2022	15.5	52,400	56.3	System offline at 1530 due to low pressure alarm.
6/13/2022	4.0	13,500	56.3	System restarted at 0915. System offline at 1230 due to low pressure alarm. System restarted again at 1445 to diagnose pressure alarm. System offline at 1530 due to faulty air compressor.
6/14/2022	9.75	32,400	55.4	System online between 1215 and 1315 for evaluation. Air compressor serviced, and FBRO pumped out. System restarted at 1515.
6/15/2022	24	77,700	54.0	System online and operating.
6/16/2022	24	78,900	54.8	System online and operating.
6/17/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/18/2022	24	79,000	54.9	System online and operating.
6/19/2022	24	79,300	55.1	System online and operating.
6/20/2022	24	78,300	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/21/2022	24	79,300	55.1	System online and operating.
6/22/2022	24	78,800	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/23/2022	24	78,500	54.5	System online and operating. Air sparged IPC. Manually pumped excess sludge.
6/24/2022	11.75	39,300	55.7	System offline at 0600 due to low pressure alarm. System online between 0800 and 0845 and again between 1030 and 1530 for evaluation. System offline at 1530 due to air compressor failure.
6/25/2022	0	0	0.0	System offline due to air compressor failure.
6/26/2022	0	0	0.0	System offline due to air compressor failure.
6/27/2022	0	0	0.0	System offline due to air compressor failure.
6/28/2022	0	0	0.0	System offline due to air compressor failure. FBRO pump out.
6/29/2022	0	0	0.0	System offline due to air compressor failure.
6/30/2022	0	1,400	0.0	Temporary air compressor installed. System remains offline due to faulty potable water solenoid valves on the chlorine dioxide skid.

Total	**491.0**	**1,615,500**	
Total Available Hours	**720**	**Average On-line Flow**	**54.8**
Percent Online	**68**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
7/1/2022	0	0	0	System offline due to faulty potable water solenoid valves on the chlorine dioxide skid.
7/2/2022	0	0	0	System offline.
7/3/2022	0	0	0	System offline.
7/4/2022	0	0	0	System offline.
7/5/2022	1.0	3,400	56.7	New solenoid valves installed and water eductor cleaned on chlorine dioxide skid. System online between 0830 and 0930 for testing. System offline at 0930 for CIP.
7/6/2022	10.0	31,500	52.5	System online at 1400 following CIP.
7/7/2022	24	78,900	54.8	System online and operating.
7/8/2022	24	78,900	54.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/9/2022	24	80,200	55.7	System online and operating.
7/10/2022	24	78,700	54.7	System online and operating.
7/11/2022	24	78,900	55.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/12/2022	21.25	71,600	56.2	System offline from 1000 to 1245 for FBRO pump out and for chlorine dioxide skid adjustments and maintenance.
7/13/2022	24	78,400	54.4	System online and operating.
7/14/2022	24	79,600	55.3	System online and operating.
7/15/2022	24	79,800	55.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/16/2022	24	78,300	54.4	System online and operating.
7/17/2022	24	78,600	54.6	System online and operating.
7/18/2022	24	79,100	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/19/2022	24	79,400	55.1	System online and operating.
7/20/2022	21.75	73,200	56.1	System offline from 0745 to 1000 for chlorine regulator maintenance. Air sparged IPC. Manually pumped excess sludge.
7/21/2022	24	79,300	55.1	System online and operating.
7/22/2022	24	79,500	55.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/23/2022	24	79,200	55.0	System online and operating.
7/24/2022	24	79,100	54.9	System online and operating.
7/25/2022	24	78,000	54.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/26/2022	24	79,100	54.9	System online and operating.
7/27/2022	24	80,100	55.6	System online and operating. Air sparged IPC. Manually pumped excess sludge. FBRO pumped out
7/28/2022	24	82,000	56.9	System online and operating.
7/29/2022	24	80,300	55.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
7/30/2022	24	80,600	56.0	System online and operating.
7/31/2022	24	81,200	56.4	System online and operating.

Total	**605.8**	**2,006,900**	
Total Available Hours	**744**	**Average On-line Flow**	**55.2**
Percent Online	**81**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
8/1/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/2/2022	6.5	22,400	57.4	System offline at 0630 for CIP.
8/3/2022	12.0	39,000	54.2	System online at 1200 following CIP.
8/4/2022	24	78,700	54.7	System online and operating.
8/5/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/6/2022	24	78,800	54.7	System online and operating.
8/7/2022	24	78,300	54.4	System online and operating.
8/8/2022	24	78,600	54.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/9/2022	23.25	75,000	53.8	System offline from 0515 to 0545 due to a faulty I/O card on MF. System offline from 0800 to 0815 for FBRO pump out and for the I/O card to be replaced.
8/10/2022	24	78,300	54.4	System online and operating.
8/11/2022	24	79,000	55.4	System online and operating.
8/12/2022	24	78,500	54.5	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/13/2022	24	78,800	54.7	System online and operating.
8/14/2022	24	79,000	54.9	System online and operating.
8/15/2022	8.5	28,000	54.9	System offline at 0830 due the disruption of potable water service to the building as a result of Town of Ayer water line work on Sculley Road.
8/16/2022	13.75	44,400	53.8	System online at 1015 following restoration of potable water service.
8/17/2022	24	79,100	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/18/2022	24	78,700	54.7	System online and operating.
8/19/2022	24	78,300	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge. Replaced check valve on NaClO2 feed line.
8/20/2022	24	79,100	54.9	System online and operating.
8/21/2022	24	79,000	54.9	System online and operating.
8/22/2022	23.5	77,300	54.8	System offline from 0930 to 1000 due to effluent sump high level alarm. Pumped down effluent sump and restarted system. Air sparged IPC. Manually pumped excess sludge.
8/23/2022	24	77,100	53.5	System online and operating. Air sparged IPC. Manually pumped excess sludge. FBRO pumped out.
8/24/2022	15.75	52,400	55.4	System offline at 1545 due to effluent sump high level alarm.
8/25/2022	15.25	47,600	52.0	Pumped down effluent sump, and restarted system at 0845.
8/26/2022	18.0	61,200	56.7	System offline from 0630 to 1230 to replace NaClO2 feed line and clean, service, and evaluate effluent pumps. Air sparged IPC. Manually pumped excess sludge. Due to impellor wear, adjusted system flowrate to 58 GPM until effluent pump impellors can be replaced.
8/27/2022	24	76,600	53.2	System online and operating..
8/28/2022	24	76,300	53.0	System online and operating.
8/29/2022	24	75,600	52.5	System online and operating. Air sparged IPC. Manually pumped excess sludge.
8/30/2022	24	75,900	52.7	System online and operating.
8/31/2022	24	76,600	53.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.

Total	**664.3**	**2,166,400**	
Total Available Hours	**744**	**Average On-line Flow**	**54.4**
Percent Online	**89**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
9/1/2022	24	76,200	52.9	System online and operating.
9/2/2022	24	75,700	52.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/3/2022	24	75,900	52.7	System online and operating.
9/4/2022	24	76,500	53.1	System online and operating.
9/5/2022	24	76,100	52.8	System online and operating.
9/6/2022	9.0	29,600	54.8	System offline at 0900 for CIP. FBRO pumped out.
9/7/2022	12.0	38,100	52.9	System online at 1200 following CIP.
9/8/2022	24	75,800	52.6	System online and operating.
9/9/2022	24	76,200	52.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/10/2022	3.25	11,100	56.9	System offline at 0315 due to high effluent sump alarm.
9/11/2022	0	0	0.0	System offline.
9/12/2022	15.5	47,900	51.5	System restarted at 0830. Air sparged IPC. Manually pumped excess sludge.
9/13/2022	24	76,500	53.1	System online and operating.
9/14/2022	24	76,500	53.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/15/2022	24	75,600	52.5	System online and operating.
9/16/2022	24	76,800	53.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/17/2022	24	76,300	53.0	System online and operating.
9/18/2022	24	76,100	52.8	System online and operating.
9/19/2022	24	76,400	53.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/20/2022	14.75	43,700	49.4	System offline from 0915 to 1100 for FBRO pumpout. Air sparged IPC. Manually pumped excess sludge. System offline at 1630 due to a faulty microfilter relay.
9/21/2022	0	0	0.0	System offline.
9/22/2022	0	0	0.0	System offline.
9/23/2022	11.0	34,500	52.3	New microfilter relay installed. System restarted at 1300.
9/24/2022	24	75,900	52.7	System online and operating.
9/25/2022	24	76,000	52.8	System online and operating.
9/26/2022	23.25	74,200	53.2	System offline from 0945 to 1030 to replace faulty Cl2 gas regulator. Air sparged IPC. Manually pumped excess sludge.
9/27/2022	24	75,400	52.4	System online and operating.
9/28/2022	24	75,800	52.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
9/29/2022	24	76,500	53.1	System online and operating.
9/30/2022	24	75,900	52.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.

Total	**568.8**	**1,801,200**	
Total Available Hours	**720**	**Average On-line Flow**	**52.8**
Percent Online	**79**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
10/1/2022	24	76,200	52.9	System online and operating.
10/2/2022	24	76,300	53.0	System online and operating.
10/3/2022	24	76,300	53.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/4/2022	7.25	24,600	56.6	System offline at 0715 for CIP activities.
10/5/2022	11.25	37,125	55.0	System online at 1245 following CIP activities. Replaced Effllluent Pump 1 impeller. Returned system flow to 60 gpm.
10/6/2022	24	79,000	54.9	System online and operating.
10/7/2022	21.25	60,700	47.6	System offline from 0630 to 0845 due to alarm. System offline from 1245 to 1315 for Cl2 gas cylinder exchange. Air sparged IPC. Manually pumped excess sludge.
10/8/2022	24	79,500	55.2	System online and operating.
10/9/2022	24	79,200	55.0	System online and operating.
10/10/2022	24	79,300	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/11/2022	24	79,300	55.1	System online and operating.
10/12/2022	24	78,400	54.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/13/2022	24	78,500	54.5	System online and operating. Replaced Effluent Pump 2 impellor.
10/14/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/15/2022	24	80,400	55.8	System online and operating.
10/16/2022	24	79,100	54.9	System online and operating.
10/17/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/18/2022	24	79,300	55.1	System online and operating.
10/19/2022	23.75	77,600	54.5	System offline from 0930 to 0945 for FBRO pumpout. Air sparged IPC. Manually pumped excess sludge.
10/20/2022	24	78,900	54.8	System online and operating.
10/21/2022	24	79,900	55.5	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/22/2022	24	79,600	55.3	System online and operating.
10/23/2022	24	79,400	55.1	System online and operating.
10/24/2022	24	79,500	55.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/25/2022	15	51,800	57.6	System offline at 1500 due to MF basket strainer high pressure.
10/26/2022	14	46,000	54.8	System restarted at 1000. Air sparged IPC. Manually pumped excess sludge.
10/27/2022	24	80,000	55.6	System online and operating.
10/28/2022	24	78,800	54.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
10/29/2022	24	79,100	54.9	System online and operating.
10/30/2022	24	79,600	55.3	System online and operating.
10/31/2022	24	79,500	55.2	System online and operating. Air sparged IPC. Manually pumped excess sludge.

Total	**692.5**	**2,271,525**	
Total Available Hours	**744**	**Average On-line Flow**	**54.7**

Percent Online	**93**

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
11/1/2022	7.25	26,100	60.0	System offline at 0715 for CIP activities. FBRO pumped out.
11/2/2022	2.25	9,800	72.6	System online at 1400 following CIP activities. System offline at 1615 due to faulty sludge pump switch.
11/3/2022	14.5	49,100	56.4	System online at 0925 following sludge pump switch repair.
11/4/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/5/2022	24	78,900	54.8	System online and operating.
11/6/2022	24	82,900	57.6	System online and operating.
11/7/2022	24	80,300	55.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/8/2022	24	79,600	55.3	System online and operating.
11/9/2022	24	79,700	55.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/10/2022	24	79,500	55.2	System online and operating.
11/11/2022	24	80,400	55.8	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/12/2022	24	79,900	55.5	System online and operating.
11/13/2022	24	80,200	55.7	System online and operating.
11/14/2022	24	79,800	55.4	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/15/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge. FBRO pumped out.
11/16/2022	24	80,100	55.6	System online and operating.
11/17/2022	24	80,000	55.6	System online and operating.
11/18/2022	24	79,000	54.9	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/19/2022	24	80,000	55.6	System online and operating.
11/20/2022	24	79,700	55.3	System online and operating.
11/21/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/22/2022	24	79,900	55.5	System online and operating.
11/23/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
11/24/2022	24	79,900	55.5	System online and operating.
11/25/2022	24	79,300	55.1	System online and operating.
11/26/2022	24	79,600	55.3	System online and operating.
11/27/2022	24	80,400	55.8	System online and operating.
11/28/2022	23.25	77,600	55.6	System offline from 0900 to 0945 for backflow preventer replacement. Air sparged IPC. Manually pumped excess sludge.
11/29/2022	22.25	73,500	55.1	System offline from 0945 to 1130 for FBRO pumpout. Air sparged IPC. Manually pumped excess sludge.
11/30/2022	24	80,200	55.7	System online and operating.

Total	**669.5**	**2,232,400**	
Total Available Hours	**720**	**Average On-line Flow**	**55.6**
Percent Online	**93**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-5
2022 ATP Monthly Operations Summary
Shepley's Hill Landfill
Devens, Massachusetts

Date	Hours Online	Gallons Discharged	Average Effluent Flowrate	Status
12/1/2022	24	79,300	55.1	System online and operating.
12/2/2022	24	79,600	55.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/3/2022	24	79,700	55.3	System online and operating.
12/4/2022	24	80,100	55.6	System online and operating.
12/5/2022	24	79,400	55.1	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/6/2022	24	79,600	55.3	System online and operating.
12/7/2022	7.25	26,100	60.0	System offline at 0715 for CIP activities.
12/8/2022	7.75	28,400	61.1	System online at 1615 following CIP activities.
12/9/2022	24	79,600	55.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/10/2022	24	80,000	55.6	System online and operating.
12/11/2022	24	80,000	55.6	System online and operating.
12/12/2022	24	80,000	55.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/13/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge. FBRO pumped out.
12/14/2022	24	79,700	55.3	System online and operating.
12/15/2022	24	79,700	55.3	System online and operating.
12/16/2022	24	80,200	55.7	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/17/2022	24	80,100	55.6	System online and operating.
12/18/2022	24	79,200	55.0	System online and operating.
12/19/2022	24	80,000	55.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/20/2022	24	81,100	56.3	System online and operating.
12/21/2022	24	80,000	55.6	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/22/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/23/2022	24	81,100	56.3	System online and operating.
12/24/2022	24	80,400	55.8	System online and operating.
12/25/2022	24	80,700	56.0	System online and operating.
12/26/2022	24	80,200	55.7	System online and operating.
12/27/2022	24	79,200	55.0	System online and operating. Air sparged IPC. Manually pumped excess sludge. FBRO pumped out.
12/28/2022	24	79,900	55.5	System online and operating.
12/29/2022	24	81,100	56.3	System online and operating. Air sparged IPC. Manually pumped excess sludge.
12/30/2022	24	79,900	55.5	System online and operating.
12/31/2022	24	80,700	56.0	System online and operating.

Total	**711.0**	**2,373,400**	
Total Available Hours	**744**	**Average On-line Flow**	**55.6**
Percent Online	**96**		

Note:

Flowrate in Gallons per Minute (GPM)

Clean in Place (CIP)

Table G-6
Historical ATP Monthly Discharge Totals
Shepley's Hill Landfill
Devens, Massachusetts

Month	Discharge Flow (gallons)	Month	Discharge Flow (gallons)	Month	Discharge Flow (gallons)	Month	Discharge Flow (gallons)
startup 8&9/2005	213,900	Nov-10	1,869,600	Aug-15	2,454,900	May-20	2,328,000
Mar-06	555,800	Dec-10	1,833,600	Sep-15	2,530,300	Jun-20	2,235,100
Apr-06	833,600	Jan-11	1,907,600	Oct-15	2,577,600	Jul-20	2,318,100
May-06	941,700	Feb-11	1,766,400	Nov-15	2,522,000	Aug-20	2,218,500
Jun-06	979,000	Mar-11	1,413,900	Dec-15	2,399,400	Sep-20	2,213,300
Jul-06	646,600	Apr-11	1,834,200	Jan-16	2,583,000	Oct-20	2,326,700
Aug-06	327,200	May-11	2,064,700	Feb-16	2,209,000	Nov-20	2,243,900
Sep-06	453,500	Jun-11	1,872,000	Mar-16	2,359,700	Dec-20	2,162,400
Oct-06	597,500	Jul-11	1,642,500	Apr-16	2,242,200	Jan-21	2,239,400
Nov-06	562,500	Aug-11	1,904,500	May-16	2,366,500	Feb-21	1,808,400
Dec-06	606,800	Sep-11	1,825,500	Jun-16	2,277,300	Mar-21	2,333,700
Jan-07	739,600	Oct-11	1,438,700	Jul-16	2,369,200	Apr-21	2,259,700
Feb-07	0	Nov-11	1,907,200	Aug-16	2,344,800	May-21	2,331,900
Mar-07	672,400	Dec-11	1,843,300	Sep-16	2,292,000	Jun-21	1,887,700
Apr-07	854,000	Jan-12	1,814,900	Oct-16	2,347,300	Jul-21	2,240,000
May-07	974,700	Feb-12	1,641,400	Nov-16	2,259,400	Aug-21	1,336,500
Jun-07	942,200	Mar-12	1,530,400	Dec-16	2,332,600	Sep-21	1,787,400
Jul-07	970,500	Apr-12	1,512,300	Jan-17	2,318,600	Oct-21	2,057,400
Aug-07	1,563,400	May-12	1,374,700	Feb-17	2,072,500	Nov-21	2,185,400
Sep-07	1,809,100	Jun-12	1,938,100	Mar-17	2,325,100	Dec-21	2,301,900
Oct-07	1,616,000	Jul-12	1,557,500	Apr-17	2,182,300	Jan-22	2,328,000
Nov-07	1,436,200	Aug-12	1,595,800	May-17	2,287,400	Feb-22	2,096,800
Dec-07	1,629,200	Sep-12	1,807,400	Jun-17	2,234,300	Mar-22	2,335,000
Jan-08	1,589,100	Oct-12	1,729,100	Jul-17	2,289,200	Apr-22	2,099,000
Feb-08	1,418,100	Nov-12	1,979,100	Aug-17	2,249,500	May-22	1,930,700
Mar-08	1,596,600	Dec-12	1,915,900	Sep-17	2,337,900	Jun-22	1,615,500
Apr-08	1,586,500	Jan-13	1,776,000	Oct-17	2,328,400	Jul-22	2,006,900
May-08	1,616,300	Feb-13	1,310,700	Nov-17	1,975,400	Aug-22	2,166,400
Jun-08	1,424,400	Mar-13	1,926,400	Dec-17	2,049,700	Sep-22	1,801,200
Jul-08	1,591,800	Apr-13	2,055,600	Jan-18	2,347,800	Oct-22	2,271,525
Aug-08	1,101,700	May-13	1,492,100	Feb-18	2,108,500	Nov-22	2,232,400
Sep-08	1,652,800	Jun-13	2,055,700	Mar-18	2,340,000	Dec-22	2,373,400
Oct-08	1,238,900	Jul-13	2,023,050	Apr-18	2,208,300		
Nov-08	1,649,500	Aug-13	2,185,000	May-18	2,285,700		
Dec-08	1,521,400	Sep-13	1,679,300	Jun-18	2,244,200		
Jan-09	1,602,500	Oct-13	1,697,700	Jul-18	2,301,600		
Feb-09	1,625,700	Nov-13	1,865,600	Aug-18	2,313,500		
Mar-09	909,400	Dec-13	2,054,300	Sep-18	2,215,300		
Apr-09	1,292,500	Jan-14	1,905,500	Oct-18	2,276,800		
May-09	1,631,000	Feb-14	1,773,000	Nov-18	903,800		
Jun-09	1,793,400	Mar-14	2,108,500	Dec-18	1,404,300		
Jul-09	1,830,700	Apr-14	1,696,300	Jan-19	2,004,100		
Aug-09	1,935,700	May-14	2,124,000	Feb-19	2,066,100		
Sep-09	1,879,100	Jun-14	1,943,600	Mar-19	2,268,000		
Oct-09	1,832,600	Jul-14	2,019,100	Apr-19	2,246,200		
Nov-09	1,909,100	Aug-14	2,182,900	May-19	2,329,900		
Dec-09	1,773,100	Sep-14	1,871,900	Jun-19	393,300		
Jan-10	2,030,000	Oct-14	1,646,600	Jul-19	2,265,400		
Feb-10	1,695,500	Nov-14	1,980,900	Aug-19	2,309,700		
Mar-10	1,922,900	Dec-14	1,948,100	Sep-19	2,237,100		
Apr-10	1,986,900	Jan-15	1,600,100	Oct-19	2,308,000		
May-10	1,997,200	Feb-15	1,779,800	Nov-19	2,241,200		
Jun-10	1,882,400	Mar-15	1,992,100	Dec-19	2,284,500		
Jul-10	1,606,700	Apr-15	2,198,900	Jan-20	2,322,300		
Aug-10	1,552,700	May-15	2,118,300	Feb-20	2,168,200		
Sep-10	1,207,200	Jun-15	2,071,100	Mar-20	2,313,900		
Oct-10	1,768,600	Jul-15	2,037,000	Apr-20	2,189,200		

Cumulative Total	374,303,475

Table G-7
2022 ATP Filter Bed Roll-Off Disposal Totals
Shepley's Hill Landfill
Devens, Massachusetts

Date	Sludge Removed for Disposal (Tons)
1/12/2022	11.39
1/25/2022	10.33
2/8/2022	10.38
2/22/2022	10.73
3/8/2022	9.96
3/22/2022	11.54
4/5/2022	10.70
4/19/2022	10.50
5/3/2022	10.32
5/17/2022	11.14
5/31/2022	10.34
6/14/2022	9.65
6/28/2022	9.39
7/12/2022	6.37
7/27/2022	10.80
8/9/2022	9.17
8/23/2022	9.70
9/6/2022	10.10
9/20/2022	9.46
10/4/2022	10.05
10/19/2022	11.89
11/1/2022	10.30
11/15/2022	10.70
11/29/2022	9.52
12/13/2022	8.80
12/27/2022	11.50
YEARLY TOTAL	**264.68**

Note:

All Filter Bed Roll-off disposal activities completed by Gobal Remdiation Services Inc. (East Taunton, MA)

All Filter Bed Roll-off sludge disposed of at Tradebe Treatment & Recycling (Stoughton, MA)

Table G-8
2022 ATP Routine and Non-Routine System Maintenance, Repairs, and Upgrades
Shepley's Hill Landfill
Devens, Massachusetts

Activity	Type	Description	Shutdown Period
Routine MF Skid CIPs	Routine	Routine MF Skid CIPs are conducted monthly, or as needed, to clean and maintain each MF module.	January - 1/4/22 at 07:30 to 1/5/22 at 12:15 February - 2/1/22 at 07:15 to 2/2/22 at 14:45 March - 3/1/22 at 07:00 to 3/2/22 at 12:00 April - 4/4/22 at 08:15 to 4/5/22 at 14:45 May - 5/2/22 to 5/3/22 - conducted while system offline due to air compressor failure June - 6/1/22 at 07:30 to 6/2/22 at 13:30 July - 7/5/22 at 09:30 to 7/6/22 at 14:00 August - 8/2/22 at 06:30 to 8/3/22 at 12:00 September - 9/6/22 at 09:00 to 9/7/22 at 12:00 October - 10/4/22 at 07:15 to 10/5/22 at 12:45 November - 11/1/22 at 07:15 to 11/2/22 at 14:00 December- 12/7/22 at 07:15 to 12/8/22 at 16:15
Chlorine Gas Cylinder Replacement	Routine	Chlorine gas cylinders are replaced as necessary as part of plant operations. During replacement activities, the system is offline.	2/2/22 Conducted during routine CIP to minimize downtime 4/8/22 from 09:15 to 09:45 6/27/22 Conducted while system offline due to air compressor failure 10/7/22 from 12:45 to 13:15
Microfilter Pump P1 Replacement	Non-Routine	On 3 January 2022, microfilter Pump P1 was replaced.	1/3/22 between 07:15 and 11:45
Chlorine Dioxide Skid Maintenance	Non-Routine	On 2 February 2022, the chlorine dioxide flow control valve was replaced during a CIP to minimize downtime. On 30 June 2022, the potable water solenoid valve failed. The valve was subsequently replaced on 5 July 2022. On 12 July 2022, the chlorine dioxide skid was serviced, and the eductor and inline mixer were cleaned. In addition, the backup chlorine gas cylinder flow control valve was removed from service. On 20 July 2022, the faulty flow control valve on the backup chlorine gas cylinder was replaced. On 19 August 2022, the sodium chlorite feed check valve was replaced between batches to minimize downtime. On 26 August 2022, the sodium chlorite feed line was replaced. On 26 September 2022, a faulty chlorine gas regulator was replaced.	6/30/22 until 7/5/22 at 08:30 (potable water solenoid valve) 7/12/22 between 10:00 and 12:45 (chlorine dioxid skid servicing) 7/20/22 between 07:45 and 10:00 (flow control valve) 8/26/22 between 06:30 and 12:30 (sodium chlorite feed line) 9/26/22 between 09:45 and 10:30 (chlorine gas regulator)
Air Compressor Maintenance and Replacement	Non-Routine	On 16 April 2022, the system was offline due to low pressure. Initially, the I/O card for Pump P1 was replaced. However, the system was offline again due to low pressure on 17 April 2022. The air compressor was subsequently serviced on 19 April 2022, and the system was restarted. On 1 May 2022, the system was offline due to low pressure. The air compressor was serviced on 6 May 2022, and the system restarted. On 12 June 2022, the system was offline due to low pressure. The air compressor was restarted on 13 June 2022 but failed again later that day. The compressor was subsequently serviced on 14 June 2022, and the system was restarted. On 24 June 2022, the system was offline due to low pressure, and the existing air compressor was taken out of service. A new compressor was installed on 30 June 2022.	4/16/22 between 06:15 and 12:45 4/17/22 at 16:45 until 4/19/22 at 11:45 5/1/22 at 09:30 until 5/6/22 at 14:30 6/12/22 at 15:30 until 6/13/22 at 09:30 6/13/22 at 12:30 until 6/14/22 at 15:15 6/24/22 at 06:00 until 7/5/22 at 08:30
Polymer Skid Static Mixer Replacement	Non-Routine	On 17 May 2022, the polymer skid static mixer failed and was subsequently replaced on 18 May 2022.	5/17/22 from 09:30 until 5/18/22 at 14:45
Fire Panel Replacement	Non-Routine	On 17 May 2022, the fire suppression panel was replaced during a CIP to minimize downtime.	None
Microfilter I/O Card Replacement	Non-Routine	On 10 June 2022 and 9 August 2022, the I/O card for the VFD for Pump 1 on the microfilter skid was replaced.	6/10/22 between 10:15 and 10:30 8/9/22 between 05:15 and 05:45
Potable Water Service Disruption	Non-Routine	On 15 August 2022, potable water service to the building was disrupted due to work on Sculley Road. Water service was restored on 16 August 2022.	8/15/22 at 08:30 until 8/16/22 at 10:15
Effluent Pump Maintenance	Non-Routine	In August 2022, a loss of effluent flow was observed, and on 22 August and 24 August 2022, the system shut down due to high effluent sump alarms. The effluent pumps were subsequently serviced on 26 August 2022 followed by impellor replacement on 5 October 2022 (Pump 1) and 13 October 2022 (Pump 2). Impellor replacement work was conducted during a CIP or while one pump was maintaining system flow to minimize downtime.	8/22/22 from 09:30 to 10:00 8/24/22 at 15:45 until 8/25/22 at 08:45 8/26/22 between 06:30 to 12:30

Table G-8
2022 ATP Routine and Non-Routine System Maintenance, Repairs, and Upgrades
Shepley's Hill Landfill
Devens, Massachusetts

Activity	Type	Description	Shutdown Period
Microfilter Relay Replacement	Non-Routine	On 20 September 2022, a microfilter relay failed. A new relay was subsequently installed on 23 September 2022.	9/20/22 at 16:30 until 9/23/22 at 13:00
Microfilter Basket Strainer Maintenance	Non-Routine	On 25 October 2022, the system shut down due to basket strainer high pressure. The basket strainer was subsequently inspected and cleaned on 26 October 2022.	10/25/22 at 15:00 until 10/26/22 at 10:00
Sludge Pump Switch Repair	Non-Routine	On 2 November 2022, the sludge pump switch failed. The switch was subsequently repaired on 3 November 2022.	11/2/22 at 16:15 until11/3/22 at 09:25
Potable water Backflow Preventer Replacement	Non-Routine	On 28 November 2022, the potable water backflow preventor was replaced.	11/28/22 between 09:00 to 09:45

Notes
CIP = Clean-in-Place
MF = Microfilter

Table G-9
Historical ATP As/Fe/Mn Influent Concentrations
Shepley's Hill Landfill
Devens, Massachusetts

		EW-01			EW-04		
Date	**Flow**	**As**	**Fe**	**Mn**	**As**	**Fe**	**Mn**
12/6/2006	40	2.77	92.00	2.47	5.00	72.00	1.75
12/6/2006	50	2.76	90.00	2.45	5.24	72.00	1.73
12/7/2006	25	2.64	87.00	2.43	4.93	70.00	1.71
8/7/2007	55	2.40	88.00	2.46	4.09	67.00	1.71
9/11/2007	55	2.58	80.00	2.32	4.04	54.00	1.52
12/27/2007	51	2.45	77	2.29	3.88	56	1.66
3/6/2008	52	2.43	74	2.2	3.74	50	1.55
6/17/2008	52	2.43	75.00	2.20	3.59	50.00	1.60
9/10/2008	52	2.22	78.00	2.22	3.60	54.00	1.78
12/2/2008	52	2.33	78.0	2.25	3.63	50.0	1.73
4/13/2009	53	2.51	81.0	2.37	3.77	55.0	1.90
6/24/2009	53	2.41	78.0	2.22	3.91	48.0	1.73
9/15/2009	54	2.32	76.0	2.14	3.72	41.0	1.56
12/15/2009	52	2.36	72.0	1.99	3.53	40.0	1.51
3/16/2010	52	2.37	73.0	2.19	3.54	38.0	1.66
6/23/2010	52	2.4	72.0	2.09	3.78	39.0	1.67
9/24/2010	50	2.79	81.0	3.3	4.29	56.0	2.19
12/22/2010	55	2.21	81.0	2.17	3.81	48.0	1.99
3/16/2011	55	2.14	76.0	2.22	4.38	42.0	1.96
6/20/2011	56	2.08	72.0	2.12	4.36	50.0	2.17
9/13/2011	56	2.04	74.0	2.05	3.75	46.0	2.16
12/20/2011	56	2.19	77.0	2.26	3.91	45.0	2.26
3/6/2012	49	2.23	81.0	2.26	3.71	47.0	2.22
6/7/2012	50	2.28	74.0	2.03	3.66	48.0	2.13
9/14/2012	50	2.31	76.0	2.13	3.15	43.0	2.04
12/5/2012	50	2.04	78.0	2.25	3.25	45.0	2.12
3/1/2013	50	2.29	73.0	2.04	3.85	45.0	2.00
6/3/2013	50	2.05	63.0	1.86	3.67	47.0	2.26
9/10/2013	50	1.91	65.0	1.97	3.44	37.0	1.98
12/9/2013	52	2.13	78.0	2.33	3.82	42.0	2.19
3/6/2014	50	1.98	72.0	2.10	3.28	42.0	2.08
6/2/2014	49	1.90	73.0	2.26	3.19	39.0	2.21
9/5/2014	50	1.83	76.1	2.32	3.20	43.9	2.44
12/4/2014	50.1	1.80	73.6	2.29	3.24	45.0	2.52
3/5/2015	56.2	2.00	75.5	2.34	3.82	50.3	2.61
6/5/2015	57.6	2.09	75.5	2.35	3.69	50.1	2.61
9/9/2015	61.7	1.89	72.5	2.28	3.28	43.3	2.39
12/7/2015	62.0	1.92	68.3	2.24	3.24	39.0	2.35
3/2/2016	55.1	1.87	64.7	2.06	3.18	36.5	2.18
6/3/2016	55.3	1.82	68.6	2.18	3.38	41.4	2.47
9/7/2016	55.3	1.82	71.7	2.13	2.99	41.9	2.32
12/2/2016	54.5	1.82	57.4	1.99	3.14	37.0	2.43
3/2/2017	54.5	1.81	61.9	2.21	3.73	38.7	2.56
6/9/2017	54.5	1.71	62.1	2.19	3.26	41.1	2.66
9/13/2017	55.0	1.91	64.1	2.18	3.47	39.9	2.47
12/11/2017	45.9	1.74	68.6	2.36	3.08	46.6	2.85
3/8/2018	54.9	1.74	64.3	2.11	3.10	42.0	2.49
6/4/2018	55.1	1.75	65.4	2.14	3.20	41.4	2.47
9/7/2018	55.4	1.60	65.1	2.25	2.83	38.8	2.49
12/17/2018	53.7	1.74	68.0	2.22	3.78	55.9	3.14
3/12/2019	55.7	1.61	64.6	2.09	3.28	41.8	2.42
7/8/2019	54.1	1.62	69.3	2.17	3.52	47.8	2.56
9/6/2019	54.2	1.63	65.3	2.09	3.11	40.1	2.29
12/6/2019	54.3	1.64	65.9	1.92	3.32	40.5	2.12
3/6/2020	54.3	1.74	65.5	2.22	3.67	37.6	2.36
6/5/2020	54.3	1.55	68.8	2.13	6.37	41.7	2.39
9/4/2020	54.2	1.75	64.8	2.05	3.32	35.9	2.17
12/5/2020	54.4	1.67	58.5	1.97	3.04	31.6	2.16
3/5/2021	54.6	1.55	58.8	1.93	3.64	33.7	2.17
6/4/2021	54.6	1.73	63.4	2.08	3.34	35.9	2.27
9/7/2021	48.2	1.70	70.8	2.3	3.41	41.7	2.67
12/10/2021	54.8	1.65	64.8	2.13	3.35	39.8	2.53
3/4/2022	54.7	1.42	69.1	2.26	2.80	37.0	2.36
6/3/2022	54.8	1.48	64.7	2.21	2.73	36.9	2.44
9/9/2022	52.8	1.55	66.9	2.17	2.92	37.3	2.34
12/9/2022	55.6	1.49	63.9	2.09	2.81	32.2	2.07
AVERAGE (2022)	54.5	1.49	66.15	2.18	2.82	35.85	2.30
AVERAGE (All Years)	52.7	2.01	71.72	2.20	3.60	44.88	2.17

Note:
Concentrations reported in mg/l (ppm)
Flow reported in gallons per a minute (gpm)

Appendix G
Influent Metals Concentrations - GWTP
Shepley's Hill Landfill

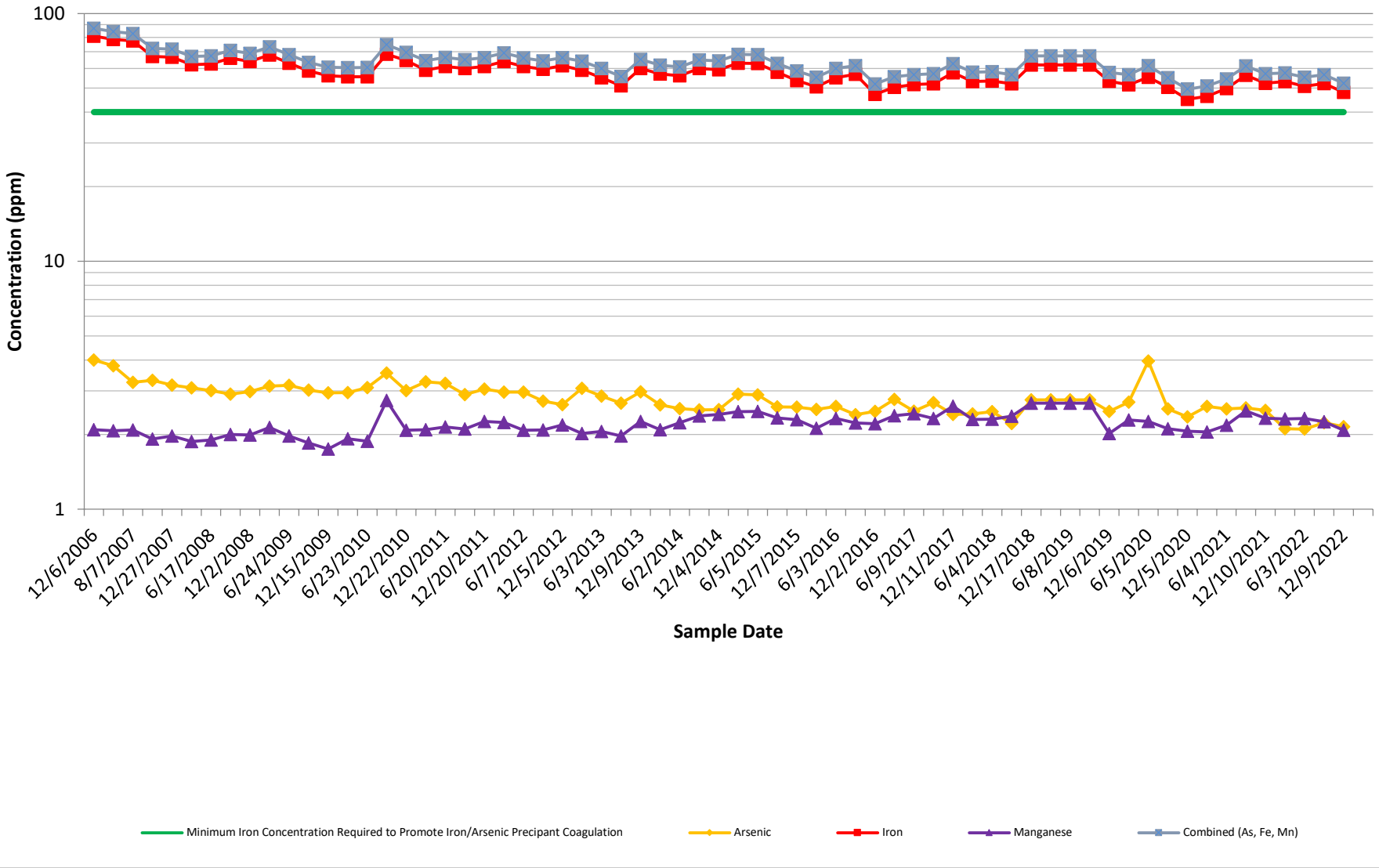


Table G-10
ATP Influent VOC and Dissolved Gases Concentrations - September 2022
Shepley's Hill Landfill
Devens, Massachusetts

EW-01			EW-04		
Analyte	**Result**		**Analyte**	**Result**	
1,1,1,2-Tetrachloroethane	ND		1,1,1,2-Tetrachloroethane	ND	
1,1,1-Trichloroethane	ND		1,1,1-Trichloroethane	ND	
1,1,2,2-Tetrachloroethane	ND		1,1,2,2-Tetrachloroethane	ND	
1,1,2-Trichloroethane	ND		1,1,2-Trichloroethane	ND	
1,1-Dichloroethane	ND		1,1-Dichloroethane	ND	
1,1-Dichloroethene	ND		1,1-Dichloroethene	ND	
1,1-Dichloropropene	ND		1,1-Dichloropropene	ND	
1,2,3-Trichlorobenzene	ND		1,2,3-Trichlorobenzene	ND	
1,2,3-Trichloropropane	ND		1,2,3-Trichloropropane	ND	
1,2,4-Trichlorobenzene	ND		1,2,4-Trichlorobenzene	ND	
1,2,4-Trimethylbenzene	ND		1,2,4-Trimethylbenzene	ND	
1,2-Dibromo-3-chloropropane	ND		1,2-Dibromo-3-chloropropane	ND	
1,2-Dibromoethane	ND		1,2-Dibromoethane	ND	
1,2-Dichlorobenzene	ND		1,2-Dichlorobenzene	ND	
1,2-Dichloroethane	ND		1,2-Dichloroethane	ND	
1,2-Dichloropropane	ND		1,2-Dichloropropane	ND	
1,3,5-Trimethylbenzene	ND		1,3,5-Trimethylbenzene	ND	
1,3-Dichlorobenzene	ND		1,3-Dichlorobenzene	ND	
1,3-Dichloropropane	ND		1,3-Dichloropropane	ND	
1,4-Dichlorobenzene	ND		1,4-Dichlorobenzene	ND	
1,4-Dioxane	ND		1,4-Dioxane	ND	
2,2-Dichloropropane	ND		2,2-Dichloropropane	ND	
2-Butanone	ND		2-Butanone	ND	
2-Hexanone	ND		2-Hexanone	ND	
4-Methyl-2-pentone	ND		4-Methyl-2-pentone	ND	
Acetone	ND		Acetone	ND	
Benzene	0.94	J	Benzene	0.35	J
Bromobenzene	ND		Bromobenzene	ND	
Bromochloromethane	ND		Bromochloromethane	ND	
Bromodichloromethane	ND		Bromodichloromethane	ND	
Bromoform	ND		Bromoform	ND	
Bromomethane	ND		Bromomethane	ND	
Carbon disulfide	ND		Carbon disulfide	ND	
Carbon Tetrachloride	ND		Carbon Tetrachloride	ND	
Chlorobenzene	0.73	J	Chlorobenzene	ND	
Chloroethane	ND		Chloroethane	ND	
Chloroform	ND		Chloroform	ND	
Chloromethane	ND		Chloromethane	ND	
cis-1,2-Dichlorothene	0.56	J	cis-1,2-Dichlorothene	ND	
cis-1,3-Dichloropropene	ND		cis-1,3-Dichloropropene	ND	
Dibromochloromethane	ND		Dibromochloromethane	ND	
Dichlorodifluoromethane	ND		Dichlorodifluoromethane	ND	
Di-Isopropyl Ether	ND		Di-Isopropyl Ether	ND	
Ethyl ether	6.6		Ethyl ether	2.7	J
Ethylbenzene	0.41	J	Ethylbenzene	ND	
Ethyl-tert-butyl-ether	ND		Ethyl-tert-butyl-ether	ND	
Hexachlorobutadiene	ND		Hexachlorobutadiene	ND	
Isopropylbenzene	ND		Isopropylbenzene	ND	
Methyl tert butyl ether	ND		Methyl tert butyl ether	ND	
Methylene Bromide	ND		Methylene Bromide	ND	
Methylene Chloride	ND		Methylene Chloride	ND	
Naphthalene	ND		Naphthalene	ND	
n-Butylbenzene	ND		n-Butylbenzene	ND	
n-Propylbenzene	ND		n-Propylbenzene	ND	

Table G-10
ATP Influent VOC and Dissolved Gases Concentrations - September 2022
Shepley's Hill Landfill
Devens, Massachusetts

EW-01			EW-04	
Analyte	**Result**		**Analyte**	**Result**
o-Chlorotoluene	ND		o-Chlorotoluene	ND
o-Xylene	ND		o-Xylene	ND
p/m-Xylene	1.6	J	p/m-Xylene	ND
p-Chorotoluene	ND		p-Chorotoluene	ND
p-Isopropyltoluene	ND		p-Isopropyltoluene	ND
sec-Butylbenzene	ND		sec-Butylbenzene	ND
Styrene	ND		Styrene	ND
tert-Butylbenzene	ND		tert-Butylbenzene	ND
Tertiary-amyl Methyl Ether	ND		Tertiary-amyl Methyl Ether	ND
Tetrachloroethene	ND		Tetrachloroethene	ND
Tetrahydrofuran	ND		Tetrahydrofuran	ND
Toluene	ND		Toluene	ND
trans-1,2-Dichloroethene	ND		trans-1,2-Dichloroethene	ND
trans-1,3-Dichloropropene	ND		trans-1,3-Dichloropropene	ND
Trichloroethene	ND		Trichloroethene	ND
Trichlorofluoromethane	ND		Trichlorofluoromethane	ND
Vinyl chloride	ND		Vinyl chloride	ND
EW-01 Totals	**10.84**		**EW-04 Totals**	**3.05**

EW-01			EW-04	
Analyte	**Result**		**Analyte**	**Result**
Methane	2,120		Methane	1,060
Ethane	0.68	J	Ethane	ND

Notes:
J = Value is estimated. It is below the reportable detection limit but greater than the method detection limits.
ND = Non-detect at laboratory detection limit.
All units in µg/L.

Table G-11
Historical ATP Monthly Effluent Sampling REsults (Arsenic)
Shepley's Hill Landfill
Devens, Massachusetts

Date	Effluent As Conc. (ppb)	Date	Effluent As Conc. (ppb)	Date	Effluent As Conc. (ppb)	Date	Effluent As Conc. (ppb)
8/29/2005	1.5	11/17/2009	11.6	7/1/2014	45.3	5/10/2019	19.6
8/30/2005	1.2	12/15/2009	43	8/7/2014	68.0	7/8/2019	16.2
8/31/2005	17.1	12/22/2009	9.4	9/5/2014	37.7	8/9/2019	25.3
9/1/2005	1	1/7/2010	25.2	10/1/2014	10.6	9/6/2019	24.8
9/2/2005	1	2/18/2010	33.1	11/6/2014	**742**	10/4/2019	24.9
9/6/2005	1	3/16/2010	3.2	11/14/2014	5.2	11/8/2019	31.5
9/8/2005	0.9	4/21/2010	14.4	12/4/2014	11.1	12/6/2019	34.6
9/9/2005	3	5/13/2010	10.4	1/2/2015	34.8	1/3/2020	25.8
3/10/2006	0.9	6/23/2010	24.6	2/12/2015	27.5	2/7/2020	24.0
3/15/2006	2	7/15/2010	17.5	3/5/2015	58.4	3/6/2020	20.0
3/23/2006	1	8/19/2010	29	4/10/2015	6.6	4/3/2020	34.1
4/7/2006	2	9/24/2010	13.9	5/7/2015	6.5	5/8/2020	17.9
4/14/2006	1.3	10/27/2010	22.3	6/5/2015	11.1	6/5/2020	37.8
4/20/2006	9	11/23/2010	26.1	7/10/2015	11.2	7/10/2020	36.9
4/27/2006	2	12/22/2010	10.3	8/10/2015	37.4	8/7/2020	44.6
5/22/2006	2	1/24/2011	55.8	9/9/2015	5.5	9/4/2020	60.6
6/27/2006	ND	2/16/2011	9.8	10/6/2015	6.2	10/9/2020	28.5
7/12/2006	2	3/16/2011	14.1	11/2/2015	15.5	11/4/2020	23.7
8/31/2006	13	4/21/2011	17.4	12/7/2015	5.9	12/4/2020	55.4
9/28/2006	28	5/16/2011	7.7	1/4/2016	11.7	1/8/2021	36.2
10/16/2006	4	6/20/2011	5.2	2/1/2016	13.5	2/17/2021	17.8
11/14/2006	2	7/22/2011	4.6	3/2/2016	19.5	3/5/2021	29.4
12/26/2006	34	8/11/2011	2.3	4/4/2016	11.3	4/8/2021	28.4
1/5/2007	19	9/13/2011	38.1	5/2/016	16.0	5/7/2021	38.1
1/16/2007	2	10/24/2011	20.3	6/3/2016	18.6	6/4/2021	33.0
1/23/2007	4	11/21/2011	12.5	7/5/2016	16.0	7/13/2021	**81.4**
1/30/2007	1	12/20/2011	15.1	8/1//16	17.4	7/21/2021	61.4
3/22/2007	1	1/24/2012	18.2	9/7/2016	15.3	8/19/2021	11.8
4/11/2007	ND	2/7/2012	28.1	10/3/2016	13.5	9/7/2021	17.2
5/16/2007	1.2	3/6/2012	16.1	11/1/2016	15.3	10/8/2021	25.5
6/13/2007	1.3	4/13/2012	**269.3**	12/2/2016	45.1	11/5/2021	40.2
7/12/2007	1.4	4/30/2012	14.9	1/6/2017	13.3	12/10/2021	9.9
8/7/2007	1.5	5/14/2012	**90.5**	2/8/2017	13.1	1/10/2022	8
9/11/2007	1.3	5/25/2012	8.7	3/2/2017	39.4	2/3/2022	8.8
10/10/2007	1.2	6/7/2012	12.7	4/12/2017	16.8	3/4/2022	2.8
11/6/2007	1.3	7/2/2012	23.0	5/18/2017	17.7	4/8/2022	26.3
12/27/2007	1.2	8/3/2012	17.1	6/9/2017	20.6	5/9/2022	20.0
1/10/2008	3	9/14/2012	23.9	7/14/2017	12.1	6/3/2022	4.5
2/13/2008	1	10/10/2012	15.6	8/16/2017	13.8	7/8/2022	1.6
3/6/2008	1.1	11/6/2012	32.9	9/13/2017	1.0	8/5/2022	17.5
4/10/2008	1	12/5/2012	11.9	10/10/2017	2.7	9/9/2022	8.8
5/15/2008	1	1/2/2013	14.3	11/10/2017	0.96 J	10/7/2022	24.4
6/17/2008	1	2/6/2013	15.7	12/11/2017	3.3	11/4/2022	19.4
7/8/2008	1.25	3/1/2013	15.1	1/8/2018	7.5	12/9/2022	13.4
8/6/2008	1	4/3/2013	14.1	2/7/2018	42.8		
9/10/2008	5.3	5/1/2013	13.9	3/8/2018	1.4 J		
10/14/2008	1.1	6/3/2013	20.5	4/5/2018	38.4		
11/4/2008	1	7/8/2013	15.5	5/4/2018	14.4		
12/2/2008	0.87	8/5/2013	15.0	6/4/2018	13.7		
1/13/2009	1.3	9/10/2013	11.0	7/6/2018	10.9		
2/3/2009	1.6	10/2/2013	13.9	8/10/2018	9.8		
3/5/2009	1.1	11/12/2013	19.2	9/7/2018	10.5		
4/13/2009	24.7	12/9/2013	20.7	10/4/2018	11.7		
5/26/2009	6.1	1/6/2014	17.8	11/12/2018	10.6		
6/24/2009	25.2	2/6/2014	20.2	12/17/2018	12.5		
7/16/2009	6.3	3/6/2014	19.2	1/11/2019	10.9		
8/18/2009	9.7	4/3/2014	15.1	2/8/2019	18.1		
9/15/2009	3.5	5/5/2014	19.3	3/12/2019	38.4		
10/20/2009	15.5	6/9/2014	7.2	4/5/2019	35.0		

Notes:
= Above effluent limitation of 75 ppb
Tables Includes all daily/weekly (when required) Arsenic sampling results
ND - Non-detect

Table G-12
Historical ATP Quarterly Effluent Sampling Results
Shepley's Hill Landfill
Devens, Massachusetts

Sample Date	Effluent Limitation	9/2/2005	3/15/2006	6/27/2006	9/2/2006	12/26/2006	3/22/2007	6/13/2007	9/11/2007	12/27/2007	3/6/2008	6/17/2008	9/10/2008	12/2/2008	4/13/2009	6/24/2009	9/15/2009	12/8/2009	3/16/2010
Analyte																			
BOD	--	NA	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Solids, Total Suspended	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	--	ND	ND	0.007	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Chloride	--	54	44	50	100	50	68	56	60	67	80	60	58	62	63	58	58	62	68
pH	5.5 - 9.5	6.7	5.8	6.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate	--	ND	ND	ND	ND	ND	ND	0.18	0.32	0.21	0.36	0.26	0.16	0.3	0.19	0.14	0.14	0.18	0.38
Sulfate	--	ND	ND	ND	2.6	160	70	2.2	2.7	3.3	3	3.1	2.8	3.2	3.3	7.9	7.9	4.3	4.6
Oil & Grease	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals																			
Aluminium	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Antimony	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.2	0.001	0.002	ND	0.028	0.034	0.002	0.0013	0.0013	0.0012	0.0011	0.00094	0.0053	0.00087	0.0247	0.0252	0.0035	0.043	0.0032
Barium	--	ND	0.02	0.03	0.02	0.015	0.029	0.023	0.023	0.023	0.023	0.022	0.024	0.022	0.022	0.023	0.024	0.021	0.022
Beryllium	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.045	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	ND	NA	NA
Chromium	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	0.75	ND	ND	ND	ND	0.026	0.017	0.015	0.0049	0.0076 J	0.015	0.13	0.0096 J	0.011	0.0054 J	0.0059 J	0.01	0.015	0.0088 J
Lead	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0022 J	ND	ND
Magnesium	--	ND	8.5	8.8	9.1	8.4	8.1	7.5	7.1	7.6	6.9	6.9	7.1	6.8	6.8	6.9	6.6	6.5	6.4
Manganese	--	ND	0.87	2.1	0.26	0.876	0.709	0.001	0.0026	0.0011 J	0.0008 J	ND	0.0026 J	ND	0.017	0.02	0.0041 J	0.029	0.0026 J
Mercury	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.0002 J	0.0002 J	0.0005 J	ND	ND	ND	ND	0.00003 J	0.00002 J	ND
Nickel	--	ND	ND	ND	ND	ND	0.010	0.005	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	0.3	ND	ND	ND	ND	ND	ND	ND	ND	0.0009 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	ND	ND	ND	ND	ND	0.007	0.005	--	--	--	--	--	--	--	--	--	--	--
VOCs																			
Bis(2-ethylhexyl)phthalate	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--

Notes:
All unit in mg/l, except for pH (standard pH units)
NA: Not Analyzed
ND: Non-detect at laboratory detection limit
--: Parameter no longer requirerd per Discharge Permit # 020
**: Metal is no longer required as part of quaterly sampling. Metal sampled as part of annual sampling per Discharge Permit # 020
All dectection limits are below discharge limits
J: Estimated value. The Target analyte concentration is below the quanitation limit (RL) but above the Method Dectection Limit (MDL)

Table G-12
Historical ATP Quarterly Effluent Sampling Results
Shepley's Hill Landfill
Devens, Massachusetts

Sample Date	Effluent Limitation	6/23/2010	9/24/2010	12/22/2010	3/16/2011	6/20/2011	9/13/2011	12/20/2011	3/6/2012	6/7/2012	9/14/2012	12/5/2012	3/1/2013	6/3/2013	9/10/2013	12/9/2013	3/6/2014	6/2/2014	9/5/2014	12/4/2014
Analyte																				
BOD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Solids, Total Suspended	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	--	67	59	73	44	28	44	42	46	36	28	43	41.2	28	35	39	37	41	39	38.7
pH	5.5 - 9.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate	--	0.69	0.15	0.35	0.06	0.12	0.09 J	0.09 J	0.06 J	0.07 J	0.099 J	0.12	ND	0.081 J	0.10	0.054 J	0.077 J	0.098 J	0.43	0.43
Sulfate	--	5.3	4.4	3.9	4	3.5	3.6	3.5	3.4	2.6	58	3.9	3.35	2.97	3.64	4.30	4.97	4.74	4.8 J	6.0 J
Oil & Grease	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals																				
Aluminium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.2	0.0246	0.0139	0.0103	0.0141	0.0052	0.0381	0.0151	0.0161	0.0127	0.0239	0.0119	0.0151	0.0205	0.0110	0.0207	0.0192	0.0072	0.0377	0.0111
Barium	--	0.018	0.025	0.021	0.024	0.018	0.023	0.023	0.023	0.022	0.020	0.023	0.023	0.020	0.021	0.023	0.025	0.023	0.025	ND
Beryllium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.045	NA	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Chromium	0.4	ND	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Copper	0.75	0.013	0.0063 J	**	**	**	0.009 J	**	**	**	**	**	**	**	**	**	**	**	**	**
Lead	0.2	ND	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Magnesium	--	5.7	5.7	6	6	5.9	5.8	6.2	6.2	5.9	5.2	6.2	5.6	5.5	5.1	5.8	6.3	5.3	6.14	6.37
Manganese	--	0.017	0.656	0.007	1.09	0.912	0.66	1.1	0.757	1.15	0.031	0.279	1.27	1.19	1.40	0.908	1.59	1.64	1.62	1.55
Mercury	0.001	ND	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.03	ND	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Silver	0.3	ND	ND	**	**	**	ND	**	**	**	**	**	**	**	**	**	**	**	**	**
Thallium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs																				
Bis(2-ethylhexyl)phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
All unit in mg/l, except for pH (standard pH units)
NA: Not Analyzed
ND: Non-detect at laboratory detection limit
--: Parameter no longer requirerd per Discharge Permit # 020
**: Metal is no longer required as part of quaterly sampling. Metal sampled as part of annual sampling per Discharge Permit # 020
All dectection limits are below discharge limits
J: Estimated value. The Target analyte concentration is below the quanitation limit (RL) but above the Method Dectection Limit (MDL)

Table G-12
Historical ATP Quarterly Effluent Sampling Results
Shepley's Hill Landfill
Devens, Massachusetts

Sample Date	Effluent Limitation	3/5/2015	6/5/2015	9/9/2015	12/7/2015	3/2/2016	6/3/2016	9/7/2016	12/2/2016	3/2/2017	6/9/2017	9/13/2017	12/11/2017	3/8/2018	6/4/2018	9/7/2018	12/17/2018	3/12/2019
Analyte																		
BOD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Solids, Total Suspended	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	--	38.0	34.0	33.7	33.5	34.5	34.0	33.5	33.2	34.4	34.1	35.0	34.6	36.0	35.6	36.1	37.4	32.6
pH	5.5 - 9.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate	--	ND	0.20	0.34	0.22	0.13 J	0.19	0.24	0.34	0.35	0.30	0.22	0.37	0.11	0.40	0.23	0.22	0.098J
Sulfate	--	3.4 J	3.5	3.7 J	6.5 J	3.5 J	4.3 J	4.1 J	5.3 J	4.9 J	5.1 J	6.0	5.6	5.8	6.3	6.0	3.6	7.9
Oil & Grease	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals																		
Aluminium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.2	0.0584	0.0111	0.0055	0.0059	0.0195	0.0186	0.0153	0.0451	0.0394	0.0206	0.0010	0.0033	0.0014 J	0.0137	0.0105	0.0125	0.0384
Barium	--	ND	ND	ND	ND	ND	ND	ND	0.0206 J	0.0206 J	0.0188 J	0.0198 J	0.0229 J	0.0221 J	0.0231 J	0.0221 J	0.0216 J	0.0147J
Beryllium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.045	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Chromium	0.4	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Copper	0.75	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Lead	0.2	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Magnesium	--	6.06	6.11	5.88	5.74	5.27	5.62	5.45	5.33	5.32	5.23	5.03 J	5.62	5.6	5.6	5.44	6.23	5.51
Manganese	--	1.69	1.67	1.75	1.77	1.44	1.53	1.46	1.40	1.61	1.57	1.66	1.91	1.65	1.60	1.55	1.16	0.0434
Mercury	0.001	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.03	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Silver	0.3	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Thallium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs																		
Bis(2-ethylhexyl)phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
All unit in mg/l, except for pH (standard pH units)
NA: Not Analyzed
ND: Non-detect at laboratory detection limit
--: Parameter no longer requirerd per Discharge Permit # 020
**: Metal is no longer required as part of quaterly sampling. Metal sampled as part of annual sampling per Discharge Permit # 020
All dectection limits are below discharge limits
J: Estimated value. The Target analyte concentration is below the quanitation limit (RL) but above the Method Dectection Limit (MDL)

Table G-12
Historical ATP Quarterly Effluent Sampling Results
Shepley's Hill Landfill
Devens, Massachusetts

Sample Date	Effluent Limitation	7/8/2019	12/6/2019	3/6/2020	6/5/2020	9/4/2020	12/4/2020	3/5/2021	6/4/2021	9/7/2021	12/10/2021	3/4/2022	6/3/2022	9/9/2022	12/9/2022
Analyte															
BOD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Solids, Total Suspended	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	--	37.9	35.5	34.9	35.8	32.4	36.6	34.0	36.2	36.3	43.3	41.3	37.9	35.2	26.8
pH	5.5 - 9.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate	--	0.21	0.28	0.26	0.17	0.29	0.25	0.19	0.26	0.12	0.19	0.17	ND	ND	ND
Sulfate	--	5.7	5.7	6.8	4.9	5.1	5.6	7.8	4.6	5.1	5.4	6.2	5.1	6.1	5.9
Oil & Grease	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals															
Aluminium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.2	0.0162	0.0346	0.0200	0.0378	0.0606	0.0554	0.0294	0.0330	0.0172	0.0099	0.0028	0.0045	0.0088	0.0134
Barium	--	0.0142J	0.0144J	0.0156J	0.0145J	0.0154 J	0.0135 J	ND	0.0135 J	ND	0.0151 J	0.0140 J	0.0153 J	0.0160 J	0.0226 J
Beryllium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.045	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Chromium	0.4	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Copper	0.75	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Lead	0.2	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Magnesium	--	5.94	5.33	5.83	5.55	5.13	4.66 J	4.77 J	5.09	5.80	5.28	5.14	4.89 J	5.33	5.03
Manganese	--	0.0184	0.0373	0.0269	0.0445	0.0669	0.0606	0.0352	0.0385	0.0252	0.0199	0.0045 J	0.0060 J	0.0118 J	1.69
Mercury	0.001	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.03	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Silver	0.3	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Thallium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs															
Bis(2-ethylhexyl)phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
All unit in mg/l, except for pH (standard pH units)
NA: Not Analyzed
ND: Non-detect at laboratory detection limit
--: Parameter no longer requirerd per Discharge Permit # 020
**: Metal is no longer required as part of quaterly sampling. Metal sampled as part of annual sampling per Discharge Permit # 020
All dectection limits are below discharge limits
J: Estimated value. The Target analyte concentration is below the quanitation limit (RL) but above the Method Dectection Limit (MDL)

Table G-13
ATP Effluent Sampling Results - September 2022
Shepley's Hill Landfill
Devens, Massachusetts

Analyte	Concentration (mg/L)	Analyte	Concentration (mg/L)	Analyte	Concentration (mg/L)	Analyte	Effluent Limitation (mg/L)	Concentration (mg/L)
VOCs		**SVOCs**		**Pesticides & PCBs**		**Metals, TPH, and TTO**		
Acetone	ND	1,2,4-Trichlorobenzene	ND	Aldrin	ND	Cadmium	0.045	ND
Acrolein	ND	1-Methylnaphthalene	ND	Alpha-BHC	ND	Chromium (Total)	0.4	ND
Acrylonitrile	ND	1,2-Dichlorobenzene	ND	Beta-BHC	ND	Copper	0.75	0.0147 J
Benzene	ND	1,3-Dichlorobenzene	ND	Delta-BHC	ND	Lead	0.2	ND
Bromodichloromethane	ND	1,4-Dichlorobenzene	ND	Chlordane	ND	Mercury	0.001	ND
Bromoform	ND	2,4,5-Trichlorophenol	ND	cis-Chlordane	ND	Selenium	0.03	ND
Bromomethane	ND	2,4,6-Trichlorophenol	ND	trans-Chlordane	ND	Silver	0.3	ND
2-Butanone	ND	2,4-Dichlorophenol	ND	Dieldrin	ND			
Carbon disulfide	ND	2,4-Dinitrololuene	ND	4,4'-DDD	ND	TPH	100	ND
Carbon tetrachloride	ND	2,6-Dinitrololuene	ND	4,4'-DDE	ND			
Chlorobenzene	ND	2,4-Dimethylphenol	ND	4,4'-DDT	ND	TTO	5	0.0411 J
Chloroethane	ND	2,4-Dinitrophenol	ND	Endosulfan I	ND			
2-Chloroethyl vinyl ether	ND	3,3'-Dichlorobenzidine	ND	Endosulfan II	ND			
Chloroform	ND	2-Chloronaphthalene	ND	Endosulfan sulfate	ND			
Chloromethane	ND	2-Chlorophenol	ND	Endrin	ND			
Dibromochloromethane	ND	2-Methylnapthalene	ND	Endrin aldehyde	ND			
1,2-Dichlorobenzene	ND	2-Methylphenol	ND	Endrin ketone	ND			
1,3-Dichlorobenzene	ND	2-Nitroaniline	ND	Heptachlor	ND			
1,4-Dichlorobenzene	ND	2-Nitrophenol	ND	Heptachlor epoxide	ND			
1,1-Dichloroethane	ND	3-Methylphenol/4-Methylphenol	ND	Lindane	ND			
1,2-Dichloroethane	ND	3-Nitroaniline	ND	Methoxychlor	ND			
1,1-Dichloroethene	ND	4,6-Dinitro-o-cresol	ND	Toxaphene	ND			
cis-1,2-Dichloroethene	ND	4-Bromophenyl phenyl ether	ND					
trans-1,2-Dichloroethene	ND	4-Chloroaniline	ND	Aroclor 1016	ND			
1,2-Dichloropropane	ND	4-Chlorophenyl phenyl ether	ND	Aroclor 1221	ND			
cis-1,3-Dichloropropene	ND	4-Nitroaniline	ND	Aroclor 1232	ND			
trans-1,3-Dichloropropene	ND	4-Nitrophenol	ND	Aroclor 1242	ND			
Ethylbenzene	ND	Acenaphthylene	ND	Aroclor 1248	ND			
2-Hexanone	ND	Acenapthene	ND	Aroclor 1254	ND			
4-Methyl-2-pentanone	ND	Aniline	ND	Aroclor 1260	ND			
Methylene chloride	0.0411 J	Anthracene	ND					
Styrene	ND	Benzidine	ND					
1,1,2,2-Tetrachloroethane	ND	Benzo(a)anthracene	ND					
Tetrachloroethene	ND	Benzo(a)pyrene	ND					
Toluene	ND	Benzo(b)fluoranthene	ND					
1,1,1-Trichloroethane	ND	Benzo(ghi)perylene	ND					
1,1,2-Trichloroethane	ND	Benzo(k)fluoranthene	ND					
Trichloroethene	ND	Benzoic Acid	ND					
Trichlorofluoromethane	ND	Benzyl Alcohol	ND					
Vinyl acetate	ND	Bis(2-chloroethoxy) methane	ND					
Vinyl chloride	ND	Bis(2-chloroethyl)ether	ND					
o-Xylene	ND	Bis(2-chloroisopropyll)ether	ND					
p/m-Xylene	ND	Bis(2-ethylhexy)phthalate	ND					
Xylene (Total)	ND	Butyl benzyl phthalate	ND					
		Carbazole	ND					
		Chrysene	ND					
		Dibenzo(a,h)anthracene	ND					
		Dibenzofuran	ND					
		Diethyl phthalate	ND					
		Dimethyl phthalate	ND					
		Di-n-butylphthalate	ND					
		Di-n-octylphthalate	ND					
		Flourene	ND					
		Fluoranthene	ND					
		Hexachlorobenzene	ND					
		Hexachlorobutadiene	ND					
		Hexachlorocyclopentadiene	ND					
		Hexachloroethane	ND					
		Indeno(1,2,3-cd)pyrene	ND					
		Isophorone	ND					
		Naphthalene	ND					
		Nitrobenzene	ND					
		n-Nitrosodimethylamine	ND					
		n-Nitrosodi-n-propylamine	ND					
		N-Nitrosodiphenylamine	ND					
		p-Chloro-m-cresol	ND					
		Pentachlorophenol	ND					
		Phenanthrene	ND					
		Phenol	ND					
		Pyrene	ND					

Notes:

ND - Non-detect

J: Estimated value - the target analyte concentration is below the quanitation limit but above the method dectection limit (TPH).

Appendix H

LUCIP Documentation

Appendix H
LUCIP Documentation
Shepley's Hill Landfill
Former Fort Devens Army Installation, Devens, MA

Land Use Controls			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewees: Dan Van Schalkwyk (DPW), Bridgette Braley (Nashoba Associated-BOH), Charles Schultz (Town of Ayer)			
Contact Information: dvanschalkwyk@ayer.ma.us, 978-772-8240; bbraley@nashoba.org, 978-772-3335 x303; cshultz@ayer.ma.us, 978-772-8214			
Interview Notes: Emailed 2021 AR LUCIP form and updated informational pamphlet to interviewees on 1/30/2023. Received responses from all parties on 3/2/2023, answers to interview questions are provided below.			
Site Update: The Army is currently investigating PFAS which have been detected at the Former Fort Devens. A record-of-decision has not been completed for PFAS.			
Item	**Yes**	**No**	**Comments**
BOH, DPW and Building Department personnel familiar with LUC implementation, LUC coverage area, and informational pamphlet?	X		
Any issues reported with the implementation of the LUCs?		X	
Any changes to the SHL or Northern Impact Area (NIA)?		X	The Ayer DPW completed a water main replacement project on Sculley Road in 2022. The Ayer DPW will be completing the West Main Street Massworks project in 2023, which involves sidewalks, curbing, and paving. The West Main Street bridge (crossing the Nonacoicus Brook) is also scheduled to be replaced.
Affirmative Measures			
Item	**Yes**	**No**	**Comments**
Annual distribution of educational materials completed?	X		Mailed LUC informational pamphlet to all property owners and addresses located within the LUC area in September 2022. A copy of the pamphlet is included in this Appendix.
Updated list of land owners and residents within the LUC area prepared?	X		Confirmed current owners names and addresses through the Ayer Assessors website in September 2022. Created updated table of addresses, a copy of which is included in this Appendix.
Door-to-door survey completed?		X	Survey is only required every 5 years, and the last survey was completed in September 2019. The next door-to-door survey will be completed in 2024.
Met with DPW and Building Department to confirm water supply connections, and assess presence of private wells within LUC area?		X	A review of water supply connections and private wells is completed every 5 years, with the next review to be completed in 2024.

Map ID	LUC Street Address	Owner Name	Owner Address	City	State	Zip	Address Checked on Ayer Assessor Site (Y/N)	Additional Notes (2019)
Properties for Mailing								
25-1	139 West Main Street	Cibor David	147 West Main Street	Ayer	MA	01432	9/30/2022	
25-10	107 West Main Street	Norstrom Russell R	107 West Main Street	Ayer	MA	01432	9/30/2022	
25-12	130 West Main Street	D'amico Anthony V	130 West Main Street	Ayer	MA	01432	9/30/2022	
25-13	2 Rogers Street, Apt. 2	Rengard Llc	Po Box 664	Ayer	MA	01432	9/30/2022	
25-13	2 Rogers Street, Apt. 1	Rengard Llc	Po Box 664	Ayer	MA	01432	9/30/2022	Duplex
25-14	122 West Main Street	Scullane Donald G & Shirley G	79 Pleasant Street	Ayer	MA	01432	9/30/2022	
25-15	118 West Main Street	James M Mazzola	118 West Main Street	Ayer	MA	01432	9/30/2022	
25-16	116 West Main Street, Apt. 1	Lapin Joshua A	116 West Main Street	Ayer	MA	01432	9/30/2022	Duplex
25-16	116 West Main Street, Apt. 2	Lapin Joshua A	116 West Main Street	Ayer	MA	01432	9/30/2022	
25-17	114 West Main Street	Aragones Jerry A	114 West Main Street	Ayer	MA	01432	9/30/2022	
25-18	108 West Main Street	Sheahan Timothy J	108 West Main Street	Ayer	MA	01432	9/30/2022	
25-19	65 Shirley Street	Dighton Gail	65 Shirley Street	Ayer	MA	01432	9/30/2022	
25-2	137 Old West Main Street	Manni Pamela A	137 Old West Main Street	Ayer	MA	01432	9/30/2022	
25-20	59 Shirley Street	Ford John L	59 Shirley Street	Ayer	MA	01432	9/30/2022	
25-21	57 Shirley Street	Miles Macuch	57 Shirley Street	Ayer	MA	01432	9/30/2022	
25-22	55 Shirley Street	Norstrom Brian D	55 Shirley Street	Ayer	MA	01432	9/30/2022	
25-3	131 -1/2 West Main Street	Banchs Jose A III	37 Peabody Road	Shirley	MA	01464	9/30/2022	
25-3	131 West Main Street	Banchs Jose A III	37 Peabody Road	Shirley	MA	01464	9/30/2022	Triplex
25-3	133 West Main Street	Banchs Jose A III	37 Peabody Road	Shirley	MA	01464	9/30/2022	
25-4	127 West Main Street	Carlisle Robert C	127 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123 West Main Street, Apt. 1	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	Duplex
25-5	123-1/2 West Main Street Apt. 1	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	Multiple
25-5	123-1/2 West Main Street Apt. 10	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 3	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 4	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 6	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 9	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123 West Main Street, Apt. 2	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 2	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 5	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 7	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	123-1/2 West Main Street Apt. 8	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-5	125 West Main Street	Razzaboni Walter D & Rosemary	125 West Main Street	Ayer	MA	01432	9/30/2022	
25-6	117 West Main Street	Crowley Charles G	96 Chestnut Hill Road	Amherst	NH	03031	9/30/2022	Appears Abandoned
25-7	111 West Main Street	Capparella James L	111 West Main Street	Ayer	MA	01432	9/30/2022	Duplex
25-7	113 West Main Street	Capparella James L	111 West Main Street	Ayer	MA	01432	9/30/2022	
25-9	109 West Main Street	White Sarah A	109 West Main Street	Ayer	MA	01432	10/3/2022	
26-32	95 West Main Street	Mcbreen John	95 West Main Street	Ayer	MA	01432	10/3/2022	
26-33	91 West Main Street, Apt. L1	Turra Realty Trust	57 Sandy Pond Rd	Ayer	MA	01432	10/3/2022	Apartment
26-33	91 West Main Street, Apt. L2	Turra Realty Trust	57 Sandy Pond Rd	Ayer	MA	01432	10/3/2022	Apartment
26-33	91 West Main Street, Apt. L3	Turra Realty Trust	57 Sandy Pond Rd	Ayer	MA	01432	10/3/2022	Apartment
26-33	91 West Main Street, Apt. R1	Turra Realty Trust	57 Sandy Pond Rd	Ayer	MA	01432	10/3/2022	Apartment
26-33	91 West Main Street, Apt. R2	Turra Realty Trust	57 Sandy Pond Rd	Ayer	MA	01432	10/3/2022	Apartment
26-332	82 West Main Street	Clements Richard	82 West Main Street	Ayer	MA	01432	10/3/2022	
26-339	65 West Main Street	Leonard Kaela M	65 West Main Street	Ayer	MA	01432	10/3/2022	
26-34	87 West Main Street, Apt. 1	J & A Realty Trust	280 Great Road	Shirley	MA	01464	10/3/2022	Duplex
26-34	87 West Main Street, Apt. 2	J & A Realty Trust	280 Great Road	Shirley	MA	01464	10/3/2022	Duplex
26-35	83 West Main Street, Apt. 1	White Kelli J	83 West Main Street	Ayer	MA	01432	10/3/2022	
26-35	83 West Main Street, Apt. 2	White Kelli J	83 West Main Street	Ayer	MA	01432	10/3/2022	Apartment
26-351	5 Mechanic Street	Dorsey Ryan H	5 Mechanic Street	Ayer	MA	01432	10/3/2022	

Map ID	LUC Street Address	Owner Name	Owner Address	City	State	Zip	Address Checked on Ayer Assessor Site (Y/N)	Additional Notes (2019)
26-359	74 West Main Street	Maclaughlin Ian	74 West Main Street	Ayer	MA	01432	10/4/2022	
26-36	81 West Main Street, Apt. 1	Jackson Dorothea M - Tr	81 West Main Street	Ayer	MA	01432	10/3/2022	Duplex
26-36	81 West Main Street, Apt. 2	Jackson Dorothea M - Tr	81 West Main Street	Ayer	MA	01432	10/3/2022	Duplex
26-37	73 West Main Street, Apt. 1	Alpine North Llc	Po Box 315	Nutting Lake	MA	01865	10/3/2022	
26-37	73 West Main Street, Apt. 2	Alpine North Llc	Po Box 315	Nutting Lake	MA	01865	10/3/2022	
26-37	75 West Main Street, Apt. 1	Alpine North Llc	Po Box 315	Nutting Lake	MA	01865	10/3/2022	
26-37	75 West Main Street, Apt. 2	Alpine North Llc	Po Box 315	Nutting Lake	MA	01865	10/3/2022	
26-38	71 West Main Street, Apt. 2r	Lorden Michael J - Tr	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	Apartment
26-38	71 West Main Street, Apt. 1l	Lorden Michael J - Tr	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	
26-38	71 West Main Street, Apt. 1r	Lorden Michael J - Tr	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	
26-38	71 West Main Street, Apt. 2l	Lorden Michael J - Tr	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	Apartment
26-39	61 -West Main Street, Apt 1	Rourkela LLC	36 Glendale Street, Apt 1	Maynard	MA	01754	10/3/2022	Apartment
26-39	61 -West Main Street, Apt 2	Rourkela LLC	36 Glendale Street, Apt 1	Maynard	MA	01754	10/3/2022	Apartment
26-39	63 -West Main Street, Apt 1	Rourkela LLC	36 Glendale Street, Apt 1	Maynard	MA	01754	10/3/2022	
26-39	63 -West Main Street, Apt 3	Rourkela LLC	36 Glendale Street, Apt 1	Maynard	MA	01754	10/3/2022	Apartment
26-42	53 Shirley Street	Slarskey Revocable Trust	53 Shirley Street	Ayer	MA	01432	10/3/2022	
26-45	98 West Main Street	Page Shari J	98 West Main Street	Ayer	MA	01432	10/3/2022	
26-46	3 Union Street	Van Tassell Belinda M	3 Union Street	Ayer	MA	01432	10/3/2022	
26-47	5 Union Street	Solomon Kelly A	5 Union Street	Ayer	MA	01432	10/3/2022	
26-48	7 Union Street	King Nathanael	7 Union Street	Ayer	MA	01432	10/3/2022	Duplex
26-50	50 Shirley Street	Boak Susan Jones	50 Shirley Street	Ayer	MA	01432	10/3/2022	
26-51	44 Shirley Street, Apt. C	Rogers Steven C	44 Shirley Street	Ayer	MA	01432	10/3/2022	
26-51	44 Shirley Street, Apt. A	Rogers Steven C	44 Shirley Street	Ayer	MA	01432	10/3/2022	
26-51	44 Shirley Street, Apt. B	Rogers Steven C	44 Shirley Street	Ayer	MA	01432	10/3/2022	
26-53	22 Shirley Street	Cormier Janice	22 Shirley Street	Ayer	MA	01432	10/3/2022	
26-54	20 Shirley Street	Neelands Ellen Bliss	20 Shirley Street	Ayer	MA	01432	10/3/2022	
26-55, 26-56	12 Shirley Street	Tk-Investment Group Llc	12 Shirley Street	Ayer	MA	01432	10/3/2022	
26-61	92 West Main Street	Slack Cody R	92 West Main Street	Ayer	MA	01432	10/3/2022	
26-63	41 Shirley Street	Defrancisco Johanna L	75 Mystic Street, Apt 3	Arlington	MA	02474	10/3/2022	
26-64	88 West Main Street, Apt.2	Toro Ramon A	88 West Main Street	Ayer	MA	01432	10/3/2022	
26-64	86 West Main Street, Apt.1	Toro Ramon A	88 West Main Street	Ayer	MA	01432	10/3/2022	
26-64	86 West Main Street, Apt.2	Toro Ramon A	88 West Main Street	Ayer	MA	01432	10/3/2022	
26-64	88 West Main Street, Apt.1	Toro Ramon A	88 West Main Street	Ayer	MA	01432	10/3/2022	
26-65	84 West Main Street	Dickie Willard	84 West Main Street	Ayer	MA	01432	10/3/2022	
26-66	76 West Main Street	Mass Ave Rentals, Llc	69 Massachusetts Avenue	Lunenburg	MA	01462	10/3/2022	Duplex
26-66	78 West Main Street	Mass Ave Rentals, Llc	69 Massachusetts Avenue	Lunenburg	MA	01462	10/3/2022	Duplex
26-67	70 West Main Street, Apt.2	Mcguane Paul K	70 West Main Street	Ayer	MA	01432	10/3/2022	Duplex
26-67	70 West Main Street, Apt.1	Dausman Amanda R	70 West Main Street	Ayer	MA	01432	10/3/2022	Duplex
26-68	29 Shirley Street	Roman Catholic Archbishop Of Boston	33 Shirley Street	Ayer	MA	01432	10/3/2022	
26-69	64b West Main Street	Lorden Michael J	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	
26-69	64 West Main Street	Lorden Michael J	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	
26-69	66 West Main Street	Lorden Michael J	1810 Mariner Drive #402	Tarpon Springs	FL	34689	10/3/2022	
26-70	23 Shirley Street	Macdougall Denise	23 Shirley St	Ayer	MA	01432	10/3/2022	
26-71	17 Shirley Street	Decot Kathleen M	343 Ayer Road	Harvard	MA	01451	10/3/2022	Duplex
26-71	19 Shirley Street	Decot Kathleen M	343 Ayer Road	Harvard	MA	01451	10/3/2022	Duplex
26-72	60 West Main Street	Argo Trust LLC	53 Ardale Street	Roslindale	MA	02131	10/3/2022	Commercial Building
26-73	15 Shirley Street	Ellis Jason M	13 Shirley Street	Ayer	MA	01432	10/3/2022	Duplex
26-73	13 Shirley Street	Ellis Jason M	13 Shirley Street	Ayer	MA	01432	10/3/2022	Duplex
26-74	11 Shirley Street	Ranx Realty Llc	Po Box 4138	Andover	MA	01810	10/3/2022	Condemned Two-Family home
26-75	50 West Main Street	Alpha Residences LLC	100 Power Mill Rd, Ste 136	Acton	MA	01720	10/3/2022	Commercial Building

Map ID	LUC Street Address	Owner Name	Owner Address	City	State	Zip	Address Checked on Ayer Assessor Site (Y/N)	Additional Notes (2019)
26-77	9 Shirley Street, Apt 2	Cunningham Timothy F	8 Redskin Trail	Groton	MA	01450	10/3/2022	Duplex
26-77	9 Shirley Street, Apt 1	Cunningham Timothy F	8 Redskin Trail	Groton	MA	01450	10/3/2022	Duplex
32-10	71 Shirley Street	Aitelhadj Amina	71 Shirley Street	Ayer	MA	01432	10/3/2022	
32-2	161 West Main Street, Apt. 2	Cole Tanner S	Po Box 393	Lunenburg	MA	01462	10/3/2022	
32-2	161 West Main Street, Apt. 1	Cole Tanner S	Po Box 393	Lunenburg	MA	01462	10/3/2022	
32-2	161 West Main Street, Apt. 3	Cole Tanner S	Po Box 393	Lunenburg	MA	01462	10/3/2022	
32-24	173 West Main Street	Pinard James	Po Box 28	Ayer	MA	01432	10/3/2022	
32-28	2 Scully Road	Hunley Cassandra	2 Scully Road	Ayer	MA	01432	10/3/2022	
32-29	4 Scully Road	Cole Larry A	4 Scully Road	Ayer	MA	01432	10/3/2022	
32-3	157 West Main Street	Lynch Gary	157 West Main Street	Ayer	MA	01432	10/3/2022	
32-4	149 West Main Street	Varner Billy E	149 West Main Street	Ayer	MA	01432	10/3/2022	
32-43	7 Scully Road	Two P Realty LLC	120 Central Avenue	Ayer	MA	01432	10/3/2022	
32-44	11 Scully Road	Ayer Masonic Association, Inc	P O Box 330	Ayer	MA	01432	10/3/2022	
32-45	13 Scully Road, Apt. A	Bourque David W & Mary L	13 Scully Road	Ayer	MA	01432	10/3/2022	Duplex
32-45	13 Scully Road, Apt. B	Bourque David W & Mary L	13 Scully Road	Ayer	MA	01432	10/3/2022	Duplex
32-46	17 Scully Road	Pinard James	120 Central Avenue	Ayer	MA	01432	10/3/2022	
32-47	19 Scully Road	Powers Jeremy A	19 Scully Road	Ayer	MA	01432	10/3/2022	
32-49	33 Scully Road	Olson Jonathan	33 Scully Road	Ayer	MA	01432	10/3/2022	
32-5	147 West Main Street	Cibor David L	147 West Main Street	Ayer	MA	01432	10/3/2022	
32-52	31 Scully Road	Logan George E	31 Scully Road	Ayer	MA	01432	10/3/2022	
32-8	136 West Main Street, Apt. 1l	Rzonca Stanley F	134 West Main Street	Ayer	MA	01432	10/3/2022	
32-8	136 West Main Street, Apt. 1r	Rzonca Stanley F	134 West Main Street	Ayer	MA	01432	10/3/2022	
32-8	136 West Main Street, Apt. 2l	Rzonca Stanley F	134 West Main Street	Ayer	MA	01432	10/3/2022	
32-8	136 West Main Street, Apt. 2r	Rzonca Stanley F	134 West Main Street	Ayer	MA	01432	10/3/2022	
32-9	132 West Main Street	Raffaelo Robert A	132 West Main Street	Ayer	MA	01432	10/3/2022	
33-32	1 Scully Road	Moore Family Realty	39 Main Street Ste 204	Ayer	MA	01432	10/3/2022	
33-4	0 Scully Road	Ctc Holdings Inc	22 West Main Street	Ayer	MA	01432	10/3/2022	

How Are People Being Protected from Arsenic In Groundwater?

In August 2014, the Army released the final report called a "Land Use Control Implementation Plan" (LUCIP), based on the land use controls (LUCs) established per the Shepley Hill Landfill remedy. The LUCIP is part of the remedy for Shepley's Hill landfill. It establishes the framework for land use controls to protect people from exposure to contaminated groundwater. The final LUCIP is available at:

- Town of Ayer website (www.ayer.ma.us)
- Ayer Public Library
- Ayer Town Hall
  - The Board of Health Office
  - The Board of Selectman's Office
  - The Town Clerk

The Army has implemented Land Use Controls that will reduce the risk of arsenic exposure by:

- Supporting compliance with the Ayer Zoning By-laws and the Subdivision Control Regulations.
- Supporting compliance with a Moratorium on Groundwater Use issued by the Town of Ayer Board of Health limiting groundwater use where arsenic groundwater contamination is present.
- Supporting compliance with the Ayer Board of Health Well Regulations (Adopted January 10, 2001) – Town of Ayer permitting requirements for the installation and use of new drinking water wells.
- Continued public education and outreach.
- Continued groundwater monitoring and inspections where arsenic groundwater contamination is present.
- Conducting meetings with the Ayer Board of Health at least once a year.

Where to Get More Information

Comments on the Land Use Control Implementation Plan can be sent to the Army by mail or email:

U.S. Army
2530 Crystal Drive
Taylor Building, Room 5104A
Arlington, VA 22202
thomas.a.lineer.civ@mail.mil

If you have a water well in or near the affected area contact the Army and the Board of Health with your comments and well information:

Ayer Board of Health
1 Main Street (3rd Floor)
Ayer, MA -1432

References & Other Resources

Arsenic in Drinking Water-EPA Fact Sheet
http://www.epa.gov/dwreginfo/chemical-contaminant-rules

Toxicological Profile for Arsenic
https://wwwn.cdc.gov/TSP/substances/ToxSubstance.aspx?toxid=3

Town of Ayer 2021 Water Quality Report
https://www.ayer.ma.us/ccr

Town of Ayer Water Department
http://www.ayer.ma.us/water-department

Fort Devens Restoration Program Website
https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/

Land Use Control Implementation Plan:

Restriction of Groundwater Use

SHEPLEY'S HILL LANDFILL



Introduction

A Land Use Control Implementation Plan has been established by the Army to protect human health and the environment from arsenic contamination in groundwater affecting a localized portion of the aquifer in the Town of Ayer. Arsenic contamination in groundwater is attributable to both naturally occurring causes and groundwater discharge from the former Shepley's Hill Landfill (SHL). SHL is located on the northeast corner of the former Main Post at Fort Devens.

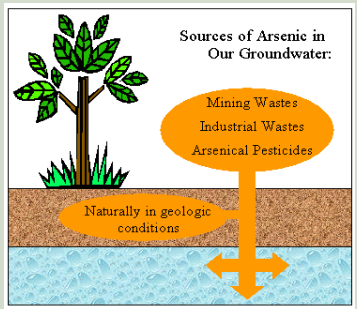
What Area is Affected?

Groundwater contaminated with arsenic is located north of the SHL. Approximately 65 to 70 homes in the Town of Ayer are located within the impacted area.



What Is Arsenic?

Arsenic is an odorless and tasteless metal that is both naturally occurring in the environment and also a by-product of agricultural, mining and industrial activities. It can enter the groundwater from runoff or infiltration through the ground.



http://www.idwr.idaho.gov/WaterInformation/GWQuality/FactSheets/Arsenic/Arsenic.htm

Where Does Arsenic Drinking Water Come From?

Arsenic in groundwater can be from anthropogenic sources, originating from human activity, or from natural sources, such as minerals in soil and bedrock. Many arsenic compounds dissolve in water and can enter the groundwater by dissolving in rain or snow or through the discharge of industrial wastes. The arsenic in groundwater in the Town of Ayer is occurring in groundwater because of both natural conditions and from the former operation of the SHL. The SHL has been closed and capped since 1993. Since its closure, the SHL has had long term monitoring and maintenance of the existing landfill cap and groundwater monitoring. A groundwater extraction and treatment system has operated at the SHL since 2006, however, arsenic is still present at high levels in groundwater in an area north of the landfill.

What Are Health Effects of Consuming Water With Arsenic?

Arsenic is known to cause cancer and is classified as a carcinogen by the Environmental Protection Agency (EPA). Specifically, exposure to arsenic can result in cancer of the bladder, lungs, skin, kidneys, nasal passages, liver and prostate. Arsenic in drinking water can result in the following symptoms:

- Discoloration of the skin
- Irritation of the stomach and intestines
- Fatigue
- Abnormal heart rhythm
- Blood-vessel damage resulting in bruising
- Impaired nerve function causing "pins and needles" sensation in your hands and feet

How to Avoid Arsenic

Not using private well water for drinking or irrigation purposes where arsenic groundwater contamination is present will prevent exposure of arsenic from groundwater. Drinking public water provided from the Town of Ayer and avoiding drinking private well water will mitigate the risk of arsenic exposure. The Town of Ayer's public drinking water supply meets all state and federal standards. The Town of Ayer Department of Public Works Water Division conducts annual water quality reports to document that the Town of Ayer drinking water quality is safe for drinking. **If you have a private well, you need to notify the Town of Ayer Board of Health at the contact number provided below.** The Ayer Board of Health will work with the Army to make necessary arrangements to properly abandon the well and obtain a new source of water, if necessary.

Appendix I

Response to Comments

US Army Corps of Engineers ®

New England District
696 Virginia Road
Concord, Massachusetts
01742-2751

Project Name:	Former Fort Devens Army Installation		
Location:	Devens, Massachusetts	Reviewers:	Joanne Dearden (MassDEP) and Michael Daly (USEPA)
Document Name: Draft 2022 Annual Operations, Maintenance, and Monitoring Report, Shepley's Hill Landfill, Former Fort Devens Army Installation, Devens, Massachusetts, May 2023			

No.	Ref. Page / Para.	COMMENT	RESPONSE
		Joanne Dearden (MassDEP) (11 July 2023)	
1	N/A	MassDEP has reviewed the Draft 2022 Annual Operations, Maintenance, and Monitoring Report for Shepley's Hill Landfill and has no comments.	N/A
		Michael Daly (USEPA)	
2	N/A	EPA has no comments on the Draft 2022 Annual Operations, Maintenance, and Monitoring Report for Shepley's Hill Landfill.	N/A
		END OF COMMENTS	